ATTACHMENT BOOKLET

ORDINARY COUNCIL MEETING 24 JULY 2024

BOOK 2





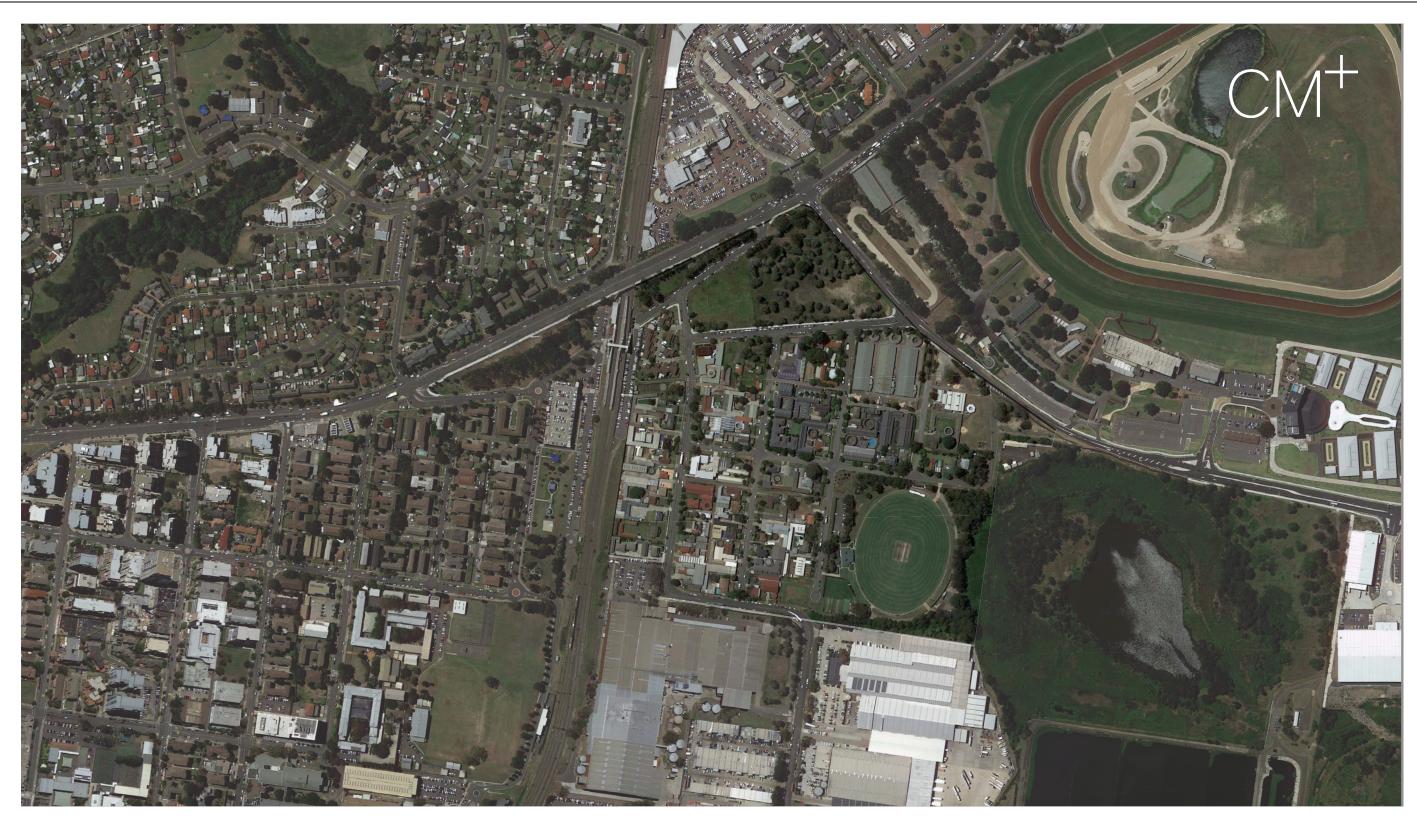
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REVISED WARWICK FARM STRUCTURE PLAN URBAN DESIGN REPORT

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REVISED WARWICK FARM STRUCTURE PLAN

Revision	Date	Description	Ву	Chk	Арр
01	23/08/21	Revised Warwick Farm Structure Plan	WW/DW	WW	DN
		Urban Design Report			
02	26/08/21	Revised Warwick Farm Structure Plan	ww	DN	
		Urban Design Report Rev 02			

Prepared for: CITY COUNCIL

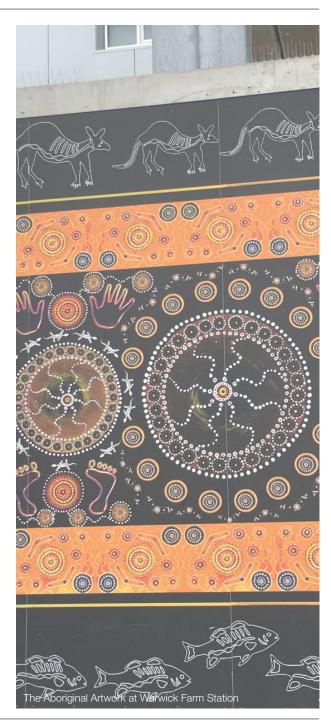
By

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1.0 Introduction

1.1 Background Introduction

Conybeare Morrison International (CM⁺) and the consultant team are engaged by Liverpool City Council (LCC) to conduct a study of the Warwick Farm Precinct (the precinct) and develop a Structure Plan as well as the associated Planning Proposal and Contributions Plan to submit to the Department of Planning, Industry and Environment (DPIE) for Gateway determination.

In the December 2019 Council meeting, Liverpool City Council decided to support a B4 Mixed Use zoning within the precinct and deliver a high quality Urban Renewal Precinct with optimal urban design outcomes. Council has also resolved to support in principle the Planning Proposal at No. 240 Governor Macquaire Drive (GMD), lodged by SJB Planning on behalf of Warwick Farm Central (Projects) Pty Ltd, with reduced height and density as well as a new VPA offer. Subsequently, Council prepared and lodged a Planning Proposal to the DPIE on the 25th of February 2020 seeking to amend the Liverpool Local Environmental Plan 2008 (LLEP 2008).

The draft Structure Plan was developed to include the design described in the previously submitted Planning Proposal for No. 240 GMD. It was then placed on the public exhibition in late 2020 and 20 public submissions were received including submissions from Sydney Water and Transport for NSW (TfNSW). A financial feasibility study was conducted in this period in light of the Liverpool Planning Panel comments and the Council resolution. On 21 September 2020, the Planning Proposal at No. 240 GMD was refused by the DPIE at the gateway determination, citing a lack of strategic merit. The DPIE states in the Gateway determination letter that the Warwick Farm Structure Plan and its associated studies should inform the planning of No. 240 GMD.

In April 2021, Council resolved to further refine the exhibited Warwick Farm Structure Plan to incorporate the feedback received from the community, the DPIE and the latest regional studies. Therefore, CM⁺ and the consultant team were re-engaged by LCC to update the exhibited Warwick Farm Structure Plan and the associated Planning Proposal and Contributions Plan.

The following issues were considered in amending the structure plan:

- Respond to feedback received during public exhibition of the draft plans.
- Incorporate the outcomes of regional transport, flood, and open space studies.
- Respond to the outcomes of feasibility testing.
- Incorporate the 240 Governor Macquarie Drive site into the draft planning proposal and structure plan, considering DPIE's Gateway refusal and feedback received from public exhibition.
- Conduct a detailed flood impact assessment to better understand land needed for flood mitigation and potential flood mitigation options.



Figure 1: Aerial view of the Warwick Farm Precinct



1.0 Introduction

1.2 The Study Area

The Warwick Farm Precinct is located in the Liverpool Council Local Government Area (LGA), in the suburb of Warwick Farm. The Liverpool CBD, which is the third largest CBD of Metropolitan Sydney, is approximately 1.5km (10-minute drive) to the southwest of the precinct. The Warwick Farm Racecourse is across Governor Macquarie Drive to the northeast of the precinct.

The precinct has an area of approximately 28.4 hectares and is bounded by the Hume Highway to the northwest, the railway corridor to the west, Priddle Street to the south, Horseshoe Pond to the east and Governor Macquarie Drive to the northeast.

It is well connected to the surrounding suburbs, parks, sport and recreational facilities as well as educational facilities. Rosedale Oval, located within the precinct, is an 'A-Grade' Cricket Ground. A children's playground is located within Rosedale Oval along National Street. Hart Park is across the railway corridor to the west of the precinct. Liverpool Hospital is approximately 800m to the southwest of the precinct.

The precinct is also well served by the Hume Highway, major roads, local roads and public transport. Warwick Farm Station, which is serviced by T2 Inner West / Leppington, T3 Liverpool / Lidcombe and T5 Richmond / Leppington lines, provide frequent train services to the major strategic and local centres, including Liverpool CBD, Parramatta CBD and Sydney CBD.

The Warwick Farm Precinct currently has a mix of uses, however most are related to the equine business. Residential, hotel and motel accommodation is scattered within the precinct. A general industrial area is immediately adjacent to the Warwick Farm Precinct to the south, which generates a large amount of heavy vehicle traffic movements through Manning and Munday Streets to Governor Macquarie Drive and the Hume Highway. The conflict of uses between small vehicles, heavy vehicles, pedestrian and horses is one of the major issues within the precinct.

Council, at its December 2019 meeting, has also identified the Manning Street Bypass as a priority project to redirect heavy vehicles away from entering the core of the precinct, therefore facilitating the redevelopment of the precinct to mix of uses, including

B4 Mixed Use zone. The Manning Street Bypass project is at the preliminary stage. Detailed information regarding the proposed Manning Street Bypass will be made available to the public once the design is finalised.



Figure 2: The Warwick Farm Precinct



1.0 Introduction

1.3 Project Objectives

The project aims to:

- Rezone the Warwick Farm Precinct to a mix of uses, including B4 Mixed Use, R4 High Density Residential and RE1 Public Recreation consistent with the Liverpool Local Strategic Planning Statement (LSPS).
- Incorporate 240 Governor Macquarie Drive into the overall precinct planning.
- Develop a well considered Structure Plan for the precinct to guide future development.
- Achieve the objectives and actions identified in the Liverpool Local Strategic Planning Statement (LSPS).
- Mitigate the potential traffic and flooding impacts.
- Improve the public domain, including pedestrian / cycling linkages, wayfinding and new public spaces.
- Deliver public benefits as a result of the redevelopment.
- Reconsider the appropriate height and density across the entire precinct based on the analysis of constraints and opportunities and feedback received.
- Amend the Planning Proposal and Contributions Plan based on the revised Structure Plan to submit to the DPIE for a Gateway Determination.

1.4 The Team

The CM⁺ led Consultant Team includes the following expertise:

- Project Management CM+
- Urban Design CM+
- Strategic, Statutory Planning and Contributions Plan- GLN Planning
- Transport Planning SCT Consulting
- Flood Management WMA Water
- Economic and Land Valuations Atlas Urban Economics
- Quantity Surveying Mitchell Brandtman
- Social and Community Planning Cred Consulting

The Consultant Team has worked closely with Liverpool City Council to deliver this project. The team structure is illustrated in Figure 3.

1.5 Methodology

This project has been undertaken in two phases. Phase 1 of the project was focused on development of a draft Structure Plan based on Council's resolution in 2019. Subsequently, the draft Structure Plan was put on public exhibition. Phase 2 of this project is to amend the exhibited Structure Plan addressing the community feedback, the DPIE's Gateway determination on No. 240 Governor Macquarie Drive and the relevant regional studies.

Phase 1 - Draft Structure Plan Methodology

- Attend an Inception Meeting with Council to familiarise with the background information and confirm the project objectives, program and deliverable.
- Conduct a site visit of the precinct and its surrounding context to familiarise with the area.
- Undertake background information review.
- Conduct Urban Design Analysis, planning study, traffic and transport study, flood study and social infrastructure study to identify constraints and opportunities.
- Establish the Urban Design Vision and Principles for the precinct.
- Develop Structure Plan options based on the Urban Design Vision and Principles as well as the input from the Consultant Team.
- Workshop with Council on the Structure Plan options.
- Develop and document the preferred Structure Plan option, based on the feedback from Council and the Consultant Team.
- Present the Structure Plan to Councillors and to the Liverpool Local Planning Panel and finalise the plan addressing comments received.

Phase 2 - Refinement of the Exhibited Structure Plan Methodology

- Review the additional information, the DPIE and community feedback
- Refine the Urban Design Vision and Principles for the precinct.
- Develop Structure Plan options based on the refined Urban Design Vision and Principles as well as the input from the Consultant Team.
- Workshop on the Structure Plan options.
- Conduct a detailed flood impact assessment.
- Develop and document the preferred Structure Plan option, based on the feedback from Council and the Consultant Team.
- Present the Preferred Structure Plan to Councillors.
- Finalise the revised Structure Plan based on the feedback received.



Figure 3: The team structure





2.1 Strategic Context

A Metropolis of Three Cities

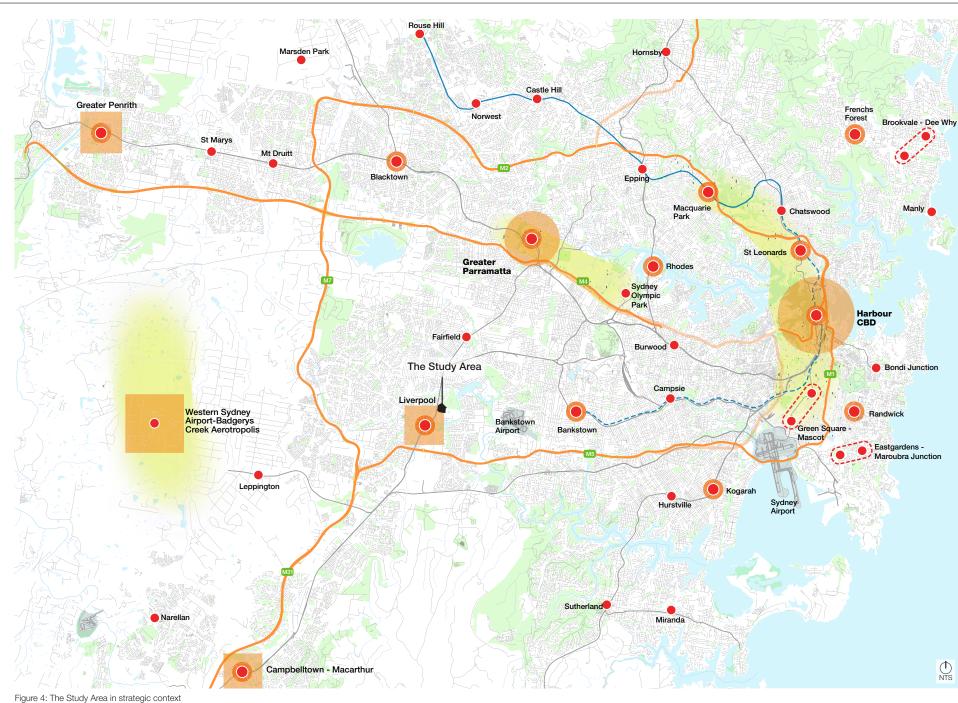
The Greater Sydney Regional Plan - A Metropolis of Three Cities by the Greater Sydney Commission is a 40 year vision for Metropolitan Sydney. It envisions a 30-minunte city, where residents live within 30 minutes travel of their jobs, education and health facilities, services and great places. The three cities identified in the Plan are:

- The Easter Harbour City
- The Central River City
- The Western Parkland City

The Regional Plan projects that almost half of the population growth in Greater Sydney over the next 40 years will reside west of Parramatta in the Central River City and the Western Parkland City. It is projected that the population of Western Parkland City will grow from 740,000 in 2016 to 1.1 million by 2036 and to over 1.5 million by 2056.

The Regional Plan promotes the ongoing growth of the Western Parkland City. It emphasises the role of collaboration, and encourages urban renewal and new neighbourhood establishment close to the existing centres, including the Liverpool CBD. A place-based approach, that provides great public spaces, and Transport-Oriented Development (TOD), is encouraged to deliver high quality neighbourhoods and a healthy lifestyle in the Western Parkland City.

The Warwick Farm Precinct will contribute to the Liverpool Metropolitan Cluster which comprises civic, health, education, residential, retail and commercial uses. The Hume Highway connects the precinct to the M5 Motorway, which forms part of the Sydney Orbital Network. The precinct is approximately 1.5km to the Liverpool CBD (10-minute drive), 14km to the Parramatta CBD (30-minute drive), 27km to the future Western Sydney Airport (35-minute drive) and 40km to the Sydney CBD (40-minute drive). The precinct is also close proximity to Warwick Farm Station. The revisioning of the precinct presents a TOD opportunity and enables the creation of a high-quality new neighbourhood that fulfils the 30-minute city vision in the Regional Plan.





Western City District Plan

The Western City District Plan (the District Plan) is a 20-year plan to manage growth and achieve the 40-year vision identified in the Regional Plan. The District Plan will guide the growth of the Western Parkland City to year 2036.

The District Plan covers eight individual councils, including Liverpool City Council. It is projected that the Western City District will have a population of 1,534,450 by 2036, which is an additional 464,450 people compared with 2016. The Western City District will accommodate 27% of the total population growth in Greater Sydney. An additional 184,500 dwellings are projected by 2036, which comprises 25% of the total housing increase in Greater Sydney. The District Plan also estimates that an additional 370,200 jobs will be created which is 15% of the Greater Sydney total.

The District Plan emphasises the importance of transport infrastructure to facilitate the population and job growth of the district. It promotes housing diversity and easy access to public transport and infrastructure, including schools, hospitals and community facilities. Active transport, including walking and cycling paths, and green links will improve the district's livability.

Collaboration Area - Liverpool Place Strategy

The Liverpool CBD and the Warwick Farm Precinct are identified as part of the Collaboration Area, which promotes rezoning land for additional housing, improving connections, and undertaking urban renewal of the Warwick Farm Precinct. The District Plan nominates a five year housing target of 8,250 for Liverpool. In addition to the housing target, a baseline job target of 36,000 by 2036 (7,000 increase compared with 2016) is nominated for Liverpool.

The 2019 NSW Population Projections by DPIE estimates the population of Liverpool will increase by 229,450 and reach 441,450 people by 2041. A total of 156,800 dwellings is projected by year

The Liverpool Collaboration Area Place Strategy

The District Plan has identified the Liverpool area as a Collaboration Area as it involves complex urban challenges. The Place Strategy sets out the vision and actions to enable the redevelopment of the

The Warwick Farm Precinct is identified as an Innovation / Research / Health / Advanced Manufacturing area under the Place Strategy. The Place Strategy also identifies the need to upgrade the

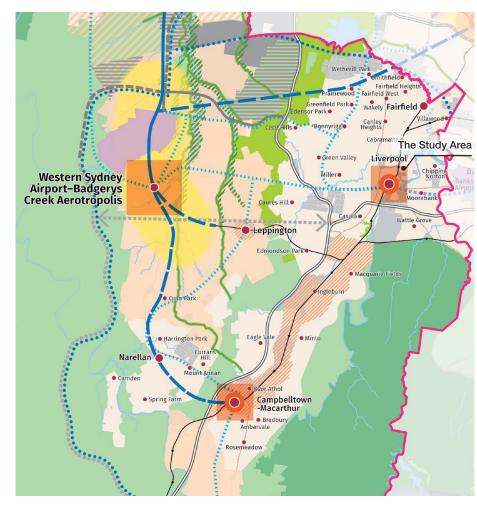


Figure 5: West District Plan

Warwick Farm Station Interchange underpass, the commuter car park and its access as a priority. The vision outlines in the Liverpool Collaboration Area Place Strategy for the Warwick Farm Precinct is included in the Liverpool Local Strategic Planning Statement which has been endorsed by the Greater Sydney Commission.



Figure 6: Liverpool Collaboration Area Plan





River Sensitive Liverpool: Cool, Comfortable, Connected Ideas for the Liverpool Collaboration Area

In February 2019, a two-day workshop was co-hosted by Liverpool City Council and Sydney Water. The workshop intended to explore opportunities to deliver Council's Water Management Policy and implement the priorities and actions of the Liverpool Place Strategy. A report was published by the Cooperative Research Centre for Water Sensitive Cities (CRC) summarising the workshop outcomes.

There were 35 participants from eleven organisations that attended this workshop, including:

- NSW Department of Planning, Industry and Environment (DPIE)
- NSW Office of Environment and Heritage (now a part of DPIE)
- Greater Sydney Commission
- NSW Department of Health
- NSW Environmental Protection Authority
- Sydney Water
- Liverpool City Council
- CRC
- Property developers

The workshop envisaged providing public access to both Horseshoe Pond and the Georges River foreshore area within the Liverpool Sewage Treatment Plant, which are currently owned by Sydney Water (refer to Figure 7).

The workshop also identified the next steps to realise the ideas proposed. It identified that Council and Sydney Water co-develop the strategic masterplan for the Sydney Water site.

Key

WATERWAY

NEW ROAD

PROPOSED SHARED PATH

RECYCLED WATER

OPEN SPACE

RAILWAY

.....

LIVERPOOL WATER RECYCLING PLANT

EXISTING VEHICULAR CONNECTION

NEW PEDESTRAIN CONNECTIVITIES

Council has been working with Sydney Water to deliver the masterplan for the Sydney Water Site.

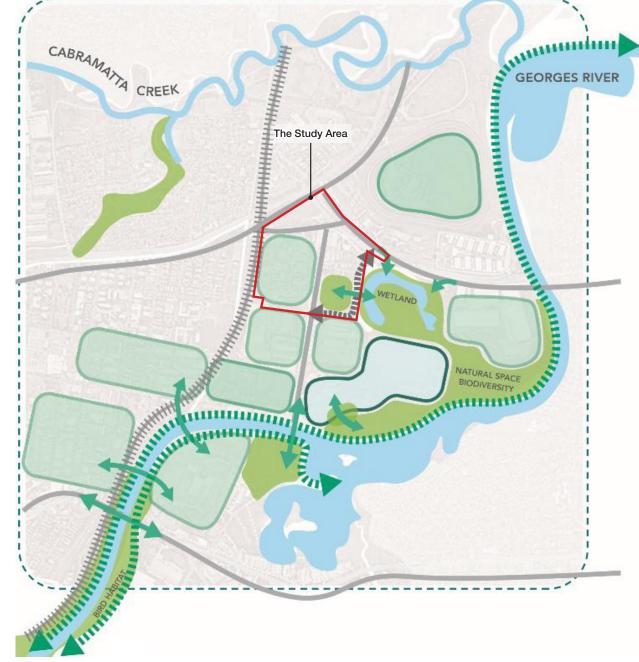


Figure 7: Ecology and accessibility Ideas for the Liverpool Collaboration Area (Courtesy of CRC Water Sensitive Cities)



Liverpool Local Strategic Planning Statement (LSPS)

In 2018, the DPIE introduced a new requirement for local councils in NSW to prepare an LSPS, which sets out a 20-year land use vision to manage future growth and realise the regional / district plans. The LSPS will also inform the changes to the local level plans including the Local Environmental Plan (LEP) and Development Control Plan (DCP). The LSPS will need to be endorsed by the DPIE or the relevant planning authority (e.g. the Greater Sydney Commission).

Liverpool City Council endorsed the Liverpool LSPS - Connected Liverpool 2040 in December 2019. The Greater Sydney Commission (GSC) has accepted the Liverpool LSPS through its assurance review process. The Liverpool LSPS provides a 20-year vision for the Liverpool Local Government Area (LGA) to facilitate the continuous growth of the area. It identifies 16 priorities across connectivity, livability, productivity and sustainability to realise the vision:

'A vibrant place for people that is community focused, walkable, public transport-oriented, sustainable, resilient and connected to its landscape. A place that celebrates local diversity and history, and is connected to other Sydney centres. A jobs-rich city that harnesses health, research, education, innovation and growth opportunities to establish an inclusive and fair place for all.'

Warwick Farm is identified as a Town Centre. The overall Structure Plan and Action 10.2 identifies the necessity of preparing a Structure Plan and Planning Proposal to rezone the land to a mix of uses, including B4 Mixed Use (Figure 8).

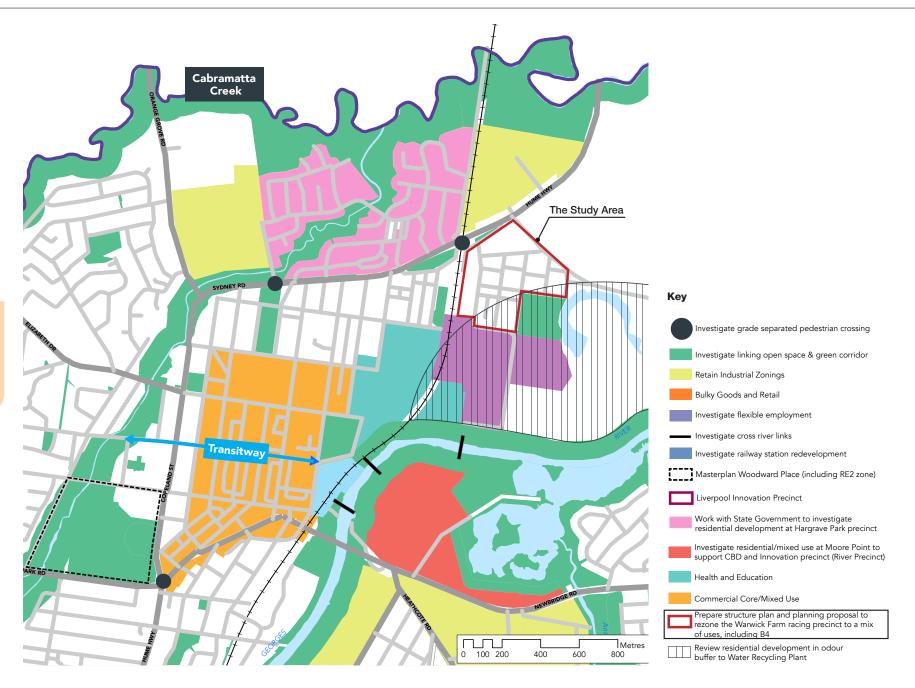


Figure 8: Liverpool LSPS



2.2 Liverpool Local Environmental Plan 2008 (LLEP 2008)

Land Zoning

The current zoning that applies to the precinct is illustrated in Figure 9. The majority of the precinct is zoned low to medium density residential. Rosedale Oval is zoned RE1 Public Recreation, providing a recreational facility to the general public. The triangular land along Governor Macquarie Drive is zoned B5 Business Development, in which warehouse-type businesses are permitted. RE2 Private Recreation zoning can be found along Governor Macquarie Drive close to the Warwick Farm Racecourse.

There is a parcel of land along Rosedale Oval zoned SP2 Infrastructure - Sewage System. SP2 Infrastructure zoning can also be found along the Hume Highway and the railway corridor.

A General Industrial area (zoned IN1) is situated immediately to the south of the precinct.

LEGEND

Study Area

B1 Neighbourhood Centre

B5 Business Development

IN1 General Industrial

R2 Low Density Residential

R3 Medium Density Residential

R4 High Density Residential

RE1 Public Recreation

RE2 Private Recreation

SP2 Infrastructure

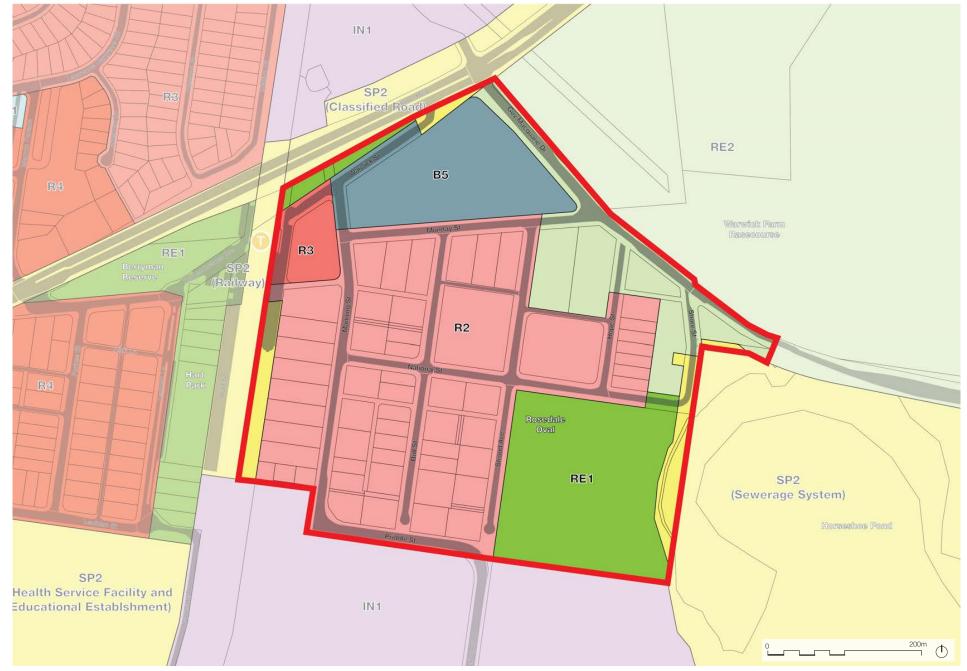


Figure 9: Existing zoning map



Building Height

The majority of the precinct has a maximum building height of 8.5m (2.5 storeys), with the triangular site along Governor Macquarie Drive with a maximum allowable height of 15m (4 storeys).

The general industrial area to the south has a height control of 15m (4 storeys). The Warwick Farm Racecourse adjacent to the precinct has a height limit of 30m, equivalent to about 9 storeys. The land to the west of the railway corridor has a height limit of 35m which is about 10 to 11 storeys.

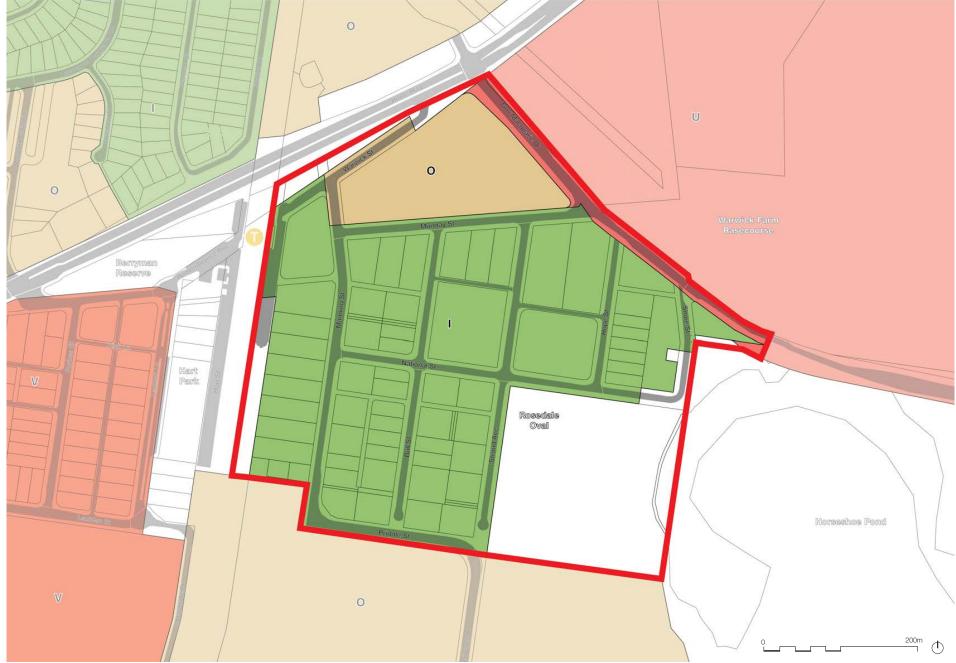


Figure 10: Existing building height map

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0 15

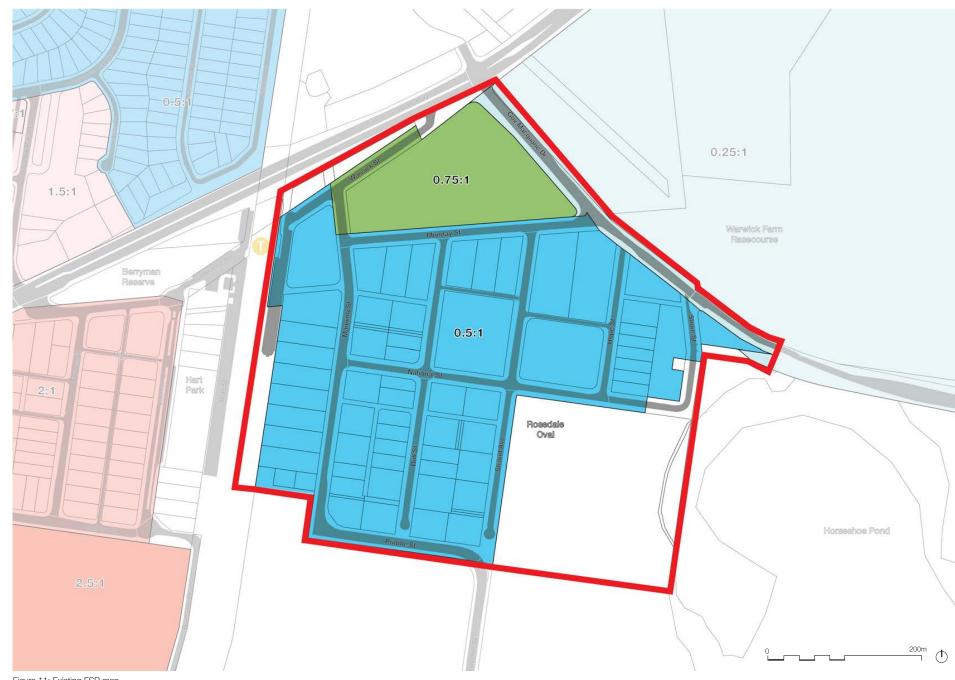
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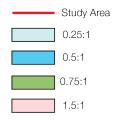
Floor Space Ratio (FSR)

The precinct is relatively low in density. FSR 0.5:1 applies to the majority of the land, with the highest FSR of 0.75:1 applicable to the triangular site along Governor Macquarie Drive.

The area to the west, across the railway corridor enjoys a higher FSR, ranging from 2.0:1 to 2.5:1. There is no FSR control for the industrial land to the south of the precinct.







2.5:1

Figure 11: Existing FSR map



Heritage Item

There is no heritage item or Heritage Conservation Area (HCA) within the precinct. Warwick Farm Racecourse, which is across Governor Macquarie Drive to the northeast of the precinct, is identified as a heritage item with State level significance.

Berryman Reserve along the Hume Highway has a local landscape heritage. The grid of streets to the west of the railway corridor are identified in LLEP 2008 as local heritage, which represent the early Liverpool Town Centre layout which dates back to the 1800s.

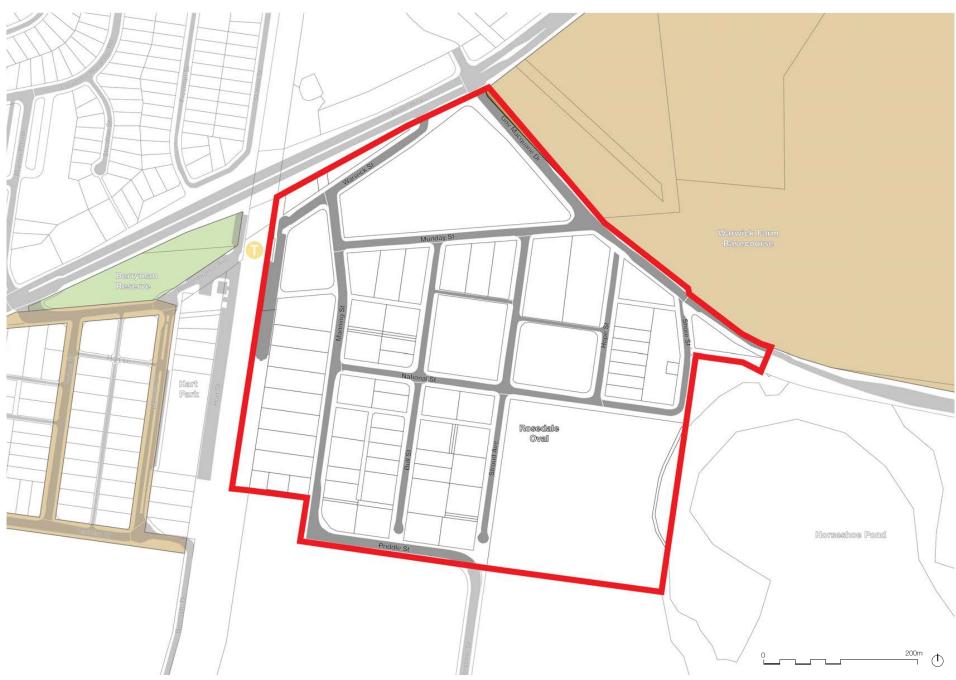






Figure 12: Heritage map



Minimum Lot Size

The minimum lot size controls ensure that subdivisions and associated developments promote the desired future character of the neighbourhood through consistent lot size, shape, orientation and housing density. The minimum lot size controls within the precinct vary. The land within the R2 Low Density Residential Zoneare set at 600m². The site adjacent to Warwick Farm Station, which is zoned R3 Medium Density Residential has a minimum lot size of 450m². Larger lot sizes apply to the sites zoned B5 and RE2, with minimum lot sizes of 2ha and 1ha respectively.

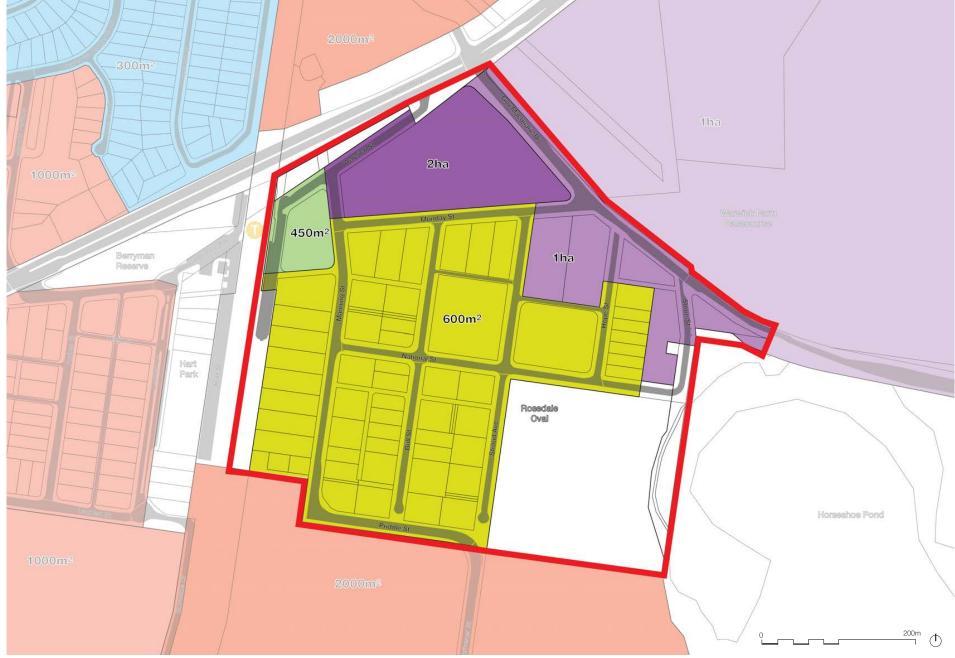


Figure 13: Existing minimum lot size map

2ha

LEGEND





3.0 Local Context

3.1 Local Context

The Warwick Farm Precinct is located within the Liverpool Metropolitan Cluster identified in the Western City District Plan. The precinct is close to the Liverpool CBD (about 1.5km), which has a mixed use character, providing civic, educational and recreational facilities as well as retail, commercial and residential uses.

The precinct is well connected to the surrounding areas via public transport and main roads. Warwick Farm Station provides frequent services to Liverpool, Leppington and other major centres including Sydney CBD and Parramatta. The Hume Highway links the precinct to the M5 Motorway. Governor Macquarie Drive provides a crossing point of the Georges River and links the Hume Highway and Newbridge Road, which is another east-west state route providing access to Central River City and Eastern Harbour City. It is envisaged that the whole stretch of Governor Macquarie Drive will be widened to accommodate four-lane traffic, which will further improve the precinct's connectivity and traffic capacity.

Educational facilities, including Warwick Farm Public School, Liverpool Girls High School and Liverpool Public School are within 2km of the precinct to the west of the railway corridor. The precinct is well serviced by sport and recreational facilities. Rosedale Oval and Warwick Farm Racecourse provide sport facilities for both local residents and the broader community. Public open spaces along the Georges River foreshore, Chipping Norton Lake and Cabramatta Creek provide regional level open spaces. Liverpool Hospital and associated medical facilities provide the precinct easy access to public health facilities.

The future public domain improvement projects, including the development of the Georges River Parklands and Chipping Northon Lake Masterplan and Liverpool Water Treatment Facility Masterplan (LCC is currently working with Sydney Water to deliver this masterplan), coupled with the proposed additional bridges across Georges River (refer to Liverpool LSPS) will further improve the precinct's access to surrounding open space. The proposed new bridges will also provide easy access from the Liverpool CBD and the precinct to the future masterplan area - Moore Point Mixed Use Development.

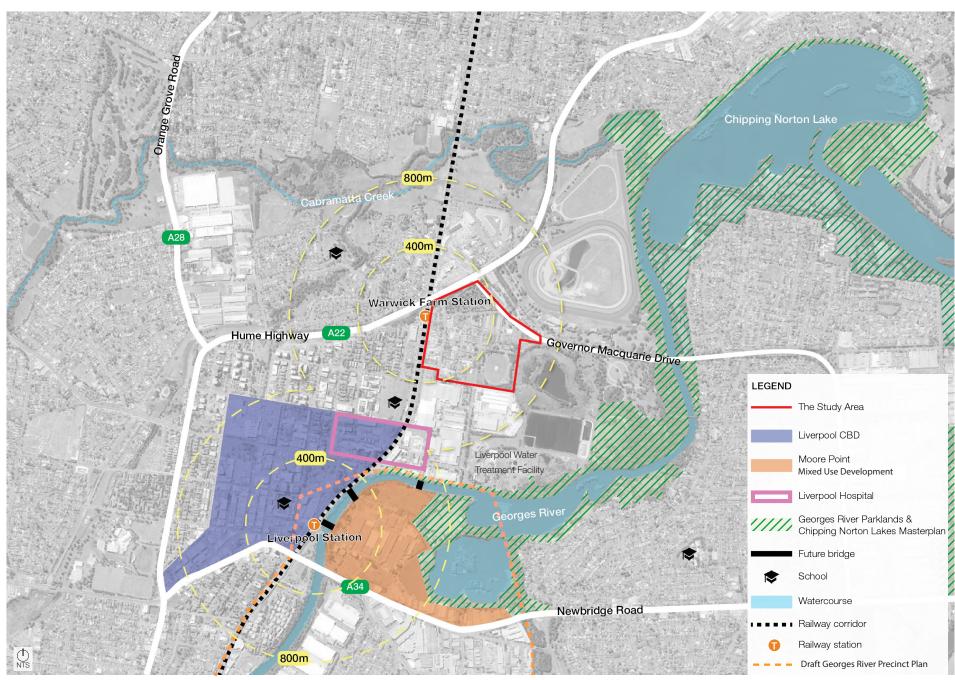


Figure 14: The study area and its context

CM⁺

3.0 Local Context

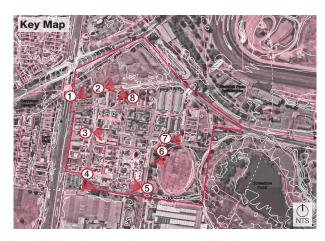
3.2 Existing Site Conditions

The Warwick Farm Precinct is predominantly occupied by equine related facilities (View 5). However, there is a mixture of character and built form within the precinct.

The precinct has a low scale character, with buildings ranging between one to two storeys in height. Low density residential houses spread throughout the precinct and are generally associated with horse training facilities. Poorly maintained houses also exist in the precinct, which contribute negatively to the streetscape character (View 8). Medium density residential dwellings are scattered along Manning Street close to Warwick Farm Station (View 1 and 3).

The industrial area to the south of Priddle Street generates heavy vehicle traffic in the precinct (View 4), as Priddle - Manning - Munday Street provide the only access to Governor Macquarie Drive and the Hume Highway from the industrial area. Conflict of uses among light and heavy vehicles, and pedestrian and horse movement is a major issue (View 2, 4 and 7).

Rosedale Oval (View 6) is the major open space within the precinct, which provides sport facilities and a children's playground. Dense mature Eucalyptus trees define the edge of the oval to its south and east.





















4.1 Introduction

CM⁺ has conducted a thorough Urban Design Analysis, informed by the site visit, and a background document review. The Urban Design Analysis assesses the existing conditions of the Warwick Farm Precinct, identifies the constraints and opportunities and establishes the future vision and Urban Design principles to guide the redevelopment of the precinct.

4.2 Topography

The precinct is relatively flat with most of the area at RL 8m Australian Height Datum (AHD). Rosedale Oval is lower than the rest of the precinct and sits at RL 7m AHD.

The Hume Highway is higher than the precinct. It rises up gradually towards the railway corridor, and reaches its highest point at RL 15m AHD above the railway line

The land to the west of the railway corridor is higher than the precinct, and sits at RL 9m AHD and above.

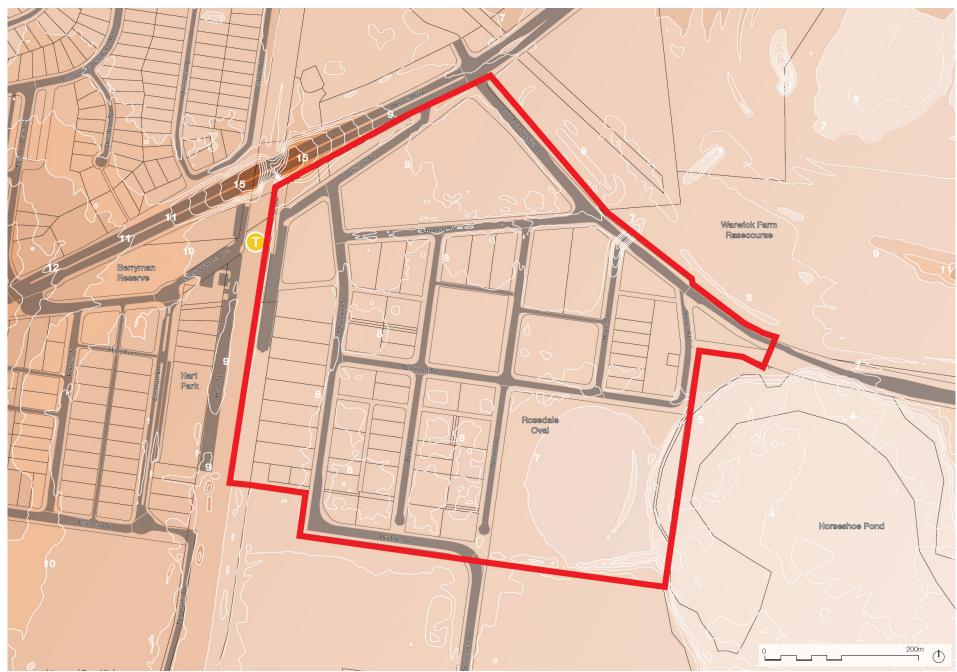


Figure 15: Existing topography



4.3 Flooding

The existing peak flood depths and extents within the study area are derived from the 2004 Georges River Floodplain Risk Management Study and Plan and are shown in Figures 16 and 17, and are summarised below:

- 1. 1% Annual Exceedance Probability (AEP) is 8.5m AHD
- 2. Probable Maximum Flood (PMF) is 10.8m AHD

A key issue with this development is the evacuation of residents during a flood. Shelter in place is not appropriate and therefore there must be appropriate access from every building in events larger than a 1% AEP. The key features of the evacuation approach are:

- 1. All floors to be at or above 9m AHD (1% AEP + 0.5m).
- All floors must be at least 0.3m above the surrounding ground / road to allow for local drainage.
- 3. All internal roads to be at or above 8.5m AHD (1 % AEP).
- All roads or pedestrian access used for evacuation must rise to the PMF.
- There must be either pedestrian or vehicle access from all floors that is always at or above 8.5m AHD (1 % AEP) to above the PMF.

Another important factor is the need to ensure the new development proposed will not result in net loss of the flood storage at 1% AEP namely RL 8.5m AHD. Therefore, balancing the cut and fill in the precinct is critical in the development of the structure plan.

Refer to Warwick Farm Flooding Assessment Report by WMA Water.

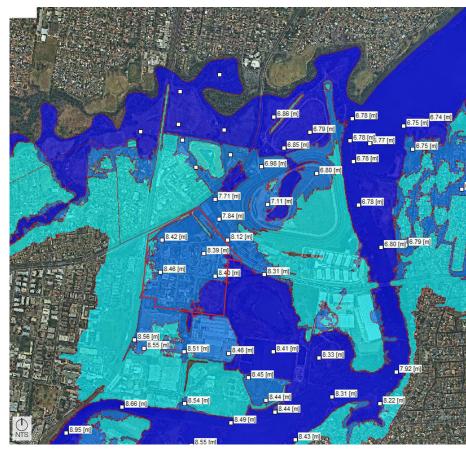


Figure 16: 1 in 100 flood level (Source: MIKE-11 model)

Note in both diagrams: Light blue = PMF extent, mid blue = 1% AEP extent

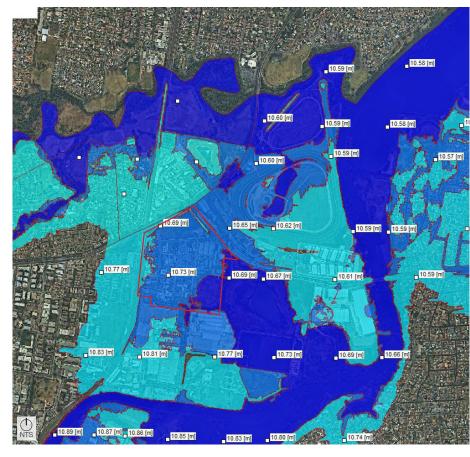


Figure 17: PMF level map (Source: MIKE-11 model)



4.4 Community Facility, Open Space Benchmark and Significant Landscaping

Social infrastructure and open space have significant impacts on the wellbeing of the local community, as they provide community services, places for social gathering and recreational uses.

Landscaping plays an important role shaping the character of the precinct and has significant impacts on the visual and residential amenity.

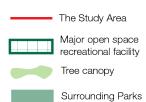
There are no multipurpose or hireable community facilities within the precinct. The closest one - Warwick Farm Community Hub is about 800m to the northwest of the precinct; however, it is ageing and is not available for general community hire.

Rosedale Oval, which is approximately 5ha in size, is a major open space within the precinct providing recreational uses and a children's playground. There are no local parks within the precinct; however, smaller parks, including Hart Park and Berryman Reserve are immediately to the west of the precinct.

The open space benchmark is very important to guide the planning of the precinct. It requires the future development to comply with the nominated benchmark to deliver adequate open spaces. The benchmark applied to the precinct when the exhibited Structure Plan was made was 2ha per a thousand population. However, this benchmark is revised by the latest Open Space Needs Analysis for the Liverpool Collaboration Area to 1.5ha per 1,000 residents. Refer to Section 7.2 of this report for more information.

A cluster of dense mature Eucalyptus trees are located within Rosedale Oval, especially along its southern and eastern boundaries. Munday Street and National Street present some consistency in street tree planting. However, the trees cover within the precinct is generally low.

LEGEND







4.5 Traffic and Transport

Road Network

The characteristics of the roads surrounding the subject precinct are:

- Hume Highway is a primary road connecting Liverpool to Sydney's Inner West. It is a state road (A22) and has three lanes in each direction. In the vicinity of the precinct, there is a footpath on the northern side and a shared pedestrian/cycle path on the southern side. Pedestrian crossings are provided at the intersection of Hume Highway / Governor Macquarie Drive (except on the east side) and an underpass is available to the west of Warwick Farm Station to connect Warwick Farm to the south of Hume Highway with Station Street to the north of Hume Highway.
- Governor Macquarie Drive is a distributor road. It intersects with Hume Highway to the north and Newbridge Road to the south. The road has only one lane in each direction between Munday Street and the signalised access to Warwick Farm Racecourse. The road has recently been upgraded to two lanes in each direction plus turning lanes between the Warwick Farm Racecourse and Georges River. The section of the road between Georges River and Newbridge Road remains one lane in each direction, with future plans to be upgraded to two lanes in each direction. Footpaths are not provided on the west side in the vicinity of No. 240 Governor Macquarie Drive. Pedestrian crossings are present on all approaches of the Munday Street intersection.
- Warwick Street is a local road that connects Warwick Farm
 Station and Manning Street with Hume Highway. It has one
 lane in each direction. Except for the recently completed shared
 path on the south side of the road close to the station, there is
 no footpath on either side of the road, making it unattractive for
 walking.
- Munday Street / Manning Street / Priddle Street is the local collector road that connects Governor Macquarie Drive with the industrial area to the south of the Warwick Farm precinct. It has one traffic lane and one parking lane in each direction. A recently completed shared path is provided on the northern side.
- Shore Street is a one way (northbound) one lane local road that
 mainly services the residences and visitors of the Rosedale Oval
 and nearby racecourse. It currently terminates at a left-out only
 intersection with Governor Macquarie Drive.

Active Transport

Shared pedestrian / cycle paths are provided on the southern side of Hume Highway, on the northern side of Munday Street, and a small section of Manning Street and Warwick Street connecting to the station. A shared path crossing of Hume Highway is provided via an underpass located to the west of the Warwick Farm Station, although the underpass is in poor condition. There is an extended shared path network to the southwest of the precinct to connect to Liverpool CBD, providing potential opportunity to promote cycle use in the local area.

Footpaths are provided on some internal streets within the precinct in various qualities. Along Governor Macquarie Drive, there is no footpath on the western side between Munday Street and Hume Highway and on the eastern side between Munday Street and Shore Street.

