

ATTACHMENT BOOKLET

ORDINARY COUNCIL MEETING
28 OCTOBER 2019

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Liverpool Development Control Plan 2008 Part 1

General Controls for all development

2019

Part 1 must be read for all development

Check if other Parts are also needed for the particular development

**LIVERPOOL
CITY
COUNCIL**



Liverpool Development Control Plan 2008 Part 1 General Controls for all Development

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1. Preliminary

Applies to

This plan applies to all land in Liverpool Local Government Area (LGA). The plan is known as *Liverpool Development Control Plan 2008*.

Structure of Liverpool Development Control Plan 2008

Part 1 General Controls for all Development

Part 2 Locality Specific Controls

- Part 2.1 Green Valley (Subdivision of land)
- Part 2.2 Hoxton Park, Carnes Hill and Prestons (Subdivision of land)
- Part 2.3 Georges Fair Moorebank (Subdivision of land and residential development)
- Part 2.4 Moorebank Defence Lands (Subdivision of land and industrial development)
- Part 2.5 Middleton Grange (Subdivision of land and residential development)
- Part 2.6 Holsworthy Station Area (Subdivision of land and residential development)
- Part 2.7 Greenway Views (Subdivision of land and residential development)
- Part 2.8 Voyager Point (Subdivision of land and residential development)
- Part 2.9 Former Hoxton Park Airport (Subdivision of land)
- Part 2.10 Moorebank East (Subdivision of land and residential development)
- Part 2.11 Edmondson Park (Subdivision of land and residential development)
- Part 2.12 Repealed
- Part 2.13 Pleasure Point (Subdivision of land)
- Part 2.14 Elizabeth Hills (Subdivision of land and residential development)
- Part 2.15 New Brighton Golf Course (Subdivision of land, residential and golf course development)

Part 3 Development in Residential Zones

- Part 3.1 Dwelling houses in the R5 Zone
- Part 3.2 Dwelling houses on lots greater than 400sqm in the R2, R3 & R4 zones
- Part 3.3 Dwelling houses on Hatchet Shaped Lots
- Part 3.4 Semi-Detached and Attached Dwellings in the R2 and R3 zones
- Part 3.5 Dwelling houses on lots less than 400sqm
- Part 3.6 Multi Dwelling Housing in the R3 & R4 zones
- Part 3.7 Residential Flat Buildings in the R4 zones
- Part 3.8 Non Residential Development in Residential Zones
- Part 3.9 Boarding House Development

Part 4 Liverpool City Centre

Part 5 Development in Rural and E3 Zones

Part 6 Development in Business Zones

Part 7 Development in Industrial Zones

Adoption of Plan

This plan was made under Section 74C of the Environmental Planning and Assessment Act 1979 and Part 3 of the Environmental Planning and Assessment Regulation 2000.

The plan was adopted by Council on 28 July 2008. The plan came into force on 29 August 2008.

This plan was subsequently amended as follows:

Amendment No.	Trim Container	Date of amendment	Part(s) Amended
1	2008/1477	8 July 2009	Part 1.1, 1.2, 2.2, 2.5, 2.10, 2.11, 2.13, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 4, 5, 6 & 7
2	2008/0171	9 June 2010	Part 1.1 & 2.14
3	2009/1725	15 September 2010	Part 1.1, 1.2, 2.2, 2.3, 2.5, 2.7, 2.8, 2.9, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 4, 5, 6 & 7
4	2010/0769	15 September 2010	Part 1.1 & 6
5	2010/1253	8 December 2010	Part 1.1 & 5
6	2011/6089	11 April 2012	Part 1.1, 1.2, 2.2, 2.3, 2.5, 2.8, 2.9, 2.10, 2.11, 2.14, 3.2, 3.3, 3.4, 3.5 & 6
7	RZ-9/2011	19 April 2013	Insertion of Part 2.15
Reformatted as part of Amendment No 10			
10	2012/3187	19 February 2014	Merging of Parts 1.1 and 1.2, 2.3, 2.11, 3.3, 3.6 and 7.
9	2012/1606	4 April 2014	Part 3.1 and Part 5
16	2013/2409	18 June 2014	Part 5 and Part 7
13	2014/0925	2 July 2014	Part 1
12	2013/3913	25 July 2014	Part 1, Part 4 and Part 6
15	2014/1149	3 September 2014	Parts 2.2, 2.3, 2.5, 2.14, 3.1 and 7
14	2014/0929	12 November 2014	Part 2.11
17	2014/1508	1 April 2015	Part 5
20	2014/3813	26 May 2015	Part 1
21	2015/1066	8 July 2015	Part 1
18	2014/3695	19 August 2015	Part 2.11
19	2015/1050	9 September 2015	Part 1
22	RZ-4/2015	20 April 2016	Part 2.11
23	2016/1961	2 November 2016	Part 1
26	2014/1947	22 February 2017	Part 8
24	2016/3822	8 March 2017	Part 1.27
27	2017/0584	23 August 2017	Part 1.15
29	2016/1769	18 April 2018	Part 2.11
30	2006/0610	21 November 2018	Part 1.20
31	2018/3364	6 March 2019	Insertion of Part 3.9
32	2018/4071	20 March 2019	Part 1
33	2018/4049	17 April 2019	Part 1, 4 and 7
34	2016/2714	TBD	Part 1 and 4

Background

Council's Corporate Plan provides an overview of its Strategy for the Liverpool LGA. It also provides a framework for the objectives of this plan. The Corporate Plan is divided into the following strategic areas:

- The regional city for south west Sydney
- Neighbourhoods and villages
- the land between two rivers, where city and country meet
- Communities and governments working together
- A place for people
- Sustainability
- Improved organisational management and development

Liverpool Local Environmental Plan 2008

The *Liverpool Local Environmental Plan (LEP) 2008* provides the broad land use controls for Liverpool LGA. It covers most of the Liverpool LGA. In some cases land will be covered by other planning controls such as a *State Environmental Planning Policy* or a *Regional Environmental Plan*. It is advisable to check the zoning of land prior to the use of the DCP.

Some planning controls are contained in the *Liverpool LEP 2008* rather than in the DCP. These are not part of the DCP for the purpose of the *Environmental Planning and Assessment Act 1979*.

State and Regional Planning Provisions

In some cases a *State Environmental Planning Policy* or *Regional Environmental Plan* may also apply to land. It is advisable to check the impact of this prior to use of the DCP.

Contributions

Council requires contributions from development to fund infrastructure needed to support that development. Part 2 of the DCP includes a number of new areas where land is converted from rural to urban. The maps that accompany each chapter in Part 2 show public infrastructure needed to support development in the area. Much of this public infrastructure is to be funded from contributions from development.

The extent and anticipated staging of development in an area, the scope and cost of infrastructure required to service it, and the cost to development for the infrastructure is embodied in the contributions plans, which is a companion document to the DCP and LEP.

For details on current contribution rates, please refer to Council's web page at, www.liverpool.nsw.gov.au.

Standards in the Liverpool Development Control Plan 2008

Any variation to the standards in the DCP that will apply to a development will need to be justified before Council can consider any variation.

1.1 The Vision of Liverpool Development Control Plan 2008

Background

Liverpool Directions provides the background for Council's Management Plan, *Liverpool Local Environmental Plan 2008* and forms the framework for the vision for *Liverpool Development Control Plan 2008*.

The NSW Government's Sub Regional Plan for South West Sydney provides the context for Council's guiding document *Liverpool Directions*.

Change

Liverpool will experience significant growth as a result of Sydney's growth. This will involve creation of new suburbs as well as redevelopment in existing suburbs.

Some areas in Liverpool will experience substantial change over a short period. These include the new residential suburbs that were previously rural areas. Areas around Liverpool City Centre and some other centres will also experience substantial change with redevelopment. Other areas will also experience more gradual redevelopment, which will nevertheless bring change.

Liverpool Development Control Plan 2008, in conjunction with *Liverpool Local Environmental Plan 2008* aims to manage this change so that any change, which is inevitable, will make Liverpool a better place.

The Vision

Liverpool – A highly connected and vibrant City, with a strong City Centre supported by a hierarchy of neighbourhood and local centres. Identified as one of five Regional Cities for Sydney, Liverpool will experience rapid population and employment growth.

Liverpool Development Control Plan 2008 will guide this growth to ensure high quality and sympathetic urban development outcomes are achieved, significant environmental land is protected, appropriate open space is provided and the rural character outside the Growth Centres will be maintained and enhanced.

The Future

1. There will be new suburbs in Liverpool. These will have leading urban design outcomes for both individual developments and public areas that will be created.
2. Some existing localities, particularly Liverpool City Centre, will experience significant change through substantial redevelopment, although largely within the existing street pattern. There will be increased development that will result in a different but improved urban design outcome for the locality, which enhances the local amenity. It will also create opportunities for improved public spaces.
3. Other suburbs will experience more gradual redevelopment. New development will have an urban outcome that will be compatible with existing development.
4. Liverpool City Centre will be the Regional Centre for employment, health, education, recreation and cultural life.
5. High quality medium and high density infill development will occur in a targeted manner along public transport routes near shops, which will provide greater choice for all people as to what type of housing that they want, and enable greater access to public transportation.
6. There will be a concentration of activities such as shops, community, health, high density housing around local centres in new and existing suburbs. Local centres will be enhanced with shop-top housing, which are apartments above these shops.
7. Local centres in new and existing suburbs will have active and attractive street frontages, including out of hours.
8. Centres in new suburbs will be designed to be public transport user friendly. Centres in existing suburbs will become more public transport user friendly as they redevelop.
9. New suburbs will have attractive landscaped streetscapes while existing areas will have improved streetscapes as development takes place.
10. New suburbs and redevelopment in existing suburbs will be compatible with adjoining creeks, parkland and major transport corridors.
11. There will less development that is subject to risks such as flooding, salinity etc.
12. Development in new and existing suburbs will assist in making creeks and rivers attractive and clean.

13. Development in new and existing suburbs will preserve attractive natural areas.
14. Development in new and existing suburbs will contribute to a clean and sustainable environment.
15. Development in new suburbs will provide attractive and easily accessible open space.
16. There will continue to be open space linked along creek networks.
17. New development near the Georges River will allow access to the foreshore.
18. Development in new suburbs will have attractive and efficient transport corridors. Redevelopment in existing suburbs will improve the attractiveness and efficiency of existing transport corridors.
19. Development in new and existing suburbs will allow for good safe access to cycle and pedestrian ways.
20. There will be a sense of community.
21. Conflict between land uses will be minimised.
22. New industrial areas will be attractive. Redevelopment in existing industrial areas will improve the amenity of these areas.
23. Industrial/Employment areas will provide employment and provide sufficient space for local and start-up industry with some ancillary land uses to service the local workforce.
24. New industrial areas will be easily serviced and accessible. Redevelopment in existing industrial areas will improve the serviceability and accessibility of these areas.
25. Rural areas will keep a high level of rural amenity, with new development sympathetic and appropriate to the locality.

1.2 The Objectives of Liverpool Development Control Plan 2008

The objectives of this DCP are:

- a) To provide more detailed provisions for regulating the carrying out of development.
- b) To protect and improve the natural environment in the City of Liverpool.
- c) To protect and improve the amenity of the City of Liverpool.
- d) To protect personal safety and to minimise the risk of damage to areas subject to environmental hazards, particularly flooding.
- e) To promote a high standard of urban and environmental design.
- f) To conserve, protect and enhance the environmental heritage of the City of Liverpool.
- g) To encourage a diversity of housing to meet the needs of the residents of the City of Liverpool.
- h) To facilitate development that is environmentally sustainable.

There are also additional specific objectives for each section of each part of the DCP.

2. Tree Preservation

Applies to

This section applies to applications to remove trees with or without a development application for a development and involves:

- a) Any perennial plant that has a:
 - Height greater than 3.5m and/or
 - Canopy spread of greater than 4m and/or
 - Primary trunk diameter greater than 400mm when measured 1m above the existing ground level of the tree.
- b) Any tree that forms part of a heritage item or is situated within a heritage conservation area.

This section does not apply to:

- a) Any species, populations or communities listed under the provisions of the *Threatened Species Conservation Act (TSC) 1995*; or their habitats.
- b) Any plant that is on the Noxious Weeds Register for Liverpool City Council or listed in Appendix 3. (These plants must be removed, and destroyed in a way to ensure that they do not spread. It can be an offence to leave a noxious weed on a site.)

Background

Trees provide a natural amenity and appeal to urban environments. They are an integral part of built and natural landscapes and perform a key role in recycling oxygen, energy and important soil nutrients within ecological systems. They provide many benefits by reducing climatic extremes, improving air quality and providing habitat, which supports much of life on earth. Insects, birds, frogs and mammals and including familiar wildlife such as parrots and possums are attracted to the areas where we live.

Consequently, tree preservation is an important consideration for urban dwellers and Council. This DCP and Council's Tree Preservation Policy will help ensure these values are preserved for the future. The DCP overrides any inconsistency between these two documents.

Any proposal to prune or remove a tree located on private property requires development consent from Council. Legal action may be taken against any person in either the Local Court or Land and Environment Court who fails to obtain consent prior to pruning or removing a tree.

Objectives

- a) To ensure the protection of trees that are contributing to the ecological and aesthetic values of the Liverpool LGA.
- b) To protect the integrity of heritage items through preservation of all trees occurring within the heritage place, precinct or land.
- c) To ensure trees are maintained in an appropriate manner as not to cause harm or damage to the tree or community.
- d) To ensure that construction works and the ultimate design treatments protect the identified trees.
- e) To ensure that trees that provide high ecological or amenity benefits are protected wherever possible.

Controls

1. Any approvals to remove or prune trees issued with a development consent shall lapse when the development consent lapses or becomes invalid or void.

2. An application to remove a tree may be refused by Council if the tree:
- Form(s) a prominent part of the streetscape.
 - Stands alone and is thus of more significant than if it were part of a group of trees.
 - Is of historic or cultural significance or is/are registered on any Council register of significant trees.
 - Is prominent due to its height, size, position or age.
 - Is a locally indigenous, rare or endangered species.
 - Provides a significant visual screen.
 - Is part of an important habitat for wildlife.
 - Is part of remnant or riparian vegetation.
 - Can be effectively treated by applying appropriate remedial treatment such as pruning of branches, pruning of roots and removal of deadwood or by other appropriate action as recommended by an arborist.
 - Is listed under the provisions of the *Threatened Species Conservation Act 1995*. (Listed as a threatened species, is habitat to a threatened species or is part of a threatened ecological community).

Note: Council may refuse an application to remove a tree(s) but may give conditional consent for the appropriate remedial "branch or root pruning" for that tree(s).

3. An application to remove a tree may be consented to by Council if the tree:
- Has sustained severe damage, e.g. from wind, lightning, flood or impact from a vehicle, and cannot respond to remedial treatment.
 - Causes or is likely to cause structural damage to property including any building or pipeline, only if the damage cannot be contained by appropriate pruning of the tree's roots and installation of a root barrier.
 - Is causing an allergic reaction in any local resident, and the reaction has been certified in writing by a medical allergy specialist.
 - Causes considerable overshadowing to dwellings (restricts potential sunlight penetration to habitable rooms to under three hours per day).
 - Obstructs the line-of-sight for motorists and presents dangerous traffic conditions.
 - Is essential to mitigate a fire hazard.
 - Is dead, dying, or has become dangerous.
4. Applications for trees that have Aboriginal markings and/or constitute an item of Aboriginal significance shall be referred to the *NSW Department of Environment and Climate Change (DECC)*. Intensive management options such, as fencing or buffer provisions will be considered to ensure adequate preservation.
5. Any pruning shall be undertaken in accordance with *AS 4373/2007 – Pruning of amenity Trees*.
6. All existing indigenous trees shall be retained or replaced. Where approval is given to remove trees, appropriate replacement planting will be required.
7. Significant trees that are identified as having habitat value shall not be relocated or removed.

3. Landscaping and Incorporation of Existing Trees

Applies to

This section applies to land, which will need to provide landscaping or retain existing trees as part of a development.

Background

Vegetation is an integral part of the environment, with the type and quantity of vegetation provided being one of the key influences in determining the quality and character of Liverpool's urban and rural environments. Many urban and even rural environments have been largely cleared of trees and shrubs. The provision of landscaping is a step to reintroduce vegetation into these environments in a way that complements the built environment.

Landscaping provides visual interest and amenity, provides recreation areas, and assists in managing the climate of the built environment. The use of existing vegetation assists with the provision of landscaping. In particular native trees in urban and rural environments have many valuable functions:

- Soften the visual impact of large-scale developments and increased densities.
- Assist in managing the climate of the built environment.
- Supports native plants and animals by providing habitat.
- Add to aesthetic and environmental values.
- Serve as a natural screen to the sun, wind and noise.

Good design recognises that landscape and buildings operate together as an integrated system, resulting in greater aesthetic quality and amenity for the occupants, neighbours and the public domain. Landscape design builds on the existing site's natural and cultural features to contribute to a development's positive relationship to its context and site.

Objectives

- a) Promote landscape planning and design as part of a fully integrated approach to site development.
- b) Assist in improving the climate of the local environment.
- c) Retain as many existing trees as possible.
- d) To provide habitat for locally indigenous plants and animals and contribute to biodiversity.
- e) To encourage landscaping that is appropriate to the natural, cultural, built and heritage characteristics of its locality.
- f) Improve the amenity of developments and adjoining areas by ensuring proposals adequately complement the proposed building forms and surrounding streetscape.
- g) Ensure that the proposed landscape designs provide functional attributes such as privacy, shade and wind protection, while discouraging the opportunity for crime and vandalism.

3.1 Retention of existing on site trees

Controls

1. Existing trees and native vegetation are to be retained, protected and incorporated into the development proposal. This is particularly important for vegetation which forms part of a ridgeline tree canopy and in foreshore and riparian areas (with the exception of weed species).
2. Prior to the commencement of the design of a development existing trees should be identified. The design of a development should consider options to retain existing trees.
3. Existing indigenous trees within any building setback should be retained where possible, as an integral component of the site's landscaping, and to protect local habitats.
4. It is important that all plans accompanying the development application including engineering and hydraulics plans are consistent with the landscape plan. This is particularly important where trees are to be retained. For example storm water lines and excavation should not be within the drip line of trees to be retained.

Note: Where trees are located outside the normal building envelope for a development, Council will give particular attention to the retention of those trees.

The following shows some ideas for retention of existing on site trees.

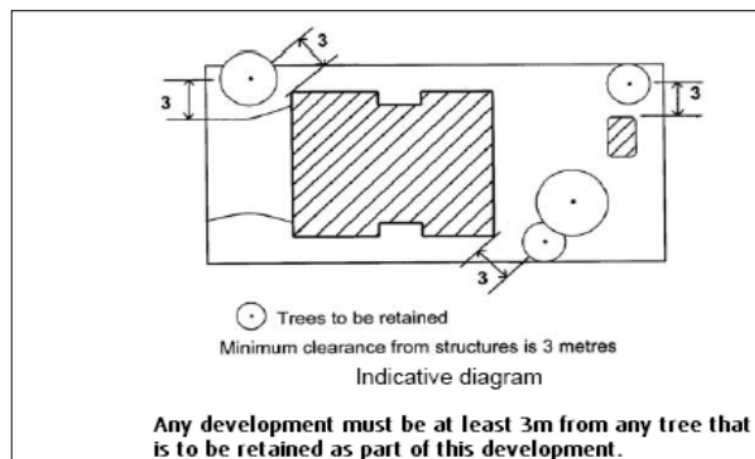


Figure 1 Retention of trees

3.2 Retention of existing street trees

Controls

1. Prior to the commencement of the design of a development existing street trees should be identified. The design of a development should consider options to retain existing street trees.
2. The design and location of access driveways should wherever possible be located to avoid removal of any existing street trees.

3.3 Protection of existing trees during construction

Controls

1. Trees nominated for protection must be enclosed within a 1.8m high protection fence that is installed to conform to a Tree Protection Zone (TPZ) that is consistent with current Arboriculture industry standards.
2. A report which outlines the condition, dimensions and species of existing trees contained within a development site is to be included as part of any development application documents and is to be accompanied by a Tree Retention Management Plan which shows the dimension of any proposed TPZs and outlines any other protection/enhancement methods that are appropriate to encourage the viable retention of trees.
3. All reports pertaining to trees on development sites are to be prepared by a suitably qualified person.

3.4 Landscape Specifications

Controls

1. Landscape planting should be principally comprised of native species to provide an integrated streetscape appearance. Species selected in environmentally sensitive areas should be indigenous to the locality. However, Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access. Environmental and noxious weeds in Liverpool shall not be used in the landscape design
2. The landscaping shall contain an appropriate mix of canopy trees, shrubs and groundcovers. Avoid medium height shrubs (0.6 – 1.8m) especially along paths and close to windows and doors.
3. Landscaping in the vicinity of a driveway entrance must not obstruct visibility for the safe ingress and egress of vehicles and pedestrians.
4. Trees, which are planted around high use facilities such as car parking areas, children's, play areas and walkways should have clean trunks to a height of 1.8m.
5. All topsoil used shall be sourced from a recognized commercial topsoil supplier. Site topsoil will only be considered suitable where the material has a high organic content. The consultant shall inspect and approve all top soiling prior to commencement of planting and application of mulch. An imported light and free draining topsoil mix is to be used in all planters.
6. The following minimum topsoil and mulch depths are to apply:

- Garden beds	300mm
- Turfed areas	100mm
- Planters on structure	750mm
- Mulch over garden beds	75mm
7. Trees shall be planted well clear of underground services or overhead wires. Trees shall be planted in general accordance with the following minimum distances from buildings:

- Small trees less than 6m mature height	2m
- Medium trees 6 – 15m mature height	3m
- Large trees more than 15m mature height	4m

Refer to Appendix 2 for the Preferred Species.

8. To maintain tree health, all trees in lawn areas are to have a 75mm deep x 1m diameter layer of mulch around its base. The mulch layer is to be reduced in depth directly around the base of the stem to form a shallow watering dish. The tree is to be staked well clear of the root ball and tied using Hessian ties as required.
9. All approved landscaping must be maintained at all times to the satisfaction of Council.
10. All trees are to be planted at not less than 45 litre pot size.
11. Use low water/low maintenance plant selection by selecting drought tolerant species.
12. Applicants need to demonstrate that plant selection is suitable for the particular soil type of the site and comply with any site constraints such as Bushfire Prone Land.
13. Where possible, all landscaping designs should incorporate permeable paving options. Permeable paving includes the use of porous paving units, ornamental gravel and paving on a compacted sand bed. Permeable paving ensures that air and water is made available to tree roots while providing a safe and stable pedestrian surface and around trees. Benefits include:
14. Ensuring that air and water are available to tree roots to ensure healthy and secure growth.
15. Assisting in the protection of established trees where the root system extends beyond the drip line.
16. Reducing the amount of surface water runoff entering the stormwater system.
17. Maintaining the existing natural drainage patterns.
18. All landscaping should consider soil salinity. Sites identified as having moderate to high levels of salinity shall incorporate the following measures in the landscape plan:
19. Selection of salt tolerant plant species (generally natives).
20. Use mulch in all gardens beds.
21. Minimise large areas of lawn, as this requires large quantities of irrigation.
22. Use "water-wise" garden and landscape design.
23. Plant large native trees and shrubs.

4. Bushland and Fauna Habitat Preservation

Applies to

This section applies to:

- a) All land, which contains or is adjacent to bushland.
- b) All land that contains known or potential habitat for threatened species, populations or communities.
- c) Any Land zoned:
 - W1 – Natural Waterways
 - SP1 – Drainage
 - Land shown on the Environmental Significant Land Maps of the *Liverpool LEP 2008*.
 - E2 – Environmental Conservation
 - E3 – Environmental Management
 - Any land under the definition of a waterbody in the *Liverpool LEP 2008*.
- d) Development that has potential to directly or indirectly destroy or adversely affect bushland.

Background

Bushland provides a variety of positive values to an urban area, including education, conservation, scientific and aesthetic values. It consists of native groundcovers, shrubs and trees that combine to produce a community that provides habitat for fauna. In many areas only a small number of native species remain and their health and existence are increasingly threatened by urban development.

As well the positive contributions at a local level to the urban and rural environments, bushland preservation contributes to total catchment health and preservation of biodiversity.

Objectives

- a) To protect and manage natural assets in association with the development of land.
- b) To conserve the natural heritage of Liverpool.
- c) To maintain and improve the amenity and scenic qualities of Liverpool.
- d) To maintain and enhance the biodiversity and natural ecology of Liverpool.

Controls

1. Bushland, particularly that identified as a threatened community or habitat for a threatened species shall be substantially retained and incorporated within a development. Clearing of bushland in association with any development shall be limited to the extent necessary to facilitate the safe and orderly use of the land.
2. Where impacts on threatened biodiversity are unavoidable, offsetting utilising the NSW Government BioBanking Scheme will be required where practicable.
3. Where bushfire management measures are required that involve clearance or alteration to bushland, details of proposed measures shall be submitted. Clearing for the purposes of bushfire management involving a substantial loss of bushland shall not be permitted.
4. Prior to the commencement of the design of a development, existing bushland and fauna habitat should be identified. The design of the development should consider retention of this bushland and fauna habitat.

5. Development shall not adversely impact on the long term viability of bushland. Existing connectivity and contiguity of bushland stands and fauna corridors shall be retained.
6. Where a proposal is likely to adversely impact on bushland, a Vegetation Management Plan (VMP) for the conservation of the bushland shall be submitted. The VMP shall be undertaken in accordance with pertinent NSW Office of Water Guidelines.
7. Any imported soils and/or mulches used shall be purchased from an appropriate supplier and be free of contaminants, seeds, propagules of weeds and undesirable species. Mulch shall not be used on flood liable land and/or areas where it is likely to be washed away.
8. Any proposed re-vegetation shall:
 - Augment remaining bushland.
 - Consist predominately of species which occur naturally on the site or are of local provenance.
 - Reflect the structure of natural bushland.
 - Be undertaken in accordance with a vegetation management plan which forms part of the consent.
9. Any proposed re-vegetation, seed collection and weed removal to be undertaken as part of the implementation of the approved vegetation management plan shall be undertaken by an appropriately qualified and licensed bushland restoration contractor.
10. Council may require measures to restrict access to bushland areas where it considers necessary, to ensure the conservation of bushland.
11. A flora and fauna assessment is required where a site is identified as containing native vegetation or habitat for threatened flora or fauna. The flora and fauna assessment shall consider all impacts associated with the development on the habitat, including the impacts of APZ's and water management practices. Flora and Fauna Assessments should be prepared in accordance with pertinent NSW Office of Environment and Heritage survey and assessment guidelines. The assessment must be prepared by a suitably qualified person.

5. Bush Fire Risk

Applies to

This section applies to:

1. Land identified as being Bushfire Prone Land or designated as Bushfire Prone Lands Buffer Zones on Liverpool City Council Bushfire Prone Land Maps.
2. All land that requires bushfire hazard reduction (burning).

Background

The desire to live close to nature means that many homes are built in areas that are at risk of bush fire. The *NSW Rural Fire Service* advises that 80% of homes destroyed by bushfire are built within 100m of bushland.

Council maintains many areas of bushland and reserves systems. As development continues to expand throughout the southwest there is an increasing number of developments encroaching or in close proximity to areas of bushland and are subsequently placed at bushfire risk.

Adequate planning and construction provisions need to be implemented and maintained to ensure the protection of developments in bushfire prone areas. Bushfire hazard maps have been developed by Bush Fire Risk Management Committees to assist in identifying areas of low, moderate and high bushfire hazard, based upon the surrounding vegetation and topography of the area.

It should be noted that despite planning and construction provisions to protect developments from bushfire risk, these would not guarantee the lifetime safety of the development though it will assist in minimising the severity of the risk.

Objectives

- a) To reduce the possible loss of life or property in the event of a bushfire and provide a safer environment.
- b) To ensure that development in bushfire prone areas is accessible by emergency services at all times.
- c) To ensure that development in bushfire prone areas is designed to enhance the survivability of the building and is prepared for its defence in the event of a bushfire.
- d) Implement an ongoing maintenance regime to manage surrounding vegetation and asset protection zones to reduce possible bushfire fronts and protect the development.
- e) To ensure that Asset Protection Zones (APZ) do not have a significant impact upon biodiversity.

Controls

1. Construction of single dwellings on or adjacent to bushfire prone land is to be carried out in accordance NSW Rural Fire Service's Single Dwelling Application Kit.
2. All development shall comply with provisions of the Rural Fires and Assessment Act 2002 and *Planning for Bushfire Protection 2006*.
3. Asset Protection Zones shall be provided within the boundary of the land on which a development is proposed but may include public streets located between the land and bushland.
4. Development controls which shall be addressed to ensure bushfire risk is reduced include the following.

- Clearing for the purposes of bushfire management shall not be permitted where loss of bushland is deemed to be unacceptable by Council in terms of quantitative and qualitative aspects.
- Where development requires bushfire management measures involving clearance or other alteration to bushland, details of proposed measures shall be submitted with a development application.
- Asset Protection Zones are to be placed primarily within the Residential zones. APZs shall not be located on land in the E1, E2 or E3 zones, particularly where altering these lands to create an APZ may conflict with the LEP objectives. Key aspects of an APZs are illustrated below.

5. The key components of APZs are illustrated below in Figure 2.

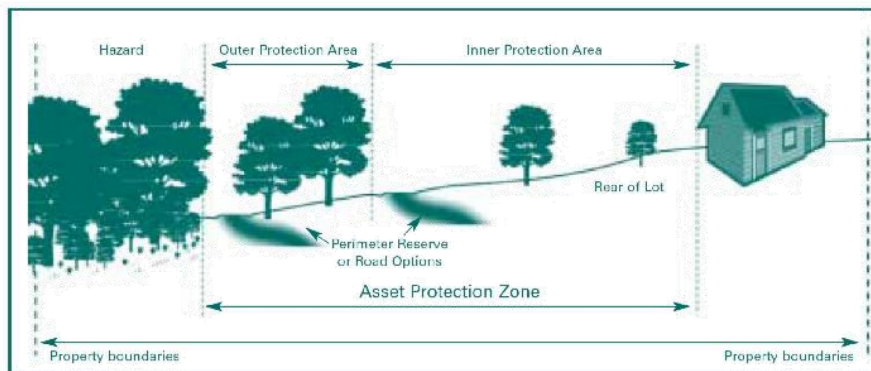


Figure 2 Key Components of an APZ (NSW Rural Fire Service 2002)

6. The APZs are to be placed as restrictions on the burdened allotments. No habitable or storage structures are permitted within those zones. Developments permitted in these zones include cycleways, footpaths, children's playgrounds and gas barbeques.
7. APZs shall be combined with active recreational uses where possible.
8. APZs may be landscaped with native grassland species that occur naturally on the site or on surrounding lands.
9. Minimal quantities of combustible materials shall be stored within inner protection zone.
10. New subdivisions in bushfire interface areas shall include a perimeter road.
11. A perimeter fire trail instead of a perimeter road may be acceptable where:
 - The perimeter fire trail is located on an east facing slope.
 - A small subdivision is being added to an existing urban area, where the pattern of development does not allow for a perimeter road.
 - Adequate arrangements are provided for ongoing maintenance of the perimeter trail.
12. Development shall be located to minimise the risk of loss of life and property from bushfire.
13. Development applications relating to land identified on the Bushfire Prone Land Map shall be accompanied by a bushfire hazard assessment report prepared by a suitably qualified professional.
14. Any development in a bushfire interface area shall not reduce the effectiveness of any existing APZ.

15. The APZ shall be located and designed to allow ongoing maintenance to be readily carried out by the responsible landowners or occupiers.
16. Hazard reduction (burning or mechanical) proposals shall be in accordance with the *Liverpool Bush Fire Risk Management Plan* and the Bush Fire Environmental Assessment Code. Landowners wishing to undertake hazard reduction shall contact the *NSW Rural Fire Service* (NSWRFS) for any requirements. Applications to undertake hazard reduction will be assessed by the NSWRFS.
17. Guidelines for hazard reduction include:
 - As far as possible, the frequency, time of year and intensity of any hazard reduction burning in native vegetation is to approximate the natural regime.
 - Periodic weed monitoring and control shall be undertaken after bushfires and hazard reduction burning, and appropriate action taken as necessary.
 - All Asset Protection Zones shall be provided within the boundary of the subject land. National Parks, Crown Reserves, water catchments, easements, Council managed reserves and riparian corridors shall not be considered as part of Asset Protection Zones.

6. Water Cycle Management

Applies to

This section applies to all developments, which involve additional buildings or hard surface areas.

It does not involve on site disposal of sewage. Refer to Section 15 – On Site Sewage Disposal.

Background

Stormwater has the potential to cause loss of life, serious property damage, erosion and sedimentation. The management of stormwater is however part of a larger management of the water cycle. This management not only includes managing stormwater events, the quality of rainwater runoff, erosion and sedimentation but also the use of rainwater to supplement reticulated water supplies. The management of the water cycle has its impacts on the design of developments.

Objectives

- a) To ensure that there is no adverse impact from stormwater runoff on downstream properties as a result of development in the catchment for all storm events up to and including a 100-year ARI event.
- b) To collect and use rainwater from roof tops to reduce town water consumption.
- c) To ensure adequate drainage is provided for developments.
- d) To protect properties from localised flooding.
- e) To prevent contaminated run-off from entering watercourses.
- f) To minimise erosion and reduce the volume of waste water entering waterways.
- g) To minimise sedimentation and pollution in waterways and drainage systems.
- h) To maintain and enhance the quality of natural water bodies such as creeks, rivers and groundwater.

6.1 Gravity Drainage to Council's drainage system

Applies to

This sub-section applies to development, which drains to a drainage system constructed by or on behalf of Council. This includes drainage to the pipe system, constructed drains, detention basins and constructed swales.

Controls

Stormwater runoff shall be connected to Council's drainage system by gravity means. Mechanical means (i.e. pump) for disposal of stormwater runoff will not be permitted except for basement car parks. Charged systems will not be permitted.

Easements to drain stormwater

1. The acquisition of drainage easements over downstream properties will be required where direct access is not possible to Council's drainage system (i.e. street kerb and gutter, piped system or open channels and watercourses).
2. All costs associated with the value of land and easement creation are to be borne by the developer.
3. Written consent for the piping and acquisition of an easement is to be obtained from adjoining owners and provided to Council at the time of lodging the Development Application. Inability to provide a gravity stormwater drainage system and easement to drain water in favour of the development site will prevent the granting of Development Consent. Creation of easement(s) shall be completed prior to the issue of the Construction Certificate.
4. Where negotiations between a developer and a downstream property owner have failed to obtain an easement, an easement may be granted via the Land and Environment Court.
5. Exception to acquiring an easement may be given for sites that do not drain to the street, only where extensions to an existing residential building or replacement of an existing house or dual occupancy is proposed, and genuine attempts at acquiring a downstream easement have failed. Written documentation of these attempts, including reasonable financial consideration, must be included for any application for exemption. If an exception is granted an alternative drainage system may be considered by Council.

Stormwater Drainage Concept Plan (SDCP)

For developments that require construction of stormwater drainage, a SDCP shall be submitted with the Development Application demonstrating the feasibility of the proposed drainage system within the site and connection to Council's system. Early consultation between engineers and architects is required to reduce possible conflicts in the final plan.

Visual impact

All drainage structures and storage areas are to be designed to be visually unobtrusive and sympathetic with the environment. This requirement is necessary to help ensure that future occupants do not adjust or remove facilities for aesthetic reasons without understanding the functional impact of such actions.

Surface flow Paths

1. Surface flow paths, including the provision of an emergency overflow to cater for blockage of the system or flows in excess of the 100-year ARI storm flow must be provided.
2. The flow route must be capable of carrying the flows generated by a 100-year ARI storm with a freeboard of 300mm to the adjacent habitable floor levels of the development site and adjoining properties.
3. Development must not cause any adverse impact on adjoining or any other properties. This includes maintaining surface flow paths and not increasing water levels in these flow paths. Diverting flows from one catchment to another will not be permitted.

Runoff from adjacent properties

Surface runoff from upstream properties shall not be allowed to enter OSD systems. On Site Detention systems must not be located in overland flow paths, which convey catchment flows through the site.

Floor and Ground Levels

All habitable floor levels are to be a minimum of 300mm and garage/non habitable floor levels to be a minimum of 150mm above the maximum design storage water surface level and flow path levels.

On-Site Stormwater Detention

1. On-Site Detention (OSD) systems provide temporary storage of stormwater runoff from developments and restrict discharge from the site at a rate which council's existing drainage system is capable of accommodating.
2. OSD may only be used where:
 - The existing or proposed stormwater pipe system that is unable to cater for the increase in discharge due to development.
 - The development will involve an increase in impervious area on the site.
 - It is intended to connect stormwater directly to the street kerb and gutter only and the discharge exceeds 20 litres per second for the 10-year ARI.
3. OSD will not be required where:
 - The increased discharge for all storms up to and including a 100-year ARI can be accommodated by the existing stormwater pipe system.
 - A building addition or internal alteration is within the footprint (plan area) of the existing building.
 - The additional impervious surfaces (e.g. roof, driveway, paving) total is less than 30sqm in plan area. (NOTE: the designer is advised to confirm with council engineer first to ensure the cumulative total of previous and future additions still remain less than 30sqm, otherwise OSD will apply).
 - The sub-division of an existing development does not change the buildings or the impervious areas of the site.
 - Sites substantially inundated by flooding.
 - The development contributes funds to a major basin strategy that mitigates the impact of the increased impervious area and there are no other local drainage issues requiring OSD.
4. Calculations shall account for the total development site area.

Refer to Council's *On Site Stormwater Detention Policy and Design Specification*.

6.2 Gravity drainage to a creek system

Applies to

This sub-section applies to development, which drains to a natural creek or river. It does not apply to development, which drains to a constructed swale or other similar drainage work.

Controls

All buildings shall be setback a minimum of 40m from the top of the bank of a creek or river, subject limitations imposed by flooding or Foreshore Building Lines.

Nutrient loading/effluent

Depending on the proposed use there may be a need to provide a permanent water quality basin to minimise any contaminated runoff.

Erosion protection of creek banks

All outlet structures discharging to a creek system shall provide scour protection and energy dissipaters.

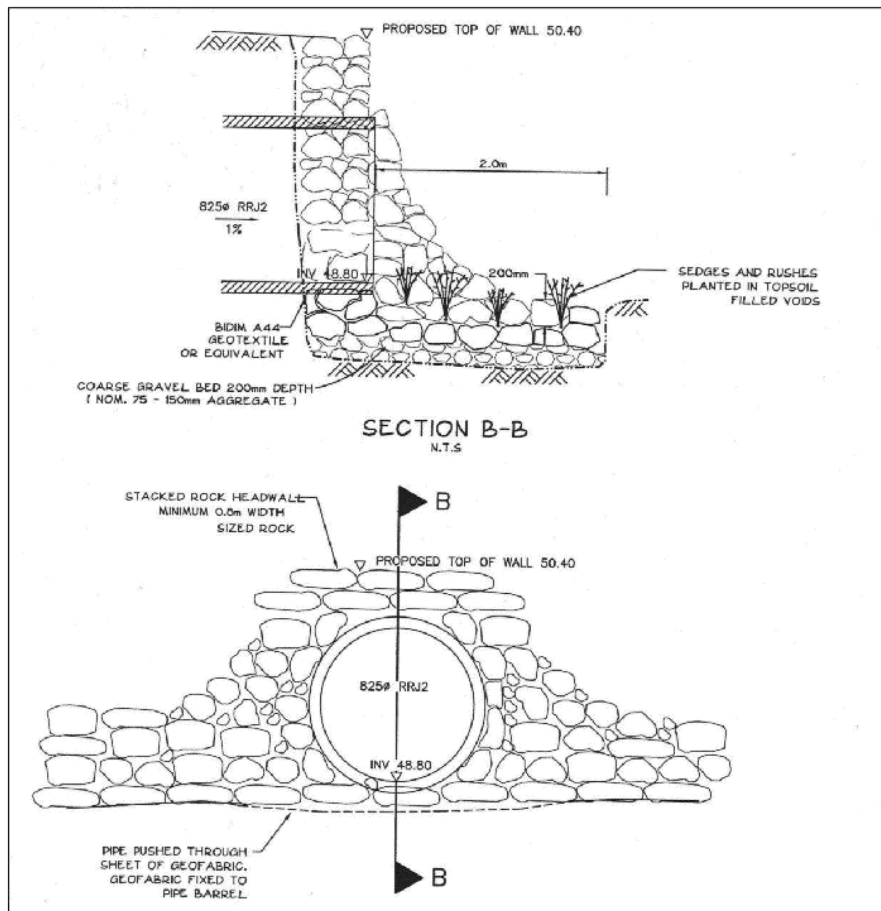


Figure 3 Discharging to a creek system

For more information on water cycle management please refer to *Council's Stormwater Design Specification*.

6.3 Gross Pollutant Traps

Applies to

This sub-section applies to:

- a) Development on land within a Business or Industrial zone.
- b) Development on private land that includes the construction of car parks or other significant impervious areas where there is a potential for the generation of gross pollutants.
- c) Locations where gross pollutant traps are required by Part 2 of the DCP

Background

Stormwater runoff has the potential to mobilise significant quantities of gross pollutants or sediment from a development and deposit this pollution in local waterways. This pollution can significantly impact on waterways in terms of aesthetics, damaging plants, destroying the environment / habitats and introducing chemical water quality pollutants.

Objectives

- a) To prevent the transportation of gross pollutants and sediment from a site by stormwater runoff during the operational stages of a development.
- b) To install gross pollutant traps or utilise equivalent water sensitive urban design treatment train prior to discharge of stormwater from a site.
- c) To require developments to capture or prevent the generation of gross pollutants and sediment on site and at their own cost.
- d) Ensure that any gross pollutant traps on Council land are installed in accordance with a master plan or water cycle management plan to the satisfaction of Council.

Controls

- 1. A minimum of one gross pollutant trap shall be required between the last downstream stormwater pit or pollution source and prior to discharge from the site.
- 2. Gross pollutant traps shall not be located within the banks of watercourses or within riparian zones.
- 3. Where a valve is required to isolate a site during a pollution spill, consideration shall be given to the location of the valve in relation to gross pollutant traps.
- 4. The design of the gross pollutant trap shall comply with Council's drainage design specifications.
- 5. Details of the proposed gross pollutant trapping system, performance and compliance with Council's drainage design specifications shall be included in the Stormwater Drainage Concept Plan.

Note: The impact of the device and cleaning activities on adjacent areas shall be considered.

6.4 Stormwater Runoff Quality

Applies to

This sub-section applies to all development except for development applications for single dwelling houses and dual occupancy housing.

Background

Waterbodies in urban or agricultural areas usually, suffer from decreased water quality. This adversely impacts on the biodiversity of the waterbody and the use of watercourses by humans.

Objectives

- a) To ensure that stormwater runoff is of suitable quality to protect the aquatic ecosystems of waterbodies within Liverpool and downstream receiving catchments.
- b) To protect the aquatic environment of the Georges River catchment and the Hawkesbury Nepean River catchment.
- c) To maintain and enhance freshwater and estuarine ecosystems, including biodiversity, relative abundance and ecological processes.

Controls

- 1. The post development water quality shall be reduced to the following targets when compared to pre development water quality:
 - 45% reduction in the mean annual load of total nitrogen.
 - 45% reduction in the mean annual load of total phosphorus.
 - 80% reduction in the mean annual load of total suspended solids.
- 2. In the case of areas where council has adopted a master plan or in Part 2 specifying water quality targets. The requirements of those documents shall be utilised in preference to the targets listed above.
- 3. In the case of green field developments where Council has not adopted a master plan or is not included in Part 2 of the DCP specifying water quality targets the above targets shall be utilised by comparing post development water quality with that of a conventional stormwater drainage design without water quality treatment for an urbanised development.

6.5 Stormwater Quality Management**Applies to**

This sub-section applies to the following development applications.

- a) Residential development greater than 2,000sqm;
- b) Commercial, retail, industrial, and / or mixed use development involving new or additional gross floor area of greater than 100sqm; and
- c) Any development which involves the construction or designation of 10 or more additional uncovered car parking spaces.

Single dwelling houses and dual occupancy housing on lot area of less than 2,000sqm are exempt from these requirements.

Background

The Liverpool Local Government Area (LGA) is traversed by two major river systems, the Georges River and the Nepean River, and many of their tributary creeks and waterways systems. Waterways are under pressure from past and ongoing developments, catchment disturbance and hydrological modification, land use transformation and large-scale vegetation changes. Stormwater runoff has the potential to mobilise significant quantities of gross pollutants and sediments as well as nutrients from a development site and dispose into the local waterways. These pollutants will have significant adverse impact on the aesthetics and ecological health of waterways and the riparian corridor.

In June 2016, Council adopted the Water Management Policy that aims to integrate and coordinate Council's water management initiatives to achieve its strategic target to improve ecological health of all waterways within the LGA. The Policy seeks to provide a proactive response to the development pressures and aims to protect the aquatic ecosystems, the water resources and minimise the impacts of urban development to the urban water cycle through the necessary improvements to the quality of stormwater discharged to the waterways.

The Policy requires the design and construction of water quality improvement devices considering a sequence of water quality treatment train to effectively improve water quality to desirable level while also offering substantial short and long-term ecological, environmental, and economic benefits. The water quality treatment train generally comprises of gross pollutant traps (GPT), bio retention basins, bio swales and raingardens.

The GPTs provide the primary treatment to stormwater runoff that use physical processes to capture and retain gross pollutants such as litter and coarse sediment from stormwater runoff. The fine sediments are removed and chemical pollutants are treated through the provisions of bio swales, raingardens and bio retention basins.

Objectives

The objectives of the stormwater quality management DCP provision is to provide necessary control to set standards for post development stormwater runoff in a way that:

- a) Ensures a holistic and coordinated catchment based approach across all areas of council in managing water;
- b) Enables achievement of council's water quality targets for its major creeks and rivers;
- c) Ensures that stormwater runoff is of suitable quality to protect the aquatic ecosystems of receiving waterbodies and downstream catchments; maintains and enhances freshwater and estuarine ecosystems, including biodiversity, relative abundance and ecological processes; and
- d) Promotes community participation to encourage source control to reduce pollutants reaching its major creeks and rivers.

Controls

1. The post development stormwater runoff quality shall be improved to achieve the following reduction targets when compared to pre development levels:
 - 45% reduction in the baseline annual pollutant load of total nitrogen (TN);
 - 65% reduction in the baseline annual pollutant load of total phosphorus (TP);
 - 85% reduction in the baseline annual pollutant load of total suspended solids (TSS); and
 - 90% reduction in the baseline annual pollutant load of litter and vegetation larger than 5mm, through provision of GPT.
2. Developments that this subsection applies to, including residential development of land area greater than 2,000m², are to submit a stormwater quality management assessment demonstrating that necessary water quality improvement targets are achieved.

The stormwater quality management assessment is to be prepared by suitably qualified professionals with experience in water sensitive urban design (WSUD). Water quality modelling is to be undertaken with the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) model in accordance with the Liverpool City Council WSUD Technical Guideline.

The documentation required to be submitted include:

- a) Details of MUSIC modelling, with the MUSIC parameters and assumptions.
- b) Copy of the MUSIC model used for the assessment
- c) Plans showing details of the water quality treatment devices including gross pollutant traps (GPT), bio-retention basins, bio swales and rain gardens.

- d) Analysis showing the least present value cost option is considered through the lifecycle cost assessment of all possible alternative options. The lifecycle cost assessment shall consider capital cost and ongoing operation and maintenance cost of the treatment system for minimum of 20 years.

6.6 Sewage Treatment Plant

Objectives

- a) To ensure that development near the sewage treatment plant does not encroach on the buffer zoning.

Controls

1. Development within 400m of the Scrivener Street Sewage Treatment Plant needs to be referred to Sydney Water for assessment.

6.7 Environmental Flows

Applies to

This sub-section applies to all development except for development applications for dwelling houses, semi detached dwellings, attached dwellings and dual occupancy housing.

Background

Urbanisation of catchments can increase the frequency and size of smaller stormwater runoff events. This has a significant impact on channel morphology, bed and bank stability as well as significantly influencing aquatic ecosystems. Furthermore, excessive harvesting of stormwater may reduce the water available to support aquatic ecosystems.

Objectives

- a) To ensure that development does not adversely impact on flow patterns from that of a natural undeveloped catchment.
 b) Prevent bed and bank erosion and instability of waterways.
 c) Provide sufficient environmental flows to support aquatic environments and ecological processes.

Controls

1. The peak runoff for the 1-year ARI post development does not exceed that of an undeveloped catchment.
 2. The peak runoff for the 1-year ARI post development is not less than 50% from that of an undeveloped catchment.

6.8 Water Conservation

Applies to

This section applies to all development involving the use of water.

Background

Building design can contribute to environmental sustainability by integrating measures for improved water quality and efficiency of use. Water can be conserved in a number of ways, including; reducing water demand from the mains and re-using water, which would otherwise be lost as run off or waste water.

By integrating water use efficiency, water collection and water reuse measures into building and associated infrastructure design development can contribute to environmentally sustainable outcomes.

All mains water is treated to drinking water standard. However, only about 1% of domestic water consumption is actually used for drinking.

Uses such as toilet flushing, laundry and outdoor uses do not require water to be treated to such a high standard. Such uses can be satisfactorily supplied using rainwater collected from roofs and stored in tanks. Benefits include significant water cost savings and substantial reductions in stormwater discharges.

Objectives

- a) To reduce per-capita mains consumption of potable water.
- b) To harvest rainwater and urban stormwater runoff for use.
- c) To reduce wastewater discharge.
- d) To capture, treat and reuse wastewater where appropriate.
- e) To safeguard the environment by improving the quality of water run-off.
- f) To ensure infrastructure design is complementary to current and future water use.

Controls

Residential

New dwellings, including a residential component within a mixed-use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with *State Environmental Planning Policy – Building Sustainability Index (BASIX)*.

Non-Residential

1. A comprehensive Water Management Plan must be submitted with all non-residential development to address the following criteria.
2. Installed water fixtures (shower heads, taps, toilets, urinals, etc) must be Wells 3 Star or better rated.
3. Installed appliances (dishwashers, clothes washers etc) are to be Wells 3 Star or better rated with respect to water use efficiency. Demonstrate, if necessary, how these requirements will be achieved for replacement appliances, appliances not installed at construction, or bought in by occupants following construction.
4. Install stormwater runoff control, capture and reuse, including water quality management in accordance with Council guidelines.
5. Select water efficient plants and/or, indigenous vegetation for landscape in accordance with Council's recommendations.
6. Use non-potable water for watering gardens and landscape features.
7. For development of more than \$1 million construction cost, consideration of separate pipe-work for the utilisation of recycled stormwater for non-potable purposes should be considered.
8. Submit operating details for swimming pools and water features including filling, draining and maintenance activities. Covers must be included in the building design and operational aspects of swimming pool installations.
9. Any development that contains a rainwater tank must satisfy the following criteria:
 - Rainwater is to be sourced only from roof structures via a tank storage system, the tank capacity, or combined tank capacity, must be at least 5,000L.

- Tanks may be connected to toilets and garden/outdoor taps (the common tanks in residential flat buildings are to be connected to common outdoor taps only).
- Tanks may be connected to laundry taps with suitable filters, the system is to be fitted with an effective first flush device for removing roof surface contamination.
- The system must contain a facility for periodic desludging.
- Tanks must be connected to main water to top them up during times of low rainfall with supplemental inflow not taking places until the tank is 80% empty.
- Alternatives to the above water savings methods can be presented to Council and they will be assessed on merit.

7. Development near a Watercourse

Applies to

This section applies to:

- a) Development within 40m of a watercourse, creek or river except where separated from the watercourse, creek or river by land in an
 - RE1 – Public Recreation zone ,
 - E2 – Environmental Conservation zone,
 - E3 – Environmental Management zone or
 - W1 – Natural Waterways zone.
- b) Development that may impact upon, bed, banks or stream flow of a watercourse.
- c) Development, which involves removal of riparian vegetation.

Background

Waterfront areas are often compromised due to lack of awareness and planning resulting in degradation of their environmental value.

Waterfront areas, including riparian zones represent the interface between land and watercourses. These areas are continually under threat from development pressures. These pressures have the potential to trigger the following impacts:

- Increases in sedimentation;
- Modification of flow regimes;
- Destruction of riparian vegetation;
- Visual impacts;
- Bank instability;
- Loss of biodiversity through destruction of habitat.

Waterfront areas are significant in ensuring protection of the aquatic environment through their role in acting as a bio-filter to reduce polluted surface runoff, excessive sedimentation and erosion. Therefore it is important to ensure that adequate controls are in place to maintain and enhance the environmental significance of these areas.

Objectives

- a) To protect, restore and maintain ecological processes, natural systems and biodiversity in wetlands and waterfront areas.
- b) To maintain watercourse bed and bank stability.
- c) To minimise sedimentation and pollution of watercourses and wetlands.
- d) Ensure conservation and long term maintenance of existing native vegetation in waterfront areas.
- e) To maintain lateral connectivity between waterways and riparian vegetation.
- f) To protect the visual amenity of the water and land interface.

Controls

1. If any works are proposed near a water course, the Water Management Act 2000 may apply, and you may be required to seek controlled activity approval from the NSW Office of Water. Please consult with the NSW Office of Water regarding your proposal. Section 4 Bushland and Fauna Habitat Preservation of this DCP should also be addressed when pertinent.

8. Erosion and Sediment Control

Applies to

This section applies to all development, which may involve:

- a) Clearing, levelling, shaping, excavation of the existing soil surface and or vegetation on any site or the placement of any material stockpiles on that site;
- b) Placement of any fill upon a site; and
- c) Changes in the rate and or volume or course of runoff entering a waterbody, or overland flow.

Background

The excavation of land removes ground cover and often results in stockpiling of loose soil. This has the potential to create erosion of soils on site and sedimentation downstream from a development site. The sedimentation can result not just on adjoining land or streets but on creek and river systems quite some distance away. The impact on the ecosystem of creeks and rivers can be very significant.

Objectives

- a) To avoid soil erosion through the use of effective erosion and sediment control measures both during and following any works.
- b) To reduce pollution by avoiding land degradation and disturbance of vegetation on site, hence reducing pollution impact to downstream areas and receiving waters and their ecosystem.
- c) To minimise costs involved in unblocking drains and water bodies, cleaning of roads and compensating for the loss of topsoil through improved sedimentation and erosion control.
- d) To improve water quality by reducing sedimentation.

Controls

1. The development application shall be accompanied by either a Soil and Water Management Plan (SWMP) or an Erosion and Sediment Control Plan (ESCP) as shown in Table 1.

Table 1 Plans for stormwater soils management

Plan Required	Area of Disturbance
ESCP	Up to 2,500sqm
SWMP	Greater than 2,500sqm and/or where development consent is required.

2. These plans shall be prepared in accordance with *Managing Urban Stormwater Soils and Construction*, also known as the *Blue Book* (current edition) produced by the *NSW Department of Housing*. The plans should form part of the engineering design drawings and be documented in the construction plans.
3. The SWMP and ESCP are to include the following:
 - A set of plans drawn to scale which show the layout of appropriate sedimentation and erosion control in accordance with the requirements of this DCP;
 - Outline of appropriate sedimentation and erosion control measures;
 - Proposed control of erosion and sedimentation shall be prepared by referencing and incorporating the requirements of Council's *Specification for Control of Erosion and Sedimentation*.

4. The matters to be considered in the preparation of SWMP and ESCP are detailed in the "Blue Book". These include but are not limited to:
- Slope and soil characteristics.
 - Conservation of topsoil and consideration of ecologically sustainable principles and measures.
 - Location and details of proposed control measures.
 - Control of stockpiles and re-use of material on site.
 - All weather access to the site.
 - Location of existing vegetation and vegetation to be removed.
 - Proposed method of protection of vegetation.
 - Water bodies, dams and other drainage structures.
 - Soil and water implications.
 - Re-stabilisation/revegetation details.
 - Construction site location/disturbed area boundaries.
 - Clean up of downstream sedimentation resulting from breach of erosion and sedimentation controls.
 - Order of works based upon construction and stabilisation of all culverts and surface drainage works at the earliest practical stage.
 - Proposed time schedules for construction of structures and implementation of control measures and details of proposed maintenance, inspection and corrective action.
 - Where practical, all runoff from areas up slope is to be diverted away from the disturbed areas. Diverted stormwater should be discharged onto stable areas and should not be diverted into neighbouring properties unless written permission is obtained from the land owner(s). Avoid directing stormwater towards the site's access and egress.

8.1 Sediment Basins

Applies to

This sub-section applies to development, which involves the provision of a sediment basin.

Background

The conversion of a sediment basin into a permanent water feature would significantly disturb any flora or fauna in and around the basin. There would be a need to remove accumulated sediment. Typical issues with retaining sediment basins include:

- a) Remobilisation of nutrients from sediment trapped during subdivision causing problems such as algal growth.
- b) Inappropriate design features such as bank treatments causing public safety issues as well as promoting growth and propagation of weeds.
- c) Inappropriate treatment train design promoting the accumulation of gross pollutants, weed infestation and algae growth.

Objectives

- a) To ensure that temporary sediment basins are removed when no longer needed.
- b) To ensure that temporary sediment basins are constructed in a way that there is no long-term adverse environmental impact.

Controls

1. A Sediment Basin shall not be retained as a permanent facility unless required by:
 - Part 2 of the DCP
 - Total Catchment Management Study
 - Floodplain Management Plan
2. A Sediment Basin shall not be located within core riparian areas, land in public ownership or land that is intended to be transferred to public ownership.
3. A Sediment Basin shall have no substantial impact on a natural water body or wetland.
4. A Sediment Basin shall be designed and managed to prevent the establishment of native fauna within the basin.
5. Any approval for the installation of a temporary basin must include approval for removal of that basin and site remediation.
6. Any approval for the installation of a temporary sediment basin must include a plan outlining actions to be undertaken for removal of the basin and a timeline for its removal.
7. Suitable fencing shall be installed and maintained to prevent persons from gaining access to the basin.

9. Flooding Risk

Applies to

This section applies to land identified as at or below the flood planning level.

Background

1. In 1984, the State Government introduced its current flood prone land policy applicable to New South Wales. The first Floodplain Development Manual was published in 1986, providing guidelines for the implementation of the government's flood prone land policy and the merit approach, which underpins its application. Revised guidelines were released in 2005 and are now embodied in the *Floodplain Development Manual, April 2005*. The revised *Floodplain Development Manual* continues to support the NSW Government's Flood Prone Land Policy. The primary objective of the policy is:

"To reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods, utilising ecologically positive methods wherever possible."

2. To achieve this objective the *Floodplain Development Manual* acknowledges a broad risk management hierarchy of:
 - Avoidance of flood risk;
 - Minimisation of flood risk using appropriate planning controls; and
 - Flood risk mitigation.
3. Flood risk mitigation is not always the preferred option, being costly and most likely to adversely affect the natural environment. Avoidance and minimisation of flood risk are the options most likely to be acceptable and are primarily reliant on land use planning and development control for implementation. These planning and development controls are reflected in this Section.
4. Local Government is the primary authority responsible for both flood risk management and land use planning in New South Wales. The NSW Government's flood policy provides for a flexible merit based approach to be followed by local government when dealing with planning, development and building matters on flood prone land. For Council to fully carry out its responsibilities for management of flood prone land, it is necessary to prepare local Floodplain Risk Management Plans.
5. The *Floodplain Development Manual* requires that Councils prepare Floodplain Risk Management Studies as a prelude to the formulation of a Floodplain Risk Management Plan that, among other things, would control development and other activity within the floodplain. This Section of the DCP is consistent with Council's and State Government's "Flood Prone Land Policy" and the *Floodplain Development Manual*.
6. This Section of the DCP is an application of the State Policy, which reflects local circumstances, as identified for some floodplains, through the preparation of Floodplain Risk Management Plans.

Objectives

- a) To minimise the potential impact of development and other activity upon the aesthetic, recreational and ecological value of the waterway corridors.
- b) To ensure essential services and land uses are planned in recognition of all potential floods.
- c) To reduce the risk to human life and damage to property caused by flooding through controlling development on land affected by potential floods.
- d) To ensure that the economic and social costs which may arise from damage to property due to flooding is minimised and is not greater than that which can be reasonably managed by the property owner and general community.
- e) To limit developments with high sensitivity to flood risk (e.g. critical public utilities) to land with minimal risk from flooding.
- f) To prevent intensification of inappropriate use of land within high flood risk areas or floodways.
- g) To permit development with a lower sensitivity to the flood hazard to be located within the floodplain, subject to appropriate design and siting controls.
- h) To ensure that development should not detrimentally increase the potential flood affectation on other development or properties either individually or in combination with the cumulative impact of development that is likely to occur in the same floodplain.
- i) To ensure that development does not prejudice the economic viability of any Voluntary Acquisition Scheme.

9.1 Determining Relevant Controls

Controls

The controls vary depending on:

1. Sensitivity of a land use to flooding
2. Severity of flood impact on site
3. Specific Floodplain in which a site is located

Follow these steps determine the relevant controls.

Step 1. Identify Flood Risk Category (degree of flooding risk). See Section 9.2.

Step 2. Identify Land Use Risk Category. See Section 9.3.

Step 3. Identify relevant Floodplain. See Section 9.4.

Step 4. Identify relevant Floodplain Controls. See Section 9.5 and 9.6.

The following figure summarises this consideration process.

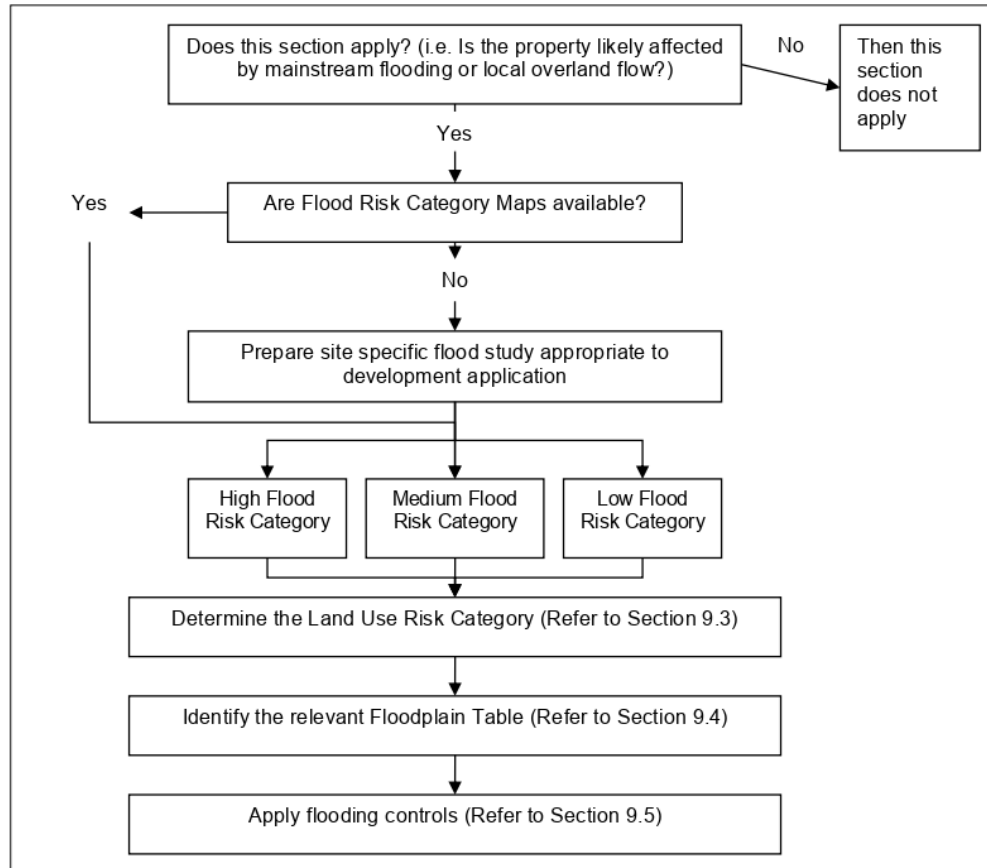


Figure 4 Flow chart for the determination of flood risk

9.2 Step 1 Identify the Flood Risk Category

Controls

1. Flood liable land is categorised according to the levels of potential flood risk as outlined below.

High Flood Risk Category means land below the 1% AEP flood that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties.

Note: The high flood risk Category is where high flood damages potential risk to life evacuation problems would be anticipated or development would significantly and adversely affect flood behaviour. Most development should be restricted in this Category. In this Category there would be a significant risk of flood damages without compliance with flood related building and planning controls.

Medium Flood Risk Category means land below the 1% AEP flood that is not subject to a high hydraulic hazard and where there are no significant evacuation difficulties.

Note: In this Category there would still be a significant risk of flood damage, but these damages can be minimised by the application of appropriate development controls.

Low Flood Risk Category means all other land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either the High Flood Risk or the Medium Flood Risk Category.

Note: The Low Flood Risk Category is where the risk of damages is low for most land uses. The Low Flood Risk Category is that area above the 1% AEP flood and most land uses would be permitted within this Category.

No Flood Risk Mapping means that there has not yet been any risk Categories determined for this area.

Note: Flood Risk Category Maps are not available for all Flood Prone Land. Applicants may be required to undertake a flood study to determine the flood extent and Flood Risk Categories in order to apply appropriate controls required by this Development Control Plan.

2. Council has prepared flood risk mapping for the majority of the floodplains within the Liverpool LGA through a number of Floodplain Risk Management Studies and Plans adopted by Council and this information is available from Council.
3. It should be noted that the flood risk mapping prepared by Council has been developed at a broad scale for the purpose of undertaking Floodplain Risk Management Studies. This mapping is considered preliminary and can be subject to refinement as part of the assessment of individual proposals. Furthermore, works consistent with the flooding provisions of this DCP and acceptable to Council could be undertaken to alter the flood risk category of land.
4. If the peak flow rate of an overland flow path, during the 1% AEP flood, exceeds 5 cubic metres per second then the overland flow path shall be treated as mainstream flooding and the development controls for mainstream flooding shall be applied.

9.3 Step 2 Identify Land Use Risk Category

Land use is categorised into 8 Land Use Risk Categories according to the sensitivity of each land use to flooding. The definitions of each land use are based on the *Liverpool LEP 2008*, are categorised as follows.

Critical uses and Facilities

Community facility which may provide an important contribution to the notification or evacuation of the community during flood events

Hospitals

Residential care facility

Sensitive Uses and Facilities

Educational establishments

Schools

Hazardous or offensive industry or storage establishment

Liquid fuel depot

Seniors housing

Utility installations or Public utility undertakings (including generating works) undertakings which are essential to evacuation during periods of flood or if affected would unreasonably affect the ability of the community to return to normal activities after flood events

Telecommunications facility

Waste disposal land fill operation

Group home

Subdivision

Subdivision of land, which involves the creation of new allotments, with potential for further development

Residential

Attached dwelling	Exhibition village	Residential accommodation
Backpackers' accommodation	Family day care centre	Residential flat building
Bed and breakfast premises	Health consulting rooms	Rural workers' dwelling
Boarding houses	Home-based child care service	Secondary dwelling
Canal estate development	Home business	Semi-detached dwelling
Caravan Park	Home occupation	Serviced apartments
Child care centre	Hostel	Shop top housing
Dual occupancy	Information and education facility	Utility installations or Public utility undertakings (other than critical utilities)
Dwelling	Moveable dwelling	Tourist and visitor accommodation
Dwelling house	Multi dwelling housing	
Exhibition home		

Commercial or Industrial

Agricultural produce industry	Funeral home	Registered club
Amusement Centre	Heavy Industry	Restaurant
Animal boarding or training establishment	Heliport	Retail premises
Boat repair facility	Hotel accommodation	Roadside stall
Boat shed	Industry	Rural industry
Bulky goods premises	Kiosk	Sawmill or log processing works
Business premises	Light Industry	Service station
Cemetery	Materials recycling or recovery centre	Sex service premises
Charter and tourism boating facility	Medical centre	Transport depot
Commercial port facility	Mortuary	Take away food or drink premises
Crematorium	Neighbourhood shop	Tank based aquaculture
Depot	Office premises	Truck depot
Electricity generating works	Passenger transport terminal	Vehicle body repair workshop
Entertainment facility	Place of public worship	Vehicle repair station
Freight transport facility	Public administration building	Vehicle showroom
Function Centre	Recreation facility (indoor)	Veterinary hospital
Funeral chapel	Recreation facility (major)	Warehouse or distribution centre

Recreation or Non-urban Uses

Agriculture
 Aquaculture
 Dam
 Environmental facility
 Extractive industry
 Feedlot
 Helipads
 Horticulture
 Intensive livestock agriculture
 Landscape and garden supplies
 Marina
 Recreation facility (outdoor)
 Stock and sale yard
 Turf farming

Concessional Development

1. In the case of residential development:
 - An addition or alteration to an existing dwelling of not more than 30sqm or 10% (whichever is the lesser) of the habitable floor area which existed at 1 December 1987. (The date of adoption of the first *Liverpool City Council Floodplain Management Plan*); or
 - The construction of an outbuilding with a maximum floor area of 20sqm (or 50sqm for land zoned for non urban purposes); or
 - Rebuilding dwellings in a manner which substantially reduces the flood risk having regard to property damage and personal safety when compared to the existing building.
2. In the case of other development:
 - An addition to existing premises of not more than 10% of the floor area which existed at 1 December 1987. (The date of adoption of the first *Liverpool City Council Floodplain Management Plan*); or
 - Rebuilding of a development in a manner which substantially reduces the flood risk having regard to property damage and personal safety when compared to the existing development; or
 - A change of use, which does not increase flood risk having regard to property damage and personal safety; or
 - Subdivision that does not involve the creation of new allotments with potential for further development.

9.4 Step 3 Identify relevant Floodplain

Identify the relevant Floodplain on Figures 5 & 6.

9.5 Step 4 Identify relevant Floodplain Controls

1. Each floodplain area has two sets of controls. These are:
 - Mainstream Flooding Controls, identified in Tables 2 – 4 and Section 9.6.
 - Local Overland Flooding Controls, identified in Table 5.
2. Development on flood prone land will be required to comply with either or both of these.
3. An explanation of these controls is in Table 6.

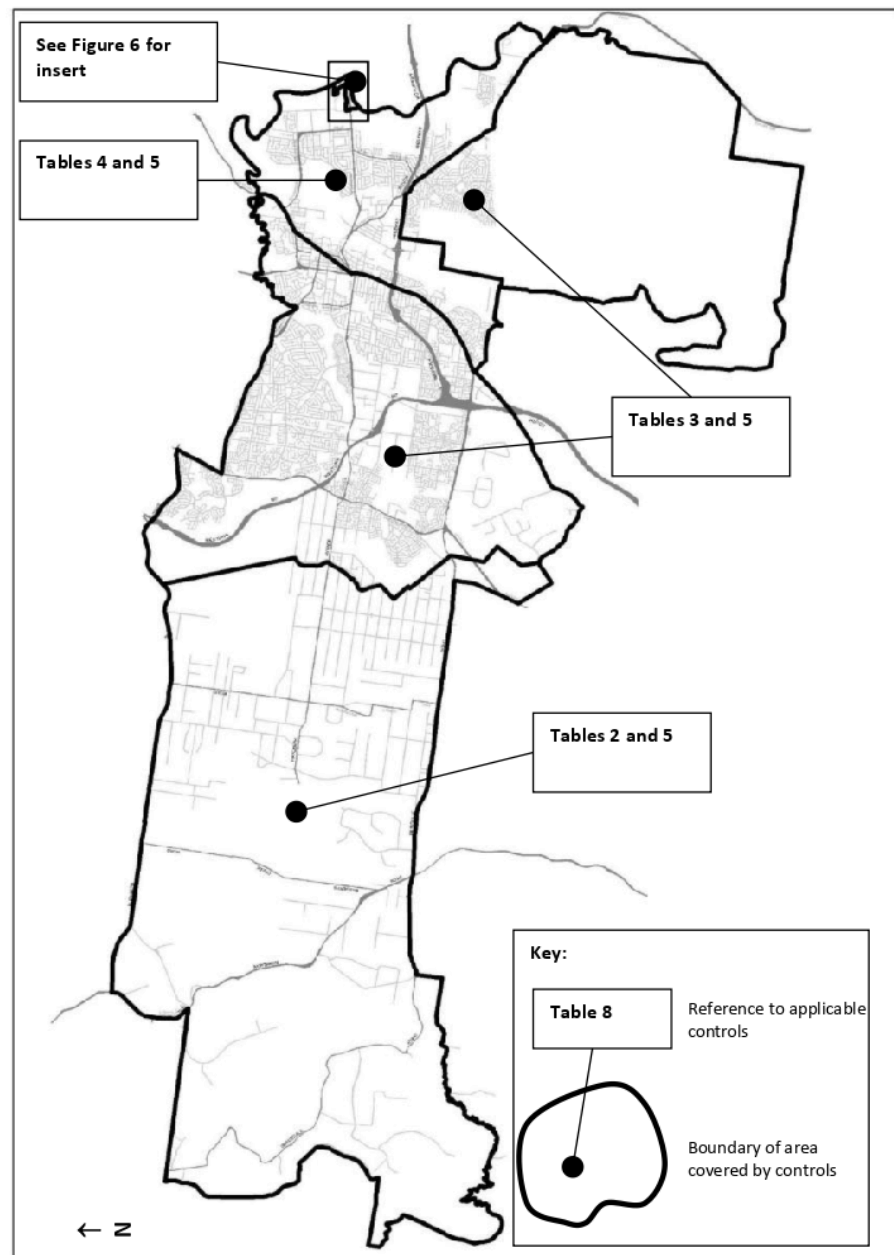


Figure 5 Map for identification of relevant floodplains

Table 2 Nepean River Floodplains (Includes South Ck, Kemps Ck, Bonds Ck and other tributaries of the Nepean River)

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Low Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities	12	4	4	2, 4, 5	2, 3, 6, 7, 8	2, 6, 8	4, 5	
	Subdivision				2, 4, 5			1, 6	
	Residential (++)	2, 6	3	3		2, 3, 6, 7, 8	2, 6		
	Commercial & Industrial	2, 6	3	3	2, 4, 5	2, 3, 6, 7, 8	1, 6	2, 3, 5	
	Tourist Related Development	1, 6, 15	3	3	2, 4, 5	2, 3, 6, 7, 8	2, 6	2, 3, 5	
	Recreation & Non-Urban	1, 9, 15	3	3		1, 5, 7, 8	6, 8	2, 3, 5	
	Concessional Development	14	3	3		1, 3, 5, 7, 8, 9	2, 6	2, 3, 5	
Medium Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision				1, 4, 5			1	1, 2, 3
	Residential	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	2, 6		1, 2, 3
	Commercial & Industrial	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	1, 6	2, 3, 5	1, 2, 3
	Tourist Related Development	1, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	2, 6	2, 3, 5	1, 2, 3
	Recreation & Non-Urban	1, 9, 15	3	1	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	1, 14, 15	3	1	2, 4, 5	1, 3, 5, 7, 8, 9	2, 8	2, 3, 5	1, 2, 3
High Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision								
	Residential								
	Commercial & Industrial								
	Tourist Related Development								
	Recreation & Non-Urban	1, 9, 15	3	1	1, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	1, 14, 15	3	1	1, 4, 5	1, 3, 5, 7, 8, 9	2, 6	2, 3, 5	1, 2, 3

Key:

Not Relevant

Unsuitable Land Use

1, 2, 3 Control reference number relevant to the particular planning consideration. (see Table 6)

(++) Attached dwellings, Dwelling houses, dual occupancies, multi unit dwelling housing, residential flat buildings (not including development for the purpose of group homes or seniors housing), Secondary dwellings and Semi-detached dwellings are exempt from these controls.

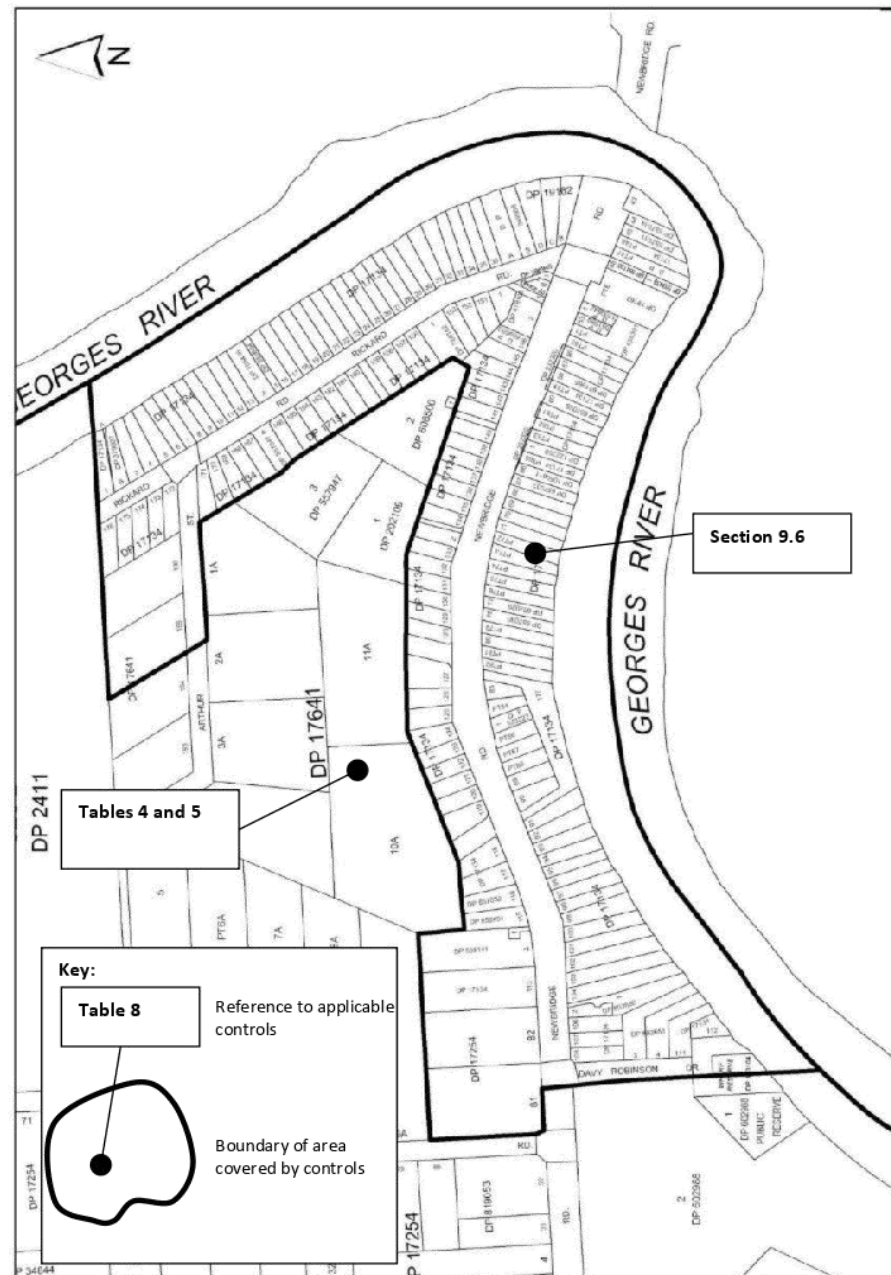


Table 3 Cabramatta Creek and all other Floodplains (Includes Hinchinbrook Creek, Maxwells Creek, Brickmakers Creek, upper parts of Anzac Ck, and other tributaries)

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Low Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities	13	4	4	2, 4, 5	2, 3, 6, 7, 8	3, 6, 8	4, 5	
	Subdivision				2, 4, 5			1, 6	
	Residential (++)	2, 6	3	3		2, 3, 7	3, 6		
	Commercial & Industrial	2, 11, 15	3	3	2, 4, 5	2, 3, 6, 7, 8	(3 or 4), 6	2, 3, 5	
	Tourist Related Development	2, 6, 15	3	3	2, 4, 5	2, 3, 6, 7, 8	3, 6	2, 3, 5	
	Recreation & Non-Urban	2, 7	3	3	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	
	Concessional Development	14, 15	3	3	2, 4, 5	1, 7, 8, 9	3, 6	2, 3, 5	
Medium Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision				1, 4, 5			1, 6	1, 2, 3
	Residential	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	3, 6		1, 2, 3
	Commercial & Industrial	11, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	4, 6	2, 3, 5	1, 2, 3
	Tourist Related Development	2, 6, 15	3	1	2, 4, 5	2, 3, 6, 7, 8	3, 6	2, 3, 5	1, 2, 3
	Recreation & Non-Urban	2, 7	3	1	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	3	1	2, 4, 5	1, 7, 8, 9	3, 8	2, 3, 5	1, 2, 3
High Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision								
	Residential								
	Commercial & Industrial								
	Tourist Related Development								
	Recreation & Non-Urban	2, 7	3	1	1, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	3	1	1, 4, 5	1, 7, 8, 9	3, 6	2, 3, 5	1, 2, 3

Key:

Not Relevant

Unsuitable Land Use

1, 2, 3 Control reference number relevant to the particular planning consideration. (see Table 6)

(++) Attached dwellings, Dwelling houses, dual occupancies, multi unit dwelling housing, residential flat buildings (not including development for the purpose of group homes or seniors housing), Secondary dwellings and Semi-detached dwellings are exempt from these controls.

Table 4 Georges River Floodplain (Includes Harris Ck and Williams Ck, lower parts of Anzac Ck, but not Cabramatta Creek)

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Low Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities	13	4	4	2, 4, 5	2, 3, 6, 7, 8	6, 8, 9	2, 4	
	Subdivision				2, 4, 5			1	
	Residential (++)	2, 6	2	3	2, 4, 5	2, 3, 6, 7, 8	6, 9		
	Commercial & Industrial	4, 8, 15	2	3	2, 4, 5	2, 3, 6, 7, 8	(4 or 9), 6	2, 3, 5	
	Tourist Related Development	2, 6, 15	2	3	2, 4, 5	2, 3, 6, 7, 8	6, 9	2, 3, 5	
	Recreation & Non-Urban	2, 7	2	3	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	
	Concessional Development	14, 15	2	3	2, 4, 5	1, 7, 8, 9	6, 9	2, 3, 5	
Medium Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision				1, 4, 5			1	1, 2, 3
	Residential	2, 6, 15	2	2	2, 4, 5	2, 3, 6, 7, 8	6, 9		1, 2, 3
	Commercial & Industrial	8, 4, 15	2	2	2, 4, 5	2, 3, 6, 7, 8	4, 6	2, 3, 5	1, 2, 3
	Tourist Related Development	2, 6, 15	2	2	2, 4, 5	2, 3, 6, 7, 8	6, 9	2, 3, 5	1, 2, 3
	Recreation & Non-Urban	2, 7	2	2	2, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	2	2	2, 4, 5	1, 7, 8, 9	8, 9	2, 3, 5	1, 2, 3
High Flood Risk	Critical Uses & Facilities								
	Sensitive Uses & Facilities								
	Subdivision								
	Residential								
	Commercial & Industrial								
	Tourist Related Development								
	Recreation & Non-Urban	2, 7	2	2	1, 4, 5	1, 5, 7, 8	6, 8	2, 3, 5	1, 2, 3
	Concessional Development	14, 15	2	2	1, 4, 5	1, 7, 8, 9	6, 9	2, 3, 5	1, 2, 3

Key:

Not Relevant

Unsuitable Land Use

1, 2, 3

(++)

Control reference number relevant to the particular planning consideration. (see Table 6)

Attached dwellings, Dwelling houses, dual occupancies, multi unit dwelling housing, residential flat buildings (not including development for the purpose of group homes or seniors housing), Secondary dwellings and Semi-detached dwellings are exempt from these controls.

Table 5 Local Overland Flooding

Flood Risk Category	Land Use Risk Category	Planning Controls							
		Floor Level	Building Components	Structural Soundness	Flood Effects	Car Parking & Driveway Access	Evacuation	Management & Design	Fencing
Local Overland Flood Risk	Critical Uses & Facilities	13	4	5	3	4, 7, 8	7	3, 5	2, 4
	Sensitive Uses & Facilities	13	4	5	3	4, 7, 8	7	3, 5	2, 4
	Subdivision				3		5	1	2, 4
	Residential	3, 5	1	6	3	4, 7, 8	5		2, 4
	Commercial & Industrial	10	1	6	3	4, 7, 8	5	3, 5	2, 4
	Tourist Related Development	3, 5	1	6	3	4, 7, 8	5	3, 5	2, 4
	Recreation & Non-Urban	3, 5	1	6	3	4, 7, 8	5	3, 5	2, 4
	Concessional Development	14	1	6	3	4, 7, 8	5	3, 5	2, 4

Key:



Not Relevant

Control reference number relevant to the particular planning consideration.

Table 6 Explanation of Development Controls

Ref No	Controls
Floor level	
1	All floor levels to be as high as practical but not less than the 20% AEP flood level.
2	Non habitable floor levels to be as high as practical but no less than the 5% AEP flood level.
3	Non-habitable floor levels to be not less than the 1% AEP flood.
4	The level of Non-habitable and general Industrial floor areas to be as high as practical but not less than the 2% AEP flood. Where this is impractical for single lot developments within an existing developed area, the floor shall be as high as practical but no less than the 5% AEP flood.
5	Habitable floor levels to be equal to or greater than the 1% AEP flood level plus 300mm freeboard.
6	Habitable floor levels to be equal to or greater than the 1% AEP flood level plus 500mm freeboard.
7	Habitable floor levels to be no lower than the 1% AEP flood plus 500mm freeboard unless justified by site specific assessment.
8	Habitable and general commercial floor levels to be as high as practical but no lower than the 1% AEP flood plus 500mm freeboard unless justified by site specific assessment.
9	The level of habitable floor areas to be equal to or greater than the 1% AEP flood level plus 500mm freeboard. If this level is impractical a lower floor level may be considered provided the floor level is as high as possible but no less than the 5% AEP flood level.
10	All floor levels to be equal to or greater than the 1% AEP flood level plus 300mm freeboard. Freeboard may be reduced if justified by site specific assessment.
11	All floor levels to be no lower than the 1% AEP flood plus 500mm freeboard. Freeboard may be reduced if justified by site specific assessment.
12	All floor levels to be equal to or greater than the PMF level. If this level is impractical a lower floor level may be considered provided the floor level is as high as possible but no less than the 1% AEP flood level plus 500mm freeboard.

Ref No	Controls
13	Floor levels to be no lower than the PMF level unless justified by a site specific assessment.
14	Floor levels to be equal to or greater than the minimum requirements normally applicable to this type of development. Where this is not practical due to compatibility with the height of adjacent buildings, or compatibility with the floor level of existing buildings, or the need for access for persons with disabilities, a lower floor level may be considered. In these circumstances, the floor level is to be as high as practical, and, when undertaking alterations or additions no lower than the existing floor level.
15	A restriction is to be placed on the title of the land, pursuant to S.88B of the <i>Conveyancing Act</i> , where the lowest habitable floor area is elevated more than 1.5m above finished ground level, confirming that the undercroft area is not to be enclosed.
Building Components & Method	
1	All structures to have flood compatible building components below the 1% AEP flood level plus 300mm freeboard.
2	All structures to have flood compatible building components below the 1% AEP flood level plus 500mm freeboard.
3	All structures to have flood compatible building components below the 1% AEP flood level plus 500mm freeboard or a PMF if required to satisfy evacuation criteria (see below).
4	All structures to have flood compatible building components below the PMF level.
Structural Soundness	
1	Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 500mm freeboard or a PMF if required to satisfy evacuation criteria (see below). An engineer's report may be required.
2	Engineer's report to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 500mm freeboard.
3	Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 500mm freeboard.
4	Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including a PMF. An engineer's report may be required.
5	Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including a PMF.
6	Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus 300mm freeboard.
Flood Effects	
1	Engineers report required to certify that the development will not increase flood effects elsewhere, having regard to: (i) loss of flood storage; (ii) changes in flood levels, flows and velocities caused by alterations to flood flows; and (iii) the cumulative impact of multiple similar developments in the floodplain.
2	The flood impact of the development to be considered to ensure that the development will not increase flood effects elsewhere, having regard to: (i) loss of flood storage; (ii) changes in flood levels and velocities caused by alterations to the flood conveyance; and (iii) the cumulative impact of multiple potential developments in the floodplain. An engineer's report may be required.
3	The flood impact of the development to be considered to ensure that the development will not increase flood affectation elsewhere having regard to changes in flood levels and velocities caused by alteration of conveyance of flood waters. An engineer's report may be required if Council considers a significant

Ref No	Controls
	affectation is likely. The unmitigated obstruction, concentration or diversion of overland flow paths to adjacent property shall not be permitted.
4	A floodway or boundary of significant flow may have been identified in this catchment. This area is the major conveyance area for floodwaters through the floodplain and any structures placed within it are likely to have a significant impact on flood behaviour. Within this area no structures other than concessional development, open type structures or small non habitable structures (not more than 30sqm) to support agricultural uses will normally be permitted. Development outside the Boundary of Significant flow may still increase flood effects elsewhere and therefore be unacceptable
5	Any filling within the 1% AEP flood will normally be considered unacceptable unless compensatory excavation is provided to ensure that there is no net loss of floodplain storage volume below the 1% AEP flood.
Car Parking and Driveway Access	
1	The minimum surface level of open car parking spaces, carports or garages, shall be as high as practical.
2	The minimum surface level of a car parking space, which is not enclosed (e.g. open car parking space or carport) shall be as high as practical, but no lower than the 5% AEP flood level or the level of the crest of the road at the highest point where the site can be accessed. In the case of garages, the minimum surface level shall be as high as practical, but no lower than the 5% AEP flood.
3	Garages capable of accommodating more than 3 vehicles on land zoned for urban purposes, or basement car parking, must be protected from inundation by floods equal to or greater than the 1% AEP flood plus 0.1m freeboard.
4	Basement car parking shall be protected from inundation by the 1% AEP flood.
5	The driveway providing access between the road and car parking space shall be as high as practical and generally rising in the egress direction.
6	The level of the driveway providing access between the road and car parking space shall be no lower than 0.3m below the 1% AEP flood or such that depth of inundation during a 1% AEP flood is not greater than either the depth at the road or the depth at the car parking space. A lesser standard may be accepted for single detached dwelling houses where it can be demonstrated that risk to human life would not be compromised.
7	Basement car parking or car parking areas accommodating more than 3 vehicles (other than on Rural zoned land) with a floor level below the 5% AEP flood or more than 0.8m below the 1% AEP flood level; shall have adequate warning systems, signage and exits.
8	Barriers to be provided to prevent floating vehicles leaving a site during a 1% AEP flood.
9	Driveway and car parking space levels shall be no lower than the minimum requirements normally applicable to this type of development. Where this is not practical, a lower level may be considered. In these circumstances, the level is to be as high as practical and, when undertaking alterations or additions no lower than the existing level.
Evacuation	
1	Reliable access for pedestrians required during a 1% AEP flood.
2	Reliable access for pedestrians or vehicles is required from the building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF level, or a minimum of 20% of the habitable floor area is above the PMF.
3	Reliable access for pedestrians or vehicles is required from the building to an area of refuge above the PMF level, or a minimum of 20% of the habitable floor area is above the PMF
4	Reliable access for pedestrians or vehicles required during a 1% AEP flood to a publicly accessible location above the PMF.

Ref No	Controls
5	The evacuation requirements of the development during flooding shall be considered.
6	The development is to be consistent with any relevant flood evacuation strategy or similar plan.
7	The evacuation requirements of the development are to be considered up to the PMF level.
8	The evacuation requirements of the development are to be considered. An engineer's report will be required if circumstances are possible where the evacuation of persons might not be achieved within the effective warning time.
9	Adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon the SES or other authorised emergency services personnel.
Management and Design	
1	Applicant to demonstrate that potential development as a consequence of a subdivision proposal can be undertaken in accordance with this DCP.
2	Site Emergency Response Flood Plan required where floor levels are below the design floor level, (except for single dwelling-houses).
3	Applicant to demonstrate that area is available to store goods above the 1% AEP flood level plus 500mm freeboard.
4	Applicant to demonstrate that area is available to store goods above the PMF level.
5	No storage of materials below the design floor level which may cause pollution or be potentially hazardous during any flood.
6	Finished land levels in new release areas shall be not less than the 1% AEP flood unless justified by site specific assessment. A surveyor's certificate will be required upon completion certifying that the final levels are not less than the required level.
Fencing	
1	Fencing within a High Flood Risk area, Boundary of Significant Flow or floodway will not be permitted except for permeable open type fences.
2	Fencing is to be constructed in a manner that does not obstruct the flow of floodwaters so as to have an adverse impact on flooding.
3	Fencing shall be constructed to withstand the forces of floodwaters or collapse in a controlled manner so as not to obstruct the flow of water, become unsafe during times of flood or become moving debris.
4	Fencing shall be constructed to withstand the forces of floodwaters.

9.6 Controls Applicable to the Moorebank Floodway

1. Notwithstanding any other provision where a property is identified within the Moorebank Voluntary Acquisition Scheme area, Council will only consent to further development as noted in Table 7.

Table 7 Controls applicable to the Moorebank Floodway

Control	
Development	Development is only for minor works such as small awnings over existing first floor balconies or in-ground swimming pools
	The capital investment shall not materially increase the acquisition costs of the property.

Council will not permit any type of development which would be inconsistent with the objective of discouraging further development in areas of high risk and with Council's commitment to the Moorebank Voluntary Acquisition Scheme.

10. Contaminated Land Risk

Applies to

This section applies to:

- a) Land that is identified as being potentially or actually contaminated in accordance with the relevant guidelines.
- b) Land which has past or current land use of the following:

Agricultural/ horticultural activities	Defence work	Mining and extractive industries
	Drum reconditioning	
Airports	Dry cleaning	Photography, rubber manufacture and solvents
	Electrical	
Asbestos production/disposal	Engine works such as mechanics and air conditioning repairers	Power stations
		Printing shops
Batteries manufacture and recycling	Foundries	Railway yards
	Gas works	Scrap yards
Chemicals such as use or manufacture of acid/alkali products, adhesives/ resins, dyes, explosives, fertiliser, flocculants, foam production, fungicides, herbicides, paints, pesticides, pharmaceuticals, Service stations and fuel storage facilities	Iron and steel works	Sheep and cattle dips
	Landfill sites	Smelting and refineries
	Marinas	Tanning and associated trades
	Metal treatments	Water and sewage treatment plants
		Wood preservation

Background

Land contamination is most often the result of past uses. It can arise from activities that took place on or adjacent to a site and be the result of improper chemical handling or disposal practices, or accidental spillages or leakages of chemicals during manufacturing or storage. Activities not directly related to the site may also cause contamination; for example, from diffuse sources such as polluted groundwater migrating under a site or dust settling out from industrial emissions.

The impacts of land contamination can include increased risk to human health, detrimental effects on the biophysical environment and adverse impacts on the safety of existing and new structures. A decision will need to be made as to whether the land should be remediated, or its use of the land restricted, in order to reduce the risk.

Objectives

- a) To identify the presence of contamination at an early stage of the development process and to manage the issues of land contamination to ensure protection of the environment and that of human health is maintained.
- b) Ensure that proposed developments or changes of land use will not increase the risk to human health or the environment;
- c) Avoid inappropriate restrictions on land use;
- d) Ensure that all stakeholders are aware of their responsibilities for the ongoing management of contaminated land.

Controls

Preliminary Contamination Investigation

If the initial evaluation by Council finds insufficient information available, or sufficient information is available, which indicates that contamination is an issue for the site, a Preliminary Contamination Investigation (Stage 1) shall be undertaken.

Detailed Contamination Investigation

If the Preliminary Site Contamination Investigation (Stage 1) indicates a potential for contamination and that the land may not be suitable for the proposed use, a Detailed Contamination Investigation (Stage 2) shall be undertaken.

Remedial Action Plan

1. If the Detailed Contamination Investigation (Stage 2) indicates that the site is not suitable for the proposed use a Remedial Action Plan shall be prepared.
2. If the Remedial Action Plan proposes to undertake Category 1 Remediation:
 - Additional consent may be required. Council shall be consulted for a determination on the appropriate course of action that is whether an additional development application is required.
 - Approval of the application shall be subject to satisfactory remediation. A notice of completion of Category 1 Remediation works shall be provided to Council within thirty (30) days of completion of the works.
 - A validation and/or monitoring report shall be prepared and approved by Council prior to works commencing.
 - A Site Audit Statement may be requested by Council to be prepared and submitted to Council.
3. If the Remedial Action Plan proposes to undertake Category 2 Remediation, Council shall be notified within 30 days upon commencement and completion of remedial works. Documentation associated with or in support of the Remedial Action Plan shall be submitted to Council.
4. Any remedial works shall be undertaken in accordance with the Remedial Action Plan.

5. Any investigations, Remedial Action Plans or reports shall be undertaken or prepared by an appropriately qualified professional with experience in preliminary and detailed investigations, the preparation of Remedial Action Plans as well as validation and/or monitoring reports for contaminated lands.

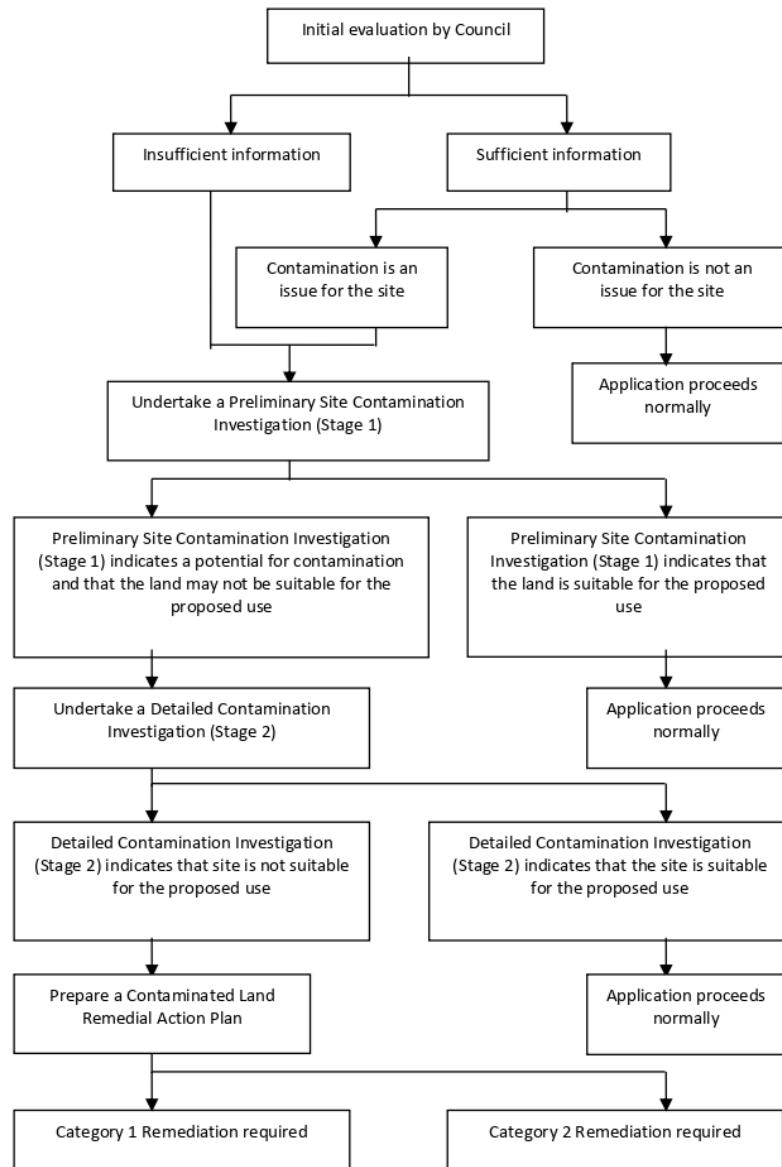


Figure 7 Model for Contaminated Lands Investigation and Management Strategies that should be undertaken. (Adapted from Managing Contaminated Lands, 1998)

11. Salinity Risk

Applies to

This section applies to all development, which:

- a) Is located in an area coloured yellow, orange or red on State Government issued salinity potential maps or
- b) Is in existing or proposed urban areas that may affect the processes of salinisation.
or
- c) Involves lands affected by groundwater salinity.

Background

Salinity is the accumulation of salt in the soil and is one of the major issues facing the NSW landscape. The problem affects both urban and rural landscapes. While salt occurs naturally in our landscape, activities such as land clearing and inefficient water use can exacerbate the problem. This impacts on soil, native vegetation, biodiversity, crops and water quality.

The four main types of salinity are:

1. Dryland: This involves the build up of salts in the soil surface and groundwater in non-irrigated areas.
2. Irrigation: This involves the rise in saline groundwater and the build up of salt in the soil surface in irrigated areas.
3. Industrial: Effluent from rural villages, intensive agriculture and rural industry can contain high levels of salt.
4. Urban: This is mainly caused by rising groundwater bringing salts to the land surface. Towns are often located in areas prone to salinity (such as plains, valleys, or at the foot of a ridge). Urban development can lead to localised salinity because of clearing of native vegetation, over-watering of gardens, parks and sporting fields, water leaking from pipes, drains and tanks, seepage from sullage pits and blocking or changing natural drainage paths (such as by building roads).

Salinity can cause physical damage to buildings, roads and water pipes. Some building methods may also contribute to the development of salinity. Compacted surfaces can restrict groundwater flow and concentrate salt in one area. By cutting into slopes to build, groundwater or saline soil may be intercepted and exposed. Fill used to build up an area may be a source of salt, or it may be less permeable, preventing good drainage.

Salinity can render farming land unproductive and sports grounds and recreation areas unusable. Salinity can also damage wetlands and rivers and affect native vegetation, causing the disappearance of native flora and fauna and poor downstream water quality.

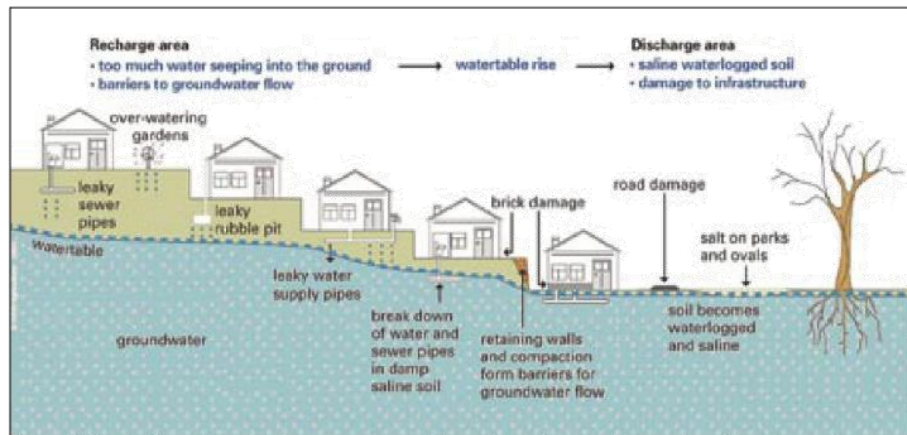


Figure 8 Illustration showing how development can impact on landscape functions as well as how development may be impacted upon salinity processes

Objectives

- To prevent further spread of urban salinity and remedy, where possible, existing areas of salinity.
- To minimise disturbance to natural hydrological systems as a result of development and appropriately manage land uses affecting land salinisation and/or those affected by salinity.
- To ensure that land is used and developed in a manner that does not significantly increase water infiltration to groundwater systems and does not significantly increase salt loads in waterways, wetlands drainage lines, or soils.
- To control the impact of a development on prevailing and potential soil or groundwater salinity in the urban environment as well as ensure that soil or groundwater salinity does not impact on the structural integrity of a development.
- To ensure that consideration is given to any physical limitations of land, including soil salinity and the impacts of that salinity, to minimise the potential for future adverse economic impacts arising from development.

Controls

- The following flowchart shall be used to determine an appropriate course of action for salinity investigation and management for single or multi-lot developments.

Note: *Where it is difficult to decide between colours it should be assumed that the salinity potential is denoted by the colour for the higher salinity potential.

Note: **Salinity risk activities are those activities which are considered to have a greater risk associated with them in area of salinity potential, based on level of ground disturbance, water-use, and the potential to alter hydrological conditions and/or salt concentrations. This may include, but is not limited to: quarrying, intensive agriculture, activities involving high levels of irrigation, large scale artificial waterbodies, infiltration into the soil or groundwater, waste water re-use or treatment systems or major landscape reshaping.

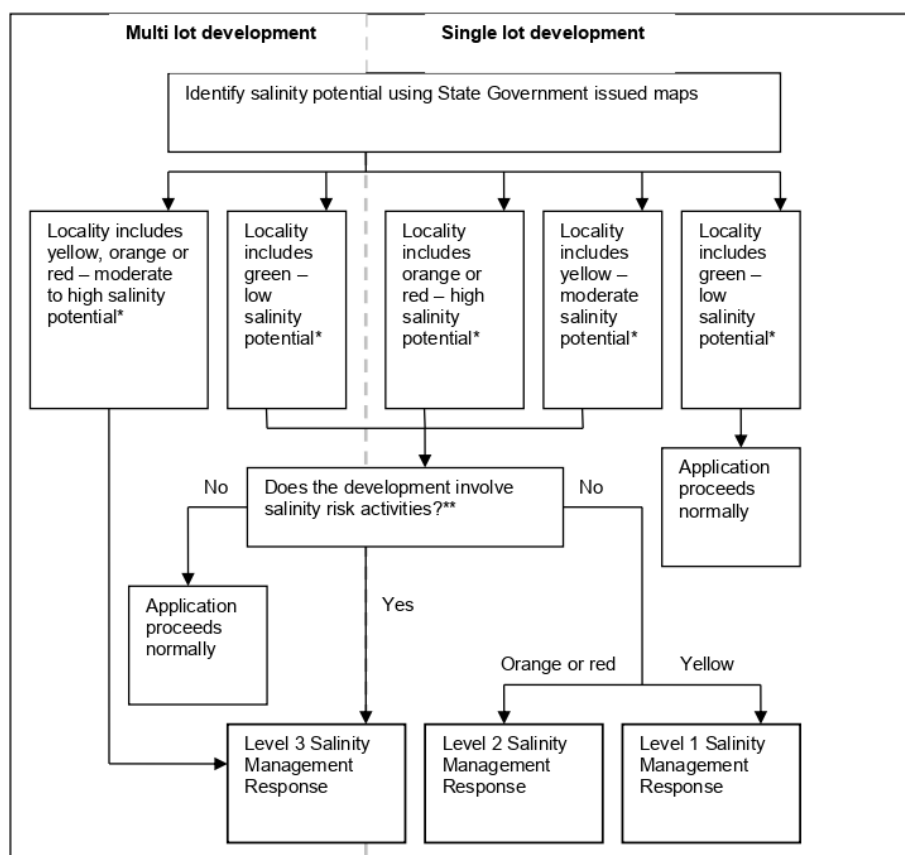


Figure 9 Model for how salinity assessment, investigation and management strategies should be undertaken (Adapted from WSROC 2003)

2. If a Level 1 or 2 Salinity Management Response is required the applicant shall use the Salinity Management Response Checklists to determine appropriate measures to prevent salinity. These measures shall be detailed in the Statement of Environmental Effects or equivalent. These measures shall be approved by Council prior to the issuing of Development Consent.
3. Level 3 Salinity Management Response shall be:
 - Approved by Council prior to the issuing of Development Consent.
 - Integrated into a Total Water-cycle Management Plan for the site for developments where such a plan is required.
4. The Salinity Management Response shall be based on site conditions and the proposed development. It shall include controls to protect buildings and also strategies to protect infrastructure, including roads and underground services and to manage the water cycle. A Response shall assume worst-case scenario for salinity on the site.
5. Salinity investigations shall be undertaken by an appropriately qualified professional with experience in salinity investigations and management.

6. Management strategies for salinity shall be developed in accordance with the approved Guidelines. This includes general management strategies for all sites and salinity processes and strategies including, but not limited to, the following:
 - Building requirements
 - Vegetation and landscaping
 - Roads and pavements
 - Soil landscapes with a shale geology
 - Localised concentrations of salinity
 - Deeply weathered soils
 - Salinity in groundwater.
7. To ensure appropriate measures or management strategies are employed Council may require monitoring reports to be submitted.
8. For developments involving the construction or removal of dams, artificial wetlands or stormwater retention ponds a Level 3 Salinity Management Response is required.
9. For developments involving the construction or removal of dams, artificial wetlands or stormwater retention ponds, water sensitive urban design (WSUD) principles shall be applied.
10. Development shall have minimal impact on the water table.
11. For areas with a moderate to high salinity potential development shall demonstrate no net increase in hydrologic load or water inputs and shall maintain the natural water balance.

12. Acid Sulfate Soils Risk

Applies to

This section applies to

- a) Any development that is located in an area identified as having an acid sulfate soil potential within the *Liverpool LEP 2008*.
- b) Any development involving drainage or excavation, which has the potential to result in the formation of acid sulfate soils.

Background

Acid sulfate soils are sediments deposited under estuarine conditions (that is close to sea level), and which contain the sulfidic mineral pyrite. Acid sulfate soils are found underlying many coastal floodplains, in coastal wetlands, and as bottom sediments in coastal estuaries.

As long as acid sulfate soils are not disturbed or drained, these materials are relatively harmless and are termed potential acid sulfate soils. However, if the sediments are exposed to air, the pyrite is oxidised and sulfuric acid is generated. When the rate of acid production exceeds the neutralising capacity of the soil, actual acid sulfate soils are formed. As a result, soil pH may become highly acidic.

Acid sulfate soils can have considerable effects on:

- Engineering and landscaping works including affecting the type of concrete or steel required for construction, the design of roads, buildings, embankment and drainage system, extractive materials specifications, maintenance programs for drains, water and sewage pipelines and other structures.
- Agricultural management practices including choice of crops, liming practices, fertiliser requirements and drainage practices.
- Aquaculture management practices including choice of site, pond design and management practices
- The management of contaminated soil particularly in relation to mobility of metals
- The conservation of biodiversity and protection of wetlands as well as shallow freshwater systems including degradation of water quality and habitat, killing or disease of fish and other aquatic organisms.

Acid sulfate soils underlie significant areas of coastal Australia including parts of the Liverpool LGA. The cost of testing, treating and monitoring of acid sulfate substantially increase the cost of development.

The impacts of actual acid sulfate soils are one of the most significant water-based environmental problems in coastal areas of NSW. Certain environmental effects of actual acid sulfate soils can last for hundreds or even thousands of years

Appropriate planning and management of urban and agricultural land to prevent damage associated with acid sulfate soils is now recognised as an extremely important issue. A well informed understanding of acid sulfate soils and their distribution is critical for sustainable land use.

Objectives

- a) To provide regulation on the procedures involved in the assessment and management of activities within areas affected by acid sulfate soils.
- b) To identify areas of acid sulfate soil risk to prevent any unnecessary impact to the environment.
- c) To ensure that preliminary acid sulfate soil assessment is undertaken prior to development consent being granted to determine the level of risk proposed by the activity/development.
- d) To ensure that acid sulfate soil management plans are prepared when an activity or development is associated with an acid sulfate soil risk.
- e) To provide effective management of areas where acid sulfate soils are identified.

Controls

The following flowchart shall be used for investigation and assessment of acid sulfate soil potential as well as any management responses, which may be required.

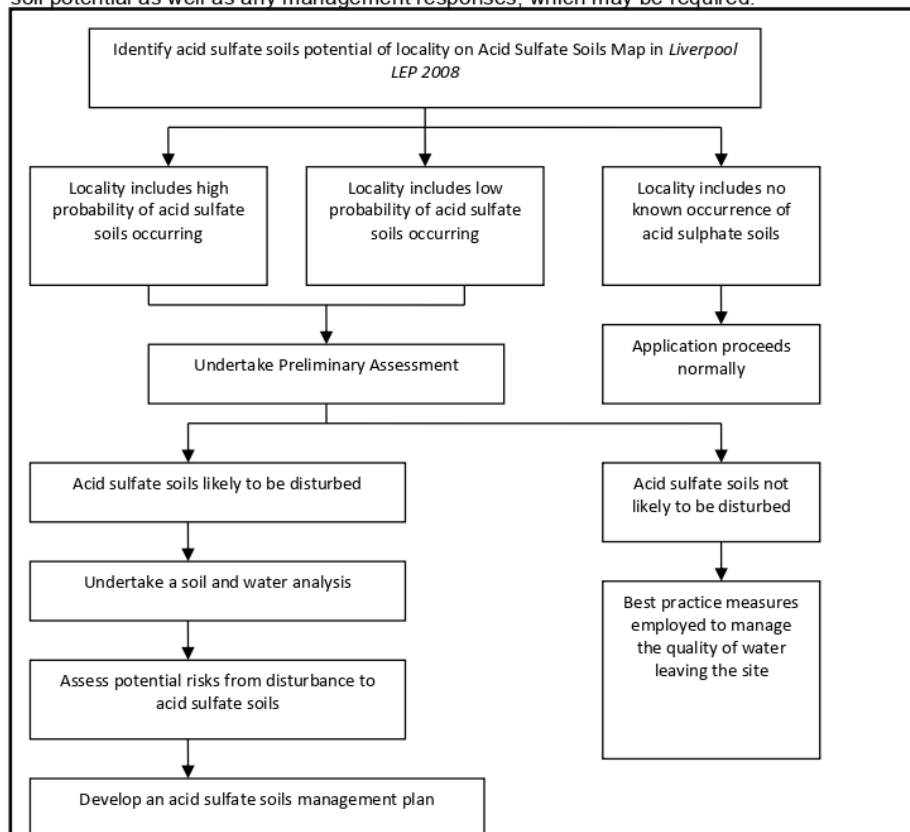


Figure 10 Model for how acid sulfate soils assessment, investigation and management strategies should be undertaken (adapted from *Acid Sulfate Soil Manual 1998*).

1. If acid sulfate soils are present and not likely to be disturbed, best practice measures employed to manage the quality of water leaving the site shall be detailed in the SEE or equivalent.
2. If acid sulfate soils are present and likely to be disturbed a soil and water analysis and an assessment of the potential risk from disturbance of the acid sulfate soils

shall be undertaken. The analysis and assessment shall be approved by Council prior to the issuing of development consent.

3. If acid sulfate soils are present and likely to be disturbed an acid sulfate soils management plan shall be prepared in accordance with the guidelines. The acid sulfate soils management plan shall be approved by Council prior to the issuing of development consent.
4. Any acid sulfate soils analysis, assessments and management plans shall be undertaken or prepared by an appropriately qualified professional with experience in acid sulfate soils analysis and assessments as well as the preparation of acid sulphate soils management plans.
5. Council may require monitoring reports on the implementation of an acid sulfate soils management plan to be submitted.

13. Weeds

Applies to

This section applies to land where noxious weeds are found.

Background

Noxious weeds have the potential to have an adverse impact on the biodiversity and economic use of land. Some species compete with native tree and shrub species and have the potential to dominate entire landscapes altering their natural condition. Some species are particularly effective at penetrating areas of bushland, others choke waterways and riverbanks, some are toxic and others cause allergic reactions in humans.

Objectives

To remove noxious weeds in conjunction with the development of land.

Controls

1. Where the site analysis identifies noxious weeds on the site, a Weed Management Strategy (WMS) shall be submitted with any development application. A WMS shall be prepared by a suitably qualified professional and shall include:
 2. A complete list of all noxious and environmental weeds on the site;
 3. A site plan displaying actual weed infestation densities shown as percentages and grouped into cover classes as follows:
 - R = (Rare): less than 1% cover
 - O = (Occasional): between 1 and 5% cover
 - F = (Frequent) between 5 and 20% cover
 - A = (Abundant) between 20 and 40% cover
 - D = (Dominant) between 40 and 100% cover
 4. A treatment program for each weed species identified.
 5. The treatment program for each weed species shall detail the following:
 - The method(s) of treatment of weeds e.g. mechanical removal or herbicide application.
 - The herbicide product name (if used), the proposed rates and method(s) of application.
 - The timing of all treatments and control method(s) to be applied.
 - An ongoing maintenance program detailing methods of follow up treatments to ensure all weed infestations present are contained and/or controlled.
 - Details of any weed material disposal methods (i.e. if weed material is to be removed from the development site.)
 6. It is an offence to knowingly remove any weed material that is classified as a W1 noxious weed under section 28 of the *Noxious Weeds Act 1993*.
 7. Plants that have been declared noxious are listed in Appendix 2.

14. Demolition of Existing Developments

Applies to

This section applies to development, which involves the demolition of an existing building.

Background

The demolition of buildings can have environmental impacts, particularly involving older buildings, which may contain toxic materials. There is also the potential to recycle materials and minimise waste going to land fill.

Objectives

- b) To minimise waste generation and disposal to landfill.
- c) To ensure efficient storage and collection of wastes and recyclables during demolition and construction stages.
- d) To minimise adverse impact on adjoining premises; and
- e) To minimise release of contaminated materials.

Controls

Demolition

1. All demolition work must comply with the *Australian Standard AS2601 - 1991, The Demolition of Structures*.
2. Security fencing such as hoardings must be provided around the perimeter of the demolition site prior to work commencing to prevent access by unauthorised persons at all times during the demolition period. Approval of the fencing by Council must be received prior to erection.
3. Demolition must not be conducted in high winds to ensure dust does not spread beyond the site boundaries. High winds are identified as either a strong breeze (39-49km/hr), or near gale (50-61km/hr) under the Beaufort Scale.
4. All lead contaminated materials identified in the building must be handled and disposed of in accordance with the *NSW Environment Protection Authority's* requirements.
5. Dust Controls must be implemented on site prior to and during demolition.
6. Asbestos, if identified in the building, must be removed and disposed of in accordance with the requirements of Work Cover. Where the amount or type of asbestos materials to be removed requires a licensed asbestos contractor to undertake the removal and disposal, both Council and the Principle Certifying Authority must be advised in writing of the name, address and asbestos license details of the contractor undertaking that work and the name and address of the facility to which the materials will be taken.
7. All trucks/trailers entering or leaving the site must have their loads adequately covered. A sign indicating this should be placed at the entry to and exit from the site.
8. Temporary toilet facilities must be provided on the site until all demolition work is completed.
9. Demolition activities on site must be limited to the following hours:
 - Monday to Friday 7:00am to 6:00pm
 - Saturday 8:00am to 1:00pm
 - No work on Sunday and Public Holidays

10. Sound pressure levels emanating from the site must not exceed levels established by the *NSW Environment Protection Authority*.
11. A Waste Management Plan (WMP) is to be submitted with the Development Application. The WMP must include realistic estimates of the volume or area of all types of waste material to be generated from the demolition and excavation activities. Details of how each of those materials will be re-used, recycled or disposed of is to be provided, including the locations to which the materials will be taken.
12. The waste management plan together with proof of lawful disposal for all waste that is disposed of, or otherwise recycled from the site must be retained on site. Proof is to include a log book with associated receipt/invoices, waste classification, and site validation certificate. All entries must include:
 - Time and Date
 - Description and size of waste
 - Waste facility used
 - Vehicle registration and company name

Both the log book and the associated receipts must be made available for inspection by authorised Council Officer at any time during site works.
13. Where subdivision works are proposed, relevant sections of the WMP must be completed. If the destination for excavation material is not a licensed waste facility, it must have development consent to receive such material.
14. A Dilapidation Report for any demolition within the zone of influence of any other building.
15. Where demolition work includes the removal of air-conditioning or refrigeration units, all refrigerants that remain within those units must be extracted by a licensed air-conditioning technician. The recovered refrigerant must be forwarded for destruction to Refrigerant Reclaim Australia (RRA), or other facility approved to destroy refrigerants in an environmentally friendly manner.
16. All construction and demolition waste must be inspected, graded and sorted in accordance with current EPA standards. Once sorted, it must be either recycled or disposed of according to its classification.

15. On-site Sewage Management Systems (OSMS)

Applies to

This section applies to:

- Development of land that does not have access to a reticulated sewerage system.
- All existing and proposed On-site Sewage Management Systems and Greywater reuse systems.

Background

The rural areas and rural villages of Liverpool are generally not connected to a reticulated sewerage system. Disposal of waste water must take place on site which places limitations on the scope of development that is possible on the site and the extent of the area that can be developed. Disposal of wastewater on site also has potential public health and environmental impacts which must be addressed and minimised.

Application for approval to operate an OSMS

Where a new OSMS is to be installed or an existing OSMS altered, an application under Section 68 of the *Local Government Act 1993* for approval to install or alter an OSMS must be submitted and the prescribed fee paid.

Prior to the operation of an OSMS an application under Section 68 of the Local Government Act 2003 for approval to operate must be submitted along with certification of the installation and commissioning of the system. Approval to operate the OSMS will be granted upon successful installation and certification of the system and this approval will be automatically renewed on an annual basis or at a frequency determined by Council.

Council officers may inspect the OSMS from time to time to ensure that the conditions of approval are being met and that the system is operated and maintained in accordance with the required performance standards set out in the Local Government (General) Regulation 2005.

Council may modify, revoke or withhold an approval or renewal of approval should the system not comply with the conditions of that approval or be found to be inadequately performing or operated in an inappropriate manner.

Objectives

To ensure that the disposal of wastewater and reuse of greywater:

- a) Is carried out in a manner which is economically and environmentally sustainable
- b) Protects the quality of public and environmental health.

Controls

Application Requirements

1. Applications for development of land to which this part applies must be accompanied by an application under s68 of the *Local Government Act 1993* for the installation, alteration and operation of an OSMS. Development consent will not be issued until Council is satisfied that the s68 application can be approved.
2. All development proposals relying on an OSMS or impacting on an existing OSMS must be accompanied by a wastewater report demonstrating that the site can sustainably accept all wastewater generated on the site. This includes the modification of existing developments such as additions/modifications to a dwelling or commercial activity.

3. When a proposed development increases the potential wastewater flow on an existing property, the treatment capacity of the existing system must be reviewed. A new system must be installed where the existing system does not have adequate treatment capacity for all potential flows. A wastewater report will be required to detail the capacity of the existing or proposed system and propose a new or modified effluent irrigation area.
4. All wastewater reports must be prepared by a suitably qualified and experienced person and must contain the following as a minimum:

Plan

The report must include a plan, to scale, showing the location of:

- The sewage management facility proposed to be installed or constructed on the premises,
- Any related effluent application areas,
- Any buildings or facilities existing on, and any environmentally sensitive areas of, any land located within 100 metres of the sewage management facility or related effluent application areas, and
- Any related drainage lines or pipework (whether natural or constructed).

Specifications

The report must include full specifications of the sewage management facility proposed to be installed or constructed on the premises concerned.

Site assessment

The report must include details of the climate, geology, hydrogeology, topography, soil composition and vegetation of any related effluent disposal areas together with an assessment of the site in the light of those details.

Statement

The report must include a statement of:

- The number of persons residing, or probable number of persons to reside, on the premises, and
- Such other factors as are relevant to the capacity of the proposed sewage management facility.

Operation and maintenance

The report must include details of:

- The operation and maintenance requirements for the proposed sewage management facility,
- The proposed operation, maintenance and servicing arrangements intended to meet those requirements, and
- The action to be taken in the event of a breakdown in, or other interference with, its operation.

Standards and guidelines

The report must demonstrate that a system can be installed in accordance with the requirements of the documents listed in control 5 of this section.

Wastewater Flows

The report must consider all potential wastewater flows on the property including all proposed and existing flows.

Specifications

5. Design OSMSs in accordance with:

- a) Local Government (General) Regulation 2005;
- b) Australian/New Zealand Standard 1547:2012, On-site Domestic Wastewater Management, or any updated standard which supersedes AS1547:2012.
- c) Sydney Catchment Authority 2012, Designing and Installing On-site Wastewater Systems.
- d) NSW Health 2001, Septic Tank and Collection Well Accreditation Guideline
- e) Department of Local Government 1998, On-site Sewage Management for Single Households.
- f) Any other relevant guideline documents adopted by Council after the issue of this DCP.

Types of systems not supported

6. Development or subdivision proposals relying on pump-out systems will not be approved by Council.

Pump-out systems are not considered to be economically or environmentally sustainable systems due to the high costs associated with the removal of effluent which can result in unauthorised discharge into the environment.

Connection to reticulated sewer

7. Proposals relying on on-site sewage management will not be approved where a reticulated sewerage service is available within 75m of any property boundary.
8. Decommission OSMSs when a reticulated sewerage service becomes available within 75m of any property boundary, and connect the development to the service.

NOTE: This requirement may also be a condition of development consent and/or be included on the 88b certificate.

Location requirements

9. Locate OSMS tanks a minimum of 1.5m from any building and outside of any overland flow paths or depressions in the land.
10. Setback effluent disposal areas associated with OSMSs with setbacks in accordance with Table 8.

Table 8 Minimum Setbacks for Effluent Disposal Areas

System		Setbacks
All land application systems	100m	to permanent surface waters (river, stream, lake etc.)
	250m	to domestic groundwater well
	40m	to other waters (farm dams, intermittent waterways and drainage channels)
Surface spray irrigation	6m	if area up-gradient of driveways and property boundaries
	3m	if area down-gradient of driveways and property boundaries
	15m	to dwellings
	3m	to paths and walkways
	6m	to swimming pools
	6m	if area up-gradient of swimming pools, driveways, property boundaries and buildings

Surface drip and trickle irrigation	3m	if area down-gradient of swimming pools, driveways, property boundaries and buildings
Sub-surface irrigation	6m	if area up-gradient of swimming pools, driveways, property boundaries and buildings
	3 m	if area down -gradient of swimming pools, driveways, property boundaries and buildings
Absorption system	12m	if area up-gradient of property boundaries
	6m	if area down-gradient of property boundaries
	6m	if area up-gradient of swimming pools, driveways, and buildings
	3m	if area down -gradient of swimming pools, driveways, and buildings

11. New or replacement systems for horticulture (as defined in Liverpool LEP 2008) must comply with the following:
 - a) A minimum buffer distance of 20m if disposal area is up-gradient and 10m if disposal area is down-gradient of any market garden/igloo.
 - b) The related Effluent Disposal Area is required to be fenced to prevent access of vehicles, animals and any heavy vehicles.
 - c) Fruit and/or Vegetables are not to be grown on top or within the designated related Effluent Disposal Area(s) and associated buffer zones.
12. Exclude any proposed or existing areas designated for effluent disposal from calculations for private open space.
13. Locate the lid to OSMS tanks or holding tanks and all associated electrical components such as motors, blowers and non-submergible pumps etc. above the 1% AEP flood contour.
14. Irrigate only effluent treated to a secondary standard by an Aerated Wastewater Treatment System (AWTS) on land below the 1% flood contour.
15. Do not locate any portion of the Effluent Disposal Area on land within the 5% AEP contour.

Systems no longer in use

16. Remove or reuse any redundant septic tank, collection well or aerated wastewater treatment system in accordance with *NSW Health Advisory Note 3 – May 2006 – Destruction Removal or Reuse of Septic Tanks, Collection Wells, Aerated Wastewater Treatment Systems and other Sewage Management Facility Vessels*.

Note: Demolition of tanks (Methods 1 & 5 of the advisory note) is not permissible.

Design wastewater flow rates - domestic

17. Calculate the design wastewater flow for domestic systems based on the following:

- a) Two people per bedroom for the first three bedrooms and;
- b) One person for each additional bedroom.

NOTE: Rooms which are easily converted into a bedroom without the need for structural modification are to be included in this calculation e.g. studies, sewing rooms and other rooms of a similar size and location to a typical bedroom.

The daily wastewater flow volume must be calculated at the following rate:

- c) 150L per person when serviced by a reticulated water supply.
- d) 120L per person when serviced by on-site rainwater tanks.

Example: The design wastewater flow rate for a five bedroom equivalent dwelling (four bedrooms and one study) serviced by a reticulated water supply must be 1200L per day based on the following;

- Two people per bedroom for the first three bedrooms = 6 people

- One person for each additional bedroom, including the study = 2 people
- 150L per person for a total of 8 people = 1200L per day.

18. Consider each dwelling separately for the purpose of the calculation listed in control 17 of this section when the design wastewater flow is calculated for multiple dwellings on any premises.

Example: The design wastewater flow rate for a five bedroom equivalent dwelling (four bedrooms and one study) and a 2 bedroom granny flat serviced by a reticulated water supply must be 1800L per day based on the following;

Primary dwelling;

- Two people per bedroom for the first three bedrooms = 6 people
- One person for each additional bedroom, including the study = 2 people
- 150L per person for a total of 8 people = 1200L per day.

Granny Flat;

- Two people per bedroom = 4 people
- 150L per person for a total of 4 people = 600L per day

Minimum irrigation area requirements for residential subdivision

Where residential subdivision relying on an OSMS is proposed:

19. Provide an area sufficient to accommodate an effluent disposal area of at least 1,200sqm on each lot. This must be demonstrated in the wastewater report.
20. Locate proposed effluent disposal areas to meet the minimum setback distances listed in table 8 considering a potential building envelope representing a dwelling of typical size for the local area on each lot.

Example: Figure 11 shows an example subdivision plan demonstrating the required effluent disposal areas on each lot.

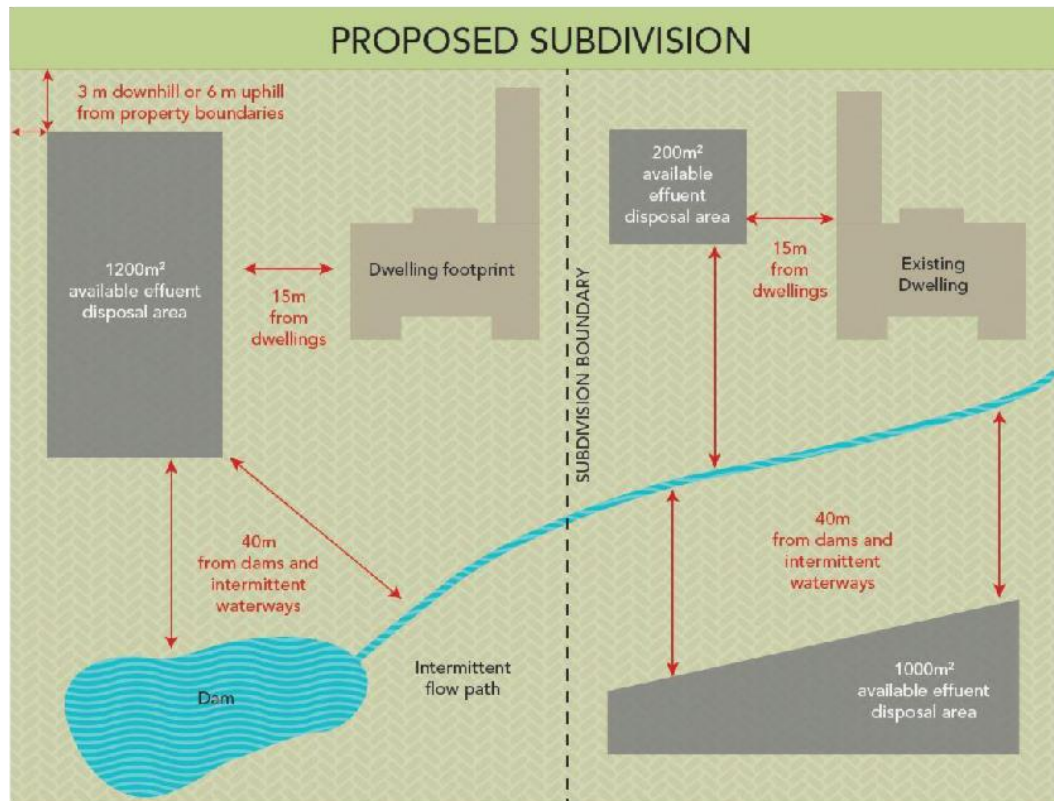


Figure 11: Example of a proposed subdivision with a total of 1200sqm of available effluent disposal area demonstrated on each lot.

16. Aboriginal Archaeology

Applies to

This section applies to land:

1. In which Aboriginal sites, places or relics have been previously identified.
2. Within an identified cultural landscape.
3. That has not been cleared.

Background

The Liverpool LGA was occupied by Aboriginal people prior to European settlement. Relics of this still remain.

Objectives

To identify and where possible preserve relics of the occupation of the land by Aboriginal communities.

Controls

Initial Investigation

An initial investigation must be carried out to determine if the proposed development or activity occurs on land potentially containing an item of aboriginal archaeology. If any of the above features apply then the relevant Aboriginal community must be consulted, as part of the initial investigation to ensure that the potential for the land to contain Aboriginal sites, places or relics has not been overlooked by previous studies.

Detailed Investigation

1. If any of the features apply, then an Aboriginal Heritage Impact Assessment (AHIA) must be prepared in accordance with the *NSW Department of Environment and Climate Change Draft Guidelines for Aboriginal Heritage Impact Assessment* and submitted with the initial investigation report.
2. An AHIA will also be required if the relevant local Aboriginal community provides sufficient information to the Council that leads it to conclude that the site may have Aboriginal heritage significance.
3. Once the AHIA is submitted, the Council will send copies to representatives of the relevant local Aboriginal communities and the *NSW Department of Environment and Climate Change* for comment.

17. Heritage and Archaeological Sites

Applies to

This section applies to development affecting a heritage item, land in a heritage conservation area or an archaeological site as identified in the Liverpool Local Environmental Plan 2008, as well as land in the vicinity of a heritage item.

Background

The City of Liverpool local government area has a long and diverse history. The Liverpool area was originally the home of the Cabrogal group of the Darug people. The European settlement of the area began in the early 19th century and was formalised with the founding of the Town of Liverpool by Governor Macquarie in 1810. The buildings, sites and elements of our landscape illustrate the history of our local government area. Places identified as heritage items and heritage conservation areas contribute to forming our living historic environment which enriches the character of the local government area. Heritage places give identity to our neighbourhoods and help make the City of Liverpool an attractive and interesting place to live and work.

Development that affects places of heritage significance needs to be carefully designed to minimise negative impacts on heritage significance. Negative impacts may occur due to actions such as the removal of original fabric, loss of important design features, loss of important views, the removal of important vegetation, unsympathetic bulk and scale of new development and inappropriate selection of materials.

Liverpool Local Environmental Plan 2008 identifies a range of heritage items and heritage conservation areas and provides objectives and provisions for the conservation of Liverpool's heritage. This portion of the DCP provides additional objectives, controls and guidance for regulating development affecting these heritage items and heritage conservation areas.