Refer to Traffic and Transport Impact Assessment by SCT for more information.



Figure 19: Road network (Source: SCT Consulting)



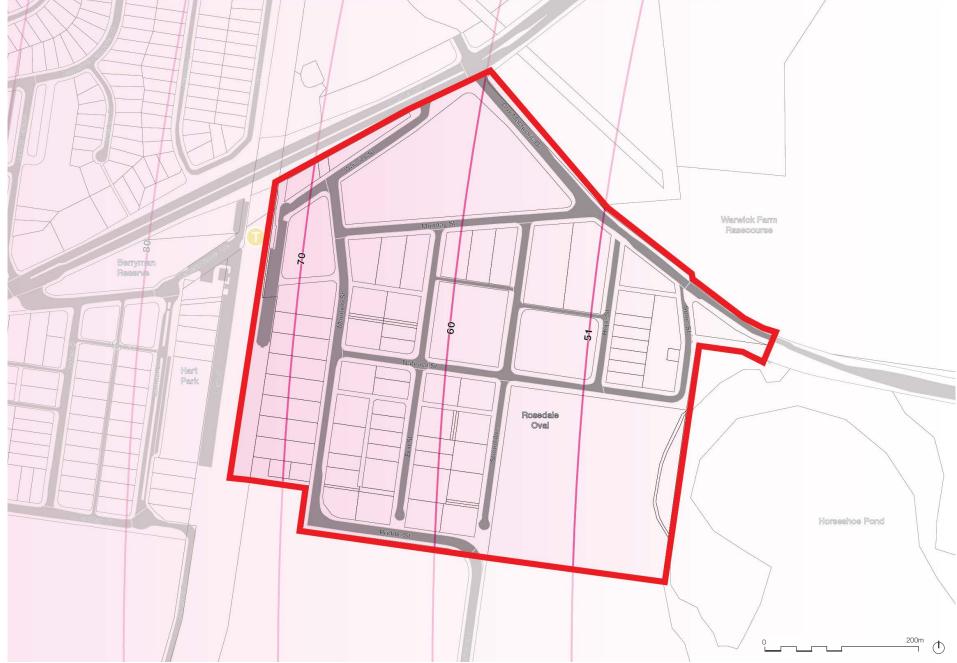
Figure 20: Existing shared pedestrian / cycle path (Source: SCT Consulting)



4.6 Bankstown Airport Obstacle Limitation Surface (OLS)

The Warwick Farm Precinct is in an area affected by the operational requirements for Bankstown Airport, which is located approximately 9.5km to the east of the precinct. Obstacle Limitation Surface is used to define the airspace that is protected from obstacles to ensure the safety of aircraft during takeoff and landing phases.

The nominated Bankstown Airport OLS ranges between RL 51m AHD and RL 70m AHD. Considering the existing ground level height of RL 8m AHD, the Bankstown Airport OLS limits the building height within the precinct to a maximum of 62m (about 20 storeys) close to Warwick Farm Station.



LEGEND

The Study Area

 Bankstown Airport Obstacle Limitation Surface Contours (m AHD)

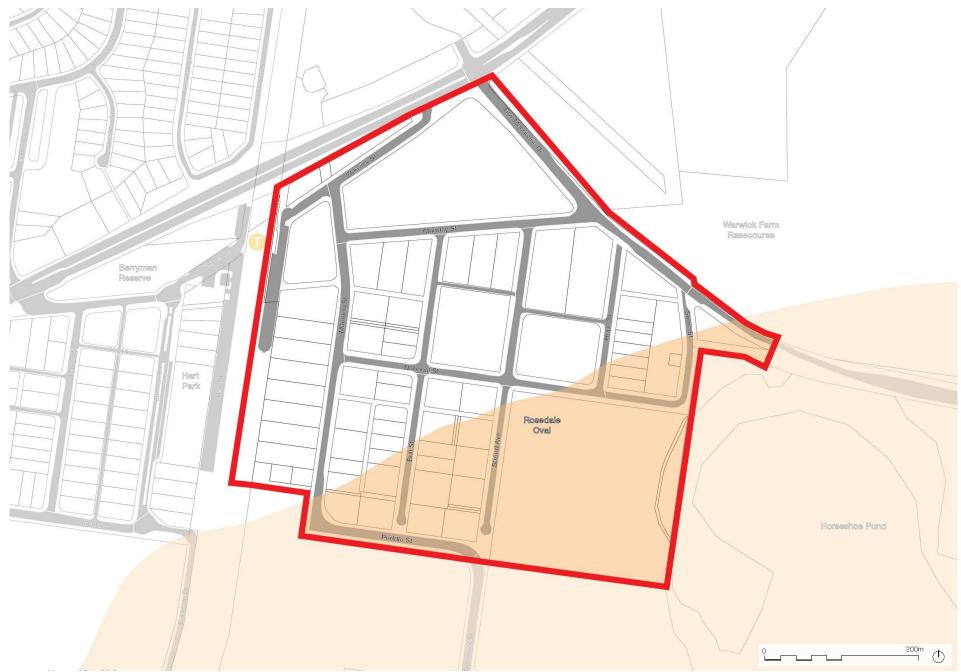
Figure 21: Bankstown Airport OLS controus



4.7 Odour Buffer

Liverpool Sewage Treatment Plant is situated adjacent to the Warwick Farm Precinct and generates odour that impacts surrounding areas. The odour buffer zone provided by Sydney Water indicates that the southeast portion of the site is within the odour buffer zone, including Rosedale Oval.

The LSPS and Sydney Water Guidelines seek to avoid residential development within the odour buffer. A reduction of the odour buffer size may be achievable as a result of upgrading the Sewage Plant facilities. The exhibited Structure Plan adopts the odour buffer outlined in Figure 22. For the latest information on this odour buffer, Refer to the Section 7.2 of this report.





Sydney Water Treatment Facility odour buffer area

Figure 22: Sydney Water Treatment Facility odour buffer



4.8 Planning Proposal and Development Applications

The study has identified sites that are subject to a Planning Proposal or an approved Development Application (DA). The Planning Proposal site is:

240 Governor Macquarie Drive
 (refer to Figures 24-26) - this proposal has been rejected by the
 DPIE at the Gateway determination)

Recently approved DAs include:

- 2. 12 Munday Street
- 3. 2 Stroud Avenue
- 4. 6 Manning Street
- 5. 8 Manning Street
- 6. 13 Bull Street
- 7. 21C Manning Street
- 8. 1 Stroud Avenue9. 11 Manning Street
- 10.7 Bull Street
- 11.9A Bull Street
- 12. 11A Bull Street
- 13. 10 Stroud Avenue
- 14.14 Manning Street
- 15. 12 Bull Street
- 16. 17 Stroud Avenue
- 17.14 Bull Street

The majority of the DAs listed above are in relation to horse training facilities and alteration and additions to existing residential dwellings.

LEGEND







240 Governor Macquarie Drive (GMD)

This Planning Proposal was endorsed by Liverpool City Council and submitted to the DPIE for Gateway determination on 25 February 2020. The Planning Proposal was under assessment by the DPIE when the exhibited Structure Plan was developed. Thereby, the exhibited Structure Plan adopted the built form and height strategy outlined in this Planning Proposal. However, the Planning Proposal was rejected at Gateway by the DPIE on 21 September 2020. Refer to Section 7.2 of this report for the implication of the Gateway determination.

Note that the plan and 3D views on this page illustrates the built form and height strategy for No.240 Governor Macquarie Drive that are rejected by the DPIE for reference purposes.





4.9 Ownership Pattern

The Warwick Farm Precinct has a relatively fragmented ownership, with some large land holdings in the precinct.

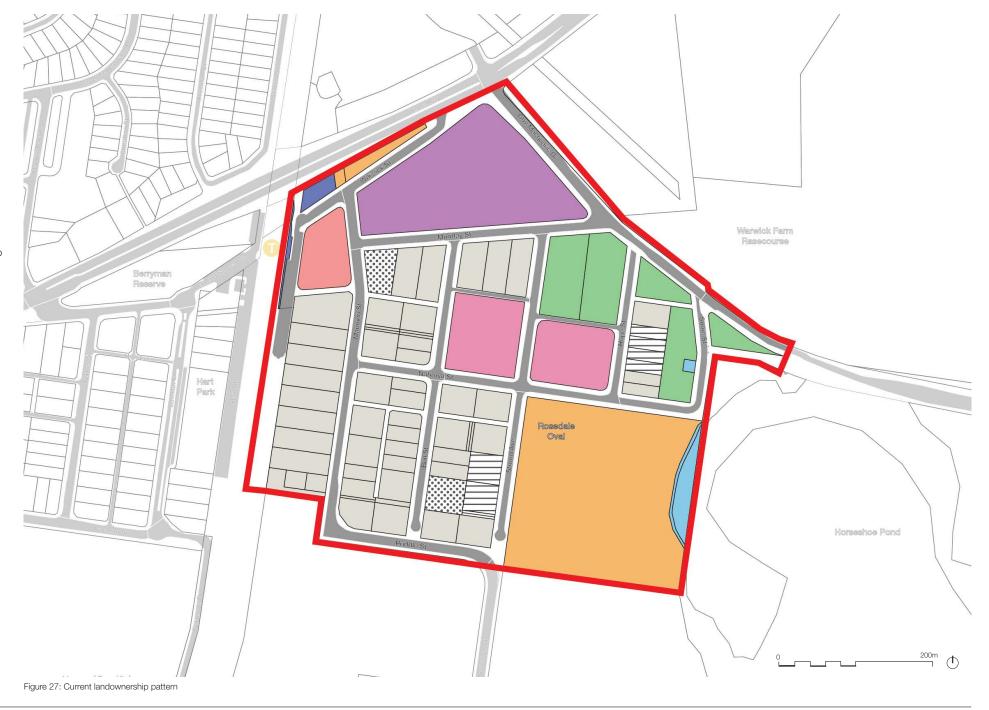
Rosedale Oval and a strip of land along the Hume Highway are Council owned land. There are some small land parcels close to Warwick Farm Station that are owned by Transport for NSW (TfNSW). Sydney Water owns a piece of land adjacent to Rosedale Oval, which is known as Liverpool Sewage Treatment Plant. Another Sydney Water facility is located along Shore Street.

The large vacant site at No. 240 Governor Macquarie Drive is under one ownership. The Australian Turf Club (ATC) owns several properties along Governor Macquarie Drive, which are currently occupied by horse training facilities.

Darley is another private landowner within the precinct. It owns two large lots along National Street, close to Rosedale Oval, which are also occupied by equine related uses.

The land opposite Warwick Farm Station is strata constrained, which has over 20 separate owners. Land with strata constraints presents less opportunity to be redeveloped in the short to medium term; however, there are precedents in the Metropolitan Sydney area where strata titled land has been consolidated and redeveloped.









5.0 The Exhibited Structure Plan

5.1 Executive Summary

The exhibited Structure Plan was developed informed by the comprehensive Urban Design analysis and the information / studies available at that time. In developing the original Structure Plan, CM⁺ and the consultant team had tested several options and conducted strengths and weakness analysis for each option. This chapter of the report extracts the key information from the exhibited Structure Plan. Council's website provides additional information about the exhibited Structure Plan.

The exhibited Structure Plan presents a maximum building height of 15 storeys (near Warwick Farm Station), and overall density (FSR) of approximately 0.8:1. Approximately 2,295 dwellings (including No. 240 Governor Macquarie Drive) and 4.7ha of additional open space is proposed.

The precinct is subject to flooding issues. The exhibited Structure Plan has carefully considered the floodplain water displacement by balancing the associated cut and fill. The tables on the next page provide a high level summary of the yield proposed in the exhibited Structure Plan. Note that the cut and fill calculation in the yield table is based on the data available at the time the exhibited Structure Plan was developed.

The draft Structure Plan, associated yield and studies were put on public exhibition between September and October 2020. A virtual community session was held on 22 September 2020. A total number of 20 submissions were received during the public exhibition period. Refer to the next chapter of this report for the high-level summary of the submissions.

Notes

- The built forms at No. 240 Governor Macquarie Drive correlate with the Council endorsed Planning Proposal (Planning Proposal No. 81, by Liverpool City Council, dated 25 February 2020)
- New stormwater pipelines will be introduced to the future Local Sport Venue open spaces to drain the areas during a flood event. It is acknowledged that detailed measures in regard to hazard reduction and hydraulic engineering design will need to be undertaken in the detailed design stage.
- ⁺ The location of the proposed community facility shown on the plan is indicative only. The final form and location will be determined in the detailed design stage

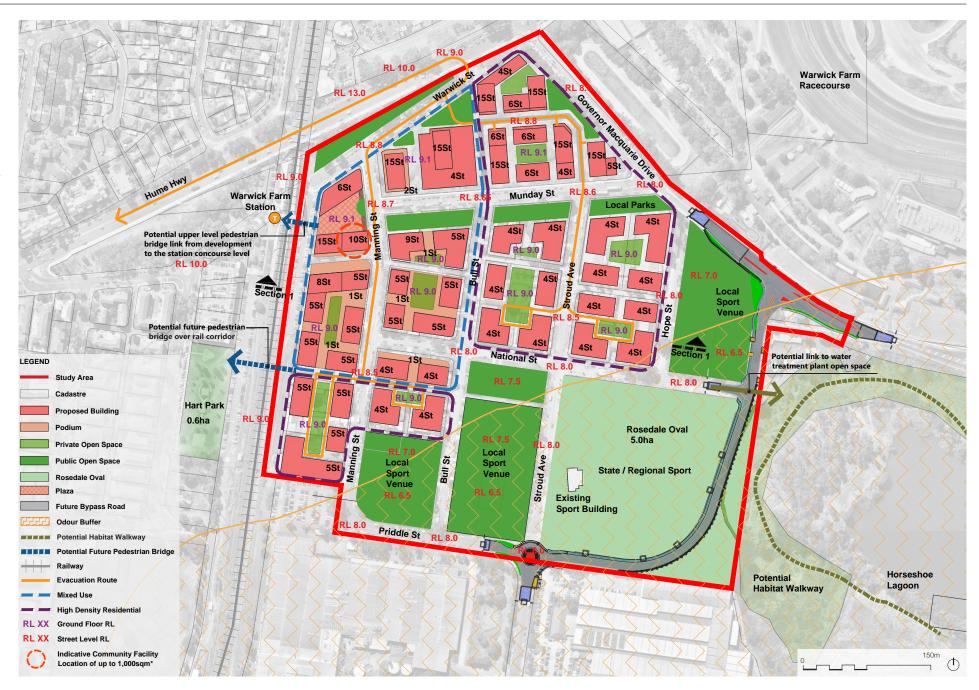
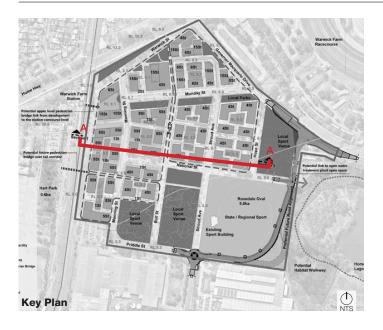


Figure 28: Exhibited Structure Plan



5.0 The Exhibited Structure Plan



Exhibited Structure Plan - Long Section



Figure 29: Exhibited Structure Plan - Section A

Hart Park



5.0 The Exhibited Structure Plan

Exhibited Structure Plan - Yield Summary

	240 Governor Macquarie Drive (GMD) ⁺	
	Residential GFA	82,300 m ²
	Commercial GFA	5,000 m ²
	Total GFA	87,300 m ²
	Site Area	29,307 m ²
	No. of Dwellings	830
	FSR	3.0:1

	Total GBA (m²)	Efficiency	Total GFA (m²)	Dwelling Size (m²)	No. of Dwellings
Residential	166,047	75%	124,535	85*	1,465
Commercial (GF)	25,425	70%	17,798	N/A	
Commercial (1st Floor)	2,601	85%	2,211	N/A	
Total GFA			144,544		
Site Area			254,735		
Overall FSR			0.56:1		

	Overall Development Farameters (incl. 240 divid)		
	Residential GFA	206,835 m ²	
	Commercial GFA	25,008 m ²	
	Total GFA	231,843m²	
	Site Area	284,042m ²	
	No. of Dwellings	2,295	

0.82:1

FSR

Open Space Calculation	
Open Space 1 (OS1)	2,490 m ²
Open Space 2 (OS2)	4,948 m ²
Open Space 3 (OS3)	13,507 m ²
Open Space 4 (OS4)	26,887 m ²
Total Proposed Local Open Space++	47,832 m² (16.8% of the site area)
Rosedale Oval	49,927 m ²
Total Open Space Area	97,759 m ² (34% of
	the site area)

Floodplain Displacement Calculation (approximate only)		
Existing Building Footprint (EBF)	50,000 m ²	
Proposed Developed area (PDA)	137,000 m ²	
FILL**	43,500 m ³	
CUT (in OS3 & OS4)***	44,300 m ³	

- + The yield is extracted from the approved Planning Proposal Urban Design Report by SJB dated 27/06/2018.
- + + This does not include Hart Park, which has an area of approximately 0.66ha. The total local open space percentage will be approximately 18.8%.
- * The average dwelling size does not apply to 240 GMD.
- ** The volume of fill = (PDA-EBF) \times 0.5m
- ***The volume of cut = OS3 Cut Volume + OS4 Cut Volume

Note: 0.5m is an average depth calculated based on the level difference between 1%AEP (RL8.5) and average existing level of the site (RL8.0). Detailed floodplain displacement will need to be undertaken in the detailed design stage.







6.0 Public Exhibition Feedback Summary

6.1 Public Exhibition Overview and Summary

The draft Structure Plan, associated yield and studies were put on public exhibition between September and October 2020. Council used a number of means to make people aware of the opportunities to comment on the Structure Plan on exhibition. A Community Session was also held on 22 September 2020.

The community provided the comments via 'Have Your Say' website, emails and letters between 14 September and 12 October 2020. The exhibited Structure Plan and the associated studies were also forwarded to the DPIE, the Greater Sydney Commission (GSC), Transport for NSW (TfNSW) and Sydney Water for feedback. A total of 20 submissions were received, including submissions from Sydney Water and TfNSW. However, the DPIE and GSC declined to provide submissions at this stage of planning process.

They key themes raised in the submission are summarised by Council in Figure 30. Refer to Chapter 7 of this report for the responses to the community feedback.

In summary, the key issues can be categorised into:

Flooding:

- flooding was no longer an issue.
- land should be found elsewhere to compensate for the loss of flood storage.

• Odour buffer zone:

- odour buffer zone should be ignored.
- Warwick Farm sewage treatment facility would inevitably be upgraded therefore would reduce the odour buffer over time.
- Sydney Water objects to the original structure plan as there is some development shown within the confines of the current odour buffer zone.

Open space:

- concerns over the quantum of open space provided.
- proposed open space is not evenly distributed and concentrated in the vicinity of the least-dense residential areas.

Feasibility:

- the proposed development standards are not feasible to encourage redevelopment.
- question regarding how future development can practicably proceed.

Traffic:

- concerns relating to an increase in traffic congestion that would occur from increased density within the area.
- 240 Governor Macquarie Drive:
 - support the redevelopment of the site.
- concerns over the proposed built form outcome and unequitable distribution of dwellings in the precinct.
- employment uses are preferred to be located on this site.

Refer to Council's Community Engagement Report for the detailed summary of the submissions received.

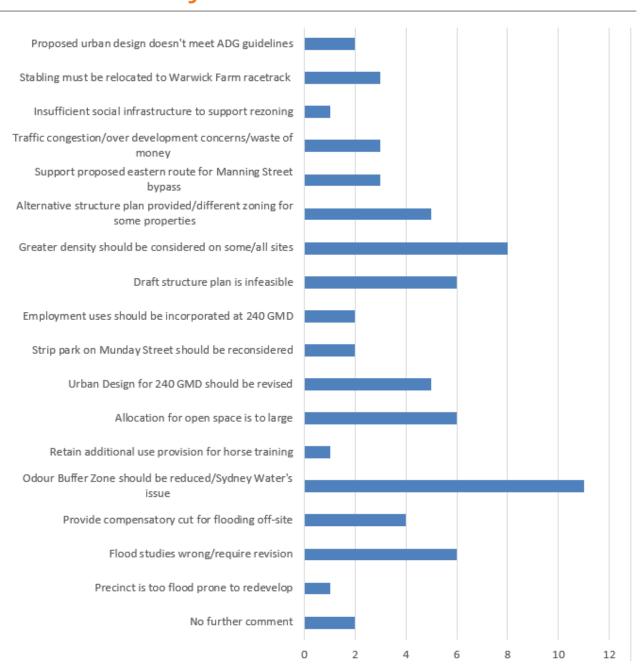


Figure 30: Public Exhibition Submission Summary (Source: Liverpool City Council)





7.1 Executive Summary

Council at its meeting on 28 April 2021 resolved to refine the exhibited Warwick Farm Structure Plan to reflect more detailed information and the community feedback received during the public exhibition in 2020. In amending the exhibited Structure Plan, the project team has carefully considered this information and its implications, including:

- Department of Planning, Industry and Environment (DPIE) gateway refusal on 240 Governor Macquarie Drive - 240 Governor Macquarie Drive has been incorporated into the overall structure plan.
- Community feedback All the feedback are reviewed and assessed. The revised structure plan has considered and incorporated some of the feedback where appropriate.
 Section 6.1 of the report provides a brief summary of the key community engagement outcomes. Refer to Section 7.7 of this report and Council's Community Engagement Report for the responses to the submissions.
- Atlas Urban's Feasibility Testing Report The revised structure
 plan has incorporated the suggestions by reducing the overall
 non-residential GFA, contributions cost and rerun the testing for
 three typical sites to ensure they are financially viable. Refer to
 Section 7.2 on this page for more information on the implication
 of this study.
- New regional studies including Liverpool Collaboration Area
 Open Space Needs Assessment, Liverpool Collaboration Area
 Strategic Transport Infrastructure Assessment and Liverpool
 Collaboration Area Regional Flood Evacuation Strategy The
 consultant team reviewed the new regional studies and their
 implications. The revised Structure Plan reflects the outcomes
 from the regional studies.
- Bypass Road Two options have been identified by Council: one to the south and east of Rosedale Oval and the other utilising the existing road network. The final design of this bypass road is yet to be determined.

A detailed assessment of the potential flood impacts and the proposed floodplain displacement has also been conducted to minimise the potential risks and to comply with the relevant guidelines and Council strategies. A staged approach has also been adopted to realise the redevelopment of the precinct in a coordinated and feasible way.

7.2 Implications of the New Information

Economic Feasibility Testing

In October 2020, Atlas Urban Economics conduced an economic feasibility study against the exhibited Structure Plan. The study determined that the planning controls proposed in the exhibited Structure Plan were not financially viable. It also suggested ways to reduce the contributions rates associated with new infrastructure and to decrease the non-residential GFA to 5% to 10% of the overall floor space in the mixed use zone.

An iterative approach has been adopted in developing the revised Structure Plan. Economic feasibility testing of three typical blocks was conducted to ensure that the proposed planning controls will make the most of the blocks financially feasible. The financial feasibility tipping points of 3.35:1 for B4 Mixed Use zone and 2.2:1 for R4 High Density Residential zone were identified. The economic feasibility testing did not test every single block within the precinct. Instead, the findings on the typical blocks were extrapolated to the larger precinct and a generic approach was taken to test the typical blocks.

Open Space Benchmark

An Open Space Needs Analysis for the Liverpool Collaboration Area was prepared by Council to set a more appropriate open space benchmark for the urban renewal areas, including the Warwick Farm precinct. The study nominates a regional level open space benchmark of 1.5 hectares per 1,000 residents compared with the previous Council metric of 2.0 hectares per 1,000 residents. The revised Structure Plan considers the nominated open space benchmark.

Odour Buffer

Council has been liaising with Sydney Water regarding their plan to upgrade the facilities. However, no updated information is available at this time. Therefore, the revised Structure Plan adopts the current odour buffer information available and complies with the relevant guidelines in regard to residential development within an odour buffer.

240 Governor Macquarie Drive Planning Proposal

This Planning Proposal was rejected at Gateway by the DPIE on 21 September 2020. One of the recommendations from the DPIE is to consider the regional level technical studies and incorporate the site into the development of the Warwick Farm Structure Plan. Council resolves in its meeting on 28 April 2021 that:

The consultant is to consider the site's relationship to the entire precinct in terms of distribution of density, proposed zoning and SEPP 65 concerns, while also addressing the reasons for DPIE's Gateway refusal.

The revised Structure Plan therefore reconsiders the development potential on No. 240 GMD and its relationship with the rest of the precinct.

The Bypass Road Options

The Manning Street Bypass road was identified by Council in 2019 as a priority project to redirect heavy vehicles from entering the core of the precinct, therefore facilitating the redevelopment of the precinct to mix of uses, including B4 Mixed Use zone.

Two design options are being considered by Council:

- Construct a new bypass road to the south and east of Rosedale Oval connecting Scrivener and Shore Streets with Governor Macquarie Drive.
- Upgrade the existing road network to construct a new bypass road through Scrivener Street Stroud Avenue National Street Shore Street

The Manning Street Bypass design is a separate project to the Warwick Farm Structure Plan project and it is at the preliminary stage. Therefore, both of the options are shown in the revised structure plan.

Detailed information regarding the proposed Manning Street Bypass will be made available to the public once the design is finalised

7.3 Flood Related Information

It is Council's direction at its April 28 Meeting to conduct a detailed flood impact assessment against the revised Structure Plan. It recommends that:

The completion of a detailed flood impact assessment to better understand land required for flood mitigation and alternative flood mitigation options.

Subsequently, Council has provided the TUFLOW hydraulic model used in the Draft January 2020 Georges River Flood Study to the consultant team to undertake the flood impact assessment.

It is important to note that the TUFLOW hydraulic model from the Draft January 2020 Georges River Flood Study is provided to the proponents for flood assessments; however, Council still adopts the design flood levels from the 2004 Georges River Floodplain Risk Management Study and Plan.

The 2004 Georges River Floodplain Risk Management Study and Plan uses a Mike-11 hydraulic model to determine design flood levels rather than TUFLOW hydraulic model. Therefore the nominated 1% Annual Exceedance Probability (AEP) and Probable Maximum Flood (PMF) design flood levels in Section 4.3 of this report are used in the revised structure plan. Refer to the Flood Assessment Report by WMA Water for more information.



7.4 Constraints and Opportunities

The Urban Design Analysis of the Warwick Farm Precinct in terms of its strategic, local and planning context and existing conditions, has identified a suite of constraints and opportunities. New information, coupled with the community feedback received, has further informed the understanding of the constraints and opportunities for the precinct.

Constraints

The constraints include:

- The precinct is prone to flood. The majority of the land is identified as having medium flood risk. Rosedale Oval has high flood risk. Flooding issues would affect the design of buildings, places, land uses and earth works. The two key flood related issues are the evacuation route in a flood event and balancing cut and fill to avoid net loss of flood storage.
- ZZZ Residential development within the Liverpool Sewage Treatment Plant odour buffer zone is to be avoided.
- The only through site vehicular access (Priddle Sreet Manning Street - Munday Street) linking the industrial area to the south of the precinct to the Hume Highway limits the area's permeability. It also creates conflicts of uses among pedestrian, light and heavy vehicles.
- ♦ The Warwick Farm Station concourse provides the only eastwest cross railway corridor access for pedestrians and cyclists, which limits the precinct's access to surrounding recreational, educational, and health facilities as well as the Liverpool CBD.
- The Hume Highway underpass adjacent to the precinct is narrow and lacks maintenance, which provides an unsafe environment for pedestrians and cyclists.
- The vehicular traffic along the Hume Highway and the railway corridor generate noise to the precinct, which affects the area's acoustic amenity.
- Bankstown Airport OLS contours limit the maximum building height within the precinct.
- The industrial area immediately to the south of the precinct could potentially affect the area's residential amenity.

- The lots in the precinct are in fragmented ownership. It may be challenging to achieve amalgamation.
- The strata constrained land opposite Warwick Farm Station would potentially retain its current form in the short to medium term.
- Governor Macquarie Drive is currently at capacity. Future development within the precinct needs to assess and address the potential traffic impacts to Governor Macquarie Drive.
- There are no multipurpose or hireable community facilities within the precinct. The closest one - Warwick Farm Community Hub, is 800m away from the precinct and is ageing.
- Tree coverage along the main streets is minimal.

Refer to Figure 31

Opportunities

Creek

The precinct presents the following opportunities:

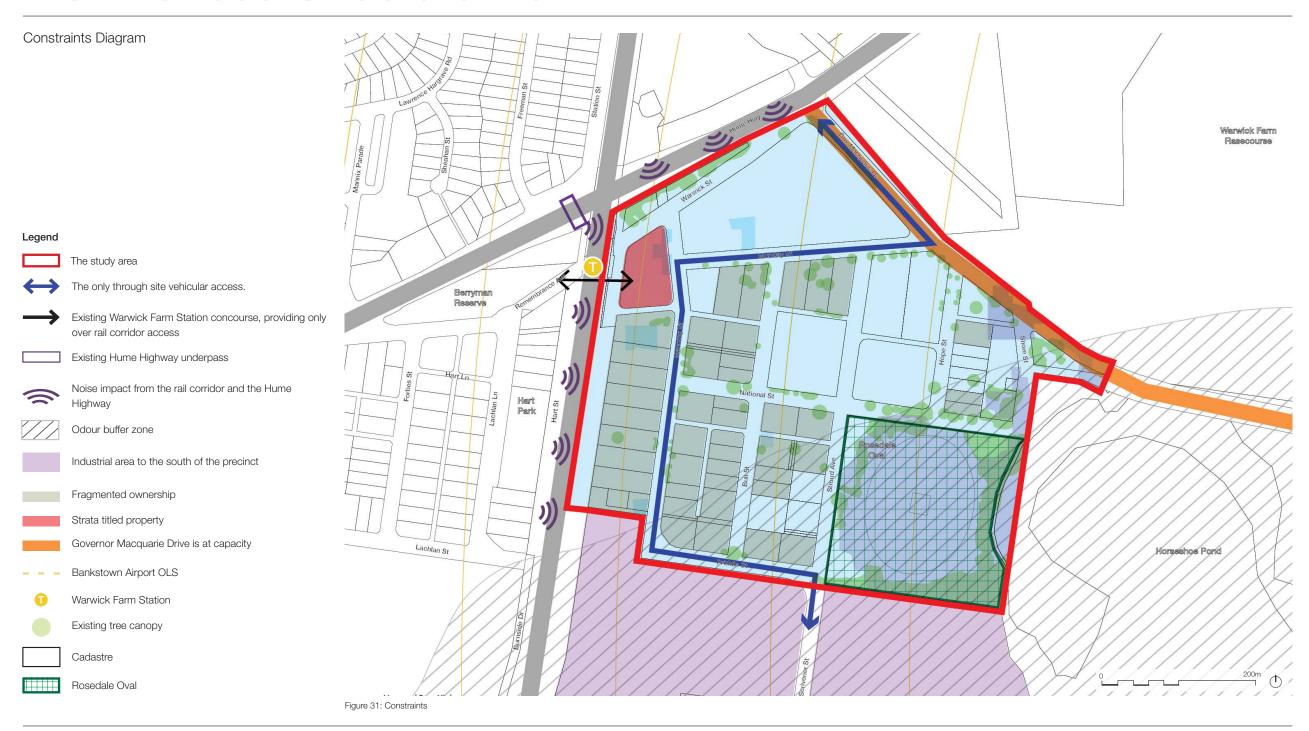
- To provide a high quality mixed-use, Transport Oriented Development (TOD) close to Warwick Farm Station.
- To incorporate No. 240 Governor Macquarie Drive into the overall precinct planning.
- * To create an urban centre close to Warwick Farm Station, providing a mix of uses and community facilities.
- To activate the main streets close to the urban centre by providing a mixed-use building typology with ground floor retail / commercial uses fronting the streets.
- To concentrate height and density close to Warwick Farm Station and transitioning down towards Rosedale Oval.
- To enable the redevelopment of the precinct by moving horse training facilities and stables to the Warwick Farm Racecourse (subject to agreement with ATC).
- To facilitate the future growth of the precinct by improving the capacity of Governor Macquarie Drive.
- To provide a bypass road redirecting heavy vehicles from entering the heart of the precinct.
- To improve the pedestrian amenity and streetscape along
 Priddle Street Manning Street Munday Street and reduce use
 conflicts in light of the reduced through site heavy vehicle traffic.
- To promote active transport (walking and cycling) within and around the precinct.
- To improve east-west cross railway corridor connection by improving the station concourse and providing a new link.
- To upgrade the Hume Highway underpass improving the precinct's access to Warwick Farm northwest and Cabramatta

- To provide future pedestrian and cyclist accesses to Georges
 River Foreshore via Governor Macquarie Drive and Horseshoe
- To improve access to Liverpool Boys High School, and the surrounding open spaces via existing and new links.
- To create 'green links' connecting east and west of the precinct.
- To protect the existing mature trees and improve the precinct's tree coverage by planting additional street trees along main
- To provide flood escape route from the precinct to the flood free

Refer to Figure 32.

area along the Hume Highway.











7.5 Urban Design Vision Statement

The Urban Design Study, the input received from Council, public submissions and the consultant team in regard to flooding, traffic and social infrastructure requirements as well as the latest regional studies have informed the development and amendments to the Urban Design Vision and the structure plan for the precinct.

Urban Design Vision

The Warwick Farm Precinct will be a new mixed-used community, providing living and employment close to Warwick Farm Station. It will be a precinct that addresses the community needs by leveraging the surrounding natural and built assets as well as delivering new high quality urban spaces. Its rural character will be transferred to a vibrant and multifunctional community that facilitates urban living.

Its character will be defined by diverse built forms and uses; and further strengthened by the precinct's rich history. Leafy streets and prime open spaces will complement the high quality urban living and distinct the precinct from the surrounding suburbs.

A new urban centre will be formed close to Warwick Farm Station, facilitating greater density and height. The new urban centre will become a 'community heart' providing high quality urban spaces and community facilities for the precinct and the suburb of Warwick Farm.

Mixed-use buildings will provide active street frontages and living and working opportunities in convenient proximity. The urban environment will gradually transition down in height towards Rosedale Oval providing a sensitive approach interfacing with the public domain.

The pedestrian and vehicular accessibility of the precinct will be improved. Governor Macquarie Drive will be widened to facilitate the future growth of the area. The proposed bypass road, which is Council's priority project, will provide an alternative route to access to the industrial area, thereby improving the road amenity and streetscapes in the heart of the Warwick Farm Precinct. The eastwest connectivity across the railway corridor will be improved via upgrading the existing station concourse and additional crossing.

Active transport, including walking and cycling, will be encouraged, connecting the precinct to the surrounding suburbs, facilities and open spaces. Tree line streets together with active street frontages will improve public domain amenity and passive surveillance.

The precinct's amenity and appearance will be further improved by the proposed local parks, which will be provided within walking distance from any medium to high density development. Local parks coupled with tree-line streets will form 'green grids' linking the precinct to the surrounding regional and local open space networks.

The access to the regional parks will be enhanced. Rosedale Oval will continue to accommodate recreational uses for different age groups. The future pedestrian and cycle link to Horseshoe Pond and Georges River foreshore, through the Sydney Water site, will provide the community with additional access to the picturesque natural assets of the region.

Flooding issues that impact the precinct will be carefully dealt with through managing cut and fill and adopting Water Sensitive Urban Design (WSUD). The proposed open space network will also play an important role, facilitating flood water runoff and water storage.

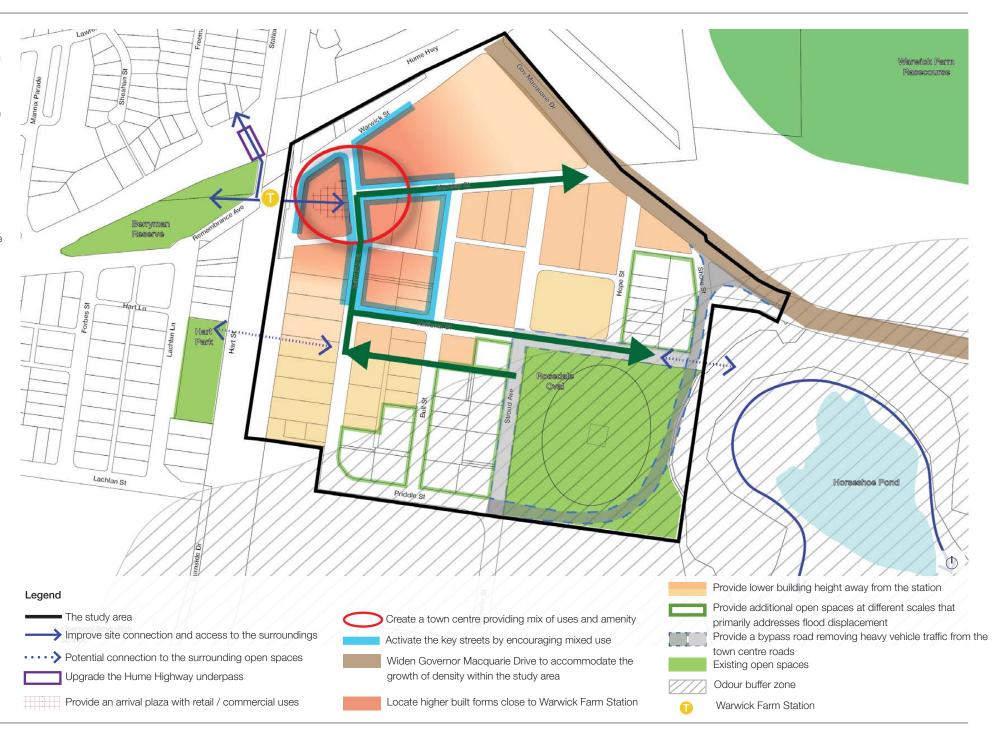




7.6 Urban Design Framework

The Urban Design framework identified below has formed the basic structure and principles to guide the redevelopment of the precinct, as well as fulfilling the Urban Design Vision outlined in Section 7.5.

- Create a high quality, lively 'community hub' near Warwick Farm Station, comprising new community infrastructure and a mix of uses.
- Concentrate higher built from and density around the future town centre and transition the height / density down to the lower lying areas to the southeast
- 3. Create a mixed use town centre in close proximity to Warwick Farm Station providing living and job opportunities.
- Promote high quality residential living in the precinct, utilising the existing and proposed parks and natural resources.
- 5. Recognise Rosedale Oval as a valuable asset to the broader community as well as to future residents in the precinct.
- Deliver new local open spaces throughout the precinct, providing amenity to the future community and to primarily address flood water displacement.
- 7. Create 'green links' and tree lined boulevards, utilising streets, laneways, existing and future open spaces.
- 8. Improve cross rail corridor accessibility via upgrading the old connection and exploring a new link.
- 9. Explore opportunities to harness the natural assets of the area, in particular Horseshoe Pond and the Georges River foreshore, to enable the general public access to picturesque areas.
- 10. Upgrade the road infrastructure in the precinct to prevent heavy vehicles from entering the precinct, whilst promoting active transport and local traffic within the precinct.
- 11. Improve streetscapes within the precinct via tree planting, footpath upgrades and ground floor activation.
- 12. Mitigate the flood impact through design and management and implementing Water Sensitive Urban Design (WSUD) measures.
- 13. Ensure the proposed flood storage open spaces are functional for recreational purposes and are safe for all in any flood event.
- 14. Manage the potential amenity impacts of the Sydney Water treatment facility by locating built form beyond the current odour buffer zone.





Precedent Images

Projects across Australia have been studied to identify the most appropriate examples the nominated vision, framework and development standard for the Warwick Farm Precinct. The examples also facilitate the visualisation of the proposed changes.

The precedent images on this page illustrate the desired quality for the future public domain, including local parks, urban plaza, streets, and built form.

Examples of the large recreational open spaces while also serving floodwater storage / drainage can be found overleaf. The success of these places in Zetland demonstrate that it is possible to balance recreational uses whilst providing flood storage / drainage through thoughtful design. The precedents also illustrate the intended design outcome for these future open spaces.













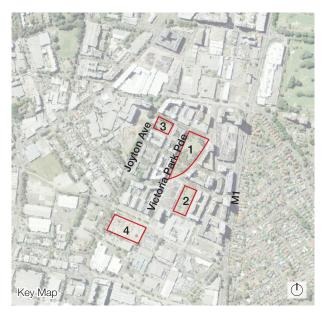
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7.0 Revised Structure Plan

Precedent Images - Water Parks















7.7 Revised Structure Plan

The revised Structure Plan was informed by the urban design vision and framework, community feedback, economic feasibility study, latest regional studies, and feedback from the DPIE regarding the 240 Governor Macquarie Drive Planning Proposal.

The revised Structure Plan considers the economic feasibility input to ensure each development block can achieve the nominated tipping points for different zoning (refer to Section 7.2 of this report for more information). It presents a maximum building height of 15 storeys (near Warwick Farm Station), and overall density (FSR) of approximately 1.04:1. Approximately 3,224 dwellings (including No. 240 Governor Macquarie Drive) and 3.9 ha of additional open space is proposed. Refer to Section 8.2.4 of this report for the yield summary.

The revised Structure Plan has carefully considered flood evacuation and floodplain water displacement by balancing the associated cut and fill. The volume of cut will be accommodated in the nominated proposed open spaces only (refer to Section 7.7.3 Floodplain Displacement).

The buildings illustrated on the revised structure plan are envelopes only. No articulations or architectural treatments are introduced. The building envelopes illustrated present the potential maximum building outlines projected onto each block. It is anticipated that building widths will vary between 18-22m.

Notes:

Appropriate drainage system will be developed for the future Local Sport Venue open spaces to drain the areas during and after a flood event. Detailed measures in regard to hazard reduction, warning signs and hydraulic engineering design will need to be undertaken in the later design stage.

The detailed design of the open spaces in the later stages will need to comply with the relevant requirements, provide appropriate edge transitions to mitigate the changes in levels and ensure easy access. Flood warning signs and other hazard reduction measures are to be facilitated in the detailed design stage.

⁺ The location of proposed community facility shown on the plan is indicative only. The final form and location will be determined in detailed design stages.

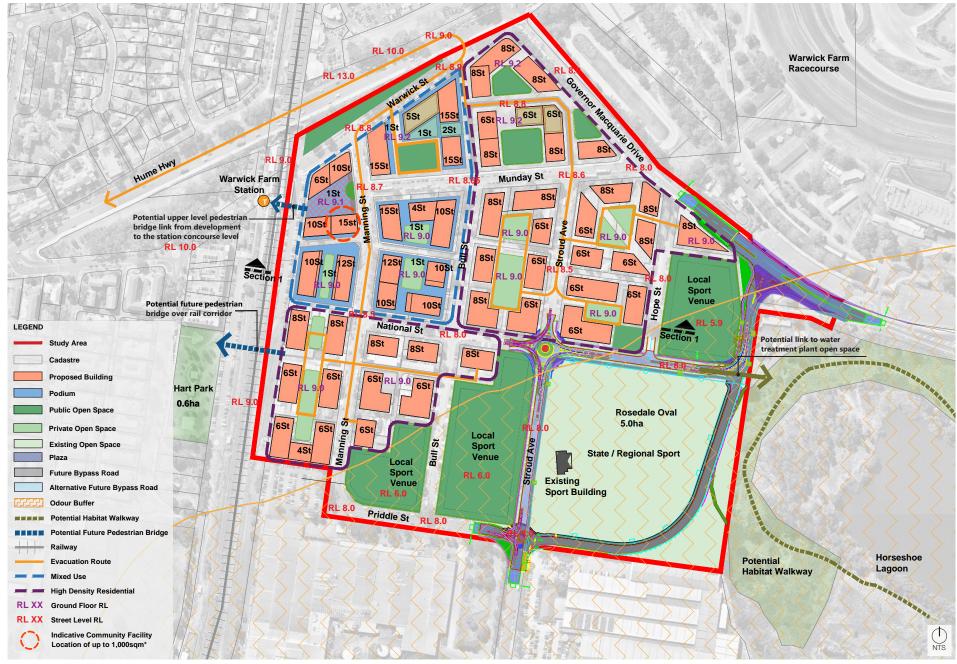


Figure 33: Revised Structure Plan



7.7.0 Plan Comparison

The revised Structure Plan preserves various Urban Design initiatives developed from the exhibited Structure Plan, including road network, precinct accessibility and height transition. However, it also adopts a suite of changes to reflect the new information. The key changes are:

- 240 Governor Macquaire Drive This land has been incorporated into the overall structure plan. The proposed built forms and height distribution now aligns with the overall Urban Design strategy and presents a more contextual fit.
- Open space configuration The configuration of the open spaces has been changed reflecting the increased overall development areas, latest open space benchmark and the

floodplain displacement needs. The larger open spaces close to Rosedale Oval also align more closely to the odour buffer zone.

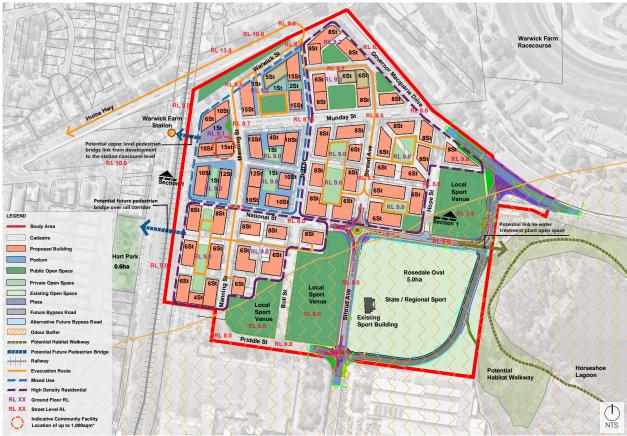
- Munday Street Linear Parks The linear parks are removed.
 Instead building setbacks are proposed along Munday Street to form Munday Street boulevard. Several publicly accessible open spaces in different sizes are nominated on No. 240 Governor Macquarie Drive. These open spaces will have improved amenity, be more useful and contribute to the proposed residential and non-residential uses.
- Building height and massing Refined built form height and massing are proposed to reflect the financial feasibility study and the latest regional level studies including the new open

space benchmark. The revised building height and massing also reflect the redistribution of height and density on 240 Governor Macquarie Drive.

Refer to the following sections of this report for the detailed information regarding the revised Structure Plan.



Exhibited Structure Plan



Revised Structure Plan



7.7.1 Response to Community Feedback

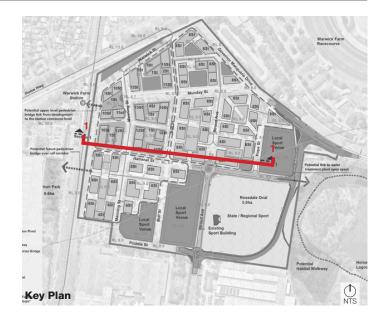
The revised Structure Plan has been developed with consideration of the community feedback received. The table on this page highlights how community commentary has influenced the ongoing development of the Structure Plan. The topics in the table have been taken from the summary of key concerns provided in Chapter 6 of this report.

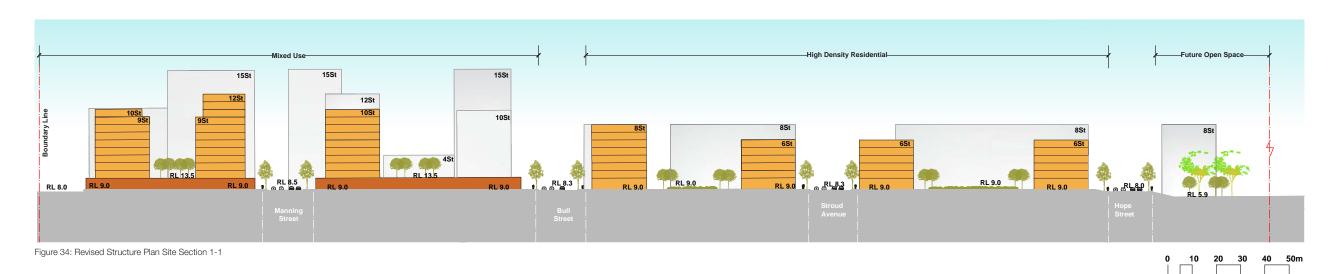
Key Areas of Concerns and Responses

key topics	responses
Topic 1 - Flooding	
Flooding was no longer an issue.	The precinct is constrained by flooding issues. The Structure Plan needs to consider two key issues related to flooding. One is the evacuation of residents during a flood event. The other issue is the need to ensure the new development proposed will not result in net loss of the flood storage, within the site, at 1% AEP namely RL 8.5m AHD. Refer to Warwick Farm Flooding Assessment Report by WMA Water.
Land should be found elsewhere to compensate for the loss of flood storage.	The floodplain displacement is proposed to be located within the Warwick Farm Precinct. Refer to the relevant Council policies and Warwick Farm Flooding Assessment Report by WMA Water.
Topic 2 - Odour buffer zone	
Odour buffer zone should be ignored.	Council has been liaising with Sydney Water regarding their plan to upgrade the facilities. However, no updated information is
Warwick Farm sewage treatment facility would inevitably be upgraded therefore would reduce the odour buffer over time.	available at this time. Therefore, the revised Structure Plan adopts the current odour buffer information available and complies with the relevant guidelines in regard to residential development within an odour buffer.
Sydney Water objects to the original structure plan as there is some development shown within the confines of the current odour buffer zone.	The revised Structure Plan has removed all the proposed residential development within the current odour buffer zone.
Topic 3 - Open space	
Concerns over the quantum of open space provided.	The quantum of open spaces proposed is to comply with the required open space benchmark for the future population and also to facilitate floodplain displacement. The revised Structure Plan has reduced the amount of the proposed open spaces reflecting the latest open space benchmark for the area and the floodplain displacement modelling.
Proposed open space is not evenly distributed and concentrated in the vicinity of the least-dense residential areas.	The larger open spaces have been located to facilitate floodplain displacement and as a response to the need to avoid development within the odour buffer zone. The revised Structure Plan provides a more usable approach to the configuration of the smaller sized local open spaces.
Topic 4 - Feasibility	
The proposed development standards are not feasible to encourage redevelopment	The revised Structure Plan has reviewed and considered the previous economic feasibility study for the exhibited Structure Plan. An iterative approach has also been adopted in developing the revised Structure Plan. Economic feasibility testing of three typical blocks was conducted to ensure that the proposed planning controls will make the most of the blocks financially feasible. Refer to Section 7.2 of this report.
Question regarding how future development can practicably proceed.	An indicative staging plan is provided. Refer to Section 8.5 of this report.
Topic 5 - Traffic	
Concerns relating to an increase in traffic congestion that would occur from increased density within the area.	The revised Structure Plan has considered the potential traffic impact. No major concern is identified. Refer to SCT Consulting's high level commentary against the revised Structure Plan.
Topic 6 - 240 Governor Macquarie Drive	
Support the redevelopment of the site.	Noted.
Concerns over the proposed built form outcome and unequitable distribution of dwellings in the precinct.	The revised Structure Plan has reconsidered the configuration of development on No. 240 GMD and its relationship with the rest of the precinct. The proposed building envelopes and heights on No. 240 GMD have been revised to reflect the overarching Urban Design vision and principles for the precinct and provide a more contextual fit.
Employment uses are preferred to be located on this site.	Employment uses (non-residential uses) are proposed on the land close to Warwick Farm Station, including No. 240 GMD.



7.7.2 Indicative Section







7.7.3 3D View - Preferred Built Form



Figure 35: Revised Structure Plan Bird's Eye View

Note: This is an indicative building envelope diagram only and does not include detailed articulation, or topography. The model anticipates that built forms will be between 18m to 22m wide.



7.7.4 Floodplain Displacement

The precinct is constrained by flooding issues. One of the important flood considerations is to ensure that the new development will not result in net loss of the flood storage at 1% Annual Exceedance Probability (AEP) namely RL 8.5m AHD. Therefore, it is critical to balance the cut and fill within the precinct. Three open spaces, Open Spaces 1, 2 and 4 in Figure 36, are identified as the places to accommodate the required excavation. Other open spaces will not provide compensatory excavation. Rosedale Oval currently is at RL 7m. No excavation is proposed to Rosedale Oval. The proposed cuts are summarised as follows:

- Open Space 1 2.0m cut from the existing level (RL 8m).
- Open Space 2 2.0m cut from the existing level (RL 8m).
- Open Space 4 2.1m cut from the existing level (RL 8m).

An average of 1:4 slope to the edges is proposed to the above open spaces to facilitate edge transitions. This will enable universal access compliance and mitigate the changes in levels in detailed design stages.

Appropriate drainage systems will be developed to the future Local Sport Venue open spaces to drain the areas during and after a flood event. It is acknowledged that detailed measures in regard to hazard reduction, warning signs and hydraulic engineering design will need to be undertaken in the detailed design stage.

A detailed flood impact assessment has also been conducted through TUFLOW hydraulic model to determine the change in 1% AEP flood level with the structure plan fully implemented.

The results are shown in Figure 37 and indicate no increase in flood level outside the Structure Plan area. There is a slight reduction in peak level (generally less than 0.05m) downstream towards the Warwick Farm Racecourse due to the restriction in flow caused by the proposed development (increase in building density and raised roads). The table below Figure 37 summarises the floodplain displacement data from the TUFLOW hydraulic model, which indicates the volume of cut and fill is 99.93% balanced. Considering the structure plan is a high level strategy, the variation is therefore within the acceptable tolerance level. The revised Structure Plan indicates its capability of balancing cut and fill in the detailed design stage.

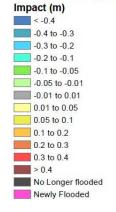
Refer to Warwick Farm Flood Assessment Report by WMA Water for more information.





Figure 36: Proposed Areas of Excavation for Floodwater Displacement





Proposed Building Envelope

50,000 m ²
143,860 m²
209,384.3 m ³
209,236.1 m ³

^{*} The data is from the detailed TUFLOW modelling based on the revised structure plan conducted by WMA Water.

Note:

The proposed excavation for the flood water retention only applies to Open Spaces 1,2 and 4.