Conservation Philosophy

The aim of heritage conservation is to ensure that the cultural significance of heritage items and heritage conservation areas is maintained over time. While changes may be necessary to adapt heritage buildings to new uses or modern living standards, it is important to ensure that these changes do not compromise the heritage significance of the item.

The underlying philosophy of the controls for regulating development affecting heritage items and heritage conservation areas is derived from The Burra Charter: The Australia International Council on Monuments and Sites (ICOMOS) Charter for Places of Cultural Significance, 1999 (Burra Charter). The Burra Charter is widely accepted as an industry standard for heritage conservation in Australia.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

Objectives

- a) to conserve the heritage significance of heritage items and heritage conservation areas of Liverpool including associated fabric, setting, curtilage and views;
- b) to conserve archaeological sites;
- c) to facilitate the implementation of the objectives and provisions relating to heritage conservation contained in the Liverpool LEP 2008;
- d) to promote and encourage heritage conservation and the consideration of the heritage context in development;
- e) to encourage the retention and appropriate development of significant items;

- f) to encourage a high standard of contemporary design in the heritage context;
- g) to encourage the preservation of culturally significant vegetation;
- h) to enhance the amenity and heritage values of the Liverpool local government area;
- i) to enable appropriate and expert consideration of proposed development to be made by applicants and the Council; and
- j) to encourage and promote public awareness, appreciation and knowledge of heritage conservation.

Development Application Requirements

In addition to the general requirement for development applications the following additional details are required for applications relating to heritage items, places within a heritage conservation area or in the vicinity of a heritage item:

- a Statement of Heritage Impact prepared in accordance with guidelines set out in the NSW Heritage Branch publication titled *Statements of Heritage Impact* and available at their website, www.heritage.nsw.gov.au;
- measured drawings of the existing building including elevations, and clearly indicating existing walls and building elements to be retained and those proposed for removal or alteration;
- details of the materials, finishes and colour schemes;
- a streetscape elevation showing the proposed development within the context of the existing streetscape;
- Additional submission requirements which may include:
 - **Structural Report** – major alterations may also require a report from a structural engineer verifying that the proposed works will not have a detrimental impact on the structural stability of the building, on significant building elements, or on neighbouring properties;
 - **Archaeological Assessment Report** – where there is a likelihood of disturbance of significant archaeology, an Archaeological Assessment will be required;
 - **Interpretation Strategy** – major alterations to a heritage item may also require the production of an interpretation strategy, detailing how the significant aspects and uses of the building may be publicly interpreted;
 - **Demolition Report** – whilst the demolition of heritage items and places within heritage conservation areas is not supported, if there is a proposal to demolish a heritage place this may require the production of a Demolition Report which details the heritage significance of the building and area and the contribution of the building or building element to that significance; the structural stability of the building in the form of a structural engineer's report; and/or a pest inspection report.

In the case of an item listed on the State Heritage Register, an Integrated Development Application or Section 60 Approval from the NSW Heritage Branch may need to be submitted. Exemptions from this requirement are detailed on the NSW Heritage Branch website at www.heritage.nsw.gov.au.

You are advised to contact Liverpool City Council prior to submitting a development application for development affecting a heritage item, heritage conservation area or in the vicinity of a heritage item to clarify what the submission requirements will be for your particular development proposal.

Guidelines for preparing Heritage Impact Statements

A Statement of Heritage Impact is a document which assesses the impact of any proposed development on the heritage significance of a building, site, streetscape, or area. The Statement of Heritage Impact should clearly identify each of the proposed works and should incorporate all development application drawings.

The statement should include options that have been considered for the proposal and document reasons for choosing the preferred option. These should include proposals to minimise the impact of the development on the heritage significance of the building, site, streetscape or area. The statement should also consider compliance with any recommended management policies contained in Council's Heritage Inventory or any Conservation Management Plan available for the place.

The NSW Heritage Branch have produced guidelines for the preparation of Statements of Heritage Impact which are available on their website at www.heritage.nsw.gov.au

A Statement of Heritage Impact must be submitted with any applications for development to:

- Heritage items;
- Properties in the vicinity of heritage items where the works may impact upon the item;
- Properties within heritage conservation areas, including applications for demolition; and
- Fire upgrading of heritage items and buildings in heritage conservation areas.

Where a building has a current Conservation Management Plan, the Statement of Heritage Impact Statement will need to demonstrate compliance with the plan.

Demolition and Demolition Reports

The demolition of heritage items and places within heritage conservation areas is not supported. The onus is on the applicant to demonstrate why the building cannot be retained, taking into consideration:

- The heritage significance of the item or contribution of the building or building elements to the heritage significance of the heritage conservation area; and
- A Demolition Report.

A Demolition Report is a document which should include consideration of:

- The heritage significance of the building and area and the contribution of the building or building element to that significance;
- The structural stability of the building in the form of a structural engineer's report; and/or
- A pest inspection report.

If the application proposes demolition of a structure of heritage significance, the applicant must:

- Submit a Demolition Report demonstrating that the structure is not reasonably capable of retention;
- Submit a factual statement as to why the structure needs to be demolished, including a statement from an appropriately qualified structural engineer; and
- If demolition is recommended primarily on economic grounds, submit a statement from a quantity surveyor comparing the cost of demolition and cost of retention.

The above requirements may be waived in the event of an emergency or danger to the public.

Submitting the necessary reports or justifications in no way implies that the consent authority will agree to the proposed demolition. Liverpool City Council may obtain independent structural engineering advice. Where possible and reasonable, built heritage should be retained.

Where demolition is allowed, a photographic record of the building must be submitted to Council prior to the commencement of the demolition works.

Heritage Inventory

Liverpool City Council maintains the Liverpool State Heritage Inventory database which lists all heritage items and heritage conservation areas within the local government area. Each listing contains an inventory sheet that includes a physical description of the heritage item or heritage conservation area and a statement of significance. The inventory will be considered by the consent authority as part of its assessment of development applications.

Limited information on the inventory sheet does not mean that the item is not significant. Where insufficient detail is available, information provided with the development application may be used to update the database.

Liverpool State Heritage Inventory sheets are available by contacting Council or online through the NSW Heritage Office at: www.heritage.nsw.gov.au

Controls

Development of heritage items

1. Where a proposal involves a heritage item, it will be necessary to lodge a Statement of Heritage Impact;
2. All development of heritage items must be designed by a Registered Architect;
3. All development of heritage items must be designed to respect the heritage significance of these places in terms of:
 - Setting;
 - Scale;
 - Form;
 - Materials and colours;
 - Fenestration;
 - Fencing;
 - Landscaping.
4. Original fabric and landscape elements that contribute to the significance of a heritage item should be retained;
5. Outbuildings should be located to the rear of heritage items and outside important view corridors to or from the place;
6. Additions should maintain the integrity of the heritage item by retaining the significant fabric and form of the place and should be smaller in height and scale than the existing building to maintain views and vistas to the heritage item;
7. Modern technologies (e.g. solar electricity collectors, TV aerials or satellite dishes) are to be located on roof slopes facing the rear yard of heritage items and should not be visible from the public domain nor intrude into significant view corridors to or from the place;
8. Garages and carports should be located as far behind the front building alignment as possible and should not be incorporated into the front façade of a heritage item.

Development in heritage conservation areas

9. Where a proposal involves development within a heritage conservation area, it will be necessary to lodge a Statement of Heritage Impact;
10. All development within heritage conservation areas must be designed to respect the heritage significance of the area in terms of:
 - Character;
 - Setting and views;
 - Scale;
 - Form;
 - Setbacks;
 - Materials and colours;
 - Fenestration;
 - Fencing;
 - Carparking;
 - Landscaping.
11. Modern technologies (e.g. solar electricity collectors, TV aerials or satellite dishes) are to be located on roof slopes outside primary view corridors to or from the place and should not be visible from the public domain nor intrude into significant view corridors to or from the place.

Development in the vicinity of a heritage item

12. Development in the vicinity of a heritage item shall be designed to respect and complement the heritage item in terms of:
 - Scale;
 - Materials, colours and finishes;
 - Building and street alignment;
 - Landscaping and fencing.
13. Development in the vicinity of heritage items is to minimise the impact on the setting of the heritage item by:
 - Retaining and respecting significant views to and from the heritage item;
 - Retaining original or significant landscaping (especially plantings associated with the heritage item);
 - Providing an adequate area around the place to allow interpretation of the heritage item.

Development of Archaeological Sites

14. The Council may grant consent to carry out development involving the excavation or filling of land or the erection (involving disturbance of land) or demolition of buildings on land which is an archaeological site that has non-Aboriginal significance or a potential archaeological site that is reasonably likely to have non-Aboriginal significance only if:
 - It has been considered an archaeological report; and
 - It is satisfied that any necessary excavation permit required by the Heritage Act 1977 has been granted.

Subdivision

15. Subdivision of an allotment that includes a heritage item should not be allowed unless it can be demonstrated that an adequate curtilage of the heritage item is retained and important views corridors conserved.

Signage

16. The significant architectural detailing of a heritage item, or places within a heritage conservation area, is not to be obscured by commercial signage;
17. The façade of a heritage item should not be painted in a corporate colour scheme, especially where the colour is inappropriate in the heritage context or when the façade is traditionally unpainted;

18. Backlit signs and neon signs should only be allowed for under-awning signs on commercial buildings that are heritage items or within heritage conservation areas;
19. Advertising structures should not obstruct or dominate important views to or from a heritage item or within a heritage conservation area.

Adaptive Reuse

20. Adaptive reuse of a heritage item or places within a heritage conservation area should involve minimal change to the significant fabric of the place, particularly features that contribute to the streetscape;
21. Adaptive reuse of a heritage item or places within a heritage conservation area should consider significant associations and meanings of the place.

18. Notification of Applications

Applies to

This section applies to development identified in Tables 10 and 11.

Background

Development of land has the potential to affect adjoining landowners and occupants.

Objectives

- a) To provide the opportunity for the community to view and have input into the assessment process prior to Council or its delegate, making a decision to determine the application.
- b) To provide a reasonable time for inspection of plans and the preparation of submissions on applications, while recognising the obligations of the Council to determine applications within the prescribed periods as set by the relevant legislation.
- c) To match notification and exhibition standards to the complexity of the application and development risk.

18.1 Notified Development and Advertised Development

There are four levels of public consultation that a development application may be subject to. These are:

- Notified Development - where Council notifies people in writing advising of the submission of a development application;
- Advertised Development - where Council, in addition to notification, places an advertisement in a local newspaper and a sign on the subject land advising of the submission of a development application;
- No consultation – applying to applications of minor complexity, where no notification or advertising is necessary; and
- Development not defined – where development is not defined in Table 10, no notification or advertising is necessary.

The level of consultation required is specified in Table 10 and will be dependent on the land use and/or structure proposed. The land uses in Table 10 are defined in *Liverpool LEP 2008*. Where the *Environmental Planning and Assessment Act, 1979*, *Environmental Planning and Assessment Regulation, 2000*, a *State Environmental Planning Policy* or *Regional Environmental Plan* requires a particular type of development to be notified and/or advertised, then the requirements of this DCP shall not apply.

Additional Information on Notification and Advertising

- Nothing in this component of the DCP restricts Council's ability to notify or advertise development greater than the distance prescribed in Table 11.
- Where the development will intensify an existing use of the land, nothing in this component of the DCP restricts Council's ability to notify development that is not prescribed in Table 11.
- A notice to a body corporate is taken to be a notice to the owner of each lot or leaseholder within the parcel concerned. If land is owned or occupied by more than one person, a notice to one owner and/or one occupier is taken to be a written notice to all the owners or occupiers of that land.
- Notification shall include a written notice advising of the proposal, and a copy of the notification plan. Persons notified in writing will be invited to comment on the proposal within a 14-day period (excluding public holidays). This period shall be

specified within the notification letter. Figure 12 shows an example of opposite and adjacent notification.



Figure 12 Opposite and Adjacent Notification

Explanation of symbols

N – Notification required (see Table 11)

A – Advertising required

N2 – Notification if in residential zones only (see Table 11)

A2 – Advertising required if in residential zones

N3 – Notification of Opposite and Adjacent lots only (see Figure 12)

A3 – If the DA is for New Development adjacent to Residential Zones (not including change of use)

Where there is no symbol Notification or Advertising is not required

Please note: Integrated and Designated Development will be advertised in accordance with the provisions of the Environmental Planning and Assessment Act 1979 and Environmental Planning and Assessment Regulation 2000. Distances for notification will be in accordance with Table 11.

Table 9 Level of Notification or Advertising

Land use or purpose		Land use or purpose	
Advertisements	N2	Dwelling houses	
Advertising Structure	N2	Entertainment facilities	N
Agricultural produce industry	N	Educational establishments	A
Agriculture	N3	Environmental protection works	
Airport	A	Exhibition homes	
Airstrip	A	Exhibition villages	N3
Amusement centre	A	Extensive agriculture	

Land use or purpose		Land use or purpose	
Animal boarding or training establishments	N	Extractive industries	A
Attached dwellings	N3	Farm buildings	
Aquaculture	N	Feedlot	N3
Backpackers' accommodation	A	Fill	N3
Bed & breakfast premises	N3	Filming	
Boarding houses	A	Flood mitigation works	N
Boat launching ramp			
Boat building and repair facility	N3	Forestry	
Boat shed	N3	Freight transport facility	A3
Bulky goods premises	A3	Function centre	
Business premises		Funeral home	N
Car parks	N3	Group home	N3
Caravan parks	A	Hazardous industries	A
Cellar door premises	N3	Hazardous storage establishments	A
Cemetery	A	Health consulting rooms	N3
Charter and tourism boating facility		Heavy industry	A
Child care centres	N	Helipad	A
Community facilities	N3	Heliports	A
Crematorium	A	Home businesses	
Dairy (pasture based)	N3	Home industries	
Dams	N	Home occupations	
Depots	A3	Horticulture	
Dual occupancies	N3	Hospitals	A
Land use or purpose		Land use or purpose	
Hostels	N3	Resource recovery facility	A
Hotel or motel accommodation	A	Restaurants	
Industries	A3	Restricted dairy	N3
Information and education facilities		Restricted premises	A
Intensive livestock agriculture	A	Residential flat buildings - not within Liverpool City Centre	N
Kiosk		Residential flat buildings - within Liverpool City Centre	
Landscaping materials supplies		Resource recovery facility	A
Light industries	N3	Rural workers' dwelling	
Liquid fuel depot	A	Sawmill or log processing works	N3
Livestock processing industry	N	Secondary Dwelling	N3
Marinas	A	Self storage	N3
Market	A3	Semi detached dwellings	N3
Medical centres	N	Seniors housing	N3
Mines	A	Service stations	A
Mixed use development	N	Serviced apartments	N3
Mooring		Sewage treatment works	A
Mortuary	N	Sex service premises	A
Multi dwelling housing	N	Shop top housing	N3

Land use or purpose		Land use or purpose	
Natural water-based aquaculture		Stock and sale yards	A
Neighbourhood shops		Subdivisions with lots less than 300sqm	N3
Offensive industries	A	Take away food or drink premises (not in Liverpool City Centre)	N
Offensive storage establishments	A	Take away food or drink premises in Liverpool City Centre	
Office premises		Telecommunication facilities	A
Open cut mine	A	Timber and building supplies	A3
Outdoor Dining on Council owned Footpaths		Tourist and visitor accommodation	N
Passenger transport terminals	A	Transport depots	N
Places of public worship	A	Truck depot	N
Public administration buildings	N3	Turf farming	
Public utility undertaking		Utility installations	
Pubs	A	Vehicle body repair workshops	A3
Recreation facilities (indoor)	N3	Vehicle repair stations	A3
Recreation facilities (major)	A3	Vehicle sales or hire premises	A3
Recreation facilities (outdoor)	A3	Veterinary hospitals	N3
Registered clubs	A	Warehouse or distribution centres	A3
Residential care facilities	N3	Waste or resource management facility	N
Residential flat buildings - not within Liverpool City Centre	N	Waste or resource transfer station	N
Residential flat buildings - within Liverpool City Centre		Water Recreation structure	
		Waterbody (artificial)	N

Note: The Liverpool City Centre is defined in the LLEP 2008

18.2 Notification of Development

Where Table 11 identifies Notified Development the following shall be notified:

- Where a development application for a property is located opposite or adjoins another Local Government Area (LGA), the adjoining Council will be notified.
- The owner/occupier of land that:
 - Adjoins or is opposite the land where a development application has been submitted, except where exemption is given.
 - Is located within the specified distances for the types of development in Table 11.

Table 10 Distances for Notification

Development Type	Distance from subject land**	
	Rural Zones*	Other Zones*
Advertisements	N/A	75m
Advertising structure	N/A	75m
Agricultural produce industry	200m	N/A
Airport	1000m	500m
Airstrip	1000m	500m
Amusement centre	500m	200m
Animal boarding or training establishments	500m	75m
Aquaculture	200m	N/A
Backpackers accommodation	N/A	50m
Boarding house	N/A	100m
Caravan Parks	N/A	50m
Cemetery	1000m	200m
Child care centres	N/A	75m
Crematorium	1000m	200m
Dams	500m	N/A
Depot	N/A	100m
Educational establishments / Schools	500m	200m
Entertainment facilities	500m	200m
Extractive Industries	1000m	200m
Flood mitigation works	1000m	200m
Freight transport facility	N/A	100m
Funeral home	1000m	200m
Hazardous industries	N/A	500m
Hazardous storage establishments	1000m	200m
Heavy Industry	N/A	200m
Helipad/ Heliport	200m	100m
Hospital	200m	100m
Hotel or motel accommodation	N/A	75m
Intensive livestock agriculture	500m	N/A
Liquid fuel depot	500m	200m
Livestock processing industry	200m	200m
Marinas	N/A	200m
Market	N/A	100m
Medical centre	200m	75m
Mines	1000m	N/A
Mixed use development	N/A	75m
Mortuary	1000m	200m
Multi dwelling housing	N/A	75m
Offensive industries	N/A	200m
Offensive storage establishments	500m	200m
Open cut mine	1000m	N/A
Passenger transport terminal	N/A	200m
Place of public worship	1000m	200m
Pubs	N/A	200m
Recreation facilities (major)	N/A	200m
Recreation facility (outdoor)	500m	100m
Registered club	500m	200m
Residential flat buildings (outside the Liverpool City Centre)	N/A	75m
Resource recovery facility	N/A	200m
Restricted premises	N/A	200m

Development Type	Distance from subject land**	
	Rural Zones*	Other Zones*
Service stations / Liquid fuel depot	500m*	200m
Sewerage Treatment works	500m	200m
Sex services premises	N/A	200m
Stock and sale yards	500m	200m
Take away food or drink premises / food and drink premise (outside the Liverpool City Centre)	N/A	100m
Telecommunication facilities	1000m	300m
Transport depot	N/A	200m
Tourist and Visitor accommodation	200m	75m
Truck depot	N/A	200m
Vehicle body repair	N/A	100m
Vehicle repair station	N/A	100m
Vehicle sales and hire premises	N/A	100m
Warehouse and distribution centres	N/A	100m
Waste or resource management facility	1000m	200m
Waste or resource transfer station	1000m	200m
Waterbody (artificial)	500m	50m

* Where permitted by *Liverpool LEP 2008*

** These distances are to be measured as a radius from the external boundaries of the property the subject of the application.

18.3 Exemptions to Notification

Exemptions to the notification procedures include:

1. Building works for, additions, awnings, pergolas, swimming pools, outbuildings and the like which are either:
 - Considered to be in keeping with accepted community standards and the existing local environment; or
 - Have the floor level of the structure, at no point, greater than 600mm above the existing ground level; or
 - Located on land in a residential zone or in a rural zone, which has an area greater than 4,000sqm.
2. Internal works, where there is no change to the external configuration of the building in shape or height.
3. A change of use of an existing development (except "non-conforming" uses).
4. Building works, which have been previously notified at the Development Application stage and have had no substantial changes made to the plans.
5. Applications for temporary land sales offices that are to be erected for a period no greater than 12 months.
6. Applications where the person to be notified is also the applicant,
7. Dwelling houses – including all alterations to existing dwellings, no notification as long as the application complies with:
 - Maximum Height;
 - Maximum FSR;
 - The requirement for no first floor rear balconies (unless overlooking public open space)

Variance of DCP controls does not require notification if the development does not detrimentally impact upon the amenity of the area and does not intensify land use.

8. In extenuating circumstances notification and/or advertising requirements can be waived at the discretion of the Chief Executive Officer or his delegate.
9. Development for the following uses is exempt from notification when within the Liverpool City Centre.
 - Change of use from business premises to business premises
 - Change of use from retail premises to retail premises
 - Restaurants
 - Take away food and drink premises or food and drink premises
10. An applicant may amend a development application at any time prior to the determination of the application. In these instances, the responsible Council officer will, if the original development application was subject to public notification, re-notify:
 - a) Those persons previously notified of the original development application; and
 - b) Those persons who made submissions in relation to the original development application.

Where the impact of the development is being reduced or if the modifications are internal, no re-notification is required.

18.4 Advertised Development

Where Table 10 identifies that Advertising is required, applications shall in addition to the Notified Development requirements, be advertised in the following manner:

1. An advertisement placed in a local newspaper. A copy of the advertisement shall also be placed on Councils website
2. A notice measuring 600 x 400mm, erected upon the subject property.
3. Placed on exhibition at Council offices for a period of 14 days (excluding public holidays).
4. Written comments on the application shall be received by Council within the exhibition period.
5. An applicant may amend a development application at any time prior to the determination of the application. In these instances, the responsible Council officer will, readvertise the application if the original development application was advertised.

Where the impact of the development is being reduced or if the modifications are internal, no re-notification is required.

18.5 Section 96 Applications

When Council receives a Section 96 application, notification or advertising will be in accordance with the below categories.

- Section 96(1) – No notification
- Section 96(1)(A) – No notification if the impact of the development is being reduced or if the modifications are internal.
- Section 96(2) - No notification if impact is being reduced or the modifications are internal.
- Section 96AA – No notification if the impact of the development is being reduced or if the modifications are internal.

19. Used Clothing Bins

Applies to

This section applies to charity bins located on either private or Council land.

Background

Used clothing bins are considered beneficial for the local community as they provide a means for residents to dispose of unneeded clothing items whilst providing an avenue for charities to obtain clothing donations from the public to provide goods, services and financial relief for disadvantaged people. Furthermore, clothing bins have the capacity to divert a substantial amount of recyclable material from landfill, thus ensuring the continued protection of the environment. The use of clothing bins is important as it supports both charitable causes and local residents in need.

Objectives

- a) To recognise used clothing bins form a legitimate and appropriate means of social support while encouraging the recycling of unneeded clothing.
- b) To allow for the operation of used clothing bins in a manner which limits adverse impacts upon visual amenity, health amenity, existing landscaping and the safety of pedestrians and vehicles.
- c) To control the number and location of used clothing bins within the Liverpool LGA.
- d) To regulate the size, appearance and maintenance of used clothing bins.
- e) To provide Council with legal protection from issues that may arise with regard to the placement and operation of used clothing bins.

General controls for all Used Clothing Bins

1. Used clothing bins are permitted in all business zones, the private recreation zone and on compatible sites such as educational establishments and places of public worship.
2. A used clothing bin is permitted on RE1 zoned land, only if the land adjoins a business zone and Council permission is obtained.
3. A maximum of 8 square metres must be identified in each development application for retail/shopping centre, schools and places of public worship for the future placement of used clothing bins.
4. A maximum of 2 used clothing bins are permitted on each shopping centre site. The bins at each shopping centre location/or other site are to be operated by the one charity organisation. Council reserves the right to use its discretion in determining whether additional bins are appropriate, and whether the site is considered suitable.
5. A used clothing bin must clearly display the name and telephone number of the operator and not exceed the following dimensions:
 - Width: 1.2 metres
 - Depth: 1.3 metres
 - Height: 1.9 metres
6. The used clothing bin is to be placed on a concrete slab to allow all weather use.
7. The organisation owning the clothing bin will maintain the bin and its immediate surroundings in a neat and tidy condition at all times and operate it in such a manner so as to minimise any form of nuisance. The bin itself should be kept free of graffiti.
8. Illegally dumped materials within a 5 metre radius of a used clothing bin must be removed by the organisation owning the bin within 24 hours of being informed by Council.

9. A used clothing bin must be emptied at least twice every week or within 24 hours of being notified by Council of the necessity to do so.
10. Used clothing bin should be readily accessible and are not to be located in a designated car parking space and manoeuvring areas, nor in such a way that contravenes any condition of development consent applicable to the site.
11. Used clothing bin proposed to be placed on privately owned land must be supported by a letter giving the consent of the owner of that land.
12. A used clothing bin must not be located in a position where it could cause an obstruction to pedestrian and cycle paths, affect vehicular sightlines, on a road verge or in a manner which contributes to a potentially dangerous situation.
13. At no time will a used clothing bin be permitted on Council's footpaths, cyclepaths or nature strips.
14. Council reserves the right to direct the replacement of a used clothing bin that has become damaged or dilapidated.
15. A used clothing bin will not be permitted in a particular location if, in the opinion of Council, the bin will result in an unacceptably adverse visual impact upon the surrounding area.
16. Each used clothing bin is to be left in the approved location and if moved by accident, or by any other persons, it is to be relocated to the correct position by the owner of the bin within 48 hours of being notified by Council.
17. The owner of a charity bin shall be responsible for compliance with any conditions imposed by the NSW Department of Gaming and Racing and the Charitable Fundraising Act 1991.
18. Breaches of conditions of any development consent granted can lead to the service of Order by the Council or a prosecution or any other action under the provisions of the Environmental Planning and Assessment Act 1979.

Additional controls for Used Clothing Bins on Council owned land

19. An application for the placement of a used clothing bin must be in writing and must address the following criteria:
 - a. The name of the company which will be operating the bin, and the name and contact details of a designated contact person within that company who has control of locating and servicing their bins.
 - b. Proof of membership with the National Association of Charitable Recycling Organisations. An application for the placement of a charity bin will only be approved if the owner of the bin is registered with the National Association of Charitable Recycling Organisation (NACRO). Approved bins are to at all times carry a label, as issued by NACRO, identifying that the owner is a member of that organisation.
 - c. A copy of the current insurance policy which indemnifies Council against any claims that could arise from the operation of the bin.
 - d. A detailed map which shows:
 1. The location of the proposed bin,
 2. The location of any other bins located within 500 metres of the proposed location,
 3. The location of any other bins controlled by the applicant/operator that are located within the Liverpool LGA,
 4. Details of the bins dimensions, signage, materials and method of installation,
 5. Details of the maintenance arrangements for the bin itself (including removal of graffiti) and the area around the bin (including the removal of excess clothing and general waste),

6. Details of the frequency and method with which the bin will be emptied.
20. The organisation owning the used clothing bin shall carry public liability insurance providing cover against third party injury or damage. The owner of the bin must submit written evidence of public liability insurance naming Liverpool City Council as an additional insured party and providing a limit of indemnity not less than \$20 million. Details of the insurance cover are to be lodged with Council at the time of making the application for approval.
 21. The siting of used clothing bins on Council land is permitted only with the written consent of Council.
 22. The cost of any necessary improvements to Council owned land is to be borne by the bin owner.
 23. Approval to place a used clothing bin on Council land is conditional on:
 - There being no detrimental impact to the amenity of the area where the charity bin is proposed to be located,
 - Any other condition considered appropriate by Council.
 24. The applicant will comply with the criteria endorsed by NACRO in relation to the use and operation of the used clothing bin.
 25. The owner of any charity bin placed on Council property without Council's permission or not carrying a NACRO membership label will be given a written direction to remove the bin.
 26. Council will review the location of the bin after an initial period of twelve (12) months and may require removal/relocation if the bin and surrounds is not managed appropriately.
 27. Council will retain the authority to require that any bin, approved or otherwise, shall be removed at any time after reasonable notification.

20. Car Parking and Access

Applies to

This section applies to development, which generates the need to provide car parking and loading facilities, generates vehicle and pedestrian movement and potentially generates the need for public transport.

Background

Most development generates vehicle and pedestrian movements. There is a need to achieve a balance between the need to minimise adverse impacts on the immediate neighbourhood, the street network and adjoining developments. Some developments, due to their scale may require changes to the transport networks.

Good design integrates vehicle access and car parking into the development concept so that it is convenient for the users and safe for pedestrians and vehicles. Access and car parking needs to be carefully considered so that it is balanced with landscape elements and does not dominate the appearance or character of a development.

Objectives

- a) To ensure that adequate parking space and service facilities are conveniently located on site to satisfy the reasonable demand created by the development.
- b) To ensure that access is designed to accommodate the size and volume of vehicles likely to visit the site.
- c) To ensure that loading facilities are provided for vehicles likely to service the site.
- d) To ensure where appropriate that car parking and the manoeuvring of commercial vehicles are separated in the interest of safety and amenity.
- e) To ensure that adequate landscaping/tree planting is provided to improve amenity and reduce visual impact of car parking and loading areas.
- f) To ensure that car parking and driveways do not interfere unreasonably with the amenity of the neighbourhood.
- g) To ensure the provision of the appropriate car parking depending on location.
- h) To ensure that where a development generates the need to augment the local transport network that the development contributes to that work.
- i) To provide highly accessible end-of-trip facilities for bicycle riders, and to provide a network of cycleways which encourages active travel.
- j) To provide safe facilities by ensuring adequate manoeuvring space, and separation where appropriate, between bicycles and motor vehicles in parking areas.
- k) To ensure pedestrian and vehicle safety.

Controls

The controls for Car Parking and Access are contained within clause 20.1 through 20.7. Bicycle parking, facilities, and infrastructure requirements are contained within this section for all development.

20.1 Overall Design Considerations

The layout of a car parking area shall consider the entire facility, including car parking modules, landscaping, circulation aisles and roadways, access driveways and, if necessary, frontage road access as an integrated coordinated design. The management of traffic within a car parking facility should take into account:

1. The need for traffic to move to and from the frontage road with minimum disruption to passing traffic and maximum pedestrian safety.
2. Provision of adequate capacity in circulation roadways and aisles to handle peak hour movements without congestion.
3. Avoid as far as practicable conflicts between intersecting streams of circulating traffic.
4. Minimum length travel paths between entry/exit points and car parking spaces.
5. Safe treatment of points of conflict with pedestrians and other road users.

20.2 Vehicular Access Arrangement and Manoeuvring Areas

Background

The location, type and design of vehicular access points to a development can have significant impacts on the streetscape, the site layout and the building façade design.

The design and location of vehicular access to developments should minimise traffic impacts, including pedestrians and vehicles conflicts, on footpaths, particularly along pedestrian priority places, and visual intrusion and disruption of streetscape continuity.

Objectives

- a) To ensure all driveways and access points are designed to Australian Standards
- b) To minimise any negative impacts of vehicular access points on the public footpath
- c) To ensure efficient traffic flow.
- d) To minimise impact of driveway crossovers on pedestrian safety and streetscape amenity.
- e) To minimise stormwater runoff from uncovered driveways and parking areas.

Controls

1. If driveways are proposed from a classified road approval is required from the Roads and Maritime Services (RMS).
2. Vehicular egress and entrances must be integrated into the building design so they are visually recessive. This can be achieved by locating the opening a small distance behind the front façade.
3. Where practicable, adjoining buildings are to share or amalgamate vehicle access points. Internal on site signal equipment is to be used to allow shared access. Where appropriate, new buildings should provide vehicular access points so that they are capable of shared access at a later date.
4. Access ways to underground parking should be sited to minimise noise impacts on adjacent habitable rooms, particularly bedrooms.
5. Vehicular access may not be required or may be denied to some heritage buildings.
6. Vehicle access ramps parallel to the street frontage will not be permitted;
7. Doors to vehicular access points are to be roller shutters or tilting doors set back from the building façade; and
8. Vehicular entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street.

20.3 On-Site Car Parking Provision and Service Facilities by Land Use

Background

On-site parking includes underground (basement), surface (at grade) and above ground parking, including parking stations.

Objectives

- a) To facilitate an appropriate level of on-site parking provision to cater for a mix of development types.
- b) To minimise the visual impact of on-site parking.
- c) To provide for adequate space for parking and manoeuvring of vehicles including service vehicles and bicycles.
- d) To enable the conversion of above ground parking to other future uses.
- e) To recognise the complementary use and benefit of public transportation and non-motorised modes of transport such as bicycles and walking.

Controls

- 1. Where a proposed use is, in the opinion of Council, unusual and not appropriately dealt with by the parking rates, the RMS guidelines to Parking rates may be used to guide the required parking rate.
- 2. Basements cannot extend out of the ground more than 700mm at the street front of a site and 1200mm at the rear unless site conditions are such that minor variations are require.
- 3. Provide natural ventilation to underground parking areas, where possible. Ventilation grills must be:
 - integrated into the overall façade and landscape design of the development;
 - only located on the secondary streets and service lanes; and
 - oriented away from windows of habitable rooms and private open space areas.
- 4. Tables 11, 12 and 13 outline the number of car parking spaces and any other facilities required for the accommodation of vehicles on site for each land use type. In proposals where calculations of car parking requirements result in fractions of spaces being required, the fraction will be rounded up to the nearest whole space. Where developments comprise separately defined facilities, for example a hotel with a restaurant; the relevant requirements of each facility must be satisfied.
- 5. For Development Applications that propose composite developments such as shopping malls, retail plazas (and the like) the common or shared areas (e.g. toilets, corridors) are excluded from the LFA.

Car Parking Provision in Liverpool City Centre

Off-street car parking shall be provided in Liverpool City Centre in accordance with Clause 7.3 of Liverpool Local Environmental Plan (LLEP) 2008, Car parking in Liverpool city centre (where the land is zoned B3 — Commercial Core or B4 — Mixed Use) and Section 4.4.2 of Part 4 LDCP 2008.

Off-Street - Car Parking Provision other than Liverpool City Centre

Off street car parking provision and service and loading provision shall be provided in accordance with Table 11.

Table 11 Car Parking, Servicing and Loading Provision

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Boarding houses	1 space per, 2 bedrooms or 1 space per 3 beds, whichever is the greater	Servicing facilities for 1 small rigid vehicle
Bulky Goods Premises (in the B5 zone)	Developments of LFA < 600sqm: 1 space per 30sqm LFA, Developments of LFA 600 to 3,000sqm: 1 space per 90sqm LFA, Developments of LFA > 3,000sqm: 1 space per 150sqm LFA	Developments of LFA < 600sqm require occasional access for an articulated vehicle and service facilities for a heavy rigid vehicle Developments of LFA > 3,000sqm require service facilities for an occasional articulated vehicle
Caravan Parks and Camping Areas	1 space per unit/site plus 1 space per employee	Waste collection vehicle service access Loading space for a coach
Child care centres		
Residential & industrial zones	1 space per staff member and 1 space per 10 children (Stack parking of employees cars, maximum 2 deep, will be considered if there is good design for flow-through of short term car parking) Pick up and set down of children must address their safety	Service facilities for a van
Business zones	1 space per 35sqm of LFA	Service facilities for a van
Drive-in food Outlets For type definitions refer to Appendix 1 in Part 1	Type 1 - 1 space per 8sqm of LFA Type 2 - 1 space per 8sqm of LFA plus 1 space per 5 seats Type 3 - 1 space per 6 seats plus queuing area for 10 cars	Waste collection vehicle service access Service facilities for a heavy rigid vehicle
Drive-in Liquor Stores	Parking while browsing is provided for without interfering with through traffic Internal roadway: Two parallel lanes, minimum 3m wide, with queuing min. length 30m. Entry & exit driveways min 4m wide & minimum 1m apart	Waste collection vehicle service access Heavy rigid vehicle service facilities
Dwelling houses	2 spaces	
Educational establishments		
Rural, Residential & Industrial zones	1 space per 1 staff member, plus 1 space per 30 students Car parking is to be convenient to the distribution of destinations on campus A traffic and car parking report will be required, as these uses are land intensive, including student car traffic generation	Loading facilities for a coach

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Business zones	1 space per 35sqm of LFA A traffic and car parking report will be required, as these uses are land intensive, including student car traffic generation	
Entertainment facility	1 space per 10sqm LFA of audience area or per 6 seats whichever is the greater OR subject to traffic report (at the applicant's expense) if required by Council, due to the scope of a particular development	Service access for a small rigid vehicle
Exhibition home Exhibition villages	5 spaces per dwelling used for exhibition purposes Temporary car parking can use the front setback area	
Group homes - (transitional & permanent)	1 Space per employee, plus 1 space per 4 bedrooms	
Health consulting rooms & veterinary hospitals	3 spaces per consulting room or health care professional, whichever is greater, plus 1 space per person employed on the premises, plus any residential requirement	Service access for an occasional small rigid vehicle
Home business Home occupation Home industry	1 space per employee not resident on the site plus the residential requirements	Service access for an occasional small rigid vehicle
Hospitals	A traffic and car parking report will be required to define the need and demonstrate its fulfilment Car parking is to be convenient to the distribution of destinations on site	Service facilities for a heavy rigid vehicle Facilities are designed for waste collection
Hotel accommodation (Reductions available if peaks of facilities do not coincide)	1 space per room/unit plus 1 space per 2 employees engaged in accommodation For developments exceeding 200 bedrooms, provision must be made for short-term lay by for a tourist coach, couriers and taxis	Waste collection vehicle service access Loading facilities detailed in Sub Section 4
Industry	1 space per 35sqm of office LFA 1 space per 75sqm factory/warehouse LFA or 1 space per 2 employees, whichever is the greater Warehouse developments of GFA >1000sqm: 1 space per 250sqm in GFA	Developments of LFA > 1,000sqm require occasional access for an articulated vehicle Service Facilities detailed in Section 4
Landscape and garden supplies	Minimum 15 spaces plus 1 space per 200sqm of nursery site area	Service access for a heavy rigid vehicle

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Markets	2.5 spaces per stall	Occasional access for an articulated vehicle (to transport temporary structures) Loading facilities to be convenient to stalls
Materials recycling or recovery centre	Traffic Report Required	
Medical centres	1 space per 25sqm of LFA for typical situation Traffic report required where specialised services are provided	Developments > 2,000sqm LFA require waste collection vehicle service access
Multi dwelling housing and residential flat buildings		
Residential & Business zones	1 space per small dwelling (< 65sqm) or 1 bedroom 1.5 spaces per medium dwelling (65 - 110sqm) or 2 bedrooms 2 spaces per large dwelling (> 110sqm) or 3 or more bedrooms 1 visitor car space for every 4 dwellings or part thereof	Service access for removalists and garbage servicing
Office premises		
Business zones	1 space per 35sqm of LFA	Developments of LFA > 2,000sqm require waste collection vehicle service facilities
Place of Public Worship		
Rural, Residential & Recreation zones	1 space per 5sqm LFA or 1 space per 6 seats, whichever is the greater OR subject to traffic report (at the applicant's expense) if required by Council, due to the scope of a particular development	Service access for a small rigid vehicle
Business zones	1 space per 35sqm of LFA	Service access for a small rigid vehicle
Industrial zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Recreation facilities		
Industrial & Recreation zones	Gymnasia, Fitness Centres and Indoor Cricket 1 space per 22sqm of LFA Tennis or Squash Court & Bowling Alleys - 3 spaces per court/alley Bowling Green 30 spaces for first green and 15 spaces for each additional green Other sports subject to traffic report	Service access for a small rigid vehicle

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Business zones	1 space per 20sqm of LFA For major or large recreation facilities a traffic report may be required.	Service access for a small rigid vehicle
Registered club		
All areas	1 space per 5sqm of LFA of uses under license OR a traffic report	Service access for a small rigid vehicle Waste collection vehicle service access
Restaurant		
Residential zones (where permitted)	1 space per 7sqm of LFA of uses under license OR 1 space per 3 seats, whichever is the greater	Waste collection vehicle service access
Business zones	1 space per 20sqm of LFA	Waste collection vehicle service access
Industrial zones	1 space per 7sqm of LFA of uses under license OR 1 space per 3 seats, whichever is the greater	Waste collection vehicle service access
Retail premises		
Business zones	Developments of LFA < 12,000sqm: 1 space per 20sqm LFA, Developments of LFA 12,000 to 30,000sqm: 1 space per 25sqm of LFA, Developments of LFA > 30,000sqm: 1 space per 30sqm LFA	Developments of LFA < 4,400sqm require service access for an articulated vehicle Service Facilities as per Section 4
Transport depot	Traffic Report Required	
Roadside stalls	4 spaces per stall	Occasional access for an articulated vehicle (to transport temporary structures) Loading facilities to be convenient to stalls
Service station	2 spaces per fuel outlet plus 3 spaces per service bay plus 1 space per employee 1 space per 20sqm of LFA of any convenience store	Service access for an articulated vehicle Service facilities for a heavy rigid vehicle
Serviced apartments	1 space per bedroom/suite plus 1 space per 2 employees	Service access and facilities for an occasional heavy rigid vehicle (e.g. Furniture van)
Sex service premises (in Industrial Areas)	1 space per 70sqm of LFA or 1.5 car spaces per employee, whichever is the greater	

Land Use	Minimum Number of Car Parking Spaces	Service and Loading
Vehicle Repair Station		
Business zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Industrial zones	1 space per 70sqm of LFA	Service access for a small rigid vehicle
Vehicle showroom	1 space per 130sqm	
Veterinary hospital	1 space per 35sqm of LFA	
Business zones	1 space per 20sqm LFA	Service access for a small rigid vehicle
Warehouses	1 space per 35sqm of office LFA	Developments of LFA > 1,000sqm require occasional access for an articulated vehicle
	1 space per 75sqm factory/warehouse LFA or 1 space per 2 employees, whichever is the greater	Service Facilities detailed in Section 4
	Where it can be shown that employee numbers will be significantly less than the required car parking provision, some of the car spaces may be set aside as unformed car parking	
	Warehouse developments of GFA >1000sqm: 1 space per 250sqm in GFA	

Disabled Off-Street Car Parking

Disabled car parking shall be provided in accordance with Table 12 for car parking areas over 20 spaces:

Table 12 Disabled Car Parking Provision

No of spaces	Land Use
1 per 100 spaces	Retail, Commercial, Industry or Transport
2 per 100 spaces	Community, Recreation, Accommodation or Education
3 per 100 spaces	Entertainment or Health

Bicycle Parking and Cycling Facilities

1. Bicycle parking and cycling facilities shall be provided in accordance with Table 13 below.
2. Bicycle parking and cycling facilities shall be clearly signposted and located in an area that is convenient to access from within the building(s) and from the street/public path.
3. In multi-storey developments, bicycle parking and cycling facilities for residents and staff shall be located on the ground floor, or first basement level close to entry/exit points, to ensure they are secure and easily accessible by staff and tenants. The design of buildings must ensure:
 - areas between bicycle parking and the street have a courtesy ramp, if stairs are the primary means of access,
 - paths between the entry point and bike parking and cycling facilities shall be wide enough to accommodate a person walking a bike (particularly around corners)
 - paths adjacent to a driveway are visually or physically separated and marked,

- bike cages or lockers within basement car parks are not located in, or create, concealed spaces.
- 4. Any bicycle parking for visitors or customers shall be located adjacent to the main entry point. In developments with multiple entry/exit points, the share of bicycle parking can be divided between each entry point, as per expected demand and design of the development.
- 5. End-of-trip facilities (showers and change rooms) are to be provided at the rate of 1 per 10 employee bicycle spaces. Where less than 4 facilities are proposed, they should be unisex. End-of-trip facilities are optional for residential uses or for visitors to other developments.
- 6. Where shower facilities and change rooms are provided, they should be located adjacent to the employee bicycle parking. This may be near the main entrance/lobby of the building, or in some instances the service entry.
- 7. At least one personal locker is to be provided for each Class 1 or 2 bicycle parking space.

Note: Bicycle parking facilities have the same classification as Cycling Aspects of Austroads Guidelines and are classified as:

- Class 1. High security facilities are suitable for all-day or night parking. This includes fully enclosed individual lockers. Refer to AS 2890.2
- Class 2. Medium security facilities are appropriate for all-day parking in many areas. These facilities include a lockable shelter/enclosure fitted with Class 3 facilities. Refer to AS 2890.2
- Class 3. Low security facilities are appropriate for short-medium stay parking in highly visible areas. This includes bicycle rails/racks where the wheels and frame can be locked to the rack (traditional 'toaster' racks where the front wheel only is secured is not an appropriate facility).

Table 13 Bicycle Parking Provision		
Land Use	Employee/Resident Parking Spaces (Class 1 or 2 facility)	Visitor/Customer Parking Spaces (Class 3 facilities)
Residential		
Residential Flat Buildings, Multi-Dwelling Housing	1 per 2 units, or 1 for every 4 bedrooms (whichever is greater).*	1 per 10 units.
Boarding Houses, Hostels & Group homes	1 per 10 beds.	1 per 10 units/rooms.
Seniors Housing	1 per 10 staff & 1 per 20 units	2 per centre
Caravan Parks, Tourist & Visitor Accommodation	1 per 10 staff.	1 per 20 bedrooms/sites.
Commercial		
Bulky Goods Premises, Garden Centres, Hardware and Building Supplies premises, Industrial Retail Outlets, and Rural Supplies.	1 per 1000sqm GFA or 1 per 10 staff (whichever is greater)	1 per 1000sqm GFA
Cellar Door premises, Kiosks, Roadside Stalls and Timber Yards.	Not Applicable	Not Applicable
Office Premises	1 per 200sqm of GFA.	1 per 750sqm GFA
Other Retail and Business Premises (>500sqm GFA)	1 per 10 staff or 1 per 200sqm GFA (whichever is greater)	2 plus 1 per 100sqm GFA
Shopping Centres	1 per 300sqm LFA	1 per 500sqm LFA
Industry, Depots, Warehouses & Distribution Centres	1 per 10 staff (or 1 per 10 car spaces if staff numbers are undetermined)	Nil
Rural Industry (Fixed Location)	Not Applicable	Not Applicable
Community/Other		
Medical Centres and Health Consulting Rooms	1 per 10 staff	2 per centre, plus 1 for every 5 th consulting room
Educational Facilities	1 per 10 staff	1 per 10 students
Child Care Centres	1 per 10 staff	2 per centre
Community Centre/Museums	1 per 10 staff	2, plus 1 per 1500sqm GFA
Places of Public Worship	1 per 10 staff	1 per 20 seats
Libraries	1 per 10 staff	4 plus 1 per 200sqm GFA
Registered Club & Function Centres	1 per 10 staff	1 per 140sqm GFA
Recreational Facilities		
Major Facilities	1 per 1500 spectator places	1 per 250 spectator places
Swimming Pools	1 per 10 staff	1 per 15sqm of pool
Other Indoor Facilities	1 per 10 staff	2 plus 1 per 100sqm GFA

*The storage of bicycles for a unit in a residential flat building or multi-dwelling housing may be combined with a unit's allocated basement storage area. The bicycle parking space may also be combined with a storage room within the dwelling. The area for bicycle parking must be larger than a Class 1 locker. If the storage room is in a basement it must satisfy control 3 above.

Bike Paths and Facilities

The Liverpool Bike Plan provides for new on-road and off-road bicycle routes to be provided across Liverpool. In an effort to avoid instances of providing 'tack-on' widenings or reconstruction of new footpaths, new developments must consider any proposed routes in the Bike Plan.

1. Any development which would otherwise be required to rehabilitate, or provide a new footpath, shall provide a shared-path (or other facility as specified) if it forms part of a route in the bike plan.
2. In addition to control 1 above, any developments involving more than 10 dwellings may be required to join any shared paths (or other facilities) required as part of the development with that of other nearby facilities if the paths would not meet.
3. Shared paths shall be at-least 2.5m wide, and designed in accordance with any applicable Council paving policy, the Cycling Aspects of Austroads Guidelines and NSW Bicycle Guidelines (RTA).
4. In an effort to reduce streetscape clutter, regulatory shared-path signage should not be installed until a reasonable portion of the route has been constructed (e.g. a length of approximately 50m or more, such as an uninterrupted length between two streets).

20.4 Car Parking Design

Car Space Dimensions

Table 14 Dimensions of Off-Street Car parking for bays at 90°

Land use types	Width	Length 1	Length 2	Aisle Width
Tenant, employee and commuter car parking, universities (generally all day car parking)	2.4m	5.4m	4.8m	6.2m
Long-term city and town centre car parking, sport facilities, entertainment centres, hotels, motels, airport visitors (generally medium term car parking)	2.5m	5.4m	4.8m	5.8m
Short-term city and town centre car parking, shopping centres, department stores, supermarkets, hospitals and medical centres (generally short term car parking and where children and goods can be expected to be loaded into vehicles)	2.6m	5.4m	4.8m	5.8m
Car parking for people with disabilities (see next section)	3.2m	5.4m	4.8m	5.8m

1. Length 1 - Where car parking is to a wall to high kerb not allowing any overhang.
2. Length 2 - Where car parking is controlled by wheel-stops or a kerb no higher than 100mm, which allows 600mm overhang.
3. Refer to AS 2890.1: 2004 for more details.
4. *Adjacent Obstruction* - If the side boundary of a space is a wall or fence, or if there are obstructions such as columns placed so as to restrict door opening, 300mm shall be added to width required for the space.
5. *Blind Aisles* - The end spaces shall be made 1m wider than the remaining spaces. In car parks open to the public, the maximum length of a blind aisle shall be equal to the width of six, 90-degree spaces unless provision is made for cars to turn around at the end and drive out forwards.

Landscaping within car parking areas

An outdoor car park with 20 or more car parking spaces must include at least 1 tree per 10 car parking spaces to the following specifications:

1. A tree must be a single trunk species to allow a minimum visibility clearance of 1.5m measured above natural ground level; and
2. A tree must be planted in an island bed that is a minimum 2m in width and 4m in length.

Layout for car parking spaces

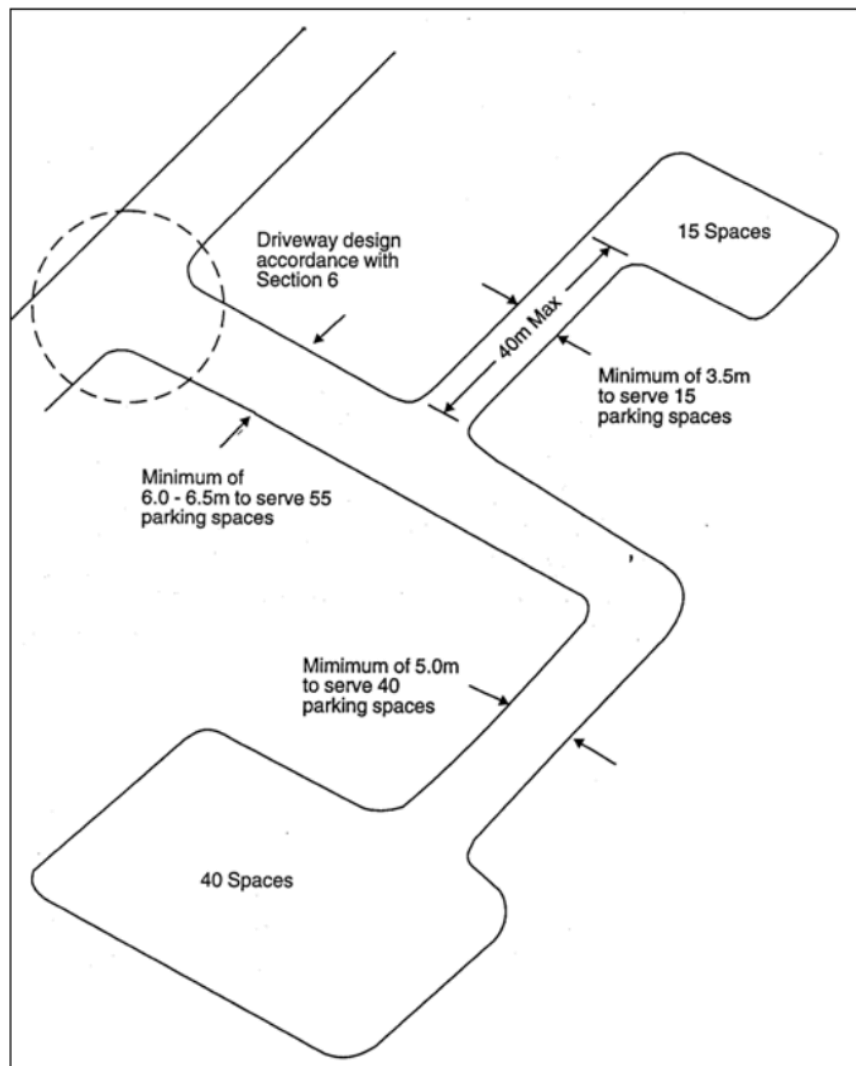


Figure 13 Car parking layout

20.5 Internal Driveways

Gradient

1. Driveways are to be in accordance with the relevant Australian Standard. The maximum change in gradient is to be as shown in the "Maximum Gradients of Internal Driveway" diagram (See Figure 3).
2. Measured parallel to the angle of car parking 1 in 20 (5%); and
3. Measured at 90° to the angle of car parking – 1 in 16 (6.25%).

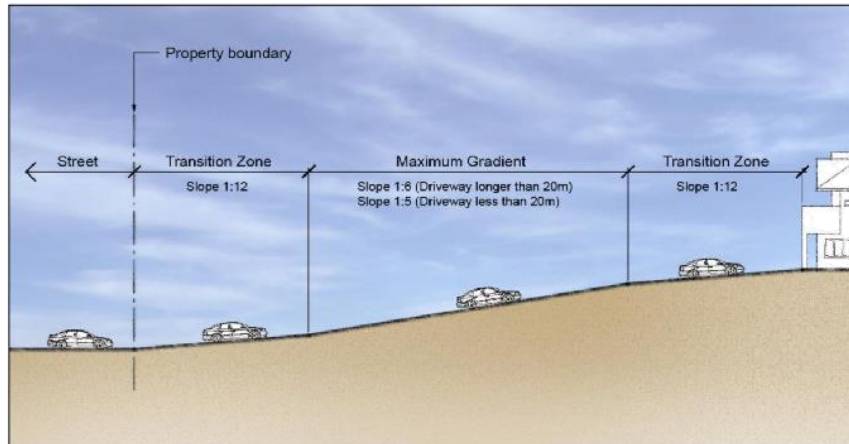


Figure 14 Driveway gradients

Widths

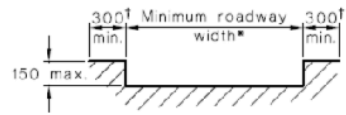
1. For internal driveways between the access driveway and the car parking area the minimum carriageway width depends on the number of car parking spaces and service bays served.
2. Consideration should be given to increase these widths where high levels of heavy vehicles usage are anticipated.
3. By definition circulation driveways should not have car parking on them.
4. The minimum internal driveway widths are to be provided in accordance with Table 4.

Table 15 Internal driveway widths

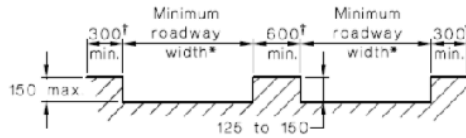
	Number of Car Parking Spaces / Service Bays		
	1 - 15 spaces and length not exceeding 40m	15 - 40 spaces	Over 40 spaces
Width	3.5m	5m	6 - 6.5m

The following illustrates this table.

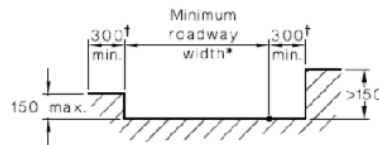
AS/NZS 2890.1:2004



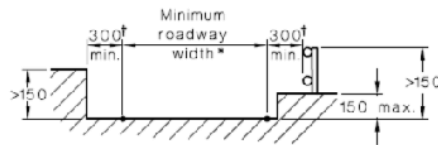
(a) One-way or two-way roadway



(b) Two parallel roadways



(c) High obstruction on one side of roadway



(d) High obstruction on both sides of roadway

* Minimum roadway width: One-way roadway—3000 mm
 Two-way roadway—5500 mm
 On curve—see Table 2.2

† Increase clearance to 500 mm if on the outside of a curve.

DIMENSIONS IN MILLIMETRES

MINIMUM ROADWAY WIDTHS ON CURVED ROADWAYS AND RAMPs

Turn radius R_o (Note 1)	Single lane		metres
	Public facilities	Domestic property	Two-way, no separator All cases (Note 3)
7.6 to 11.9	3.9	3.6	—
12.0 to 19.9	3.4	3.1	6.7 (Note 4)
20.0 to 50.0	3.2	3.0	6.3
>50.0	3.0	3.0	5.5

Figure 15 Internal driveway widths

Design

1. Locate and design car-parking areas so they can be observed by adjoining uses.
2. Minimise the number of pedestrian and vehicular entry and exit points, and ensure they are in close proximity to each other and to nearby active uses.
3. Staff car parking areas should be separated and secured.
4. Provide surveillance measures such as security cameras or devices and security guards where possible.
5. Underground car parking areas should provide security grilles in the roofs or upper walls to allow some street surveillance.
6. Lighting must comply with relevant Australian Standards, with brighter lighting located at entrances and pedestrian path or accessways. Lighting should be placed to sufficiently illuminate car parking bays as well as the driveways. Light fittings should be vandal resistant and easily maintained to ensure continued compliance with the Australian Standard.
7. Clear directional signs must be provided to stairs, lifts, and exits to shops or businesses, as well as signs to advise users of security measures in place.
8. Pedestrian pathways should be integrated into the design and allow for maximum safety, especially for people with a disability and people using prams. Pathways should be clearly marked and well lit.
9. Internal driveway should be designed for a low speed environment.

Loading Facilities

1. Adequate facilities for servicing developments shall be provided on-site to ensure loading/unloading activities do not occur on street and compromise the safety, amenity and capacity of the public road system.
2. Provision for loading facilities shall be provided for development in accordance with AS 2890.2 – 2002.
3. Service facilities shall be conveniently located close to service entrances (or other building entrances) to discourage loading/unloading in other than the designated areas.
4. Areas where heavy vehicles are manoeuvring shall be separated from areas of car parking or pedestrian movement with safety being the over-riding consideration.

20.7 Driveway Crossings

Location of Driveway Crossings

1. Driveway Crossings shall be located a minimum distance from the following items:
 - 0.5m from all drainage structures on the kerb and gutter;
 - 1.0m from side property boundaries;
 - 6m from a kerb tangent point of a street corner.
2. Driveway Crossings should avoid the need to remove existing street trees and any replacement tree (species determined by Council) is to be at the development's cost.
3. Driveway Crossings should avoid changes to existing public utility infrastructure including drainage and any relocation of such shall be the development's expense.
4. Where a development site has frontage to a Classified Road, the Driveway Crossings should be located on an alternative street.
5. Where a Driveway Crossing is proposed directly from a Classified Road, a deceleration lane may be required.
6. Locate the entrance at the first Driveway Crossing from the adjacent kerbside lane.
7. Avoid a driveway layout, which may result in on-street queuing.
8. All vehicles must enter and leave the property in a forward direction (except in the case of dwelling houses and Attached dwellings and Semi detached dwellings).
9. Locate each Driveway Crossing so that it is clear of all obstructions, e.g. poles, trees, which may prevent drivers from having a timely view of pedestrians.

Design of Driveway Crossings

1. Design each Driveway Crossing so that it is relatively level within 6m of the site boundary or any pedestrian way, the recommended maximum gradient is 5%.
2. Signpost each Driveway Crossing with appropriate entry, exit and keep left signs.
3. Decorative Driveway Crossings over the footpath area will only be permitted if it is compatible with the amenity of the locality.
4. In business zones any Driveway Crossing shall be compatible with the existing and future paving pattern.

Second Driveways (for Residential Dwellings)

1. A second Driveway Crossing for dwelling houses, attached dwellings and semi-detached dwellings are to be consistent with the relevant Australian Standards and all other provisions in the DCP, specifically:
 - Minimum distances from public domain infrastructure, including drainage structures, street signage, bus stops, kiosks, lighting, power poles and the like;
 - Minimum distances from property boundaries and kerb tangent points;
 - Minimum and maximum driveway widths;
 - Cut and fill of the land (including any associated retaining wall);
 - Minimum landscaping requirements for the site, as indicated in the relevant DCP provision; and
 - Removal of existing vegetation, including street trees.
2. Second driveways will only be considered in instances where:
 - The lot width, measured at the lot boundary which faces the road, is greater than 15 metres;

- The combined driveway width between the lot boundary and the face of the dwelling is not more than 50% of the total lot frontage, or 12m, whichever is the lesser;
 - There is at least a 6m space between driveway crossings, to allow for an on-street parking space;
 - The existing driveway cannot be augmented;
 - The second driveway will not involve the net loss of any street tree;
 - The second driveway will not reasonably invoke obstruction of a footpath (or area outside the property boundary) due to vehicle overhang;
 - The second driveway will not decrease pedestrian and other road user safety due to poor visibility to/from the driveway;
 - There is a demonstrated lack of available on-street parking for registered vehicles; and
 - The existing driveway, and any garages or carports, approved by Council, have not been converted for other uses which reduces the availability of on-site parking
3. An application for an additional driveway must include a dimensioned plan of the site, which shows:
- Location of dwelling;
 - Location of the existing and proposed driveway, including any garage, or carport;
 - Width of the property frontage;
 - Distance between existing and proposed layback;
 - Dimensions of the proposed and existing driveways;
 - The area of impervious surfaces and pervious surfaces within the front setback;
 - The area of landscaped area on the site as a whole; and
 - Indication of any vegetation to be removed

The following illustrates the requirements for the location of Driveway Crossings.

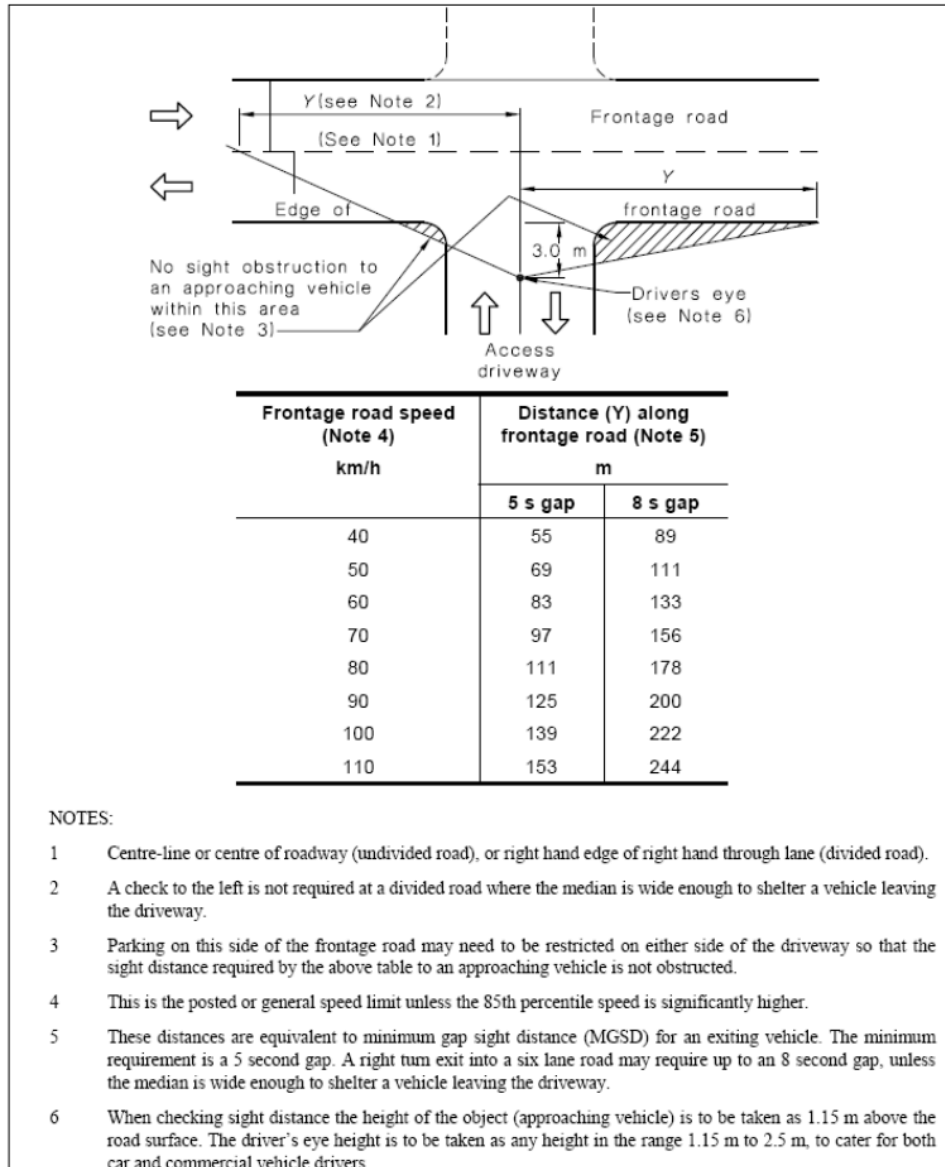


Figure 16 Locations of Driveway Crossings

Width of Driveway Crossings

1. Driveway crossing widths shall be in accordance with tables 5 and 6.

Table 16 Car Parking Spaces served by the Driveway Type

Street Frontage	Number of Car Parking Spaces served by the Driveway Type					
	Less than 25	25-100	101-300	301-600	More than 600	Heavy Vehicles
Major	1-2	2-3	3-4	4	5	7
Minor	1	1-2	2-3	3-4	4	6

2. Major Street Frontage includes Classified Roads and Sub Arterial Roads under Council's Road Hierarchy.

- Maximum for residential: 6m.

Table 17 Driveway crossing widths

Type	Entry Width	Exit Width	Minimum separation of driveways	Splay at kerb line	Kerb return turnout radius
	W	W		S	R
1	3 – m	Combined	NA	0.5m	-
2	6 – 9m	Combined	NA	1m	-
3	6m	4 – 6 m	1 - 3m	1m	2 – 9m
4	6 – 8m	6 – 8 m	1 - 3m	1m	2 – 9m
5	Direct feed from a controlled intersection via a public street				
6	8 – 10m	8 – 10m	3m	1m	2 – 9m
7	10 – 12m	10 – 12m	3m	1m	2 – 9m

Cost of Driveway Crossing Works

The cost of any adjustment to a public road, including kerb and gutter, road shoulder and deceleration lane shall be borne by the development.

20.8 Pavement requirements

Access driveways, internal driveways and car parking spaces are to be paved to a standard to carry the anticipated loadings, unless otherwise specified elsewhere in the DCP. Porous paving materials will be considered, provided that sufficient detail is provided to show that such paving is sustainable. Driveway material must not be allowed to spill or be carried onto road pavement.

20.9 Transport Impact

Transport Management Plan

For major developments a Transport Management Plan shall be submitted with the development application. The Transport Management Plan shall address the following:

1. The existing traffic environment.
2. Traffic generation anticipated from the proposed development.
3. The cumulative impact of traffic in the locality.
4. The need for traffic improvements in the locality.
5. The need for public transport works on site and in the locality.
6. Proposed traffic egress/ingress to Classified/Sub Arterial Roads.
7. Sight distance and other safety issues.

Construction Transport Plan

A Construction Transport Plan may also be required where it is likely that the construction phase of a development will have a significant impact on traffic movement in the locality. A Construction Transport Plan shall address the following:

1. The existing traffic environment.
2. Traffic generation anticipated from the construction of the proposed development.
3. The impact on traffic in the locality.
4. Proposed heavy vehicle routes.
5. The need for transport management and hours of operation and access in the locality.
6. Sight distance and other safety issues.

Cost of Transport Impact Works

The cost of any works directly attributable to the development, including dedication and or construction of road works, traffic management facilities or any public transport facilities either on site or off site shall be borne by the development.

21. Subdivision of Land and Buildings

Applies to

This section applies to development, which involves subdivision of land or buildings.

Background

The subdivision of land has a major impact on the use of land in terms of density and type of development, impacts on adjoining development, impact on the natural environment, demands on public infrastructure, usability of land, access to roads and future development potential. The subdivision of buildings also has impacts on the future management of buildings and on the adjoining areas.

Objectives

- a) To provide a functional, attractive and safe environment for residents that are consistent with community standards and needs.
- b) To minimise adverse effects on the natural environment.
- c) To provide for the needs of future users of the land in respect to building requirements vehicular and pedestrian access, provision of services and an amenity appropriate to the zoning of the land.
- d) Provide for the economic utilisation of the land resource of the area.
- e) To achieve a balance between the development / subdivision of residential, commercial and industrial land and the amenity of existing occupants.
- f) To provide for an equitable and efficient distribution of public amenities and services.
- g) To minimise Council's future maintenance costs for roads, services and open spaces.

Controls

21.1 Specifications

Subdivision works shall be carried out in accordance the Council Subdivision Specification.

Play corners

Minimum 6 x 6m splay for all subdivisions involving creation of a road junction.

21.2 Rural Zones – RU1 and RU4

Minimum lot sizes

Refer to *Liverpool LEP 2008* written statement and the maps for the minimum allotment sizes in the RU1 and RU4 zones. Note that this varies depending on the location.

Minimum Lot Width

The minimum lot width in the RU1 and RU4 zone is 24m.

Street widths

All new streets shall be a minimum 20m wide, unless specified elsewhere in a Locality Part of the DCP.

All Weather Roads

Development involving the creation of new streets in RU1 and RU4 zones will be required to provide an all-weather road system to provide a functional and safe vehicular access to each allotment or development.

Sealing of Roads

1. Bitumen sealing of the road system will be required on all new roads and existing roads, which will be an extension of existing sealed roads unless specified otherwise by Council.
2. Council will not approve the development/subdivision of lands proposing non- dedicated road access (e.g. private road systems). However consideration will be given to the creation of a right-of-way to serve allotments having the minimum dedicated road frontage but not having road access.
3. Such right-of-way is to link directly to an existing or proposed dedicated road and constructed in accordance with Councils standards.
4. Minor subdivisions in isolated rural areas require a reasonable standard of all-weather access road suitable for all year round access for essential services, i.e. school bus, ambulance etc.
5. Each proposal will be considered on its merits in accordance with the following guidelines:
 - The status of the road.
 - Existing road surface condition.
 - Cost of upgrading.
 - Flooding frequency and hazards of creek or river crossings.
 - Potential population catchment.
 - Bush Fire Hazard.

Electricity

1. The extension of electricity mains to each allotment within the subdivision is required.
2. Subdivisions in areas remote from electricity mains may be relieved of this requirement, if special circumstances prevail and details of such circumstances are submitted to Council, together with the written agreement from *Integral Energy*.

Sewerage

1. Effluent disposal will normally be by way of appropriate on-site disposal.
2. Where the development is in near proximity to an existing sewerage area or where, in the opinion of the *NSW Department of Health* or Council, the land is unsuitable for site disposal of effluent, connection to sewerage will be required.
3. A geotechnical report to support sewerage treatment proposals is to accompany an application for onsite sewage management this type of the development.

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

21.3 Rural Zone – RU2 and Residential Zone – R5

Minimum lot sizes

Refer to *Liverpool LEP 2008* written statement and the maps for the minimum allotment sizes in the RU2 and R5 zones. Note that this varies depending on the location.

Minimum Lot Width

The minimum lot width in the RU2 and R5 zone is 24m.

Street widths

All new streets shall be a minimum 20m wide, unless specified elsewhere in a Locality Part of the DCP.

Kerb & Gutter

1. Development involving the creation of new streets in RU2 and R5 zones shall require kerb and guttering and underground stormwater drainage where specified in Council's standards.
2. Concrete lined table drains shall be required where scour velocities are exceeded and/or the soils are susceptible to erosion from stormwater.

Sewerage

1. Effluent disposal will normally be by way of appropriate on-site disposal.
2. Where the development is in near proximity to an existing sewerage area or where, in the opinion of the *NSW Department of Health* or Council, the land is unsuitable for site disposal of effluent, connection to sewerage will be required.
3. A geotechnical report to support sewerage treatment proposals is to accompany an application for onsite sewage management this type of the development.

Natural Features

1. The configuration of the subdivision is to have consideration for natural features such as rivers, creeks, topography of the land, tree groupings and prominent natural features.
2. The design should also consider buffers for conflicting land uses, watercourses, etc.

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

Street lights

Street lighting is to be provided in accordance with AS1158.

21.4 Residential Zones (Except R5)

Minimum lot sizes

Refer to *Liverpool LEP 2008* written statement and the maps for the minimum allotment sizes in the Residential Zones. Note that this varies depending on the location.

Minimum Lot Width

1. Subdivision of land shall meet the minimum lot width requirements as set out in Table 18.
2. Subdivision of land involving the creation of lots less than 300sqm or less than 10m lot width shall include the dwelling house as part of the development application.
3. The subdivision plan will not be released until the dwelling which was approved in conjunction with the subdivision is completed to above ground floor level.

Table 18 Minimum Lot Widths

Zones	Minimum Lot Size (as per LLEP 2008 minimum lot size map)	Minimum lot Width
R4	Any lot size shown on the Lot Size Map greater than 300sqm	24m
R1, R2	600-1000sqm	20m
R2	450sqm	15m
R1, R3	450sqm	12m
R1, R2	400sqm	11m
R1, R2	300sqm	9m
R1, R2	300sqm (Area 3)	9m
R1, R2, R3	300sqm (Area 2)	8m
R1, R4	300sqm (Area 1)	7m

Note: Minor variations may be considered if the average width of the lot is greater than the Minimum Lot Width as stated in Table 18.

Road widths

All new streets shall be a minimum 18m wide, unless specified elsewhere in Part 2 of this DCP.

Road works

1. Development involving the creation of new streets in Residential Zones will be required to provide fully serviced subdivisions including the provision of a sealed road system with drainage, and kerb and gutter, to adequately and safely provide both vehicular and pedestrian access to each allotment.
2. Development in established residential areas shall meet the full cost of kerb and guttering across all existing street frontages of any development/subdivision except where direct vehicular access is restricted.
3. Streets adjoining a public reserve shall provide kerb and gutter to adequately and safely provide both vehicular and pedestrian access. Footpaths may also be required.

Stormwater

Legal easements of width as determined by the Council Codes and Specifications are to be provided over stormwater drains and watercourses.

Water and Sewerage

New development will be required to extend augment and meet the full cost of water and sewerage reticulations, as arranged with *Sydney Water* within developments / subdivisions plus the cost of connecting to existing services.

Electricity

1. Electricity services are to be extended to the development / subdivision and in accordance with the requirements of Integral Energy and at full cost to the development.
2. Underground electricity services will be required except where it can be shown that it is not appropriate.

Street lighting

Street lighting shall be designed by the applicant to *AS1158* and the development will be required to meet the full cost of street lighting installation.

Telephone

The development will be required to provide for telephone facilities within the design. Where underground electricity is used, underground telephone facilities are also to be provided by the development.

Stormwater Runoff

Urban stormwater runoff will need to be assessed in terms of satisfactory performance both within the development and external to the development to a legal point of discharge.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for each allotment created.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 17 for details.

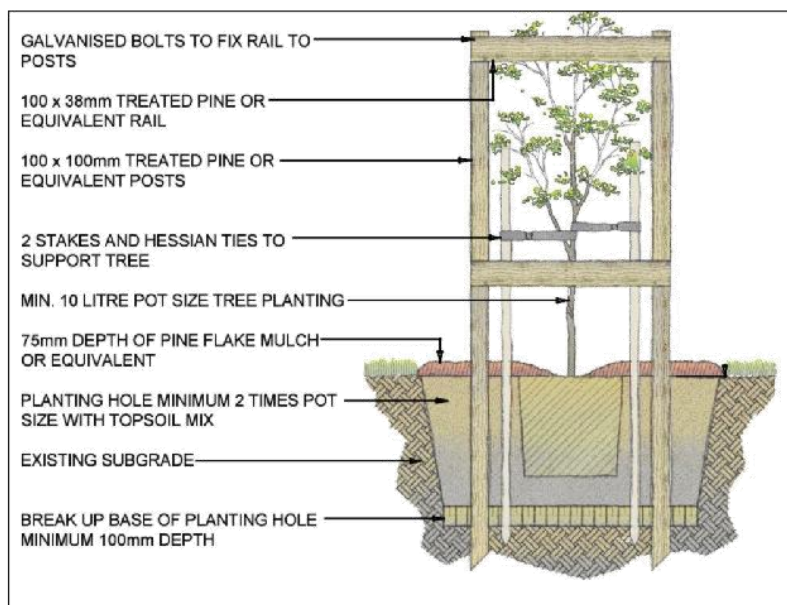


Figure 17 Tree Guard and Planting Details

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

21.5 Industrial and Business Zones

Road widths

All new streets shall be a minimum 20m wide, unless specified elsewhere in Part 2.

Minimum Lot Width

B1 and B2 zones

The minimum lot width in the B1 and B2 zones is 20m.

B6 Zone (Enterprise Corridor)

1. Development shall not be permitted for a new building (other than a maximum 10% addition to an existing structure) in the B6 zone unless the site has a frontage width to the Classified road of at least:
 - 30 m, where the site also has frontage to a local street that intersects with and would permit access to and from the classified road; or
 - 90m otherwise.
2. Development for a new building (other than a maximum 10% addition to an existing structure) in the B6 zone must not leave adjacent land such that it cannot achieve either:
 - A site frontage with of at least 30m (where the site also has frontage to a local street that intersects with and would permit access to and from the Classified Road): or
 - 90m otherwise.

IN 1, IN 2 and IN 3 Zones (Industrial)

The minimum frontage for new lots shall be in accordance with Table 19.

Table 19 Frontage Width

Street	Width of Frontage
Classified Roads, Bernera Road, Kurrajong Road and Moorebank Avenue	65m
Other streets	30m
Cowpasture Road (Site adjacent to future link road across Hinchinbrook Creek to former Hoxton Park Airport)	120m

Road works

1. Development involving the creation of new streets in Industrial and Business Zones will be required to provide fully serviced subdivisions including the provision of a sealed road system with drainage, and kerb and gutter, to adequately and safely provide both vehicular and pedestrian access to each allotment.
2. Development in established areas shall meet the full cost of kerb and guttering across all existing street frontages of any development/subdivision except where direct vehicular access is restricted.
3. Streets adjoining a public reserve shall provide kerb and gutter to adequately and safely provide both vehicular and pedestrian access. Footpaths may also be required.

Street Lighting

Provide Street lighting to AS1158.

Pavement for Heavy Traffic

Engineering Road Design and Pavement Design will need to provide for heavy traffic conditions as specified by Council.

Water and Sewerage

New development will be required to extend augment and meet the full cost of water and sewerage reticulations, as arranged with *Sydney Water* within developments / subdivisions plus the cost of connecting to existing services.

Electricity

Electricity services are to be extended to the developments/subdivision and in accordance with the requirements of Integral Energy at full cost to the development. Integral Energy will make determination of the maximum loading of the electricity service, and whether the service is provided above ground or underground.

Telephone

Developments will be required to provide for telephone facilities. Where underground electricity is used, underground telephone facilities are also to be provided by the development.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for every 20m of street frontage.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 17 for details.

Street signage

1. Street name and information signs shall be provided to facilitate accessibility and mobility.
2. Approval for the naming of all new streets shall be obtained from Council prior to the erection of any new street signage.

21.6 Hatchet shaped Allotments

1. The minimum width of the accessway to a hatchet shaped allotment shall be as shown in Table 20.

Table 20 Hatchet allotment access handle

No of Allotments	Rural and Residential zones	Industrial and Business zones
One allotment	5m	7m
Two allotments	5m	7m

2. There shall be a maximum of 2 allotments from any access way in the Residential, Business and Industrial zones.
3. Where 2 allotments are proposed to be created having an adjacent access ways to a public street, the access ways shall have reciprocal rights of way created over each of the access ways in order to minimise separate driveway access points.

4. Where traffic generation from use of a hatchet shaped allotment is likely to be significant an additional width for the access way may be required.

21.7 Strata subdivision

Applications for strata subdivision of buildings, space or land will need to ensure that the strata plan is consistent with the development consent particularly the allocation of private and common property. In particular visitor or customer car parking identified in a development consent shall remain as common property.

There must be a minimum requirement of three buildings, spaces, or land parcels for strata subdivision.

22. Energy Conservation

Applies to

This section applies to development involving the use of energy.

Background

The ability of development to optimise thermal performance, thermal comfort and day lighting will contribute to the energy efficiency of the buildings, provide increased amenity to occupants and reduce greenhouse emissions and, with them, the cost of supplying energy.

Objectives

- a) To reduce the necessity for mechanical heating and cooling.
- b) To minimise greenhouse gas emissions.
- c) To provide thermal comfort by minimising temperature variations within buildings.

Controls

Residential

New dwellings, including multi-unit development within a mixed use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with *State Environmental Planning Policy – Building Sustainability Index (BASIX)*. A complying BASIX report is to be submitted with all development applications containing residential activities.

Non-Residential

1. All Class 5 to 9 non-residential developments are to comply with the Building Code of Australia energy efficiency provisions.
2. Improve the control of mechanical space heating and cooling by designing heating/cooling systems to target only those spaces which require heating or cooling, not the whole building.
3. Encourage passive solar designed dwellings.
4. Improve the efficiency of hot water systems by:
 - Insulating hot water systems.
 - Installing water saving devices, such as flow regulators, 3 stars rated shower heads, dual flush toilets and tap aerators.
5. Reduce artificial lighting and design lighting systems to target only those spaces which required lighting at any particular 'off-peak' time, not the whole building.
6. Maximise natural light to reduce reliance on artificial lighting and utilise energy efficient lamps, reflectors and fittings to reduce requirements for artificial lighting.
7. For all commercial office development over \$5 million, provide an Energy Efficiency Report from a suitably qualified consultant to accompany any development application for a new commercial office development. The report is to demonstrate that the building can achieve no less than 4 stars under the Australian Building Greenhouse Rating Scheme.

23. Reflectivity

Background

Reflective materials used on the exterior of buildings can result in undesirable glare for pedestrians and potentially hazardous glare for motorists. Where installed on tall buildings, reflective materials may be also a hazard for aircraft. Reflective materials can also impose additional heat load on other buildings. The excessive use of highly reflective glass is discouraged. Buildings with a glazed roof, facade or awning should be designed to minimise hazardous or uncomfortable glare arising from reflected sunlight.

Objectives

- a) To restrict the reflection of sunlight from buildings to surrounding areas and buildings.

Controls

7. New buildings and facades must not result in glare that causes discomfort or threatens safety of pedestrians or drivers.
8. Visible light reflectivity from building materials used on the facades of new buildings must not exceed 20%.
9. Subject to the extent and nature of glazing and reflective materials used, a Reflectivity Report that analyses potential solar glare from the proposed development on pedestrians, motorists or aircraft may be required.

24. Landfill

Applies to

This section applies to development, which involves cutting and or filling of land. It does not involve land cut and filling in conjunction with a development application for a building(s).

Background

The cutting and filling of land has the potential to have significant environmental and visual impacts on the environment.

Objectives

- a) To minimise any land cut and filling.
- b) To minimise any adverse impact of land cut or filling on adjoining or nearby lands.

Controls

- 1. All fill applied should be Virgin Excavated Natural Material (VENM), as defined by the *NSW Department of Environment and Climate Change*. Any fill involving material other than VENM is subject to referral to the State Government as potential Integrated Development or contaminated land assessment.
- 2. All filling in the vicinity of native vegetation must be local material (in order to minimise the spread of weeds).
- 3. Any excavation within the zone of influence of any other building will require a Dilapidation Report.
- 4. Refer to the section on Salinity if cutting greater 500mm is to be undertaken.
- 5. No retaining wall structures will be permitted within any easements such as drainage easements. Retaining walls located on the boundary of two allotments or boundary to a public street or public reserve shall be of masonry construction. Other types of retaining wall structure may be permitted if the structure is located wholly within the property.

25. Waste Disposal and Re-use Facilities

Applies to

This section applies to all applications that propose:

1. Subdivision and excavation of land.
2. Demolition of an existing building.
3. Construction of any development including alterations and additions.
4. Any development that requires a waste bay or the like.

Background

The construction and demolition of buildings and excavations generates the need for waste disposal and opportunities to minimise waste disposal and maximise recovery of resources from those activities. For new buildings, the occupation of those buildings generates an ongoing need for waste disposal and recycling. There are potential environmental and human health impacts associated with waste generation, storage and disposal. Under current waste legislation there is a need to minimise disposal of waste to landfill and recover resources to minimise depletion of natural resources.

Objectives

- a) To minimise waste produced during demolition and construction of new development and maximise resource recovery.
- b) To ensure waste management for the end use of the development is designed to provide satisfactory amenity for occupants and provide appropriately designed collection systems.
- c) To minimise ongoing waste to landfill and maximise recycling of ongoing waste.

Controls

Non-residential development

Note: Council does not provide waste services to non-residential premises. Owners and operators of non-residential premises must engage a private commercial waste contractor to remove and legally dispose of the waste their premises generates.

1. Development applications for all non-residential development must be accompanied by a waste management plan that addresses:
 - best practice recycling and reuse of construction and demolition materials,
 - use of sustainable building materials that can be reused or recycled at the end of their life,
 - handling methods and location of waste storage areas, such that handling and storage has no negative impact on the streetscape, building presentation or amenity of occupants and pedestrians, and
 - procedures for the on-going sustainable management of green and putrescible waste, garbage, glass, containers and paper, including estimated volumes, required bin capacity and on-site storage requirements.
2. The waste management plan is to be prepared by a specialist waste consultant and is subject to approval by Council

Residential development

1. Provision must be made for the following waste generation shown in Table 21.

Table 21 Waste Generation

Type of Waste	Dwellings (including housing, attached and semi dwellings and dual occupancy)	Medium and High Density Residential Development
General Waste	140 litres/week/dwelling	110 litres/week/dwelling
Recycling	120 litres/week/dwelling	110 litres/week/dwelling
Green Waste	120 litres/week/dwelling	Shared 240 litre bins can be provided by Council. Numbers of bins will be assessed on a case by case basis and require provision of adequate storage.

2. In dwellings not exceeding six (6) dwellings, individual waste storage facilities may be permitted. In a development of more than six dwellings or where the topography, or distance to the street makes access difficult for individual occupants, a collection and storage area is required. The storage area must be located in a position which is:
 - Not visible from the street
 - Easily accessible to dwelling occupants
 - Accessible by collection vehicles (or adequately managed by the body corporate to permit relocation of bins to an approved collection point),
 - Has water and drainage facilities for cleaning and maintenance; and
 - Does not immediately adjoin private open space, windows or clothes drying areas.
3. Wherever a rear lane is present, the rear lane is to be used for the removal of waste provided that it complies as follows:
 - Provides an area of kerbside where the placement of waste bins will not obstruct the passage of vehicles; and
 - Has sufficient dimensions for the Council's contractor's collection vehicles to be able to empty waste bins safely and without damage to property.
4. Subject to Council collection policy, common waste storage areas are to be sized to accommodate the number and size of waste bins that are required, plus enough space for the bins to be accessed, manoeuvred in and out for emptying and rotated as necessary. Minimum dimensions of the bins can be found in the Council fact sheet, 'Waste Management Services for Residential Flat Buildings and Multi Dwelling Housing
5. The size and number of the waste bins shall be determined having regard to the number of dwellings to be serviced, the space available for the presentation of the bins for emptying and the need for either on-site access by the waste contractor's collection vehicle or the requirement for bins to be wheeled to the street for collection by the contractor. If transferred to the street for collection, the body corporate or a caretaker must be responsible for the movement of bins to their collection point and return to their place of storage within the time set in Council's Domestic Waste Policy. If bins are being collected from within a development, they are to be presented for emptying to the approved collection point by agents of the body corporate and then returned back into the storage area by those agents afterwards.

Waste Management Plan

1. A Waste Management Plan (WMP) shall be submitted with a Development Application for any relevant activities generating waste. The WMP is provided in three sections:

- Demolition;
 - Construction; and
 - On-going waste management.
2. The WMP shall show:
- Estimated volumes of waste generated according to type; and
 - Details of whether each type of waste material that will be produced on site are to be reused, recycled or disposed of and the recycling or waste facilities to which those materials will be taken.
3. The WMP must then be implemented on site throughout the development process, demolition, construction and use of the development. During demolition and construction the WMP together with proof of lawful disposal for all waste that is disposed of or otherwise recycled from the site must be retained onsite in a Waste Data File. Proof is to include a log book with associated receipt/invoices, waste classification and site validation certificate.
- All entries in the Waste Data File must include:
- Time and Date
 - Description and size of waste
 - Waste facility used
 - Vehicle registrations and Company name
4. The Waste Data File must be made available for inspection by any authorised Council Officer at any time during site works and at the conclusion of site works should be retained by the person responsible and made available for inspection by authorised Council Officers.
5. A copy of the final Waste Data File shall be submitted by the PCA to Council with a copy of the occupation certificate.

Waste Management Facilities

1. Waste management facilities shall be provided for in all new buildings (except dwelling houses, Attached dwellings, Semi-Detached Dwellings and Dual Occupancy). These shall be designed to ensure that the storage and collection of waste and recyclables is user friendly for both the occupant and the waste collection contractor.
2. Where a communal Waste Management Facility for Multi dwelling housing and Residential flat buildings is required, on site storage details are to be submitted on the plans and set out as below:
 - Location of space within the dwelling for the separation and temporary storage of waste, recyclables and compost with sufficient capacity for a minimum of one days waste or recycling
 - Location and design of the Waste Storage and Recycling Area (Bin bay) on the premises. This must be readily accessible for both residents and waste and recycling contractors.
 - Where applicable design details of any Volume Reduction Equipment. The use of volume reduction equipment (to compact waste materials) may be appropriate where space is a problem. In normal circumstances there will not be a reduction in area requirements where such equipment is proposed, to accommodate future variations to development management and waste disposal options. Volume reduction equipment should not be used on recyclables; removing contaminants from compacted recyclables is almost impossible and compacted contaminated loads will be rejected by end markets.

- For buildings more than three (3) storeys, or where elevator access is required for dwellings on the upper levels a waste service room, or compartment must be provided on each floor of the building for the intermediate storage of garbage and/or recycling. Sufficient space must be allocated for access by residents, storage of bins, and easy manoeuvring of bins.
 - The area must be suitably located on premises in terms of accessibility for both the occupants and the waste and recycling contractor. The system for waste management must be compatible with available collection services – collection occurs at the front of the land.
 - Measures for protecting bins and any associated waste equipment from theft or damage are to be indicated within the WMP.
3. Provision of ongoing waste management facilities shall include:
- In the case of multi dwelling housing of 8 or fewer dwellings individual 240L waste bins are to be provided and stored within the courtyard of each dwelling. If such storage is not possible an easily accessible garbage bin bay is to be provided.
 - In the case of multi dwelling housing of 9 or more dwellings and residential flat buildings one or more garbage and recycling enclosures (bin bays) are to be provided within the site.
 - Bin bays are to be well ventilated and screened to a minimum height of 1.5m by a structure and landscaping. Construction materials are to be compatible with the proposed development and adjoining development.
 - Bin bays or waste service rooms are to be sufficiently open and well lit to allow safe use after dark
 - A hose cock for hosing the garbage bin bay and a sewered drainage point are to be provided in or adjacent to the bin storage area. The drainage point should have a fine grade drain cover sufficient to prevent coarse pollutants from entering the sewer. If the hose cock is located inside the bin storage bay it is not to protrude into the space indicated for the placement of bins. Responsibility for cleaning of all waste storage areas should be determined when designing the system and clearly stated in the waste management plan. Frequency of cleaning to eliminate odour and pests should also be indicated on the WMP.
 - Sufficient space must be allocated within the bin bays to allow for access to all required bins by residents and waste collectors, as well as manoeuvring of bins within the bay and for the removal and return of bins by the waste collector.
 - The agreed numbers of bins that will require storage are given as a consent condition.
 - In the case of secure developments where garbage and recycling bins are stored within the secure area, the WMP needs to indicate:
 - Arrangements for supervised access by Council Contractors to collect waste must be shown to the satisfaction of Council; or
 - Arrangements for delivery of bins to kerbside and removal when emptied to within the development must be shown.
 - Council waste and recycling contractors are not to be provided with keys, pass keys, or other mechanical or electronic means of entry to secure developments.

Access to waste and recycling storage

1. Bin bays are to be adjacent to a street frontage, or if not possible then at a designated point adjacent to the common access driveway provided sufficient level areas (<5% grade) is available for bin collection to be carried out, away from vehicle ramps and steps. The bin bay is to be located so that distance from bin bay to the nearest waste

collection point accessible by the collection vehicle is no further than 15m. The bin bay shall be positioned so as to minimise noise impacts on residents from the usage of bins and waste or recycling collection.

2. The access routes should be highlighted on the plan. Access must be made available by wheelchair for occupants. Bin bays should allow for bins to be wheeled by to the street kerb over flat or ramped surfaces with a maximum grade of 7% and not over steps, gutters, or landscape edging. The need for manual handling by collection staff should be kept to a minimum.
3. Residents should not be required to carry waste or recyclables more than 30m to a waste storage area such as a bin bay, or in the case of a residential flat building greater than three storeys, a waste service room for interim storage of waste and/or recyclables. Recycling bins are not to be stored in isolation, but in close proximity to garbage bins or chutes.
4. Waste service rooms or compartments where provided, shall be enclosed and of design compatible with the proposed development. Adequate ventilation shall be provided for the room or compartment. Suitable arrangements for transfer of any interim storage to the main bin bay are to be indicated in the WMP.
5. Waste and recycling collection vehicles should be able to service the development efficiently and effectively and with no need to reverse. Current collection vehicles are fitted with a left side lifter for handling MGBs, with a minimum height clearance of 3.6 m when lifting and 4.7m width when lifting.
6. Council and waste collection contractor vehicles will not enter private property including driveways to collect waste or recycling.

Other Waste Considerations

1. In the case of multi dwelling housing or residential flat buildings of more than 25 dwellings, a designated space reflecting the number of dwellings shall be provided for temporary storage of disposed bulky items awaiting Council clean up or contracted removal. The minimum allocated space must be 6sqm, with a minimum height of 2m. The space shall be signed as to its purpose.
2. No waste incineration devices are permitted.
3. Council will consider applications for buildings more than three (3) storeys or where elevator access is required for dwellings on the upper levels that utilise garbage chutes as a means of transferring waste from each level to a centralised garbage room, with the following criteria:
 - Garbage chute access can only be located within a waste service room or compartment.
 - Recycling chutes are not permitted. Recycling bins for interim storage are to be provided in each waste service room.
 - Garbage chutes are not to be situated adjacent to habitable rooms
 - Applications must state the material the chute is to be made from, how the chute is to be cleaned, how often the chute will be cleaned, how any blockages will be removed and any fire protection measures to be used.
 - The waste collection system that the chute feeds into must be stated (compactor, carousel, open bin) and suitable for the number of dwellings in the development.
4. Signage should be in English, and consideration given to other languages reflective of the most recent demographics of Liverpool LGA. Illustrative graphics will form a minimum 50% of the area of the signage. Council can provide appropriate bin bay usage signs if required. Signage is to be prominently posted in each bin bay, or waste service room indicating that:

- Garbage is to be placed wholly within the garbage bins provided.
- Only recyclable materials accepted by Council shall be placed within the recycling bins.
- The area is to be kept tidy.
- A telephone number for arranging the disposal of bulky items.
- Should garbage chutes be incorporated, signage on how to use the chutes is to be located prominently next to the chute itself.

26. Outdoor Advertising and Signage

Applies to

This section applies to applications for Outdoor Advertising and Signage.

Background

The provision of signage is an integral part of any business to identify its presence to the potential customers. Depending on the size, number and location, signage may have a substantial visual impact on a locality.

Objectives

- a) To ensure that outdoor advertising signage is complementary to and compatible with both the development on which it is displayed and the character of the surrounding locality.
- b) To encourage the rationalisation of existing and proposed advertising signs so as to minimize the extent of visual clutter caused by the proliferation of signs.
- c) To provide guidelines for the display of outdoor advertising to ensure that they communicate effectively and contribute positively to the urban and rural environment.
- d) To ensure that outdoor advertisements are designed and located so that they do not adversely affect the safety of motorists and pedestrians.

Controls

26.1 Need for Consent

A combined DA/CC could be submitted to save time in processing the applications.

26.2 Outdoor Advertising without Consent

Some outdoor advertisements have a minimal effect on the appearance of the building, structure or place where they are displayed and, as such, have a low level of environmental impact. However, if a structure is used to display such advertisements, a construction certificate may be required.

Advertisements without Consent include:

All Zones

1. Advertisement other than on a heritage item or in a heritage conservation area which is not visible from outside the land on which it is displayed
2. Temporary signs other than those on awnings provided they comply with the Design Criteria in Section 8.7.
3. A public notice displayed by a public body giving information or direction about the services provided.
4. Signs behind the glass line of a shop window provided they are not flashing or moving and do not occupy more than 25% of the shop window for heritage items or 50% in all other situations.
5. Street sign.
6. Advertisements on a public seat or bus shelter.
7. Advertisements on motor vehicles used principally for the conveyance of goods or passengers.

8. Business identification sign not including a moving sign or flashing sign and other than on a heritage item or in a heritage conservation area provided they comply with Sub-section 9.7 Design Criteria.

Rural Zones

1. One pole or pylon sign of not more than 2sqm in area and not exceeding 2m in height above ground level per lot.
2. One additional sign of not exceeding 0.75sqm in area on the face of a building where the business is carried out in an architecturally compatible manner.

Residential Zones

One sign of not more than 0.75sqm in area attached to a solid masonry fence or one pole or pylon sign of not more than 0.75sqm in area and not exceeding 2m in height from ground level for each business operation or activity.

Business Zones

One under-awning sign, one fascia sign and one top hamper sign on each shop or business premises.

Industrial Zones

1. One pole or pylon sign (including directory board for multiple occupancies) not exceeding 5sqm in area and 5m in height from ground level for each development. Such a sign is to be located within an area of 5 x 3m on either side of the ingress or combined ingress/egress, subject to compliance with sight distance requirement.
2. For multiple occupancy development, one additional company identification sign, not exceeding 2 x 0.6m at the entrance to each occupied unit.
3. For single user development, one additional company identification sign is permitted at the rate of not exceeding 1sqm of advertising area per 3m of street frontage or a maximum of 50 sqm whichever is the less.

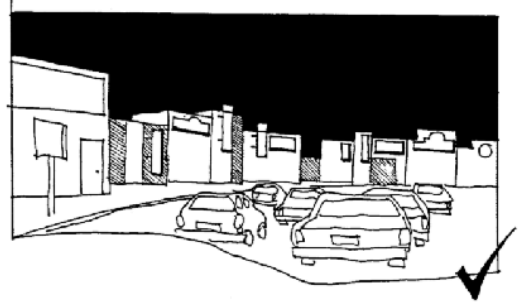
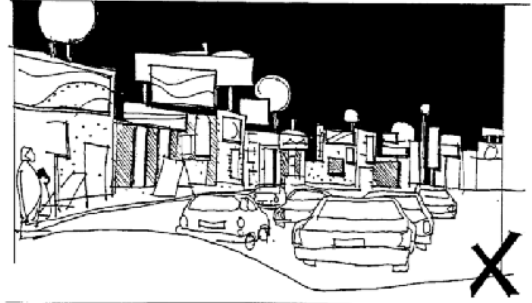
Real Estate Signs

1. Real estate signs other than flashing signs or moving signs or those on awnings provided they comply with the design criteria specified in Schedule 1 and the following:
2. In residential or rural premises:
 - Does not exceed 2.5sqm in area;
 - Has returns not exceeding 180mm.
3. In business and industrial premises does not exceed 4.5sqm in area;
4. In land development on subdivision does not exceed 6sqm for each 25 lots or part thereof.

26.3 Outdoor Advertising

1. All proposals for Outdoor advertising shall comply with the following:

- Conforms to the desired future character of the area or zone as described in the objectives for the zone.
- Complements the dominant character of an urban or rural landscape.
- Complements the character of a building, site or area, e.g. an historic building, public garden, view of urban or rural landscapes.
- Conveys the advertiser's message or image while conforming to the surrounding character.
- Rationalises or reduces the number of existing signs.
- Does not adversely affect traffic and/or pedestrian safety.
- Complements any established theme or pattern of signage.
- Refers to an approved or lawful use of the site or building.



Limiting sign numbers

1. The following design factors are relevant:

- Number of existing signs on the building (and adjacent buildings);
- Placement - visibility;
- Dimensions (including depth);
- Scale (dimensional or proportional relationship to spaces, other physical urban elements including buildings, trees, other signs or people);
- Shape;
- Materials, construction details - means of attachment;
- Colour;
- Purpose of sign (identification, directional or general advertising);
- Reflectivity;
- Means of illumination;
- Movement;
- Provision of services;
- Durability;
- Maintenance provisions.

Figure18 Signage Requirements

26.4 Signage Controls in Zones

Rural Zones

Objectives

- To preserve the rural amenity of the locality.
- To minimise the visual impacts of signs in rural areas.
- To coordinate tourism signs.
- To avoid undue distraction to motorists and to maintain traffic safety on rural roads.

Controls

- One pole or pylon sign is permissible per lot. Sign is not to exceed 2sqm in area and 2m in height above ground level.
- One additional sign is permitted on the face of a building where the business is carried out in an architecturally compatible manner. The size of the sign is not to exceed 0.75sqm in area.
- Illuminated signs are only permitted to operate during those times when the business is open for trading.
- Moveable signs are not permitted.
- Signs for tourist facilities are to be considered on individual merits.
- Signs are not permitted at locations where they are hazardous to traffic.
- Third party advertising is not permitted.
- Advertising structures shall comply with Sub-section 9.7 Design Criteria.

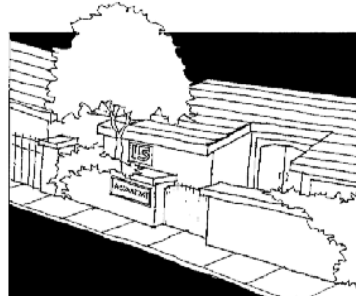


Figure 19 Tourist directional signs

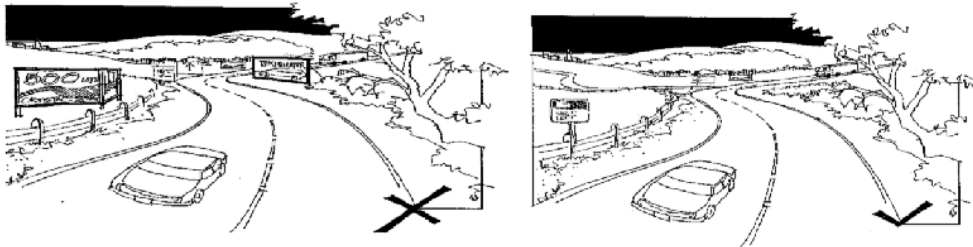


Figure 20 Proliferation of signs

Residential Zones

Objectives

- To preserve the residential amenity of the locality.
- To minimise the visual impact of signs.
- To permit adequate identification of permissible uses (e.g. convenience store, home occupations, home industries, professional services, place of public worship, child care centre) without interfering with the amenity of the area.

Identification sign

Controls

1. Signs are to be placed wholly within the allotment boundary.
2. Signs are not permitted on walls facing adjoining residences.
3. The number and size is restricted to 1 sign of not more than 0.75sqm per business operation or activity.
4. Signs shall not be affixed to or displayed on the fence other than solid masonry fence.
5. Maximum height of a free standing sign is 2m from ground level.
6. Illuminated signs, except for doctors or veterinarians, are not permitted.
7. Third party advertising other than on public seat and bus shelter is not permitted.
8. Advertising structures shall comply with Sub-section 8.7 Design Criteria.

Business Zones

Objectives

- a) To permit adequate identification and business advertising.
- b) To recognise that advertising signs can help to express the character of commercial and entertainment environments, creating a lively daytime and evening atmosphere.
- c) To ensure that signs are in keeping with the scale and character of the building they are on and do not detract from the architecture.
- d) To ensure that the number, size and positioning of signs do not crowd the advertiser's message and defeat the purpose of advertisement.
- e) To reduce the visual complexity of a streetscape by providing fewer, more effective signs.
- f) To ensure compatibility with the desired urban character of the adjacent land uses.
- g) To ensure that advertising signs do not adversely affect the safety of motorists and other road users.

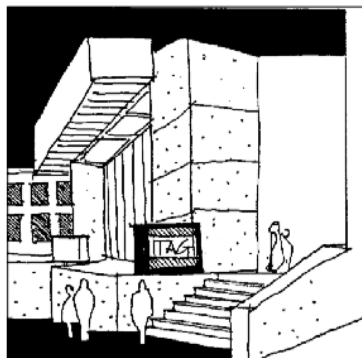


Figure 21 Signs should complement the architecture

Controls

1. One under-awning sign is permitted on each shop or commercial premises. For shop or premises with wide frontage, under-awning signs are permissible at the rate of not more than one sign per 8m of shop front.
2. Under-awning signs are to be at least 6m apart to provide adequate visibility.
3. Signs including real estate signs and temporary signs are not allowed to stand on awnings.

4. One projecting wall sign is permitted for each shop or commercial premises.
5. Total area of all signs is not to exceed 1sqm of advertising area per 1m of shop frontage. This includes signs painted on blinds or window blinds.
6. Signs in excess of a total of 50sqm in area are to be considered on its merits.



Figure 22 Corporate identity

7. Special consideration will be given to commercial uses along Classified Roads where signs are required to be bigger in order to be seen by people travelling in vehicles.
8. Applications for high wall signs are to be considered on individual merits. They are not allowed in local centres unless it can be demonstrated that it is compatible with the scale of development and amenity of the surrounding land uses.
9. Roof signs are not permitted.
10. Moving signs will be considered on individual merits having regard to the objective of creating a lively day time and evening atmosphere, the safety of motorists and pedestrians and the amenity of adjacent developments.
11. For development with wide street frontage and adequate setback, pole signs are permissible at the rate of not more than one pole sign per development. Application for additional pole signs will be considered on individual merit.
12. Advertising structures shall comply with Sub-section 8.7 Design Criteria.



Figure 23 Illuminated pole sign in neighbourhood areas

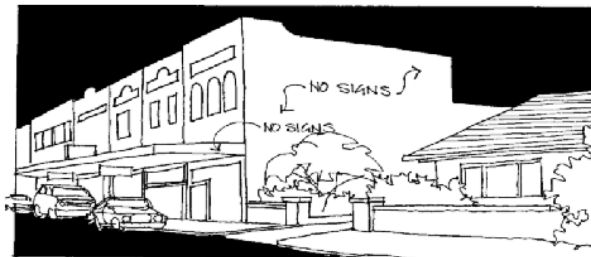


Figure 24 Protecting residential amenity

Outdoor cafes

1. Only the name and/or logo of the business and/or core product and/or service associated with the outdoor cafes may be placed on any item of furniture, as a minor element of the furniture design to the Council's satisfaction.
2. No other advertising is permitted on any outdoor furniture or elsewhere in the outdoor cafe or adjacent area, unless Council grants development consent.

Industrial Zones

Objectives

- a) To permit the display of information concerning the identification of premises, and the name of the occupier and activity conducted on the land or in the building.
- b) To encourage a coordinated approach to advertising where there is multiple occupancy of site.
- c) To enhance the architectural and landscape presentation of industry so that advertising signs appear proportional to the scale of the building or space within which they are located.
- d) To minimize the negative visual impact of cluttered and untidy advertising signs, in particular at gateway sites and entry points to industrial precincts, so as to promote the townscape qualities of Liverpool.

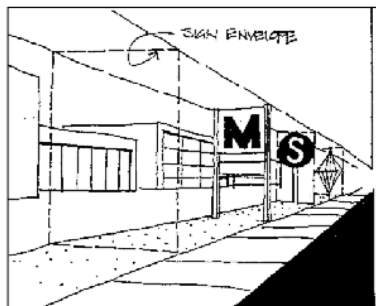


Figure 25 Sign envelope

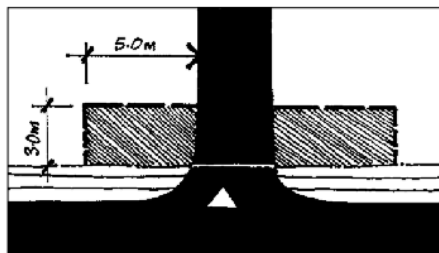


Figure 26 Advertising zone at the ingress to development

Controls

1. Pole or pylon sign for building or site (including directory board for multiple occupancies) is limited to a single structure at the entry to the site from a public road, along the road frontage.
2. Pole or pylon sign not exceeding 5sqm in area and 5m in height from ground level are to be located within an area of 5 x 3m on either side of the ingress or combined ingress/egress, subject to compliance with sight distance requirements.

3. For multiple occupancy development, one company identification sign not exceeding 2 x 0.6m is permitted at the entrance to each occupied unit. Such signs are to be of a uniform shape, size and general presentation.
4. For single user development, additional company identification sign is permissible at the rate of not exceeding 1sqm of advertising area per 3m of street frontage or a maximum of 50sqm whichever is the less. (Corner lots will be assessed on the length of the main presentation frontage of the building only.)
5. Roof signs are not permitted.
6. Third party advertising is not permitted.
7. Sign exceeding 50sqm in area will be dealt with on individual merits.
8. Advertising facing back/side boundaries and abutting a Classified Road will be assessed on individual merits.
9. Advertising structures shall comply with Sub-section 8.7 Design Criteria.

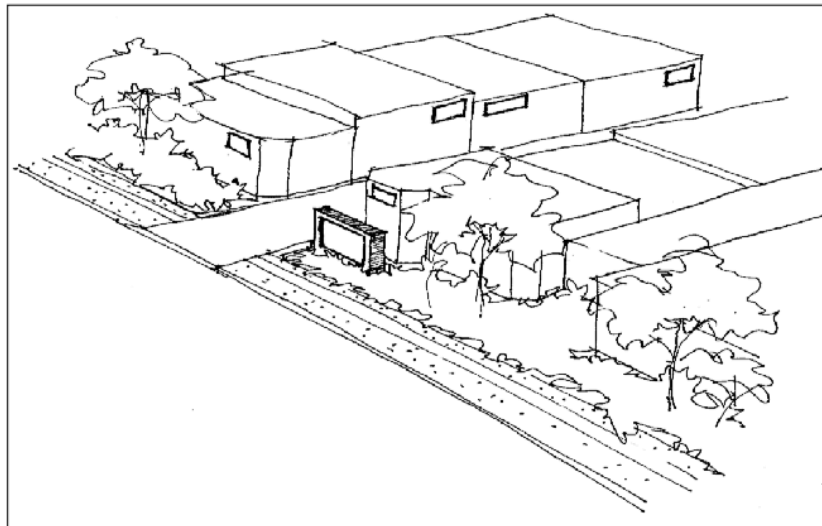


Figure 27 Signage locations for Industrial units

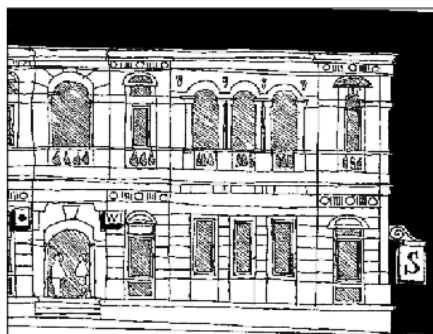


Figure 28 Areas of Environmental Significance (including Environmentally Significant Land, Heritage Conservation Areas and Heritage Item)

Multiple occupancy development

Objective

To ensure that outdoor advertising is designed and located in a manner, which preserves and enhances an area of environmental significance.

Controls

1. Signs on individual buildings or within an area of environmental significance are to be discreet and complement the building or the area. The architectural characteristics of a building always dominate. (For example, signs are not to be placed on cast-iron, first floor verandahs and balustrades or in front of cast-iron verandah frieze work.).
2. Advertising is placed in locations on the heritage item, which traditionally have been used as advertising areas. If such areas do not exist, advertising is generally inappropriate.
3. No signs are permitted to break an historic parapet or roofline of a building or buildings.
4. The form and content of all signs must enhance the heritage significance of the heritage item or area. Particular attention is to be given to location, choice of colours, size of lettering and means of illumination.
5. Permanent signs on shop windows are not to occupy more than 25% of the window area.
6. The size of signs may vary according to the design and history of the building or its environment.
7. Complies with Sub-section 8.7 Design Criteria.



Figure 29 Considering building design

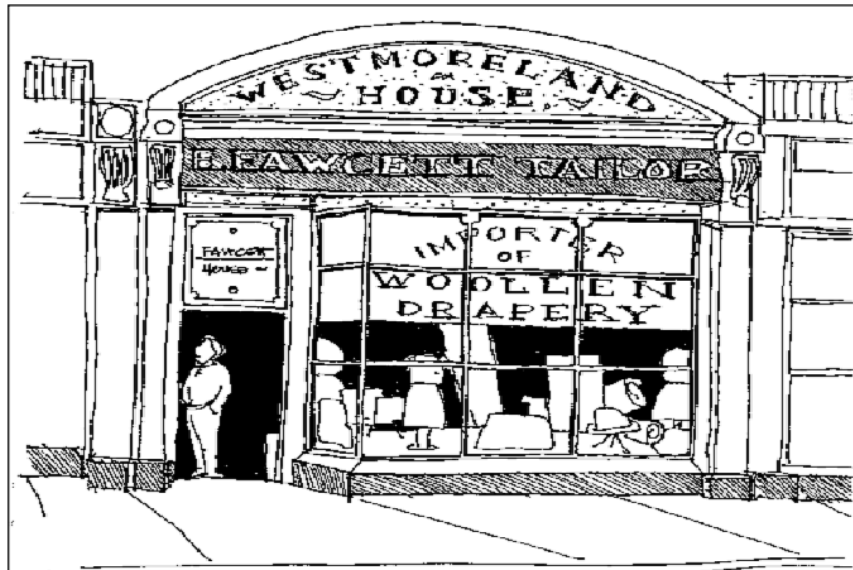


Figure 30 Traditional sign

Special Uses Zones

Objectives

- a) To permit adequate identification and/or business advertising.
- b) To ensure that signs are in keeping with the scale and character of the buildings and are compatible with the amenity of the area.
- c) To ensure that advertising does not adversely affect the safety of road users.

Controls

1. Owing to the variety of special uses, it is not possible to design control guidelines that are relevant and common to all situations. Every application for outdoor advertisement is to be considered on individual merit.
2. For applications within the 'Special Use - Classified Road' zone, advertising signs are to be a minimum of 1 km apart. Their location and dimension are not to adversely affect the amenity of the locality and the safety of motorists and other road users.
3. For applications within the 'Special Use - Airport' zone, concurrence is to be obtained from the operator of the airport.
4. Advertising structures shall comply with Sub-section 8.7 Design Criteria.

Recreation Zones

Objectives

- a) To recognise the opportunity for outdoor advertisement for the promotion of commodities and services associated with recreational activities.
- b) To ensure that outdoor advertisement is compatible with the character of the development on which it is displayed and the character of the surrounding land uses.
- c) To permit the display of information associated with the recreational activities carried out on the land or in the building on which the sign is displayed.



Figure 31 Sign at entry point to recreational facility

Controls

1. Pole or pylon signs are permitted at the rate not exceeding one pole sign per vehicular entry point to the recreational facility.
2. Each pole sign is not to exceed 10sqm in area and not more than 7m in height from ground level.
3. Signs in sports grounds are permissible on the perimeter fencing of the play area and on scoreboards and shall face the play area. The maximum height above ground level of any sign, except signs on scoreboards, is 1.2m.
4. Advertising structures shall comply with the Sub-section 8.7 Design Criteria.



Figure 32 Advertising opportunity at playing field

26.5 Signage in Particular Developments

Service Stations

As service stations are land extensive and are permissible within a wide range of zones, it is considered necessary to have controls for advertising on such development.

Objectives

- a) To ensure that advertisement is compatible with the amenity of the surrounding locality.
- b) To ensure that advertisement is designed and located so that it does not adversely affect the safety of motorists and other road users.

Controls

1. One pole or pylon sign of not exceeding 7m in height from ground level.
2. Pole or pylon sign of not exceeding 2.5m in height from ground level for the display of prices of fuels is permitted at the rate of not more than one sign per ingress point to the development.
3. Fascia signs on the canopy of forecourt and top hamper signs for the sales office and associated convenience store, workshop or food outlet are permissible.

4. The total advertisement area in excess of 50sqm is to be considered on individual merits.
5. Roof signs and fin signs are prohibited.
6. The location and design of signs (including their illumination) are not to adversely affect the amenity of adjacent development and the character of the locality and not to obstruct any traffic lights and traffic signs.
7. Advertising structures shall comply with the Sub-section 8.7 Design Criteria.

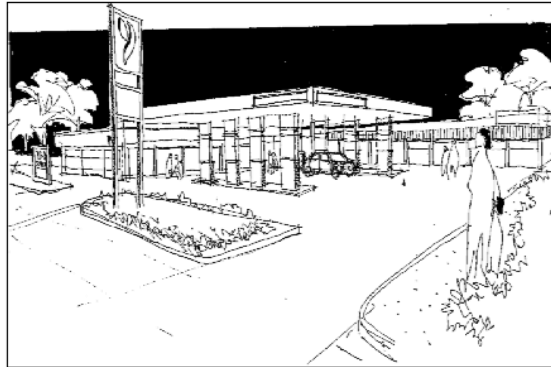


Figure 33 Advertising sign at service station

Exhibition Home and Exhibition Village

Although exhibition home and exhibition village are temporary in nature, they are usually located within residential zones. Their use is also associated with strong promotion through outdoor advertising.



Figure 34 Pole sign for exhibition home

Objectives

- a) To recognise the need for outdoor advertising, business identification and promotion.
- b) To ensure that outdoor advertising is compatible with the amenity of the surrounding locality.

Controls

1. One pole or pylon sign with an area of not exceeding 2.5sqm and a height of not more than 3m from ground level is permitted for an exhibition home. For each exhibition home within an exhibition village, one pole or pylon sign with an area of not exceeding 2.5sqm and a height of not more than 5m from ground level is permissible.
2. For exhibition village advertising signs are to be of a uniform shape, size and general presentation.

3. Additional signs for ancillary uses such as sales office, home financing and materials display are to be considered on individual merits.
4. All advertisements must be placed wholly within the allotment boundary.
5. Third party advertising is prohibited.
6. Illuminated signs are prohibited.
7. The location and design of advertisements are not to adversely affect the amenity of the locality in general and adjacent occupied dwellings in particular.
8. Advertising structures shall comply with Sub-section 8.7 Design Criteria.

26.6 Other Types of Signage

Illuminated Street Name Signs

Objectives

- a) To facilitate the use of Illuminated Street Name Signs (ISNS) in providing directional information and the identification of street names, in conjunction with the display of an appropriate advertising/ sponsor message.
- b) To ensure that ISNS do not have an adverse impact on the amenity of residential areas by restricting their use to Classified Roads.
- c) To ensure that ISNS are designed and located so that they do not have an adverse impact on pedestrian and motorist amenity and safety, by providing controls which clearly identify the required location of ISNS within the road reservation.
- d) To ensure that ISNS are complementary to and compatible with the existing streetscape and the character of the surrounding area, and do not obstruct the view of RTA traffic signs and traffic controls for road users.
- e) To ensure that the external shape, style, colour, text and graphics of ISNS are consistent with Liverpool City Council colours and existing Council signs and street furniture.

Controls

1. To maintain the amenity of residential and rural areas ISNS shall be restricted to Classified Road reservations.
2. One ISNS will be permitted per intersection only. Provided that where signs are located 20m or more apart, two signs per intersection may be permitted.
3. ISNS shall be located at a sufficient distance so as to not obstruct the view of traffic control signals and RTA directional signage for road users.
4. ISNS shall be restricted to corner locations within road reservations only. The sign pole shall be located at a minimum distance of 1.5m from each kerb line forming the edge of the carriageway at the intersection.
5. The ISNS shall comprise an advertising sponsor panel, in conjunction with separate finger panels displaying at least two street names and locality or other community facility directional information approved by Council. The advertising/ sponsor panel shall display the use of appropriate messaging conforming to standards of decency and morality acceptable to Council; Advertising of local products and services is preferred and in all cases Council approval is to be obtained for the content of the sign.
6. The maximum height of the ISNS shall not exceed 5.2m above the ground, measured as a vertical distance from the existing ground level to the uppermost portion of the sign. The clearance to the underside of the advertising/sponsor panel shall be a minimum of 2.6m. To ensure pedestrian amenity, the clearance to the underside of the street name/finger panel shall not be less than 2.1m.

7. The total area of the advertising/sponsor panel shall not exceed 2.2sqm in dimensions (excluding the street name portion of the sign), including any city identification.
8. The external shape, colour, text and graphics of an ISNS shall be generally consistent with the shapes, colours and design used in existing Council signs (such as park and community signs) and Council street furniture, and standard RTA text and graphics in the locality.
9. Written approval of the Roads and Traffic Authority (RTA) shall be provided to Council with each ISNS application proposing installation on a road reservation under the control of that Authority.
10. Each application for approval of an ISNS shall be accompanied by an engineer's certificate verifying structural integrity and frangibility conforming to the requirements of the RTA.
11. As a condition of any consent being given to install an ISNS, Council will require the applicant to meet its requirements covering operational aspects of the system, including such matters as: agreement commencement and term, community messages, compliance with Australian Standards, maintenance and repairs, payment of electricity charges, public risk, annual licence fee, use of sponsor panel vacant space, pavement restoration, relocation, temporary removal and default by company.

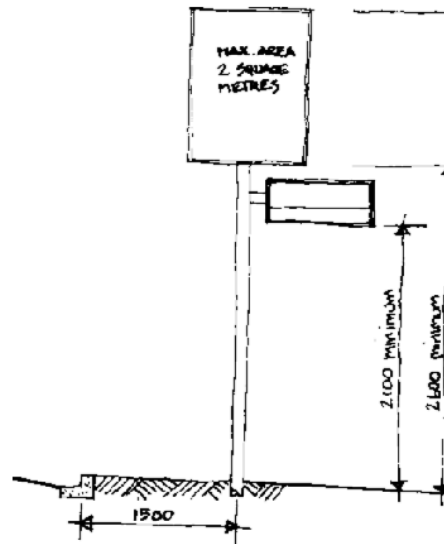


Figure 35 Illuminated Street name Signs

Inflatable Signs

Inflatable sign as a promotion tool is becoming more common. In view of the visual attraction it captures and the impact it may have upon the locality special controls are considered necessary.

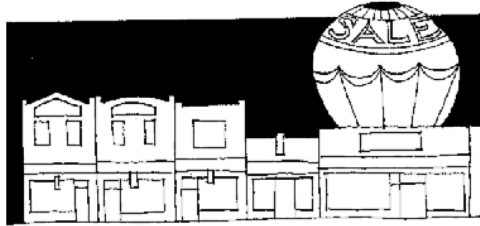


Figure 36 Inflatable sign

Objectives

- a) To ensure that inflatable signs are compatible with the character of the surrounding land uses and do not adversely affect the amenity of the locality.
- b) To ensure that inflatable signs are designed and located so that they do not adversely affect the safety of motorists and pedestrians.

Controls

1. Inflatable signs are not normally permissible in residential zones and areas of environmental significance.
2. The size, shape and colour of signs do not adversely affect the amenity of the locality and adjoining areas.
3. The operation of inflating mechanical services is not to cause noise nuisance to neighbouring properties.
4. Illumination of signs is not to cause nuisance to neighbouring properties by spillage of light and glare.
5. The size, shape, colour, location and illumination of signs are not to interfere with traffic signals and cause undue distraction to motorists.
6. Any other requirements as may be stipulated by Council and/or other agencies.

26.7 Design Criteria

Specific Requirements Relating to Advertising Structures

Compliance with these requirements does not imply that an application will be approved.

Advertising Panel

(Any advertising structure, other than those described in other parts of this section, which is illuminated, including hoarding or bulletin board)

1. Not to extend laterally beyond or vertically above the top of the wall to which it is attached.
2. Not to cover any windows or architectural features.

Underside Awning Sign

(Sign attached to the underside of an awning, other than the fascia or return end)

1. Maximum size not to exceed 2.5m in length and 0.5m in height.
2. Erected horizontally to the ground and a minimum clearance of 2.6m from the ground level to the underside of the sign.
3. A minimum of 0.6m clearance inside the kerb.
4. Not to project beyond the awning.
5. Securely fixed by metal supports.

Upper side Awning Sign

(Sign attached to the upper side of an awning, other than the fascia or return end)

Normally not permitted, if approved, the design criteria are:

1. Size to be considered on individual merits.
2. Not to project beyond the awning.
3. Securely fixed by metal supports.

Fascia Sign

(Sign attached to the fascia or return of an awning)

1. Not to project above or below the fascia or return end of the awning to which it is attached.
2. Not to extend more than 0.3m from the face of the fascia or return end of the awning.

Fin Sign

(Sign erected on or above the canopy of a building e.g. canopy of a service station)

Normally not permitted, if approved, the design criteria are:

1. Not to extend more than 2.6m above the canopy on or above which it is erected.
2. Securely fixed by metal supports.

Flashing Sign

(Illuminated as to any part of the advertising area at frequent intervals by an internal or external source of artificial light and whether or not included in any other class of advertising sign)

A minimum of 6.1m above ground level.

Floodlit Sign

Illuminated as to any part of the advertising area by an external light source and whether or not included in any other class of advertising sign.

Lighting medium must be at least 2.6m above the ground if the sign projects over a public road.

Moving Sign

Sign attached to a building and capable of movement by any source of power whether or not included in any other class of advertising sign.

A minimum of 4.6m from ground level.

Pole or Pylon Sign

Sign erected on a pole or pylon independent of any building or other structure.

Unless otherwise stated in this DCP, not to project more than 7m from ground level. A minimum of clearance of 2.6m from ground level to the underside of the sign.

Roof/Sky Sign

Sign erected on or above the roof or parapet of a building. (It is also called a sky sign)

Normally not permitted. If approved, subject to specification by Council.

Top Hamper Sign

(Sign attached to the transom of a doorway or display window of a building)

1. Not to extend more than 0.2m beyond any building alignment;
2. Not to extend below the head of the doorway or window above which it is attached.

Flush Wall Sign

(Sign attached to the wall of a building (other than the transom of a doorway or display window) and not projecting more than 300mm from the wall) Painted wall sign:

Sign painted onto a wall of a building.

1. Not to project above or beyond the wall to which it is attached;
2. Where it is illuminated, it must be at least 2.6m above the ground level.

Projecting Wall Sign

(Sign attached to the wall of a building (other than the transom of a doorway or display window) and projecting more than 300mm)

1. Not to project above the top of the wall to which it is attached;
2. Not to project more than 1.2m from the wall to which it is attached;
3. A minimum clearance of 2.6m from the ground level to the underside of the sign;
4. A minimum of 0.6m clearance inside the kerb.

Other types of Signs

Illuminated Street Name Sign

Freestanding pole sign comprising an internally illuminated sponsor panel and up to two internally illuminated street name cabinets erected within a road reservation.

Parapet Sign

Sign attached to or painted on the parapet of a building, but not extending above the parapet.

Spandrel Sign

Sign attached to the wall below the sill of windows.

Street Sign

Sign erected on public road which include guide sign, warning sign, temporary warning sign, regulatory sign, car parking sign, hazardous markers and service symbols as defined under AS 1742.

Window Sign

Sign attached to, or displayed on, the shop window.

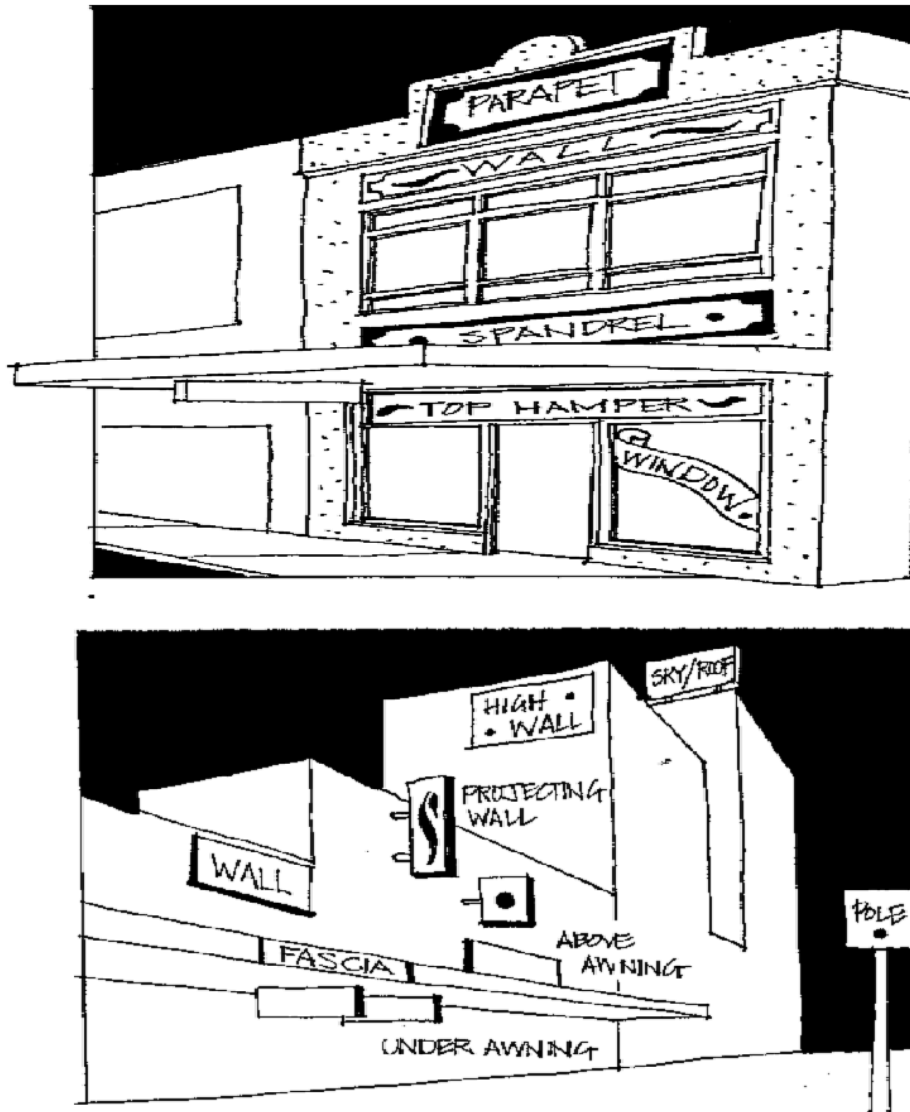


Figure 37 Types of signs

26.8 The Facade - Grid Analysis Technique

While the technique relates specifically to traditional building facades (such as those commonly found in strip-shopping centres), the principles apply to all building forms.

Signs do not have to be on a building's front facade. For example, they can be placed on sidewalls provided they do not interfere with the adjoining development. In these circumstances the principles of the technique still apply.

The technique

Step 1

To identify sign opportunities the facade could be subdivided using the main design lines to form a series of panels. Many traditional building designs can be easily broken into a grid based on the alignments of the parapet (skyline), cornice, verandah, window and door. An example of this procedure is shown in Figure 38.

Step 2

To identify possible sign panels the rectangles of the grid may be used separately or be joined together to form horizontal or vertical panels. Figure 39 shows examples of such panels.

The scale of advertising signs should be compatible with the buildings they are on, as well as with nearby buildings, street widths and other existing signs. In most cases, appropriate dimensions are achieved by restricting signs to grid locations or panels. This ensures that the original architectural character (set by the lines of awnings, windows and door openings, parapet lines and setbacks) remains dominant.

On buildings with decorative facades, signs should not be placed on the decorative forms or mouldings. Instead, they should appear on the undecorated wall surfaces, unless architecturally designed panels are provided.

Figure 39 also shows that a building may be given a horizontal or vertical appearance simply by the way in which the sign panels are arranged across or down a building.

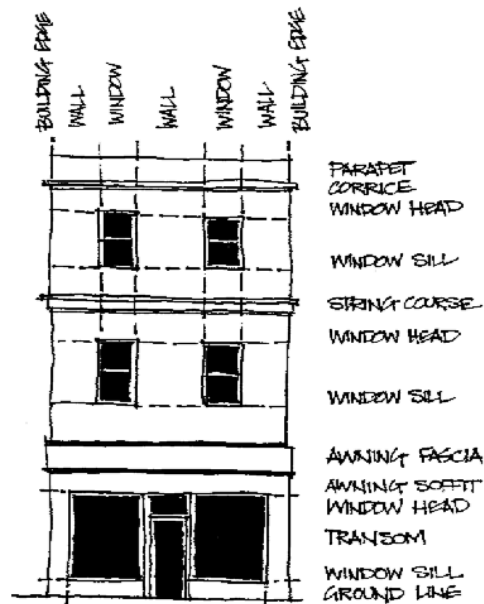


Figure 38 Horizontal or vertical panels

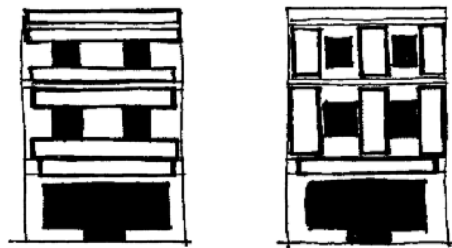


Figure 39 Establishing the façade grid

Step 3

Applying the technique to a series of buildings shows the possible panels for the streetscape and provides the basis for developing patterns and themes. Figure 40 shows how the technique produces a uniform and clean series of sign possibilities instead of a haphazard array.

Figure 40 also shows that sign panels do not have to be rectilinear in design or contained in a perimeter margin unless these impose an architectural formality or introduce continuity with the surrounding area, which is presently lacking in the building.

Figure 41 shows how a variation of the technique can be used to help correct discontinuities in streetscape. The lines of adjacent buildings may be projected across the facade of the building, thereby defining horizontal panels in which signs may be located. This will achieve visual continuity with neighbouring buildings.

Step 4

Not every panel identified using this technique should be used to display a sign. Consideration should be given to placing signs in locations compatible with those on adjoining buildings to develop a pattern or theme in streetscape.



Figure 40 Developing patterns and themes



Figure 41 Improving discontinuities in streetscape

27. Social Impact Assessment

Applies to

This section applies to applications for the types of development listed in Table 1, and any other types of development if notified in writing by Council. This section does not apply to development that is otherwise permitted without consent.