Figure 37: TUFLOW Modelling Testing the Revised Structure Plan



8.1 Key Strategies in Developing the Controls

The revised Structure Plan illustrates the desired Urban Design outcome for the Warwick Farm Precinct. The nominated building footprints present the maximum envelopes the future development can fulfil. Building articulations and architecture details will need to be introduced in the detailed design stage. Therefore, it is important to introduce the right suite of controls which is easy to reference to and enables the delivery of the proposed structure plan whist providing a certain level of flexibility.

A two-step approach is adopted in developing and rationalising the floor space ratio (FSR) control:

- Calculate the development yield based on the revised preferred structure plan building envelopes - the resultant FSR for each block fluctuates slightly; however the FSRs are all above the tipping points.
- 2. Determine a consistent zoning and density (FSR) approach this is to rationalise the proposed planning controls to avoid having multiple density controls over different blocks within a same zoning that is based on both the model and the feasibility tipping points and building width between 18m and 22m.

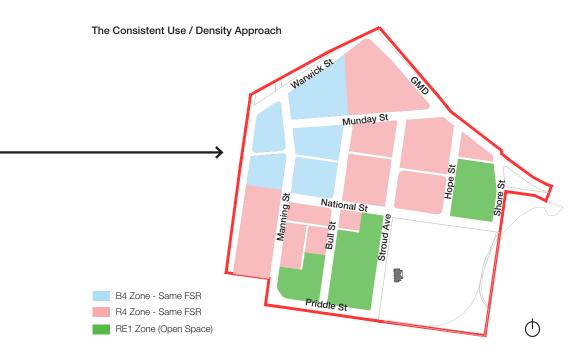
A generic approach is also introduced to the building height control. It nominates the maximum height within a block to form the building height map. The building height control coupled with the Urban Design Control - height in storeys will further define the desired height distribution across the entire precinct.

3D Building Envelopes from the Revised Structure Plan



Note

This is an indicative building envelope diagram only and does not include detailed articulation, or topography. The model anticipates that built forms will be between 18m to 22m wide.





8.2 Proposed Planning Controls

8.2.1 Proposed Zoning

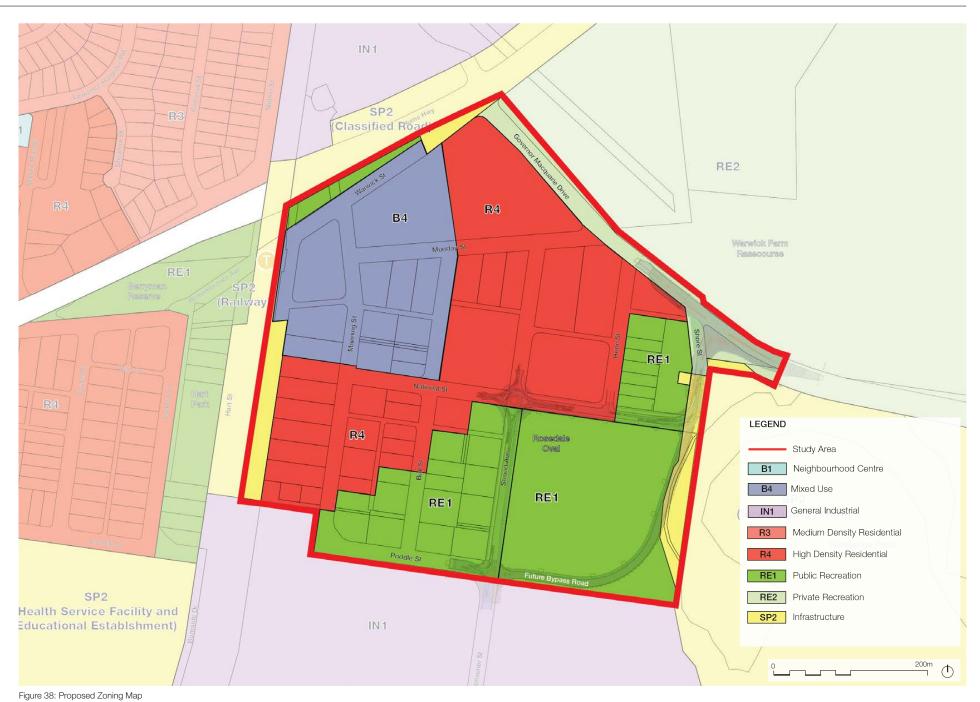
Proposed changes to zoning controls to facilitate implementation of the revised Structure Plan includes:

- B4 Mixed Use Zone In close proximity to Warwick Farm Station and the future town centre.
- 2. R4 High Density Residential Zone Adjacent to the proposed B4 Mixed Use zone to its east and south.
- 3. RE1 Public Recreation Zone Adjacent to Rosedale Oval.

The revised Structure Plan also identifies a number of smaller sized local open spaces along Munday and National Streets, namely Open Spaces 3, 5, 6, 7 and 8 (refer to the diagram below). The proposed zoning does not intend to zone these local open spaces to RE1 zone, which means that the abovementioned open spaces will be under private ownership. Open Spaces 3, 5, 6, 7 and 8 form important parts to the proposed open space network. They are also critical to fulfil the local open space requirement identified in the Community Needs Assessment by Cred Consulting. Therefore these privately owned open spaces are required to provide the general public access. The Planning Proposal Report by GLN Planning provides more detailed information on the mechanism of achieving this arrangement.



The nominated Open Spaces in the revised Structure Plan



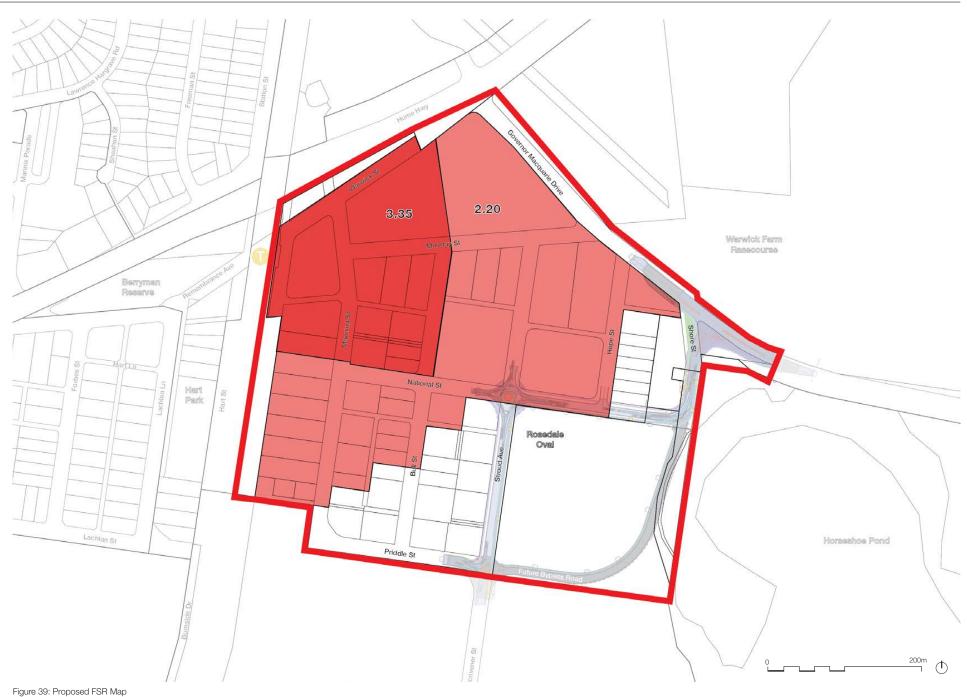


8.2.2 Proposed Density Control - Floor Space Ratio (FSR)

The revised Structure Plan introduces a generic approach to the proposed FSR. The nominated FSR on this page is developed based on the approach nominated in Section 8.1 of this report:

- 1. B4 Mixed Use zone enjoys a maximum of 3.35:1 FSR.
- 2. R4 High Density Residential zone has a maximum FSR control of 2.20:1

Non-residential floor space in the B4 mixed use zone is required to provide employment opportunities and facilitate the proposed street activation (refer to Section 8.3.2).







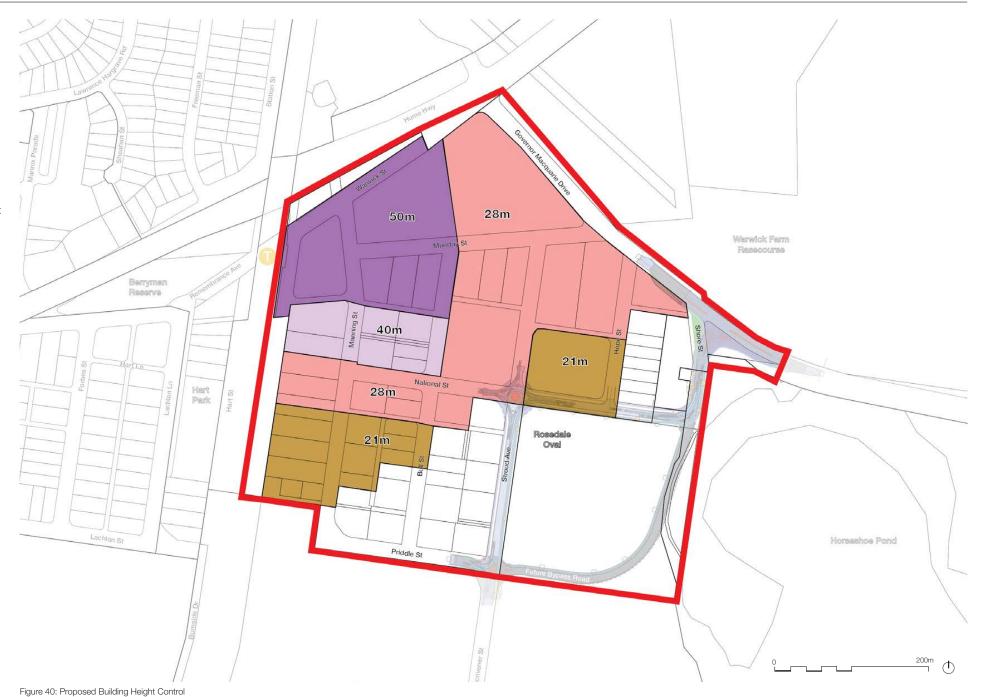


8.2.3 Proposed Building Height Control

An increase in building height is proposed in the precinct. The revised Structure Plan proposes building height ranges from 6 storeys up to 15 storeys in the future town centre, close to Warwick Farm Station.

The proposed height transitions down from 50m (approximately 15 storeys) near the transport node (Warwick Farm Station) to 21m (6 storeys) towards the edge of the precinct, which provides a sensitive built form transition towards Rosedale Oval as well as the future open spaces.

The recommended maximum building height control (in metre) is illustrated in Figure 40. The maximum achievable height for any built form on any given site will also determined by impacts with respect to overshadowing, privacy or other loss of urban amenity.





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8.2.4 Proposed Yield Summary

The following yield summary is based on the nominated planning controls.

Overall Development Pa	rameters (Incl. 240 GMD)
Residential GFA	274,053 m ²
Non-Residential GFA	20,109 m ²
Total GFA	294,162 m ²
Site Area	284,042 m ²
No. of Dwellings *	3,224
Population Projection**	7,383
FSR	1.04:1
% Non-Resi	7%

240 Governor Macq	uarie Drive (GMD)
Residential GFA	69,781 m²
Non-Residential GFA	7,260 m ²
Total GFA	77,401 m²
Site Area	29,307 m ²
No. of Dwellings*	821
FSR	2.64:1

Resi		7%			
	,				
ernor Macq	ernor Macquarie Drive (GMD)				
al GFA		69,781 m ²			
idential		7,260 m ²			
4		77,401 m²			
		29,307 m ²			
vellings*		821			
		2.64:1			

N	oto	٥.

Gross Building Area (GBA) is the entire building footprint.

Gross Floor Area (GFA) means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, excludes common vertical articulation, car parking, services and voids. Refer to the Liverpool LEP 2008 for the detailed defination.

GFA is used to calculate FSR.

Open Space Calculation			
Open Space 1 (OS1) (Proposed RE1)	7,200 m ²		
Open Space 2 (OS2) (Proposed RE1)	16,360m²		
Open Space 3 (OS3)**	910 m²		
Open Space 4 (OS4) (Proposed RE1)	10,374m²		
Open Space 5 (OS5)**	690 m²		
Open Space 6 (OS6)**	1,480 m²		
Open Space 7 (OS7)**	1,014 m²		
Open Space 8 (OS8)**	1,575 m²		
Total Proposed Local Open Space+	39,603m² (14% of the site area)		
Open Space 9 (OS9)	2,678 m ²		
Rosedale Oval	49,927 m²		
Total Existing Open Space Area	52,605 m ²		
Total Open Space Area	92,208 m² (32% of the site area)		
The Resultant Open Space Benchmark			

1.25ha / 1,000 residents

- * The average dwelling size used in the calculation is 85sqm.
- ** Private owned publicly accessible open space.
- + This does not include Hart Park, which has an area of approximately 0.66ha.
- ++ A household size of 2.29 has been used to forecast the future
- The GBA to GFA efficiency rate used for residential uses is
- The GBA to GFA efficiency rate used for ground floor non-residential uses is 50% and 85% for the 1st floor.



Figure 41: Key Plan for the Yield Calculation



8.3 Urban Design Controls

The following Urban Design controls are proposed. The Urban Design Controls will dovetail with the proposed planning controls to realise the vision for the Warwick Farm Precinct.

8.3.1 Proposed Building Height in Storey

The nominated height in storeys will comfortably sit within the proposed building height controls.

15-storey built forms are concentrated to the future town centre in the B4 Mixed Use zone, close to Warwick Farm Station. The building height cascades down to six storeys in the periphery of the precinct fronting Rosedale Oval and the future open spaces.

The recommended building height in storeys is illustrated in Figure 42.





Figure 42: Proposed Building Height in Storey



8.3.2 Active Street Frontages

Streets play an important role in shaping the amenity and character of an area. Active street frontages, in the form of retail and commercial uses define the streets, and bring vibrancy to the area, provide passive surveillance and create an attractive town centre. Refer to Figure 43 for the nominated active street frontages. The general principles are:

- Active street frontages are required along the local streets within the future town centre (B4 Mixed Use Zone).
- Active street frontages along laneways and internal roads are desired.
- 3. Active uses, including retail, commercial shop front, civic uses, display windows and the like should define the active frontages.
- High quality pedestrian environment along active street frontages should be provided through improving footpath condition, tree planting and awnings all support this street activity.
- 5. Reduce long sections (i.e. greater than 40m) of blank walls, building services (i.e. substation) and minimise vehicular access points and width along active frontages to improve pedestrian safety and footpath continuity. Buildings that require to have active street frontages should have a minimum 85% of their ground floor building length activated.

Werwick Farm State / Regional Sport Sport Building 200m

Figure 43: Active Street Frontages Plan

LEGEND

Study Are

Active Street Frontages - Required

Active Street Frontages - Preferred



8.3.3 Street Wall Height

Street wall height defines the character of an urban space. It forms and shapes the urban experience from the street level. A proper street wall height will assist creating a human-scale streetscape and provide a consistent urban setting. Figure 44 illustrates the desired street wall height. The key principles are:

- Provide one to two storey street wall height within B4 Mixed Use zone.
- 2. Promote human scale through a well proportioned, consistent street wall height.
- 3. Make the upper levels distinct from the street wall height.
- Include active and employment generating uses within the building podium level(s) to activate the street and to provide local employment.



Figure 44: Street Wall Height Map

LEGEND





8.3.4 Open Space Network and Benchmark

The open space network is based on the proposed open spaces in the revised Structure Plan, which identifies the locations of the additional RE1 Recreational zone as well as private owned publicly accessible open spaces along Munday and National Streets. The proposed network provides a structure for the future public domain improvements. It also adjoins the adjacent existing / proposed open spaces and forms a part of Liverpool's green network.

Future residential development will benefit from the proposed large and small size local open spaces within walking distance from the door step, providing amenities and views.

Green links along Munday Street, National Street and laneways will improve the precinct's permeability. They will provide east-west spines linking the community to the west of the railway corridor to the future habitat walkway in Horseshoe Pond (subject to the collaboration with Sydney Water) through the heart of the precinct.

Tree-lined streets within the precinct coupled with Munday Street boulevard will provide shades to pedestrian and cyclists and improve the overall streetscape.

The future open spaces will provide multi-purpose sport facilities (in the larger open spaces close to Rosedale Oval), playground, natural based discovery facilities, BBQ and picnic areas.

It is noted that the proposed overall open space metric of 1.25 ha per 1,000 residents is slightly lower than 1.5 ha identified in the Open Space Needs Analysis for the Liverpool Collaboration Area. Considering the proposed open space network will improve the precinct's connection to Hart Park and Horseshoe Pond, the amount of the open spaces proposed is considered acceptable to Council.

LEGEND



Landscaping Tree



Figure 45: Open Space Network Map



8.3.5 Active Transport

Active transport, which priorities walking and cycling, will improve the quality of the public domain as well as the wellbeing of residents.

The precinct currently has a shared path (pedestrian and cyclists) along Warwick Street, Manning Street, Munday Street and Governor Macquarie Drive, linking Warwick Farm Station to the Hume Highway (refer to Figure 46). The walking and cycling environment will be further strengthened via improved existing footpaths / through site laneways and new footpath / shared way.

The over railway corridor connections are indicative only and will be improved via additional pedestrian / cyclists over bridge and updated station concourse. The proposed active transport network in the precinct will also link to the Chipping Norton Cycleway, which provides access to the Georges River foreshore. The potential link to Horseshoe Pond will provide a habitat walkway through the scenic area and create another access to the Georges River foreshore.

Study Area Existing Shared Path (Pedestrian / Cycle) Chipping Norton Cycleway (Liverpool Bike Plan 2018-2023) Local Road - One Side of Pedestrian Footpaths + One Side of Shared Path Local Road - Pedestrian Footpaths on both sides Improved Through Site Laneway - Shared Zone Potential Pedestrian Bridge Over Rail Corridor Potential Pedestrian Link to Open Water Treatment Plant Open Space Potential Habitat Walkway Bus Stop



Figure 46: Active Transport Map



8.4 Evacuation Route

The precinct is subject to flooding issues. A key issue with the proposed development is the evacuation of residents during a flood. Shelter in place is not appropriate and therefore there must be appropriate access from every building in events larger than a 1% Annual Exceedance Probability (AEP). The key features of the evacuation approach are:

- 1. All floors to be at or above 9m AHD (1% AEP + 0.5m).
- All floors must be at least 0.3m above the surrounding ground / road to allow for local drainage.
- 3. All internal roads to be at or above 8.5m AHD (1 % AEP).
- 4. All roads or pedestrian access used for evacuation must rise to the Probable Maximum Flood (PMF).
- There must be either pedestrian or vehicle access from all floors that is always at or above 8.5m AHD (1 % AEP) to above to the PMF.

The proposed evacuation route fulfils the abovementioned requirements by providing a continuously rising route from 8.5m AHD to 10.8m AHD (PMF) and above along the Hume Highway. The proposed evacuation route will be detailed later in the Development Application (DA) stage. Refer to Warwick Farm Flooding Assessment Report by WMA Water.



Figure 47: Evacuation Route Plan

LEGEND

Study Area

Evacuation Route



8.5 Indicative Staging Plan

Staging is important in delivering the revised Structure Plan. The delivery of the required infrastructure, including open spaces, flood storage excavation, raising roads for flood evacuation and the building of the bypass road etc., is critical, however expensive. A high level staging plan has been developed to facilitate the realisation of the structure plan in a coordinated and feasible way. The staging strategy on this page is of high level. A detailed implementation plan will be needed in later stages to further test and refine the proposed staging boundaries and the associated infrastructure.

In general, three stages are proposed:

- Stage 1 The land parcels close to Warwick Farm Station along Munday Street.
- Stage 2 The properties to the north of National Street.
- Stage 3 The remainder of the precinct.

To ensure the proposed staging will not result in net loss of the flood storage, the three large open spaces nominated for accommodating compensatory cut are also designated to each development stage:

- Open Space 2 is to be delivered in Stage 1 It has an area of roughly 16,360 m² to compensate the amount of fill by Stage 1.
- Open Space 4 is to be delivered in Stage 2 It has an area of roughly 10,374 m² to compensate the amount of fill by Stage 2.
- Open Space 1 is to be delivered in Stage 3 It has an area of roughly 7,200 m² to compensate the amount of fill by Stage 3.

The table on this page summarises the yield for each stage.

Stage 1 Yield	
Dwelling Number	1,360
Population Projection	3,114
Open Space 2 Area	16,360m²
Fill Volume	23,632m³
Cut Volume	29,448m³
Cut Depth (on Open Space 2 only)	2m
Stage 2 Yield	
Dwelling Number	1,193
Population Projection	2,733
Open Space 4 Area	10,374m²
Fill Volume	17,206m³
Cut Volume	19,607m³
Cut Depth (on Open Space 4 only)	2.1m
Stage 3 Yield	
Dwelling Number	671
Population Projection	1,536
Open Space 1 Area	7,200m²
Fill Volume	6,593m³
Cut Volume	12,960m³
Cut Depth (on Open Space 1 only)	2m
Total Dwelling Number	3,224
Total Population Projection	7,383

Notes:

- The average dwelling size used in the calculation is 85sqm.
- A household size of 2.29 has been used to forecast the future population.
- The cut and fill volumes are of high level.





8.6 Conclusion

The exhibited Structure Plan has been updated to respond to:

- Department of Planning, Industry and Environment gateway refusal on 240 Governor Macquarie Drive.
- Community feedback.
- Financial Feasibility Testing results.
- New regional studies including Liverpool Collaboration Area
 Open Space Needs Assessment, Liverpool Collaboration Area
 Strategic Transport Infrastructure Assessment and Liverpool
 Collaboration Area Regional Flood Evacuation Strategy.
- The latest flood model.

The revised Structure Plan presents the following key changes:

- 240 Governor Macquaire Drive This land has been incorporated into the overall structure plan. The proposed built forms and height distribution now aligns with the overall Urban Design strategy and presents a more contextual fit.
- Open space configuration The configuration of the open spaces has been changed reflecting the increased overall development areas, latest open space benchmark and the floodplain displacement needs. The larger open spaces close to Rosedale Oval also align more closely to the odour buffer zone.
- Munday Street Linear Parks The linear parks are removed.
 Instead building setbacks are proposed along Munday Street to form Munday Street boulevard. Several publicly accessible open spaces in different sizes are nominated on No. 240 Governor Macquarie Drive. These open spaces will have improved solar amenity, be more useful and contribute to the proposed residential and non-residential uses.
- Building height and massing Refined built form height and massing are proposed to reflect the financial feasibility study and the latest regional level studies including the new open space benchmark. The revised building height and massing also reflect the redistribution of height and density on 240 Governor Macquarie Drive.

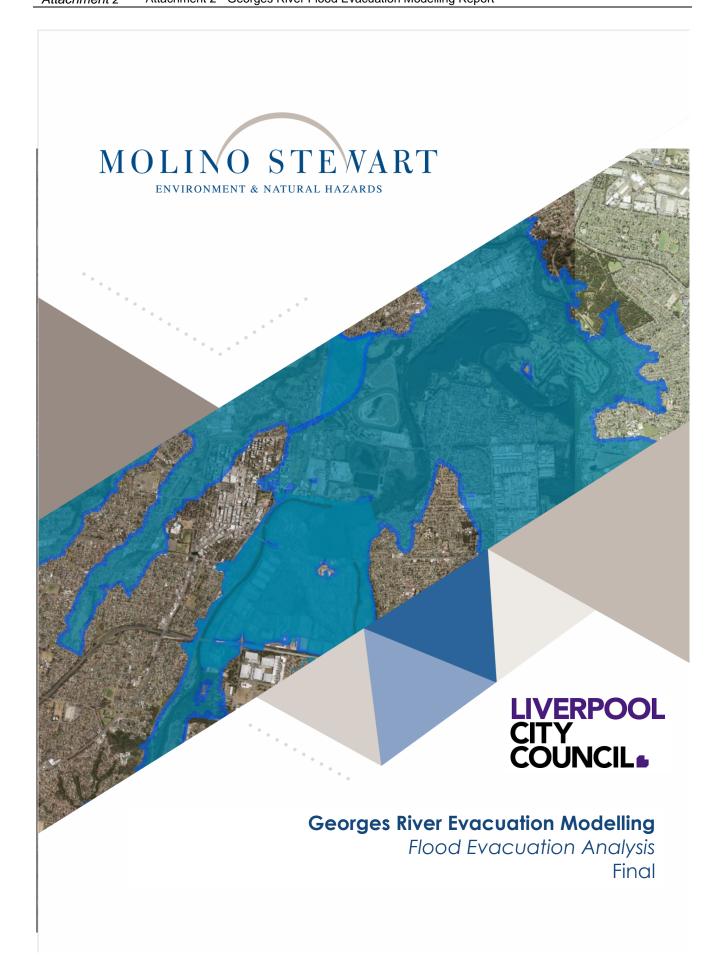
The revised Structure Plan has provided a blueprint for the redevelopment of the Warwick Farm Precinct. The structure plan envisions incremental changes to the precinct over the coming years. The Warwick Farm Precinct will gradually change from the low density suburb characterised by its equine related facilities to a mixed use higher density area providing housing choice and local employment opportunities.



Figure 49: Revised Structure Plan Bird's Eye View

Note: This is an indicative building envelope diagram only and does not include detailed articulation, or topography.

The model anticipates that built forms will be between 18m to 22m wide.





Georges River Evacuation Modelling

Flood Evacuation Analysis

Final

Client: Liverpool City Council

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Document Control

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Executive Summary

Context

Flooding has been identified as a major constraint to achieving future growth in Liverpool LGA under the Greater Sydney Commission's Liverpool Collaboration Area Place Strategy (LCA Place Strategy). Action 24 of the Strategy states that there is a need to "prepare floodplain constraint categorisation study and a flood evacuation study." However, flood evacuation of the Collaboration Area would occur at the same time as other parts of the Georges River floodplain. Molino Stewart was already investigating evacuation capacity for planning proposals in Moorebank East. Accordingly, Council commissioned Molino Stewart to investigate flood evacuation challenges across the floodplain to investigate evacuation capacity for future development in the Moorebank Peninsula and the Liverpool Collaboration Area.

The NSW SES is the lead agency for flood emergency response in NSW and it is currently updating its Georges River and Woronora River Valley Flood Emergency Sub Plan (NSW SES 2018). During the preparation of this study there was extensive consultation with NSW SES which made it clear that its preferred primary flood emergency response for the Georges River floodplain is evacuation. The modelling has therefore assumed that all premises threatened by flooding will need to evacuate when ordered to by NSW SES. As such, it is effectively modelling road transport capacity to see if Liverpool's entire floodplain can evacuate within the available flood warning time, given a 100% evacuation compliance rate.

Model Construction

This study uses an agent-based model (Life Safety Model) to investigate the road transport capacity of Liverpool LGA to evacuate from the Georges River Probable Maximum Flood (PMF). The model simulates warning dissemination, evacuee response, traffic flows and flood rise and spread. It can visually and dynamically show the progress of evacuation, the build-up and dissipation of traffic queues and the overtaking of vehicles by floodwaters. The model results in this report are presented as map extracts and tables but videos of each model run from start to finish are also available.

It is emphasised that the modelling is only as good as the model's inputs and assumptions. To formulate these, extensive consultation was undertaken with Liverpool Council, NSW State Emergency Service (NSW SES), Infrastructure NSW, Transport for NSW, Department of Planning and Environment (DPE) and others to provide local knowledge and ensure the modelling was in line with the most up to date information on future urban development and road upgrades, and NSW SES's approach to managing a flood emergency in the area.

Table i lists the key parameters and studies utilised in the model assumptions.







Table i. Summary of model parameters and incorporated studies

Parameter	Description	Source
Flood Study	For flood behaviour and flood impact probabilities	Georges River Flood Study 2020 2D Tuflow model
Design Flood	Georges River Probable Maximum Flood (PMF) used to set evacuation triggers and model flood impacts	
Warning Lead Time	12 hours prior to flooding	Warning time available for floods on both the Liverpool and Milperra Bridge Gauges (NSW SES, 2019)
Road Cuts	Evacuation routes would not be cut by local creek or Georges River flooding in events more frequent than a 0.2% (1 in 500) Annual Exceedance Probability (AEP) flood	Georges River Flood Study's 2D Tuflow model (BMT, 2020) Anzac Creek Flood Study (Bewsher Consulting, 2005) Cabramatta Creek Flood Study and Basin Strategy Review (Bewsher Consulting (2011)
Time Required between Evacuation Order and Departure	 One hour Warning Acceptance Factor, plus One hour Warning Lag Factor (see Section 4.2.1) 	NSW SES Timeline Evacuation Model (TEM) (Opper et al, 2009)
Road Capacity/ Travel Time Required	 Assumed road capacity of 600 vehicles per hour per lane This has been applied to all scenarios, except in Scenario B where the two on ramps from the Hume Highway and M5 onto the M7 will have their capacity increased to 900 vehicles per lane per hour as per TfNSW advice. 	NSW SES Timeline Evacuation Model (TEM) (Opper et al, 2009)
Traffic Safety Factor (TSF)	Calculated and accounted for based on the elapsed time that vehicles are traveling on the road, as per TEM table. Subsectors were identified where accounting for the TSF meant that additional vehicles would be trapped by floodwaters or on the road.	NSW SES Timeline Evacuation Model (TEM) (Opper et al, 2009)

The study assumed that evacuation would occur by subsector as triggered by forecast flood impacts. Each subsector would evacuate either progressively from areas with a rising road access or all at once where the evacuation route would be cut before properties were flooded.

Specific assumptions regarding residential and non-residential vehicle numbers and other details for each scenario are summarised in Table ii.



Modelled Scenarios

Multiple Georges River flood evacuation scenarios were defined and modelled in this study to demonstrate how various assumptions will alter the evacuation process. The following scenarios are discussed and presented in this report:

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- Scenario 1 is the base case scenario based on 2016 Census (ABS, 2016) population and vehicle data and 2011 Journey to Work (Transport for NSW, 2011) data¹
- Scenario 2 is a future scenario with intensified development under existing zoning, accounting for residential and non-residential infill and planned road upgrades
- Scenario 3 is a future scenario with rezoning and development from planning proposals currently under investigation, as advised by Council
- Scenario A is Scenario 2 with multiple non-residential vehicle evacuation destinations depending on the origin of the workers
- Scenario B is a modified Scenario 3 with updated planning proposals, adjusted vehicle
 yields for new development, upgrades to roads and capacities, and multiple nonresidential vehicle evacuation destinations.

These are summarised in Table ii.

Key Findings

Existing and Infill Development

The modelling suggests that there are some existing flood evacuation issues which need to be addressed. In particular:

- Parts of the commercial development along Orange Grove Road and residential development in Hargrave Park may not be able to evacuate on public roads because of local creek flooding. Provision of a flood emergency evacuation route through private property would alleviate this problem.
- There are numerous low flood islands where occupants may get trapped and overwhelmed by floodwaters if they don't leave promptly. Emergency services may need to focus resources on these areas to ensure timely evacuation.
- Nuwarra Road is an evacuation bottle neck which may prevent the timely evacuation of parts of Chipping Norton. The provision of an additional southbound lane from Brickmakers Road to Heathcote Road and the utilisation of Brickmakers Road and Anzac Road for some of the Chipping Norton evacuation traffic may alleviate this problem
- In the most extreme flood events the M5 will flood at the Moorebank Avenue underpass and, because its drainage is only designed for local rainfall, could be closed for several days due to ponded water. This could prevent some evacuees from leaving the peninsula and would disrupt through traffic for weeks. The planned additional westbound lanes crossing the Georges River at this location could be constructed in such a way to ensure access to Moorebank Peninsula in even the most extreme floods.

¹ The 2011 Journey to Work data was used since more recent 2016 Journey to Work data with the associated spatial data is not publicly available.



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Table ii. Summary of modelled scenarios

	Scenario 1: Base case ¹	Scenario 2: Intensified development under existing zoning ²	Scenario 3: Proposals currently under investigation ³	Scenario A: Modified Scenario 2 ⁴	Scenario B: Modified Scenario 3 ⁵
Description	The "present" or current status scenario	Residential and non-residential infill development under existing zonings and currently planned road capacity upgrades	Residential and non-residential infill development under existing zonings plus development associated with planning proposals currently under investigation and currently planned road capacity upgrades	Scenario 2 but with four non- residential vehicle destinations depending on the origin of the workers	Scenario 3 with updated planning proposals, adjusted vehicle yields for new development, changes to roads and capacities, and multiple non-residential vehicle evacuation destinations as per Scenario A
Timing	2016	2036	>20 years in future	2036	>20 years in future
Destinations	M7 northbound (single destination)	M7 northbound (single destination)	M7 northbound (single destination)	M7 northbound for all residential. Four non-residential destinations depending on origin of workers: 1) M7 northbound; 2) Hume Motorway southbound; 3) Camden Valley Way westbound and 4) M5 eastbound	M7 northbound for all residential. Four non-residential destinations depending on origin of workers: 1) M7 northbound; 2) Hume Motorway southbound; 3) Camden Valley Way westbound and 4) M5 eastbound
Road Capacity	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour except for the two on ramps from the Hume Highway and M5 onto the M7 will have their capacity increased to 900 vehicles/ lane/ hour
Road Network	As current	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound, and additional third lane northbound on the M7 and improvements to M7 on ramp capacities through ramp metering
Dwelling Numbers ⁶	Google Maps visual assessment: ~8,500 dwellings or ~27,000 people in evacuation study area	Additional dwellings based on existing zoning-dependent infill potential in Warwick Farm, Chipping Norton and Moorebank as estimated by Council (370 additional dwellings compared to Scenario 1)	Additional dwellings based on existing zoning- dependent infill potential in Warwick Farm, Chipping Norton and Moorebank as estimated by Council plus additional dwellings as per original Planning Proposal numbers from Council (21,765 additional dwellings compared to Scenario 2)	Same as Scenario 2	Modified dwelling numbers compared to Scenario 3, as per updated Planning Proposals numbers from Council
Vehicles per Dwelling	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate but with a rate of one vehicle per dwelling for new apartments
Non- Residential Vehicles	Based on 2011 Journey to Work data for vehicle drivers commuting from outside of the study area (no double counting of those both living and working in the study area)	As per Scenario 1 with additional vehicles added to Liverpool Hospital location only (discounted to include only vehicle drivers originating from outside of the study area)	As per Scenario 2 with additional vehicles associated with additional jobs from original Planning Proposals numbers from Council (discounted to include only vehicle drivers originating from outside of the study area)	Same as Scenario 2	Modified commercial development areas and associated vehicle numbers compared to Scenario 3, as per updated Planning Proposals numbers from Council
Vehicles ⁶	Base case: ~27,500 total	1,541 additional evacuating vehicles compared to Scenario 1	61,671 additional evacuating vehicles compared to Scenario 2	1,541 additional evacuating vehicles compared to Scenario 1	40,097 additional evacuating vehicles compared to Scenario 2, minus existing development in the locations of new development.

1-See Section 5.5.1 for details; 2-See Section 5.5.2 for details; 3-See Section 5.5.3 for details; 4-See Section 5.5.4 for details; 5-See Section 5.5.5 for details; 6-Excluding creek-only impacted subareas I10, R21 and R22





- It would appear that no matter how the additional lanes are provided on the M5 they
 would alleviate the existing evacuation risks for Chipping Norton and allow some infill
 development to take place on floodprone R3 and R4 zoned land in Chipping Norton and
 Moorebank.
- While the NSW SES evacuation planning for the Georges River relies upon motor vehicle evacuation, there are currently thousands of people within the floodplain that do not have access to a vehicle (over 30% of dwellings in some areas). It is recognised that both rail and pedestrian evacuation have their limitations and may not be able to be relied upon. Furthermore, they are generally not supported by the NSW SES.
- Failing to evacuate or deliberately Sheltering in Place in the Georges River floodplain is
 particularly risky considering buildings can be isolated and inaccessible to emergency
 services for more than 24 hours in the PMF.

Planning Proposals

The capacity for the expected augmented road network to accommodate development associated with future planning proposals is mixed.

Table iii summarises the key challenges for future development in the study area.

Table iii. Constraints on Future Development

Development	Challenge
The Grove	Requires a flood free evacuation route connection between Homepride Avenue and Orange Grove Road
Shepherd Street	May require an emergency level crossing of the railway line at Atkinson Street
Warwick Farm Structure Plan	Insufficient road capacity to cater for the evacuation of the planning proposals
Moore Point	Insufficient road capacity to cater for the evacuation of the planning proposals
Moorebank East	Approved and proposed development in Moorebank East would be able to evacuate in time but proposed development blocks the evacuation of Chipping Norton

"Spare" evacuation capacity has been investigated at a high level for some of the large planning proposals included in Scenario B. However, it is stressed that this is only a high-level calculation, and the capacity would have to be modelled in order to test the impact of a reduction in vehicles from certain developments. Also note that the vehicles which escape the floodwaters but are trapped on the Moorebank Peninsula have not been accounted for in those calculations.

The Grove

The Grove development should be able to evacuate if an emergency evacuation route through private property is provided to deal with existing evacuation problems.

33 Shepherd Street

The capacity to evacuate 33 Shepherd St by vehicle will depend on how much of the evacuation capacity has been taken up by approved neighbouring developments. Shepherd Street gets cut by frequent floods at the railway underpass which is a threat to both existing development and that being





considered in the planning proposal. An emergency level crossing at Atkinson Street would significantly reduce risks to existing and proposed development. It might be possible for 33 Shepherd St to shelter in place because it is generally above the PMF level or subject to shorter duration flooding in the PMF. The provision of the emergency level crossing would make this more viable.

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Warwick Farm Structure Plan

Development proposed for the Warwick Farm structure plan would appear to exceed the evacuation capacity of the area because many surrounding areas need to share the same evacuation routes at the same time. Scenario B suggests that the road network could have capacity for 850 evacuating vehicles from Warwick Farm in Scenario B, accounting for the road upgrades included in Scenario B.

Other than reducing the scale of the proposed development, there is not a lot which can be done to mitigate the above challenges. Providing two exit lanes on Warwick Street might assist if it does not create capacity issues on the Hume Highway. Sheltering within buildings is not advisable as the area is surrounded by hazardous floodwaters in the PMF for more than 24 hours and for up to 8 hours in a 0.2% AEP flood.

The precinct is not a flood island and rises gently towards the Hume Highway which then rises rapidly as it crosses the rail line to higher ground west of the railway. Therefore, walking out ahead of rising flood waters should vehicular evacuation fail would be an option.

Moore Point

The planning proposals for Moore Point far exceed the capacity of the road network to cater for their evacuation during a flood. Together they would result in nearly 32,000 vehicles having to evacuate in advance of a flood under the current settings and the modelling suggests that more than 26,000 of them would not be able to evacuate by vehicle in time. The problem is caused because there are only two lanes of Newbridge Road on which it can evacuate and the road gets cut in a 2% (1 in 50) AEP flood. Scenario B suggests that the road network may have capacity for approximately 5,500 evacuating vehicles from Moore Point, accounting for the road upgrades included in Scenario B.

Alternatives to vehicular evacuation such as pedestrian evacuation or sheltering in place present their own challenges because tens of thousands of people are involved and the development can be surrounded by high hazard floodwaters for more than 24 hours in the most extreme floods.

Moorebank East

The modelling suggests that while planning proposals for Moorebank East would have sufficient time to evacuate, they would take up road capacity currently used by Chipping Norton evacuees and thousands would be caught by floodwaters who would otherwise have time to escape. Modelling suggests that that the road network could have capacity for approximately 700 evacuating vehicles from Moorebank East, accounting for the road upgrades included in Scenario B. It is noted that the model included over 360 vehicles for Site C, which is already approved and under construction. This only leaves capacity for 340 additional vehicles. The suggested widening of Nuwarra Road and use of additional roads for evacuation may facilitate some further modest development at Moorebank East without compromising the safety of those already living and working in Chipping Norton.

Recommendations

A. Current Flood Evacuation Challenges

Ensure that the proposed additional lanes on the M5 across the Georges River are configured to reduce the probability of flooding isolating the Moorebank Peninsula









- Investigate the provision of an additional southbound lane on Nuwarra Road between Brickmakers Drive and Heathcote Road to reduce the queuing that severely limits the evacuation of Chipping Norton onto the M5
- Investigate an emergency level crossing at Atkinson Street to improve the evacuation capability of current developments on Shepherd Street and Riverpark Drive
- Investigate an emergency flood evacuation route through private property between Homepride Avenue and Orange Grove Road (Figure 25 is one possibility) to ensure a floodfree evacuation route for the existing commercial, industrial and residential developments in the areas
- Investigate development of a comprehensive flood forecasting and warning system in the Georges River Catchment to increase the warning time for evacuation
- Investigate the benefits of an intelligent traffic system (ITS) to see whether this could increase evacuation route capacities at route bottlenecks
- Investigate whether contraflow arrangements are likely to increase flood evacuation capacity
- Use data and consider outcomes from this study to inform preparation of Volume 2 and 3 of the Georges River and Woronora River Valley Flood Emergency Sub Plan
- Identify means of safely managing the thousands of people on the floodplain who do not have access to private motor vehicles, many of whom may have mobility challenges. This might include pedestrian evacuation, mass transport or sheltering in place.

B. Planning Proposals

- Many of the above listed recommendations to deal with "current" challenges may also facilitate evacuation capacity improvements for future planning proposals
- Development at Moorebank East should be restricted, considering it is estimated that half
 of the potential evacuation capacity is taken up by the already-approved Site C
 development. An additional lane on Nuwarra Road should be investigated to see whether
 it would provide sufficient additional evacuation capacity to enable further development
 at Moorebank East without compromising the safe evacuation of existing development in
 Chipping Norton
- Development at Shepherd Street has a relatively low flood evacuation risk and is unlikely
 to compromise the evacuation of nearby developments. Emergency access in the area
 could be improved through the provision of an emergency level crossing at Atkinson
 Street
- The Grove in Warwick Farm should only be approved if a flood free emergency evacuation route can be created between Homepride Avenue and Orange Grove Road
- The planning proposals for Moore Point and the Warwick Farm Structure Plan either need to be substantially scaled back or:
 - o more time to evacuate is provided through an improved warning system
 - improved evacuation route capacity is provided through road upgrades, contraflow traffic arrangement and/or an ITS
 - o alternatives to private motor vehicle evacuation is catered for through mass transport, pedestrian evacuation or sheltering in place.





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1 | Introduction

1.1 Background

In October 2019, Molino Stewart prepared a report for Liverpool City Council (Council) on flood evacuation potential in the Moorebank Peninsula in Liverpool LGA. This was specifically for the potential development of five sites in the Moorebank East precinct (Figure 1) which was previously used for extractive industry and commercial purposes. The whole precinct is at risk of flooding from the Georges River and, to a lesser extent, from local creek flooding.

The highest part of the area was rezoned for residential development in 2008 (Site C) and a development application was submitted in 2017 for low density residential development on that site. A condition of the planning approval for Site C was that a road bridge be constructed to connect the development to Brickmakers Drive to facilitate evacuation in advance of an extreme flood in the Georges River. More recently, development approval was granted for a marina at Site D with approval conditional on the availability of Site C's road infrastructure. It is noted that a separate planning proposal is also being pursued by the landowner of Site D for additional residential development, this planning proposal has yet to receive a Gateway determination.

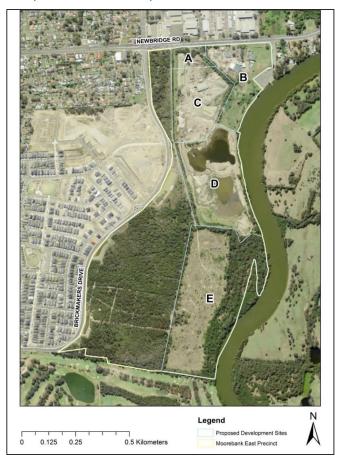


Figure 1. Moorebank East Development Precinct, the scope for the 2019 Molino Stewart report



Since then, additional planning proposals for residential and commercial development on the floodplain have been submitted to Council. While sheltering in place (SIP) above the reach of the Probable Maximum Flood (PMF) level may be physically possible on some of these sites if evacuation from these properties is not achievable, the NSW State Emergency Service (SES) has advised that SIP is not an appropriate primary flood emergency response for new developments. An important consideration in this advice from the NSW SES is that in the most extreme floods most sites on the floodplain can be isolated by hazardous flood waters for nearly two days. This means the developments must allow for vehicular evacuation ahead of flooding, with pedestrian evacuation being an essential secondary response should vehicular evacuation fail for any reason.

Application of the NSW SES Timeline Evacuation Model in the Molino Stewart 2019 study showed that there is sufficient time to evacuate all of the proposed residential and non-residential vehicles in the Moorebank East precinct onto Brickmakers Drive. However, where traffic converges onto a single lane at the intersection of Brickmakers Drive and Nuwarra Road, there is insufficient road capacity for timely evacuation. Therefore, for evacuation to be possible, either Nuwarra Road would need to be widened or the number of evacuating vehicles would need to be reduced. The study also recognised that accounting for the evacuation of existing development in Moorebank and Chipping Norton along with the proposed developments would further constrain the development capacity of the Moorebank East Precinct.

However, it was beyond the scope of that report to assess the constraints which may be imposed by the evacuation of existing development in Moorebank and Chipping Norton, which may take up some, or all, of the local road capacity. Additionally, Liverpool has been flagged as a centre for future growth under the Greater Sydney Commission's Collaboration Area Place Strategy, which aims to find opportunities for growth including housing developments within the collaboration area.

According to the Greater Sydney Commission (2018), the population of the Western Sydney Region is set to grow from 740,000 in 2016 to 1.1 M by 2036, and to over 1.5 M by 2056. The majority of this growth is projected to occur around the existing hub of Liverpool, which has established transportation, residential areas, employment opportunities and educational centres. While significant growth is anticipated for the area, flooding has been identified as a major constraint to achieving the vision of the Strategy, which has identified the need to "prepare floodplain constraint categorisation study and a flood evacuation study" as per action no. 24 of the Strategy.

Accordingly, Council commissioned Molino Stewart to investigate flood evacuation challenges for both the Moorebank Peninsula and the Liverpool Collaboration Area.

1.2 Study Area

1.2.1 Moorebank Peninsula

The Moorebank Peninsula encompasses the suburbs of Chipping Norton and Moorebank. The Georges River bounds the peninsula from the west to the east, and Anzac Creek flows into the Georges River through the southwest of this area. This area includes the Moorebank East Precinct (Figure 1), which sits south of Newbridge Road between Brickmakers Drive and the Georges River. The Precinct is flagged for potential development and divided up into five sites, which are referred to as:

- Site A Benedict Sands
- Site B Flower Power
- Site C Moorebank Cove
- Site D –Georges Cove Marina
- Site E EQ Riverside





1.2.2 Liverpool Collaboration Area

The Liverpool Collaboration Area was co-designed by the Greater Sydney Commission and the Liverpool Collaboration Area Stakeholder Group and was approved in 2018. The extent of the Liverpool Collaboration Area is shown in Figure 2 and encompasses the area between Cabramatta Creek and the Georges River, as well as a section of the Moorebank Peninsula between the Georges River and Anzac Creek. It includes the Liverpool CBD, the health and education precinct, the Warwick Farm precinct, and nearby residential and industrial lands. It therefore partially overlaps with the above study area for the Moorebank Peninsula.

As the Moorebank Peninsula will be evacuating at the same time as the Liverpool Collaboration Area, it is necessary to cover the extents of both areas within a single evacuation model. The combined area is shown in Figure 3 along with the PMF extent of the Georges River, Cabramatta Creek and Anzac Creek which must all be taken into consideration in the evacuation modelling.

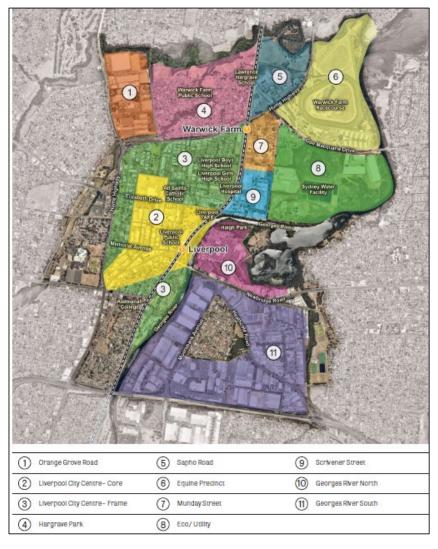


Figure 2. Extent of the Liverpool Collaboration Area



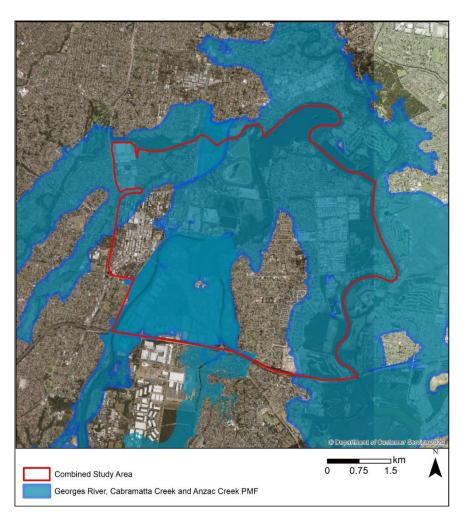


Figure 3. Extent of the combined study area

1.2.3 Extended Study Area

While Figure 3 shows the extent of the primary study area for evacuation modelling, an extended study area was also identified which takes into account additional areas which may need to evacuate at the same time. The extended area includes:

- Areas affected by the modelled Probable Maximum Flood (PMF) from the Georges River which are outside of the primary study area but which will share evacuation routes with the primary study area and contribute to traffic congestion.
- Areas flooded by nearby creeks which are likely to be experiencing some degree of flooding when the Georges River is flooding but are unlikely to receive flood warnings or evacuation orders. While not the focus of this study, these additional areas may place additional loads on the road network if people undertake self-directed evacuation to escape rising flood waters and were included for potential sensitivity analysis to





understand the possible impact of simultaneous flooding of the Georges River and the local creeks.

Figure 4 shows the extent of the extended study area that is affected by the PMFs from the Georges River, Cabramatta Creek Brickmakers Creek, or Anzac Creek and that will need to utilise the same regional evacuation routes when flooding. Therefore, some of the areas are affected only by creek flooding, some only by the Georges River and some by the creeks and the Georges River.

The suburbs within the entire modelled area include Liverpool, Chipping Norton, Moorebank, Hammondville, Voyager Point, Casula, Prestons, Lurnea, Cartwright, Wattle Grove, and Holsworthy.

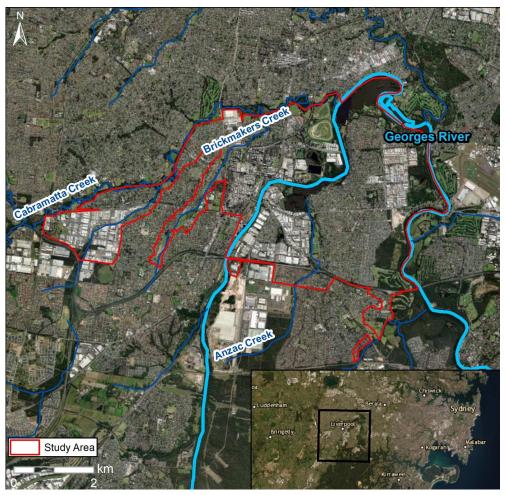


Figure 4. Study area



1.3 Scope of Work

This report is a single comprehensive document describing the study context, the model construction, assumptions, inputs and outputs and a discussion of the results. The primary components covered in this report are:

- Urban Development Context
- Local Flooding Context
- Emergency Planning Context
- Life Safety Model Inputs and Outputs
- Implications for Evacuation Planning
- Conclusions and Recommendations

1.4 Modelled Scenarios

Over the course of this study, multiple Georges River flood evacuation scenarios were defined and modelled to demonstrate how various assumptions will alter the evacuation process. The following scenarios are discussed and presented in this report:

- Scenario 1 is the base case scenario based on 2016 Census (ABS, 2016) population and vehicle data and 2011 Journey to Work (Transport for NSW, 2011) data²
- Scenario 2 is a future scenario with intensified development under existing zoning, accounting for residential and non-residential infill and planned road upgrades
- Scenario 3 is a future scenario with rezoning and development from planning proposals currently under investigation, as advised by Council
- Scenario A is Scenario 2 with multiple non-residential vehicle evacuation destinations depending on the origin of the workers
- Scenario B is a modified Scenario 3 with updated planning proposals, adjusted vehicle
 yields for new development, changes to roads and capacities, and multiple non-residential
 vehicle evacuation destinations.

These are summarised in Table 1.

 $^{^2}$ The 2011 Journey to Work data was used since more recent 2016 Journey to Work data with the associated spatial data is not publicly available.



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Table 1. Summary of modelled scenarios

Table 1. Sumi	Scenario 1: Base case ¹	Scenario 2: Intensified development under existing zoning ²	Scenario 3: Proposals currently under investigation ³	Scenario A: Modified Scenario 2 ⁴	Scenario B: Modified Scenario 3 ⁵
Description	The "present" or current status scenario	Residential and non-residential infill development under existing zonings and currently planned road capacity upgrades	Residential and non-residential infill development under existing zonings plus development associated with planning proposals currently under investigation and currently planned road capacity upgrades	Scenario 2 but with four non- residential vehicle destinations depending on the origin of the workers	Scenario 3 with updated planning proposals, adjusted vehicle yields for new development, changes to roads and capacities, and multiple non-residential vehicle evacuation destinations as per Scenario A
Timing	2016	2036	>20 years in future	2036	>20 years in future
Destinations	M7 northbound (single destination)	M7 northbound (single destination)	M7 northbound (single destination)	M7 northbound for all residential. Four non-residential destinations depending on origin of workers: 1) M7 northbound; 2) Hume Motorway southbound; 3) Camden Valley Way westbound and 4) M5 eastbound	M7 northbound for all residential. Four non-residential destinations depending on origin of workers: 1) M7 northbound; 2) Hume Motorway southbound; 3) Camden Valley Way westbound and 4) M5 eastbound
Road Capacity	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour	600 vehicles/ lane/ hour except for the two on ramps from the Hume Highway and M5 onto the M7 will have their capacity increased to 900 vehicles/ lane/ hour
Road Network	As current	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound	Additional planned road upgrades to Governor Macquarie Drive and M5 westbound, and additional third lane northbound on the M7 and improvements to M7 on ramp capacities through ramp metering
Dwelling Numbers ⁶	Based on 2016 census data and Google Maps visual assessment: ~8,500 dwellings or ~27,000 people in evacuation study area	Additional dwellings based on existing zoning-dependent infill potential in Warwick Farm, Chipping Norton and Moorebank as estimated by Council (370 additional dwellings compared to Scenario 1)	Additional dwellings based on existing zoning-dependent infill potential in Warwick Farm, Chipping Norton and Moorebank as estimated by Council plus additional dwellings as per original Planning Proposal numbers from Council (21,765 additional dwellings compared to Scenario 2)	Same as Scenario 2	Modified dwelling numbers compared to Scenario 3, as per updated Planning Proposals numbers from Council
Vehicles per Dwelling	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate	Based on 2016 census vehicle ownership rate but with a rate of one vehicle per dwelling for new apartments
Non-Residential Vehicles	Based on 2011 Journey to Work data for vehicle drivers commuting from outside of the study area (no double counting of those both living and working in the study area)	As per Scenario 1 with additional vehicles added to Liverpool Hospital location only (discounted to include only vehicle drivers originating from outside of the study area)	As per Scenario 2 with additional vehicles associated with additional jobs from original Planning Proposals numbers from Council (discounted to include only vehicle drivers originating from outside of the study area)	Same as Scenario 2	Modified commercial development areas and associated vehicle numbers compared to Scenario 3, as per updated Planning Proposals numbers from Council
Vehicles ⁶	Base case: ~27,500 total	1,541 additional evacuating vehicles compared to Scenario 1	61,671 additional evacuating vehicles compared to Scenario 2	1,541 additional evacuating vehicles compared to Scenario 1	40,097 additional evacuating vehicles compared to Scenario 2, minus existing development in the locations of new development.

¹⁻See Section 5.5.1 for details; 2-See Section 5.5.2 for details; 3-See Section 5.5.3 for details; 4-See Section 5.5.4 for details; 5-See Section 5.5.5 for details; 6-Excluding creek-only impacted subareas I10, R21 and R22



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2 | Urban Development Context

2.1 Existing Land Uses

2.1.1 Existing Development

The study area currently encompasses a range of land use zonings according to the Liverpool Local Environmental Plan (LEP) 2008 (Figure 5). The lands directly adjacent to the Georges River and creeks in the study area are generally zoned as open space for private or public recreation, as these flood prone lands are unsuitable for habitable buildings. The majority of the study area is zoned as either residential or industrial. The equestrian precinct of Warwick Farm is also included in this study area. These three generalised zones are shown in Figure 6.

There are 15 major industrial subareas, including in the east of Chipping Norton, west Moorebank, Liverpool CBD, Warwick Farm, and Prestons. There are 27 residential subareas, which are located along the Georges River in Chipping Norton, Moorebank, and Hammondville; along the Anzac Creek in Moorebank and Wattle Grove; and along Cabramatta Creek and Brickmakers Creek in Casula, Lurnea, Cartwright, and Liverpool. There are scattered business zonings such as local shops across these generalised zones.

There is a strip of properties along Newbridge Road in the east of Moorebank along the Georges River which have long had houses on them but due to their flood risk are subject to a voluntary purchase scheme by Council (the Moorebank Voluntary Acquisition Scheme), which is currently operational. As houses are acquired by Council in this area the land is rezoned from residential to recreational.

Under the LEP, residential lots are zoned as either R1 General Residential, R2 Low Density Residential, R3 Medium Density Residential, or R4 High Density Residential. Based on these current categories, different numbers of residential dwellings are allowed on each lot without any change to zoning. This means that there is potential for densification of residential dwellings within the study area without any amendments to the LEP and current zoning. A summary of the zones is as follows:

- R1 General Residential: There is only one area with this zoning in the study area, which is
 in Moorebank and is filled with recently constructed dwellings.
- R2 Low Density Residential: Over half of the residential lots in the study area, or approximately 4,500 lots, fall under R2 zoning. There is currently an average of 1.11 dwellings per lot as of the 2016 census.
- R3 Medium Density Residential: There are 17 R3 zones within the study area, which
 contain over 2,300 lots with a current average density of 1.29 dwellings per lot as of the
 2016 census.
- R4 High Density Residential: There are 12 R4 zones within the study area, within which
 almost one third of the dwellings in the study area are located. There is currently an
 average density of 4.65 dwellings per lot as of the 2016 census. There is currently a
 maximum of 144 dwellings on a single lot, as well as a large number with only one dwelling
 per lot.





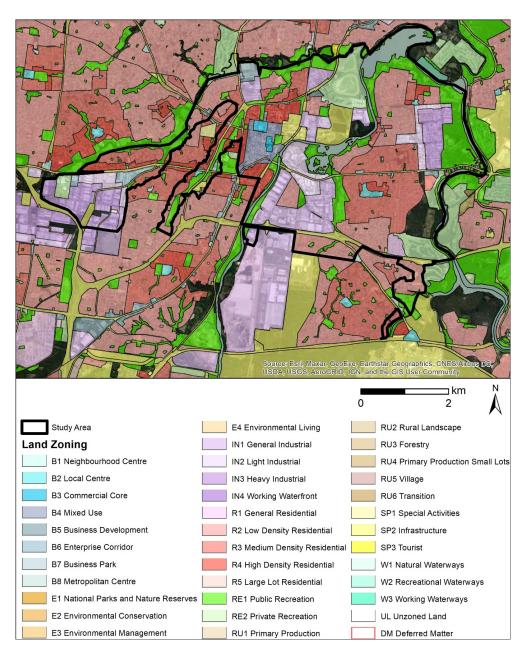


Figure 5. Liverpool City Council land use planning in the extended study area



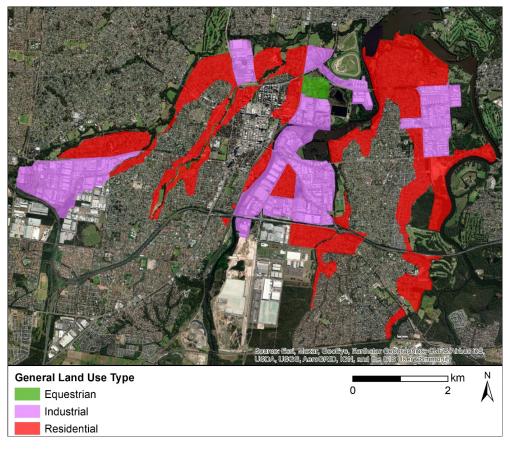


Figure 6. General land use type by evacuation subareas in the extended study area

2.1.2 Residential Infill Development Potential

Without any rezoning, there is the potential for the residential density to increase within the study area. There may be potential for infill, redevelopment and intensification to take place within R2, R3 and R4 residential zones. This can range from replacing small houses with larger houses with more people and more cars, adding granny flats to existing dwellings, replacing single dwellings with duplexes, building townhouse developments and erecting residential apartment buildings. The potential for lots to increase their number of dwellings depends on their zoning and size, as well as a number of other factors specified in Liverpool's Development Control Plans. Therefore, not every lot meeting the zoning and size requirement would be able to increase its number of dwellings, but there is potential for more dwellings than currently present in these areas.

Evacuation modelling scenarios have accounted for assumptions regarding future infill under existing zoning, as explained in Section 5.5.2. This includes assumptions regarding how much infill development and intensification is likely to take place in R1, R2, R3 and R4 zoned areas over the next 20 years.

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2.2 Planning and Development Proposals

Liverpool is a rapidly growing local government area (LGA), experiencing substantial growth through both urban release areas and redevelopment of existing areas. Both Liverpool City Council and the NSW Government are involved in the planning of several major land release areas in the LGA, including the South West Priority Growth Area, the Western Sydney Employment Area, and the Western Sydney Aerotropolis. While not all impacting the specific study area of this assessment, it is evident that Liverpool LGA is rapidly growing as a southwest Greater Sydney Central Business District. Development proposals relevant to the study area are discussed below, and specific assumptions integrated into evacuation modelling are discussed in Section 5.5.3.

2.2.1 Moorebank East

As discussed in Section 1.1, the Moorebank East Precinct is flagged for potential development within the five sites shown in Figure 1. Table 2 summarises the current data for each development or planning proposal, as provided by Council in 2021.

Table 2. Proposed Moorebank East Developments

Site	Development	Commercial	Familiano	Dwellings	
Site	Туре	Space (ha)	Employees	Houses	Apartments
Site A: Benedict Sands	Mixed use	0.89	857	0	126
Site B: Flower Power	Mixed use and commercial strip	2.32	361	0	602
Site C: Moorebank Cove	Low density residential	0	N/A	179	0
Site D: Georges Cove Marina	Apartments	0	N/A*	21	374
Site E: EQ Riverside	Apartments and commercial/ retail	0.18	207	0	1,500

^{*}there are an estimated 45 employees under Site D's existing deferred commencement consent for a Marina, however the modelling considered the residential planning proposal for the site.

2.2.2 Liverpool Collaboration Area

The Liverpool Collaboration Area is an action in the Greater Sydney Regional Plan and is one of the locations identified as a place of metropolitan significance with potential to grow into a larger centre. The Liverpool Collaboration Area Place Strategy was developed between 2017 and 2018 by the Greater Sydney Commission and the Liverpool Collaboration Stakeholder Group. The vision of the strategy is that, by 2036, Liverpool is a rejuvenated city with diverse and growing residential and employment opportunities. It aims to have major health, education and retail precincts along with open spaces and parklands along the Georges River bringing employees, residents and recreational users to Liverpool.

Part of its mission will be to service the new Western Sydney International Airport through upgraded public transport. A key goal for the area is to improve public spaces, including connections to the Georges River. The four immediate imperatives from the Liverpool Place Strategy (Greater Sydney Commission, 2018) are to:

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1. Develop an integrated transport strategy that applies movement and place and addresses the transport challenges associated with delivering the vision, shared objectives and growth profile (led by Transport for NSW/Roads and Maritime Services).

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- 2. Update and complete the Georges River, Brickmakers Creek and Liverpool CBD Overland Flood Studies and prepare floodplain risk management plans.
- 3. Prepare a floodplain constraints categorisation study (led by Liverpool City Council) and a flood evacuation study (led by State Emergency Service).
- Establish an enduring Collaboration Area Partnership that facilitates the implementation 4. of stakeholder actions and builds on existing governance structures (led by Liverpool City Council and the Greater Sydney Commission).

With flooding recognised as a major factor that could potentially limit growth in the area, the flood studies and floodplain risk management plan have already been completed by Liverpool City Council. The Floodplain Constraints Categorisation Study has also been completed (FloodMit, 2020) but due to resource constraints the NSW SES was not able to commence the flood evacuation study. To expedite this aspect Liverpool City Council commissioned Molino Stewart to undertake the flood evacuation study.

The Liverpool Place Strategy states that one challenge is that market interest in new residential development significantly exceeds the NSW Government forecasts. Planning proposals have been assessed by Liverpool City Council that equate to more than 30,000 dwellings, compared to the 2036 Government forecast of 7,800 dwellings. The Collaboration Area aims to provide a mix of housing densities, including affordable housing and high-density housing close to public transport.

As shown in Figure 2, there are 11 places that make up the Liverpool Collaboration Areas, which are:

- Orange Grove Road: an employment precinct outside Liverpool City Centre;
- Liverpool City Centre Core: Liverpool's primary commercial centre for Liverpool, including a mixed use central business district with commercial offices, retail, government services, educational services, and residential apartments;
- Liverpool City Centre Frame: a mixed-use area including the Liverpool Hospital, educational centres, and high-density residential dwellings;
- Hargrave Park: a low-density residential area with a large proportion of Land and Housing Corporation dwellings and some educational services;
- Sappho Road: an urban employment precinct;
- **Equine Precinct:** the Australian Turf Club racecourse and the Inglis Hotel;
- Munday Street: predominantly low-density residential development with horse stables;
- Eco/Utility: the Sydney Water Liverpool Water Recycling Facility;
- Scrivener Street: industrial precinct with some hospital facilities and offices;
- Georges River North: industrial precinct;
- Georges River South: predominantly industrial precinct surrounding a low-density residential neighbourhood.

Stakeholders have assessed potential growth profiles prepared by Liverpool City Council meant to guide a coordinated response to development. The preferred "Metropolitan City" growth profile anticipates that the Collaboration Area could potentially host up to 16,200 new jobs, have capacity for up to 18,800 new dwellings by 2036, and host up to 15,000 tertiary students.

As discussed in the FloodMit (2020) study, recent planning proposals assessed by council equate to more than 30,000 new dwellings, including high density residential development proposed within:

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- Liverpool City Centre Frame;
- Hargrave Park Area;
- Munday Street Area;





- · Georges River North Area; and
- Georges River South Area.

This includes the area covered by the Warwick Farm Structure Plan and Moore Point Planning Proposal, which both aim to contribute significant residential and non-residential precincts to the area. Table 3 shows the proposed development yields for significant developments planned in the Collaboration Area.

Table 3. Liverpool Collaboration Area development yields

Site	Additional Dwellings	Additional Jobs
Moore Point (JLG) in Moorebank	12,200	16,648
Moore Point (Rose Group) in Moorebank	1,854	6,352
The Grove in Warwick Farm		600
Warwick Farm Structure Plan including 240 Gov Macquarie Drive	3,224	925
33 Shepherd Street, Liverpool*	1,200	

^{*}This Planning Proposal is already gazetted with some developments approved and constructed and others pending approval.

2.2.3 Liverpool Hospital

Liverpool Hospital is undergoing a planned expansion which is due for completion by 2026. This includes the construction of the Liverpool Health and Academic Precinct with a new education and research hub. The redevelopment will include additional clinical services and public spaces. The recently approved concept plan included provision for an additional approximately 900 car parking spaces across the hospital campus, including a multi-storey car park, amounting to a total of 2,400 spaces.

2.2.4 Floodplain Constraints

While there is significant growth projected for the study area, flooding has been identified as a constraint on the development potential for the area. Liverpool City Council commissioned FloodMit (2020) to prepare a study considering the flood constraints that apply to the Liverpool Collaboration Area Place Strategy. This study looks at how the following legislative and flood policy requirements may have an impact on planning proposals and future development in the area:

- Directions by the Minister (formerly Section 117 Directions);
- NSW Floodplain Development Manual;
- Floodplain Management Studies and Plans;
- Liverpool LEP 2008;
- Liverpool DCP 2008.

A summary of the regional flood constraints that apply to the study area are outlined in Table 4 as set out in the FloodMit report.





Table 4. Regional Flood Constraints for the Liverpool Collaboration Area (based on FloodMit, 2020)

Constraints	Details	
	This is the area within which developments may be subject to flood related	
Flood Planning Area (FPA)	development controls. Approximately 56% of the Liverpool Collaboration Area	
	is included in the Flood Planning Area.	
	This is a level used to set flood planning controls. It is calculated from a	
	designated flood event plus an allowance for freeboard. It is the height used to	
Flood Planning Level (FPL)	set floor levels for property development in flood prone areas. In Liverpool	
riodd riaining Lever (i'r L)	LGA the FPL for habitable floor levels in residential, commercial and industrial	
	properties affected by riverine flooding is the 1% AEP flood level plus 0.5m	
	freeboard.	
Flood Risk Management	Approximately 20% of the Liverpool Collaboration Area is within High Flood	
Areas	Risk areas, which are subject to significant development restrictions.	
Floodway Area	There are floodways in the Georges River and Cabramatta Creek that need to	
Floodway Area	be kept clear of all development.	
Dinamia a Cannidana	A riparian corridor is required to act as a buffer between the area's waterway	
Riparian Corridors	banks and future development.	
	Vulnerable existing development has been identified throughout the study	
Vulnerable Development	area, and future development must not exacerbate the existing flood	
	problems.	
Detential Climate Change	The climate change impacts of sea-level rise and increased rainfall intensities	
Potential Climate Change	need to be considered, although not expected to have a large impact	
Impacts	compared to the presently adopted models.	
Emergency Management	The availability of suitable evacuation routes must be assessed considering	
and Evacuation	,	
Considerations	both the existing and future population of the area.	
Controls on Future	Future development in land below the flood planning area will be restricted by	
Development	controls such as those relating to minimum floor levels, building components,	
Development	structural stability, car parking, driveway access, evacuation and others.	
On-Site Detention (OSD)	OSD in the Liverpool Collaboration Area is not likely to be effective, and runoff	
and Water Harvesting	retention for all new development is likely to be a more appropriate response.	

Some specific flood risks for the following areas were examined in the report (Figure 7):

- Orange Grove Road Place Area which is affected by both Cabramatta Creek and Brickmakers Creek;
- Shepherd Street/Riverpark Drive in Liverpool City Centre, where the only site access is via a railway underpass at Shepherd Street that is inundated in a 20 year flood, prior to flooding of the homes in this area;
- Hargrave Park Place Area, where 56% of the area is below the residential flood planning level;
- Sappho Road Place Area, which is approximately 82% below the residential flood planning level, and consideration of flood free access is needed for future development;
- Equine Precinct Place Area, which is approximately 78% below the residential flood planning level, with considerable high flood risk areas in the north of the site and potential issues surrounding flood free site access;
- Munday Street Place Area, which is entirely below the residential flood planning level, is
 within a flood storage area, and has low spots on local road restricting flood free access;
- Scrivener Street Place Area, which has a limited evacuation route across the railway bridge towards the Liverpool CBD;





- Georges River North Place Area, which is 92% below the residential flood planning level, has areas of vulnerable development including along Newbridge Road, and requires considerations of flood free site access;
- Georges River South Place Area, which is 70% below the flood planning level, at risk in flood greater than a 1% AEP flood, and contains industrial and residential areas vulnerable to flooding.





Figure 7. Liverpool Collaboration Place Areas from the Floodplain Constraints Study (FloodMit, 2020)





3| **Local Flooding Context**

3.1 Topography and Drainage

The Georges River has a catchment area of 960 km² and is heavily urbanised in its northern half and in a natural state in its southern half with some rural residential areas in its western parts which are gradually being urbanised as Sydney expands. The major tributaries for the middle reaches of the Georges River, relevant to the study area, include:

- Anzac Creek which flows from the site of the Moorebank Intermodal Terminal south west of Wattle Grove and runs under the M5 and flows north through the western part of the study area before joining the river at Lake Moore;
- Cabramatta Creek which drains western parts of the catchment and flows into the upstream end of the Chipping Norton Lake on the Georges River to the north of the study area:
- Brickmakers Creek which is a major tributary of Cabramatta Creek and runs roughly parallel to Cabramatta Creek and the Georges River flowing north east between the two before joining Cabramatta Creek upstream of its confluence with the Georges River
- Prospect Creek which drains the north western parts of the catchment and has several tributaries before entering the downstream end of Chipping Norton Lake on the Georges River north of the study area;
- Harris Creek which flows north towards the south western part of the site in Holsworthy, where it meets with Williams Creek and joins the Georges River.

The Georges River wraps through the study area around the Moorebank Peninsula to the east, north and western boundaries. There are low lying floodplains all along most of this reach of the Georges River on both sides of the river. Within Moorebank, there is a ridge that runs north to south roughly along Nuwarra Road. On either side of this there is land which is above the reach of any flooding.

Part of the study area, mostly west of Stockton Avenue in Moorebank, generally flows into Anzac Creek via the local piped drainage network and overland flow paths. Between Stockton Avenue and Nuwarra Road the drainage and overland flow paths generally lead to a major trunk drain and an overland drainage pathway heading north roughly along what would have been the original route of Cunningham Creek, the northern most section of which leads into the Georges River. East of Nuwarra Road and north of Alfred Road there are pipes and some open canals which direct rainfall into the Georges River as well as there being overland flow paths leading directly to the river.

South of Alfred Road in Chipping Norton there is a drainage pathway running south just to the east Governor Macquarie Drive which intercepts piped and overland flows east of Nuwarra Road and directs them into the north-western corner of the Moorebank East Development Precinct. From here stormwater runoff flows south along the eastern side of Brickmakers Drive. Pipes through the developments between Nuwarra Road and Brickmakers Drive also discharge into this drainage swale which then drains east into the Georges River along a drainage pathway in Moorebank East.

In addition to the Georges River, Cabramatta and Brickmakers Creeks influence drainage in the western section of the study area, in the Liverpool Collaboration Area. Cabramatta Creek is a major tributary of the Georges River, with a 74 km² catchment (Bewsher, 2004) from the suburb of Denham Court to Liverpool. Brickmakers Creek flows from Casula to meet Cabramatta Creek approximately 1.7 km upstream of where it flows into the Georges River.



3.2 Flood History

There are several river height gauges within the catchment and along the Georges River for which the Bureau of Meteorology reports river levels. Before the establishment of the current gauging system flood levels were recorded at various locations along the river during significant floods. Three points have long records, with one going back to early colonial history. These points correspond to the current gauges operating at:

- Liverpool Weir, south of Newbridge Road between Liverpool and Moorebank;
- Lansdowne Bridge, which sits north of the study area where the Hume Highway crosses Prospect Creek;
- Milperra Bridge which sits where Newbridge Road becomes Milperra Road to the east of the study area.

These give some insight into the history of flooding on the Georges River as seen in Table 5.

Table 5. Historic Flooding Events

Date	Level (m AHD)				
Date	Liverpool Weir	Lansdowne Bridge	Milperra Bridge		
May 1809		8.2			
Apr 1860		7.5			
Feb 1873	10.5	8.0			
Apr 1887	9.2				
May 1889	9.7	7.2			
1892	6.3				
Jan 1895	7.1				
Feb 1898	9.0	5.5			
July 1900	7.3				
Mar 1914	7.4				
1927	6.7				
1943	7.0				
Jun 1949	7.6				
Jun 1950	7.4	5.3	3.5		
Feb 1956	8.3	5.7	4.8		
Nov 1961	7.1	4.6	3.8		
Dec 1962	5.6				
Aug 1963	6.7		3.3		
Jun 1964	7.1		3.6		
Apr 1967	5.9				
Mar 1978	5.8	3.7	2.9		
April 1981	3.8				
Apr 1982			3.0		
Aug 1986	7.2	5.1	4.4		
Oct 1987	6.0		2.4		
Apr 1988	7.4	5.8	4.9		
Jul 1988			2.9		
Feb 1990	5.1	3.1	2.9		
Aug 1990			2.4		
Jun 1991	6.6	4.7	3.8		
Aug 1996	5.8	2.4	2.0		
Feb 2008			2.1		
Mar 2012			2.2		
Apr 2015			2.8		
Feb 2020	5.4	3.6	4.6		

Source: George River Floodplain Risk Management Study and Plan (Bewsher, 2004), MHL Historical Gauge Data (1982-2019) and correspondence from the Bureau of Meteorology (2020)





The largest recorded flood occurred in February 1873 and is estimated to be well above the 1% annual exceedance probability (AEP) event (Maruf Hossain pers. comm.). The April 1860, April 1887 and the May 1889 floods were estimated to be similar in magnitude to a 1% (1 in 100) AEP flood (Bewsher Consulting, 2004).

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It is noted that there is now a new Milperra gauge just downstream of the bridge which has replaced the gauge located on the bridge. It has a gauge zero of zero metres AHD.

3.3 Flood Behaviour

3.3.1 Georges River

a) Flood Model

Although the NSW Government's guidance is that planning controls for residential development should be based on the 1% AEP flood level plus 0.5 m of freeboard, the NSW Floodplain Development Manual (DIPNR, 2005) requires consideration of the consequences of the full range of floods up to the Probable Maximum Flood (PMF) when assessing the merits of planning and development proposals.

For this work, Liverpool City Council provided outputs of the 2020 Georges River Flood Study 2D TUFLOW hydraulic model (BMT, 2020) which covered the entire study area and some of the Georges River upstream and downstream floodplains. This is the latest flood model available for the Georges River and was jointly developed by Canterbury-Bankstown and Liverpool City Council under the State Floodplain Management Program funded by OEH and councils.

The primary objective of the 2020 Georges River Flood Study was to develop a 2D model and assess flooding behaviour in the local catchment and to identify significant inundation patterns, flow paths and flooding locations within the study area for a range of design flood events up to the Probable Maximum Flood (PMF). Council's objectives are to evaluate the impact of flooding on existing and future developments within the study area and assess floodplain management options in subsequent floodplain management and planning studies. The flood model went through extensive calibration and validation against all historical floods including August 1986, April 1988, April 2015 and June 2016 events.

Output files were provided for the following events:

- 20% AEP
- 10% AEP
- 5% AEP
- 2% AEP
- 1% AEP
- 0.5% AEP
- 0.2% AEP
- Probable Maximum Flood (PMF)

This model uses LiDAR data to define the existing ground levels throughout the study area. Because it is looking at a large section of the Georges River, a 10 m grid size was used for the flood modelling to make computing run times manageable. The model runs for 50 hours after the commencement of rainfall.

Note that there is an older Georges River Flood Study (Bewsher, 2004) which is a 1D Mike 11 flood model that is adopted by Council. Council uses the adopted flood levels of the MIKE 11 flood model for development controls.





b) Spatial Extension of Georges River Flood Model

The 2020 Georges River 2D TUFLOW hydraulic model (BMT, 2020) extent is truncated where Cabramatta Creek and Harris Creek enter the river. Cabramatta Creek has its own separate TUFLOW model, which is discussed below. However, if these tributaries are not flooding, but the Georges River is, the riverine flooding would extend up these creeks and affect residential areas that would also be required to evacuate. This is important because even though the same rainfall event would cause flooding in all watercourses, the specific spatial and temporal distribution of the rainfall will mean that the timeline of flooding of the tributaries are independent of the flooding of the river.

In order to account for Georges River flooding in the northwest of the study area, the additional area that would be flooded was mapped by extrapolating the flood levels at the Georges River model extent along the contours using the digital elevation model (DEM). This allowed for the identification of additional areas around Cabramatta Creek and Harris Creek that are lower than the Georges River flood levels, and therefore would be inundated during river flooding. This flood extent is shown in Figure 8 for the PMF.

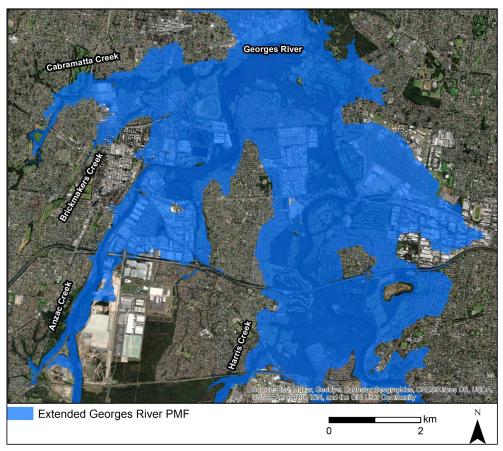


Figure 8. Extent of the Georges River modelled PMF extended up Cabramatta and Harris Creeks

c) Georges River Modelled Flood Levels

Figure 9 shows the modelled Georges River PMF levels across the study area. There is a considerable change in water level across the study area, as the river goes from the Liverpool side of the peninsula



to the Milperra side. Flood levels are 12.4 m AHD where the M5 crosses the Georges River to the west of Moorebank. Levels decrease to 11.7 m AHD where the M5 cross the eastern reach of the Georges River by Milperra.

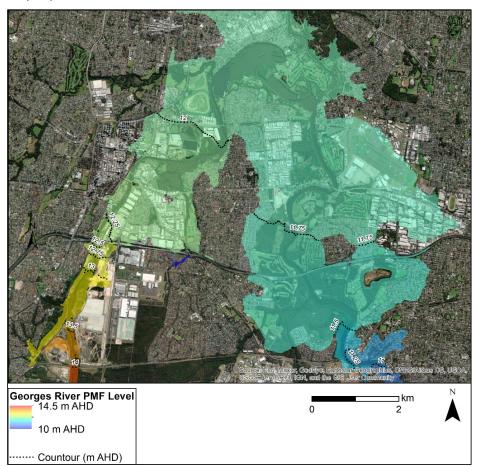


Figure 9. Georges River modelled PMF levels (BMT, 2020)

d) Impacts on road network

Floodwaters from the Georges River can inundate and cut roads within the study area, including:

- The Hume Highway to the north, where it crosses Cabramatta Creek, can flood by backwater from the Georges River up the creek in the Georges River 5% AEP flood.
- Backwater flooding from the Georges River PMF up Cabramatta Creek can also flood the Cumberland Highway/ Orange Grove Road and Elizabeth Drive.
- Governor Macquarie Drive can flood in the vicinity of Warwick Farm Race Course in the 2% AEP flood.
- The western end of Newbridge Road does not flood where it crosses the Georges River to the west, even in the PMF. However, Newbridge Road does flood between the Georges River and Anzac Creek (i.e. by the intersection with Heathcote Road) in events as frequent as the 2% AEP flood making the bridge over the river inaccessible.



- The eastern end of Newbridge Road is cut at multiple points between Governor Macquarie Drive and the Georges River in events as frequent as the 20% AEP flood.
- Junction Road can be cut near its intersection with Heathcote Road in a 5% AEP flood on the Georges River, where backwater flows up Anzac Creek. Flooding can also cut the intersection of Junction Road and Heathcote Road in the Georges River 2% AEP flood.
- East of the bridge over the Georges River the M5 can be cut by flooding in the 0.2% AEP flood in the vicinity of the UWS Campus.
- The M5 can flood in the Georges River PMF west of Heathcote Road as well as where it goes under Moorebank Avenue.

These critical locations are shown in Figure 10.

3.3.2 Anzac Creek

It is important to understand flooding in the study area's creeks as well as the Georges River, as the same rainfall event is likely to cause flooding in both at the same time, impacting evacuation routes and required evacuation areas. Anzac Creek has been modelled separately by Council and the TUFLOW model results were provided for this investigation.

Anzac Creek can flood independently of the Georges River with floodwaters coming from the upper reaches of its catchment and flowing under the M5 Motorway towards the River. Figure 11 shows the extent of the 1% AEP and PMF floods on Anzac Creek, along with the other creeks and the Georges River. The 1% AEP cuts Junction Road but not Heathcote Road, Nuwarra Road or the M5 Motorway on ramps. The PMF overtops Heathcote Road just southeast of the M5 Motorway on ramps but a bridge on Anzac Road appears to be above the PMF flood level and this provides and alternative route to the M5 Motorway via Anzac Road and Moorebank Avenue. These are shown in Figure 10.

3.3.3 Cabramatta Creek

Cabramatta Creek is a major tributary of the Georges River, with a catchment area of 74 km². It has five major subcatchments, including the Upper Cabramatta Creek, Hinchinbrook Creek, Lower Cabramatta Creek, Maxwells Creek and Brickmakers Creek.

The majority of the catchment is located within the Liverpool LGA, and it is bound by the Hume Highway in the east, where it flows into the Georges River. Brickmakers Creek joins Cabramatta Creek near the downstream end of the catchment. Compared to the Georges River, Cabramatta Creek generally experiences rapidly rising waters and short-duration flooding, and also a history of flooding. It has been modelled separately to the Georges River (Bewsher, 2011) for the 1%, 0.5% and 0.2% AEP events as well as the PMF. Figure 11 shows the extent of the 1% AEP and PMF floods along with the other creeks and the Georges River.

Cabramatta Creek flooding can cut several roads in the study area. The 1% AEP Cabramatta Creek flood cuts many local roads in Prestons and Jedda Road is cut by Maxwell Creek. This event also cuts Camden Valley Way. It is possible that these roads are cut in more frequent events. In the PMF, it cuts Hoxton Park Road and Camden Valley Way by the M7 entrance. Cabramatta Creek and its tributaries do not cut the M7 and its on ramps from the Hume Highway and the M5. These are shown in Figure 10.



Georges River Evacuation Modelling



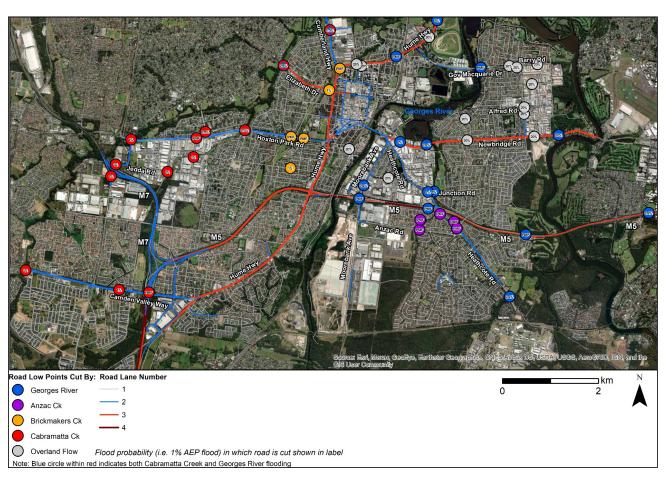


Figure 10. Location of road low points inundated by the Georges River, creek and overland flow flooding





3.3.4 Brickmakers Creek

Although it is a subcatchment of Cabramatta Creek, Council has had Brickmakers Creek modelled separately for the 1% AEP flood and the PMF. The creek starts in Casula and flows north to the west of the Liverpool CBD and flows into Cabramatta Creek. Figure 11 shows the extent of the 1% AEP and PMF floods along with the other creeks and the Georges River.

Brickmakers Creek 1% AEP flooding can cut many local roads in Liverpool and Lurnea as well as Elizabeth Drive. Orange Grove Road, the Hume Highway and Hoxton Park Road are inundated in the PMF. These are shown in Figure 10.

3.3.5 Harris Creek

Flood modelling was not available for Harris Creek, however, backwater flooding from the Georges River cuts Heathcote Road where it crosses Harris Creek in the 1% AEP event. It was therefore assumed that no evacuation traffic from the study area would head south along Heathcote Road.

3.3.6 Local Overland Flows

Modelling of the Liverpool City Centre Overland flow has also been completed, which defines local flood behaviour throughout the heavily urbanised city centre catchment. This includes the analysis of flows within the underground pipe drainage network and surface runoff across the catchment. The catchment drains into the Georges River to the east and Brickmakers Creek to the west. There is no flood warning for local overlands flows, but they have the potential to inundated local roads with relatively short duration flooding.

Overland flows can cut roads throughout Liverpool and Moorebank in floods as frequent as the 20% AEP. This includes inundation of Governor Macquarie Drive, Newbridge Road, Alfred Road, and Barry Road in Chipping Norton, the Hume Highway by the Warwick Farm race course and by Brickmakers Creek, and Shepherd Street and Macquarie Street in Liverpool. These are shown in Figure 10.

Figure 11 shows the combined peak 1% AEP and PMF extents of the creeks and Georges River. The critical duration of the 1% AEP and the PMF in the Georges River would be different from the 1% AEP and PMF events in the creeks and the probability of a PMF occurring at the same time on the river and all major creeks would be extremely low. The figure is included to show the potential extent of impacts from flooding from any of these watercourses.





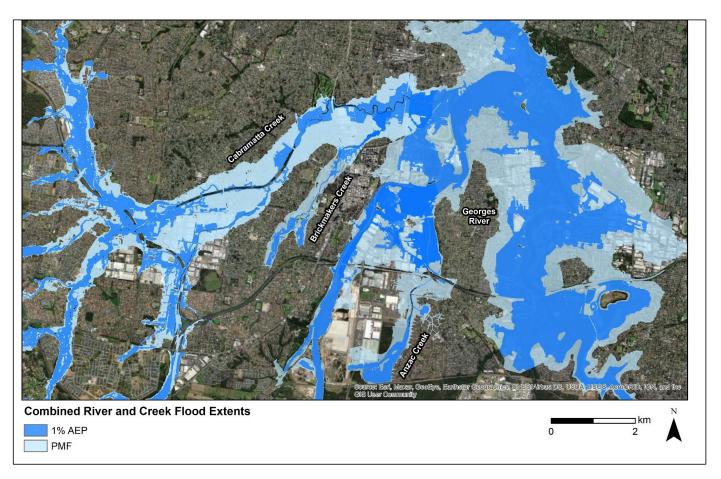


Figure 11. Combined 1% AEP and PMF extents for Georges River, Anzac Creek, Cabramatta Creek and Brickmakers Creek





4 | Emergency Planning Context

4.1 Georges River Flood Plan

The NSW SES is the designated combat agency for floods, and has roles in prevention, preparedness, response and recovery. This includes protecting dangers to people, protecting property from destruction or damage, and preparing for the eventuality of severe to extreme floods in the Georges River. The NSW SES Metro Zone is the unit dealing with Georges River flooding.

The NSW SES has developed the *Georges River and Woronora River Valley Flood Emergency Sub Plan* (NSW SES 2018) which is a Sub Plan of the *Sydney Metropolitan* and *South West Metropolitan Regional Emergency Management Plans* (EMPLAN) and a sub plan to the *NSW SES State Flood Plan*. This is the most up-to-date document relevant to Georges River flooding. This sets out the responsibilities for all organisations involved in flood planning, as well as preparation, response and recovery measures in place. The purpose of this document is to outline roles and responsibilities of support agencies specific to cross boundary arrangements during the Prevention, Preparedness, Response and Recovery (PPRR) phases.

Volume 1 of the *Georges River and Woronora River Valley Flood Emergency Sub Plan* (NSW SES 2018) is currently available, which maps out the emergency management arrangements. The NSW SES advises that Volume 2 is in preparation, which will detail hazards and risks. It will describe flood behaviour and consequences across the river system using current flood studies and reports, and will include information generated from the Floodplain Risk Management review and Liverpool evacuation modelling. Volume 3 is in the preliminary stages of drafting. This volume articulates the triggers and emergency response arrangements based on Volume 2 and other data and analysis. Volume 2 and 3 are prepared by the NSW SES for informing the relevant Emergency Management Committees, rather than for endorsement. Note that Volume 1 will be revised when Volumes 2 and 3 are developed, to align with the HN Flood Plan which uses the SEMC recommended format for State level plans.

The following are relevant excerpts from Volume 1:

1.4 Out of Scope

1.4.1 This plan is based on existing information publicly available at the time of writing. Planned and future development beyond current levels are not covered by this plan. Consultation with the NSW SES and modification to this plan will be required to account for future population increases and development within the area.

2.9 Community Members Within the Georges River Valley

2.9.1 Prepare now, know how to respond appropriately and recover effectively to help your community become more resilient, including:

Preparedness

- 2.9.2 Know your risk: Understand the potential risks and impact of flooding at home, work and places you visit. The flood risk is so severe in parts of the Georges River that in a major flood, evacuation will be the only safe option for people in these areas.
- 2.9.3 Know where to go: Including which evacuation route you will take and where you will stay in case you are flood affected.
- 2.9.4 Get your home ready: Prepare homes and property to reduce the impact of flooding. Have an emergency kit and essential supplies.





- 2.9.5 Plan for what you will do: Develop home emergency plans to identify who to contact, what to do, where to go and when. Share plans and practice them with family, friends, pets and neighbours.
- 2.9.6 Businesses develop continuity plans to prepare, minimise losses and reinstate essential services as soon as possible after a flood.
- 2.9.7 Be informed: Know where to find risk information, understand warnings, triggers and the safest actions to take in a flood.
- 2.9.8 Be involved: Work with local Emergency Services, local leaders, councils and other stakeholders to anticipate and manage the flood emergencies that could affect your community.

Response

- 2.9.9 Be aware: Monitor emergency warnings and broadcasts, and follow the advice of emergency services.
- 2.9.10 Never drive, ride or walk through floodwater: The major cause of death during floods is due to people entering floodwater.
- 2.9.11 Look out for each other: Share information with family, friends and neighbours and help those that may need assistance.
- 2.9.12 Leave flood affected areas early: If you are at risk of flooding or are advised by emergency services to evacuate.

Recovery

- 2.9.13 Stay clear of flood affected areas: Until you are advised by emergency services that it is safe to enter.
- 2.9.14 Ensure your home is safe before entering: Check for structural damage and potential risk of electrocution.
- 2.9.15 Manage ongoing health, safety and hygiene: Ensure personal items, food and water in contact with floodwater are not consumed and protective clothing is worn while cleaning.
- 2.9.16 Understand where and how to get support and assistance with your recovery.
- 2.9.17 Check the NSW SES website for further information on what to do before, during and after a flood.

5.3 Operational Strategies

- 5.3.1 The main response strategies for NSW SES flood operations are:
 - a. Provision of timely, relevant, accurate and tailored information to the community regarding the potential impacts of a flood and what actions to undertake to support and encourage proactive measures to be taken.
 - b. Evacuate people pre-emptively from dangerous or potentially dangerous places created by the flood hazard to safe locations away from the hazard.
 - c. Rescue people and domestic animals from floods in accordance with the NSW Flood Rescue Policy including where evacuation operations have not been successfully completed.
 - d. Coordinate the protection of property of residents, businesses and essential infrastructure at risk of flood damage where feasible.
 - e. Resupply properties, towns and villages which have become isolated as a consequence of flooding to minimise disruption of the community.





f. Manage the transition from response operations to recovery.

5.3.3 The NSW SES Incident Controller will select the appropriate mix of response strategies to deal with the expected impact of floods and set operational objectives.

5.11 Warnings and Information

5.11.13 NSW SES Evacuation Warnings and Evacuation Orders. These are usually issued to the media by the NSW SES Operations Controller on behalf of the NSW SES Incident Controller. Evacuation warnings are a message advising the community to prepare for likely evacuation. The warning advises people what to do and what to take with them. Evacuation orders communicate the need for a community (or parts of a community) to evacuate within a specified time frame in response to an imminent threat. It also advises where people should go and may advise which evacuation route to take.

5.29 DECISION TO EVACUATE

- 5.29.1 The decision to evacuate rests with the NSW SES Incident Controller who exercises his/her authority as an emergency officer in accordance with Section 22(1) of The State Emergency Service Act 1989. The decision to evacuate will usually be made after consultation with the NSW SES Operations Controller and the Local Emergency Operations Controller.
- 5.29.2 In events that require large scale evacuations, the decision to evacuate will remain with the Incident Controller with the approval of evacuation warnings and orders required from State Duty Operations Controller/NSW SES Commissioner.
- 5.29.3 Some people will make their own decision to evacuate earlier and move to alternate accommodation, using their own transport. This is referred to as self-managed evacuation (5).
- 5.29.4 Evacuations will take place when there is a risk to public safety. Circumstances may include:
 - a. Evacuation of people when their homes or businesses are likely to flood.
 - b. Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access.
 - c. Evacuation of people where essential energy and utility services have failed or are likely to fail where buildings have been or may be made uninhabitable. Evacuation is the primary response strategy as isolated properties can lose power, water, phone lines, sewerage services, become a refuge for spiders, snakes and other animals and are at risk of the consequences secondary emergencies without assistance.

5.31 Evacuation Warning and Order Delivery

5.31.12 Refusal to evacuate. Field teams should not waste time dealing with people who are reluctant or refuse to comply with any Evacuation Order. These cases are to be referred to the NSW Police Force.

5.32 Withdrawal

- 5.32.3 The most effective means of evacuation is via road, using private vehicles and public buses for those who do not have or unable to use their own vehicles. This allows residents more control over their own evacuation. However, other means of evacuation may also be used if available and as necessary (e.g. by foot, rail, air).
- 5.32.4 Evacuees who require emergency accommodation or disaster welfare assistance will be directed to designated evacuation centres. Evacuees who have made their own accommodation arrangements will not be directed to evacuation centres. It is not possible to determine in advance how many will fall into this category.





5.32.5 Evacuees will:

- a. Move under local traffic arrangements from the relevant sectors to the evacuation route entry point.
- b. Move under traffic management arrangements to the evacuation route exit points.
- c. Continue along the road network to allocated evacuation centres.
- 5.32.6 On major evacuation routes there may be one lane set aside for emergency vehicle traffic into and out of the Sectors. These include:
 - a. Utility service provider vehicles to disconnect services and make safe utility assets.
 - b. Waste service vehicles to make final collections and make safe waste assets.
 - c. Vehicle breakdown repair and towing vehicles.
 - d. Road maintenance repair crews.
 - e. Road barricade and traffic signage crews.

5.33 All Clear and Return

5.33.1 Evacuation Centres: Evacuees will be advised to go to friends or relatives, or else be taken to the nearest accessible evacuation centre, which may initially be established at the direction of the NSW SES Incident Controller, but managed as soon as possible by Welfare Services.

The currently available Volume 1 of the plan does not include information regarding the evacuation triggers, proposed evacuation routes, local evacuation centres or the scale of evacuation operations required for the existing population. This information is expected to be included in Volume 3.

Accordingly, the NSW SES has been closely liaised with over the course of this project. This has included multiple meetings during 2020 and 2021 to ensure that the approaches and assumptions are applicable to the study area and in line with NSW SES methodologies. This includes:

- The NSW SES requires modelling of the "worst case scenario" evacuation, which includes
 all residential and non-residential premises evacuating at the same time although only the
 non-residential vehicles which originate from outside of the floodplain are counted in the
 evacuating traffic.
- Determining the methodology for estimating non-residential vehicles based on Infrastructure NSW's approach in the Hawkesbury-Nepean Valley;
- Vehicles in the study area would primarily be evacuating south on the Hume Highway or
 west on the M5 and then northwest onto the M7 out of the floodplain in advance of a
 flood which would trigger evacuation of the precinct, as per the NSW SES provision;
- There would be 12 hours warning time of flooding reaching the level which would trigger evacuation as per the Provision of and Requirements for Flood Warning (NSW SES, 2019);
- The NSW SES would have mobilised in advance of it being necessary to issue an evacuation order and the whole of the warning time would be available for occupants of the precinct to respond to the evacuation order;
- Evacuation would occur on a subsector by subsector basis, and the subsectors used in the
 modelling are modifications of original subsector boundaries provided by NSW SES by
 adjusted to account to roads being cut by flooding. The adjusted boundaries were sent to
 the NSW SES in order to be transparent in the methodology and to seek any feedback,
 although none was received at time of writing.

The above list is not exhaustive, and the NSW SES has confirmed in meetings that all assumptions adopted in the various model runs are in line with its approach for flood evacuation in the Georges River.





It is reiterated that the preferred primary response of the NSW SES to a flood emergency in the Georges River is evacuation, rather than Shelter in Place. The NSW SES does not support Shelter in Place for any new development where that is relied upon as the primary means of flood emergency response.

4.2 NSW SES Flood Evacuation Planning

4.2.1 SES Timeline Evacuation Model

The NSW SES has developed the Timeline Evacuation Model (TEM) as an empirical tool for consistently estimating the ability of people to safely evacuate by motor vehicle from floodplains (Opper et al, 2009). It takes into account the time people take to accept a warning, act upon the warning and travel along an evacuation route which may face delays due to incidents along the route. It then compares this estimated "Time Required" with the estimated "Time Available". The Time Available is derived from information about warning times, flood travel times and flood rates of rise.

The TEM was born out of the 1997 Hawkesbury-Nepean Floodplain Management Strategy, where the NSW SES applied conventional timeline project management to the flood evacuation problem. It became apparent that this approach provided a clear and concise method for examining the evacuation process. Since that time, the approach has been refined into a model that can be easily applied to different developments. The TEM has been used widely within NSW by both the NSW SES and consultants in evacuation planning, with the scale of the model ranging from small subdivisions to towns of tens of thousands of people.

The primary goal of the TEM is to compare the time required for evacuation with the time available for evacuation. This can be represented by the equation:

Surplus Time (ST) = Time Available (TA) - Time Required (TR)

Where the Time Available exceeds the Time Required there can be greater confidence that a community can evacuate safely by motor vehicle. Where the Time Required exceeds the Time Available it is unlikely that everyone will be able to evacuate safely by motor vehicle in all floods.

The Time Required (TR) is the sum of the following four components:

- Warning Acceptance Factor (WAF) accounts for the delay between receiving an evacuation order and acting upon it. The NSW SES recommends a value of one hour.
- Warning Lag Factor (WLF) is an allowance for the time taken by occupants to prepare for evacuation. The NSW SES recommends a value of one hour.
- Travel Time (TT) is defined as the number of hours taken for all of the evacuating vehicles to pass a point given the road capacity. The NSW SES recommends an assumed road capacity of 600 vehicles per hour per lane. Therefore, if an evacuation generates 1,200 vehicles and the evacuation route has one lane, then the travel time is two hours. If there are two lanes the travel time is reduced to one hour.
- Traffic Safety Factor (TSF) is added to the travel time to account for any delays that occur
 along the evacuation route. This includes potential for incidents such as vehicle accidents
 or breakdowns, fallen trees or power lines or water across the road. The NSW SES has
 developed a table of traffic safety factors, where the safety factor is proportional to the
 travel time, ranging from one hour to three and a half hours (Table 6).

This is summarised in Figure 12.

The time needed to disseminate an evacuation order also needs to be considered. Generally, the NSW SES will broadcast the order by several means but will also initiate doorknocking of the target





premises. The model assumes that the evacuation order is not received at a property until it is doorknocked and that at any one time there will be properties at different stages of the evacuation sequence.

However, this is only true if the number of door-knocking teams available is equal to the number that would produce enough traffic to keep the evacuation route at full capacity. Should the number of door knocking teams available be less than this optimal number, then the travel time must be modified to account for this. If more door knockers are provided than the optimal number, then the rate of traffic generation will exceed the road capacity and traffic queues will form until no more premises evacuate.

Table 6. Traffic Safety Factors

Travel Time (TT) (hrs)	Traffic Safety Factor (TSF) (hrs)
0 to 3	1.0
>3 to 6	1.5
>6 to 9	2.0
>9 to 12	2.5
>12 to 15	3.0
>15	3.5

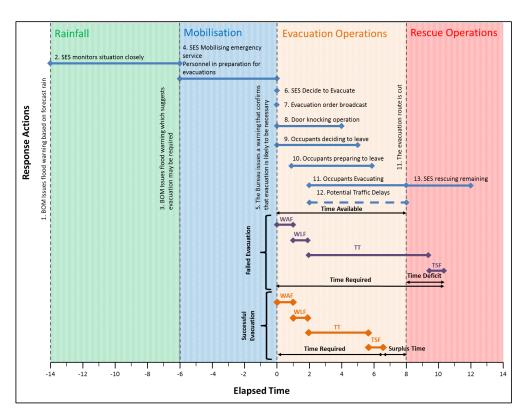


Figure 12. Timeline Evacuation Model summary



The Time Available (TA) is usually the time from when an Evacuation Order is issued by the NSW SES to when the lowest point on the evacuation route is cut by floodwaters. The ability to estimate this time for use in the TEM will be very dependent on the quality of available flood data and the type of warning products which the Bureau of Meteorology (BoM) is able to provide.

When determining the Time Available, consideration also needs to be given to the relative position of where the warning is provided for, compared to the location where the road will be cut. This requires accounting for the flood travel time from the gauge to the road cut location in estimating the available warning time.

4.2.2 NSW SES Evacuation Subsectors

The NSW SES manages flood response on a sector by sector basis, and has divided the Georges River floodplain into 46 draft subsectors. They have provided their draft Georges River evacuation subsectors for this study, which have informed the identification of evacuation subsectors for this study. It is noted that the NSW SES subsectors extend beyond the scope of this study (i.e. into Fairfield City Council). Many of the NSW SES evacuation subsectors were further subdivided in this study in order to assess evacuation in the study area at a higher resolution, particularly where it became clear from a detailed analysis of flood modelling results that flooding would sever key road connections within a subsector.

4.3 Other Flood Evacuation Considerations

4.3.1 Availability of Safe Refuge

While vehicular evacuation is the preferred primary response to a major flood on the Georges River and pedestrian evacuation a critical secondary response should vehicular evacuation fail, it is also important to consider where safe refuges are available to building occupants in the full range of flood events should evacuation fail. For such refuge to be considered suitable there must be sufficient, accessible and appropriate shelter above the peak PMF level, including for those with limited mobility, those on lower levels of multi-floor buildings or people in buildings which do not have their own refuge above the PMF level. The building in which shelter is to take place must be able to remain structurally sound during a PMF and withstand the hydrostatic, hydrodynamic, buoyancy and debris loads of the flood. It must be of suitable size and have adequate amenities for the number of people likely to use it

Taking refuge as a final response should both vehicular and pedestrian evacuation fail is quite different from planned Sheltering in Place as a primary flood emergency response. Where evacuation is planned and there is sufficient time and road capacity for it to occur, there should be a low probability of people needing to take refuge and only a small proportion of the population which needs to do so. The space and facilities provided can arguably be minimal.

On the other hand, where Sheltering in Place is the proposed primary response, adequate provisions need to be made for the entire population for the full range of events in which sheltering is to take place. The potential for secondary emergencies or inappropriate behaviour by individuals which can place lives at risk needs to be considered. The longer the duration of isolation by flooding the higher the likelihood of such things occurring.

The NSW SES does not support shelter in place for future development. It considers that such an approach is only suitable to allow existing dwellings that are currently at risk to reduce their risk, without increasing the number of people subject to the flood risk.





4.3.2 Human Behaviour

According to Haynes et al. (2009), most of flood-related death and injuries in Australia have occurred to people voluntarily entering floodwaters, usually trying to walk or drive through them. For this reason, avoiding direct contact with floodwaters is the main aim of every flood emergency policy in Australia and overseas.

All the NSW Councils that have a risk to life policy in place recommend evacuation as the preferred emergency response for new development only if enough time is available to safely reach a flood free area. If this is not possible, avoiding the risk of direct contact with floodwaters by sheltering in place becomes the preferred emergency response strategy.

Whether the preferred flood emergency response is evacuation or sheltering in place, the success of the response is highly dependent on people responding appropriately. It requires those that need to evacuate evacuating in a timely manner and those that need to shelter, doing so until the flood hazard has gone.