Background

Social impacts include the intended and unintended effects of a change or activity on the well-being of a community, families and individuals. Demand for a greater focus on social impacts has been driven by:

- a changing demographic profile and pressures arising from the growth and positioning of Liverpool as the regional city for South Western Sydney;
- increasing awareness of planning authorities to apply social criteria in making decisions about development and land use;
- increasing emphasis by Council and the community in considering social issues.

Council has a statutory obligation under Section 79C of the Environmental Planning and Assessment Act 1979 to consider the social impacts of development applications. The Liverpool Local Environmental Plan 2008 aims to "foster economic, environmental and social well-being so that Liverpool continues to develop as a sustainable and prosperous place to live, work and visit".

Social impact assessment is a process that aims to identify and manage the potential positive and negative consequences of development to optimise social outcomes, consistent with Council's objectives for the community. Council is committed to the process of social impact assessment as a means of considering social issues more comprehensively and consistently in its planning and decision making. Council requires a social impact assessment to be submitted with development applications for specific types of development. In addition, Council may, at its discretion, require a social impact assessment for other types of development.

Objectives

- a) To ensure distributional equity of positive and negative social impacts of development, to help build healthier communities where people want to live and work;
- b) To apply a precautionary approach to, and encourage effective community engagement and participation in, planning and development decisions that may have significant impact;
- c) To ensure social impact assessments are undertaken in a consistent and transparent manner, by an appropriately trained person, and contain the information required to enable objective evaluation of potential impacts by Council.

Controls

1. A social impact assessment shall be submitted with a development application for all types of development listed in Table 21. The social impact assessment shall take the form of a Social Impact Comment or a Comprehensive Social Impact Assessment, as specified in Table 21.
2. Council may, at its discretion, alter the requirements for social impact assessment at any stage of the development assessment process, if it deems a proposal to foreseeably generate or contribute to social impacts that are substantially less or more significant than envisaged in Table 21. This discretion rests with the

Executive Management Team, with consideration of recommendations made by Council staff.

3. A social impact assessment shall be submitted for any types of development not listed in Table 21 if, at any stage of the development assessment process, Council deems the proposal to foreseeably generate or contribute to significant social impacts. The social impact assessment shall take the form of a Social Impact Comment or a Comprehensive Social Impact Assessment.
4. Any social impact assessment shall be prepared in accordance with Council's Social Impact Assessment Policy.

Note:

Applicants are advised to consult with Council before lodging a development assessment, to discuss Council's specific requirements relating to social impact assessment. Council will notify applicants in writing of any changes to requirements for social impact assessment.

Table 22 Types of development for which a social impact assessment is required

Type of development	Social Impact Comment	Comprehensive Social Impact Assessment
Residential development	Applications for development of, or major changes to: <ul style="list-style-type: none"> - Residential flat buildings greater than 20 units - Multi-dwelling housing greater than 20 dwellings - Residential subdivision greater than 20 dwellings - Affordable housing, within the meaning of SEPP (Affordable Rental Housing) 2009 – excluding secondary dwellings - Housing for seniors or people with a disability, within the meaning of SEPP (Housing for Seniors or People with a Disability) 2004 - Student housing - Caravan parks 	Application for development of, or major changes to: <ul style="list-style-type: none"> - Residential flat buildings greater than 250 units - Development that results in a reduction of affordable housing

Commercial development	Applications for development of, or major changes to: <ul style="list-style-type: none"> - Entertainment facilities - Amusement centres - Function centres (greater than 100 persons capacity) - Retail centres and other commercial development, including tattoo parlours 	Applications for development of, or major changes to: <ul style="list-style-type: none"> - Packaged liquor outlets - Hotels (bars, pubs, taverns), nightclubs and registered clubs - Applications for liquor licences and gaming machines* - Extension of trading hours for licensed premises - Gaming outlets - Restricted premises (e.g. sex shops) - Sex services premises (e.g. brothels) - Gun shops
Other types of development	Applications for development of, or major changes to: <ul style="list-style-type: none"> - Childcare centres (more than 20 places) - Places of public worship (greater than 200 persons capacity) - Educational establishments - Health consulting rooms - Council-owned community facilities, including community centres, libraries, childcare centres and recreation facilities - Community land, as classified by the Local Government Act 1993 	Applications for development of, or major changes to: <ul style="list-style-type: none"> - Drug rehabilitation services – including methadone clinics and safe injecting rooms - Hospitals, medical centres and community health service facilities - Freight transport facilities - Major public transport facilities

28. Shopping Trolleys

Applies to

This section applies to any development that will provide shopping trolleys for customers.

Background

Abandoned shopping trolleys are a major problem throughout the Liverpool LGA as they tend to end up in streets, parks and waterbodies.

Objectives

To minimise the abandonment of shopping trolleys.

Controls

1. A management plan is required for all businesses that offer the use of trolleys to their customers. At a minimum the management plan must contain the following elements:
 - A list of contacts for the store/premises (including phone numbers).
 - A statement verifying that trolley management will be undertaken in accordance with the relevant consent (the consent is to be attached as an addendum once issued).
 - Methods for identifying shopping trolleys that belong to a specific business (e.g. serial numbers, company logo, tracking device etc.).
 - A schedule for the daily collection of abandoned shopping trolleys, including details of trolley collection routes.
 - Details of a trolley containment system which restricts the removal of trolleys from the premises.
 - Measures to ensure that any trolleys reported as posing a risk or nuisance, are collected immediately upon notification (this may require an “after hours” collection service).
 - A register of all trolleys that have been reported or collected (including instances where the trolley was not found at the reported location).
 - Methods for warning customers about the consequences of abandoning or removing trolleys from the premises.
 - A site plan of the premises showing the location of trolley bays and exit points.

Note:

Council must be notified of any updates to the plan of management.

2. A trolley containment system must be provided for businesses with 20 or more trolleys. Such examples include:
 - Coin/token operated system with refund
 - Trolleys with wheel locks activated by a radio signal or magnetic strip
 - Radio signal transmitters on trolleys

29. Safety and Security

29.1 Safety and Security

Background

The design of buildings and public spaces has an impact on perceptions of safety and security, as well as actual opportunities for crime. A safe and secure environment encourages activity, vitality and viability, enabling a greater level of security.

Objectives

- a) To ensure developments are safe and secure for pedestrians.
- b) To reduce opportunities for crime through environmental design.
- c) To contribute to the safety of the public domain.
- d) To encourage a sense of ownership over public and communal open spaces.

Controls

1. Address 'Safer-by-Design' principles in the design of public and private domain, and in all developments including the NSW Police 'Safer by Design' Crime Prevention Through Environmental Design (CPTED) principles.
2. Submit a 'Safer by Design' assessment in accordance with the CPTED principles from a qualified consultant for retail and commercial development with a gross floor area of more than 5000sqm.

29.2 Pedestrian Access and Mobility

Background

New development must be designed to ensure that safe and equitable access is provided to all, including mobility impaired people.

Objectives

- a) To provide safe and easy access to buildings.
- b) To ensure buildings and places are accessible to people with a disability.
- c) To provide a safe and accessible public domain.

Controls

1. Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage and high quality architectural detail.
2. The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard (AS 1428 Pt 1 and 2, or as amended) and the Disability Discrimination Act 1992 (as amended).
3. Barrier free access is to be provided to not less than 20% of dwellings in each multi-dwelling development and associated common areas.
4. One main pedestrian entrance is to be provided with convenient barrier free access in all multi-dwelling developments to the ground floor.
5. Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain (street) with appropriate slip resistant materials, tactile surfaces and contrasting colours.

30. Additional Uses

30.1 Restricted Premises

Background

Liverpool LEP 2008 permits restricted premises within the business zones. The following provisions are provisions for that particular land use.

Objectives

- a) To ensure that the design and external appearance of restricted premises, including colour scheme and lighting, does not have an adverse impact on the architectural character of the surrounding built environment and streetscape appearance.
- b) To ensure that the safety of all staff and visitors to restricted premises is maintained when approaching, entering and leaving the premises.
- c) To ensure that restricted premises are provided with appropriate facilities in accordance with the relevant occupational health and safety provisions.
- d) To ensure that adequate and suitable facilities are provided within restricted premises to ensure the privacy, comfort, safety and security of staff and patrons.
- e) To ensure that advertising and signage associated with restricted premises is discreet, does not draw attention to the use and does not result in visual clutter or other adverse visual impacts on the surrounding area.
- f) To minimise the potential for the operation of a restricted premises to cause a disturbance in the surrounding area because of its size, location, hours of operation, number of employees or clients, or proximity to other restricted premises or sex services premises.
- g) To ensure the safe and adequate storage, handling and disposal of contaminated waste.

Controls

Siting of Premises

1. Restricted premises shall not be located within 150m of any land zoned residential or any place of worship, school, community facility, child care centre, hospital, rail station, bus stop, taxi stand, licensed premises (i.e. hotel, club, restaurant), or any place regularly frequented by children for recreational or cultural pursuits.
2. Restricted premises shall not be located within 150m of any land for which a consent for the uses listed in item 1 above exists.
3. In determining an application to carry out development for the purpose of restricted premises, the consent authority must consider the following matters:
 - whether the operation of the restricted premises will be likely to cause a disturbance in the neighbourhood because of its size, location, hours of operation, clients or the number of employees and other people working in it;
 - whether the operation of the restricted premises will be likely to interfere with the amenity of the area; and
 - whether the operation of the restricted premises will be likely to cause a disturbance in the neighbourhood when taking into account other businesses operating in the neighbourhood offering similar goods and services and involving similar hours of operation.

Design of Premises

1. No part of the premises (other than an access corridor to the premises) shall be located at ground floor level, mezzanine, sub-basement level or street level or be visible from a public place.
2. Restricted premises must be designed so that there is only one visible pedestrian entrance to the premises from the primary street frontage. In instances where there is no front access and/or front access is impractical, Council will consider a side or rear pedestrian access where adequate attention has been given to safety and security matters.
3. Rear or side pedestrian access is to be limited to one only, unless it can be demonstrated to Council's satisfaction that more than one access contributes to the amenity and functional efficiency of the restricted premises and surrounding uses and does not result in safety and security concerns or visual clutter via the need for additional signage.
4. The external appearance of restricted premises must respect the character and appearance of the streetscape, such that they do not become a prominent feature in the street. In this regard, the external colour scheme of these premises is to be consistent with surrounding colour schemes. Vivid and/or ostentatious colour schemes will not be permitted unless it can be demonstrated that the proposed colour scheme would be in keeping with the existing streetscape.
5. All entrances and exits of restricted premises must have appropriate lighting to ensure the safety of all staff and visitors as they arrive and leave the premises. Any flashing, intermittent etc. lighting used in conjunction with a restricted premises must not be visible from a public place.
6. No merchandising display relating to the sex services premises shall be erected, displayed or exhibited in any location which is visible from a public place or in an access corridor (including any stairwell to the premises).

Signage

1. Signage is to be discreet and is limited to a combination of the business name, address and phone number.
2. There is to be one sign, not exceeding 1.m2 area, per premises. A second sign may be permitted where pedestrian access is provided at the side or rear of the site.
3. The content, illumination and shape of the sign must not interfere with the amenity of the locality. In this regard, signs are not to include suggestive or offensive material, or include colours or designs that may distract passing motorists. Illumination of signs must not cause nuisance to any adjoining premises or interfere with the amenity of the area.
4. In addition to a business identification sign, a clearly visible street number is to be displayed on the premises.

Note: In addition to the above controls, applications for restricted premises must comply with the requirements of the Crimes Act 1900 Section 578 (e) and Classification (Publications, Films and Computer Games) Enforcement Act 1995.

30.2 Non Business Uses**Background**

Liverpool LEP 2008 permits a range of Non Business land uses within the business zones. These Non-Business land uses may involve using an existing industrial development or construction of a new development. The following provisions are

additional provisions for particular land uses. These land uses shall also comply with the other provisions of the DCP.

Objectives

- a) Ensure that the Non Business developments are compatible with the Business environment.
- b) Ensure that the Non Business developments do not unnecessarily restrict the operation of Business and related uses in Business areas.
- c) Ensure that Non Business developments are designed to operate without adverse impact from Business developments.

Controls

Site Planning

1. Site planning for a Non Business development shall give consideration to how minimise the impact of uses on the site and how to ensure that a proposed use would not unduly impose restrictions on existing or future nearby business uses.

Building Appearance, Streetscape and Layout

2. All developments in a business area shall present a shop front to the street. Closing in of windows or painting over windows shall not be permitted.

Amenity and Environmental Impact

3. Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises after hours; and
4. A Noise Impact Assessment Statement prepared by a qualified Acoustics Engineer may be required to be submitted with the application depending on the scale and location of the proposed use to show that the use can operate satisfactorily in the business area.

30.3 Restaurants/Outdoor Cafes

Background

There is an increasing trend to have outdoor eating in conjunction with restaurants and cafes. This contributes to the activity in business areas. There is however a potential conflict between the users of outdoor eating areas and users of the footpath areas.

Objectives

- a) Ensure that outdoor cafes enhance the economic viability for centres.
- b) Ensure that outdoor cafes enhance the streetscape to create attractive and vibrant surroundings.
- c) Preserve or enhance public amenity, safety and access.

Controls

These controls apply to outdoor eating areas on public footpaths. Other than Hours of operation, these controls do not apply to outdoor eating areas may also take place on private land.

Streetscape and Layout

General Requirements

1. A minimum width of 2.5m of footpath shall be available for pedestrians thoroughfare at all times.

2. There shall be no increase in the number of chairs and tables at each individual cafe site without further approval from Council.
3. Outdoor furniture shall remain at least 3m away from a corner, pedestrian crossing, bus stop, taxi stand or anywhere pedestrians often congregate to cross the road or wait for services.
4. Outdoor furniture shall remain at an appropriate distance from any pedestrian crossing, disabled parking spaces, post box, public telephone, street sign, street tree or other street structure to ensure that these facilities remain accessible and/or retain function. An appropriate distance will be determined by Council officers.

Controls for footpaths greater than 6m

5. Outdoor furniture must be located at least 2.5m away from the shop front. This leaves an appropriate width to ensure there is unobstructed pedestrian thoroughfare. See Figure 42.
6. Outdoor seating shall be arranged to ensure a minimum of a 1m clearance is retained from the back of the kerb to the furniture. This ensures that passengers in vehicles can enter and exit vehicles safely.
7. In some instances Council may require more than 1m width from the back of the kerb.

Controls for footpaths less than 6m

8. Outdoor furniture shall be located abutting the building frontage/shop front. This provides an appropriate width for safe pedestrian passage.

Written Consent

9. A standard letter of consent must be provided by the owner of the building from which the associated business operates. However in the event that permission is withheld without due cause and Council judges this to be unreasonable consideration will be given to proceeding without it. The owner will be informed by letter of the development application at the commencement of the public exhibition.
10. A standard letter of consent must also be provided by neighbouring tenants on each side of the associated business. However in the event that permission is withheld without due cause and Council judges this to be unreasonable consideration will be given to proceeding without it. The neighbouring tenants will be informed by letter of the development application at the commencement of the public exhibition.

Car Parking and Access

11. No additional car parking is required for any outdoor eating area.

Amenity and Environmental Impact

12. The hours of operation shall be restricted to between 7:00 to 10:00 pm, unless otherwise varied by Council.

Site Services

13. If any of Council's street furniture or other items such as garbage bins, seats and planter boxes has to be removed for the installation of outdoor cafe seating, then that removal and any subsequent re-erection in the vicinity shall be at the permit holder's expense and shall be completed to Council's satisfaction;
14. Any additional lighting to normal street lighting shall be provided at the applicant's expense and shall be completed to the satisfaction of Council; and
15. Any illuminations shall be appropriately managed during operations of the premises.

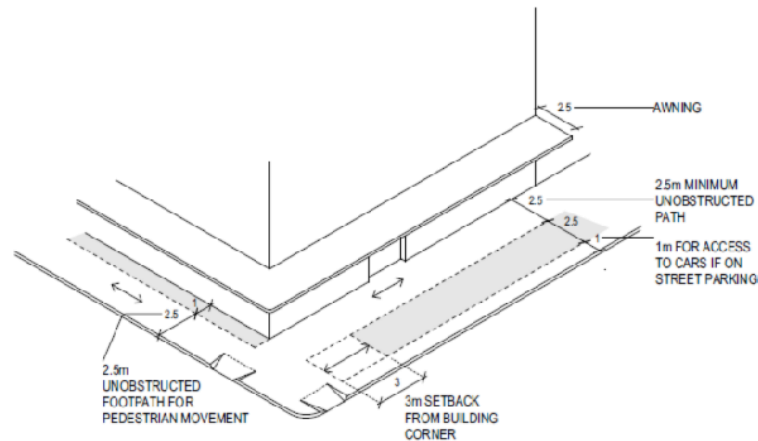


Figure 2 Indicative Outdoor Seating Zones

30.4 Child Care Centres

Background

There is an increasing need to have child care centres in close proximity to work places and places of residence. The need to locate child care centres in close proximity to work places and places of residence in business centres is balanced by the need to ensure that other business uses do not adversely affect the operation of a child care centre and vice versa.

The State Environmental Planning Policy (Educational Establishments and child Care Facilities) 2017 includes planning provisions for the development of centre-based child care facilities. The Child Care Planning Guideline 2017 provides additional guidance that must be addressed by any centre-based child care facility development application.

Provider and Service Approval

In order to operate a child care centre, the applicant needs to obtain the following:

1. Development consent from Council under the *Environmental Planning and Assessment Act 1979*.
2. Provider and service approval to operate from the NSW Department of Education.

Objectives

- a) Ensure that Child Care Centres are compatible with the business environment.
- b) Minimise any adverse impact of Child Care Centres on surrounding properties.
- c) Locate childcare centres where they would not have an adverse impact on the safety and health of children.

It is strongly recommended that applicants arrange a meeting with Council prior to submitting a development application to ensure that all the pre-requisite documentation is in order. This will save time and money for the applicant.

Building Appearance

Objectives

- a) Encourage designs that will enhance the character of the City Centre.
- b) Ensure high visibility of entrances when the child care facility is located in a multi storey building.
- c) Ensure child care buildings address all street frontages.
- d) Ensure that the building design, detailing colour and finish shall add visual interest to the street and shall complement the street.

Controls

1. The building shall be designed so:
 - That it is in character with the surrounding residential area in terms of bulk, scale, size and height; and
 - That it employs passive solar and energy saving techniques where possible.
2. The front pedestrian entrance must be visible from the street.
3. Buildings that face two street frontages or a street and public space must address both frontages by the use of verandas, balconies, windows or similar modulating elements.

Landscaping

1. A landscape plan must be submitted to Council with the development application. Refer to Part 1 of the DCP.
2. Areas of grass are to be limited to play areas. Other landscaped areas are to be planted.
3. Trees adjacent to/or within the play area, are to provide shade and allow winter sun entry. Trees adjacent to private open space areas and living rooms should provide summer shade and allow winter sun entry.
4. Landscaping species must be appropriate to prevent injury to children. No toxic, spiky or other hazardous plant species.
5. If there are setback areas these are to be utilised for canopy tree planting. The landscape design for all development must include canopy trees that will achieve a minimum 8m height at maturity within front and rear setback areas. Any tree with a mature height over 8m should be planted a minimum distance of 3m from the building or utility services.
6. Landscape planting should principally comprise of native species to maintain the character of Liverpool and provide an integrated streetscape appearance. Council will consider the use of deciduous trees in small private open space areas such as courtyards for control of local microclimate and to improve solar access.
7. Tree and shrub planting alongside and rear boundaries should assist in providing effective screening to adjoining properties. The minimum height of screening to be provided is 2.5m to 3m at maturity.
8. Landscaping on any podium level or planter box shall be appropriately designed and irrigated. See ADG Planting on Structures.

Car Parking and Access

Access for the disabled including those with prams is to be provided from the car parking area to the building.

Amenity and Environmental Impact

1. Child Care Centres shall be designed and operated so that noise generated by the centre does not impact significantly upon adjoining properties.
2. Child Care Centres shall not be constructed on sites that are contaminated.
3. All buildings, whether to be built, extended, renovated or converted to a Child Care Centre shall not contain any material or substance that will cause lead or asbestos or other contamination or poisoning.

Appendix 1 - Definitions

The following list of definitions used in the DCP which are not defined in *Liverpool LEP 2008* or the *Environmental Planning and Assessment Act 1979*. Please refer to these for the appropriate definition.

Access Driveway	A roadway extending from the edge of the frontage to the property boundary to connect with the first ramp, circulation roadway or aisle encountered, and carrying one or two-way traffic.
Active Frontage	A street frontage that is characterised by lively pedestrian activity.
Adaptable Housing	The definition as contained within <i>Adaptable Housing Australian Standard AS 4299 (1995)</i> .
Adaptation or adaptive reuse	means the modification of a heritage place to a new use that conserves its heritage values. Adaptation may involve the introduction of new services, or a new use, or changes to safeguard a heritage item. A good adaptation is one that is sympathetic to the existing building and its historic context, and inserts new work, or makes changes that enhance and complement the heritage values of the heritage item.
Adjoining land	Land, which abuts the land, which is the subject of an application, or is separated from it only by a pathway, driveway or similar thoroughfare.
Affected person means a person:	(a) who owns or occupies land that adjoins a site which is the subject of an application in which their enjoyment may be detrimentally affected by a proposed development; or (b) who owns or occupies neighbouring land.
ANZECC	(<i>Australian New Zealand Environmental Conservation Council</i>) Guidelines for the Assessment and Management of Contaminated Sites.
Annual Exceedance Probability (AEP)	Is the probability of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500m ³ /s has an AEP of 1%, it means that there is a 1% probability (that is one-in-100 chance) of a peak flood of 500m ³ /s or larger occurring in any one year (see average recurrence interval).
Apron	The area in front of the loading dock including the service bay.
Arborist	A person who is qualified in arboriculture or tree surgery.
Atrium	A void intersecting all building levels that brings light (and sometimes air) into a building core.
Australian Height Datum (AHD)	A common national plain of level corresponding approximately to mean sea level.
Australian Noise Exposure Forecast (ANEF) contour	A contour marked on a map to determine a level of noise exposure by aircraft. Certain restrictions apply to development within these contours.
Average Recurrence Interval (ARI)	The long-term average number of years between the occurrences of a flood as big as, or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
Basement car parking	Car parking areas generally below ground level, or above natural ground level and enclosed by bunding, where inundation of the surrounding areas may raise water levels above the entry level to the basement, resulting in rapid inundation of the basement to depths greater than 0.8m. Basement car parks are areas where the means of drainage of accumulated water in the car park has an outflow discharge capacity significantly less than the potential inflow capacity.
Batter	The slope of a dam embankment wall.

Berm	Soil piled against the length of a wall at an angle to reduce the exposure of surface area to solar radiation and to assist in the maintenance of equilibrium between subsoil ground temperature and the building's thermal mass. Berms also provide insulation against noise.
Borrow pit	An area from which excavated soil is taken to construct the embankment of a dam.
Buffer zone	An area of land, set aside to minimise the impacts of land uses on each other.
Building footprint	The area of the site occupied by buildings and includes other structures attached to the main building such as decks, verandas, garages and carports.
Bushland	means land on which there is vegetation which is either a remainder of the native plants of the land or, if altered, is still representative of the structure and floristics of the natural vegetation.
Canopy	That part of the tree above the main stem comprising primarily branches and foliage.
Car Space	The area of pavement required to park one car, and is usually delineated.
Character	is defined by the combination of the particular characteristics or qualities of a place.
Collector street	A non-Classified Road, which collects and distributes traffic in an area, as well as servicing the abutting property.
Commercial Vehicle	The trucks and vans used for commercial purposes. Cars, station wagons and utilities may also be used for commercial purposes but are, by definition, not included because they become submerged in the large number of such vehicles, which are used for private purposes. Dimensions of typical commercial vehicles are found in Section 4 of this document.
Compatible use	means a use that involves no change to the culturally significant fabric, changes which are substantially reversible or changes which require a minimal impact.
Composting	The breakdown of organic matter by microbial action.
Conservation	means all the processes of looking after a place so as to retain its cultural significance. It includes maintenance, and may according to circumstance, include preservation, restoration, reconstruction and adaptation and will commonly be a combination of more than one of these.
conservation management plan	means a document prepared in accordance with the NSW Heritage Branch guidelines which establish the heritage significance of an item, place or heritage conservation area, and identify conservation policies and management mechanisms that are appropriate to enable that significance to be retained.
Contaminated soil	Soil that contains a concentration of chemical substances that are likely to pose an immediate or long-term hazard to human health or the environment.
Council	The Council of the City of Liverpool.
cultural significance	means aesthetic, historic, scientific, or social value for past, present or future generations.
dB(A)	Decibels of the 'A-scale' – a set frequency-weighted scale of noise which allows for lack of sensitivity of the ear to sound at very high and very low frequencies.
Design floor level	The minimum floor level that would apply to development if it was not categorised as Concessional Development. The floor level standards specified for the relevant land use category (excluding Concessional Development) in the low flood risk precinct are to be applied.
Drip Line	The area directly beneath the outer canopy of the tree.
Demolish a building	To wholly or partly dismantle the building.

Drive-in Food Outlets	<p>One of three types of drive-in facilities:</p> <ol style="list-style-type: none"> 1. Where customers park on site and walk to the food outlet, with no seating for the onsite consumption of food. 2. Similar to 1 but with seating for onsite food consumption. 3. With the features of 1 and/or 2 plus a drive through service for customers not wishing to consume food on the premises.
Effective warning time	The time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken. The effective warning time is typically used to move farm equipment, move stock, raise furniture, evacuate people and transport their possessions.
Embankment	The low permeability earth fill wall of a dam comprising crest, batter slopes and foundation.
Extreme flood	An estimate of the probable maximum flood, which is the largest flood that could conceivably occur at a particular location.
fabric	means all the physical material of the place.
Fenestration	The disposition of glazing on a facade.
Flood	A relatively high stream flow, which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding, associated with major drainage as defined by the FMM before entering a watercourse.
Flood awareness	An appreciation of the likely effects of flooding and knowledge of the relevant flood warning and evacuation procedures.
Flood compatible building components	A combination of measures incorporated in the design and/or construction and alteration of individual buildings or structures subject to flooding, and the use of flood compatible materials for the reduction or elimination of flood damage.
Flood compatible materials	Materials used in building which are resistant to damage when inundated. A list of flood compatible materials is attached in Appendix 3.
Flood evacuation strategy	The proposed strategy for the evacuation of areas within effective warning time during periods of flood as specified within any policy of Council, the FRMP, the relevant State government disaster plan, by advices received from the <i>State Emergency Services (SES)</i> or as determined in the assessment of individual proposals.
Flood hazard	The potential for damage to property or persons due to flooding.
Flood storage	Parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood.
Floodplain	The portion of a river valley, adjacent to the river channel, which is covered with water when the river overflows during floods.
Floodplain Development Manual (FDM)	Refers to the document dated April 2005, published by the New South Wales Government and entitled " <i>Floodplain Development Manual: the management of flood liable land</i> ".
Floodplain Risk Management Plan (FRMP)	A plan prepared for one or more floodplains in accordance with the requirements of the FDM or its predecessor.
Floodplain Risk Management Study (FRMS)	A study prepared for one or more floodplains in accordance with the requirements of the FDM or its predecessor.
Floodways	Areas where a significant volume of water flows during floods. They are often aligned with obvious naturally defined channels. Floodways are areas, which, even if only partially blocked, would cause a significant redistribution of flood flow, which may in turn adversely affect other areas. They are often, but not necessarily, the areas of deeper flow or the areas where higher velocities occur.

Form	means the overall shape and volume and the arrangement of its parts.
Freeboard	A factor of safety expressed as the height above the design flood level. Freeboard provides a factor of safety to compensate for uncertainties in the estimation of flood levels across the floodplain, such as wave action, localised hydraulic behaviour and impacts that are specific event related, such as levee and embankment settlement, and other effects such as "greenhouse" and climate change.
Frontage	The width of an allotment at the street boundary.
Full supply level	The top water level of a dam, equivalent to the spillway intake level.
Greenhouses / Igloos / Market Gardening	A free - standing outbuilding covered in plastic / fabric / or other rigid coverings such as glass or poly-carbonate used to provide a controlled environment and improved crop production rates associated with the cultivation / propagation or growth of vegetables, flowers, mushrooms and other agricultural products.
Habitable floor area	means: <ul style="list-style-type: none"> (a) in a residential situation: a living or working area, such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom; (b) in an industrial or commercial situation: an area used for offices or to store valuable possessions susceptible to flood damage in the event of a flood.
Habitable room	A main living room, such as a living room, dining room, family room or bedroom.
Hatchet shaped allotment	A lot which has frontage to a public street by only an access way.
Height	In relation to a building, means the vertical distance measured between ground level at any point at which the building is sited, and the ceiling of the topmost floor of the building above that point.
Hazard	A source of potential harm or a situation with a potential to cause loss. In relation to this plan, the hazard is flooding which has the potential to cause harm or loss to the community.
High hazard	Possible danger to life and limb; evacuation by trucks difficult; potential for structural damage; social disruption and financial losses could be high.
In the vicinity	means surroundings, context, environment or vicinity of a heritage item
Item	means a place, building, work, relic, movable object or precinct.
LEP	Local Environmental Plan
Leasable Floor Area (LFA)	Means the sum of the areas of each floor of a building where the area of each floor is taken to be the area within the outer face of the external enclosure walls as measured at a height of 1400 millimetres above each floor level, excluding: <ul style="list-style-type: none"> - Columns, fin walls, sun control devices, awnings and any other elements, projections or works outside the general lines of the outer face of the external wall; and - Lift towers, cooling towers, machinery and plant rooms, ancillary storage space and air conditioning ducts; and - Car parking needed to meet any requirements of the Council and any internal designated vehicular or pedestrian access thereto; and - Space for loading and unloading of goods; and - Internal public arcades and thoroughfares, terraces and balconies with outer walls less than 1400 millimetres high and the like.
LGA	Local Government Area

Loading Dock	The specific area set aside for loading and unloading of a commercial vehicle. Commonly the operation is carried out from a raised platform to which the vehicle is backed. Loading and unloading can, however take place from the side and/or ground level.
Local overland flooding	The inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
Local street	A road or street used primarily for access to abutting properties.
Loft	The gross floor area contained within the roof space of a dwelling where: <ul style="list-style-type: none"> (a) the pitch of the roof creating the space does not exceed 35 degrees; and (b) the external enclosing walls do not exceed a height of 300mm measured vertically from the floor level of the loft (not including gabled end walls); and (c) there is no balcony, terrace, and the like forming part of the loft; and (d) the floor space of the loft does not exceed 60% of the footprint of the storey immediately below; and (e) one or more dormers may form part of the loft.
Lopping	The incomplete removal of branches leaving stumps attached to the tree.
Low hazard	Should it be necessary, people and their possessions could be evacuated by trucks. Able-bodied adults would have little difficulty wading.
m	Metre
Merit approach	An approach, the principles of which are embodied in the Floodplain Development Manual which weighs social, economic and ecological impacts of land use options for different flood prone areas together with flood damage, hazard and behaviour implications, environmental protection and wellbeing of the State's rivers and floodplains.
Natural ventilation	A range of techniques that combine natural airflow with building design characteristics to induce fresh air into a building and exhaust stale air. Natural ventilation is also sometimes used as a means to reduce the temperature of a building's thermal mass.
Neighbouring land	Any land, other than adjoining land, which in the opinion of Council, may be detrimentally affected by a proposed development (and may include properties in a neighbouring Local Government area).
Notified Development	Where Council writes to those people identified as requiring notification advising of the submission of an application.
Number of Employees	The number of persons anticipated to be working for re-numeration at a given development site, whether for salary or wages, part time or full time at the time of day, day of the week, which is being assessed. It should not be confused with employment which is the expected number of persons registered as working and which is thus equal to or greater than the number of employees on site at any given time.
Outbuilding	A building, which is ancillary to a principal residential building and includes sheds, garages, car ports and similar buildings.
Outdoor cafes	An area that exhibits these characteristics: <ul style="list-style-type: none"> (a) Food and drink are provided for public consumption. (b) Items of furniture, such as tables and chairs, are provided for use by cafe patrons. (c) The site is accessible, out-of-doors and available for public use. (d) There is an adjacent associated business such as a cafe, coffee bar, milk bar, restaurant, ice-cream parlour, dining hall, food court or sandwich shop. (e) The associated business extends its supervised activities within the outdoor cafe location.

Outdoor Markets	Places or temporary structures / stalls for the purpose of retailing goods able to be carried away by the purchaser. Stalls are combined on suitable sites to form an outdoor market place.
Permeable ceiling	A false ceiling that allows air to come in direct contact with a slab above it.
Place	means an area of land, with or without improvements.
Potential koala habitat	Areas of native vegetation where the trees of the types listed in Schedule 2 of the <i>State Environmental Planning Policy No 44 - Koala Habitat Protection</i> constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.
Poultry	All forms of farmed bird including chickens, waterfowl, turkeys, ostriches, quail, squab and emus.
Poultry farming	Birds such as domestic fowls, turkeys, ducks geese, game birds, squab, quail and emus, whether as meat birds, layers or breeders and whether as free range or shedded birds.
Poultry processing plants	Poultry abattoirs and plants for the further processing of poultry (e.g. cutting up, filleting etc.), packaging and dispatch.
Probable maximum flood (PMF)	The largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation.
Probable maximum precipitation (PMP)	The greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year, with no allowance made for long-term climatic trends (World Meteorological Organisation, 1986). It is the primary input to the estimation of the probable maximum flood.
Probability	A statistical measure of the expected chance of flooding (see ARI).
Private open space	An open area of land or building attached to a dwelling (e.g. balcony or roof garden) intended for the exclusive use of the occupants of the dwelling, being located and designed so as to offer maximum privacy to occupants and neighbours.
Primary frontage	means: <ul style="list-style-type: none"> (a) the single frontage where an allotment has a single frontage to the street; or (b) the shortest frontage where an allotment has two or more frontages to the street; or (c) the two frontages where an allotment (not including a corner allotment) runs between two streets.
Prune	To remove some of the branches or roots of a tree.
Ramp	The circulation roadway, which connects an access driveway to an off-street car park, or service facility on a substantially different level, or which, connects two levels in a multi-level development.
Rebuilt dwelling	Refers to the construction of a new dwelling on an allotment where an existing dwelling is demolished.
Reliable access	<i>During a flood</i> means the ability for people to safely evacuate an area subject to flooding, having regard to the depth and velocity of flood waters, the suitability of the evacuation route, and without a need to travel through areas where water depths increase.
Remnant vegetation	Any patch of native vegetation around which most or all of the native vegetation has been removed. Remnant vegetation can range in size from a few plants to a very large group of plants.
REP	Regional Environmental Plan
Ridgeline	The highest point at which upward angled roof planes meet.

Ring barking	Cutting through the bark and sapwood of the tree so as to stop the flow of water and nutrients between roots and leaves.
Riparian Corridor	That component of land (including floodplains) adjacent to creeks.
Riparian vegetation	Any vegetation, which is adjacent to a water body and is reliant upon and contributes to the hydrological regime and ecology of that water body.
Risk	The chance of something happening that will have an impact. It is measured in terms of consequences and probability (likelihood). In the context of this plan, it is the likelihood of consequences arising from the interaction of floods, communities and the environment.
Road	A public thoroughfare used for the passage of vehicles or animals.
Root plate	The volume of roots of a mature tree.
Run-off	The amount of water that actually ends up as storm flow.
Rural shed	A building or structure erected on a rural zoned property for uses associated with agriculture or other permissible rural land uses on the site. This does not include buildings for the keeping of poultry or intensive horticultural activities.
Scale	means the size of a building and its relationship with its surrounding buildings or landscape.
Secondary frontage	means: (a) the longer frontages where an allotment has two or more frontages to the street; or (b) the frontage that adjoins a lane where an allotment (not including a corner allotment) runs between a street and a lane. A lane is a roadway that is 6m wide or less.
Sensitive populations	Population groups that include Childcare centres, Hospitals, Education facilities and Retirement villages.
Separation distance	The distance between the point of generation of an environmental impact and a receptor sensitive to that impact that will allow for the effects to be minimised.
SEPP	State Environmental Planning Policy
Service Aisles	The roadways, which connect, service areas with driveways and the street system. They may be part of the internal circulation road system. Required widths for straight sections of service aisles are 4.5m one way and 6.5m two-way. The width of curved sections should be determined by the swept path of the largest, relevant design vehicle.
Service Bay/Area	The service bay/area is the specific area delineated for a commercial vehicle to stand within a service area.
Service Facility	The service facility is the area in a development set aside for the manoeuvring lay-by, loading and unloading of commercial vehicles, together with shelter and equipment, which might be provided for the receipt and dispatch of freight. Normally included among the facilities is the storage of waste (garbage), prior to its removal by a special purpose vehicle.
Setback	The horizontal distance measured from an external enclosing wall (including an above ground deck, balcony, and the like), a window, or the eaves of a building, to the: (a) allotment boundary; or (b) a window to a bedroom or living area of another dwelling.
Setting	means the area around a heritage item that contributes to its heritage significance. It may include views to and from the heritage item. The listing boundary of a heritage item does not always include the whole of its setting
Shopping Trolley	A basket, frame or flat base on wheels (or castors), usually of metal construction that is provided by a business for customers to transport items within the store and within any car parking area allocated for use by customers of the store.

Side Boundary	The boundary between adjacent properties
Site Emergency Response Flood Plan	A management plan that demonstrates the ability to move goods above the flood level within the available warning time, and includes a strategy to safely evacuate persons.
Spillway	The earth swale (or pipe) used to divert water from a dam.
sqm	Square metre
Stacked Car Parking	The car parking, which may require the removal of other vehicles in order to gain access
Street sign	A street name sign or a sign under <i>Australian Standard AS 1742</i> being <ul style="list-style-type: none"> (a) guide sign; (b) warning sign; (c) temporary warning sign; (d) regulatory sign; (e) parking sign; (f) hazardous markers; (g) service symbol; (h) which is on a public road.
Survey plan	A plan prepared by a registered surveyor, which shows the information required for the assessment of an application in accordance with the provisions of this Policy.
The Act	The <i>Environmental Planning and Assessment Act 1979</i> .
The Plan	This <i>Development Control Plan</i> .
Third party advertising	The content of the advertisement is not related to the land, building or premises or goods sold on the land, building or premises to which the advertisement is attached.
Threatened species, population or community	means any species, population or ecological community which is scheduled under the Threatened Species Conservation Act 1995.
Topping	The removal of the top portion of a tree including a section of trunk.
Vegetative screening	Naturally occurring or purpose planted vegetation (preferably species native to an area) to lessen the impacts of a development on the surrounding area.
Waste Data File	A File or Folder containing the Waste Management Plan together with records (waste receipts or dockets) of disposal and/ or recycling of demolition and construction materials. The Waste Data File is to be retained by the person responsible for the site.
Waste Management Plan or WMP	An outline of any waste or recycling materials to be produced during <ul style="list-style-type: none"> (a) Demolition (b) Construction and (c) Future Use for a particular demolition and/ or construction project. It is to include estimates of volumes or weights of waste produced as well as a description of reuse, recycling and final destination. A blank Waste Management Plan is shown in Appendix 4.

Appendix 2 - Recommended Plant Species List for Landscaping

1. The following plant list is a guide only. It is a list of shrub and tree species known to grow well in the heavy clay soils of Liverpool. The list is a substitute for independent Landscape Architectural advice. It is recommended that a qualified Landscape Architect shall prepare all Landscape Plans submitted for Council approval.

Tall Evergreen Shrubs up to 3m high

Botanic Name	Common Name	Yr 1	Yr 2	Maturity
Westringia fruticosa	Coast Rosemary	0.5 m	1 m	1.5 m
Westringia longifolia	Westringia	0.5 m	1 m	1.5 m
Grevillea 'Robyn Gordon'	Grevillea 'Robyn Gordon'	0.5 m	1.5 m	1.5 m
Grevillea rosmarinifolia	Rosemary Grevillea	0.5 m	2 m	2 m
Melaleuca hypericifolia	Hillock Bush	0.5 m	1 m	2 m
Callistemon 'Captain Cook'	Bottlebrush	0.5 m	1 m	2 m
Grevillea 'Sandra Gordon'	Grevillea 'Sandra Gordon'	0.5 m	1.5 m	3 m
Banksia ericifolia	Heath Banksia	0.5 m	2 m	3 m
Leptospermum laevigatum	Coast Tea Tree	0.5 m	2 m	3 m
Melaleuca ericifolia	Melaleuca ericifolia	0.5 m	2 m	3 m
Melaleuca nesophyla	Melaleuca nesophyla	0.5 m	2 m	3 m
Hakea salicifolia	Silky Hakea	0.5 m	2 m	3 m
Doryanthes excelsa	Gynea Lily	0.5 m	2 m	3 m
Leptospermum spp.	Tea tree	0.5 m	2 m	3 m
Baekea spp.	Heath Myrtle	0.5 m	2 m	3 m
Pittosporum tenuifolium	New Zealand Pittosporum	0.5 m	2 m	3 m
Michelia figo	Port Wine Magnolia	0.5 m	2 m	3 m

Small Trees less than 9m high (D) = Deciduous

Botanic Name	Common Name	Yr 1	Yr 3	Maturity
Planted a minimum of 1.5m from the building				
Callistemon hannah ray	Hannah Ray Bottlebrush	2 m	3 m	4 - 5 m
Callistemon citrinus	Lemon Scented Bottlebrush	2 m	3 m	4 - 5 m
Leptospermum petersonii	Lemon-scented Tea tree	1.5 m	3 m	4 - 6 m
Acacia floribunda	Gossamer Wattle	2 m	3 m	4 - 6 m
Acacia baileyana	Cootamundra Wattle	2 m	3 m	5 - 8 m
Ceratopelum gummiferum	NSW Christmas Bush	2 m	4 m	5 - 8 m
Elaeocarpus reticulatus	Blueberry Ash	1.5 m	2 m	6 - 8 m
Banksia integrifolia	Coast Banksia	2 m	5 m	6 - 8 m
Tristanopsis laurina	Water Gum	2 m	3 m	6 - 8 m

Medium Sized Trees 9 - 15m high

Botanic Name	Common Name	Yr 1	Yr 3	Maturity
Planted a minimum of 3m from the building				
Melaleuca bracteata	Melaleuca bracteata	3 m	5 m	8 - 10 m
Melaleuca decora	White Cloud Tree	3 m	5 m	6 - 12 m
Melia azedarach	White Cedar (D)	2 m	4 m	8 - 12 m
Brachychiton acerifolium	Illawarra Flame Tree (D)	2 m	4 m	8 - 12 m
Hymenosporum flavum	Native Frangipani	2 m	4 m	8 - 12 m
Melaleuca quinquenervia	Broad-leaved Paper bark	3 m	5 m	8 - 15 m
Eucalyptus scoparia	Willow Gum	3 m	5 m	8 - 15 m
Angophora bakeri	Narrow leaved Apple	2 m	4 m	9 - 15 m
Brachychiton populneus	Kurrajong	2 m	4 m	9 - 15 m

Large Trees greater than 15m Tall*Native*

Botanic Name	Common Name	Yr 1	Yr 3	Maturity
Planted a minimum of 4.0m from the building				
Acacia elata	Cedar Wattle	2 m	5 m	10 - 18 m
Casuarina glauca	Swamp She Oak	3 m	5 m	10 - 18 m
Casuarina littoralis	Black She Oak	3 m	5 m	10 - 18 m
Callistemon viminalis	Weeping Bottlebrush	3 m	5 m	10 - 18 m
Planted a minimum of 5.0m from the building				
Eucalyptus molucana	Grey Box	3 m	5 m	12 - 18 m
Eucalyptus crebra	Narrow Leaved Ironbark	3 m	5 m	12 - 18 m
Eucalyptus fibrosa	Broad Leaved Ironbark	3 m	5 m	12 - 18 m
Eucalyptus sclerophylla	Hard Leaved Scribbly	3 m	5 m	12 - 18 m
Eucalyptus haemastoma	Scribbly Gum	3 m	5 m	12 - 18 m
Planted a minimum of 6.0m from the building				
Eucalyptus microcorys	Tallow-wood	3 m	5 m	15 - 20 m
Eucalyptus botryoides	Bangalay Tree	3 m	5 m	15 - 20 m
Eucalyptus tereticornis	River Red Gum	3 m	5 m	15 - 20 m
Eucalyptus sideroxylon	Red Ironbark	3 m	5 m	15 - 20 m
Syncarpia glomulifera	Turpentine	2 m	4 m	15 - 20 m
Casuarina cunninghamiana	River She Oak	3 m	5 m	15 - 20 m

Appendix 3 - List of Noxious Plants for Liverpool LGA

The following weeds are declared noxious in the Liverpool LGA:

Weed	Class	Legal requirements
<u>African feathergrass [Pennisetum macrourum]</u>	5	1
<u>African turnipweed [Sisymbrium runcinatum]</u>	5	1
<u>African turnipweed [Sisymbrium thellungii]</u>	5	1
<u>Alligator weed [Alternanthera philoxeroides]</u>	3	2
<u>Anchored water hyacinth [Eichhornia azurea]</u>	1	3
<u>Annual ragweed [Ambrosia artemisiifolia]</u>	5	1
<u>Arrowhead [Sagittaria montevidensis]</u>	5	1
<u>Artichoke thistle [Cynara cardunculus]</u>	5	1
<u>Athel pine [Tamarix aphylla]</u>	5	1
<u>Bear-skin fescue [Festuca gautieri]</u>	5	1
<u>Bitou bush [Chrysanthemoides monilifera subsp. rotundata]</u>	3	4
<u>Black knapweed [Centaurea nigra]</u>	1	3
<u>Blackberry [Rubus fruticosus aggregate species]</u> except cultivars Black satin, Chehalem, Chester Thornless, Dirksen Thornless, Loch Ness, Murrindindi, Silvan, Smoothstem, Thornfree	4	5
<u>Boneseed [Chrysanthemoides monilifera subsp. monilifera]</u>	3	4
<u>Bridal creeper [Asparagus asparagoides]</u>	5	1
<u>Broomrapes [Orobanchae species]</u> Includes all Orobanchae species except the native O. cernua variety australiana and O. minor	1	3
<u>Burr ragweed [Ambrosia confertiflora]</u>	5	1
<u>Cabomba [Cabomba caroliniana]</u>	5	1
<u>Castor oil plant [Ricinus communis]</u>	4	5
<u>Cayenne snakeweed [Stachytarpheta cayennensis]</u>	5	1
<u>Chilean needle grass [Nassella neesiana]</u>	4	5
<u>Chinese violet [Asystasia gangetica subsp. micrantha]</u>	1	3
<u>Clockweed [Gaura lindheimeri]</u>	5	1
<u>Clockweed [Gaura parviflora]</u>	5	1
<u>Corn sowthistle [Sonchus arvensis]</u>	5	1
<u>Dodder [Cuscuta species]</u> Includes All Cuscuta species except the native species C. australis, C. tasmanica and C. victoriana	5	1
<u>East Indian hygrophila [Hygrophila polysperma]</u>	1	3
<u>Espartillo [Achnatherum brachychaetum]</u>	5	1
<u>Eurasian water milfoil [Myriophyllum spicatum]</u>	1	3
<u>Fine-bristled burr grass [Cenchrus brownii]</u>	5	1
<u>Fountain grass [Pennisetum setaceum]</u>	5	1
<u>Gallon's curse [Cenchrus biflorus]</u>	5	1
<u>Glaucous starthistle [Carthamus glaucus]</u>	5	1

Weed	Class	Legal requirements
<u>Golden thistle [Scolymus hispanicus]</u>	5	1
<u>Green cestrum [Cestrum parqui]</u>	3	2
<u>Harrisia cactus [Harrisia species]</u>	4	5
<u>Hawkweed [Hieracium species]</u>	1	3
<u>Horsetail [Equisetum species]</u>	1	3
<u>Hygrophila [Hygrophila costata]</u>	2	3
<u>Hymenachne [Hymenachne amplexicaulis]</u>	1	3
<u>Karoo thorn [Acacia karroo]</u>	1	3
<u>Kochia [Bassia scoparia] except Bassia scoparia subspecies trichophylla</u>	1	
<u>Lagarosiphon [Lagarosiphon major]</u>	1	3
<u>Lantana [Lantana species]</u>	4	6
<u>Lantana [Lantana species]</u>	5	1
<u>Leafy elodea [Egeria densa]</u>	5	1
<u>Long-leaf willow primrose [Ludwigia longifolia]</u>	3	2
<u>Long-leaf willow primrose [Ludwigia longifolia]</u>	5	1
<u>Ludwigia [Ludwigia peruviana]</u>	3	2
<u>Mexican feather grass [Nassella tenuissima]</u>	1	3
<u>Mexican poppy [Argemone mexicana]</u>	5	1
<u>Miconia [Miconia species]</u>	1	3
<u>Mimosa [Mimosa pigra]</u>	1	3
<u>Mossman River grass [Cenchrus echinatus]</u>	5	1
<u>Onion grass [Romulea species] Includes all Romulea species and varieties except R. rosea var. australis</u>	5	1
<u>Oxalis [Oxalis species and varieties] Includes all Oxalis species and varieties except the native species O. chnoodes, O. exilis, O. perennans, O. radicata, O. rubens, and O. thompsoniae</u>	5	1
<u>Pampas grass [Cortaderia species]</u>	3	2
<u>Parthenium weed [Parthenium hysterophorus]</u>	1	3
<u>Pellitory [Parietaria judaica]</u>	4	6
<u>Pond apple [Annona glabra]</u>	1	3
<u>Prickly acacia [Acacia nilotica]</u>	1	3
<u>Prickly pear [Cylindropuntia species]</u>	4	5
<u>Prickly pear [Opuntia species except O. ficus-indica]</u>	4	5
<u>Red rice [Oryza rufipogon]</u>	5	1
<u>Rhus tree [Toxicodendron succedaneum]</u>	4	6
<u>Rubbervine [Cryptostegia grandiflora]</u>	1	3
<u>Sagittaria [Sagittaria platyphylla]</u>	5	1
<u>Salvinia [Salvinia molesta]</u>	2	3

Weed	Class	Legal requirements
<u>Sand oat [Avena strigosa]</u>	5	1
<u>Senegal tea plant [Gymnocoronis spilanthoides]</u>	1	3
<u>Serrated tussock [Nassella trichotoma]</u>	4	5
<u>Siam weed [Chromolaena odorata]</u>	1	3
<u>Smooth-stemmed turnip [Brassica barrelieri subspecies oxyrrhina]</u>	5	1
<u>Soldier thistle [Picnemon acarna]</u>	5	1
<u>Spotted knapweed [Centaurea maculosa]</u>	1	3
<u>St. John's wort [Hypericum perforatum]</u>	4	6
<u>Texas blueweed [Helianthus ciliaris]</u>	5	1
<u>Water caltrop [Trapa species]</u>	1	3
<u>Water hyacinth [Eichhornia crassipes]</u>	2	3
<u>Water lettuce [Pistia stratiotes]</u>	1	3
<u>Water soldier [Stratiotes aloides]</u>	1	3
<u>Willows [Salix species]</u> Includes all Salix species except S. babylonica, S. x reichardtii, S. x calodendron	5	1
<u>Witchweed [Striga species]</u> Includes all Striga species except native species and Striga parviflora	1	3
<u>Yellow burrhead [Limnocharis flava]</u>	1	3
<u>Yellow nutgrass [Cyperus esculentus]</u>	5	1

- 1 The requirements in the Noxious Weeds Act 1993 for a notifiable weed must be complied with.
- 2 The plant must be fully and continuously suppressed and destroyed
- 3 The plant must be eradicated from the land and the land must be kept free of the plant
- 4 The plant must be fully and continuously suppressed and destroyed
- 5 The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority and the plant may not be sold, propagated or knowingly distributed
- 6 The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority
- 7 except B.scoparia subspecies trichophylla
The plant must be eradicated from the land and the land must be kept free of the plant

Appendix 4 - Flood Compatible Materials

Building Component	Flood compatible material	Building Component	Flood compatible material
Flooring and Sub-floor	Concrete slab-on-ground monolith construction	Doors	Solid panel with water proof adhesives
Structure	Suspension reinforced concrete slab.		Flush door with marine ply filled with closed cell foam
			Painted metal construction
			Aluminium or galvanised steel frame
Floor Covering	Clay tiles	Wall and Ceiling Linings	Fibro-cement board
	Concrete, precast or in situ		Brick, face or glazed
	Concrete tiles		Clay tile glazed in waterproof mortar
	Epoxy, formed-in-place		Concrete
	Mastic flooring, formed-in-place		Concrete block
	Rubber sheets or tiles with chemical-set adhesives		Steel with waterproof applications
	Silicone floors formed-in-place		Stone, natural solid or veneer, waterproof grout
	Vinyl sheets or tiles with chemical-set adhesive		Glass blocks
	Ceramic tiles, fixed with mortar or chemical-set adhesive		Glass
	Asphalt tiles, fixed with water resistant adhesive		Plastic sheeting or wall with waterproof adhesive
Wall Structure	Solid brickwork, block work, reinforced, concrete or mass concrete	Insulation	Foam (closed cell types)
		Windows	Aluminium frame with stainless steel rollers or similar corrosion and water resistant material.
Roofing Structure (for Situations Where the Relevant Flood Level is Above the Ceiling)	Reinforced concrete construction	Nails, Bolts, Hinges and Fittings	Brass, nylon or stainless steel
	Galvanised metal construction		Removable pin hinges
			Hot dipped galvanised steel wire nails or similar

Article II. Electrical Equipment	Electrical and Mechanical	Heating and Air Conditioning Systems
Article III. For dwellings constructed on land to which this DCP applies, the electrical and mechanical materials, equipment and installation should conform to the following requirements.		Article IV. Heating and air conditioning systems should, to the maximum extent possible, be installed in areas and spaces of the house above the relevant flood level. When this is not feasible every precaution should be taken to minimise the damage caused by submersion according to the following guidelines.
Main power supply		Fuel
Article V. Subject to the approval of the relevant authority the incoming main commercial power service equipment, including all metering equipment, shall be located above the relevant flood level. Means shall be available to easily disconnect the dwelling from the main power supply.		Article VI. Heating systems using gas or oil as a fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off.
Wiring		Installation
Article VII. All wiring, power outlets, switches, etc., should, to the maximum extent possible, be located above the relevant flood level. All electrical wiring installed below the relevant flood level should be suitable for continuous submergence in water and should contain no fibrous components. Earth core linkage systems (or safety switches) are to be installed. Only submersible-type splices should be used below the relevant flood level. All conduits located below the relevant designated flood level should be so installed that they will be self-draining if subjected to flooding.		Article VIII. The heating equipment and fuel storage tanks should be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks should be vented to an elevation of 600mm above the relevant flood level.
Equipment		Ducting
Article IX. All equipment installed below or partially below the relevant flood level should be capable of disconnection by a single plug and socket assembly.		Article X. All ductwork located below the relevant flood level should be provided with openings for drainage and cleaning. Self-draining may be achieved by constructing the ductwork on a suitable grade. Where ductwork must pass through a watertight wall or floor below the relevant flood level, the ductwork should be protected by a closure assembly operated from above relevant flood level.
Reconnection		Article XII.
Article XI. Should any electrical device and/or part of the wiring be flooded it should be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.		

**LIVERPOOL
CITY
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Liverpool Development Control Plan 2008
Part 4
Development in
Liverpool city centre

DRAFT

Part 4 must be read in conjunction with Part 1

**LIVERPOOL
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Liverpool Development Control Plan 2008

Part 4 Liverpool city centre

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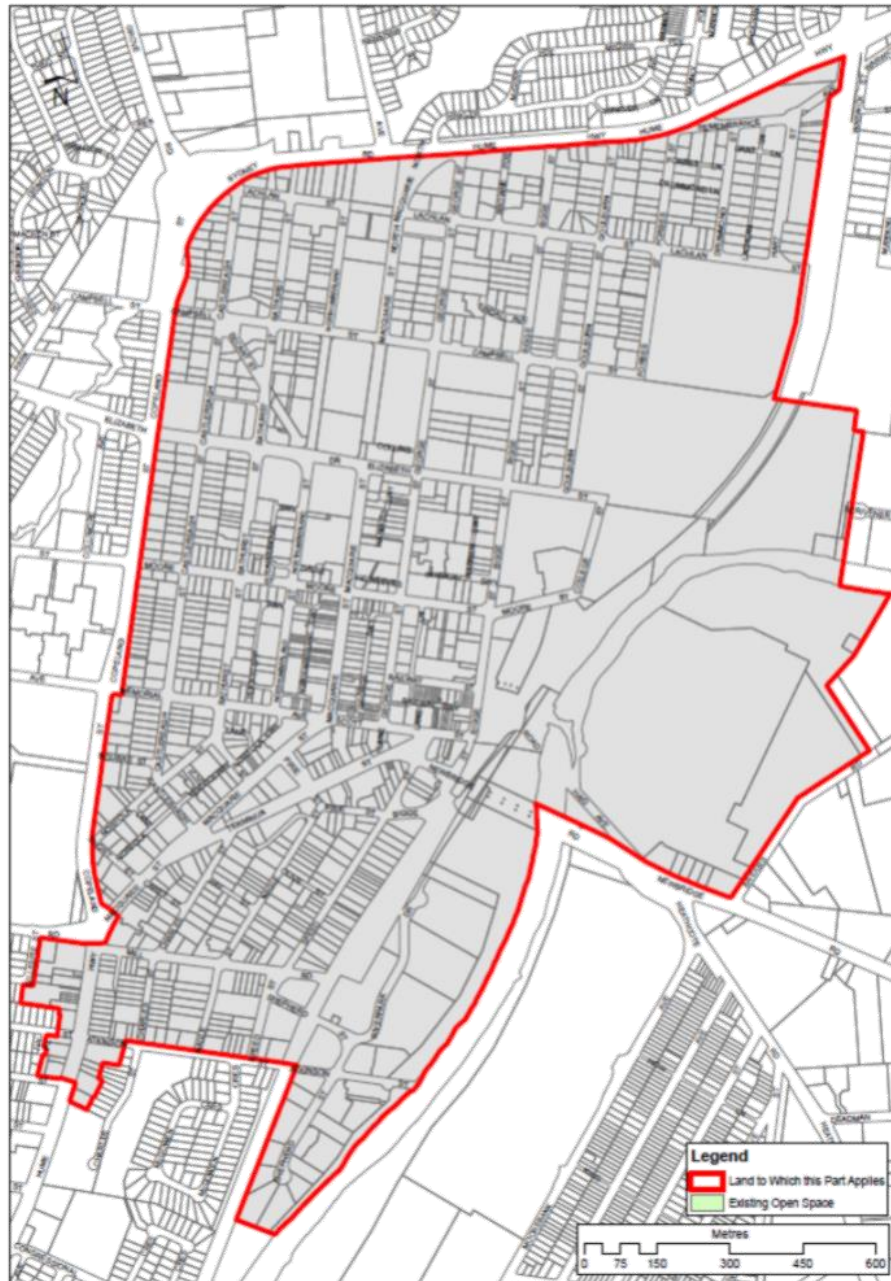
4.1. PRELIMINARY

Applies to

This Part applies to the area shown in Figure 4-1.

Part 1 also applies to the area shown in Figure 4-1.

Figure 4-1: Land to which this Part applies



Background

The Liverpool city centre was identified by the Department of Planning as a regional city through the Sydney Metropolitan Strategy – A City of Cities in 2005. This status was confirmed in A Plan for Growing Sydney released by the Department of Planning and Environment in December 2014.

In March 2018 the Sydney Regional Plan, *A metropolis of three cities* was published by the Greater Sydney Commission (GSC), establishing a renewed planning framework for the Sydney region as a whole towards 2056. The Western City District Plan — connecting communities (WCDP), was finalised by the GSC in March 2018 also. The WCDP provides detailed planning direction for the future development of Liverpool city centre, as part of the Liverpool LGA.

Liverpool city centre LEP revision

In 2015 Council launched a review of the planning controls applying to Liverpool city centre. The city centre LEP review sought to revitalise Liverpool city centre, to create a mixed-use, vibrant 18-hour city centre, a walkable city that offers living, recreation and work opportunities and a city focused along the river. To this end it was decided to significantly expand the area of B4 – Mixed Use zoned land and reduce the area of land zoned B3 – Commercial Core. This amendment to Liverpool Local Environmental Plan (LEP) 2008 — Amendment 52, was gazetted and came into force on 5 September 2018.

In addition to rezoning land to reduce the size of the Commercial Core and expand the area of Mixed Use zoned land, Amendment 52 defined legible character precincts based on ownership, subdivision, street block patterns, and the role of the public domain. It also specified an urban form that responds to the character of each precinct, has different building typologies, and offers different economic opportunities.

Amendment 52 enables individual owners to develop sites without the requirement for amalgamation, improves connectivity to and within the city centre, de-couples car parking from development where appropriate and develops consistent urban form, where possible, for new development within the city centre. It is envisaged that increasing the number of residents in the city centre will activate the city centre, and will lead to increased demand for retail and services, resulting in more jobs.

This Part of Liverpool Development Control Plan (LDCP) 2008 seeks to provide appropriate development objectives and controls that will facilitate development in Liverpool city centre in concert with the Liverpool Local Environmental Plan (LEP) 2008.

Characteristics of the Liverpool city centre

The character of Liverpool city centre can be divided into specific areas which have a number of character elements as described below. The character areas are illustrated in **Figure 4.2** below. However, where appropriate, reference is also made to which precinct, illustrated on the FSR map as amended by Amendment 52, also applies:

- Mixed Use (Area 7 and Area 8).
- High Density Residential.
- Education and Medical Precinct (Area 9).
- Commercial Core (Area 10)
- Standalone sites (including Area 11)
- City Centre Riverfront.
- Georges River Precinct.

Commercial Core

Land considered as part of Amendment 52, but which retains the B3 — Commercial Core zoning. Council aims to increase employment in the city centre to a total of 30,000 jobs by 2031. Commercial development is encouraged throughout the Mixed Use and Commercial Core areas of the city centre.

Liverpool city centre's commercial core is located near the public transport interchange on land bounded by Elizabeth Street to the north, Bigge Street to the east, George Street to the west and Railway Street to the south. In addition, the existing Westfield shopping centre is also part of the Commercial Core. Preservation of a Commercial Core in the city centre will support the broader base of uses likely to arise in the Mixed Use areas. Retail development will continue to be focused around the Macquarie Street Mall and Westfield shopping centre, though retail uses will also be permitted throughout the Mixed Use and Commercial precincts.

Mixed Use

Amendment 52 expanded the area of Liverpool city centre zoned B4 – Mixed Use. Land zoned B4 – Mixed Use may be developed for a range of retail/commercial and residential uses. Three new precincts have been defined for the rezoned sites in Liverpool city centre and some existing B4 sites. These precincts relate to the existing site characteristics, ownership patterns and subdivision patterns. The precincts are identified as Fine Grain, Midrise and Long Term Civic Sites. Certain lots within the Mid-Rise and Long-term Civic Sites (in addition to the Commercial Core) precincts may be developed pursuant to clause 7.5A of LLEP 2008, but only if they meet lot size and access requirements.

The Fine Grain and the Midrise sites use a perimeter block typology, defined by building envelopes (see 4.22 below). The building envelopes enable buildings constructed to these profiles to relate to each other and the street network.

Lots that may be developed pursuant to clause 7.5A are large, strategically located sites, which can be developed subject to a concept development application as defined by section 4.23 of the Environmental Planning and Assessment (EP&A) Act 1979 and the delivery of a public benefit, as defined by clause 7.5A(3)(b) of LLEP 2008 (see 4.2.5 below).

High Density Residential

Liverpool city centre is an increasingly popular residential destination. The Commercial Core and Mixed Use areas of the city centre are surrounded by R4 – High Density Residential zoned land. With the growth of the hospital, there will be increasing demand for accommodation for health workers. One of Council's aims is to improve access to residential areas and the city centre.

In addition to significant residential development in the Mixed Use areas of the city centre, residential development will be focused around the northern, western and southern periphery. It is desirable that the frontages to Macquarie Street at Pioneer Park accommodate retail/café/restaurant activities at ground floor with residential and potentially some office space on floors above. Shepherd Street (at the southern extremity of the city centre) offers the potential to accommodate residential development with good access to the Georges River. Planning controls have been reviewed to assist this outcome.

Education and Medical Precinct

The Education and Medical precinct is located on the eastern edge of the city centre. It is defined by the South-Western Sydney Area Health Service (Liverpool Hospital) and attendant medical centres and clinics, the Liverpool Private Hospital, public and private schools, and the Liverpool TAFE buildings. The precinct is centred on historic Bigge Park and the Francis Greenway-

designed old Liverpool Hospital, now part of TAFE.

LLEP 2008 identifies Liverpool Hospital as a Long-Term Civic Site so that the site may develop using a concept development application and with a full range of building typologies.

Standalone sites

Standalone sites, as illustrated in **Figure 4.2**, describes a number of sites in certain locations around the city centre, which have been rezoned by Council independently of Amendment 52. The sites have been recognised by Council with development standards which will encourage architecturally significant buildings. It is envisaged that these buildings will develop using the tower on podium building typology.

City centre riverfront

Liverpool city centre was the first of the 'Macquarie towns', chartered by Governor Lachlan Macquarie in 1810. From its foundation, the city identity was closely connected to the Georges River. Since the development of the railway line along the river as early as 1856, the city centre has become increasingly divorced from the river. The State Rail Freight Line, which runs alongside the passenger line immediately adjacent to the river, has further divided the city and obstructs connections across the Georges River, both physically and visually.

The natural edge of the Georges River and the Chipping Norton lakes system is one of Liverpool's most valuable assets. Opportunities exist to create continuous urban parkland. Council is committed to exploring improved connections from the city centre to the river and to Moorebank.

Georges River Precinct

The Georges River Precinct has been identified for potential city centre expansion due to the large sites, the limited ownership and proximity to the train station. The site has a number of constraints however, including the location of the railway line, which presents a barrier to access to the city centre, the river and the site's location within the 1% AEP (i.e. 100 year flood). There is limited existing connectivity to the city centre.

Streets, Laneways and Serviceways

The Hoddle grid, adopted as the township plan shortly after Governor Macquarie founded Liverpool, provides an excellent and legible framework for development. It has a vital role in determining the city's built form.

Streets make up the largest area of public space in Liverpool city centre. Used primarily for traffic and pedestrian movement, they also accommodate business, shopping, festivals, dining, socialising and entertainment. Within the formal grid of north-south and east-west streets there are serviceways (lanes) and arcades. Currently the serviceways do not generally provide direct connections between streets but the arcades do.

In the southern part of the city centre, the grid distorts in response to the topography, forming a secondary grid. The meeting of the regular Hoddle grid with the secondary grid along Memorial Avenue creates corner blocks with obtuse and acute angles. This provides a valuable opportunity to reinforce the character and streetscape quality of Liverpool city centre.

The core of the city centre is bounded by Bathurst Street, Campbell Street, Bigge Street, Pirie Street and Terminus Street. These streets carry the bulk of through traffic around the city centre to access the major arterials – Newbridge Road, Hoxton Park Road, the Hume Highway, Elizabeth Drive and the Cumberland Highway.

The network of serviceways complements the dominant qualities of the main streets. Hidden within the blocks, the serviceways have the potential to be extended to provide important direct pedestrian links to the streets. If this can be achieved, the serviceways have the capacity to improve permeability and provide spaces that diversify and enrich the city structurally and economically. The active street frontages along Macquarie Street and throughout the city centre are also an asset that should be maintained and expanded.

The development controls in this Part complement the amended LLEP 2008 and define the built form required to ensure that the amenity of the streets and lanes/serviceways is protected and enhanced.

Satisfactory arrangements

At the request of Transport for NSW, Council conducted a review of the transport needs that would be created by the additional residential development that would be made possible by rezoning much of the existing commercial core of the city centre to permit residential development. The review made a number of recommendations, including that a range of improvements to designated State public infrastructure would be required to support the planned residential growth.

In order to fund the required infrastructure improvements, clause 6.4A of LLEP 2008 indicates that the development of any and all residential accommodation on land within the intensive urban development area of Liverpool city centre (i.e. "Area 7", "Area 8", "Area 9", "Area 10" or "Area 11" shown on the Floor Space Ratio Map), must demonstrate via written confirmation from the Secretary of the DP&E that, according to clause 6.4A(2), "satisfactory arrangements have been made to contribute to the provision of designated State public infrastructure in relationship to the land on which the development is to be carried out."

The satisfactory arrangements provision must be satisfied prior to the determination of a DA which includes residential development. It is expected that the satisfactory arrangements will take the form of an additional levy on residential development, and may require the making of the planning agreement with the DP&E.

Development of hotel, motel, backpacker, bed-and-breakfast or serviced apartment accommodation is not considered "residential development" and will not be subject to satisfactory arrangements as described in clause 6.4A of LLEP 2008.

Site-specific Development Control Plan

Clause 6.6, Development control plan, of LLEP 2008 requires that:

- (1) Development consent must not be granted for development on land in an urban release area or intensive urban development area unless a development control plan that provides for the matters specified in subclause (2) has been prepared for the land.*

The "intensive urban development area" is defined in clause 6.4A as being "Area 7", "Area 8", "Area 9" or "Area 10" shown on the Floor Space Ratio Map.

Proposed development that does not rely on clause 7.5A of LLEP 2008 (see Section 2.1.4 below), would not require the lodgement of a site-specific DCP. Council will accept an assessment of compliance with Part 1 and Part 4 of LDCP 2008 in lieu of the submission of a site-specific DCP. For development undertaken pursuant to the floor space bonuses described in clause 7.5A of LLEP 2008, please refer to Section 4.2.5 of this Part.

4.2. CONTROLS FOR BUILDING FORM

4.2.1 Building form

Background

Building form refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. LLEP 2008 includes provisions for land use, building heights, sun access, floor space ratio (FSR) and design excellence. The development controls in this Part of the DCP are intended to reinforce the desired outcomes for the city centre. The resulting built form and character of new development should contribute to an attractive public domain in Liverpool city centre and produce a desirable setting for the intended uses.

The provisions in the Apartment Design Guidelines (ADG) associated with State Environmental Planning Policy No.65 – Design Quality are incorporated in this DCP to apply to all residential development in the Liverpool city centre including apartments, any residential component of a mixed use development, and serviced apartments that are strata titled. Where there is an inconsistency between other provisions in the ADG and this DCP, the ADG prevails to the extent of the inconsistency.

Within the existing Liverpool city centre, the diversity of uses is reflected in the different building typologies. These are:

- Perimeter Block (accommodating commercial and residential uses).
- Towers on a Podium (accommodating commercial and residential uses).
- Detached Buildings (apartment buildings, religious, commercial, education and medical uses).

LLEP 2008 identifies specific precincts on the FSR map for Liverpool city centre (Area 7, Area 8, Area 9, Area 10 and Area 11). The precincts relate to specific character areas defined in this Part as follows:

- "Area 7" is the Fine Grain Precinct;
- "Area 8" is the Midrise Precinct;
- "Area 9" is the Long-Term Civic Sites Precinct;
- "Area 10" is the Commercial Core Precinct; and
- "Area 11" is the Standalone site known as 77-83 Moore Street and 193 Macquarie Street.

The precincts are shown in **Figure 4-2**.

Objectives

1. Establish the scale, dimensions, form and separation of buildings as appropriate for the city centre and the range of uses.
2. Provide a strong definition of the public domain with buildings on a common alignment.
3. Promote building frontages with good connections to the street.

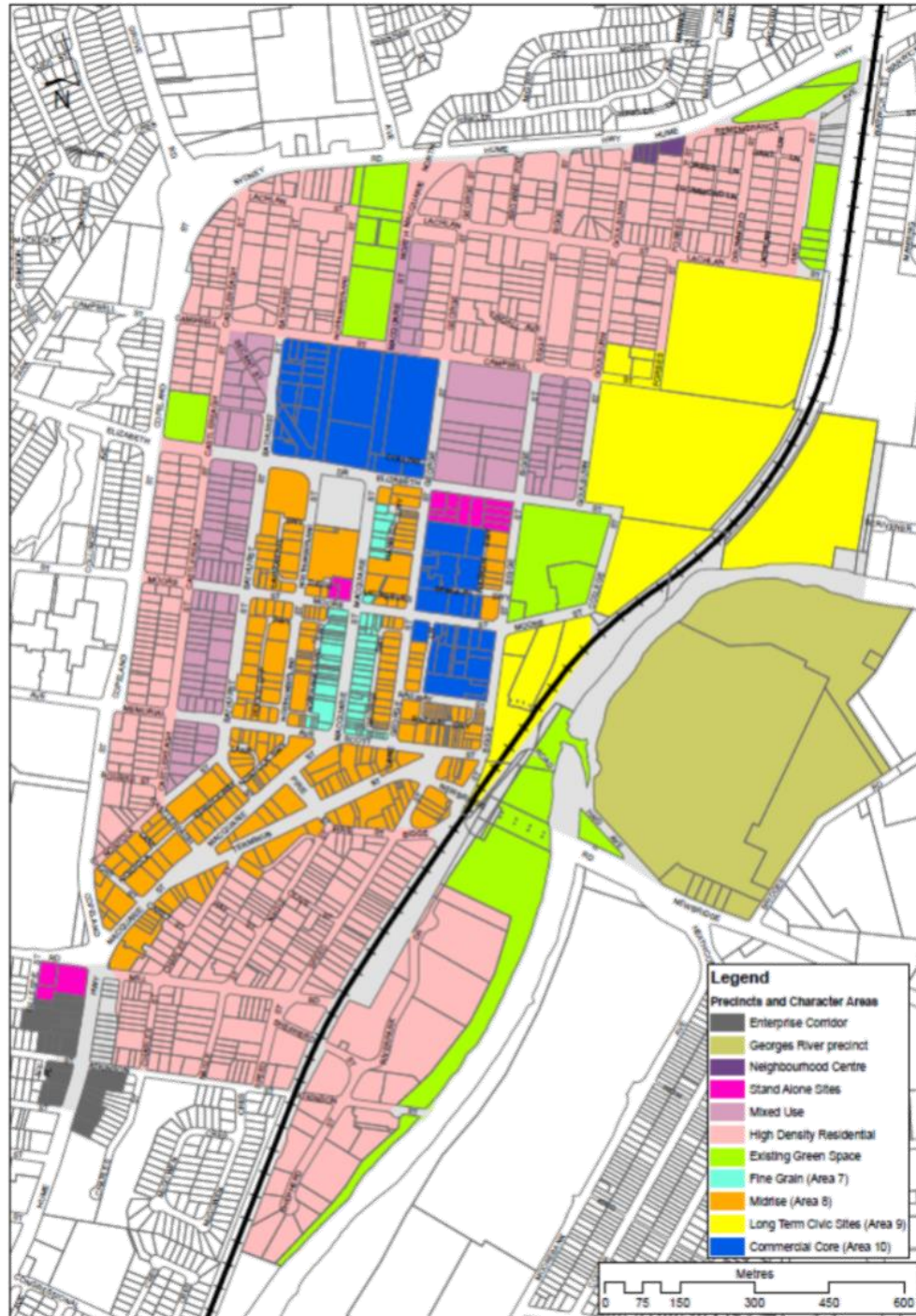
Controls

Develop new buildings in Liverpool city centre using the following building typologies for precincts as identified in **Figure 4-2**:

1. Perimeter block typology for Fine Grain precinct.
2. Perimeter block typology for Midrise precinct, with the exception of those Midrise sites

developed pursuant to clause 7.5A of LLEP 2008 (which may also be developed with a tower on podium typology).

3. Perimeter block, tower on podium or detached building typology for Long Term Civic Sites.
4. Tower on podium or detached building typology for standalone sites.
5. Perimeter block, tower on podium or detached building typology for Commercial Core sites.
6. Perimeter block, or detached building typology for Mixed Use.
7. Detached building typology for High Density Residential sites.
8. Perimeter block, or detached building typology for Enterprise Corridor sites and Neighbourhood Centre sites.

Figure 4-2 Precincts

4.2.2 Building Envelopes

Background

Building envelopes provide buildings with a strong address to the street, ensure compatibility between sites and maintain a suitable relationship to the scale of existing buildings. The lower scale buildings on the Fine Grain and Midrise sites contribute to the character of the existing city centre and make a positive contribution to its vitality, image and identity.

Midrise and Commercial Core sites of over 1,500m² in area may be developed as described in clause 7.5A of LLEP 2008 in certain circumstances. See section **4.2.5 Controls for sites requiring the submission of a DCP** for greater clarification.

4.2.3 Controls for the Fine Grain Precinct

Background

The Fine Grain Precinct is identified on **Figure 4-2**. Fine Grain Sites are small sites that have a very important role for pedestrian interface along streets. They are important because of their short frontages to streets, variety of uses, but also because the diverse ownership offers significant contrast of character, opening hours and price-point for retail offerings.

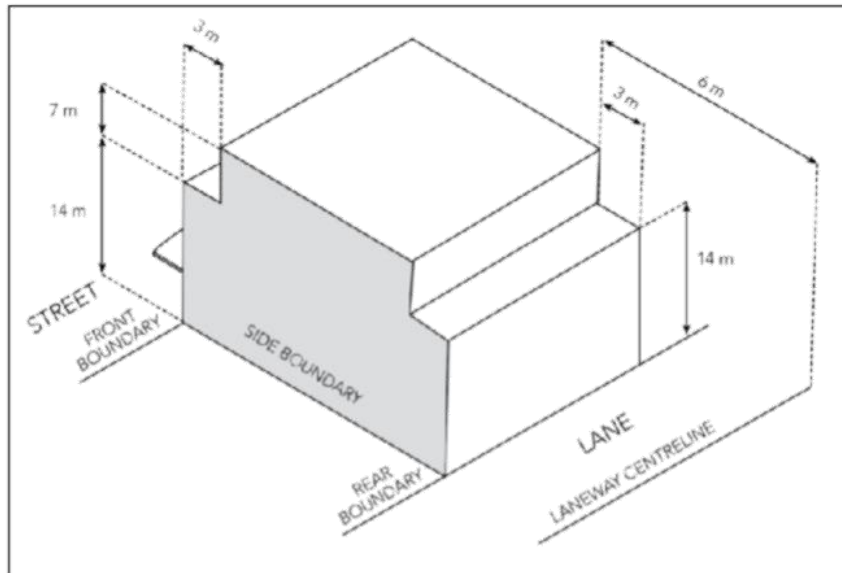
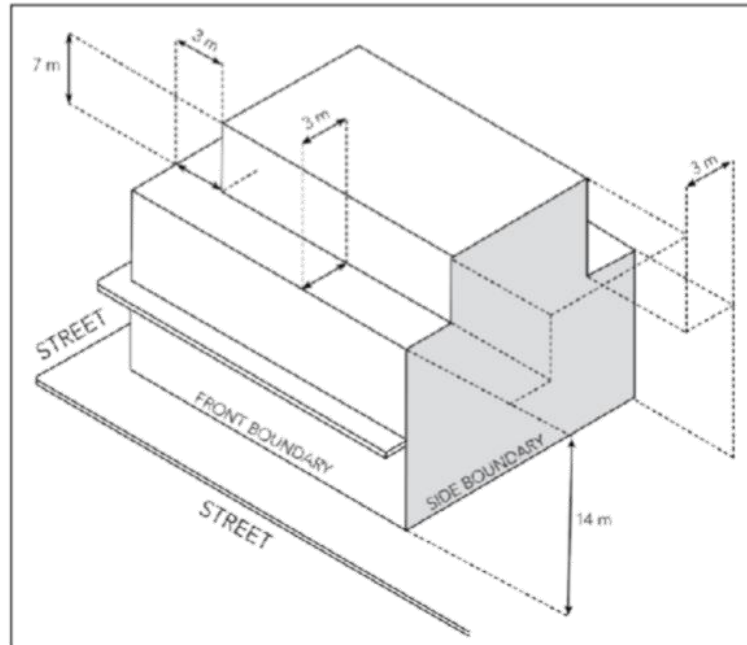
Objectives

1. Create a contiguous street wall even though sites are developed independently.
2. Address solar access/privacy and light within the building envelope so that separate studies are not required.
3. Provide active street and lane/serviceway frontages.
4. Encourage development without car parking on site.

Controls

Design new buildings in the Fine Grain Precinct as follows:

1. Construct a maximum of four storeys to the street and four storeys to the serviceway frontages, with an additional two storeys set back to street frontages in accordance with **Figures 4-3 and 4-4**.
2. Locate retail uses at the ground floor on street and lane/serviceway frontages (where possible).
3. Develop no more than one level of (at grade) car parking (where necessary), which is to be appropriately screened or sleeved.
4. Provide parking in accordance with LLEP 2008 provisions or make an alternative arrangement to the satisfaction of Council.

Figure 4-3: Fine Grain/Mid-Block**Figure 4-4: Fine Grain/Corner**

4.2.4 Controls for the Midrise Precinct

Background

The Midrise Precinct is identified on **Figure 4-2**. Midrise Sites are capable of accommodating more development than Fine Grain Sites. They are important because of the relatively short-frontages to streets and their diverse range of uses. Differing ownership also provides a variety of use and form that single ownership of large city buildings does not achieve.

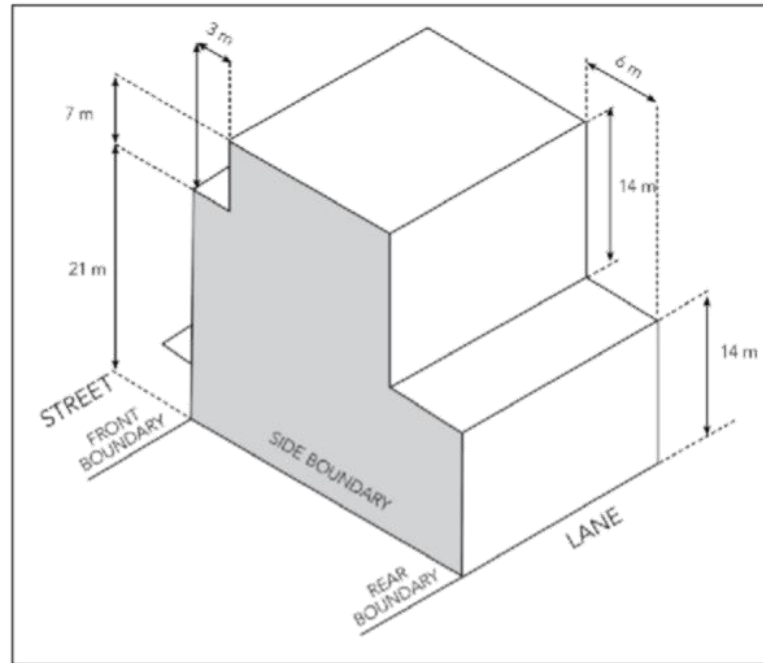
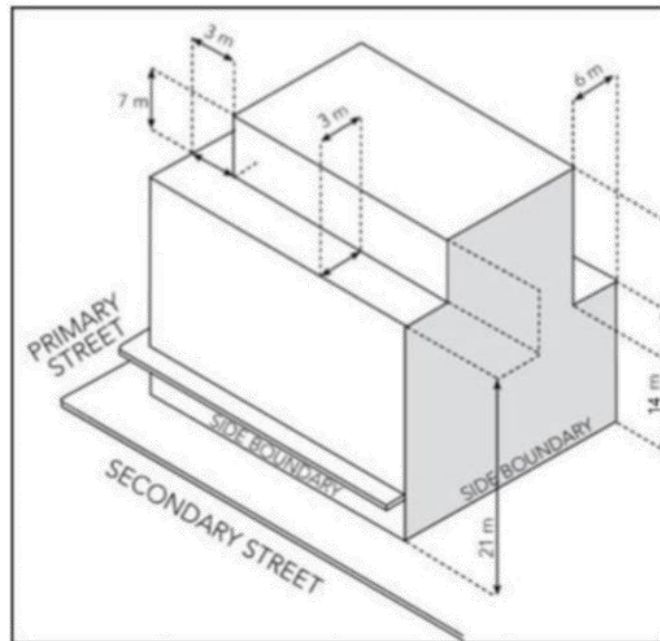
Objectives

1. Form a contiguous street wall even though sites are developed independently.
2. Address solar access/privacy and light within the building envelope so that separate studies are not required.
3. Provide active street and lane/serviceway frontages.
4. Allow flexibility of uses within the building envelope (long life/loose fit) that can change over time.
5. Provide parking for the development on site.

Controls

Design new buildings in the Midrise Precinct as follows:

1. Construct buildings to a maximum of six storeys to the street and four storeys to the lane/serviceway frontages, with an additional two storeys set back to both frontages in accordance with **Figures 4-5 and 4-6**.
2. Develop retail uses at the ground floor at street and lane/serviceway frontages (where possible).
3. Develop at least one level above the ground floor for a commercial use, or that is capable of being adapted to a commercial use.
4. Provide parking in a basement car park. No more than one level of service (at grade) car parking is permitted and this is to be appropriately screened or sleeved.
5. Provide parking in accordance with the LLEP 2008.

Figure 4-5: Mid-Rise/Mid-Block**Figure 4-6 Mid-Rise/Corner**

4.2.5 Controls for sites that require the submission of a site specific DCP or concept DA

Background

Clause 7.5A of LLEP 2008 provides additional provisions relating to certain land in Liverpool city centre. This section specifies the requirements for a lot to be developed according to the provisions of clause 7.5A.

The provisions of clause 7.5A are not considered development standards and therefore may not be varied according to clause 4.6 of LLEP 2008. Minimum requirements for the development of a lot pursuant to clause 7.5A are:

- That the lot is situated within "Area 8", "Area 9" or "Area 10" on the Floor Space Ratio Map; and
- Has a lot size exceeding 1500m²; and
- Has two or more street frontages.

Pursuant to clause 7.5A(2), any building which is proposed to exceed the maximum height shown for the land on the Height of Buildings Map, and the maximum floor space ratio shown for the land on the Floor Space Ratio Map for the site (to a maximum FSR of 10: 1 in "Area 8" or "Area 10" and 7:1 in "Area 9"), must be developed so that at least 20% of the gross floor area is used for the purposes of:

- business premises;
- centre based childcare facilities;
- community facilities;
- educational establishments;
- entertainment facilities;
- food and drink premises;
- functions centres;
- information and education facility;
- medical centres;
- public administration buildings; or
- retail premises.

The Dictionary of LLEP 2008 defines the meaning and development requirements of each of the specified uses.

Development of sites pursuant to clause 7.5A of LLEP 2008 will require the submission of a DCP. According to section 4.23(2) of the EP&A Act 1979:

(2) However, if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a concept development application in respect of that land.

In other words, the requirement to lodge a DCP pursuant to clause 7.5A(3)(a) of LLEP 2008, may be satisfied by the lodging of a concept development application pursuant to the requirements of section 4.23 of the EP&A Act 1979 instead. It is to be noted however, that section 4.23(3) of the EP&A Act also applies to any such application meaning that:

3) Any such concept development application is to contain the information required to be

included in the development control plan by the environmental planning instrument or the regulations.

Objectives

1. That development of sites within Liverpool city centre pursuant to clause 7.5A demonstrates the appropriate mix of uses and standards of design excellence.
2. Provide appropriate parking for the development on site.
3. Provide active street and lane/serviceway uses .

Controls

1. Sites that require the submission of a DCP are to be developed pursuant to the adopted site specific DCP or a concept development application consistent with Division 4.4 of the EP&A Act 1979 and clause 7.5A of LLEP 2008.
2. Clause 7.5A(3)(b) of LLEP 2008 specifies that any proposed development which seeks to utilise the additional provisions relating to certain land in Liverpool city centre must yield a public benefit, in that the site on which the building is to be located must also include one or more of the following uses (NB: in order to provide the required public benefit, these uses must be publicly accessible):
 - recreation areas;
 - recreation facilities (indoor);
 - community facilities;
 - information and education facilities;
 - through site links; or
 - public car parks.

Each land use that is required to yield public benefit (with the exception of "through site links" and "public car parks", defined below), is defined in the Dictionary of LLEP 2008. The size, scale, location and detailed use of any such proposed development, must be included in the required site specific DCP or concept development application, and be to the satisfaction of Council.

Through site links are only to be developed on those sites indicated in Figure 4.12 and must be developed in accordance with the requirements of section 4.3 Pedestrian Amenity.

Public car parks are only to be developed with the written permission of Council and must be vested in or under the control of Council. Provision of public car parking must be consistent with Council's Parking Strategy and locational requirements. Any such public car park must be of sufficient scale and located so as to be of a public benefit acceptable to Council.

3. The concept development application lodged pursuant to clause 7.5A of LLEP 2008, must demonstrate how the proposal addresses all matters described in 7.5A(4)(a-m), as follows:

(a) the suitability of the land for development.

The site specific DCP or concept development application must articulate planning and design principles relating to development of the land and explain how these address Part 4 of Liverpool Development Control Plan 2008 and any other relevant documents or plans. It must include an analysis of the characteristics and the local context of the land to which it applies.

It must conceptually outline and show graphically the proposed site layout and planning for the development of the land, including the conceptual vertical and horizontal distribution of potential future uses, arrangement, footprint, envelopes and mix of building types. Through analysis of a number of illustrated options for redevelopment it must determine the preferred approach,

(b) the existing and proposed uses and use mix.

The site specific DCP or concept development application must describe the existing uses of any building currently occupying the site, and the proposed use mix to be developed on the site (noting additional use requirements outlined in control 1 above),

(c) any heritage issues and streetscape constraints.

The site specific DCP or concept development application must describe how the proposal will address all heritage items in the vicinity, in accordance with the requirements of clause 5.10 of LLEP 2008 and section 4.6.1 of this Part,

(d) the impact on any conservation area.

The site specific DCP or concept development application must indicate how any proposed development within the Bigge Park Conservation Area addresses the requirements of clause 5.10 of LLEP 2008 and section 5.10 of this Part,

(e) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form.

Liverpool city centre is a mixed-use environment. The site specific DCP or concept development application must ensure that any proposed residential tower is consistent with ADG separation and side setback distances, taking into account existing or proposed towers on the same site or neighbouring sites. Siting of all proposed towers, residential or commercial, must be consistent with clause 7.4 of LLEP 2008 Building separation in Liverpool city centre,

(f) the bulk, massing and modulation of buildings

The site specific DCP or concept development application must illustrate the proposed bulk, massing and modulation of buildings to be developed on the site,

(g) street frontage heights.

The site specific DCP or concept development application must indicate the street frontage heights of any proposed building. A tower on podium building is to be designed so that the podium is:

- a. four to six storeys in height at the primary street frontage;
- b. four storeys in height to the lanes and/or serviceways; and
- c. 6 metres from a side/rear boundary if the site is adjoining a property that is not zoned B4 – Mixed Use or contains a stand-alone building. The setback should be in accordance with the ADG,

(h) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity.

The site specific DCP or concept development application must illustrate how the proposed design will satisfactorily address environmental impacts on the public domain and other sites in proximity, depending on the scale of the development. Designs must ensure the streetscape environment is of pedestrian scale and ensures human qualities of solar access, shade and amenity are provided and negative elements such as noise and wind are minimised,

(h) the achievement of the principles of ecologically sustainable development.

The site specific DCP or concept development application must illustrate the ways by which the development proposed maximises ecological sustainability,

(i) encouraging sustainable transport, including increased use of public transport, walking and cycling, road access and the circulation network and car parking

provision, including integrated options to reduce car use.

The site specific DCP or concept development application must incorporate a Transport Management and Access Plan (TMAP). The TMAP must illustrate how the proposed development will encourage sustainable transport including:

- measures to encourage increased use of public transport, walking and cycling;
- provisions for access (for pedestrians, cyclists and vehicles including heavy vehicles), circulation and car parking; and
- other measures to reduce car use (e.g. carpooling and car-share services),

(j) the impact on, and any proposed improvements to, the public domain.

The site specific DCP or concept development application must demonstrate how the proposed development will integrate with and/or make improvements to the existing public domain, including the provision of setbacks where required. The site specific DCP or concept development application must include a detailed public domain plan.

Improvements to the public domain include:

1. Contributing to the urban tree canopy through new street tree plantings consistent with the Liverpool CBD Streetscape and Paving Manual 2018.
2. Providing street furniture and pedestrian amenity items.
3. Installing high quality pedestrian paving consistent with the Liverpool CBD Streetscape and Paving Manual 2018.
4. Integrating public art in accordance with section 4.3.10 of this Part.
5. Making provision for pedestrians to access to sunlight and shade.
6. Providing a design that contributes to activation of street frontages.
7. Integration of WSUD elements to improve vegetation success within the public domain,

(k) achieving appropriate interface at ground level between buildings and the public domain.

The site specific DCP or concept development application must demonstrate how all buildings, including any proposed tower building, achieves an appropriate interface at ground level with existing and proposed buildings and the public domain, according to the requirements of Section 4.3.1 to 4.3.10 of this Part.

Electricity substations and waste collection points must be appropriately integrated into the building design to minimise disruption and visual clutter in the ground plane and streetscape,

(l) the excellence and integration of landscape design.

The concept development application must demonstrate compliance with section 4.2.13 of this Part.

4. Locate non-residential uses at ground level that address all street frontages (and laneway/service way frontages, where possible).
5. Develop a maximum of two levels of above-ground car parking, provided it is sleeved by other uses on street frontages and appropriately screened or sleeved by other uses on lane/serviceway frontages. Aboveground parking must achieve minimum floor to ceiling heights that would permit adaption for another use (e.g. commercial/retail or residential).
6. Construct buildings according to the requirements illustrated in **Figure 4.7**, **Figure 4.8** or **Figure 4.9**, depending on the location of the site.

Figure 4-7: Tower on a Podium/Mid-Block

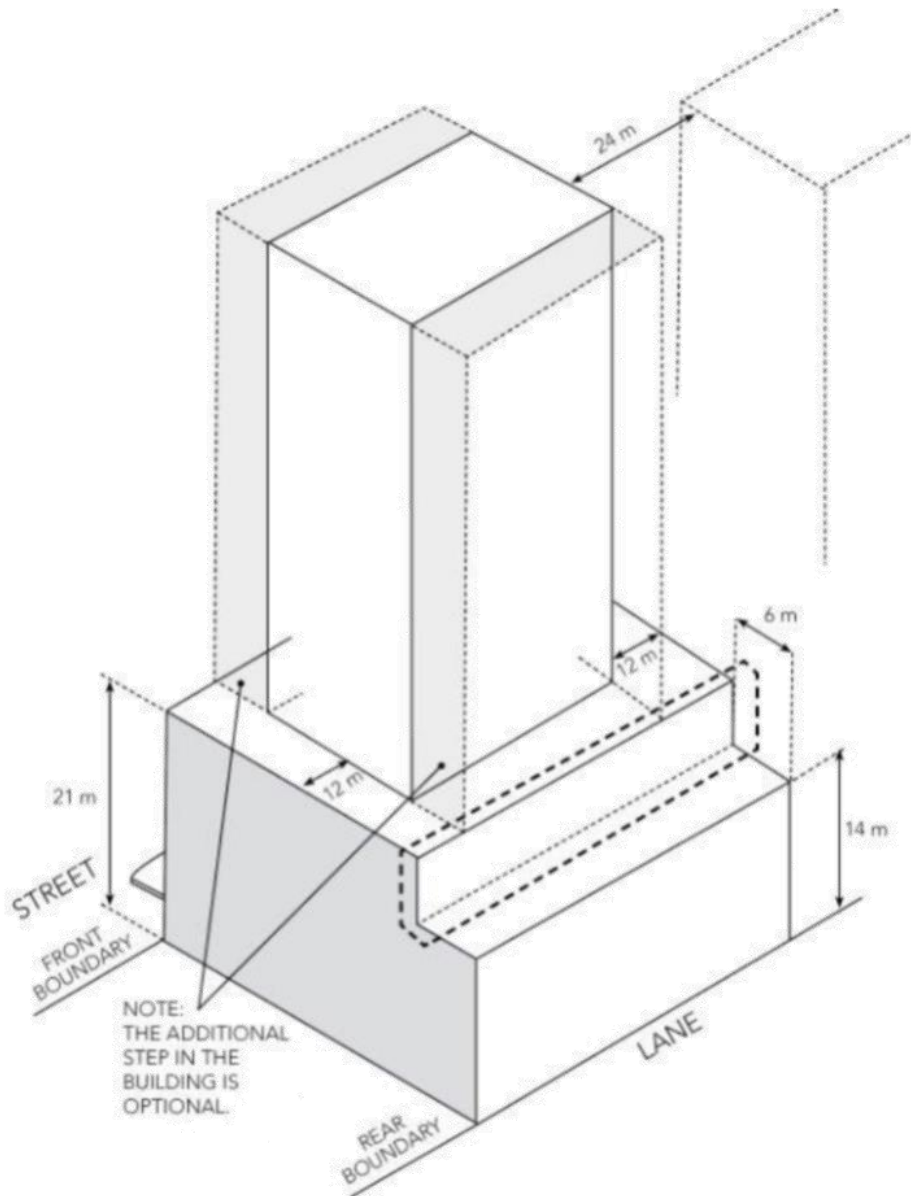


Figure 4-8: Tower on a Podium/Corner Site

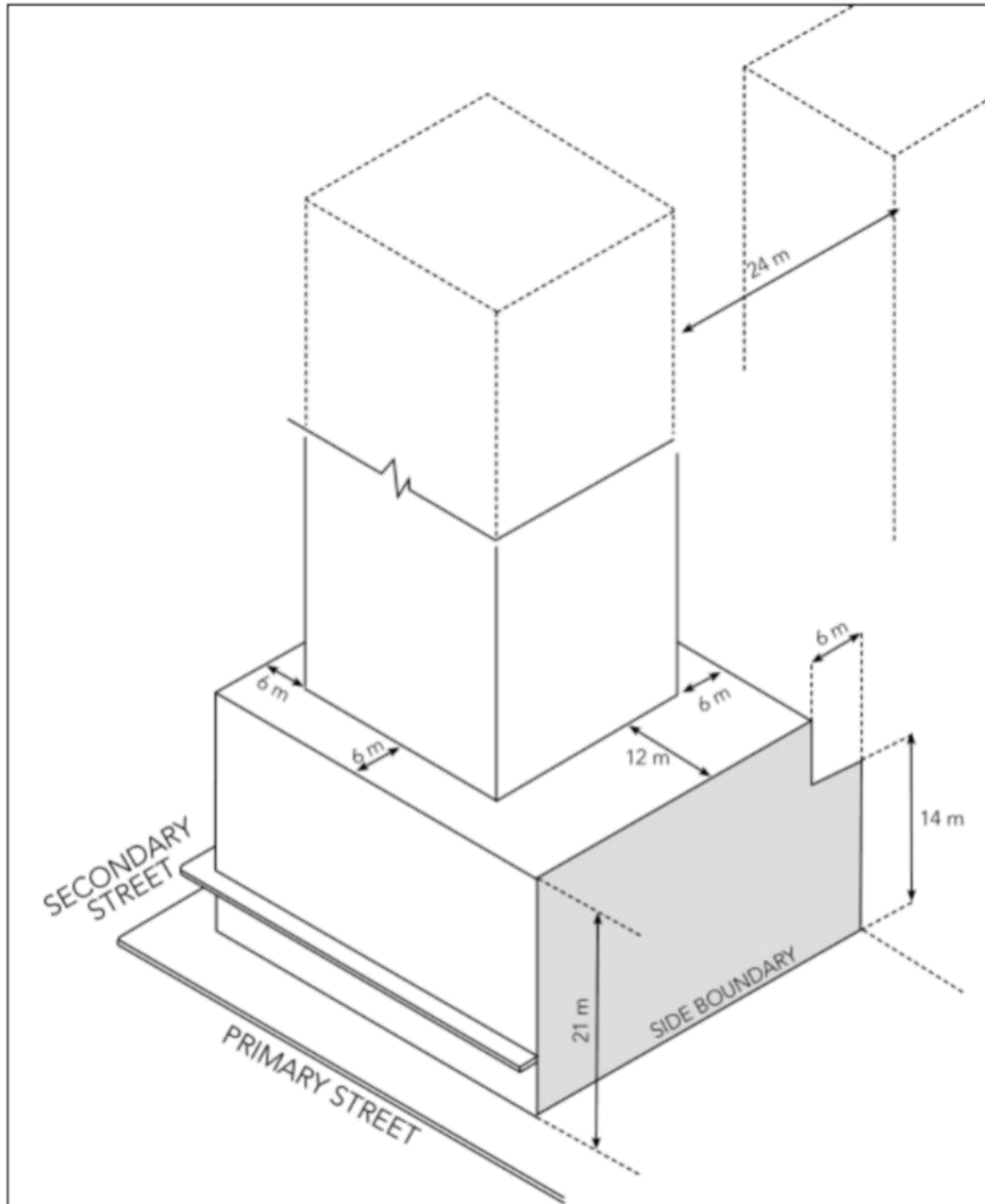
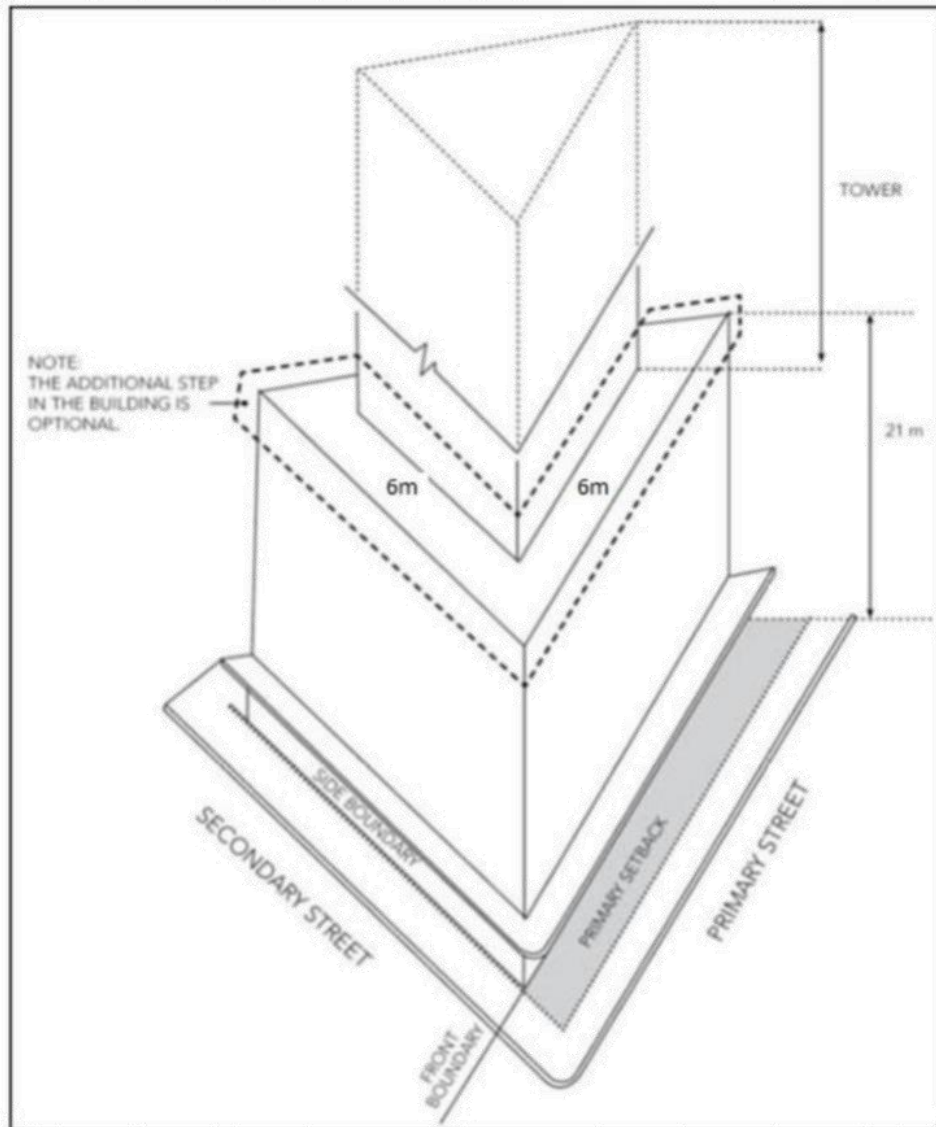


Figure 4-9: Tower on a Podium/Acute Corner Site



4.2.6 Building Floor Plates

Background

Limiting the size of tower floor plates allows for good internal amenity in terms of natural light and ventilation, while mitigating the potentially adverse impacts that tall and bulky buildings may have on the public domain including overshadowing and poor street amenity. Building depth is related to building use, meaning that commercial floor plates are typically deeper and larger than residential floor plates.

Objectives

1. Achieve living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.
2. Provide viable and useable commercial and/or residential floor space.
3. Contribute to useable and pleasant streets and public domain at ground level by controlling the size of upper level floor plates of buildings.
4. Reduce the apparent bulk and scale of buildings by limiting the size of the building.

Controls

1. Design the floor plate sizes and depth of buildings for Fine Grain and Midrise sites as indicated in the building envelopes.
2. Provide a maximum GFA of 700m² per level for residential towers with maximum length of elevation of 45m.
3. Comply with ADG standards for building depth and number of apartments.
4. Provide a maximum GFA of 1,000m² per level for commercial towers with maximum length of elevation of 45m. Where sites are greater than 2,000m² a proportionally larger GFA per floor may be considered.

4.2.7 Street Alignments and Street Setbacks

Background

Buildings define the street network and public domain. For this reason, the alignment and setbacks of buildings are critical to the quality of internal and external environments. Land in the setback areas may be utilised as outdoor dining and may have basement car parking located under it if required.

Objectives

1. Create a strong and consistent definition of the public domain.
2. Define the street as a spatial entity. Reinforce the importance of the public role of the street.
3. Provide front setbacks appropriate to building function and character.
4. Establish the desired spatial proportions of the street.
5. Provide sunlight access to streets, comfortable wind conditions, a generous footpath for pedestrians, and to assist growing conditions for street trees. Allow for street landscaping.
6. Locate active uses, such as shopfronts, close to pedestrian activity areas. Allow an outlook to, and surveillance of, the street.
7. Create a transition between public and private space.

Controls

1. Buildings are to comply with the front setbacks as set out in **Figures 4-12**.
2. Upper level frontages to a lane/serviceway must be setback 6 metres from the centre line of the lane/serviceway.
3. Construct perimeter block buildings and podiums, which comply with the building envelope requirement, to the street and side boundaries (0m setback).

4. Buildings with a boundary to the Hume Highway have a minimum setback of 8m.
5. Buildings on the southern side of streets identified in **Figure 4-10** have minimum front setbacks as follows, in order to maximise solar access:
 - a. Elizabeth Street between Bathurst Street and George Street - 6m.
 - b. Railway Street, Scott Street and Memorial Avenue - 3m.
 - c. Parts of George, Bathurst, Terminus and Bigge Streets – 2.5m.

Figure 4-10 Street Setbacks

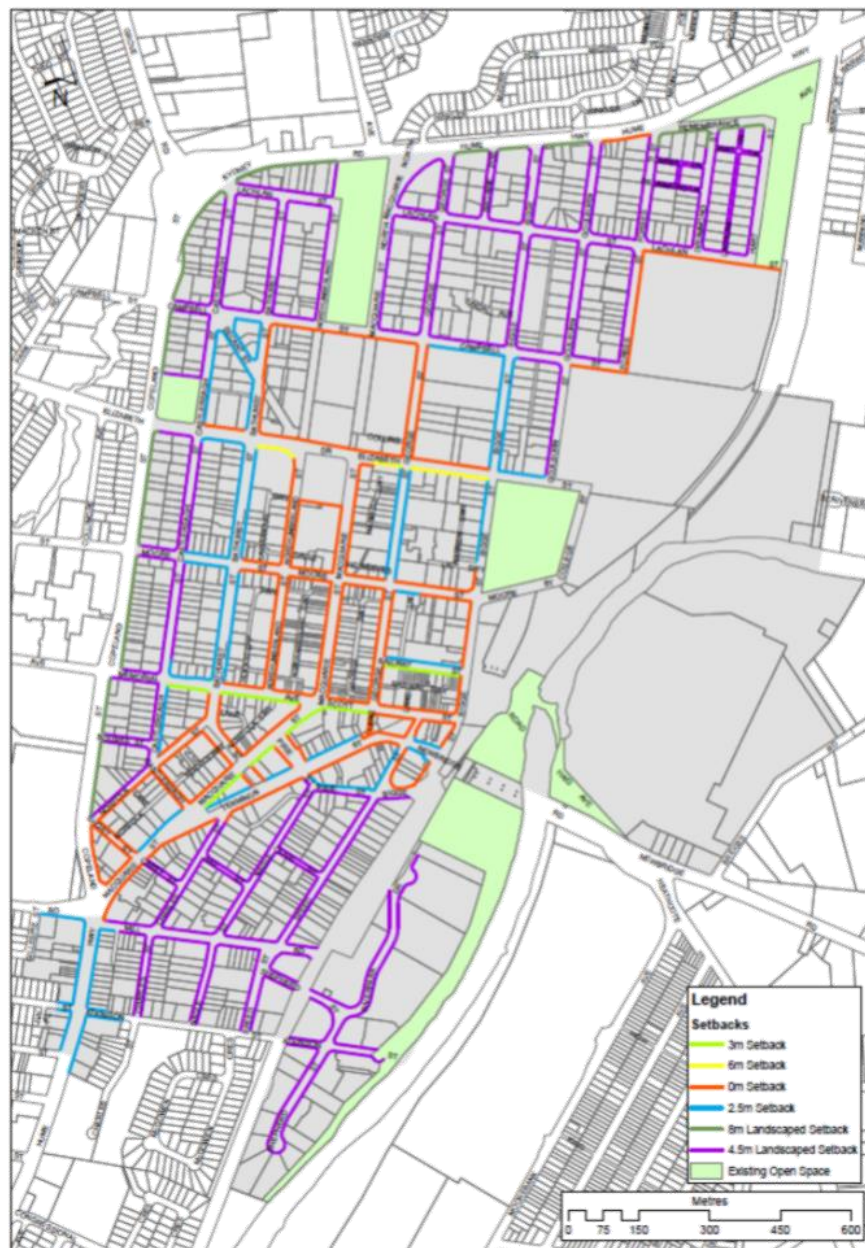
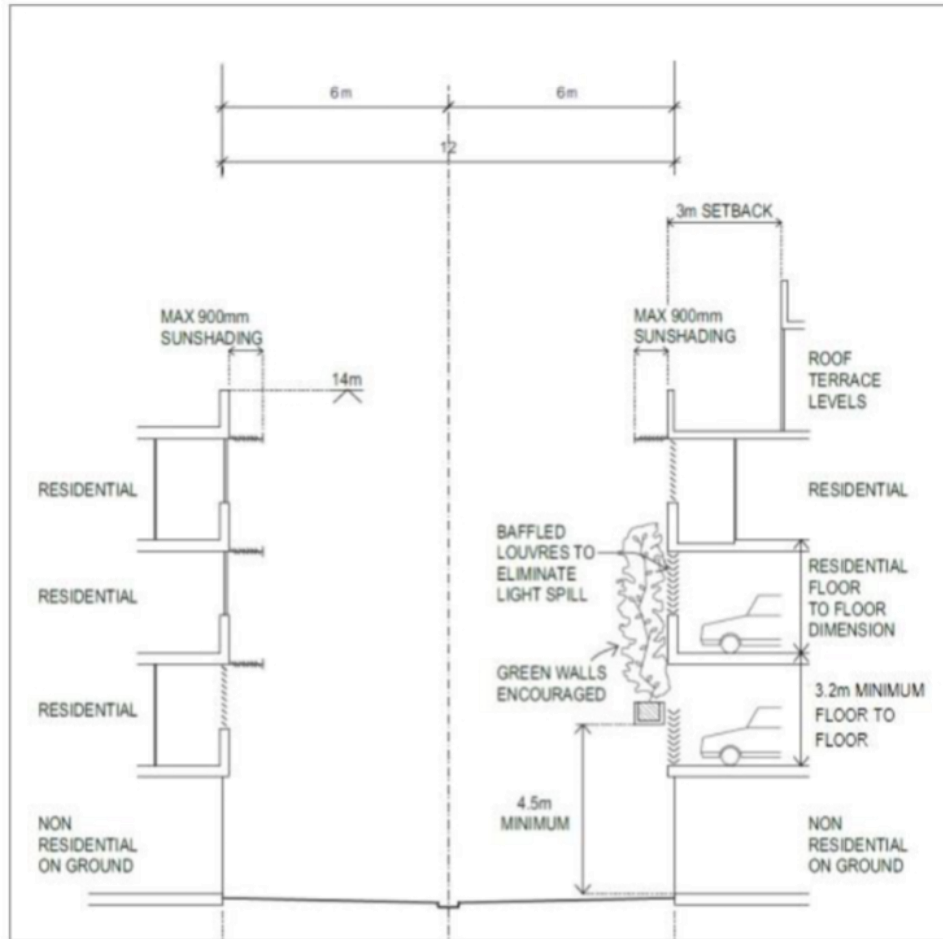


Figure 4-11 Laneway and Serviceway Setbacks



6. Pave the land in the set-back zone to match the paving in the public street so that it provides a seamless and level ground plane.
7. Ensure that no columns, blade walls or other building elements encroach the ground level of the front setback.
8. Ensure that balconies project a maximum of 1.2 metres into front building setbacks in the R4 - High Density Residential Zone.
9. Ensure that minor projections into front building lines and setbacks above ground level are designed for sun shading, entry protection or building articulation and enhance the amenity of the public domain.
10. Allow enclosures or screening of balconies only if they are moveable and aid the amenity of the apartments.

4.2.8 Side and rear boundary setbacks

Background

Side and rear setbacks, where provided, allow ventilation, solar and daylight access, assist with visual privacy, acoustic amenity, view sharing, and can reduce adverse wind effects. Building separation should relate to building height to ensure appropriate urban form, amenity and privacy for building occupants.

Objectives

Side and rear boundary setbacks must:

1. Ensure an appropriate level of amenity for building occupants in terms of daylight, outlook, view sharing, ventilation, wind mitigation, and privacy.
2. Achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

Controls

1. All residential and commercial buildings must comply with the separation distances in SEPP 65 and the ADG unless otherwise agreed with Council in an approved concept development application.
2. For existing buildings that do not comply with the setback requirements identified in control 1 above, appropriate screening must be installed should the building be refurbished or converted.
3. Buildings with a rear or side boundary to the rail corridor are to provide a minimum setback of 12m. The setback is to be appropriately landscaped.
4. Buildings on land zoned B6 – Enterprise Corridor and B1 – Neighbourhood Centre located in the Liverpool city centre, to have setbacks consistent with Table 4-1 below.
5. Construct buildings across the site facing the street and the rear boundaries rather than facing side boundaries.

Table 4-1 Side and rear boundary setbacks

Enterprise Corridor, Neighbourhood Centre and Existing Mixed Use areas	Setbacks	
	Side	Rear
Podium up to six levels :		
- If adjoining development built to boundary	0m	0m
- If adjoining stand-alone development	ADG	ADG
Stand-Alone Buildings		
- Building height up to 12m	ADG	6m
- Building height 12-25m	ADG	9m
- Building height over 25m	ADG	12m

4.2.9 Minimum Floor to Ceiling Heights

Background

The height of a ceiling contributes to amenity within an apartment and the perception of space. Well designed and appropriately defined ceilings can create spatial interest and hierarchy in apartments. Ceiling height is directly linked to achieving sufficient natural ventilation and daylight access to habitable rooms. The ground and first floor levels of mixed use apartment buildings should have increased ceiling heights to ensure their longer term adaptability for non-residential uses.

Objectives

Minimum floor to ceiling heights must:

1. Address the internal amenity of all users.
2. Assist in ensuring buildings are well-proportioned, articulated and modulated.
3. Allow for the potential for commercial uses in the first floor of any new building.

Controls

The minimum floor to ceiling heights are:

1. Ground floor: 3.6m.
2. Above ground level:
 - a) Commercial office 3.3m.
 - b) Capable of adaptation to commercial uses 3.3m.
 - c) Residential 2.7m.
 - d) Active public uses, such as retail and restaurants 3.6m.
3. Car Parks: Sufficient to cater to the needs of all vehicles that will access the car park and, if aboveground, adaptable to another use, as above.

4.2.10 Housing Choice and Mix

Background

A mix of dwelling types is essential to cater for different family groups and lifestyles, and to achieve housing affordability. Dwellings require internal flexibility as well as a variety of outdoor and recreational areas.

Objectives

Developments must:

1. Provide a mix of dwelling types, sizes and open space to cater for a range of household types and living styles.
2. Provide dwelling layout that is sufficiently flexible for residents' changing needs over time.
3. Meet the Australian Adaptable Housing Standard (AS 4299-1995) and provide a sufficient proportion of dwellings that include accessible layouts and features to accommodate the changing requirements of residents.

Controls

1. In addition to the provisions for dwelling mix in the ADG, residential apartment buildings and shop-top housing must comply with the following apartment mix and size:
 - Studio and one bedroom units must not be less than 10% of the total mix of units within each development;
 - Three or more bedroom units must not be less than 10% of the total mix of units within each development;
 - Dual-key apartments must not exceed 10% of the total number of apartments; and
 - A minimum of 10% of all dwellings (or at least one dwelling – whichever is greater) to be capable of adaptation for disabled or elderly residents.
2. Adaptable dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995).
3. Provide certification from an Accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Ensure car parking and garages allocated to adaptable dwellings comply with the requirements of the relevant Australian Standard for disabled parking spaces.

4.2.11 Deep Soil Zones and Site Cover

Background

Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including promoting healthy growth of large trees with large canopies, protecting existing mature trees, and allowing stormwater infiltration.

Limiting site cover provides separation between buildings. This space may be public (accessible and useable by the general public), communal (shared by all occupants of a development) or private (for the exclusive use of a single dwelling or tenancy).

Objectives

1. Provide an area on site that enables soft landscaping and deep soil planting, permit the retention and/or planting of trees that will grow to a large or medium size.
2. Improve amenity by allowing for good daylight access, ventilation, and assisting improved visual privacy.
3. Integrate with the open space and provide passive and active recreational opportunities.

Controls

1. The maximum permitted site coverage for development is specified in **Table 4-2**.

Table 4-2 Site coverage

Zone	Commercial & Mixed Use	Residential
Commercial Core, Fine Grain and Midrise	Up to 100%	N/A
Existing Mixed Use	75%	N/A
Enterprise Corridor and Infrastructure	75%	50%
All other zones	60%	50%

2. Include a deep soil zone as per Section 3E of the ADG in all developments with a residential component in all areas other than the Fine Grain Precinct and Midrise Precinct, or where perimeter block buildings are developed.

4.2.12 Public Open Space and Communal Open Space

Background

Public and communal open spaces are critically important for outdoor recreation opportunities for residents, connection to the natural environment, and valuable 'breathing space' between apartment buildings and within the city centre.

They also contribute to the appeal of the city, the individual development and the wellbeing of residents. High quality open space is essential in higher density urban precincts. The size, location and design of public and communal open space will vary depending on the site context and the scale of development.

Council encourages the development of the rooftop of residential flat buildings and mixed-use developments for the purposes of communal open space, including rooftop gardens, where possible. Better use of the rooftop space will increase the overall amenity and quality of new development in Liverpool city centre.

Objectives

Open space must:

1. Provide amenity in the form of:
 - a) landscape character and design;
 - b) opportunities for group and individual recreation and activities, including on the roof space of new residential flat buildings and mixed-use developments;
 - c) opportunities for social interaction;

- d) environmental and water cycle management; and
- e) opportunities to enhance microclimate.
- 2. Allow for a range of activities.
- 3. Provide an attractive outlook for residents.
- 4. Respond to and enhance site characteristics and context.
- 5. Optimise safety.

Controls

Existing Public Open Space

1. Ensure that at least 70% of Bigge Park, Apex Park, Pioneer Park and any other public open space in the city centre has a minimum of 3 hours of sunlight between 10am and 3pm on 21 June (Winter Solstice).

New Public Open Space

2. Dedicate open space to Council, where required, as part of an approved concept development application if the space meets the requirements of Council in terms of:
 - a) location;
 - b) aspect;
 - c) accessibility;
 - d) safety; and
 - e) solar access. The open space must be located and designed so that at least 50% of the open space provided has a minimum of 3 hours of sunlight between 10am and 3pm on 21 June (Winter Solstice).
3. Developments with a residential component in all zones must comply with the sections 3D Communal Public Open Space and 4F Common Circulation and Spaces, of the ADG. Consistent with the requirements of the ADG, communal open space is to be collocated with areas of deep soil, where possible.
4. The roof space of residential flat buildings (RFBs) and mixed-use development (including shop-top housing) is to be developed for the purposes of communal open space that incorporate shade structures and amenity facilities (barbecue and rooftop garden) that complement the development.

4.2.13 Landscape Design

Background

Landscape design includes the planning, design, construction and maintenance of all utility, open space and garden areas. The landscape qualities of the city centre are an important influence on its image, comfort, public and private amenity. Landscaping within the public domain will be implemented within the framework established by the Liverpool CBD Streetscape and Paving Manual 2018. In the private domain, it is important that a strong and consistent approach to landscaping is achieved in order to contribute to both a high level of amenity and a cohesive image for the city centre.

Objectives

1. Enhance quality of life for residents and occupants within a development in terms of privacy, outlook, views and recreational opportunities.
2. Ensure potable water for irrigation is minimised. Incorporate passive irrigation where possible.
3. Ensure landscaping is integrated into the design of development.
4. Improve stormwater quality and control run-off.
5. Improve the microclimate and solar performance within the development.
6. Improve urban air quality and contribute to biodiversity.

Controls

1. Submit a landscape plan prepared by a registered landscape architect that demonstrates consistency with the above objectives and section 4V, water management and conservation, of the ADG.

4.2.14 Planting on Structures**Background**

The following controls apply in the Commercial, Mixed Use and Enterprise Corridor zones (as identified in **Figure 4-2**) for planting on roof tops or over car park structures, particularly for communal open space required as a component of mixed use residential development, and in non-residential developments where the landscaping proposed is not on natural ground.

Objectives

1. Contribute to the quality and amenity of open space on roof tops and internal courtyards.
2. Encourage the establishment and healthy growth of trees in urban areas.
3. Minimise the use of potable water for irrigating planting on structures.

Controls

1. Comply with the Section 4P, planting on structures in the ADG in all developments with a residential component and/or communal open space.

4.3. PEDESTRIAN AMENITY

Pedestrian amenity incorporates all those elements of individual developments that directly affect the quality and character of the public domain. These provisions are intended to achieve a high standard of public domain design and pedestrian comfort in city centre public spaces. The pedestrian environment is to be characterised by excellence of design, high quality materials and a standard of finish appropriate to a regional city centre. The city's lanes, arcades and through-site links are to form an integrated pedestrian network providing a choice of routes at ground level for pedestrians.

The controls in this section aim to increase the vitality, safety, security and amenity of the public domain by:

1. Developing future through-site links at ground level;
2. Ensuring active street frontages;
3. Ensuring a positive relationship between the building and the public domain;
4. Ensuring provision of awnings along the retail frontages; and
5. Mitigating adverse impacts on the street arising from driveway crossings.

4.3.1 Pedestrian Permeability**Background**

The existing serviceways and through-site links are an integral component of the pedestrian movement system, providing direct access between the street frontage, serviceways and rear parking areas. The north-south oriented street grid in the city centre provides excellent connectivity in this direction, but the city's street pattern would benefit from additional through-site links in an east-west direction. This will assist in reducing the overall street block size.

In some blocks, additional north-south connections will also improve accessibility and choice. Additionally, laneways provide for site servicing in a manner that protects the quality of main street

frontages in the city centre.

Objectives

1. Improve access and choice in the city centre by providing through-site links as redevelopment occurs.
2. Reduce the size of large street blocks to provide greater movement choice.
3. Create clear and direct throughways for pedestrians.
4. Increase the range of economic opportunities.
5. Retain and enhance existing through site links as redevelopment occurs.
6. Enable active street frontages on through site links.
7. Discourage vehicular access from the primary street frontages. Vehicular access shall be provided from secondary streets or laneways.

General Controls

1. Design through-site links to have direct sight lines.
2. Locate through-site links as shown in **Figure 4-12**.
3. Locate through-site links within "through site link encouragement areas" (as identified in **Figure 4-12**) opposite other through site links.
4. Extend existing dead end lanes (as identified in in **Figure 4-12**) through to the next street as redevelopment occurs.
5. Connect new through site links with existing and proposed through site links, serviceways, shared zones, arcades and pedestrian ways.
6. The siting of new through site links may be varied where new links cannot be directly aligned with existing links.
7. Retain existing, publicly and privately owned, through-site links.
8. Locate active uses on through site links where possible.
9. Nominate sites for through-site links, shared zones etc. that may be acquired by Council or may be dedicated to Council at no cost as part of a concept development application.
10. Vehicular access shall be provided from secondary streets or laneways only. Vehicular access will not be allowed from the primary street.

Figure 4-12 Through Site Links



Specific Controls for Different Link Typologies

1. Shareway | Pedestrians and Cars (Public) Through Site Links must:
 - a) Be a minimum width of 6m and clear of all obstructions.
 - b) Be open to the sky and to be publicly accessible at all times.
 - c) Display signage at street entries indicating public accessibility and the street to which the through site link connects.
2. Pedestrian Paths | (Public) Through Site Links must:
 - a) Be a minimum width of 3m clear of all obstructions.
 - b) Be open to the sky and to be publicly accessible at all times.
 - c) Have signage at street entries indicating public accessibility and the street to which the through site link connects.
3. Pedestrian Arcades and Through Site Links must:
 - a) Be a minimum width of 5m and clear of all obstructions (including columns, stairs, and escalators).
 - b) Provide public access at all business trading times.
 - c) Be at least 2 storeys high.
 - d) Have access to natural light for at least 50% of their length, where appropriate.
 - e) Incorporate clear glazed entry doors comprising at least 50% of the entrance where air conditioned, and to be accessible at least 18 hours per day, 7 days per week.
 - f) Display signage at street entries indicating public accessibility and the street to which the through site link connects.

4.3.2 Pedestrian Overpasses and Underpasses

Background

Streets provide the best amenity and safety when activated by pedestrians. Pedestrians should be encouraged to use the street to enhance and contribute to street life, and to maximise safety and security of the public domain.

Pedestrian overpasses linking commercial or retail buildings over the public street are discouraged as they can have a negative impact on the streetscape quality and on views and vistas along streets. New pedestrian overpasses or underpasses will only be considered where they directly connect to major transport nodes (such as Liverpool railway station), and/or can substantially improve pedestrian safety and access over major arterial roads (such the Hume Highway).

Objectives

1. Promote pedestrian activation of streets and public places by limiting pedestrian overpasses and underpasses.
2. Encourage pedestrian circulation at street level.
3. Protect views and vistas along streets.

Controls

1. Design underpasses or overpasses in accordance with *Crime Prevention Through Environmental Design* principles and compliant with the applicable Australian Standard for Disabled Access.
2. Design overpasses to be fully glazed or open, and not greater than 3m wide or more than one level high.
3. Consider underpasses for direct connection under adjacent streets to the railway station where they:

- a) would substantially improve pedestrian safety and accessibility;
- b) incorporate active uses, particularly at entry and exit points; and
- c) have a minimum width of 4.5m clear of all fixed obstructions and a minimum ceiling height of 6m.

4.3.3 Active Street Frontages

Background

Active street frontages promote an interesting and safe pedestrian environment.

Active frontage uses are defined as one or a combination of the following at street level:

- entrance to retail;
- glazed entries to commercial and residential lobbies;
- café or restaurant, if accompanied by an entry from the street;
- active office uses, such as reception, if visible from the street; and/or
- public building if accompanied by an entry.

Objectives

1. Promote pedestrian activity and safety in the public domain.
2. Maximise active street frontages in Liverpool city centre.
3. Development in Liverpool city Centre is consistent with the Liverpool City Activation Strategy 2019-24.

Controls

1. Locate active street frontages on the ground level of all commercial or mixed use buildings, including adjacent through-site links.
2. Locate active street frontages in the Mixed Use, Commercial Core, Enterprise Corridor and Neighbourhood zones (as identified in **Figure 4-2**), on ground level. This does not preclude servicing activities particularly in the serviceways.
3. Locate active street frontages at first floor level in addition to ground for sites addressing major roads as depicted in **Figure 4-16**.
4. Locate street fronts at the same level as the footpath and with direct access from the street.
5. Use only open grill or transparent security (at least 50% visually transparent) shutters to retail frontages.

4.3.4 Street Address

Background

Street address is defined as that part of a building that has a frontage to the street, contains entries, lobbies, balconies and habitable rooms overlooking the street. Buildings can contribute positively to the street by providing a clear address to, direct access from and outlook over, the street.

Objectives

1. The street address for buildings must provide:
 - a) An attractive interface between the public and private domains.
 - b) Legible entries to the building from the street.
 - c) Opportunities for surveillance of the street and public domain.

Controls

1. Provide a clear street address and direct pedestrian access off the primary street frontage in mixed use and residential developments.
2. Provide multiple entrances to large developments on all street frontages.

3. Provide direct 'front door' and/or garden access to the street in ground floor residential units.

4.3.5 Street and Building Interface

Background

Buildings are to provide privacy if dwellings are located on the ground floor. Where fences are used, they need to be designed to enable a positive relationship between the building and the street. Front fences include all fences to the primary and secondary street frontages, and side boundary fences forward of the building alignment.

Objectives

1. Clearly define the interface between the public and private domain.
2. Provide privacy for dwellings on the ground floor of buildings.
3. Ensure front fences allow for passive surveillance of the street.
4. Encourage the preservation and/or construction of fences, walls and landscaped areas that contribute to the character of the locality.

Controls

1. Design the area between the building and the public footpath so that it:
 - a) provides visibility to and from the street (if non-residential use);
 - b) provides privacy if residential uses are on the ground floor;
 - c) introduces paving and/or landscaping between the street and the building; and/or
 - d) screens any above ground car parking.
2. Use front fences that:
 - a) do not present a solid edge to the public domain greater than 1.2 m above the footpath / public domain level; and
 - b) are not constructed of sheet metal or opaque glass.

4.3.6 Lane / Serviceways and Building Interface

Background

Council envisages lane ways and serviceways in Liverpool city centre developing to offer some of the higher order functions of streets. While preserving functions necessary to the servicing of businesses, lane ways and serviceways may develop to include independent/niche retail businesses and/or residential accommodation in addition to providing back of house services. Active street frontages on service ways can assist in promoting interesting and safe environments in which vehicles and pedestrians have access and a range of uses may flourish.

Objectives

1. Clearly define the interface between the public and private domain.
2. Provide for passive surveillance of the street from the building to the serviceway.
3. Minimise the impact of above ground car parking.
4. Provide suitable non-residential uses with direct pedestrian access to the lane/serviceway.
5. Ensure the effective operation of loading facilities.

Controls

1. Set back all levels above ground of buildings 6m from the centre line of the lane/serviceway so that residential uses can be accommodated on opposite sides of the serviceway, as described in **Figure 4-11**.
2. Provide active uses and/or entries at ground level where possible.
3. Screen or sleeve above ground car parking with green walls or other screening devices.
4. Electricity substations (where required) shall be situated within the building or its basement.
5. Vehicular entry points must be of high quality design. The impact of vehicular entry points

on pedestrians must be minimised.

6. Garbage collection points, fire services and other service requirements are to be integrated into the design of the building.

4.3.7 Awnings

Background

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from sun and rain. Awnings provide a public presence and interface within the public domain to contribute to the identity of a development.

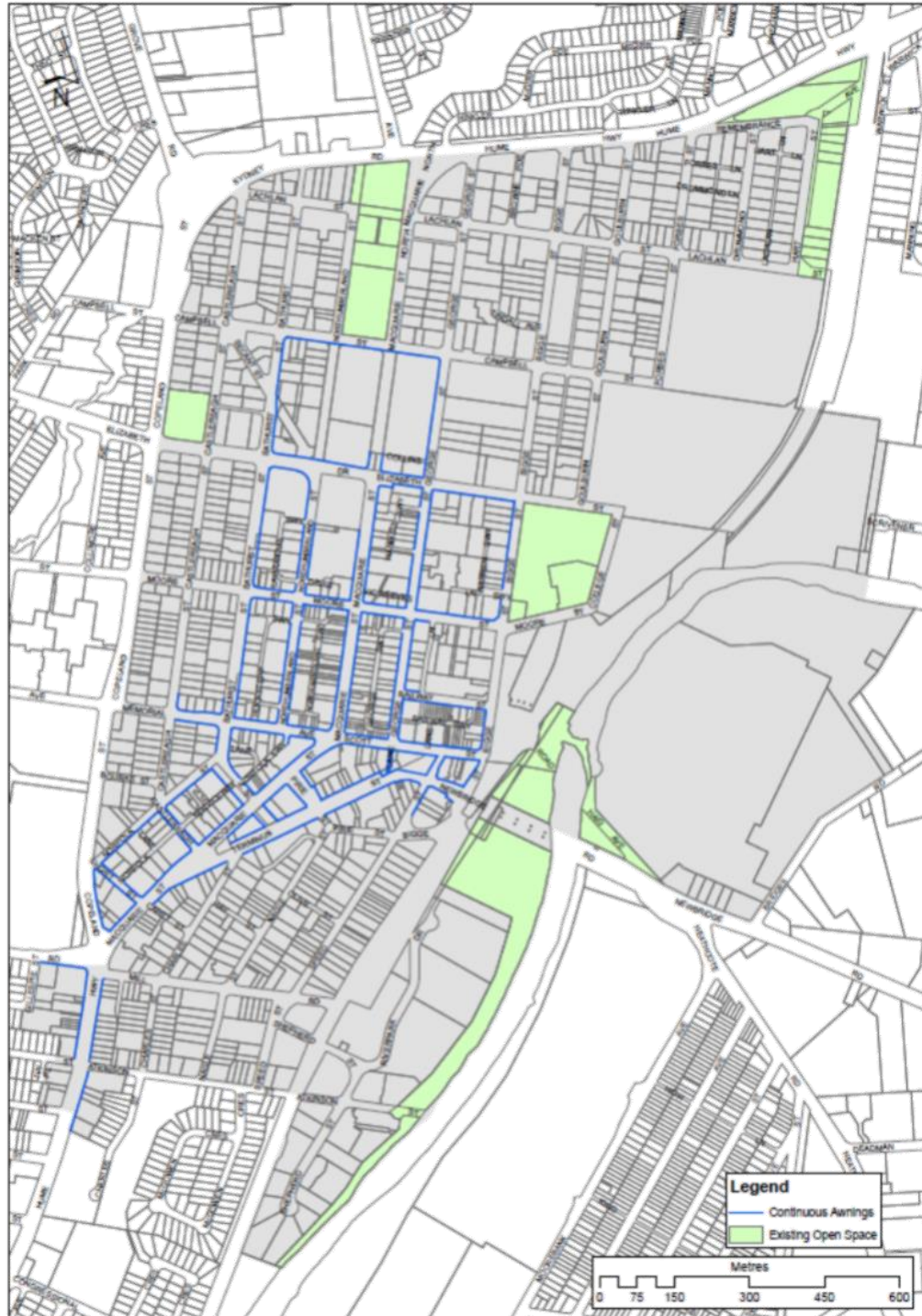
Objectives

Awnings on buildings must:

1. Provide shelter for public streets where most pedestrian activity occurs.
2. Address the streetscape by providing a consistent street frontage.