In recent years there have been floods in Australia where evacuation orders have been given with sufficient time to evacuate but many residents have failed to do so. Some research shows that less than 25% of people evacuate when told to do so (Opper et al., 2006; Strahan Research, 2011). However, in the June 2007 Hunter Valley floods, 76% of people in Maitland said they evacuated when ordered to do so (Molino Stewart, 2008). Yeo et al. (2018) found that compliance with Evacuation Orders in the Murrumbidgee region in March 2012 was frequently greater than 80%, although rates were as low as less than 5% in other areas. About 10-20% of people say they will not evacuate under any circumstances. On 27th January 2013 a voluntary mass evacuation of north and east Bundaberg was called in advance of forecast flooding. On 28th January this was escalated to a mandatory evacuation. Although 7,000 people were provided with sufficient advanced warning to leave, 850 people had to be rescued by 24 Blackhawk helicopters in the largest air evacuation in Australia's history (Honor and Regan, 2014).

The safety of sheltering in place is also highly dependent on appropriate human behaviour. This can be illustrated by two examples.

The June 2007 Hunter Valley floods resulted in flash flooding in the Newcastle CBD at about 5pm on the Friday of the June long weekend. Office workers who saw the flooding in the streets contacted the NSW SES who told them to stay within their buildings until the flooding had subsided which would occur within a couple of hours. Within an hour, the NSW SES was rescuing those same people as they had tried to drive out through the floodwaters (Greg Perry, NSW SES, pers. comm.).

During the 2017 Lismore floods, many residents of North Lismore elected not to evacuate when ordered to do so because their homes were elevated on piers and they believed they could sit out the flood with stocks of food and drinking water. Many of those people regretted that decision when they lost power and the flooding continued for more than 24 hours. They were left in the dark with no communication to the outside world and refrigerated food was spoiling. Some had medical emergencies. Some traversed hazardous floodwaters to escape their homes or to get help (BNHCRC, 2017).

These examples illustrate that when people are sheltering in a building that is isolated by floodwaters, they might decide to take actions which increase the risks to their lives and the lives of others. The longer they are isolated the more likely they are to want to leave the premises and the more time they have available to make poor decisions.

The viability of evacuation plans or plans to shelter in place will be very dependent on the relationship people have with the buildings. Typically, workers will want to leave the flood threatened building to be able to get home even if the flood duration is only a couple of hours. On the other hand, residents will tend to remain in their dwellings for several hours or more even if they are without services such





as electricity but will then want to leave if they are isolated for longer durations. Residents who are outside of the floodplain when the building isolation occurs are very likely to try to reach their homes, risking travelling through hazardous floodwaters in the process.

4.3.3 Secondary Emergencies

A secondary emergency is where a non-flood related emergency, such as a building fire or medical emergency, occurs during a flood. In many cases the flood and secondary emergency will be two unrelated events, however there is potential for floodwaters to damage the electrical system and cause fires or for occupants to use improvised lighting (candles), cooking and heating with naked flames that may also cause fires. The flood could also cause elevated stress levels in occupants that could aggravate pre-existing medical conditions leading to more medical emergencies.

While the probability of a fire in a building during a flood is likely to be small, the consequences, should a fire occur, could be significant if people are unable to evacuate the building because they are surrounded by hazardous floodwaters and firefighters are not able to reach the building to undertake rescues and extinguish the fire. Ambulance emergencies are more likely to occur than a fire while areas are isolated by flooding, particularly if the stress of flooding aggravates pre-existing medical conditions.

While a secondary emergency has a relatively low chance of occurring during a flood, it is important to recognise the potential and understand the potential consequences. Buildings can be designed to be accessed by boat or helicopter for rescue during floods but there are practical difficulties due to the river and weather conditions which prevail during a flood that may prevent emergency access.

4.3.4 Flood Duration

An important consideration in assessing the risks associated with isolation from floodwaters is the duration of the isolation. There are several aspects of risk associated with isolation. Firstly, the shorter the duration of the isolation, the lower the probability that a secondary incident such as a fire or a medical episode is likely to occur. Secondly, the shorter the duration of the isolation, the less likely that building occupants will be frustrated by being isolated and therefore they are less likely to be motivated to traverse floodwaters to leave the building. Finally, the shorter the isolation duration the less opportunity people will have to traverse the floodwaters.

For example, the NSW SES Timeline Evacuation Model suggest that on average it takes about two hours people to make an evacuation decision and get ready to evacuate (Opper et al, 2009). The probability of people traversing floodwaters when isolated for two hours or less is therefore expected to be quite low. An isolation of up to eight hours might be considered to be another key threshold as it is about the average time that people sleep or are in a workplace and isolation up to this duration might not be considered particularly inconvenient. Research has also shown that even people who have decided not to evacuate and to shelter within a building they know will be surrounded by floodwaters can change their minds after 24 hours (Tofa et al., 2018). This therefore would appear to be another key threshold for isolation risk analysis.

Based on an analysis by Molino Stewart for this study of the 2020 Georges River 2D TUFLOW hydraulic model data (BMT, 2020), the vast majority of the area inundated by the Georges River PMF experiences high hazard flooding (i.e. Hazard level 3 (H3) according to the Australian Rainfall and Runoff 2019 hazard classification which is described as, "unsafe for vehicles, children and the elderly") for over 24 hours, in many places for in excess of 40 hours (Figure 13). Therefore, failing to evacuate or deliberately sheltering in place in the Georges River floodplain is particularly risky considering buildings can be isolated and inaccessible to emergency services for more than 24 hours.





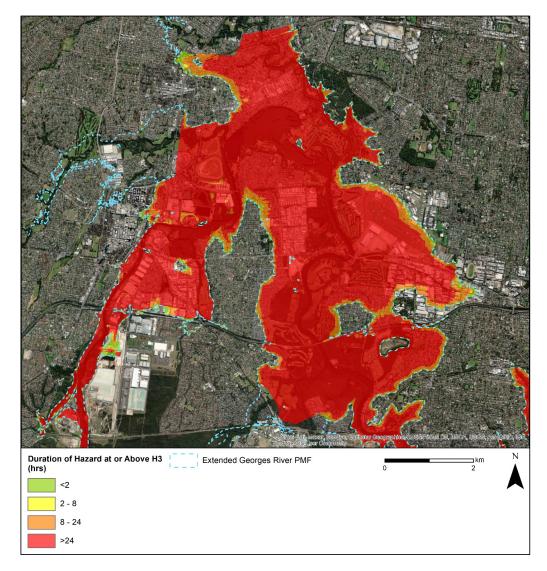


Figure 13. Duration of high flood hazard during the PMF for the modelled extent of Georges River flooding

4.3.5 Warning Systems

There are two gauges on the Georges River within the study area that have quantitative flood warnings provided by the Bureau of Meteorology. The key gauges, defined as "key location for downstream predictions, critical for the provision of a quantitative flood forecasting service" in the study area are the Liverpool Gauge and the Milperra Gauge. Table 7 shows the information for these gauges, as per *The Provision and Requirements for Flood Warning in New South Wales* (NSWSES, 2019) and the Bureau of Meteorology *Service Level Specification for Flood Forecasting and Warning Services for New South Wales and the Australian Capital Territory* (BoM, 2013).



Table 7. Service Level Specification for Flood Forecasting and Warning Services for New South Wales (BoM, 2013)

					Flood cla	lassification (m)			Target warning lead time		70% of		
Bureau number	AWRC number	Forecast location	Station owner	Gauge type	Gauge datum	Minor	Moder-	Major		Time (hrs)	Trigger height (m)	peak forecasts within	Priority
213 – Ge	213 – Georges River and Sydney Coast												
566054	213400	Liverpool	Sutherland Shire Council NSW OEH	Auto- matic	Local	2.0	3.0	4.5	Quantitative	6 hrs 12hrs	>2.0 m >4.0 m	+/- 0.3 m	High
66168	213405	Milperra	MHL*	Auto- matic	AHD	2.0	3.3	4.2	Quantitative	6 hrs 12hrs	>2.0 m >4.0 m	+/- 0.3 m	High

^{*} Updated from the referenced document which has the station owner as Sutherland Shire Council and NSW OEH.

It is noted that a reading of 0 m on the gauges does not necessarily equal 0 m AHD. The Milperra Gauge has a gauge zero of 0 AHD but the Liverpool gauge has a gauge zero of 2.8 m AHD.

Table 8 shows the impacts of various flood and gauge levels in the study area.

Table 8. Georges River flood levels and impacts

Georges River Flood Classification	Liverpool Weir Gauge Level (m)	Liverpool Weir Flood Level (m AHD)	Milperra Gauge and Flood Level (m AHD)	Impacts for the Study Area
Minor ¹	2	4.8	2.0	No significant impacts
Moderate ¹	3	5.8	3.3	Flooding of low-lying areas in Moorebank East, along eastern Newbridge Road, and along Cabramatta Creek in Warwick Farm.
Major (about a 1 in 15) ¹	4.5	7.3	4.2	Flooding along eastern Newbridge Road, Barry Road in Chipping Norton, the Hume Highway by Cabramatta Creek, and Junction Road by Anzac Creek.
2% AEP ²	6.5	9.3 (8.7)	5.6 (5.5)	Flooding throughout western and eastern Moorebank, eastern Chipping Norton, and Warwick Farm, cutting many roads and inundating properties.
1% AEP ²	6.8	9.6 (9.0)	5.8 (5.9)	High flood islands form in east Moorebank, extensive flooding through Liverpool, Warwick Farm and western Moorebank, cutting many roads and inundating properties.
0.5% AEP ³	6.9	9.7	5.9	As above, with additional flooding throughout and in Chipping Norton.
0.2% AEP ³	7.2	10	6.2	As above, with additional flooding throughout entire study area.
PMF ²	9.4	12.2 (11.6)	11.8 (10.4)	Study area inundated except for the high ridge in the Moorebank peninsula and higher terrain in western Liverpool.

^{1.} Levels from Bureau of Meteorology flood gauge information

^{2.} Levels from Georges River Flood Study Report (BMT, 2020)

^{3.} Levels extracted from Georges River Flood Study model results

^() bracketed values are corresponding levels currently adopted by Council



Based on the above information, there should also be at least 12 hours warning that a precinct's evacuation route will be cut or that the precinct will start flooding.

While the time for floodwaters to travel from the gauges to the evacuation subsectors can theoretically be accounted for as additional effective warning time, the distances between the gauges and the subsectors in the study area are such that such travel times are short and can be discounted for practical purposes.

It is noted that flood warning systems are not failsafe. During the floods in Victoria between September 2010 and February 2011, about 50% of the warning systems experienced some type of failure (Molino Stewart, 2011). This included mechanical and electrical failures in gauges, gauges being damaged by flood debris or erosion, communication failures between the gauges and the receivers or human error in the interpretation of the data. The more extreme the flood event, the more likely it is that the gauging hardware will be damaged by the flooding.

Forecasts made for future flood levels at the Liverpool and Milperra gauges are based on rainfall gauge readings in the catchment and stream gauges readings upstream on the Georges River and its tributaries as well as current water levels at Liverpool and Milperra. Damage to the Liverpool or Milperra gauges could compromise the ability to gain accurate information on current flood levels at those locations. Damage to upstream gauges could compromise the ability to accurately forecast future flood levels at Liverpool and Milperra.

44 **Emergency Response Classification**

In this study, areas have been spatially defined according to emergency response classification of communities in accordance with Handbook 7, Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia (AIRD, 2017). This is a classification in regard to isolation and access considerations. The four classes of land that are flooded in the PMF include:

- Flooded Isolated and Submerged (FIS), also known as low flood islands, where the area is first isolated from flood-free land and then completely inundated as flood waters continue to rise. This is the most dangerous scenario.
- Flooded Isolated Elevated (FIE), also known as high flood islands, which are similar to FIS areas but a portion of the site remains flood free in the PMF, providing a refuge for those who do not evacuate before the loss of access.
- Flooded with an Exit Route via Rising Road (FER), where the area is flooded but there is a continuously rising flood evacuation exit route by road out of the floodplain.
- Flooded Overland Escape (FOE) where the area is flooded but there is a continuously rising overland exit route out of the floodplain rather than by road.

In addition, there are two classes of not flood affected areas outside of the PMF, including:

- Indirect Consequence (NIC), which are areas not flooded but may lose access to services such as electricity, gas, water, and telecommunication.
- Flood free areas that do not experience any indirect consequences of flooding.

The above emergency response classification thus differentiates between buildings where occupants can evacuate by driving (FER) or walking (FOE) from rising floodwaters, and buildings where occupants would get trapped by floodwaters before they are affected themselves (FIS and FIE). This provides the framework for gauging the nature, severity and scale of inundation and isolation risk across the floodplain.

Georges River Evacuation Modelling





5 | Georges River Flood Evacuation Model

5.1 Limitations of Timeline Evacuation Model

In the earlier Moorebank East evacuation analysis, the NSW SES Timeline Evacuation Model (TEM) was used to estimate the time needed to evacuate each sector in the Moorebank Peninsula, which was compared to the time available based on expected warning times published by the NSW SES. Based on this, sectors were identified where there was insufficient time or road capacity to evacuate.

Traffic was then converged from each sector according to their relative evacuation trigger timings based on a flood rising as fast as the modelled PMF. It was then assessed whether the converged traffic would have sufficient time to evacuate in the time available using TEM. This was based on the assumption that all sectors would evacuate onto the M5 Motorway, but once on the Motorway, would have free flow to evacuate east or west to an area outside of the Peninsula which is above the PMF extent. As there were only two roads leading onto the Motorway in this study, and each sector fed onto one of these two roads, the modelling was sufficiently straightforward that the Timeline Evacuation Model could be used in this instance.

The NSW SES recognises that evacuation of a development may not necessarily occur in isolation as other nearby developments may also have to evacuate at the same time. The TEM makes provision for estimating how converging evacuation traffic may impact on the ability of developments to evacuate simultaneously. However, the TEM is not set up to consider more than two converging traffic streams such as when there are multiple subsectors evacuating onto shared evacuation routes. This means that more sophisticated modelling that accounts for traffic convergence in more detail is required for larger scale studies. This would allow consideration on what impact other existing evacuating traffic from Moorebank and Liverpool would have on the safe evacuation of new development.

Furthermore, the TEM is coarse in that it analyses towns, precincts, subsectors or sectors as a single block and provides no sense of what is happening to evacuation traffic on the roads within the spatial unit which is evacuating.

Nevertheless, the fundamental principles and assumptions of the TEM including warning lead times, delays in evacuation response, evacuation route capacities and potential for traffic delays need to be incorporated in any flood evacuation model.

5.2 Life Safety Model

In recent years more sophisticated models for the estimation of loss of life in any flood event have been created. One of the most advanced of these was developed by British Columbia Hydro in Canada and commercialised as the Life Safety Model (LSM) by HR Wallingford in the UK.

HR Wallingford, under licence from British Columbia Hydro, has developed the LSM into a dynamic model that represents the:

- Rise and spread of floodwaters;
- Receipt of warning messages;
- Response of occupants to the warning;
- Evacuation traffic flow;
- Fate of those who fail to evacuate before the arrival of floodwaters.





It models the evacuation and fate of each individual household based on their exact spatial location and the available road network over time. Time series output from the model can be viewed as animations as well as in tables.

In the LSM, each individual and vehicle is represented as an autonomous entity within the model. The behaviour of each entity is individually governed by a set of rules that control its interactions with other entities and with the flood hazard. The traffic model is a simplified traffic model that is appropriate for traffic that is constrained by flow rate limits and congestion (the high vehicle density associated with mass evacuation). The traffic model uses the Greenshields relationship between traffic density and speed to control the movement rate of vehicles, with additional rules to:

- Account for the movement across junctions;
- The interaction with other vehicles (it is assumed that vehicles can't pass one another on a single lane);
- Once a queue is formed, the length of each vehicle is used to determine the position of the next vehicle back of the queue.

The LSM has previously been compared with a full traffic model (Omnitrans) and produced similar results for large scale evacuation (Tagg et al., 2012; 2016).

The inputs required for the LSM are:

- Buildings: The physical location of occupied buildings to provide a start location for the
 population groups and vehicles.
- Population Data: Census or other data to define household groups and distribute them to a physical building location.
- Number of Vehicles: The number of vehicles evacuating from each property. These are distributed to the building locations.
- Road network: A simplified, digitised road network containing the evacuation routes and minor roads leading to it. The number of lanes and free flow speed limits are required.
- Hydrodynamic data: A two-dimensional flood modelling of depths, water levels, velocity
 for a number of time intervals covering the flood event. The time interval depends on the
 duration and rate of rise of the flood event.

The advantages that the LSM has over the TEM are that it:

- fully integrates with two-dimensional flood models;
- can model different warning dissemination mechanisms;
- can model vehicular and pedestrian evacuation;
- models individual buildings and vehicles with spatial accuracy;
- can replicate NSW SES TEM warning, departure and travel assumptions;
- models the entire road network including networks internal to evacuation nodes;
- models traffic convergence within and outside of evacuation nodes;
- shows results dynamically and visually in a way which helps communicate convergence, queuing and evacuation failure;
- can undertake sensitivity analysis quickly.

LSM is also able to estimate the movement of pedestrians leaving buildings or leaving vehicles which are no longer able to travel on the traffic network. In addition, it can estimate the fate of people who are caught by floodwaters by using information about their situation (in a building, in a vehicle or on foot), the water conditions (depth, velocity, temperature) and their exposure (duration).

The fully featured model has been calibrated/verified against the Malpasset dam failure in Italy (Johnstone et al., 2003; 2005) and the storm surge on Canvey Island (Di Mauro et al., 2008; Lumbroso et al., 2011).





5.3 Applying the Life Safety Model to the Georges River

In this project, the Life Safety Model (LSM) was used to model vehicular evacuation from the study area. The pedestrian evacuation and the fate features of the model were not used but they can be switched on in the model if these issues are to be explored in the future.

Council's 2020 Georges River 2D TUFLOW hydraulic Probable Maximum Flood (PMF) model (BMT, 2020) was used in the model to represent the maximum flood extent and fastest rising flood which evacuees would need to respond to. While it is recognised that this is an extremely rare event, more frequent events could rise this quickly and if vehicular evacuation can be achieved in this event then it should be possible to achieve it in events which rise more slowly or which have a lower peak.

The NSW cadastral lot layer, together with satellite imagery, was used to identify each individual premises from which evacuating vehicles would originate. The number of vehicles at each premises was assigned using census data for existing residential premises and journey to work data for existing non-residential premises. Vehicles numbers for potential future development were informed by the census data and journey to work data as well as other considerations about the nature of the development.

The floodplain was divided into subsectors based on preliminary subsector boundaries provided by NSW SES. The boundaries were refined through detailed analysis of the TUFLOW model times series outputs and where and when roads would be cut. It was assumed that each subsector would receive an evacuation order 12 hours in advance or either its evacuation route being cut or premises being flooded by the PMF. It was assumed that the evacuation order would be disseminated at a rate which would generate a maximum of 600 vehicles per hour from each subsector with each premises receiving their evacuation order in order of the ground elevation from lowest to highest.

In the LSM it was assumed that those receiving the evacuation order would take one hour to accept the order and a further hour to be ready to leave. Therefore, there was a two hour delay between order delivery and evacuation commencement which is the same as the TEM.

The NSW road network GIS layer was used to represent the road network with some modifications where roads are gated at railway crossings or where local flood modelling suggested that roads may be closed by local flooding during and evacuation. Generally, it was assumed that each evacuating lane would have a capacity of 600 vehicles per hour per lane as recommended by the NSW SES in its TEM and there would be no contraflow lanes available for evacuation.

To account for the traffic safety factors (TSF) recommended by NSW SES, the LSM model outputs were interrogated to determine the duration of evacuation from a particular subsector or along a particular length of road. The NSW SES TSF was then applied to that location and the number of vehicles remaining in the subsector or still on a section of road at the earlier time was extract from the model.

The details of how these model assumptions and inputs were derived and applied is elaborated upon in Section 5.4.

Over the course of this study, multiple different Georges River flood evacuation scenarios were defined and modelled to demonstrate how various assumptions will alter the evacuation process. The following scenarios are discussed and presented in this report:

- Scenario 1 is the base case scenario based on 2016 Census (ABS, 2016) population and vehicle data and 2011 Journey to Work (Transport for NSW, 2011) data
- Scenario 2 is a future scenario with intensified development under existing zoning, accounting for residential and non-residential infill and planned road upgrades
- Scenario 3 is a future scenario with rezoning and development from planning proposals currently under investigation, as advised by Council





Subsequently, two of the above scenarios were run with modified assumptions. These are:

- Scenario A is Scenario 2 with multiple non-residential vehicle evacuation destinations depending on the origin of the workers being:
 - M7 north (i.e., the single destination of all vehicles in Scenarios 1, 2 and 3),
 - Hume Motorway south,
 - Camden Valley Way west, or
 - M5 east 0
- Scenario B is a modified Scenario 3 with the following modifications:
 - updated numbers of vehicles from proposed residential and non-residential areas for all developments, including a decrease in the number of vehicles per dwelling for new planning proposal apartments,
 - non-residential vehicle traffic will evacuate to multiple destinations depending on the origin of the workers as per Scenario A (i.e. M7 north, Hume Motorway south, Camden Valley Way west or M5 east),
 - the two on ramps from the Hume Highway and M5 will have their capacity increased to 900v/h/lane,
 - there will be a third lane heading north on the M7

The above scenarios are referred to in the discussion and presentation of results.

54 Model Inputs and Assumptions

5.4.1 Warning Times

According to the Provision and Requirements for Flood Warning in New South Wales (NSWSES, 2019), the Bureau of Meteorology has a target minimum warning lead time of 12 hours for floods greater than 4.0 m, and 6 hours for floods greater than 2.0 m for both the Liverpool and Milperra Bridge Gauges.

As evacuation from the Georges River floodplain is only necessary in floods exceeding 4.0 m at these gauges, there will be at least 12 hours warning available. Therefore, in all five of the modelled scenarios, a warning time of 12 hours was utilised.

5.4.2 Time Required to Evacuate

All modelled scenarios utilised the assumptions from the NSW Timeline Evacuation Model (TEM) as explained in Section 4.2.1. This included:

- Vehicles leave two hours after being notified of evacuation order (one hour Warning Acceptance Factor plus one hour Warning Lag Factor).
- The travel time is based on an assumed road capacity of 600 vehicles per hour per lane. This has been applied to all scenarios, except in Scenario B where the two on ramps from the Hume Highway and M5 onto the M7 will have their capacity increased to 900 vehicles per lane per hour.
- Traffic Safety Factors (TSF) were calculated and accounted for based on the elapsed time that vehicles are traveling on the road. Subsectors were identified where accounting for the TSF meant that additional vehicles would be trapped by floodwaters or on the road.



Georges River Evacuation Modelling



5.4.3 Evacuation Subsectors and Trigger Levels

As shown in Figure 14, there are 43 evacuation subsectors in the study area that are impacted by the PMF from the Georges River and the study area's creeks. These have been identified based on an analysis of the flood model time series and the NSWSES published warning times for the Georges River. The evacuation subsectors have been informed by the draft NSW SES subsectors that were provided, but are not identical. The NSW SES was provided with the subsectors identified in this study for its approval.

The subsectors used in all modelled scenarios were refined by selecting areas with shared evacuation routes and flood risks, and thus would need to respond to specific trigger level(s). They were classified based on the emergency response classification of communities in accordance with DPIE guidelines to identify the flood islands within the study area and those which have rising road access and overland escape routes. Of these subsectors, 15 are primarily industrial, 26 are primarily residential, one is both industrial and residential, and one was classed as an equestrian area.

Subsectors R13, R14, R20, R22, I10 and I11 are only affected by local creek flooding and their evacuation was not included in the modelled scenarios.

The trigger levels at the Liverpool and Milperra gauges which would cut off the flood islands or start to flood areas with rising road access were identified. The timing of these trigger levels were identified by timestep on the PMF design flood hydrograph in Liverpool Council's TUFLOW model of the Georges River. The standard warning dissemination, warning acceptance, evacuee response and road capacity assumptions as per the NSW Timeline Evacuation Model were utilised.

A database of both initial and progressive evacuation triggers for each subsector was developed. The staging of evacuation of each subsector was based on the following three possible scenarios:

- Areas where everyone is told to evacuate based on a single trigger level ("all"). This was generally where the subsector is a flood island and the trigger for evacuation is the level at which the evacuation route is cut although it also applied to subsectors where there is little change in level across the subsector. The model assumed that evacuees would be warned at a rate which would generate a maximum of 600 vehicles per hour evacuating from the subsector and that the evacuation order would be issued to the premises in order of ascending ground level;
- Areas where they will progressively evacuate by ground level based on revised flood forecasts, as per SES staging of subsector evacuations ("by level"). These are subsectors with rising road access or overland escape routes and a significant change in level across the subsector. Only those parts of the subsector which are expected to flood would be evacuated based on current forecasts. As forecasts are revised upwards more elevated parts of the subsector would be ordered to evacuate;
- Areas where there will initially be a staged evacuation, until the evacuation route gets cut, at which point everyone will need to evacuate ("by level until..."). This used a combination of the above two approaches.

Appendix A shows the triggers that have been identified for each subsector.





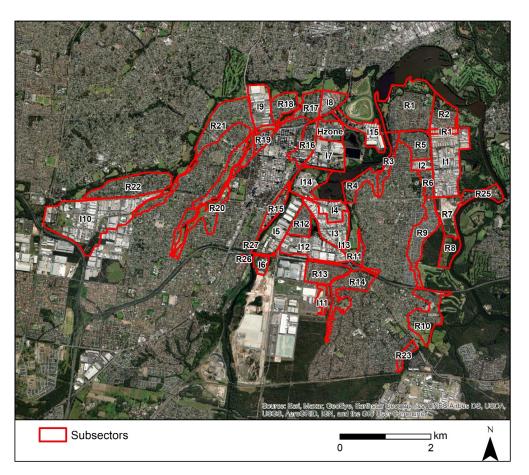


Figure 14. Subsectors identified and used in this study

Existing and Future Road Network 5.4.4

The existing road network was input into the modelled base case (Scenario 1), with modifications made in the future scenarios (Scenarios 2, 3, A and B) based on advice from Council.

As advised by the NSW SES, all traffic is expected to be directed to evacuate west to the M7 and north from there. Therefore, to force traffic in this direction in the model, Newbridge Road and the M5 were cut at the eastern extent of the study area where they cross the Georges River in scenarios 1, 2, and 3. In Scenarios A and B where some vehicles need to evacuate to the east, the M5 crossing of the Georges River was opened.

To account for the very real possibility of local creek flooding during an evacuation from the Georges River flooding, every road that crosses Anzac Creek, Brickmakers Creek, Cabramatta Creek and Maxwell's Creek was cut in the model if it was flooded by a 1 in 500 annual exceedance probability (AEP) flood or more frequent events (Figure 15) according to the local flood modelling. It was assumed that wherever overland flooding would cross roads it would be of a short enough duration and low enough hazard that it would be accounted for in the delays allowed for the in the TSF within the modelling.

Flood Evacuation Analysis



There were three locations where the road network layer suggested roads cross the railway line but investigation showed that these crossings are all gated, so they were closed in the model. These locations are also shown in Figure 15.

In the model each road was assigned a number of evacuation lanes based on the number of lanes available in the direction of evacuation. This was groundtruthed using GoogleMaps aerial imagery and is also shown in Figure 15.

For scenarios 2, 3, A and B, committed road upgrades in Moorebank, Chipping Norton and Warwick Farm, as advised by Council, were incorporated into the evacuation models. These are shown in Figure 16 and include:

- Governor Macquarie Drive widening to two lanes in each direction between Newbridge Rd and Alfred Rd, between Alfred Rd and Childs Rd, and between Munday St to the racecourse access.
- an upgrade to the M5 Motorway westbound that will add two additional lanes connecting between east of the Moorebank Avenue and the intersection with the Hume Highway.

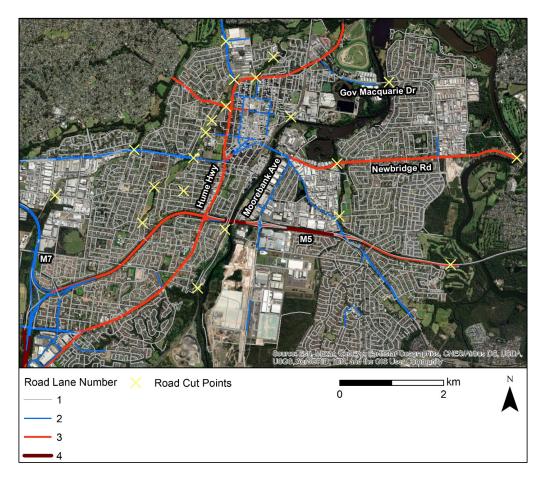


Figure 15. Road cut locations



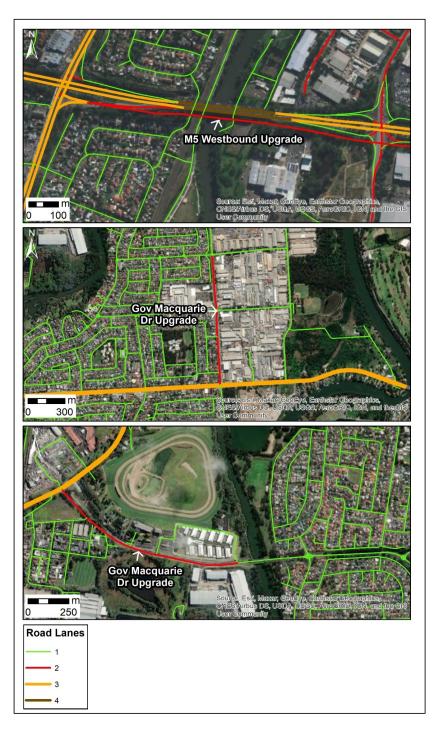


Figure 16. Road upgrades for the future scenarios including additional two lanes of M5 westbound traffic (top), and widening of Governor Macquarie Drive to two lanes in Chipping Norton (middle) and Warwick Farm (bottom)





5.4.5 Evacuating Vehicles

As advised by NSW SES, all of the modelled scenarios assume that all of the residential and non-residential premises in the lots that fall under the extent of the Georges River design PMF will need to be evacuated in the same event. The methodology ensured that those who both live and work within the study area were not double counted (i.e. only non-residential traffic originating from outside of the area was counted as the non-residential traffic originating within the floodplain was assumed to be counted in the residential traffic).

Each of the five modelled scenarios used different assumptions and inputs for the numbers of residential and non-residential vehicles distributed across the subsectors that require evacuation from the Georges River PMF. This is summarised in Table 1. Section 5.5 details the five modelled scenarios and the current and future residential and non-residential vehicle model inputs.

It was assumed that each evacuating vehicle would occupy 6 m of road for the purposes of representing traffic queueing in the model. The exception is that vehicles originating from the equestrian area in Warwick Farm were assigned a 15 m vehicle length to account for trailers being towed.

5.5 Modelled Scenarios

5.5.1 Scenario 1: Base Case

Existing building and vehicle numbers were used to develop the scenario 1 Base Case.

a) Residential

Molino Stewart developed a methodology using an integration of the flood model data, 2016 Australian Bureau of Statistics Census data, cadastre data, and Google Maps imagery to estimate the number of vehicles that would need to evacuate from existing residential developments in the study

The total number of dwellings based on the 2016 Census at the Mesh Block spatial scale (the smallest geographical area available) was distributed as whole integer numbers among the cadastre lots containing residential buildings that were affected by the Georges River PMF. Where the value of dwellings was higher than the number of lots within the Mesh Block, visual assessment using Google Maps Street View was used to determine which lots contained multi-dwelling residences (i.e. apartment blocks, or houses with granny flats) and the number of dwellings on the lots (i.e. using number of post boxes). Where the number of dwellings was slightly fewer than the number of lots, visual assessment in Google Maps was used to determine if any lots did not contain a unique dwelling (i.e. if there were single dwelling houses occupying two lots). Where the number of dwellings based on the 2016 census was clearly less than observed visual assessment in Google Maps, it was assumed that development had happened since 2016 resulting in additional dwellings. For example, there had been recent development in southwestern Moorebank (south of Brickmakers Drive) and Hammondville (i.e. the HammondCare development that is partially affected by the Georges River PMF). The majority of the newer development is relatively dense and on smaller lots, so typically only has one dwelling per lot. These lots were thus assigned a number of dwellings based on the Google Maps and Google Street View assessment (i.e. counting the number of mailboxes in a new subdivision).3

³ Note that it has been determined that the number of vehicles requiring evacuation from Shepherd Street has likely been underestimated due to recent apartment developments (i.e., post-2016 census) that were not accounted for in the base case nor picked up as infill development but are included in the planning proposal.



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Data on average residential vehicle ownership for each suburb (the lowest spatial resolution this data was available in) was calculated based on 2016 census data. This is shown in Table 9. Each residential lot containing at least one dwelling was assigned the average value of vehicles for its suburb, which was multiplied by the number of dwellings to result in a whole integer number of vehicles per lot. The remainder or excess of vehicles per suburb that resulted from whole-integer rounding was calculated. The remaining number of unassigned or excess vehicles were added or removed from lots to achieve the more accurate total number within the suburbs by either: 1) subtracting where necessary from multi-dwelling lots (i.e. apartment buildings) particularly close to public transport, or 2) adding to single-dwelling lots in suburban areas further from public transport.

Table 9. Current vehicle ownership rate (based on 2016 census)

Areas	Vehicles per Dwelling
Liverpool	1.31
Chipping Norton and Moorebank	2.03
Holsworthy, Wattle Grove, Hammondville,	2.00
Lurnea and Cartwright	1.63
Warwick Farm	1.14
Casula	1.95
Prestons – Edmondson Park	2.19

b) Non-Residential

Molino Stewart consulted with NSW SES and Infrastructure NSW (INSW) regarding a method for estimating the number of cars which might evacuate from the industrial and commercial areas, and the proportion of these which might need to evacuate at the same time as the residential areas. INSW provided guidance based on its government-endorsed methodology established as a part of the Hawkesbury-Nepean Valley Flood Risk Management Strategy (2016-2021) to inform evacuation modelling.

The base data used is Journey to Work Data (Transport for NSW, 2011) released by Transport Performance and Analytics (TPA), which is based on the 2011 Census of Population and Housing. It provides data at the Travel Zone geographical scale and includes data on the Origin Travel Zones (OTZ), Destination Travel Zones (DTZ) and mode of transport for every employee across NSW. Data was extracted from *Table 19: Origin TZ x Destination TZ x Mode9*, to calculate the number of employees who travel to work as the driver of a vehicle within the study area. This process entailed:

- Determining the total number of vehicles entering each Travel Zone within the flood affected study area from outside of the study area;
- Distributing the calculated number vehicles across the non-residential lots within each Travel Zone based on the lot's size.

Only vehicles that originated from outside of the study area and entered the study area's Travel Zones were included to avoid double counting vehicles already accounted for in the residential vehicle count. This approach means that the non-residential vehicle count does not include those that both live and work inside the study area (even in they live and work in different travel zones within the study area).

Additionally, only vehicle drivers were counted in assigning non-residential vehicles to lots.

The project managers for Australian Turf Club (ATC) (Mostyn Copper) were also consulted to understand the operating procedures and seek information to estimate the number of vehicles and horse floats which may need to evacuate from the equestrian zone and Warwick Farm Race Course





(in subsector Hzone). This helped ensure our approach and assumptions are consistent with the typical operations of the race course and the nearby stables.

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The ATC advised that while the race course operates every day of the year, there are only one to two events a year that would bring more than 1,000 people to the site. There are also 20 to 25 race days per year on the race course that would have fewer than 1,000 attendees. ATC also advised that in rainy weather, races would be cancelled (i.e. events cancelled due to poor weather in February 2020). There is a hotel located adjacent to the track available for people to stay in and patronage of the hotel is not always linked to race meetings.

Approximately 700 horses train daily at the track in the morning. They said that the majority of racehorses (500 to 600) stable "on course" within the equestrian area on the southern side of Governor Macquarie Drive and use an underground tunnel to travel between the stables and track. They advised that horse floats that may be present on site can transport up to 25 horses at a time. However, they could not advise how many horse floats are kept on site, or how many would be required for evacuation. Despite follow up, we did not receive specific data on the number of horse floats that would be required in the event of an evacuation.

Future development plans were also discussed, including plans to create a new stabling area on the northern side of Governor Macquarie Drive, as the current stabling area is flagged for future rezoning and redevelopment.

To account for this area in the model, we used the number of residential and non-residential for this area as per the above methodology (a total of 211) but allowed 15 m for the vehicle length (as opposed to the standard 6 m vehicle length) for all vehicles coming from this area to account for trailers being towed. Additionally, 245 vehicles were assigned to subsector I15, which encompasses the ATC track and adjacent hotel, accounting for the current parking capacity for visitors and hotel guests.

5.5.2 Scenario 2: Infill

All future scenarios modelled built on the existing base case Scenario 1. Scenario 2 accounted for increased residential and non-residential infill or intensified development and planned road works without any changes to zoning. This was based on data supplied by Council regarding forecasts of the likely dwelling and population growth to 2036. Council utilises Forecast .id data (Profile .id, 2021) as the preferred forecasting tool for demographics.

The data provided by Council was collated to match the study area as best as practically possible as informed by a Forecast .id representative. The Forecast .id data was reduced to match the Travel Zones that sit within the study area by:

- taking the dwelling count from 2016 for each small area and splitting that count by the proportion of the catchment that intersects with the area.
- using the growth profile of the small areas in the forecast data to apportion the growth into the appropriate catchments.

As summarised in Table 10 there may be potential for infill within R2, R3 and R4 residential zones. The potential for lots to increase their number of dwellings depends on their size, as well as a number of other factors specified in Liverpool's Development Control Plans. Therefore, not every lot meeting the size requirement would be able to increase its number of dwellings, but there is potential for more dwellings than currently present in these areas.

It was assumed that in the single R1 General Residential zone within the study area, there is no potential for an increased number of dwellings, although secondary dwellings may be permitted with consent. This is because these lots have recently been developed, and it was assumed this development has maximised the number of permissible dwellings per lot.





In R2 Low Density Residential, only lots that are greater than 400m² would have the potential to increase the number of dwellings from one to two per lot. As almost 80% of the R2 lots are larger than 400 sqm and have only one dwelling, there is high potential for an additional secondary dwelling within this zone.

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R3 Medium Density additionally has high potential for infill development. Approximately one third of R3 lots are between 400 and 600 m² and only have one dwelling. These lots may be permitted to have a secondary dwelling. In addition, under the new NSW Government's Low Rise Housing Diversity Code, manor houses with four dwellings may be permitted on lots larger than 600 m². Approximately 43% of the R3 lots are greater than 600 m² and have fewer than four dwellings. Once again, there is high potential for these lots to increase their numbers of dwellings under these planning regulations.

R4 High Density Residential also would have a high potential for infill development. While the number of potential dwellings on lots is dependent on a number of factors, approximately half of the lots currently zoned R4 have only one dwelling and are larger than 400 m². Approximately 10% of the R4 lots currently have 10 or more dwellings. This alone implies that there is potential for a significant increase in number of dwellings without any changes to the current residential zoning.

Table 10. Current residential zoning and infill potential

Zoning	Lots	Current Dwellings	Current Dwellings per Lot	Potential for Infill
R1 General Residential	77	77	1	It is assumed that these lots have already been recently filled with their maximum permissible number of dwellings.
R2 Low Density Residential	4,524	5,025	1.11	Lots >400 m ² may have two dwellings, which may apply to the approximately 80% of lots this size which only have one dwelling.
R3 Medium Density Residential	2,373	3,057	1.29	Lots between 400 and 600 m² may have two dwellings, which may apply to the approximately one third of lots this size which only have one dwelling. Lots >600 m²may have four dwellings (i.e. manor house), which may apply to the approximately 43% of lots this size which have fewer than four dwellings.
R4 High Density Residential	818	3,806	4.65	High potential for infill.

In addition to the infill potential, there are 38 residential dwellings along Newbridge Road currently included within the evacuation area that are subject to the above-mentioned voluntary purchase scheme by Council due to their flood risk from the Georges River. It is expected that these lots will eventually be rezoned from residential to recreational, therefore decreasing the number of dwellings to zero in this area.

The infill scenario primarily included additional residential vehicles, but also accounted for the planned expansion from the Liverpool Hospital, which was the only non-residential addition. All other planned non-residential development locations were outside of the floodplain.



Based on information supplied by Council planners and projections published by Profile .id, the intensified development under existing zoning scenario incorporated 1,541 additional evacuating vehicles in the following locations within the study area⁴. These are shown in Figure 17. This includes:

- 821 non-residential vehicles added to the Liverpool Hospital location. This is based on a planned increase of 900 parking spaces to Liverpool Hospital (added to the existing car parking area west of the railway) and adjusted based on the current distribution of commuters between study area residents and non-residents (91.2% of workers in this travel zone come from outside of the study area travel zones)
- 720 residential vehicles were added to flood-affected residential lots in the study based on location-specific increases in dwelling density within R3 and R4 zoned areas, utilising the existing vehicle ownership rate, including:
 - 52 residential vehicles added to 6 Drummond St, Warwick Farm (which is a development proposal which was before Council)
 - o 93 residential vehicles added to R3 and R4 zones in Chipping Norton
 - 575 residential vehicles added to R3 and R4 zones in Moorebank

It was decided to exclude the Moorebank Intermodal terminal from the evacuation analysis due to the fact that the majority of the developed part of the site is not directly impacted by the Georges River PMF, and additional land filling associated with this development is expected to occur. The site will only be isolated by the PMF. There should be sufficient opportunity to stop people from going into work, so it is not expected that this large number of workers will be evacuating at the same time as the rest of the study area.

5.5.1 Scenario 3: Planning Proposals

Council also advised of the details for planning proposals that are in progress or have been recently finalised within the study area (Table 11). It included approved development under construction at Site C in Moorebank East which gained approval after model set up had begun. Also, rezoning is already gazetted in Shepherd Street with several developments approved and constructed and others not yet approved. The values for additional evacuating vehicles were added to those from Scenario 2. The numbers of vehicles were calculated based on the provided numbers of new dwellings and jobs. Vehicle ownership rates as per the 2016 census were applied (Table 9).

Note that Scenario 2 evacuation also utilised planned road upgrades as discussed in Section 5.4.4.

Commercial and retail floor space and associated job estimates were supplied by Council. The number of vehicles per job were estimated from the Journey to Work data and multiplied by the number of jobs to estimate the number of cars on site. This value was then adjusted to only account for vehicle drivers coming from outside of the study area based on the ratios calculated from Journey to Work 2011 data for each relevant Travel Zone. For example, the number of jobs created in Moorebank East was multiplied by 0.77 to account for vehicle drivers only, and then multiplied by 0.69 to account for only vehicles coming from outside of the study area. This avoided double counting between residential and non-residential evacuating vehicles.

⁴ It is recognized that this may be an underestimate due to potential redevelopment and intensification of residential areas where there are currently public housing estates within the floodplain (e.g. Hargrave Park). NSW Land and Housing Corporation (LAHC) currently has 1,298 dwellings in the study area across both Warwick Farm and Cartwright (only subject to creek flooding) with an average occupancy of 2 people per dwelling. LAHC has also informed this study that their development projection for the study area over the next 20 years is 481 additional dwellings, with 45% of the additional dwellings in Warwick Farm and 55% in Cartwright.





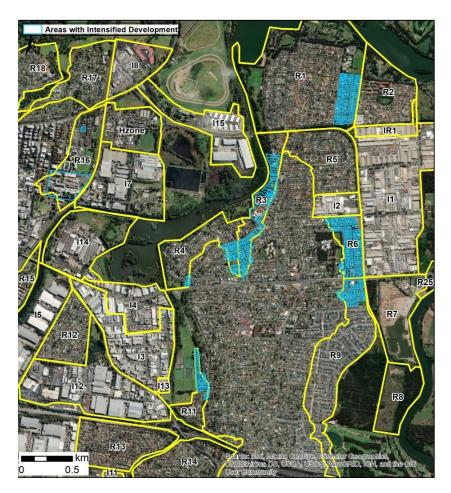


Figure 17. Locations where vehicles were added in scenario 2, showing potential for intensified development

There was a total of 61,671 vehicles added to the study area in the sites specified in Table 11 and shown in Figure 18.

It was assumed that Sites A, B, C and D at Moorebank east would share an exit via a new bridge onto Brickmakers Road from site C. The trigger level for the evacuation of these subsectors was level of a low Point on Brickmakers Road just south of this bridge.

In the case of Site E it was assumed that it would be constructed with an access road which rose continuously from the site to Brickmakers Road. The evacuation trigger for this site was therefore the 1% AEP flood level which was assumed to be the lowest flood level which would impact the habitable parts of the site.

It was acknowledged that development of Moore Point would involve filling habitable parts of the site to above the 1% AEP flood level. However, the evacuation trigger for this subsector is set by its evacuation route. For the modelling it was assumed that evacuation would be triggered when it was forecast that flooding would exceed 7.5m AHD.

For all other planning proposals the evacuation trigger was the same as it was for that cadastral lot in scenarios 1 and 2.



Scenario 3 evacuation also utilised planned road upgrades as discussed in Section 5.4.4.

Table 11. Additional vehicles in Scenario 3: Planning Proposals

Site	New Dwellings	Additional Population ¹	New Residential Vehicles ¹	New Jobs	New Non- Residential Vehicles	Total New Vehicles
Site A	126	391	255	857	459	714
Site B	602	1,866	1,219	361	193	1,412
Site C	179	555	363			363
Site D	374	1159	758	2		758
Site E	2,000	6,200	4,052	207	111	4,163
Site F: Moore Point JLG	14,783	45,827	29,950	23,617	18,282	48,232
Site G: Moore Point Rose Group	536	1,662	1,086	91	70	1,156
Site H: The Grove				600	462	462
Site I: 240 Gov Macquarie Dr	500	1200	571	125	80	651
Site J: Warwick Farm Structure Place	1,465	3516	1,673	800	509	2,182
Site K: 33 Shepherd Street ³	1,200	3,360	1,578			1,578
Total	21,765	65,736	41,505	26,658	20,166	61,671

 $^{1.\} Based\ on\ respective\ suburb's\ average\ people\ and\ vehicles\ per\ dwelling\ rates\ from\ the\ 2016\ census.$

Georges River Evacuation Modelling

^{2.} There are an estimated 45 employees under Site D's existing deferred commencement consent for a Marina, however the modelling considered the residential planning proposal for the site.

^{3.} This Planning Proposal is already gazetted with some developments approved and constructed and others pending approval.



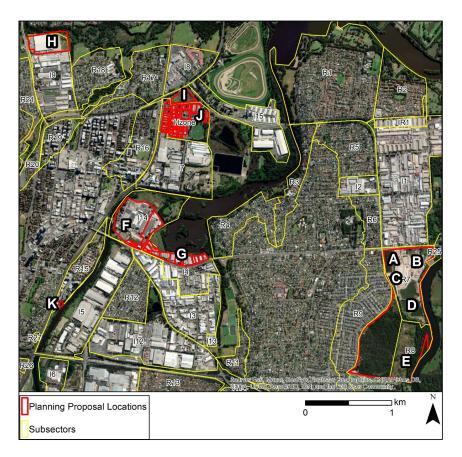


Figure 18. Location of additional planning proposal locations (letters refer to labels in Table 11)

5.5.2 Scenario A: Modified Infill

Following discussions with Council, Scenario 2 was modified and run as Scenario A. It is the same as Scenario 2 but with multiple non-residential vehicle evacuation destinations depending on the origin of the workers. These are:

- M7 north (i.e., the single destination of all vehicles in Scenarios 1, 2 and 3),
- Hume Motorway south,
- Camden Valley Way west, or
- M5 east

Workers' origins were determined from the 2011 Journey to Work data⁵, as used in Scenarios 1, 2 and 3. Based on this data, drivers of vehicles working in the study area but not living in the study area come from:

- 30% come from north of the study area
- 30% come from the east of the study area

⁵ The 2011 Journey to Work data was used since more recent 2016 Journey to Work data with the associated spatial data is not publicly available.





- 20% come from the south of the study area
- 20% come from the west of the study area

Therefore, from each subsector, the above proportions of non-residential evacuees were sent to the respective destinations.

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In the case of those heading North, while many may have arrived at work via the Hume Highway or the Cumberland Highway, these roads cannot be relied upon as flood evacuation routes because of their risk of being cut by either Georges River or Cabramatta Creek flooding. Accordingly, the M7 heading north was the only northbound evacuation route in the model.

Furthermore, the M5 heading East is cut but flooding before all of the vehicles with this destination are able to evacuate. Therefore, vehicles with an eastern evacuation destination had their destination changed to North after t = 7 in the Georges River PMF timing, as they can no longer travel East. The M7 heading North is their only route to roads travelling east.

Non-residential vehicles from each subsector were each sequentially sent north, east, south and west based on the order in which they would leave.

Consideration was also given to the fact that not all residential evacuees would wish to head north on the M7 with many seeking alternative accommodation with family or friends or at commercial accommodation to the west, south or east or even within flood free areas of the study area. As there was no way to estimate in which direction these would head it was conservatively assumed they would all head north.

Where a planning proposal involved a mixed use development it was assumed that the non-residential traffic would leave first which is likely to be the case in a real evacuation with people more willing to leave their work places than their homes.

Note that Scenario A evacuation also utilised planned road upgrades as discussed in Section 5.4.4. The following evacuation route assumptions were made:

- Arrangements would be made to create a flood emergency access route between Homepride Avenue and Orange Grove Road using existing private accessways
- Camden Valley Way would have two lanes each of 600 vehicles per hour capacity and the vehicle destination is west of the M7 on ramp;
- The Hume Highway south of Camden Valley Way would continue south as three lanes (Campbelltown Road) each with a 600 vehicles per hour capacity, which narrows to two lanes and then a single lane before it merges with the M5;
- The M5 after its M7 offramp would continue south as two lanes each of 600 vehicles per hour capacity until it merges with the Hume Highway;
- Once the Hume Highway and the M5 merge they become the Hume Motorway which continues south as a four lane road:
- While the M5 heading east has three lanes, to account for other traffic streams entering it from elsewhere, the model has assumed that it only has a single lane available for traffic coming from the study area. The evacuation destination is east of the University of Western Sydney Campus (past a low point west of that which can be inundated).

It was recognised that Camden Valley Way can be cut by local flooding in the 1% AEP flood and possibly more frequent events where it crosses Cabramatta Creek and theoretically is does not satisfy NSW SES requirements as a regional flood evacuation route. However, it gets cut for about 2 hours or less in the 0.2% AEP Cabramatta Creek flood. However, there is considerable flood free land in Prestons between the M7 and Cabramatta Creek where evacuating vehicles could wait if required. About 500 vehicles can queue on the two west bound lanes of Camden Valley way between Cabramatta Creek and one of its tributaries to the east. In Scenario A, there are 2,710 non-residential vehicles with a West destination.





5.5.3 Scenario B: Modified Planning Proposals

Following discussions with Council, Scenario 3 was modified and run as Scenario B. This included the following modifications:

- Updated numbers of vehicles from proposed residential and non-residential areas for all developments as per Table 12. This included an assumption that there would only be one vehicle for each new residential apartment building;
- Non-residential vehicle traffic evacuates to multiple destinations depending on the origin
 of the workers as per the ratios and description in Scenario A (i.e. M7 north, Hume
 Motorway south, Camden Valley Way west or M5 east) and as per the road modifications
 in Scenario A;
- The two on ramps from the Hume Highway and M5 would have their capacity increased to 900 vehicles per lane per hour through upgrades as advised by TfNSW;
- An added third lane heading north on the M7 as advised by TfNSW.

Note that Scenario B evacuation also utilised planned road upgrades as discussed in Section 5.4.4.

Table 12. Scenario B assumptions and vehicle numbers

Site	New Dwellings	Additional Population ¹	Vehicles per New Dwelling	New Jobs	New Non- Residential Vehicles	Total New Vehicles
Site A	126	391	1	857	459	585
Site B	602	1,866	1	361	193	795
Site C	179	555	2.03			363
Site D	374	1,159	1	2		374
Site E	1,500	4,650	1	207	111	1,611
Site F: Moore Point JLG	12,200	37,820	1	16,648	12,888	25,088
Site G: Moore Point Rose Group	1,854	5,747	1	6,352	4,917	6,771
Site H: The Grove				600	462	462
Site I and J: Warwick Farm Structure Plan including 240 Gov Macquarie Dr	3,224	7,738	1	925	485	3,709
Site K: 33 Shepherd St ³	1,200	3,360	1			1,200
Total	21,259	63,286		25,950	19,515	40,958

^{1.} Based on respective suburb's average people per dwelling rate from the 2016 census

In these specific locations, it was assumed that all existing development would be removed before the new development occurred, and so these values were not added to the Scenario 1 or Scenario 2 values within these lots.



^{2.} There are an estimated 45 employees under Site D's existing deferred commencement consent for a Marina, however the modelling considered the residential planning proposal for the site.

^{3.} This Planning Proposal is already gazetted with some developments approved and constructed and others pending approval



6 | Life Safety Model Outputs

6.1 Interpretation of Results

Outputs from the LSM can be presented in a number of ways including interactive animations, videos, graphs and tables. For the purposes of this discussion, screen shots from the animation of the evacuating vehicles have generally been used to illustrate particular points. An AVI files of the model animations have been provided separately so that the outputs can be viewed in more detail than can be conveyed in the static images in this report.

The key to interpreting the screen shots is that:

- Shades of blue represent the extent of the Georges River PMF at a particular time step with deeper shades indicating greater water depth.
- The fine grey lines represent the road network which has been included in the model. This has been edited to block access down inaccessible sections of road which are either permanently closed by a locked gate or are unlikely to be reliable during a flood evacuation because they could be cut by local creek flooding.
- Dark purple squares represent the locations of vehicles at properties which have not yet been ordered to evacuate. Where there are multiple vehicles at a property only one square is visible but in the model there are many vehicles allocated to that location.
- Mauve squares represent vehicles on properties where the occupants have been made aware of the need to evacuate but have not yet evacuated.
- Yellow squares are evacuating vehicles at the location they would be found at the associated time step.
- Red squares are vehicles (or clusters of vehicles) which have been caught by floodwaters
- The time code is shown in the top right corner and displays the hours and minutes relative to the start of flooding in the Georges River PMF design flood event.