Controls

1. Provide street frontage awnings for all new developments on streets identified in **Figure 4-13**.
2. Awnings must be:
 - a) horizontal in form;
 - b) minimum 2.4m deep (dependent on footpath width);
 - c) minimum soffit height of 3.2m and maximum of 4m;
 - d) stepped to accommodate sloping streets;
 - e) integral with the building design;
 - f) slim vertical faciae or eaves (generally not to exceed 300mm height); and
 - g) setback 1.2m from kerb to allow for clearance of street furniture, trees, and other public amenity elements.
3. Match awning design to building facades, so that they maintain continuity and are complementary to those of adjoining buildings.
4. Include appropriate sun shading device for the outer edge of awnings along east-west streets if required. These blinds must not carry advertising or signage.
5. Provide lighting recessed into the soffit of the awning to facilitate night use and to improve public safety.
6. Maintain a minimum clearance of 2.8m from the level of the pavement to the underside of awning signage.
7. Provide all residential buildings in areas not identified for continuous awnings in **Figure 4-13** with awnings or other weather protection at their main entrance area.

Figure 4-13 Awnings

4.3.8 Building Design and Public Domain Interface

Background

Liverpool's public domain is defined by the buildings, streets and public places. The quality of the public domain is dependent on a consistent approach to the design of new development including the articulation and finish of building exteriors.

Dark coloured finishes (e.g. black, charcoal) can tend to increase heat absorption and add to the urban heat island effect, whereby the urban environment is hotter than surrounding land. Council encourages the use of lighter coloured finishes to help reduce the urban heat island effect in Liverpool city centre.

Objectives

The design of new/modified buildings in Liverpool city centre must:

1. Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.
2. Provide richness of detail and architectural interest especially at visually prominent parts of buildings such as lower levels and roof tops.
3. Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.
4. Seek to reduce the urban heat island effect by selecting lighter coloured external finishes.

Controls

1. Design new buildings that adjoin existing buildings, particularly heritage buildings and those of architectural merit so that they consider:
 - a) the street 'wall' alignment and building envelope;
 - b) the 'depth' within the façade;
 - c) facade proportions; and
 - d) the response to the corners at street intersections.
2. Provide balconies and terraces appropriately orientated where buildings face public spaces.
3. Articulate façades to address the street, proportion the building, provide 'depth' in the street wall when viewed obliquely along the street and add visual interest.
4. Use high quality robust finishes and avoid finishes with high maintenance costs, and those susceptible to degradation due to a corrosive environment. Large expanses of rented concrete finish is discouraged.
5. Select lighter-coloured materials for external finishes including roofs and avoid the use of darker-coloured materials (e.g. black, charcoal) to reduce the urban heat island effect.
6. Maximise glazing in the facades for retail uses.
7. For residential components of buildings, do not use highly reflective finishes and curtain wall glazing above ground floor level.
8. Construct only minor projections up to 600mm from building walls into the public space. These must not add to the GFA and must provide a benefit, such as:
 - a) expressed cornice lines that assist in enhancing the definition of the street; or
 - b) projections such as entry canopies that add visual interest and amenity.
9. Do not locate communication towers such as mobile phone towers, but excluding satellite dishes, on residential buildings or mixed use buildings with a residential component.
10. Incorporate roof top structures, such as air conditioning and lift motor rooms, into the architectural design of the building.
11. Screen air conditioning units on balconies.
12. No clothes drying facilities to be allowed on balconies.

4.3.9 Street Intersections and Corner Buildings

Background

As buildings located on corner sites address two street frontages instead of one, they are more visibly prominent than mid-block buildings. Corner buildings therefore play a particularly important role in the city centre. Corners can strengthen the form of city blocks, streets and intersections, identify important junctions, assist in revealing topographic features and define pedestrian routes.

Objectives

Corner buildings must:

1. Contribute to the legibility of the city.
2. Ensure they address all street frontages.
3. Support the role of corner sites in creating a clear skyline and minimising apparent density.
4. Respond to any heritage buildings on opposing corner sites.

Controls

1. Address all street frontages in the design of corner buildings.
2. Design the corner buildings to respond to the character of the intersection by recognising the different hierarchies of the street typologies.

Note: Intersections of different street types all require varied design responses.

4.3.10 Public Artworks

Background

Public Art enhances the visual quality and cultural influence of both the public domain. It contributes to people feeling positive about their surroundings. Public Art may be ephemeral, temporary or permanent in nature. It may be located in or part of a public space or facility and may be commissioned by either the public or private sector.

Public art also includes the conceptual contribution of an artist to the design of public spaces and facilities. Public Art is crucial to the development of public places which are innovative, vibrant and meaningful and allow curiosity, playfulness and or a sense of connection to form. Public art may take any of the following forms:

- a) Functional Connection; seating, lighting, bollards
- b) Decorative: Incorporated into structures eg paving, awnings
- c) Iconic: Stand-alone sculptural works
- d) Integrated: fully incorporated within the design eg flooring, windows
- e) Interpretative: describe, inform or educate, on issues, events, situations eg signage, plaques, text based work

Objectives

Public Art in Liverpool city centre must:

1. Contribute to the city's physical attractiveness and the quality of life that it offers visitors and residents.
2. Interpret and express Liverpool's historical and cultural themes, particularly as identified in *Our Home, Liverpool 2027. Community Strategic Plan*
3. Improve the quality of public artworks in Liverpool.
4. Encourage the development of public art as consistent with Council's Public Art Policy.

Controls

1. Design public art to respond to the particular site of the development as well as the city as

- a whole.
- 2. Provide well designed and visually interesting public art created by artists or organisations that are competent in the selected field and committed to best practice.
- 3. Construct Public Art of materials that are durable, resistant to vandalism, safe for the public and constructed to ensure minimal maintenance.
- 4. Develop clear and concise agreements with artists/organisations in relation to expectations and deaccession (the process used to permanently remove an object, artwork or assemblage).

4.4. TRAFFIC AND ACCESS

Background

This section contains objectives specifically related to pedestrian access, vehicular access, on-site parking and site facilities in the city centre. An upgrade of the intersection of the Hume Highway and Hoxton Park Road is also under consideration.

4.4.1 Vehicular Access and Manoeuvring Areas

Background

The location, type and design of vehicular access points to a development can have significant impacts on the streetscape, the site layout and the building façade design.

Objectives

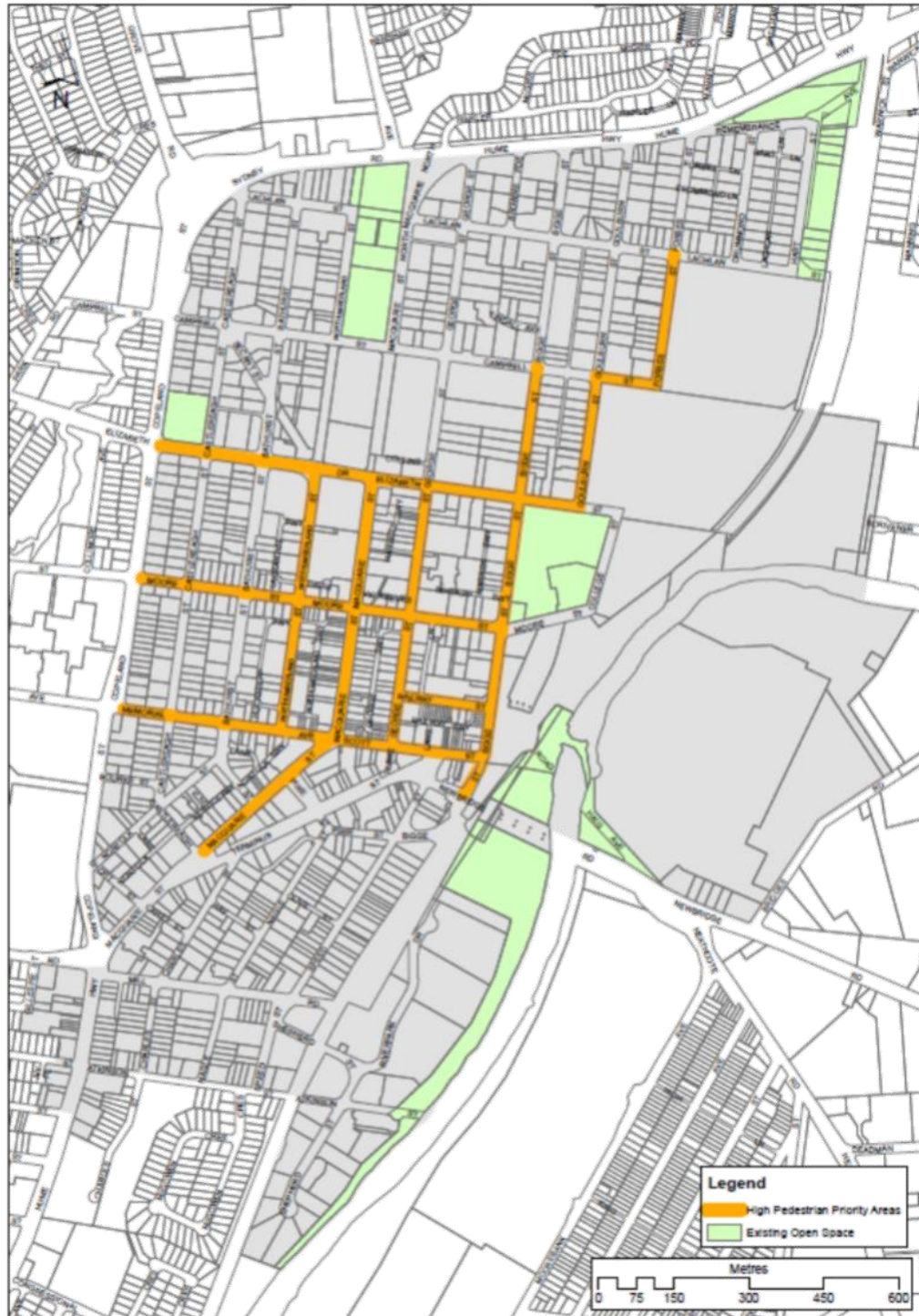
The design and location of vehicular access to developments must:

- 1. Avoid or minimise conflicts between pedestrians and vehicles on footpaths, particularly along pedestrian priority areas identified in **Figure 4-14**.
- 2. Not intrude visually into the streetscape continuity.

Controls

- 1. Vehicular access shall be restricted to the secondary street (other than along a High Pedestrian Priority Area) where possible.
- 2. Design of vehicle entry points must be of high quality and relate to the architecture of the building, including being constructed of high quality materials and finishes.
- 3. All weather access:
 - a) Locate and design porte cochere (for hotels only) to address urban design, streetscape, heritage and pedestrian amenity considerations.
 - b) Design porte cochere to be internal to the building, where practical, with one combined vehicle entry and exit point, or one entry and one exit point on two different frontages of the development.
 - c) In exceptional circumstances for buildings with one street frontage only, an indented porte cochere with separate entry and exit points across the footpath may be permitted, as long as it is constructed entirely at the footpath level and provides an active frontage at its perimeter.

Figure 4-14 High Pedestrian Priority Areas



4.4.2 On Site Parking

Background

On-site parking includes underground (basement), surface (at grade) and above ground parking, including parking stations. Parking requirements for buildings on land zoned B3 — Commercial Core B4 — Mixed Use within Liverpool city centre are detailed in clause 7.3 of LLEP 2008. For other development (including buildings on land zoned R4 — High Density Residential, B1 — Neighbourhood Centre or B6 — Enterprise Corridor) are detailed below. Bicycle parking requirements are detailed in section 21.3 of Part 1 LDCP 2008, On-Site Car Parking Provision and Service Facilities by Land Use.

Objectives

On site car parking must:

1. Provide a sufficient supply of on-site parking on the outskirts of the city centre to cater for a mix of development types.
2. Encourage economic growth within the city centre.
3. Enable the conversion of above ground parking to other uses in the future.
4. Encourage a modal shift in transport and recognise the complementary use and benefit of public transportation and non-motorised modes of transport such as bicycles and walking.

Controls

1. All required car parking is to be provided on site in an underground (basement) carpark except to the extent provided below:
 - a) On Fine Grain and Midrise sites, a maximum of one level of surface (at grade) parking may be provided where it is fully integrated into the building design; and
 - b) On sites requiring the lodgement of a concept DA, a maximum of one level of surface (at grade) and one additional level of above ground parking may be provided where it is fully integrated into the building design.
2. Provide car parking for buildings developed on land in the R4 - High Density Residential zone as follows:
 - a) 1 space per two studio apartments.
 - b) 1 space per one bedroom or two bedroom apartments.
 - c) 1.5 spaces per three or more bedroom apartments.
3. Provide car parking for buildings developed on land in other zones (B1 — Neighbourhood Centre and B6 — Enterprise Corridor) as follows:
 - a) 1 space per 100 m² of floor area
4. Service and visitor parking is to be provided for all development within the city centre. For sites zoned B3 — Commercial Core or B4 — Mixed Use, service and visitor parking is to be provided as part of the parking required according to clause 7.3 of LLEP 2008, Car parking in Liverpool city centre. For all other sites, service and visitor parking requirements are additional to that specified in controls 2 and 3 above.

Service and visitor parking is to be provided in accordance with the following formula:

Residential (including residential components of mixed-use or other developments)

- 1 space per 10 apartments or part thereof, for visitors; and
- 1 space per 40 apartments for service vehicles (including removalist vans and car washing bays) up to a maximum of 4 spaces per building

All other development

5. Sufficient service and delivery vehicle parking adequate to provide for the needs of the development.

Provision is to be made for motorcycle parking at the rate of 1 motorcycle space per 20 car spaces.

6. No less than 2% of the total parking demand generated by development shall be accessible parking spaces, designed and appropriately signposted for use by persons with a disability.

4.5. ENVIRONMENTAL MANAGEMENT

4.5.1 Wind Mitigation

Background

Windy conditions can cause discomfort and be dangerous to pedestrians. Downdrafts from buildings can inhibit the growth of street trees. Conversely, moderate breezes that penetrate streets can enhance pedestrian amenity and disperse vehicle emissions and air conditioning plant exhausts.

Objectives

Wind mitigation measures must:

1. Ensure that new developments satisfy nominated wind standards and maintain comfortable conditions for pedestrians.
2. Ensure that the moderate breezes are able to penetrate the streets of Liverpool city centre.

Controls

1. Design all new buildings to meet the following maximum wind criteria :
 - a) 10m/second in retail streets;
 - b) 13m/second along major pedestrian streets, parks and public places; and
 - c) 16m/second in all other streets.
2. Submit a Wind Effects Report with the DA for all buildings greater than 35m in height.
3. Submit results of a Wind Tunnel Testing report for buildings over 48m in height.

4.5.2 Noise

Background

Noise sources from major road and railway corridors and mixed-use and commercial development have been identified within and adjacent to the city centre. It is important for the amenity and comfort of future occupants of buildings in proximity to these areas that appropriate measures are put in place.

Objectives

1. Noise mitigation measures must achieve appropriate amenity in noise affected locations.

Controls

1. Design development on sites adjacent to road and rail noise sources identified in **Figure 4-15**, in a manner that shields any residential development from the noise source through the location and orientation of built form on the site, supported by an appropriate acoustic report as required by the State Environmental Planning Policy (Infrastructure) 2007.
2. Provide an 8m setback from the primary street frontage to any residential component of development located along Terminus Street and the Hume Highway.

3. All residential apartments and / or serviced apartments within a mixed use development should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as appropriate insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).

Figure 4-15 Noise



4.6. CONTROLS FOR SPECIFIC AREAS

Background

The following controls are in addition to the general controls elsewhere in this DCP. The purpose of this section is to provide additional, site specific controls for areas of sensitivity within the city centre. These included heritage areas and sites requiring the lodgement of a site-specific DCP.

4.6.1 Heritage Items and Conservation Areas

Background

Heritage items and heritage conservation areas identified on the heritage map and in Schedule 5 of the LLEP 2008. Works affecting listed heritage items or areas, or development on listed heritage sites, are subject to the provisions of the LLEP 2008. As part of the assessment process, the consent authority must have regard to:

- Heritage provisions outlined in Clause 5.10 of the LLEP 2008;
- Heritage objectives, controls and conservation criteria as listed below;
- The relevant Statement of Significance for each item;
- Any conservation management plan, heritage impact statement or study required by the consent authority in response to proposed development of these areas;
- For development that may impact a heritage item, information addressing relevant issues must be included in a Statement of Heritage Impact submitted with the DA; and
- Development within the curtilage of a listed item, or a heritage conservation area, or which will impact upon the setting of a heritage item or heritage conservation area is also subject to the following provisions. Where there is a discrepancy with general controls elsewhere in this DCP, the following objectives and controls are to apply.

Objectives

1. Facilitate the conservation and protection of heritage items and heritage conservation areas and their settings.
2. Reinforce the special attributes and qualities of the heritage significance by ensuring that development has regard to the fabric and prevailing character of the item or conservation area, including scale, proportions, materials and finishes.
3. Design infill development to complement the heritage values and address the desired future character.
4. Conserve, maintain and enhance existing views and vistas to buildings and places of heritage significance.
5. Ensure new buildings and landscaping in heritage precincts recognise community values and provide a sense of continuity. Refer to the joint NSW Heritage Office and RAlA publication "Designing in Context: Guidelines for Infill Development in the Historic Environment" (2005) for further guidance.

Controls

1. Submit a Conservation Management Plan prior to the submission of any development application for the following sites:
 - a) St Luke's Church;
 - b) Liverpool Railway Station; and
 - c) Liverpool College of TAFE (Francis Greenway Building).
2. Ensure that all development in the Bigge Park Conservation Area addresses any potential impact on the heritage significance of the area as a whole.
3. Retain and enhance the significance of heritage items and their setting in any new development within Liverpool city centre.

4. Undertake an assessment for sites in the vicinity of heritage items or heritage conservation areas, of the impact of the proposal on the setting of nearby heritage items or heritage conservation areas.
5. Establish the relevant criteria for each proposal depending on the nature of development, the proximity of the development to surrounding heritage items and conservation areas in addition to any other factors considered in the design of the subject building.
6. Infill building must not precisely imitate its neighbour but use recognisable tools such as spatial organisation, massing, scale, alignment, detailing, materials, roof forms and coursing lines to complement adjacent heritage items.
7. New buildings must not obstruct important views and vistas of a heritage item.

4.6.2 Site specific DCPs

Background

As noted in Section 4.2.5 above, certain sites in Liverpool city centre (having a minimum lot size of 1500 m² with two or more Street frontages and situated in "Area 8", "Area 9" or "Area 10") may be developed pursuant to Clause 7.5A of LLEP 2008. While Council's preferred option is that development of these sites proceeds pursuant to a concept developed application, the option is to lodge a site specific DCP which meets all the requirements of clause 7.5A(4) of LLEP 2008. Any such site-specific DCPs are to be considered as amendments to Part 4 LDCP 2008 and included in this section.

Liverpool Development Control Plan 2008
Part 4
Development in
Liverpool City-Centrecity centre

DRAFT

Part 4 must be read in conjunction with Part 1

**LIVERPOOL
CITY
COUNCIL**



Liverpool Development Control Plan 2008

Part 4 Liverpool ~~City Centre~~city centre 10-04-17

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4.1. PRELIMINARY

Applies to

This Part applies to the area shown in Figure 4-1.
Part 1 also applies to the area shown in Figure 4-1.

Figure 4-1: Land to which this Part applies





Background

The Liverpool [City-Centre city centre](#) was identified by the Department of Planning as a Regional City through the Sydney Metropolitan Strategy – A City of Cities in 2005. This status was confirmed in A Plan for Growing Sydney released by the Department of Planning and Environment in December 2014.

[In March 2018 the Sydney Regional Plan, A metropolis of three cities was published by the Greater Sydney Commission \(GSC\), establishing a renewed planning framework for the Sydney region as a whole towards 2056. The Western City District Plan – connecting communities \(WCDP\), was finalised by the GSC in March 2018 also. The WCDP provides detailed planning direction for the future development of Liverpool city centre, as part of the Liverpool LGA.](#)

[Liverpool city centre LEP revision](#)

In 2015 Council launched a review of the planning controls applying to Liverpool [City-Centre city centre](#). The [City-Centre city centre](#) LEP review sought to revitalise Liverpool [City-Centre city centre](#), to create a mixed-use, vibrant 18-hour city centre, a walkable city that offers living, recreation and work opportunities and a city focused along the river. To this end it was decided to significantly expand the area of B4 – Mixed Use zoned land and reduce the area of land zoned B3 – Commercial Core. [This amendment to Liverpool Local Environmental Plan \(LLEP\) 2008 – Amendment 52, was gazetted and came into force on 5 September 2018.](#)

In addition to rezoning land to reduce the size of the Commercial Core and expand the area of Mixed Use zoned land, the [City-Centre city centre](#) LEP review sought to define legible character precincts based on ownership, subdivision, street block patterns, and the role of the public domain. It also sought to create an urban form that responds to the character of the precinct, has different building typologies, and offers different economic opportunities.

The [City-Centre city centre](#) LEP review seeks to enable individual owners to develop sites without the requirement for amalgamation, improve connectivity to and within the [City-Centre city centre](#), de-couple car parking from development where appropriate and develop form-based codes within the constraints of the standard LEP instrument. It is envisaged that increasing the number of residents in the [City-Centre city centre](#) will activate the [City-Centre city centre](#), and will lead to increased demand for retail and services, resulting in more jobs.

This Part of Liverpool Development Control Plan (LDCP) 2008 seeks to provide appropriate development objectives and controls that will facilitate development in Liverpool [City-Centre city centre](#) in concert with the Liverpool Local Environmental Plan (LLEP) 2008.

[Characteristics of the Liverpool City-Centre city centre](#)

[The character of Liverpool city centre can be divided into specific areas which have a number of character elements as described below. The character areas are illustrated in Figure 4.2 below. However, where appropriate, reference is also made to which precinct, illustrated on the FSR map as amended by Amendment 52, also applies:](#)

- [Mixed Use \(Area 7 and Area 8\)](#)
- [High Density Residential](#)
- [Education and Medical Precinct \(Area 9\)](#)
- [Commercial Core \(Area 10\)](#)
- [Standalone sites \(including Area 11\)](#)
- [City Centre Riverfront](#)
- [Georges River Precinct](#)

[The character of Liverpool City-Centre city centre can be divided into specific areas which have a number of character elements as described below:](#)

- Commercial Core.
- Mixed Use.
- High Density Residential.
- Education and Medical Precinct.
- City Centre City Centre Riverfront.
- Streets and Lane/Serviceway.
- Georges River Precinct.

Commercial Core

Land considered as part of Amendment 52, but which retains the B3 — Commercial Core zoning. Council aims to increase employment in the City Centre City Centre to a total of 30,000 jobs by 2031. Commercial development is encouraged throughout the Mixed Use and Commercial Core areas of the city centre. Most commercial development will be concentrated in the Commercial Core and the Mixed Use areas of the City Centre.

Liverpool City Centre City Centre's Commercial Core is located near the public transport interchange on land bounded by Elizabeth Street to the north, Bigge Street to the east, George Street to the west and Railway Street to the south. In addition, the existing Westfield shopping centre is also part of the Commercial Core. Preservation of a Commercial Core in the City Centre City Centre will support the broader base of uses likely to arise in the Mixed Use areas. Retail development will continue to be focused around the Macquarie Street Mall and Westfield shopping centre, though retail uses will also be permitted throughout the Mixed Use and Commercial precincts.

Mixed Use

Amendment 52 expanded the area of Liverpool city centre zoned B4 — Mixed Use. Land zoned B4 — Mixed Use may be developed for a range of retail/commercial and residential uses. Three new precincts have been defined for the rezoned sites in Liverpool city centre and some existing B4 sites. These precincts relate to the existing site characteristics, ownership patterns and subdivision patterns. The precincts are identified as Fine Grain, Midrise and Long Term Civic Sites. Certain lots within the Mid-Rise and Long-term Civic Sites (in addition to the Commercial Core) precincts may be developed pursuant to clause 7.5A of LLEP 2008, but only if they meet lot size and access requirements.

The City Centre LEP review expanded the area of Liverpool City Centre zoned B4 — Mixed Use. Land zoned B4 — Mixed Use may be developed for a range of retail/commercial and residential uses. Three types of new precinct have been defined for the rezoned sites in Liverpool City Centre and some existing B4 sites. These precincts relate to the existing site characteristics, ownership patterns and subdivision patterns. The precincts are identified as Fine Grain Sites, Mid Rise Sites and Long-Term Civic Sites. Mid-Rise Sites may be developed under certain criteria as Opportunity Sites.

The Fine Grain and the Mid Rise Sites use a perimeter block typology and are defined by building envelopes. The building envelopes enable buildings constructed to these profiles to relate to each other and the street network. Their flexibility also enables a diverse range of uses to be accommodated.

Lots that may be developed pursuant to clause 7.5A are large, strategically located sites, which can be developed subject to a concept development application as defined by section 4.23 of the Environmental Planning and Assessment (EP&A) Act 1979 and the delivery of a public benefit, as defined by clause 7.5A(3)(b) of LLEP 2008 (see 4.2.5 below).

The Opportunity Sites are large strategically located sites which can be developed subject to an

approved Master Plan and the delivery of a public benefit. The Long-Term Civic Sites, and any sites with special characteristics such as public uses or sites within a heritage context, also require an approved Master Plan. Building height and floor space are derived from the approved Master Plan.

High Density Residential

Liverpool City-Centrecity centre is an increasingly popular residential destination. The Commercial Core and Mixed Use areas of the City-Centrecity centre are surrounded by R4 – High Density Residential zoned land. With the growth of the hospital, there will be increasing demand for accommodation for health workers. One of the key aims of the Liverpool City-Centrecity centre plan is to improve access to residential areas and the City-Centrecity centre.

In addition to significant residential development in the Mixed Use areas of the City-Centrecity centre, residential development will be focused around the northern, western and southern periphery of the City-Centrecity centre. It is desirable that the frontages to Macquarie Street at Pioneer Park accommodate retail/café/restaurant activities at ground floor with residential and potentially some office space on floors above. Shepherd Street (at the southern extremity of the City-Centrecity centre) offers the potential to accommodate residential development with good access to the Georges River. Planning controls have been reviewed to assist this outcome.

Education and medical precinct

The Education and Medical precinct is located on the eastern edge of the City-Centrecity centre. It is defined by the South-Western Sydney Area Health Service (Liverpool Hospital) and attendant medical centres and clinics, the Liverpool Private Hospital, public and private schools, and the Liverpool TAFE buildings. The precinct is centred on historic Bigge Park and the historic Francis Greenway old Liverpool Hospital, now part of TAFE.

LLEP 2008 identifies Liverpool Hospital as a Long-Term Civic Site so that the site may develop using a concept development application and with a full range of building typologies. The City-Centre LEP review has identified Liverpool Hospital as a Long-Term Civic Site so that the site may develop using the approved Master Plan process and with a full range of building typologies.

City-Centrecity centre Riverfront

Liverpool City-Centrecity centre was the first of the 'Macquarie towns', chartered by Governor Lachlan Macquarie in 1810. From its foundation, the city identity was closely connected to the Georges River. Since the development of the railway line along the river as early as 1856, the City-Centrecity centre has become increasingly divorced from the River. The State Rail Freight Line which runs alongside the passenger line on the east and immediately adjacent to the river has further divided the city and obstructs connections across the Georges River, both physically and visually.

The natural edge of the Georges River and the Chipping Norton lakes system is one of Liverpool's most valuable assets. Opportunities exist to create continuous urban parkland. Council is committed to exploring improved connections from the City-Centrecity centre to the river and to Moorebank.

Georges River Precinct

The Georges River Precinct is identified as a potential precinct for city centre expansion due to the large sites, the limited ownership and proximity to the rail station. The site has a number of constraints, however including the location of the railway line, which presents a barrier to access to the city centre, the river and the site's location within the 1% AEP. There is limited existing connectivity to the city centre.

Streets, Laneways and Serviceways

The Hoddle grid, adopted as the township plan shortly after Governor Macquarie founded Liverpool, provides an excellent and legible framework for development. It has a vital role in determining the city's built form.

Streets make up the largest area of public space in Liverpool City-Centrecity centre. Used primarily for traffic and pedestrian movement, they also accommodate business, shopping, festivals, dining, socialising and entertainment. Within the formal grid of north-south and east-west streets there are serviceways (lanes) and arcades. Currently the serviceways do not provide direct connections between streets but the arcades do.

In the southern part of the City-Centrecity centre, the grid distorts in response to the topography, forming a secondary grid. The meeting of the regular Hoddle grid with the secondary grid along Memorial Avenue creates corner blocks with obtuse and acute angles. This provides a valuable opportunity to reinforce the character and streetscape quality of the Liverpool City-Centrecity centre.

The core of the City-Centrecity centre is bounded by Bathurst Street, Campbell Street, Bigge Street and Pirie Street and Terminus Street site specific. These streets carry the bulk of through traffic around the City-Centrecity centre to access the major arterials – Newbridge Road, Hoxton Park Road, the Hume Highway, Elizabeth Drive and the Cumberland Highway.

The network of serviceways complements the dominant qualities of the main streets. Hidden within the blocks, the serviceways have the potential to be extended to provide important direct pedestrian links to the streets. If this can be achieved, the serviceways have the capacity to improve permeability and provide spaces that diversify and enrich the city structurally and economically. The active street frontages along Macquarie Street and throughout the City-Centrecity centre are also an asset that should be maintained and expanded.

The development controls Planning Controls in this Part complement the amended LLEP 2008 and define the built form required to ensure that the amenity of the streets and lanes/serviceways is protected and enhanced.

Satisfactory arrangements

At the request of Transport for NSW, Council conducted a review of the transport needs that would be created by the additional residential development that would be made possible by rezoning much of the existing commercial core of the city centre to permit residential development. The review made a number of recommendations, including that a range of improvements to designated State public infrastructure would be required to support the planned residential growth.

In order to fund the required infrastructure improvements, clause 6.4A of LLEP 2008 indicates that the development of any and all residential accommodation on land within the intensive urban development area of Liverpool city centre (i.e. "Area 7", "Area 8", "Area 9", "Area 10" or "Area 11" shown on the Floor Space Ratio Map), must demonstrate via written confirmation from the Secretary of the DP&E that, according to clause 6.4A(2), "satisfactory arrangements have been made to contribute to the provision of designated State public infrastructure in relationship to the land on which the development is to be carried out."

The satisfactory arrangements provision must be satisfied prior to the determination of a DA which includes residential development. It is expected that the satisfactory arrangements will take the form of an additional levy on residential development, and may require the making of the planning agreement with the DP&E.

Development of hotel, motel, backpacker, bed-and-breakfast or serviced apartment accommodation is not considered "residential development" and will not be subject to satisfactory arrangements as described in clause 6.4A of LLEP 2008.

Site specific Development Control Plan

Clause 6.6, Development control plan, of LLEP 2008 requires that:

- (1) Development consent must not be granted for development on land in an urban release area or intensive urban development area unless a development control plan that provides for the matters specified in subclause (2) has been prepared for the land.*

The "intensive urban development area" is defined in clause 6.4A as being "Area 7", "Area 8", "Area 9" or "Area 10" shown on the Floor Space Ratio Map.

Proposed development that does not rely on clause 7.5A of LLEP 2008 (see Section 2.1.4 below), would not require the lodgement of a site-specific DCP. Council will accept an assessment of compliance with Part 1 and Part 4 of LDCP 2008 in lieu of the submission of a site-specific DCP. For development undertaken pursuant to the floor space bonuses described in clause 7.5A of LLEP 2008, please refer to Section 4.2.5 of this Part.

Georges River Precinct

The Georges River Precinct is identified as a potential precinct for city centre expansion due to the large sites, the limited ownership and proximity to the rail station. The site has a number of constraints, including that the railway, the river and the site's location within the 1% AEP. There is limited existing connectivity to the City Centre.

4.2. CONTROLS FOR BUILDING FORM

4.2.1 Building form

Background

Building form refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. LLEP 2008 includes provisions for land use, building heights, sun access, Floor Space Ratio (FSR) and design excellence. The development controls in this Part of the DCP are intended to reinforce the desired outcomes for the [City Centre city centre](#). The resulting built form and character of new development should contribute to an attractive public domain in Liverpool [City Centre city centre](#) and produce a desirable setting for the intended uses.

The provisions in the Apartment Design Guidelines (ADG) associated with State Environmental Planning Policy No.65 – Design Quality of Residential Apartment Development (SEPP 65) are incorporated in this DCP to apply to all residential development in the Liverpool [City-Centre city centre](#) including apartments, any residential component of a mixed use development, and serviced apartments that are strata titled. Where there is an inconsistency between other provisions in the ADG and this DCP, the ADG prevails to the extent of the inconsistency.

Within the existing Liverpool [City-Centre city centre](#), the diversity of uses is reflected in the different building typologies. These are:

- Perimeter Block (accommodating commercial and residential uses).
- Towers on a Podium (accommodating commercial and residential uses).
- [Detached Buildings \(apartment buildings, religious, commercial, education and medical uses\)](#).
- [Stand-Alone Buildings \(apartment buildings, religious, commercial, education and medical uses\)](#).

LLEP 2008 identifies [specific precincts on the FSR map for Liverpool city centre \(Area 7, Area 8, Area 9, Area 10 and Area 11\)](#). The precincts relate to specific character areas defined in this Part as follows:

- ["Area 7" is the Fine Grain Precinct;](#)
- ["Area 8" is the Midrise Precinct;](#)
- ["Area 9" is the Long-Term Civic Sites Precinct;](#)
- ["Area 10" is the Commercial Core Precinct; and](#)
- ["Area 11" is the Standalone site known as 77-83 Moore Street and 193 Macquarie Street.](#)

The precincts are shown in [Figure 4-2](#).

LLEP 2008 identifies precincts and criteria within the City-Centre that relate to the desired future character and the related building typologies for each precinct. The precincts are shown in [Figure 4-2](#).

Objectives

1. Establish the scale, dimensions, form and separation of buildings as appropriate for the [City-Centre city centre](#) and the range of uses.
2. Provide a strong definition of the public domain with buildings on a common alignment.
3. Promote building frontages with good connections to the street.

Controls

Develop new buildings in Liverpool [City-Centre city centre](#) using the following building typologies as identified in [Figure 4-2](#):

1. Perimeter block typology for Fine Grain Sites.
2. Perimeter block typology for Mid Rise Sites with the exception of those Mid Rise Sites developed as Opportunity sites, which may also be developed with a tower on podium typology.
3. Perimeter block, tower on podium or [stand-alone detached](#) building typology for Long Term Civic Sites.
4. [Tower on podium or detached building typology for Standalone sites.](#)
- 4.5. Perimeter block, tower on podium or [stand-alone detached](#) building typology for Commercial Core sites.
- 5.6. Perimeter block, or [stand-alone detached](#) building typology for existing Mixed Use.
- 6.7. Stand-alone building typology High Density Residential sites.

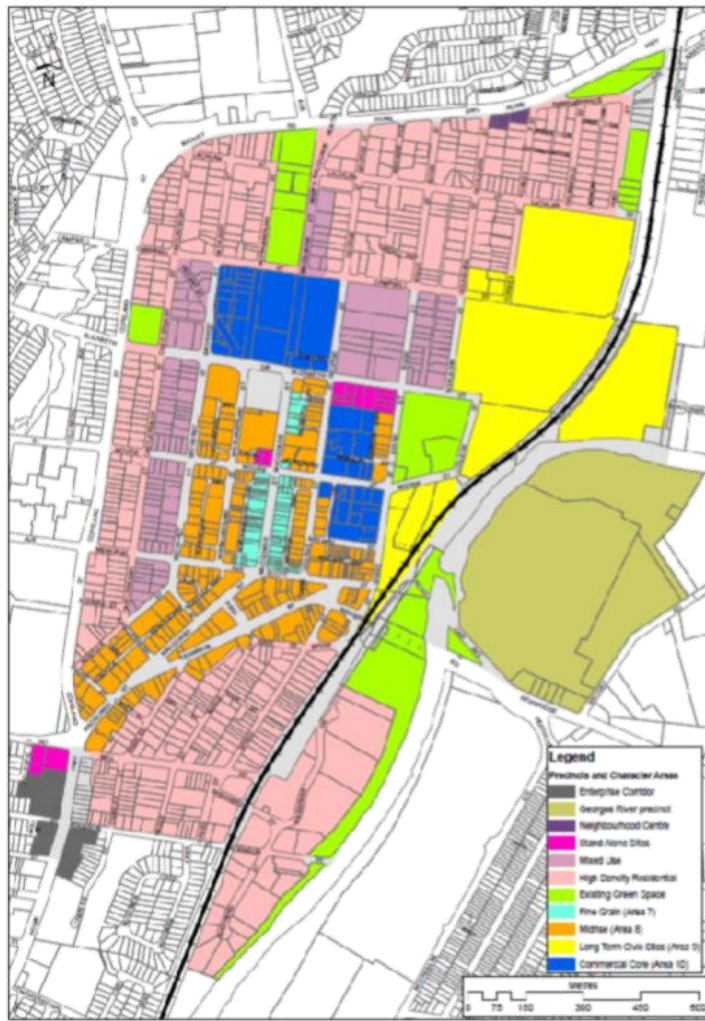
7.8 Perimeter block, or [stand-alone detached](#) building typology for Enterprise Corridor sites and Neighbourhood Centre sites.

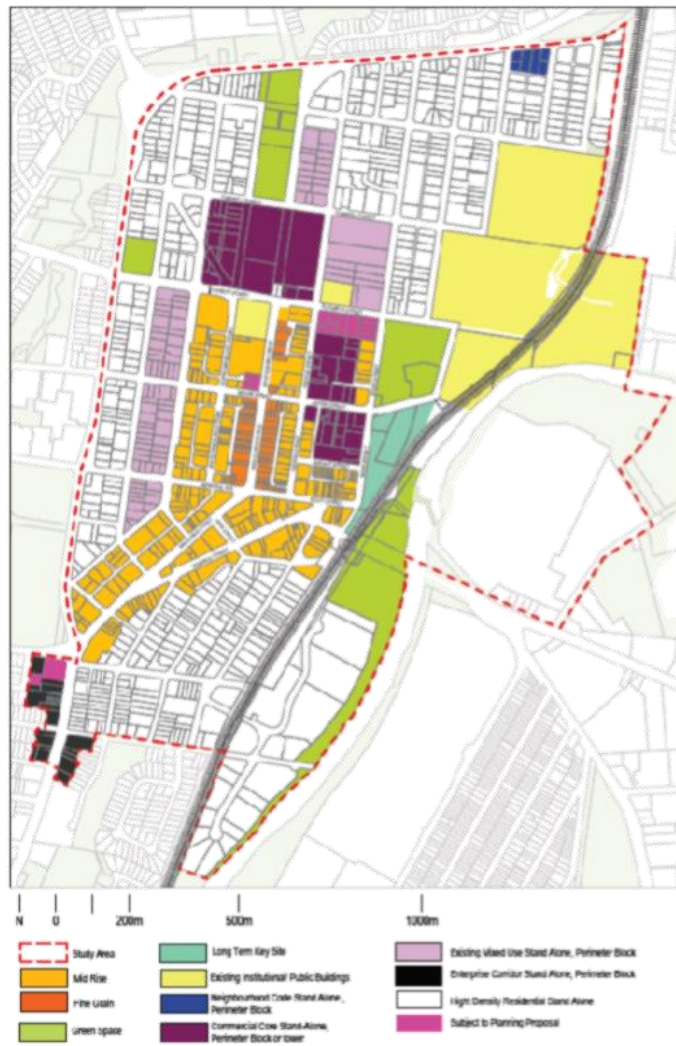
4.2.2 Building Envelopes

Background

Building envelopes define the built form for sites identified as Fine Grain, Mid Rise and Opportunity Sites or Long Term Civic Sites. Building envelopes provide buildings with a strong address to the street, ensure compatibility between sites and maintain a suitable relationship to the scale of existing buildings. The lower scale buildings on the Fine Grain and Mid Rise Sites contribute to the character of the existing [City Centre city centre](#) and make a positive contribution to its vitality, image and identity.

Figure 4.2 Precincts and Building Typologies





4.2.2 Building Envelopes

Background

Building envelopes provide buildings with a strong address to the street, ensure compatibility between sites and maintain a suitable relationship to the scale of existing buildings. The lower scale buildings on the Fine Grain and Midrise sites contribute to the character of the existing city centre and make a positive contribution to its vitality, image and identity.

Midrise and Commercial Core sites of over 1,500m² in area may be developed as described in clause 7.5A of LLEP 2008 in certain circumstances. See section 4.2.5 Controls for sites requiring the submission of a DCP for greater clarification.

The drawings of the building envelopes depicted in Figures 4.3 through 4.9, illustrate the profile of the building form assuming full site cover at ground. The associated numbers relate to elements of that building. Numerical controls are not necessarily required for every element of every building type.

The maximum floor space that may be developed for Fine Grain, Mid Rise and Opportunity Sites will be derived from the building envelope. LLEP 2008 requires the floor space to be calculated at 80% of the building envelope for retail/commercial uses and 75% of the building envelope for residential uses. This enables all building envelopes to be built to their capacity as established by the subdivision plan, but allows for appropriate architectural resolution. The available building floorspace will therefore vary depending on the site dimensions, proposed use, and the related requirements for natural light and separation distances.

LLEP 2008 permits sites in the Fine Grain and Mid Rise Precincts to exceed the mapped FSR control. Fine Grain sites must meet the requirements of Clause 4.4 (2A) of LLEP 2008. Mid Rise Sites must meet the requirements of Clause 4.4 (2B) of LLEP 2008. Mid Rise Sites over 1,500m² may be developed as Opportunity Sites in certain circumstances. See Opportunity Sites criteria below.

Objectives

1. Provide a strong, consistent and appropriate definition of the public domain.
2. Enable buildings to relate to one another.
3. Retain a fine grain street address.
4. Facilitate development of smaller sites without the requirement of amalgamation.
5. Enable a diverse range of uses to be accommodated.
6. Minimise apparent density and maximise actual density.
7. Facilitate comfortable street environments for pedestrians in terms of daylight, scale, sense of enclosure and wind mitigation as well as creating a healthy environment for street trees.
8. Provide for solar access to key streets and public spaces.
9. Enable adaptation when located in proximity of Heritage Items or the Bigge Park Conservation Precinct.

Controls

1. Design buildings on the Fine Grain and Mid Rise Sites to comply with the building envelopes as illustrated in Figures 4.6 below.
2. Design tower on podium buildings for Opportunity Sites and Long Term Civic Sites to comply with the building envelopes as illustrated in Figures 4.7 through 4.9 below.
3. Design new developments in proximity to Heritage Items and within the Bigge Park Heritage Conservation Precinct, so that they address the significance of the heritage item/precinct notwithstanding the Building Envelope controls (refer to Section 4.6.1 of Heritage Items and Conservation Areas and Clause 5.10 LLEP 2008).

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4. Integrate that part of the building that forms the street wall with the overall building design and construction.
5. Any above-ground car parking, to a maximum of two levels, must be integrated into the overall design of the building.
6. The building envelopes for the Tower on a Podium Buildings are shown in Figures 4-7 through 4-9.

4.2.3 Additional Controls for the Fine Grain Precinct

Background

The Fine Grain Precinct is identified on Figure 4-2. Fine Grain Sites are small sites that have a very important role for pedestrian interface along streets. They are important because of their short frontages to streets, variety of uses, but also because the diverse ownership offers significant contrast of character, opening hours and price-point for retail offerings.

Objectives

1. Provide active street and lane/serviceway frontages.
- 2.1 Create a contiguous street wall even though sites are developed independently.
- 3.2 Address solar access/privacy and light within the building envelope so that separate studies are not required.
3. Allow flexibility of uses within the building envelope (long life/loose fit) that can change over time
4. Provide active street and lane/serviceway frontages.
- 5.4. Permit Encourage development without car parking on site.

Controls

Design new buildings in the Fine Grain Precinct as follows:

1. Construct a maximum of four storeys to the street and four storeys to the serviceway frontages, with an additional two storeys set back to street frontages (see Figures 4-3 and 4-4).
2. Locate retail uses at the ground floor on street and lane/serviceway frontages.
3. Develop no more than one level of above-ground car parking which is to be appropriately screened or sleeved.
4. Provide parking in accordance with LLEP 2008 provisions or make an alternative arrangement to the satisfaction of Council.
4. make a monetary contribution in lieu of parking where parking is not provided on-site via a Planning Agreement.

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Figure 4-3: Fine Grain/Mid-Block

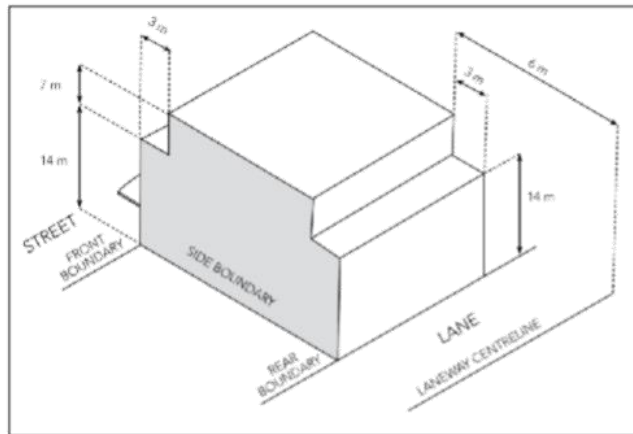
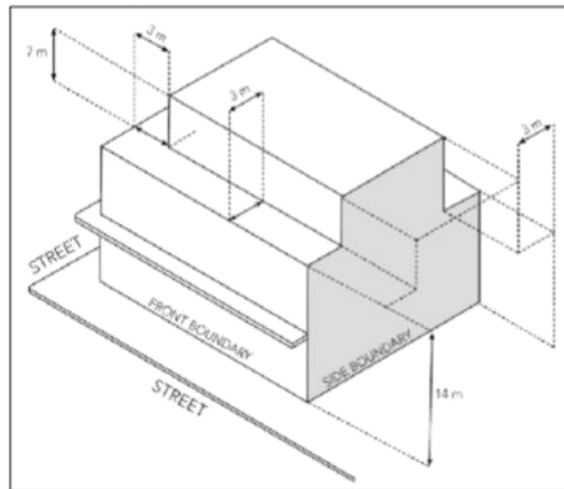


Figure 4.4: Fine Grain/Corner



4.2.4 Controls for the Midrise Precinct

Background

The Midrise Precinct is identified on [Figure 4.2](#). Midrise Sites are capable of accommodating more development than Fine Grain Sites. They are important because of the relatively short-frontages to streets and their diverse range of uses. Differing ownership also provides a variety of use and form that single ownership of large city buildings does not achieve.

Objectives

1. [Form a contiguous street wall even though sites are developed independently.](#)
2. [Address solar access/privacy and light within the building envelope so that separate studies are not required.](#)
3. [Provide active street and lane/serviceway frontages.](#)
4. [Allow flexibility of uses within the building envelope \(long life/loose fit\) that can change over time.](#)
5. [Provide parking for the development on site.](#)

Controls

[Design new buildings in the Midrise Precinct as follows:](#)

1. [Construct buildings to a maximum of six storeys to the street and four storeys to the lane/serviceway frontages, with an additional two storeys set back to both frontages in accordance with \[Figures 4-5 and 4-6\]\(#\).](#)
2. [Develop retail uses at the ground floor at street and lane/serviceway frontages \(where possible\).](#)
3. [Develop at least one level above the ground floor for a commercial use, or that is capable of being adapted to a commercial use.](#)
4. [Provide parking in a basement car park. No more than one level of service \(at grade\) car parking is permitted and this is to be appropriately screened or sleeved.](#)
- 4.5. [Provide parking in accordance with the LLEP 2008.](#)

Figure 4-5: Mid-Rise/Mid-Block

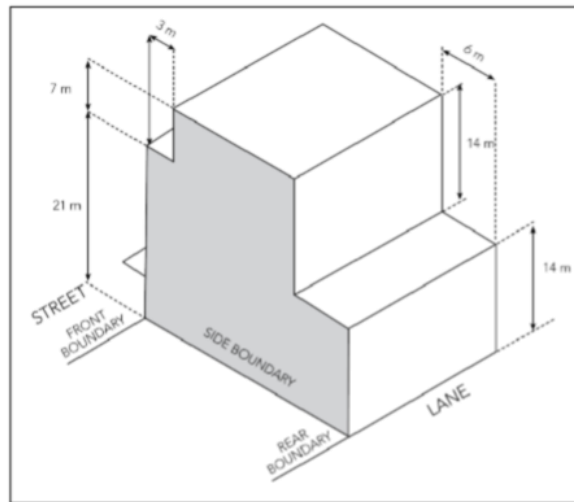
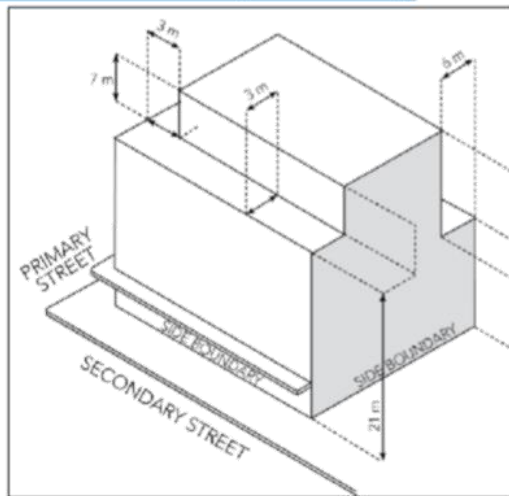
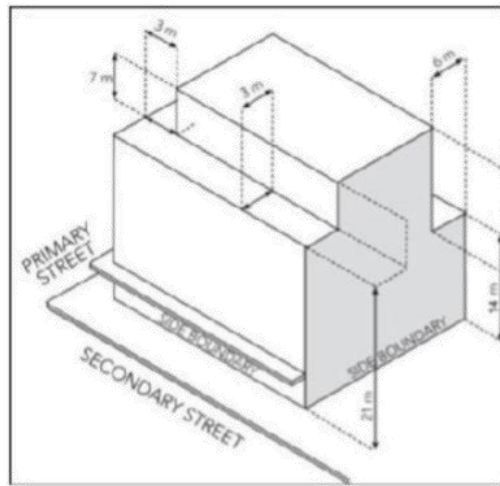


Figure 4-6: Mid-Rise/Corner



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4.2.5 Controls for sites that require the submission of a site-specific DCP or concept DA

Background

Clause 7.5A of LLEP 2008 provides additional provisions relating to certain land in Liverpool city centre. This section specifies the requirements for a lot to be developed according to the provisions of clause 7.5A.

The provisions of clause 7.5A are not considered development standards and therefore may not be varied according to clause 4.6 of LLEP 2008. Minimum requirements for the development of a lot pursuant to clause 7.5A are:

- That the lot is situated within "Area 8", "Area 9" or "Area 10" on the Floor Space Ratio Map; and
- Has a lot size exceeding 1500m²; and
- Has two or more street frontages.

Pursuant to clause 7.5A(2), any building which is proposed to exceed the maximum height shown for the land on the Height of Buildings Map, and the maximum floor space ratio shown for the land on the Floor Space Ratio Map for the site (to a maximum FSR of 10:1 in "Area 8" or "Area 10" and 7:1 in "Area 9"), must be developed so that at least 20% of the gross floor area is used for the purposes of:

- business premises;
- centre based childcare facilities;
- community facilities;
- educational establishments;
- entertainment facilities;
- food and drink premises;
- functions centres;
- information and education facility;
- medical centres;
- public administration buildings; or
- retail premises.

The Dictionary of LLEP 2008 defines the meaning and development requirements of each of the specified uses.

Development of sites pursuant to clause 7.5A of LLEP 2008 will require the submission of a DCP. According to section 4.23(2) of the EP&A Act 1979,

(2) However, if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a concept development application in respect of that land.

In other words, the requirement to lodge a DCP pursuant to clause 7.5A(3)(a) of LLEP 2008, may be satisfied by the lodging of a concept development application pursuant to the requirements of section 4.23 of the EP&A Act 1979 instead. It is to be noted however, that section 4.23(3) of the EP&A Act also applies to any such application meaning that,

3) Any such concept development application is to contain the information required to be

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included in the development control plan by the environmental planning instrument or the regulations.

Controls

1. Sites that require the submission of a DCP are to be developed pursuant to the adopted site specific DCP or a concept development application consistent with Division 4.4 of the EP&A Act 1979 and clause 7.5A of LLEP 2008.
2. Clause 7.5A(3)(b) of LLEP 2008 specifies that any proposed development which seeks to utilise the additional provisions relating to certain land in Liverpool city centre must yield a public benefit, in that the site on which the building is to be located must also include one or more of the following uses (NB: in order to provide the required public benefit, these uses must be publicly accessible):
 - recreation areas;
 - recreation facilities (indoor);
 - community facilities;
 - information and education facilities;
 - through site links; or
 - public car parks.

Each land use that is required to yield public benefit (with the exception of "through site links" and "public car parks", defined below), is defined in the Dictionary of LLEP 2008. The size, scale, location and detailed use of any such proposed development, must be included in the required site specific DCP or concept development application, and be to the satisfaction of Council.

Through site links are only to be developed on those sites indicated in Figure 4.12 and must be developed in accordance with the requirements of section 4.3 Pedestrian Amenity.

Public car parks are only to be developed with the written permission of Council and must be vested in or under the control of Council. Provision of public car parking must be consistent with Council's Parking Strategy and locational requirements. Any such public car park must be of sufficient scale and located so as to be of a public benefit acceptable to Council.

3. The concept development application lodged pursuant to clause 7.5A of LLEP 2008, must demonstrate how the proposal addresses all matters described in 7.5A(4)(a-m), as follows:

(a) the suitability of the land for development.

The site specific DCP or concept development application must articulate planning and design principles relating to development of the land and explain how these address Part 4 of Liverpool Development Control Plan 2008 and any other relevant documents or plans. It must include an analysis of the characteristics and the local context of the land to which it applies.

It must conceptually outline and show graphically the proposed site layout and planning for the development of the land, including the conceptual vertical and horizontal distribution of potential future uses, arrangement, footprint, envelopes and mix of building types. Through analysis of a number of illustrated options for redevelopment it must determine the preferred approach.

(b) the existing and proposed uses and use mix.

The site specific DCP or concept development application must describe the existing uses of any building currently occupying the site, and the proposed use mix to be developed on the site (noting additional use requirements outlined in control 1 above).

(c) any heritage issues and streetscape constraints.

The site specific DCP or concept development application must describe how the proposal will address all heritage items in the vicinity, in accordance with the requirements of clause 5.10 of LLEP 2008 and section 4.6.1 of this Part.

(d) the impact on any conservation area.

The site specific DCP or concept development application must indicate how any proposed development within the Bigge Park Conservation Area addresses the requirements of clause 5.10 of LLEP 2008 and section 5.10 of this Part.

(e) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form.

Liverpool city centre is a mixed-use environment. The site specific DCP or concept development application must ensure that any proposed residential tower is consistent with ADG separation and side setback distances, taking into account existing or proposed towers on the same site or neighbouring sites. Siting of all proposed towers, residential or commercial, must be consistent with clause 7.4 of LLEP 2008 Building separation in Liverpool city centre.

(f) the bulk, massing and modulation of buildings

The site specific DCP or concept development application must illustrate the proposed bulk, massing and modulation of buildings to be developed on the site.

(g) street frontage heights.

The site specific DCP or concept development application must indicate the street frontage heights of any proposed building. A tower on podium building is to be designed so that the podium is:

- a. four to six storeys in height at the primary street frontage;
- b. four storeys in height to the lanes and/or serviceways; and
- c. 6 metres from a side/rear boundary if the site is adjoining a property that is not zoned B4 – Mixed Use or contains a stand-alone building. The setback should be in accordance with the ADG.

(h) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity.

The site specific DCP or concept development application must illustrate how the proposed design will satisfactorily address environmental impacts on the public domain and other sites in proximity, depending on the scale of the development. Designs must ensure the streetscape environment is of pedestrian scale and ensures human qualities of solar access, shade and amenity are provided and negative elements such as noise and wind are minimised.

(i) the achievement of the principles of ecologically sustainable development.

The site specific DCP or concept development application must illustrate the ways by which the development proposed maximises ecological sustainability.

(j) encouraging sustainable transport, including increased use of public transport, walking and cycling, road access and the circulation network and car parking provision, including integrated options to reduce car use.

The site specific DCP or concept development application must incorporate a Transport Management and Access Plan (TMAP). The TMAP must illustrate how the proposed development will encourage sustainable transport including:

- measures to encourage increased use of public transport, walking and cycling;
- provisions for access (for pedestrians, cyclists and vehicles including heavy

vehicles), circulation and car parking; and

- other measures to reduce car use (e.g. carpooling and car-share services).

(i) the impact on, and any proposed improvements to, the public domain.

The site specific DCP or concept development application must demonstrate how the proposed development will integrate with and/or make improvements to the existing public domain, including the provision of setbacks where required. The site specific DCP or concept development application must include a detailed public domain plan.

Improvements to the public domain include:

1. Contributing to the urban tree canopy through new street tree plantings consistent with the Liverpool CBD Streetscape and Paving Manual 2018.
2. Providing street furniture and pedestrian amenity items.
3. Installing high quality pedestrian paving consistent with the Liverpool CBD Streetscape and Paving Manual 2018.
4. Integrating public art in accordance with section 4.3.10 of this Part.
5. Making provision for pedestrians to access to sunlight and shade.
6. Providing a design that contributes to activation of street frontages.
7. Integration of WSUD elements to improve vegetation success within the public domain.

(k) achieving appropriate interface at ground level between buildings and the public domain.

The site specific DCP or concept development application must demonstrate how all buildings, including any proposed tower building, achieves an appropriate interface at ground level with existing and proposed buildings and the public domain, according to the requirements of Section 4.3.1 to 4.3.10 of this Part.

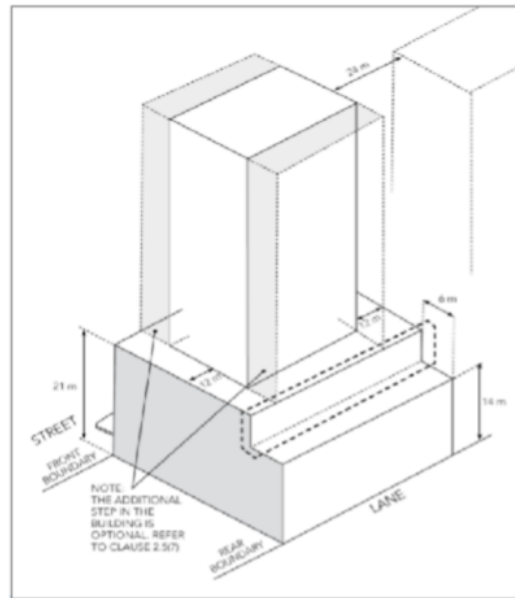
Electricity substations and waste collection points must be appropriately integrated into the building design to minimise disruption and visual clutter in the ground plane and streetscape.

(l) the excellence and integration of landscape design.

The concept development application must demonstrate compliance with section 4.2.13 of this Part.

4. Locate non-residential uses at ground level that address all street frontages (and laneway/service way frontages, where possible).
5. Develop a maximum of two levels of above-ground car parking, provided it is sleeved by other uses on street frontages and appropriately screened or sleeved by other uses on lane/service way frontages. Aboveground parking must achieve minimum floor to ceiling heights that would permit adaption for another use (e.g. commercial/retail or residential).
6. Construct buildings according to the requirements illustrated in Figure 4.7, Figure 4.8 or Figure 4.9, depending on the location of the site.

Figure 4-7: Tower on a Podium/Mid-Block



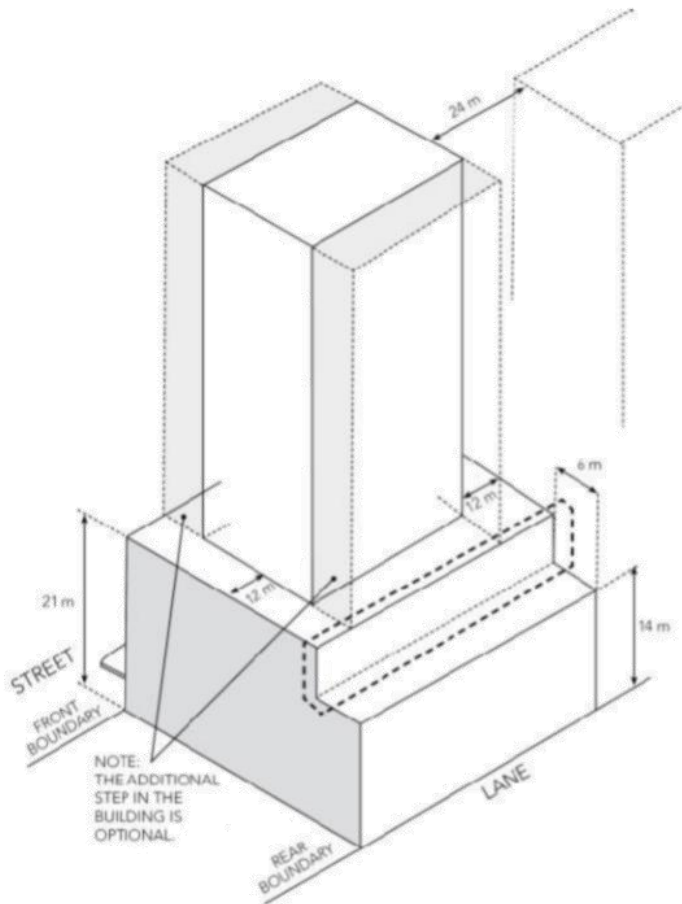
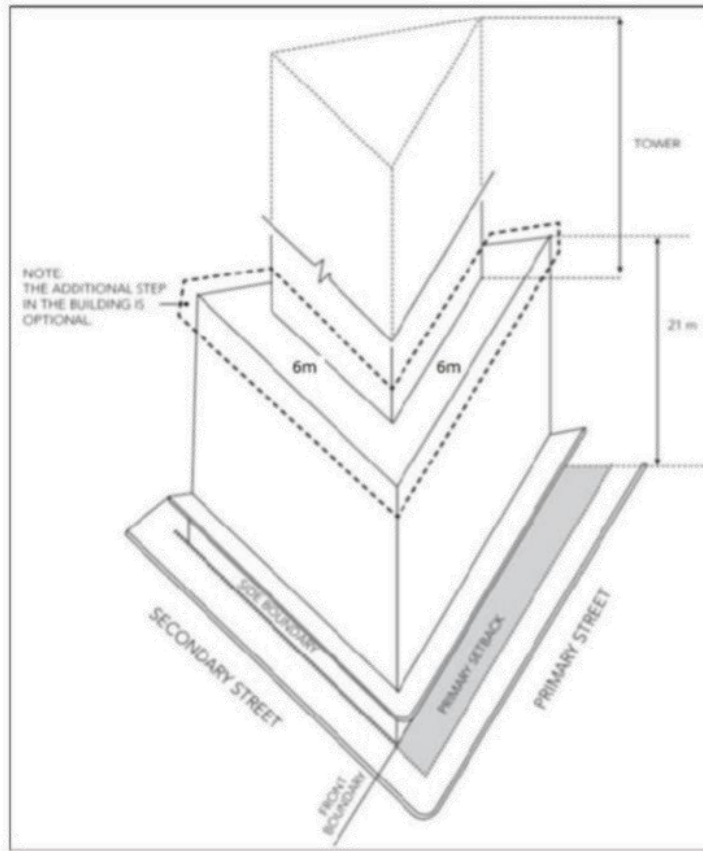
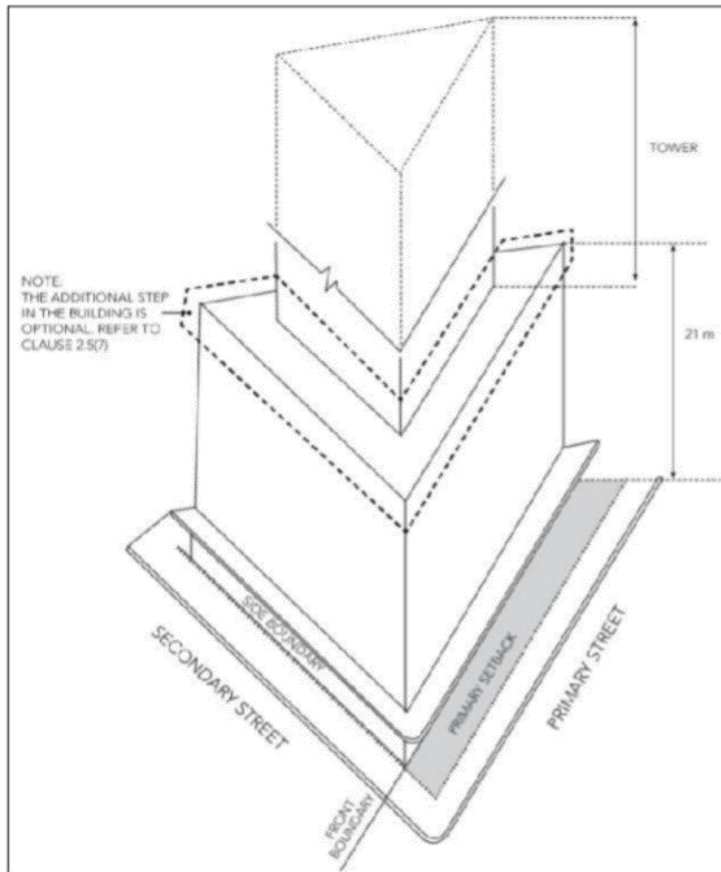


Figure 4-9: Tower on a Podium/Acute Corner Site





- a) Long Term Civic Sites as defined by Clause 7.5A of LLEP 2008;
 - b) Any site in the proximity of a heritage item or located within the Bigge Park Conservation Area;
2. As defined in LLEP2008 a "Master Plan" must:
- a) Be based on an analysis of the characteristics and the local context of the land to which it applies; and
 - b) Articulate planning and design principles relating to development of the land and explain how these address Part 4 of Liverpool Development Control Plan 2008 and any other relevant documents or plans; and
 - c) Conceptually outline and show graphically the proposed site layout and planning for the development of the land, including the conceptual vertical and horizontal distribution of activities, arrangement, footprint, envelopes and mix of types of buildings, heritage and conservation considerations, pedestrian and vehicular access and movements, parking and open space arrangements, and ways by which the development proposed maximises ecological sustainability and contributes to public domain enhancement; and
 - d) Illustrate a number of options for redevelopment of the land to which it applies.

4.2.6 Additional controls for Opportunity Sites

Background

A site located in the Mid Rise Precinct may be developed as an Opportunity Site providing it meets the criteria described in Clause 7.5B of LLEP 2008, to Council's satisfaction. This section details the requirements that must be met for an Opportunity Site. It also provides guidelines as to how a development application is to be prepared, and clarifies what constitutes public benefit provisions under Clause 7.5B of LLEP 2008 for an Opportunity Site.

Objectives

- 1. Be consistent with the desired future character of the Mid Rise Precinct;
- 2. Be consistent with the requirements of the ADG;
- 3. Have a "Master Plan" approved under Section 83B of the Environmental Planning and Assessment Act 1979 (Staged Development Applications);
- 4. Provide active street and lane/serviceway uses;
- 5. Be designed to allow flexibility of uses within the building (long life/loose fit) that can change over time;
- 6. Exhibit architectural merit and diversity within the detail design resolution;
- 7. Provide parking for the development on site;
- 8. Provide a 'public benefit' to Council under Section 93F of the Environmental and Planning Assessment Act 1979 (Planning Agreements);

Controls

- 1. Meet the requirements of those specified in LLEP 2008 for a site to be developed as an "Opportunity Site". Note: This includes the approval of a "Master Plan" under Section 83B of the Environmental Planning and Assessment Act 1979 (Staged Development Applications);
- 2. Residential or commercial tower is consistent with ADG separation and side setback distances;
- 3. Locate non-residential uses at ground level that address all road frontages;
- 4. Locate a minimum of two levels above ground that are either developed for commercial uses or are constructed in a manner that can be easily adapted to commercial uses;

4.2.4—Additional controls for the Mid Rise Precinct

Background

The Mid Rise Precinct is identified on Figure 4.2. Mid Rise Sites are capable of accommodating more development than Fine Grain Sites. They are important because of the relatively short frontages to streets and their diverse range of uses. Differing ownership also provides a variety of use and form that single ownership of large city buildings does not achieve.

Objectives

1. Provide active street and lane/serviceway frontages.
2. Form a contiguous street wall even though sites are developed independently.
3. Address solar access/privacy and light within the building envelope so that separate studies are not required.
4. Allow flexibility of uses within the building envelope (long life/loose fit) that can change over time.
5. Provide parking for the development on site.

Controls

Design new buildings in the Mid Rise Precinct as follows:

2. Construct buildings to a maximum of six storeys to the street and four storeys to the lane/serviceway frontages, with an additional two storeys set back to both street frontages (see Figures 4.5 and 4.6).
3. Develop retail uses at the ground floor at street and lane/serviceway frontages.
4. Develop at least one level above the ground floor for a commercial use, or that is capable of being adapted to a commercial use.
5. Provide parking in a basement car park. No more than one level of above-ground car parking is permitted and this is to be appropriately screened or sleeved.
6. Provide parking in accordance with the LLEP 2008 or address any shortfall in parking on site via a Voluntary Planning Agreement.

4.2.5—Additional controls for “Master Planned” Sites

Background

Certain sites in the Liverpool City Centre will require the submission of a Master Plan DA. This means an application pursuant to Section 83B of the *Environmental Planning and Assessment Act 1979* (Staged Development Applications). The Master Planned DA process is used to ensure flexibility related to building type where appropriate and an ability to respond to the differing subdivision patterns.

Objectives

1. Demonstrate a public benefit to Council's satisfaction.
2. Be approved pursuant to Section 83B of the *Environmental Planning and Assessment Act 1979* (Staged Development Applications).
3. Be reviewed by Council's Design Excellence Panel (DEP) to ensure proposal exhibits design excellence.

Controls

1. A “Master Plan” DA is to be submitted to Council for approval. The “Master Plan” is to meet the objectives of LLEP 2008, LDCP 2008 and other relevant policies for any development application on any of the following sites:

5. Develop a maximum of two levels of above-ground car parking, provided it is sleeved by other uses on street frontages and appropriately screened or sleeved by other uses on lane/serviceway frontages.
6. Design a tower on podium building form so that the podium is:
 - a. four to six storeys in height at the primary street frontage;
 - b. four storeys in height to the lanes and/or serviceways; and
 - c. includes a 6 metre setback from a side/rear boundary if the site is adjoining a property that is not zoned B4—Mixed Use or contains a stand-alone building. The setback should be in accordance with the ADG.
7. Design a tower building that may be integrated with the podium and not set back from the podium. This is most likely to occur in a corner condition where there is a generous street setback or where a public plaza is to be located.
8. Identify public benefits provided by the development to the satisfaction of Council and formalise in an approved planning agreement pursuant to Section 93F of the Environmental Planning and Assessment Act 1979 (Planning Agreements).

Note: Public Benefit

Public benefits may include but are not restricted to:

- Additional car parking that is in an acceptable location and is of the appropriate quantity and quality to be dedicated to Council at no cost.
- Dedication of land for public open space at no cost to Council.
- Embellishment of public open space.
- Provision of through-site links, arcades, laneways or the extension of serviceways or streets that are required by Council.
- Provision of affordable housing.
- Provision of community facilities.
- An acceptable contribution towards public art.
- Provision of facilities that encourage and facilitate a modal shift in transport options i.e. car and bike share facilities.
- Preservation and/or restoration of heritage items.
- A higher ratio of commercial/retail floorspace than prescribed in LLEP 2008 to encourage job creation.

Public benefit does not include:

- Additional car parking that is not required by Council.
- Through-site links, arcades, laneways or the extension of lanes/serviceways or streets that are not required by Council.
- Building setbacks, including primary street, lane/serviceway and other mandatory setbacks.
- Public domain improvements such as paving, landscaping where they are an expected part of a development.

4.2.67 Building Floor Plates

Background

Limiting the size of tower floor plates allows for good internal amenity in terms of natural light and ventilation, while mitigating the potentially adverse impacts that tall and bulky buildings may have on the public domain *such as* including overshadowing and poor street amenity. Building depth is related to building use, meaning that commercial floor plates are typically deeper and larger than residential floor plates.

Objectives

1. Achieve living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.
2. Provide viable and useable commercial and/or residential floor space.
3. Contribute to useable and pleasant streets and public domain at ground level by controlling the size of upper level floor plates of buildings.
4. Reduce the apparent bulk and scale of buildings by limiting the size of the building.

Controls

1. Design the floor plate sizes and depth of buildings for Fine Grain and Mid Rise sites as indicated in the building envelopes.
2. Provide a maximum GFA of 700m² per level for residential towers with maximum length of elevation of 45m.
3. Comply with ADG standards for building depth and number of apartments.
4. Provide a maximum GFA of 1,000m² per level for commercial towers with maximum length of elevation of 45m. Where sites are greater than 2,000m² a proportionally larger GFA per floor may be considered.

4.2.78 Street Alignments and Street Setbacks

Background

Buildings define the street network and public domain. For this reason, the alignment and setbacks of buildings are critical to the quality of internal and external environments. Land in the setback areas may be utilised as outdoor dining and may have basement car parking located under it if required.

Objectives

1. Create a strong and consistent definition of the public domain.
2. Define the street as a spatial entity. Reinforce the importance of the public role of the street.
3. Reinforce the importance of the public role of the street.
4. 3. Provide front setbacks appropriate to building function and character.
5. 4. Establish the desired spatial proportions of the street.
6. 5. Provide sunlight access to streets, comfortable wind conditions, a generous footpath for pedestrians, and to assist growing conditions for street trees.
6. 6. Locate active uses, such as shopfronts, close to pedestrian activity areas Allow an outlook to, and surveillance of, the street.
7. .
8. 1. Allow an outlook to, and surveillance of, the street.
9. 8. Create a transition between public and private space.
10. Allow for street landscaping.

Controls

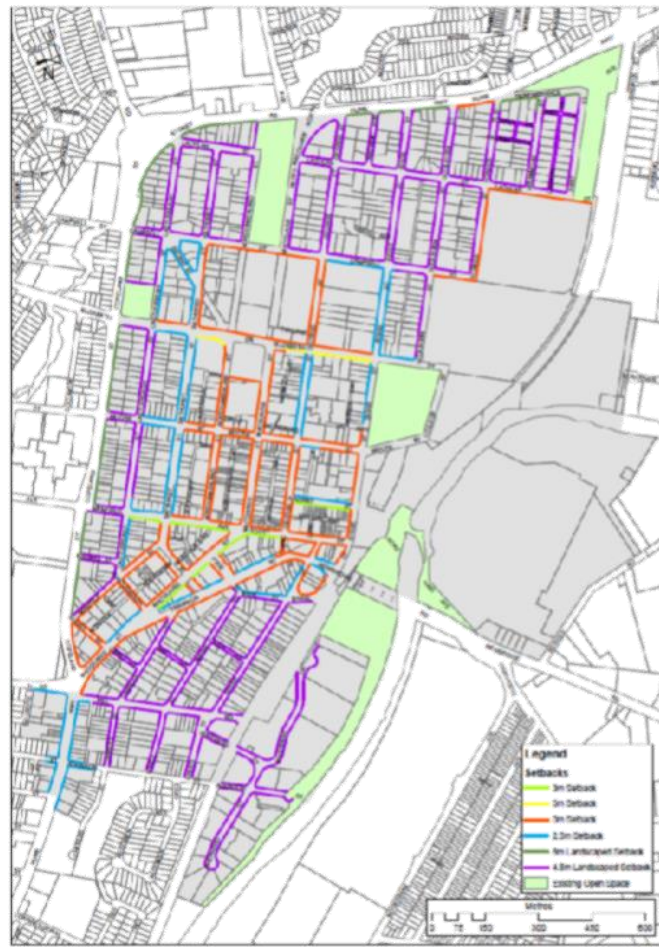
1. Buildings to comply with the front setbacks as set out in **Figures 4-10 and 4-11**.
2. Upper level frontages to a lane/serviceway must be setback 6 metres from the centre line of the lane/serviceway.
3. Construct perimeter block buildings and podiums, which comply with the building envelope requirement, to the street and side boundaries (0m setback).
3. Construct perimeter block buildings and podiums to the street and side boundaries (0m setback).
4. Construct perimeter block buildings and podiums to comply with the building envelope requirement for the street and side boundaries (0m setback).
5. 4. Buildings with a boundary to the Hume Highway have a minimum setback of 8m.

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6.5 Buildings on the southern side of streets identified in Figure 4-10 have minimum front setbacks as follows, in order to maximise solar access:

- a. Elizabeth Street between Bathurst Street and George Street - 6m.
- b. Railway Street, Scott Street and Memorial Street Avenue - 3m.
- c. Parts of George, Bathurst, Terminus and Bigge Streets - 2.5m.

Figure 4-10 Street Setbacks



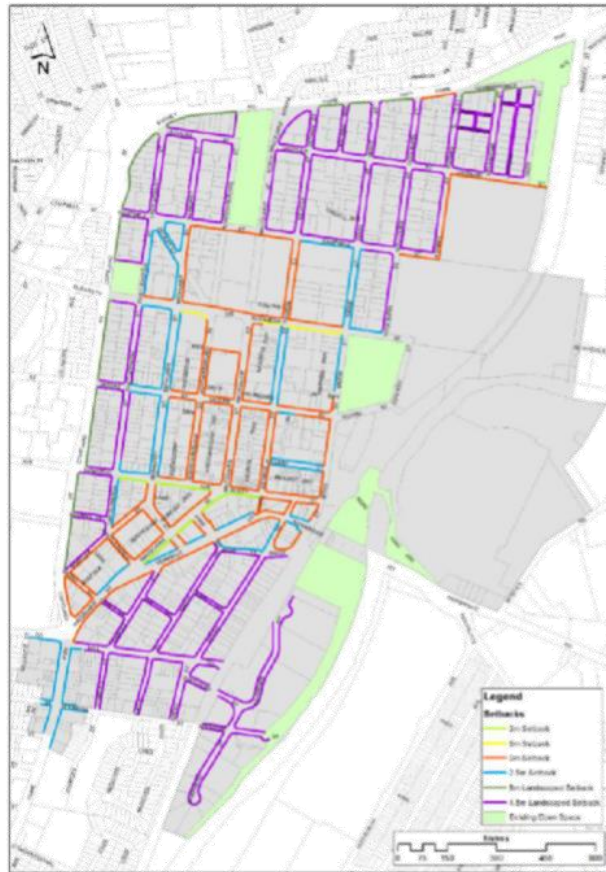
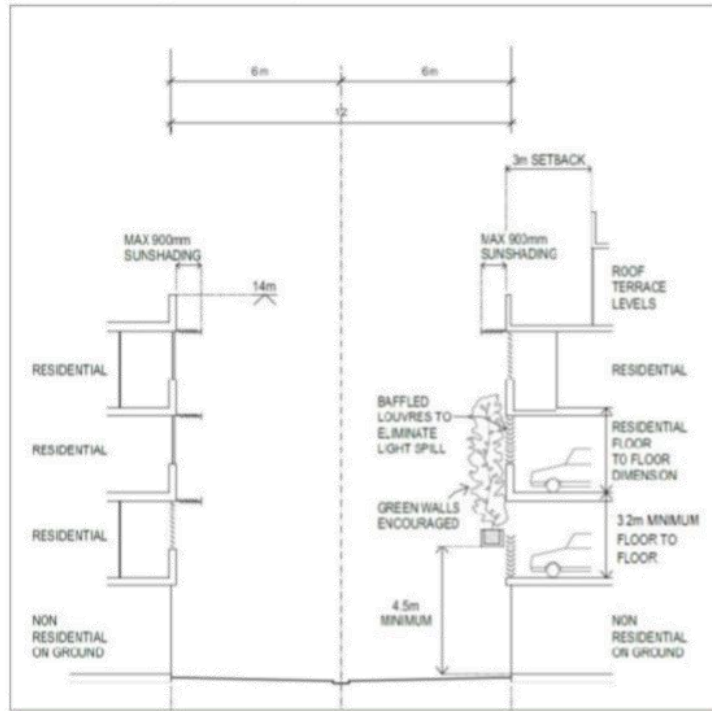
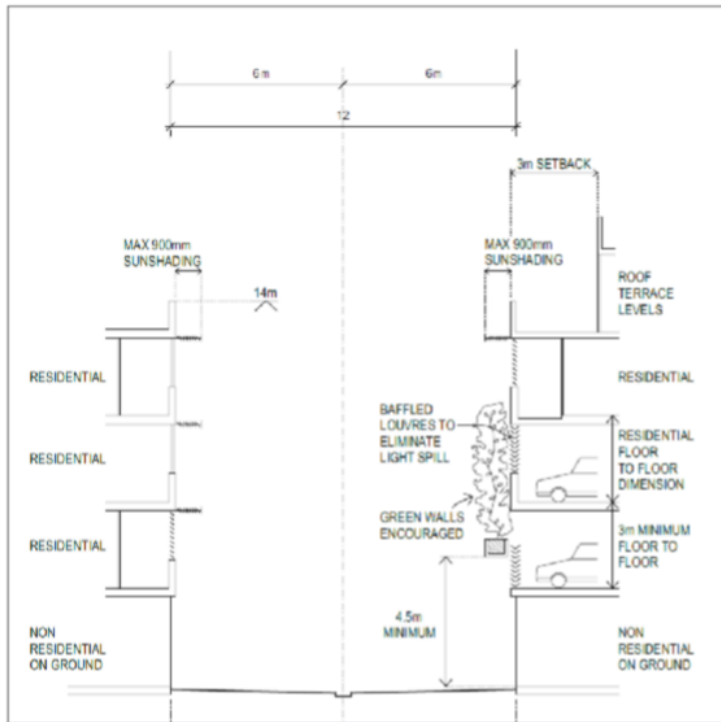


Figure 4-11 Laneway and Serviceway Setbacks





6. Pave the land in the set-back zone to match the paving in the public street so that it provides a seamless and level ground plane.
7. Ensure that no columns, blade walls or other building elements encroach the ground level of the front setback.
- 7-8. Ensure that balconies project a maximum of 1.2 metres into front building setbacks in the R4 - High Density Residential Zone.
- 8-9. Ensure that minor projections into front building lines and setbacks are designed for sun shading, entry protection or building articulation and enhance the amenity of the public domain.
10. Allow enclosures or screening of balconies only if they are moveable and aid the amenity of the apartments.
9. Include enclosures or screening of balconies that is moveable where it aids the amenity of the apartments.

4.2.89 Side and rear boundary setbacks

Background

Side and rear setbacks, where provided, allow ventilation, solar and daylight access, assist with

visual privacy, acoustic amenity, view sharing, and can reduce adverse wind effects. Building separation should relate to building height to ensure appropriate urban form, amenity and privacy for building occupants.

Objectives

Side and rear boundary setbacks must:

1. Ensure an appropriate level of amenity for building occupants in terms of daylight, outlook, view sharing, ventilation, wind mitigation, and privacy.
2. Achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

Controls

1. All residential and commercial buildings to comply with the separation distances in SEPP 65 and the ADG unless otherwise agreed with Council in an approved master plan.
2. For existing buildings that do not comply with the setback requirements identified in 1, appropriate screening openings must be installed for refurbished or converted buildings.
3. Buildings with a rear or side boundary to the rail corridor to provide a minimum setback of 12m. The setback is to be appropriately landscaped.
4. Buildings on land zoned B6 – Enterprise Corridor and B1 – Neighbourhood centre located in the [City-Centre city centre](#), have setbacks consistent with Table 4-1 below.
5. Construct buildings across the site facing the street and the rear boundaries rather than facing side boundaries.

Table 4-1 Side and rear boundary setbacks

Enterprise Corridor, Neighbourhood Centre and Existing Mixed Use areas	Setbacks	
	Side	Rear
Podium up to six levels :		
- If adjoining development built to boundary	0m	0m
- If adjoining stand alone development	ADG	ADG
Stand-Alone Buildings		
- Building height up to 12m	ADG	6m
- Building height 12-25m	ADG	9m
- Building height over 25m	ADG	12m

4.2.910 Minimum Floor to Ceiling Heights

Background

The height of a ceiling contributes to amenity within an apartment and the perception of space. Well designed and appropriately defined ceilings can create spatial interest and hierarchy in apartments. Ceiling height is directly linked to achieving sufficient natural ventilation and daylight access to habitable rooms. The ground and first floor levels of mixed use apartment buildings should have increased ceiling heights to ensure their longer term adaptability for other uses.

Objectives

Minimum floor to ceiling heights must:

1. Address the internal amenity of all users.
2. Assist in ensuring buildings are well-proportioned, articulated and modulated.
3. [Allow for the potential for commercial uses in the first floor of any new building.](#)

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Controls

The minimum floor to ceiling heights are:

1. Ground floor: 3.6m.
2. Above ground level:
 - a) Commercial office 3.3m.
 - b) Capable of adaptation to commercial uses 3.3m.
 - c) Residential 2.7m.
 - d) Active public uses, such as retail and restaurants 3.6m.
3. Car Parks: Sufficient to cater to the needs of all vehicles that will access the car park and, if aboveground, adaptable to another use, as above.

4.2.140 Housing Choice and Mix

Background

A mix of dwelling types is essential to cater for different family groups and lifestyles, and to achieve housing affordability. Dwellings require internal flexibility as well as a variety of outdoor and recreational areas.

Objectives

Developments must:

1. Provide a mix of dwelling types, sizes and open space to cater for a range of household types and living styles.
2. Provide dwelling layout that is sufficiently flexible for residents' changing needs over time.
3. Meet the Australian Adaptable Housing Standard (AS 4299-1995) and provide a sufficient proportion of dwellings that include accessible layouts and features to accommodate the changing requirements of residents.

Controls

1. In addition to the provisions for dwelling mix in the ADG, residential apartment buildings and shop-top housing must comply with the following apartment mix and size:
 - Studio and one bedroom units must not be less than 10% of the total mix of units within each development;
 - Three or more bedroom units must not be less than 10% of the total mix of units within each development;
 - Dual-key apartments must not exceed 10% of the total number of apartments; and
 - A minimum of 10% of all dwellings (or at least one dwelling – whichever is greater) to be capable of adaptation for disabled or elderly residents.
2. Adaptable dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995).
3. Provide certification from an Accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Ensure car parking and garages allocated to adaptable dwellings comply with the requirements of the relevant Australian Standard for disabled parking spaces.

1. In addition to the provisions for dwelling mix in the ADG, residential apartment buildings and shop-top housing must comply with the following apartment mix and size:
2. Studio and one bedroom units must not be less than 10% of the total mix of units within each development;
3. Three or more bedroom units must not be less than 10% of the total mix of units within each development;

4. Dual-key apartments must not exceed 10% of the total number of apartments.
5. A minimum of 10% of all dwellings (or at least one dwelling, whichever is greater) is capable of adaptation for disabled or elderly residents.
6. Adaptable dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995).
7. Provide certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
8. Ensure car parking and garages allocated to adaptable dwellings comply with the requirements of the relevant Australian Standard for disabled parking spaces.

4.2.1¹² Deep Soil Zones and Site Cover

Background

Deep soil zones are areas of natural ground retained within a development, uninhibited by artificial structures and with relatively natural soil profiles. Deep soil zones have important environmental benefits, including promoting healthy growth of large trees with large canopies, protecting existing mature trees, and allowing stormwater infiltration.

Limiting site cover provides separation between buildings. This space may be public (accessible and useable by the general public), communal (shared by all occupants of a development) or private (for the exclusive use of a single dwelling or tenancy).

Objectives

1. Provide an area on site that enables soft landscaping and deep soil planting, permit the retention and/or planting of trees that will grow to a large or medium size.
2. Improve amenity by allowing for good daylight access, ventilation, and assisting improved visual privacy.
3. Integrate with the open space and provide passive and active recreational opportunities.

Controls

1. The maximum permitted site coverage for development is specified in **Table 4-2**.

Table 4-2 Site coverage

Zone	Commercial Mixed Use	& Residential
Commercial Core, Fine Grain and Mid Rise	Up to 100%	N/A
Existing Mixed Use	75%	N/A
Enterprise Corridor and Infrastructure	75%	50%
All other zones	60%	50%

2. Include a deep soil zone as per Section 3E of the ADG in all developments with a residential component in all areas other than the Fine Grain Precinct and Mid-Rise Precinct, or where perimeter block buildings are developed.

4.2.1²³ Public Open Space and Communal Open Space

Background

Public open spaces and communal open spaces are critically important for outdoor recreation opportunities for residents, connection to the natural environment, and valuable 'breathing space' between apartment buildings and within the [City-Centre-city centre](#).

They also contribute to the appeal of the [cCity](#), the individual development and the wellbeing of residents. High quality open space is essential in higher density urban precincts. The size, location and design of public and communal open space will vary depending on the site context and the scale of development.

[Council encourages the development of the rooftop of residential flat buildings and mixed-use developments for the purposes of communal open space, including rooftop gardens, where possible. Better use of the rooftop space will increase the overall amenity and quality of new development in Liverpool city centre.](#)

Objectives

Open space must:

1. Provide amenity in the form of:
 - a) landscape character and design;
 - b) opportunities for group and individual recreation and activities [including on the roof space of new residential flat buildings and mixed-use developments](#);
 - c) opportunities for social interaction;
 - d) environmental and water cycle management; and
 - e) opportunities to enhance microclimate.
2. Allow for a range of activities.
3. Provide an attractive outlook for residents.
4. Respond to and enhance site characteristics and context.
5. Optimise safety.

Controls

Existing Public Open Space

1. Ensure that at least 70% of Bigge Park, Apex Park, Pioneer Park and any other public open space in the [City-Centre-city centre](#) has a minimum of 3 hours of sunlight between 10am and 3pm on 21 June (Winter Solstice).

New Public Open Space

2. Dedicate open space to Council, where required, as part of an approved Master Plan DA if the space meets the requirements of Council in terms of:
 - a) location;
 - b) aspect;
 - c) accessibility;
 - d) safety; and
 - e) solar access. The open space must be located and designed so that at least 50% of the open space provided has a minimum of 3 hours of sunlight between 10am and 3pm on 21 June (Winter Solstice).
3. [Developments with a residential component in all zones must comply with the sections 3D Communal Public Open Space and 4F Common Circulation and Spaces, of the ADG. Consistent with the requirements of the ADG, communal open space is to be collocated with areas of deep soil, where possible.](#)
4. [The roof space of residential flat buildings \(RFBs\) and mixed-use development \(including shop-top housing\) is to be developed for the purposes of communal open space that incorporate shade structures and amenity facilities \(barbecue and rooftop garden\) that](#)

- complement the development.
3. Developments with a residential component in all zones must comply with the Communal Open Space requirements of the ADG.

4.2.143 Landscape Design

Background

Landscape design includes the planning, design, construction and maintenance of all utility, open space and garden areas. The landscape qualities of the City-Centrecity centre are an important influence on its image, comfort, public and private amenity. Landscape within the public domain will be implemented within the framework established by the Liverpool CBD Streetscape and Paving Manual 2018⁵. In the private domain, it is important that a strong and consistent approach to landscape is achieved in order to contribute to both a high level of amenity and a cohesive image for the City-Centrecity centre.

Objectives

1. Enhance quality of life for residents and occupants within a development in terms of privacy, outlook, views and recreational opportunities.
2. Ensure potable water for irrigation is minimised. Incorporate passive irrigation where possible.
3. Ensure landscaping is integrated into the design of development.
4. Improve stormwater quality and control run-off.
5. Improve the microclimate and solar performance within the development.
6. Improve urban air quality and contribute to biodiversity.

Controls

1. Submit a landscape plan prepared by a qualified-registered landscape architect that demonstrates consistency with the above objectives and section 4V, water management and conservation, of the ADG.

4.2.145 Planting on Structures

Background

The following controls apply in the Commercial, Mixed Use and Enterprise Corridor Zones (as identified in Figure 4-2) for planting on roof tops or over car park structures, particularly for communal open space required as a component of mixed use residential development, and in non-residential developments where the landscaping proposed is not on natural ground.

Objectives

1. Contribute to the quality and amenity of open space on roof tops and internal courtyards.
2. Encourage the establishment and healthy growth of trees in urban areas.
3. Minimise the use of potable water for irrigating planting on structures.

Controls

1. Comply with the Section 4P, Planting on Structures in the ADG in all developments with a residential component and/or communal open space.

4.3. PEDESTRIAN AMENITY

Pedestrian amenity incorporates all those elements of individual developments that directly affect

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the quality and character of the public domain. These provisions are intended to achieve a high standard of public domain design and pedestrian comfort in [City-Centrecity centre](#) public spaces. The pedestrian environment is to be characterised by excellence of design, high quality materials and a standard of finish appropriate to a regional city centre. The City's lanes, arcades and through-site links should form an integrated pedestrian network providing choice of routes at ground level for pedestrians.

The controls in this section aim to increase the vitality, safety, security and amenity of the public domain by:

1. Developing future through-site links at ground level;
2. Ensuring active street frontages;
3. Ensuring a positive relationship between the building and the public domain;
4. Ensuring provision of awnings along the retail frontages; and
5. Mitigating adverse impacts on the street arising from driveway crossings.

4.3.1 Pedestrian Permeability

Background

The existing serviceways and through-site links are an integral component of the pedestrian movement system, providing direct access between the street frontage, serviceways and rear parking areas. The north-south oriented street grid in the [City-Centrecity centre](#) provides excellent connectivity in this direction but the City's street pattern would benefit by additional through-site links in an east-west direction. This will assist in reducing the overall street block size.

In some blocks, additional north-south connections will also improve accessibility and choice. Additionally, laneways provide for site servicing in a manner that protects the quality of main street frontages in the [City-Centrecity centre](#).

Objectives

1. Improve access and choice in the [City-Centrecity centre](#) by providing through-site links as redevelopment occurs.
2. Reduce the size of large street blocks to provide greater movement choice.
3. Create clear and direct throughways for pedestrians.
4. Increase the range of economic opportunities.
5. Retain and enhance existing through site links as redevelopment occurs.
6. Enable active street frontages on through site links.
7. Discourage vehicular access from the primary street frontages. Vehicular access shall be provided from secondary streets or laneways.

General Controls

1. Design through-site links to have direct sight lines.
2. Locate through-site links as shown in **Figure 4-12**.
3. Locate through-site links within "through site link encouragement areas" (as identified in **Figure 4-12**) opposite other through site links.
4. Extend existing dead end lanes (as identified in in **Figure 4-12**) through to the next street as redevelopment occurs.
5. [Connect new through site links with existing and proposed through site links, serviceways, shared zones, arcades and pedestrian ways.](#)
6. [Introduce alternative sites with similar connections where new links cannot be directly aligned with existing links.](#)
7. [Retain existing publicly and privately owned through-site links.](#)
8. [Locate active uses on through site links where possible.](#)

9. Nominate sites for through-site links, shared zones etc. that may be acquired by Council or may be considered as a public benefit in a redevelopment of an Opportunity site.
10. Vehicular access shall be provided from secondary streets or laneways only. Vehicular access will not be allowed from the primary street frontage.

Figure 4-12 Through Site Links





5. Connect new through site links with existing and proposed through site links, serviceways, shared zones, arcades and pedestrian ways.
6. Introduce alternative sites with similar connections where new links cannot be directly aligned with existing links.
7. Retain existing publicly and privately owned through site links.
8. Locate active uses on through site links where possible.
9. Nominate sites for through site links, shared zones etc. that may be acquired by Council or may be considered as a public benefit in a redevelopment of an Opportunity site.

~~40.—Vehicular access shall be provided from secondary streets or laneways only. Vehicular access will not be allowed from the primary street frontage unless there are no other alternative accesses available.~~

Specific Controls for Different Link Typologies

1. Shareway | Pedestrians and Cars (Public) Through Site Links must:
 - a) Be a minimum width of 6m and clear of all obstructions.
 - b) Be open to the air and to be publicly accessible at all times.
 - c) Display signage at street entries indicating public accessibility and the street to which the through site link connects.
2. Pedestrian Paths | (Public) Through Site Links must:
 - a) Be a minimum width of 3m clear of all obstructions.
 - b) Be open to the air and to be publicly accessible at all times.
 - c) Have signage at street entries indicating public accessibility and the street to which the through site link connects.
3. Pedestrian Arcades and Through Site Links must:
 - a) Be a minimum width of 5m clear of all obstructions (including columns, stairs, and escalators).
 - b) Provide public access at all business trading times.
 - c) Be at least 2 storeys high.
 - d) Have access to natural light for at least 50% of their length, where appropriate.
 - e) Incorporate clear glazed entry doors comprising at least 50% of the entrance where air conditioned, and to be accessible 18/7 (18 hours per day, 7 days per week).
 - f) Display signage at street entries indicating public accessibility and the street to which the through site link connects.

4.3.2 Pedestrian Overpasses and Underpasses

Background

Streets provide the best potential amenity and safety when activated by pedestrians. Pedestrians should be encouraged to use the street level to enhance and contribute to street life, and to maximise safety and security of the public domain.

Pedestrian overpasses linking commercial or retail buildings over the public street are discouraged as they can have a negative impact on the streetscape quality and on views and vistas along streets. New pedestrian overpasses or underpasses will only be considered where they can directly connect to major transport nodes (such as Liverpool railway station), and can substantially improve pedestrian safety and access over major arterial roads (such the Hume Highway).

Objectives

1. Promote pedestrian activation of streets and public places by limiting pedestrian overpasses and underpasses.
2. Encourage pedestrian circulation at street level.
3. Protect views and vistas along streets.

Controls

1. Design underpasses or overpasses in accordance with *Crime Prevention Through Environmental Design* principles and compliant with the applicable Australian Standard for Disabled Access.

2. Design overpasses to be fully glazed or open, and not greater than 3m wide or more than one level high.
3. Consider underpasses for direct connection under adjacent streets to the railway station where they:
 - a) would substantially improve pedestrian safety and accessibility;
 - b) incorporate active uses, particularly at entry and exit points; and
 - c) have a minimum width of 4.5m clear of all fixed obstructions and a minimum ceiling height of 6m.

4.3.3 Active Street Frontages

Background

Active street frontages promote an interesting and safe pedestrian environment.

Active frontage uses are defined as one or a combination of the following at street level:

- entrance to retail;
- glazed entries to commercial and residential lobbies;
- café or restaurant, if accompanied by an entry from the street;
- active office uses, such as reception, if visible from the street; and/or
- public building if accompanied by an entry.

Objectives

1. Promote pedestrian activity and safety in the public domain.
2. Maximise active street frontages in Liverpool City Centre city centre.
3. Development in Liverpool city Centre is consistent with the Liverpool City Activation Strategy 2019-24.
- 2-4.

Controls

1. Locate active street frontages on ground level of all areas identified on the Active Street Frontages Map in LLEP 2008 Maps including adjacent through-site links.
2. Locate active street frontages in the existing Mixed Use, Commercial Core, Enterprise Corridor and Neighbourhood zones (as identified in Figure 4-2), on ground level. This does not preclude servicing activities particularly in the serviceways.
3. Locate active street frontages at first floor level in addition to ground for sites addressing major roads as depicted in Figure 4-16.
4. Locate street fronts at the same level as the footpath and with direct access from the street.
5. Use only open grill or transparent security (at least 50% visually transparent) shutters to retail frontages.

4.3.4 Street Address

Background

Street address is defined as that part of a building that has a frontage to the street, contains entries, lobbies, balconies and habitable rooms overlooking the street. Buildings can contribute positively to the street by providing a clear address to, direct access from and outlook over, the street.

Objectives

1. The street address for buildings must provide:
 - a) An attractive interface between the public and private domains.
 - b) Legible entries to the building from the street.

- c) Opportunities for surveillance of the street and public domain.

Controls

1. Provide a clear street address and direct pedestrian access off the primary street frontage in mixed use and residential developments.
2. Provide multiple entrances to large developments on all street frontages.
3. Provide direct 'front door' and/or garden access to the street in ground floor residential units.

4.3.5 Street and Building Interface

Background

Residential buildings can contribute positively to the street by providing direct access from the street and outlook over the street. They also need to provide privacy if dwellings are located on the ground floor. Where fences are used, they need to be designed to enable a positive relationship between the building and the street. Front fences include all fences to the primary and secondary street frontages, and side boundary fences forward of the building alignment.

Objectives

1. Clearly define the interface between the public and private domain.
2. Provide privacy for dwellings on the ground floor of buildings.
3. Ensure front fences allow for passive surveillance of the street.
4. Encourage the preservation and/or construction of fences, walls and landscaped areas that contribute to the character of the locality.

Controls

1. Design the area between the building and the public footpath so that it:
 - a) provides visibility to and from the street if non-residential use;
 - b) provides privacy if residential uses are on the ground floor;
 - c) introduces paving and/or landscaping between the street and the building; and/or
 - d) screens any above ground car parking basements.
2. Use front fences that:
 - a) do not present a solid edge to the public domain greater than 1.2 m above the footpath / public domain level; and
 - b) are not constructed of sheet metal or opaque glass.

4.3.6 Lane / Serviceways and Building Interface

Background

Active street frontages on service ways can assist in promoting interesting and safe environments in which vehicles and people have mutual benefits.

Objectives

1. Clearly define the interface between the public and private domain.
2. Provide for passive surveillance of the street from the building to the serviceway.
3. Minimise the impact of above ground car parking.
4. Provide suitable non residential uses with direct pedestrian access to the lane/serviceway
5. Ensure the effective operation of loading facilities.

Controls

1. Set back all levels above ground of buildings 6m from the centre line of the lane/serviceway so that residential uses can be accommodated on opposite sides of the serviceway, as described in **Figure 4-11**.
2. Provide active uses and/or entries at ground level where possible.

3. Screen or sleeve above ground car parking with green walls or other screening devices.
4. Electricity substations (where required) shall be situated within the building or its basement.
5. Vehicular entry points must be of high quality design. The impact of vehicular entry points on pedestrians must be minimised.
6. Garbage collection points, fire services and other service requirements are to be integrated into the design of the building.

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4.3.7 Awnings

Background

Awnings increase the useability and amenity of public footpaths by protecting pedestrians from sun and rain. Awnings provide a public presence and interface within the public domain to contribute to the identity of a development.

Objectives

Awnings on buildings must:

1. Provide shelter for public streets where most pedestrian activity occurs.
2. Address the streetscape by providing a consistent street frontage.

Controls

1. Provide street frontage awnings for all new developments on streets identified in Figure 4-13.
2. Awnings must be:
 - a) horizontal in form;
 - b) minimum 2.4m deep (dependent on footpath width);
 - c) minimum soffit height of 3.2m and maximum of 4m;
 - d) stepped to accommodate sloping streets;
 - e) integral with the building design;
 - f) slim vertical fascias or eaves (generally not to exceed 300mm height); and
 - g) setback 1.2m from kerb to allow for clearance of street furniture, trees, and other public amenity elements.
3. Match awning design to building facades, so that they maintain continuity and are complementary to those of adjoining buildings.
4. Include appropriate sun shading device for the outer edge of awnings along east-west streets if required. These blinds must not carry advertising or signage.
5. Provide lighting recessed into the soffit of the awning to facilitate night use and to improve public safety.
6. Maintain a minimum clearance of 2.8m from the level of the pavement to the underside of awning signage.
7. Provide all residential buildings in areas not identified for continuous awnings in Figure 4-13 with awnings or other weather protection at their main entrance area.

Figure 4-13 Awnings





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4.3.8 Building Design and Public Domain Interface

Background

Liverpool's public domain is defined by the buildings, streets and public places. The quality of the public domain is dependent on a consistent approach to the design of new development including the articulation and finish of building exteriors.

Objectives

The design of the street elevations of buildings must:

1. Contribute positively to the streetscape and public domain by means of high quality architecture and robust selection of materials and finishes.
2. Provide richness of detail and architectural interest especially at visually prominent parts of buildings such as lower levels and roof tops.
3. Clearly define the adjoining streets, street corners and public spaces and avoid ambiguous external spaces with poor pedestrian amenity and security.
4. Seek to reduce the urban heat island effect by selecting lighter coloured external finishes.

Controls

1. Design new buildings that adjoin existing buildings, particularly heritage buildings and those of architectural merit so that they consider:
 - a) the street 'wall' alignment and building envelope;
 - b) the 'depth' within the façade;
 - c) facade proportions; and
 - d) the response to the corners at street intersections.
2. Provide balconies and terraces appropriately orientated where buildings face public spaces.
3. Articulate façades to address the street, proportion the building, provide 'depth' in the street wall when viewed obliquely along the street and add visual interest.
4. Use high quality robust finishes and avoid finishes with high maintenance costs, and those susceptible to degradation due to a corrosive environment. Large expanses of rented concrete finish is discouraged.
5. Select lighter-coloured materials for external finishes including roofs and avoid the use of darker-coloured materials (e.g. black charcoal) to reduce the urban heat island effect.
- 4.6. Maximise glazing in the facades for retail uses.
- 5.7. For residential components of buildings, do not use highly reflective finishes and curtain wall glazing above ground floor level.
- 6.8. Construct only minor projections up to 600mm from building walls into the public space. These must not add to the GFA and must provide a benefit, such as:
 - a) expressed cornice lines that assist in enhancing the definition of the street; or
 - b) projections such as entry canopies that add visual interest and amenity.
- 7.9. Do not locate communication towers such as mobile phone towers, but excluding satellite dishes, on residential buildings or mixed use buildings with a residential component.
- 8.10. Incorporate roof top structures, such as air conditioning and lift motor rooms, into the architectural design of the building.
- 9.11. Screen air conditioning units on balconies.
- 10.12. No clothes drying facilities to be allowed on balconies.

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4.3.9 Street Intersections and Corner Buildings

Background

As buildings located on corner sites address two street frontages instead of one, they are more visibly prominent than mid-block buildings. Corner buildings therefore play a particularly important role in the City Centre city centre skyline. Corners can strengthen the form of city blocks, streets and intersections, identify important junctions, assist in revealing topographic features and define pedestrian routes.

Objectives

Corner buildings must:

1. Contribute to the legibility of the city.
2. Ensure they address all street frontages.
3. Support the role of corner sites in creating a clear skyline and minimising apparent density.

4. Respond to any heritage buildings on opposing corner sites.

Controls

1. Address all street frontages in the design of corner buildings.
2. Design the corner buildings to respond to the character of the intersection by recognising the different hierarchies of the street typologies.

Note: Intersections of different street types all require varied design responses.

4.3.10 Public Artworks

Background

Public Art enhances the visual quality and cultural influence of both the private and public domain. It contributes to people feeling positive about their surroundings. Public Art may be ephemeral, temporary or permanent in nature. It may be located in or part of a public space or facility and may be commissioned by either the public or private sector.

Public art also includes the conceptual contribution of an artist to the design of public spaces and facilities. Public Art is crucial to the development of public places which are innovative, vibrant and meaningful and allow curiosity, playfulness and or a sense of connection to form. Public art may take any of the following forms:

- a) Functional Connection: seating, lighting, bollards
- b) Decorative: Incorporated into structures eg paving, awnings
- c) Iconic: Stand-alone sculptural works
- d) Integrated: fully incorporated within the design eg flooring, windows
- e) Interpretative: describe, inform or educate, on issues, events, situations eg signage, plaques, text based work

Objectives

Public Art in Liverpool City Centre must:

1. Contribute to the City's physical attractiveness and the quality of life that it offers visitors and residents.
2. Interpret and express Liverpool's historical and cultural themes particularly as identified in Our Home, Liverpool 2027, Community Strategic Plan.
3. Increase/improve the number and quality of public artworks in Liverpool.
- 3-4. Encourage the development of public art as consistent with Council's Public Art Policy.

Controls

1. Design public art to respond to the particular site of the development as well as the City as a whole.
2. Provide well designed and visually interesting public art created by artists or organisations that are competent in the selected field and committed to best practice.
2. Provide well designed and visually interesting public art created by artists or organisations that are competent in the selected field and in support of Council's Public Art Policy.
3. Construct Public Art of materials that are hard-wearing durable, resistant to vandalism, safe for the public and constructed to ensure minimal maintenance.
- 3-4. Develop clear and concise agreements with artists/organisations in relation to expectations and deaccession (the process used to permanently remove an object, artwork or assemblage).

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4.4. TRAFFIC AND ACCESS

4.4.1 Road widenings and extensions

Background

This section contains objectives specifically related to pedestrian access, vehicular access, on-site parking and site facilities in the City Centre city centre. Figure 4-14 outlines the streets within the City Centre that may be subject to road widening or where changes to street pattern may occur. An upgrade of the intersection of the Hume Highway and Hoxton Park Road is also under consideration.

Objectives

1. Provide adequate car parking and servicing within each development to ensure sustainable growth in the City Centre.
2. Provide for safe and efficient vehicular and pedestrian access.
3. Minimise impacts on city amenity, the public domain and the streetscape.
4. Ensure that access is provided for the disabled and the mobility impaired.

Controls

1. Provide road widenings and extensions in accordance with Figure 4-14.

Figure 4-14 Potential Road Widening



4.4.21 Vehicular Access and Manoeuvring Areas

Background

The location, type and design of vehicular access points to a development can have significant impacts on the streetscape, the site layout and the building façade design.

Objectives

The design and location of vehicular access to developments must:

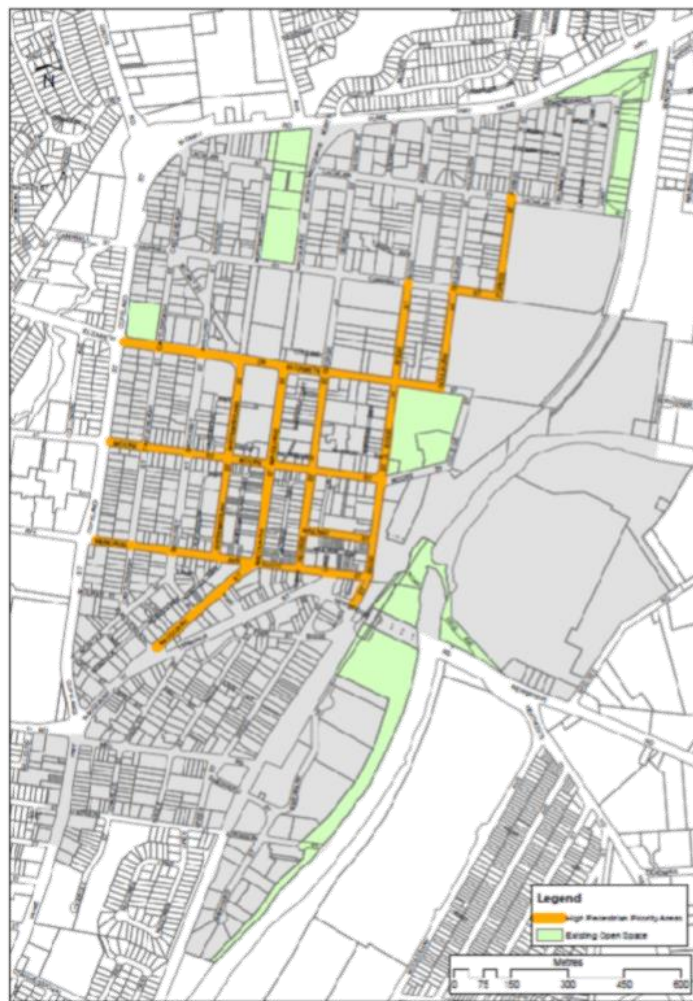
1. Avoid or minimise conflicts between pedestrians and vehicles on footpaths, particularly along pedestrian priority areas identified in Figure 4-14.
2. Not intrude visually into the streetscape continuity.

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Controls

1. Vehicular access shall be restricted to the secondary street (other than along a High Pedestrian Priority Area) where possible.
2. Design of vehicle entry points must be of high quality and relate to the architecture of the building, including being constructed of high quality materials and finishes.
4. Minimise potential conflict between vehicles and pedestrians through appropriate design treatment for areas identified in Figure 4-15.
- 2.3. All weather access:
 - a) Locate and design porte cochere (for hotels only) to address urban design, streetscape, heritage and pedestrian amenity considerations.
 - b) Design porte cochere to be internal to the building, where practical, with one combined vehicle entry and exit point, or one entry and one exit point on two different frontages of the development.
 - c) In exceptional circumstances for buildings with one street frontage only, an indented porte cochere with separate entry and exit points across the footpath may be permitted, as long as it is constructed entirely at the footpath level and provides an active frontage at its perimeter.

c)
Figure 4-14 High Pedestrian Priority Areas



4.4.2 On Site Parking

Background

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On-site parking includes underground (basement), surface (at grade) and above ground parking, including parking stations. Parking requirements for buildings on land zoned B3 — Commercial Core B4 — Mixed Use within Liverpool city centre are detailed in clause 7.3 of LLEP 2008. For other development (including buildings on land zoned R4 — High Density Residential, B1 — Neighbourhood Centre or B6 — Enterprise Corridor are detailed below. Bicycle parking requirements are detailed in section 21.3 of Part 1 LDCP 2008. On-Site Car Parking Provision and Service Facilities by Land Use.

Objectives

On site car parking must:

1. Provide a sufficient supply of on-site parking on the outskirts of the City-Centrecity centre to cater for a mix of development types.
2. Encourage economic growth within the City-Centrecity centre.
3. Enable the conversion of above ground parking to other uses in the future.
4. Encourage a modal shift in transport and recognise the complementary use and benefit of public transportation and non-motorised modes of transport such as bicycles and walking.
5. Be provided underground (basement).

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Controls

1. All required car parking is to be provided on site in an underground (basement) carpark except to the extent provided below:
 - a) On Fine Grain and Midrise sites, a maximum of one level of surface (at grade) parking may be provided where it is fully integrated into the building design; and
 - b) On sites requiring the lodgement of a concept DA, a maximum of one level of surface (at grade) and one additional level of above ground parking may be provided where it is fully integrated into the building design.
2. Provide car parking for buildings developed on land in the R4 - High Density Residential zone as follows:
 - a) 1 space per two studio apartments.
 - b) 1 space per one bedroom or two bedroom apartments.
 - c) 1.5 spaces per three or more bedroom apartments.
3. Provide car parking for buildings developed on land in other zones (B1 — Neighbourhood Centre and B6 — Enterprise Corridor) as follows:
 - a) 1 space per 100 m² of floor area
4. Service and visitor parking is to be provided for all development within the city centre. For sites zoned B3 — Commercial Core or B4 — Mixed Use, service and visitor parking is to be provided as part of the parking required according to clause 7.3 of LLEP 2008. Car parking in Liverpool city centre. For all other sites, service and visitor parking requirements are additional to that specified in controls 2 and 3 above.

Service and visitor parking is to be provided in accordance with the following formula:

Residential (including residential components of mixed-use or other developments)

- 1 space per 10 apartments or part thereof, for visitors; and

- 1 space per 40 apartments for service vehicles (including removalist vans and car washing bays) up to a maximum of 4 spaces per building

All other development

5. Sufficient service and delivery vehicle parking adequate to provide for the needs of the development. Provision is to be made for motorcycle parking at the rate of 1 motorcycle space per 20 car spaces.

6. ~~No less than 2% of the total parking demand generated by development shall be accessible parking spaces, designed and appropriately signposted for use by persons with a disability.~~
4. ~~All required car parking is to be provided on site in an underground (basement) carpark except to the extent provided below:~~
- a) ~~On Fine Grain and Mid-Rise Sites, a maximum of one level of surface (at-grade) parking may be provided where it is fully integrated into the building design; and~~
 - b) ~~On Opportunity Sites a maximum of one level of surface (at-grade) and one additional level of above-ground parking may be provided where it is fully integrated into the building design.~~

Figure 4-15 High-Pedestrian Priority Areas

Commented [GM2]: Image relocated to page 52 and amended to incorporate Railway Street



2. Provide car parking for land in the R4 – High Density Residential zone as follows:
 - a) 1 space per two studio apartments.
 - b) 1 space per one bedroom or two bedroom apartments.
 - c) 1.5 spaces per three or more bedroom units.
 - d) 1 space per 10 units or part thereof, for visitors.
 - e) 1 space per 40 units for service vehicles (including removalist vans and car washing bays) up to a maximum of 4 spaces per building.
3. Provide one (1) bicycle space per 200sqm of leasable floor area to be provided. 15% of this requirement is to be accessible to visitors.
4. For commercial and retail development providing employment for 20 persons or more, provide adequate change and shower facilities for cyclists. Facilities should be located conveniently close to bike storage areas.

4.5. ENVIRONMENTAL MANAGEMENT

4.5.1 Wind Mitigation

Background

Windy conditions can cause discomfort and be dangerous to pedestrians, and downdrafts from buildings can inhibit the growth of street trees. Conversely, moderate breezes that penetrate streets can enhance pedestrian amenity and disperse vehicle emissions and air conditioning plant exhausts.

Objectives

Wind mitigation measures must:

1. Ensure that new developments satisfy nominated wind standards and maintain comfortable conditions for pedestrians.
2. Ensure that the moderate breezes are able to penetrate the streets of Liverpool City Centre city centre.

Controls

1. Design all new buildings to meet the following maximum wind criteria :
 - a) 10m/second in retail streets;
 - b) 13m/second along major pedestrian streets, parks and public places; and
 - c) 16m/second in all other streets.
2. Submit a Wind Effects Report with the DA for all buildings greater than 35m in height.
3. Submit results of a Wind Tunnel Testing report for buildings over 48m in height.

4.5.2 Noise

Background

Noise sources from major road and railway corridors and mixed-use and commercial development have been identified within and adjacent to the City Centre city centre. It is important for the amenity and comfort of future occupants of buildings in proximity to these areas that appropriate measures are put in place.

Objectives

1. Noise mitigation measures must achieve appropriate amenity in road and rail noise affected locations.

Controls

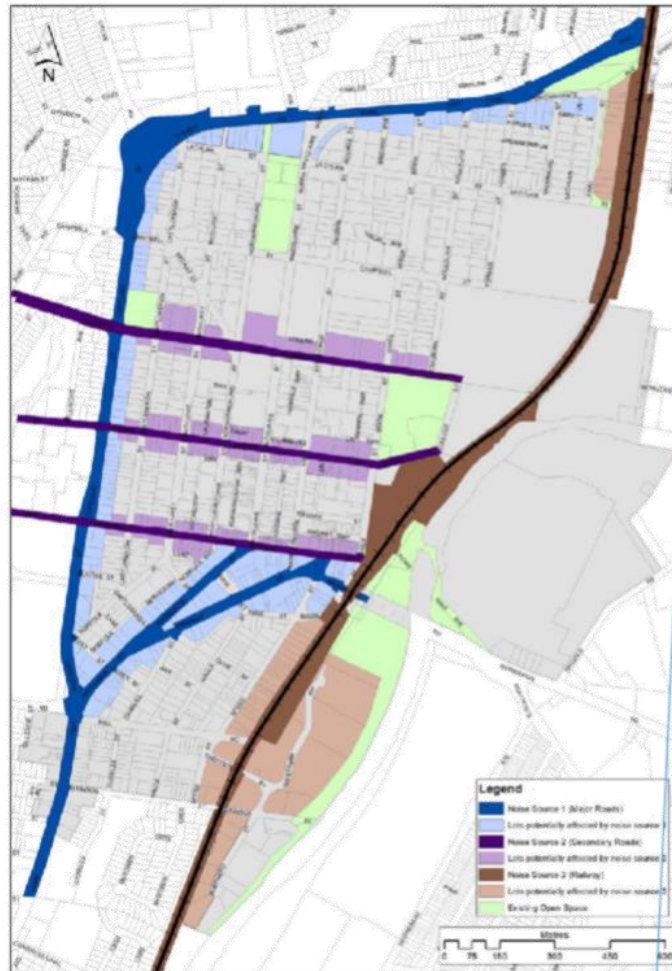
1. Design development on sites adjacent to noise sources identified in **Figure 4-16**, in a manner that shields any residential development from the noise source through the location and orientation of built form on the site, supported by an appropriate acoustic report as required by the State Environmental Planning Policy (Infrastructure) 2007.
2. Provide an 8m setback from the primary street frontage to any residential component of development located along Terminus Street and the Hume Highway.
3. All residential apartments and / or serviced apartments within a mixed use development should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as appropriate insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s).

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4.15 Noise



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4.6. CONTROLS FOR SPECIAL AREAS

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Background

The following controls are in addition to the general controls elsewhere in this DCP. The

purpose of this section is to provide addition, site specific controls for areas of sensitivity within the [City-Centrecity centre](#). These included heritage areas and sites requiring [the lodgement of a site-specific DCP](#), [design-excellence](#).

4.6.1 Heritage Items and Conservation Areas

Background

Heritage items and heritage conservation areas identified on the heritage map and in Schedule 5 of the LLEP 2008. Works affecting listed heritage items or areas, or development on listed heritage sites, are subject to the provisions of the LLEP 2008. As part of the assessment process, the consent authority must have regard to:

- Heritage provisions outlined in Clause 5.10 of the LLEP 2008;
- Heritage objectives, controls and conservation criteria as listed below;
- The relevant Statement of Significance for each item;
- Any conservation management plan, heritage impact statement or study required by the consent authority in response to proposed development of these areas;
- For development that may impact a heritage item, information addressing relevant issues must be included in a Statement of Heritage Impact submitted with the DA; and
- Development within the curtilage of a listed item, or a heritage conservation area, or which will impact upon the setting of a heritage item or heritage conservation area is also subject to the following provisions. Where there is a discrepancy with general controls elsewhere in this DCP, the following objectives and controls are to apply.

Objectives

1. Facilitate the conservation and protection of heritage items and heritage conservation areas and their settings.
2. Reinforce the special attributes and qualities of the heritage significance by ensuring that development has regard to the fabric and prevailing character of the item or conservation area, including scale, proportions, materials and finishes.
3. Design infill development to complement the heritage values and address the desired future character.
4. Conserve, maintain and enhance existing views and vistas to buildings and places of heritage significance.
5. Ensure new buildings and landscaping in heritage precincts recognise community values and provide a sense of continuity. Refer to the joint NSW Heritage Office and RAIA publication "Designing in Context: Guidelines for Infill Development in the Historic Environment" (2005) for further guidance.

Figure 4-16 Noise

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Controls

1. Submit a Conservation Management Plan prior to the submission of any development application for the following sites:
 - a) St Luke's Church;
 - b) Liverpool Railway Station; and
 - c) Liverpool College of TAFE (Francis Greenway Building).
2. Ensure that all development in the Bigge Park Conservation Area addresses any potential impact on the heritage significance of the area as a whole.
3. Retain and enhance the significance of heritage items and their setting in any new development within Liverpool City Centre.
4. Undertake an assessment for sites in the vicinity of heritage items or heritage conservation areas, of the impact of the proposal on the setting of nearby heritage items or heritage conservation areas.
5. Establish the relevant criteria for each proposal depending on the nature of development, the proximity of the development to surrounding heritage items and conservation areas as well as other factors.
6. Infill building must not precisely imitate its neighbour but use recognisable tools such as a spatial organisation, massing, scale, alignment, detailing, materials, roof forms and coursing lines to complement adjacent heritage items.
7. New buildings must not obstruct important views and vistas of a heritage item.

4.6.2—Design Excellence

Background

Good building design should positively contribute to the overall architectural quality of the City and provide buildings appropriate to their context. In some circumstances, this contribution may be as an iconic or landmark building, but more typically it is as a building that fits sensitively into the streetscape.

Objectives

1. Ensure design excellence delivers a high standard of design quality.

Controls

All development is to be reviewed by the Liverpool Design Excellence Panel (LDEP) in accordance with the Design Excellence Charter.

4.6.2 Site specific DCPs

Background

As noted in Section 4.2.5 above, certain sites in Liverpool city centre (having a minimum lot size of 1500 m² with two or more Street frontages and situated in 'Area 8', 'Area 9' or 'Area 10') may be developed pursuant to Clause 7.5A of LLEP 2008. While Council's preferred option is that development of these sites proceeds pursuant to a concept developed application, the option is to lodge a site specific DCP which meets all the requirements of clause 7.5A(4) of LLEP 2008. Any such site-specific DCPs are to be considered as amendments to Part 4 LDCP 2008 and included in this section.

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Memo

To: The Mayor and Councillors
From: David Smith, Manager Planning & Transport Strategy
Date: 3 September 2018
Subject: Liverpool Local Environmental Plan 2008 (Amendment 52)
Reference: 243101.2018

For the Information of the Mayor and Councillors

The Department of Planning and Environment has advised that the gazettal of Liverpool Local Environmental Plan (LLEP) 2008 (Amendment 52) is likely this week, with a press conference scheduled for tomorrow, 4 September 2018 with Council and the Minister of Planning. Amendment 52 applies to land in the Liverpool City Centre.

Council has been working with the Department of Planning for some time to finalise Amendment 52 as Council was not delegated by the Minister as the planning proposal authority for Amendment 52 given the strategic nature of the proposal. The following changes to the LLEP 2008 will be made as a result of Amendment 52:

- Rezones the majority of the commercial core in the Liverpool City Centre from B3 — Commercial Core to B4 — Mixed Use;
- Establishes four precincts within the Liverpool City Centre as illustrated in Figure 1 (below) being "Area 7" (Fine Grain precinct), "Area 8" (Midrise precinct), "Area 9" (Long-term Civic Sites precinct) and "Area 10" (Residual B3 Commercial Core precinct);
- Development standards as follows:
 - "Area 7" FSR 2.5:1, Height of Building 21 m;
 - "Area 8" FSR 3:1, Height of Building 28 m;
 - "Area 9" FSR 2.5:1, Height of Building 45 m (rail transit centre), 35 m (hospital);
 - "Area 10" FSR 4:1 to 5:1, Height of Building 35 m to 100 m, depending on individual lot.
- Amendment 52 introduces a new clause 7.5A, which makes provision that certain larger lots (in excess of 1,500 m² with a minimum of two street frontages) located in Areas 8, 9 or 10, may exceed the mapped FSR to a maximum of 7:1 for land in "Area 9" or 10:1 for land in "Area 8" or "Area 10". The height of buildings and these lots may also exceed that stipulated in the Height of Building development standard. Such development must also meet minimum use requirements (no less than 20% of the gross floor area must be used for uses other than residential including business premises, retail premises, community facilities, educational establishments etc.) and must also provide recreation areas, indoor recreation facilities, community facilities, information and education facilities, through site links or public car parks at the site;



Memo

- A DA submitted pursuant to clause 7.5A must be prepared in accordance with Division 4.4 Concept development applications, of the *Environmental Planning and Assessment Act 1979* and must address:
 - the suitability of the land for development,
 - the existing and proposed uses and use mix,
 - any heritage issues and streetscape constraints,
 - the impact on any conservation area,
 - the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,
 - the bulk, massing and modulation of buildings,
 - street frontage heights,
 - environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity,
 - the achievement of the principles of ecologically sustainable development,
 - encouraging sustainable transport, including increased use of public transport, walking and cycling, road access and the circulation network and car parking provision, including integrated options to reduce car use,
 - the impact on, and any proposed improvements to, the public domain,
 - achieving appropriate interface at ground level between buildings and the public domain,
 - the excellence and integration of landscape design.
- Clause 6.4A of the LLEP requires any residential development within the area rezoned by Amendment 52 to meet "satisfactory arrangements" for the provision of designated State public infrastructure. This is likely to take the form of a monetary contribution paid by Developers directly to the Department of Planning and Environment. The amount of the contribution will be determined by the Department of Planning & Environment upon an application made to it (Council is not at this time aware of the likely contribution amount). Council cannot grant consent to a DA unless the Secretary of the Department of Planning certifies in writing to Council that satisfactory arrangements have been made to contribute to the provision of designated State public infrastructure in relation to the land on which the development is to be carried out.
- Amendment 52 makes the following additional changes to LLEP 2008:
 - increases the maximum height of buildings lining the Macquarie Street Mall to 21m;
 - deletes requirements for an architectural design competition for buildings within the Liverpool city centre;
 - deletes requirements for a minimum building street frontage for land within "Area 7" or "Area 8".

Councillors have already adopted changes to the DCP (Part 1 and Part 4) to give effect to Amendment 52. Staff are currently reviewing these documents to ensure they align with the final version of Amendment 52. If further changes are required, a report will be prepared for a future Council meeting.



Memo

If you have any further enquiries, please do not hesitate to contact me on 87117610.

A handwritten signature in black ink, appearing to read "Smith".

David Smith
Manager Planning & Transport Strategy



Figure 1: Land included in Amendment 52, "Area 7", "Area 8", "Area 9" and "Area 10"

architectus™



Prepared for
Holsworthy Development Services Ltd

Date
30 October 2018

Planning Proposal

Holsworthy Village Centre

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This report is considered a draft unless signed by a Director



30 October 2018

Michael Harrison, Director Urban Design and Planning

Revision history

Issue Reference	Issue Date	Issue Status
A	25 October 2018	Draft for client review
B	30 October 2018	Final submitted to Council

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Attachment A – Master Plan and Urban Design Study
Attachment B – Landscape Master Plan
Attachment C – Social Impact Assessment
Attachment D – Economic Impact Assessment
Attachment E – Traffic Impact Assessment
Attachment F – Flood Study
Attachment G – Bushfire Constraints Assessment
Attachment H – Noise and Vibration Impact Assessment
Attachment I – Servicing and Utilities Infrastructure Strategy Report
Attachment J – Preliminary Site Investigation

Executive summary

This Planning Proposal has been prepared by Architectus on behalf of Holsworthy Shopping Centre Pty Ltd for the land known as 2 Macarthur Drive, Holsworthy, and legally defined as Lot 5 in Deposited Plan 825745 (the site). The site is located at the intersection of Heathcote Road and Macarthur Drive and is currently vacant.

This Planning Proposal seeks the support of Liverpool City Council to amend the existing planning controls applicable to the site, to allow an increased density of uses to be delivered on the site which is commensurate with its highly accessible location and which will result in no unreasonable environmental impact.

The proposed amendments to the Liverpool Local Environmental Plan (LLEP) 2008 include the following:

- **Height of Buildings (Clause 4.3)** – Increase the maximum height of buildings control from a blanket height of 21 metres, to part 25 metres and part 45 metres
- **Floor Space Ratio (Clause 4.4)** – Increase the maximum floor space ratio (FSR) control from 1.5:1 to 2.15:1
- **Maximum non-residential gross floor area (Schedule 1)** – Include a site-specific provision under Schedule 1 stipulating a maximum non-residential gross floor area of 9,000sqm on the site.

The site

This report relates to the land at 2 Macarthur Drive, Holsworthy, shown highlighted at **Figure 1**. The site has an area of 1.862 hectares and is currently vacant, however has been partially excavated to the level of the basement of the previously approved mixed-use development on the site.



Figure 1 Subject site
Site outlined in red
Image source: Nearmap

As per the LLEP 2008, a maximum building height of 21 metres and a maximum floor space ratio of 1.5:1 currently apply to development on the site.

The land is currently zoned B2 - Local Centre. The zoning of the land permits a range of uses on the site which are appropriate for its location, including the provision of a mixed-use centre as intended under this proposal. Accordingly, no change to the zoning of the land is being sought by this Planning Proposal.

This Planning Proposal has been prepared in accordance with Section 55 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and *A Guide to Preparing Planning Proposals*, (NSW Department of Planning and Environment, 2016). In line with these documents, this Planning Proposal explains the intended effect of the proposed instrument and sets out the justification for the making of the proposed instrument.

Strategic and planning context

The site is a long term vacant site having been intended for a commercial shopping village, as reflected by both current and historical land zoning. A DA was approved in 2005 for use of the site as a commercial shopping centre/plaza, and although the site was excavated under the consent for the centre, the building was never constructed. It is noted that the site is referred to within subsequent Council documents as the 'Holsworthy Village'.

Subsequent previous market fluctuations inhibited the undertaking of the development fully as approved. However current market conditions along with recent other development within the locality as enabled a unique opportunity to provide a more efficient mixed-use outcome, including the opportunity to provide for improved retail facilities for local residents.

The site holds a prominent position within the locality, constituting a gateway into the suburbs of Holsworthy and Wattle Grove when travelling from the south-east. The site benefits from existing public transport connections, specifically the adjoining Holsworthy railway station which provides for regular and direct access to Central Sydney and is therefore well placed to accommodate a mixed-use form and general uplift in residential density. It is noteworthy that Holsworthy provides the quickest rail connection between the Liverpool LGA and Central Sydney and Sydney Airport.

This Planning Proposal responds to metropolitan, subregional and local strategic targets to increase the supply of housing choice within proximity to existing transport infrastructure and accompanying retail facilities. The accompanying Urban Design Study demonstrates how the development responds to its strategic context and neighbouring character.

Assessment

A number of assessments have been undertaken to accompany the Planning Proposal and investigate potential issues within the proposed legislative amendments, including,

- Urban Design Study, prepared by Architectus (**Attachment A**);
- Landscape Master Plan, prepared by Clouston (**Attachment B**);
- Social Impact Assessment, prepared by Architectus (**Attachment C**);
- Economic Impact Assessment, prepared by Leyshon Consulting (**Attachment D**);
- Traffic Impact Assessment, prepared by The Transport Planning Partnership (TPPP) (**Attachment E**);
- Flood Study, prepared by Xavier Knight (**Attachment F**);
- Bushfire Constraints Assessment, prepared by RPS (**Attachment G**);
- Noise and Vibration Impact Assessment, prepared by Wilkinson Murray (**Attachment H**);
- Servicing and Utilities Infrastructure Strategy Report, prepared by ARUP (**Attachment I**); and
- Preliminary Site Investigation, prepared by GHD (**Attachment J**).