As explained in Section 5.4.1, it has been assumed that the evacuation order for each subsector will be given 12 hours prior to its trigger level being reached as this is the anticipated minimum warning time which will be available for flooding exceeding 4.0 m at Liverpool and Milperra Gauges. This means that most subsectors would receive evacuation orders prior to time step 0 in the PMF design flood event.

There are buildings in the model which do not need to be evacuated in the Georges River PMF, which have been included in order to run possible later sensitivity testing taking into account evacuation from local creek flooding while evacuation from the Georges River is also taking place. These remain dark purple for the entire model run.

As advised by the NSW SES, the primary final destination for all evacuation vehicles in the model is traveling north on the M7, although multiple destinations are included for non-residential vehicles in Scenarios A and B. As shown in the screen shots, the majority of traffic evacuates onto the M7 either via the M5 traveling westbound or from the Hume Highway via Camden Valley Way.





6.2 Scenario 1 Results

6.2.1 Raw Results

Appendix B Figures B1 to B6 show excerpts of the Scenario 1 base case LSM at key time steps, which are:

- T = -5:25 hours (Figure B1): The first evacuation wave occurs of vehicles leaving from R25
 on Newbridge Road in the east of the study area. These have to evacuate very early before
 the Georges River cuts Newbridge Road at the western end of the subsector.
- T = -2:55 hours (Figure B2): The next wave of evacuation occurs with vehicles leaving
 predominantly industrial subareas in west Moorebank (e.g. I3, I5 and I13). Their primary
 evacuation route is south on Moorebank Avenue to the M5. There are also some low lying
 homes west of the river (R26) which evacuate onto the Hume Highway at this time.
- T = 0 hours (Figure B3): As the modelled PMF begins to rise, evacuation is underway across the study area. Almost all of Chipping Norton is preparing to evacuate or is already evacuating south onto the M5 via Nuwarra Road and Heathcote Road. The industrial and residential areas in west Moorebank are all preparing to evacuate, evacuating or have already evacuated onto the M5 via Moorebank Avenue. Subsectors in Warwick Farm are preparing or starting to evacuate via the Hume Highway. Lanes of traffic from the M5 and from Camden Valley Way via the Hume Highway are entering the M7 to travel northwest out of the study area. There is significant traffic queueing throughout the Moorebank Peninsula while evacuation traffic on the Hume Highway is travelling more freely.
- T = 5 hours (Figure B4): Floodwater approaches properties on the Moorebank peninsula, including in Chipping Norton. All properties that have not yet evacuated on the Moorebank peninsula are prepared to evacuate, however there is extensive queueing to get onto the M5 via Nuwarra Road and Heathcote Road. The remaining vehicles from subareas in west Moorebank are evacuating. Vehicles from Warwick Farm subsectors I9 and R18 are starting to evacuate but have no evacuation routes on public roads which do not cross a low point on a local creek and so in the model are trapped within their subsectors due to road cuts. Traffic continues to merge onto the M7 from the M5 and from Camden Valley Way/ Hume Highway but with six lanes merging into two there is queueing on the Hume Highway and even longer queues on the M5. Nuwarra Road is at capacity with queued vehicles and other roads leading into it are also experiencing queueing.
- T = 12 hours (Figure B5): Traffic traveling to the M7 is queued on the M5 over the Georges River, and on the Hume Highway. Access onto the M5 from Moorebank Avenue is cut by floodwaters at t = 11 and the M5 itself is cut nearby at t = 12.5. At this latter point the Moorebank peninsula becomes a high flood island. Some vehicles from I1, R1, R2 and IR1 in Chipping Norton have been caught by floodwaters.
- T = 28:30 hours (Figure B6): At the end of modelled PMF, the number of vehicles that are caught by the flood water (red cells) at the end of the model are:
 - o I1 (Chipping Norton): 94 vehicles
 - o IR1 (Chipping Norton): 6 vehicles
 - o R1(Chipping Norton): 11 vehicles
 - o R2(Chipping Norton): 22 vehicles
 - o Total: 133 vehicles

The subsectors that are trapped due to a lack of flood free road access are:

- o 19 (Warwick Farm): 258 vehicles
- o R18(Warwick Farm): 237 vehicles
- o Total: 495 vehicles













The primary evacuation routes utilised in the model are:

- The primary route for Chipping Norton and Moorebank East onto the M5 is via Nuwarra Road and the Heathcote Road on ramp. This route has extensive queueing throughout the model.
- Moorebank West enters the M5 via the Moorebank Avenue on ramp.
- Traffic from the Hume Highway which is a primary route for vehicles from Warwick Farm and Liverpool CBD, enters the M7 via Camden Valley Way.

6.2.2 Applying the Traffic Safety Factor

The modelling results presented in the preceding discussion represent evacuee and evacuation traffic behaviour based on assumptions set out by the NSW SES in its Timeline Evacuation Model. However, LSM does not account for the NSW SES recommended Traffic Safety Factor (TSF). This is normally added to the time taken to evacuate an area to account for the potential for incidents such as vehicle accidents or breakdowns, fallen trees or power lines or water across the road.

Appendix C shows the TSF calculated for each subsector based on the elapsed time that there are vehicles travelling out of the subsector (time on road (TOR)). The difference between the Required Time (which equals TSF + Warning Acceptance Factor + Warning Lag Factor+ TOR) and the Available Time, the subsectors that do not have enough time to evacuate (i.e. a negative Surplus Time) have been identified.

Based on initial calculations, these subsectors are: R18, I9, R17, R27, R11, I1, R1, R2, I2, R16, R5, and R3. However, a more detailed analysis accounting for the time it takes for floodwaters to rise within each subsector with rising road access showed that several of these subsectors are likely do have enough time to evacuate because vehicles will be able to evacuate before flood waters reach them even accounting to the TSF.

The remaining subsectors that would have a problem directly when accounting for TSF are:

- R18 (Warwick Farm)
- I9 (Warwick Farm)
- I1 (Chipping Norton)
- R1 (Chipping Norton)
- R2 (Chipping Norton)
- IR1 (Chipping Norton)

R18 and R9 are a special case because they do not have any evacuation route on a public road which does not involve a low level creek crossing. Thus, these subsectors cannot evacuate irrespective of whether the TSF is taken into account.

Subsectors I1, R1, R2 and IR1, which are all in Chipping Norton, are low flood islands which will all have less time to get past the evacuation route low point before it is cut by floodwaters when the TSF is taken into account. However, because the traffic is queued back into these subsectors and not moving for a few hours before their evacuation routes are cut, accounting for the traffic safety factor makes no difference to the number of trapped vehicles here.

Vehicles that do not make it west of the low point on the M5 located at the Moorebank Avenue underpass would become trapped on the Moorebank peninsula. This includes all vehicles queued in Chipping Norton and Moorebank, and queued on the M5 to the east of this point. As mentioned previously, this point gets cut at t=12.5 in the model. However, to account for a 3 hr TSF, the number of vehicles east of this point were counted in the model at t = 9.5 (Figure 19). A total of 2,367 vehicles,





originating from the following subsectors, would be trapped within the Moorebank Peninsula. Note that these numbers include those that are eventually overtaken by floodwaters.

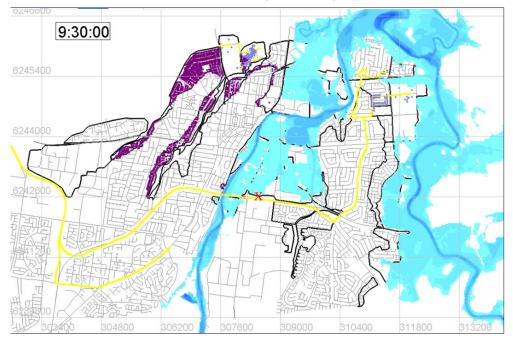


Figure 19. Georges River PMF timestep 9.5 with X at road cut location on the M5 (Scenario 1: Base Case)

6.2.3 Scenario 1 Summary

The results of Scenario 1: Base Case are summarised in Table 13 and Figure 20. To assist in interpreting the table:

- Vehicles on a road (driving or queuing) when the road is inundated by floodwaters are referred to as "caught" by floodwaters.
- Vehicles that do not have a possible evacuation route on public roads (that do not cross a low point on a local creek/ flooded road) are "trapped due to a lack of flood free access" and cannot evacuate from their subsectors.
- It is estimated that the model accounts for, on average, less than two people per vehicle (an average of between 1.5 to 2 people per residential vehicle and one person per non-residential vehicle).



Table 13. Scenario 1: Base Case (2016) Results

Caught by flood waters	Trapped due to a lack of flood free road access	Trapped on the Moorebank Peninsula ¹
I1 (Chipping Norton): 94 vehicles	19 (Warwick Farm): 258 vehicles	I1(Chipping Norton): 695 vehicles
IR1 (Chipping Norton): 6 vehicles	R18 (Warwick Farm): 237 vehicles	I2(Chipping Norton): 88 vehicles
R1 (Chipping Norton): 11 vehicles		IR1 (Chipping Norton): 1 vehicle
R2(Chipping Norton): 22 vehicles		R1 (Chipping Norton): 469 vehicles
		R2 (Chipping Norton): 368 vehicles
		R3 (Chipping Norton): 16 vehicles
		R5 (Chipping Norton): 674 vehicles
		R6 (Chipping Norton): 50 vehicles
		R11 (Moorebank): 6 vehicles
Total: 133 vehicles	Total: 495 vehicles	Total: 2,367 vehicles

^{1.} These numbers include those that are eventually overtaken by floodwaters in Chipping Norton.

These results indicate that 2,862 vehicles (with one to two people per vehicle), or about 10% of the approximately 27,500 total modelled vehicles, do not successfully evacuate and are affected by flooding in Scenario 1.

6.3 Scenario 2 Results

While Scenario 2 includes 1,541 additional vehicles compared to the base case, evacuation benefits from additional road capacity. In particular, the planned two-lane addition to the M5 over the Georges River (included based on advice from Council) improves evacuation capacity from Moorebank and Chipping Norton because some of the traffic from the M5 goes onto the Hume Highway and utilises spare capacity on that road and its on-ramp to the M7 which was not being fully utilised in the base case.

Appendix B Figures B7 to B9 show excerpts of the Scenario 2 at key time steps where they differ from the base case. These are:

- T = 5 hours (Figure B7): As in the base case, there is still some queueing to get onto the M5 via Nuwarra Road, however this is reduced due to the additional two westbound M5 lanes. There is additional queuing on the Hume Highway to get onto the M7 via the Camden Valley Way compared to the base case because some M5 traffic has been diverted onto the Hume Highway.
- T = 12 hours (Figure B8): By the time the M5 westbound is cut by floodwaters, more vehicles have been able to evacuate from the Moorebank peninsula compared to the base case (i.e. no vehicles from R1 are caught by floodwaters, and 20 fewer vehicles from R2 are caught by floodwaters). There is significant queuing on the Hume Highway, which is back up to Liverpool, slowing evacuation from Warwick Farm and Liverpool CBD. This did not happen in the base case and has been caused by traffic from the M5 taking up capacity on the Hume Highway
- T = 28.5 hours (Figure B9): At the end of the modelled PMF, accounting for the TSF, 155 vehicles are caught by flood waters (red cells)





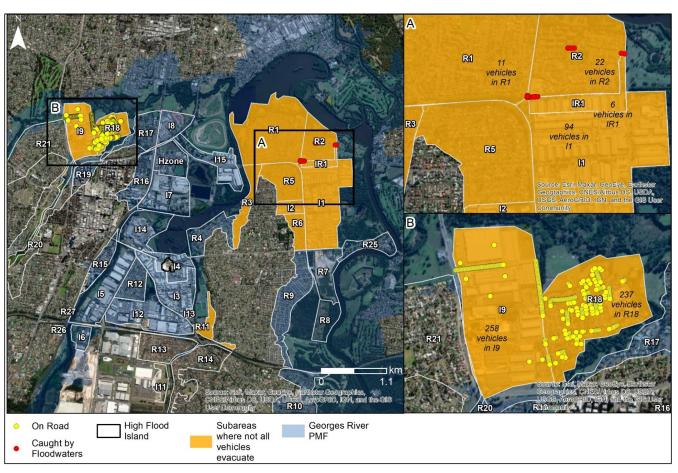


Figure 20. End results of Scenario 1 showing subsectors where vehicles do not successfully evacuate, and vehicles trapped on the road or caught by floodwaters.

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This is 22 vehicles more than in the base case, and the vehicles are from different subsectors. Whereas the base case had a total of 133 vehicles from northern Chipping Norton caught by floodwaters, in Scenario 2, this is reduced to 106 vehicles. The remaining 49 vehicles caught by flood waters are from R16, which is the subarea including Liverpool Hospital. It is noted that the model sends vehicles along the shortest route to the M7 and where these vehicles are trapped in Liverpool there are other flood free routes above the PMF which are available, so they are not likely to actually get trapped.

The subsectors that are trapped due to a lack of flood free road access are the same as in the base case:

- 19 (Warwick Farm): 258 vehicles
- R18 (Warwick Farm): 237 vehicles
- Total: 495 vehicles

A total of 399 vehicles are trapped on the Moorebank peninsula when the M5 gets cut at t = 9.5. Note that these numbers include those that are eventually overtaken by floodwaters.

The primary evacuation routes utilised in the model are:

- Chipping Norton and Moorebank East use the M5 via Nuwarra Road and the Heathcote Road on ramp. The traffic moves more quickly on the M5 westbound due to the additional M5 lanes diverting of some of that traffic onto the Hume Highway.
- Moorebank West enters the M5 via the Moorebank Avenue on ramp, which has less
 queueing compared to the base case due to the additional M5 lanes diverting of some of
 that traffic onto the Hume Highway.
- Scenario 2 has more queueing on the Hume Highway than the base case, as vehicles travel
 to the M7 via Camden Valley Way. This is the primary route for vehicles from Warwick
 Farm and Liverpool CBD. This additional queuing is because some of the M5 traffic is
 diverted onto the Hume Highway.

The results of Scenario 2: Infill are summarised in Table 14 and Figure 21.

Table 14. Scenario 2: Future Infill with Existing Zoning Results

Caught by flood waters	Trapped due to a lack of flood free road access	Trapped on the Moorebank Peninsula ¹
I1 (Chipping Norton): 94 vehicles	19 (Warwick Farm): 258 vehicles	I1 (Chipping Norton): 57 vehicles
IR1 (Chipping Norton): 10 vehicles	R18 (Warwick Farm): 237 vehicles	12 (Chipping Norton): 21 vehicles
R2 (Chipping Norton): 2 vehicles		IR1 (Chipping Norton): 1 vehicle
R16 (Liverpool): 49 vehicles		R1 (Chipping Norton): 125 vehicles
		R2 (Chipping Norton): 83 vehicles
		R5 (Chipping Norton): 106 vehicles
		R11 (Moorebank): 6 vehicles
Total: 155 vehicles	Total: 495 vehicles	Total: 399 vehicles

 1 Note that these numbers include those that are eventually overtaken by floodwaters in Chipping Norton.

These results indicate that 943 vehicles (with one to two people per vehicle), or about 3% of the approximately 29,000 total modelled vehicles, do not successfully evacuate and are affected by flooding in Scenario 2.



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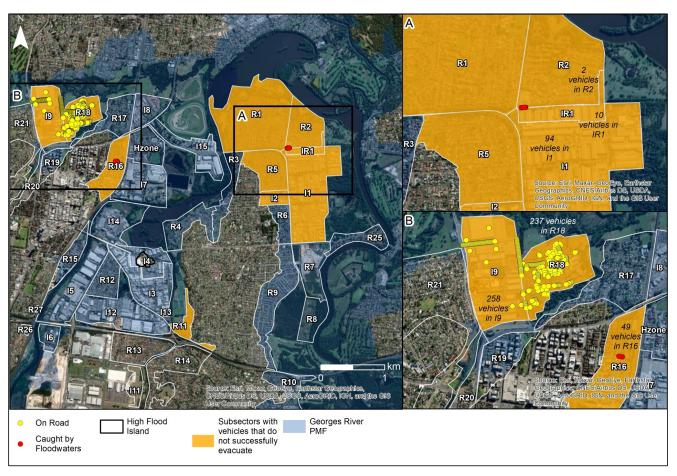


Figure 21. End results of Scenario 2 showing subsectors where vehicles do not successfully evacuate, and vehicles trapped on the road or caught by floodwaters.





6.4 Scenario 3 Results

Scenario 3 includes the addition of 61,671 vehicles in the study area. Appendix B Figures B10 to B14 show excerpts of Scenario 3 LSM at key time steps where they differ from the base case. These are:

- T = -2:55 hours (Figure B10): Due to the large number of additional vehicles, there is immediately queuing as soon as evacuation starts in western Moorebank. There is a bottleneck as traffic enters the M5 westbound via Moorebank Avenue.
- T = 0 hours (Figure B11): Compared to the base case, there is more queueing throughout the entire study area. While there is road capacity still available on the M5 due to the addition of the two additional westbound lanes, there are bottlenecks at the M5 on ramps at Moorebank Avenue and Heathcote Road which are both single lane. There is also significant queuing on the Hume Highway and Camden Valley Way to get onto the M7 from Liverpool and Warwick Farm.
- T = 5 hours (Figure B12): Despite the additional westbound M5 road capacity compared to the base case, there are traffic bottlenecks at the M5 on ramps at both Moorebank Avenue and Heathcote Road. Compared to the base case, there are many more vehicles remaining on properties ready to evacuate in Moorebank (i.e. I4 and R12) where they cannot yet leave, as the roads are too full to accommodate additional vehicles. In addition, there is significant queuing to get onto the M7 via the Hume Highway. In Warwick Farm, there are also many vehicles ready to evacuate that cannot leave due to lack of road capacity, while in the base case, vehicles in this area had already been evacuated.
- T = 12 hours (Figure B13): There remains extensive queuing on all primary evacuation routes, as vehicles have been caught by flood waters throughout the study area in Chipping Norton, Moorebank, Warwick Farm and Liverpool. There are vehicles stranded on the roads and on the properties on a high flood island that forms in I4 in west Moorebank, that reduces in size as PMF flood waters continue to rise. There are still vehicles that are ready to evacuate but cannot due to lack of road capacity in Chipping Norton, Warwick Farm and Moorebank.
- T = 28:30 hours (Figure B14): At the end of the modelled PMF, accounting for TSF, 51,199 vehicles are caught by flood waters (red cells)

As opposed to Scenarios 1 and 2 where only four subareas had vehicles caught by flood waters, Scenario 3 results in vehicles trapped in flood waters throughout the entire study area, in Moorebank, Chipping Norton, Liverpool and Warwick Farm.

The subsectors that are trapped due to a lack of flood free road access are the same as in the base case, however there are more vehicles that have been unable to evacuate from 19 because there are more vehicles in that area due to the planning proposal:

I9 (Warwick Farm): 720 vehicles
 R18 (Warwick Farm): 237 vehicles

Total: 957 vehicles

A total of 8,679 vehicles (including those that are eventually overtaken by floodwaters) are trapped on the Moorebank peninsula when the M5 gets cut. There are 9,673 vehicles also trapped on the roads in I4 in western Moorebank, where a small high flood island remains.

The results of Scenario 3: Planning Proposals are summarised in Table 15 and Figure 22.



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Table 15. Scenario 3: Future Planning Proposals

Caught by flood waters		Trapped due to a lack of flood free road access	Trapped on roads/ Moorebank Peninsula
R1 (Chipping Norton): 956	R2 (Chipping Norton): 647	19 (Warwick Farm): 720	I4 (Moorebank): 9,673 vehicles trapped on the high flood island
I1 (Chipping Norton): 1,514	R5 (Chipping Norton): 35	R18 (Warwick Farm): 237	8,579 vehicles trapped on the Moorebank Peninsula ¹
IR1 (Chipping Norton): 104	R6 (Chipping Norton): 258		
I14 (Moorebank): 38,171	R7 (Moorebank): 996		
I4 (Moorebank): 891 I5 (Moorebank): 33	R8 (Moorebank): 1,353 R9 (Moorebank): 956		
R12 (Moorebank): 122	R15 (Liverpool): 510		
I12(Moorebank): 659 R16 (Liverpool): 1,421	I7 (Liverpool): 782 R17 (Warwick Farm): 74		
Hzone (Warwick Farm): 1,717			
Total: 51,199 vehicles		Total: 957 vehicles	Total: 18,252 vehicles

 $^{1} Note that these numbers include those that are eventually overtaken by floodwaters in Chipping Norton and Moorebank. \\$

These results indicate that at least 61,829 vehicles (with one to two people per vehicle), or about 69% of the approximately 89,200 total modelled vehicles, do not successfully evacuate and are affected by flooding in Scenario 3 (note that, to avoid double counting, this estimate does not include the count of additional vehicles trapped on the Moorebank Peninsula but not caught by floodwaters in Table 15).



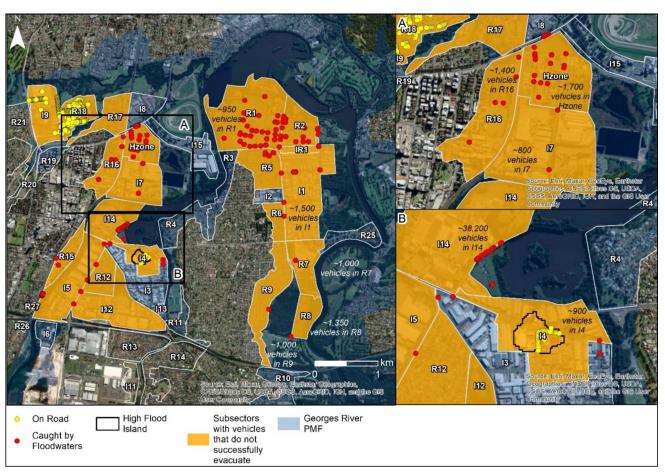


Figure 22. End results of Scenario 3 showing subsectors where vehicles do not successfully evacuate, and vehicles trapped on the road or caught by floodwaters.





6.5 Scenario A Results

Scenario A represents an improvement from Scenario 2, as non-residential traffic has additional evacuation destinations and a private evacuation route has been included to account for I9 and R18 evacuation. There are slightly fewer vehicles trapped in total compared to Scenario 2. These vehicles come from the same subsectors as Scenario 2, however slightly more vehicles are trapped from some subsectors and slightly fewer from other subsectors. This is likely due to the random merging of vehicles in the model. Appendix B Figures B15 through B18 show excerpts of the Scenario A model run at key time steps. These are:

- T = -2:55 hours (Figure B15): Vehicles leave predominantly industrial subareas in west Moorebank (e.g. I3, I5 and I13). The primary evacuation routes are south on Moorebank Avenue to the M5, or on the Hume Highway for vehicles originating from west of the river (e.g. R26). Non-residential vehicles also travel east on the M5. Vehicles whose destinations are west or south are travelling west on Newbridge Road to the Hume Highway.
- T = 5 hours (Figure B16): As in the previous scenarios, there is still some queueing to get onto the M5 via Nuwarra Road, however this is reduced compared to previous scenarios. Evacuation of western Moorebank is occurring more quickly compared to Scenario 2. There is less queuing on the Hume Highway to get onto the M7 via the Camden Valley Way compared to Scenario 2.
- T = 8:35 hours (Figure B17): At this time, the first vehicles are overtaken by floodwaters in Chipping Norton (IR1). This is because of the amount of queuing on Nuwarra Road, preventing all of northern Chipping Norton from evacuating before the roads flood. It is also noted that vehicles are able to evacuate from I9 and R18 due to the provision of floodfree road access through subsector 19.
- T = 28.5 hrs (Figure B18): At the end of the modelled PMF, accounting for TSF, there are 97 vehicles caught by floodwaters (red cells).
- When the Moorebank Peninsula is cut off by floodwaters, accounting for TSF, there are 227 vehicles trapped on the Moorebank peninsula accounting for TSF. The above vehicles caught by floodwaters are included in the numbers below, but all of these vehicles do not necessarily get overtaken by floodwaters as they rise, as there is some queueing capacity on the roads above the floodwaters.

The detailed results of Scenario A are summarised in Table 16 and Figure 23.

Table 16. Scenario A: Modified Future Infill Results

Caught by flood waters	Trapped on the Moorebank Peninsula ¹	Trapped due to a lack of flood free road access
I1 (Chipping Norton): 93 vehicles	I1 (Chipping Norton): 19 vehicles	
IR1 (Chipping Norton): 4 vehicles	I2 (Chipping Norton): 21 vehicles	
	IR1 (Chipping Norton): 7 vehicles	
	R1 (Chipping Norton): 64 vehicles	
	R2 (Chipping Norton): 4 vehicles	
	R5 (Chipping Norton): 106 vehicles	
	R11 (Moorebank): 6 vehicles	
Total: 97 vehicles	Total: 227 vehicles	None

¹Note that these numbers include those that are eventually overtaken by floodwaters in Chipping Norton.



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These results indicate that 227 vehicles (with one to two people per vehicle), or less than 1% of the approximately 29,000 total modelled vehicles, do not successfully evacuate and are affected by flooding in Scenario A.

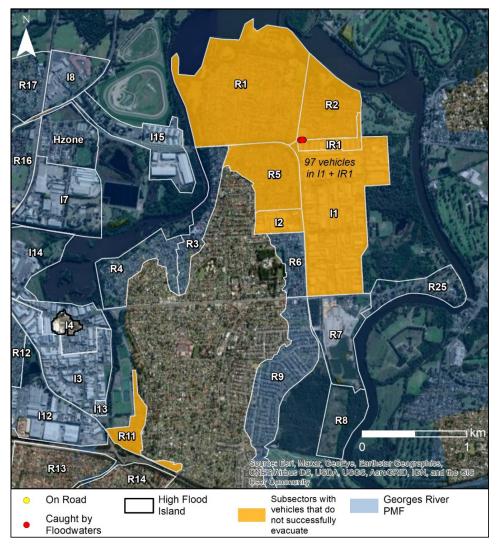


Figure 23. End results of Scenario A showing subsectors where vehicles do not successfully evacuate, and vehicles trapped on the road or caught by floodwaters.

6.6 Scenario B Results

Scenario B represents an improvement from Scenario 3, as there are fewer evacuating vehicles and non-residential traffic have additional evacuation destinations. Appendix B Figures B19 to B23 show excerpts of the Scenario B model run at key time steps. These are:

• T = -2:55 hours (Figure B19): Vehicles leave industrial and residential subareas in west Moorebank (e.g. I3, I5 and I13). The primary evacuation routes are south on Moorebank





Avenue to the M5, or on the Hume Highway for vehicles originating from west of the river (e.g. R26). Non-residential vehicles also travel east on the M5.

- T = 0 hours (Figure B20): By this point, there is queueing throughout the study area. There
 is queueing throughout Chipping Norton and Moorebank to get on the M5 via Nuwarra
 Road, in Moorebank west to get on the M5 via Moorebank Avenue, and in Warwick Farm
 on the Hume Highway to get onto the M7 via the Camden Valley Way. Non-residential
 vehicles are also still travelling east on the M5.
- T = 5:00 hours (Figure B21): There is extensive queueing throughout the study area, including in Moorebank, Chipping Norton, Liverpool and Warwick Farm. Many vehicles throughout these areas are not able to enter the roads yet since they are at capacity.
- T = 8:05 hours (Figure B22): The first vehicles are overtaken by floodwaters in I3 as
 floodwater rise in western Moorebank. Floodwaters approach houses in Chipping Norton,
 Warwick Farm and Moorebank East, which have not yet fully evacuated. It is also noted
 that vehicles are able to evacuate from I9 and R18 due to the provision of flood-free road
 access through subsector I9.
- T = 28:30 hours (Figure B23): At the end of the modelled PMF, accounting for TSF, there are 32,178 vehicles caught by floodwaters (red or orange cells).
- When the Moorebank Peninsula is cut off by floodwaters, accounting for TSF, there are 8,040 vehicles trapped on the Moorebank peninsula accounting for TSF. The above vehicles caught by floodwaters are included in the numbers below.

The results of Scenario B are summarised in Table 17 and Figure 24.

Table 17. Scenario B: Modified Future Planning Proposals Results

Caught by flood waters	Trapped on the Moorebank Peninsula ¹	Trapped due to a lack of flood free road access
R1 (Chipping Norton): 955 vehicles	R1 (Chipping Norton): 1,134 vehicles	
R2 (Chipping Norton): 635 vehicles	R2 (Chipping Norton): 868 vehicles	
R5 (Chipping Norton): 36 vehicles	R3 (Chipping Norton): 314 vehicles	
IR1 (Chipping Norton): 102 vehicles	R5 (Chipping Norton): 722 vehicles	
I1 (Chipping Norton): 1,311 vehicles	R6 (Chipping Norton): 322 vehicles	
R16 (Liverpool): 53 vehicles	IR1 (Chipping Norton): 103 vehicles	
R17 (Warwick Farm): 74 vehicles	I1 (Chipping Norton): 1,660 vehicles	
I7 (Liverpool): 1,155 vehicles	I2 (Chipping Norton): 206 vehicles	
I4 (Moorebank): 2,903 vehicles (note: many of these are trapped on the small high flood island in I4)	R9 (Moorebank): 99 vehicles	
I14 (Moorebank): 23,391 vehicles	R11 (Moorebank): 6 vehicles	
Hzone (Warwick Farm): 1,563 vehicles	I4 (Moorebank): 2,584 vehicles	
	I14 (Moorebank): 22 vehicles	
Total: 32,178 vehicles	Total: 8,040 vehicles	None

¹ Note that these numbers include those that are eventually overtaken by floodwaters in Chipping Norton and Moorebank.

These results indicate that at least 32,178 vehicles (with one to two people per vehicle), or about 48% of the approximately 67,500 total modelled vehicles, do not successfully evacuate and are affected by flooding in Scenario B (note that, to avoid double counting, this estimate does not include the count of additional vehicles trapped on the Moorebank Peninsula but not caught by floodwaters in Table 17).





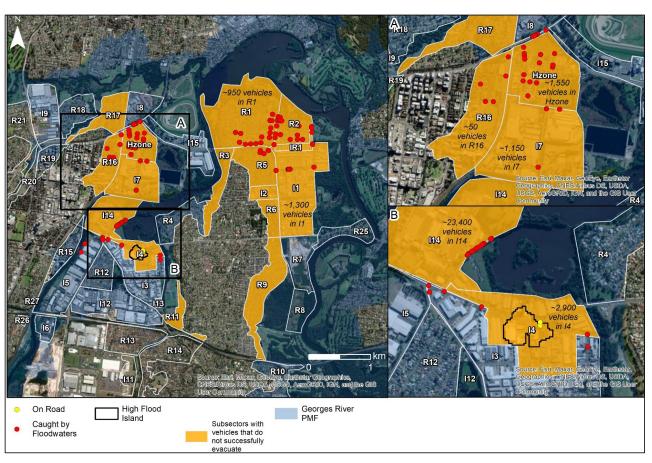


Figure 24. End results of Scenario B showing subsectors where vehicles do not successfully evacuate, and vehicles trapped on the road or caught by floodwaters.





6.7 Sensitivity Analysis

With any modelling it is appropriate to consider the sensitivity of the outputs to the model's assumptions and inputs.

It would be fair to say that most, but not all, of the assumptions used in the modelling, including those recommended by the NSW SES, are conservative and so the modelling results presented in this report present a worst case, extremely low probability scenario.

While it is important to understand the worst possible case when undertaking analyses with regard to loss of life, particularly when tens of thousands of people are involved, when evacuation consequences are inconvenient rather than fatal (such as long traffic queues), more likely outcomes may be tolerable.

The following observations are made with regard to the sensitivity of the model outputs to changing key parameters.

6.7.1 Flood Behaviour

It has been assumed that the Georges River flood will be rising as fast as the design PMF. While it is possible that floods smaller than a PMF could rise as quickly as a PMF, the assumed rate of rise is likely to be at the upper end of the scale with regard to rates of rise across the full spectrum of flood probabilities.

Nevertheless, it is possible that some floods could rise more quickly than the design flood. One way to determine where the flood used in the modelling sits in that regard would be to undertake a Monte Carlo analysis of different temporal spatial rainfall distributions across the catchment. However, this exercise may not be practical for the Georges River catchment due to the high level of computational capacity required. Alternatively, selected additional flooding scenarios could be considered for the assessment of evacuation performance beyond the scope of this study, and the modelled outputs from this study could be interpreted to determine the potential evacuation constraints during other flooding events.

Provision of and Requirements for Flood Warning (NSW SES, 2019) states that the target warning lead time for the Liverpool and Milperra gauges above 4.0 m gauge height is 12 hrs. It defines the Target Warning Lead Time as the minimum lead time that will be provided before the height or the flood class level is exceeded. It makes no statements about this being dependent on the rate of rise of the flood because presumably it is dictated by the travel time of fallen rain and river flows from the upstream gauge locations to Liverpool whereas the rate of rise is determined by the amount of rain which has fallen. Therefore, the warning time available is a minimum of 12 hrs regardless of the rate of rise of the flood. It is noted that a more comprehensive flood forecasting and warning system for the Georges River may be able to extend the available warning time and therefore reduce evacuation constraints. This might include development of a Georges River Probabilistic Forecast product.

However, were a flood to rise faster than has been modelled that would compress the duration of the evacuation and more subsectors are likely to be using evacuation routes simultaneously which would increase congestion and queuing and is likely to result in more vehicles being trapped by floodwaters.

Any slower rate of rise than that used in the modelling would provide more time for evacuees to depart and result in less risk of evacuees being trapped.

On balance, most floods would have more time for evacuation than has been modelled rather than less.





6.7.2 Number of Premises Evacuating

The number of existing premises in 2016 is likely to be quite accurate and the number of premises in future planning proposals can be controlled by the urban planning process. The main unknown in the modelling of the future development scenarios is the extent of infill development and intensification which will take place under existing zonings. While planning controls permit duplexes and granny flats on average sized blocks, town houses on large blocks and residential flat buildings on R3 and R4 zoned land, there is nothing preventing growth in dwelling numbers beyond what has been assumed in the modelling. The numbers used in the modelling are the best available forecasts but they could be high or low.

Where infill development takes place will have a significant impact on evacuation capacity. ⁶

The model has been set up so that creek and overland flow flooding can also be incorporated to test the impact of concurrent flooding from another source during a Georges River flood. This sensitivity analysis is yet to be run. In the current model scenarios, only areas impacted by Georges River flooding evacuate.

Although there are no warning systems for flooding of the creeks and the NSW SES is unlikely to have sufficient lead time to issue evacuation orders, people may self-evacuate and add to the evacuation traffic on the road network. This is less likely to be problematic from flooding on Brickmakers Creek, Cabramatta Creek and Maxwell's Creek as they would be evacuating onto the Hume Highway in a location where in most scenarios it has some spare capacity. Furthermore, there are numerous streets between these creeks and the Highway where vehicles could queue above the reach of floodwaters.

Flooding from Anzac Creek may be more problematic as it may increase the evacuation loads on Nuwarra Road and Heathcote Road which already have capacity issues which are preventing vehicles evacuating in some scenarios.

The 2016 Census indicates that dwellings in Liverpool LGA had an average occupancy rate of about 95% on Census night. That means that when a flood occurs about 5% of the dwellings could be unoccupied and therefore not have to evacuate. As this discounting has not been applied then the modelling may be overestimating the number of evacuating residential vehicles by about 5%.

Overall, the number of premises evacuating in the modelling is likely to be at the upper end of possible estimates.

6.7.3 Number of Evacuating Vehicles

The numbers of vehicles per dwelling have been derived from Census data and while the number of vehicles per person has been increasing in Australia and Liverpool LGA, the number of people per dwelling has been declining (steady in Liverpool LGA from 2011 to-2016). It is therefore unlikely that the number of vehicles per dwelling would continue to increase substantially. This is particularly likely to be the case in those parts of the study area which are close to the Liverpool CBD and are well serviced by public transport.

⁶ Since completing the modelling it has become apparent that there may have been development since the census dates used but which was not included in the infill data provided by Council. In the case of non-residential development the 2011 Census travel to work data has been used and there has been a significant development on Governor Macquarie Drive opposite the race course stables as well as on the corner of Alfred Road and Wendlebury Road since that date. In the case of residential development there is recent development in Shepherd Street which is not picked up by the infill development (although it is included in the Planning Proposal scenario) and there may also be scattered small scale residential intensification.





It is also arguable that assuming one vehicle per dwelling for new apartments is conservatively high, particularly as it would be possible to impose development controls which limited the number of vehicles at new developments.

Another conservative assumption in the modelled scenarios is that everyone who is outside of the floodplain when evacuation is called will be able to return to their homes in the 12-hour warning window and then evacuate from there. In the sort of extreme rainfall that would require large scale evacuation from the Georges River it is probable that flooding is occurring across the broader Sydney Metropolitan Area and road and public transport networks will not be operating efficiently. Therefore, some people will not be able to reach their homes because their route home is either flooded or otherwise disrupted and so the estimated numbers of vehicles leaving from residential premises would be an overestimate.

It is much harder to estimate the number of vehicles evacuating from business premises and the method used would represent the absolute maximum number were all employees at work at the same time. Where a factory has two 12 hours shifts for instance, then only half of the vehicles estimated to be at those premises in the modelling would be there at any one time.

Not many businesses operate 24/7 and a business which is open as much as 70 hours per week is unoccupied for nearly 60% of the time. It is therefore unlikely that all businesses and all dwellings will have to evacuate simultaneously. Furthermore, with evacuation orders being issued about 12 hours in advance, it should be possible to tell many people not to come to work if businesses are not open at the time that the evacuation order is given.

If evacuation is ordered when people are at work then the situation is more complicated. The duration of the total evacuation in the PMF scenario modelled is close to 24 hours. While businesses are likely to close during the evacuation and therefore there is an opportunity to ensure that less flood prone businesses are occupied when their evacuation needs to be triggered, those employees will leave work at the end of their shift earlier in the evacuation. Therefore, it is possible that the modelled scenario underestimates the traffic on the road network early in the flood when lower premises are evacuating, and higher premises are leaving at the end of a normal day's work but merging with evacuation traffic.

The evacuating traffic from the equestrian zone was even more difficult to estimate. The number of vehicles in the area increases during race meets but those are cancelled in the weather which generates floods. There are numerous stables with many horses and during an evacuation it is likely that the owners would want to evacuate the animals. Large numbers of horses can be transported in many small horse floats or a small number of very large horse floats. It either case multiple trips are likely to have to be made as there would not be sufficient floats to evacuate all of the horses in one trip. Furthermore, when these vehicles are queuing, they are likely to take up more road space than a 6m length assumed in the modelling. The modelling has therefore probably underestimated the traffic impacts from evacuating the equestrian zone, however, the future planning for that area is to change its land use so in the planning proposal scenarios these underestimates had no impact.

All of the above suggests that the number of evacuating vehicles being used in the model is an upper bound number.

6.7.4 Flood Warning Times

The warning times used to guide evacuation triggers in the model are the minimum times which the Bureau of Meteorology is willing commit to. NSW SES has advised that for the Georges River these are based on observed fallen rain and measured stream gauging as well as some rainfall forecasting. In a real event there may be longer warning times available, particularly if the flooding evolves more slowly. The BoM flood warning timeframe of 12 hours may be able to be increased with the

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development of a Georges River Probabilistic Forecast product or other features of a more comprehensive flood forecasting and warning system.

6.7.5 Warning Dissemination Time

The modelling assumes all houses are door knocked to receive an evacuation order. It does not make any allowance for people receiving an evacuation order by electronic broadcast, direct contact from neighbours, friends or relatives, or by observing others evacuating nearby. While they may receive the message more quickly than assumed it is unlikely that the majority will receive it more slowly and so the capacity of evacuation routes is unlikely to be underutilised because of slower warning dissemination than assumed in the model.

It is noted that all evacuation models assume a departure profile based on various curves, taking into account warning diffusion processes and time taken to initiate protective action. The TEM assumes a linear departure pattern as a simplification. NSW SES has advised that research indicates that the choice of departure curves has limited impact on results as the capacity of the evacuation network in inclement weather is the main limiting factor.

6.7.6 Departure Delays

The two-hour delay between people receiving an evacuation order and actually leaving is a NSW SES recommendation. While post-flood surveys Molino Stewart has undertaken for the NSW and Victorian SES suggest that is about the right order of magnitude for people who evacuate, those same surveys suggest that the vast majority of residents do not evacuate at all when ordered to do so. Most would probably await the arrival of floodwaters at their doorstep before leaving and then it would be too late for vehicular evacuation and, for those who get isolated by floodwaters, too late for pedestrian evacuation.

While this suggests that the model may be significantly overestimating the amount of actual traffic congestion on the road, it may mean that it significantly underestimates the number of people who safely evacuate ahead of rising floodwaters.

This evacuation model is in effect modelling the capacity of the transport network to see how many people can evacuated within the 12-hour warning timeframe given a 100% compliance rate.

6.7.7 Route Capacities

Urban roads can have a capacity of between 1,200 to 1,400 vehicles per hour per lane and freeways a rate of 2,000 vehicles per hour or more at a free flow speed of 100km/hr (Austroads). A rate of 600 vehicles per hour per lane as per the NSW SES TEM (Opper et al., 2009) is conservatively low and is the rate recommended for modelling the departure of vehicles from car parks.

NSW SES has advised that this traffic flow rate accounts for poor driving conditions due to inclement weather. It has advised that this rate has been reviewed by an external peer review group for the current HN Flood Strategy and is similar to evacuation rates observed in evacuations in the USA during inclement weather. Lower effective lane capacities and lower vehicle free speeds are often observed during inclement weather in the Sydney Metropolitan area.

It is unlikely that the rate will be significantly less than this.

However, it is acknowledged that the model does not account for through traffic which may be using the roads. While flooding could close the Hume Highway, Cumberland Highway and Newbridge Road to through traffic early in a flood, the M5 and M7 are likely to remain open to through traffic well into





the event and this could reduce the available road capacity for evacuation. Nevertheless, using 600 vehicles per hour per lane for the motorways arguably allows for some through traffic taking up capacity.

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The modelling also assumes that there is no provision for contraflow traffic on any of the evacuation routes. Any route which has contraflow would have its capacity increased. Contraflow for flood evacuation is not supported by NSW SES because of its resource demands and the fact that contraflow lanes do not flow at the same rate as other lanes.

6.7.8 Traffic Destinations

While the model makes a reasonable estimate of the distribution of non-residential traffic to different destinations based on Journey to work data, it has assumed all residential evacuees will head north on the M7 towards the M4 and the Homebush Evacuation Centre. It is noted that in reality, most people will make their own accommodation arrangements with only the residual travelling all the way to evacuation centre/s. However, there is no data available to be able to estimate how many people will evacuate to certain locations where they have friends or family.

Some will be able to find temporary accommodation with friends or relatives in flood free areas within the study area but above the reach of the PMF. Similarly, many evacuees will be able to head south (i.e. Campbelltown), east or west because that is where they can readily find temporary accommodation. However, since most of the metropolitan area is north of Liverpool and that the mass care facility would be in the Sydney Olympic Park precinct, it is reasonable to assume that most residential traffic will travel north on the M7. Nevertheless, the assumed number of vehicles converging on The M7 is likely to be an overestimate.

Although this assumption results in significant queues on the M5 and the Hume Highway leading into the M7, a comparison of Scenarios 2 and 3 with Scenarios A and B shows that sending some nonresidential traffic in directions other than northward relieves this queueing somewhat. This in turn revealed that regardless of what is happening on the highway and motorways, there are significant capacity issues on some of the roads feeding onto these regional roads. In other words, many of the evacuation capacity issues are occurring within the network before evacuees have a choice about which direction they will head out of the study area.



7 | Implications for Evacuation Planning and Strategic Planning

7.1 Existing Challenges

7.1.1 Orange Grove Road and Hargrave Park Place Areas

The Floodplain Constraints Categorisation Study (FloodMit, 2020) identified that Orange Grove Road Place (subsector I9 in this study) is affected by both Cabramatta Creek and Brickmakers Creek. This study found that it does not have a reliable evacuation route on public roads as all roads leading from it can be cut by creek flooding.

Similarly, this study found that the part of the Hargrave Park Place Area which is between the two creeks (subsector R18) does not have a reliable flood evacuation route on public roads. The FloodMit study reported that 56% of that Place Area is below the residential flood planning level.

These subsectors fall outside of the extent of the Georges River flood model due to truncation of the flood model. However, this area would be impacted by the Georges River flooding based on an extrapolation of the flood levels at the model extent along the contours using the digital elevation model (DEM) of this area.

During investigations a possible flood free evacuation route through private roadways within the industrial premises was identified (Figure 25) and included in Scenarios A and B. Modelling showed that this would facilitate the timely evacuation of these areas without interfering with the evacuation of others.

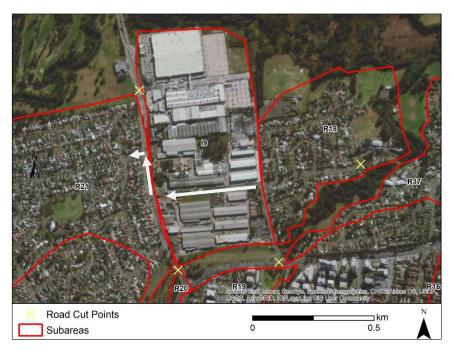


Figure 25. Possible vehicular evacuation route through private property





7.1.2 Residential Flood Islands

The following residential subsectors were identified as low flood islands and are listed in order of frequency of evacuation trigger:

- R25 Newbridge Road East (approximately 38 current dwellings or 114 people)
- R15 Shepherd Street/Riverpark Drive (at least 553 current dwellings or 1,548 people, noting this is likely to be an underestimate due to recent development)
- IR1 Residential component is Riverside Road Chipping Norton (approximately 8 current dwellings or 24 people)
- R1 Chipping Norton North of Governor Macquarie Drive (approximately 783 current dwellings or 2,349 people)
- R12 between Moorebank Avenue and Heathcote Road (approximately 331 current dwellings or 1,026 people)
- R2 Chipping Norton North of Governor Macquarie Drive (approximately 502 current dwellings or 1,506 people)

In addition, Sammut Crescent Chipping Norton, which is in R4, has a group of 11 houses (approximately 33 people) which are at the end of a cul-de-sac which can be isolated early in a flood.

The modelling suggests that under existing conditions all of these areas would have sufficient time to safely evacuate but should they delay evacuation residents may become trapped and then overwhelmed by flood waters. If emergency resources are limited their efforts need to focus on the timely evacuation of these subsectors.

Houses in Newbridge Road East start flooding in a 20% flood but they are part of a voluntary purchase scheme and over time are likely to be removed from the floodplain.

Shepherd Street, Riverside Road and Sammut Crescent get isolated in a 5% AEP flood

A 1% AEP flood is needed before parts of R12 becomes isolated, but it is virtually completely isolated and inundated in a 0.5% AEP flood.

A 0.2% flood is needed before parts of Chipping Norton are isolated.

The whole Moorebank Peninsula is a high flood island which becomes isolated when flooding exceeding a 0.2% AEP event cuts the on ramp from Moorebank Avenue, all other access to the peninsula having been cut at lower flood levels. A slightly higher flood would overtop the M5 and flow into the Moorebank Avenue underpass. Should this happen, it would take days to drain because the drainage system is only designed for local runoff.

As infill development increases on the Moorebank peninsula the flood modelling suggests that evacuation traffic queues on Nuwarra Road could create evacuation challenges for residents on Riverside Road. It may be necessary to use low forecast flood level to trigger their evacuation but that would increase the frequency with which they would need to evacuate and on some occasions, it would prove in hindsight to have been unnecessary.

7.1.3 Industrial Flood Islands

The industrial subsectors which are low flood islands are, in order of frequency of evacuation trigger:

- I5 between Moorebank Avenue and the Georges River (1,162 modelled employees/ vehicles)
- 13 Between Anzac Creek and Heathcote Road (953 modelled employees/ vehicles)
- I13 Junction Road (38 modelled employees/ vehicles)
- I15 Governor Macquarie Drive Warwick Farm (359 modelled employees/ vehicles)





- I1 Chipping North (1,955 modelled employees/ vehicles)
- 17 Scrivener Street Place Area (2,378 modelled employees/ vehicles)
- IR1 Barry Road Chipping North (156 modelled employees/ vehicles)
- I12 Between Moorebank Avenue and Heathcote Road (1,319 modelled employees/ vehicles)

The modelling indicates that all of these should have time for safe evacuation if evacuation orders are followed in a timely manner.

IR1 is the industrial properties fronting Barry Road. It is challenging to evacuate because the premises are raised more than 1m above the road which is quite flat and floods rapidly once the river breaks its banks in a 5% AEP flood. Furthermore, the modelling suggests that timely evacuation may become more challenging as residential infill development takes up more of the evacuation capacity of Nuwarra Road.

Similarly, the balance of the Chipping Norton industrial area (I1) has properties which can get isolated when the low lying parts of Riverside Road and Childs Road flood. The modelling suggests that these properties are at greatest risk of not being able to evacuate as residential infill development occurs.

It may be necessary to trigger the evacuation of these two subsectors at a lower forecast river level to ensure they have time to evacuate as residential densities increase.

Together I5, I3, I13 and I12 make up the Georges River South Place Area. Parts of this area is impacted by 5% AEP flooding with significant isolation in the 2% AEP event but complete isolation not occurring until the 0.2% flood.

In addition, I4 and I14 are high flood islands and they constitute the Georges River North Place area. They become isolated in a 2% AEP flood.

Under existing conditions and with projected infill development it is expected that these areas will continue to have sufficient time to evacuate.

7.1.4 Evacuation Capacity Improvements

Another way of dealing with the growing evacuation challenge on the Moorebank Peninsula would be to increase the evacuation capacity. The model has sent all of the evacuating vehicles from Chipping Norton along Nuwarra Road which is a single lane road to near its intersection with Heathcote Road. While Heathcote Road is a two lane road, its on ramps onto the M5 are single lane.

While parts of Chipping Norton could use Brickmakers Drive as an evacuation route, once that joins Nuwarra Road it once again narrows to a single lane. It is noted, however, that there is a very wide road reserve on Nuwarra Road and the M5 underpass so there may be capacity to provide an additional lane through there. Once at Heathcote Road one stream of traffic would need to be directed onto Heathcote Road and the other through to Wattle Grove Road and Anzac Road from where they could enter the M5 via Moorebank Avenue.

This arrangement may only be suitable early in a flood evacuation because in larger floods Brickmakers Road gets flooded and also evacuees from Hammondville and Holsworthy need to use Anzac Road. It would also be dependent on emergency services having sufficient resources to direct traffic at the Heathcote Road intersection.

While a flood larger than a 0.2% event would be needed to cut the M5 at Moorebank Avenue, this could be overcome if the proposed additional M5 lanes across the Georges River could be provided with a higher level of flood immunity. This would ensure that the peninsula did not get isolated and the M5 did not remain closed for long periods in more extreme events.

Route capacities may also be increased through the provision of contraflow traffic however, this would only be of significant benefit if there are no downstream capacity constraints. For example, there





would be little benefit in providing a second lane of evacuation capacity through contraflow if the two lanes then had to merge into one to enter a motorway. The contraflow lane would not reduce evacuation time but might provide some additional space for vehicles to queue above the reach of floodwaters. It is noted that NSW SES does not support the use of contraflow for flood evacuation.

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7.1.5 Alternative Evacuation Modes

The NSW SES evacuation planning for the Georges River relies upon motor vehicle evacuation and that is why vehicular evacuation has been the focus of the modelling in this study. Nevertheless, not everyone has access to a motor vehicle for evacuation. Based on 2016 ABS Census data (available at the Statistical Area [SA]1 level), a significant number of dwellings in the study area do not have a vehicle. In some suburbs in Liverpool and Warwick Farm (i.e. R16 and R17) over 30% of dwellings do not have a vehicle (Figure 26). It is estimated that there are around 4,000 people without a vehicle at home in Liverpool and Warwick Farm. On the Moorebank peninsula, where car ownership is higher; it is estimated that 550 people do not have a vehicle at their home.

Warwick Farm (particularly subsector R17) is noted as an area requiring special consideration, as it contains a number of public housing developments. NSW Land and Housing Corporation (LAHC) currently has 1,298 dwellings in the study area across both Warwick Farm and Cartwright (the latter only subject to creek flooding) with an average occupancy of 2 people per dwelling. LAHC has also informed this study that its development projection for the study area over the next 20 years is 481 additional dwellings, with 45% of the additional dwellings in Warwick Farm and 55% in Cartwright. LAHC notes that these tenants are older and have higher rates of disability and mobility issues when compared to the general population, and currently 37% of tenants in the Liverpool LGA are eligible for seniors housing. As indicated by subsector R17, where 43% of dwellings do not have a vehicle, these residents are also more likely to not have access to a vehicle.

The suggestion has been made that pedestrian or rail evacuation could be relied upon for some, or all, of the flood evacuation.

In response, the NSW SES has advised that large scale rail evacuation in Sydney cannot be relied upon as a primary evacuation strategy or where vehicular evacuation fails during flood events because of the unreliability of the rail network during major storm events. For example, in April 2015, Sydney Trains estimated nearly 200 significant incidents to Sydney Trains and NSW Trains, and approximately 585 peak and non-peak services were affected during a 3-day period of storms (TfNSW, 2017).

NSW SES has also advised that pedestrian evacuation is limited by a number of factors including safety challenges of pedestrians and vehicles sharing routes, the large number of officials required to coordinate the evacuation on-ground, pedestrians being exposed to the weather, and the limited capacity to carry important documents and possessions.