These assessments demonstrate that the proposed LEP amendments sought in this Planning Proposal would be feasible and have acceptable planning impacts, that it most instances can be appropriately mitigated.

Justification

The Planning Proposal is well justified on the following basis:

- The site is large, unencumbered and well situated, with the ability to efficiently accommodate additional density without impacting upon adjacent properties.
- The site is well serviced by public transport, being located adjacent to the Holsworthy Railway Station which provides frequent services which allow access to Sydney Airport in as little as 17 minutes, Central Station in 35 minutes, and to Liverpool in approximately 15 minutes.
- The site is capable of accommodating a well-designed, mixed use development of an increased density over the current controls, which can accommodate non-residential uses that provide for the daily needs of both future and current residents of Holsworthy and surrounding suburbs.
- Holsworthy station is currently well utilised by commuters from the surrounding suburbs who drive to the station and park. The location of a mixed-use development providing retail and commercial uses at the ground floor which are easily accessed from the railway station will reduce the number of individual trips needing to be made by private car.
- The proposal has an acceptable traffic impact to the surrounding road network.
- The proposed design and built form that can be envisaged by LEP amendment will have negligible overshadowing impacts, with the site being located north of the railway line and the Army Barracks.
- The proposal will provide for a greater mix of housing types in an area characterised by a large proportion of single detached dwellings, and where there are currently no examples of residential flat development within the suburb of Holsworthy.
- There is considered no potential for such a development to be located elsewhere within the immediate locality, with an inability of surrounding sites to be developed.

Strategic merit

This Planning Proposal holds strategic merit as it will result in an appropriately scaled mixed use development on a long term under-utilised site. The proposal has been designed in response to changing market conditions, recent development in the locality as well as the unique circumstances of the site and capability for an increase in residential density with no unreasonable environmental impact. The proposal seeks to providing for housing supply in close proximity to the Holsworthy railway station, establishing a clear visual and physical connection to this key asset.

This Planning Proposal will allow for the delivery of an improved mixed-use centre when compared to previous approvals on the site. This will be consistent with the land zoning and Council's intent for the site, providing for a range of services and dwelling types not currently available within the suburb of Holsworthy or the locality.

Site specific merit

This Planning Proposal holds site specific merit as it seeks the redevelopment of a long term vacant and generally unconstrained site, appropriately located.

The site circumstances are unique a result of its location adjacent to the East Hills railway line to the south, whilst also being triangularly defined by Heathcote Road and Macathur Drive, which bound the site to the north, east and west. The site is standalone, being positioned against the rail corridor, areas of bushland and with adequate separation to surrounding development and is of a size and capacity capable of accommodating the proposed development without unreasonable environmental impact.

By virtue of the unique setting, there are no other sites considered within the locality where such a development is possible.

There is no likely future development that would affect the uplift in density sought by this Planning Proposal, nor would the proposal affect nor preclude the development capability of surrounding sites.

Recommendation

This Planning Proposal has been informed by the preparation of a comprehensive Urban Design Study which was produced based on input from a variety of technical consultants, to determine a suitable scale of development for the site, recognising its strategic significance and potential to provide a high-quality mixed-use, transit-oriented development.

By 2036, the population of Holsworthy and the Liverpool LGA is projected to grow significantly, by an additional 116,900 residents (NSW DP&E, 2016, Projected Population Main Series). Accordingly, this Planning Proposal is well justified and would support the delivery of high quality, accessible housing options within an area where this form of housing stock does not currently exist. (ABS statistics indicate no residential apartment development in the suburb of Holsworthy). This provision of multiple dwelling types is consistent with Council's vision for the area and is further supported by State and metropolitan strategic planning objectives and studies.

The Planning Proposal is therefore recommended for support by Council.

1. Introduction

This section outlines the structure of the Planning Proposal and provides detail on the preparation of the Planning Proposal and the project team.

1.1 Preliminary

This Planning Proposal has been prepared by Architectus on behalf of Holsworthy Shopping Centre Pty Ltd for Liverpool City Council in relation to the proposed development of a well situated and strategic site at 2 Macarthur Drive, Holsworthy.

This Planning Proposal identifies the development potential of the site to develop as a mixed-use precinct incorporating podium level commercial and retail uses with residential towers of varying heights above. Accordingly, this Planning Proposal seeks to amend the following controls under the LLEP 2008:

- **Height of Buildings (Clause 4.3)** – Increase the maximum height of buildings control from 21 metres to part 25 metres and part 45 metres
- **Floor Space Ratio (Clause 4.4)** – Increase the maximum floor space ratio (FSR) control from 1.5:1 to 2.15:1
- **Maximum non-residential gross floor area (Schedule 1)** – Include a site-specific provision under Schedule 1 stipulating a maximum non-residential gross floor area of 9,000sqm on the site.

This Planning Proposal has been drafted in accordance with Section 3.33 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and 'A Guide to Preparing Planning Proposals', NSW Department of Planning and Environment (2016). In line with these documents, this Planning Proposal outlines the proposed LEP amendments, the intended outcome of these amendments, and provides justification of the impacts proposed by these amendments.

1.2 Structure of this report

This report is prepared in accordance with the NSW Government's 'A Guide to Preparing Planning Proposals', and is set out as follows:

- **Section 2: The site and context** – provides an overview of the site to which the Planning Proposal is intended to apply.
- **Section 3: The vision for the site and potential building envelopes** – outlines the design principles and built form philosophy which have informed the urban design and landscape studies.
- **Section 4: Objectives and intended outcomes** – provides a concise statement of the proposal objectives and intended outcomes.
- **Section 5: Explanation of provisions** – outlines the proposed amendments to the planning provisions within the LLEP 2008 to achieve the proposal.
- **Section 6: Justification** – provides the urban planning justification to support the proposal.
- **Section 7: Consultation** – outlines a recommended community consultation program that should be undertaken in respect of the proposal.
- **Section 8: Project Timeline** – outlines expectations for timeframe of the progression of the proposal.
- **Section 9: Conclusion** – concludes the report with a summary of findings and recommendations.

This report should be read in conjunction with **Attachments A to J**.

1.3 Preparation of the proposal

This Planning Proposal has been prepared by Taylar Vernon and Jonathan Archibald, both Senior Urban Planners at Architectus. Michael Harrison, Director at Architectus, have provided quality assurance and project direction, with input from John Riordan Consultant Planner.

1.4 Background

This Planning Proposal is based on a master plan prepared for the site by Architectus, and informed by the inputs, assessment and analysis of the site by various specialist consultants, listed at **Section 1.5** below.

The master plan design has also been developed following three consultations with Liverpool Council (detailed at **Section 8** of this report) in order to address key issues raised.

1.5 Project team

The Project team is set out below:

Table 1 Holsworthy Village Centre Project Team

Applicant	Holsworthy Developments Pty Ltd
Town Planning and Urban Design	Architectus Group
Social Impact Assessment	Architectus Group
Landscape Architecture	Clouston Associates
Retail Specialist	Bonnefin Property
Services Engineer	ARUP Pty Ltd
Contamination	GHD Pty Ltd
Traffic and Transport	The Transport Planning Partnership (TPPP)
Acoustic and Vibration	Wilkinson Murray Pty Ltd
Flooding	Xavier Knight Consulting Engineers Pty Ltd
Economic Impacts	Leyshon Consulting Pty Ltd
Bushfire	RPS Australia East Pty Ltd

2. Site and context analysis

This Section provides an overview of the site's urban context and identifies the legislation, planning instruments and planning controls applicable to the Planning Proposal.

2.1 Regional context

The site is located within the suburb of Holsworthy in Sydney's south-west, approximately 31 kilometres south-west of the Sydney CBD and 6 kilometres south-east of the Liverpool CBD. The Georges River flows approximately 1.8 kilometres east of the site.

The locality includes large areas of bushland associated with the Georges River and Williams Creek to the north east, and the Holsworthy Army Barracks to the south. Low to medium density housing developed some years ago largely comprises the residential character of the area north and west of the site.

The site is located adjacent to the Holsworthy Station, which provides frequent train services to the city via the airport, and to Campbelltown via Glenfield. Express services between Holsworthy and Central Sydney allow Sydney Airport to be reached in as little as 17 minutes and Central Station in 30 minutes. Regular services reach the airport in 25 minutes and Central in 38 minutes. Journey time to Liverpool via Glenfield is approximately 17 minutes and frequent bus services are also provided between Holsworthy Station and the Liverpool City Centre. Holsworthy itself has the fastest rail connections to Sydney Airport and Central Sydney in the Liverpool LGA.

The site is bound to the north east by Heathcote Road, which is a major arterial road servicing the south of Sydney and a connecting road between Liverpool and the M5 in the west, to the Sutherland Shire in the east.

2.2 Urban context and site surrounds

The subject site is centrally located within the suburb of Holsworthy, within the Liverpool Local Government Area (LGA). The suburb of Holsworthy is characterised by predominately by a mix of both established residential uses and Defence lands, being the Holsworthy Barracks.

Surrounding suburbs include Voyager point (1km east), Pleasure Point (2km east), Sandy Point (3.3km south east), Hammondville (900m north), Moorebank (2km north) and Wattle Grove (1.6km north west). These suburbs principally consist of established low density housing, being predominately single detached dwellings. There are some examples of medium-density development within Wattle Grove and examples of higher density development located along Nuwarra Road in Moorebank (Georges Fair) (although located some 3km north of the subject site).

The site is located within proximity to the Liverpool CBD (5.4km north west), a major commercial and retail centre within the region which provides regional services and amenities such as Liverpool Hospital, two university campuses and a TAFE Campus. In recent years Liverpool City Centre has seen the development of residential apartment towers, accordingly the LGA has been introducing housing with increased density.

Other key employment areas within the region include the Moorebank industrial area (3.7km north west of the site), Moorebank defence lands and facilities (3.2km west of the site), Chipping Norton industrial area (3.7km north of the site), Milperra industrial area

(3.9km north east of the site) and Bankstown Airport and associated industrial area (4.2km north east of the site).

The site is also within proximity to the Moorebank Intermodal Terminal and freight facility currently under construction, being located approximately 3.5km west of the site along the East Hills railway line.



Figure 2 Subject site and context plan

Site outlined in red

Image source: Nearmap

Immediate context

Development surrounding the site to the north west consists of the Mornington Estate, a master planned residential community completed by Mirvac in 2008. The estate comprises a mix of low to medium density residential development forms, consisting predominately of manor-home dwellings, dual occupancies and multi-dwelling 'townhouse' developments, contributing to a total of approximately 250 dwellings. It is noted this estate is a Community Title scheme, with all roads and areas of open space within the estate being associated property. No residential apartments are present within this estate.

Development to the west of the subject site is a multi-storey commuter car park, bus stop and secure storage lockers associated with and servicing the Holsworthy Station. It is noted the site abuts the East Hills rail line along the southern (rear) boundary.

The Holsworthy Army Barracks and military reserve are located directly to the south of the site, only separated from the site by the railway line. The Holsworthy Barracks are a major Defence facility within Sydney, having undergone a significant upgrade and expansion of facilities in recent years (completed in 2015).

There is minimal development existing to the north east or east of the site, consisting of a number of sporting fields, vacant land parcels and areas of bushland. Much of this surrounding land was previously used for Defence purposes (and retains the SP2 – Defence zoning), however has recently been vacated as part of the broader relocation and consolidation of operations to the Holsworthy Barracks site (known as the Moorebank Units Relocation ('MUR')).

There are no existing commercial or retail centres or general shopping facilities within proximity to the site. The closest shopping facility is the 'Wattle Grove Shopping Village', located approximately 1.5km north west of the site which contains a Coles supermarket, medical centre and specialty stores.

Other shopping facilities within the region include the Moorebank Shopping Centre (3.25km north), the Liverpool CBD (5.4km north west), Liverpool Westfield (5.7km north west), Panania neighbourhood shops (3.6km east) and Revesby Village Centre (5.1km east).

It is noted that an amendment to the LLEP 2008 has recently been approved to rezone part of Hammondville Park and car park to from RE1 - Public Recreation, to part RE2 - Private Recreation and part B6 - Enterprise Corridor, to facilitate development outcomes along Heathcote Road. This area is located approximately 700m north west of the site. This rezoning has been approved at Gateway and is currently with Council for implementation, however, has not been finalised at the time of writing.

Please refer to images of the site at **Figures 3 and 4** below.



Figure 3 Site context plan
Site outlined in red
Source: Nearmap



Figure 4 Site location plan
Site outlined in red
Source: Nearmap

Built form character

The site has been vacant for a long period, having been intended for use as a commercial shopping village for over fifteen (15) years, following the release and private sale of the site from Commonwealth ownership and military control in approximately 2001.

Development surrounding the site is varied.

The built form character of the Barracks is predominately low in scale, consisting of lodgings, warehousing and training facilities up to approximately three to four storeys in height.

The Mornington Estate to the north west of the site comprises a mix of low to medium density residential development, with built form consisting predominately of manor-home dwellings, dual occupancies and multi-dwelling 'townhouse' developments, between two to three storeys in height.

The Holsworthy railway station and transport interchange are located to the west, including a three storey commuter car park occupying the majority of the site.

Traffic and transport context

The subject site is accessed by road via Heathcote Road and Macarthur Drive. Heathcote Road is an RMS Classified Road and a major arterial road within the region, approximately 24km in length, connecting the suburb of Moorebank to the north west, through the Heathcote National Park to the suburbs of Lucas Heights and Heathcote to the south.

Macarthur Drive is a local road under control of Council, being approximately 140m in length, originating from Heathcote Road and servicing the subject site and adjoining Mornington residential estate only. Macarthur Drive then forms The Boulevard (cul-de-sac), which services the Mornington residential estate and Holsworthy railway station and commuter car park only.

Heathcote Road is currently identified for widening by RMS to four lanes and general upgrade along the corridor commencing at Infantry Parade, Holsworthy through to The Avenue, Voyager Point. These upgrade works are approximately 2.2km in length and encompass the subject site, which holds direct access to, and is located at the corner of Heathcote Road and Macarthur Drive. Specifically, these works would convert the existing roundabout at this location to a signalised intersection. This road widening project is currently in the detailed design phase.

A bus stop located at Holsworthy railway station transport interchange services bus routes operating between Voyager Point and the Liverpool CBD (Transdev routes numbered 901, 902, and 902X).

Existing pedestrian access to the site is poor, largely due to the historically undeveloped nature of the site, location against the East Hills railway line and minimal surrounding development. There are no footpaths surrounding the site.

The site is within proximity to the Holsworthy railway station commuter car park, located across Macarthur Drive approximately 60m west of the site. This car park receives a generally high patronage for rail commuters, often at capacity on week days, with a high incidence of informal or unauthorised parking on nearby grassed areas, verges etc.

Ecological context

There are no areas of bushland located on the site, and the site is devoid of any significant vegetation, likely having been removed during periods of excavation undertaken as part of development consent DA-1839/2005 in approximately 2009.

The site is in proximity to several parks, reserves and areas of bushland, including the Moorebank Sports Club and Hammondville Park playing fields, Harris Creek bushland

area, Williams Creek bushland area, and other areas of bushland located to the south west of the site and within the bounds of the Holsworthy defence lands.

As contained within Council's Biodiversity Management Plan, prepared by Eco Logical Australia and dated June 2012, these areas are noted as being in 'B' condition, being 'good condition with a canopy cover <10% and containing native understorey'.

These areas are also identified to contain threatened ecological communities, with former defence lands located to the north east of the site having been nominated for conservation purposes (refer **Figure 5**).

Notwithstanding the significance of these surrounding ecologically significant lands, the subject site is otherwise isolated and located away from any sensitive or endangered ecological areas.

Accordingly, the proposal is accompanied by a detailed landscape master plan prepared by Clouston Associates (**Attachment B**) which provides for complementary and appropriate provision of landscaping and species details having regard to these surrounding bushland areas. The landscape master plan demonstrates that future built form under the amended controls can minimise impact on its surrounds whilst complementing the bushland setting of the locality.



Figure 5 Threatened ecological communities map

Subject site in its entirety is as shown in red

Source: Liverpool City Council Biodiversity Management Plan dated June 2012

Geotechnical

Further to SEPP 55 and contamination matters within this report, whilst Council and EPA records do not indicate any contamination at the site, a Preliminary Site Investigation has been prepared by GHD Pty Limited (**Attachment J**) which details the presence of polycyclic aromatic hydrocarbons (PAH) to the south west corner of the site. This report however identifies that the site is appropriate for the proposal with no remediation required for residential use with no direct access to soil (i.e. a residential apartment building), where this soil is otherwise covered by permanent structures (concrete slab, road etc.).

This report details the site is centrally situated within an alluvial soil landscape comprising predominately Shale with some sandstone beds (Bringelly Shale, Minchinbury Sandstone, Ashfield Shale).

It is considered that this geological structure will not preclude the undertaking of future development, however, it is recognised that further testing and geotechnical input will be required at later DA stages.

2.3 Site details

Existing land use

The site is currently vacant and has been partially excavated to the level of the basement of the approved mixed use development on the site under DA-1839/2005, approved by Council on 20 December 2005.

Following this initial approval, there have been four (4) subsequent modifications to DA-1839/2005 (referenced 'A' through 'D'), outlined generally as follows:

- DA-1839/2005/A (approved by Council 29 March 2006);
- DA-1839/2005/B (approved by Council 14 February 2007);
- DA-1839/2005/C (approved by Council 21 December 2006); and
- DA-1839/2005/D (approved by Council 21 December 2006).

It is noted there appears to be an anomaly in the order of the date of determination of the modifications shown above. The dates provided are as per the relevant notices issued by Liverpool City Council.

A further Development Application, DA-820/2008 was approved by Council on 25 August 2008 for construction of a McDonalds restaurant with associated drive through and signage to the northern portion of the site.

A subsequent complementary Development Application, DA-582/2009, was approved by Council on 6 January 2009 for alterations and additions to the approved Holsworthy Plaza to include additional retail and commercial floor space to facilitate an ALDI Supermarket, in lieu of residential units.

Accordingly, the existing approved development at the site under DA-1839/2005 (as amended) and DA-582/2009 provides for a maximum of 8,835sqm (GLA) of retail and commercial uses and ten (10) residential apartments with an overall maximum height of 15.0m. As noted earlier, this has not been realised on the site.

Legal description

The site comprises a single irregularly shaped allotment, legally described as Lot 5 in Deposited Plan 825745.

Land ownership

The land is owned by Holsworthy Developments Pty Ltd, who is also the applicant for this Planning Proposal.

2.4 Planning context

The following legislation, planning instruments and planning controls are applicable to the proposal:

Legislation	-	<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>
Strategic plans	-	<i>Greater Sydney Region Plan 2056: A Metropolis of Three Cities (2018); and</i>
	-	<i>Western City District Plan (2018)</i>
Current planning controls	Environmental Planning Instruments:	
	-	<i>State Environmental Planning Policy No. 55 – Remediation of Land;</i>
	-	<i>State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (and associated Apartment Design Guide);</i>
	-	<i>State Environmental Planning Policy (Infrastructure) 2007; and</i>
	-	<i>Liverpool Local Environmental Plan 2008.</i>

Legislation	- <i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>
Development Control Plans:	
	- <i>Liverpool Development Control Plan 2008.</i>
Other plans and policies	- <i>Liverpool Residential Development Strategy 2008;</i> - <i>Liverpool Retail Centres Hierarchy Review 2012;</i> - <i>Liverpool Business Centres and Corridors Strategy 2013;</i> - <i>Liverpool Economic Development Strategy 2013-2023;</i> and - <i>Liverpool Community Strategic Plan – Our Home, Liverpool 2027.</i>

The above legislation, planning instruments and planning controls are addressed in the paragraphs below.

2.5 Strategic planning context

Greater Sydney Region Plan 2056, 2018

A *Greater Sydney Region Plan 2056*, (the Sydney Metropolitan Strategy) was released in March 2018 and sets NSW Government's 40-year vision (to 2056) and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters. It provides direction for Sydney's productivity, environmental management, livability, and for the location of housing, employment, infrastructure and open space.

The Strategy's vision for Sydney is for a "A Metropolis of Three Cities". The vision is supported by 'Ten Directions' to guide the growth of the city. The Directions are each supported by a set of Objectives. Of particular relevance to this Planning Proposal are the following Directions and Objectives:

Liveability

A city for people

- Objective 6: Services and infrastructure meet communities' changing needs
- Objective 7: Communities are healthy, resilient and socially connected
- Objective 8: Greater Sydney's communities are culturally rich with diverse neighbourhoods

Housing the city

- Objective 10: Greater housing supply
- Objective 11: Housing is more diverse and affordable

A city of great places

- Objective 12: Great places that bring people together

Productivity

A well-connected city

- Objective 14: A Metropolis of Three Cities – integrated land use and transport creates walkable and 30-minute cities

The site is uniquely situated within proximity to Liverpool and Campbelltown-Macarthur, and the Glenfield to Macarthur Urban Renewal area. Liverpool and Campbelltown-Macarthur are both identified as Health and Education Precincts. Health and Education Precincts act as drivers of export services and provide major employment opportunities.

Together with the Western Sydney Airport and Badgerys Creek Aerotropolis, Greater Penrith, Liverpool and Campbelltown-Macarthur form the Western Parkland City. The cluster of four major centres will deliver the metropolitan functions of providing concentrations of higher order jobs and a wide range of goods and services. The

redevelopment envisaged by the proposed LEP amendments will benefit from proximity to two Health and Education Precincts, and its location within the Western Parkland City.

This Planning Proposal seeks to amend the planning controls applicable to the site to optimise the site's capacity for increased density, providing a mixed-use development with a range of retail, business, entertainment and residential uses within a highly accessible location. The development envisaged by this Planning Proposal will serve the needs of those who live in, work in and visit the local area.

An Urban Design Study and master plan (**Attachment A**) has been developed for the site which proposes a high quality mixed use development, including ground floor retail uses with activation of Macarthur Drive, and a range of dwelling types within multiple residential buildings above. The proposed mixed-use development will provide essential day-to-day services in an accessible, however currently underserved location.

The plan represents an improved design response over previous schemes for the site, providing an appropriate mix of retail and residential development, with easy access to existing services and transport infrastructure. The Urban Design Study demonstrates a more efficient design outcome for the site, maintaining pedestrian accessibility with minimal visual imposition to existing surrounding development.

The 'Greater Sydney Region Plan' is addressed further in **Section 6**.

Western City District Plan 2018

The 'Western City District Plan' was released in March 2018 to support the role of the Greater Sydney Commission and the implementation of the 'Greater Sydney Region Plan' for specific local areas.

The District Plan sets out aspirations and proposals for the Western City District, which includes the local government areas of Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly. The District Plan outlines how the Government will make decisions on public spaces, community facilities, housing, jobs, transport options, schools and hospitals to meet the needs of communities across south western Sydney.

Relevant Directions for the District include:

- *A city supported by infrastructure: Infrastructure supporting new developments*
- *Housing the city: Giving people housing choices*
- *A city of great places: Designing places for people*

Relevant 'Planning Priorities' for the District include:

- *W5: Providing housing supply, choice and affordability, with access to jobs, services and public transport*
- *W6: Creating and renewing great places and local centres, and respecting the District's heritage*
- *W7: Establishing the land use and transport structure to deliver a liveable, productive and sustainable Western Parkland City*

The strategy provides the following 'actions' to achieve improved liveability and housing choice:

- *Action 11: Deliver healthy, safe and inclusive places for people of all ages and abilities that support active, resilient and socially connected communities by:*
 - a. *Providing walkable places at a human scale with active street life,*
 - b. *Prioritising opportunities for people to walk, cycle and use public transport,*
 - c. *Co-locating schools, health, aged care, sporting and cultural facilities,*
 - d. *Promoting local access to healthy fresh food and supporting local fresh food production*

- Action 17: Prepare local or district housing strategies that address the following:
 - a. The delivery of five-year housing supply targets for each local government area,
 - b. The delivery of 6-10-year (when agreed) housing supply targets for each local government area,
 - c. Capacity to contribution to the local term 20-year strategic housing target for the District,
 - d. The housing strategy requirements outlined in Objective 10 of the A Metropolis of Three Cities that include
 - i. Creating capacity for more housing in the right locality

The strategy also provides the following 'actions' to achieve improved productivity:

- Action 24: Integrate land use and transport plans to deliver the 30-minute city

This Planning Proposal seeks to amend the permissible planning controls applicable to the site to allow an optimal and efficient form of development, which will increase the capacity and diversity of housing with accessible retail facilities, whilst encouraging and supporting the use of existing public transport infrastructure providing access to key employment centres within 30 minutes.

The Urban Design Study developed for the site achieves the objectives of the District Plan's productivity and housing actions by increasing the number, mix and diversity of dwelling types available. The development will facilitate the orderly and efficient economic development of the site and provide high quality mixed use development with connectivity to established infrastructure which is consistent with established government policy and sound environmental planning principles.

The Western City District Plan is addressed further in **Section 6**.

2.6 Current planning controls

State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development

State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65) applies to all land within New South Wales for improvement in the design quality of residential apartment development in accordance with the following aims:

- a) "To ensure that it contributes to the sustainable development of New South Wales:
 - i. By providing sustainable housing in social and environmental terms, and
 - ii. By being a long-term asset to its neighbourhood, and
 - iii. By achieving the urban planning policies for its regional and local contexts, and
- b) To achieve better built form and aesthetics of buildings and of the streetscapes and the public spaces they define, and
- c) To better satisfy the increasing demand, the changing social and demographic profile of the community, and the needs of the widest range of people from childhood to old age, including those with disabilities, and
- d) To maximise amenity, safety and security for the benefit of its occupants and the wider community, and
- e) To minimise the consumption of energy from non-renewable resources, to conserve the environment and to reduce greenhouse gas emissions, and
- f) To contribute to the provision of a variety of dwelling types to meet population growth, and
- g) To support housing affordability, and

h) To facilitate the timely and efficient assessment of applications for development to which this Policy applies."

The proposal identifies the future provision for residential apartment development within the amended controls, therefore requiring the application of SEPP 65 to assess the capacity of the residential components.

A detailed Urban Design Study has been undertaken having regard for the nine (9) design principles within SEPP 65, and where possible, finer grained controls contained within the associated Apartment Design Guide (ADG), such as solar access, building separation, deep soil etc. Full compliance with SEPP 65 and the ADG will be detailed at subsequent DA stage(s).

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy Infrastructure 2007 (SEPP Infrastructure) applies to all land within New South Wales within proximity to, or which has the potential to affect infrastructure assets and identifies matters to be considered in the assessment of development adjacent to infrastructure assets.

Accordingly, the SEPP Infrastructure is to be considered given the proximity of site to the following infrastructure assets:

- The East Hills railway line (adjoining the site to the south); and
- Heathcote road (an RMS classified road).

Additionally, whilst the site is within proximity to the Holsworthy defence lands, zoned SP2 – Infrastructure (Defence), these lands are not included within the provisions of the SEPP Infrastructure.

Having regard to the detailed Urban Design Study at **Attachment A**, the proposal is capable of complying with, the provisions of the SEPP Infrastructure, specifically, impacts of traffic generation and vehicle movements to Heathcote Road, as well as acoustic and vibration impacts to residential development from the adjoining East Hills railway line.

A Noise and Vibration Impact Assessment has been undertaken for the site by Wilkinson Murray and is provided at **Attachment G**. The assessment concludes that the proposal can meet all of the required criteria in the NSW Department of Planning and Environment's *Development Near Rail Corridors and Busy Roads – Interim Guideline*, and that no additional mitigation measures are required as a result of the proximity of the site to the rail line.

To meet the relevant criteria for road noise associated with Heathcote Road some windows within the development at lower levels may be required to be closed. Measures will therefore be required to ensure that those units are adequately ventilated in accordance with the Building Code of Australia and AS 1668 – *The Use of Ventilation and Air Conditioning in Buildings*, but that single glazed windows and doors will be acceptable. This will be addressed, with full detail provided through future a DA (or applications) for the site.

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) applies to all land within New South Wales and holds an overall aim to promote the remediation of contaminated land and to reduce the risk to human health and the environment. Specifically, Clause 6 of SEPP 55 provides that contamination and remediation to be considered in zoning or rezoning proposal, including Clause 6(2) which requires the undertaking of a preliminary site investigation.

A previous Preliminary Audit Investigation and Site Audit Investigation, associated with DA-1839/2005 were undertaken by Clyde-Woodward in 1999 and 2000 respectively. The Site Audit Summary identified potential contamination by way of Polycyclic Aromatic Hydrocarbons (PAH), as a result of historical fuel storage in underground storage tanks

(USTs) on land to the south of the site. Notwithstanding, several development consents were both issued by Council and acted upon and the site was partially excavated (up to approximately 3m below ground level), having existed in this condition for approximately ten (10) years. The site is not identified on the NSW EPA contaminated land register.

Relevant to the subject application, a further Preliminary Site Investigation has been prepared for the site by GHD Pty Limited and is held at **Attachment J**. This Preliminary Site Investigation is consistent with previous studies and concluded elevated levels of PAH at locations consistent with previous studies, however that the site is appropriate with no remediation required for residential use with no direct access to soil (i.e. a residential apartment building), where this soil is otherwise covered by permanent structures (concrete slab, road etc.). On this basis, it is considered that the subject site is suitable for the proposal and is satisfactory with regard to Clause 6 of SEPP 55.

Liverpool Local Environmental Plan 2008

The LLEP 2008 applies to the site. An extract of the key LEP controls and development standards applicable to the site and this Planning Proposal are provided overleaf.

Land Use Table and Zoning

The subject site is currently zoned B2 Local Centre under the LLEP 2008.

Objectives of the zone	<p><i>"To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.</i></p> <p><i>To encourage employment opportunities in accessible locations.</i></p> <p><i>To maximise public transport patronage and encourage walking and cycling.</i></p> <p><i>To allow for residential and other accommodation while maintaining active retail, business or other non-residential uses at street level.</i></p> <p><i>To facilitate a high standard of urban design and a unique character that contributes to achieving a sense of place for the local community"</i></p>
Permitted without consent (Item 2)	<i>Home-based child care; Home occupations</i>
Permitted with consent (Item 3)	<p><i>Boarding houses; Building identification signs; Business identification signs; Child care centres; Commercial premises; Community facilities; Depots; Educational establishments; Entertainment facilities; Environmental facilities; Flood mitigation works; Function centres; Helipads; Home businesses; Home industries; Hostels; Information and education facilities; Medical centres; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Service stations; Shop top housing; Tourist and visitor accommodation; Vehicle repair stations; Veterinary hospitals</i></p>
Prohibited (Item 4)	<i>Any development not specified in item 2 or 3</i>

An extract of the LLEP 2008 Zoning and land use map of the site and the surrounding area is illustrated at **Figure 6** overleaf.

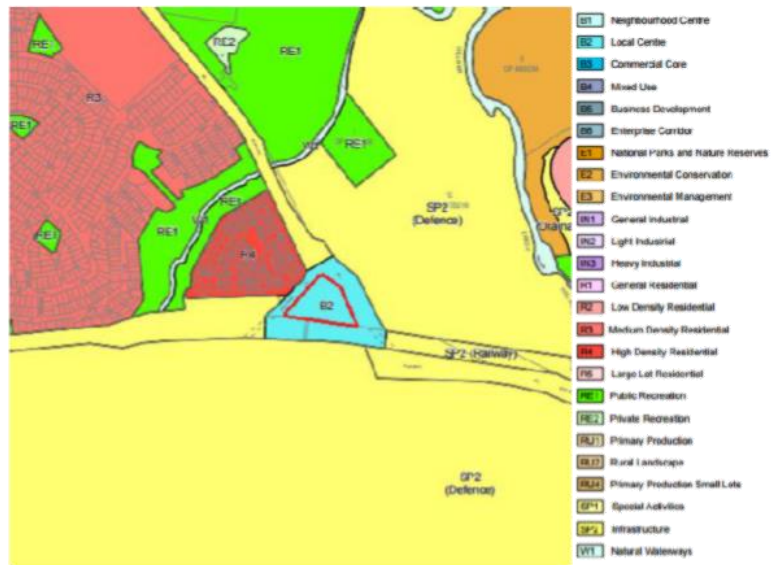


Figure 6 Land use zoning map
Site outlined in red
Source: LLEP 2008 (Sheet LZN_015))

Clause 4.3 – Height of Building

The maximum building height for development on the site is controlled under Clause 4.3 of the LLEP 2008. The LLEP 2008 currently allows for heights of 21.0 metres on the subject site. The objectives of the maximum height of building controls under Clause 4.3 are as follows:

- To establish the maximum height limit in which buildings can be designed and floor space can be achieved,*
- To permit building heights that encourage high quality urban form,*
- To ensure buildings and public areas continue to receive satisfactory exposure to the sky and sunlight,*
- To nominate heights that will provide an appropriate transition in built form and land use intensity."*

The maximum building height plan for the site and the surrounding area is illustrated at **Figure 7** overleaf.



Figure 7 Maximum building height map

Site outlined in red

Source: LLEP 2008 (Sheet HOB_015)

Clause 4.4 – Floor space ratio

The maximum floor space ratio (FSR) for development is controlled under Clause 4.4 of the LLEP 2008. The objectives of the maximum FSR controls under Clause 4.4 are as follows:

- "To establish standards for the maximum development density and intensity of land use, taking into account the availability of infrastructure and the generation of vehicle and pedestrian traffic,*
- To control building density and bulk in relation to the site area in order to achieve the desired future character for different locations,*
- To minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,*
- To maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,*
- To provide an appropriate correlation between the size of a site and the extent of any development on that site,*
- To facilitate design excellence in the Liverpool City Centre by ensuring the extent of floor space in building envelopes leaves generous space for the articulation and modulation of design."*

The site is subject to a maximum FSR of 1.5:1 pursuant to Clause 4.4 of the LLEP 2008 as detailed in **Figure 8** overleaf.



Figure 8 Floor space ratio map

Site outlined in red

Source: LLEP 2008 (Sheet FSR_015)

Clause 5.10 – Heritage conservation

The site is not identified as a heritage item and is not located within any Heritage Conservation Area pursuant to Clause 5.10 of the LLEP 2008. The site is however within proximity to local heritage items numbered I32 and I34 located within the Holsworthy Defence lands, known as the 'Holsworthy Group' (including powder magazine and former officers' mess, corporals' club, internment camp, Holsworthy railway station lock-up/gaol, German concentration camp) and 'Cubbitch Barta National Estate' respectively.

It is noted that the Cubbitch Barta National Estate is a place of Aboriginal heritage, and although located on the adjoining Lot 1 DP 825745, is of a significant distance from the subject site (>4km). Likewise, items of heritage associated with the 'Holsworthy Group' are otherwise centrally located within the Holsworthy defence lands are also of a significant distance (>400m) from the subject site.

Accordingly, the proposal will not impact any nearby heritage items. An extract of the LLEP 2008 Heritage Map is provided at **Figure 9** below.



Figure 9 Heritage Map

Site outlined in red

Source: LLEP 2008 (Sheet HER_015)

Clause 7.6 – Environmentally Significant Land

The site is not identified as containing any Environmentally Significant Land pursuant to Clause 7.6 of the LLEP 2008, however is within proximity to areas of Environmentally significant land located to the north east and east of the site, being bushland areas associated with the nearby Harris Creek and Williams Creeks respectively.

Notwithstanding, the site is located outside of these nominated areas and development at the site will not impact any nearby Environmentally Significant Lands. Appropriate management of construction processes will be detailed in any future DA for the site. An extract of the LLEP 2008 Environmentally Significant Lands Map is provided at **Figure 10** below.



Figure 10 Environmentally Significant Lands Map

Site outlined in red

Source: LLEP 2008 (Sheet ESL_015)

Clause 7.8 – Flood Planning

The site is not identified as being located within a flood planning area pursuant to Clause 7.8 of the LLEP 2008, however is within proximity to flood planning areas located to the north east and east of the site, being bushland areas associated with the nearby Harris Creek and Williams Creeks respectively.

A flood study has been prepared for the site by Xavier Knight (**Attachment F**), which found that the site contains an existing overland flow path which conveys the flow from an upstream catchment in Macarthur Drive. This flood impact is relatively minor and future development on the site can be designed to be commensurate with the flood hazard and include consideration of the potential flood impacts both on and off the subject site.

Further consideration of flood matters will be given in any future DA for the site, with appropriate mitigation measures to be provided.

An extract of the LLEP 2008 Flood Planning Map is provided at **Figure 11** overleaf.



Figure 11 Flood Planning Map
Site outlined in red

Source: LLEP 2008 (Sheet FLD_015)

Liverpool Development Control Plan 2008

The Liverpool Development Control Plan (LDCP) 2008 applies to all sites within the LGA, with the following sections specifically applicable to the subject site:

- Part 1: General Controls for All Development; and
- Part 2.6: Holsworthy Station Site.

The LDCP 2008 provides for a range of controls relating to protection of the environment site suitability, built form, density and other matters. The Urban Design Study at **Attachment A** demonstrates that future development on the site can generally comply with the environmental requirements and development objectives set under the LDCP 2008.

The LDCP 2008, in addition to several overarching controls, identifies additional specific controls for the subject site in accordance with the following overall objective:

- *"To provide an attractive, accessible mixed-use centre providing for retail, commercial, residential, recreation, community facilities and public transport adjacent to Macarthur Drive, Holsworthy."*

Part 2.6 of the LDCP 2008, provides the following controls for non-residential floorspace in the Holsworthy Local Centre:

- *"The maximum gross leasable retail floor area within the centre shall not exceed 7,250sqm. The maximum gross leasable floor area for commercial use shall not exceed 1,200sqm."*

The proposed non-residential GFA component of this Planning Proposal (8,965sqm) marginally exceeds this DCP control (total 8,450sqm non-residential GFA). However, having regard to extant development consent DA-582/2009, the proposal does not seek any additional non-residential GLA above what has already been approved under this DA (8,835sqm). The proposal seeks a total of 8,804sqm GLA, 31sqm below the approved GLA total. In any case, this Planning Proposal seeks to impose a maximum non-residential GFA on the site under the LLEP 2008, to ensure no additional impact on existing nearby centres would result.

Council may seek to develop site specific DCP controls for the subject site to achieve the specific design outcomes described in the Urban Design Study prepared to support the Planning Proposal, including, however not limited to:

- Additional height in storeys;
- Revised public domain plan; and

- Revised traffic and circulation.

Bushfire Risk

Section 5 of Part 1 of the LDCP 2008 applies to land identified as being bushfire prone land. A portion of the site is identified as being bushfire prone, with the eastern portion of the site identified as a 'vegetation buffer' pursuant to Council's Bushfire Prone Land map.

A Bushfire Constraints Assessment has been undertaken by RPS and is provided at **Attachment G** which demonstrates that the proposal is capable of complying with the Rural Fires Act 1997 and the NSW Rural Fire Service 'Planning for Bushfire Protection' guidelines. An extract of the LLEP 2008 Bushfire Map is provided at **Figure 12** below. Suitable mitigation may be employed at the DA stage regarding any impacts, if required.

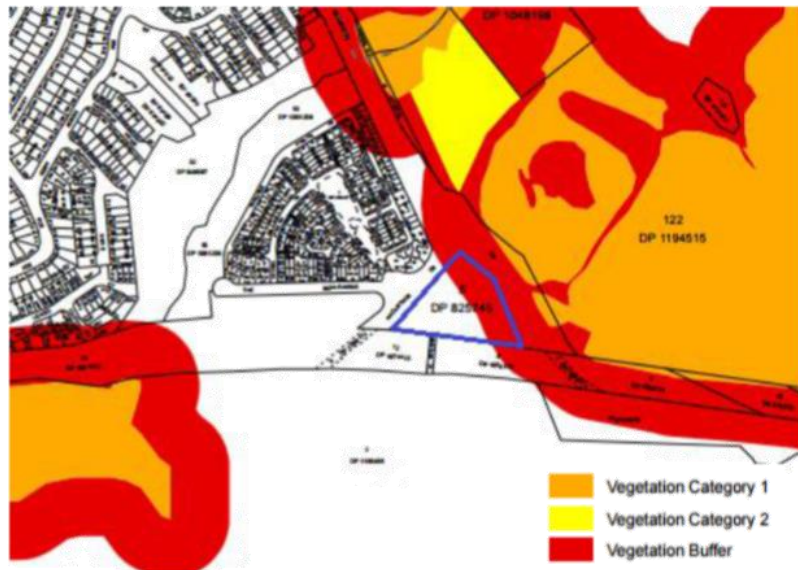


Figure 12 Bushfire Prone Land Map
Site outlined in blue

Source: Liverpool City Council GIS Services (Bushfire Map Sheet 2)

2.7 Other plans and policies

Liverpool Residential Development Strategy 2008

The Liverpool Residential Development Strategy 2008 was prepared by Liverpool Council and adopted in July 2008 as Council's principal strategic planning document for residential development and sets the direction for residential land within Liverpool and housing Liverpool's increasing population over a 25-year period. Under the strategy, key residential directions were identified including:

- "Consolidate medium density residential zones to areas around activity centres (200m-800m) and major transport nodes and down-zone fringe areas.
- Introduce new high density residential zone nodes adjacent to main town centres and major transport nodes.
- Investigate the surrounds (approximately 800m) of the 10 town and village centres identified by the retail strategy and METRIX and determine appropriate locations and extent of housing.
- Investigate the surrounds (approximately 800m) of the 2 locations on the T-way adjacent to the City Centre and determine appropriate locations and extent of housing.

- *Encourage modest affordable private housing types within medium density zones, particularly around main town centres at Moorebank, Casula, Miller and Green Valley.*
- *Group all high density residential zones (including mixed-use residential) into one zone and utilise additional uses and development standards to create distinctive characters.*
- *Introduce new location specific development standards (minimum lot size, floor space ratio and building height) to respond to specific capacity or existing or desired urban characters of different areas."*

Council's Residential Development Strategy 2008 was prepared in accordance with the State's 2005 Metropolitan Strategy. Subsequently, this document was instrumental in preparing and formed the underlying basis for residential zonings and development standards within the standard instrument LLEP 2008 which came into effect in August 2008.

This Planning Proposal will provide a diverse mix of housing supply in line with the objectives and directions of Council's Residential Development Strategy 2008, including provision of high density residential development adjacent to a key transport node, being Holsworthy station.

Liverpool Retail Centres Hierarchy Review 2012

The Liverpool Retail Centres Hierarchy Review 2012 was prepared by Hill PDA for Liverpool Council in July 2012 to establish a hierarchy of retail and commercial areas across the LGA and to identify existing and potential future demand for retail floor space resulting from residential development and land release, population growth and changing demographics across suburbs. The aims of this review were:

- *"To undertake a stock take of the existing B1 to B6 zoned land within the Liverpool Council Local;*
- *Government Area (LGA) and all land subject to a rezoning application to or from a business zoning;*
- *Assess the function and the community served by each of the retail and business centres in the LGA; and*
- *Provide direction for the futures of business and retail operations in the Liverpool LGA."*

This review was undertaken as part of a broader analysis of the LLEP 2008 and to inform planning decisions and policy, including specifically the *Liverpool Economic Development Strategy 2013-2023*, referred to further within this document.

Although the subject site remained undeveloped at the time of preparation of this document, the site was otherwise included within the review, referred to as 'Holsworthy Plaza' and based on the extant development consent DA-1839/2005 (as amended) and with an approximate Gross Leasable Area (GLA) of 7,000sqm. Under this review, the site and 'Holsworthy Plaza' is defined as a 'Village Centre'.

Whilst no specific definition is provided for a 'Village Centre', this is otherwise referenced within the report as a consolidated retail offering within the B2 – Local Centre Zone, containing a supermarket and specialty retail stores and servicing the immediate locality. A 'Village Centre' is noted as being specifically different from a 'Neighbourhood Centre' or 'Town Centre', both of which are generally larger in scale, with additional community facilities (medical centre, post office etc.) and servicing a larger catchment.

Whilst this Planning Proposal seeks an increase in density at the site, the proposed development as outlined within the Urban Design Study and master plan does not seek an intensification of the non-residential component already approved at the site. The proposed development is consistent with approved GLA and will maintain the long-term intent and nature of the site as a 'Village Centre'. As noted earlier, this Planning Proposal seeks to impose a maximum non-residential GFA control under the LLEP 2008 to ensure

no additional impact on existing nearby centres, beyond that which would result from the current approved development of the site.

Whilst the outcomes of this review have largely been implemented within subsequent policy changes, including through revisions to the LLEP 2008 and implementation of the *Liverpool Economic Development Strategy 2013-2023*, the proposed development will not alter the conclusions of this report, nor is it considered to threaten the role of any other centre within the region.

Liverpool Economic Development Strategy 2013-2023

The *Liverpool Economic Development Strategy 2013-2023* was prepared by Council's Economic Development Unit and outlines the key economic priorities, actions and targets that will guide the economic growth of the Liverpool LGA during this period. This document provides the following seven (7) key strategic outcomes:

- *"Assisting existing businesses in Liverpool to link to programs and services delivered by the Commonwealth and NSW governments that help them grow, innovate and improve their competitiveness."*
- *Targeting the attraction of new job generating business investment to Liverpool, with a focus on the area's competitive advantages in advanced manufacturing, construction, health, education, and medical research, distribution and logistics, professional services and retail."*
- *Activating the City Centre and developing vibrant places that attract residents, visitors and workers to Liverpool."*
- *Working in partnership with local industry to promote and support employment opportunities and initiatives for local and regional residents (including disadvantaged groups)."*
- *Building awareness and "ownership" of activities that strengthen Liverpool's economic base."*
- *Working with the Commonwealth and NSW Governments to advocate for infrastructure and services investment in the Liverpool local government area commensurate with Liverpool's regional city status."*

The proposal will provide for a high quality mixed use development at the site and contribute to the economic development of the locality and within proximity to established transport infrastructure. Having regard to the Urban Design Study held at **Attachment A** and Economic Impact Assessment at **Attachment D**, the proposal is considered to be the highest and best use of the site.

Our Home, Liverpool 2027

Our Home, Liverpool 2027 is Liverpool City Council's long-term Community Strategic Plan. The Plan was prepared by Council's corporate governance division to influence Council's delivery program and ongoing annual operational plans. The Plan incorporates four directions which seek to underpin the actions of Council over the next ten years, whilst achieving the social justice principles of equity, access, participation and rights:

- *"Social – Creating Connection;*
- *Environment – Strengthening and Protecting our Environment;*
- *Economic – Generating Opportunity;*
- *Civic Leadership – Leading Through Collaboration."*

This Planning Proposal will not affect the implementation of the Liverpool Community Strategic Plan 2027, nor the ability of Council to exercise its functions under the Local Government Act 1993.

2.8 Demographic profile trends

The Planning Proposal takes note of the population projections for the Holsworthy and Liverpool LGA generally. The Australian Bureau of Statistics provides information regarding population demographics and existing housing diversity in the Liverpool LGA and the suburb of Holsworthy.

As of the 2016 census, the population of Holsworthy was 5,476 persons with a median age of 30. The most common ancestries in Holsworthy (State Suburb) were Australian (20.4%), English (18.7%), Indian (9.4%), Chinese (6.5%) and Irish (5.9%). The majority of Holsworthy residents were born in Australia (60.4%), with most common countries of birth being India (7.3%), Philippines (3.0%), Indonesia (2.5%), New Zealand (2.2%) and China (2.1%).

The composition of dwelling structure in Holsworthy is predominantly detached housing (80.8%). The second most predominant dwelling type were semi-detached dwellings, including townhouses, row and terrace houses (19%). Specifically, no higher density residential development (flats, units and apartments) were identified in the suburb of Holsworthy in the 2016 census. A review of aerial imagery does not indicate any examples constructed since this date.

The Department of Planning and Environment's *Population, Household and Dwelling Projections* is a summary of population and household change in Sydney's subregions between 2011 and 2036. The summary identifies a significant increase in population of the Liverpool LGA overall, from 214,100 persons in 2016 to 331,000 by 2036, a total increase of 54.6% (NSW DP&E, 2016, Projected Population Main Series). Whilst the suburb of Holsworthy is not specifically identified in the data sets, it is considered that the subject site is well placed to facilitate an increase in density, particularly given the proximity of the site to established transport infrastructure.

This Planning Proposal will provide the opportunity for an appropriate increase in density at a highly accessible location and within proximity to existing transport infrastructure and surrounding employment lands. The proposal provides a holistic, master planned, mixed use development, which will increase housing choice and provide retail facilities to serve the needs of people who live in, work in and visit the local area.

Having regard to the Urban Design Study at **Attachment A**, the proposal can facilitate outcomes of a high standard of urban design and a unique character, contributing to a sense of place within the locality, consistent with the objectives of the B2 – Local Centre zone.

3. The Proposal

This Section provides an overview of the need for a Planning Proposal and identifies the design philosophy to inform the redevelopment of the site.

3.1 Design philosophy

The vision for Holsworthy Village is to provide a high quality, integrated and accessible retail and residential mixed use village environment focused on community life.

Key to the success of a mixed-use outcome on the site will be creating an excellent relationship with the local context and particularly through improved connections to the Holsworthy Railway Station. Principles for achieving this, which have underpinned the Urban Design Study, include the following:

- Maximising pedestrian permeability and connectivity between the retail centre and the railway station, including consideration of topography;
- Utilising Macarthur Drive as the preferred frontage for active uses and pedestrian activity;
- Utilising the broad verge of Macarthur Drive and the underutilised space around the former railway bridge to maximise public utility of the area;
- Minimising the impact of vehicles on pedestrian routes;
- Providing a transition in building height across the site, with lower building heights proposed along the Macarthur Drive frontage providing a suitable transition between the existing residential development to the west of Macarthur Drive and the taller built form elements of the proposal;
- Providing well-located and attractive open spaces on site, including a public square and communal open spaces; and
- Maximising solar access to green spaces and providing shading through tree canopies is key to ensuring amenity.

Further to these design principles, key design philosophies have been developed to inform the Urban Design Study and Master Plan for Holsworthy Village, to achieve a built form which encourages active and social living and connectivity to key public transport connections.

3.2 Urban Design Study and Master Plan

An Urban Design Study and Master Plan has been prepared by Architectus to illustrate an outcome of development under the proposed amended controls. This document is provided at **Appendix A**.

The Urban Design Study and Master Plan envisages a redevelopment of the site as providing:

- An attractive and successful retail centre. The design includes ground floor retail anchored by large and small supermarkets (e.g. Woolworths/Coles, ALDI) together with supporting specialty retail;
- A new active public square at the heart of the centre, activated by a retail frontage along Macarthur Drive with the opportunity for alfresco dining;
- Improved pedestrian connections to the train station;
- High quality landscaping of Macarthur Drive and Heathcote Road for positive visual impact and to allow the provision of shading by trees in summer;
- Slender residential buildings on the podium at varying heights up to 12 storeys; and

- Delivery of approximately 350 apartments with excellent amenity including access to communal open space, communal and public facilities and public transport.

Provide a strong functional, useable and attractive link to Holsworthy railway station

A key emphasis in development of the Master Plan was to provide a clear and direct physical and visual connection to the Holsworthy railway station through the provision and integration of a usable and attractive pathway and landscaping.

The provision of this link to Holsworthy railway station will not result in any loss of parking nor reduction in function of the associated commuter car park, however, will promote the use of public transport by the residents of the proposed development.

It is proposed that the existing roundabout at the intersection of Macarthur Drive and The Boulevard may be replaced with a signalised intersection. This will ensure that pedestrians have a safe and convenient walking route to the station and avoids any potential for conflict between pedestrians and vehicles. These works could be undertaken under a voluntary planning agreement associated with a future development application for redevelopment of the site.

The Landscape Master Plan prepared by Clouston Associates also identifies a potential future connection to the station further south, adjacent the railway line. Provision of a future connection in this location would be subject to discussions with Transport for NSW and may form part of a future DA for the proposed development.

Creating a positive main street presentation and character to Macarthur Drive

The proposal seeks to facilitate a significant improvement over prior approved schemes, through reorientation of the built form to allow an enlarged retail forecourt area and revised public domain interface. The Master Plan results in an overall improved visual and physical connectivity between the site, the Holsworthy railway station, and the existing residential housing to the west of the site.

Importantly, a key design principle has been the creation of a "main street" along Macarthur Drive, as opposed to previous approvals for the site which provided a more internalised retail experience with the front setback of the site being predominantly at-grade car parking. The proposal creates a strong boulevard style presentation along Macarthur Drive across the frontage of the site and maintaining this connection through to Holsworthy railway station to the west of the site.

The design has been led through the promotion of connectivity between the site to Holsworthy railway station and transport interchange. The establishment of this boulevard nature and the promotion of active uses along Macarthur Drive will result in improved streetscape activation, presentation and overall, contributes to the creation of the desired "main street" environment. The design of this boulevard element, the provision of retail uses at street level, and general open presentation across the frontage of the site will provide a space that feels more public, is safe and inviting, and where wayfinding is clear for visitors, deliveries and emergency services.

Visual interest in built form

The proposed single storey retail podium provides an appropriate scale and feel, sympathetic to the existing neighbouring residential dwellings. Slender, articulated buildings with high quality designs and height variations ensure variety and visual interest in the building forms over the podium.

A transition in building heights is proposed across the site, with a maximum of 6 storeys proposed at the frontage to Macarthur Drive, ensuring the proposed development appropriately relates to existing nearby development.

Residential amenity and open space

Extensive communal open space on the podium provides excellent amenity for residents. A diversity of spaces for active and passive recreation are defined by high quality landscaping and a central water feature with skylight provides sunlight to the retail

centre below. Residential buildings are configured to ensure well separated apartments which maximise internal and external views and achieve optimal solar access and cross ventilation.

The Master Plan is illustrated in **Figure 13** below.



Figure 13 Proposed Master Plan
Source: Urban Design Study (Attachment A), prepared by Architectus

4. Objectives and intended outcomes

This section outlines the objectives of the Planning Proposal and provides detail on the proposed planning control provisions to achieve these objectives and outcomes.

4.1 Intended outcomes

The intended outcome of the Planning Proposal is to amend the LLEP 2008 to increase the maximum building height and FSR controls applicable to the site, to facilitate its eventual development, as demonstrated by the Urban Design Study and Master Plan at **Attachment A**.

Land use activity

The intended outcome of the Planning Proposal is to facilitate a mixed-use retail and residential development on the site, as demonstrated by the Urban Design Study and Master Plan, comprising the following:

- Basement car parking
- Multiple residential towers of differing heights (six to twelve storeys)
- Podium levels on the towers providing approximately 8,804sqm of retail GLA

The eventual development will have a total GFA of 40,000sqm, including approximately 31,035 sqm of residential uses.

The proposed uses are permitted with consent in the B2 - Local Centre zone and are consistent with the objectives of the zone.

Built form

The Urban Design Study and Master Plan prepared by Architectus (**Attachment A**) demonstrates that the site may provide for six integrated residential towers above a mixed-use podium, with retail uses proposed at the ground floor addressing Macarthur Drive.

The internal component of the ground floor retail may include provision for a large supermarket and a small supermarket, with multiple smaller specialty retail tenancies.

Based on an assumed apartment mix, the proposal would provide for around 350 apartments in the towers with a mix of 1 bedroom, 2 bedroom and 3 bedroom units. Courtyard apartments may be provided on the roof of the podium.

All car parking (retail and residential) would be provided in basement parking. All car parking would be accessed by the proposed signalized intersection at Macarthur Drive and The Boulevard.

An expansive area of landscaped communal open space for the residents of the site could be provided above the podium levels.

The Urban Design Study and Master Plan demonstrates residential towers of differing heights up to twelve (12) storeys (including the podium level) with potential lift overruns and/or rooftop plant, resulting in a maximum building height of 45 metres. In addition to an amendment to the maximum building height under the LLEP 2008, a future site-specific DCP may also impose a maximum height in storeys, if deemed appropriate by Council.

4.2 Objectives of the proposed controls

The objectives of this Planning Proposal are to facilitate provision of a high quality and efficient mixed-use development outcome for the site.

Key objectives of this proposal are:

- To provide a high quality built form and design outcome on a long term vacant site;
- To provide a mixed-use development outcome at the site;
- To provide a range of dwelling types not currently available within the locality;
- To provide residential development within proximity to established services and transport infrastructure;
- To enable the most efficient economic outcome for the site;
- To service the needs of residents and visitors to the locality;
- To ensure that the proposed development does not result in an unacceptable impact on existing centres; and
- To positively address the site's features and context including the large areas of bushland opposite the site to the north through south east.

4.3 Amendments to planning provisions

This Planning Proposal seeks to amend the LLEP 2008 to increase the maximum building height and FSR controls applicable to the site as follows:

- **Height of Buildings (Clause 4.3)** – Increase the maximum height of buildings control from 21 metres to partially 25 metres and partially 45 metres
- **Floor Space Ratio (Clause 4.4)** – Increase the maximum floor space ratio (FSR) control from 1.5:1 to 2.15:1
- **Maximum non-residential gross floor area (Schedule 1)** – Include a site-specific provision under schedule 1 stipulating a maximum non-residential gross floor area of 9,000sqm on the site.

4.4 Maximum building height

The maximum building height for the subject site is required to be amended to achieve the desired mixed-use built form outcome as demonstrated by the Urban Design Study and Master Plan.

The study demonstrates the potential for heights between 6 to 12 storeys, including the double height ground floor retail centre.

A maximum height of 24 metres, or 6 storeys (being a 3 metre increase in the current maximum building height) is proposed adjacent Macarthur Drive. A maximum height of 45 metres, or 12 storeys is recommended for the southern boundary of the site adjoining the railway line and Heathcote Road.

The Proposed transition in heights will minimise visual imposition and provide an appropriate stepping of building elements when viewed from Holsworthy Station and the Mornington residential estate to the west of the site.

To the east of the site the nearest development is approximately 800 metres away in the suburb of Voyager Point. Between Voyager Point and the subject site is an area of dense vegetation, meaning the proposed development is unlikely to be visible from the east, except for passing traffic on Heathcote Road.

4.5 Maximum floor space ratio

To facilitate a development outcome consistent with proposed maximum building height, the maximum floor space ratio for the subject site needs to also be amended.

Commensurate to the proposed building heights, a Floor Space Ratio control of 2.15:1 is proposed for the site under Clause 4.4 of the LLEP 2008.

4.6 Maximum non-residential gross floor area

The maximum non-residential floor space on the site is currently controlled by the Liverpool DCP 2008, specifically Section 3.1(2) of Part 2.6 which provides:

"The maximum gross leasable retail floor area within the centre shall not exceed 7,250sqm. The maximum gross leasable floor area for commercial use shall not exceed 1,200sqm."

Based on the Urban Design Study and Master Plan, a maximum indicative retail GLA of 8,804sqm (or 8,965sqm GFA) is possible and therefore exceeds this existing control.

Notwithstanding, it is noted that extant development consents 1839/2005 (as amended) and 582/2009 have gone beyond the provisions of this control (having resulted in approvals for 8,835m non-residential GLA).

The proposed non-residential component of this Planning Proposal does not seek any additional non-residential GLA above what has already been approved.

To ensure certainty on the end outcome of the site, and to support unacceptable impacts on existing nearby centres, it is recommended that a site-specific LEP provision be imposed stipulating a maximum non-residential GFA of 9,000sqm on the subject site.

5. Explanation of Provisions

The objective of this Planning Proposal is to amend the existing LLEP 2008 to facilitate the development a high quality mixed use development at the site. The specific objective is to amend the existing maximum height of buildings and FSR controls to allow for the optimal built form outcome, and to facilitate the redevelopment and renewal of the site.

5.1 Proposed amendments to the LLEP 2008 planning controls

The outcome of this Planning Proposal is to amend to the LLEP 2008 proposed to facilitate optimal redevelopment and renewal of the site. An explanation of the proposed amendments to the LLEP 2008 is provided below.

5.2 Height of buildings

The current maximum height of buildings is prescribed by Clause 4.3 of the LLEP 2008. Clause 4.3 prescribes a maximum building height of 21m at the site.

This Planning Proposal seeks to amend the mapping associated with Clause 4.3 of the LLEP 2008 to increase the maximum height of buildings control for the site to 24m (for a depth of approx. 25 metres from Macarthur Drive) and 45m.

Refer to the proposed LLEP 2008 height of buildings map in **Section 7.0** of this report for mapping guidance.

5.3 Floor space ratio

The current maximum floor space ratio is prescribed by Clause 4.4 of the LLEP 2008. Clause 4.4 prescribes a maximum floor space ratio of 1.5:1 at the site.

This Planning Proposal seeks to amend the mapping associated with Clause 4.4 of the LLEP 2008 to increase the floor space ratio control for the site to 2.15:1.

This increase in allowable floor space ratio at the site correlates directly to the proposed increase in building heights outlined above. Together, the proposed increase in allowable building heights and floor space ratio at the site is necessary to allow for an optimal built form outcome and to facilitate the appropriate redevelopment and renewal of the site, as demonstrated by the Urban Design Study and Master Plan.

Refer to the proposed LLEP 2008 floor space ratio map in **Section 7.0** of this report for mapping guidance.

5.4 Maximum non-residential gross floor area

The current maximum non-residential GFA for the site is provided under the DCP, however, existing approvals on the site have surpassed that which is allowed for.

To provide greater certainty of the outcome of a development of the site and to ensure impacts on existing nearby centres are within an acceptable limit, it is proposed to introduce a site-specific provision under Schedule 1 of the LLEP 2008, which could indicatively state the following:

24 Use of certain land at Holsworthy in Zone B2

- (1) *This clause applies to Lot 5 in Deposited Plan 825745 in Zone B2 Local Centre at 2 Macarthur Drive, Holsworthy.*

- (2) *Development consent must not be granted to development if it would result in the gross floor area of all development on the site, other than residential accommodation, exceeding 9,000 m².*

5.5 Assessment

Expert assessments have been undertaken to accompany the Planning Proposal and are appended to this report. These assessments demonstrate that the legislative amendments sought in this Planning Proposal are feasible and have acceptable impacts.

6. Justification

This section provides justification of the Planning Proposal in line with the 'Questions to consider when demonstration justification' set out within the NSW Government's 'A guide to preparing Planning Proposals'.

6.1 Section A – Need for the Planning Proposal

Is the planning proposal a result of any strategic study or report?

This Planning Proposal has resulted from the following strategic reports.

A Greater Sydney Region Plan 2056

Holsworthy falls within the Western Parkland City under Sydney's Metropolitan Strategy, the *Greater Sydney Region Plan 2056*. The Strategy provides direction for Sydney's productivity, environmental management, livability, and for the location of housing, employment, infrastructure and open space.

The Strategy's vision for Sydney is for a "Metropolis of Three Cities", to rebalance and improve opportunities for all who live in Greater Sydney. *A Metropolis of Three Cities* is built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. Holsworthy is strategically located within 30 minutes travelling distance by public transport of two Metropolitan Clusters, being Liverpool (20 minutes) and Campbelltown-Macarthur (24 minutes). Holsworthy is also within 30 minutes of the Eastern Economic Corridor, the State's greatest economic asset, with Sydney Airport being 21 minutes by train from Holsworthy. Central Sydney is just outside of 30 minutes from the site, with trains to Central Station taking 33-35 minutes. It is considered that the subject site is likely the best located site for urban renewal within the Western Parkland City in terms of access to a broad range of employment, entertainment and recreation opportunities throughout Greater Sydney.

This Planning Proposal seeks to amend the planning controls applicable to the site to allow future development that will maintain Council's long-term intent for retail at this location. In addition, the Master Plan and Urban Design Study supporting the Planning Proposal demonstrates that through the amendments the site may provide a range of high quality housing options in a highly accessible and convenient location and which are not currently present within the locality.

As per the Master Plan in the Urban Design Study, the proposal seeks to support the delivering a quality-built environment with high levels of accessibility and connectivity across the site, supporting the productivity and liveability of the Western Parkland City.

Western City District Plan

The Western City District Plan was released in March 2018 to support the role of the Greater Sydney Commission and the implementation of the Greater Sydney Region Plan for specific local areas.

This Planning Proposal seeks to amend the permissible planning controls applicable to the site to allow an optimal and efficient form of future development. In doing so, the Planning Proposal is consistent with multiple Directions of the District Plan, including *A city supported by infrastructure*; *Housing the city*; and *A city of great places*. The development that may result from this Planning Proposal will enable the optimum and efficient use of existing transport infrastructure (T8 Airport and South Rail Line), will substantially increase housing supply, diversity and affordability to meet the changing demographic profile in the area, and will create a new neighbourhood centre in Holsworthy that is of a high urban design quality, supports the provision of safety, community engagement and cohesion, and access to a mix of land use.

Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes. There are no alternative processes to achieve the intent of this Planning Proposal due to the current planning controls that apply to the site under the LLEP 2008.

6.2 Section B – Relationship to strategic planning framework

This section provides a summary of the strategic planning framework within which the Planning Proposal outcomes for the site have been considered.

Is the planning proposal consistent with the objectives and actions of the applicable regional or sub-regional strategy (including the Sydney Metropolitan Strategy and exhibited draft strategies)?

Yes. The Planning Proposal is consistent with the objectives and actions of the applicable regional and sub-regional strategies as detailed below.

A Greater Sydney Region Plan 2056, 2018

The current metropolitan strategy applicable to the site is the NSW Government's Greater Sydney Region Plan (2018).

Relevant directions from the metropolitan strategy are noted at **Table 2** below.

Table 2 A Greater Sydney Region Plan

Strategy or Strategic Plan	Consistency	Comment
Liveability		
<i>A City for people</i>		
– Objective 6: Services and infrastructure meet communities' changing needs	Yes	The Urban Design Study and Master Plan demonstrates that the Proposal can provide for a development highly liveable place where daily shopping, social and recreational amenities are consolidated to meet the changing needs of the precinct and the its immediate surrounding community and infrastructure.
– Objective 7: Communities are healthy, resilient and socially connected	Yes	The Urban Design Study and Master Plan demonstrates that the Proposal can provide for a development embedded into its context by a new active square at the heart of the centre, activated by a retail frontage along Macarthur Drive with the opportunity for alfresco dining. Improved pedestrian connections to the station will be provided, along with high quality landscaping of Macarthur Drive which will result in positive visual impact and allow for shading by trees in summer.
– Objective 8: Greater Sydney's communities are culturally rich with diverse neighbourhoods	Yes	The Urban Design Study and Master Plan demonstrates that the Proposal can provide for a development with a vibrant mix of uses and has the potential to accommodate a diverse community reflective of Liverpool LGA and Sydney. A range of housing types will be provided to attract a broad demographic at different stages in their lives, including key workers, students, recent graduates, retirees and families.
<i>Housing the city</i>		
– Objective 10: Greater housing supply	Yes	The Planning Proposal seeks to grow the availability of high quality housing at the site. The Urban Design Study and

– Objective 11: Housing is more diverse and affordable		Master Plan demonstrates that proposal can provide for a future development would provide a mix of housing types and sizes that can suit varying lifestyle options.
<i>A city of great places</i>		
– Objective 12: Great places that bring people together	Yes	<p>The Urban Design Study and Master Plan demonstrates that the proposal can facilitate a development that includes a large public square (Holsworthy Square), creating a focal space for people.</p> <p>This Planning Proposal will support a more efficient outcome at the site by providing for an appropriate balance of residential accommodation with Council's long term vision for the site as a retail centre.</p> <p>Proposed development envisaged under the controls would deliver well-designed, high quality buildings, contributing to a mix of dwelling types in the locality, which is currently comprised predominantly of single detached dwellings and where there are currently no apartment dwellings.</p>
Productivity		
<i>A well-connected city</i>		
– Objective 14: A Metropolis of Three Cities – integrated land use and transport creates walkable and 30-minute cities	Yes	<p>The Urban Design Study and Master Plan demonstrates that the proposal can create a new strategically located centre adjacent to Holsworthy Railway Station, provide improved pedestrian connections to the station, delivery of approximately 350 apartments with excellent amenity, and an attractive and successful retail centre.</p> <p>Outside of the Liverpool centre, the site is one of only three centres within walking distance to a train station in the Liverpool LGA. Of these centres, Holsworthy has the best rail connectivity to Central Sydney as noted earlier.</p>

The provision of residential apartment development beyond the scale previously approved, and where no such housing stock exists within the area, will provide additional choice for the community with access to existing services and transport infrastructure. The Proposal provides the opportunity for a more efficient design outcome for the site, with minimal visual imposition to existing surrounding development.

Western City District Plan, 2016

The site is located within the Western City District and the applicable District Plan is the *Western City District Plan* (2018), as established by the Greater Sydney Commission in March 2018. Relevant directions from the Western City District Plan are noted at **Table 3** below.

Table 3 Western City District Plan

Direction	Consistency	Comment
A city supported by infrastructure	Yes	The Planning Proposal will encourage and support the use of existing transport infrastructure as the site is conveniently serviced by the Holsworthy Railway Station (< 250m walking distance from site).
Housing the city	Yes	The proposal is located on a long term vacant site and provides a unique opportunity to provide strategic housing supply, to be integrated as part of a mixed-use development and within proximity to established transport infrastructure.

		<p>The indicative apartment mix under the Urban Design Study and Master Plan comprises 23% one bedroom, 50% two bedroom, and 27% three bedroom apartments.</p> <p>This mix is influenced by current and forecast trends in household composition in Holsworthy and the wider Liverpool LGA. In Holsworthy, couple family with children has changed from 55% of total families in 2001, to 61.5% in 2016. In addition, one parent families have also increased from 8.6% of all families in 2011, to 12.5% in 2016. Furthermore, notable forecast household types in Liverpool LGA between 2011 to 2036 include a proportional increase in lone person households (14% to 17%), and in couple only households (17% to 19%).</p>
A city of great places	Yes	<p>The Urban Design and Master Plan demonstrates that the proposal can provide for a development strategically centred adjacent to Holsworthy Railway Station, opportunity for improved pedestrian connections to the station, delivery of approximately 350 apartments with diversity of dwelling sizes and an attractive retail centre.</p> <p>The Proposal has the opportunity to deliver a precinct that is activated by a vibrant mix of uses and designed to welcome a diverse community reflective of the Liverpool LGA and Sydney.</p> <p>As noted earlier, future development may feature a large public square (Holsworthy Square) that will create a focal space for the existing and future community in Holsworthy.</p>

The Urban Design Study and Master Plan demonstrates that the Proposal can provide for a development that achieves the objectives of the District Plan's productivity and housing actions by increasing the number, mix and diversity of dwelling types available. Future development would facilitate the orderly and efficient economic development of the site and provide high quality mixed use development with connectivity to established infrastructure, consistent with established government policy and sound environmental planning principles.

Does the proposal have strategic merit?

This Planning Proposal, as supported by the Urban Design Study and Master Plan at **Attachment A**, holds strategic merit and should be supported by Council.

Is the proposal consistent with the relevant regional plan outside of the Greater Sydney Region, the relevant district plan within the Greater Sydney Region, or corridor/precinct plans applying to the site, including any draft regional, district or corridor/precinct plans released for public comment

The proposal will allow for the delivery of a mixed-use village centre consistent with Council's intent for the site, Council's residential, economic and community development strategies and the Western City District Plan.

Is the proposal consistent with a relevant local council strategy that has been endorsed by the Department

There are no relevant Council strategies which have been endorsed by the Department applicable to this Planning Proposal.

Is the proposal responding to a change in circumstances, such as the investment in new infrastructure or changing demographic trends that have not been recognised by existing planning controls

The Proposal has been designed in response to changing market and demographic trends which have not been recognised by the existing planning controls. The provision of a higher density mixed-use outcome, when compared against previous schemes for the site, will result in the most efficient outcome on a well-located site, which is capable of accommodating an uplift in density with no unreasonable environmental impact.

Current development standards applying to the site under the LLEP 2008 have applied since the LEP was adopted 10 years ago. It is further noted that the controls applicable to the site further predate the 2008 LEP, having been applied to the site at the disposal

of the site, which previously formed part of the Holsworthy Defence Land, but which was excised from the Barracks by the construction of the railway line.

The site, and the proposed LEP amendments sought under this Planning Proposal is of strategic importance within the locality. At present, the locality is considered not to be well accommodated with respect to retail services and the availability of a range of dwelling types and therefore housing choice, where existing residential development is primarily limited to low density forms. This Planning Proposal seeks a moderate increase in density in order to expand and enhance previously approved schemes for the site to achieve an integrated village centre which includes retail uses to serve the needs of people who live, work and visit the local area.

With regard to the Urban Design Study and Master Plan (**Attachment A**), key differences over prior approved schemes at the site include the increased provision of residential apartments, consistent with population projections for the locality, which will be well serviced by the integrated retail offering at lower levels. Through the increased provision of residential uses at upper levels, the Proposal will contribute to expanding the variety of dwelling types within the locality, where this form of housing stock does not currently exist. (ABS Census 2016 statistics indicate no residential apartment development in the state suburb of Holsworthy, with no known residential apartment developments since). This provision of multiple dwelling types is consistent with Council's vision for the area and is further supported by State and metropolitan strategic planning objectives and studies, that seek to provide a variety of housing typologies to meet changing household composition and socioeconomic status, particularly in well serviced and accessible locations.

Whilst this form of mixed-use development is permitted under the current zoning controls for the site, the principal guiding development standards of height and FSR (to which this Planning Proposal seeks to vary), inhibit the highest and best use of the site being realised under current market conditions. The subject site has been vacant for approximately fifteen (15) years, with current development standards applying to the site having existed for approximately ten (10) years. The existing controls are considered conservative in the context of more recent planning instruments, subsequent patterns of development and forecast population increases within the Liverpool LGA. Within the Liverpool LGA, the site provides unparalleled accessibility to Greater Sydney and is ideally located for increased residential density to maximise the opportunity to provide a mix of dwelling types with easy access to retail, recreation and employment, without the need for reliance on private motor vehicles.

Accordingly, whilst appropriate at the time of implementation, and noted as being one of the first standard-instrument adopted LEPs, it is considered that the current height and FSR controls applying to the site pursuant to the LLEP 2008 do not allow for the highest and best use of the site, being an increase in residential density as part of a broader mixed-use development, to be achieved.

The proposal will support the delivery of an integrated mixed-use village centre, within close proximity, and establishing both a physical and visual connection to, the Holsworthy railway station. The opportunity for residential tower components provide a progressive increase in the density of the built form within close proximity to the Holsworthy railway station.

Overall, the increases to building height and FSR sought by this Planning Proposal will result in an improved village centre development which will provide identity and a strategic point of reference for the suburb of Holsworthy and on approach to the Holsworthy railway station. As detailed within the supporting Social Impact Assessment (**Attachment C**) and Economic Impact Assessment (**Attachment D**), the proposed increase in density will not result in an oversupply of residential dwellings, will not result in an unreasonable economic impact to surrounding centres, nor set any precedent for further development within the locality, as there are no other sites which are capable of accommodating a development of this form.

The proposed increase in density beyond current development standards is considered to be without any unreasonable impacts to the locality or the environment. The Planning Proposal is considered to be of strategic merit and is therefore recommended for support by Council.

Does the proposal have site-specific merit, having regard to the following:

This Planning Proposal, as supported by the Urban Design Study and Master Plan at **Attachment A**, holds site-specific merit and should be supported by Council.

the natural environment (including known significant environmental values, resources or hazards);

The site holds minimal environmental constraints as it is largely devoid of any vegetation, is not identified with significant flood impacts, does not contain any endangered ecological communities, and by virtue of surrounding infrastructure, is generally isolated from surrounding areas of bushland.

A portion of the site is, however, identified as being bushfire prone, with the eastern portion of the site identified as a 'vegetation buffer' pursuant to Council's Bushfire Prone Land map. This affectation has influenced the Master Plan and will not preclude, the undertaking of future development. This would be further analysed and appropriate mitigation measures put in place as part of any future DA.

the existing uses, approved uses, and likely future uses of land in the vicinity of the proposal;

This Planning Proposal seeks the redevelopment of a long term vacant and generally unconstrained site, and where no similar opportunities exist to surrounding sites or within the locality.

As noted within this report, there is a strong and timely need for redevelopment of the site, which holds site-specific merit to accommodate the uplift in density sought by this Planning Proposal. As reflected by both current and historical zoning, the site has been identified for development for the purposes of a mixed use centre for over fifteen years, following the release and private sale of the site from Commonwealth ownership and military control in approximately 2001.

As discussed earlier, the site benefits from a number of existing development approvals, specifically DA-1839/2005 (as amended) and DA-582/2009 for the purposes of a retail centre. The site is currently vacant, having existed in a partially excavated and desolate state for approximately eight (8) years, with excavation works approved under DA-1839/2005 understood to have been undertaken in 2009. Accordingly, whilst the site remains undeveloped it is otherwise known by both Council and the general community as the site of 'Holsworthy Plaza'.

The Planning Proposal is accompanied by an Economic Impact Assessment prepared by Leyshon Consulting (**Attachment D**) which concludes that the proposed development will not lead to the loss of retail facilities at Wattle Grove and Moorebank or in other centres. Residents will still have easy access to the same (or a better) range of retail facilities compared with those they currently enjoy including access to a full-line supermarket and an Aldi discount supermarket. Further, the assessment concludes that the impacts of the proposal will be mitigated by the significant public benefits associated with creating a new mixed-use, transit-oriented centre at Holsworthy anchored by a full-line supermarket and an Aldi discount supermarket.

Historically, the site is somewhat fragmented as a result of its location adjacent to the East Hills railway line to the south, whilst also being triangularly defined by Heathcote Road and Macathur Drive, which bound the site to the north, east and west. The site is therefore standalone, being uniquely positioned against the rail corridor, bushland and with adequate separation to surrounding development and is of a size and capacity capable of accommodating the proposed increase in density without unreasonable environmental impact.

By virtue of the unique setting and history of the site, there are no comparable sites in the Liverpool LGA that possess equivalent strategic merit for a high density mixed use development, nor where such a development is possible. The subject site is under single ownership, is in close proximity to a railway station and future development under the amended controls will not impact on amenity and function of surrounding uses.

The Holsworthy Barracks to the south of the site is a key military asset, having recently undergone significant redevelopment, with development into the future likely to be restricted to Defence uses only. The Proposal would not affect the on-going Defence uses.

Development to the west of the site, the Mornington Estate, has only recently been constructed (2008), and is under Community Title, therefore having minimal development potential in the medium term. Further, and despite recent upgrades, whilst development associated with the Holsworthy railway station and commuter carpark is likely, any such development will be related to transport infrastructure only and not capable of any significant outward expansion (i.e. any development is likely to be uplift only).

Development to the north through east of the site consists of remnant bushland, the Holsworthy sewerage treatment plant and sports playing fields, zoned SP2 – Defence and RE1 – Public Recreation respectively. It is considered that development of this land is unlikely in the short to medium term, with any future development likely to be residential in nature only and dictated by significant flooding and ecological constraints burdening this land.

On this basis, there is no likely future development that would affect the uplift in density sought by this Planning Proposal, nor would the proposal affect nor preclude the development capability of surrounding site. Conversely, the proposed development is considered to result in a high-quality outcome for the site providing a range of retail, commercial uses to serve the needs of people who live in, work in and visit the local area, without unreasonable environmental, economic or social impact. The site therefore has site specific merit to support the Planning Proposal.

the services and infrastructure that are or will be available to meet the demands arising from the proposal and any proposed financial arrangements for infrastructure provision.

As detailed within **Section 6.4** of this report, there is adequate infrastructure to support the Planning Proposal. The site is well located and seeks to utilise existing public transport infrastructure and road connections to the site. Existing service provisions also exist for electricity, water, sewer, gas, stormwater infrastructure and telecommunications infrastructure at the site.

The site is well located to areas of public open space, specifically Kokoda Oval, Hammondville Oval and associated playing fields as well as areas of open space and bushland associated with Harris Creek and Williams Creek to the north of the site.

As detailed within the accompanying Social Impact Assessment (**Attachment C**), the site is also well located to a variety of community facilities, child care centres, sports clubs and associations, churches and schools (pre, primary and high schools) within the locality and surrounding suburbs of Hammondville and Wattle Grove.

Is the planning proposal consistent with a Council's local strategy or other local strategic plan?

Yes. The Planning Proposal is consistent with the objectives and actions of the applicable Council strategies, including the *Liverpool Business Centres and Corridors Strategy 2013*, the *Liverpool Residential Development Strategy 2008* and the *Liverpool Community Strategic Plan (Our Home, Liverpool 2027)*.

Liverpool Business Centres and Corridors Strategy 2013

The *Liverpool Business Centres and Corridors Strategy 2013* was prepared by Liverpool Council to encourage and guide retail and commercial development in identified centres,

whilst providing for appropriate commercial and business uses outside of identified centres. Despite having been a vacant site at the time of writing, the strategy identifies the subject site as 'Holsworthy Plaza', being an 'established centre' as follows:

"Holsworthy Plaza in the south-east of Liverpool LGA has existing DA approval for the development of 7,000sqm of retail floorspace including ALDI and Coles supermarkets. Examination of the retail demand generated by residents of the Wattle Grove area in isolation indicates an undersupply of supermarket and specialty floorspace in this area. The Holsworthy Plaza development will address the immediate undersupply of supermarket floorspace and will negate the need for any additional supermarket floorspace in the area to 2031, based on current population projections."

The proposed development does not seek a material intensification of the retail component already approved at the site and considered within the *Liverpool Retail Centres Hierarchy Review 2012* and *Liverpool Business Centres and Corridors Strategy 2013*. The provision of a residential development at the site remains within population projections for the region. Accordingly, the provision of residential accommodation at the site will facilitate a more efficient economic outcome for the site, providing a larger and centralised retail catchment and improving trade and economic efficiency within the capacity of the site.

This Planning Proposal is seen to be in accordance with the key directions defined under the strategy which are addressed below.

Table 4 Liverpool Business Centres and Corridors Strategy 2013

Strategy Direction	Consistency	Comment
– Preserve a commercial core area (excluding residential) in the Liverpool CBD for future business, office and retail growth.	Yes	The proposal is located in Holsworthy on a long standing commercially zoned site. The retail component of the proposal is consistent with extant development consents for the site and will not result in any impact to the Liverpool CBD and commercial core.
– Limit professional office premises to business zones to capitalise on, and concentrate infrastructure and services.	Yes	The proposal does not include any commercial office component. Any commercial use would be ancillary to the proposed retail use.
– Establish and maintain Liverpool's Retail Centre Hierarchy.	Yes	The proposal is located in Holsworthy on a long standing commercially zoned site and will maintain Liverpool's Retail Centre Hierarchy.
– Support the expansion of existing retail and business centres in accordance with the adopted Retail Centres Hierarchy 2012.	Yes	The subject site has been identified for construction of a retail centre.
– Ensure that new centres complement existing centres and do not impact upon their viability.	Yes	The subject site has been identified for the construction of a retail centre for over 10 years and the revisions made by this proposal will not impact upon the viability of any existing centres within the locality.
– Expand start-up business opportunities (and restrict residential) in extended enterprise corridor zones leading into main centres and nodes.	N/A	The subject site is not located within an enterprise corridor zone, nor the proposal include any start up business.
– Support growth of existing bulky goods clusters in accordance with the retail centre hierarchy	N/A	The proposal does not include provision for any bulky goods facility.

Strategy Direction	Consistency	Comment
<i>and limit other locations to serve a district role.</i>		

Liverpool Residential Development Strategy 2008

The *Liverpool Residential Development Strategy 2008* was prepared by Liverpool Council and adopted in July 2008 as Council's principal strategic planning document for residential development within the LGA.

This Planning Proposal will provide diversity of housing supply in line with the objectives and directions of the Strategy, including provision of high density residential development adjacent to a key transport node at Holsworthy railway station. This Planning Proposal is seen to be in accordance with the key directions defined under the strategy which are addressed below.

Table 5 *Liverpool Residential Development Strategy 2008*

Strategy Direction	Consistency	Comment
General Provisions		
– Consolidate medium density residential zones to areas around activity centres (200m-800m) and major transport nodes and down-zone fringe areas.	N/A	The site is zoned B2 – Local Centre pursuant to the LLEP 2008. The proposal does not seek any alteration to existing zoning at the site.
– Introduce new high density residential zone nodes adjacent to main town centres and major transport nodes.	Yes	Whilst the proposal does not seek to alter the existing zoning applicable to the site, the proposal otherwise provides for the introduction of high density residential development integrated within the 'Holsworthy Village' shopping centre development, being within close proximity (60m) to the adjacent Holsworthy railway station, which provides for fast direct rail connections.
– Investigate the surrounds (approximately 800m) of the 10 town and village centres identified by the retail strategy and METRIX and determine appropriate locations and extent of housing.	Yes	The proposed development is to be located on the site of an identified village centre, known as the 'Holsworthy Village'.
– Investigate the surrounds (approximately 800m) of the 2 locations on the T-way adjacent to the City Centre and determine appropriate locations and extent of housing.	N/A	The site is not located within proximity to any bus T-way.
– Encourage modest affordable private housing types within medium density zones, particularly around main town centres at Moorebank, Casula, Miller and Green Valley.	N/A	The site is not located within a medium density zone.
– Group all high density residential zones (including mixed-use residential) into one zone and	Yes	The proposal seeks to provide for an integrated, high density, mixed-use residential offering at the site, as

This Planning Proposal will not affect the implementation of the Draft Liverpool Community Strategic Plan 2027 nor the ability of Council to exercise its functions under the Local Government Act 1993.

Is the planning proposal consistent with applicable State Environmental Planning Policies?

As outlined below, the Planning Proposal does not preclude consistency with any State Environmental Planning Policy. Refer to the full assessment of SEPPs at **Table 6** below.

Table 6 Response to State Environmental Planning Policies

State Environmental Planning Policy (SEPP)	Consistency	Comment
State Environmental Planning Policy No 1—Development Standards	N/A	N/A
State Environmental Planning Policy No 19—Bushland in Urban Areas	N/A	N/A
State Environmental Planning Policy No 21—Caravan Parks	N/A	N/A
State Environmental Planning Policy No 30—Intensive Agriculture	N/A	N/A
State Environmental Planning Policy No 33—Hazardous and Offensive Development	N/A	N/A
State Environmental Planning Policy No 36—Manufactured Home Estates	N/A	N/A
State Environmental Planning Policy No 44—Koala Habitat Protection	N/A	N/A
State Environmental Planning Policy No 47—Moore Park Showground	N/A	N/A
State Environmental Planning Policy No 50—Canal Estate Development	N/A	N/A
State Environmental Planning Policy No 52—Farm Dams and Other Works in Land and Water Management Plan Areas	N/A	N/A
State Environmental Planning Policy No 55—Remediation of Land	Yes	As noted within this report, a Preliminary Site Investigation has been prepared for the site by GHD Pty Limited and is held at Attachment J . This Preliminary Site Investigation is consistent with previous studies and concluded elevated levels of PAH at locations consistent with previous studies, however that the site is appropriate with no remediation required for residential use with no direct access to soil (i.e. a residential apartment building), where this soil is otherwise covered by permanent structures (concrete slab, road etc.). On this basis, it is considered that the subject site is suitable for the proposed development and is satisfactory with regard to Clause 6 of SEPP 55.
State Environmental Planning Policy No 62—Sustainable Aquaculture	N/A	N/A
State Environmental Planning Policy No 64—Advertising and Signage	N/A	N/A
State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development	Yes	The proposal has been designed to ensure consistency with the provisions of SEPP 65 and the ADG, specifically relating to building massing, setbacks and

Strategy Direction	Consistency	Comment
<i>utilise additional uses and development standards to create distinctive characters.</i>		demonstrated by the Master Plan and Urban Design Study at Attachment A . The proposal will provide for a development that can offer distinctive character, will reinforce and promote pedestrian activity along Macarthur Drive, creating a vibrant corridor where residents and visitors can experience an element of village life and feel part of their community.
– <i>Introduce new location specific development standards (minimum lot size, floor space ratio and building height) to respond to specific capacity or existing or desired urban characters of different areas.</i>	Yes	As noted within Section 5.0 of this report, this Planning Proposal seeks amendment of the LLEP 2008 to introduce new location specific development standards relating to height and floor space ratio. Together, the proposed increase in allowable building heights and floor space ratio at the site is necessary to allow for an optimal built form outcome and to facilitate the redevelopment and renewal of the site consistent with the Urban Design Study and master plan prepared for the site (Attachment A).
Strategy for Holsworthy		
– <i>Introduce a new 4 Ha – 6 Ha high density residential node providing for continued concentrated residential apartment accommodation and terrace housing east of Harris Creek within 400m of the new centre.</i>	Yes	The 'new centre' referred to within this objective constitutes the subject site. The Planning Proposal seeks the appropriate concentration of residential housing within proximity to retail services and existing transport infrastructure and is therefore consistent with this objective.
– <i>Provide for three to four residential buildings.</i>	Yes	Whilst this objective is ambiguous, the proposal includes provision for up to six residential apartment buildings at the site.
– <i>Establish a medium density zone for the remainder of the investigation area west of Harris Creek, extending 800m (10-minute walk) from the Centre.</i>	N/A	The site does not seek to alter existing zoning at the site. It is noted that the 'medium density' zone referred to within this objective constitutes land to the north west of the site, being the 'Morningside Estate', which has subsequently been fully developed for medium density residential development.
– <i>Facilitate improved pedestrian connections through Harris Creek Reserve to the Station and new centre and the schools north of Infantry Parade.</i>	N/A	The site is not within proximity to the Harris Creek Reserve.

Our Home, Liverpool 2027 – Community Strategic Plan

The Liverpool Community Strategic Plan 2027 has been prepared by Council's corporate governance division to influence Council's delivery program and ongoing annual operational plans. It outlines a 10 years plan to transform Liverpool into an inclusive place to learn and grow and to become the destination of choice for business, investment, living and recreation. Our Home Liverpool 2027 was adopted by Council in April 2017 and commenced 1st July 2017.

State Environmental Planning Policy (SEPP)	Consistency	Comment
		provision of landscaping and open space at the site.
State Environmental Planning Policy No 70—Affordable Housing (Revised Schemes)	N/A	N/A
State Environmental Planning Policy (Affordable Rental Housing) 2009	N/A	N/A
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	N/A	N/A
State Environmental Planning Policy (Coastal Management) 2018	N/A	N/A
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017	N/A	N/A
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	N/A	N/A
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004	N/A	N/A
State Environmental Planning Policy (Infrastructure) 2007	Yes	The proposal has been designed having regard to SEPP Infrastructure, considering the proximity of the site to the adjacent railway line and scale of the development overall (considered to be traffic generating development). The proposal is supported by a Traffic Impact Assessment prepared by Terraflow (Attachment E) demonstrating the proposal will not result in any unreasonable impact to the local road network.
State Environmental Planning Policy (Kosciuszko National Park—Alpine Resorts) 2007	N/A	N/A
State Environmental Planning Policy (Kumell Peninsula) 1989	N/A	N/A
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	N/A	N/A
State Environmental Planning Policy (Miscellaneous Consent Provisions) 2007	N/A	N/A
State Environmental Planning Policy (Penrith Lakes Scheme) 1989	N/A	N/A
State Environmental Planning Policy (Rural Lands) 2008	N/A	N/A
State Environmental Planning Policy (State and Regional Development) 2011	N/A	N/A
State Environmental Planning Policy (State Significant Precincts) 2005	N/A	N/A
State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011	N/A	N/A
State Environmental Planning Policy (Sydney Region Growth Centres) 2006	N/A	N/A
State Environmental Planning Policy (Three Ports) 2013	N/A	N/A

State Environmental Planning Policy (SEPP)	Consistency	Comment
State Environmental Planning Policy (Urban Renewal) 2010	N/A	N/A
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017	Yes	The SEPP applies to land zoned B2 Local Centre in Liverpool Local Government Area. Consistency with this SEPP will be subject to future DAs, although there is very limited vegetation on the site, a result of minor groundworks undertaken under the consent of extant DAs for the site.
State Environmental Planning Policy (Western Sydney Employment Area) 2009	N/A	N/A
State Environmental Planning Policy (Western Sydney Parklands) 2009	N/A	N/A

Is the planning proposal consistent with applicable Ministerial Directions (s.117 directions)?

A review of the consistency of the Planning Proposal with the Ministerial Directions for LEPs under Section 117 of the EP&A Act 1979 is discussed at **Table 7** below.

Table 7 Response to Section 117 Directions

No.	Direction	Objectives	Consistency	Comment
1	Employment and Resources			
1.1	Business and Industrial Zones	<ul style="list-style-type: none"> Encourage employment growth in suitable locations; Protect employment land in business and industrial zones; and Support the viability of identified strategic centres. 	Yes	The Planning Proposal will support a retail centre on a site having been long identified for this purpose and already appropriately zoned.
1.2	Rural Zones	<ul style="list-style-type: none"> Protect the agricultural production value of rural land. 	N/A	The Planning Proposal does not affect land within an existing or proposed rural zone.
1.3	Mining, Petroleum Production and Extractive Industries	<ul style="list-style-type: none"> Ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development. 	N/A	The Planning Proposal does not relate to the mining of coal or other materials, production of petroleum or extractive materials.
1.4	Oyster Aquaculture	<ul style="list-style-type: none"> Ensure that Priority Oyster Aquaculture Areas and oyster aquaculture outside such an area are adequately considered when preparing a planning proposal; and Protect Priority Oyster Aquaculture Areas and oyster aquaculture outside such an area from 	N/A	The Planning Proposal does not relate to oyster aquaculture.

No.	Direction	Objectives	Consistency	Comment
		land uses that may result in adverse impacts on water quality and consequently, on the health of oysters and oyster consumers.		
1.5	Rural Lands	<ul style="list-style-type: none"> – Protect the agricultural production value of rural land; and – Facilitate the orderly and economic development of rural lands for rural and related purposes. 	N/A	The Planning Proposal does not apply to an existing or proposed rural or environmental protection zone.
2 Environment and Heritage				
2.1	Environment Protection Zones	<ul style="list-style-type: none"> – Protect and conserve environmentally sensitive areas. 	N/A	The Planning Proposal does not affect land within an environmental protection zone.
2.2	Coastal Protection	<ul style="list-style-type: none"> – Implement the principles in the NSW Coastal Policy. 	N/A	The Planning Proposal does not apply to land within the coastal Zone.
2.3	Heritage Conservation	<ul style="list-style-type: none"> – Conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance. 	N/A	The Planning Proposal does not affect land within a heritage Conservation Zone.
2.4	Recreation Vehicle Areas	<ul style="list-style-type: none"> – Protect sensitive land or land with significant conservation values from adverse impacts from recreation vehicles. 	N/A	The Planning Proposal does not seek to enable the land to be developed for the purposes of a recreation vehicle area.
3 Housing, Infrastructure and Urban Development				
3.1	Residential Zones	<ul style="list-style-type: none"> – Encourage a variety and choice of housing types to provide for existing and future housing needs; – Make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services; and – Minimise the impact of residential development on the environment and resource lands. 	Yes	<p>The site is zoned B2 - Local Centre, which although not a residential zone, otherwise provides for the undertaking of some forms of residential development, including residential flat buildings as permissible within the zone.</p> <p>The Planning Proposal will facilitate the delivery of high quality housing of this type, currently not present within the suburb of Holsworthy or broader locality. The development will increase housing supply and improve the variety and choice of dwelling types available.</p>

No.	Direction	Objectives	Consistency	Comment
				<p>The Planning Proposal will make efficient use of existing transport infrastructure as the site is conveniently serviced by the Holsworthy railway station and transport interchange immediately to the west of the site.</p> <p>The surrounding road network servicing the site is capable of accommodating the proposed development and the locality will benefit from forthcoming upgrades of Heathcote Road in coming years.</p> <p>The site is currently vacant, having been long identified for retail/commercial development. The proposal seeks to increase residential density at a well-located site and without unreasonable impact to surrounding infrastructure, resource lands or the environment.</p>
3.2	Caravan Parks and Manufactured Home Estates	<ul style="list-style-type: none"> – Provide for a variety of housing types; and – Provide opportunities for caravan parks and manufactured home estates. 	N/A	The Planning Proposal does not relate to the location or provision for caravan parks or manufactured homes.
3.3	Home Occupations	<ul style="list-style-type: none"> – Encourage the carrying out of low-impact small businesses in dwelling houses. 	Yes	The Planning Proposal does not seek to change the permissibility of home occupations in dwelling houses.
3.4	Integrating Land Use and Transport	<ul style="list-style-type: none"> – Improving access to housing, jobs and services by walking, cycling and public transport; – Increasing the choice of available transport and reducing dependence on cars; – Reducing travel demand including the number of trips generated by development and the distances travelled, especially by car; – Supporting the efficient and viable operation of public transport services; and 	Yes	<p>The site is within 100 metres of Holsworthy railway station and transport interchange, which provides fast connections.</p> <p>The Planning Proposal will provide for residential accommodation across a variety of dwelling types in a well-connected site and encourage use of public transport.</p>

No.	Direction	Objectives	Consistency	Comment
		<ul style="list-style-type: none"> Providing for the efficient movement of freight. 		
3.5	Development Near Licensed Aerodromes	<ul style="list-style-type: none"> Ensure the effective and safe operation of aerodromes; Ensure that their operation is not compromised by development that constitutes an obstruction, hazard or potential hazard to aircraft flying in the vicinity; Ensure development for residential purposes or human occupation, if situated on land within the Australian Noise Exposure Forecast (ANEF) contours of between 20 and 25, incorporates appropriate mitigation measures so that the development is not adversely affected by aircraft noise. 	Yes	<p>The site is located approximately 4.2km south of Bankstown Airport, 20km south east of Sydney Kingsford Smith Airport and approximately 25km east of the proposed Western Sydney Airport at Badgery's Creek. The site is not burdened by any ANEF restriction at the site.</p> <p>The proposed increase in height sought under this Planning Proposal (up to RL 55.0m AHD) is significantly below the OLS limitations applying to the site (Approx. RL. 100m AHD).</p> <p>The proposal will not affect the operation of any aerodromes.</p>
3.6	Shooting Ranges	<ul style="list-style-type: none"> Maintain appropriate levels of public safety and amenity when rezoning land adjacent to an existing shooting range; Reduce land use conflict arising between existing shooting ranges and rezoning of adjacent land; and Identify issues that must be addressed when giving consideration to rezoning land adjacent to an existing shooting range. 	N/A	<p>The Planning Proposal does not seek to affect, create, alter or remove a zone or provision relating to land adjacent to or adjoining an existing shooting range.</p>
4 Hazard and risk				
4.1	Acid Sulfate Soils	<ul style="list-style-type: none"> Avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils. 	Yes	<p>The site is identified as containing Class 5 Acid Sulfate Soils pursuant to Cl.7.7 LLEP 2008. The proposed development is not considered to have the potential to disturb, expose or drain acid sulfate soils, nor cause environmental damage.</p>
4.2	Mine Subsidence and Unstable Land	<ul style="list-style-type: none"> Prevent damage to life, property and the environment on land identified as unstable 	N/A	<p>The Planning Proposal does not apply to land that is within a mine subsidence district or</p>

No.	Direction	Objectives	Consistency	Comment
		or potentially subject to mine subsidence.		that has been identified as being unstable.
4.3	Flood Prone Land	<ul style="list-style-type: none"> Ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005 Ensure that the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land. 	N/A	<p>The Planning Proposal does not relate to land that is identified as being flood prone land.</p> <p>There exists an overland flow path across the site which conveys the flow from an upstream catchment in Macarthur Drive.</p> <p>Further consideration of flood matters will be given in any future DA for the site, with appropriate mitigation measures to be provided.</p>
4.4	Planning for Bushfire Protection	<ul style="list-style-type: none"> Protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas; Encourage sound management of bush fire prone areas. 	Yes	<p>The Planning Proposal applies to land that is partially bushfire prone, with the eastern portion of the site identified as a 'vegetation buffer' pursuant to Council's Bushfire Prone Land map.</p> <p>This affectation has been considered in the design of the proposal, with a future development capable of complying with Rural Fires Act 1997 and the NSW Rural Fire Service 'Planning for Bushfire Protection' guidelines.</p>
5 Regional Planning				
5.1	Implementation of Regional Strategies	<ul style="list-style-type: none"> Give legal effect to the vision, land use strategy, policies, outcomes and actions contained in regional strategies. 	N/A	The Planning Proposal does not apply to land subject to regional strategies.
5.2	Sydney Drinking Water Catchment	<ul style="list-style-type: none"> Protect water quality in the Sydney drinking water catchment. 	N/A	The Planning Proposal does not apply to land in the Sydney drinking water catchment.
5.3	Farmland of State and Regional Significance on the NSW Far North Coast	<ul style="list-style-type: none"> Ensure that the best agricultural land will be available for current and future generations to grow food and fibre; Provide more certainty on the status of the best agricultural land, thereby assisting councils with their local strategic settlement planning; 	N/A	The Planning Proposal does not apply to land in the nominated Council areas.

No.	Direction	Objectives	Consistency	Comment
		<ul style="list-style-type: none"> Reduce land use conflict arising between agricultural use and non-agricultural use of farmland as caused by urban encroachment into farming areas. 		
5.4	Commercial and Retail Development along the Pacific Highway, North Coast	<ul style="list-style-type: none"> Protect the Pacific Highway's function, that is to operate as the North Coast's primary inter- and intra-regional road traffic route; Prevent inappropriate development fronting the highway; Protect public expenditure invested in the Pacific Highway; Protect and improve highway safety and highway efficiency; Provide for the food, vehicle service and rest needs of travellers on the highway; and Reinforce the role of retail and commercial development in town centres, where they can best serve the populations of the towns. 	N/A	The Planning Proposal does not apply to land in Council areas on the north Coast.
5.5	Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)	(Revoked 18 June 2010)		
5.6	Sydney to Canberra Corridor	(Revoked 10 July 2008)		
5.7	Central Coast	(Revoked 10 July 2008)		
5.8	Second Sydney Airport: Badgerys Creek	<ul style="list-style-type: none"> Avoid incompatible development in the vicinity of any future second Sydney Airport at Badgerys Creek 	N/A	The Planning Proposal does not apply to land in the vicinity of Badgerys Creek.
5.9	North West Rail Link Corridor Strategy	<ul style="list-style-type: none"> Promote transit-oriented development and manage growth around the eight train stations of the North-West Rail Link (NWRL) Ensure development within the NWRL corridor is consistent with the proposals 	N/A	The Planning Proposal does not apply to land in the vicinity of the North-West Rail Link.

No.	Direction	Objectives	Consistency	Comment
		set out in the NWRL Corridor Strategy and precinct Structure Plans.		
6	Local Plan Making			
6.1	Approval and Referral Requirements	– Ensure that LEP provisions encourage the efficient and appropriate assessment of development.	Yes	The Planning Proposal does not contravene the objectives of this direction.
6.2	Reserving Land for Public Purposes	– Facilitate the provision of public services and facilities by reserving land for public purposes; and – Facilitate the removal of reservations of land for public purposes where the land is no longer required for acquisition.	Yes	The Planning Proposal does not propose to create, alter or reduce any existing zoning or reservation on the land for public purposes
6.3	Site Specific Provisions	– Discourage unnecessarily restrictive site specific planning controls.	Yes	The Planning Proposal does not propose any unnecessarily restrictive site specific planning controls, and will use standard built form controls to amend the LLEP 2008.
7	Metropolitan Planning			
7.1	Implementation of A Plan for Growing Sydney	– Give legal effect to the planning principles; directions; and priorities for subregions, strategic centres and transport gateways contained in A Plan for Growing Sydney	Yes	The Planning Proposal will enable development that is consistent with the key directions of the Metropolitan Strategy.
7.2	Implementation of Greater Macarthur Land Release Investigation	– Ensure development within the Greater Macarthur Land Release Investigation Area is consistent with the Greater Macarthur Land Release Preliminary Strategy and Action Plan (the Preliminary Strategy)	N/A	The Planning Proposal does not apply to land in the vicinity of the Macarthur land release area.

6.3 Section C – Environmental, social and economic impact

Is there any likelihood that critical habitat or threatened species, populations, or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The site does not contain any critical habitat, threatened species, population or ecological communities or their habitats. Whilst some areas of threatened ecological communities have been identified in areas of bushland adjacent to Williams Creek to the north east of the site, the Planning Proposal is not considered to result in any impact to these areas.

Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

The Planning Proposal seeks an increase in the height and floor space ratio controls applicable to the site to facilitate future development, as demonstrate by the Urban Design Study and Master Plan at **Attachment A**.

It is anticipated that subject to a future, detailed design, that the development has the potential to result in environmental impacts.

Should this Planning Proposal be supported, a detailed design and future Development Application (or applications) will be lodged seeking development consent for a proposed mixed-use development and will be subject to the applicable planning framework, including the provisions the EP&A Act 1979 and detailed controls of Liverpool City Council. It is anticipated that potential environmental impacts will be fully explored, with appropriate mitigation measures implemented, as to ensure that the development will result in no unreasonable effects.

Has the planning proposal adequately addressed any social and economic effects?

The social and economic effects of this Planning Proposal have been considered and addressed.

An Economic Impact Assessment has been prepared and is provided at **Attachment D** to this report. The Economic Impact Assessment notes that the proposal will provide the opportunity for a new district retail centre in south-eastern Liverpool, which the area currently lacks. The further advantage of the site is its co-location with Holsworthy Railway Station. The proposal will generate estimated annual sales of \$70 million, which may have an impact on other existing centres at Wattle Grove and Moorebank, however the impact is unlikely to lead to a significant reduction in retail services at these locations. The Economic Impact Assessment notes that the potential economic impacts of the proposal will be mitigated by the significant public benefits associated with creating a new, mixed use development, close to the railway station and anchored by a full line supermarket.

A Social Impact Assessment has been prepared and is provided at **Attachment C**. The planning proposal is considered to have an overall positive social impact, whilst potential negative impacts can be appropriately mitigated.

6.4 Section D – State and Commonwealth interests***Is there adequate public infrastructure for the planning proposal?***

It is considered there is adequate public infrastructure to support the Planning Proposal. The site is well located and seeks to utilise existing public transport infrastructure and road connections to the site.

As detailed within the Servicing and Utilities Infrastructure Strategy Report, prepared by ARUP (**Attachment I**), existing service provisions exist for electricity, water, sewer, gas, stormwater infrastructure and telecommunications infrastructure at the site.

It is likely that the proposed development may necessitate an upgrade of infrastructure, the extent of which will be considered as part of the detailed design and within any future Development Application (or applications) for the site.

What are the views of State and Commonwealth public authorities consulted in accordance with the Gateway determination?

It is anticipated that formal referral and consultation will be held with the following State and Commonwealth Authorities and service providers post-gateway determination:

- Department of Defence;
- NSW RMS;

- Transport for NSW;
- Sydney Water Corporation;
- NSW Rural Fire Service;
- Endeavour Energy;
- Jemena;
- Telstra; and
- NBN Co.

7. Mapping

The following maps identify the site, the subject of this Planning Proposal, the current development standards relating to the site, the proposed amendment to the zone and proposed development standards.

This Planning Proposal seeks to amend to the LLEP 2008 maps as follows:

- **Height of Buildings (Clause 4.3)** – Increase the maximum height of buildings control from 21 metres to 24 and 45 metres.
- **Floor Space Ratio (Clause 4.4)** – Increase the maximum floor space ratio (FSR) control from 1.5:1 to 2.15:1

7.1 Proposed LLEP 2008 height of buildings map

The proposed LLEP 2008 height of buildings map is provided at **Figure 14** below.



Figure 14 Proposed LLEP 2008 height of buildings map

7.2 Proposed LLEP 2008 floor space ratio map

The proposed LLEP 2008 floor space ratio map is provided at **Figure 15** overleaf.



Figure 15 Proposed LLEP 2008 floor space ratio map

7.3 Adjacent road reserve and railway line

While not depicted in the proposed LLEP 2008 maps at **Figure 14** and **Figure 15**, it is recommended that Liverpool City Council also seek to implement change the planning controls maps for the adjacent road reserve and railway line.

It is recommended that Heathcote Road and the railway line be rezoned to SP2 Infrastructure and have building height and FSR controls removed.

It is recommended that Macarthur Drive take on the adjacent B2 Local Centre controls proposed for the subject site, with a maximum building height of 24 metres and a maximum FSR of 2.15:1.

These changes would be consistent with the general treatment of road reserves and SP2 zoned land under the Liverpool LLEP 2008.

8. Consultation

This section provides information regarding consultation with council, stakeholders, residents and the community which has informed the preparation of this Planning Proposal.

8.1 Liverpool City Council

Consultation with Liverpool City Council has been undertaken as the Planning Proposal has been prepared, including meetings held on 14 December 2015, 10 August 2016, and 8 May 2017.

This consultation has involved the sharing of information and advice on a range of issues to inform the Planning Proposal. Key issues raised during this consultation include:

- Analysis of the existing urban context to and ability to support the proposed increased density.
- Connectivity to the locality, including to surrounding residential development, areas of open space and to Holsworthy railway station.
- Undertake a Traffic Impact Assessment to ascertain the capacity of and integration with the surrounding road network, specifically Heathcote Road and Macarthur Drive.
- Undertake a Social Impact Assessment to determine the extent and capacity of social infrastructure and community facilities that are available in the area and what may be needed to support the proposed increase in residential density.
- Undertake an Economic Impact Assessment to determine the extent and capacity of surrounding retail and commercial centers and the likely impacts of the proposed development on customer trade of these centres.

Following lodgement of the Planning Proposal, Council provided comments on 18 May 2018 in relation to the following matters:

- Scale of the proposed development relative its surroundings
- Three storey podium typology was not supported
- Economic impacts on existing nearby centres
- Landscaping within the road reserve

A follow up meeting occurred on 22 June 2018 to discuss the above matters. Additional to the above, the quality of the pedestrian connection to the railway station was identified as a key issue.

To address Council's concerns, the scale of the proposed development has been significantly reduced in the amended Master Plan (**Attachment A**). The proposed podium scale has been reduced from three-storeys to a single storey and the residential component of the development significantly reduced, meaning a reduction in overall building heights.

The proposed maximum building height adjacent Macarthur Drive has been reduced to provide an area of transition between existing low-scale residential development to the west of Macarthur Drive, and proposed taller buildings (up to 12-storeys) at the east of the subject site.

There is no proposed increase in non-residential floor space above what has been already approved on the site and for which there is a current and commenced DA. It is therefore asserted that there are no additional economic impacts proposed, beyond what would result from existing approvals on the site.

Landscaping within the verge of Macarthur Drive continues to be proposed by the Master Plan as this is considered to contribute to the "main street" environment of the centre as it addresses Macarthur Drive. This is shown indicatively. Whether or not this is proposed can be determined in consultation with Council as part of a future development application.

It is proposed to replace the existing roundabout at the intersection of Macarthur Drive and The Boulevard with a signalised intersection. This ensures a safe and easy connection between the station and the subject site. The upgrade of the intersection may be undertaken by the applicant in accordance with a voluntary planning agreement (VPA) as part of future development applications. This will be discussed with Council during the assessment of the Planning Proposal. It is additionally noted that the Landscape Master Plan also illustrates indicatively a potential future southern connection to the station running adjacent the railway line. Provision of this connection will be subject to future discussions with Transport for NSW during progression of the proposal and site planning applications.

8.2 Roads and Maritime Services

At the pre-Gateway stage, Council consulted with RMS in relation to the proposed development. A meeting also occurred between the proponent and RMS in relation to the impact of the Heathcote Road widening project on the proposed development.

Issues with the previously proposed direct access from Heathcote Road to the site were raised by RMS and this has subsequently been removed from the Master Plan.

8.3 Department of Defence

Council consulted with the Department of Defence at the pre-Gateway stage and letter of response was received dated 17 April 2018.

Key concerns raised in the letter include:

- Traffic and access
- Noise impacts from military operations on future development
- Base security

Upon receipt of the letter, the proponent met with Defence Housing Australia (DHA) who identified a strategic need for additional housing in the Holsworthy. A future development of the subject site has the potential to provide housing to meet this demand.

The proponent has made contact with the Department of Defence and intends on meeting with them to discuss how their concerns may be addressed through design.

It is noted that the military base is located directly south of the subject site. For the purpose of addressing Defence's concerns and also to achieve ADG solar access requirements, a future development of the subject site will seek to orientate dwellings away from the base. South-facing units will be minimised and where unavoidable, balconies and windows are capable of being screened to ensure no overlooking of the base.

The proposed development will have a negligible impact on traffic and access to the base.

8.4 APA Group

APA Group were consulted in relation to the Moomba to Sydney Ethane Pipeline, an existing high pressure gas transmission pipeline running to the south of the site.

The APA response identified concerns with the previously proposed child care centre and its proximity to the pipeline. To address this concern, the childcare centre has been removed.

8.5 Community

No consultation has been held with the community in the preparation of this Planning Proposal.

8.6 Consultation strategy

It is anticipated that community consultation will occur post gateway approval for a period of approximately twenty-eight (28) days, unless otherwise specified within the Gateway determination.

9. Project Timeline

This section provides information regarding the timeline and staging for the proposed LLEP 2008 amendments, the subject of this Planning Proposal.

9.1 Timeline

The timeframe for amendment of the LLEP 2008 is expected to be dependent on the consideration of the Planning Proposal by Council, the undertaking of community consultation, as well as any additional information requested as part of the assessment process.

It is considered that the technical studies required to progress the Planning Proposal to a Gateway determination have been submitted along with this Planning Proposal.

A timeframe to finalise the Planning Proposal will be issued with a Gateway determination. A timeframe of up to 12 months following a Gateway determination is anticipated. An indicative timeframe is provided below.

Stage	Timing	Responsible Person/Organisation
Preliminary consideration of Planning Proposal by Council	February 2019	Liverpool City Council
Gateway Determination	May 2019	NSW Department of Planning and Environment
Public exhibition and community consultation	June – September 2019	Liverpool City Council
Reporting of final Planning Proposal to Council Meeting	October 2019	Liverpool City Council
Finalisation of Planning Proposal	August 2019	Liverpool City Council (if delegated) or NSW Department of Planning and Environment

10. Conclusion

This Planning Proposal has been prepared in accordance with Section 55 of the Environmental Planning and Assessment Act 1979 and *A Guide to Preparing Planning Proposals*, NSW Department of Planning and Environment (2016).

The objective of this Planning Proposal is to enable the delivery of a high quality mixed-use development at the site, beyond what is capable under the current planning framework, to facilitate the preferred design option and support the effective utilisation of the site. The concept design for the redevelopment of the site is appended at **Attachment A**.

To achieve this, it is sought that the LLEP 2008 be amended as follows:

- **Height of Buildings (Clause 4.3)** – Increase the maximum height of buildings control from 21 metres to partially 25 metres and partially 45 metres
- **Floor Space Ratio (Clause 4.4)** – Increase the maximum floor space ratio (FSR) control from 1.5:1 to 2.15:1
- **Maximum non-residential gross floor area (Schedule 1)** – Include a site-specific provision under schedule 1 stipulating a maximum non-residential gross floor area of 9,000sqm on the site.

It is considered that this Planning Proposal report is sufficient to enable a Gateway determination. It is recommended Council support this Proposal to accelerate the provision of mixed-use development in a highly accessible, yet currently underserved strategic location.

The proposed amendment to the LLEP 2008 is supportable because:

- The Planning Proposal is a design-led outcome resulting from a detailed urban design study ensuring consistency with Council's long term intent for the site as a 'Village Centre'.
- The Planning Proposal is consistent with the Greater Sydney Region Plan for Sydney and the Western City District Plan. The development that may result from this Planning Proposal, as demonstrated by the Urban Design Study and Master Plan, will enable the optimum and efficient use of existing transport infrastructure (T8 Airport and South Line Rail Lines), will substantially increase housing supply and diversity to meet the changing demographic profile in the area, and will create a new neighbourhood centre in Holsworthy that has the potential to be of a high urban design quality. In doing so this Planning Proposal is considered consistent with the Directions of the Western City District Plan including *A city supported by infrastructure, Housing the city and A city of great places*, and the Liveability and Productivity Directions of the Greater Sydney Region Plan.
- The Planning Proposal is consistent with Council's strategic policy documents, including, however not limited to, the Liverpool Residential Development Strategy 2008; Liverpool Retail Centres Hierarchy Review 2012; Liverpool Business Centres and Corridors Strategy 2013; Liverpool Economic Development Strategy 2013-2023; and the Liverpool Community Strategic Plan - Our Home, Liverpool 2027.
- The Planning Proposal will facilitate the efficient and optimal redevelopment of a long term underutilised site, capable of accommodating an increase in density with minimal environmental impact.

The Planning Proposal is therefore recommended for support by Council to proceed to a Gateway Determination.

Attachment A – Master Plan and Urban Design Study

Attachment B – Landscape Master Plan

Attachment C – Social Impact Assessment

Attachment D – Economic Impact Assessment

Attachment E – Traffic Impact Assessment

Attachment F – Flood Study

Attachment G – Bushfire Constraints Assessment

Attachment H – Noise and Vibration Impact Assessment

Attachment I – Servicing and Utilities Infrastructure Strategy Report

Attachment J – Preliminary Site Investigation

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Item no:	
Application Number:	RZ-8/2017
Proposal	Planning Proposal to amend the Liverpool Local Environmental Plan 2008 development standards for building height and floor space ratio and a Schedule 1 amendment limiting non-residential uses to 9,000sqm GFA
Property Address	2 Macarthur Drive, Holsworthy
Legal Description:	Lot 5 DP 825745
Applicant:	Architectus Pty Ltd
Land Owner:	Holsworthy Developments Pty Ltd
Recommendation:	Proceed to Gateway determination
Assessing Officer:	David Smith, Manager Planning and Transport Strategy

1. EXECUTIVE SUMMARY

Council has received a planning proposal to intensify the development potential at 2 Macarthur Drive, Holsworthy (Lot 5 DP 825745) by increasing the applicable maximum building height from 21m to a maximum of 45m, and floor space ratio (FSR) from 1.5:1 to 2.15:1. The amended development standards are to be accompanied by an amendment to Schedule 1 of the Liverpool Local Environmental Plan (LLEP) 2008 limiting non-residential uses to a Gross Floor Area (GFA) of 9000sqm on the site. The amendments to the LLEP 2008 are to be supplemented by a corresponding amendment to Part 2.6 (Holsworthy Station Area) of the Liverpool Development Control Plan (LDCP) 2008.

Determination of strategic merit and site specific merit have been assessed in accordance with *A guide to preparing planning proposals*, as updated and published by the NSW Department of Planning, Industry and Environment in 2018. The application has been submitted pursuant to Section 3.33 of the *Environmental Planning and Assessment (EP&A) Act 1979* and the proposal is referred to the Liverpool Local Planning Panel for advice in accordance with Section 2.19 of the *EP&A Act 1979*.

This report recommends that the planning proposal be supported by Council and submitted to the Department of Planning, Industry and Environment seeking a Gateway determination.

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2. SITE DESCRIPTION AND LOCALITY

This planning proposal is site specific and relates to land at 2 Macarthur Drive, Holsworthy (Lot 5 DP 825745). The subject site is a vacant, triangular shaped parcel of land with an area of approximately 1.86ha. The site has approximate frontages of 232m to the T8 - Airport & South Railway line in the south, 185m to Macarthur Drive in the northwest and 200m to Heathcote Road in the northeast.



Figure 1: Site location and surroundings

The site is located directly to the east of Holsworthy train station and the 'Mornington Estate', and is approximately 400m to the south of Hammondville Park. The Holsworthy Army barracks are located 65m to the south of the site, being separated by the T8 Rail line.

The site has existing DA consents as follows:

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- On 20 December 2005, DA-1839/2005 was approved for a mixed use residential development for 6800sqm of retail and commercial floor space, and 40 residential units
**Subsequent modifications were approved on 29 March 2006, 14 February 2007, 21 December 2006 and 21 December 2007*
 - On 25 August 2008, DA-820/2008 was approved for a McDonald's restaurant
 - On 11 May 2009, DA-582/2009 was approved to modify the mixed use residential development (DA-1839/2005) to comprise of 8822sqm of retail and commercial floor space, and 10 residential units

3. DETAILS OF THE PROPOSAL

The proposal seeks to amend the Liverpool Local Environmental Plan (LLEP) 2008 as follows:

- Increase the height of building development standard from 21m to part 24m and part 45m;
- Increase the floor space ratio development standard from 1.5:1 to 2.15:1; and
- Insert a site-specific provision under Schedule 1 stipulating a maximum non-residential gross floor area of 9,000sqm on the site.

A summary of the proposed amendments and the existing planning controls are defined below:

	Existing	Proposed
Floor Space Ratio	1.5:1	2.15:1
Height (max)	21m	24m-45m

The proposed changes to the zoning maps for LLEP 2008 are shown below.

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Figure 2: Extract of LLEP 2008 FSR Map (proposed)



Figure 3: Extract of LLEP 2008 Height Map (proposed)

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The proposal is supported by an Urban Design Study and Master Plan. The analysis presents a potential future development outcome for the site. Key features within the urban design analysis are discussed in this report noting that any final development would be subject to further detailed assessment during the DA stage.

Any DA would need to be assessed against Part 2.6 (Holsworthy Station Area) of the Liverpool Development Control Plan (LDCP) 2008. It is proposed that Part 2.6 of the LDCP 2008 is amended to support the planning proposal.

A summary of the proposed built form outcomes are outlined below.

Built form and function	1 storey podium structure (retail and parking) with street wall façade elements and 6 x 6-12 storey tower structures (residential).
Retail Area	8804sqm of Gross Leasable Floor Area (GLA) dedicated to retail uses
Residential Apartments	Potential for 350 dwellings comprising of a mixture of one, two, and three bedroom apartments (approx. GFA of 31000sqm)
Vehicular Access	Off Macarthur Drive only
Parking	Parking provided through 2 levels of on-site basement parking.
Public Domain	Ground level public domain with shelter, street vegetation, public seating areas, and public gathering spaces.

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Figure 4: Proposed built form layout (Urban Design Study and Master Plan)

4. CONSIDERATIONS OF STRATEGIC MERIT

The Department's *A guide to preparing planning proposals* includes the following questions to justify the proposal (Section A, Q1 and Q2).

Q1 PPG - Is the planning proposal a result of an endorsed local strategic planning statement, strategic study or report?

The proponent has stated that the proposal has been prepared as a result of the Greater Sydney Region Plan 2056 and the Western City District Plan. However, the subject regional and district plans do not mention Holsworthy as being an area of any strategic significance. Although reference is made to a 'Bankstown-Holsworthy' area in the Western City and South District plans, this area comprises of the Punchbowl, Wiley Park and Lakemba Station precincts in the Sydenham to Bankstown Urban Renewal Corridor. As the subject site does not form part of the Sydenham to Bankstown Urban Renewal Corridor, the proposal is not considered to be the subject of any strategic study or report. The site is consistent with the draft Liverpool Local Strategic Planning

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Statement, particularly Local Planning Priority 7 *"housing choice for different needs, with density focused in the city centre and centres well serviced by public transport* and Local Planning Priority 11 *"An attractive environment for local jobs, business, tourism and investment"*.

Q2 PPG - Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The objective of the proposal is to increase the permissible residential density on the site. This will be accomplished by increasing the maximum height from 21m to 45m and the maximum FSR from 1.5:1 to 2.15:1. The proposal also aims to impose a maximum permitted gross floor area (GFA) of 9000sqm for retail uses on the subject site. The retail GFA will be administered through an enabling clause under Schedule 1 of the LLEP 2008. Based on the current development standards, the only way the proposal could be achieved would be via a planning proposal.

The Department's *A guide to preparing planning proposals* includes the following question to delineate consistency with the NSW strategic planning framework (Section B, Q3).

Q3 PPG - Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

The Department includes 'assessment criteria' which provide guidance on assessing a proposal's consistency with matters raised in Question 3. The following table summarises the assessment criteria.

Guideline Assessment Question	Council Response
<i>Give effect to the relevant regional plan outside of the Greater Sydney Region, the relevant district plan within the Greater Sydney Region, or corridor/precinct plans applying to the site, including any draft regional, district or corridor/precinct plans released for public comment; or</i>	This question is addressed in detail below.
<i>Give effect to a relevant local strategic planning statement or strategy that has been endorsed by the Department or required as part of a regional or district plan or local strategic planning statement; or</i>	This question is addressed in detail below.
<i>Responding to a change in circumstances, such as the investment in new infrastructure or changing demographic trends that have not been recognised by existing planning controls.</i>	This question is addressed in detail below.

A Metropolis of Three Cities - Greater Sydney Region Plan (March 2018)

The Greater Sydney Region Plan – A Metropolis of Three Cities (the MoTC) was updated in March 2018 and replaces the previous metropolitan strategies. The MoTC is a strategic land use plan

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which provides the overarching vision for the Sydney Metropolitan Area over the next 20-40 years. Its aim is to manage growth in alignment with agency infrastructure plans, to deliver strategic place-based outcomes for Greater Sydney. Guided by 10 overarching directions in the section of the document titled *Directions for a Greater Sydney*, the optimal goal is to deliver infrastructure, productivity, liveability, and sustainability benefits to Greater Sydney. The planning proposal specifically addresses three directions and their associated priorities under the MoTC as follows:

Item	Comment
<i>Objective 10: Greater housing supply</i>	The proposal allows for a contemporary housing supply to be developed in close proximity to public transport and services. The Holsworthy suburb is currently characterised by detached dwellings and some attached dwelling typologies. The planning proposal will facilitate the provision of high density residential units. The apartments will comprise of a mix of one, two and three bedroom units to cater for a range of people different households and will contribute to Council's supply of residential dwellings.
<i>Objective 11: Housing is more diverse and affordable</i>	
<i>Objective 14: A Metropolis of Three Cities – integrated land use and transport creates walkable and 30-minute cities</i>	The concept of a '30 minute city' is to be achieved by establishing connections between various airports, train stations and localities as identified in the <i>Greater Sydney Services and Infrastructure Plan - Future Transport 2056</i> . The site is well positioned to meet this requirement as residents can travel to metropolitan centres such as Liverpool within 30 minutes by train.

Western City District Plan

The *Western City District Plan* (WCDP) provides a guide for the management of economic growth, social service planning, and environmental conservation for the Western District over the next 20 years. The planning proposal specifically addresses three directions and their associated priorities under the WCDP as follows:

Item	Council Response
<i>Planning Priority W1: Planning for a city supported by infrastructure</i>	The site is well supported by Heathcote Road and the 901, 902 and 902X bus routes and the T8 railway line. Increased residential density in this location, close to public transport, will make good use of the existing infrastructure and services in the vicinity.
<i>Planning Priority W5: Providing housing supply, choice and affordability with access to jobs,</i>	The proposal has considered place-based planning priorities that support the vision of the locality and the benefits provided by mixed land uses permitted with consent in a B2 Local Centre zone. The planning proposal enables a range of diverse contemporary housing options in an area served by existing public transport, open space and commercial services.

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<i>services and public transport</i>	
<i>Planning Priority W6: Creating and renewing great places and local centres, and respecting the District's heritage</i>	The site benefits from good accessibility to Holsworthy railway station which provides onwards connections to key employment, education and services destinations. The urban design strategy provides a conceptual built-form which includes embellished areas of open space on-site and on land within road reserves.

The Department's *A Guide to Preparing Planning Proposals* includes the following questions (Section B, Q4 & Q6)

Q4 PPG - Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

Our Home Liverpool 2027

Council's *Our Home, Liverpool 2027* is a Community Strategic Plan (CSP) which provides strategic directions that have been identified with the input of community members. The directions are supplemented with goals and targets to achieve each direction. The four key directions are: *creating connection, strengthening and protecting our environment, generating opportunity and leading through collaboration*.

The submitted documents state that the proposal "will not affect the implementation of the Liverpool Community Strategic Plan 2027, nor the ability of Council to exercise its functions under the Local Government Act 1993". Additionally, the amended planning controls would ultimately deliver (subject to further development assessment) a mixed use development with quality urban built form and additional employment opportunities. The proposal provides an additional supply of residential apartment dwellings in an area that has access to adjacent parklands and community facilities.

Liverpool Residential Development Strategy

The Liverpool Residential Development Strategy (LRDS) was adopted by Council in July 2008. While the strategy is over 10 years old, it nevertheless provides strategy consistent with current Section 9.1 directions, and makes recommendations specifically applicable to land within the vicinity of Holsworthy railway station. A revised housing strategy is currently being prepared to inform the preparation of the Local Strategic Planning Statement and LEP review.

Broadly, the existing LRDS seeks to implement "location specific development standards (minimum lot size, floor space ratio and building height) to respond to specific capacity or existing or desired urban characters of different areas." In addition, the LRDS seeks to "introduce new high density residential zone nodes adjacent to main town centres and major transport nodes" such as Holsworthy.

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The specific residential development strategy for Holsworthy is described as follows:

- *Introduce a new 4 Ha – 6 Ha high density residential node providing for continued concentrated residential apartment accommodation and terrace housing east of Harris Creek within 400m of the new centre.*
- *Provide for three to four residential buildings.*
- *Establish a medium density zone for the remainder of the investigation area west of Harris Creek, extending 800m (10 minute walk) from the Centre.*
- *Facilitate improved pedestrian connections through Harris Creek Reserve to the Station and new centre and the schools north of Infantry Parade.*

The proposed zoning changes recommended by the LRDS for Holsworthy, which were incorporated into the LLEP 2008, are illustrated in Figure 5 below.



Figure 5: Holsworthy residential development strategy

The subject site has been identified for future commercial development, with the 'Morningside Estate' being identified as a 'high density residential node'. Despite the above, the current zoning permits residential development within the Holsworthy village centre, and the LLEP 2008 and LDCP 2008 include development controls to regulate the density of any proposed development.

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The current FSR and height controls were implemented so that Council's hierarchy of residential and retail uses would not be undermined by potential overdevelopment of the Holsworthy village centre. The current LLEP 2008 and LDCP 2008 controls are capable of supporting a mixed use development comprising of approximately 200 dwellings with 7250sqm of retail GLA and 1200sqm of commercial GLA on the subject site (depending on built form). However, the current DCP for Holsworthy envisions a mixed use development on the site with a limited floor plate, in which the majority of dwellings would be wholly contained within the 'Morningson Estate' to the west of the site (Figure 6).

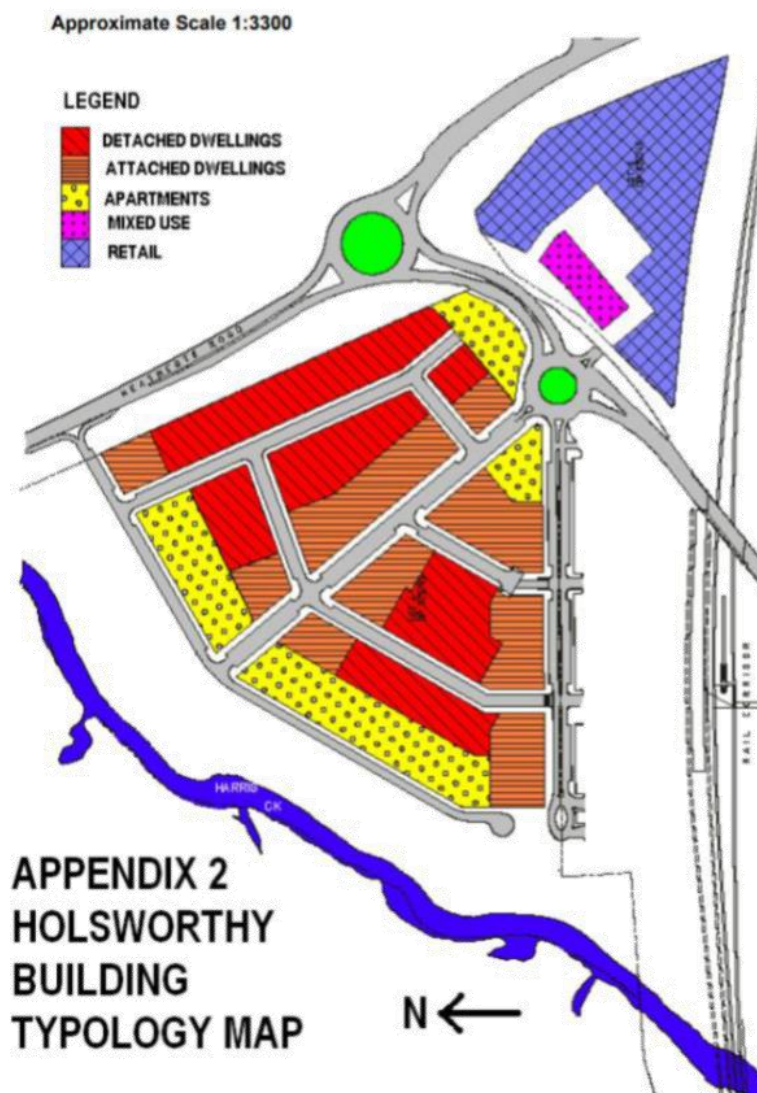


Figure 6: Holsworthy Building Typology

Although consent has been granted for developments which are inconsistent with the building

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typology map, the current controls were designed to cater for the future development of a potential village centre that would largely comprise of retail uses and primarily cater for the shopping needs of residents in Voyager Point, Pleasure Point and the 'Morningside Estate'. Despite the inconsistencies between existing developments, the proposal and the LRDS; Council has recently resolved to endorse a draft Local Strategic Planning Statement (LSPS) which supports density in centres well serviced by public transport.

Draft Local Strategic Planning Statement

At its ordinary meeting of 26 June 2019, Council resolved to endorse the draft *Connected Liverpool 2050 - Local Strategic Planning Statement (LSPS)* and place it on public exhibition for a period of 6 weeks. Council's LSPS provides strategic directions to support the implementation of the MoTC, WCDP and CSP. The directions are supplemented with priorities and actions to achieve each direction. The four key directions are: *connectivity, liveability, productivity and sustainability*. The planning proposal specifically addresses directions for *liveability* and *productivity*, and their associated priorities under the LSPS as follows:

Item	Comment
<i>Local Planning Priority 6: High quality, plentiful and accessible community facilities, open space and infrastructure aligned with growth</i>	The planning proposal and urban design report identified high quality public open space which could be provided as part of a future development, consisting of a 1000sqm public square with frontage to Macarthur Drive. Improving access to other local open spaces in the area, such as Hammondville Park, will be essential to provide access to a range of quality open spaces.
<i>Local Planning Priority 7: Housing choice for different needs, with density focused in the City Centre and centres will serviced by public transport</i>	The planning proposal will cater for the construction of approximately 350 dwellings comprising of a mix of one, two and three bedroom apartments, thereby contributing to Council's dwelling targets. The dwellings will be within 250m of Holsworthy train station and cater for a range of people including singles, couples and families.
<i>Local Planning Priority 9: Safe, healthy and inclusive places shaping the wellbeing of the Liverpool Community</i>	The proposal will facilitate the delivery of a mixed use, transit-oriented development which will encourage walkability and promote an integrated cycling network between centres. Improvements to the public domain, including better access to Holsworthy Station and local open spaces will be necessary to ensure the proposal is consistent with this priority.
<i>Local Planning Priority 11: An</i>	The proposal will foster an attractive environment for local jobs and businesses as the retail GFA will cater for a wider range of retail uses on

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<i>attractive environment for local jobs, business, tourism and investment</i>	the site, which will inevitably lead to increased employment opportunities for local workers. The amount of retail floor space achievable on the site would not compete with higher order centres such as Liverpool or Bankstown.
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Liverpool Retail Centres Hierarchy Review 2012

The Liverpool Retail Centres Hierarchy Review 2012 was prepared by Hill PDA to establish a hierarchy of retail and commercial areas across the LGA and to identify existing and potential future demand for retail floor space resulting from residential development and land release, population growth and changing demographics across suburbs.

The subject site has been identified as a potential 'village centre' with a projected GLA of 7000sqm for retail uses. This is supported by the current DCP for the site which allows for a maximum GLA of 7,250sqm for such purposes. Consent was granted for a mixed use development on the site in 2005 (DA-1839/2005) which catered for approximately 5600sqm of retail GLA with an additional 1200sqm of GLA dedicated for commercial purposes. The Economic Impact Assessment submitted with the DA identified that the village centre would have a moderate impact on nearby centres at Wattle Grove and Moorebank, with projected sales deficits of 11.2% and 10.1%, respectively.

Subsequently, consent was granted in 2009 (DA-582/2009) for a development consisting of 7085sqm of retail GLA with an additional 1737sqm of GLA dedicated for commercial purposes. The current planning proposal will provide a GLA of 8,804sqm for retail uses (contained within a GFA of 9000sqm) which represents a 1554sqm (21%) increase above the recommended maximum in the DCP. The proposal has been supplemented by an Economic Impact Assessment which shows that the proposed extent of retail uses would affect the viability of nearby shopping centres at Wattle Grove and Moorebank as there would be a projected deficit of 14.5% and 12.5% in sales, respectively.

Despite the above, the subject site would be the most appropriate location to provide additional retail GFA as the residential population within Holsworthy has increased by approximately 12% since the Retail Centres Hierarchy Review was produced in 2012. Therefore, it is highly unlikely that the impacts noted above would lead to the closure of any supermarkets in the nominated centres.

Q6 PPG - Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

9.1 Directions by the Minister (previously Section 117)

The planning proposal addresses the following directions, pursuant to Section 9.1 of the EP&A Act 1979:

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Direction	Objectives	Comment
1.1 Business and Industrial Zones	<i>To encourage employment growth in suitable locations.</i>	The proposal is generally consistent with this objective as it will provide opportunities for employment growth on the subject site.
	<i>To protect employment land in business and industrial zones.</i>	The proposal is consistent with this objective as it will retain the current B2 Local Centre zone.
	<i>To support the viability of identified strategic centres.</i>	The proposal is not likely to have any adverse economic impacts on identified strategic centres.
3.1 Residential Zones	<i>To encourage a variety and choice of housing types to provide for existing and future housing needs.</i>	The proposal provides a range of units with varying number of bedrooms, contained within a shop-top housing arrangement.
	<i>To make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services.</i>	The site is in close proximity to a train station and existing bus services. The site also has the potential to accommodate a range of land uses including shops and medical centres.
	<i>To minimise the impact of residential development on the environment and resource lands.</i>	The site is within an urban area adjoining a train line and there is no significant vegetation on the site. Any future development within the site will have no impact on the sensitive vegetation that is situated on Defence Land within the vicinity.
3.4 Integrating Land Use and Transport	<i>Improving access to housing, jobs and services by walking, cycling and public transport.</i>	The subject site is well positioned in relation to public transport, with Holsworthy railway station located within approximately 200 metres, which provides access to employment, education and health services in Liverpool and the wider region. The proximity to the railway station will encourage public transport use.
	<i>Increasing the choice of available transport and reducing dependence on cars.</i>	The site is located adjacent to the Holsworthy Station, which provides frequent train services to the city via the airport, and to Campbelltown via Glenfield. Express services between Holsworthy and Central Sydney allow Sydney Airport to be reached in as little

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		as 17 minutes and Central Station in 30 minutes. Regular services reach the airport in 25 minutes and Central in 38 minutes. Journey time to Liverpool via Glenfield is approximately 17 minutes and frequent bus services are also provided between Holsworthy Station and the Liverpool City Centre.
	<i>Reducing travel demand including the number of trips generated by development and the distances travelled, especially by car</i>	Holsworthy station is located on three bus routes including the 901 and 902 which connect the site to Liverpool, and the 902X which connects to Sandy Point.
	<i>Supporting the efficient and viable operation of public transport services</i>	The site is located adjacent to the Holsworthy railway station (200m) which is serviced by the T8 Airport and South Line.
	<i>Providing for the efficient movement of freight.</i>	N/A
3.5 Development Near Regulated Airports and Defence Airfields	<i>To ensure the effective and safe operation of regulated airports and defence airfields</i>	The proposal will not affect the operation of any regulated airports. However, there is an airfield located 3.1km to south of the site within the Holsworthy Army Barracks. Should the proposal receive Gateway Determination, then the Department of Defence will need to be notified as part of the post Gateway Determination process.
	<i>To ensure that their operation is not compromised by development that constitutes an obstruction, hazard or potential hazard to aircraft flying in the vicinity</i>	The proposed increase in height sought under this Planning Proposal (up to RL.55.0m AHD) is significantly below the OLS limitations applying to the site (Approx. RL. 100m AHD).
	<i>To ensure development, if situated on noise sensitive land,</i>	The site is located approximately 4.2km south of Bankstown Airport, 20km south east of Sydney Kingsford Smith Airport, 25km east of Nancy Bid Walton International Airport and approximately 3.1km

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	<i>incorporates appropriate mitigation measures so that the development is not adversely affected by aircraft noise.</i>	north of the Holsworthy Army Barracks defence airfield. The site is not burdened by any ANEF restrictions.
4.1 Acid Sulfate Soils	<i>The objective of this direction is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils.</i>	The site is impacted by Class 5 acid sulfate soils and is within 500m of land affected by Class 4 acid sulfate soils. Accordingly, an acid sulfate soil management plan will be required should any works lower the water table below 1 metre AHD on the adjacent Class 4 land.
4.4 Planning for Bushfire Protection	<i>Protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas</i>	This affectation has been considered in the design of the proposal, with a future development capable of complying with Rural Fires Act 1997 and the NSW Rural Fire Service 'Planning for Bushfire Protection' guidelines 2006, subject to concurrence from the NSW Rural Fire Service.
	<i>Encourage sound management of bush fire prone areas</i>	This objective can be achieved, subject to concurrence from the NSW Rural Fire Service.
6.1 Approval and Referral Requirements	<i>The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development</i>	The Planning Proposal does not contravene the objectives of this direction.
6.2 Reserving Land for Public Purposes	<i>to facilitate the provision of public services and facilities by reserving land for public purposes</i>	The proposal does not propose to create, alter or reduce any existing zoning or reservation on the land for public purposes.
	<i>To facilitate the removal of reservations of land for</i>	The proposal does not propose to create, alter or reduce any existing zoning or reservation on the land for public purposes.

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	<i>public purposes where the land is no longer required for acquisition.</i>	
6.3 Site Specific Provisions	<i>The objective of this direction is to discourage unnecessarily restrictive site specific planning controls.</i>	The proposal does not propose any unnecessarily restrictive site specific planning controls, and will use standard built form controls to amend the LLEP 2008.
7.1 Implementation of A Plan for Growing Sydney	<i>The objective of this direction is to give legal effect to the planning principles; directions; and priorities for subregions, strategic centres and transport gateways contained in A Plan for Growing Sydney.</i>	A Plan for growing Sydney has now been superseded by the 'Metropolis of Three Cities' Regional Plan.

5. CONSIDERATIONS FOR SITE-SPECIFIC MERIT

The Department's planning proposal guide includes the following site-specific merit questions (Section B, Q3b).

Does the proposal have site-specific merit, having regard to the following:

- *the natural environment (including known significant environmental values, resources or hazards) and*
- *the existing uses, approved uses, and likely future uses of land in the vicinity of the proposal and*
- *the services and infrastructure that are or will be available to meet the demands arising from the proposal and any proposed financial arrangements for infrastructure provision.*

Natural environment

Land Contamination

The conclusions and recommendations presented in the Preliminary Site Investigation (Revision No. Final) prepared by GHD Pty Ltd dated 17th July 2017 are dissimilar to those included in the Planning Proposal report. Whilst GHD Pty Ltd identified a need for more detailed investigations of the site, Architectus Group Pty Ltd suggested that the land is appropriate for redevelopment without the need

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for remediation.

SEPP 55 requires the proponent to investigate the site and provide Council with the information needed to carry out its planning functions. To satisfy the requirements of Clause 6 of State Environmental Planning Policy No. 55 - Remediation of Land, more detailed investigations are required to verify the suitability of the land for its intended use (i.e. Stage 2-Detailed Site Investigation or Remedial Action Plan if needed). This should be provided prior to public authority consultation to aid in satisfying the site-specific merits of the planning proposal.

Acid Sulfate Soils

The site is identified as being affected by Class 5 acid sulfate soils. The Planning Proposal states that "The proposed development is not considered to have the potential to disturb, expose or drain acid sulphate soils, nor cause environmental damage." However, Clause 7.7 of the LLEP 2008 requires the submission of an acid sulfate soils management plan when works within Class 5 are undertaken within 500m of Class 1,2,3 or 4 acid sulfate soils, provided that the works will be below 5m AHD and lower the water table by 1m on the adjacent Class 1,2,3 or 4 land. Given that basement level parking is likely to form part of any future development, it is possible that an acid sulfate soils management plan will be required as part of any DA.

Flooding and Stormwater management

The land for the proposed rezoning is not affected by mainstream flooding. However, the flood modelling demonstrates that the existing stormwater pipes do not have the capacity to convey the flow from the entire catchment across the adjoining roads. The existing stormwater drainage system across Heathcote Road is inadequate and will require upgrading to facilitate development of the site. This will need to be addressed as part of any DA, should the proposed LLEP amendment be gazetted.

Noise Impacts

The submitted Noise and Vibration Impact Assessment prepared by Wilkinson Murray Pty Limited (dated 24 May 2017) indicates that the four buildings along the north-eastern boundary may be required to have closed windows to meet the internal noise levels at both facades facing and perpendicular to Heathcote Road. Although it appears that the proposal has generally addressed the statutory requirements of Clause 87 and 102 of State Environmental Planning Policy (Infrastructure) 2007, it should be noted that an updated acoustic report will be required as part of any DA as the report makes reference to an outdated iteration of the proposed master plan (i.e. current masterplan has only three buildings on the north-eastern boundary).

Bushfire hazard

The north-eastern portion of the site is bushfire prone (vegetation buffer) at an approximate depth of 65m from the Heathcote Road frontage. A Bushfire Constraints Assessment report prepared by RPS (dated May 2017) has been submitted indicating that the proposal is capable of complying with

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the Rural Fires Act 1997 and the NSW Rural Fire Service 'Planning for Bushfire Protection' guidelines. The report will be referred to the NSW Rural Fire Service for their review should a Gateway Determination be issued for the proposal.

Services and infrastructure

Gas Pipeline Easement

The subject site is adjacent to the Moomba-Sydney ethanol pipeline which is located along the southern boundary. The proposal was referred to the APA Group who advised that due to the change in density being proposed, the risk associated with the land use surrounding the gas pipeline would go up a level from Residential (T1) to High Density (T2) (a significant step change), under Australian Standard (AS) 2885. Therefore, a Safety Management Study (SMS) will be required to assess the additional risk and examine additional risk mitigation measures. The preparation of a SMS will need to be supported by various studies and will need to include proposed pipeline protections. The proponent will be responsible for the cost of the SMS, and the implementation of protection measures arising from the SMS.

The APA Group has advised that the SMS does not need to be completed prior to Gateway Determination, but should be provided at DA stage subject to further consultation as part of the post Gateway Determination process. However, it must be noted that the APA Group will not support the inclusion of any 'sensitive uses' under AS2885, which includes uses for sectors of the community who may be unable to protect themselves from the consequences of a pipeline failure (e.g. child care, seniors housing, health facilities etc.).

The proponent has been made aware of APA's concerns and has offered to remove the child care centre from the proposed development.

It should also be noted that the land-uses APA uses in its assessment (such as T1 and T2) are not aligned with any NSW planning zones, meaning Council cannot, strictly, prohibit any developments for which APA would object, as per the standard instrument permissible uses.

Traffic and Transport

Traffic considerations will largely depend on concurrence from Transport for NSW, as Heathcote Road will be widened to a four lane road. Any comments from this agency would be considered as part of the post Gateway Determination process.

Voluntary Planning Agreement

The proponent has prepared an offer to enter into a Voluntary Planning Agreement (VPA) in association with the planning proposal and will also make required Section 7.11 development contributions in accordance with Council's *Liverpool Contributions Plan 2009* as part of future DA approvals. The VPA will involve the undertaking of the following works:

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- Upgrade of the existing roundabout in Macarthur Drive to a signalised intersection
 - Removal of the redundant roadway connecting the existing roundabout and rail bridge
 - Embellishment of Macarthur Drive road reserve to Council's satisfaction
 - Landscaping along Heathcote Road to the satisfaction of the RMS
 - Provision of public open space on the site with a minimum area of 1000sqm

The VPA will provide upgrades within the Macarthur Drive road reserve, and the landscaping along Heathcote Road will offer opportunities for embellishment alongside a classified road. The onsite public open space will benefit the wider community as it will cater for new residents who will occupy the site. Provision of the open space will need to be further investigated with APA, as there is a desire to limit areas of congregation within close proximity to high pressure ethane gas pipelines. Connectivity to other areas of public open space should also be in the scope of a VPA.

Statutory Considerations / Conditions

Land Contamination

Prior to public exhibition, a Stage 2 - DSI report would need to be prepared by a suitably qualified and experienced contaminated land consultant in accordance with the *Environmental Protection Authority (EPA) Contaminated Sites Series*, providing an assessment of the suitability of the site for the intended use.

The Stage 2 - DSI report is to identify the level and extent of any contamination at the site, assess the potential risk posed by contaminants to health and the environment, and obtain a sufficient level of information in order to develop a remedial action plan (RAP). It should be noted that future development on the site would be subject to consent and any significant adverse environmental impacts can be addressed as part of any DA.

DCP Amendment

The proposal is supported by an amendment to Part 2.6 (Holsworthy Station Area) of the LDCP 2008. The current DCP includes controls to regulate residential and commercial/retail development on the subject site as well as the 'Morningside Estate' to the west. There are controls for both public and private domain, and the controls are supplemented by a preferred street layout, building typology and local centre design principles.

The amendments will ensure that Part 2.6 includes controls that align with the masterplan as detailed in the planning proposal. Should a Gateway Determination be issued, then the DCP will be exhibited concurrently with the planning proposal as part of the post Gateway Determination process.

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The Department's *A guide to preparing planning proposals* includes the following questions regarding State Environmental Planning Policies (Section B, Q5).

Q5 PPG - *Is the planning proposal consistent with applicable State Environmental Planning Policies (SEPP)?*

The proponent provides a review of the relevant SEPPs as provided below.

Policy	Proponents Comments	Council Assessment
SEPP 55 – Remediation of Land	As noted within this report, a Preliminary Site Investigation has been prepared for the site by GHD Pty Limited. This Preliminary Site Investigation is consistent with previous studies and concluded elevated levels of PAH at locations consistent with previous studies, however that the site is appropriate with no remediation required for residential use with no direct access to soil (i.e. a residential apartment building), where this soil is otherwise covered by permanent structures (concrete slab, road etc.). On this basis, it is considered that the subject site is suitable for the proposed development and is satisfactory with regard to Clause 6 of SEPP 55.	The proposal has provided a Stage 1 Preliminary Site Investigation. Council requires a Stage 2 Detailed Site Investigation report to determine the extent of contamination on the site (if any). This can be provided prior to exhibition and will inform the suitability of the site for the intended use.
SEPP 65 Design Quality of Residential Flat Buildings	The proposal has been designed to ensure consistency with the provisions of SEPP 65 and the ADG, specifically relating to building massing, setbacks provision of landscaping and open space at the site.	Consistent. The proposal includes an Urban Design Concept report that indicates potential to develop residential flat buildings in alignment with SEPP 65. Any future development to occur on the site as a result of the rezoning would be subject to consent, with any significant adverse design impacts or conflicts with SEPP65 being addressed during the development application stage.
SEPP (Vegetation in Non-Rural	The SEPP applies to land zoned B2 Local Centre in Liverpool Local Government Area. Consistency with this	Consistent. The proposal would not be in conflict with the requirements under SEPP (Vegetation in Non-Rural Areas)

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<i>Areas) 2017</i>	SEPP will be subject to future DAs, although there is very limited vegetation on the site, a result of minor groundworks undertaken under the consent of extant DAs for the site.	2017.
<i>SEPP (Infrastructure) 2007</i>	The proposal has been designed having regard to SEPP Infrastructure, considering the proximity of the site to the adjacent railway line and scale of the development overall (considered to be traffic generating development). The proposal is supported by a Traffic Impact Assessment prepared by Terrafic demonstrating the proposal will not result in any unreasonable impact to the local road network.	Consistent. Although, potential traffic impacts can be mitigated (subject to RMS concurrence), it is advised that Clause 55 of the SEPP (Infrastructure) 2007 requires consent authorities to assess any risks associated with development within a gas corridor. The APA Group recommends that mitigation measures are largely addressed prior to gazettal and that a Safety Management Study is submitted at the DA stage. Accordingly, the proposal will need the concurrence of APA Gas as part of the post Gateway Determination process.

Q7 PPG - Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The site and any proposed land uses would be contained within an established urban environment, therefore there will be no adverse impacts on ecological communities or habitats.

Q8 PPG - Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

The applicant will be required to submit a Stage 2 - detailed site investigation (and RAP if required) and undertake potential upgrades of the stormwater drainage system within the vicinity. Bushfire mitigation measures will need to be implemented in accordance with any advice received from the NSW Rural Fire Service.

Q9 PPG - Has the planning proposal adequately addressed any social and economic effects?

Economic Impacts

The planning proposal would allow for additional land uses that would neither negate nor reduce employment outcomes in the area, and would be complimentary to the approved neighbouring developments. As discussed earlier in this report, there will be no significant adverse impacts upon any existing shopping centres that have been identified in the Economic Impact Assessment.

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Social Impacts

The Social Impact Assessment Report found that the proposal will not have any adverse impacts on the social fabric of the area surrounding the site. The subject site is well suited for a mixed use development and is in context with neighbouring developments. The development will not significantly reduce or impact upon the level of service provided by existing social infrastructure and facilities. Accordingly, there are no notable social implications for the proposal.

Q10 PPG - *Is there adequate public infrastructure for the planning proposal?*

Yes. As discussed earlier in this report there is adequate public infrastructure for the planning proposal including shops, open space and public transport options.

Q11 PPG - *What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination?*

As noted earlier, referrals will be made to the NSW Rural Fire Service, Transport for NSW, Department of Defence and APA Gas, subject to Gateway Determination. Consultation with other state or Commonwealth authorities will be determined during the post Gateway Determination process, and at DA stage should the proposal be supported.

Next Steps

The Planning Proposal will be reported to Council for endorsement and subsequently forwarded to the Department of Planning, Industry and Environment seeking Gateway Determination.

Following a Gateway Determination, in support of the Planning Proposal, there will be public authority and community consultations, a public exhibition period and a further report to Council prior to proceeding with the making of any amendment to LLEP 2008.

7. CONCLUSION

This report has been prepared following consultation with internal Council officers and relevant external agencies. The above assessment has shown that the proposal is consistent with State and local strategies. There is strategic merit to support the proposed rezoning. The proposal demonstrates site specific merit where the amended development standards will facilitate increased housing supply and retail uses, without negatively impacting upon current or future land uses in the vicinity. As demonstrated in this report, the urban design and built form considerations for this proposal are consistent with Council's future vision for the site.

It is recommended that the planning proposal proceed to Gateway Determination.

Attachments

1. Planning Proposal

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2. Urban Design Study and Master Plan
 3. Traffic Impact Assessment
 4. Social Impact Assessment
 5. Economic Impact Assessment
 6. Flood Study
 7. Preliminary Site Investigation
 8. Noise and Vibration Impact Assessment
 9. Bushfire Preliminary assessment
 10. Servicing Report



**ADVICE ON PLANNING PROPOSALS
LIVERPOOL LOCAL PLANNING PANEL**

Monday 26th August 2019

Held at the
'Gold Room, Liverpool Library'
170 George Street
LIVERPOOL

Panel: Michael Mantei (Chair)
Matthew Taylor Expert
Lindsay Fletcher Expert
Carl Hadfield Community Rep

There were no conflicts of interest declared by any panel members in relation to any items on the agenda.

Trim Reference:

LIVERPOOL CITY COUNCIL

ADVICE OF LIVERPOOL LOCAL PLANNING PANEL

PAGE 1

26 August 2019

ITEM No:	1
APPLICATION NUMBER:	RZ-8/2017
SUBJECT:	Planning Proposal to amend the Liverpool Local Environmental Plan 2008 development standards for building height and floor space ratio and a Schedule 1 amendment limiting non-residential uses to 9,000sqm GFA
LOCATION:	Lot 5 DP 825745 2 Macarthur Drive, Holsworthy
OWNER:	Holsworthy Developments Pty Ltd
APPLICANT:	Proceed to Gateway determination
AUTHOR:	David Smith, Manager Planning and Transport Strategy

ADVICE OF THE PANEL

The Panel has inspected the site and surrounding locality and read the Council officer's report and supporting documents. Subject to the further comments below the Panel considers the planning proposal has strategic and site specific merit. The Panel supports the recommendation that the planning proposal proceeds to gateway determination.

The Panel recommends Council consider the following matters:

- 1) Placing a minimum non-residential gross floor area to be developed on the site as a means of ensuring that the site is not wholly developed for residential purposes. This could be achieved by the schedule amendment to the LEP or a DCP control.
- 2) Requiring the proponent to liaise with Council's Design Excellence Panel in the preparation of the site-specific urban design masterplan in the proposed DCP.
- 3) Requiring the proponent to include the following additional commitments in the proposed VPA:
 - Pedestrian and cycle way linkages to provide connectivity between the site and the passive and active open space to the North of the site
 - Enhancement of the public domain along the pedestrian link between the site and Holsworthy Train Station.

VOTING NUMBERS:

4-Nil

Holsworthy Village Centre Planning Proposal – Response to matters raised by Local Planning Panel

- 1. A minimum non-residential gross floor area is to be developed on the site as a means of ensuring that the site is not wholly developed for residential purposes. This could be achieved through a schedule amendment to the LEP, or a DCP control.**

The land is zoned B2 Local Centre (the existing zoning is to be retained). The objectives of the B2 zone are to provide for a range of uses, including retail, business and community uses, to encourage employment, and to allow residential uses while maintaining active retail, business or other non-residential uses at street level.

Existing provisions in the Liverpool LEP 2008 (Cl. 7.16 'Ground floor development in Zones B1, B2 and B4) requires non-residential uses at ground level in the B2 zone. This ensures development in the B2 zone has active uses at ground level and cannot be wholly developed for residential purposes.

The Planning Proposal includes approximately 8,965m² of non-residential GFA (8,804m² GLA). All non-residential GFA is located at the ground level.

Therefore, a minimum non-residential GFA control is not required. Cl. 7.16 will ensure the site is developed as a mixed-use development, with active uses at ground level.

- 2. The proponent is to liaise with Council's Design Excellence Panel in preparation of the site-specific urban design masterplan in the proposed DCP.**

A site specific DCP will be prepared to support the planning proposal. This can be included as a condition of the Gateway Determination. A similar approach to the Master' site (240 Governor Macquarie Drive, Warwick Farm), is recommended.

Council's recommendation was to 'submit the planning proposal to the Department of Planning, Industry and Environment for a Gateway determination with a recommendation that a site specific DCP be included as a Gateway condition to be satisfied prior to public exhibition'.

- 3. The proponent is to include the following additional commitments in the proposed VPA:**

- a. Pedestrian and cycleway linkages to provide connectivity between the site and passive and active open space to the North of the site**

There is an existing pathway on Heathcote Road that connects the site to the sportsfields to the north. However, the RMS is upgrading a two-kilometre section of Heathcote Road at Holsworthy to improve traffic congestion and improve pedestrian and cyclist connectivity to Holsworthy Train Station and Hammondville Park. A plan of the proposed RMS works is attached.

The RMS will be providing a pedestrian and cyclist shared path along Heathcote Road, connecting Voyager Point to Holsworthy Train Station and towards Hammondville. The works also include the signalisation of the Heathcote Road and Macarthur Drive intersection providing improved pedestrian access from the site to the north. The RMS commenced early works in March 2019.

The works to be undertaken by RMS will provide improved pedestrian and cycleway linkages to the active open space to the north of the site. No further works are required.

There are existing connections to the passive open space to the north-west of the site (Harris Creek Reserve). There are existing footpaths on both sides of The Boulevard connecting the site to an existing entry point to Harris Creek Reserve at the western end of The Boulevard. Signage is provided at the entry point from The Boulevard to the Harris Creek Reserve.

There is also an existing footpath along Morningside Parade, providing access to entry points to Harris Creek Reserve at the corner of Margate Avenue and on Parkwood Road. Morningside Parade

and Parkwood Avenue are local streets, with low traffic and provide an attractive and safe walking and cycling environment to the Reserve.

The existing footpaths are good- quality and provide excellent connectivity between the site and Harris Creek Reserve. The improvements by RMS along Heathcote Road will provide excellent accessibility to the active sportsfields to the north.

No further upgrades to pedestrian and cycleway linkages to Harris Creek Reserve or the sportsfields to the north are required.

b. Enhancement of the public domain along the pedestrian link between the site and Holsworthy Train Station

The site is within 200m of Holsworthy Station, with direct access along The Boulevard.

The Boulevard has footpaths on both sides of the road, street lights and Holsworthy Station signage provided along the pathway.

The public domain along The Boulevard is high quality, with footpaths that are in good condition, high quality landscaping and regular streetlighting and a landscaped medium strip providing a low traffic environment for pedestrians. Refer to photos below.

The proposed signalisation and improvements to the intersection of MacArthur Drive and The Boulevard will significantly improve pedestrian access between the site and the station. A new shared cycle and pedestrian path proposed along MacArthur Drive will provide a direct connection to The Boulevard and the station. These works form part of the statement of commitments and will form part of the VPA.

The landscape concept for the proposal includes a new open space to connect the site and the station. This park will create a high-quality arrival and important link between the site and the station.

The existing public domain between the site and the station will be significantly enhanced by the proposed intersection upgrades, a new shared pathway along Macarthur Drive and a new open space linking the site and the station. These works will be included in the VPA. (Refer to diagrams on the following page).

No further enhancement of the public domain is considered necessary.

Proposed enhancement to the public domain linking the site and the station

A new
signalised
intersection
will enhance
connectivity
to the station

A new shared
pathway will
provide a
direct
connection to
the station

A new open space
providing a high-
quality connection
between the site
and the station



Heathcote Road – Existing condition and RMS Upgrade



Existing shared pathway on Heathcote Road looking north and south (a new shared pedestrian and cycle way is to be provided by the RMS).



RMS upgrades to Heathcote Road – a new shared connection (shown in green) will be provided along the length of Heathcote Road, providing direct access from the site to the active sports fields to the north.

The Boulevard – Access to Holsworthy Train Station



A new shared path (and signalised intersection) will connect MacArthur Drive with the existing footpath on The Boulevard – providing direct access from the site to the station.



Existing footpath along The Boulevard provides a direct line of sight and connection to the station. The public domain is high quality- with landscaping and streetlights along the length of the pathway.



Existing footpaths on both side of the street and landscaped median strip makes walking along The Boulevard a pleasant experience. The median creates a slow traffic environment and landscaping provides an attractive connection to the station.

Access to Harris Creek Reserve

Existing footpaths on both sides of Morningside Parade provide access a safe and pleasant walking environment to existing entry points to Harris Creek Reserve on Parkwood Road



A dedicated footpath is provided along the length of Parkwood Road, with two clear entry points to Harris Creek Reserve located on Parkwood Road. There are a number of existing pathways in Harris Creek Reserve that provide walking and recreational opportunities.



Close to The Boulevard (with a dedicated access point from Parkwood Road) is a well-used pathway through Harris Creek Reserve. The pathway provides a direct connection between Holsworthy Station and the surrounding areas to the west of the Reserve. The pathway has street lights and provides a high-quality walking and cycling connection to the Reserve.

architectus™



Prepared for:
Holsworthy Developments Pty Ltd
Date:
29 October 2018

Urban Design Report

Revision B - October 2018

Holsworthy Centre

A NEW VILLAGE CENTRE WITH GREAT AMENITY

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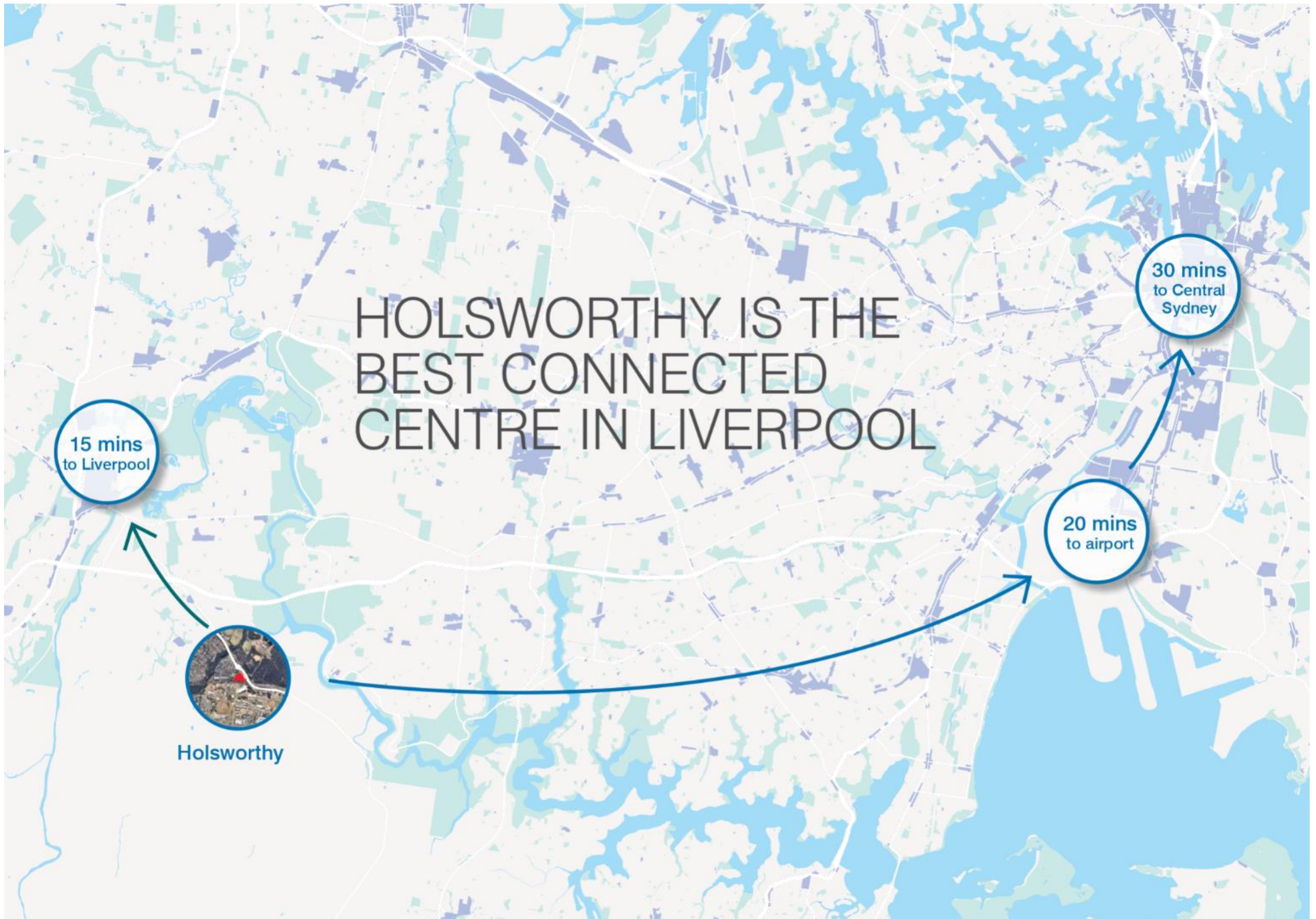
Date
October 2018

This document is for discussion purposes only unless signed.

GALAXY COFFEE



1	Site and context		3	Master plan	
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1 Site and context

Purpose of this report

Architectus has been engaged by Holsworthy Shopping Centre Pty Ltd to undertake an urban design analysis and review of the site at Macarthur Drive and Heathcote Road, Holsworthy. The site is currently subject to an approved Development Application (DA) for a mixed-use retail and residential centre.

This report details Architectus' design-led planning approach to the future redevelopment of the site as an integrated retail and residential centre with excellent connections to Liverpool and Central Sydney, leading to a master plan to realise the potential for the site.

A landscape concept for the site has been developed by Clouston Associates alongside Architectus' master plan and is included in this report.

This report is intended to accompany a Planning Proposal which will seek to amend the relevant planning controls under the Liverpool Local Environmental Plan (LEP) 2008 to allow the vision for the site to be achieved through subsequent development application(s).

This version of the report has been revised in 2018 following submission of an earlier version to Council (August 2017) and feedback from Council.

The site

The site has an area of approximately 18,620 square metres. It is bound by the railway line to the south, Heathcote Road (an RMS road) to the north east and Macarthur Drive to the north west.

The site is strategically located adjacent to Holsworthy Railway Station (T2 Airport, Inner West and South line), which provides express services to major employment hubs, such as Sydney Airport (17 minutes) and Central Sydney (30 minutes).





1.1 Summary of strategic context

Greater Sydney Region Plan

The Greater Sydney Region Plan (A Metropolis of Three Cities) is the metropolitan strategy for Sydney updated by the NSW Department of Planning and Environment in March 2018.

The site lies in the 'Western City' for which the strategy notes that **"In the Western City, improving liveability is about new great places, with well-connected communities which have access to a range of jobs and services."**

Key directions with relation to this site include:

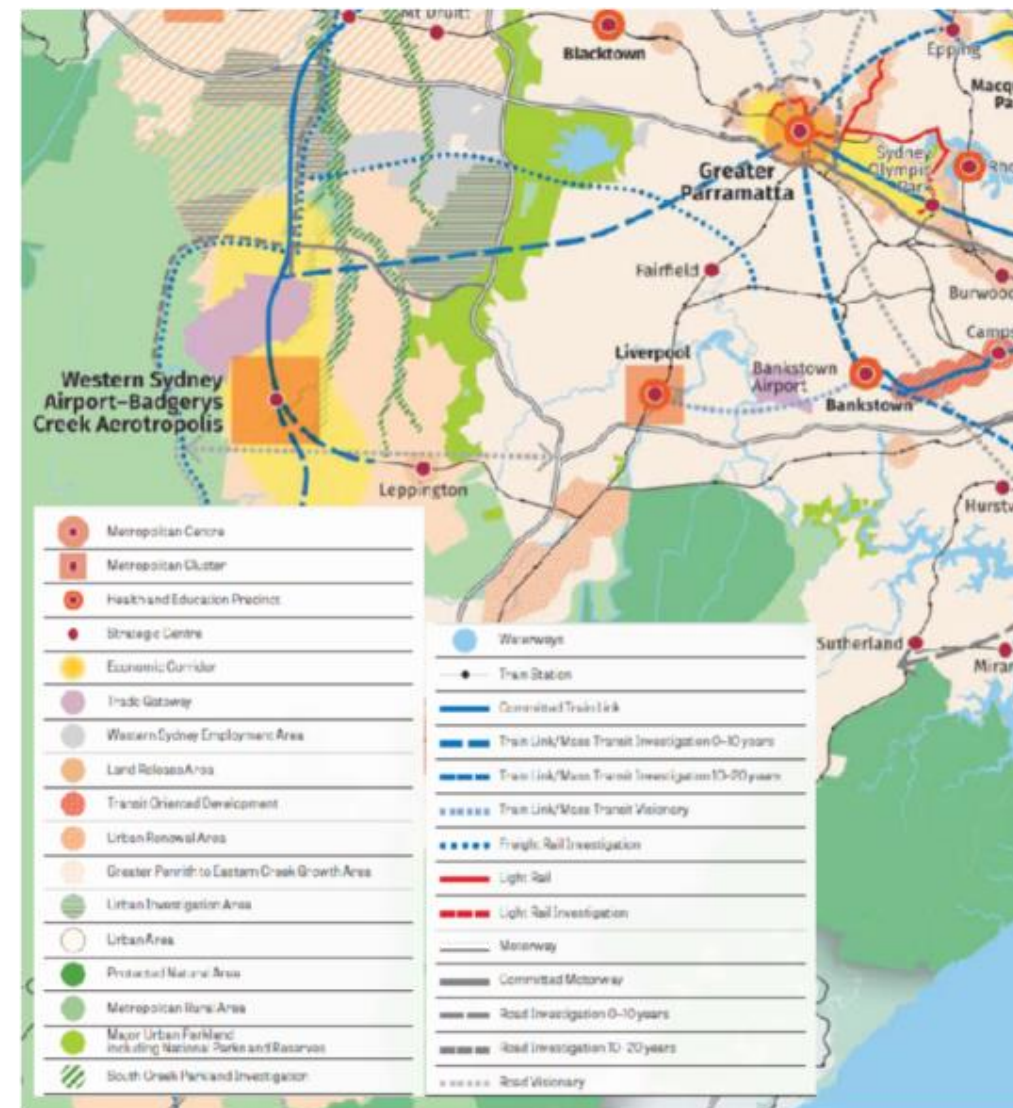
- The Western City region will experience the greatest housing growth of all regions.
- Principles for housing strategies in delivering new growth include to **"facilitate high quality urban outcomes including the creation of walkable neighbourhoods which support active and healthy lifestyles, as well as the creation and renewal of great places"**

Western City District Plan

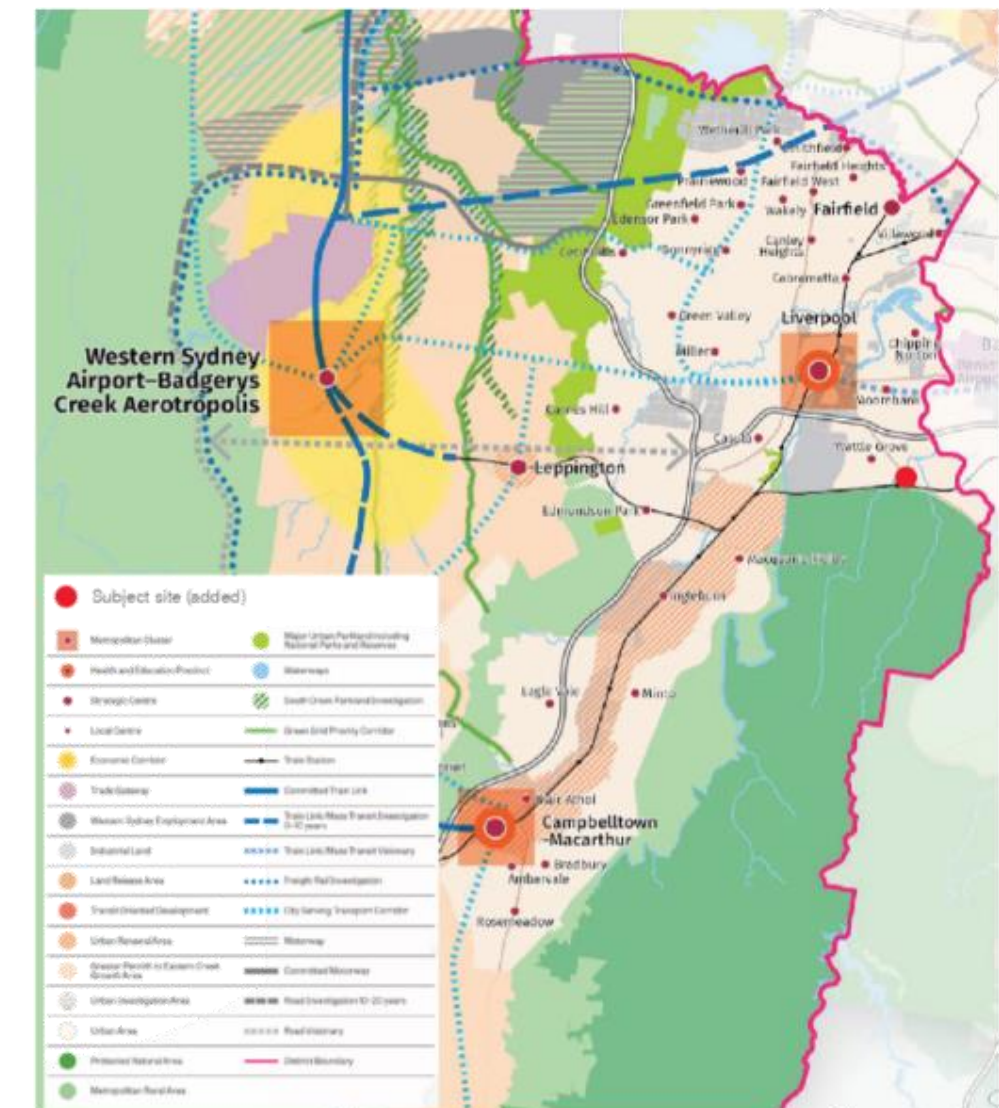
The Western City District Plan, updated by the Greater Sydney Commission in March 2018, is a 20 year plan with a 40 year vision for the district.

This project is particularly well suited to meet the needs of the following Liveability objective of **Providing housing supply, choice and affordability, with access to jobs, services and public transport.**

With regard to these strategic documents, the site is ideally and strategically located to advance these visions and to enhance access from the South West District to key employment hubs within 30 minutes (particularly Sydney Airport and Central Sydney via the East Hills T2 Railway Line).



Extract from Greater Sydney Region Plan



Extract from Western City District Plan

1.2 Existing LEP controls

The following key controls from the Liverpool LEP 2008 apply to the site:

- B2 Local Centre zone
- 1.5:1 Floor Space Ratio
- 21m height of buildings
- 1,000sqm minimum lot size



Land use zoning

B2	Local Centre
E2	Environmental Conservation
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
RE1	Public Recreation
RE2	Private Recreation
SP2	Infrastructure
W1	Natural Waterways



Floor space ratio

A1	0.01
O	0.5
I	0.75
N	1.0
E1	1.5



Building height

T	6.5
M	12
O	15
R	21



Minimum lot size

O	300
U	1000
W	4000
Y	10000
AD	120ha
	refer to clause 4.1

1.3 Holsworthy's role - Why a residential centre?

Architectus considers that the current planning controls relating to the site do not reflect strategic significance and it's potential to develop as an integrated and well-connected mixed-use centre for the following key reasons:

1

The site's strategic importance as one of four **centres within walking distance of a railway station** within Liverpool LGA.

2

Urban renewal along rail corridors being planned by the Department of Planning indicate an appropriateness for uplift around key railway stations, with FSRs proposed of 4:1 and 5:1 in these centres.

3

Other **comparison centres** in Liverpool are being planned for comparable growth.

4

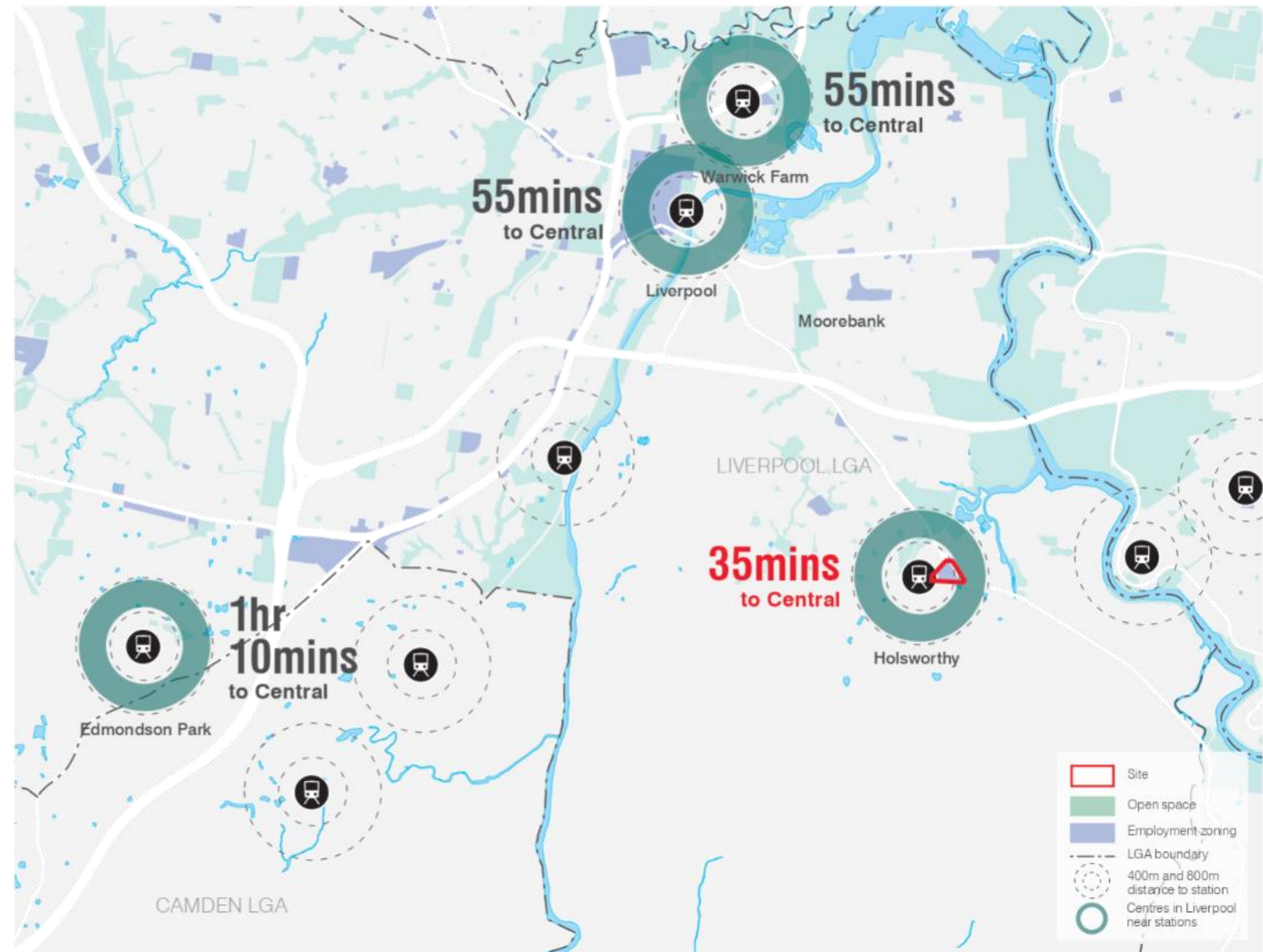
Change is appropriate within the **hierarchy of centres**.

The following pages describe these issues in further detail.

1 Centres within walking distance to a railway station

THE SITE IS ONE OF ONLY FOUR ZONED CENTRES WITHIN LIVERPOOL LGA WHICH ARE WALKABLE TO A RAILWAY STATION, AND THE SHORTEST TRIP TO CENTRAL SYDNEY OF THESE.

These four centres are Liverpool itself, the Edmondson Park Town Centre a currently undeveloped site in Warwick Farm, and the site.



2 Urban renewal along railway corridors

URBAN RENEWAL ALONG RAILWAY CORRIDORS IS PLANNED. THE SITE CAN BE SEEN AS THE OPPORTUNITY TO LINK TWO URBAN RENEWAL CORRIDORS ALONG RAILWAYS.

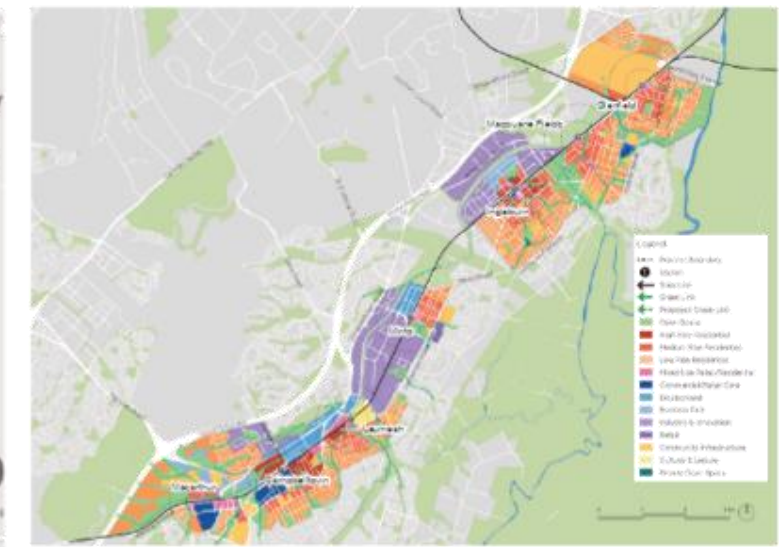
Holsworthy provides the **opportunity to link two existing urban renewal corridors:**

- ① The Glenfield to Macarthur urban renewal corridor currently being planned and;
- ② Another urban renewal corridor within the Plan for Growing Sydney east of East Hills.

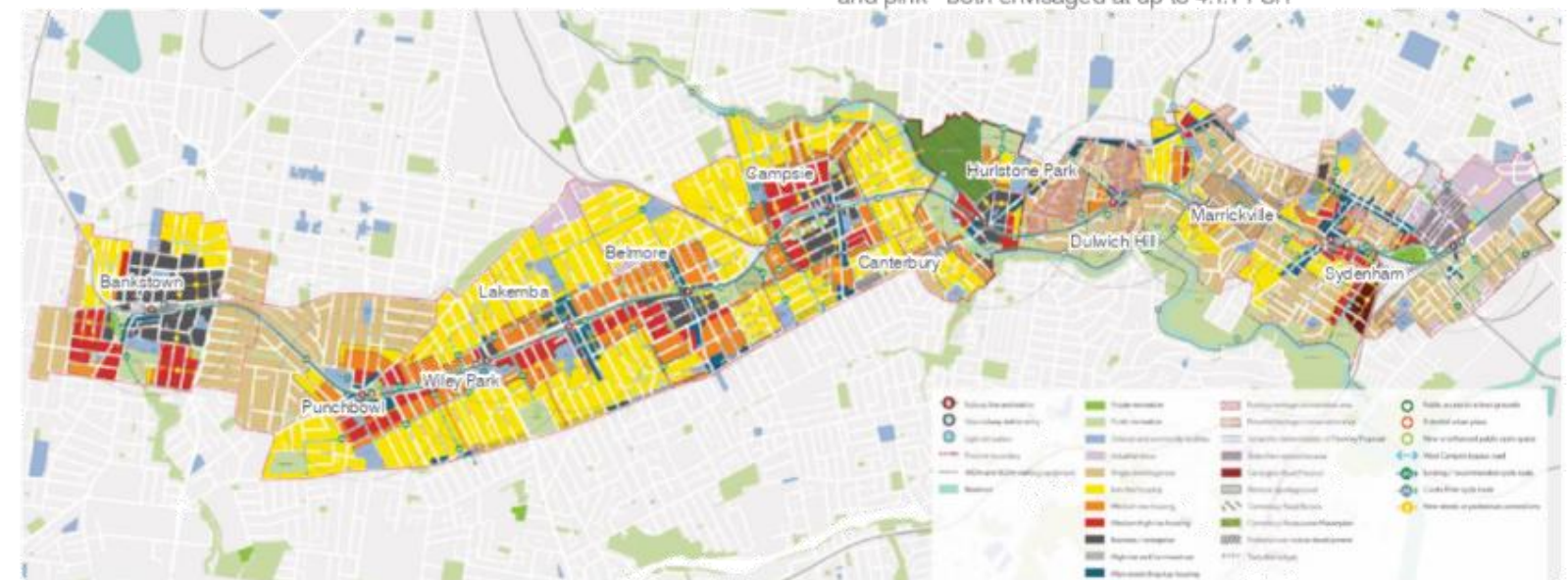
Other comparison railway corridors are planning for FSRs of 5:1 and 4:1 around similar centres. These are the densities planned in the draft Sydenham to Bankstown Strategy as well as Glenfield to Macarthur Strategies respectively. These are likely to result in buildings up to around 25 storeys (another state-led document, the Parramatta Road Urban Transformation Strategy notes a typical maximum 25 storeys relating to FSRs of 4.5:1).



Linking existing urban renewal corridors



Glenfield to Macarthur Strategy - Built form and Land Use Plan (2015)
Station names added for clarity. Darker red (envisaged at 7 storeys +) and pink - both envisaged at up to 4.1:1 FSR



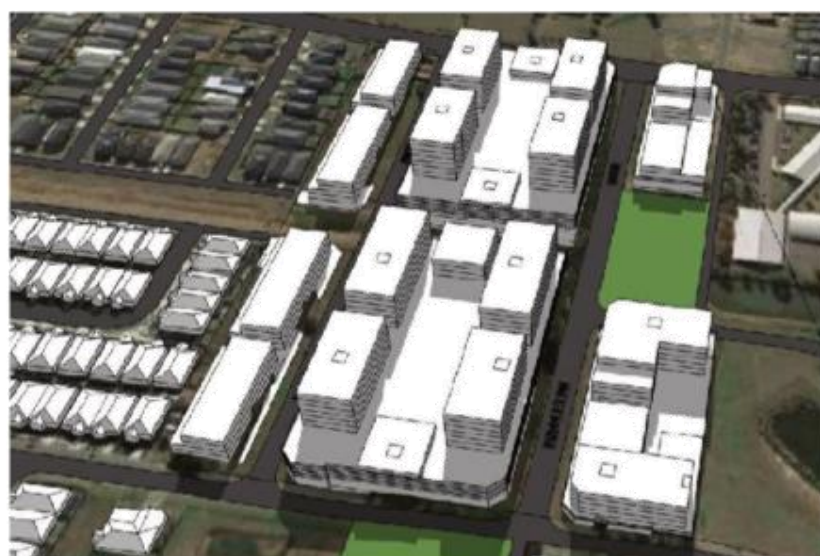
Sydenham to Bankstown Strategy - Built form and Land Use Plan 2017

Station names added for clarity.

Note: In the Drafter Strategy, higher density areas around centres were noted as being 9 storeys+, up to around 5.1:1 FSR

3 Comparison Centres

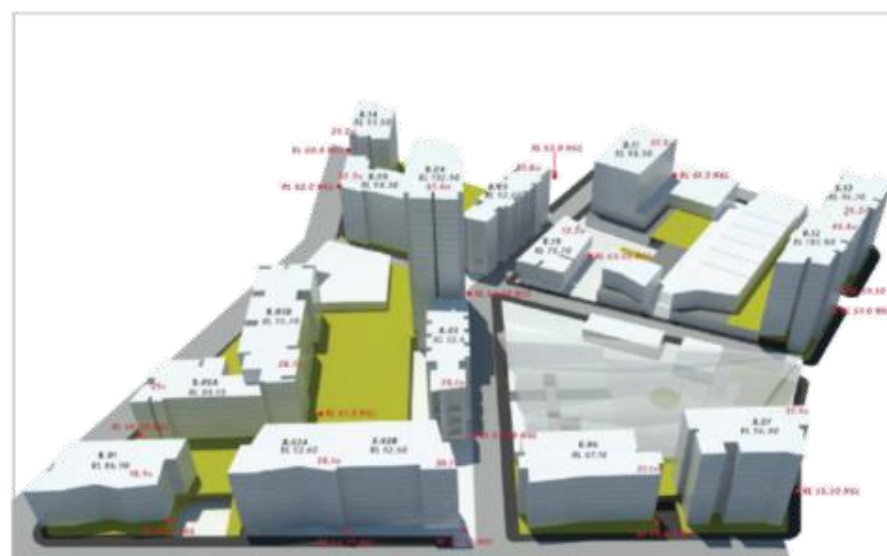
OTHER CENTRES ARE BEING PROPOSED FOR COMPARABLE GROWTH



Source: Proposed Concept Plans, Christiansen O'Brien Architects Pty Ltd

Middleton Grange

Middleton Grange, which is being publicly exhibited by Council between 29 August and 26 October 2018 with an FSR up to 2.3:1 and up to 12 storeys in height, is at the same level in the retail hierarchy as Holsworthy, however, is not serviced by a railway station as Holsworthy is.



Illustrative Design - Edmondson Park Town Centre Core - Approved MP10_0118 MOD 4 (HDR Rice Daubney 2016)

Edmondson Park

Edmondson Park, although a larger centre than Holsworthy, is introducing high-rise living up to 20 storeys (67.4m). The train journey to Central Station is half as long from Holsworthy (35 mins) as Edmondson Park (1 hour 10 mins).



Washington Park development, Riverwood - approx. 10 mins (800m) from rail station

Centres in Bankstown LGA

Panania, Revesby, Padstow and Riverwood are neighbouring centres in Bankstown LGA.

All of these centres are proposed for FSRs of 2:1-3:1 within key locations close to the railway station.

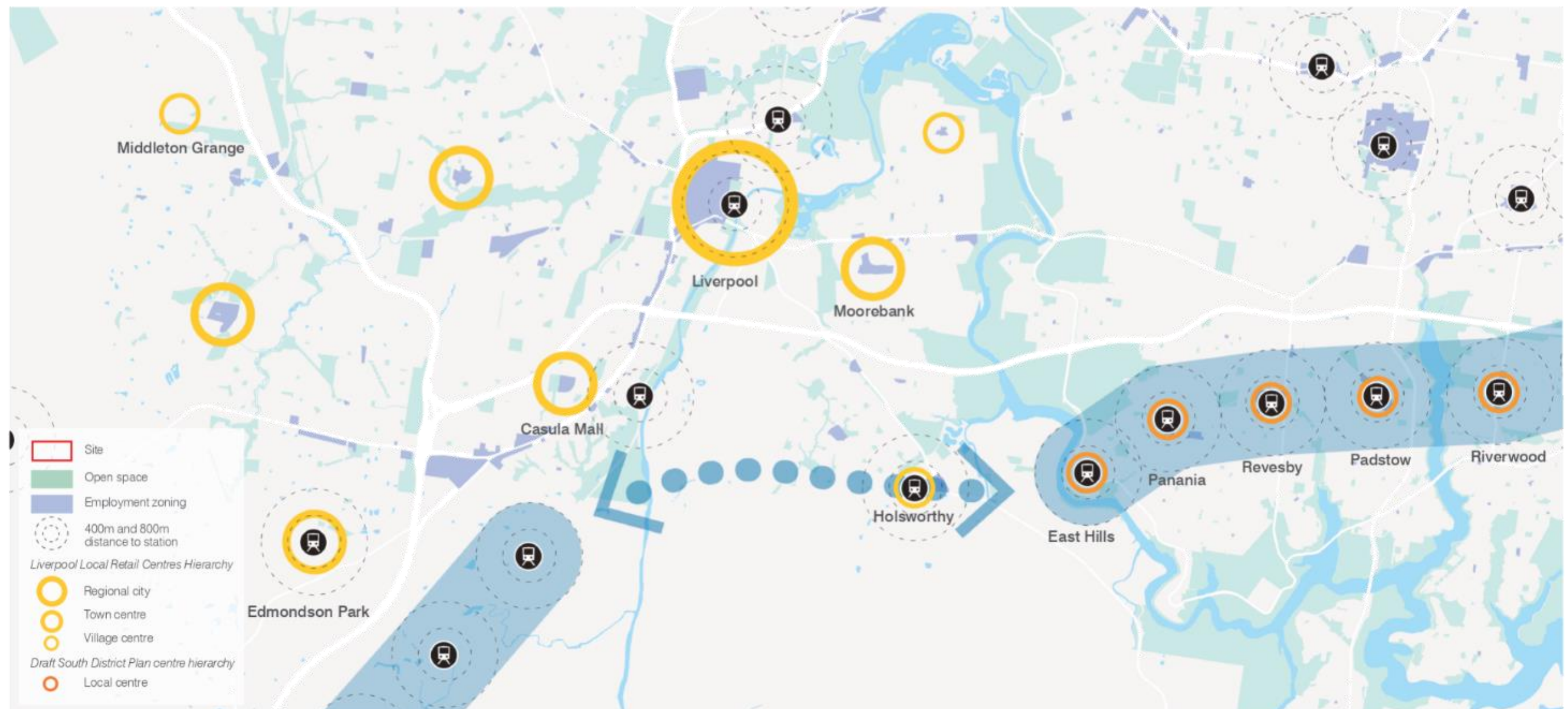
They represent a similar accessibility to Central Sydney as in Holsworthy.

4 Hierarchy of centres

RESIDENTIAL GROWTH IS APPROPRIATE WITHIN THE HIERARCHY OF CENTRES

Liverpool's 'retail centres hierarchy' was developed by HillPDA based on retail catchments. Architectus considers that the **residential densities and retail hierarchy should not necessarily be linked and this is evident in recent planning** e.g. at Middleton Grange.

Holsworthy has the opportunity to be a higher-order centre within its locality. Although a significant uplift in retail is not considered appropriate, its retail role is already greater than other centres along the railway nearby and it has the potential to provide residential growth around a railway station unlike Wattle Grove and Moorebank.



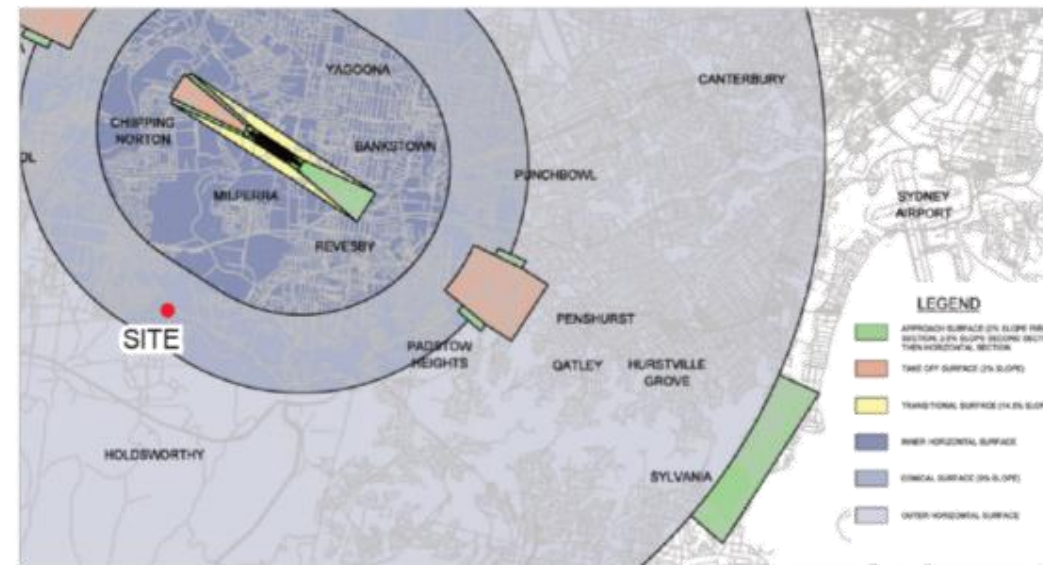
1.4 Aviation height limits

Aviation limits are not considered likely to affect development of the site based on Architectus' understanding described below.

Key surfaces describing prescribed airspace are presented in the diagrams below and adjacent. It is understood that:

- Any development above the OLS surface will need approval from relevant civil aviation authorities. This is understood to be approximately 25 storeys above ground for the site (approx 100m AHD - the site is approx. 1km into the conical surface at 5% slope from the inner horizontal surface of 51m AHD).
- Development above the OLS may be acceptable up to the heights of the PANS-OPS surface, which is approximately 35 storeys for the site (135.9m AHD).

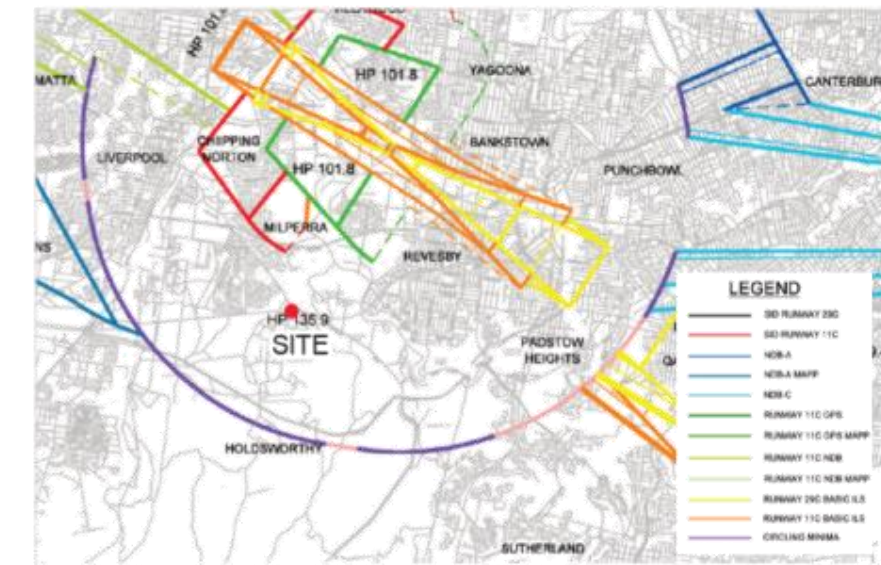
The proposed maximum building height (see final chapter of this document) will result in buildings of up to approximately RL 64m AHD.



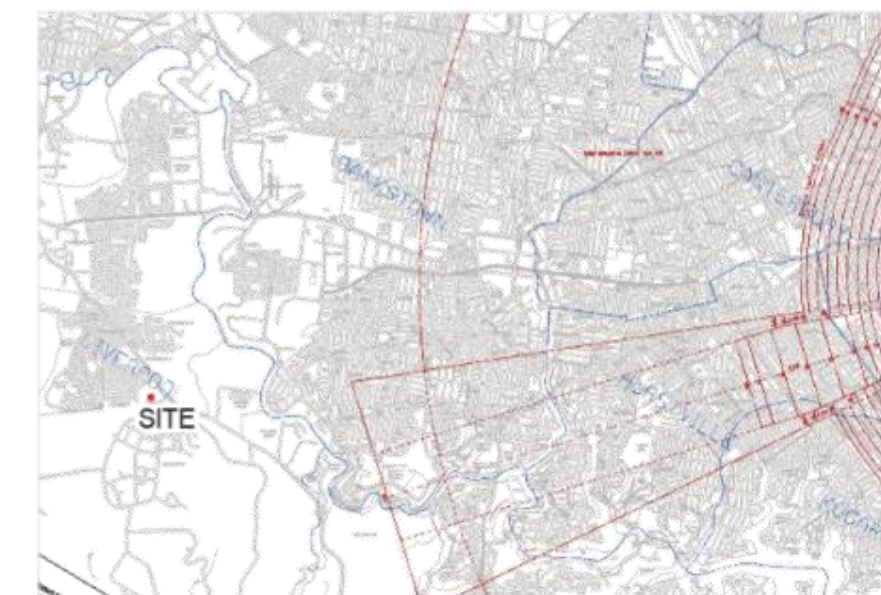
OLS - Bankstown Airport (extract)



RTCC - Sydney Airport (extract)



PANS-OPS - Bankstown Airport (extract)



OLS - Sydney Airport (extract)

● Subject site

1.5 Existing approval

The site has an existing DA approval for a mixed-use development which includes retail and commercial uses at ground level and two levels of residential above.

The retail centre includes:

- Supermarket
- Internal retail mall
- Petrol outlet
- Commercial uses
- At-grade car parking
- Vehicular entries / exits from Heathcote Road and Macarthur Drive

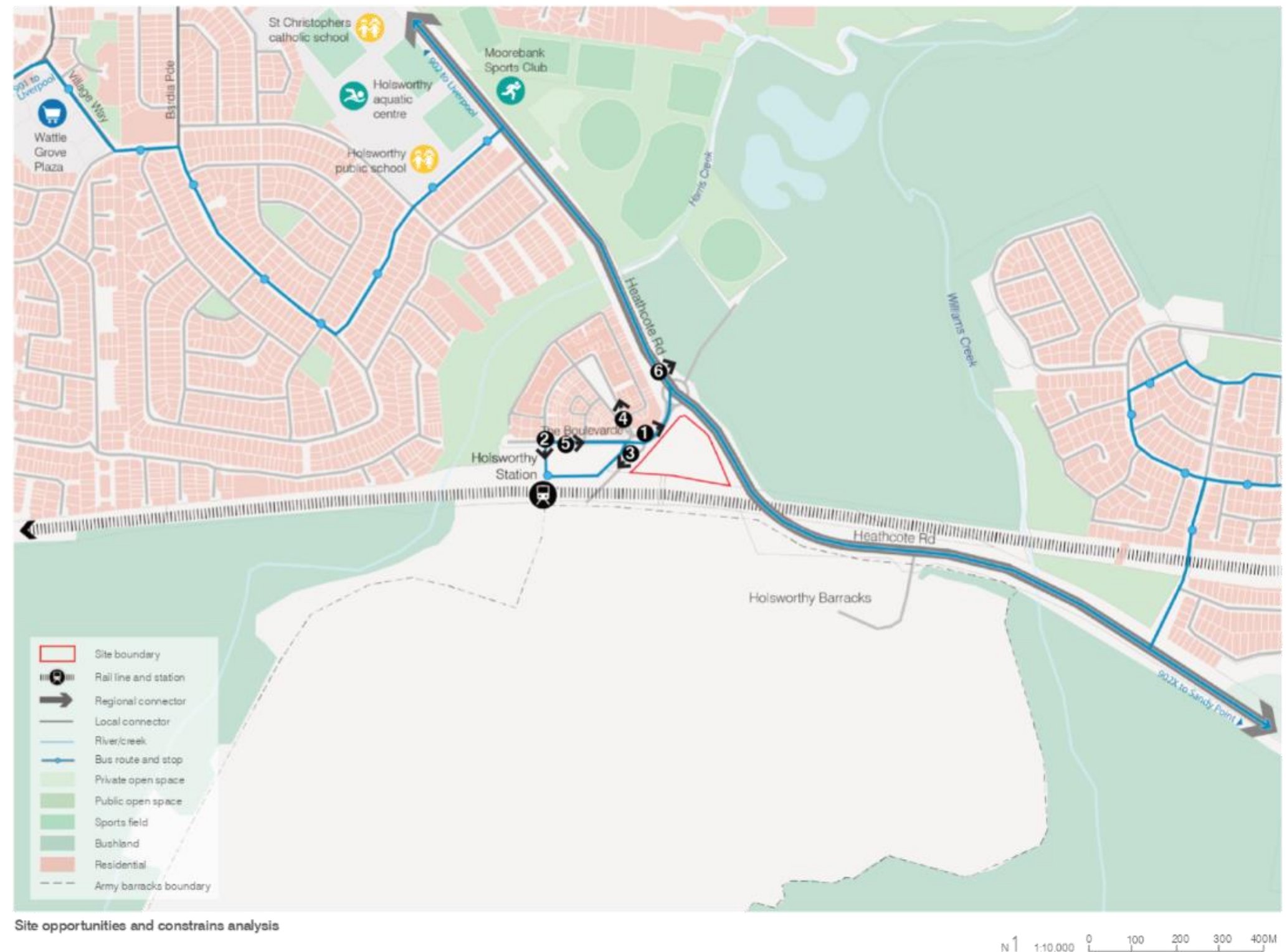
The proposal included in this document seeks a similar retail GFA to the existing approval. The proposal provides improved access to the railway station, improved relationship to streets and greater amenity for residents.



Existing DA approval for site

1.6 Local context

- The site is located adjacent to the Holsworthy railway station (200m).
- The site is surrounded by a commuter carpark to the west, a small area of detached dwellings to the north west, bushland to the north and east and Holsworthy Army Barracks to the south.
- The site is within walking distance of amenities and services within the established area of Holsworthy and adjoining Wattle Grove, to the north west of the site, including an existing local shopping centre, two primary schools, an aquatic centre and the Moorebank Sports Club.
- Holsworthy station is located on three bus routes including the 901 and 902 which connect the site to Liverpool and the 902X which connects to Sandy Point.
- Heathcote Road, immediately north of the site, is a regional arterial road. It provides good vehicular access to the site, however also acts as a barrier for pedestrian accessibility. The railway line and Holsworthy Barracks are also major barriers to connectivity to the south.
- All other roads surrounding the site are local roads, with a large number of cul-de-sacs in the area. There is an existing road entry/stump to the site provided from the roundabout at the intersection of Macarthur Drive and The Boulevard, to the west of the site. The roundabout exit to the south leads to a disused road bridge to the Holsworthy Barracks.





1 Macarthur Drive is a landscaped local street that borders the site. On the western side of the road is an existing footpath and on the eastern side is a wide, overgrown verge.



2 The commuter carpark provides an unattractive pedestrian connection to the station.



3 Adjacent to the site is a disused road which is the former entry to Holsworthy Army Barracks.



4 The Mornington Estate adjacent to the site is primarily duplex residential developments.



5 The Boulevard leading from the site to Holsworthy station is a well landscaped street.



6 To the north of the site along Heathcote Rd is existing bushland.

1.7 Opportunities and constraints

- The site has a strategic location next to Holsworthy Railway Station.
- Sloping topography (4m from northern corner of site to southwest) can be utilised to provide a range of streetscape relationships. The site is partially excavated.
- The local area has a well defined network of vehicular and pedestrian links which development will need to connect.
- Extensive green verges around the site present an opportunity for improved use.
- Noise from the railway to the south and Heathcote Road to the north-east will need to be considered.
- Heathcote Road provides an opportunity for a high retail visibility to passing traffic.
- An existing services easement to the south-west presents a local constraint.
- Existing significant Bunya Pine Trees on Macarthur Road are in varying condition but mostly good health. They are an attractive feature of this frontage
- The opportunity for a future pedestrian linkage over Heathcote Road should also be considered.

- Site boundary
- Sense of arrival
- Primary frontage for road visibility
- Vehicular access to site - approved development
- Pedestrian access from railway station
- Other existing pedestrian routes
- Missing pedestrian links
- Opportunity for future pedestrian linkage
- Views from upper levels across bushland to east
- Extensive verges in front of site - potential for landscaping and use
- Services easement - southwest corner of site
- Topography (1m contour intervals)
- Major slope
- Noise from the railway line and major road
- Existing Bunya Pine trees



2 Developing the master plan

This section explains the approach for the development of the master plan. It includes:

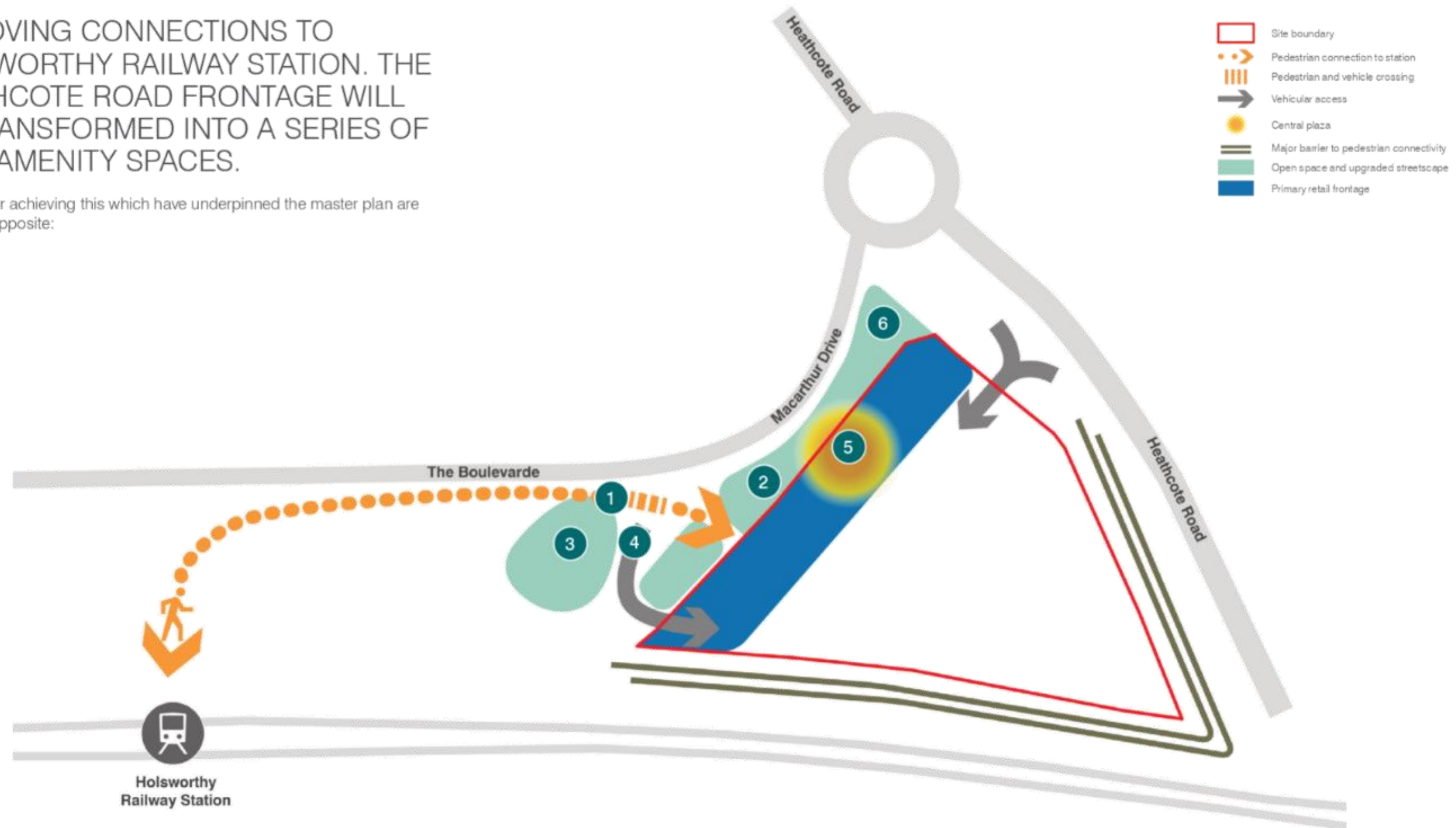
- Open space and connectivity principles to establish development of part of the centre.
- A retail vision and strategy.
- Residential case studies for the proposal including successful typologies for mixed use developments with residential over retail, as well as exemplar residential developments which abut railway lines.
- Preliminary options development for the site including options at varying heights and densities.

These have led to the development of the master plan presented in the following chapter.

2.1 Open space and connectivity principles

IMPROVING CONNECTIONS TO HOLSWORTHY RAILWAY STATION. THE HEATHCOTE ROAD FRONTAGE WILL BE TRANSFORMED INTO A SERIES OF HIGH AMENITY SPACES.

Principles for achieving this which have underpinned the master plan are described opposite:





1

Maximise pedestrian permeability and connectivity between the retail centre and the railway station, including consideration of topography.



2

Utilise Macarthur Drive as the preferred frontage for active uses and pedestrians



3

Utilise the broad verge of Macarthur Drive and the underutilised space around the former railway bridge to maximise public amenity of the area.



4

Minimise the impact of vehicles on pedestrian routes.



5

Provide well-located and attractive open spaces on site, including a public square and communal open spaces.



6

Maximising solar access to green spaces and providing shading through tree canopies is key to ensuring amenity.

2.2 Retail concept

THE NEW HOLSWORTHY RETAIL CENTRE WILL HAVE A BUSTLING VILLAGE FEEL AND FINE- GRAIN HIGH STREET APPROACH.

Expert input on a retail strategy for the site has been provided for this project by Bonnefin Property.

Vision and concept

A key intent of the retail vision and concept developed has been to ensure that the retail space adds significantly to the overall amenity of the residential component and is seen as a major contributor to the innovative design and place making strategy of the project.

In achieving this objective we want to ensure that pedestrian movement in and around the retail precinct creates activities and connections with the neighbouring residential occupants and creates an easy and logical pedestrian path directly to the railway station.

Whilst the residential component of the mixed use development will be the predominant use of the site, it is the ground floor plane that remains in the public domain and is pivotal in ensuring a successful development outcome for the site.

Future residents will want to see an active, well thought out retail precinct that addresses their every day needs and provides essential services, together with a great place to meet up, entertain, dine and relax.

Key design elements

A good retail strategy requires key urban design and place-making elements including:

- A bustling local village feeling, trading 7 days a week.
- High Street and fine-grain approach to the design where possible - turning the retail shops towards the edges and ensuring solar access to pedestrian areas during the cooler months.
- Easy pedestrian and vehicular access in and around the site.
- Good clear sight lines through the centre.
- Centrally located vertical transportation (VT) from ground to car park.
- Covered outdoor dining areas to support a range of dining options from early morning cafe culture to
- Quick service food and casual dining.
- High quality public facilities, parent rooms, disabled access.
- Quality landscaping to support the outdoor dining.
- Night time lighting to ensure customer safety and passive security and extend the night time economy.

Perfect partners

The key to the projects success from a retail perspective is in the curation of each retail offering, understanding each business, and hand-picking each operator.

The retail uses we see working together to create an aspiration high quality, urban residential and retail precinct include the following:

- Supermarkets
- Quality Fresh Food
- Casual Dining
- Cafe Culture
- Quick Service Food
- Everyday Needs and Services
- Healthy Lifestyle Options
- Child Care



Bakery and patisserie



Quick service food options



Quality fresh food



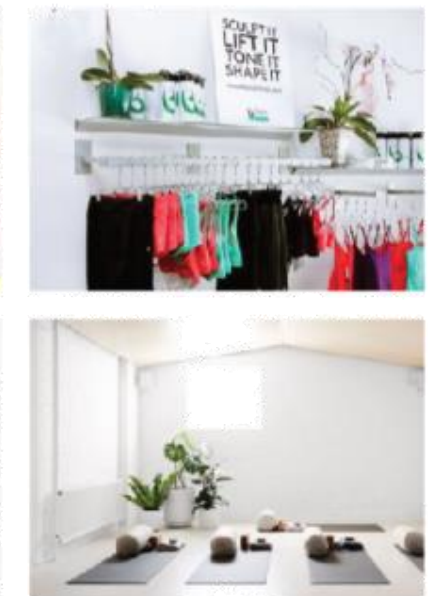
Cafe culture



Everyday needs



Healthy lifestyle



2.3 Residential case studies

Residential over retail

Successful developments incorporating residential and retail uses can be achieved through:

- Locating development within easy walking distance (400 metres) of high quality public transport corridors.
- Providing a range of development types that allow for a mix of day and night time activities supported by dense residential activity that aids with natural surveillance and provides a base load of activity.
- Providing high amenity open space and recreation areas.
- Ensuring that lighting, street furniture, signage, footpath treatments and safe road crossings provide a safe and legible urban realm for all users.

The images adjacent show examples of successful typologies for mixed use developments in Sydney which include retail at ground/podium level with residential apartments above. These precedents and the principles described above have been considered in developing a concept for the site.



Village Balgowlah



Cammeray Square, Cammeray



East Village, Victoria Park (South Sydney)

Railway interface

The 'Development near Rail Corridors and Busy Roads Interim Guideline (2008)' provides requirements to avoid vandalism including, where sites are less than 20m from a railway to:

- Enclose balconies
- Install louvred windows or restricted window openings
- Restrict all opening windows to maximum of 80 millimetres

The site is able to comply with these requirements through detailed design.

The images adjacent show exemplar residential developments which abut railway lines. These precedents have been considered in developing a concept for the site.



Metro Residences, Chatswood



The Forum St Leonards



Deicota Tower and Urba, Redfern

2.4 Options development

Architectus considered a range of design approaches for the site which included plan and built form options tested at varying heights and densities.

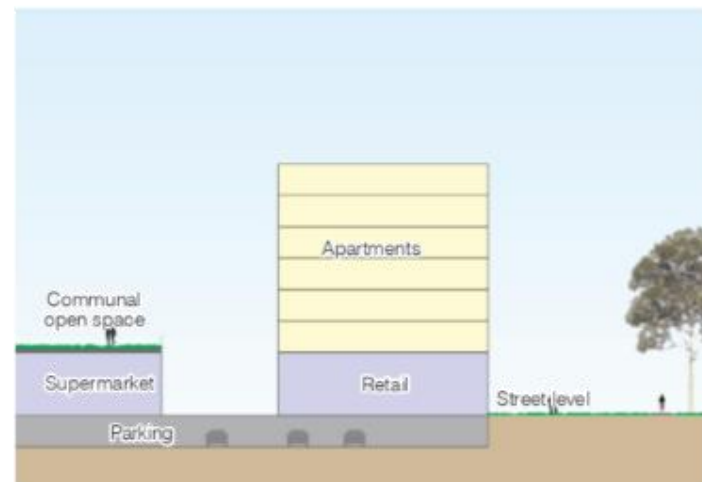
Initially a comparison of an LEP height and density compliant scheme (Option 1) was considered for two different models of retail (Options 2 and 3) at different densities.

Further analysis of the site context and review of comparison projects resulted in a better understanding of the site's capacity to accommodate density led to the development of Option 4, which investigated moving taller building forms away from the street frontage to minimise any potential impact on neighbours.

Through consideration of the site's strategic context, the role of the Holsworthy centre as a transit-oriented mixed-use development, analysis of comparable centres (see previous chapter of this report), and testing of various built form options for the site, an FSR of 2.5:1 was identified as being the most appropriate density for the site. This FSR has been used in developing the submitted master plan (Option 5)

The submitted masterplan has been revised following submission to respond to Council's concerns, including reducing the building height and bulk, especially Macarthur Drive. The final master plan is presented in the following chapter.

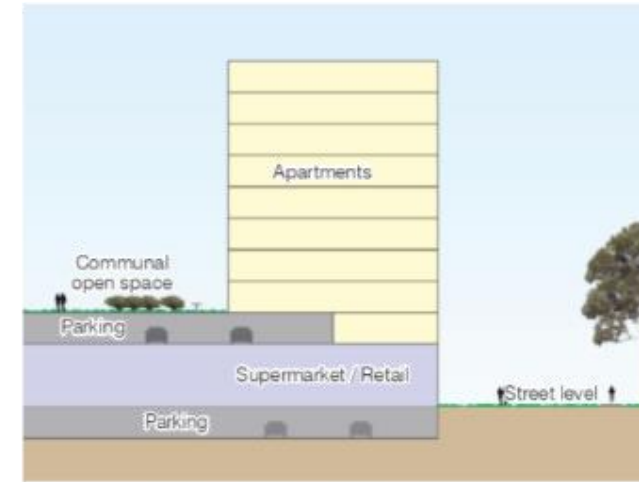
Option 1 - Compliant - 1.5:1 FSR



Typical section with open air link

- Compliant with existing controls
- 7 storeys
- Long building forms
- Large roof top over supermarket provides poor outlook for residential
- May not be the best strategic use of land

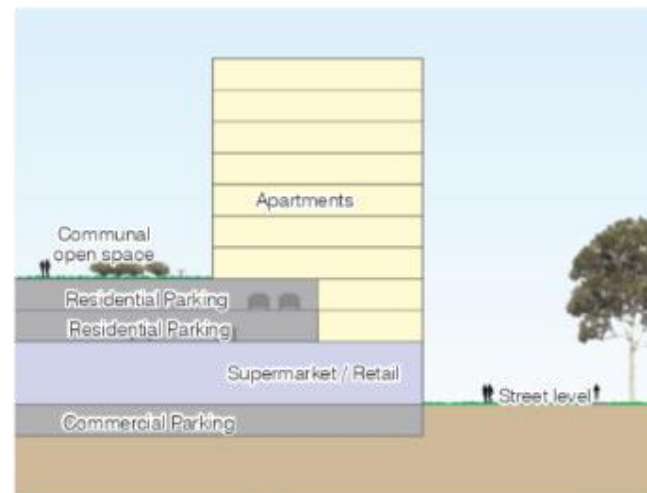
Option 2 - Central courtyard - 2.25:1



Typical section residential over supermarket

- Up to 16 storeys
- Remains below potential FSR of sites of similar strategic significance in Edmondson Park
- Open space created internally to provide address to residential uses further from street frontage
- Residential uses and communal open space over supermarket/shops

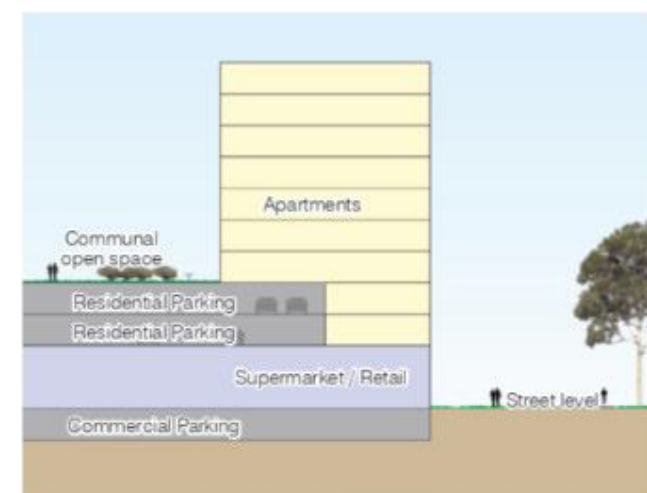
Option 3 - Raised open space - 2.5:1



Typical section residential over supermarket

- Up to 21 storeys
- Similar FSR to sites of similar strategic significance in Edmondson Park
- Apartments accessed from the street, with communal open space over retail

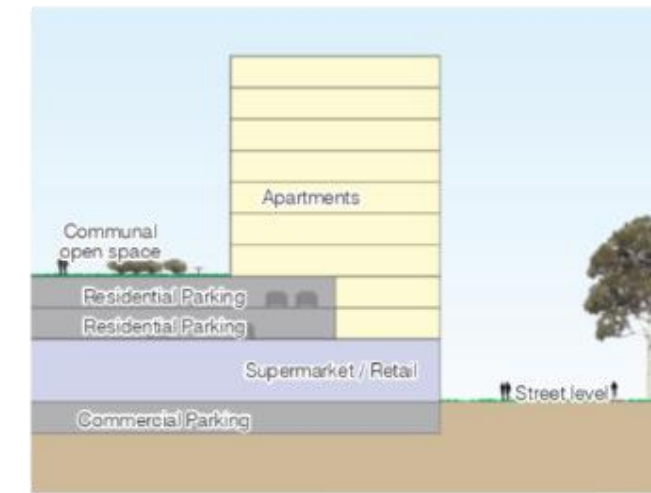
Option 4 - Rotated towers - 2.5:1 FSR



Typical section residential over retail

- Two towers up to 19 storeys
- Tower rotated to reduce visual impact to low scale residential
- Similar FSR to sites of similar strategic significance in Edmondson Park
- 8 storey buildings widened to allow for double-loaded apartments

Option 5 - Parallel towers - 2.5:1 FSR
(Preferred master plan as submitted in October 2017)



Typical section residential over retail

- Three parallel towers up to 14 storeys and four 9 storey buildings reduces height of development
- Courtyard, retail frontage and residential entrance orientated to Macarthur Drive primary frontage
- Similar FSR to sites of similar strategic significance in Edmondson Park



3 Master plan



3.1 Master plan key principles



A new strategically located centre adjacent to Holsworthy Railway Station.



A new active public square at the heart of the centre, activated by a retail frontage along Macarthur Drive with the opportunity for alfresco dining.



Improved pedestrian connections to the station.



High quality landscaping of Macarthur Drive and Heathcote Road for positive visual impact and to allow the provision of shading by trees in summer.



Slender residential buildings on the podium at varying heights up to 12 storeys.



Delivery of approximately 350 apartments with excellent amenity including access to communal open space, communal and public facilities and public transport.



An attractive and successful retail centre. The design includes ground floor retail anchored by large and small supermarkets (e.g. Woolworths/Coles, Aldi) together with supporting specialty retail





3.2 Desired character

Holsworthy Square

A bustling local village feel is created for the centre with active retail frontages centred around a new public square providing spaces for outdoor dining, informal meetings and passive recreation. A pedestrian promenade along Macarthur Drive with generous footpaths and high quality landscaping ensures an inviting front door to the centre is created.



Heathcote Road

The proposed three storey podia provides an appropriate scale and feel, sympathetic to the existing neighbouring residential dwellings. Slender, articulated buildings with high quality designs and height variations ensure variety and visual interest in the building forms over the podium.



Macarthur Drive

New high quality hedging and pedestrian paths will ensure good pedestrian accessibility and legibility to the centre from the station. Existing street tree coverage ensures taller residential buildings have minimal visual impact from street level.



3.3 Public domain and open space principles

FOUR KEY OPEN SPACE
CHARACTER AREAS HAVE
BEEN DEFINED



Principles for the open space character areas are as follows:

1

Holsworthy Square

- Create a focal space for Holsworthy
- Create a focal space for retail activity
- Utilise planting to create a high quality amenity space
- Provide a buffer between active places and the noise of Macarthur Drive
- A small staged space can provide form informal performance, small retail events or demonstrations
- Include tree cover to provide shade and enhance the green setting of Macarthur Drive

2

Macarthur Drive

- Transform Macarthur Drive into 'Main Street' of active uses
- Link the proposal's residential and retail 'front doors' to Holsworthy Railway station with a series of attractive spaces
- Create a series of new spaces and places that provide amenity to the wider community
- Provide for active ground floor uses
- Deal with changes in topography appropriately
- Enhance the tree cover and setting of Macarthur Drive
- Include public art

3

Heathcote Road

- Create an active path
- Provide a visually attractive frontage to Heathcote Road
- Utilise the opportunity for quieter spaces away from the primary retail activity
- Deal with topography
- Provide a 'front door' to residential buildings facing Heathcote Road
- Allow for the potential for a future connection across Heathcote Road should this be proposed by Council
- Improve the landscape amenity of RMS land through appropriate planting where possible

4

Residents open space

- Create high quality amenity for residents and users (such as rooftop childcare), including outdoor spaces
- Create excellent access to the street and station for all residential users through a generous landscaped staircase and lift access
- Create an attractive green outlook for residents
- Utilise opportunities for skylights e.g. a water covered skylight over the central retail spine

3.4 Public domain and open space precedents



Hedges help enclose and define spaces.



Paving design assists in defining spaces and intuitive wayfinding.



Shade structure adjoining building.



Paving pattern for private garden courtyard spaces.



Irregular paving pattern to add visual interest.



Pergolas provide shade and a comfortable space to sit and walk



Accent plants provide interest and colour.



Raised planters also provide additional seating options.



Water elements add interest and cool ambient temperature.



Terracing is enhanced by planting.



Curved terraces assist level changes and add visual interest.



Steps are generous in length and accompanied by ramps for access.



Green walls assist temperature control and add year round interest.



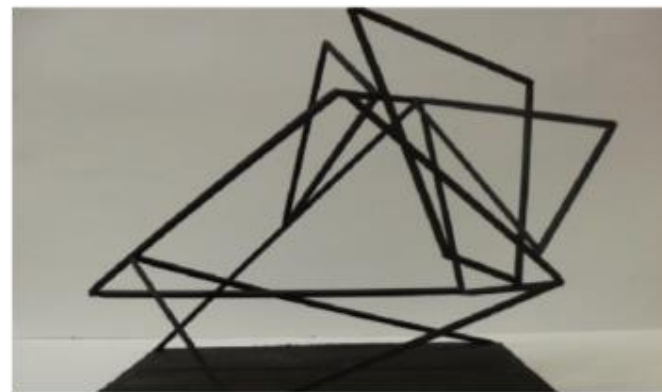
Climbing plants extend green.



Large planting pots.



Play will be important on the podium level, especially for toddlers.



Public art adds interest to the streetscape and front plaza.



Ample and comfortable seating in shade is key to socialising.

3.5 Illustrative floor plans

Illustrative floor plans

The plans presented over the following pages demonstrate the indicative layout for the site.

Final designs for the site will be subject to future development application(s).

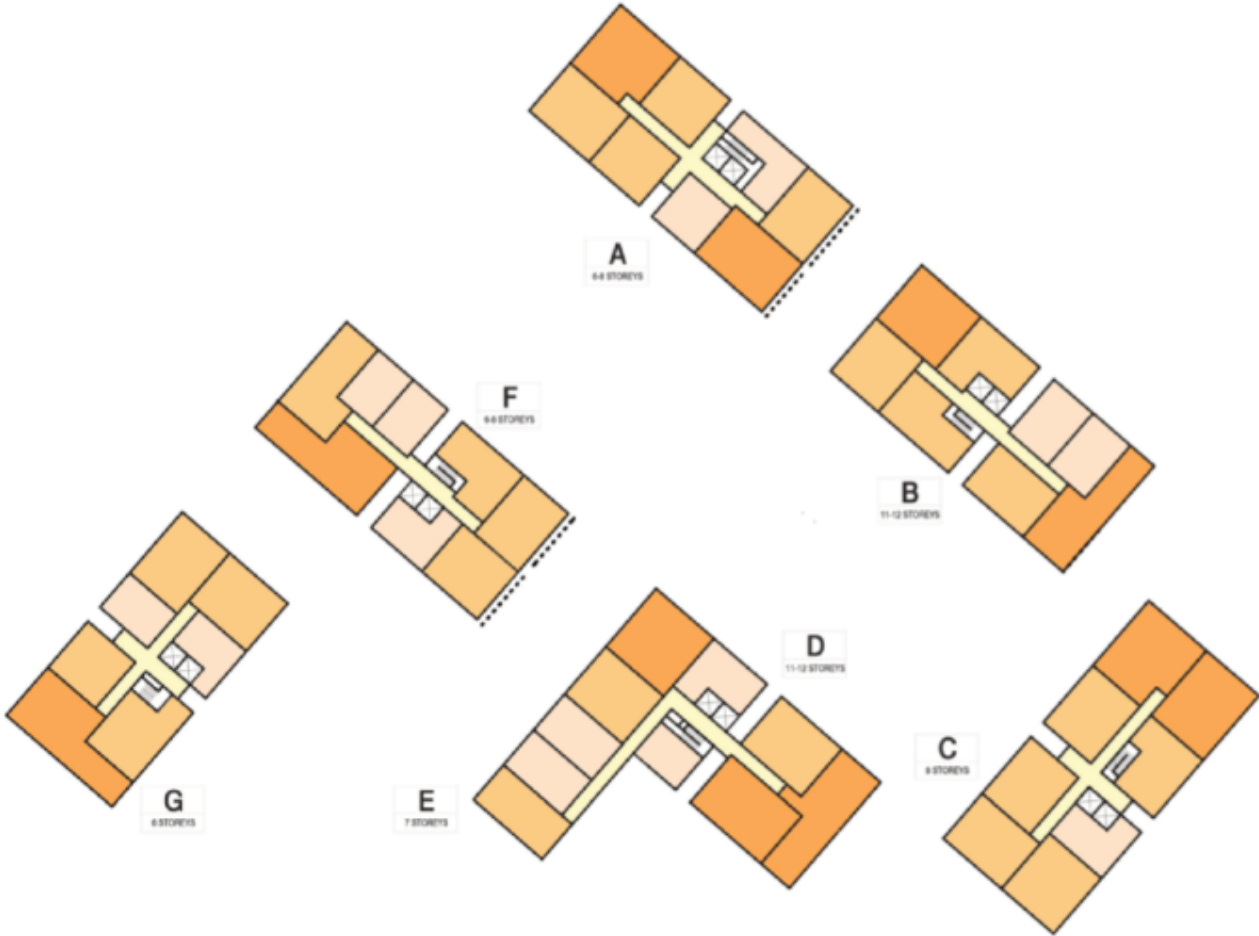




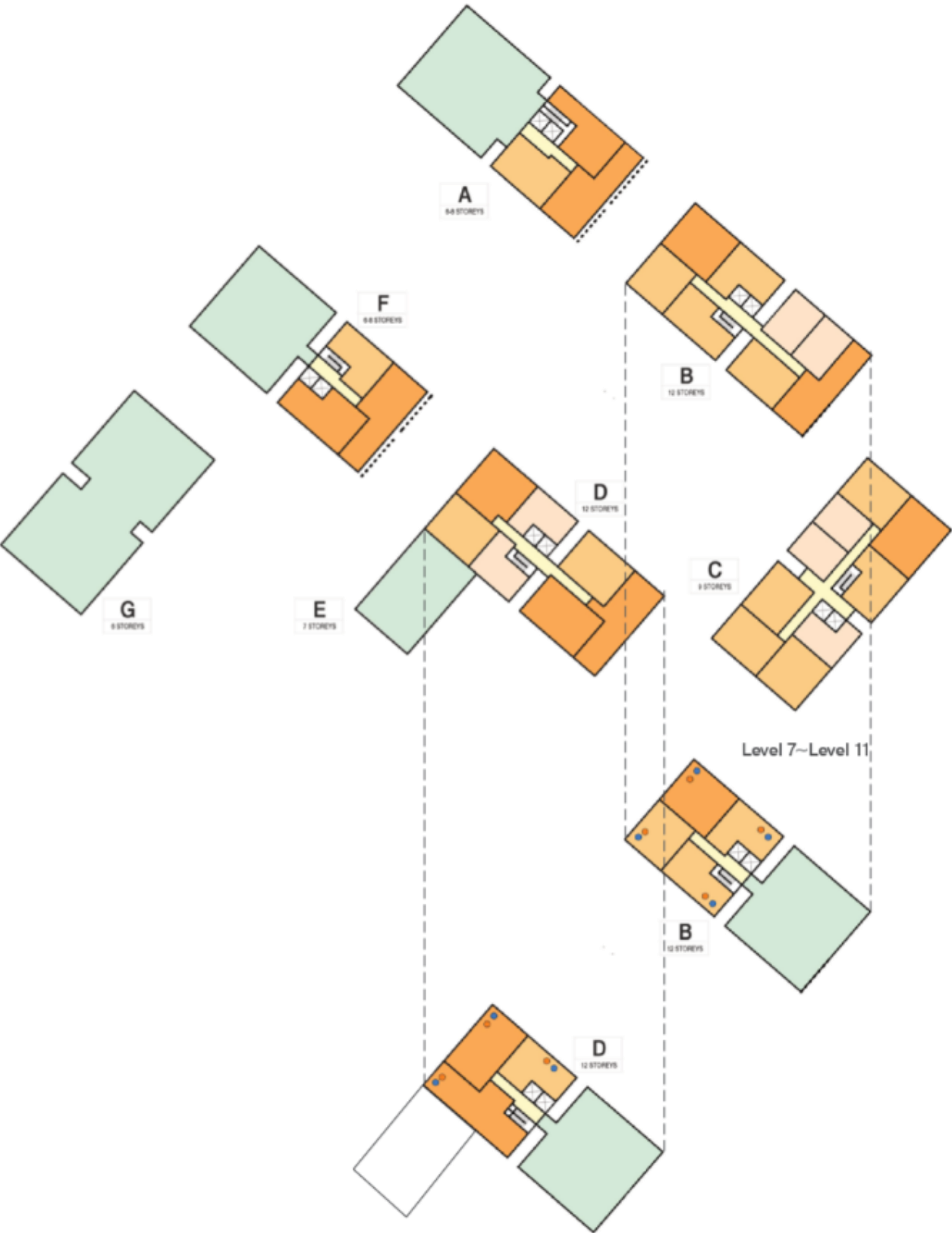
Level 1 layout

Level 2 layout

- 1 BED
- 2 BED
- 3 BED
- CORRIDOR/LOBBY
- ROOF TOP
- *****NON-HABITABLE FACADE (HIGH LEVELS OR TRANSLUCENT WINDOWS ONLY)
- Solar access 2 hours or greater
- Solar access 2 hours or greater via roof skylight on top level
- Cross ventilated
- Cross ventilated via roof skylight on top level



Level 3~6 Typical layout



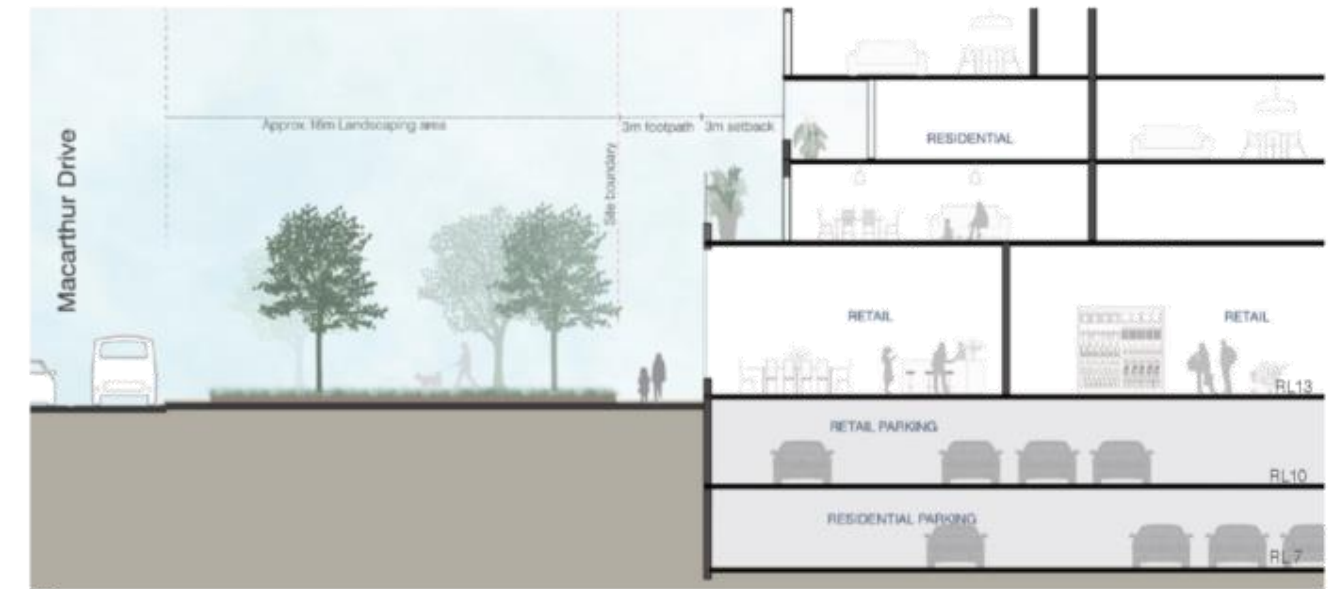
Level 12 Penthouse





3.6 Illustrative sections

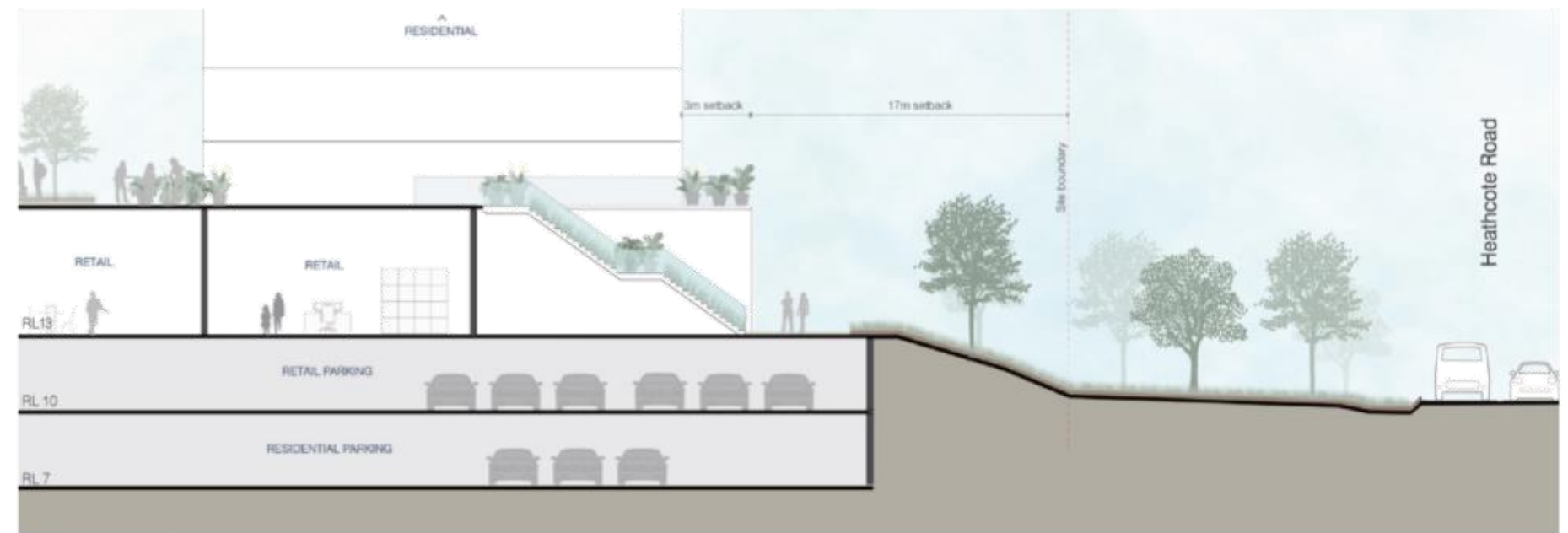
These sections have been developed in conjunction with the illustrative floorplans above and describe the relationship between different uses and the topography across the master plan.



① Macarthur Drive section



Site plan with section locations



② Heathcote Road stair section

1:250 0 2.5 5 7.5 10M

3.7 Schedule of areas and SEPP65 compliance

The schedules adjacent demonstrate calculations used in this master plan. Key figures are as follows:

- Total GFA 40000sqm, including:
 - 31035 sqm residential (350 apartments)
 - 8965 sqm retail (approx. 8804sqm GLA)
- Parking can be provided within 2 levels of basement parking (retail parking and residential parking)
- The proposal is capable of achieving SEPP65 solar compliance and cross ventilation requirements

Assumptions:

- Ground floor
 - GBA and GLA as illustrative floor plans
 - GFA as 85% of GBA (including amenities, corridor, office)

- Level 1 and above
 - GFA as 75% of envelope area.

Schedule of GFA

Based on illustrative floor plans (ground floor retail) and building envelopes (typical)

Retail		
Ground	GBA sqm	GLA
SM	3,440	3,440
SM BOH	656	656
SSM	1,218	1,218
SSM BOH	379	379
Retail -A	468	468
Retail -B	659	659
Retail -C	400	400
Retail -D	572	572
Retail -E	1,012	1,012
Amenities	221	
Corridor	1,389	
Office	133	
Total	10,547	8,804

Residential			
Building No.	Levels	Envelope area	Total Area
A	5	880	5240
	2	420	
B	10	880	9240
	1	440	
C	8	940	7520
	10	860	
D	1	420	420
	6	260	
F	5	840	5000
	2	400	
G	5	760	3800
Total			41380

Community Centre		
Building F	Ground floor	355
Site Area		18620
Total Use	GFA	FSR
Residential	31,035	1.67
Retail	8,965	0.48
Community Centre		
Total	40,000	2.15

Schedule of apartments

Based on illustrative floor plans

Building No.	No. of storeys		1B	Total 1B	2B	Total 2B	3B	Total 3B	Total No. of apartments
A	Terrace Apt Lower	1	0	0	9	9	3	3	12
	Terrace Apt Upper	1	0	0	0	0		0	0
	Typical level	3	2	6	4	12	2	6	24
	Penthouse level	2	0	0	1	2	2	4	6
B	Terrace Apt Lower	1	2	2	8	8	3	3	13
	Terrace Apt Upper	1	0	0	0	0	0	0	0
	Typical level	8	2	16	4	32	2	16	64
	Penthouse level	1	0	0	3	3	1	1	4
C	Typical level	8	1	8	5	40	2	16	64
D	Entry level	1	2	2	2	2	3	3	7
	Typical level	9	2	18	2	18	3	27	63
	Penthouse level	1	0	0	1	1	2	2	3
E	Typical level	6	2	12	1	6	0	0	18
F	Terrace Apt Lower	1	0	0	5	5	1	1	6
	Terrace Apt Upper	1	1	1	3	3	0	0	4
	Typical level	3	3	9	4	12	1	3	24
	Penthouse level	2	0	0	1	2	2	4	6
G	Terrace Apt Lower	1	1	1	8	8	2	2	11
	Terrace Apt Upper	1	0	0	0	0		0	0
	Typical level	3	2	6	4	12	1	3	21
				81		175		94	350
% of units mix			23.1%		50.0%		26.9%		

Car parking requirements

Based on illustrative floor plans

Parking requirement	Requirement	Per unit	Number of units in illustrative floor plans	Required spaces	Sqm GBA / car park area	Total approx. sqm
Residential - 1 bedroom unit	0.6	apartment	81	49	42	2,041
Residential - 2 bedroom unit	0.9	apartment	175	158	42	6,615
Residential - 3 bedroom unit	1.4	apartment	94	132	42	5,527
Visitor	1/5	apartment	350	70	42	2,940
Supermarket + shops	1/20	sqm GLA	8804	440	36	15,847
Sub-total Residential				408		17,123
Sub-total Commercial				440		15,847
Total				848		65,941

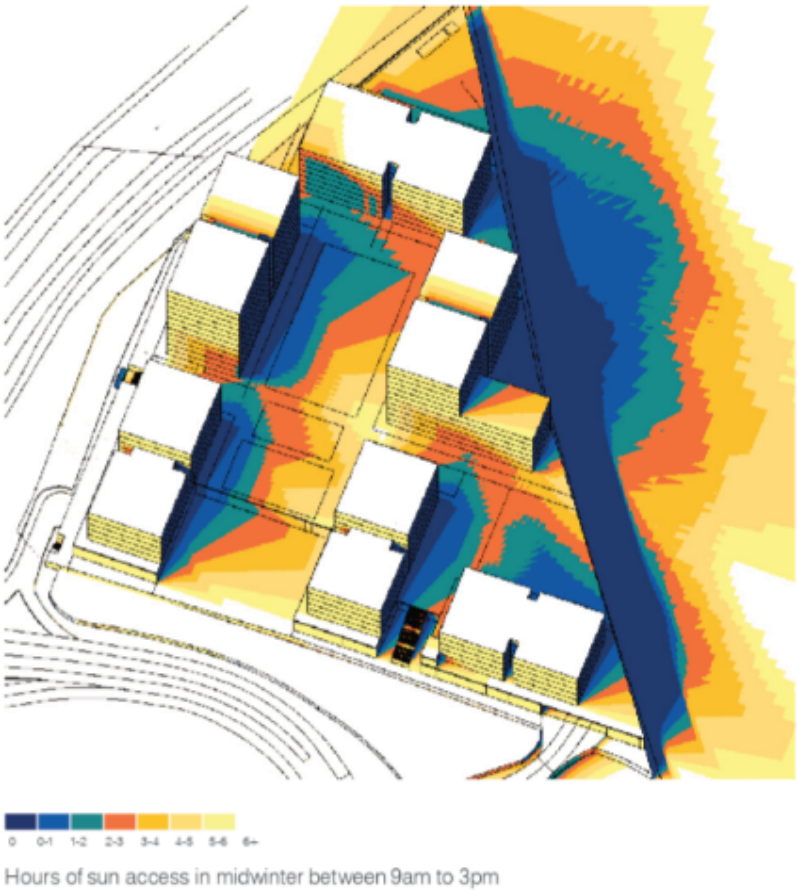
Schedule of SEPP65 solar compliance

Based on illustrative floor plans

Building No.	Levels	No. of storeys	Number of apartments per storey	Total number of apartments	Solar access > = 2hrs in mid winter)		
					No. of apartment on typical storey	Adjustment for non typical storey	Total number of apartments
A	Terrace Apt Lower	1	12	12	10		10
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	8	24	5		15
	Penthouse level	2	3	6	3		6
B	Terrace Apt Lower	1	13	13	10		10
	Terrace Apt Upper	1	0	0	0		0
	Typical level	8	8	64	6		48
	Penthouse level	1	4	4	3		3
C	Typical level	8	8	64	5	-3	37
D	Entry level	1	7	7	5		5
	Typical level	9	7	63	5		45
	Penthouse level	1	3	3	3		3
E	Typical level	6	3	18	3		18
F	Terrace Apt Lower	1	6	6	5		5
	Terrace Apt Upper	1	4	4	2		2
	Typical level	3	8	24	6		18
	Penthouse level	2	3	6	3		6
G	Terrace Apt Lower	1	11	11	9		9
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	7	21	5		15
Total				350			255
% achieved apartments with 2hrs or greater solar access							72.9%
Requirement SEEP65-4A-1 Criteria 1							70.0%
Compliant							Yes

This image describes the number of hours of sunlight achieved within each block of the proposal. It has been used in conjunction with the illustrative floor plans to develop a schedule of SEPP65 compliance for solar access.

It also demonstrates solar access to the open spaces proposed.



Schedule of SEPP65 cross-ventilation compliance, first nine storeys

Based on illustrative floor plans on first nine storeys

Building No.	Levels	No. of storeys	Number of apartments per storey	Total number of apartments	Cross ventilated apartments		
					No. of apartment on typical storey	Adjustment for non typical storey	Total number of apartments
A	Terrace Apt Lower	1	12	12	11		11
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	8	24	4		4
	Penthouse level	2	3	6	3		6
B	Terrace Apt Lower	1	13	13	11		11
	Terrace Apt Upper	1	0	0	0		0
	Typical level	6	8	48	8		48
	Penthouse level	0	3	0			
C	Typical level	8	8	64	4		32
D	Entry level	1	7	7	6		6
	Typical level	7	7	49	7	-2	47
	Penthouse level	0	3	0			
E	Typical level	6	3	18	3		18
F	Terrace Apt Lower	1	6	6	6		6
	Terrace Apt Upper	1	4	4	4		4
	Typical level	3	8	24	7		21
	Penthouse level	2	3	6	3		6
G	Terrace Apt Lower	1	11	11	10		10
	Terrace Apt Upper	1	0	0	0		0
	Typical level	3	7	21	3		9
				313			239
Adjusted storey numbers based on the first nine storey in consideration (SEEP65-4B-3 Criteria 1)							
% achieved apartments with cross ventilation							76.4%
Requirement SEEP65-4B-3 Criteria 1							60.0%
Compliant							Yes

4 Conclusions and recommendations

4.1 Conclusions

Holsworthy's strategic role

Outside of the Liverpool centre, the site is one of only three zoned centres within walking distance to a train station in the Liverpool LGA. Of these centres, Holsworthy has the best rail connectivity to Central Sydney (30 minutes travel).

The Plan for Growing Sydney and draft South West District Plan place an emphasis on residential growth in centres and in locations with good public transport.

Recent planning along rail corridors and in nearby centres suggest that the site's current 21m height / 1.5:1 FSR zoning does not reflect the site's potential to contribute towards these goals.

Development of the master plan

While the existing context of the site does not include high density residential to reflect its strategic role, Architectus has developed a tailored master plan based on urban design principles to deliver strategically appropriate growth with excellent amenity for residents.

Key benefits of the master plan

- A new strategically located centre adjacent to Holsworthy Railway Station.
- A new active public square at the heart of the centre, activated by a retail frontage along Macarthur Drive with the opportunity for alfresco dining.
- Improved pedestrian connections to the station
- High quality landscaping of Macarthur Drive and Heathcote Road for positive visual impact and to allow the provision of shading by trees in summer.
- Slender residential buildings on the podium at varying heights up to 12 storeys.
- Delivery of approximately 350 apartments with excellent amenity including open space amenity, access to facilities and public transport.
- An attractive and successful retail centre. The design includes ground floor retail anchored by large and small supermarkets (e.g. Woolworths/Coles, Aldi) together with supporting specialty retail.



4.2 Proposed LEP amendments

This report will accompany a Planning Proposal which seeks the support of Liverpool City Council to amend the Liverpool LEP 2008 to allow the objectives and vision of the master plan to be achieved.

To achieve a highly-integrated and connected mixed-use development of the site of a scale which is commensurate with its location adjacent Holsworthy Railway Station the following development standards would need to be amended for the site under the Liverpool LEP 2008:

- **FSR:** It is recommended that an FSR of 2.15:1 is appropriate and will allow for a scale of development which reflects the strategic significance of the site.
- **Height of buildings:** To enable the master plan to be achieved, a maximum building height of 45 metres is recommended. A lower height of 24m is proposed for the frontage to Macarthur Drive (approximately 25m in depth from this frontage). Buildings of this height will allow an FSR of 2.15:1 to be achieved in slender tower forms with high levels of residential amenity. The location of the site is such that any impacts associated with overshadowing will be negligible, as the site is located immediately to the north of the railway line and the Holsworthy Army Barracks.

The recommended development standards for the site are illustrated in the adjacent maps.



Floor space ratio

A1	0.01
C	0.5
E	0.75
N	1.0
S1	1.5
U2	2.15



Building height

E	8.5
M	12
O	15
R	21
S	24
X	45

Appendix Landscape Concept

Introduction

The following landscape concept has been developed for Clouston. This provides further detail on potential landscape implementation than provided in the main urban design report.

The landscape objectives

The concept design for the proposed development has been based on clear objectives for it's landscape. These objectives are to:

- Provide an attractive public domain frontage using quality landscape elements consistent with the surrounding existing and proposed streetscapes.
- Provide clear and integrated building entries using feature landscape treatments.
- Maximise communal landscape opportunities through use of an urban plaza and upper level podium.
- Provide a variety of communal spaces suitable for different activities.
- Utilise private balconies for integrated planter boxes that provide smaller garden opportunities for residents.
- Maximise the opportunities for vertical greening of the building by providing communal landscape planting to the atriums of the building.
- Utilise native planting landscape as the framework with highlights of exotic species.
- Transport species that are tolerant of the particular conditions that the site and building presents (shade, full sun, high wind, shallow soil etc.).
- Incorporate sustainability initiatives (water harvesting and re-use, low energy materials, ambient temperature amelioration).

Public domain / streetscapes

The public domain design provides a continuation of landscape materials and planting established for the precinct.

A pedestrian linkage from Holsworthy Railway Station to the site will be enhanced accordingly. Existing Trees will be retained where possible to provide a sense of establishment.

In the following pages landscape concepts for the street level and upper podium are illustrated and described.

Public domain

main square

Key Features

- 1 Turfed edge creates a buffer between the shared path and Macarthur Road, while also allowing clear line of site for vehicles.
- 2 Mass planting provides visual buffer between urban plaza and shared path while also allowing clear line of site for cyclists and pedestrian.
- 3 Feature mass planting to provide a sense to arrival.
- 4 Low hedging defines the space and acts as a passive barrier for pedestrians.
- 5 Water feature improves the microclimate of main plaza while creates visual interest and focal point.
- 6 Large pavers of varying sizes and colour tones assist in accentuating the geometric form.
- 7 Large level lawn area for residents and shoppers.
- 8 Decomposed granite gravel with paving inserts.
- 9 Stepping stones provide opportunity for people's interaction with water feature.
- 10 Large paved plaza space with shaded seating and trees.
- 11 Grid of *Calodendrum capense* trees gives the plaza structured form and improves microclimate of the area.
- 12 Small stage space allows for informal performances minor retail events or demonstrations and gives the plaza a variety of functions.
- 13 Main circulation and building access path.
- 14 *Eucalyptus maculata* trees tie the space into the wider environment and improve the microclimate of the area.
- 15 Proposed shared path.



open space/ potential connection

Key Features

- 1 Proposed shared path.
- 2 Decomposed granite with paving inserts.
- 3 Main access path to north side of building.
- 4 Small lawn creates a quiet space.
- 5 Low hedging defines the space and acts as a passive barrier for pedestrians.
- 6 Sandstone wall with climber planting addresses the level change between the site and road, while also creating visual appeal.
- 7 Paved area with tree provide opportunity for outdoor seating
- 8 Trees on RMS land planted in loose clusters to provide slotted view.
- 9 Native grasses as per RMS guidelines.
- 10 Large open lawn area to reduce urban heat island effect.



1:250 0 2.5 5 7.5 10M

urban plaza

Key Features

- 1 Terraced planting allows for the change in level from the road/ shared path, while also creating attractive visual appeal. Line of site for vehicles is maintained.
- 2 1:21 shared path allows for universal access to the site and improves the pedestrian connections to Holsworthy Station.
- 3 Stairs access to the urban plaza
- 4 Potential new connection creates strong pedestrian link to the nearby Holsworthy Train Station.
- 5 Small lawn creates a quiet space for people to sit and enjoy a book or have lunch.
- 6 Hedging creates visual buffer to the adjacent access road, making the lawn a more pleasant place to sit.
- 7 Large pavers of varying sizes and colour tones assist in accentuating the geometric form.
- 8 450mm seating wall along terrace planting facing the stage.
- 9 Main circulation and building access path.
- 10 Large elevated stage space allows for informal performances minor retail events or demonstrations and gives the plaza a variety of functions.
- 11 Large Pergola structure for shading as well as creating a iconic landmark.
- 12 *Eucalyptus maculata* trees tie the space into the wider environment and improve the microclimate of the area.



1:250 0 2.5 5 7.5 10M

open space/ potential connection to Holsworthy Station

Key Features

- 1 Main circulation and building access path.
- 2 Potential new connection creates strong pedestrian link to the nearby Holsworthy Train Station.
- 3 Large turf open space provide flexibility for different functions.
- 4 Shrub planting creates a buffer between the open space and proposed road, while also allowing clear line of site for vehicles.
- 5 Potental playground
- 6 Semi open space with decomposed granite gravel and pergola to provide opportunities for BBQs and picnics.
- 7 Proposed trees grid to provide shading.



Sections



Sections AA



Sections BB

Sections

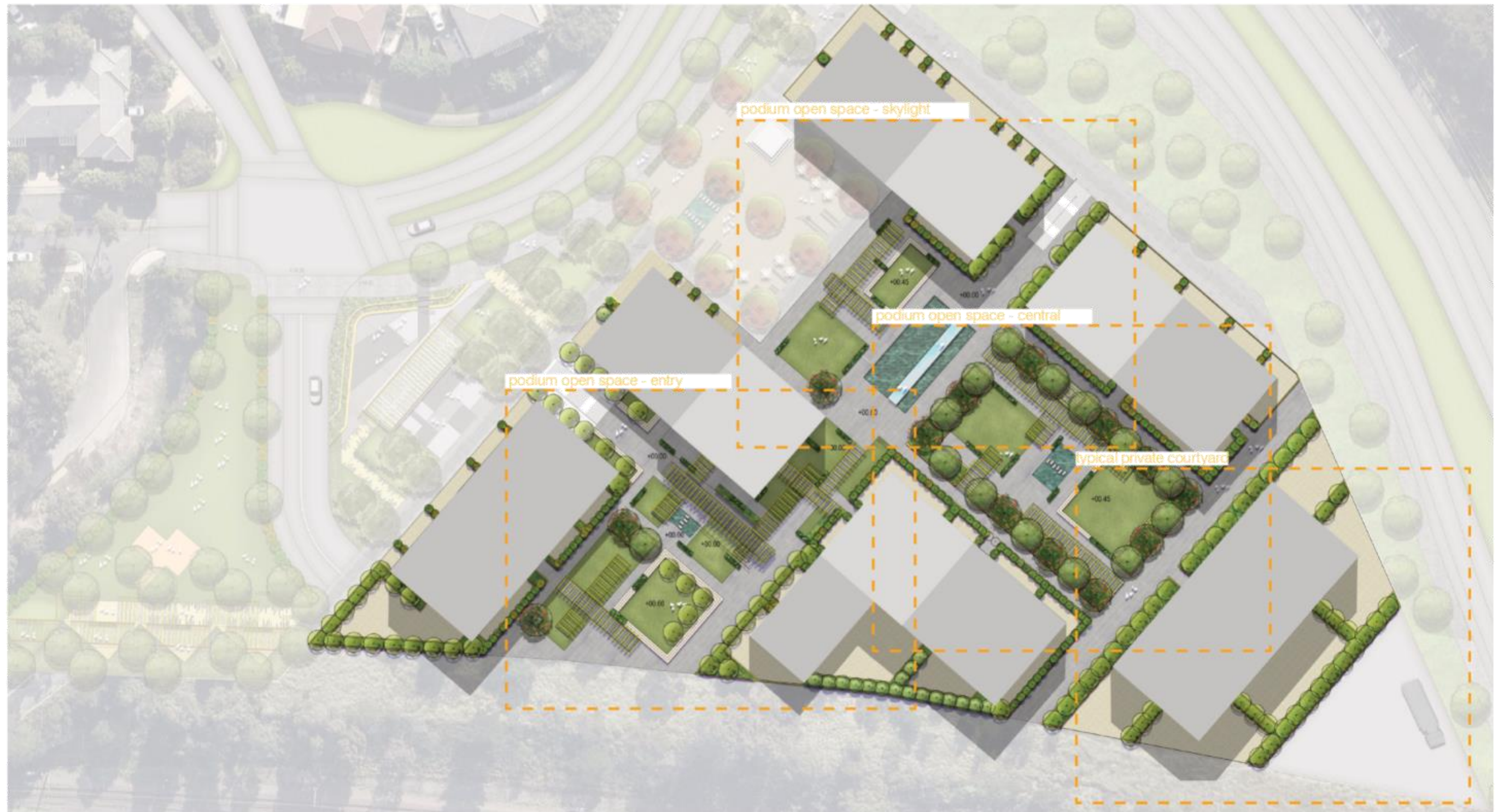


Sections CC



Sections DD

Podium communal open space



Podium master plan

1:800 0 8 16 24 32 40M

podium space - entry walkway

Key Features

- ① Trees planted along building edge help to naturally cool the building while also provide a verdant green edge.
- ② Main stairway and adjoining lift to podium level
- ③ Small areas of lawn create quiet space for resident to relax or socialise with neighbours.
- ④ Shaded pergola and seating.
- ⑤ Water feature with stepping stones.
- ⑥ Low hedging encloses and defines space.
- ⑦ Paved courtyard space.
- ⑧ Elevated open lawn for relaxing and socialising while achieving sufficient depth of soil for tree planting.
- ⑨ Mass planting along pathway softens the edge of the built form.
- ⑩ Large planting bed defines space.
- ⑪ Main circulation path.
- ⑫ Outdoor spaces (including potential plays) for adjoining community facilities.
- ⑬ Large open lawn flexible space to reduce urban heat island effect.



1:250 0 2.5 5 7.5 10M

podium open space - skylight

Key Features

- ① Trees planted along building edge help to naturally cool the building while also provide a verdant green edge.
- ② Pergola structures provides form to the space, while providing comfortable walkways and seating space.
- ③ Large raised planting beds enclose and define spaces.
- ④ Visual connection between the stairs and the water feature to be maintained.
- ⑤ Small raised areas of lawn allow for comfortable places to sit and relax.
- ⑥ Large lawn area creates a relaxing place for people to sit and socialise with friends.
- ⑦ Paved courtyard space for the residents with views out onto the public plaza below.
- ⑧ Water feature skylight improves the microclimate of the podium while also creating light and visual interest below.
- ⑨ Walkway across the water skylight improves pedestrian connections and provides interaction with water.
- ⑩ Private garden spaces with privacy screen and planting beds.



1:250 0 2.5 5 7.5 10M

podium open space - central

Key Features

- ① Raised planter beds provide privacy for the private courtyard areas and improve views from the residences.
- ② Large planter beds enclose space.
- ③ Pergola structure for seating and walking.
- ④ Lawn area creates a relaxing place for people to sit and socialise with friends.
- ⑤ Water feature with stepping stones.
- ⑥ Raised areas of lawn allows for comfortable places to sit, relax and for toddlers to run around.
- ⑦ Private garden spaces with privacy screen and planting beds.



1:250 0 2.5 5 7.5 10M

typical private courtyard

Key Features

- ① Raised planting bed to define private courtyard and provide buffer between space.
- ② Private courtyard.
- ③ Trees planted along building edge help to naturally cool the building while also provide a verdant green edge.
- ④ Raised planter to provide buffer between courtyard and loading docking on ground floor.
- ⑤ Balustrade along the edge of the building.



Sections



Sections EE

architectus™



2 MacArthur Drive Holsworthy Traffic Impact Assessment

Prepared for:
Architectus Sydney

18 October 2018

The Transport Planning Partnership

E: info@tpp.net.au



2 MacArthur Drive Holsworthy Traffic Impact Assessment

Client: Architectus Sydney

Version: Final

Date: 18 October 2018

TTPP Reference: 18181

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
Final	18/10/18	Aston Pei, Oasika Faiz	Ken Hollyoak	Ken Hollyoak	

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APPENDICES

- A. TRAFFIC SURVEYS
- B. STFM PLOTS
- C. SIDRA OUTPUTS

1 Introduction

This traffic impact assessment (TIA) report has been prepared to support a Planning Proposal to Liverpool City Council for the development of the site at 2 MacArthur Drive, Holsworthy.

The proposal is for a mixed-use development comprising indicatively 350 residential apartment units and 8,804m² GLA of retail and basement level parking containing 842 car spaces.

The report assesses the traffic and parking implications of the proposed development and is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the subject site
- Chapter 3 provides a brief description of the proposed development
- Chapter 4 assesses the proposed on-site parking provision and internal layout
- Chapter 5 examines the traffic generation and its impact, and
- Chapter 6 presents the conclusions of the assessment.

1.1 Project History

There is an existing development approval for the subject site. This 2005 approval has been the subject of several modifications. The most recent approval is DA-582/2009 and comprised the following land uses:

- Retail: 6,795m²
- Commercial: 1,600m²
- Petrol station: 90m²
- McDonalds restaurant: 360m²
- Residential: 10 apartment units

The approval included 416 off-street parking spaces with three vehicular access points into the site including an entry-only from Heathcote Road with a combined entry/exit from MacArthur Drive and additional exit-only access from MacArthur Drive.

We are instructed that Roads and Maritime Services (Roads and Maritime) have provided recent feedback on the subject Planning Proposal in that they will not support the provision of vehicular access from Heathcote Road, in line with the current practice to minimise the number of driveways along arterial roads.