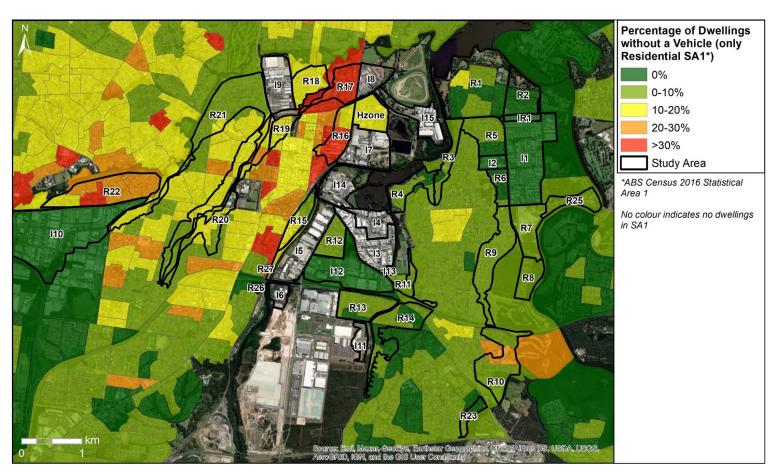


Figure 26. Percentage of dwellings without a vehicle in the study area (based on 2016 ABS Census data at the Statistical Area [SA] 1 level.









7.2 Future Challenges

7.2.1 General

The following section focusses on the evacuation challenges specific to each development. However, there are some considerations which are common to more than one of the planning proposals:

Existing "Spare" Capacity - The results of Scenario B can provide some indication of the scale of development that could be included without compromising evacuation capability in the study area. However, it is stressed that this only allows for a high-level calculation, and the capacity would have to be modelled in order to test the impact of a reduction in vehicles from certain developments. These nominal capacities are discussed in the following sections. Note the vehicles which escape the floodwaters but are trapped on the Moorebank Peninsula have not been accounted for in those calculations.

Evacuation Route Upgrades - It would be important to ensure that any road infrastructure upgrades that are to be relied upon to improve flood evacuation are fully approved and funded before the development which they support is approved.

People Without Access to Vehicles – As explained in Section 7.1.5, there are already many people in the study area who do not own a motor vehicle. It is possible that some of the proposed apartment developments in close proximity to Liverpool Station could be approved with less than one parking space per dwelling meaning that there would be an expectation that a proportion of the population will not own a car. This would increase the number of people who do not have a vehicle who would have to evacuate during a flood.

7.2.2 The Grove

The evacuation modelling suggests that there should be sufficient road capacity for the evacuation of The Grove proposal providing that a flood free evacuation route connection is created between Homepride Avenue and Orange Grove Road. Without this connection existing residential and commercial development in the area is unable to have assurance of safe evacuation.

7.2.3 Shepherd Street

The modelling suggests that there is sufficient road capacity for the evacuation of proposed development on Shepherd Street⁷. The challenge in this location is the inundation of the Shepherd Street underpass. If evacuees delay they may be trapped between the river and the rail line. There are two ways in which this residual risk can be managed.

The first would be to provide an emergency level crossing of the railway line at Atkinson Street (Figure 27). This would require approval from Sydney Trains but such an arrangement has been provided in two locations of the Hawkesbury floodplain near Mulgrave Station and Windsor Station. This could either be a vehicular and pedestrian crossing or only a pedestrian crossing and be opened by emergency services when the Shepherd Street underpass is flooded. This would not only benefit future development but also existing developments in the subsector.

⁷ Note that it has been determined that the number of existing vehicles requiring evacuation from Shepherd Street has likely been underestimated due to recent apartment developments but many of these are included in the vehicles estimates for the Planning Proposal scenario.





However, it is noted that this option would require the closure of the rail corridor after the cessation of train services on the line to the south of Liverpool rail station and would need to be examined further with the rail operator and emergency services.

The second method would be to make provision for sheltering in place because some parts of the precinct are flood free and others are low hazard in a PMF flood.



Figure 27. Atkinson Street looking west across railway line

7.2.4 Warwick Farm Structure Plan

The evacuation modelling makes it clear that there is insufficient road capacity to cater for the evacuation of the planning proposals for the Warwick Farm racing precinct. Closer investigation shows that there are a number of reasons for this.

Firstly, the proposed scale of the development in the precinct would see about 3,700 vehicles evacuating from the precinct, mostly via Warwick Street onto the Hume Highway. These vehicles alone would occupy the road for more than six hours at the modelled rate of 600 vehicles per hour.

Secondly, the industrial area to the south (I7) starts evacuating only half an hour earlier and has nearly 2,400 vehicles which need to evacuate through the Munday Street Place Area, occupying the same evacuation road for about four hours. This means that when the evacuee response delays and traffic safety factors are taken into consideration, the total evacuation time exceeds the available warning time by a few hours.

Thirdly, at the same time that these two subsectors are evacuating onto the Hume Highway at Warwick Farm, so are subsectors I15, I8 and R17 which is taking up much of the capacity of the three lanes on the Hume Highway meaning that the proposed development has to queue before evacuating.

Finally, because the area is relatively flat, there is very little time between when the lowest parts of the subsector begin to flood and the whole precinct is flooded. Everyone, has to evacuate from the





precinct and the surrounding precincts simultaneously with no opportunity for those on higher ground to delay their evacuation.⁸

Other than reducing the scale of the proposed development, there is not a lot which can be done to mitigate the above challenges. Providing two exit lanes on Warwick Street might assist if it does not create capacity issues on the Hume Highway.

In Scenario B, there are 2,845 vehicles caught in floodwaters in Liverpool and Warwick Farm, which is in part due to the additional vehicles associated with the planned development in Warwick Farm. The Warwick Farm developments account for 3,709 additional vehicles in Scenario B. This would imply that the road network has the potential spare capacity for 864 vehicles from Warwick Farm in Scenario B. Reducing vehicle lengths to 6m in this area within the model may increase the number of vehicles able to evacuate from the area but accounting for proposed growth in public housing north of the Hume Highway may decrease this number.

Sheltering within buildings is not advisable as the area is surrounded by hazardous floodwaters in the PMF for more than 24 hours and for up to 8 hours in a 0.2% AEP flood.

The precinct is not a flood island and rises gently towards the Hume Highway which then rises rapidly as it crosses the rail line to higher ground west of the railway walking out ahead of rising flood waters should vehicular evacuation fail would be an option.

7.2.5 Moore Point

The planning proposals for Moore Point far exceeds the capacity of the road network to cater for their evacuation during a flood. Together they would result in nearly 32,000 vehicles having to evacuate in advance of a flood under the current settings. Although the developments themselves would be constructed to be above the flood planning level, Newbridge Road is cut by flooding in a 2% AEP flood near the Bridges Road intersection (Figure 28). And vehicular evacuation would need to be completed before that occurred.

Newbridge Road has two west bound lanes and even if exit roads from the developments could be configured to match this road capacity, it would take more than 26 hours for all of the vehicles to evacuate from the precinct without allowing for warning acceptance, warning lag and traffic safety factors. This compares to the 12 hours warning time which is available.

While in theory some of the development could evacuate east on Newbridge Road, this would not be advisable because the only flood free evacuation route in that direction is along Nuwarra Road and that is likely to exceed its capacity with forecast infill development.

Some of the development could also theoretically head south on Heathcote Road and or Moorebank Avenue but the modelling has shown that would have an impact on other traffic currently using those roads.

This planning proposal either needs to be reduced substantially in scale or an alternative to vehicular evacuation has to be accepted as the primary flood emergency response for the precinct.

⁸ On review of the model results it would appear that in Scenario B we did not change vehicle lengths from 15 m to 6 m in this area to account for the fact that there would not be the horse floats in the future. This will also be contributing to the capacity constraints and would need to be corrected and rerun to get a more accurate estimate of available capacity.





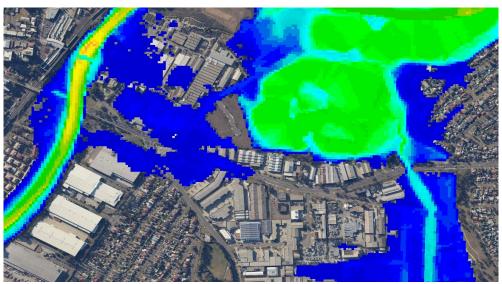


Figure 28. 2% AEP flood extent

In Scenario B there are 26,294 vehicles caught in floodwaters in Moorebank, which is largely due to the additional vehicles associated with the planned development in Moore Point. The Moore Point developments account for 31,859 additional vehicles in Scenario B. This would imply that the road network could have capacity for 5,565 vehicles from Moore Point, accounting for the road upgrades included in Scenario B.

Sheltering in place would be problematic because the area is surrounded by hazardous flood waters for more than 24 hours in a PMF and tens of thousands of people would be sheltering. The chance of loss of life due to a secondary emergency or inappropriate behaviours is high.

Pedestrian evacuation might be viable but that itself presents several challenges:

- Because of the low point in the middle of the precinct, the western part of the precinct
 would need to evacuate west over Newbridge Road bridge which is higher than the PMF
 and the eastern side of the development would have to evacuate east on Newbridge Road
 over Anzac Creek which has flood immunity up to the 0.5% AEP flood. This would create
 two different destinations for evacuees
- The NSW SES plans do not currently make provision for multiple local evacuation centres during extreme flood events, only smaller scale floods
- Evacuation centres usually only cater for a proportion of the population that cannot find their own accommodation. These centres would have to cater for tens of thousands of people arriving on foot most likely in inclement weather.
- Ground levels and pedestrian links will need to be designed so that people exiting at ground level, or alternatively from other floors, from buildings have a continuously rising evacuation route to land above the PMF level

7.2.6 Moorebank East

The five development sites at Moorebank East would add substantial evacuation traffic to the Moorebank peninsula which may approach its evacuation capacity with infill development under current zonings. While the model shows that all of the proposed development in Moorebank East





would be able to evacuate in time, it only does so by blocking the evacuation of residential and non-residential vehicles evacuating from Chipping Norton.

In Scenario B there are 3,039 vehicles caught in floodwaters in Chipping Norton, which is largely due to congestion on Nuwarra Road and which is exacerbated by the planned development vehicle numbers from Moorebank East. In this scenario, Moorebank East accounted for 3,728 additional vehicles. This could imply that only approximately 700 vehicles in Moorebank East could be added to the road network before vehicles are caught by floodwaters in Chipping Norton. However, it is noted that Site C, which includes 363 vehicles in the model, has development approvals. This would take up half of the available road capacity, accounting for the planned road upgrades included in Scenario B. It is also noted that there could be many more vehicles which escape the floodwaters but are potentially stranded on the peninsula because of the blocking effect of these developments.

The widening of a section of Nuwarra Road and the use of Brickmakers Drive and Anzac Road early in the evacuation, as suggesting in Section 7.1.4, might go some way to mitigating this impact and facilitate some additional development in Moorebank East.

A rising pedestrian evacuation route has also been approved for this site to be used in case vehicular evacuation failed. This is important because this whole area is surrounded by hazardous floodwaters for more than 24 hours in the PMF.



8 | Conclusions and Recommendations

8.1 Conclusions

This study has identified several Georges River flood evacuation findings and challenges for Liverpool LGA, including the following key points.

8.1.1 Current Evacuation Findings and Challenges

- Even under present conditions, there are challenges to flood evacuation from the Georges
 River PMF within the study area. This is primarily due to capacity constraints on Nuwarra
 Road, which results in long queuing and vehicles being caught in floodwaters and stranded
 on roads. The model suggests that more than 130 vehicles could be caught by floodwaters
 in Chipping Norton, and over 2,300 trapped on the Moorebank Peninsula when the M5 is
 cut by floodwaters.
- In the most extreme flood events, the M5 will flood at the Moorebank Avenue underpass and, because its drainage is only designed for local rainfall, could be closed for several days due to ponded water. This could prevent some evacuees from leaving the peninsula and would disrupt through traffic for weeks. A planned additional westbound lane crossing the Georges River at this location could be constructed in such a way to ensure access to Moorebank Peninsula in even the most extreme floods.
- Subsectors I9 and R18 in Warwick Farm, which are subjected to both Georges River and
 creek flooding, may be unable to evacuate due to a lack of a reliable evacuation route on
 public roads that are not at risk of being cut by creek flooding.
- The following residential subsectors were identified as low flood islands, where occupants
 may get trapped and overwhelmed by floodwaters if they don't leave promptly.
 Emergency services may need to focus resources on these areas to ensure timely
 evacuation. They are (listed in order of frequency of evacuation trigger):
 - o R25 Newbridge Road East (approximately 38 current dwellings or 114 people)
 - R15 Shepherd Street/Riverpark Drive (at least 553 current dwellings or 1,548 people, noting this is likely to be an underestimate due to recent development)
 - IR1 Residential component is Riverside Road Chipping Norton (approximately 8 current dwellings or 24 people)
 - R1 Chipping Norton North of Governor Macquarie Drive (approximately 783 current dwellings or 2,349 people)
 - R12 between Moorebank Avenue and Heathcote Road (approximately 331 current dwellings or 1,026 people)
 - R2 Chipping Norton North of Governor Macquarie Drive (approximately 502 current dwellings or 1,506 people)
- The following industrial subsectors were identified as low flood islands (listed in order of frequency of evacuation trigger):
 - I5 between Moorebank Avenue and the Georges River (1,162 modelled employees/ vehicles)
 - o I3 Between Anzac Creek and Heathcote Road (953 modelled employees/ vehicles)
 - o I13 Junction Road (38 modelled employees/ vehicles)
 - o I15 Governor Macquarie Drive Warwick Farm (359 modelled employees/ vehicles)
 - o I1 Chipping North (1,955 modelled employees/ vehicles)
 - I7 Scrivener Street Place Area (2,378 modelled employees/ vehicles)
 - o IR1 Barry Road Chipping North (156 modelled employees/ vehicles)





- I12 Between Moorebank Avenue and Heathcote Road (1,319 modelled employees/ vehicles)
- While the NSW SES evacuation planning for the Georges River relies upon motor vehicle
 evacuation, there are currently thousands of people within the floodplain that do not have
 access to a vehicle (over 30% of dwellings in some areas). It is recognised that both rail
 and pedestrian evacuation have their limitations and may not be able to be relied upon.
 Furthermore, they are generally not supported by the NSW SES.
- Failing to evacuate or deliberately Sheltering in Place in the Georges River floodplain is
 particularly risky considering buildings can be isolated and inaccessible to emergency
 services for more than 24 hours in the PMF.

8.1.2 Future Evacuation Findings and Challenges

- The planned two-lane addition to the M5 over the Georges River would improve evacuation capacity from Moorebank and Chipping Norton for existing development, as it would improve traffic flow onto the M7 via the Hume Highway.
- Future infill development within currently zoned land may be able to be accommodated through the provision of planned road upgrades in the study area, particularly the additional lanes on the M5 over the Georges River.
- Major evacuation capacity constraints are apparent when accounting for future planning proposals in the study area. Modelled Scenario B resulted in over 32,000 vehicles caught by floodwaters across the study area and over 8,000 stranded on the Moorebank Peninsula. Table 18 summarises the key challenges for future development in the study area.

Table 18. Constraints on Future Development

Development	Challenge
The Grove	Requires a flood free evacuation route connection between Homepride Avenue and Orange Grove Road
Shepherd Street	May require an emergency level crossing of the railway line at Atkinson Street
Warwick Farm Structure Plan	Insufficient road capacity to cater for the evacuation of the planning proposals
Moore Point	Insufficient road capacity to cater for the evacuation of the planning proposals
Moorebank East	Approved and proposed development in Moorebank East would be able to evacuate in time but proposed development blocks the evacuation of Chipping Norton

- "Spare" evacuation capacity has been investigated at a high level for some of the large planning proposals included in Scenario B. However, it is stressed that this is only a highlevel calculation, and the capacity would have to be modelled in order to test the impact of a reduction in vehicles from certain developments. Also note that the vehicles which escape the floodwaters but are trapped on the Moorebank Peninsula have not been accounted for in those calculations.
 - Moorebank East: Modelling suggests that that the road network could have capacity for approximately 700 evacuating vehicles from Moorebank East, accounting for the





- road upgrades included in Scenario B. Given that the model included more than 360 vehicles from approved Site C, this would leave only half of the capacity for development at Sites A, B, D and E.
- Moore Point: Scenario B suggests that the road network may have capacity for approximately 5,500 evacuating vehicles from Moore Point, accounting for the road upgrades included in Scenario B.
- Warwick Farm: Scenario B suggests that the road network could have capacity for 850
 evacuating vehicles from Warwick Farm in Scenario B, accounting for the road
 upgrades included in Scenario B.

8.2 Recommendations

Based on the findings of this study, the following recommendations are made to address Georges River flood evacuation challenges for Liverpool LGA.

8.2.1 Current Flood Evacuation Challenges

- Ensure that the proposed additional lanes on the M5 across the Georges River are configured to reduce the probability of flooding isolating the Moorebank Peninsula
- Investigate the provision of an additional southbound lane on Nuwarra Road between Brickmakers Drive and Heathcote Road to reduce the queuing that severely limits the evacuation of Chipping Norton onto the M5
- Investigate an emergency level crossing at Atkinson Street to improve the evacuation capability of current developments on Shepherd Street and Riverpark Drive
- Investigate an emergency flood evacuation route through private property between Homepride Avenue and Orange Grove Road (Figure 25 is one possibility) to ensure a floodfree evacuation route for the existing commercial, industrial and residential developments in the areas
- Investigate development of a comprehensive flood forecasting and warning system in the Georges River Catchment to increase the warning time for evacuation
- Investigate the benefits of an intelligent traffic system (ITS) to see whether this could increase evacuation route capacities at route bottlenecks
- Investigate whether contraflow arrangements are likely to increase flood evacuation capacity
- Use data and consider outcomes from this study to inform preparation of Volume 2 and 3 of the Georges River and Woronora River Valley Flood Emergency Sub Plan
- Identify means of safely managing the thousands of people on the floodplain who do not have access to private motor vehicles, many of whom may have mobility challenges. This might include pedestrian evacuation, mass transport or sheltering in place.

8.2.2 Planning Proposals

- Many of the above listed recommendations to deal with "current" challenges may also facilitate evacuation capacity improvements for future planning proposals
- Development at Moorebank East should be restricted, considering it is estimated that half
 of the evacuation capacity is taken up by the already-approved Site C development. An
 additional lane on Nuwarra Road should be investigated to see whether it would provide
 sufficient additional evacuation capacity to enable further development at Moorebank
 East without compromising the safe evacuation of existing development in Chipping
 Norton











- Development at Shepherd Street has a relatively low flood evacuation risk and is unlikely
 to compromise the evacuation of nearby developments. Emergency access in the area
 could be improved through the provision of an emergency level crossing at Atkinson
 Street
- The Grove in Warwick Farm should only be approved if a flood free emergency evacuation route can be created between Homepride Avenue and Orange Grove Road
- The planning proposals for Moore Point and the Warwick Farm Structure Plan either need to be substantially scaled back or:
 - o more time to evacuate is provided through an improved warning system
 - improved evacuation route capacity is provided through road upgrades, contraflow traffic arrangement and/or an ITS
 - o alternatives to private motor vehicle evacuation is catered for through mass transport, pedestrian evacuation or sheltering in place.



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Liverpool City Council - Final



Appendix A | Subsector Trigger Levels

Molino	Classification	Initial Trigger Level	Staging of	Initial Trigger PMF
Stewart Subsector			evacuation	Time Step (12 hrs before trigger level reached)
R25 (Chipping Norton)	Low flood island	Flooding of evacuation route	All	-7.5
I5 (Moorebank)	Low flood island	Flooding of factories	All	-5.0
I3 (Moorebank)	Low flood island	Flooding of factories	All	-5.0
R26 (Liverpool)	Rising road access	Flooding of houses	By level	-5.0
I13 (Moorebank)	Low flood island	Flooding of evacuation route	All	-5.0
R4 (Chipping Norton)	Sammut Place is a low flood island while rest of sector has an overland escape route but whole peninsula is a High flood island	Flooding of houses	By level except Sammut which leaves pre t=8.0. Then until t=11.0	-4.5
I15 (Warwick Farm)	Low flood island	Flooding of evacuation route	All	-4.5
I1 (Chipping Norton)	Low flood island	Flooding of factories	By level until t=11.5	-4.5
18 (Warwick Farm)	Rising road access	Flooding of properties	All	-4.5
I14 (Moorebank)	High flood island	Flooding of evacuation route	All	-4.5
17 (Liverpool)	Low flood island. Road on western side of bridge gets cut at t=12.5	Flooding of buildings	By level until t=12.5	-4.5
R3 (Chipping Norton)	Rising road access to Newbridge Road but whole peninsula is a High flood island	Flooding of evacuation route	By level until t=11.5	-4.0
I4 (Moorebank)	High flood island	Flooding of buildings	All	-4.0
R15 (Liverpool)	Low flood island	Flooding of evacuation route	All	-4.0
I6 (Moorebank)	Rising road access to Moorebank Ave but whole peninsula is a High flood island	Flooding of factories	All	-4.0
Equestrian (Hzone) (Warwick Farm)	Rising road access	Flooding of houses	By level	-4.0
IR1 (Chipping Norton)	Low flood island	Flooding of evacuation route	All	-4.0
R1 (Chipping Norton)	Low flood island	Flooding of evacuation route	By level until t=10.0	-4.0

Molino	Classification	Initial Trigger Level	Staging of	Initial Trigger PMF
Stewart Subsector			evacuation	Time Step (12 hrs before trigger level reached)
R11 (Moorebank)	Rising road access to Nuwarra Road but whole peninsula is a High flood island	Flooding of houses	By level until t=11.0	-4.0
R12 (Moorebank)	Low flood island	Flooding of houses	All	-4.0
I12 (Moorebank)	Low flood island	Flooding of buildings	All	-4.0
R2 (Chipping Norton)	Low flood island	Flooding of houses	By level until t=10.0	-4.0
R17 (Warwick Farm)	Rising road access	Flooding of houses	By level	-4.0
R10 (Hammondvi Ile)	Rising road access to Heathcote Road but whole peninsula is a High flood island	Flooding of properties	By level until t=11.0	-3.5
R27 (Liverpool)	Rising road access	Flooding of houses	By level	-3.5
R7 (Moorebank)	Low flood island	Flooding of evacuation route	All	-3.0
R8 (Moorebank)	Rising road access to Nuwarra Road but whole development will be at virtually same level and then peninsula is a High flood island	Flooding of houses	All	-2.5
R5 (Chipping Norton)	Rising road access to Nuwarra Road but whole peninsula is a High flood island	Flooding of houses	By level until t=11.0	-2.5
I2 (Chipping Norton)	Rising road access to Nuwarra Road but whole peninsula is a High flood island	Flooding of factories (to the north)	By level until t=11.0	-2.5
R9 (Moorebank)	Rising road access to Nuwarra Road but whole peninsula is a High flood island	Flooding of houses	By level until t=11.0	-2.5
R18 (Warwick Farm)	Rising road access	Flooding of houses	By level	-2.5
R6 (Chipping Norton)	Rising road access to Nuwarra Road but whole peninsula is a High flood island	Flooding of houses	By level	-1.5
19 (Warwick Farm)	Rising road access	Flooding of buildings	All	-1.0

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Molino Stewart Subsector	Classification	Initial Trigger Level	Staging of evacuation	Initial Trigger PMF Time Step (12 hrs before trigger level reached)
R16 (Liverpool)	Rising road access	Flooding of houses	By level	-0.5
R23 (Holsworthy)	Rising road access to Heathcote Road but whole peninsula is a High flood island	Flooding of houses	All	0.0
R19 (Liverpool)	Rising road access	Flooding of houses	By level	7.5
R21 (Warwick Farm)	Rising road access	Flooding of houses	By level	10.0

Appendix B | Model Outputs

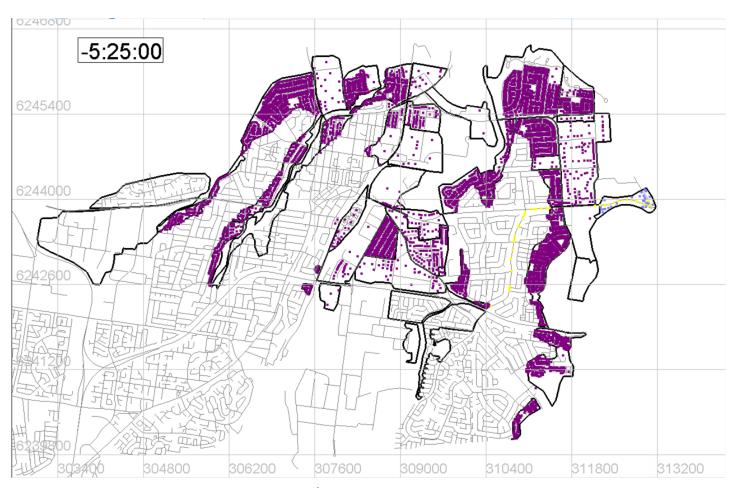


Figure B1. Georges River PMF timestep -5:25 (Scenario 1: Base Case)

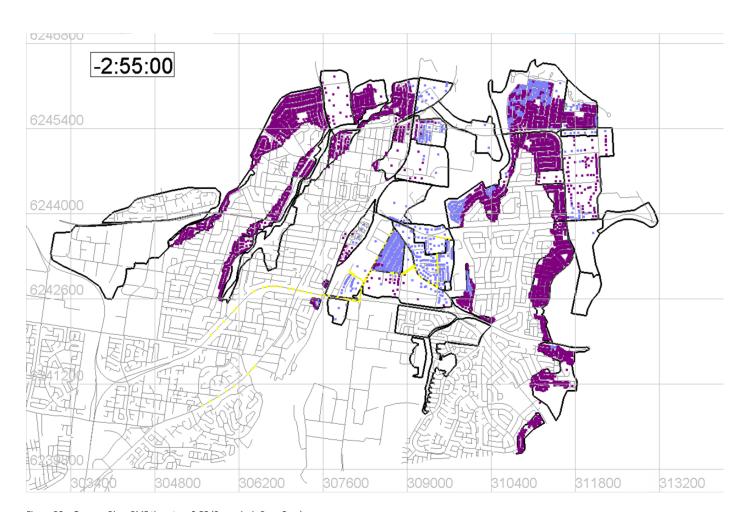


Figure B2. Georges River PMF timestep -2:55 (Scenario 1: Base Case)

PLAN 03

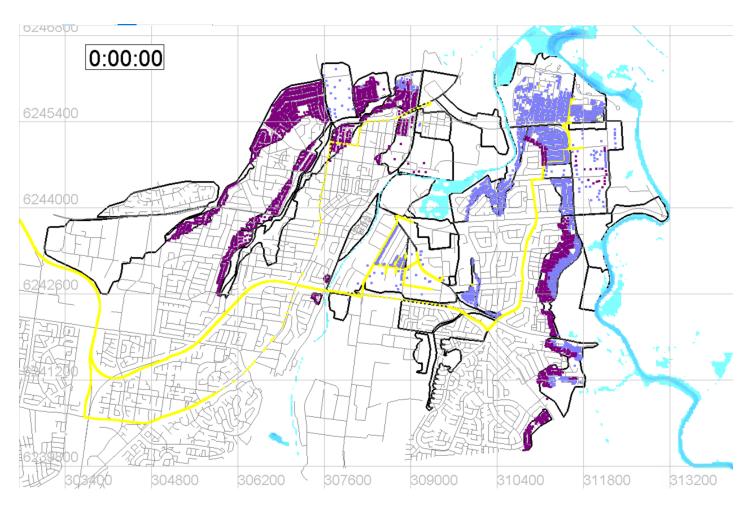


Figure B3. Georges River PMF timestep 0:00 (Scenario 1: Base Case)

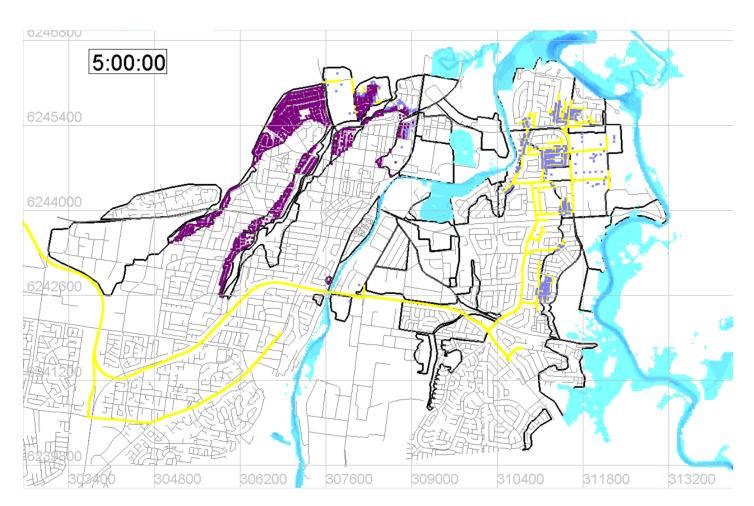


Figure B4. Georges River PMF timestep 5:00 (Scenario 1: Base Case)

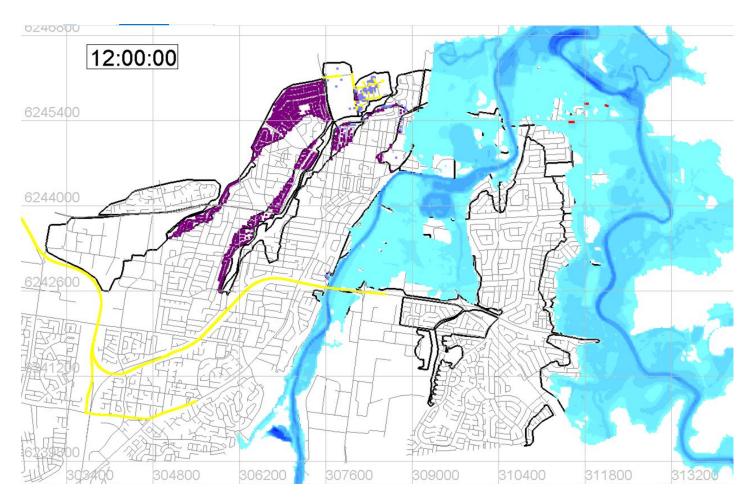


Figure B5. Georges River PMF timestep 12:00 (Scenario 1: Base Case)

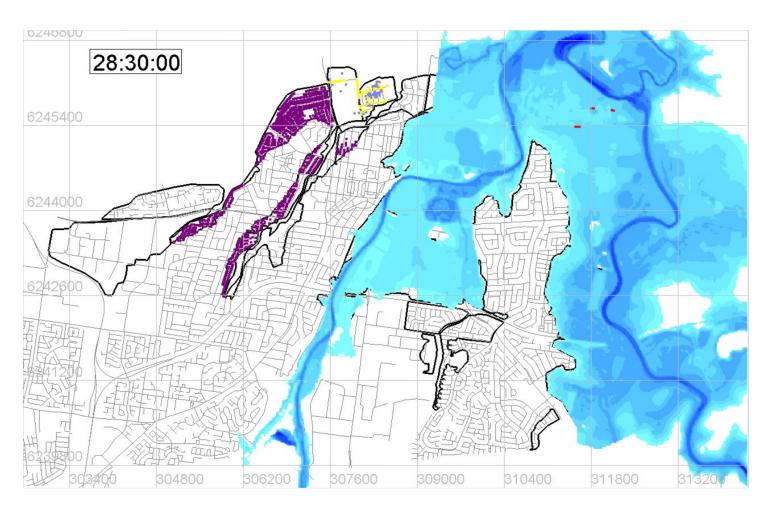


Figure B6. Georges River PMF timestep 28:30 (Scenario 1: Base Case)

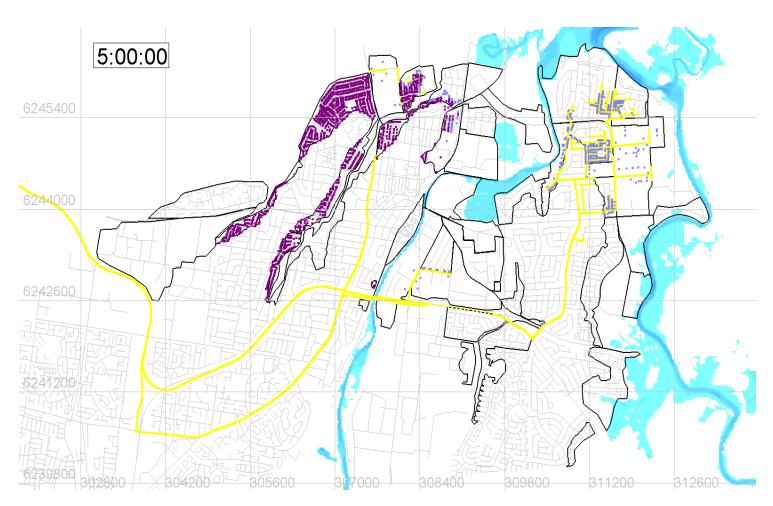


Figure B7. Georges River PMF timestep 5:00 (Scenario 2: Intensified Development under Existing Zoning)

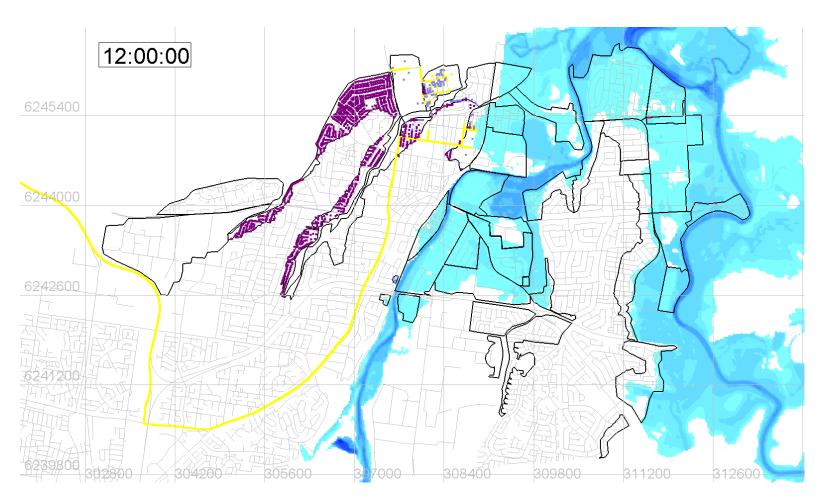


Figure B8. Georges River PMF timestep 12:00 (Scenario 2: Intensified Development under Existing Zoning)

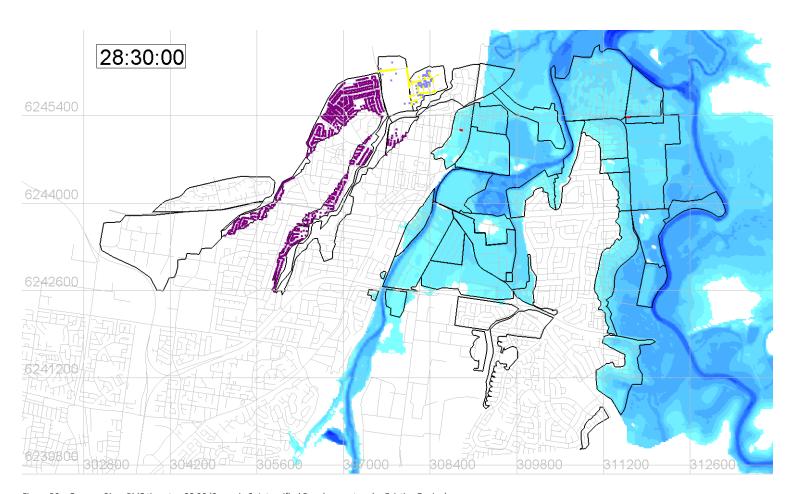


Figure B9. Georges River PMF timestep 28:30 (Scenario 2: Intensified Development under Existing Zoning)

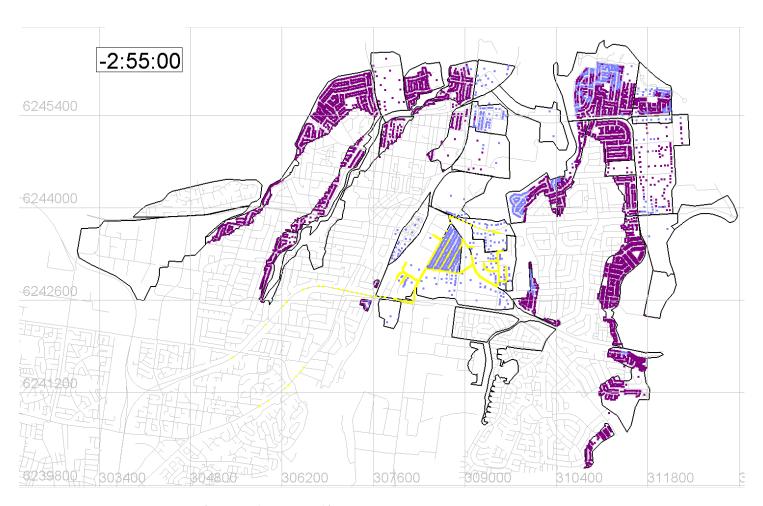


Figure B10. Georges River PMF timestep -2:55 (Scenario 3: Planning Proposals)

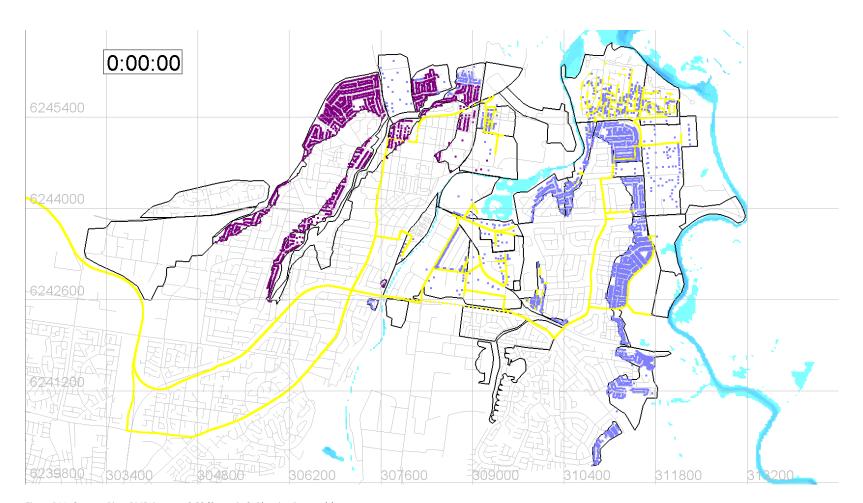


Figure B11. Georges River PMF timestep 0:00 (Scenario 3: Planning Proposals)

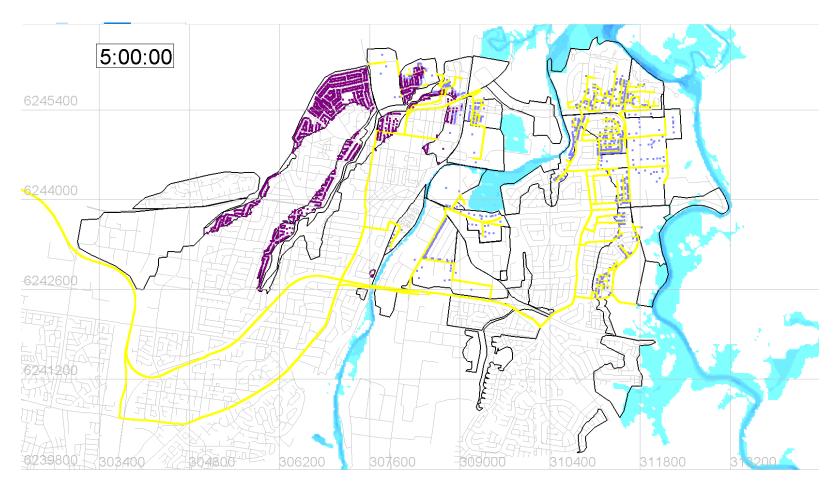


Figure B12. Georges River PMF timestep 5:00 (Scenario 3: Planning Proposals)

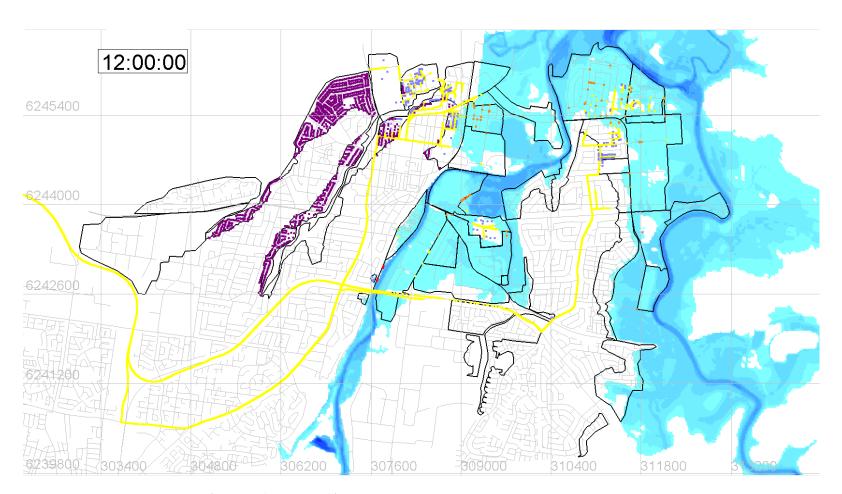


Figure B13. Georges River PMF timestep 12:00 (Scenario 3: Planning Proposals)

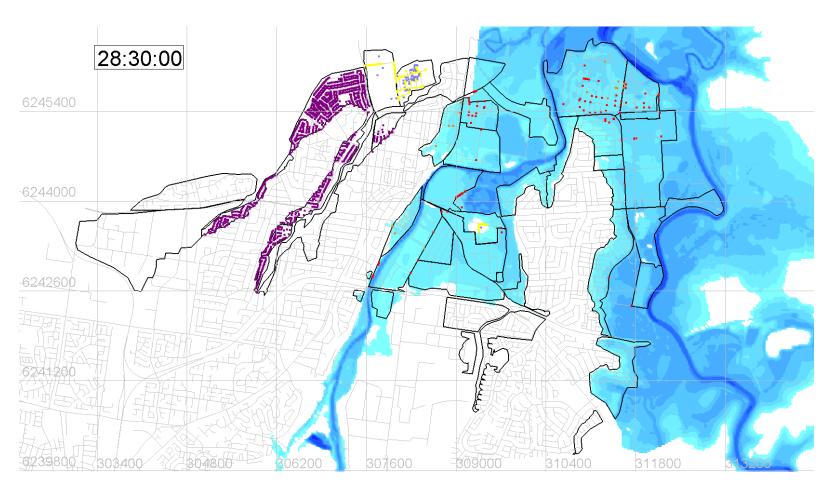


Figure B14. Georges River PMF timestep 28:30 (Scenario 3: Planning Proposals)

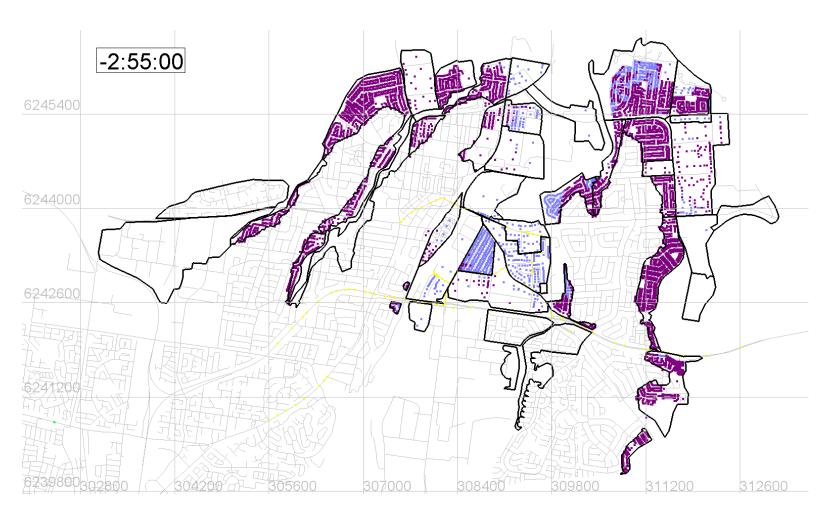


Figure B15. Georges River PMF timestep -2:55 (Scenario A)

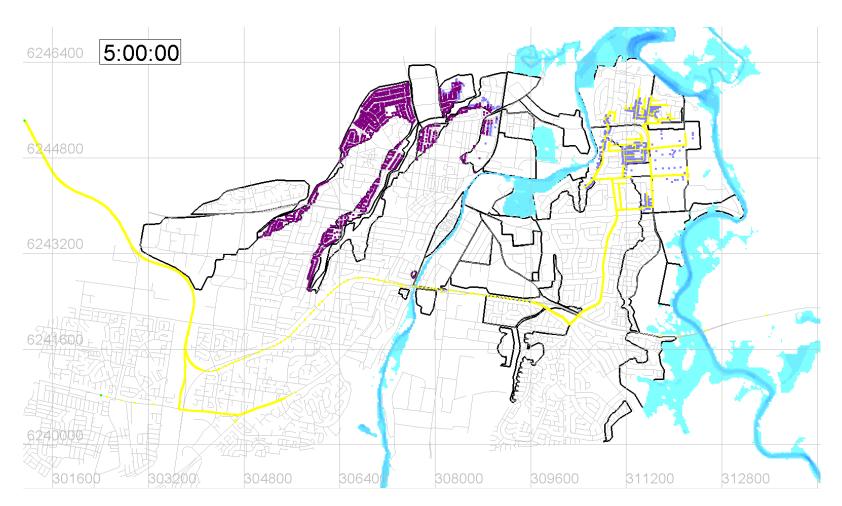


Figure B16. Georges River PMF timestep 5:00 (Scenario A)

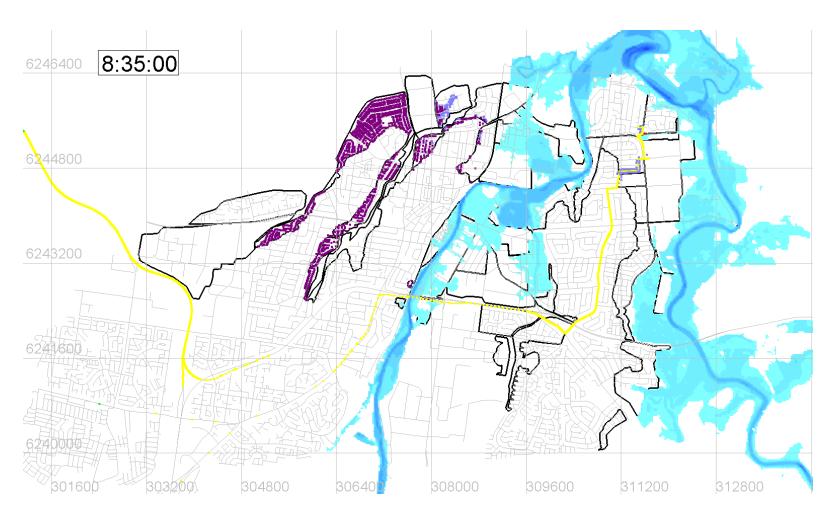


Figure B17. Georges River PMF timestep 8:35 (Scenario A)

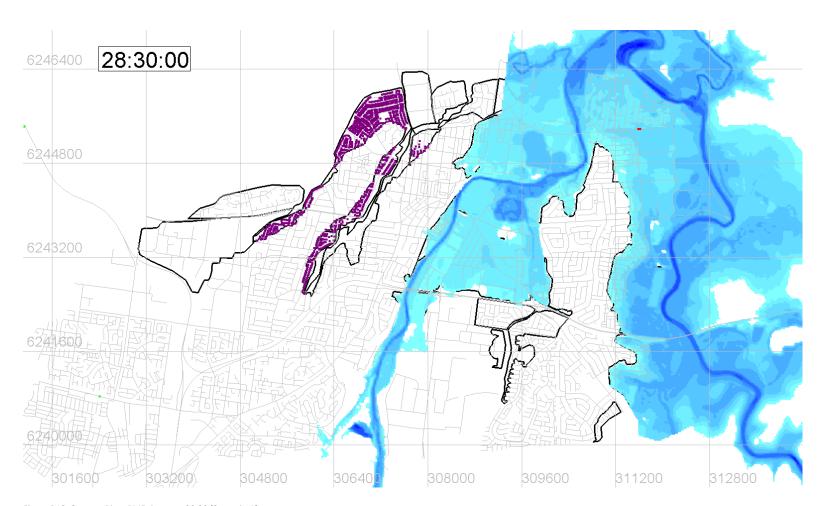


Figure B18. Georges River PMF timestep 28:30 (Scenario A)



Figure B19. Georges River PMF timestep -2:55 (Scenario B)

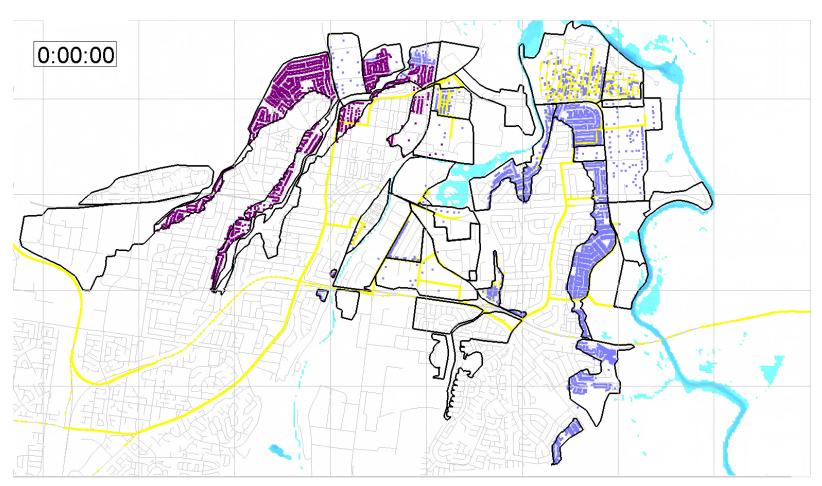


Figure B20. Georges River PMF timestep 0:00 (Scenario B)



Figure B21. Georges River PMF timestep 5:00 (Scenario B)

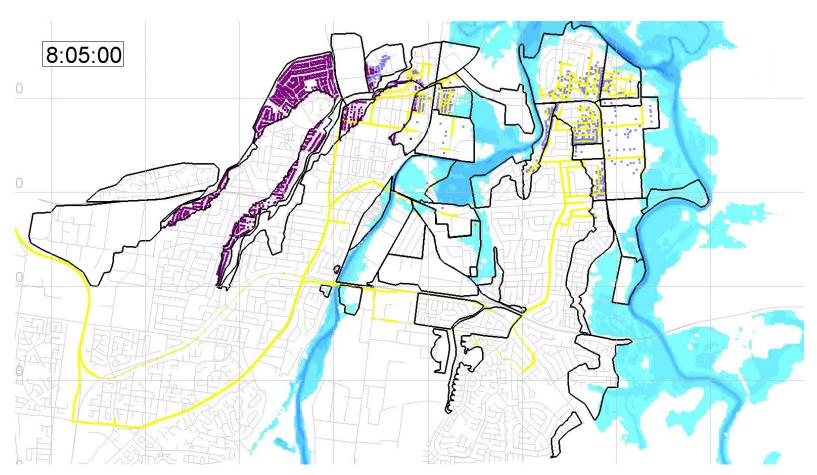


Figure B22. Georges River PMF timestep 8:05 (Scenario B)

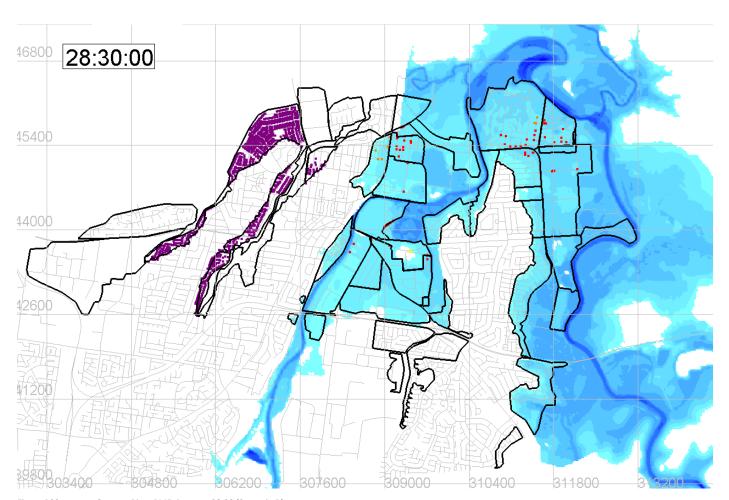


Figure B23. Georges River PMF timestep 28:30 (Scenario B)

Attachment 2 - Georges River Flood Evacuation Modelling Report

Appendix C | Traffic Safety Factor Analysis for Scenario 1

	Time on Road	Traffic Safety Factor	Warning Acceptance Factor	Warning Lag Factor	Required Time (=TSF + WAF +	Available	Surplus	Time to	Adjusted Surplus	
Location	(TOR)	(TSF)	(WAF)	(WLF)	WLF+TOR)	Time	Time	Sector	Time	Notes
R18 (Warwick										TRAPPED because there are no flood
Farm)		3.5	1	1	34	12	-22	19	-3	free public roads out
19 (Warwick										TRAPPED because there are no flood
Farm)		3.5	1	1	33.5	12	-21.5	17.5	-4	free public roads out
										Likely do have enough time to get out
										because there is not queueing the
R17 (Warwick										whole time, and there are several
Farm)		3.5	1	1	23.25	12	-11.25	20.5	9.25	waves of cars leaving progressively
										Actually do have enough time
										because low number of cars spread
										out over a long time (two waves with
R27 (Liverpool)		3	1	1	20	12	-8	20	12	big gap in between)
										Queueing (yellow) within subsector
										ends at +2 hrs, but last few cars
R11										aren't out until +11 hrs because
(Moorebank)		3	1	1	18.25	12	-6.25	20.5	14.25	Nuwarra Rd is backed up
I1 (Chipping										Queue extends into subsector
Norton)		3	1	1	18	12	-6	4	-2	because Nuwarra Rd is backed up
R1 (Chipping										Queue extends into subsector
Norton)		2.5	1	1	16.5	12	-4.5	2	-2.5	because Nuwarra Rd is backed up
R2 (Chipping										Queue extends into subsector
Norton)		2.5	1	1	16	12	-4	2	-2	because Nuwarra Rd is backed up
I2 (Chipping										No queue within subsector, only
Norton)		2.5	1	1	15.5	12	-3.5	19	15.5	because Nuwarra Rd is backed up
										Likely do have enough time to get out
										because there is not queueing the
										whole time, and there are several
R16 (Liverpool)		2.5	1	1	15.5	12	-3.5	17	13.5	waves of cars leaving progressively
R5 (Chipping										Queue extends into subsector
Norton)		2.5	1	1	15.5	12	-3.5	19	15.5	because Nuwarra Rd is backed up
R3 (Chipping										Queue extends into subsector
Norton)		2	1	1	13.75	12	-1.75	20.5	18.75	because Nuwarra Rd is backed up

Location	Time on Road (TOR)	Traffic Safety Factor (TSF)	Warning Acceptance Factor (WAF)	Warning Lag Factor (WLF)	Required Time (=TSF + WAF + WLF+TOR)	Available Time	Surplus Time	Time to Rise in Sector	Adjusted Surplus Time	Notes
15/04					42	12				Queueing in subsector ends at -0.5 hr, but the last car isn't out until +5 hr because of queuing on Moorebank
R6 (Chipping Norton)		2	1	1	12	12	0			Ave Queue extents into subsector because Nuwarra Rd is backed up
I6 (Moorebank)		2	1	1	11.25	12	0.75			No queueing in subsector: some cars leave immediately at -2 hrs, and last car not out until +5.25 because of queueing to get onto the M5
R19 (Liverpool)		2	1	1	11.25	12	0.75			darane Bar Sar anno me
I12 (Moorebank)		2	1	1	11.23	12	1			
17 (Liverpool)		1.5	1	1	9.5	12	2.5			
R12 (Moorebank)		1.5	1	1	9.5	12	2.5			
R9 (Moorebank)		1.5	1	1	9.25	12	2.75			Queue extends into subsector because Nuwarra Rd is backed up
I3 (Moorebank)		1.5	1	1	9	12	3			
R26 (Liverpool)		1.5	1	1	8.5	12	3.5			
R10 (Hammondville)		1.5	1	1	8	12	4			
R4 (Chipping Norton)		1.5	1	1	7.5	12	4.5			
R21 (Warwick Farm)		1	1	1	6.5	12	5.5			
Hzone (Warwick Farm)		1	1	1	5	12	7			
I4 (Moorebank)		1	1	1	5	12	7			
I14 (Moorebank)		1	1	1	4.75	12	7.25			

Location	Time on Road (TOR)	Traffic Safety Factor (TSF)	Warning Acceptance Factor (WAF)	Warning Lag Factor (WLF)	Required Time (=TSF + WAF + WLF+TOR)	Available Time	Surplus Time	Time to Rise in Sector	Adjusted Surplus Time	Notes
R15 (Liverpool)		1	1	1	4.5	12	7.5			
I8 (Warwick Farm)		1	1	1	4	12	8			
IR1 (Chipping Norton)		1	1	1	4	12	8			No queue within subsector, only because Nuwarra Rd is backed up
I15 (Warwick Farm)		1	1	1	3.75	12	8.25			
R23 (Holsworthy)		1	1	1	3.5	12	8.5			
R25 (Chipping Norton)		1	1	1	3.25	12	8.75			
I13 (Moorebank)		1	1	1	3	12	9			
R7 (Moorebank)		1	1	1	3	12	9			

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GOVERNANCE COMMITTEE MEETING 9 APRIL 2024 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

ITEM 01	Warwick Farm Precinct Plan: Issue and Option							
II EIVI O I	Paper							
	Evolving, Prosperous, Innovative							
Strategic Objective	Implement planning controls and best practice urban design to create high-quality, inclusive urban environments							
File Ref	020367.2024							
Report By	Brianna Van Zyl - Senior Strategic Planner							
Approved By	Lina Kakish - Director Planning & Compliance							

EXECUTIVE SUMMARY

The Warwick Farm Structure Plan (**Attachment 1**), developed by Council in 2020 and 2021 for the Warwick Farm horse training area, has been on hold since 24 November 2021 when Council resolved that:

• 'Council is provided with the information that allows Council to make a fully informed and fully educated decision on this matter, including the finalised regional flood evacuation study'.