2 Existing Conditions

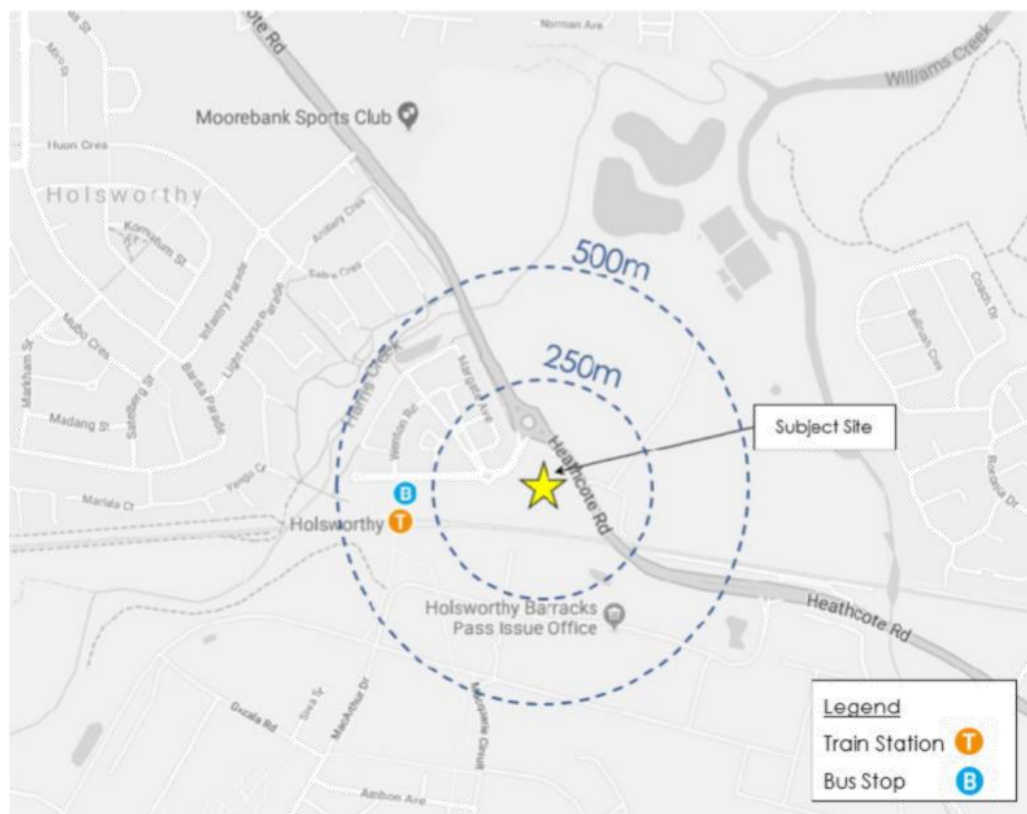
2.1 Site Description

The subject site is located at 2 MacArthur Drive, Holsworthy and falls within the local government area of Liverpool City Council. The site is bound by MacArthur Drive to the west, Heathcote Road to the east and the T8 – Airport & South Line rail corridor to the south.

At present, the site is unoccupied with no building structures present. Land uses surrounding the site comprise medium density residential to the west, natural vegetation to the east and the Holsworthy Army Barracks are located south of the rail corridor. Notably, Holsworthy Railway Station is located 300m west of the site.

The site location and its surrounds are shown in Figure 2.1

Figure 2.1: Site Locality



Basemap source: Google Maps Australia

2.2 Abutting Road Network

2.2.1 MacArthur Drive

MacArthur Drive is a two-way collector road that is aligned along the western boundary of the site. It is configured with a 14m carriageway with two-lanes in each direction plus a central median, within a 30m road reserve. No kerbside parking permitted.

MacArthur Drive intersects with Heathcote Road at the northern corner of the site and Morningside Parade and The Boulevard at the south-western corner of the site.

2.2.2 Heathcote Road

Heathcote Road is classified as a State Road and is therefore under the jurisdiction of the Roads and Maritime Services (Roads and Maritime). Heathcote road is aligned in a north-west to south-east direction and borders the eastern side of the site. In the vicinity of the site, the road is configured as one lane each in each direction with auxiliary lanes on approach to MacArthur Drive. No kerbside parking is permitted along Heathcote Road. Heathcote Road is due to be upgraded as explained in Section 2.5.

2.3 Public Transport

Holsworthy Railway Station is located within a four-minute walk of the site. The station includes both rail and bus services which provide connections to Liverpool, Campbelltown and the Sydney CBD. Holsworthy Station includes substantial parking facilities including a multi-storey commuter car park and bike parking racks and lockers to facilitate park and ride activities.

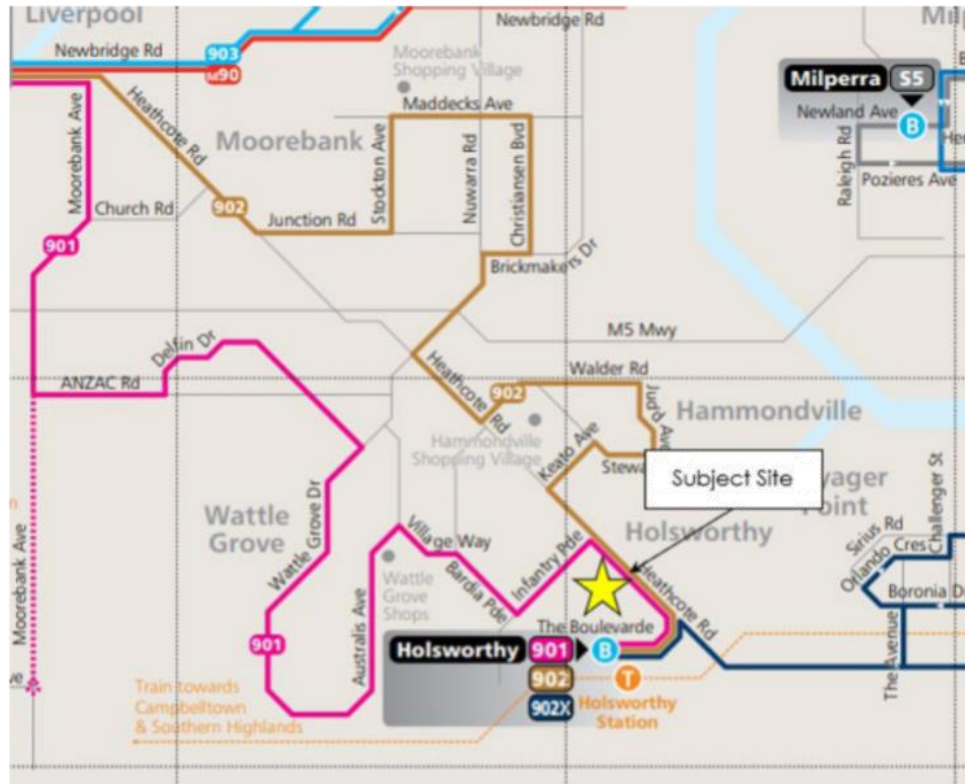
A summary of existing public transport services is shown in Table 2.1.

Table 2.1: Public Transport Services

Service	Route	Description	Proximity	Weekday Peak Frequency
Train	T8 – Airport & South Line	Macarthur to City via Airport or Sydenham	300m	5-15 minutes
Bus	901	Liverpool to Holsworthy		30 minutes
	902	Sandy Point to Holsworthy		30 minutes

The public transport network map of the area is illustrated in Figure 2.2.

Figure 2.2: Public Transport Network Map

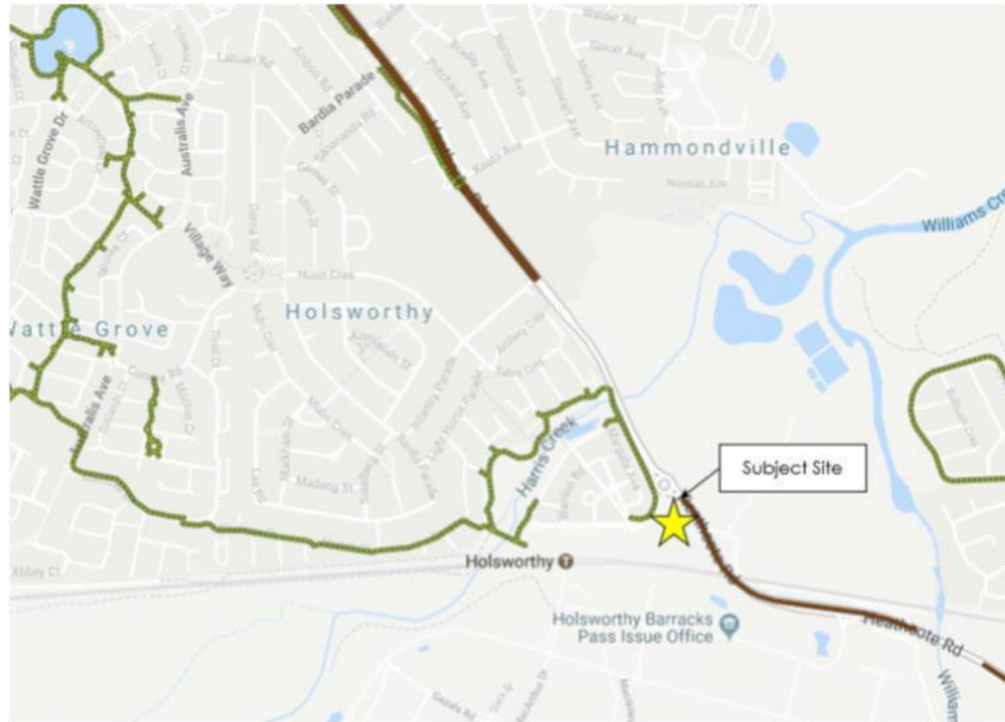


Source: Transdev NSW

2.4 Pedestrian and Cyclist Facilities

Pedestrian footpaths are generally provided on all streets surrounding the site. The exception to this is on the south side of MacArthur Drive where there is no development. In addition to this, cycling routes are provided in the vicinity of the site, comprising off-road and on-road cycleways, as shown in Figure 2.3.

Figure 2.3: Surrounding Cycleways



Source: Roads and Maritime Services Cycleway Finder 2018 (last updated 08/06/18)

2.5 Heathcote Road Upgrade

The NSW Government is proposing to upgrade Heathcote Road, between Infantry Road and The Avenue. The upgrade aims to improve the capacity and efficiency of Heathcote Road and also to improve pedestrian and cycling connectivity to Holsworthy Railway Station and Hammondville Oval (located along Heathcote Road approximately 1km north of the site).

The upgrade includes converting Heathcote Road to a four-lane road and the upgrade of key intersections. This includes the upgrade of the intersection of Heathcote Road and MacArthur Drive into traffic signals. The intersection design includes two auxiliary right-turn bays into MacArthur Drive, two left-turn bays from MacArthur Drive into Heathcote Road to accommodate the heavy northbound traffic.

Investigative work is currently being undertaken to assist with the detailed design of the intersection. A concept layout of the intersection is shown in Figure 2.4.

Figure 2.4: Heathcote Road-MacArthur Drive Concept Plan



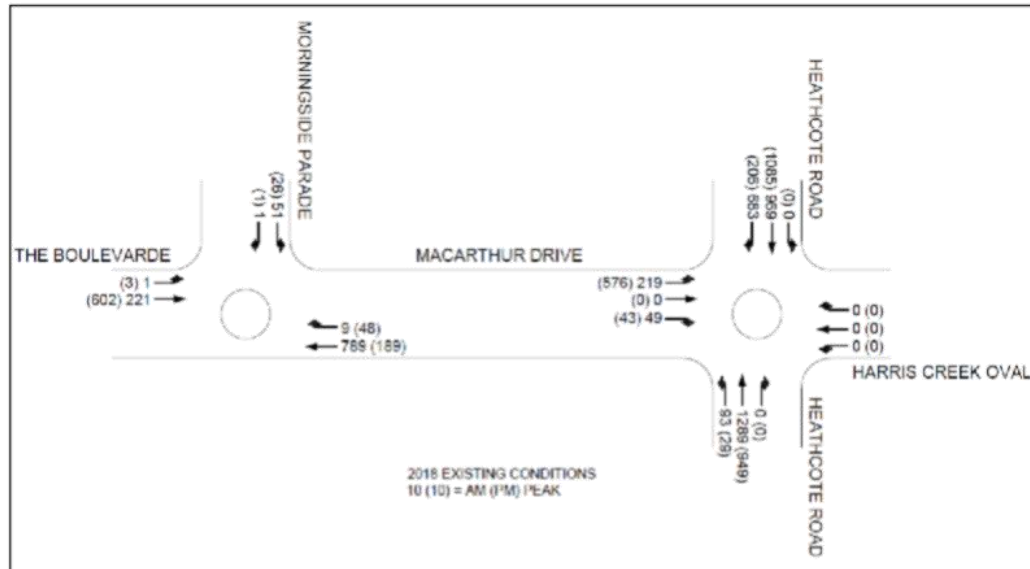
2.6 Traffic Volumes

Intersection traffic counts were undertaken on Friday 2 December 2016 at the following intersections:

- MacArthur Drive-Heathcote Road
- MacArthur Drive-The Boulevard-Morningside Parade.

The traffic counts show that peak traffic occurs during the hours of 7am to 8am and 5:30pm to 6:30pm. The existing traffic volumes are shown in Figure 2.5.

Figure 2.5: Existing Traffic Volumes



The raw data of the traffic counts are provided in **Appendix A**.

3 Planning Proposal

3.1 Development Description

The Planning Proposal consists of a mixed-use development including a small shopping centre with six residential towers situated above and basement level parking. The land use schedule for the development will comprise of the following:

- Retail = 8,804m² GLA
- Residential = 350 units
 - 81x 1-bedroom units
 - 175x 2-bedroom units
 - 94x 3-bedroom units.

3.2 Access Arrangements

The proposed development is to be accessed from a two-way access road which will intersect with MacArthur Drive, The Boulevard and Morningside Parade as a four-arm intersection.

The existing intersection of MacArthur Drive, The Boulevard and Morningside Parade is a three-arm intersection with roundabout control. It is noted that the intersection includes a fourth arm which was used to access the army barracks located to the south. This fourth arm is now closed to vehicles.

The intersection/site access is proposed to be signalised, to reduce delay and queue lengths of turning movements from the site and to assist pedestrian movement between the site and the railway station. A warrant assessment for the intersection has been undertaken and is summarised in Section 5.5.

The proposed access road will comprise three traffic lanes including one entry and two egress lanes.

The site access and layout is shown conceptually in Figure 3.1.

Figure 3.1: Site Access and Layout



Source: Architectus, 15/10/18

3.3 Loading Arrangements

Loading is to occur on ground level, adjacent to the back of house (BOH) areas located at the rear of the development site. The loading area comprises six loading bays including:

- two 19m long bays (accommodating vehicles up to an Australian Standard 19m long articulated vehicle)
- four 12.5m long bays (accommodating service vehicles up to an Australian Standard 12.5m long heavy rigid vehicle).

3.4 Pedestrian and Cycling Connectivity

A shared path is proposed along the frontage of the site to connect with the shared path proposed as part of the Heathcote Road upgrade by Roads and Maritime. The shared path provides access to/from the commuter car park and train station located to the west and Heathcote Road to the east.

4 Parking Assessment

4.1 Car Parking Requirements

4.1.1 DCP Requirement

Parking controls have been determined based on the existing controls in Council's *Development Control Plan 2008 (DCP)*, for site's outside the Liverpool City Centre.

An assessment of car parking requirements for the proposed development is demonstrated in Table 4.1 below.

Table 4.1: DCP Car Parking Requirements (outside City Centre)

Land Use	Dwelling Types	No. of Dwellings/ GLA	DCP Parking Rate	Required Parking Spaces
Residential	1 Bed Unit	81	1 space per two dwelling	
	2 Bed Units	175	1 space per dwelling	
	3 Bed Units	94	1 space per dwelling	
	Visitors	-	1.5 spaces per dwelling	
	Sub-Total	350	-	432
Retail		8,804	1 space per 20m ² (LFA <12,000m ²)	440
Total				872

Based on the DCP, the development is required a total parking provision of 872 spaces including 420 spaces for the residential component and 440 spaces for the retail component.

4.1.2 SEPP 65 Apartment Design Guide

To further assess the parking requirements for the subject site, it is noted that State Environmental Planning Policy No 65 (SEPP 65) amendment details minimum car parking requirements for residential development within 800 metres of a railway station or light rail stop. More specifically, Part 3J of the Apartment Design Guide (ADG) states:

"For development...on sites that are within 800 metres of a railway station or light rail stop...the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Development, or the car parking requirement prescribed by the relevant council, whichever is less".

Holsworthy Railway Station is located within 300m from the site. On this basis, the requirements set out in the Roads and Maritime Guide is relevant and has been assessed in Table 4.2.

Table 4.2: ADG/ Roads and Maritime Parking Requirements

Land Use	Size	Car Parking Rate	Minimum Requirement
Residential			
1-bed	81	0.6 Spaces per unit	48.6
2-bed	175	0.9 spaces per unit	157.5
3-bed	94	1.4 spaces per unit	131.6
Visitor	-	1 space per 5 units	70.0
Total	350		408

Table 4.2 indicates that the residential component of the development is required a minimum of 409 spaces including 70 visitor spaces.

Based on the guidelines of the ADG, the lesser of the DCP and Roads and Maritime requirement would be the minimum requirement for the development. On this basis, the proposed development is required to provide a total minimum of 848 car parking spaces including 408 residential spaces and 440 retail spaces.

The proposed development will provide car parking in accordance with the minimum requirements of the ADG.

The current development layout indicatively provides 842 spaces within two basement car park levels. Subject to detailed design and eventual unit mix, the site is capable of accommodating the required number of car parking spaces.

4.2 Accessible Parking

The DCP stipulates the following parking rates for accessible parking provision:

- 2 spaces per 100 spaces for residential parking
- 1 space per 100 space for retail parking.

Based on the above, the proposed development is required a provision of eight accessible residential spaces to accommodate a minimum of 408 residential car spaces and four accessible retail spaces to accommodate a minimum of 440 retail spaces.

It is proposed to comply with the accessible parking requirements as stipulated by the DCP.

4.3 Service and Loading

The DCP indicates the following requirement for the proposed land uses:

- Retail developments of LFA < 4,400m² require service access for an articulated vehicle.

In addition, access for garbage collection and removalists is required for the residential apartment units.



The development has included six loading bays to accommodate up to:

- Two 19m semi-trailers to accommodate the two supermarkets
- Four 12.5m HRVs to accommodate loading requirements from the specialty retail stores and deliveries and waste collection for the residential component.

4.4 Access and Parking Layout

The access arrangements and basement car parking layout will be designed in accordance with Australian Standard AS2890. A detailed compliance assessment of the access and car parking arrangements will be undertaken during the DA stage.

5 Traffic Assessment

5.1 Traffic Generation

Typical traffic generation estimates for the proposed development have been sourced from Roads and Maritime Service's 'Guide to Traffic Generating Developments' (Guide) and in the technical direction TDT 2013/04a containing revised rates.

The traffic generating potential of the development has been assessed and is summarised in Table 5.1.

Table 5.1: Trip Generation

Land Use	Size	Traffic Generation Rate		Trips (vph)	
		AM	PM	AM	PM
Residential	350 units	0.19 trips per unit	0.15 trips per unit	67	53
Retail	8,804m ²	6.25 trips per 100m ² NLA	12.5 trips per 100m ² NLA	550	1101
Total Development Traffic				617	1154
20% of retail trips from existing traffic flows				110	220
Net increase of traffic to road network				507	933

Table 5.1 indicates that the development would generate 581 vehicle trips per hour in the morning peak period and 1,080 trips per hour in the afternoon peak period.

It is expected that a portion of the vehicle trips to the retail shops would be existing traffic flows in the road network. Notably, the site's proximity to the railway station and Heathcote Road, would generate a proportion of vehicles that are passing by the shopping centre/site while commuting to work etc.

It is noted that the Roads and Maritime guidelines suggest an average discount of about 20 per cent for shopping centres, to account for linked and multi-purpose trips. This allowance has been included in the table above.

On this basis, it is estimated that the net increase of development related traffic generation to the road network, would be in the order of 507 vehicle trips per hour and 933 vehicle trips per hour in the morning and afternoon peak periods respectively.

5.2 Traffic Distribution

The distribution (i.e. inbound/ outbound) and direction (to the road network) of development traffic is based on many factors including the land use characteristics, the configuration of

the arterial road network, location of employment centres in relation to the site and access arrangements of the subject site.

The subject development traffic has been distributed based on generalised land use patterns and existing traffic flows on the road network. The existing traffic flows diverted from the road network into the site has been allocated as follows:

- 50 per cent from Holsworthy Railway Station and commuter car park
- 20 per cent from northbound traffic along Heathcote Road
- 20 per cent from southbound traffic along Heathcote Road
- 10 per cent from Morningside Parade.

The additional traffic generated by the proposed development has been assumed to have the following traffic distribution:

- Retail traffic distribution:
 - 50 per cent to and from the north on Heathcote Road
 - 40 per cent to and from the south on Heathcote Road
 - 10 per cent to and from Morningside Parade.
- Residential traffic distribution:
 - 60 per cent to and from the north on Heathcote Road
 - 40 per cent to and from the south on Heathcote Road.

In addition, the following typical inbound/ outbound splits have been assumed:

- Residential: 20 per cent inbound/ 80 per cent outbound in the morning peak, and vice versa in the afternoon peak
- Retail: 50 per cent inbound/ 50 per cent outbound.

5.3 Background Traffic Growth

Background growth factors have been applied to traffic along MacArthur Drive and Heathcote Road to assess the condition of the road network in 10 years in the future, with and without the development.

Background traffic growth has been adopted based on Sydney Traffic Forecasting Model (STFM) growth plots obtained from Roads and Maritime. The STFM growth plots provide growth rates (per cent per annum growth) from the year 2016 to a 10-year future (2026). Based on a base assessment year of 2018, the 2016-2026 growth rates have been similarly adopted by TTPP for the 10-year post development scenario (2028).



It is noted that the STFM model shows an anomaly along the road fronting the Holsworthy commuter car park (The Boulevard) with a growth rate of 13.9 to 16.3 per cent per annum to year 2026. It is believed that this significant increase in traffic relates to the additional traffic generated by the then proposed multi-storey commuter car park containing over 400 spaces. The multi-storey commuter car park is now built and operating.

On this basis, the traffic growth estimated in the STFM model is considered to be already included in the traffic counts used for this assessment. Instead the traffic growth rate of The Boulevard was assumed to match MacArthur Drive which includes a growth of 0.9 to 2.7 per cent per annum. The STFM plots are provided in **Appendix B** for reference.

5.4 Traffic Impact

The following intersections have been identified as the key intersections that may be impacted by the Planning Proposal:

- Macarthur Road – The Boulevard – Morningside Parade
- Macarthur Road – Heathcote Road

The existing and future operating performance of the above key intersections has been assessed using SIDRA INTERSECTION 8 (SIDRA), a computer-based modelling package which calculates intersection performance characteristics, including the degree of saturation, average delays and levels of service.

The study intersections have been assessed in SIDRA, with inclusion of development traffic and the proposed signalisation of Heathcote Road-MacArthur Drive which is assumed to be in place prior to the occupation of the proposed development.

The traffic impact of the development has been carried out under the following scenarios:

- 2018 Existing Conditions
- 2018 Existing + Development
- 2028 Base (10-year horizon without development)
- 2028 Base + Development (10-year horizon with development traffic).

The traffic turning movements for each of the above scenarios are shown in Figure 2.5, Figure 5.1, Figure 5.2 and Figure 5.4.

Figure 5.1: 2018 Existing + Development Volumes

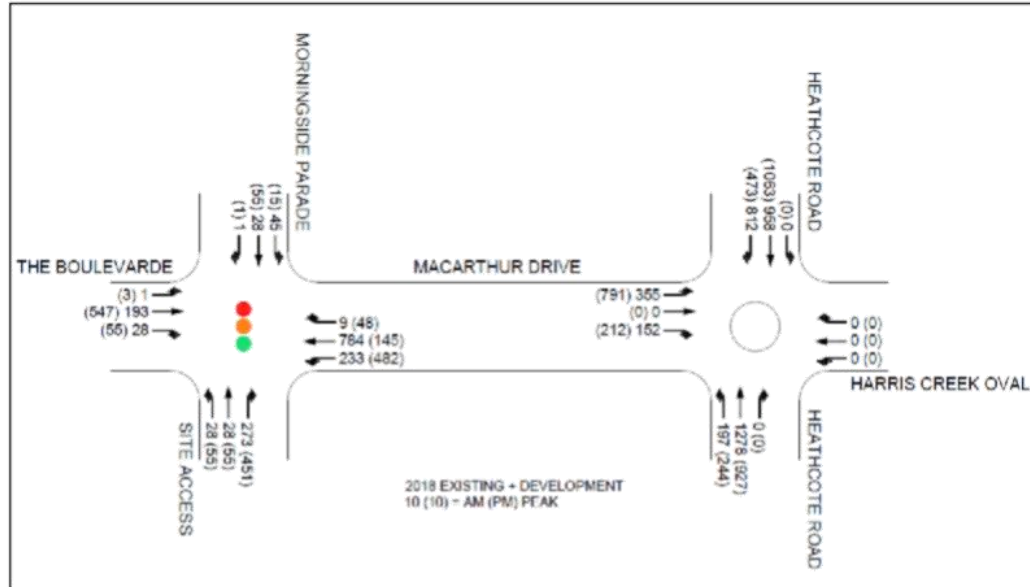


Figure 5.2: 2028 Base (10-year horizon without development)

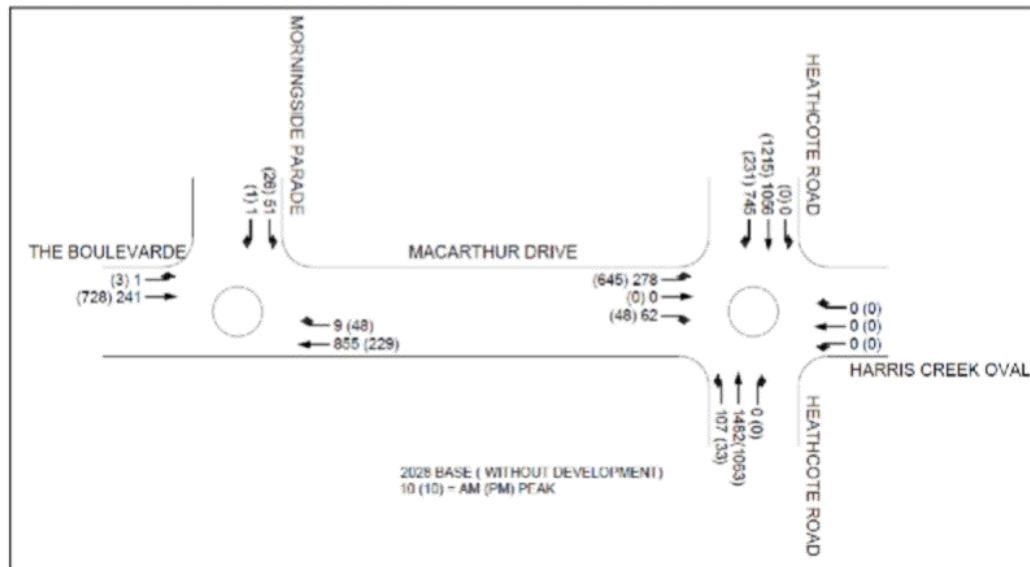
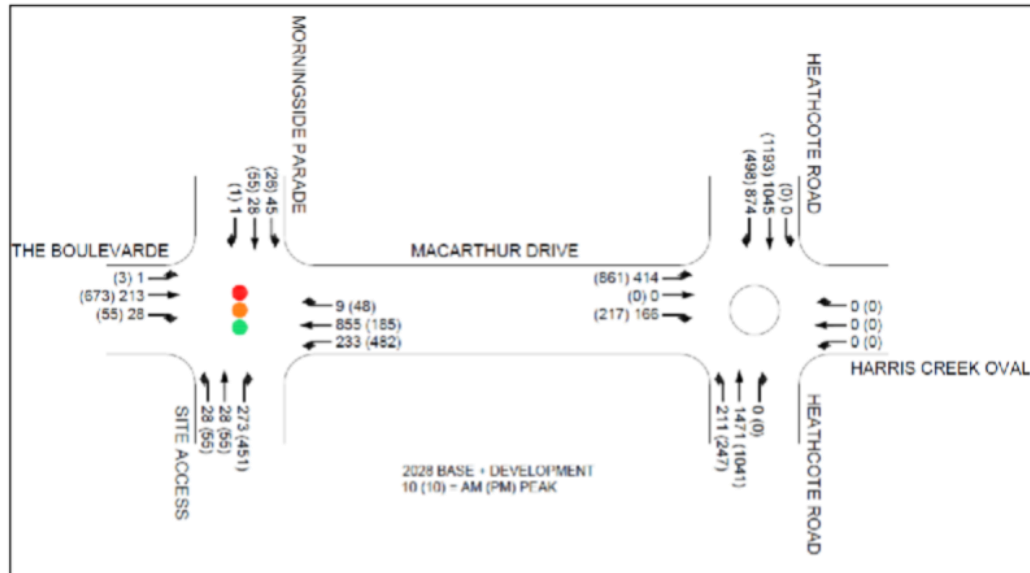


Figure 5.3: 2028 Base (10-year horizon with development)



5.4.1 Modelling Performance Indicators

SIDRA modelling provides several useful indicators to determine the level of intersection performance.

RMS uses the performance measure level of service (LoS), to determine how efficient an intersection/network is operating under given prevailing traffic conditions. Level of service is directly related to the delays experienced by traffic travelling through the intersection. SIDRA's level of service ranges from LoS A to LoS F, with LoS A indicating that the intersection is operating with spare capacity and LoS F indicating the intersection is operating over capacity. LoS D is the long-term desirable level of service.

The criteria that SIDRA intersection adopts in assessing the level of service is shown in Table 5.2.

Table 5.2: Level of Service

Level of Service	Average Delay (seconds per vehicle)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	Less than 14	good operation	good operation
B	15 to 28	good with acceptable delays and spare capacity	acceptable delays and spare capacity
C	29 to 42	satisfactory	satisfactory, but accident study required
D	43 to 56	operating near capacity	near capacity and accident study required

E	57 to 70	at capacity At signals, incidents will cause excessive delays.	at capacity, requires other control mode
F	Greater than 71	unsatisfactory with excessive queuing	unsatisfactory with excessive queuing; requires other control mode

Source: RMS Guide to Traffic Generating Developments, 2002

5.4.2 MacArthur Drive-The Boulevard & Site Access

The intersection of MacArthur Drive-The Boulevard-Morningside Parade has been assessed with and without the development (including site access) as a roundabout for the above scenarios. The results of the assessment are presented in Table 5.3.

Table 5.3: MacArthur Drive & Site Access (Roundabout) - Intersection Operation

Intersection	AM			PM		
	95% Queue (m)	Delay (sec/veh)	Level of Service	95% Queue (m)	Delay (sec/veh)	Level of Service
2018 Existing	17	9	A	17	11	A
2018 Existing + Development	26	15	A	63	17	B
2028 Base (No Development)	19	9	A	23	12	A
2028 Base + Development	29	17	B	142	28	B

The results in Table 5.3 indicate that the proposed development would increase vehicle delay however, the operation of the roundabout intersection with inclusion of an additional arm would continue to operate well with a LoS B.

In addition, notable vehicle queueing is anticipated from the site access, with results showing queue lengths of 142m exiting the site in the 2028 afternoon peak period.

5.4.3 Future operation of MacArthur Drive-Heathcote Road

The intersection of MacArthur Drive and Heathcote Road is proposed to be signalised as part of the Roads and Maritime upgrade of Heathcote Road. The actual operation of the signals in relation to phasing and timing is unavailable, however TTPP have undertaken an assessment of the potential operation of the future intersection to assess the impact of the proposed development to the intersection.

The results of the assessment are summarised in Table 5.4.

Table 5.4: Future MacArthur Drive-Heathcote Road Operation

Approach	AM			PM		
	95% Queue (m)	Delay (sec/veh)	Level of Service	95% Queue (m)	Delay (sec/veh)	Level of Service
2028 Base (No Development)	367	35	C	104	16	B
2028 Base + Development	466	50	D	149	22	B

Table 5.4 indicates that in year 2028, the signalised intersection of MacArthur Drive and Heathcote Road would operate satisfactorily with a LoS C in the morning peak period and LoS B in the afternoon peak period. However, it is noted that the assessment does not take into account any potential road coordination systems that may be applied along Heathcote Road by Roads and Maritime.

The inclusion of development related traffic would increase vehicle delay and queueing with the intersection operating near capacity in the morning peak period with a LoS D. In afternoon period, the intersection operates well with a LoS B.

Notwithstanding the increase in delay and queueing, the development impact is considered acceptable. The subject site is located along MacArthur Drive where further development projects are unlikely to occur in the near future. On this basis, no additional traffic generation is anticipated to MacArthur Drive beyond that generated by the proposed site.

In addition, given that the development site includes an existing DA approval, it is considered that Roads and Maritime Services would have included traffic generated by the development in its assessment of the Heathcote Road-MacArthur Drive intersection.

5.4.4 Signalised Access Option

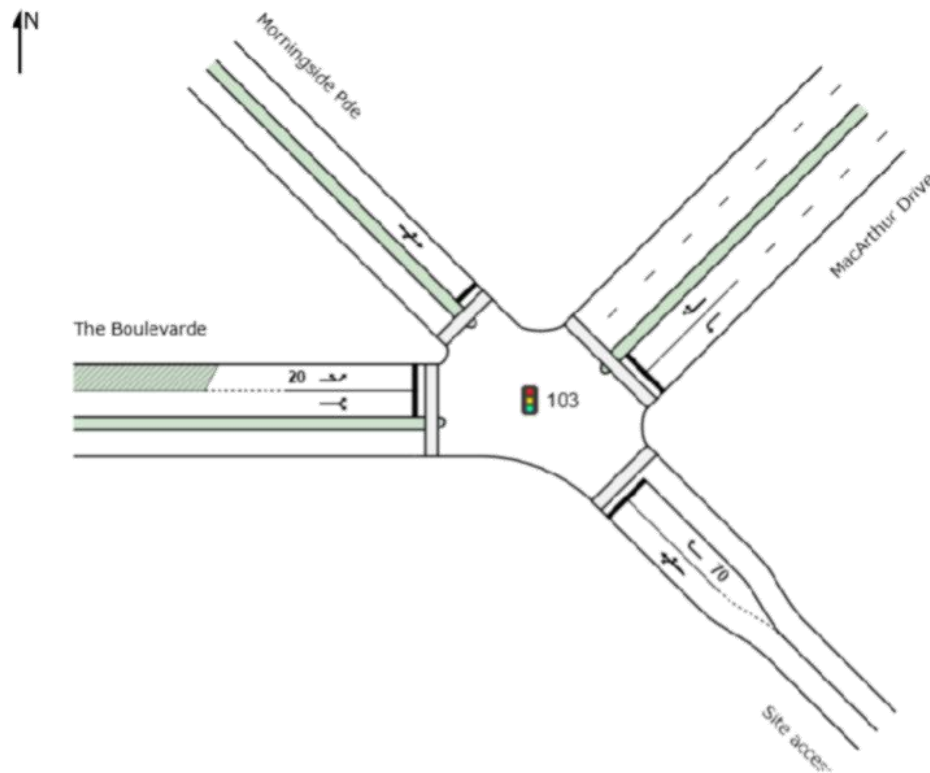
It is proposed to signalise the intersection of MacArthur Drive, The Boulevard, Morningside Parade and proposed site access.

The signalisation would prevent the potential for heavy delays to existing traffic from the site as a result of heavy through traffic along MacArthur Drive.

In addition, the provision of traffic signals provides a better outcome for cyclists and pedestrians who want to cross the road at this location.

The proposed signalised intersection layout is shown in Figure 5.4.

Figure 5.4: Signalised Access Configuration



The intersection has been designed to operate at a LoS B as shown in Table 5.5.

Table 5.5: MacArthur Drive & Site Access (Signalised) – Intersection Operation

Intersection	AM			PM		
	95% Queue (m)	Delay (sec/veh)	Level of Service	95% Queue (m)	Delay (sec/veh)	Level of Service
2018 Existing + Development	151	22	B	85	23	B
2028 Base + Development	177	22	B	85	23	B

5.4.5 Traffic Impact Summary

The proposed development is anticipated to generate a total of 581 vehicle trips per hour in the morning peak period and 1,080 trips per hour in the afternoon peak period.

Approximately 20 per cent of this traffic generation would include diverted trips from existing traffic movements carrying out multi-purpose trips.

The impact of the development traffic to the local road network as assessed in SIDRA includes:

- Minor increase in delay and queueing to the intersection of MacArthur Drive, The Boulevard, Morningside Parade and the proposed site access. The overall operation of the intersection is anticipated to be satisfactory.
- Notwithstanding the above, it is proposed to signalise the intersection of MacArthur Drive, The Boulevard, Morningside Parade and the proposed site access to reduce potential delay to traffic movements exiting from the subject site and to assist with pedestrian / cyclists movements through the network.
- Increase in delay to the proposed signalised intersection of Heathcote Road and Macarthur Road. Based on assumed operating characteristics of the proposed intersection, it is assumed to operate at a LoS C by year 2028. Post development, the intersection is anticipated to operate nearing capacity with a LoS D. The development impact is considered acceptable noting that the traffic growth figures applied to the year 2028 intersection is likely to have included the approved development site. On this basis, the subject study is conservative with the proposed development included in addition to background growth figures.

Detailed outputs of the SIDRA assessment are provided in **Appendix C**.

5.5 Roads and Maritime Traffic Signal Warrants

Based on the *Roads and Maritime Services Traffic Signal Design 2008* manual, a signalised intersection may be considered if warrants are met, either based on crash history, pedestrian safety, high speeds, or high traffic volumes.

Based on this, a traffic signal warrants assessment has been undertaken for the intersection of MacArthur Drive, The Boulevard, Morningside Parade and the proposed site access.

The relevant warrant has been reproduced and assessed within Table 5.6.

Table 5.6: Warrants Assessment for Proposed Site Access-MacArthur Drive

	Warrants Met? (Yes/No)
(a) Traffic demand: For each of four one-hour periods of an average day:	
(ii) the major road flow exceeds 600 vehicles/hour in each direction; and	Yes
(ii) the minor road flow exceeds 200 vehicles/hour in one direction.	Yes
Overall	Yes

The major road of the intersection is the MacArthur Drive and The Boulevard approaches. The site access and Morningside Parade is considered as the minor roads.



In the future scenario, that is, the year 2028 with development, the peak hour volumes on each major road approach of the intersection is estimated as follows:

- MacArthur Drive
 - 531 eastbound / 1,097 westbound vehicles per hour in the morning
 - 1,150 eastbound / 715 westbound vehicles per hour in the afternoon
- The Boulevard
 - 241 eastbound / 883 westbound vehicles per hour in the morning,
 - 731 eastbound / 241 westbound vehicles per hour in the afternoon.

Based on the above, MacArthur Road is anticipated to generate between 500 and 1100 vehicles per hour in any direction for two peak periods. Noting that each peak period would last around two to three hours, the warrant for a major road (>600 vehicles per hour for four one-hour periods in a day) is considered to be satisfied.

The minor road approach (site access) is estimated to generate the following volumes:

- Site Access
 - 228 inbound/ 328 outbound vehicles per hour in the morning
 - 592 inbound/ 561 outbound vehicles per hour in the afternoon.

Based on the above, the site access would generate around 300 and 600 vehicles per hour in each direction during the road network peak hours. The traffic signal warrant for a minor road requires traffic volumes to exceed 200 vehicles per hour for four one-hour periods in one direction. The above volumes indicate that the warrant is met for two directions in the afternoon and one direction in the morning.

Noting that the afternoon peak period is well above the warrant (>200 vehicles per hour), it is anticipated that the site would satisfy the warrant for another hour quite easily.

On this basis, the subject intersection is considered to meet the traffic signal warrants set by Roads and Maritime.

6 Conclusion

The key findings of the above traffic impact assessment are summarised in the following:

- A Planning Proposal is to be submitted for 2 MacArthur Drive, Holsworthy, for a mixed-use development. The development would include 350 residential units and 8,804m² GLA retail.
- There is an existing development approval for the subject site (DA-582/2009) for a mixed use site comprising 10 residential units, 6,795m² retail, 1,600m² commercial, a 90m² petrol station and a 360m² McDonalds restaurant.
- Based on Liverpool City Council development controls, the proposed development is required to provide 432 residential and 440 retail car spaces.
- The Apartment Design Guide stipulates a lower parking requirement for the residential component due to its proximity to Holsworthy Railway Station. On this basis, the development is considered to require a minimum of 408 residential and 440 retail car spaces.
- The development proposes to provide car parking in accordance with the minimum requirements of the ADG.
- The development is also required to provide a minimum of eight residential and four retail accessible parking spaces.
- The development is to provide six loading bays to accommodate vehicles up to an Australian Standard 19m long semi-trailer.
- The proposed development is estimated to generate 581 vehicle trips per hour in the morning peak period and 1,080 trips per hour in the afternoon peak period. Approximately 20 per cent of this traffic generation would include diverted trips from existing traffic movements carrying out multi-purpose trips.
- The proposed access into the site will include a two-way access road which will intersect with the existing roundabout controlled intersection of MacArthur Road, The Boulevard and Morningside Parade. It is proposed to convert the existing intersection to a signalised intersection to accommodate traffic to/from the site.
- SIDRA intersection modelling indicates that the development will increase vehicle delay and queuing to the local road network - however the operation of key intersections is anticipated to remain acceptable.



Appendix A

Traffic surveys

Client : Terraform Pty. Ltd.
Job No/Name : 6317 HOLSWORTHY Macarthur Dr
Day/Date : Friday 2nd December 2016

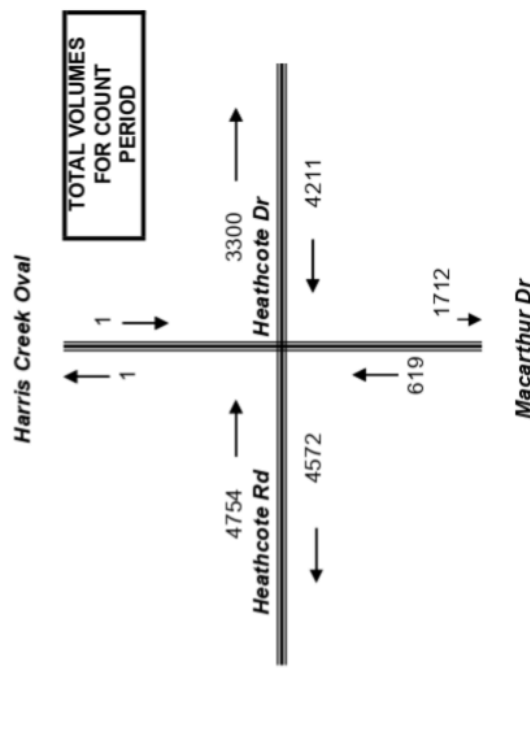
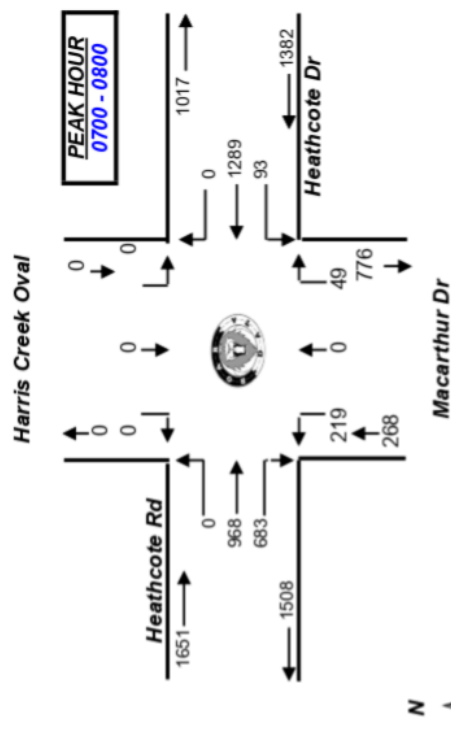
R.O.A.R. DATA

Reliable, Original & Authentic Results
Ph.88196847, Mob.0418-239019



All Vehicles	NORTH			WEST			SOUTH			EAST		
	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr
Time Per	L	I	R	L	I	R	L	I	R	L	I	R
0600 - 0615	0	0	0	0	187	66	15	0	2	4	188	0
0615 - 0630	0	0	0	0	200	78	20	0	4	6	211	0
0630 - 0645	0	0	0	0	224	84	16	0	0	6	245	0
0645 - 0700	0	0	0	0	239	125	24	0	4	11	271	0
0700 - 0715	0	0	0	0	272	161	32	0	10	21	262	0
0715 - 0730	0	0	0	0	235	189	71	0	21	28	309	0
0730 - 0745	0	0	0	0	243	173	54	0	12	29	336	0
0745 - 0800	0	0	0	0	218	160	62	0	6	15	382	0
0800 - 0815	0	0	0	0	196	145	55	0	4	22	295	0
0815 - 0830	0	0	0	0	199	120	59	0	4	15	338	0
0830 - 0845	0	0	0	0	181	55	36	0	5	10	250	0
0845 - 0900	0	0	0	0	186	40	35	0	1	4	222	0
0900 - 0915	0	0	0	0	191	46	19	0	4	2	232	0
0915 - 0930	0	0	0	0	163	29	12	0	3	0	159	0
0930 - 0945	0	0	1	1	143	36	16	0	3	1	179	0
0945 - 1000	0	0	0	0	139	30	9	0	1	1	157	0
Period End	0	0	1	1	3216	1537	535	0	84	175	4036	0
												9585

Peak Time	NORTH			WEST			SOUTH			EAST		
	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr
Peak Time	L	I	R	L	I	R	L	I	R	L	I	R
0600 - 0700	0	0	0	0	850	353	75	0	10	27	915	0
0615 - 0715	0	0	0	0	935	448	92	0	18	44	989	0
0630 - 0730	0	0	0	0	970	559	143	0	35	66	1087	0
0645 - 0745	0	0	0	0	989	648	181	0	47	89	1178	0
0700 - 0800	0	0	0	0	968	683	219	0	49	93	1289	0
0715 - 0815	0	0	0	0	892	667	242	0	43	94	1322	0
0730 - 0830	0	0	0	0	856	598	230	0	26	81	1351	0
0745 - 0845	0	0	0	0	794	480	212	0	19	62	1265	0
0800 - 0900	0	0	0	0	762	360	185	0	14	51	1105	0
0815 - 0915	0	0	0	0	757	261	149	0	14	31	1042	0
0830 - 0930	0	0	0	0	721	170	102	0	13	16	863	0
0845 - 0945	0	0	1	1	683	151	82	0	11	7	792	0
0900 - 1000	0	0	1	1	636	141	56	0	11	4	727	0
PEAK HOUR	0	0	0	0	968	683	219	0	49	93	1289	0
												3301



Client : Terraform Pty. Ltd.
Job No/Name : 6317 HOLSWORTHY Macarthur Dr
Day/Date : Friday 2nd December 2016

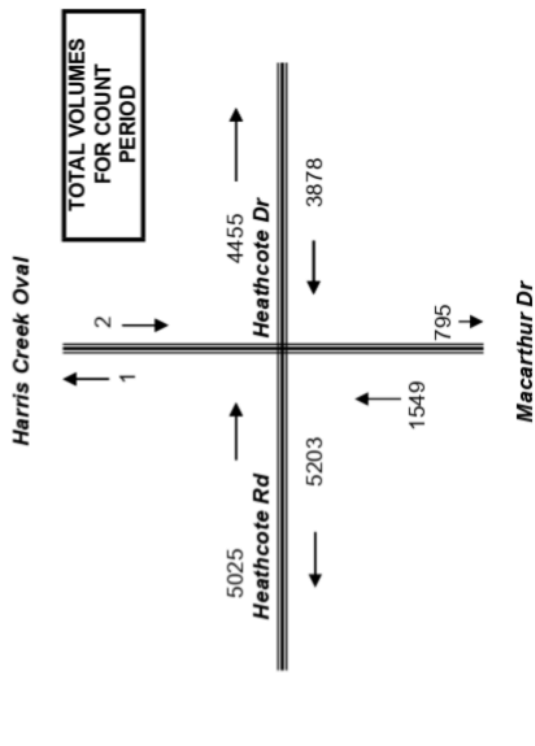
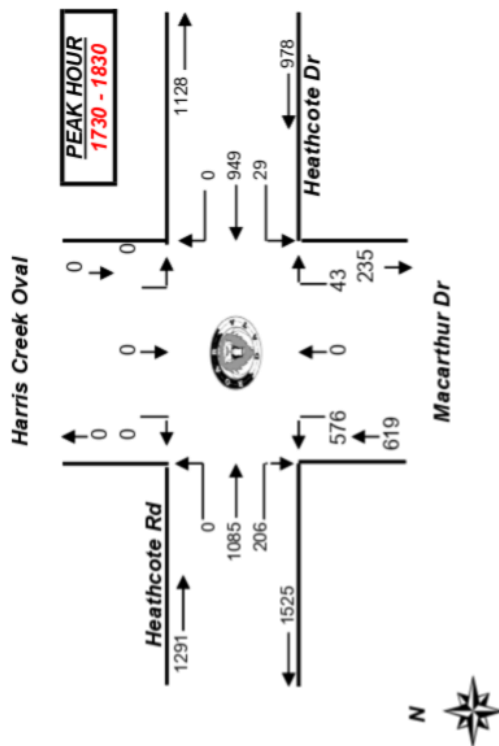
R.O.A.R. DATA

Reliable, Original & Authentic Results
Ph.88196847, Mob.0418-239019



All Vehicles	NORTH			WEST			SOUTH			EAST		
	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr
Time Per	L	I	R	L	I	R	L	I	R	L	I	R
1500 - 1515	0	0	1	0	190	17	11	0	3	3	223	0
1515 - 1530	0	0	0	0	253	46	29	0	6	6	244	0
1530 - 1545	0	0	0	0	266	38	91	0	10	7	245	0
1545 - 1600	1	0	0	1	240	55	61	0	11	10	263	0
1600 - 1615	0	0	0	0	331	39	66	0	10	7	276	0
1615 - 1630	0	0	0	0	313	45	71	0	3	3	246	0
1630 - 1645	0	0	0	0	320	47	70	0	7	5	228	0
1645 - 1700	0	0	0	0	290	45	52	0	2	7	256	0
1700 - 1715	0	0	0	0	254	49	115	0	10	2	223	0
1715 - 1730	0	0	0	0	281	55	106	0	14	7	199	0
1730 - 1745	0	0	0	0	282	53	90	0	6	9	229	0
1745 - 1800	0	0	0	0	309	71	174	0	15	8	233	0
1800 - 1815	0	0	0	0	234	37	150	0	13	4	236	0
1815 - 1830	0	0	0	0	260	45	162	0	9	8	251	0
1830 - 1845	0	0	0	0	259	37	101	0	7	4	221	0
1845 - 1900	0	0	0	0	241	22	69	0	5	4	211	0
Period End	1	0	1	1	4323	701	1418	0	131	94	3784	0
TOT	1	0	1	1	4323	701	1418	0	131	94	3784	0

Peak Time	NORTH			WEST			SOUTH			EAST		
	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr	Harris Creek	Heathcote Rd	Macarthur Dr
Peak Time	L	I	R	L	I	R	L	I	R	L	I	R
1500 - 1600	1	0	1	1	949	156	192	0	30	26	975	0
1515 - 1615	1	0	0	1	1090	178	247	0	37	30	1028	0
1530 - 1630	1	0	0	1	1150	177	289	0	34	27	1030	0
1545 - 1645	1	0	0	1	1204	186	268	0	31	25	1013	0
1600 - 1700	0	0	0	0	1254	176	259	0	22	22	1006	0
1615 - 1715	0	0	0	0	1177	186	308	0	22	17	953	0
1630 - 1730	0	0	0	0	1145	196	343	0	33	21	906	0
1645 - 1745	0	0	0	0	1107	202	363	0	32	25	907	0
1700 - 1800	0	0	0	0	1126	228	485	0	45	26	884	0
1715 - 1815	0	0	0	0	1106	216	520	0	48	28	897	0
1730 - 1830	0	0	0	0	1085	206	576	0	43	29	949	0
1745 - 1845	0	0	0	0	1062	190	587	0	44	24	941	0
1800 - 1900	0	0	0	0	994	141	482	0	34	20	919	0
PEAK HOUR	0	0	0	0	1085	206	576	0	43	29	949	0
TOT	0	0	0	0	1085	206	576	0	43	29	949	0





R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Mob.0418-239019

Client : Terrafic Pty. Ltd.
Job No/Name : 6317 HOLSWORTHY Macarthur Dr
Day/Date : Friday 2nd December 2016

Time Per	NORTH <i>Macarthur Dr</i>			NORTHWEST <i>Mornington Pde</i>			WEST <i>The Boulevard</i>			SOUTH <i>Macarthur Dr</i>			TOT
	HR	R	L	HR	R	L	HL	L	R	HL	L	I	
0600 - 0615	0	70		0		3	0	14					87
0615 - 0630	0	84		0		9	0	18					111
0630 - 0645	0	85		0		2	0	16					103
0645 - 0700	2	130		0		5	0	23					160
0700 - 0715	2	182		1		9	0	32					226
0715 - 0730	1	225		0		15	0	75					316
0730 - 0745	1	201		0		11	0	59					272
0745 - 0800	5	176		0		16	0	55					252
0800 - 0815	2	151		2		14	1	45					215
0815 - 0830	7	129		1		15	0	42					194
0830 - 0845	2	64		0		13	0	36					115
0845 - 0900	4	39		0		15	0	20					78
0900 - 0915	7	37		0		7	0	12					63
0915 - 0930	4	21		1		1	0	11					38
0930 - 0945	6	32		1		10	0	8					57
0945 - 1000	5	25		1		2	0	7					40
Period End	48	1651	0	7	0	147	1	473	0	0	0	0	2327

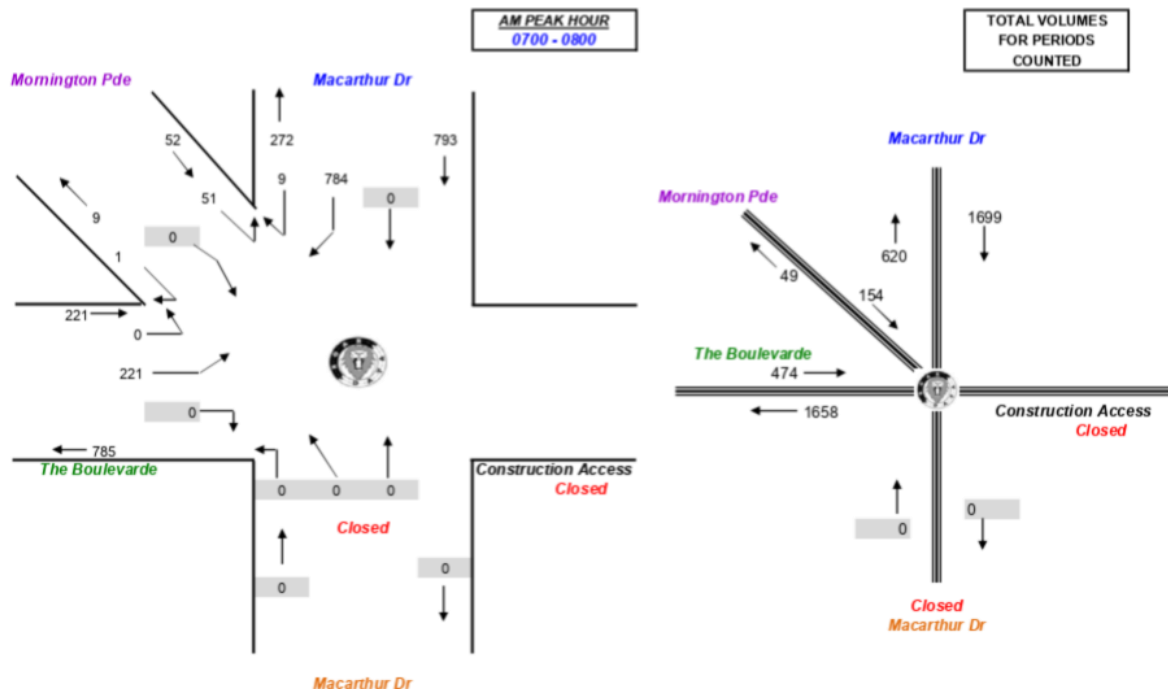
Peak Time	NORTH <i>Macarthur Dr</i>			NORTHWEST <i>Mornington Pde</i>			WEST <i>The Boulevard</i>			SOUTH <i>Macarthur Dr</i>			TOT
	HR	R	L	HR	R	L	HL	L	R	HL	L	I	
0600 - 0700	2	369	0	0	0	19	0	71	0	0	0	0	461
0615 - 0715	4	481	0	1	0	25	0	89	0	0	0	0	600
0630 - 0730	5	622	0	1	0	31	0	146	0	0	0	0	805
0645 - 0745	6	738	0	1	0	40	0	189	0	0	0	0	974
0700 - 0800	9	784	0	1	0	51	0	221	0	0	0	0	1066
0715 - 0815	9	753	0	2	0	56	1	234	0	0	0	0	1055
0730 - 0830	15	657	0	3	0	56	1	201	0	0	0	0	933
0745 - 0845	10	520	0	3	0	58	1	178	0	0	0	0	776
0800 - 0900	15	383	0	3	0	57	1	143	0	0	0	0	602
0815 - 0915	20	269	0	1	0	50	0	110	0	0	0	0	450
0830 - 0930	17	161	0	1	0	36	0	79	0	0	0	0	294
0845 - 0945	21	129	0	2	0	33	0	51	0	0	0	0	236
0900 - 1000	22	115	0	3	0	20	0	38	0	0	0	0	198

PEAK HOUR	9	784	0	1	0	51	0	221	0	0	0	0	1066
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R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Mob.0418-239019

Client : Terrafic Pty. Ltd.
Job No/Name : 6317 HOLSWORTHY Macarthur Dr
Day/Date : Friday 2nd December 2016





R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88190847, Mob.0418-239019

Client : Terrafic Pty. Ltd.
Job No/Name : 6317 HOLSWORTHY Macarthur Dr
Day/Date : Friday 2nd December 2016

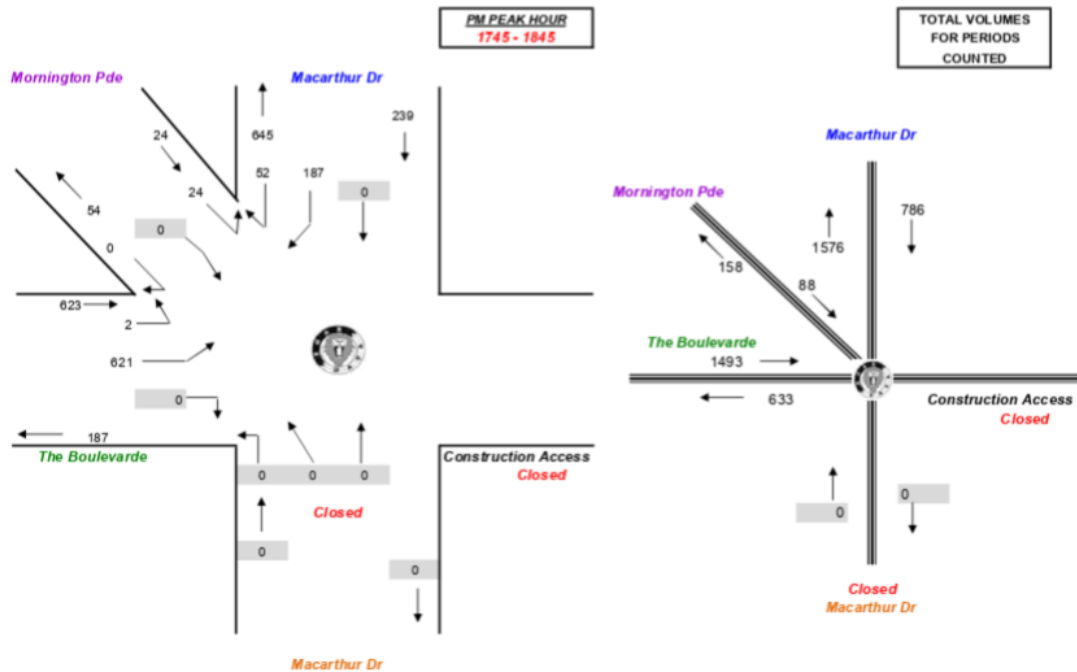
	NORTH <i>Macarthur Dr</i>			NORTHWEST <i>Mornington Pde</i>			WEST <i>The Boulevard</i>			SOUTH <i>Macarthur Dr</i>			
Time Per	HR	R	T	HR	R	L	HL	L	R	HL	L	T	TOT
1500 - 1515	8	11		0		3	1	10					33
1515 - 1530	8	36		0		4	0	23					71
1530 - 1545	9	30		0		3	0	107					149
1545 - 1600	9	57		0		7	0	64					137
1600 - 1615	10	33		1		6	0	68					118
1615 - 1630	11	39		0		3	0	80					133
1630 - 1645	6	33		0		4	0	63					106
1645 - 1700	13	35		0		4	0	57					109
1700 - 1715	6	39		0		11	0	118					174
1715 - 1730	11	44		0		8	0	115					178
1730 - 1745	5	48		0		7	1	86					147
1745 - 1800	20	52		0		4	1	182					259
1800 - 1815	13	39		0		9	0	179					240
1815 - 1830	10	50		0		8	1	155					222
1830 - 1845	9	48		0		5	0	105					165
1845 - 1900	6	40		0		3	0	77					126
Period End	154	632	0	1	0	67	4	1489	0	0	0	0	2367

	NORTH <i>Macarthur Dr</i>			NORTHWEST <i>Mornington Pde</i>			WEST <i>The Boulevard</i>			SOUTH <i>Macarthur Dr</i>			
Peak Time	HR	R	T	HR	R	L	HL	L	R	HL	L	T	TOT
1500 - 1600	34	134	0	0	0	17	1	204	0	0	0	0	390
1615 - 1615	36	156	0	1	0	20	0	262	0	0	0	0	475
1530 - 1630	39	159	0	1	0	19	0	319	0	0	0	0	537
1545 - 1645	36	162	0	1	0	20	0	275	0	0	0	0	494
1600 - 1700	40	140	0	1	0	17	0	268	0	0	0	0	466
1615 - 1715	36	146	0	0	0	22	0	318	0	0	0	0	522
1630 - 1730	36	151	0	0	0	27	0	353	0	0	0	0	567
1645 - 1745	36	166	0	0	0	30	1	376	0	0	0	0	608
1700 - 1800	42	183	0	0	0	30	2	501	0	0	0	0	758
1715 - 1815	49	183	0	0	0	28	2	562	0	0	0	0	824
1730 - 1830	48	189	0	0	0	26	3	602	0	0	0	0	868
1745 - 1845	52	187	0	0	0	24	2	621	0	0	0	0	886
1800 - 1900	38	175	0	0	0	23	1	516	0	0	0	0	753
PEAK HOUR	52	187	0	0	0	24	2	621	0	0	0	0	886



R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88190847, Mob.0418-239019

Client : Terrafic Pty. Ltd.
Job No/Name : 6317 HOLSWORTHY Macarthur Dr
Day/Date : Friday 2nd December 2016

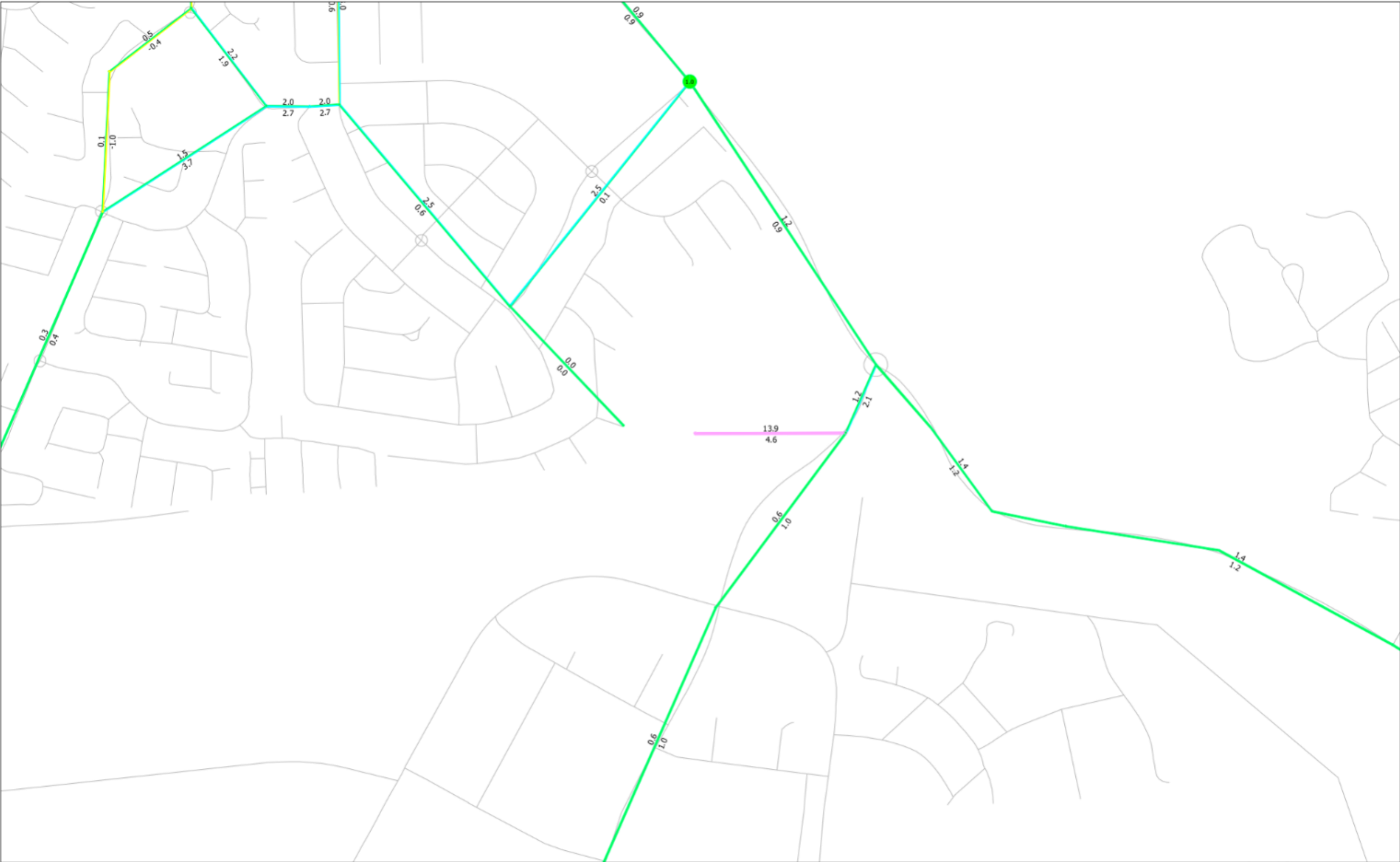




Appendix B

STFM Plots

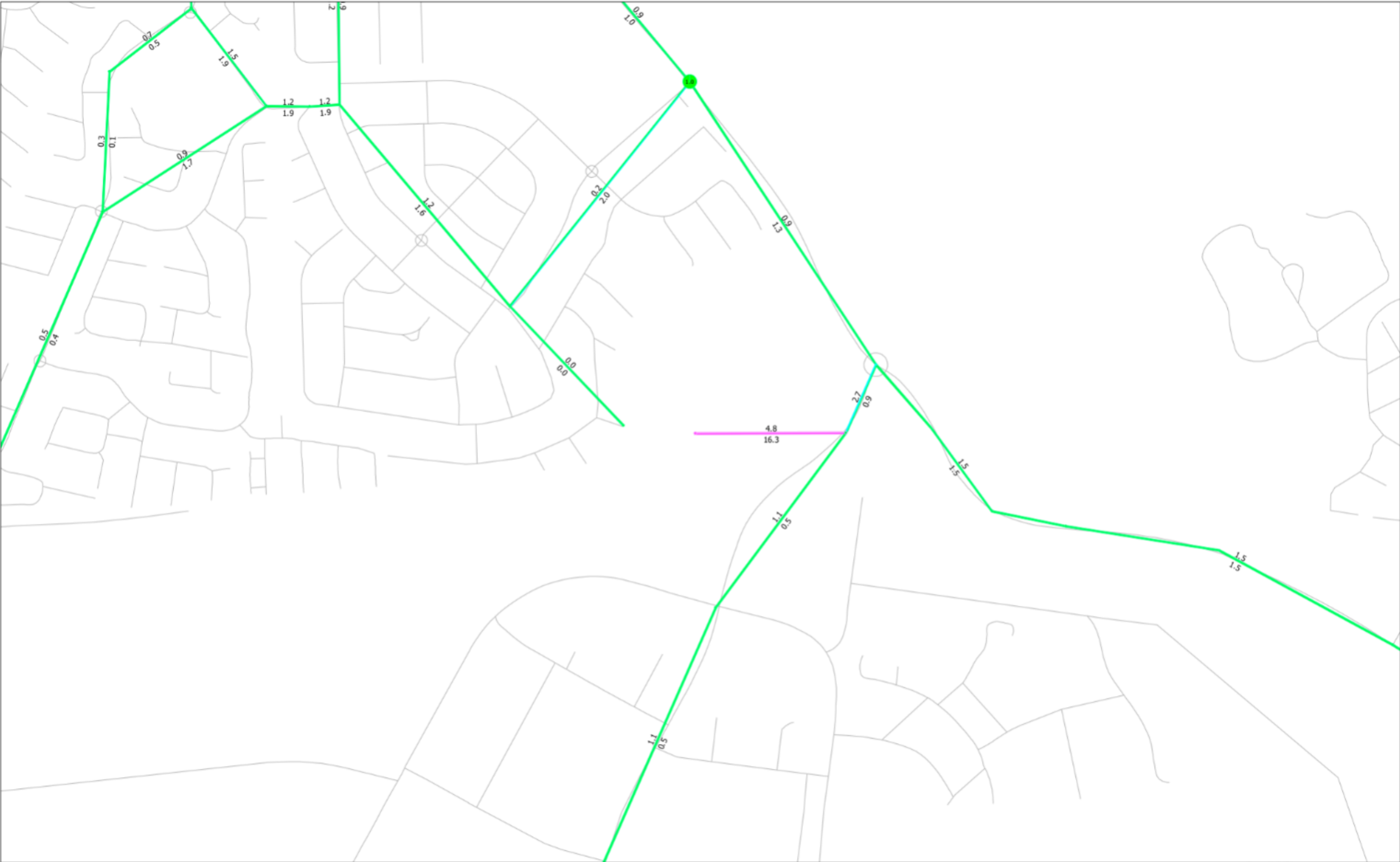
ROAD TRAFFIC GROWTH (%YR, 2HRSPK) LINKS & INTERSECTIONS



2011TZ SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL
Scenario 20260: 2026 SYDNEY TRAFFIC FORECASTING MODEL(LU2016V1.3) 4-6PM(mf54)
2018-06-21 11:24

Growth(YR):
<0
<2.00
2.01-4.00
4.01-6.00
>6.00
New Link=999

ROAD TRAFFIC GROWTH (%YR, 2HRSPK) LINKS & INTERSECTIONS



2011TZ SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL
Scenario 2026: 2026 SYDNEY TRAFFIC FORECASTING MODEL(LU2016V1.3)7-9AM(mf34)
2018-06-21 11:24

Growth(YR):

<0	Yellow
<2.00	Green
2.01-4.00	Cyan
4.01-6.00	Magenta
>6.00	Red
New Link=999	Red



Appendix C

SIDRA Outputs

MOVEMENT SUMMARY

Site: 101 [MacArthur Drive, The Boulevard and Morningside Pde - Existing AM Peak]

Existing AM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: MacArthur Drive												
26a	R1	784	2.0	0.401	6.4	LOS A	2.3	16.6	0.02	0.57	0.02	47.3
26	R2	9	2.0	0.401	7.4	LOS A	2.3	16.6	0.02	0.57	0.02	47.8
Approach		793	2.0	0.401	6.5	LOS A	2.3	16.6	0.02	0.57	0.02	47.3
NorthWest: Morningside Pde												
27	L2	51	2.0	0.049	3.4	LOS A	0.2	1.4	0.31	0.44	0.31	47.6
29b	R3	1	2.0	0.049	9.3	LOS A	0.2	1.4	0.31	0.44	0.31	50.0
Approach		52	2.0	0.049	3.5	LOS A	0.2	1.4	0.31	0.44	0.31	47.7
West: The Boulevard												
10b	L3	1	2.0	0.147	2.8	LOS A	0.6	4.2	0.05	0.27	0.05	48.2
10a	L1	221	2.0	0.147	2.2	LOS A	0.6	4.2	0.05	0.27	0.05	49.6
Approach		222	2.0	0.147	2.2	LOS A	0.6	4.2	0.05	0.27	0.05	49.6
All Vehicles		1067	2.0	0.401	5.4	LOS A	2.3	16.6	0.04	0.50	0.04	47.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MacArthur Drive, The Boulevard and Morningside Pde - Existing PM Peak]

Existing PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: MacArthur Drive												
26a	R1	189	2.0	0.121	6.4	LOS A	0.6	4.2	0.02	0.57	0.02	47.2
26	R2	48	2.0	0.121	7.4	LOS A	0.6	4.2	0.02	0.58	0.02	47.7
Approach		237	2.0	0.121	6.6	LOS A	0.6	4.2	0.02	0.58	0.02	47.3
NorthWest: Morningside Pde												
27	L2	26	2.0	0.033	5.4	LOS A	0.2	1.1	0.55	0.57	0.55	46.7
29b	R3	1	2.0	0.033	11.2	LOS A	0.2	1.1	0.55	0.57	0.55	49.0
Approach		27	2.0	0.033	5.6	LOS A	0.2	1.1	0.55	0.57	0.55	46.8
West: The Boulevard												
10b	L3	3	2.0	0.430	3.0	LOS A	2.4	17.4	0.18	0.30	0.18	47.7
10a	L1	602	2.0	0.430	2.4	LOS A	2.4	17.4	0.18	0.30	0.18	49.1
Approach		605	2.0	0.430	2.4	LOS A	2.4	17.4	0.18	0.30	0.18	49.1
All Vehicles		869	2.0	0.430	3.6	LOS A	2.4	17.4	0.15	0.38	0.15	48.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.


Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY


 **Site: 102 [MacArthur Drive, The Boulevard and Morningside Pde - Existing with Dev AM Peak]**

Existing with Dev AM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	28	2.0	0.483	9.5	LOS A	3.5	24.8	0.81	0.99	0.97	43.1
22	T1	28	2.0	0.483	9.8	LOS A	3.5	24.8	0.81	0.99	0.97	43.5
23	R2	273	2.0	0.483	14.8	LOS B	3.5	24.8	0.81	0.99	0.97	43.8
Approach		329	2.0	0.483	13.9	LOS A	3.5	24.8	0.81	0.99	0.97	43.7
NorthEast: MacArthur Drive												
24	L2	233	2.0	0.236	3.2	LOS A	1.1	7.6	0.20	0.40	0.20	47.9
26a	R1	784	2.0	0.537	6.7	LOS A	3.6	25.8	0.24	0.54	0.24	46.7
26	R2	9	2.0	0.537	7.7	LOS A	3.6	25.8	0.24	0.54	0.24	47.2
Approach		1026	2.0	0.537	5.9	LOS A	3.6	25.8	0.23	0.51	0.23	47.0
NorthWest: Morningside Pde												
27	L2	45	2.0	0.087	4.8	LOS A	0.4	3.0	0.54	0.57	0.54	46.9
28	T1	28	2.0	0.087	4.7	LOS A	0.4	3.0	0.54	0.57	0.54	48.2
29b	R3	1	2.0	0.087	10.7	LOS A	0.4	3.0	0.54	0.57	0.54	49.2
Approach		74	2.0	0.087	4.9	LOS A	0.4	3.0	0.54	0.57	0.54	47.4
West: The Boulevard												
10b	L3	1	2.0	0.233	4.3	LOS A	1.3	9.1	0.51	0.51	0.51	46.4
10a	L1	193	2.0	0.233	3.7	LOS A	1.3	9.1	0.51	0.51	0.51	47.7
12a	R1	28	2.0	0.233	8.0	LOS A	1.3	9.1	0.51	0.51	0.51	48.0
Approach		222	2.0	0.233	4.2	LOS A	1.3	9.1	0.51	0.51	0.51	47.7
All Vehicles		1651	2.0	0.537	7.2	LOS A	3.6	25.8	0.40	0.61	0.43	46.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 102 [MacArthur Drive, The Boulevard and Morningside Pde - Existing with Dev PM Peak]**

Existing with Dev PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	55	2.0	0.493	3.4	LOS A	3.2	22.5	0.46	0.62	0.46	46.0
22	T1	55	2.0	0.493	3.6	LOS A	3.2	22.5	0.46	0.62	0.46	46.4
23	R2	451	2.0	0.493	8.6	LOS A	3.2	22.5	0.46	0.62	0.46	46.7
Approach		561	2.0	0.493	7.6	LOS A	3.2	22.5	0.46	0.62	0.46	46.6
NorthEast: MacArthur Drive												
24	L2	482	2.0	0.359	3.3	LOS A	2.0	14.4	0.30	0.43	0.30	47.6
26a	R1	145	2.0	0.194	7.0	LOS A	0.9	6.3	0.28	0.57	0.28	46.4
26	R2	48	2.0	0.194	8.0	LOS A	0.9	6.3	0.28	0.57	0.28	47.0
Approach		675	2.0	0.359	4.4	LOS A	2.0	14.4	0.29	0.47	0.29	47.3
NorthWest: Morningside Pde												
27	L2	15	2.0	0.156	10.9	LOS A	1.0	6.9	0.86	0.85	0.86	43.9
28	T1	55	2.0	0.156	10.8	LOS A	1.0	6.9	0.86	0.85	0.86	45.0
29b	R3	1	2.0	0.156	16.8	LOS B	1.0	6.9	0.86	0.85	0.86	45.9
Approach		71	2.0	0.156	10.9	LOS A	1.0	6.9	0.86	0.85	0.86	44.8
West: The Boulevard												
10b	L3	3	2.0	0.754	12.1	LOS A	8.9	63.1	0.90	1.10	1.31	42.9
10a	L1	547	2.0	0.754	11.4	LOS A	8.9	63.1	0.90	1.10	1.31	44.0
12a	R1	55	2.0	0.754	15.7	LOS B	8.9	63.1	0.90	1.10	1.31	44.3
Approach		605	2.0	0.754	11.8	LOS A	8.9	63.1	0.90	1.10	1.31	44.0
All Vehicles		1912	2.0	0.754	8.0	LOS A	8.9	63.1	0.56	0.73	0.69	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay per movement.
 Intersection and Approach LOS values are based on average delay for all vehicle movements.
 Roundabout Capacity Model: SIDRA Standard.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MacArthur Drive, The Boulevard and Morningside Pde - Future Base AM Peak]

Future Base AM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: MacArthur Drive												
26a	R1	855	2.0	0.437	6.4	LOS A	2.7	19.1	0.02	0.57	0.02	47.3
26	R2	9	2.0	0.437	7.4	LOS A	2.7	19.1	0.02	0.57	0.02	47.8
Approach		864	2.0	0.437	6.5	LOS A	2.7	19.1	0.02	0.57	0.02	47.3
NorthWest: Morningside Pde												
27	L2	51	2.0	0.050	3.5	LOS A	0.2	1.4	0.33	0.44	0.33	47.6
29b	R3	1	2.0	0.050	9.4	LOS A	0.2	1.4	0.33	0.44	0.33	49.9
Approach		52	2.0	0.050	3.6	LOS A	0.2	1.4	0.33	0.44	0.33	47.6
West: The Boulevard												
10b	L3	1	2.0	0.159	2.8	LOS A	0.7	4.7	0.05	0.27	0.05	48.2
10a	L1	241	2.0	0.159	2.2	LOS A	0.7	4.7	0.05	0.27	0.05	49.6
Approach		242	2.0	0.159	2.2	LOS A	0.7	4.7	0.05	0.27	0.05	49.6
All Vehicles		1158	2.0	0.437	5.4	LOS A	2.7	19.1	0.04	0.50	0.04	47.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MacArthur Drive, The Boulevard and Morningside Pde - Future Base PM Peak]

Future Base PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: MacArthur Drive												
26a	R1	227	2.0	0.141	6.4	LOS A	0.7	5.1	0.02	0.57	0.02	47.2
26	R2	48	2.0	0.141	7.4	LOS A	0.7	5.1	0.02	0.58	0.02	47.7
Approach		275	2.0	0.141	6.6	LOS A	0.7	5.1	0.02	0.57	0.02	47.3
NorthWest: Morningside Pde												
27	L2	26	2.0	0.037	6.2	LOS A	0.2	1.3	0.61	0.61	0.61	46.2
29b	R3	1	2.0	0.037	12.1	LOS A	0.2	1.3	0.61	0.61	0.61	48.4
Approach		27	2.0	0.037	6.5	LOS A	0.2	1.3	0.61	0.61	0.61	46.3
West: The Boulevard												
10b	L3	3	2.0	0.509	3.1	LOS A	3.3	23.2	0.21	0.30	0.21	47.6
10a	L1	722	2.0	0.509	2.4	LOS A	3.3	23.2	0.21	0.30	0.21	49.0
Approach		725	2.0	0.509	2.4	LOS A	3.3	23.2	0.21	0.30	0.21	49.0
All Vehicles		1027	2.0	0.509	3.6	LOS A	3.3	23.2	0.17	0.38	0.17	48.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY


Site: 102 [MacArthur Drive, The Boulevard and Morningside Pde - Future Base with Dev AM Peak]

Future Base with Dev AM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	28	2.0	0.522	11.5	LOS A	4.1	28.9	0.85	1.04	1.09	42.2
22	T1	28	2.0	0.522	11.7	LOS A	4.1	28.9	0.85	1.04	1.09	42.5
23	R2	273	2.0	0.522	16.7	LOS B	4.1	28.9	0.85	1.04	1.09	42.8
Approach		329	2.0	0.522	15.9	LOS B	4.1	28.9	0.85	1.04	1.09	42.7
NorthEast: MacArthur Drive												
24	L2	233	2.0	0.243	3.2	LOS A	1.1	7.9	0.21	0.40	0.21	47.8
26a	R1	855	2.0	0.584	6.7	LOS A	4.2	30.1	0.25	0.54	0.25	46.6
26	R2	9	2.0	0.584	7.7	LOS A	4.2	30.1	0.25	0.54	0.25	47.2
Approach		1097	2.0	0.584	6.0	LOS A	4.2	30.1	0.24	0.51	0.24	46.9
NorthWest: Morningside Pde												
27	L2	45	2.0	0.089	4.9	LOS A	0.4	3.1	0.55	0.58	0.55	46.8
28	T1	28	2.0	0.089	4.8	LOS A	0.4	3.1	0.55	0.58	0.55	48.1
29b	R3	1	2.0	0.089	10.8	LOS A	0.4	3.1	0.55	0.58	0.55	49.1
Approach		74	2.0	0.089	5.0	LOS A	0.4	3.1	0.55	0.58	0.55	47.3
West: The Boulevard												
10b	L3	3	2.0	0.258	4.4	LOS A	1.4	10.3	0.52	0.51	0.52	46.4
10a	L1	213	2.0	0.258	3.7	LOS A	1.4	10.3	0.52	0.51	0.52	47.7
12a	R1	28	2.0	0.258	8.0	LOS A	1.4	10.3	0.52	0.51	0.52	47.9
Approach		244	2.0	0.258	4.2	LOS A	1.4	10.3	0.52	0.51	0.52	47.7
All Vehicles		1744	2.0	0.584	7.6	LOS A	4.2	30.1	0.41	0.61	0.45	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 102 [MacArthur Drive, The Boulevard and Morningside Pde - Future Base with Dev PM Peak]**

Future Base with Dev PM Peak
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	55	2.0	0.515	3.7	LOS A	3.3	23.8	0.52	0.65	0.52	45.8
22	T1	55	2.0	0.515	4.0	LOS A	3.3	23.8	0.52	0.65	0.52	46.2
23	R2	451	2.0	0.515	9.0	LOS A	3.3	23.8	0.52	0.65	0.52	46.6
Approach		561	2.0	0.515	8.0	LOS A	3.3	23.8	0.52	0.65	0.52	46.5
NorthEast: MacArthur Drive												
24	L2	482	2.0	0.360	3.3	LOS A	2.1	14.6	0.30	0.43	0.30	47.6
26a	R1	185	2.0	0.221	7.0	LOS A	1.0	7.5	0.29	0.57	0.29	46.5
26	R2	48	2.0	0.221	8.0	LOS A	1.0	7.5	0.29	0.57	0.29	47.0
Approach		715	2.0	0.360	4.5	LOS A	2.1	14.6	0.30	0.47	0.30	47.3
NorthWest: Morningside Pde												
27	L2	26	2.0	0.232	14.1	LOS A	1.5	11.0	0.94	0.95	0.94	42.3
28	T1	55	2.0	0.232	14.0	LOS A	1.5	11.0	0.94	0.95	0.94	43.3
29b	R3	1	2.0	0.232	20.0	LOS B	1.5	11.0	0.94	0.95	0.94	44.1
Approach		82	2.0	0.232	14.1	LOS A	1.5	11.0	0.94	0.95	0.94	43.0
West: The Boulevard												
10b	L3	3	2.0	0.914	24.0	LOS B	19.9	141.8	1.00	1.57	2.21	37.8
10a	L1	673	2.0	0.914	23.3	LOS B	19.9	141.8	1.00	1.57	2.21	38.6
12a	R1	55	2.0	0.914	27.6	LOS B	19.9	141.8	1.00	1.57	2.21	38.8
Approach		731	2.0	0.914	23.7	LOS B	19.9	141.8	1.00	1.57	2.21	38.6
All Vehicles		2089	2.0	0.914	12.5	LOS A	19.9	141.8	0.63	0.92	1.05	43.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Vehicle movement LOS values are based on average delay per movement.
 Intersection and Approach LOS values are based on average delay for all vehicle movements.
 Roundabout Capacity Model: SIDRA Standard.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 103 [MacArthur Drive, The Boulevard and Morningside Pde - Existing with Dev AM Peak - Signal]

Existing with Dev AM Peak

Signal Option

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 70 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	28	2.0	0.753	40.4	LOS C	6.1	43.5	1.00	0.92	1.24	31.9
22	T1	28	2.0	0.753	36.6	LOS C	6.1	43.5	1.00	0.92	1.24	32.2
23	R2	273	2.0	0.753	41.2	LOS C	6.1	43.5	1.00	0.91	1.24	31.9
Approach		329	2.0	0.753	40.8	LOS C	6.1	43.5	1.00	0.91	1.24	31.9
NorthEast: MacArthur Drive												
24	L2	233	2.0	0.226	13.5	LOS A	4.1	29.4	0.55	0.70	0.55	41.9
26a	R1	784	2.0	0.748	17.1	LOS B	21.3	151.3	0.83	0.83	0.84	40.6
26	R2	9	2.0	0.748	18.3	LOS B	21.3	151.3	0.83	0.83	0.84	40.2
Approach		1026	2.0	0.748	16.3	LOS B	21.3	151.3	0.77	0.80	0.78	40.9
NorthWest: Morningside Pde												
27	L2	45	2.0	0.447	39.9	LOS C	2.6	18.5	0.99	0.75	0.99	32.7
28	T1	28	2.0	0.447	35.5	LOS C	2.6	18.5	0.99	0.75	0.99	32.9
29b	R3	1	2.0	0.447	40.7	LOS C	2.6	18.5	0.99	0.75	0.99	32.7
Approach		74	2.0	0.447	38.2	LOS C	2.6	18.5	0.99	0.75	0.99	32.8
West: The Boulevard												
10b	L3	3	2.0	0.106	13.7	LOS A	1.8	13.1	0.51	0.63	0.51	43.0
10a	L1	193	2.0	0.106	11.7	LOS A	1.8	13.1	0.51	0.63	0.51	43.0
12a	R1	28	2.0	0.106	11.9	LOS A	1.8	13.1	0.51	0.63	0.51	42.7
Approach		224	2.0	0.106	11.8	LOS A	1.8	13.1	0.51	0.63	0.51	42.9
All Vehicles		1653	2.0	0.753	21.5	LOS B	21.3	151.3	0.79	0.80	0.84	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P5	SouthEast Full Crossing	50	12.0	LOS B	0.1	0.1	0.59	0.59	
P6	NorthEast Full Crossing	50	29.3	LOS C	0.1	0.1	0.92	0.92	
P7	NorthWest Full Crossing	50	10.9	LOS B	0.1	0.1	0.56	0.56	
P4	West Full Crossing	50	26.6	LOS C	0.1	0.1	0.87	0.87	
All Pedestrians		200	19.7	LOS B			0.73	0.73	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [MacArthur Drive, The Boulevard and Morningside Pde - Existing with Dev PM Peak - Signal]

Existing with Dev PM Peak

Signal Option

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	55	2.0	0.677	28.9	LOS C	8.1	58.0	0.97	0.86	1.05	35.6
22	T1	55	2.0	0.677	25.1	LOS B	8.1	58.0	0.97	0.86	1.05	35.9
23	R2	451	2.0	0.677	29.7	LOS C	8.1	58.0	0.97	0.86	1.05	35.5
Approach		561	2.0	0.677	29.1	LOS C	8.1	58.0	0.97	0.86	1.05	35.5
NorthEast: MacArthur Drive												
24	L2	482	2.0	0.663	21.5	LOS B	11.9	85.1	0.88	0.83	0.89	38.4
26a	R1	145	2.0	0.260	17.1	LOS B	3.9	27.9	0.72	0.72	0.72	40.4
26	R2	48	2.0	0.260	18.4	LOS B	3.9	27.9	0.72	0.72	0.72	40.1
Approach		675	2.0	0.663	20.3	LOS B	11.9	85.1	0.84	0.80	0.84	38.9
NorthWest: Morningside Pde												
27	L2	15	2.0	0.361	33.8	LOS C	2.1	14.9	0.97	0.74	0.97	35.2
28	T1	55	2.0	0.361	29.4	LOS C	2.1	14.9	0.97	0.74	0.97	35.5
29b	R3	1	2.0	0.361	34.6	LOS C	2.1	14.9	0.97	0.74	0.97	35.2
Approach		71	2.0	0.361	30.4	LOS C	2.1	14.9	0.97	0.74	0.97	35.4
West: The Boulevard												
10b	L3	3	2.0	0.515	20.2	LOS B	6.6	46.8	0.78	0.75	0.78	39.9
10a	L1	547	2.0	0.515	18.2	LOS B	6.6	46.8	0.78	0.75	0.78	39.9
12a	R1	55	2.0	0.515	18.4	LOS B	6.6	46.8	0.77	0.75	0.77	39.6
Approach		605	2.0	0.515	18.2	LOS B	6.6	46.8	0.78	0.75	0.78	39.9
All Vehicles		1912	2.0	0.677	22.6	LOS B	11.9	85.1	0.86	0.80	0.88	38.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	
P5	SouthEast Full Crossing	50	17.7	LOS B	0.1	0.1	0.77	0.77	
P6	NorthEast Full Crossing	50	20.1	LOS C	0.1	0.1	0.82	0.82	
P7	NorthWest Full Crossing	50	16.2	LOS B	0.1	0.1	0.73	0.73	
P4	West Full Crossing	50	17.7	LOS B	0.1	0.1	0.77	0.77	
All Pedestrians		200	17.9	LOS B			0.77	0.77	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [MacArthur Drive, The Boulevard and Morningside Pde - Future Base with Dev AM Peak - Signal]

Future Base with Dev AM Peak

Signal Option

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	28	2.0	0.765	45.5	LOS D	7.0	49.5	1.00	0.92	1.23	30.6
22	T1	28	2.0	0.765	41.8	LOS C	7.0	49.5	1.00	0.92	1.23	30.8
23	R2	273	2.0	0.765	46.4	LOS D	7.0	49.5	1.00	0.92	1.23	30.5
Approach		329	2.0	0.765	45.9	LOS D	7.0	49.5	1.00	0.92	1.23	30.5
NorthEast: MacArthur Drive												
24	L2	233	2.0	0.209	12.9	LOS A	4.2	30.1	0.50	0.69	0.50	42.2
26a	R1	855	2.0	0.753	16.4	LOS B	24.9	177.1	0.80	0.82	0.80	40.9
26	R2	9	2.0	0.753	17.7	LOS B	24.9	177.1	0.80	0.82	0.80	40.5
Approach		1097	2.0	0.753	15.7	LOS B	24.9	177.1	0.74	0.79	0.74	41.1
NorthWest: Morningside Pde												
27	L2	45	2.0	0.511	45.9	LOS D	3.0	21.3	1.00	0.76	1.00	31.0
28	T1	28	2.0	0.511	41.5	LOS C	3.0	21.3	1.00	0.76	1.00	31.2
29b	R3	1	2.0	0.511	46.7	LOS D	3.0	21.3	1.00	0.76	1.00	31.0
Approach		74	2.0	0.511	44.3	LOS D	3.0	21.3	1.00	0.76	1.00	31.1
West: The Boulevard												
10b	L3	3	2.0	0.107	13.1	LOS A	2.1	14.7	0.46	0.62	0.46	43.3
10a	L1	213	2.0	0.107	11.1	LOS A	2.1	14.7	0.46	0.62	0.46	43.3
12a	R1	28	2.0	0.107	11.3	LOS A	2.1	14.7	0.46	0.62	0.46	42.9
Approach		244	2.0	0.107	11.2	LOS A	2.1	14.7	0.46	0.62	0.46	43.2
All Vehicles		1744	2.0	0.765	22.0	LOS B	24.9	177.1	0.76	0.79	0.80	38.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	
P5	SouthEast Full Crossing	50	11.0	LOS B	0.1	0.1	0.53	0.53	
P6	NorthEast Full Crossing	50	33.4	LOS D	0.1	0.1	0.91	0.91	
P7	NorthWest Full Crossing	50	10.0	LOS B	0.1	0.1	0.50	0.50	
P4	West Full Crossing	50	30.7	LOS D	0.1	0.1	0.88	0.88	
All Pedestrians		200	21.3	LOS C			0.70	0.70	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [MacArthur Drive, The Boulevard and Morningside Pde - Future Base with Dev PM Peak - Signal]

Future Base with Dev PM Peak

Signal Option

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: Site access												
21a	L1	55	2.0	0.677	28.9	LOS C	8.1	58.0	0.97	0.86	1.05	35.6
22	T1	55	2.0	0.677	25.1	LOS B	8.1	58.0	0.97	0.86	1.05	35.9
23	R2	451	2.0	0.677	29.7	LOS C	8.1	58.0	0.97	0.86	1.05	35.5
Approach		561	2.0	0.677	29.1	LOS C	8.1	58.0	0.97	0.86	1.05	35.5
NorthEast: MacArthur Drive												
24	L2	482	2.0	0.663	21.5	LOS B	11.9	85.1	0.88	0.83	0.89	38.4
26a	R1	185	2.0	0.313	17.5	LOS B	4.8	34.5	0.74	0.73	0.74	40.3
26	R2	48	2.0	0.313	18.7	LOS B	4.8	34.5	0.74	0.73	0.74	39.9
Approach		715	2.0	0.663	20.3	LOS B	11.9	85.1	0.84	0.80	0.84	39.0
NorthWest: Morningside Pde												
27	L2	26	2.0	0.419	34.0	LOS C	2.4	17.3	0.98	0.75	0.98	34.9
28	T1	55	2.0	0.419	29.6	LOS C	2.4	17.3	0.98	0.75	0.98	35.2
29b	R3	1	2.0	0.419	34.8	LOS C	2.4	17.3	0.98	0.75	0.98	34.9
Approach		82	2.0	0.419	31.1	LOS C	2.4	17.3	0.98	0.75	0.98	35.1
West: The Boulevard												
10b	L3	3	2.0	0.711	22.5	LOS B	8.8	62.8	0.81	0.82	0.90	38.9
10a	L1	673	2.0	0.711	20.5	LOS B	8.8	62.9	0.81	0.82	0.90	38.9
12a	R1	55	2.0	0.711	20.8	LOS B	8.8	62.9	0.81	0.82	0.90	38.7
Approach		731	2.0	0.711	20.6	LOS B	8.8	62.9	0.81	0.82	0.90	38.9
All Vehicles		2089	2.0	0.711	23.2	LOS B	11.9	85.1	0.87	0.82	0.92	37.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P5	SouthEast Full Crossing	50	17.7	LOS B	0.1	0.1	0.77	0.77	
P6	NorthEast Full Crossing	50	20.1	LOS C	0.1	0.1	0.82	0.82	
P7	NorthWest Full Crossing	50	16.2	LOS B	0.1	0.1	0.73	0.73	
P4	West Full Crossing	50	17.7	LOS B	0.1	0.1	0.77	0.77	
All Pedestrians		200	17.9	LOS B			0.77	0.77	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Heathcote Rd-Macarthur Dr - Ex AM 2028 Base (No Dev)]

18181 2 Macarthur Dr, Holsworthy

Site Category: 2028 With Development Case

Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macarthur Drive-S												
1	L2	293	2.0	0.190	32.5	LOS C	6.2	43.9	0.67	0.73	0.67	38.8
2	T1	1	2.0	0.004	55.4	LOS D	0.1	0.4	0.88	0.53	0.88	31.5
3	R2	65	2.0	0.428	72.7	LOS F	4.4	31.2	0.99	0.77	0.99	27.2
Approach		359	2.0	0.428	39.9	LOS C	6.2	43.9	0.72	0.74	0.72	36.0
East: Heathcote Road-E												
4	L2	113	2.0	0.125	25.8	LOS B	4.1	28.9	0.57	0.70	0.57	41.8
5	T1	1560	2.0	0.866	37.1	LOS C	51.5	366.9	0.93	0.89	0.98	37.4
6	R2	1	2.0	0.005	32.1	LOS C	0.0	0.3	0.61	0.62	0.61	38.5
Approach		1674	2.0	0.866	36.3	LOS C	51.5	366.9	0.90	0.88	0.95	37.7
North: Macarthur Drive-N												
7	L2	1	2.0	0.006	67.5	LOS E	0.1	0.5	0.92	0.60	0.92	28.1
8	T1	1	2.0	0.004	55.4	LOS D	0.1	0.4	0.88	0.53	0.88	31.5
Approach		2	2.0	0.006	61.4	LOS E	0.1	0.5	0.90	0.56	0.90	29.7
West: Heathcote Road-W												
10	L2	1	2.0	0.371	10.8	LOS A	11.5	81.9	0.34	0.31	0.39	54.5
11	T1	1112	2.0	0.371	5.1	LOS A	11.5	81.9	0.34	0.31	0.36	55.4
12	R2	784	2.0	0.882	71.7	LOS F	29.2	207.6	1.00	0.96	1.19	27.4
Approach		1897	2.0	0.882	32.7	LOS C	29.2	207.6	0.61	0.57	0.71	39.0
All Vehicles		3932	2.0	0.882	34.9	LOS C	51.5	366.9	0.75	0.72	0.81	38.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	64.3	LOS F	0.2	0.2	0.96	0.96	
P1B	South Slip/Bypass Lane Crossing	53	64.3	LOS F	0.2	0.2	0.96	0.96	
P2	East Full Crossing	53	64.3	LOS F	0.2	0.2	0.96	0.96	
P2B	East Slip/Bypass Lane Crossing	53	64.3	LOS F	0.2	0.2	0.96	0.96	
P3	North Full Crossing	53	64.3	LOS F	0.2	0.2	0.96	0.96	
P4	West Full Crossing	53	64.3	LOS F	0.2	0.2	0.96	0.96	
All Pedestrians		316	64.3	LOS F			0.96	0.96	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

 **Site: 101 [Heathcote Rd-Macarthur Dr - Ex PM 2028 Base (No Dev)]**

18181 2 Macarthur Dr, Holsworthy

Site Category: 2028 With Development Case

Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macarthur Drive-S												
1	L2	679	2.0	0.463	17.8	LOS B	6.3	44.6	0.78	0.79	0.78	46.0
2	T1	1	2.0	0.003	19.3	LOS B	0.0	0.2	0.86	0.51	0.86	45.7
3	R2	51	2.0	0.391	33.6	LOS C	1.3	9.5	1.00	0.71	1.00	38.3
Approach		731	2.0	0.463	18.9	LOS B	6.3	44.6	0.80	0.78	0.80	45.3
East: Heathcote Road-E												
4	L2	35	2.0	0.053	17.0	LOS B	0.6	4.0	0.68	0.68	0.68	46.5
5	T1	1119	2.0	0.807	20.2	LOS B	14.5	103.5	0.96	0.97	1.17	45.2
6	R2	1	2.0	0.006	24.5	LOS B	0.0	0.2	0.84	0.60	0.84	41.9
Approach		1155	2.0	0.807	20.1	LOS B	14.5	103.5	0.96	0.96	1.16	45.2
North: Macarthur Drive-N												
7	L2	1	2.0	0.014	33.0	LOS C	0.0	0.2	0.98	0.58	0.98	38.2
8	T1	1	2.0	0.003	19.3	LOS B	0.0	0.2	0.86	0.51	0.86	45.7
Approach		2	2.0	0.014	26.1	LOS B	0.0	0.2	0.92	0.54	0.92	41.6
West: Heathcote Road-W												
10	L2	1	2.0	0.554	12.5	LOS A	9.5	67.4	0.64	0.58	0.78	53.2
11	T1	1279	2.0	0.554	6.7	LOS A	9.5	67.4	0.64	0.57	0.71	54.1
12	R2	243	2.0	0.553	30.1	LOS C	3.1	21.9	0.99	0.80	1.03	39.7
Approach		1523	2.0	0.554	10.5	LOS A	9.5	67.4	0.70	0.61	0.76	51.1
All Vehicles		3411	2.0	0.807	15.5	LOS B	14.5	103.5	0.81	0.76	0.90	47.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	19.4	LOS B	0.1	0.1	0.88	0.88	
P1B	South Slip/Bypass Lane Crossing	53	19.4	LOS B	0.1	0.1	0.88	0.88	
P2	East Full Crossing	53	19.4	LOS B	0.1	0.1	0.88	0.88	
P2B	East Slip/Bypass Lane Crossing	53	19.4	LOS B	0.1	0.1	0.88	0.88	
P3	North Full Crossing	53	19.4	LOS B	0.1	0.1	0.88	0.88	
P4	West Full Crossing	53	19.4	LOS B	0.1	0.1	0.88	0.88	
All Pedestrians		316	19.4	LOS B			0.88	0.88	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Heathcote Rd-Macarthur Dr - Fu AM 2028 Case (with Dev)]

18181 2 Macarthur Dr, Holsworthy

Site Category: 2028 With Development Case

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macarthur Drive-S												
1	L2	436	2.0	0.267	26.1	LOS B	7.3	51.8	0.67	0.75	0.67	41.7
2	T1	1	2.0	0.004	41.8	LOS C	0.0	0.3	0.86	0.52	0.86	35.7
3	R2	175	2.0	1.030	118.0	LOS F	14.8	105.1	1.00	1.25	1.98	20.2
Approach		612	2.0	1.030	52.4	LOS D	14.8	105.1	0.76	0.89	1.04	32.0
East: Heathcote Road-E												
4	L2	222	2.0	0.273	27.4	LOS B	7.6	54.4	0.69	0.75	0.69	41.1
5	T1	1548	2.0	0.984	73.6	LOS F	65.4	465.8	0.98	1.25	1.44	27.3
6	R2	1	2.0	0.006	31.3	LOS C	0.0	0.3	0.67	0.62	0.67	38.9
Approach		1772	2.0	0.984	67.8	LOS E	65.4	465.8	0.94	1.19	1.34	28.5
North: Macarthur Drive-N												
7	L2	1	2.0	0.006	53.7	LOS D	0.1	0.4	0.92	0.59	0.92	31.4
8	T1	1	2.0	0.004	41.8	LOS C	0.0	0.3	0.86	0.52	0.86	35.7
Approach		2	2.0	0.006	47.8	LOS D	0.1	0.4	0.89	0.56	0.89	33.4
West: Heathcote Road-W												
10	L2	1	2.0	0.388	11.5	LOS A	10.7	76.0	0.40	0.36	0.46	54.0
11	T1	1100	2.0	0.388	5.7	LOS A	10.7	76.1	0.40	0.36	0.43	54.9
12	R2	920	2.0	0.916	66.5	LOS E	25.6	182.5	1.00	1.17	1.87	28.5
Approach		2021	2.0	0.916	33.4	LOS C	25.6	182.5	0.67	0.73	1.09	38.6
All Vehicles		4406	2.0	1.030	49.9	LOS D	65.4	465.8	0.79	0.94	1.18	33.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95	
P1B	South Slip/Bypass Lane Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95	
P2	East Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95	
P2B	East Slip/Bypass Lane Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95	
P3	North Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95	
P4	West Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95	
All Pedestrians		316	49.3	LOS E			0.95	0.95	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Heathcote Rd-Macarthur Dr - Fu PM 2028 Case (with Dev)]

18181 2 Macarthur Dr, Holsworthy

Site Category: 2028 With Development Case

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m				km/h
South: Macarthur Drive-S												
1	L2	906	2.0	0.512	17.2	LOS B	9.2	65.7	0.73	0.79	0.73	46.3
2	T1	1	2.0	0.002	18.9	LOS B	0.0	0.2	0.78	0.47	0.78	45.9
3	R2	228	2.0	0.937	50.4	LOS D	9.1	64.8	1.00	1.17	1.85	32.6
Approach		1136	2.0	0.937	23.9	LOS B	9.2	65.7	0.79	0.86	0.96	42.7
East: Heathcote Road-E												
4	L2	260	2.0	0.467	25.3	LOS B	6.5	46.1	0.87	0.80	0.87	42.1
5	T1	1096	2.0	0.906	35.0	LOS C	20.9	148.7	1.00	1.15	1.46	38.2
6	R2	1	2.0	0.005	21.2	LOS B	0.0	0.2	0.70	0.61	0.70	43.6
Approach		1357	2.0	0.906	33.1	LOS C	20.9	148.7	0.98	1.09	1.34	38.9
North: Macarthur Drive-N												
7	L2	1	2.0	0.004	30.2	LOS C	0.0	0.2	0.88	0.59	0.88	39.3
8	T1	1	2.0	0.002	18.9	LOS B	0.0	0.2	0.78	0.47	0.78	45.9
Approach		2	2.0	0.004	24.5	LOS B	0.0	0.2	0.83	0.53	0.83	42.4
West: Heathcote Road-W												
10	L2	1	2.0	0.576	15.0	LOS B	11.9	84.8	0.69	0.62	0.81	51.3
11	T1	1256	2.0	0.576	9.2	LOS A	11.9	84.9	0.69	0.62	0.75	52.2
12	R2	524	2.0	0.647	19.1	LOS B	4.3	30.4	0.96	0.82	1.01	45.1
Approach		1781	2.0	0.647	12.1	LOS A	11.9	84.9	0.77	0.68	0.83	49.9
All Vehicles		4276	2.0	0.937	21.9	LOS B	20.9	148.7	0.84	0.86	1.03	44.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m			
P1	South Full Crossing	53	24.4	LOS C	0.1	0.1	0.90	0.90	
P1B	South Slip/Bypass Lane Crossing	53	24.4	LOS C	0.1	0.1	0.90	0.90	
P2	East Full Crossing	53	24.4	LOS C	0.1	0.1	0.90	0.90	
P2B	East Slip/Bypass Lane Crossing	53	24.4	LOS C	0.1	0.1	0.90	0.90	
P3	North Full Crossing	53	24.4	LOS C	0.1	0.1	0.90	0.90	
P4	West Full Crossing	53	24.4	LOS C	0.1	0.1	0.90	0.90	
All Pedestrians		316	24.4	LOS C			0.90	0.90	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

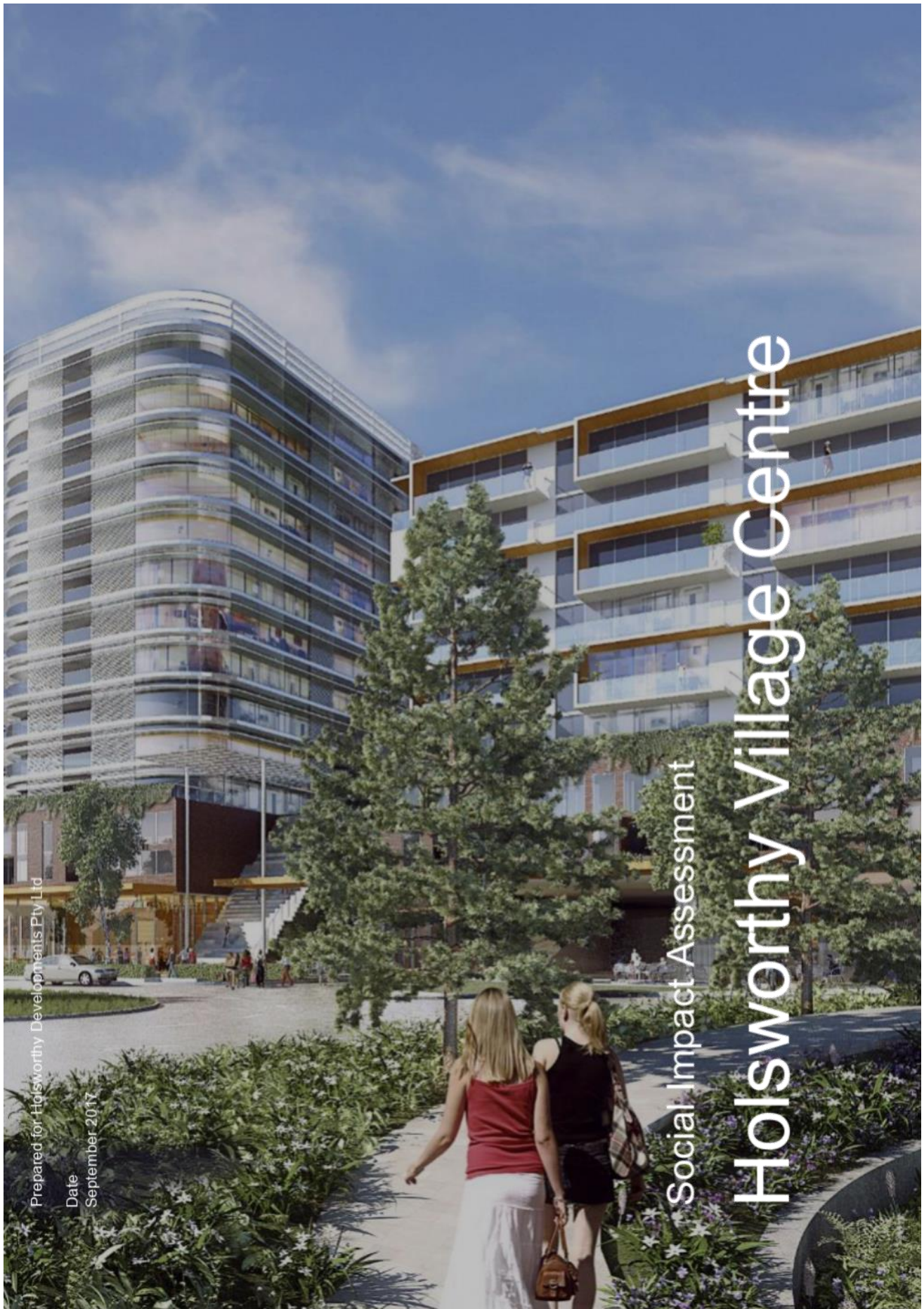
The Transport Planning Partnership
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Prepared for Holsworthy Developments Pty Ltd

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Social Impact Assessment

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This report is considered a draft unless signed by a Director



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Michael Harrison, Director Urban Design and Planning

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1.0 Introduction

This section provides information about the purpose of the report, urban context of the proposal, and the methodology and structure of the social impact assessment.

1.1 Purpose of Report

This Comprehensive Social Impact Assessment (SIA) has been prepared to assess the social impact of a planning proposal to increase the height and floor space ratio applicable to the site, 2 Macarthur Drive in Holsworthy, under the Liverpool Local Environmental Plan 2008 (Liverpool LEP 2008). The planning proposal will result in an increase the site's capacity to accommodate residential housing, as well as other commercial, retail and community uses.

Due to the scale of the potential built form outcome resultant of the planning proposal, a SIA is required in accordance with the Liverpool Social Impact Assessment Policy (2015).

This SIA provides:

- Background to the planning proposal;
- Context of the precinct;
- Overview of the methodology used for the undertaking of this SIA;
- A strategic policy context for this SIA;
- A demographic context analysis;
- An audit of social infrastructure;
- A social impact assessment of the proposal, taking into consideration strategic policy, demographic context and existing social infrastructure; and
- Social infrastructure requirements to facilitate and meet the demand of the proposed development.

1.2 Background

This SIA accompanies a Planning Proposal to amend the maximum permissible height and floor space permitted on the subject site under the Liverpool LEP 2008, as set out below:

- Amend the maximum permissible floor space ratio from 1.5:1, to 2.5:1
- Amend the maximum permissible height from 21 metres to 54 metres

An urban design study has been prepared by Architectus Group, which demonstrates that amending the controls, as above, will indicatively result in:

- Approximately 8500 sqm of retail development
- Approximately 400 residential apartments
- A mixed use retail and residential development providing housing within the Holsworthy, and provision of a local retail centre to service a local catchment.

1.3 Site Context

The site is 1.8 hectares (18,620sqm) in size, and is located in the suburb of Holsworthy. Holsworthy is positioned in the far eastern portion of the Liverpool local government area (LGA), wedged between the residential suburbs of Wattle Grove to the west, Hammondville and Voyager Point to the east, Holsworthy Barracks to the south and the M5 Motorway to the north. In a district context, Holsworthy is located to the north east of the Greater Macarthur Priority Growth Area, that is subject to a draft urban renewal plan that identifies the potential for 15,000 new dwellings, and to the south east of the strategic centre of Liverpool, that had been identified as an education and health centre.

The site is bounded by the T2 Airport, Inner West and South train line to the south, MacArthur Drive and medium density residential to the east and northeast, and Heathcote Road and environmentally significant land to the northeast and east.

The site experiences high connectivity, being in close proximity to the M5 Motorway to the north, and within 400m of Holsworthy Train Station to south west.

Analysis of adjacent land uses has revealed a mixture of residential to the immediate north west, industrial further west, infrastructure (defence) to the south and a combination of public recreation, infrastructure (defence) and natural waterways zoning to the north east.



Figure 1 Site context plan

The subject site is located in the suburb of Holsworthy, adjacent to the Railway Station.

1.4 Structure of this report

This SIA is structured as follows:

- **Strategic context:** Chapter 2 consists of a policy review to establish the strategic policy context of this SIA as applicable to the site, local government area and potential future development.
- **Analysis:** Chapter 3 consists of a summary and analysis of the existing and forecast demographics for the Holsworthy-Wattle Grove Statistical Area 2 (SA2) and Liverpool LGA. This analysis establishes the existing and likely demographic make-up of the locality impacted by the resultant development to inform the social needs of the surrounding community.
- **Audit:** Chapter 4 provides an audit of existing social infrastructure in the district to identify gaps in provision and to indicate likely future requirements.
- **Social Impact:** Chapter 5 assesses the high level social impacts of the proposed development, including calculating the additional demand for social infrastructure that would be generated because of the proposed development. This assessment has been informed by State and Industry standards.
- **Recommendations:** Chapter 6 outlines the provision of additional social infrastructure, and the augmentation to existing infrastructure required to meet the service needs resulting from the development.

1.5 Authorship

This SIA has been prepared by Matt Kelly, Urban Planner. Camille Lattouf, Associate and Urban Planner (Master of Development Studies and Culture Change) has reviewed this SIA and provided quality assurance.

2.0 Strategic policy context

This section provides an overview of the key state and local government policies and legislation considered relevant to the proposed development at Heathcote Rd/ MacArthur Drive and which are considered relevant to the planning and social infrastructure and open space provision.

2.1 State planning policies and strategies

This section considers the context of the subject development by examining the state, district and local planning policies, strategies and documents which are relevant considerations of the SIA. These include:

- Sydney Metropolitan Strategy – A Plan for Growing Sydney; and
- Draft South West District Plan.

Sydney Metropolitan Strategy - A Plan for Growing Sydney

The NSW State Government released a *Plan for Growing Sydney* in December 2014 to provide strategic direction to Sydney's growth over the next 20 years. The Government's vision for Sydney is a strong global city, a great place to live. To achieve this vision, the Government has established four goals;

- A competitive economy with world-class services and transport;
- A city of housing choice and homes that meet our needs and lifestyles;
- A great place to live with communities that are strong, healthy and well connected; and
- A sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources

Significant growth in Sydney's economic output and population is projected over the next two decades. By 2031, Sydney's economic output will almost double to \$565 billion a year and there will be 689,000 new jobs. Over the next 20 years, Sydney's population will grow by 1.6 million people, with 900,000 of this population occurring in Western Sydney.

The integration of transport, infrastructure and complementary land uses is required to address this projected economic, employment and population growth. The following directions apply to the proposed development:

- Direction 2.1 Accelerate housing supply across Sydney
- Direction 2.2 Accelerate urban renewal across Sydney – providing homes close to jobs
- Direction 2.3 Improve housing choice to suit different needs and lifestyles
- Direction 3.1 Revitalise existing suburbs

Direction 2.1 of the Plan seeks to accelerate housing supply across Sydney. The target of this direction is to produce an additional 664,000 new dwellings over the next 20 years. The strategic merit of the PP accompanying this SIA is affirmed by over 50% of anticipated growth occurring in Western Sydney and the importance of intensifying development adjacent to public transport infrastructure.

Direction 2.2 of the Plan seeks urban renewal across Sydney, especially localities in or near centres on the public transport network. This direction highlights the importance of accommodating growth in existing areas with existing infrastructure provision. Coupling

urban renewal with public transport will enable efficient movement of people between housing and jobs, and in doing so relieve pressure on congested roads. While increasing population densities augments pressure on existing infrastructure and services, it provides the economic stimulus to upgrade and provide additional infrastructure.

Direction 2.3 seeks improved housing choice to suit different needs and lifestyles.

Sydney's existing housing stock is defined by detached houses that make up 57.3% of all housing in Sydney. Demographic change, in particular the rise in single person households and couple households with no kids is increasing the demand for smaller dwellings, whilst increasingly, families are living in denser environments to be closer to amenities and services. This condition, coupled with cultural demand for inner city living is driving the need for expanding the supply of semi-detached and apartment dwellings in existing urban areas.

Direction 3.1 of the Plan seeks to revitalise existing suburbs to focus new housing in centres on the public transport network. Supplementing this development is the recognition that as the population grows in existing suburbs, there is an opportunity to provide more social infrastructure such as schools, health care and community services to revitalise communities.

Draft South West District Plan

The Draft South West District Plan is a strategic plan that establishes the aspirations and proposals for the region of Sydney incorporating the local government areas of Camden, Campbelltown, Fairfield, Liverpool, and Wollondilly. The study area of this SIA is located within the LGA of Liverpool. District plans set out principles and guidance for the preparation of local environmental plans, establish strategic planning criteria to assess planning proposals, guide strategic land use, transport and infrastructure planning across local government areas, and inform infrastructure delivery priorities. A key challenge identified by the South West District Commissioner Sheridan Dudley is to ensure the provision of jobs, transport and social infrastructure keeps pace with population growth in the district. The draft District Plan identifies priorities and actions to address the opportunities and challenges presented by growth in the district.

The vision for the district is delivered through several metropolitan priorities, to enable a productive Sydney, to create a liveable Sydney and to support a sustainable Sydney. Each priority is broken into key actions that translate the priority into tangible objectives.

Overarching productivity priorities and actions are to create the Western City, integrate land use and transport planning to drive economic activity, planning for job targets, growing, and diversifying economic opportunities of the District's strategic centres, growing jobs in the health and education sectors, coordinating infrastructure planning with population growth, strengthening the diversity of employment choice.

Overarching liveability priorities and actions are to improve housing choice, diversity, and affordability, coordinate and monitor housing outcomes and demographic trends, create great places, foster cohesive communities and respond to people's need for services. Services identified as key actions of liveable city priorities are schools, culturally appropriate services, emergency services, cemeteries, and crematoria. Providing appropriate services and infrastructure for growing communities aligns with Action 3.1 of *A Plan for Growing Sydney*.

Overarching sustainability priorities and actions to enhance and protect the landscape and biodiversity of the district, protecting the district's waterways, delivering Sydney's Green Grid, managing the metropolitan rural area, planning for a resilient district, and managing flood hazards in the Hawkesbury-Nepean Valley.

This SIA accompanies a planning proposal that aims to satisfy the priorities of the Draft South West District Plan, in particular the liveability priorities.

Liveability actions specific to social infrastructure:

- **L14: development a South West District sport and recreation participation strategy and sport and recreation facility plan.**

Outcome: contribute to informed decisions for making for sport and recreation infrastructure.

- **L15: Support planning for shared spaces.**

Outcome: increase in the provision of community facilities, including open space.

- **L16: support planning for school facilities.**

Outcome: improved infrastructure decision making.

- **L17: support the provision of culturally appropriate services.**

Outcome: improved decision making with the aboriginal community and in relation to cultural services and infrastructure.

- **L18: support planning for emergency services.**

Outcome: Inform needs for emergency services.

2.2 Local planning policies and strategies

A number of local policies and strategies have informed this Social Impact Assessment, including:

- Liverpool Local Environmental Plan 2008;
- Growing Liverpool 2023;
- Liverpool Social Impact Assessment Policy 2015.

These are addressed below.

Liverpool Local Environmental Plan 2008

The Liverpool Local Environmental Plan 2008 (LLEP 2008) provides the statutory framework for all development and planning in the local government area.

The land subject to the planning proposal is currently zoned B2 Local Centre. The objectives of this zone are;

- To provide a range of retail, business, entertainment, and community uses that serve the needs of people who live in, work in and visit the local area,
- Encourage employment opportunities in accessible locations and maximise public transport patronage, walking and cycling,
- Allow residential while maintaining active retail, business, and other non-residential uses at street level,
- Facilitate a high standard of urban design and a unique character that contributes to place making

The planning proposal associated with this SIA is for Shop top housing, a use permitted with consent under Zone B2 Local Centre. This Planning Proposal does not seek a change in zone for the land but an increase in permissible height and floor space ratio controls. The proposed changes to LEP controls will increase residential and employment density on the site, enabling a development that aligns strongly with the objectives of this zone.

Growing Liverpool 2023

Growing Liverpool 2023 is a community strategic plan that provides a vision and framework for community growth and Council action. The 10-year plan is based on seven (7) strategic directions that include, being a vibrant prosperous city, a liveable safe city, a healthy inclusive city, a proud engaged city, a natural sustainable city, an accessible connected city, and a leading proactive council.

The development proposed on the site aligns with two strategies under Direction 2, Liveable Safe City, being *2.b, create clean and attractive public places for people to engage and connect*, and *2.d, facilitate diverse and more affordable housing options*. The proposed development comprises augmented public domain along Heathcote Rd and MacArthur Drive, communal open space atop the commercial podium, in addition to the provision of new housing. The proposed development will unlock a large area of Holsworthy currently unsuitable and unavailable for public use.

Growing Liverpool 2023 plan is translated into actions by the 4 Year Delivery Program and Operational Plan & Budget 2016/17. Key social infrastructure projects in Holsworthy are specifically identified in the Delivery plan, including the implementation of Council's Outdoor Fitness Gym program at Cameron Park, Holsworthy, installation of a solar panel system at the Holsworthy childcare centre, bush regeneration works at Lot 10 Heathcote Road Area 2, Holsworthy, provision of new paved footpaths to improve accessibility and mobility in the suburb and across the LGA, and an upgrade program for Holsworthy pool.

Liverpool City Council Social Impact Assessment Policy

The Liverpool City Council Social Impact Assessment Policy provides a framework for assessing the social impact of proposed development within the Liverpool local government area. This policy provides a framework for Council to assess the social impacts of proposed developments, policies, and plans to ensure social outcomes and community wellbeing is identified, supported and augmented. Specific types of development, or developments of a particular scale, require the preparation of a SIA. Under this policy, Council requires a SIA of significant new or revised strategic land use plans including its LEP and master plans. In line with this Policy, this SIA considers the potential social impacts of the planning proposal on a range of social groups.

Multicultural Strategy and Action Plan 2015 – 2017

Liverpool LGA is one of the most culturally diverse cities in NSW, with approximately one in three people born overseas and almost half of Liverpool's residents speaking a language other than English at home. Council's Multicultural Strategy addresses fundamental 'access and equity' issues to support the LGA's cultural diverse population, including Holsworthy – Wattle Grove SA2. The strategy aligns with the NSW Community Relations Commission and Principles of Multiculturalism Act 2000. The principles state that:

- All residents have opportunities to participate in public life;
- Provisions are made for the culture, language and religion of others and that these are respected;
- All residents are able to participate in relevant activities and programs;
- Cultural and linguistic assets are promoted and celebrated as a valued resource. Priorities of the multicultural strategy include leadership and capacity building, access and equity, community and harmony, economic and cultural opportunities.

Liverpool Youth Strategy 2012 – 2017

Council's Youth Strategy and action plan provides the community with a framework to address the top priorities faced by young people in the LGA. The Youth Strategy has been informed by the views of local young people (consultation with over 600 young people and 60 youth workers) and ABS Census data. A range of issues affecting young people in Liverpool emerged from the consultations and data analysis; drugs and alcohol, crime and safety, employment, transport, leisure and recreation, education and bullying. Six priority areas for action were developed taking note of identified issues. Areas for action include sport and creation, art and culture, participation and leadership, safety, health and well-being, employment and education, planning and infrastructure. The Youth Strategy contains ample mechanisms to support youth in the Holsworthy – Wattle Grove SA2.

Liverpool Ageing Strategy

Council's Ageing Strategy and Action Plan 2015-2017 provides Council with a proactive and coordinated plan for the provision of accessible and equitable services and facilities for an ageing population. The Ageing Strategy identifies how Council will support the development of an age-friendly LGA. The Holsworthy – Wattle Grove SA2 has an augmenting ageing population. Council's strategy and action plan will support the districts ageing population, that will enable individuals to achieve physical wellness and health in the later years, but also to achieve ongoing participation in social, economic, cultural and civic life.

Disability Inclusion Action Plan (DIAP)

Council's DIAP was developed after consultation with people with disability, their families and carers and disability organisations in Liverpool, in addition to consultation with Council staff. The DIAP provides practical ways to make Liverpool inclusive, from developing positive community attitudes and behaviours regarding people with disability, creating liveable communities by improving accessibility and upgrading infrastructure. The DIAP will help ensure Liverpool LGA and the Holsworthy – Wattle Grove SA2 are stronger, fairer and better places to live.

2.3 Outcomes

The State and local policy framework indicates the need for diverse and increased housing and employment provision close to transport infrastructure, and establishes the framework in which social impact should be assessed. Furthermore, Council's multicultural strategy indicates Council's plans for facilitating the needs of a diverse and multicultural community.

In terms of accommodating diverse and increased housing choice, future development of the site provides the opportunity to provide a range of housing sizes and types. Council should consider the implementation of a dwelling mix control similar to that which applies to development within the Liverpool City Centre, to ensure a minimum quantum of smaller studio and one bedroom apartments as well as larger three or more storey apartments.

Culturally, the Liverpool and Bankstown City Centres and the respective local government areas, both located in close proximity to the site, provide an array of services, amenities, cultural groups and religious establishments which cater to the diverse cultural, linguistic and religious communities which live in this SA2 and its immediate surrounds.

In terms of youth and older persons, the proposed development offers the opportunity for increased housing that is highly accessible and will be serviced by a convenience retail component at the lower levels, making Holsworthy a more attractive place to live for both youth and seniors. Furthermore, future residential and retail development will be required to meet accessibility standards and adaptable housing provision requirements.

3.0 Demographic Analysis

This Section analysis the demographic characteristics of the local area of the proposed. This Section relies on 2016 census data where available. Where not available, the most recent data available (in some instances 2011 census data) has been used.

3.1 Existing

In 2016, the Holsworthy – Wattle Grove SA2 district accommodated 20,706 (ABS, 2016 Census of Population & Housing - based on place of usual residence). This represents an increase of 19% from 2001 (17393), and an increase of 16% from 2006 (17847). This parallels growth in the Liverpool LGA that recorded a population of 210,113 in 2016, representing an increase of 36.5% from 2001 (153,901), and an increase of 16.6% from 2011 (180,143).

Household and age distribution

The population and age distribution has changed in the district, as shown below in Error! Reference source not found. at **Attachment A**.

Over the last three census periods there has been a restructuring of age distribution within the Holsworthy-Wattle Grove district. The changes in age distribution has mirrored the general demographic trends in Australia; sustained low fertility and increasing life expectancy is producing proportionately fewer children (under 15 years of age) in the population and a proportionately larger increase in those aged 65 year and over.

Between 2001 and 2016, the proportion of the population aged between 0 to 14 decreased from 29% to 23% of the total population in the district. The change in this age bracket is contrasted to an increase in the 15 to 64 age group (traditionally referred to as the 'working-age population'), that increased by 3% from 66% of the total population to 69%. A similar growth rate has occurred in the proportion of the population aged 65 years and older, increasing from 5% of the total population in 2001 to 9% in 2016. Broadening the analysis of the older portion of the population, those aged 55 years and older have increased as a portion of the total population, from 9.2% in 2001, to 17.6% in 2016. The use of these three broad age categories belies the changes occurring within 5-year age brackets. Of importance in the context of determining social infrastructure and service requirements is the rise in both the adolescent and elderly age groups within the SA2 district.

Between 2001 and 2016, the 0-4 and 5-9 year brackets have declined as a proportion of the total population, by 3.7% and 2.6% respectively. The 10-14, and 15-19 five year age brackets have remained largely unchanged as a proportion of the total population. Each five year age bracket up to and including the 35 – 39 age group has decreased as a proportion of the total population, ranging between 1 and 3%. In contrast, the five year age groups above the 35-39 bracket have increased in proportions.

In 2016, the median age was 33 having changed from 29, in 2001. This is consistent with the median age trend for the Australian population, having increased from 34 years at 30 June 1996 to 37 years at 30 June 2016.

In addition, the average household size in the district is 3.2, remaining unchanged from 2001.

Parallel to changes in age distribution within the district, household composition has experienced restructuring. Family households comprised 86.7% of total households in Holsworthy-Wattle Grove SA2 district in 2016, compared to 82.6% of households across the Liverpool LGA. This may indicate the need for day care and out of school hours care (particularly given 69% of the population work full time), sport and recreational facilities and schools. Lone person households were the next largest household type in the district, making up 12% of all households, compared to 15.7% across the Liverpool LGA.

Over the last four Census periods there has been no significant change in the proportion of different households in the SA2 district. Of note however is the change in family types. Couple family with children has changed from 55% of total families in 2001, to 61.5% in 2016. In addition, one parent families have also increased from 8.6% of all families in 2011, to 12.5% in 2016.

Cultural characteristics

The SA2 district is comprised of a diverse range of cultural backgrounds. Collectively, close to one third (34%) of the population were born overseas (refer to **Table 20 at Attachment A** **Error! Reference source not found.**), and more than half (54.5%) had at least one parent born overseas (refer to **Error! Reference source not found.**). According to 2016 census data, the top 5 countries of birth outside Australia were India (4.7%), United Kingdom (2.4%), Philippines (2%), Egypt (1.9%), and Fiji (1.5%). In 2016, the top five (5) languages spoken at home other than English (65.4%) were Arabic (4%), Hindi (2.4%), Mandarin (1.9%), Greek (1.6%), and Tagalog (1.4%). Between 2001 and 2016, the proportion of the SA2 district's population speaking only English has reduced by 7.9% (refer to **Table 23 at Attachment A**). Conversely, the portion of the population speaking Arabic has increased by 1.6%, from 2.6% of the population in 2001, to 4% of the population in 2016.

The most common languages spoken at home (excluding English) within the Liverpool LGA in 2011 include, Arabic (11.4%), Vietnamese (4.9%), Hindi (4.0%), Spanish (2.5%), and Serbian (2.4%). Overall, 48.3% (2016) of the population was born overseas, and 35.9% (2011) were from a non-English speaking background. This is compared to Greater Sydney where 34.2% of the population was born overseas, and 26.3% were from non-English speaking background. The largest non-English speaking country in Liverpool LGA was Iraq, accounting for 4.8% of the population, or 9,885 people.

The most common languages spoken at home within the Sydney Metropolitan region (excluding English) include Mandarin (4.7%), Arabic (4.0%), Cantonese (2.9%), Vietnamese (2.1%), and Greek (1.6%).

The dominant religious affiliation in the district is to Christianity, with 61.8% of respondents identifying with this denomination (refer to Table 22). The next four highest recognised religions identified include Hinduism (6.3%), Islam (3.9%), Buddhism (2.3%) and Judaism (0.03%). In 2016 Census, of all respondents, 19% identified as having no religion, and 6% did not state their religious affiliation.

The SA2 district has a much larger proportion of English only speakers relative to Liverpool LGA, with 65.4% of the population speaking English only, compared to 41.4% LGA wide (refer to Table 23 and Table 24). While English is the dominant

language spoken in the district, this is a notable decline from 2001 when 73.35% of the population spoke English only.

The cultural diversity of the district may indicate a high proportion of migrants who require local support networks, community interaction and improved services to assist their transition into the community. These services could be provided through community centres, libraries, and social activities.

Income and employment characteristics

In 2011, 69% of the labour force in the SA2 district was employed full time, a comparatively high rate compared to NSW and Australia (refer to Error! Reference source not found. at **Attachment A**). In addition, the unemployment rate for the district has remained steady at around 4%, which is comparatively low when contrasted to the rate for NSW, recording an unemployment rate of 5.9% in 2011, and Greater Sydney recording an unemployment rate of 5.7%.

In 2011 the median personal income in Holsworthy – Wattle Grove was \$792 per week, having increased significantly by 37% from a median of \$579 in 2001 (refer to Error! Reference source not found. at **Attachment A**). This compares to the median 2011 personal income in Liverpool of \$510, and Greater Sydney of \$619.

Similarly, the median total household income in 2011 had grown by 55% from \$1,225 per week in 2001 to \$1,900 per week in 2011 (refer to Error! Reference source not found. at **Attachment A**). This compares to the median 2011 household income in Liverpool of \$1,299, and Greater Sydney of \$1,683.

The relatively low unemployment rate, and relatively high median personal and household income suggests a relatively advantaged area, benefiting from a high rate of access to jobs.

A large number of residents in Holsworthy – Wattle Grove SA2 are employed in manufacturing, although this has reduced substantially from 1073 of the working population in 2001, to 951 in 2011, a reduction of 11%. The only other sectors to experience declines, were agriculture, forestry and fishing (from 13 to 10 (-3%)), and information media and telecommunications (from 211 to 208 (-3%)). All other significant employment sectors have experienced increases between 2001 and 2011. Refer to Error! Reference source not found. at **Attachment A**.

Comparatively, the number of residents employed in construction, public administration and safety, retail trade, transport, postal and warehousing, financial and human services, education and training, health care and social assistance, arts and recreation services have all increased from 2001 to 2011, by between 22% and 60%.

Education characteristics

The table below (**Table 1**) provides a summary of the type of educational institutions residents of Holsworthy – Wattle Grove SA2 nominated they were attending across the three Census periods. Between 2001 and 2011, the number of residents attending pre-school and primary school decreased in line with a reduction in 0 – 4 year age bracket (-20%), and 5 – 9 year age bracket (-11%).

Comparatively, the number of residents attending secondary school and University increased by 52%, and 55% respectively. This is in line with growth in the 10 – 14 (29%), 15-19 (40%), and 20-24 (16%) age brackets.

The increase of residents attending University or another tertiary institution is reflected in the changing level of non-school qualifications achieved by residents. From 2001 – 2011, there was a 57% increase in the number of residents with postgraduate level degrees (an increase of 908 people). This mirrored the 42% increase in residents with diploma and advanced diploma. The increasing portion of the population obtained non-school qualifications is reflected in a declining number of residents nominating no qualification (-9%).

Overall, the analysis demonstrates an upskilling of the Holsworthy-Wattle Grove SA2 through the generally increased level of education of residents and is consistent with Sydney wide increases in the proportion of the population holding post-school qualifications.

Table 1 Type of Educational Institution attending by SA2 (2001 – 2011)

Type of Institution	2001	2006	2011	Change	% Change
Pre-school	417	427	409	-8	-2%
Primary	2105	2165	1935	-170	-8%
Government	1655	1635	1434	-221	-13%
Catholic	286	387	387	101	35%
Independent	165	143	114	-51	-31%
Secondary	1045	1213	1587	542	52%
Government	731	806	1030	299	41%
Catholic	197	226	297	100	51%
Independent	117	181	260	143	122%
TAFE	423	319	362	-61	-14%
University	504	586	780	276	55%
Other	172	118	99	-73	-42%
Not Attending	11646	11147	11869	223	2%
Not stated	613	702	753	140	23%
Total	17224	16672	17794	570	3%

Table 2 Non-School Qualification Level by SA2 (2001 – 2011)

Qualification Level	2001	2006	2011	Change	% Change
Bachelor or Higher Degree	1603	1862	2511	908	57%
Advanced Diploma or Diploma	831	901	1183	352	42%
Vocational	2254	2324	2507	253	11%
No qualification	5481	4928	4984	-497	-9%
Not stated	1042	890	801	-241	-23%

Social advantage and disadvantage

The SEIFA Index of Disadvantage measures the relative level of socioeconomic advantage and disadvantage based on various Census characteristics, such as income, education, unemployment and occupations. In this index, a lower score indicates an area that is relatively disadvantaged compared to an area with a higher score.

In 2011, the Liverpool LGA scored 951 on the SEIFA index of Disadvantage, ranked 51 in NSW from 153 LGAs and unincorporated NSW. Liverpool LGA was positioned between Ku-ring-gai on the most advantaged end of the scale (Score 1121, Ranked 153) and Brewarrina LGA on the more disadvantaged end of the scale (Score 788, Ranked 1st).

In relation to metropolitan and surrounding LGAs, Liverpool compared to Campbelltown (945), Fairfield (954), Bankstown (former LGA) (931.7) and Holroyd (966).

It is noted that based on small areas, Voyager Point-Pleasure Point, Wattle Grove and Holsworthy are the least disadvantaged areas of Liverpool, and have a lesser level of disadvantage than Great Sydney as a whole.

3.2 Forecast

Forecasts by the Department of Planning and Environment

It is expected that the Liverpool LGA will experience an annual growth rate of approximately 2.3%, which exceeds the growth rate of metropolitan Sydney.

Table 3 DP&E Forecast Resident Population 2011 – 2036

	2011	2016	2021	2026	2031	2036	Total Change	Total % Change	Annual % Change
Liverpool LGA	188,100	214,100	241,900	274,800	301,100	331,000	142,900	76.0%	2.3%
Metropolitan Sydney	4,286,200	4,681,950	5,106,300	5,537,850	5,975,550	6,421,850	1,739,900	50%	2%

Source: Department of Planning & Environment

Table 4 Forecast Household Type Liverpool LGA 2011 – 2036

Household	2011	2016	2021	2026	2031	2036	% Households in 2011	% Households in 2036	% Change
Couple only	10,500	12,550	14,600	16,850	18,750	21,050	17	19	1
Couple with children	29,050	32,800	36,800	41,350	44,650	48,200	48	43	-5
Single parent	8,850	10,300	11,800	13,650	15,250	17,000	15	15	0
Other family households	1,000	1,150	1,250	1,450	1,600	1,800	2	2	0
Multiple-family households	1,600	1,850	2,100	2,400	2,650	2,900	3	3	0
Total family households	50,950	58,600	66,600	75,700	82,850	90,950	85	82	-3
Lone person	8,250	10,000	11,900	14,250	16,500	19,100	14	17	3
Group	850	950	1,050	1,200	1,300	1,450	1	1	0
Total non-family households	9,100	10,950	12,950	15,500	17,800	20,550	15	18	3
Total	60,100	69,550	79,550	91,150	100,700	111,500			

Source: NSW Department of Planning & Environment: 2016 NSW State & Local Government Area Population and Household Projections, and Implied Dwelling Requirements

Forecasts by Bureau of Transport Statistics

Unlike the DP&E forecasts, the BTS forecasts allow a close match to the SA2 are through the inclusions of a number of travel zones.

Table 5 BTS Population Forecast

	2011	2016	2021	2026	2031	2036	2041	Total Change	Total % Change	Annual % Change
Holsworthy – Wattle Grove SA2	20289	20910	22317	23616	24689	25839	27042	6,753	33.3%	1.3%

Source: BTS, 2011

3.3 Potential population of the proposed

The redevelopment capacity of the site, reflected in the planning proposal at the time of writing, is summarised in the following table.

The assumptions contained within the table below have been used to indicate the likely additional demand for social infrastructure in **Section 0** of this report.

Table 6 Expected Population

Type	Quantity	Occupancy Rate (based on Liverpool S94 Plan)	Residential Population
1 – Bed Apartment	99	1.8 persons per dwelling	178
2 – Bed Apartment	239	2.3 persons per dwelling	616
3 – Bed Apartment	60	3.1 persons per dwelling	220
Total	438		1015 persons (rounded)

SKM property research has indicated a 0.93% average vacancy rate in the 12 months to August 2017. Based on this average, it is assumed that at any given time, it is assumed that 434 apartments will be occupied, with a resident population of approximately 1,005 persons.

4.0 Social Infrastructure Audit

The following section undertakes an audit of existing social infrastructure to identify gaps and determine likely future needs of the resident population in the locality.

This audit also seeks to identify sensitive receivers in proximity to the subject site.

For consistency, this audit has been undertaken for the Holsworthy – Wattle Grove SA2 area. This is referred to as the study area.

The analysis has been informed by a desktop analysis of geographic data and resources and the following other resources:

- Liverpool City Council website, including plans, reports and business papers;
- NSW Department of Education and Communities My School Website and My Child Website;
- Consultation with service providers.

Table 7 below provides a summary of the facilities benchmarking used for the purposes of this SIA. These benchmarks are largely based on centres of similar scale and density, sourced from the Draft Sydenham to Bankstown Social Infrastructure Strategy prepared by Arup. The 'current provision' identified in the table below identifies infrastructure currently not meeting the benchmarks used for this SIA. It is noted however that benchmarks alone are not useful in determining the adequacy of facilities provided, as this consideration needs to be coupled with other nearby facilities, accessibilities to such and the need for each facility based on population service age groups and demographic trends.

Table 7 2016 Holsworthy – Wattle Grove SA2: Quantum of infrastructure based on benchmark standard

SA2 2016 Population		20,706					Benchmark provision of infrastructure	
Infrastructure Type	Benchmark standard	Optimum	High	Medium	Low		Current Provision	
Halls and Centres								
Youth Centre	1:10,000-30,000 people		2.1	1.0	0.7		1	
Small Community Centre	1:3,500-6,000 people		5.9	4.6	3.5		0	
Large Community Centre	1:15-20,000 people		1.4	1.2	1.0		1	
Small Meeting Hall	1:10,000 people	2.1					0	
Large Meeting Hall	1:20-30,000 people		1.0	0.8	0.7		0	
Libraries								
Library Branch	1:10,000 people	2.1					1	
Childcare and education								

SA2 2016 Population	20,706	Benchmark provision of infrastructure				
Infrastructure Type	Benchmark standard	Optimum	High	Medium	Low	Current Provision
Long day care centres	1:320 children aged 0-5 years (2057 population)	6.4				16 (7 Council operated, 9 private)
Pre-school	1:4-6,000 people		5.2	4.1	3.5	
Primary school	1:1,500 new dwellings	4.5				5
Secondary school	1 school: 6,000- 7,500 new dwellings		0.89	1	1.11	2
Health						
Community Health Centre	1:20,000 people	1.04				0
Recreation						
Open Space	2.83ha / 1000 people	2.3ha/1000 people				4.9 ha/1000 people
Playground	1:500 dwellings	13				13

4.1 Local

Parks and Playing Fields, Sporting Facilities

The audit of has revealed that the Holsworthy Wattle Grove SA2 District has a provision of 100.8ha of land zoned RE1 Public Recreation, and 22ha of land zoned RE2 Private Recreation. Of the 122.8ha of land within the SA2 zoned RE1 or RE2, approximately 24ha was within 800m of the Subject site.

In 2016, this resulted in a public open space provision of 4.9ha per 1000 people in the SA2 district. This is substantially above the broadly recognised standard of 2.83ha per 1000 people. This standard was once mandated under Section 94 of the EP&A Act.

Further, a benchmark for playgrounds is 1:500 dwellings (NSW Department of Planning and Infrastructure Draft Development Contributions Guidelines (2009)). The 2016 census results identify the SA2 as having 6326 dwellings, generating a requirement for 13 playgrounds. This benchmark of 13 playgrounds is met by the existing provision in the district.

There is a variety of passive and active open space distributed throughout the district, supporting a broad range of uses and providing good accessibility. Exploring the broader use of school infrastructure (ovals, gymnasium, tennis courts etc.) is recommended, and can further improve the provision of open space and sporting facilities in the district.

The following **Table 8** demonstrate the distribution of this open space within the SA2 in relation to the subject site.

Table 8 Open Space Audit

Facility Name	Address	Facilities	Type of Open Space Public / Private	Proximity to Subject Site
Orara Park	27 Delfin Drive, Wattle Grove	<ul style="list-style-type: none"> • Large modern children's playground • Shaded area • Seating • Walking and bicycle paths • 4 car parking spaces 	Park Public Open Space	4km
Edmondson Memorial Park	Wattle Grove Drive, Wattle Grove	<ul style="list-style-type: none"> • Children's playground 	Park Public Open Space	2.5km
Unnamed Park	Torrens Court, Wattle Grove	<ul style="list-style-type: none"> • Small Open space • 3 – 4 car parking spaces 	Park Public Open Space	2.5km
Wattle Grove Lake	Wattle Grove Drive, Wattle Grove	<ul style="list-style-type: none"> • Outdoor gym • Children's playground • Children's swings • Bicycle and walking paths 	Park Public Open Space	3km
Anzac Creek	Wattle Grove	<ul style="list-style-type: none"> • Bicycle and walking paths • Pockets of open space 	Landscape & Amenity Public Open Space	2.5 – 4km
Wattle Grove Park	15 Arrowfield Drive, Wattle Grove	<ul style="list-style-type: none"> • Children's playground • Large grassed open space • Bicycle and walking paths 	Park Public Open Space	3.5km
Banyule Court Park	34 Banyule Ct, Wattle Grove NSW 2173	<ul style="list-style-type: none"> • Swing set • Park bench • Landscaped 	Park Public Open Space	4km
Unnamed Park	20 Bardia Parade, Holsworthy NSW 2173	<ul style="list-style-type: none"> • Children's playground • Undercover seating 	Park Public Open Space	2.2km
Corryton Park	2 Wattle Grove Drive, Wattle Grove NSW 2173	<ul style="list-style-type: none"> • Natural landscape 	Landscape & Amenity Public Open Space	4.8km
Unnamed Park	10 Australis Avenue, Wattle Grove NSW 2173	<ul style="list-style-type: none"> • Bicycle and walking paths • Unlandscaped open space 	Landscape & Amenity Public Open Space	2.4km
Unnamed Park	73 Bardia Parade, Holsworthy NSW 2173	<ul style="list-style-type: none"> • Modern Children's playground • Bicycle and walking paths • Open space 	Park Public Open Space	1.7km
Australis Park	24 Hyde Park Ct, Wattle Grove NSW 2173	<ul style="list-style-type: none"> • 2 x netball/basketball courts • 2 x tennis courts • Large multi-purpose sports field • Large number of car parking spaces 	Outdoor sports area Public Open Space	2.7km (direct walking route)
Wattle Grove Public School	Cressbrook Dr, Wattle Grove NSW 2173	<ul style="list-style-type: none"> • Large grass open space • 1 x netball/basketball court 	Private Open Space	3km (direct walking route)
Tusculum Park	7 Somercotes Ct, Wattle Grove NSW 2173	<ul style="list-style-type: none"> • Children's playground • Grass open space • Bicycle and walking paths 	Park Public Open Space	3.5km (direct walking route)

Facility Name	Address	Facilities	Type of Open Space Public / Private	Proximity to Subject Site
Saint Mark's Coptic Orthodox College	52 Australis Ave, Wattle Grove NSW 2173	<ul style="list-style-type: none"> Grass playing field 	Private Open Space	2.2km (direct walking route)
Unnamed Park	15 Famborough Circuit, Wattle Grove NSW 2173	<ul style="list-style-type: none"> Modern Children's playground Bicycle and walking paths Grass open space 	Park Public Open Space	2.4km (direct walking route)
Daintree park	63-65 Daintree Drive, Wattle Grove, NSW, 2173	<ul style="list-style-type: none"> Bicycle and walking paths Grass open space 	Landscape & Amenity Public Open Space	2.8km (direct walking route)
Unnamed Open Space (various)	22 Beddington Circuit, Wattle Grove, NSW, 2173	<ul style="list-style-type: none"> Grass open space 	Landscape & Amenity Public Open Space	1.5km (direct walking route)
Unnamed Park	48 Mubo Crescent, Holsworthy, NSW, 2173	<ul style="list-style-type: none"> Modern Children's playground Bicycle and walking paths Grass open space 	Parks Public Open Space	1.4km (direct walking route)
Satelberg Park	8 Satelberg Street, Holsworthy, NSW, 2173	<ul style="list-style-type: none"> Swing set Grass open space 	Park Public Open Space	1.2km (direct walking route)
Unnamed reserve	12 Mariala Circuit, Holsworthy, NSW, 2173	<ul style="list-style-type: none"> Heavily vegetated reserve 	Landscape & Amenity Public Open Space	1.0km (direct walking route)
Harris Creek Reserve	Various	<ul style="list-style-type: none"> Modern children's playground Bicycle and walking paths Grass open space 	Park Public Open Space	<1.0km (direct walking route)
Remount Park	2 Light Horse Parade, Holsworthy NSW 2173	<ul style="list-style-type: none"> Statue Bicycle and walking paths 	Park Public Open Space	<1.0km (direct walking route)
Salamaua Park	1 Komiatum Street, Holsworthy NSW 2173	<ul style="list-style-type: none"> Modern children's playground 	Park Public Open Space	1.4km (direct walking route)
St Christopher's Catholic Primary School	205 Heathcote Rd, Moorebank NSW 2173	<ul style="list-style-type: none"> 1 x basketball court Grass open space 	Private Open Space	1.4km (direct walking route)
Holsworthy High school	Huon Cres, Holsworthy NSW 2173	<ul style="list-style-type: none"> Large areas of open space 2 x multipurpose sports fields 	Private Open Space	<1.0km (direct walking route)
Holsworthy-Wattle Grove Aquatic Education Centre	26 Huon Cres, Holsworthy NSW 2173	Swimming Pool	Indoor sports facility	<1.0km (direct walking route)
Hammondville Public School	Walder Rd, Hammondville NSW 2170	<ul style="list-style-type: none"> Large areas of open space 1 x basketball court 	Private Open Space	2.1km (direct walking route)
Jo Gaffney Park	7A Morley Avenue, Hammondville NSW, 2170	<ul style="list-style-type: none"> Children's playground Open Space 	Park Public Open Space	2.1km (direct walking route)
Moorebank Football Club	Heathcote Road, Hammondville NSW, 2173	<ul style="list-style-type: none"> Two soccer fields 5 x netball courts 	Outdoor sports area Public Open Space	950m (direct walking route)
Moorebank Baseball Softball Club	230 Heathcote Rd, Hammondville NSW 2170	<ul style="list-style-type: none"> 1 x large multipurpose sports field 1 x softball/baseball specific field 	Outdoor sports area Public / Private Open Space	750m (direct walking route)

Facility Name	Address	Facilities	Type of Open Space Public / Private	Proximity to Subject Site
Hammondville Park	230 Heathcote Rd, Hammondville NSW 2170	<ul style="list-style-type: none"> • Large multipurpose sports oval 	Outdoor sports area Private Open Space	750m (direct walking route)
Moorebank Cricket	230 Heathcote Rd, Hammondville NSW 2170	<ul style="list-style-type: none"> • 2 x cricket ovals with synthetic pitches • 5 x cricket nets • Amenities building 	Outdoor sports area Public Open Space	600m (direct walking route)
Unnamed Cricket Oval	Heathcote Rd, Hammondville NSW 2170	<ul style="list-style-type: none"> • Multipurpose oval – accommodating cricket and AFL oval 	Outdoor sports area Public Open Space	400m (direct walking route)
Voyager Park	13 Orlando Crescent, Voyager Point, NSW 2172	<ul style="list-style-type: none"> • Tennis Court • Amenities Building • Children's playground • Open space • Bicycle and walking paths • Small lake • Parking 	Park & Outdoor sports area Public Open Space	2.3km (direct walking route)
Unnamed Park	Sirius Road, Voyager Point, NSW 2172	<ul style="list-style-type: none"> • Soccer field 	Outdoor sports area Public Open Space	2.5km (direct walking route)
Creekwoods Reserve	Creekwood Drive, Voyager Point, NSW 2172	<ul style="list-style-type: none"> • Naturally vegetated reserve 	Landscape & Amenity Public Open Space	2.2km (direct walking route)
Please Point Reserve	5 Green St, Pleasure Point NSW 2172	<ul style="list-style-type: none"> • Open Space and natural vegetation 	Landscape & Amenity Public Open Space	3.8km (direct walking route)

Educational Facilities

Schools

There are six schools in the Holsworthy – Wattle Grove SA2 area, including four primary, one secondary, and one combined primary and secondary school. Four of the six schools are government operated, and two are non-government operated.

In 2016 there was a total of 3522 enrolments in primary and secondary schools, having grown from 3346 in 2011, an increase of 5.2% (+176). Of the four primary schools, between 2011 and 2016 enrolments increased by 6.2% (+132). Of the school that is only secondary (Holsworthy High School), enrolments have decreased by 1.6% (-11) between 2011 and 2016.

Table 9 Primary and High Schools in Holsworthy – Wattle Grove SA2

School Name	Address	Type	Sector	Enrolments 2011	Enrolments 2016
Hammondville Public School	Walder Rd, Hammondville NSW 2170	Primary	Government	543	436
St Christopher's Catholic Primary School	205 Heathcote Rd, Moorebank NSW 2173	Primary	Non – Government	425	528
Holsworthy Public School	36 Infantry Parade, Holsworthy NSW 2173	Primary	Government	572	690
Wattle Grove Public School	Cressbrook Dr, Wattle Grove NSW 2173	Primary	Government	582	600

School Name	Address	Type	Sector	Enrolments 2011	Enrolments 2016
Saint Mark's Coptic Orthodox College	52 Australis Ave, Wattle Grove, NSW 2173 Australia	Primary & Secondary	Non – Government	528	583
Holsworthy High School	Huon Cres, Holsworthy NSW 2173	Secondary	Government	696	685
Total				3346	3522

Source: MySchools Website

Childcare services

Liverpool City Council runs six early education and care centres, and one preschool, providing care for children aged 0-5. The centres are located throughout the local government area, including two which are located in the Holsworthy-Wattle Grove SA2 district.

In the Six Month Progress Report, July – December 2016, Council reported that it had achieved a utilisation rate of 108% for the September quarter, and 102% the December quarter. This above Council's target utilisation rate of 93%.

In addition to the Council operated childcare facilities, there are nine privately operated childcare centres in the Holsworthy – Wattle Grove SA2 District.

Table 10 Council Operated Long Day Care / Preschool Centres Liverpool LGA

Facility Name	Address	Age Cohort	Proximity to Study Area	Proximity to Subject Site *
Casual Pre-School	39 Ingham Drive, Casula NSW 2170	3 – 5 years	6km	8km
Cecil Hills Early Education and Care Centre	161 Sandringham Drive, Cecil Hills NSW 2171	6 weeks - 5 years	20km	22km
Hinchinbrook Early Education and Care Centre	Lot 934 Hinchinbrook Drive Hinchinbrook NSW 2168	6 weeks - 5 years	13km	15km
Holsworthy Early Education and Care Centre	55 Infantry Parade, Holsworthy NSW 2170	6 weeks - 5 years	Within study area.	1km
Prestons Early Education and Care Centre	2 Box Road, Prestons NSW 2170	6 weeks - 5 years	7km	9km
Warwick Farm Early Education and Care Centre	68 Williamson Cres, Warwick Farm NSW 2170	6 weeks - 5 years	8km	10km
Wattle Grove Early Education and Care Centre	42 Village Way, Wattle Grove NSW 2170	6 weeks - 5 years	Within study area.	2.5km

Source: Liverpool City Council & mychild.gov.au

*Distance to Subject Site is an approximation calculated using Google walking and driving distances from the closest point of the Subject Site.

Table 11 Non-Council Day Care / Preschool Centres in Holsworthy - Wattle Grove SA2 District

Facility Name	Address	Age Cohort	Capacity	Vacancy	Proximity to Subject Site*
Wattle Grove Long Day Care Centre	8-10 Burdekin Court, Wattle Grove NSW 2173	16 weeks to pre-school age	45 places	Not provided.	3.5km
Anzac Village Preschool	3 Chauvel Ave, Holsworthy NSW 2173	3 – 5	Data not available	Not provided.	3.5km
St George Montessori Long Day Care Centre	13 Walder Rd, Hammondville NSW 2170	0 – 5	Data not available.	Not provided.	3.5km
Clever Munchkins Early Learning Centre	71 Walder Rd, Hammondville NSW 2170	6 weeks – 6 years	32 places	Not provided.	2.5km
First Grammar Hammondville	30 Fitzgerald Ave, Hammondville NSW 2170	2 – 6 years	102 places	Yes	2.1km
First Grammar Holsworthy / Wattle Grove	105/107 Derna Rd, Holsworthy NSW 2173	2 – 6 years	56 places	Yes	1.9km
Learn & Play Pre-School	81 Bardia Parade, Holsworthy NSW 2173	3 – 6 years	28 places	Yes	2.0km
Holsworthy PRE-School	2 Lighthorse Parade, Holsworthy, NSW 2173	3 – 5 years	40 places	Not provided.	1.5km
Little Diggers Child Care Centre – Moorebank *Not shown on map as it is located on the Holsworthy Barracks.	MacArthur Drive, Holsworthy Barracks, NSW 2173	6 weeks to 5 years old	Data not available.	Restricted to Defence families at this time.	0.5km

Source: Google Maps & mychild.gov.au

*Distance to Subject Site is an approximation calculated using Google walking and driving distances from the closest point of the Subject Site.

Libraries

Liverpool Council operates six libraries throughout the LGA, comprising of four branches, a main city branch, and a new state of the art library in Carnes Hill. Refer to **Table 12** below. None of the Council libraries are located within the study area, nor are they in close proximity.

Refer to **Figure 2** below for the geographical distribution of the libraries.

Table 12 Library Facilities Summary

Facility Name	Address	Proximity to Study Area*	Proximity to Subject Site*
Moorebank Library	Nuwarra Rd & Maddecks Ave, Moorebank NSW 2170	2.7km	4km
Liverpool Library	170 George St, Liverpool NSW 2170	4.1km	6.5km
Casula Library	39 Ingham Dr, Casula NSW 2170	5.6km	9.6km
Panania Library	Cnr Tower Street & Anderson Avenue, Panania NSW 2213	7.2km	9.6km
Miller	Miller Shopping Centre, Shop 18A 90 Cartwright Avenue, Miller, NSW 2168	8.6km	11.0km
Carnes Hill	600 Kurrajong Road, Carnes Hill, NSW, 2171	12.1km	14.5km

*Distance to Subject Site is an approximation calculated using Google walking and driving distances from the closest point of the Subject Site.

Figure 2 Geographical Distribution of Libraries



Source: Basemap Nearmap, Analysis Architectus

Aged Care Services

There is one aged care village within the Holsworthy – Wattle Grove SA2, being HammondCare, located at 11-23 Judd Avenue, Hammondville, NSW 2170. In addition, HammondCare also provide home care services.

There are multiple residential aged care centres throughout the Liverpool LGA. The next closest aged care facilities are clustered around the Liverpool CBD at 6km to the northwest of the subject site. Meals on Wheels service is provided at 92 Memorial Avenue, Liverpool.

Table 13 Aged Care Services

Facility Name	Address	Capacity	Proximity to Subject Site
HammondCare	11-23 Judd Avenue, Hammondville, NSW 2170	<ul style="list-style-type: none"> • 124 place mixed low and high-care home • 83 place dementia care cottages • 40 place low care dementia cottages (The Meadows) • 40 place low care dementia cottages (The Pines) 	3km

Emergency Services

There is only one emergency service located within the Holsworthy – Wattle Grove SA2, consisting of Fire and Rescue NSW (Liverpool Fire Station), located at Anzac Road, Moorebank NSW 2173.

The Liverpool Hospital, including an emergency department and community health services, is located approximately 6.5km north west of the subject site.

Community Centres

Liverpool City Council recently undertook a project to upgrade the existing bathrooms at the Wattle Grove Community Centre.

Wattle Grove Youth Centre is located at Australis Park and is fully accessible facility with adjacent netball and tennis courts.

In 2016, the provision of two community centres (excluding Voyager Point Community Centre – not for casual hire) within the Holsworthy – Wattle Grove SA2 resulted in a provision of 1 per 10,353 people. The provision has changed from 2011, when there was 1 community centre per 9773.5.

Table 14 Community Centres

Facility Name	Address	Capacity	Facilities	Proximity to Subject Site
Wattle Grove Youth Centre	2071 Australis Avenue, Wattle Grove, NSW 2173	Up to 60 people	Function room	2.3km
Wattle Grove Community Centre	8 Village Way, Wattle Grove NSW 2173	15, 50, 100 people	Full kitchen Outdoor covered area Large and small function room Two licenced areas Chairs and Tables for hire Bathroom facilities Parking	2.6km

Facility Name	Address	Capacity	Facilities	Proximity to Subject Site
Voyager Point Community Centre	50 Orlando Crescent, Voyager Point	Not for casual hire	Full kitchen Function room Licenced area Bathroom facilities Parking	2.3km

4.2 Regional

Hospitals

The closest hospitals to the site are Liverpool Public Hospital located 6.5km to the north west, and Bankstown-Lidcombe Hospital, located 11.8km to the north east of the site. Bankstown-Lidcombe Hospital has between 200 and 500 beds and an emergency department. Liverpool Public Hospital has over 500 beds and an emergency department.

Sydney Southwest Private Hospital, located in Liverpool city centre, has 87 beds and is located 6.9km to the north west of the site.

University

The Western Sydney University Bankstown Campus at Milperra is located 8.2km to the north east of the subject site. The campus is home to multiple University faculties, library, sporting facilities, a gym, and student accommodation.

Regional sporting facilities

A number of regional sports facilities are located in close proximity to the site, focused on the eastern side of Heathcote Road. Facilities include:

- Kokoda Oval – Cricket oval;
- Moorebank Baseball / Softball Club and park;
- Hammondville Oval – Includes a small grandstand adjacent to the Moorebank Football Club;
- Moorebank Football Club and adjacent three rectangular football fields;
- Five (5) x hardstand netball courts.

4.3 Summary of findings

Parks, Playing Fields, and Open Space

There is a variety of passive and active open space distributed throughout the district, supporting a broad range of uses and providing good accessibility. In 2016, the provision of open space was 4.9ha per 1000 people, substantially above the broadly recognised minimum standard of 2.83ha per 1000 people.

In addition, the provision of playgrounds meets the benchmark of 13, for an area comprising 6326 dwellings in 2016.

Schools

In 2016 there was a total of 3522 enrolments in primary and secondary schools, having grown from 3346 in 2011, an increase of 5.2% (+176). Of the four primary schools, between 2011 and 2016 enrolments increased by 6.2% (+132). Of the school that is only secondary (Holsworthy High School), enrolments have decreased by 1.6% (-11) between 2011 and 2016.

Childcare

The seven early education and care centres operated by Liverpool City Council in the study area achieved a utilisation rate of 108% for the September quarter, and 102% in the December quarter 2016. This coupled with limited availability in the nine privately operated childcare centres in the study area highlights a need for additional childcare facilities in the SA2. However when referenced against the benchmark standard in Table 7, the provision of childcare facilities are ample at 16 centres, compared to the benchmark standard of 10 (Long day care centre (6) + pre-school (4) combined benchmark).

It is noted that there is no childcare facility in the precinct surrounding Holsworthy Station.

Libraries

Liverpool Council operates six libraries throughout the LGA, comprising of four branches, a main city branch, and a new state of the art library in Carnes Hill. Refer to Table 12 above. None of the Council libraries are located within the study area, nor are they in close proximity. With reference to the benchmark standard at Table 7, the district requires an under supply of 2 library branches.

It is noted that Section 94 contributions under Council's Contributions Plan includes provision for expansion to the Liverpool City library network. Therefore, it is anticipated that future library requirements will be funded through Section 94 Contributions at DA stage.

Aged Care

There is one aged care village within the Holsworthy – Wattle Grove SA2, being HammondCare, located at 11-23 Judd Avenue, Hammondville. In addition, HammondCare also provide home care services.

Council's *Ageing Strategy and Action Plan* notes the national policy shift toward increasing home care service delivery. The proposed development will provide accessible and adaptable housing in accordance with relevant standards, accordingly providing potential dwellings for older persons.

Emergency Services

There is only one emergency service located within the Holsworthy – Wattle Grove SA2, consisting of Fire and Rescue NSW (Liverpool Fire Station), located at Anzac Road, Moorebank NSW 2173.

The Liverpool Hospital, including an emergency department and community health services, is located approximately 6.5km north west of the subject site.

A medical centre is located at Wattle Grove Shopping Village 2.6km north west of the site.

With reference to the benchmark standard for social infrastructure at Table 7, the district requires 1 community health centre. A multipurpose space within the retail space, or a small community meeting space, may provide some local health service role such as a baby health clinic or senior citizens centre.

Community Centres

In 2016, the provision of two community centres (excluding Voyager Point Community Centre – not for casual hire) within the Holsworthy – Wattle Grove SA2 resulted in a provision of 1 per 10,353 people.

In accordance with the medium benchmark standards at Table 14, there is a need for 4-5 new community centres, two small, and one large meeting hall.

There is opportunity to work with schools in the local area for co-use of their facilities by the community. Facilities such as halls, large classrooms and gathering spaces, can serve the function of providing community centres and meeting halls.

5.0 Social Impact Assessment

5.1 Population growth

Potential Change

Across the Liverpool Local Government Area, dwellings in high rise apartment buildings have an average occupancy of 2.39 persons per household. Applying this average to the proposed 438 apartments would result in an expected population increase of approximately 1,047 persons. This represents a 5% increase in the local SA2 population. Estimated population by age cohort is shown in **Table 15**.

This housing form would depart from the existing surrounding residential uses adjacent to the site, which are primarily low to medium density.

Table 15 Forecast No. of Persons by Age Cohort on the Subject Site

Age Group	Composition of Potential Change (based on SA2 age bracket %)
0-4 years	84
5-9 years	79
10-14 years	7
15-19 years	79
20-24 years	74
25-29 years	101
30-34 years	84
35-39 years	82
40-44 years	83
45-49 years	79
50-54 years	70
55-59 years	54
60-64 years	38
65-69 years	29
70-74 years	22
75-79 years	14
80-84 years	12

Age Group	Composition of Potential Change (based on SA2 age bracket %)
85 years and over	15
Total Population	1047

Source: Age group forecast based on 2016 Holsworthy – Wattle Grove SA2 Time Series Profile

Potential Impacts

The social impacts are identified as:

- Increasing the supply of housing on the site and locality;
- Increasing the diversity of housing typologies to accommodate different household types in affordable dwellings relative to lower density alternatives;
- The provision of high density mixed use development will change the low-density character of the area.
- Population growth resulting from the development would generate demand for social infrastructure and community facilities. This is analysed in **Section 6.0** below.
- Increasing the residential population, and providing a range of commercial and retail uses as part of the proposed development will activate the site and surrounds. This will likely result in increased safety for uses through increased passive surveillance and territorial reinforcement.

Significance of impact

The potential impact of population from the proposed development would be significant due to the extent of the population growth compared to growth over the last four census periods. The forecast population growth of an additional 1015 is close to the total population increase between the 2011 and 2016 Census periods.

The proposed development will increase the existing population by 5%, increasing the 2016 population of 20,706 (2016 Census) to 21,753. This is within the Bureau of Transport forecast 2021 population of 22,317 (refer to **Table 3**).

Due to the existing use of the site being vacant, the proposed development results in a significant intensification of site, representing a substantial alteration of the site's character and relationship to surrounding areas.

Table 16 SA2 Population Change between Census periods

2001		2006		2011		2016	Potential change
17393	+454	17847	+1702	19549	+1157	20706	+1015

Source: ABS Holsworthy – Wattle Grove SA2, 2016 Time Series Profile

5.2 Social infrastructure

Potential Change

The increased residential population of the site, coupled with the existing undersupply of social infrastructure would result in increased demand for community centres, meeting halls, library branches, community health care, playground and potential for additional childcare centres.

However, the proposed development would not result in the loss of open space or existing community infrastructure.

Potential Impacts

The likely residential population of the proposed development given full take up of the development capacity would generate such demand for local social infrastructure as indicated in the following table.

Table 17 Social Infrastructure Assessment

Facilities / Service	Benchmark*	Optimum (only one range)	High range	Medium range	Low range
<i>Halls and Centres</i>					
Youth Centre	1:10,000-30,000 people		0.1	0.1	0.0
Small Community Centre	1:3,500-6,000 people		0.3	0.2	0.2
Large Community Centre	1:15-20,000 people		0.1	0.1	0.1
Small Meeting Hall	1:10,000 people	0.1			
Large Meeting Hall	1:20-30,000 people		0.05	0.04	0.03
<i>Libraries</i>					
Library Branch	1:10,000 people	0.1			
<i>Childcare and education</i>					
Long day child care centres	1:320 children aged 0-5 years	0.3			
Pre-school	1:4-6,000 people		0.3	0.2	0.2
Primary school	1:1,500 new dwellings	0.3			
Secondary school	1 school: 6,000-7,500 new dwellings		0.07	0.06	0.06
Public High School	1:4,500 dwellings	0.10			
<i>Health</i>					
Community Health Centre	1:20,000 people	0.05			
<i>Open Space</i>					
Playgrounds	1:500 dwellings	0.9			

Source: Benchmark based on the NSW Department of Planning and Infrastructure Draft Development Contributions Guidelines (2009), and Growth Centres Development Code

Significance of impact

The existing shortfall in social infrastructure provision in the District (refer to Table 7), combined with an additional 1015 residents will create additional demand for facilities. New opportunities should be explored for the provision of new community spaces, both on-site and/or using existing school facilities in the local area.

5.3 Accommodation***Housing choice***

The proposed development introduces a new housing typology for this area. The area currently comprises a mix of low and medium density housing, with no apartment offering, despite strong connectivity to Central Sydney, Sydney Airport and the south-west via train services from Holsworthy Station. Apartment choice in this location is consistent with trends of providing high density housing adjacent to train stations across the Sydney Metropolitan Area, including other centres along the East Hills Train Line, such as Revesby, Panania and East Hills.

Further, future development should provide a mix of one, two and three or more bedroom dwellings to ensure a mixed demographic and market appeal, and maximise opportunities for housing choice. This may be embedded as a DCP control, or during the DA process in response to Apartment Design Guide requirements for apartment variety.

Displacement and loss of housing

The subject site is currently vacant. It has been subject of previous development approvals for retail and mixed use retail/residential developments. Given the site's current vacancy, this planning proposal will not result in displacement of any persons or existing housing stock.

5.4 Accessibility

This Planning Proposal maintains the mixed use nature of future development on the site, maintaining the potential for retail and commercial development in a highly accessible location, adjacent to the Holsworthy Railway Station. It will result in the opportunity for new services, fresh food, health premises (medical centre and/or pharmacy) and the like, to be located in an accessible location and better service the local population catchment. It also will result in the provision of such facilities to meet contemporary access standards, improving access for people with disability or mobility issues.

5.5 Community Structure, health & wellbeing***Potential Change***

The proposed development would significantly alter the character of the existing site and depart from surrounding uses. It also maintains the ability for the site to provide new and enhanced commercial, retail offerings which may include health and wellbeing offerings in this local area, which currently do not exist within walking distance of Holsworthy Station.

The proposal will lead to changes with respect to the traffic situation in this area, along with changes to pedestrian movements around Holsworthy Station, with a likely increase in movement between the site and Railway Station.

Future construction of the site may result in some concerns from the local community with respect to noise, air quality and construction vehicle movement in and out of the site, however such issues are generally addressed through conditions of consent on a Development Application.

The improvements to housing choice will also assist in allowing for ageing in place and families and communities to stay close to one another by providing a housing option that is more affordable than current suburban housing stock, but in close proximity to familiar family and community networks.

Apartments often result in an increase in population transience. In some cases, this may result also contribute to perceptions of crime or danger, and a reduced sense of belonging or friction between existing and new communities. The provision of retail facilities on the site will activate the site, and provide good perceptions of safety and crime prevention.

Potential Impacts

- Change in use of the site, coupled with significant intensification of development has the potential to cause concern for existing residents. Increased density has the potential to generate perceptions of negative social impacts such as a lack of services;
- Increased traffic in and around the site generated by substantial residential development could impact on the safety of pedestrians and other drivers; and
- The co-location of residential uses, services and public transport increases opportunities for walking and access to services.
- Reduced sense of belonging and tensions between existing and new communities.
- Positive impacts for community cohesion and choice with respect to opportunity to provide a variety of housing to improve prospects of households being capable of staying close to family and community networks.
- Activation of the site through provision of retail.

Significance of impact

Appropriate traffic calming measures within and around the site, in addition to improvements to the local traffic network should be employed to mitigate any potential safety impact associated with increased traffic. The Traffic and Transport Assessment that forms part of the Planning Proposal will address these impacts.

The changing nature of the site is integral to the planning proposal. The retail activation of the site will play a key role in mitigating the potential perceptions around provision of apartments, activating the site and its surrounding, and enhancing community cohesion.

Other identified impacts are generally addressed through appropriate conditions of consent placed on future development applications.

5.6 Crime and safety

Potential change

The planning proposal maintains the zoning allowance for retail and commercial development on the subject site, allowing for future shops and transport options to remain in walking distance to the surrounding communities.

The proposal provides new opportunities for households to remain close to existing family and community networks, assisting with social cohesion.

The proposal will result in an increase in population in this precinct, encouraging further activation of the area, particularly on weekends and evenings, particularly immediately surrounding the site which is currently vacant.

5.7 Local amenity

Potential Change

The proposed development would involve the urban renewal of a vacant, inaccessible site. The development will introduce public domain, open space and provide a centre point to the district.

The population growth associated with the proposed development would result in the activation of the site and its surrounds, which is likely to attract the provision of further retail, services, and facilities.

Potential Impacts

- The provision of a greater quantum and diversity of retail and community facilities to service the additional residential population would potentially benefit existing and future residents through increased convenience and choice;
- The renewal of the site and associated investment involves the opportunity to increase local amenity through the provision of public infrastructure (including footpaths, street trees, landscaping and open space). The proposed development includes the creation of public domain on site to foster a greater sense of community and place; and
- Increased residential population in the locality will produce additional activation of the site and surrounding area, promoting passive surveillance that would result in perceived and actual improvements to safety of users.

Significance of impact

The extent of investment associated with the proposed development would directly impact improvement to local amenity, through the provision of new public domain, open space and upgrading of existing adjacent road and footpath networks.

The greater convenience and diversity of retail offering within the development is discussed in the Economic Impact Assessment prepared for the Planning Proposal.

Additional activation of the site and passive surveillance of the site and its surrounds is likely to result in perceived and actual improvement to safety of users.

5.8 Local economy and employment opportunities

Potential Change

The planning proposal will maintain the capacity of the site to provide for retail and commercial uses. Upon development of the site, there is potential to create opportunities for new businesses as well as employment opportunities associated with the retail, commercial and child care centre spaces. There is currently no local retail or commercial offerings within walking distance of the station. As such, the proposal provides a brand new offering for local residents.

Potential Impacts

- The proposal provides new business opportunities for locals and non-locals alike.
- The proposal provides new employment opportunities for local residents in an accessible location;
- An increase in population will add to the potential client base of local businesses that may locate in the future retail centre.

Significance of impact

The proposed development will provide significant economic and employment opportunities, currently not available in this location given the site is the only one zoned in this local area for non-residential uses, and it is currently vacant.

The greater convenience and diversity of retail offering within the development is discussed in the Economic Impact Assessment prepared for the Planning Proposal. However, overall the proposal provides new opportunities for local employment in an accessible location.

6.0 Social Infrastructure Requirements

This Chapter provides an assessment of what elements of social infrastructure would be most effectively and relevantly provided on site, and what additional demand could be best addressed through augmentation of existing facilities or provision off site.

This Chapter employs the benchmark standards of social infrastructure provision provided in Chapter 5 as guidelines. Assessment of the impact likely to emanate from the resident population of the site resulted in additional demand generated for branch library services, small and large community centres, small and large meeting halls, community health care, playground, and child care services. While the additional population didn't meet the threshold of provision required for at least one additional facility, the augmented population coupled with existing under supply of certain social infrastructure items catalyses the need for additional facilities or services, or consideration toward the delivery of services through existing facilities.

6.1 Community facility requirements

An audit of local facility requirements has identified a significant shortfall in local meeting spaces, including:

- Community centres;
- Meeting spaces;
- Community halls

The proposed development adds some additional pressure on the existing shortfall of such facilities. A number of options should be explored to address this demand, including:

1. Provision of a small community space provided within the building. The advantage of this would be that it is highly accessible, however, the management and ownership burden of this would need to be considered, given the facility would be within a mixed use retail and residential building.
2. Co-use of existing school facilities. Council may negotiate a system to make school facilities, in particular halls, meeting spaces, open spaces and the like, open to the public on weekends, school holidays and evenings, when not in use for school purposes.
3. Local community facilities are facilitated for through Section 94 contributions.

Library services

The proposed development will place additional demand on existing library services, which already currently fall under the benchmark provision used for this SIA. Notwithstanding, the proposed development will be required to contribute to extension of the Liverpool Library network, which includes a local branch at Moorebank. As such, it is considered that the identified impact would be adequately addressed through contributions.

Child Care Centres

Council run child cares in the Liverpool LGA are running at capacity due to high demand. A number of local privately run child care centres have some limited vacancies. Notwithstanding, there is no child care centre located within an immediate walking catchment of the site. Given the high commuter role of Holsworthy Station, a child care centre on site will assist in alleviating pressure on existing child care centres, as well as provide a practical location adjacent to Holsworthy Station to cater for working parents travelling via Holsworthy Station.

Health facilities/services

The Liverpool Hospital, including an emergency department and community health services, are located approximately 6.5km north west of the subject site. In addition, a private medical centre is located at Wattle Grove Shopping Village, 2.6km north west of the site.

It is recommended that a medical centre is provided as part of the redevelopment due to the significant uplift in population, the low accessibility to Liverpool hospital and ancillary health services, and the small quantum of medical practices in the immediate area, comprising of one medical centre.

Education: Schools

The proposed development will increase the proportion of school aged children in the local area. Two local government schools, one primary and one secondary, have experienced a slight decline in enrolments. There does not appear to have been significant changes to the built form of these facilities in recent years, suggesting there should be capacity for the proposed growth forecast for the proposed development.

Non-government schools have not been contacted for the purposes of this SIA, however, there are a range of Catholic and independent school options available for the proportion of the population that attend these schools.

Government Agency Community Facilities

State and Commonwealth agency outlets are often located in regional or district centres. Liverpool and Bankstown are the closest centres which provide these facilities – such as RMS, Centrelink, Medicare etc. The subject site is not suitable for such facilities given its limited local catchment.

6.2 Open Space and recreational requirements

The local area is well serviced by a range of passive and active recreational opportunities. The immediate walking catchment of the site lacks a local park or playground, given the difficulty in crossing Holsworthy Road. Given the local area is largely a community title development, the subject site should provide generous communal open space which provides good family play spaces and a variety of passive and active recreational areas.

7.0 Mitigation measures

In conclusion, this planning proposal will result in largely positive social impacts, contributing to housing choice and the provision of services, retail and commercial space close to Holsworthy Railway Station. To mitigate against potential negative impacts:

1. **Childcare facilities:** provision of a new child care centre on site would benefit both future residents of the development, as well as the high number of commuters who utilise Holsworthy Station to commute to work or study commitments. As there are no childcare centres in close proximity to the station, provision of one on-site would provide significant benefit.
2. **Consideration of tenancies within the retail space:** Given the current lack of non-residential space around Holsworthy Station, there will be significant social benefit to the local and future population in providing particular tenancies within the retail and commercial component of the development, including consideration of a medical centre and pharmacy, as well as potential wellbeing tenancies such as gyms or local community spaces.
3. **Considerations for future DAs:**
 - a) Prepare a Crime Prevention through Environmental Design Report to ensure the public domain interface and building design considers appropriate safer by design principles, particularly given the broader community perception that increased density often means an increase in crime.
 - b) Ensure the retail space includes areas where both existing and future communities can enjoy and interact, such as outdoor dining spaces, a small urban square or similar.
 - c) Communal open space for future residents should provide a variety of active and passive play spaces, particularly given the barrier created by Holsworthy Road in terms of accessing open space to the east and north-east of the site. Communal open space should provide appropriate family play spaces and communal gathering spaces to ensure residents have easy access to such facilities.
4. **Broader recommendations to Council:** Consider the opportunities to create new community spaces, either through the following (or a combination of these):
 - a) Co-use of school facilities – given the number of local schools and the facilities they provide, Council could enter into an agreement for the utilisation of school open space and facilities after hours, on weekends and during school holiday periods.
 - b) Utilise existing Section 94 arrangements to meet the expected demand for facilities.

Attachment A – Data tables

Table 18 Five Year Age Group by SA2 (2011 – 2016)

Age Group	2001	Age bracket as % total	2006	Age bracket as % total	2011	Age bracket as % total	2016	Age bracket as % total	Change
Total Persons									
0-4 years	2034		1660		1619		1666		-18%
5-9 years	1758		1788		1572		1565		-11%
10-14 years	1268	29%	1487	28%	1637	25%	1458	23%	15%
15-19 years	1033		1194		1442		1571		52%
20-24 years	1238		1333		1437		1466		18%
25-29 years	1731		1329		1523		1446		-16%
30-34 years	2079		1687		1506		1661		-20%
35-39 years	1738	45%	1759	41%	1706	39%	1624	38%	-7%
40-44 years	1308		1552		1689		1651		26%
45-49 years	894		1149		1480		1561		75%
50-54 years	707		891		1162		1387		96%
55-59 years	465		638		826		1086		134%
60-64 years	286	21%	440	26%	607	29%	748	31%	162%
65-69 years	227		261		426		585		158%
70-74 years	185		193		275		432		134%
75-79 years	153		185		220		278		44%
80-84 years	132		137		214		237		62%
85 years and over	157	5%	164	5%	207	7%	283	9%	32%
Total Population	17393		17847		19549		20706		12%

Source: Holsworthy – Wattle Grove (127031524) 73.7 sq Kms, 2016 Census of Population and Housing Time Series Profile, Australian Bureau of Statistics (ABS)

Table 19 Household Composition by SA2 – Holsworthy - Wattle Grove SA2 (ABS Census 2011 - 2016)

Household Composition	2001	2001 % of Total households	2006	2011	2016	2016 % of Total households	Liverpool LGA – 2016 % of Total Households	Change 2001 – 2016	% Change
Couple family with Children	2792	55%	2716	2919	3367	61.5%	57.0%	575	21%
Couple family with no children	1170	23%	1035	1169	1364	24.9%	23.2%	194	17%
One Parent Family	436	8.6%	529	575	687	12.5%	18.2%	251	58%
Other Family	24	0.5%	26	34	60	1.1%	1.5%	36	150%
Total Family Households	4422	87.0%	4306	4697	5287	86.7%	82.6%	865	20%
Lone Person Household	146	9.6%	97	113	732	12%	15.7%	586	401%
Group Household	68	1.3%	97	125	82	1.3%	1.8%	14	21%
Other Household	102	2.0%	68	125	NA	NA	NA	NA	NA
Total	9580		9368	10276				696	7%

Source: ABS Quick Stats, 2001, 2006, 2011, 2016

Table 20 Country of Birth by SA2 (2001, 2006, 2011, 2016)

Country of Birth	2001	2006	2011	2016	2016 % Total Population	Change	% Change
Australia	12,148	12,800	13,516	13,678	66%	1,530	12.6%
Born elsewhere	688	748	981	1,119	5%	431	62.7%
India	457	557	878	956	5%	499	109.2%
United Kingdom	669	547	534	496	2%	173	-25.9%
Philippines	395	445	438	425	2%	30	7.6%
Fiji	240	267	333	319	2%	79	32.9%
New Zealand	262	258	295	336	2%	74	28.2%
Egypt	184	241	273	402	2%	218	118.5%
China	160	143	208	318	2%	158	98.8%
Indonesia	70	65	186	215	1%	145	207.1%
Malaysia	112	119	123	106	1%	6	-5.4%

Source: Holsworthy – Wattle Grove (127031524) 73.7 sq Kms, 2016 Census of Population and Housing Time Series Profile, Australian Bureau of Statistics (ABS)

Table 21 Birthplace of parents

Country of Birth	Holsworthy – Wattle Grove		New South Wales		Australia	
	Number	%	Number	%	Number	%
Both parents born overseas	7,722	42.9	2,764,170	37.0	8,051,196	34.4
Father only born overseas	1,324	6.7	458,394	6.1	1,488,092	6.4
Mother only born overseas	831	4.9	325,182	4.3	1,094,591	4.7
Both parents born in Australia	8,803	40.8	3,399,725	45.4	11,070,538	47.3

Source: Birthplace of parents, stated responses, ABS Census (2016)

Table 22 Religious Affiliation by SA2 (2001 – 2011)

Religious Affiliation	2001	2006	2011	2016	2016 % Total	Change	% Change
Buddhism	285	288	429	481	2.3%	196	68.7%
Christianity	12659	12424	13498	12763	61.8%	104	0.8%
Hinduism	723	888	1213	1304	6.3%	581	80.4%
Islam	432	477	695	807	3.9%	375	86.8%
Judaism	6	5	11	7	0.03%	1	17%

Source: Holsworthy – Wattle Grove (127031524) 73.7 sq Kms, 2016 Census of Population and Housing Time Series Profile, Australian Bureau of Statistics (ABS)

Table 23 Language Spoken at home by SA2 (2011 – 2016)

2001			2006			2011			2016		
Language	Number	% Total	Language	Number	% Total	Language	Number	% Total	Language	Number	% Total
Speaks English Only	12802	73.3	Speaks English Only	13194	73.7	Speaks English Only	13629	69.2	Speaks English Only	13541	65.4
Arabic	448	2.6	Arabic	565	3.2	Arabic	624	3.2	Arabic	829	4.0
Tagalog	369	2.1	Tagalog	427	2.4	Hindi	512	2.6	Hindi	489	2.4
Hindi	341	2.0	Hindi	368	2.1	Tagalog	393	2.0	Mandarin	389	1.9
Greek	264	1.5	Greek	299	1.7	Greek	297	1.5	Greek	330	1.6
Cantonese	246	1.4	Cantonese	209	1.2	Cantonese	280	1.4	Tagalog	284	1.4

Source: Holsworthy – Wattle Grove (127031524) 73.7 sq Kms, 2016 Census of Population and Housing Time Series Profile, Australian Bureau of Statistics (ABS)

Table 24 Language Spoken at home Liverpool LGA (2001 – 2011)

2001			2006			2011			2016		
Language	Number	% Total	Language	Number	% Total	Language	Number	% Total	Language	Number	% Total
Speaks English Only	90,878	59	Speaks English Only	92,296	56	Speaks English Only	94,012	52.2	Speaks English Only	84,511	41.4
Arabic	9,784	6.4	Arabic	12,592	7.6	Arabic	17,199	9.5	Arabic	23,247	11.4
Hindi	4,924	3.2	Hindi	6,258	3.8	Hindi	8,042	4.5	Hindi	8,142	4.0
Vietnamese	5,554	3.6	Vietnamese	6,676	4.1	Vietnamese	7,838	4.4	Vietnamese	9,974	4.9
Italian	5,827	3.8	Italian	5,338	3.2	Italian	5,105	2.8	Italian	Not released	
Spanish	4,952	3.2	Spanish	5,072	3.1	Spanish	5,066	2.8	Spanish	5,195	2.5
Serbian	3,960	2.6	Serbian	4,783	2.9	Serbian	5,064	2.8	Serbian	4,997	2.4
Filipino	2,682	1.7	Filipino	2,938	1.8	Filipino	3,226	1.8	Filipino	Not released	

Source: Census QuickStats 2001, 2006, 2011, 2016, Australian Bureau of Statistics (ABS)

**ECONOMIC IMPACT
ASSESSMENT**

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**PROPOSED RETAIL CENTRE
DEVELOPMENT,
HOLSWORTHY**

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Leyshon Consulting

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EXECUTIVE SUMMARY

Introduction

This Report has been prepared by Leyshon Consulting Pty Ltd for Prestdel Developments Pty Ltd (Prestdel). The Report presents an Economic Impact Assessment (EIA) of a proposed mixed-use development containing a component of retail floorspace on a site at Holsworthy, New South Wales.

In 2009 Prestdel obtained development consent for a mixed-use development with 7,235m² of retail and 1,600m² of commercial floorspace. The 2009 approval was based on the centre having two supermarkets.

The development now being proposed will be anchored by a full-line supermarket of 3,962m² and a smaller discount supermarket of 1,584m². Specialty retail/commercial floorspace of about 3,129m² is also proposed plus 400 residential units.

Trade Area

The defined trade area for the proposed Holsworthy centre consists of two components, namely:

- ▶ **PTA**—includes the suburbs of Holsworthy, Wattle Grove, Voyager Point, Pleasure Point and Hammondville; and
- ▶ **STA**—the suburb of Moorebank.

The Holsworthy site's location fronting Heathcote Road means the centre will almost certainly attract a significant proportion of its sales from so-called 'passing trade'.

The average household income for the trade area in 2011 (latest available) was \$93,073—almost 10% higher than the Greater Sydney average.

Population

The estimated resident population (ERP) is projected to grow to 32,133 residents in 2021 which equates to an average annual growth (AAG) rate of +1.94% per annum.

Available Spending

Total available annual retail spending in the Holsworthy trade area in 2016 is estimated at \$371.3 million (\$2016). This is projected to increase to \$423.5 million per annum (\$2016) by 2021. The estimated real growth (that is, adjusted for inflation) in annual available spending between 2016-21 is some +\$52.2 million.

EXECUTIVE SUMMARY

Annual available supermarket spending generated in the trade area in 2021 is estimated to be \$135.5 million. This would be sufficient to support 12,900m² of supermarket floorspace based on contemporary average sales levels in the Australian supermarket sector of \$10,500 per m² per annum (\$2016).

At present the Holsworthy trade area contains only some 4,950m² of supermarket floorspace. Accordingly, a significant level of 'escape supermarket spending' must be flowing out of the trade area at present.

The trade area will continue to be under-supplied with supermarket floorspace of at least 7,950m² by 2021 if the proposed development does not proceed.

Existing Retail Hierarchy

The largest centre of relevance is the Liverpool CBD located some 5.3km to the north-west. The Liverpool CBD contains a reported 121,656m² of retail floorspace and had estimated sales in the order of \$670.0 million per annum in 2016 (\$2016).

The CBD contains three national chain supermarkets (Woolworths, Coles and Aldi) plus a large Asian supermarket (Udaya Spices) and several small ethnically-based grocery/food stores.

Casula Mall is a sub-regional centre located approximately 7.4km to the south-west of the subject site. Casula Mall contains a reported 20,391m² of retail floorspace and had sales of \$199.4 million per annum in 2016 (\$2016). The centre is anchored by a Kmart discount department store (DDS) and Coles and Aldi supermarkets.

Wattle Grove Plaza is the centre closest to the subject site. Wattle Grove contains an estimated 3,730m² of retail floorspace and is anchored by a relatively small Coles supermarket. The centre's annual sales are currently in the order of \$48.4 million per annum.

Moorebank Village is located at the intersection of Stockton and Maddecks Avenues, Moorebank. The centre is a large, older-style neighbourhood centre containing about 7,300m² and anchored by a small Woolworths supermarket of about 2,200m². We estimate centre achieved sales of about \$56.0 million per annum in 2016 (\$2016).

The only other centre in the trade area is located on Walder Road at Hammondville. The centre has 17 convenience-related tenancies with its total retail floorspace estimated at 1,300m². Hammondville does not have a 'major' tenant but does contain a small IGA store of some 250m².

EXECUTIVE SUMMARY

In November 2012 Liverpool City Council endorsed the *Liverpool Retail Centres Hierarchy Review* prepared for Council by consultants Hill PDA.

The Review document specifically identifies the existing approval for a new centre on the subject site which is to be known as Holsworthy Plaza. The Review identified the centre could contain some 7,000m² of retail floorspace including Aldi and Coles supermarkets.

In this context, we consider the current Planning Proposal to be consistent with the established and proposed hierarchy of centres in Liverpool Local Government Area.

Impact Assessment

Assuming the proposed centre's first full year of trading is 2020, its annual sales are estimated at \$70.0 million. The majority of these sales (\$54 million or 77.1%) would be generated by the centre's supermarkets.

Of projected total centre sales of \$70.0 million in 2020 approximately \$60.5 million or 86.4% is estimated to be sourced from the trade area. The balance (\$9.5 million, 13.6%) originates from spending by shoppers living outside the trade area.

Sales of \$60.5 million originating from the trade area equates to the centre achieving a market share of 14.7% in terms of total available annual resident spending in 2020 (\$412.5 million).

The potential dollar and percentage impacts of the proposed Holsworthy centre on relevant nearby centres in 2020 are estimated to be:

▶	Wattle Grove	...	-\$7.5 million	(-14.5%)
▶	Moorebank	...	-\$7.4	(-12.5%)
▶	Casula Mall	...	-\$7.9	(-3.6%)
▶	Westfield Liverpool	...	-\$8.8	(-1.6%)
▶	Liverpool CBD Balance	...	-\$5.1	(-3.7%)
▶	Liverpool CBD Total	...	-\$13.9	(-2.0%)
▶	Chipping Norton	...	-\$4.1	(-7.9%)
▶	Hammondville	...	-\$0.3	(-5.1%).

The majority of impacts will fall on supermarket operators in the affected centres. It is highly unlikely, however, that the impacts noted above would lead to the closure of supermarkets in any of the nominated centres.

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EXECUTIVE SUMMARY

The estimated sales impact in 2020 of the proposed Holsworthy centre on Wattle Grove (-14.5%) and Moorebank (-12.5%) would be classified as being in the medium/high range. The estimated impact on Casula Mall, Hammondville, Westfield Liverpool and the balance of the Liverpool CBD all fall in the very low range. The projected impact on the Chipping Norton centre (-7.9%) falls in low/medium range of impact.

Conclusion

In our opinion, the proposed development will not lead to the loss of facilities at Wattle Grove and Moorebank or in other centres. Residents will still have easy access to the same (or a better) range of retail facilities compared with those they currently enjoy including access to a full-line supermarket and an Aldi discount supermarket.

The impacts of the proposal will be mitigated by the significant public benefits associated with creating a new mixed-use, transit-oriented centre at Holsworthy anchored by a full-line supermarket and an Aldi discount supermarket.



1

INTRODUCTION

1.1 Background

This Report has been prepared by Leyshon Consulting Pty Ltd for Prestdel Developments Pty Ltd (Prestdel). The Report presents an Economic Impact Assessment (EIA) of a proposed mixed-use development containing a component of retail floorspace proposed for a site at Holsworthy, New South Wales. We have previously prepared EIAs in relation to this site in 2005 and 2009.

We understand that Prestdel control a site immediately adjacent to the existing Holsworthy railway station (FIGURE 1.1 refers). The site also has a frontage to Heathcote Road, the only regional road link between Liverpool and Sutherland Shire. As Heathcote Road carries substantial traffic volumes, the proposed development can be expected to attract a significant component of its sales from passing trade.

We are advised that in 2009 Prestdel obtained development consent for a mixed use development with 7,235m² of retail and 1,600m² of commercial floorspace. The 2009 approval was based on the centre having two supermarkets.

This Report has been prepared to accompany a Planning Proposal to be submitted to Liverpool City Council (Council). As such, it is intended to meet the requirements of Section 79C of the New South Wales Environmental Planning and Assessment Act 1979.



1.2 Proposed Development

TABLE 1.1 provides a detailed breakdown of the project's proposed floorspace.

TABLE 1.1	
FLOORSPACE – PROPOSED	
HOLSWORTHY CENTRE (<i>Net Leasable Area [NLA]</i>)	
Tenancy ...	Area (Sq.M.)
Supermarket	3,962
Discount supermarket	1,584
Specialty Retail/Commercial	3,129
Total	8,675
Source: Prestdel Pty Ltd Developments, 2017.	

In total, 8,675m² of retail and commercial space is proposed. Car parking for 462 vehicles also will be provided.

The proposed development will be anchored by a full-line supermarket of 3,962m² and a smaller discount supermarket of 1,584m². Specialty retail/commercial floorspace of about 3,129m² is proposed.

In addition to the retail and commercial space, we understand the proposal involves 400 residential units to be developed above the retail and parking levels.

The centre as proposed will be larger than most neighbourhood centres which usually contain <5,000m². In our opinion, it will have more of the characteristics of a small district centre.

2

TRADE AREA

2.1 Introduction

A trade area for the proposed centre at Holsworthy has been defined. The trade area encompasses both a primary trade area (PTA) and a secondary trade area (STA). We expect that more than 80% of the centre's sales will originate from these two areas combined.

In defining the trade area account has been taken of the location and nature of existing competitive centres, the nature of the road network in the surrounding region and any barriers to vehicular movement.

This section of the Report provides estimates of expected population growth in the trade area during the period 2016-21, reviews the demographic characteristics of the trade area population and provides estimates of existing and forecast retail spending in the trade area to 2021.

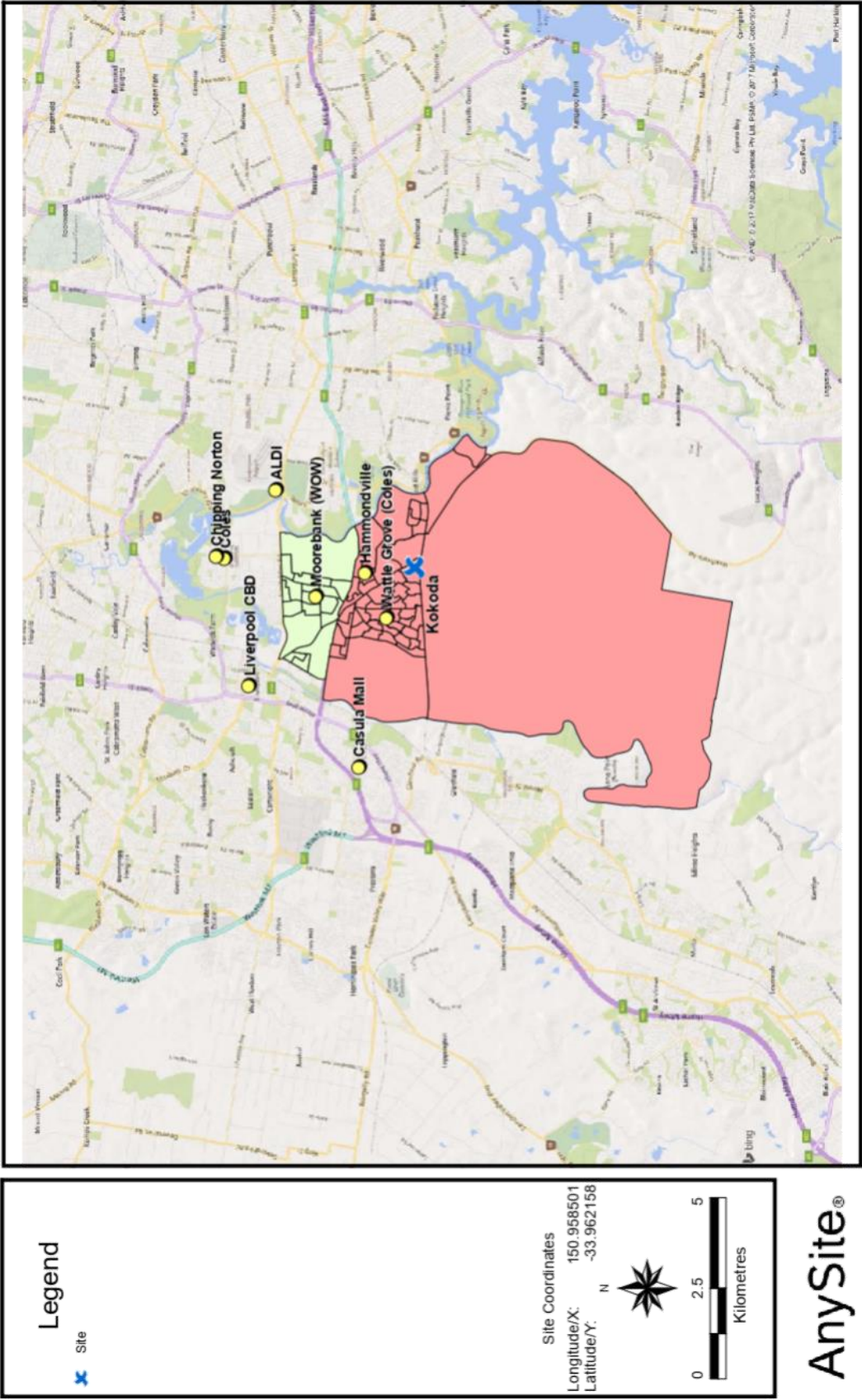
2.2 Trade Area Definition

The defined trade area for the proposed Holsworthy centre is depicted in FIGURE 2.1. It consists of two components, namely:

- ▶ **PTA**—includes the suburbs of Holsworthy, Wattle Grove, Voyager Point, Pleasure Point and Hammondville; and
- ▶ **STA**—the suburb of Moorebank.

As noted earlier, given the site's location fronting Heathcote Road, it is almost certain the centre will attract a significant proportion of its sales

FIG 2.1: Holsworthy Trade Area



Print Date: 3 July 2017
Based on data provided under licence from PSM Australia Limited. PSM Australia Limited. Spatial Data 2015.
Disclaimer: While every care is taken to ensure the accuracy of the data within this product, the owners of the data do not make any representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability for all expenses, losses, damages and costs which might be incurred as a result of the data being inaccurate or incomplete.

from so-called 'passing trade'. This refers to motorists using Heathcote Road who live well outside the defined trade area but find the centre convenient to shop at either associated with a trip to or from work or, alternatively, while on a leisure-based trip.

The subject site is also very close to the Holsworthy Army Barracks which have personnel living on base and a significant number of personnel living off base.

2.3 Demography

The demographic characteristics of a given population exert significant influence over the volume and nature of retail spending. We have reviewed the key demographic characteristics of the Holsworthy trade area population at the 2011 Census (latest available; TABLE 2.1 refers). Comparative data for the Greater Sydney Capital City Area (Greater Sydney) are also provided.

In summary, compared with Greater Sydney in 2011, the trade area was distinguished by the following:

- ▶ a younger age profile with a high proportion of persons aged 0-9 years in 2011 (16.2%) compared with 13.1% in Greater Sydney. Only 12.7 of the population was aged 60+ years in 2011 compared with 18.0% in Greater Sydney.
- ▶ a higher concentration of traditional families (that is, couples plus dependent children)—40.8% compared with 36.1% in Greater Sydney.

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- ▶ a high proportion of couple families without children—37.5% compared with 27.4% in Greater Sydney
- ▶ a lower proportion of employed persons in upper white collar job categories—31.6% compared with 38.8% in Greater Sydney
- ▶ an average household income level (\$98,073) which was +9.6% above the Greater Sydney average in 2011 (\$89,465).

TABLE 2.1
SELECTED KEY DEMOGRAPHIC ATTRIBUTES of HOLSWORTHY TRADE AREA
POPULATION and COMPARATIVE DATA for SYDNEY GREATER CAPITAL CITY
STATISTICAL AREA (SYDNEY), 2011 (% Population)

Variable ...	PTA	STA North	Total Trade Area	(Sydney GCCSA)
Population Count, 2011 (No. Persons)	19,542	6,801	26,343	4,391,674
Age Structure				
0-9 years	16.3	15.8	16.2	13.1
10-19	15.7	11.5	14.7	12.4
20-29	15.0	12.6	14.4	14.8
30-39	16.5	16.3	16.3	15.3
40-49	16.2	12.7	15.3	14.3
50-59	10.4	10.6	10.4	12.1
60+	9.9	20.5	12.7	18.0
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Household Structure				
Couples & Children	40.6	41.6	40.8	36.1
Couples Only	40.9	26.6	37.5	24.7
Single Parents	8.1	13.0	9.3	11.6
Other	0.6	1.0	0.7	1.4
<i>Total Family</i>	<i>90.2</i>	<i>82.2</i>	<i>88.3</i>	<i>73.8</i>
Non-Family Households				
Lone Person	9.0	15.4	10.5	22.0
Group	0.8	2.4	1.2	4.2
<i>Total Non-Family</i>	<i>9.8</i>	<i>17.8</i>	<i>11.7</i>	<i>26.2</i>
Total Households	100.0	100.0	100.0	100.0

TABLE 2.1
SELECTED KEY DEMOGRAPHIC ATTRIBUTES of HOLSWORTHY TRADE AREA
POPULATION and COMPARATIVE DATA for SYDNEY GREATER CAPITAL CITY
STATISTICAL AREA (SYDNEY), 2011 (% Population)

Variable ...	PTA	STA North	Total Trade Area	(Sydney GCCSA)
Average Household Size <i>(persons/dwelling)</i>	3.10	2.88	3.04	2.74
Occupational Structure				
Managers	11.4	9.9	11.1	13.3
Professionals	20.2	16.4	19.3	25.5
Technicians & Trade Workers	14.6	16.4	15.0	12.2
Community & Personal Service Workers	14.1	8.0	12.6	8.8
Clerical & Administrative Workers	19.1	19.1	19.1	16.2
Sales Workers	7.8	9.8	8.2	9.0
Machinery Operators & Drivers	6.1	10.0	7.0	5.7
Labourers	5.2	8.0	5.9	7.3
Inadequately Described/ Not Stated	1.5	2.4	1.8	2.0
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Unemployment Rate	4.1	4.3	4.1	5.7
Annual Household Income				
Average Annual Household Income (\$2011)	\$103,897	\$83,038	\$98,073	\$89,465

Source: ABS Census, August 2011.

In 2011, the population in the PTA had an average household income well above that of the STA population (\$103,897 compared with \$83,038). As can be noted from TABLE 2.1, the average household income for the trade area as a whole in 2011 was \$93,073—almost 10% higher than the Greater Sydney average.

2.4 Population

Based on the 2011 Census results, the trade area's estimated resident population (ERP) was 27,010 persons in 2011. The ERP makes allowance for the under-enumeration affecting Census population counts in New South Wales in general and Liverpool LGA in particular. It also makes allowance for military personnel living on-base in the adjacent Holsworthy Barracks.

The trade area is continuing to experience above average population growth. This is largely due to in-fill housing development which has been occurring in the eastern part of Moorebank and in Wattle Grove.

As can be noted from TABLE 2.2, the Australian Bureau of Statistics (ABS) has provided up-to-date estimates of the resident population in the following Statistical Level 2 areas (SA2s) namely:

- ▶ Holsworthy/Wattle Grove
- ▶ Chipping Norton/Moorebank.

The ABS (preliminary) estimates are that the resident population in these areas has, on a combined basis, increased from 36,617 people in 2011 to 39,273 in 2016.

The estimated average annual growth rate the period 2015-16 was as follows:

- ▶ Holsworthy/Wattle Grove ... 2.2% per annum
- ▶ Chipping Norton/Moorebank ... 2.7% per annum.

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These two SA2s are, on a combined basis, larger than the defined Holsworthy trade area. They nevertheless give an excellent insight into current growth rates in the Holsworthy area.

We anticipate the rate of population growth in the defined trade area will slow in the period to 2021 as new opportunities for in-fill housing diminish.

TABLE 2.2
ESTIMATED RESIDENT POPULATION – HOLSWORTHY SUB-REGION, 2006-16 (No. Persons)

Statistical Area Level 2 ...	2006	2011	2016 ^P	Annual Average Growth Rate 2015-16
Holsworthy/Wattle Grove	18,530	20,408	21,336	2.2%
Chipping Norton/Moorebank	14,920	16,209	18,387	2.7%
Total	33,450	36,617	39,723	2.5%

P=Preliminary.

Source: ABS March, 2017.

As noted in TABLE 2.3, we project the ERP is likely to have increased to 32,133 residents in 2021 which equates to an average annual growth (AAG) rate of +1.94% per annum.

TABLE 2.3
ESTIMATED RESIDENT POPULATION –
HOLSWORTHY TRADE AREA, 2011-21 (No. Persons)

Year ...	PTA	STA	Total
2011	20,045	6,965	27,010
2016	21,350	7,841	29,191
2018	22,215	8,270	30,485
2021	23,227	8,906	32,133

Source: Leyshon Consulting Estimates, June 2017.

It should be noted that the population estimates detailed in TABLE 2.3 do not take into account the 400 units proposed on the subject site. Clearly, if the Planning Proposal is approved this will result in a further increase in the PTA's population—by about 800 to 1,000 additional residents.

2.5 Available Retail Spending

Estimates of average annual per capita retail spending levels in the trade area in 2016 have been made. These estimates take into account 2011 Census data on average household incomes and average household size in the trade area as well as data from the ABS's 2008-09 *Household Expenditure Survey* (HES). The HES provides data on the expenditure profiles of Australian households and individuals with different socio-economic characteristics.

In summary, we estimate per capita annual retail spending in the trade area in 2016 to be as follows:

- ▶ PTA ... \$13,281 (\$2016)
- ▶ STA ... \$11,075.

By combining per capita spending with the population projections shown in TABLE 2.3, estimates can be obtained of total available retail spending generated in the Holsworthy trade area in 2016, 2018 and 2021 (APPENDIX A, TABLES A1-A3, \$2016).

As indicated in TABLE A1, total available retail spending in the Holsworthy trade area in 2016 was estimated at \$371.3 million. This is projected to increase to \$423.5 million per annum (\$2016) by 2021 (TABLE A3 refers). As summarised in TABLE 2.4 the estimated real

growth (that is, adjusted for inflation) in annual available spending between 2016-21 is some +\$52.2 million.

TABLE 2.4
CHANGE in AVAILABLE RETAIL SPENDING –
HOLSWORTHY TRADE AREA, 2016-21 (\$2016; \$ Mil.)

Year ...	PTA	STA	Total
2016	\$283.6	\$87.7	\$371.3
2018	\$301.0	\$89.5	\$390.5
2021	\$324.2	\$99.3	\$423.5
Increase 2016-21	\$40.6	\$11.6	\$52.2

Source: Tables A1-A3, APPENDIX A.

2.6 Available Supermarket Spending

Of critical importance to the evaluation of demand for additional retail facilities at Holsworthy is the availability of spending in the supermarket sector.

Broadly, supermarkets and grocery stores capture approximately 32% of available retail spending in New South Wales. As set out in TABLES A1-A3, APPENDIX A, annual available supermarket spending in the Holsworthy trade area is estimated to increase as follows (\$2016):

►	2016	...	\$118.8 million per annum
►	2018	...	\$124.9
►	2021	...	\$135.5
►	Increase 2016-21	...	\$16.7.

By 2021, this volume of spending (\$135.5 million per annum) broadly would be sufficient to support 12,900m² of supermarket floorspace

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based on contemporary average sales levels in the Australian supermarket sector of \$10,500 per m² per annum (\$2016).

At present the Holsworthy trade area contains only some 4,950m² of supermarket floorspace vis:

- ▶ Coles Wattle Grove ... 2,500m²
- ▶ Woolworths Moorebank ... 2,200m²
- ▶ IGA Hammondville ... 250m².

Accordingly, the supermarket sector must be experiencing a significant level of 'escape spending' flowing out of the trade area at present.

As a general principle, therefore, the trade area will continue to be under-supplied with supermarket floorspace of at least 7,950m² by 2021 if the proposed development does not proceed.

3

EXISTING RETAIL HIERARCHY

3.1 Introduction

The purpose of this section of the Report is to review the existing provision of retail centres in and adjacent to the Holsworthy trade area. Particular reference has been paid to the two neighbourhood-scale centres closest to the subject site (Wattle Grove and Moorebank) as they are more likely to be directly affected by the proposed development than centres either larger or further away.

3.2 Existing Centres

There are a number of centres of regional, sub-regional and local/neighbourhood-scale within 10km of the Holsworthy site. The details of these centres are provided in TABLE 3.1 and their location depicted in FIGURE 2.1.

The largest centre of relevance is the Liverpool CBD which is located some 5.3km to the north-west. The Liverpool CBD contains a reported 121,656m² of retail floorspace and had estimated sales in the order of \$650.0 million per annum in 2016 (\$2016). The centre consists of two major components—namely Westfield Liverpool and an additional area of shopfront retailing generally bounded by Elizabeth Street in the north, Bigge Street in the east, Terminus Street in the south and Bathurst Street in the west.

The Liverpool CBD contains three national chain supermarkets (Woolworths, Coles and Aldi) plus a large Asian supermarket (Udaya Spices) and several small ethnically-based grocery/food stores.

TABLE 3.1
EXISTING RETAIL CENTRES – HOLSWORTHY SUB-REGION

Centre/Type ...	Distance from Site (Kms)	Area (Sq.M.) (GLA)	Estimated Sales (\$Mil.pa)	Major Tenants
Regional				
Liverpool CBD ²	5.3	130,000	\$650.0	Myer, Target, Woolworths, Coles, Aldi
Sub-Regional				
Casula Mall ¹	7.4	20,391	\$199.4	Kmart, Coles, Aldi
Local/Neighbourhood				
Wattle Grove Plaza ¹	2.5	3,730	\$48.4	Coles
Moorebank Village ²	4.1	7,300	\$56.0	Woolworths
Hammondville ²	1.8	1,300	\$5.8	Nil

Sources:

1. Property Council of Australia, *NSW and ACT and Shopping Centre Directory and Shopping Centre News "Little Guns Survey"*, 2016
2. Leyshon Consulting Estimates, 2017.

Casula Mall is a sub-regional centre located approximately 7.4km to the south-west of the subject site. Despite this distance Casula Mall is readily accessed by residents of the trade area using the M5 and the Hume Highway. Casula Mall contains a reported 20,391m² of retail floorspace and had sales of \$199.4 million per annum in 2016 (\$2016). The centre is anchored by a Kmart discount department store (DDS) and Coles and Aldi supermarkets.

Casula Mall achieved average sales of \$10,610 per sq.m per annum in the year to September 2016. This ranked the centre 6th out of 96 centres in Australia in terms of average sales according to Shopping Centre News's "Little Guns 2016" survey.

Of more immediate relevance, in terms of the impact of the proposed Holsworthy development, are the two neighbourhood/local centres within the trade area—namely those at Wattle Grove and at Moorebank.

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Wattle Grove Plaza is the centre closest to the subject site. Wattle Grove contains an estimated 3,730m² of retail floorspace and is anchored by a relatively small Coles supermarket. At present there are no vacancies in the centre. Adjoining the centre is an hotel and associated community facilities. The centre had estimated sales of \$48.4 million per annum (\$2016) in 2016.

Wattle Grove Plaza is located near the intersection of Australis Avenue and Village Way, Wattle Grove and essentially serves the resident population of the suburb and part of the adjoining Holsworthy residential area. A limited volume of sales are also likely to be captured from Moorebank.

Moorebank Village is located at the intersection of Stockton and Maddecks Avenues, Moorebank. The centre is a large, older-style neighbourhood centre containing about 7,300m² and anchored by a small Woolworths supermarket of about 2,200m². We estimate centre achieved sales of about \$56.0 million per annum in 2016 (\$2016). The centre primarily caters to the shopping needs of Moorebank residents; it is not well located to attract trade from the population residing to the south of the M5.

A recent inspection of Moorebank Village found the centre had only one vacancy. We understand the Woolworths supermarket is trading at capacity and is unable to expand to cater for the increase in customers now residing in the area. We understand that Moorebank Village is subject to strata-title which inhibits its redevelopment/refurbishment.

The only other centre in the trade area is located on Walder Road at Hammondville. The centre has 17 convenience-related tenancies with its total retail floorspace estimated at 1,300m². Hammondville does not have a 'major' tenant but does contain a small IGA store of some

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250m². We would expect only limited competitive overlap between Hammondville and the proposed centre at Holsworthy as Hammondville essentially provides a localised community-based convenience retail/service function.

To the north of the trade area a Coles-anchored shopping centre is located in Chipping Norton. This centre is located at the intersection of Ernest Avenue and Barry Road and comprises some 5,520m². The Coles supermarket occupies approximately 2,900m².

The centre primarily meets the shopping needs of residents of Chipping Norton and workers from the adjacent Chipping Norton employment area which borders the centre.

Elsewhere within the trade area there are two fresh food shops on Newbridge Road, Moorebank which trade under the name of Fresh Food Stop (Gonca) and the Food Lovers Market respectively. These two businesses offer a range of fresh food, deli items and some groceries. The stores have floorspace of approximately 600m² and 1,000m² respectively.

3.3 Retail Hierarchy

In November 2012 Liverpool City Council endorsed the *Liverpool Retail Centres Hierarchy Review* which was prepared for Council in 2012 by consultants Hill PDA.

The adopted policy as far as Council is concerned is encapsulated in a document published by them—*Business Centres and Corridors Strategy – Review 2013* (the Review document).

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The Review document specifically identifies the existing approval for a new centre on the subject site which is to be known as Holsworthy Plaza. The Review document identifies that the centre could contain some 7,000m² of retail floorspace including Aldi and Coles supermarkets. The Review document specifically states:

"The Holsworthy Plaza development will address the immediate undersupply of supermarket floorspace and will negate the need for any additional supermarket floorspace in the area to 2031 based on current population projections."

The Review document goes on to identify Holsworthy Plaza as a "Village Centre" with the same planning status as other Village Centres such as Wattle Grove, Chipping Norton, Cecil Hills, Flowerdale and Middleton Grange.

In this context, we consider the current Planning Proposal to be consistent with the established and proposed hierarchy of centres in Liverpool Local Government Area.

4

IMPACT ASSESSMENT

4.1 Introduction

The purpose of this section of the Report is to assess the potential impact of the proposed Holsworthy development on existing centres in and adjacent to the trade area. An important component of any impact assessment is a forecast of the likely sales of the proposed development. This issue is discussed in detail below.

4.2 Forecast Centre Sales

In preparing an estimate of the proposed Holsworthy centre's likely sales, we have assumed the major centre's supermarket of 3,962m² NLA is occupied by one of the major supermarket traders—that is, Coles or Woolworths.

We have further assumed the second supermarket is intended to be an Aldi and occupy about 1,584m² NLA.

As indicated in TABLE 4.1, assuming the centre has its first full year of trading in 2020, we estimate it could generate annual sales of \$70.0 million with the majority of these sales (\$54.0 million) being generated by the proposed supermarkets. The average sales rate we estimate will be achieved by the overall development is \$8,615 per m² per annum (\$2016).

TABLE 4.1
ESTIMATED RETAIL SALES – PROPOSED HOLSWORTHY RETAIL
CENTRE, 2020 (\$2016)

Retail Component ...	Area (GLA Sq.M.)	Estimated Sales (\$ Mil pa)	Sales Rate (\$/Sq.M./pa)
Supermarket 1	3,962	\$37.5	\$9,465
Supermarket 2	1,584	\$16.5	\$10,417
Specialty Retail	2,579	\$16.0	\$6,204
Specialty Commercial	550	n.a.	n.a.
Total Centre – Retail	8,125	\$70.0	\$8,615
Total	8,675		

Source: Leyshon Consulting Estimates, June 2017.

4.3 Origin of Sales

We have also prepared an estimate of the likely origin of sales for the proposed centre assuming its first full year of trading is in 2020. This assessment identifies the volume and proportion of sales which would be captured from trade area residents and that which could be captured from spending by people residing outside the trade area.

In preparing these estimates we have taken account of data held by ourselves in relation to the performance of supermarket-based centres located on or close to arterial or sub-arterial roads (such as Heathcote Road). We have also taken account of the fact that the proposed centre will be located adjacent to an important commuter car park. This, together with the nearby military base, will lead to the centre attracting a higher proportion of non-trade area sales than would be the case for a centre not situated close to public transport facilities.

As indicated in TABLE 4.2, of projected total centre sales of \$70.0 million in 2020 approximately \$60.5 million or 86.4% is estimated to

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be sourced from the trade area with the balance (\$9.5 million, 13.6%) coming from spending by shoppers living outside the trade area.

TABLE 4.2
ESTIMATED SOURCE of SALES – PROPOSED HOLSWORTHY CENTRE,
2020 (\$2016)

Component ...	Estimated Sales (\$ Mil pa)	From Trade Area (\$ Mil pa)	From Other Areas (\$ Mil pa)	From Trade Area (%)
Supermarket 1	\$37.5	\$32.0	\$5.5	85.3%
Supermarket 2	\$16.5	\$14.0	\$2.5	84.8%
Specialty Retail	\$16.0	\$14.5	\$1.5	90.6%
Total Centre (Retail)	\$70.0	\$60.5	\$9.5	86.4%

Source: Leyshon Consulting Estimates, June 2017.

In broad terms, the capture of \$60.5 million in sales from the trade area equates to a market share of 14.7% in terms of total available annual resident spending estimated for 2020 (\$412.5 million).

The forecast supermarket sales captured by the centre from the trade area in 2020 (\$46.0 million) will be equivalent to 34.8% of total available annual supermarket spending generated by trade area residents in 2020 (\$182.0 million per annum).

4.4 Impact on Centres

An assessment has been made of the potential impact of the proposed development at Holsworthy on the sales of relevant centres in the trade area and those adjacent to the trade area. These centres include the following:

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- ▶ Wattle Grove
- ▶ Moorebank
- ▶ Casula Mall
- ▶ Chipping Norton
- ▶ Westfield Liverpool
- ▶ Balance of Liverpool CBD
- ▶ Hammondville.

In preparing this assessment we have made the following assumptions:

- ▶ the Holsworthy centre is constructed in one stage
- ▶ the centre has 2020 as its first full year of trading
- ▶ the centre is anchored by a full-line supermarket of at least 3,960m² NLA which is operated by either Coles or Woolworths and a smaller supermarket of 1,584m² such as an Aldi.

We have made no other assumptions regarding approval or otherwise of proposed developments such as the expansion of the Orange Grove centre.

TABLE 4.3 provides our estimates of relevant centre sales in 2017 and 2020 (\$2016) assuming the Holsworthy centre has opened. TABLE 4.3 also provides a comparison between the sales that existing centres might have been expected to achieve in 2020 without the proposed Holsworthy centre, and their estimated sales in 2020 assuming the opening of the Holsworthy centre as proposed.

TABLE 4.3
IMPACT ANALYSIS – PROPOSED HOLSWORTHY CENTRE, 2020

Centre ...	2017	2020 Pre	2020 Post	Change (\$ Mil. p.a.)	% Change
Holsworthy Centre	\$0.0	\$0.0	\$70.0	\$70.0	n.a.
Westfield Liverpool	515.0	\$562.8	554.0	(\$8.8)	(1.6)%
Liverpool CBD Balance	135.0	139.1	134.0	(\$5.1)	(3.7)%
CBD Total	650.0	701.9	688.0	(\$13.9)	(2.0)%
Casula Mall	199.4	217.9	210.0	(\$7.9)	(3.6)%
Wattle Grove	48.4	51.4	43.9	(\$7.5)	(14.5)%
Moorebank	56.0	59.4	52.0	(\$7.4)	(12.5)%
Chipping Norton	50.1	51.6	47.5	(\$4.1)	(7.9)%
Hammondville	5.8	6.0	5.7	(\$0.3)	(5.0)%
Other Centres	n.a.	n.a.	n.a.	(\$15.0)	n.a.

Source: Leyshon Consulting Estimates, June 2017.

TABLE 4.3 also summaries the projected change in centre sales as a consequence of the opening of the proposed Holsworthy development. As indicated in TABLE 4.3, for some centres the change in sales will be relatively significant. In summary, the projected change in the sales of nominated centres are as follows:

▶ Wattle Grove	...	-\$7.5 million
▶ Moorebank	...	-\$7.4
▶ Casula Mall	...	-\$7.9
▶ Westfield Liverpool	...	-\$8.8
▶ Liverpool CBD Balance	...	-\$5.1
▶ Liverpool CBD Total	...	-\$13.9
▶ Chipping Norton	...	-\$4.1.

In percentage terms the relevant changes are as follows:

▶ Wattle Grove	...	-14.5%
▶ Moorebank	...	-12.5%
▶ Casula Mall	...	-3.6%

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▶ Westfield Liverpool	...	-1.6%
▶ Liverpool CBD Balance	...	-3.7%
▶ Liverpool CBD Total	...	-2.0%
▶ Chipping Norton	...	-8.0%
▶ Hammondville	...	-4.6%.

In the case of all centres, but particularly those at Wattle Grove and Moorebank, the majority of the impact will mostly fall on their supermarket/s. Nevertheless, as Wattle Grove contains a Coles and Moorebank a Woolworths, some of the impact effectively will be 'internalised' within whichever chain is the eventual major supermarket operator at Holsworthy. Some flow-on impacts to specialty tenants located in each of the relevant centres will nonetheless result due to reduced levels of supermarket activity at Wattle Grove and Moorebank.

In our experience it is highly unlikely that the impacts discussed above would lead to the closure of supermarkets in the nominated centres. The primary reason for this is that major chain supermarkets generally have very long leases and it is thus uncommon for them to cease trading merely as a result of competition. We also understand (from evidence given by Woolworths and Coles Myer in litigation in the Queensland Planning and Environment Court) that impacts of up to -25% are regularly experienced in the supermarket sector immediately following the opening of new stores nearby without this leading to the closure of the major chain store affected.

4.5 Implications of Impact

There is no widely agreed definition of what constitutes either an acceptable or unacceptable impact on existing shopping centres. This derives from the fact that no research has been able to codify what a

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particular percentage reduction in sales means to various types of shopping centres. Much depends, for instance, on the competitive response of affected centres and the individual merchants within those centres, their existing profitability levels and the financial structures underpinning tenants. For example, established retailers who may own their own premises or have very low debt levels and are reasonably profitable should have the capacity to absorb a greater impact than those who may be paying high rents and/or operating on low profit margins.

Based on our experience, we classify retail impacts as follows:

- ▶ 0-5.9% ... very low
- ▶ 6-10.9% ... low/medium
- ▶ 11-15.9% ... medium/high
- ▶ 16%+ ... high/very high.

Measured in terms of the above scale, the sales impact in 2020 of the proposed Holsworthy centre on Wattle Grove (-14.5%) and Moorebank (-12.5%) would be classified as being at the upper end of the medium/high range of impact. The estimated impact on Casula Mall, Hammondville, Westfield Liverpool and the balance of the Liverpool CBD all fall in the very low range. The projected impact on the Chipping Norton centre (-7.9%) would be in the middle of the low/medium range of impact.

The estimated impact on the Liverpool CBD would mainly fall on that centre's supermarkets but will be mitigated by significant growth in annual available retail spending generated in the CBD's trade area between 2016-21.

In any event, it must be recognised that retail sales are dynamic in nature and significant changes in the volume of retail sales can occur

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due to general economic conditions when there has been no change in the size and configuration of shopping centres in a particular area.

Even if some existing stores within centres in and adjacent to the Holsworthy area are detrimentally affected by competition from the proposed development to the extent that they cease trading, there is no evidence that trade area residents would be significantly disadvantaged.

In our opinion, the proposed development will not lead to a loss of facilities at Wattle Grove, Moorebank or other centres. Residents will still have easy access to the same (or a better) range of retail facilities compared with those they currently enjoy. For example, in our opinion, the proposed addition of retail facilities adjacent to Holsworthy railway station will significantly improve the access of one group of residents, namely rail travellers, to convenience retail facilities.

In particular the assessed impacts are off-set by the introduction of a full-line supermarket into this trade area (something that currently does not exist at either Wattle Grove or Moorebank) and an ALDI discount supermarket. The introduction of these two traders will significantly enhance competition, choice and convenience as far as supermarket shopping by trade area residents and visitors/workers is concerned

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CONCLUSION

The proposed development of a new mixed-use centre at Holsworthy will provide the opportunity to create a new district centre in south-eastern Liverpool and provide the area with a focus for retailing and related activity which it currently lacks.

While there are two small retail centres in the trade area (Wattle Grove and Moorebank) neither centre currently performs this role.

The major advantage of the Holsworthy site is its co-location with Holsworthy rail station. This provides a unique opportunity to create a new, small district centre in Liverpool LGA which is already serviced by high quality public transport services.

The proposed development is projected to attract estimated annual sales of \$70.0 million on opening and clearly will have an impact on the existing centres at Wattle Grove and Moorebank.

While the impacts on Wattle Grove in particular, and Moorebank to a lesser degree, are relatively high, they are nonetheless highly unlikely to lead to any significant reduction in retail services: the majority of the impact will relate to the performance of the supermarket in each centre.

In our opinion, the impacts of the proposal will be mitigated by the significant public benefits associated with creating a new mixed-use, transit-oriented centre at Holsworthy anchored by a full-line supermarket and an ALDI discount supermarket.



APPENDIX A

APPENDIX A

Table A1: Projected Retail Spend - Holsworthy Trade Area - 2016 (\$2016)

TABLE	PTA	PTA NORTH	TOTAL TRADE AREA
Population	21,350	8,270	29,620
Average Spending (\$2016)	13,281	10,607	12,534
Total Retail Spend (\$m) (\$2016)	283.5	87.7	371.3
Spending by Category			
Food/Groceries	114.6	35.5	150.0
Food Out	18.4	5.7	24.1
Alcohol (Off Licence)	7.3	2.4	9.6
Tobacco	23.6	7.2	30.8
Clothing & Accessories	31.6	9.6	41.3
Household Furnishings & Equipment	8.6	2.7	11.3
Household Non Durables	7.4	2.9	10.2
Medical/Pharmacy	4.6	1.5	6.1
Vehicle Accessories	34.0	10.1	44.2
Recreation	6.0	1.8	7.8
Personal Care	14.1	4.3	18.4
Miscellaneous Goods & Services	13.4	4.1	17.5
Total Retail Spend	283.5	87.7	371.3
Supermarket	90.7	28.1	118.8

Table A2: Projected Retail Spend - Holsworthy Trade Area - 2018 (\$2016)

TABLE	PTA	PTA NORTH	TOTAL TRADE AREA
Population	22,215	8,270	30,485
Average Spending (\$2016)	13,548	10,821	12,808
Total Retail Spend (\$m) (\$2016)	301.0	89.5	390.5
Spending by Category			
Food/Groceries	121.6	36.2	157.8
Food Out	19.5	5.8	25.3
Alcohol (Off Licence)	7.7	2.4	10.1
Tobacco	25.0	7.4	32.4
Clothing & Accessories	33.6	9.8	43.4
Household Furnishings & Equipment	9.1	2.7	11.9
Household Non Durables	7.8	2.9	10.7
Medical/Pharmacy	4.9	1.5	6.4
Vehicle Accessories	36.1	10.3	46.5
Recreation	6.4	1.9	8.2
Personal Care	15.0	4.4	19.3
Miscellaneous Goods & Services	14.2	4.2	18.4
Total Retail Spend	300.97	89.49	390.45
Supermarket	96.3	28.6	124.9

Table A3: Projected Retail Spend - Holsworthy Trade Area - 2021 (\$2016)

TABLE	PTA	PTA NORTH	TOTAL TRADE AREA
Population	23,227	8,906	32,133
Average Spending (\$2016)	13,958	11,149	13,180
Total Retail Spend (\$m) (\$2016)	324.2	99.3	423.5
Spending by Category			
Food/Groceries	131.0	40.1	171.1
Food Out	21.0	6.4	27.5
Alcohol (Off Licence)	8.3	2.7	11.0
Tobacco	26.9	8.2	35.1
Clothing & Accessories	36.2	10.9	47.1
Household Furnishings & Equipment	9.9	3.0	12.9
Household Non Durables	8.4	3.2	11.7
Medical/Pharmacy	5.3	1.7	7.0
Vehicle Accessories	38.9	11.5	50.4
Recreation	6.8	2.1	8.9
Personal Care	16.2	4.8	21.0
Miscellaneous Goods & Services	15.3	4.6	20.0
Total Retail Spend	324.21	99.29	423.50
Supermarket	103.7	31.8	135.5

Source: Leyshon Consulting Estimates June 2017

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5 March 2019

The General Manager
Liverpool City Council
Shop R1, Ground Floor
33 Moore Street
Liverpool NSW 2170

Architecture
Urban Design
Planning
Interior Architecture

To: Mr David Smith
Manager Strategic Planning

Re: Planning Proposal for 2 Macarthur Drive Holsworthy
Letter of Offer – Voluntary Planning Agreement

Dear David,

This letter constitutes an offer by Holsworthy Developments Pty Ltd to enter into a Voluntary Planning Agreement (VPA) for the development of land located at 2 MacArthur Drive, Holsworthy (site).

The offer accompanies the Planning Proposal for the site, submitted by Holsworthy Developments Pty Ltd, which seeks an amendment to the *Liverpool Local Environmental Plan 2008 (LLEP)*. Liverpool City Council (Council) is the determining authority for the Planning Proposal.

1. Summary of Planning Proposal

The Planning Proposal would facilitate, with subsequent development consent, the construction of the following (proposed development):

- Upgraded pedestrian links along MacArthur Drive, The Boulevard and new connections to Holsworthy Railway Station;
- Public domain improvements to the road reserves of MacArthur Drive and Heathcote Road;
- A new publicly accessible square at a minimum of 1,000sqm fronting onto Macarthur Drive;
- Residential buildings between the heights of 6 and 12 storeys;
- Podium level retail uses; and
- Basement car parking.

The mandatory elements of the proposed VPA under Section 7.4 of the *Environmental Planning and Assessment Act 1979 (EPA Act)* are set out below.

2. Description of the land – Section 7.4(3)(a)

The VPA will apply to the site and proposed development.

Located at 2 Macarthur Drive, Holsworthy, the site is legally known as Lot 5 in Deposited Plan 825745 and is under the ownership of Holsworthy Developments Pty Ltd. Holsworthy Developments Pty Ltd would be the Developer under the VPA.

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ABN 90 131 245 684

Managing Director:
Nominated Architect:
Ray Brown
NSWAB 6359

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3. Description of the proposed change to the environmental planning instrument or the development to which the VPA applies – Section 7.4(3)(b)

The Planning Proposal seeks to amend the site's density and height controls under the LLEP 2008 to facilitate the future construction of the proposed development summarised above.

Specifically, the Planning Proposal seeks amendment of the following LLEP controls:

- **Height of buildings (Clause 4.3)** – increase the maximum height of buildings control from 21m to partially 25m and partially 45m;
- **Floor space ratio (Clause 4.4)** – increase the maximum floor space ratio (FSR) control from 1.5:1 to 2.15:1; and
- **Maximum non-residential gross floor area (Schedule 1)** – include a site-specific provision under Schedule 1 stipulating a maximum non-residential gross floor area of 9,000sqm on the site.

The proposed development is subject to development consent and to be completed in accordance with the Planning Proposal prepared by Architectus and the accompanying reports and plans.

4. Nature and extent of the provision to be made by the developer, and the times and manner in which the provision is to be made – Section 7.4(3)(c)

Holsworthy Developments Pty Ltd proposes that, if the Planning Proposal and a planning application for the Proposed Development are approved, Holsworthy Developments Pty Ltd will provide:

- Upgrade of existing roundabout (Macarthur Drive / The Boulevard / Morningside Parade) to a signalised crossing to facilitate vehicular entry to the site, a safer pedestrian environment, and improved traffic conditions (if warranted);
- Removal of redundant roadway connecting the existing roundabout and existing rail bridge, including associated earthworks;
- Embellishment of the Macarthur Drive road reserve to Council satisfaction, including the provision of a shared path and landscaping;
- Landscaping of the road reserve along Heathcote Road adjacent the site, to the satisfaction of RMS; and
- Provision of publicly accessible open space on the site with a minimum area of 1,000 sqm.

Prior to the issue of an Occupation Certificate for the proposed development. It is intended that works will be undertaken within Council's road reserve concurrently to construction works being undertaken on the site and will be completed prior to occupation of a building on the site.

5. Exclusion of Sections 7.11, 7.12 and 7.24 contributions – Section 7.4(3)(d)

The VPA will provide that Sections 7.11 and 7.12 of the EPA Act are not to be excluded.

As the site is not located within a NSW Department of Planning and Environment (DP&E) special contributions area, Section 7.24 of the EPA Act will not apply to the proposed development.

6. Whether benefits under the VPA are or are not to be taken into consideration in determining development contributions under Section 7.11 – Section 7.4(3)(e)

It is proposed the benefits provided under the VPA are not to be taken into consideration in determining development contributions under Section 7.11. Benefits provided under the VPA will be in addition to any Section 7.11 contributions required by Council's Contributions Plans.

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7. Mechanisms for resolution of disputes – Section 7.4(3)(f)

A conventional dispute resolution provision will be included, providing for resolution of disputes by way of negotiation and/or mediation.

8. Enforcement of the VPA by a suitable means – Section 7.4(3)(g)

The VPA will provide for:

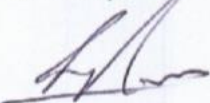
- Registration of the VPA on title to the Site, with an agreed mechanism for staged release of the VPA; and
- Provision of a bank guarantee (or bank guarantees) prior to commencement of works, with a value and mechanism for release to be determined having regard to the proposed construction programme for the works.

9. Next Steps

Holsworthy Developments Pty Ltd is grateful for the opportunity to work with the Council to achieve appropriate development outcomes for both the Site and the surrounding public domain.

If you wish to discuss further, please contact Mr Domenic Penna, Director, Holsworthy Developments Pty Ltd, on 0418 264 746 or by email dbalm@ozemail.com.au, or alternatively, Taylar Vernon, Senior Urban Planner, Architectus on 8252 8400, or by email taylor.vernon@architectus.com.au.

Yours sincerely,



Domenic Penna
Director
Holsworthy Developments Pty Ltd



GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY

Adopted: 29 May 2019

TRIM: 2016/2682, 091748.2019



GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**1. LEGISLATIVE REQUIREMENTS**

Local Government Act 1993, Section 356

2. OBJECTIVE

Council is committed to building strong and resilient communities within the Liverpool Local Government Area (LGA) and to increase social wellbeing for all residents. One way of achieving these goals is to provide financial assistance in the form of grants, donations, and sponsorships to individuals and groups to develop leadership skills, increase participation in community life and address identified social issues. Council seeks to support programs that can build or enhance the reputation and brand of Liverpool City in accordance with Council's Community Strategic Plan.

3. DEFINITIONS

Acquittal	Reporting on the activities of a project as set out in the funding agreement. This could take the form of providing financial reports, written reports, evidence of activity performance and where funding was spent
Auspice	An agreement where an incorporated organisation agrees to apply for funding or resources on behalf of an applicant that is not incorporated. If the application is successful, the auspicings organisation then administers the resources on behalf of the applicant, and is legally responsible for ensuring that the terms of the agreement are met
Charity	Listed on the Australian Charities and Not-for-profit Commission (ACNC) website as a registered charity
Community Capacity Building	Involves the provision of community activities that contribute to people developing their own capacity and resilience to maintain and build on their own resources and to manage future challenges
Incorporated Association	A legal entity (organisation) that provides legal protection to its members in legal transactions

4. GRANTS OVERVIEW

Council seeks to enhance the use of public funds through effective and efficient grant processes. Clear grant program objectives are linked to the organisation's strategic goals, outlined in Council's Community Strategic Plan. Council's grant programs provide a coordinated and integrated approach to growing Liverpool socially, culturally, economically and environmentally. Grants may be provided to individuals who reside in the LGA, or to community-based groups, organisations and services that operate within the Liverpool LGA and/or for the benefit of Liverpool residents. Council administers nine programs for the allocation of grants:

1. Kick-Starter Grants
2. Small Grants
3. Liverpool Young Achievers Awards
4. Community Grants
5. Sustainable Environment Grants
6. Matching Grants
7. Corporate Sponsorship
8. Sporting Grants
9. Sporting Donations

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**4.1 Our philosophies of grant making**

- **Community Strategic Plan.** Grants programs align with Council's Community Strategic Plan, and other social, economic and environmental policies and plans.
- **Partnerships and collaboration.** Develop and maintain partnerships between Council and the community to achieve Council's strategic directions.
- **Capacity building.** Support community groups and organisations to function positively, develop skills and increase participation.
- **Social inclusion.** Liverpool is a diverse community and our grant programs encourage directing resources to the needs of disadvantaged groups.
- **Leveraging value.** Leverage community expertise, capacity, networks and resources to provide the best suite of grant programs.
- **Good governance.** Demonstrate integrity, professionalism and transparency in our decision making and have strong governance structures in place to support this. Council will ensure that grant processes are transparent and fair.
- **Reflection and learning.** Commitment to continuous improvement, Council will ensure there are evaluation mechanisms in place and opportunities for feedback on grant processes.

5. GENERAL CONDITIONS**5.1 General Eligibility**

To be eligible for funding an applicant must:

- a) Acquit previous Council grants, donations or sponsorship and have no outstanding debts to Council;
- b) Be a resident of the LGA, or an organisation located in the LGA and/or principally providing services to the residents of Liverpool; and
- c) Include all required supporting documentation with an application.

5.2 Applications that are ineligible for funding include:

- a) Projects that duplicate existing Council services or programs or identical projects previously funded by Council.
- b) Projects that do not meet the identified priority needs of Liverpool in Council's Community Strategic Plan.
- c) Applications from government departments, political parties, or commercial/profit-making/private organisations (excluding Corporate Sponsorship which accepts applications from private organisations).
- d) Applications from charities for general donations.
- e) Applications for general fundraising activities, general operational expenditure (e.g. administration, insurance, office equipment, car parking, IT costs/equipment), shortfalls in funding by government departments, or completed/retrospective projects.
- f) For employee salaries/wages or any direct employment costs.
- g) Projects that will rely on recurrent funding from Council.
- h) Projects or programs that charge people for participation, including charges to participants through an individual's NDIS funding plan.

5.3 Further Conditions**5.3.1 Council will not:**

- a) Provide in-house design, printing and distribution services.
- b) Provide cleansing and waste services for events.
- c) Support political activities or activities that could be perceived as benefiting a political party or political campaign.
- d) Support religious activities that could be perceived as divisive within the community.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY

- e) Support activities that deliberately exclude any individuals or groups from participating or attending.

- 5.3.2 For specific eligibility requirements and exclusions for each program, refer to Section 7 of this policy.

5.4 Ethics Framework

Council will not support any activities or entities that:

- a) Pollute land, air or water, or destroy or waste non-recurring resources.
- b) Market or promote products/services in a misleading or deceitful manner.
- c) Produce, promote or distribute products/services likely to be harmful to the community.
- d) Acquire land or commodities primarily for speculative gain.
- e) Create or encourage militarism or engage in the manufacture of armaments.
- f) Entice people into financial over-commitment
- g) Exploit people through the payment of below award wages or poor working conditions.
- h) Discriminate by way of race, religion, or sex in employment, marketing or advertising.
- i) Contribute to the inhibition of human rights generally.

5.5 Conflicts of Interest

- 5.5.1 Council staff assessing and determining applications should identify and manage any potential conflicts of interest in accordance with Council's Code of Conduct and Ethical Governance: Conflicts of Interest Policy.
- 5.5.2 Members of Council staff and Councillors must ensure that any affiliation between them and the applicant is appropriately managed when assessing and determining applications for grants and donations.

6. GRANTS MANAGEMENT PROCESS**6.1 Applications**

All applicants must register with Council's online grants management system before applying. Applications must be submitted using the approved online application form on Council's online grants management system. Council will not accept any hard copy or emailed submissions, or any submissions after any applicable closing date or time.

6.2 Assessment and Recommendations

- 6.2.1 All applications received by Council will be assessed by relevant Council staff members. Sporting Grants and Donations will be sent to the Sports Committee for review. Recommendations for funding of \$1,000 or less may be approved by the CEO or their delegate, provided the funding is in accordance with sections 356(3), 377(1A), and 378 of the Local Government Act 1993. Council will be notified of funded projects by Council report as soon as appropriately possible. Recommendations for funding over \$1,000 will be made to Council for endorsement in accordance with Section 356 of the Local Government Act 1993.
- 6.2.2 For grant programs that are open for applications all year, recommendations will be made to the next available Council Meeting. For grant programs with specific funding rounds, recommendations will be made within three months of the closing date.
- 6.2.3 Unsuccessful applicants are encouraged to seek feedback from relevant Council staff on their application. Programs are highly competitive and even though an application may meet the program criteria it may not be competitive against other applications.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY

- 6.2.4 Council uses the Australian Business Register (ABN) as its sole source of truth to confirm an applicant's operating status as an incorporated not-for-profit or charitable organisation <http://www.abr.business.gov.au/>.
- 6.2.5 Council values and recognises the importance of applicant financial and in-kind contributions. Applicants that demonstrate a commitment to the project through either financial or volunteer support are considered favourably.
- 6.2.6 For all applications, council will consider the criteria of: sustainability, value for money, appropriate project and evaluation process, evidence of a need for the project, the number of individuals participating in or benefiting from, and that the organisation has the capacity to deliver the project.
- 6.3 Approval**
- 6.3.1 The elected Council has authority to approve grants, donations, and sponsorship. In some circumstances, specific delegation for this purpose is given to the CEO.
- 6.3.2 Approval of a grant, donation or sponsorship does not imply that Council has given any other consent. Applicants should note that events or any capital works require approvals and consents from Council, NSW Police and other state government agencies.
- 6.4 Funding Agreements**
- 6.4.1 All successful applicants are required to enter into a funding agreement before funds are released and before a project can commence.
- 6.4.2 Council's support must be acknowledged on all promotional material. The Council logo should be used with the text "proudly supported by Liverpool City Council". All promotional material must be approved by Council prior to publication. Council also reserves the right to receive the following: joint media release opportunities, opportunity for Mayor to speak at the event or occasion, space at the event (table/stall), and tickets to attend the event or occasion.
- 6.5 Reporting**
- All grant recipients are required to acquit their project as detailed in their funding agreement. Reports are to be submitted using the approved online grants management system. Reports provide feedback on the success of the project in terms of the agreed outputs and outcomes, relevant data, and any lessons learnt. Funding recipients are required to submit detailed financial reports and may be requested to provide further documentation and evidence of expenditure. Council may audit recipients at any time. Previously funded applicants must receive an acknowledgement of a successful acquittal prior to applying for further funding. No further funding will be granted to any organisation who has failed to submit an acquittal report for previous funding from Council.
- 6.6 Minor changes to this policy**
- Council authorises the CEO to make minor changes to this policy to reflect changes in legislation, expiry of or changes to grant programs, and changes in Council structure.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7. FUNDING PROGRAMS****7.1 KICK-STARTER GRANTS | UP TO \$500 | OPEN ALL YEAR**

This program supports individuals or unincorporated community groups to establish a social enterprise aimed at addressing priorities in Council's Community Strategic Plan or a project which promotes social inclusion and increased community participation. Applications can be made for funding of up to \$500 per financial year. Repeated applications of the same project in subsequent years will not be accepted.

- 7.1.1 Project outcomes must meet at least one of the below priorities:
- a) Improve connections and social networks within the community.
 - b) Increase participation in community activities, including by those experiencing social disadvantage.
 - c) Facilitate access to education, training, or employment opportunities.
 - d) Improve collaboration and coordination of community support and services.
 - e) Improve social and physical wellbeing through prevention and early intervention approaches.

- 7.1.2 Program timeframe
Applications can be made all year. Grants must be spent within 12 months of receiving them.

- 7.1.3 Eligibility
To be eligible for funding applicants must:
- a) Be an individual resident or unincorporated community group based within the Liverpool LGA.
 - b) Be 100% volunteer run or operate as a not-for-profit.
 - c) Must update Council's Community Development Worker (Funding and Support) during the delivery of the project or initiative.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.2 SMALL GRANTS | UP TO \$1,000 | OPEN ALL YEAR**

This program supports a range of small-scale community initiatives and is for community groups who may not have experience with grants programs. It aims to provide more intensive support and build the capacity of less established groups to familiarise themselves with grants programs and Council processes.

7.2.1 Initiatives and projects can contribute to one or more of the following outcomes:

- a) Develop trial community capacity building programs or facilitate small-scale community awareness events.
- b) Increase engagement of individuals in academic, cultural, and environmental fields.
- c) Improve relative equality, resilience and adaptive capacity of Liverpool's diverse communities.
- d) Enhance positive social, cultural, or sustainability outcomes for local communities related to Council's strategic priorities.

7.2.2 Available funding

Applications can be made for funding of up to \$1,000 per project. Repeated applications of the same project or initiative in subsequent years will not be accepted.

7.2.3 Program timeframe

Applications can be made all year. Grants must be spent within 12 months of receiving them.

7.2.4 Eligibility

To be eligible for funding applicants must:

- a) Be incorporated or auspiced by an incorporated organisation;
- b) A non-profit community service organisation or group providing programs/services to the residents of Liverpool; and
- c) Supply a copy of their most recent financial statements.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.3 LIVERPOOL YOUNG ACHIEVERS AWARDS | OPEN ALL YEAR**

The Liverpool Young Achiever Awards are given as a prize to a student who has excelled in citizenship, academic studies, artistic endeavors, or sporting proficiency.

7.3.1 Available funding

Under each applicable category there will be two prizes as follows:

<u>Citizenship:</u>	<u>Artistic Endeavours:</u>
1x \$1,000 for a high school student	1x \$1,000 for a high school student
1x \$500 for a primary school student	1x \$500 for a primary school student
<u>Academic Studies:</u>	<u>Sporting Proficiency:</u>
1x \$1,000 for a high school student	1x \$1,000 for a high school student
1x \$500 for a primary school student	1x \$500 for a primary school student

7.3.2 Highly Commended

All eligible nominees who are not selected for the major prize will be awarded a \$200 student donation.

7.3.3 Program timeframe

Applications will be accepted from the beginning of school Term 1 until the end of Term 3. A presentation ceremony will be held during Term 4.

7.3.4 Eligibility

To be eligible for this award applicants must:

- Be a high school or primary school based in the Liverpool Local Government Area (LGA);
- Be nominating a student attending either a high school or primary school based in the Liverpool LGA; and
- Supply a letter of support from the principal of the applying school for the nominated student.

- Each high school and primary school are only eligible to submit one student nomination per year. For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.4 COMMUNITY GRANTS | UP TO \$5,000 | TWO ROUNDS PER YEAR**

This program provides financial assistance to community groups, organisations and services for projects that foster partnerships and collaboration, build capacity, promote social inclusion and increase community participation. The program assists in developing pilot or trialling innovative services or programs that address the needs of residents, workers and visitors. The program will support projects that:

- a) Improve connections and build social networks within the community.
- b) Increase participation of people in community activities and programs, including members of the community who are experiencing social disadvantage.
- c) Facilitate access to education, training and employment opportunities.
- d) Improve opportunities for people to build confidence and develop their skills.
- e) Facilitate inclusion and access to facilities, services, open spaces and activities.
- f) Improve collaboration and coordination of community support and services.
- g) Improve social or physical wellbeing through prevention and early intervention.
- h) Strengthen governance and accountability in community organisations.

7.4.1 Expected program outcomes

Initiatives and projects can contribute to one or more of the following outcomes:

- a) Increased involvement and engagement by communities in social activities.
- b) Increased number of people feeling a strong sense of social wellbeing.
- c) Strengthened maintenance, management or improvement of physical and mental health and wellbeing.
- d) Improved access to information and development of new skills.
- e) Increased numbers of people undertaking educational courses and gaining sustainable employment.
- f) Reduced financial hardship and social disadvantage, including food insecurity and homelessness.

7.4.2 Available funding

Applications can be made for funding of up to \$5,000 per round. Grants must be spent within 12 months of receiving them.

7.4.3 Program timeframe

This grant program has two rounds per year.

7.4.4 Program eligibility and exclusions

To be eligible for funding through the Community Grants Program applicants must:

- a) Be incorporated or auspiced by an incorporated organisation.
- b) A non-profit community service organisation or group providing programs/services to the residents of Liverpool.
- c) Have public liability insurance of at least \$10 million (must be active during the period of funding).
- d) Supply a copy of their most recent annual report and/or financial statements.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Conditions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.5 SUSTAINABLE ENVIRONMENT GRANTS | UP TO \$5,000 | TWO ROUNDS PER YEAR**

The Sustainable Environment Grants program provides financial assistance to support schools and community groups to play an active role in reducing their impact on the environment and implementing environmentally sustainable actions. The program seeks projects focused on environmental improvement, sustainability education, awareness-raising and the promotion of sustainable living as a way of life that provide benefit to the natural environment and local community. Projects can include:

- **Waste Minimisation** – including reuse, recycling, litter reduction, composting and worm farming, waste education projects.
- **Sustainable Water Use** – including water efficiency, stormwater harvesting and water reuse, rain gardens and water quality improvements, and sustainable water use education programs.
- **Environmental Improvement** – including protection and enhancement of natural areas, habitat creation for native fauna, and natural environment education programs.
- **Sustainable Living** – including establishment of vegetable or native display gardens, bush tucker or community gardens, and the keeping of chickens or native bees.

7.5.1 Expected program outcomes

Grants from this program can contribute to one or more of the following outcomes:

- a) Build the capacity of schools and community groups to promote efficient resource use and improve the quality of the local environment.
- b) Encourage community members to become involved and take initiative in improving their behaviours for a more sustainable future.
- c) Encourage schools and community groups to identify and implement innovative approaches and positive solutions that protect and enhance Liverpool's unique natural environment.
- d) Improve the health of vegetation, water quality and healthy ecosystems contributing to cleaner waterways, air and healthier native vegetation.
- e) Raise awareness and promote sustainable living as a way of life, including actively participating in Council's environmental programs and activities.
- f) Generate positive community engagement (e.g. involvement of local businesses, environmental education centres or botanic gardens).

7.5.2 Available funding

Applications can be made for funding of up to \$5,000 per year by a school or an incorporated community group. Grants must be spent within 12 months of receiving them.

7.5.3 Program timeframe

This grants program has two rounds per year.

7.5.4 Program eligibility and exclusions

To be eligible for the Sustainable Environment Grants program applicants must have not received funding under this or another program for the same project (separate and additional stages of a previous project are eligible), operate in the Liverpool LGA and:

- a) Be a registered NSW school, not-for profit pre-school or child care centre; or
- b) An incorporated, non-profit, community service, welfare or charitable organisation or group providing programs or services to the residents of Liverpool; or
- c) Community group auspiced by an incorporated organisation.

Applications will not be accepted for:

- a) For profit organisations

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- b) Overall project coordination
- c) Capital works for major infrastructure or construction of buildings
- d) Work being completed on land not owned by the applicant without evidence of approval from the landowner.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Conditions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.6 MATCHING GRANTS | UP TO \$15,000 | TWO ROUNDS PER YEAR**

This program is designed to provide financial support to projects and activities that build or strengthen communities within Liverpool. These projects will focus on supporting the development and implementation of community capacity building activities and providing opportunities for a broader cross section of the community to be involved in community and recreational activities.

7.6.1 Funding will support projects that address one of the following categories:

- **Arts** - Contribute community art to a neighbourhood or work to increase the participation of residents within art-based programs/projects.
- **Capacity Building** - Bring residents together and enhance participation in the community, including those who are experiencing social disadvantage, or provide benefits to address an identified community need. This could be a community event or community-based capacity building project.
- **Youth Engagement** - Focus on increasing the ability of young people to obtain skills and qualifications or increase their active participation within the community.
- **Accessibility** - Enhance and improve access options for the community, either through education, transport, disability access or connectivity.
- **Environmental** - Address environmental issues and concerns or contribute to environmental education and awareness.
- **Community Safety/Public Space Activation** - Address community safety and security issues such as activities that activate or diversify the night time economy including pop up entertainment and night time performances in public spaces. These projects can also include addressing perceptions of community safety.
- **Sports Development** - Contribute to the development of sporting groups or enhance participation in sporting and recreational activities.

7.6.2 Expected program outcomes

Grants from this program can contribute to one or more of the following outcomes:

- a) Develop social connections and partnerships within communities, or reinforcement of those that already exist.
- b) Increased participation in community activities and organisations by improving collaboration and coordination of community support and services.
- c) Strengthened opportunities for community members and others to build personal creativity and self-expression.
- d) Increased opportunities for community members to acquire or develop new skills and/or employment.
- e) Create, renew or revitalise places and spaces within the community.
- f) Strengthened community members' feelings of safety and sense of belonging within public spaces.

7.6.3 Available funding

The matching grants program recognises community contribution towards a project and can offer up to \$15,000 support to match this contribution. The program supports projects that involve genuine community participation. By 'matching' what the community contributes, Council is building a sense of community and strengthening partnerships as people work together on the project. Contributions from the community or Council can be made in cash or value-in-kind. Recognised in-kind community contributions include:

- a) Design services, professional services, trade services (such as plumbing), provision of trucks and plant, concreting and painting, donated supplies, materials or venues.

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- b) Volunteer time such as labour, set up and pack down, and meeting time to identify, plan and implement projects. The rate of volunteer time is calculated as \$20 per hour. For professional or contracted services, the rate is \$75 per hour.
- c) Direct cash input to the project through donations or income generated.

The value of in-kind contributions should be verified by an independent quote, and where the value is in question, Council's assessment of the value of in-kind contributions will take precedence in the assessment of the matching grant given. The costs of Council and other approvals required by government agencies/authorities must also be considered when applying under this grants program.

7.6.4 Program timeframe

This program accepts applications twice per year. Grants must be spent within 12 months of receiving them.

7.6.5 Program eligibility and conditions

To be eligible for the Matching Grants program applicants must:

- a) Be incorporated or auspiced by an incorporated organisation.
- b) A non-profit community service organisation or group providing programs/services to the residents of Liverpool.
- c) Have public liability insurance of at least \$20 million (must be active during the period of funding).
- d) Supply a copy of their most recent annual report and/or financial statements.

Council reserves the right to defer consideration of a Matching Grant application where planning, leasing or ownership, statutory approvals, or appropriate development issues are raised by a project.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.7 CORPORATE SPONSORSHIP | UP TO \$10,000 | OPEN ALL YEAR**

Council may provide financial contributions of up to \$10,000 through its Corporate Sponsorship Program to organisations, groups, or individuals for programs that can build or enhance Council's reputation. These include but are not limited to providing appropriate branding benefits and opportunities for Council, and/or providing cross-promotional opportunities for Council's services or facilities.

Applications to Council for sponsorship must address at least one of the following:

1. Economic benefit

- a) Delivers significant economic benefit to the Liverpool LGA.
- b) Delivers benefit to tourism, hospitality and retail sectors through the attendance of regional, national, or international delegates at events.
- c) Provides a platform for research, trade, and/or investment opportunities.
- d) Attracts national or international attention to Liverpool as a place to reside, visit, work and/or invest.
- e) Creates employment opportunities within the Liverpool LGA.

2. Community, cultural, and social benefit

- a) Provides an innovative opportunity to meet community needs and promote Liverpool's cultural diversity and celebrate our City's uniqueness.
- b) Enhances Liverpool's profile and reputation as an outward looking, creative and connected city.
- c) Creates opportunities for education and information exchange between Council, the community and the sector.
- d) To support the organisation and activation of a charity event with the Liverpool LGA. Sponsorship funds are not to be used for direct fundraising, including but not limited to the purchase of tickets or tables at a fundraising event.
- e) Attracts a major program to Liverpool that has South West-Sydney region, state or national significance.

3. Environmental benefit

- a) Enhances Liverpool's reputation as a sustainable city through leadership in waste and environment management.

7.7.1 Expected program outcomes

Projects must contribute to one or more of the following outcomes:

- a) Provide an opportunity for measurable economic, social, environmental and/or cultural benefits to Council and the Liverpool LGA.
- b) Provide opportunities for the community to participate and contribute in activities/events in the Liverpool LGA.
- c) Create a valuable strategic alliance for Council.
- d) Provide extensive coverage and promotional/publicity opportunities across a range of media outlets.
- e) Promote Liverpool's reputation as a great place to live, visit, work, and invest.

7.7.2 Program timeframe

- This program accepts applications all year.
- Applications must be submitted at least three months prior to an event taking place. Applications submitted with less than three months lead time will be deemed ineligible.

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- Activities should take place within 12 months of successful sponsorship funding being received.

7.7.3 Program eligibility and conditions:

To be eligible for the Corporate Sponsorship program applicants must:

- a) Be incorporated or auspiced by an incorporated organisation and hold a current ABN.
- b) A non-profit community service organisation or group providing programs/services to the residents of Liverpool.
- c) Have public liability insurance of at least \$10 million (must be current during the period of funding).
- d) Supply a copy of their most recent annual report and/or financial statements.
- e) Must apply for sponsorship towards an event or activity in the Liverpool LGA that attracts a significantly high level of attendance from the community and provides direct benefits for Liverpool based organisations and/ or Liverpool residents.
- f) Must ensure that attendance and participation is free where sponsorship is sought for a community event.
- g) Must be registered with the Australian Charities and Not-for-profits Commission if an application is for a local charity event.

7.7.4 Funding will not be provided to:

- a) Projects that do not address the identified directions of the Liverpool LGA as set out in Council's Community Strategic Plan.
- b) Charities for general donations including the purchase of tickets or fundraising tables at an event.
- c) Projects that will rely on recurrent funding from Council.
- d) More than one event within the Liverpool area in a two-month period that celebrates or marks a specific occasion or activity.
- e) Organisations whose activities are not aligned with the City's ethical framework.
- f) Previous recipients who have not fulfilled the conditions of a sponsorship.
- g) Organisations that are not registered in Australia.
- h) Activities or events that do not benefit the Liverpool LGA or its residents.
- i) Underwrite events, programs or projects.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

7.7.5 Council's current standing sponsorship resolution:

Sponsorship Activity	Amount	Council Resolution
Police Officer of the Year	\$1,000	27/06/2011

- 7.7.6 Approval of sponsorship does not imply that Council has given any other consent. Applicants should note that many festivals and events require approvals and consents from Council, NSW Police and other NSW Government agencies. For guidelines on applying to host an event in Liverpool, visit www.liverpool.nsw.gov.au/whats-on/events/event-organisers-information-kit-guidelines

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.8 SPORTING GRANTS | UP TO \$5,000 | ONE ROUND PER YEAR**

This program offers funding to sporting clubs and junior disability sporting clubs to assist with the development of young people and encourage participation of the broader community in local sporting and recreational activities. Grants can also be used towards the purchase or maintenance of sporting equipment.

Funding will support applications by recreation and sporting organisations/clubs under one of six categories:

- a) **Sports development** – Coaching clinics, sports camps, or training/development
- b) **Ground development** – Minor capital improvements
- c) **Maintenance Equipment** – Line marking equipment or ground maintenance equipment (to be eligible, equipment must remain the property of the club)
- d) **Sporting Equipment** – Kits, bags, first aid supplies, safety equipment (to be eligible, equipment must remain the property of the club)
- e) **Education** – First aid training, coaching programs or safe play
- f) **Club diversity** – Introduction of additional sports or expansion of club to encourage greater community involvement

7.8.1 Expected program outcomes

Projects must contribute to one or more of the following outcomes:

- a) Increased opportunities for participation of the broader community in sporting and recreational activities.
- b) Improved condition and functionality of sporting equipment.
- c) Enhanced awareness of emerging trends in sports development and demonstrated best practice.
- d) Strengthened maintenance, management or improvement of physical and mental health and wellbeing by improving opportunities for physical activity.

7.8.2 Available funding

Grants of up to \$5,000 per sporting club are available. Clubs may submit applications for more than one project. Within the funding pool, \$5,000 is reserved to fund applications that support participants with a disability. Where eligible applications that support participants with a disability are less than \$5,000 the remaining funds are returned to the main pool of funding for distribution.

7.8.3 Program timeframe

This program accepts applications once per year. Grants must be spent within 12 months of receiving them.

7.8.4 Program eligibility and exclusions

To be eligible for the Sporting Grants Program applicants must:

- a) Be incorporated or auspiced, a non-profit recreation or sporting organisation/club, providing programs/services to the residents of Liverpool.
- b) Have public liability insurance of up to \$10 million.
- c) Supply a copy of most recent annual report and/or financial statements.
- d) Have not received funds from the Sporting Grants program in the previous year.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**7.9 SPORTING DONATIONS | UP TO \$500 | OPEN ALL YEAR**

This program enables Council to provide small amounts of funding to assist community members in their efforts to achieve excellence in sport at a regional, state or national representative level. Individuals and teams based in the Liverpool LGA are eligible to apply for donations towards the cost of participating in representative sporting events for which they have qualified. Donations are based on the level of representation achieved and where events will be held. Participation at school sport events is also eligible for consideration.

7.9.1 Expected program outcomes

Donations from this program can contribute to one or more of the following outcomes:

- a) Increased participation of individuals/teams in representative sporting events.
- b) Improved accessibility to participation in representative sporting events.
- c) Improved confidence and capacity of local individuals and teams by acknowledging and supporting participation at a representative level.
- d) Enhanced positive social outcomes and opportunities for local communities.

7.9.2 Available funding

Donations are available for the following amounts:

- a) \$100 for regional representation (competitor only), or for coach/referee/umpire/official representation at a regional, state or national event more than 100km from Liverpool.
- b) \$200 for state representation (competitor only).
- c) \$300 for Australian national representation at an event within New South Wales, Australian Capital Territory, Queensland and Victoria (competitor only).
- d) \$400 for Australian national representation at an event within Tasmania, South Australia, Northern Territory and Western Australia (competitor only).
- e) \$500 for Australian national representation at an overseas event (competitor only).
- f) \$500 for team representation.

7.9.3 Program timeframe

This program accepts applications all year and applicants are required to submit their application prior to the event taking place. Activities must take place within 12 months from when the application was submitted. Information must be provided on the costs associated with participating in the representative events.

7.9.4 Program eligibility and exclusions

To be eligible for funding through the Sporting Donations Program the following criteria applies:

- a) Individual applicants must be a resident of the Liverpool LGA.
- b) Applicants must provide proof of selection for the event.
- c) Applications from students at state, private or independent schools or for participation at school sport events, are eligible for consideration.
- d) Team applications – must have a minimum of 75% of the team residing in the Liverpool LGA, club must be based in the Liverpool LGA, and a maximum of three teams per club can be funded in a financial year.

For more information on eligibility and exclusions refer to Section 5: General Eligibility and Exclusions.

GRANTS, DONATIONS, AND CORPORATE SPONSORSHIP POLICY**AUTHORISED BY**

Council Resolution

EFFECTIVE FROM

29 May 2019

DEPARTMENT RESPONSIBLE

City Community and Culture (Community Development and Planning)

REVIEW DATE

The policy will be reviewed every two years.

VERSION	AMENDED BY	DATE	TRIM NUMBER
1	Council Resolution	18 October 2010	158320.2014
2	Council Resolution	29 May 2013	097264.2013
3	Council Resolution	31 July 2013	150967.2014
4	Council Resolution	25 February 2014	026269.2014
5	Council Resolution	28 May 2014	126057.2014
6	Council Resolution	30 September 2015	227843.2015
7	Minor changes approved by CEO	12 July 2016	185151.2016
8	Council Resolution	26 April 2017	026648.2017
9	Council Resolution	29 May 2019	022779.2019

THIS POLICY WAS DEVELOPED AFTER CONSULTATION WITH

City Community and Culture, Governance, Legal and Procurement, and Infrastructure and Environment.

REFERENCES

Australian Institute of Grants Management: Grant making Manifesto (2011)

Liverpool City Council: Council's Community Strategic Plan

Liverpool City Council: Code of Conduct Procedures

Liverpool City Council: Social Justice Policy and Ethical Governance, Conflicts of Interest Policy