Council completed a Flood Evacuation Study for the Liverpool Collaboration Area and Moorebank, by Molino Stewart, in 2022 (Attachment 2). Since then, following various significant flood events across NSW, the NSW Government published the NSW Flood Inquiry. The NSW Flood Inquiry findings included recommendations that affected the Georges River Catchment (which includes the Warwick Farm Precinct), which was considered one of the high-risk catchments.

As a result, Council sent a letter to the Hon. Paul Scully, Minister for Planning and Public Spaces, on 5 June 2023 (**Attachment 3**). This letter sought further clarity around how Council should proceed with the assessment of Planning Proposals and land use policies within the Georges River catchment.

Council received a response on 22 September 2023 (Attachment 4) which reiterated the need for a risk-based approach to managing potential floods, stating the level of assessment undertaken for Planning Proposals and Development Applications must include a balanced consideration of all the risks and impacts. This response has acted as a catalyst for the Precinct Plan being re-presented to Council.

This Report outlines the issues associated with the Warwick Fam Precinct, as well as the latest Precinct Plan, including flooding, traffic, feasibility, and land fragmentation. This Report also

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aims to provide further clarity to the community, and to establish clear next steps for the Precinct.

Council staff have identified three options on how to proceed, with these options detailed within this Report:

- Option 1 Proceed with the existing Precinct Plan (November 2021);
- Option 2 Conduct further investigations to rezone the Precinct to an industrial / innovation Precinct; or
- Option 3 Retain existing zoning and development standards.

Due to existing constraints within the Precinct, and logistical issues proceeding with Option 1, Council staff are recommending proceeding with Option 2. This would provide opportunity for the rejuvenation of the Precinct, in a way that complements the Liverpool City Centre, whilst still addressing the environmental constraints. An industrial / innovation Precinct would also allow for the existing animal and training establishments to remain which supports the Warwick Farm Racecourse.

The next steps will involve a Council report to the next available Council meeting which will outline the options presented below.

RECOMMENDATION

That the Committee receives and notes this Report, and the proposed options on how to proceed with the Warwick Farm Precinct Plan.

REPORT

Background Information

The Study Area

The study area comprises approximately 25.5ha (including roads) and is bounded by the Hume Highway, Shore Street, Warwick Farm Sewage Treatment Plant land, Priddle Street, the Main South Railway Line, and Governor Macquarie Drive within Warwick Farm. It is located approximately 1-1.5km north-east of the Liverpool City Centre and 13.5km south-west of Parramatta. **Figure 1** shows the location of the study area.

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Figure 1: Precinct Boundaries shown in red (Source: CM+)

History

On 11 December 2019, Council resolved to direct the CEO to engage Consultants to prepare a Precinct Plan for the rezoning of the Warwick Farm Precinct for a mix of uses. Council appointed a multi-disciplinary team led by Conybeare Morrison to prepare the supporting investigations to inform a Precinct Plan, including a Draft Contribution Framework for the provision of new infrastructure to support the Precinct.

Following the initial Council Resolution, the following has occurred:

- **25 March 2020:** Council endorsed (EGROW11) the Local Strategic Planning Statement (LSPS) which included 'Action 10.2' which commits to developing a Precinct Plan and Planning Proposal for the Warwick Farm Racing Precinct.
- 27 July 2020: The draft Precinct Plan, Planning Proposal and associated studies were
 presented to the Liverpool Local Planning Panel. The Panel did not support the
 Planning Proposal proceeding to a Gateway determination, requiring updates to the
 flood impact assessment, further analysis on the potential environmental impact of the
 truck bypass and a report in relation to the cap of 18,800 addition dwellings for the
 Liverpool Collaboration Area.

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- 26 August 2020: Council considered the advice from the Panel and resolved that the draft Precinct Plan, Planning Proposal, and associated Contributions Plan be placed on public exhibition for 28 days.
- 14 September 2020 to 12 October 2020: The Precinct Plan was placed on public exhibition.
- 28 April 2021: The outcomes of the public exhibition were presented to Council (EGROW 04) where Council resolved for several changes to be made to the Structure Plan, Planning Proposal and Contributions Plan. Such amendments included: the inclusion of 240 Governor Macquarie Drive in the Precinct Plan, additional flooding considerations, and an Economic Review of the resultant gross floor areas achieved across the site to determine feasibility.
- 29 September 2021: A Report detailing the changes to the draft package was tabled at Council. Council resolved (PLAN06) to place the Structure Plan, Planning Proposal and Local Contributions Plan on public exhibition.
- 8 October to 7 November 2021: The Planning Package was placed on public exhibition.
- 24 November 2021: The results of community consultation were reported to Council where the following was resolved: "That Council defer this matter until Council is provided with information that allows Council to make fully informed and fully educated decisions on this matter, including the finalised regional flood evacuation study."

NSW Government Flood Inquiry

Since Council placed the Precinct Plan on hold, the NSW Government conducted the NSW Flood Inquiry in 2022. The Flood Inquiry made several recommendations that relate to the Georges River, which was considered a high -isk catchment along with the Hawkesbury-Nepean, Wilsons, and Tweed River catchments. This has added an additional layer of complexity to the Precinct.

Council staff have sought direction and clarity from the Department of Planning, Housing and Infrastructure (DPHI) on how to proceed with proposals in high and medium flood risk areas (**Attachment 3**). In September 2023, Council received a response from the DPHI on behalf of the Hon. Paul Scully, Minister for Planning and Public Spaces, which identified the need to move to a risk-based approach to managing potential floods (**Attachment 4**). The letter stated that the level of assessment undertaken for planning or development proposals are proportionate, and must include balanced consideration on the merits, risks and impacts.

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Zoning under Liverpool Local Environmental Plan 2008

Under *Liverpool Local Environmental Plan 2008* (LLEP 2008), the Precinct contains a variety of existing land use zones:

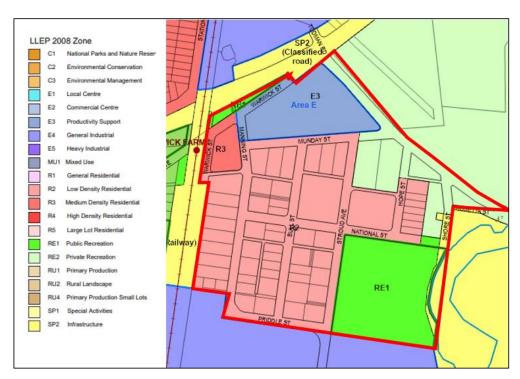


Figure 2: Existing Zoning map of Warwick Farm Precinct

E3 Productivity Support: This zone applies to 240 Governor Macquarie Drive between Munday Street, Warwick Street and Governor Macquarie Drive. The E3 Productivity support zone (formally B5 Business Development) permits offices, light industrial as well as warehouse or distribution uses (among others), however prohibits any residential uses. This land is currently vacant but was subject to a Planning Proposal to rezone to MU1 Mixed Use (formally B4 Mixed Use) and R4 High Density Residential. This detailed further below.

R2 Low Density Residential: This zone applies to the majority of the residential within the Precinct and permits dwellings houses which make up most development in this zone. Clause 16 of Schedule 1 of the LEP also permits animal boarding or training establishments, farm buildings and veterinary hospitals in the R2 zone which reflect several horse boarding and training establishments located in this area. Heights in this zone are limited to 8.5m with an FSR of 0.5:1.

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R3 Medium Density Residential: This zone applies to a small pocket of land located opposite the station and developed with 2 storey townhouse style development. Heights in this zone are currently limited to 8.5m with an FSR of 0.5:1.

<u>RE1 Public Recreation:</u> This zone applies to Rosedale Oval and the embankment supporting the Hume Highway overpass.

<u>SP2 Sewerage Systems:</u> This zone applies to land immediately east of the Rosedale Oval playing surface and corresponds with the location of Horseshoe Pond and a small section of Shore Street within the Precinct.

<u>RE2 Private Recreation:</u> This zone applies to land fronting Governor Macquarie Drive and Shore Street in the northeast of the Precinct. It primarily accommodates horse boarding and training premises.

Draft Precinct Plan (September 2021)

The most recent Structure Plan (**Attachment 1**) (prepared by CM+ dated 26/09/2021, presented to Council on 24 November 2021) depicts the redevelopment of the Precinct for mixed use development including residential development.

Key features of the Precinct Plan include:

- A total of 294,162m² GFA, with:
 - o 274,053m² of residential GFA
 - o 20,109m² of commercial GFA
- Capacity for approximately 3,224 new residential dwellings (based on an average dwelling GFA of 85m²) and a population of approximately 7,383 (based on 2.29 persons per dwelling).
- An overall FSR of 1.04:1 across the entire Precinct (including open space) with an FSR of 3.35:1 on the Mixed-use Land and 2.20:1 on the R4 High Density Residential Zone.
- The tallest development near the station at 15 storeys generally stepping down to 12, 8, 6 and 4 storeys moving away from the station.
- Approximately 39,603m² of additional open space to supplement the existing Rosedale
 Oval that will be delivered as publicly owned land as well as privately owned, but
 publicly accessible.

The most recent Precinct Plan is shown in Figure 3.

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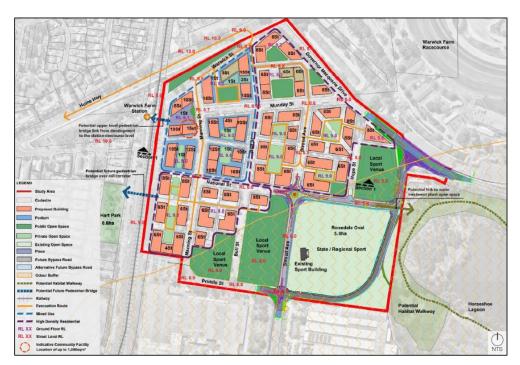


Figure 3: Precinct Plan (Source CM+)

240 Governor Macquarie Drive

On 10 July 2018, Council received a Planning Proposal request to rezone land at 240 Governor Macquarie Drive, Warwick Farm from B5 Business Development to part R4 High Density Residential. The Planning Proposal request also sought to increase the floor space (FSR) development standard from 0.75:1 to 3:1 (equating to approximately 87,900m² GFA) and the height of building (HOB) development standard from 15m to 50m and to reduce the minimum lot size from 2000m² to 1000m².

At the Ordinary Meeting of Council on 11 December 2019, Council resolved (EGROW 09), to endorse "in principle" a Planning Proposal request for 240 Governor Macquarie Drive, Warwick Farm, subject to the Applicant submitting an amended Planning Proposal Report with modified floor space ratio of 2:1 or 500 dwellings (with access to the bonus FSR provisions of up to 3:1), and height of building control of 50m.

On 27 February 2020, Council submitted the Planning Proposal to the DPHI (formerly Department of Planning and Environment) for Gateway assessment. On 22 September 2020, Council received notification that Council's request for a Gateway determination had been refused. Them DPHI cited several reasons for this, noting that investigations to inform the Warwick Farm Structure Plan, in which the subject site is located, should be undertaken as a

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Precinct-wide approach. As such, it was recommended that this standalone Precinct be rolled into a consolidated Planning Proposal for the Precinct. 240 Governor Macquarie Drive was included in the Precinct Plan by Council resolution on 28 April 2021.

More recently, the landowners of 240 Governor Macquarie Drive have met with Council staff and are seeking to progress the redevelopment of 240 Governor Macquarie Drive either as a part of the Precinct, or as a standalone Planning Proposal. It is understood that the landowners are currently undertaking further design testing, and traffic modelling to determine the evacuation capacity of the Precinct.

A Development Application (DA-1134/2021) was approved by the NSW Land and Environment Court on 5 January 2023. The DA proposed:

 'Construction of a mixed-use development comprising specialised retail premises, food and drink premises, a centre-based child care facility, health services facilities and business identification signage with associated works including car parking, access, landscaping and civil work'.



Figure 4: Photomontage of DA-1134/2021 (Leffler Simes Architects)

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Part 1: Issues

This section of the Report details the issues with the draft Precinct Plan and the constraints of the Precinct, as background information for Part 2 of this Report which details future options.

A. Strategic Merit

Local Strategic Planning Statement

Council's Local Strategic Planning Statement was endorsed in 2020. Planning Priority 10, 'A world class health, education, research and innovation Precinct' includes aims to support development of the Liverpool Innovation Precinct and ensure land use planning supports the operation and growth of the Precinct for all in the health, education and innovation ecosystem. Specifically, Action 10.2 within the LSPS states:

"Prepare structure plan and Planning Proposal to rezone the Warwick Farm reaching Precinct to a mix of uses including B4" (Updated to MU1 Mixed Use as per the Employment Zoning Reform).

Collaboration Area - Liverpool Place Strategy

Planning Priority W2 'Working through collaboration' of the Western City District Plan includes the Liverpool Collaboration Area, which established a vision for this area. Within this plan, the Warwick Farm area is identified as being Innovation / Research / Health / Advanced Manufacturing.

The intent of the vision for this area is to support the health and education Precinct of the Liverpool City Centre. Specifically, the vision for this area is for "a high-tech, transit-oriented, advanced manufacturing business park that leverages the growth of the health, education and equine sectors, excluding residential development" (p10).

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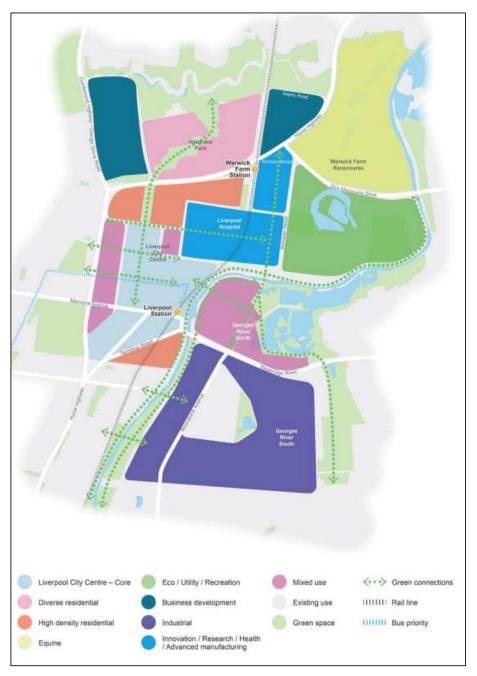


Figure 5: Place Strategy Vision, Collaboration Area Liverpool Place Strategy

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Liverpool Innovation Precinct

The Precinct is directly east of the Liverpool Innovation Precinct (pink below), which focuses on Health and Education delivery in Liverpool.

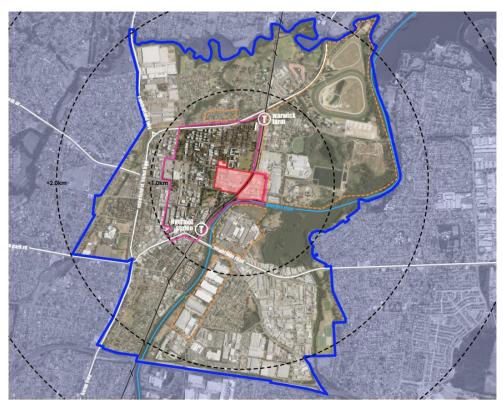


Figure 6: Liverpool Innovation Precinct (pink)

B. Site Specific Constraints

Flooding

The majority of the Precinct is mapped as high and medium risk flood prone land, with a small portion mapped as low risk (as shown in **Figure 7**, below). The site is identified as being prone to flooding from the Georges River catchment.

The site is not affected by the 20- year flood but would be inundated by the 100-year flood. Previous flood studies suggested the site would be classified as being a "medium flood risk" with inundation depth between 0.2m and 0.6m.

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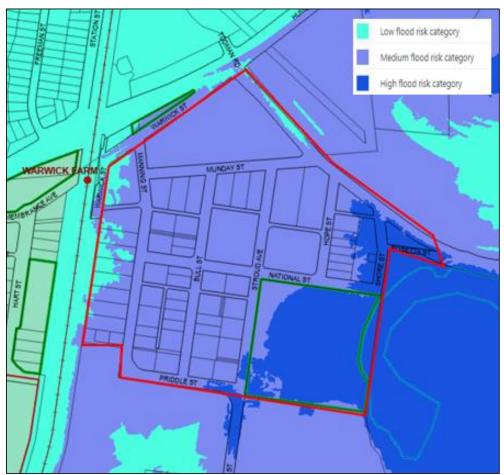


Figure 7: Council internal Flood Risk mapping

A Flood Evacuation Study for the Liverpool Collaboration Area and Moorebank was completed in 2022 by Molino Stewart on behalf of Council (**Attachment 2**). The study responded to the Liverpool Collaboration Area Place Strategy, which identified flooding and flood evacuation as potential constraints on growth in the area. It tested whether premises on the floodplain could evacuate safely when ordered to by the State Emergency Service (SES) in flooding events up to the probable maximum flood (PMF) level.

As such, the study models road capacity to determine whether development (existing and proposed) can evacuate within the available flood warning time given a 100% evacuation compliance rate as required by the SES. The study found that there is restricted capacity for additional development within the floodplain areas of the Liverpool Collaboration Area and Moorebank East.

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"Spare" evacuation capacity was investigated at a high level for the large Planning Proposals. Specifically, the spare capacity for the subject Precinct was estimated at 864 vehicles. The most recent Precinct Plan for the Warwick Farm Precinct was estimated to generate 3,709 vehicles.

In addition, Shelter In Place was determined to be inappropriate for the area, and every building requires access above the 1% AEP. This is a significant design consideration and requires balancing significant cut and fill.

'Ministerial Direction 4.1 Flooding' states a list of considerations which the Planning Proposal must be meet or be justifiably inconsistent. Specifically, the Ministerial Direction states, a Planning Proposal must not contain provisions that apply to flood planning areas which includes (but not limited to):

- Permit developments in floodway areas;
- Permit development for the purpose of residential accommodation in high hazard areas;
- Permit a significant increase in the development and /or dwelling density of that land;
- Permit development for the purpose of centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing in areas where the occupants of the development cannot effectively evacuate; and
- Are likely to result in a significantly increased requirement for government spending on emergency management services, flood mitigation and emergency response measures, which can include but are not limited to the provision of road infrastructure, flood mitigation infrastructure and utilities.

The most recent Precinct Plan would be unable to demonstrate sufficient consistency with the above-mentioned Ministerial Direction.

Odour Buffer

The Precinct is affected by an odour buffer which is identified around the Warwick Farm sewerage treatment works. The buffer zone aims to reflect areas that may be subject to odour from plant based on distance, meteorological and topographic conditions. The full extent of the buffer area can be seen in **Figure 8** below.

Since at least the mid 1990's Department of Urban Affairs and Planning (now DPHI) has released policy documents which seek to prevent residential and other sensitive uses from establishing in the odour buffers around sewerage treatment. As part of the previous exhibition for the Precinct Plan, Sydney Water raised concern about any proposals that would increase residential densities within the existing odour buffer zone. Council designed the subject Precinct Plan with this in mind.

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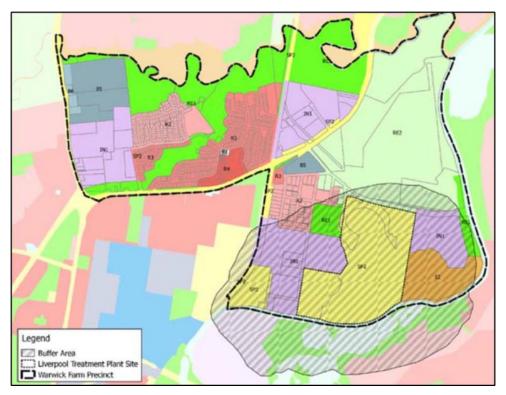


Figure 8: Odour buffer zone with associated sewerage treatments works.

C. Constraints of the Precinct Plan

Fragmented Land

Land within the Warwick Farm Precinct is generally in fragmented ownership, which further complicates the redevelopment of the Precinct. The most recent Precinct Plan seeks to encourage re-development by enabling the consolidation of various fragmented landholding for development, and the acquisition of land for open space and compensatory storage, however this increases the complexity of the proposal and negatively impacts the feasibility of redevelopment occurring.

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Figure 9: Land ownership (Source: CM+)

Feasibility

The draft Precinct Plans had high costs associated with the Precinct due to requirements for consolidation of fragmented land and required infrastructure to support the development (raising of roads, flood mitigation works, open space acquisition, truck bypass, and pedestrian links across the railway).

Economic feasibility testing has been undertaken which found the financial feasibility tipping points of 3.35:1 for B4 Mixed Use zone and 2.2:1 for R4 High Density Residential zone. However, it's important to note that this feasibility testing was done in 2021, and there have been significant changes in the building industry since the study, such as increased material costs, trade shortages and higher interest rates. The Precinct is anticipated to have a higher tipping point now.

Contributions Plan

The Precinct Plan is supported by a draft Contributions Plan which aims to fund the solutions including flood evacuation route with flood free development as well as provision of new recreation and community facilities and address traffic related issues. This would have to be



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revisited, and it is likely the contribution rates would increase. A summary of the proposed contributions rates is shown in the **Figure 10**.

Infrastructure category	Per resident or group home/hostel bed	Per 1 bedroom dwelling	Per 2 bedroom dwelling	Per 3 or more bedroom dwelling	Per m ² of non- residential GFA
Community facilities stratum land	\$630	\$1,135	\$1,450	\$1,954	-
Open space and recreation facilities	\$7,133	\$12,157	\$16,406	\$22,112	-
Roads and transport facilities	\$6,754	\$12,157	\$15,534	\$20,937	\$599
Drainage facilities	\$355	\$639	\$816	\$1,100	\$9
Plan administration and management	\$120	\$215	\$275	\$371	\$8
Total	\$14,992	\$26,985	\$34,481	\$46,474	\$616

Figure 10: Proposed Contribution Rates

Property Acquisition / Open Space

To facilitate future rezoning and redevelopment in the Warwick Farm Precinct as per the Structure Plan, there is a need to reserve some land for public purpose, including future open space and flood mitigation. The Precinct Plan provides for an increase of approximately $39,603\text{m}^2$ of open space to meet the needs of the future population.

The larger areas of open space are proposed to be zoned RE1 Public Recreation and are included in the Contributions Plan for acquisition and embellishment. Specifically, the Precinct Plan provides the overall quantum of land for open space which is public or publicly accessible private open space is 1.25ha per 1,000 people which is slightly lower than the 1.5ha per 1,000 people identified in the Open Space Needs Analysis for the Liverpool Collaboration Area.

The additional open space is crucial to ensuring the redevelopment provides sufficient amenity for future residents, however, it does increase the cost to develop, and requires property acquisition of private land.

Staging of the Precinct Plan

Given the flood constraints within the Precinct, and to achieve a safe evacuation route, it will be necessary to raise key roads with the compensatory storage being provided within nominated open space areas. Specifically, the proposed development will need to ensure that the raising of the roads is included in the Draft Local Contributions Plan as each development site will need to complete full road construction. This will need to be undertaken in a staged manner, with sequencing from north to south in order to provide a continuous evacuation route

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using the raised roads rising to the Warwick Street and Hume Highway intersection. The nominated future staging in the Precinct Plan attempts to minimise interface issues by including whole sections of raised road within the stage (see **Figure 11** below).



Figure 11: Draft Warwick Farm Precinct Plan - Staging Plan

Traffic

The road network throughout the Precinct is grid like with the only access points at Governor Macquarie Drive in the north and Scrivener Street in the south, and a minor left turn only at Warwick Street connecting to an elevated part of the Hume Highway overbridge of the rail line in the west. This means the Precinct carries a high volume of heavy vehicles traffic via

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Manning and Priddle Streets. Council has resolved to investigate construction of a road around Rosedale oval to create a bypass for industrial traffic. A concept design has been prepared; however, it has not been funded.

The investigation informing the Precinct Plan have identified the following road intersection works for the Precinct:

- Delivery of a bypass for the industrial area between Governor Macquarie Drive and Scrivener Street, via Shore Street and a new road around the Rosedale Oval;
- Conversion of the Governor Macquarie Drive / Shore Street intersection to a signalised intersection, to connect with the bypass;
- Conversation of the Governor Macquarie Drive / Munday Street intersection back to a
 priority intersection due to the proximity to Shore Street;
- Dualling of Governor Macquarie Drive between Hume Highway and the Inglis Hotel access road; and
- Implementation of a dual lane right turn bay from Hume Highway eastbound into Governor Macquarie Drive southound.

Community Consultation

The planning packages have been placed on public exhibition twice, with the initial public exhibition occurring between 14 September 2020 to 12 October 2020. During the public exhibition, Council received 20 submissions from the public. Most of thee submissions supported rezoning the Precinct for high-density residential uses, however many raised concerns with various aspects of the Draft Plan.

The planning package was again placed on public exhibition from 8 October 2021 to 7 November 2021. Council received 26 submissions during the public exhibition. Of the 26 submissions received, 15 submissions were opposed to the plans and 11 were supportive of rezoning the Precinct in principle, however some raised issues with several elements of the planning packages and requested changes.

Since the Structure Plan has been placed on hold, Council staff have received ongoing calls and enquiries. The enquiries are generally from landowners within the Precinct seeking an update and/or clarification around the next steps. Questions in relation to flooding in the Precinct are also common.

Part 2: Options for the Warwick Farm Racecourse Precinct

The following options are presented to Council to consider how best to proceed with the Precinct Planning exercise.

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Option 1: Proceed with the Precinct Plan prepared by CM+ September 2021 (Not recommended)

The most recent Structure Plan presented to Council in November 2021 depicts the redevelopment of the Precinct for mixed use development including residential development. As outlined previously, the key features of the Plan includes a total of 294,162m² of floor space (274,053m² of residential GFA, and 20,109m² of commercial GFA), creating capacity for approximately 3,224 new residential dwellings.

The proposed zoning map is shown in Figure 12 below:



Figure 12: Proposed Zoning under Option #1 (Source: CM+)

Comment:

The area is significantly constrained in terms of flooding, evacuation, and the odour buffer. The subject Precinct Plan aimed to mitigate these constraints. However, this resulted in high costs to develop due to property acquisition and required significant infrastructure to mitigate the risks of flooding and evacuation.

In addition, the approach to addressing flooding in the Structure Plan will mean that the that increased densities can only be permitted on land which is raised above the 100-year flood level and that the flood storage will occur within sports fields and recreation areas required a

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funded by the increased development in the draft Contributions Plan. The fragmented nature of the Precinct makes this extremely difficult.

The economic feasibility testing for the Precinct was done in 2021, however since then economic conditions for development have worsened and it is not expected to have the same feasibility tipping point as previously identified.

Given the constraints outlined above, and the density sought by the proposed Precinct Plan, it is considered unrealistic that it would be achieved in full. Flooding and evacuation are a significant hinderance on achieving the vision of the plan, and given the risk to life and property, is unlikely to be supported by the relevant NSW Government Agencies.

If the Structure Plan was to proceed as is, it would likely result in Council spending significantly more money to proceed with a plan which would be highly challenging to implement, and unlikely to be supported by the relevant NSW Government Agencies.

Option 2: Proceed with Industrial / Innovation Precinct (Recommended)

The subject Precinct is located approximately 1-1.5km northeast of the Liverpool City Centre, and located within the Liverpool Collaboration Area, and east of the Liverpool Innovation Precinct. The Collaboration area aims to target opportunities for growth in certain sectors including health and education.

This option would investigate the application of an industrial / business land use zoned for an innovation Precinct, as per the vision of the Liverpool Collaboration Area. This would complement the Liverpool Innovation Precinct, and encourage employment opportunities that support the hospital, and the Liverpool City Centre.

Options for this Precinct could include retaining the zoning on 240 Governor Macquarie Drive, and rezoning the remainder of the Precinct to E4 General Industrial. The proposed development standards will have to be further investigated.

The Precinct currently benefits from an additional permitted use under Schedule 1 of the LEP which permits the development of animal boarding or training establishment, farm buildings and veterinary hospital.

The E4 General Industrial permits both animal boarding or training and veterinary hospitals. Farm buildings are not listed as a permissible use but could be included under Schedule 1 of the LEP for continuity purposes. In addition, a bonus provision could be added to the Precinct for medical research and development. This would need to be further analysed.

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Comment:

Flood planning controls are less stringent for industrial and business land uses, and given the flooding and evacuation constraints, non-residential uses may be better suited to the area. Whilst a large majority of the subject area is zoned R2 Low Density Residential, it is not of a general residential nature. The area is interspersed with several horse boarding and training facilities, which complements the Warwick Farm Racing Precinct on the northern side of Governor Macquarie Drive.

There has been previous studies and strategies that have looked to influence land changes in this area, with employment uses typically being regarded as being more compatible with the range of constraints that apply to the area. Specifically, the Liverpool Collaboration Area Place Strategy (2018) identifies the area as a high-tech, transit-orientated and advanced manufacturing business park that leverages from the health, education and equine sectors. The Place Strategy identifies the area as being in a high performance location which could make significant economic contributions.

By rezoning the majority of this area to non-residential use, the odour buffer would no longer be a significant constraint, because the zoning wouldn't permit residential and sensitive uses. This would provide additional flexibility to the Precinct.

In addition, rezoning this Precinct to a business / industrial Precinct will require less investment for infrastructure and would not result the same scale of open space acquisition. Further analysis would be required to establish if the staging plan is still required for evacuation purposes.

As an immediate next step, Council staff can conduct internal investigations and masterplanning to scope the potential yield of the Precinct. This would include assessing the flood planning controls for industrial land in greater detail, and if the same amount of infrastructure investment is still required (staging plan, raising of the roads etc). It is estimated that this exercise would take approximately 9-12 months. Following further consultation and endorsement from Council, funding would be requested for further detailed testing.

It is anticipated that the final package would require the following documents to adequately justify the changes: Conceptual Design, Traffic Assessment, Economic Testing and Feasibility Studies, Detailed Flood Assessment, Open Space Needs Analysis Precinct Plan, and Contribution Plan. The proposal would also have to be reported to the Local Planning Panel.

This option would save Council from allocating significant funds for an outcome that would unlikely be supported by the NSW Government. It would also provide landowners with clarity on the future of the Precinct, and consultation would be required prior to a Planning Proposal endorsement, as per Council's Community Participation Plan.

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If Option 2 is supported by Council, additional investigations would be required to support this option. Therefore, this option would have financial implications, and require future resourcing, however it is more likely to result in a positive way forward for the redevelopment of the Precinct. Additionally, there could be opportunity to partner with the DPHI to develop a plan that unlocks much needed industrial land to service the wider area.

Option 3: Retain Existing Zoning (Not recommended)

Given the environmental constraints and development challenges within the Precinct, Council could retain the existing zoning and development standards. The current uses complement the Warwick Farm Racecourse and are of local economic importance. This option would allow for development under the existing zoning, and not require the significant infrastructure investment to support it.

This would have no financial implications on Council, however, would not align with the actions outlined in the LSPS or vision of the Collaboration Area. Furthermore, existing flooding risks impacting the Precinct would remain.

Choosing this option may result in criticism from the community, who have participated in two previous public exhibitions. As previously noted, numerous emails and calls from residents are received by Strategic Planning, seeking clarification on how the Precinct will be developed in the future.

There are no financial implications relating to this recommendation.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the Report however Council should note the following indicative financial implications associated with the three proposed options:

- Option 1 would require various issues to be resolved, requiring further investigations. So
 far approximately \$300,000 has been spent. Due to the constraints of the Precinct, it is
 highly unlikely this option would be progressed to the point of practicable
 implementation, even with further funding allocated;
- Option 2 provides a new vision for the Precinct and requires new studies to ensure the vision is viable. As an immediate next step, Council staff could draft a high-level Master Plan which includes potential development standards, and associated infrastructure needs. Once this was completed and endorsed by Council, further investigations to support a Planning Proposal could occur (e.g. Precinct Plan, Traffic Assessment, Economic Testing, Feasibility Studies, Detailed Flood Assessment, Open Space Needs Analysis, Contributions Plan and site-specific Development Control Plan). This would be outside the existing budget allocations for City Planning, and therefore require further

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funding. It is estimated approximately \$500,000 may be required to progress this option; and

• Option 3 would have no associated financial implications.

CONSIDERATIONS

Economic	Facilitate economic development.		
Environment	There are no environmental and sustainability considerations.		
Social	There are no social and cultural considerations.		
Civic Leadership	There are no civic leadership and governance considerations.		
Legislative	Section 3.31 to 3.37 of the <i>Environmental Planning and Assessment Act 1979</i> .		
Risk	This project is currently at the investigation stage, so considered to be low risk, and within Councils appetite. There is a risk of growing community frustration if an option for the redevelopment of the Precinct is not progressed.		

ATTACHMENTS

- 1. Attachment 1: Warwick Farm Structure Plan
- 2. Attachment 2: Georges River Flood Evacuation Modelling Report
- 3. Attachment 3: Letter to the Minister for Planning and Public Spaces
- 4. Attachment 4: Response from NSW Government- Deputy Secretary-OBO Minister NSW Flood Inquiry 2022

The most recent Warwick Farm draft Precinct Plan, draft Planning Proposal, draft Contribution Plan, Summary Fact Sheet, Flood Assessment, Traffic Assessment and Fact Sheet on Property Acquisition can be found through this link:

https://liverpool.infocouncil.biz/Open/2021/11/CO_20211124_AGN_439_AT_SUP_WEB.htm



DEVELOPMENT ASSESSMENT POLICY

Adopted: XX 2024

CM: XX



DEVELOPMENT ASSESSMENT POLICY

DIRECTORATE: Planning & Compliance BUSINESS UNIT: Development Assessment

1. INTRODUCTION

Development Assessment is carried out under the provisions of the *Environmental Planning & Assessment Act 1979* and the *Environmental Planning & Assessment Regulation 2021.*

The Development Assessment Policy specifies how development applications lodged with Liverpool City Council will be assessed and determined. The Development Assessment Policy aligns with the guiding principles of the Department of Planning and Environment's *Development Assessment Best Practice Guide dated March 2017*.

2. PURPOSE

This policy aims to deliver an improved level of customer service, with a focus on best practice and continuous improvement by:

- Providing a clear and accountable policy and process for applicants,
- · Aligning to best practice guidelines,
- · Promoting and supporting a continuous improvement culture, and
- Establishing clear directions and expectations for applicants to provide well-made, assessment ready applications.

3. SCOPE

3.1. This policy applies to all stages of the development application process for development applications submitted via the NSW Planning Portal including:



4. **DEFINITIONS**

- **4.1.** A word or expression in this policy has the same meaning as it has in the *Environmental Planning & Assessment Act 1979* (the Act), and any instruments made under the Act, unless it is otherwise defined in this Policy.
- 4.2. In this policy-
 - 4.2.1. Act means the Environmental Planning and Assessment Act 1979.
 - **4.2.2. Development Application** means an application for consent under Part 4 of the Act to carry out development and includes an application to modify a development consent. It does not include an application for a complying development certificate.
 - 4.2.3. Council means Liverpool City Council.
 - 4.2.4. DA means Development Application.

- 4.2.5. DEP means Design Excellence Panel.
- 4.2.6. EP&A Regulation means Environmental Planning & Assessment Regulation 2021.
- 4.2.7. LGA means Local Government Area.
- 4.2.8. LPP means Local Planning Panel.
- 4.2.9. SWCPP means Sydney Western City Planning Panel.

5. POLICY STATEMENT

- **5.1.** To deliver a customer-focused development assessment service within reasonable timeframes, applicants must furnish well-made, assessment ready applications at the time of submission via the NSW Planning Portal. The onus is on the applicant to ensure the information submitted is complete, accurate, and ready for assessment.
- **5.2.** Applications that are unclear, illegible, or fail to provide the required information will not be accepted by Council.
- **5.3.** Council strongly recommends the engagement of a professional planner and other qualified professionals, to assist with the preparation of development applications, and all stages of the development application process.



6. POLICY

6.1. Stage 1 | Pre-lodgement



Key Objectives

To provide an informative and timely pre-lodgement service to ensure once an application is lodged, it can be considered, and relevant advice provided.

Council provides the following pre-lodgment services:

6.1.1. Education

Information is provided on the Council website to assist applicants in submitting their application in the form of fact sheets and checklists, which provide guidance on information required to be submitted with the development application.

Applicable planning policies and instruments including State Environmental Planning Policies, Local Environmental Plans, and Development Control Plans, are available via Council's ePlanning Portal. Online tools and services to check the developments permissibility and eligibility are also available for Council's Fast Track Streamlined Assessment program.

6.1.2. Planning Advisory

Council encourages applicants to discuss and seek guidance on development proposals prior to lodgement. Council's Planning Advisory service is available to customers during core business hours, to provide verbal advice or a formal written response to inquiries (fees apply for formal written responses to inquiries). You can attend in person at Council's Customer Service Centre or alternatively via telephone, with the general advice provided, and made without prejudice.

6.1.3. Pre-Development Applications

For certain types of development applications, Council encourages applicants to submit a Pre-Development Application to discuss development concepts, prior to submitting a Development Application (fees apply).

Liverpool City Council strongly encourages a Pre-Development Application meeting for the following types of developments:

- Residential multi-unit developments, residential flat buildings, mixed use developments with both residential and commercial and large scale subdivisions;
- Commercial development (other than minor additions/alterations or change of use/fitout applications);
- Industrial development (other than minor additions/alterations or change of use/fitout applications);
- Proposals within the Western Sydney Aerotropolis, and
- Other development where significant site constraints exist (discuss with Council's Planning Advisory Team in the first instance).

Concept plans and a summary of the proposal are required to be provided with any Pre-Development Application. Once the documentation has been received, Council's Panel Support Officer will contact the applicant with a meeting appointment.

Detailed written advice will be issued following the meeting. The Pre-Lodgement written advice timeframe is set as a Key Performance Indicator (KPI) within Council's Delivery Program and Operational Plan (DPOP), that being:

Pre-Lodgement meeting minutes will be provided to applicants within 10 business days
of meeting date, for 90% of applications.

Note: Pre-Development applications are for development applications made under Part 4 of the Act only.

6.2. Stage 2 | Lodgement



Key Objectives

- To ensure that all applications have met the relevant requirements for lodgement.
- To ensure that any additional information requested by Council, prior to the lodgement of the application, is reasonable and is consistently applied.
- To ensure the timely lodgement of applications, and the notification and referral of applications as required.

6.2.1. Submission

Applications are required to be submitted to Council via the NSW Planning Portal. An application is not deemed as lodged until the application is accepted by Council, and full payment of the relevant fees and charges have been paid.

6.2.2. Preliminary Review

Upon submission to the NSW Planning Portal, Council will undertake a preliminary review of the application, to ensure all relevant details are provided on the form, all mandatory documents have been provided, and the application is ready for assessment.

During the preliminary review, applications that are unclear, illegible, or fail to provide the required information will be returned to the applicant, together with detailed advice setting out the issues that must be addressed prior to re-submission.

6.2.3. Payment of Fees

Following the preliminary review, if the application is acceptable, Council will process the application at which point a development application reference number and a tax invoice are issued for payment.

Failure to make payment by the due date will result in the application being returned via the NSW Planning Portal

6.2.4. Lodgement

Upon payment of fees, the application is deemed to be lodged with Council, at which point the assessment period starts.

Under the *Environmental Planning and Assessment (Statement of Expectations) Order 2024,* applications are to be lodged by Council as soon as practicable and within an average timeframe of:

- 14 days from submission, from 1 July 204 to 30 June 2025
- 7 days from submission, from 1 July 2025 onwards.

6.3. Stage 3 | Assessment



Key Objectives

 To undertake an assessment in a timely manner in accordance with relevant matters for consideration.

6.3.1. Allocation & Assessment

The application will be allocated to, and assessed by a Development Assessment Planner under the provisions of the Act, EP&A Regulation, and any instruments made under the Act.

Where Council has a perceived or actual conflict of interest, the application will be allocated to an external planning consultant to assess, and the application will be case managed by a Council Development Assessment Planner.

6.3.2. Communication & Updates

Council Officers will contact the applicant at key points during the assessment process.

Applicants will receive notification of the Development Assessment Planner managing their application at the time of allocation.

Applicants are encouraged to contact the allocated Development Assessment Planner in the first instance for all enquiries and requests for updates. The applicant nominated is to be the main point of contact with the Development Assessment Planner, and other stakeholders should seek to limit communication to through the applicant.

6.3.3. Community Consultation

The Act, along with Council's Community Participation Plan, dictate which applications trigger the need for notification, advertising, public exhibition, or an additional type of community engagement.

Council encourages respondents to make submissions during these periods, and respondents should make their submission via Council's ePlanning Portal.

Respondents will receive an acknowledgment of their submission, as well as notification of the application's determination status once the application has been finalised.

6.3.4. Concurrences & Referrals

When reviewing a development application, Development Assessment Planners must consider a range of effects the development may have including but not limited to, traffic, bushfire risks, flooding risks, pollution, infrastructure and building design, and safety.

The nature of these effects may require advice or agreement from other NSW Government agencies, Internal Referral Officers, or neighbouring Councils. These requirements are known as concurrences and referrals.

Concurrences and referrals may generate a request for additional information to support the development application.

6.3.5. Requests for Additional Information or Amendments

If the development application does not provide sufficient information for assessment, or a concurrence and/or referral requires additional information, the Development Assessment Planner will request the applicant to provide further information or amendments via the NSW Planning Portal. A specified timeframe will be outlined for the information to be submitted via the NSW Planning Portal, and a tax invoice will also be uploaded to the NSW Planning Portal, which itemises the fees and charges associated with the assessment of information lodged in response to Council's request.

The applicant may be advised to withdraw their application via the NSW Planning Portal, where the development application requires significant amendment, or where information cannot be provided within the specified timeframe. Applicants who withdraw their application may be entitled to a partial refund of development application fees paid.

Applicants can discuss their options and issues raised by the Development Assessment Planner within the specified timeframe, as required.

Extensions of time to the specified timeframe will only be granted in exceptional circumstances, and are to be made in writing to the Development Assessment Planner.

If any proposed amendments to the application results in an increased environmental impact, the application may be re-notified to surrounding properties (fees apply).

Failure to provide the requested information, or withdrawal of the development application prior to the timeframe specified, will result in the determination of the development application based upon available information, which could result in a refusal.

6.3.6. Panels

Design Excellence Panel

The following applications will be issued to Council's DEP for advice, during the development application process.

- All residential flat building,
- Medium-density developments of thirty (30) units or more,
- New developments within the Liverpool city centre over three (3) storeys,

- New buildings or major extensions to existing development within business zones (outside of the Liverpool city centre) which are three (3) storeys or more,
- Any development which has an interface with significant public space,
- Any development deemed by the Manager Development Assessment and/or Manager City Planning to have a potentially significant impact on the amenity of the locality or region; and/or
- Any new building or major extensions to existing buildings (except for low-density residential development) adjacent to the Georges River, or any new industrial or commercial development adjacent to environmentally sensitive land or vegetation.

Further information on the DEP process can be found via the Liverpool City Council *Design Excellence Panel Charter and Procedure* dated 29 June 2022.

6.4. Stage 4 | Determination



Key Objectives

- To ensure that the application is determined in a timely manner.
- To ensure that applications are determined by Council or the relevant Planning Panel, as delegated
- To ensure that the determination provides certainty and minimises the need for either modification or further approvals, as far as possible.
- To ensure the decision upholds the integrity of the planning system.

Determination timeframes are set as per Ministerial Expectations under the *Environmental Planning and Assessment (Statement of Expectations) Order 2024.*

Council is to:

- Determine applications as soon as practical and whichever is the lesser of council's previous financial year average, or an average of:
 - o 115 days from lodgement, from 1 July 2024 to 30 June 2025
 - o 105 days from lodgement, from 1 July 2025 to 30 June 2026
 - o 95 days from lodgement, from 1 July 2026 to 30 June 2027
 - o 85 days from lodgement, from 1 July 2027 onwards
- Assess Regionally Significant DAs and refer them to the relevant planning panel for determination as soon as practical and within an average of 250 days from lodgement.

The following additional KPIs have been adopted within Council's DPOP relevant to Development Assessment:

• Determine development applications of a minor nature (dwellings, secondary dwellings, ancillary residential structures) within 40 business days for 90% of applications.

Development applications are largely determined by the Development Assessment Department under Delegated Authority, however, certain applications are required to be determined by the Liverpool Local Planning Panel or the Sydney Western City Planning Panel.

Liverpool Local Planning Panel

In accordance with Schedule 2 of the Local Planning Panels Direction – Development Applications 23/02/2023, developments of the kind specified are to be determined by the LPP. These include:

- Conflict of interest,
- Contentious development,
- Departure from development standards, and/or
- Sensitive development.

Sydney Western City Planning Panel

A comprehensive list of applications determined by the Sydney Western City Planning Panel are itemised within Schedule 6 of *State Environmental Planning Policy (Planning Systems)* 2021.

6.5. Stage 5 | Post Determination Options



Key Objectives

 To ensure the Applicant and other relevant stakeholders are notified of decisions in a timely manner.

6.5.1. Notice of Determination

Notices of Determination (NODs) are available in real time via the NSW Planning Portal, once the determination is finalised. Applicants will be sent an e-mail containing the NOD and approved documents.

6.5.2. Post Determination Options

Review of Determination

Applicants may request a review of a determination or decision made in accordance with Section 8.2 of the Act.

Review of determination or decision applications must be lodged via the NSW Planning Portal in a timely manner, following the original determination, to allow Council sufficient time to complete an assessment.

Modification of Consent

Applicants that have obtained development consent may seek to modify the development consent in accordance with Section 4.55 of the Act.

Applications to modify a consent must be lodged via the NSW Planning Portal.

For modifications applications lodged due to an administrative error, Council may choose to waive the associated modification application fees, pending review of the application.

Other Options

Should an application be determined as a refusal, applicants can lodge a new application, or alternatively, lodge an appeal with the NSW Land and Environment Court.

RELEVANT LEGISLATIVE REQUIREMENTS

Environmental Planning & Assessment Act 1979
Environmental Planning & Assessment Regulation 2021
State Environmental Planning Policy (Precincts – Western Parkland City) 2021
Liverpool Local Environmental Plan 2008;
Liverpool Local Development Control Plans.
Local Planning Panels Direction – Development Applications dated 23 February 2023
Liverpool Design Excellence Panel Charter and Procedure dated 29 June 2022
Environmental Planning & Assessment (Statement of Expectations) Order July 2024
Other relevant environmental planning instruments, codes and planning policies.

7. RELATED POLICIES & PROCEDURE REFERENCES

Department of Planning and Environment's Development Assessment Best Practice Guide dated March 2017

Conflict of Interest Council-related Development Applications Policy 2023 Liverpool City Council Delivery Program & Operational Plan (DPOP) 2022-2023

AUTHORISED BY

Council Resolution

EFFECTIVE FROM

This date is the date the policy is adopted by Council resolution.

REVIEW DATE

xx 2026

This policy must be reviewed every two years or as legislation is updated.

VERSIONS

Version	Amended by	Changes made	Date	СМ
1.0	Manager Development Assessment	New policy	Xxx 2024	xxxx

THIS POLICY HAS BEEN DEVELOPED IN CONSULTATION WITH

Development Assessment (Planning & Compliance) Community Standards (Planning & Compliance) Governance (Corporate Support)



DEVELOPMENT ASSESSMENT OF DEVELOPMENT APPLICATIONS POLICY

Adopted: XX 20232024

CM: XX



DEVELOPMENT ASSESSMENT OF DEVELOPMENT APPLICATIONS POLICY

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1. INTRODUCTION

DIRECTORATE:

BUSINESS UNIT:

Development Assessment is carried out under the provisions of the *Environmental Planning & Assessment Act 1979* and the *Environmental Planning & Assessment Regulation 2021*.

The Development Assessment Policy specifies how development applications lodged with Liverpool City Council will be assessed and determined. The Development Assessment Policy aligns with the Department of Planning and Environment's Development Assessment Best Practice Guide dated March 2017.

2. PURPOSE

This policy aims to deliver an improved level of customer service, with a focus on best practice and continuous improvement by:

- Providing a clear and accountable policy and process for applicants,
- · Aligning to best practice guidelines,
- · Promoting and supporting a continuous improvement culture, and

Planning & Compliance

Development Assessment

 Establishing clear directions and expectations for applicants to provide well-made, assessment ready applications.

3. SCOPE

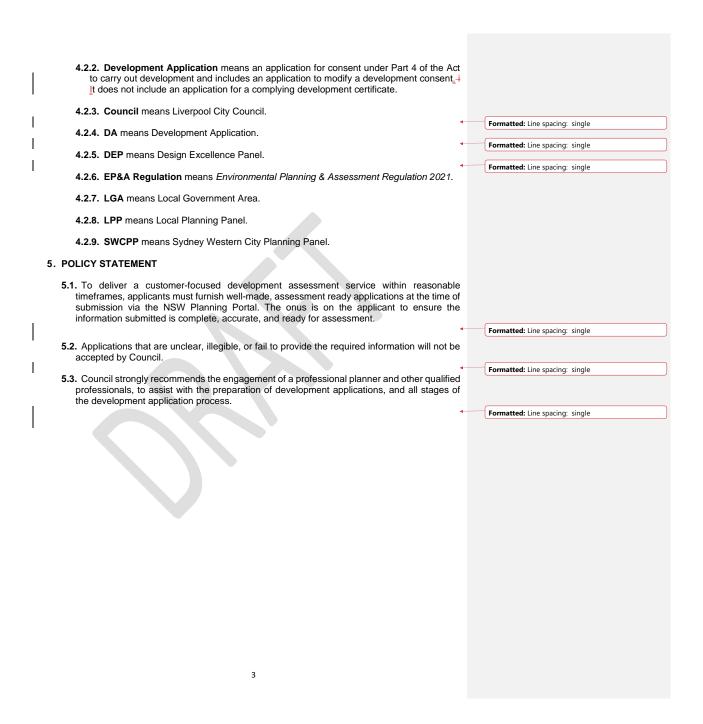
- 3.1. This policy applies to all stages of the development application process for development applications submitted via the NSW Planning Portal including:
 - Pre-lodgement,
 - Lodgement,
 - Assessment;
 - Determination, and
 - Post determination options.

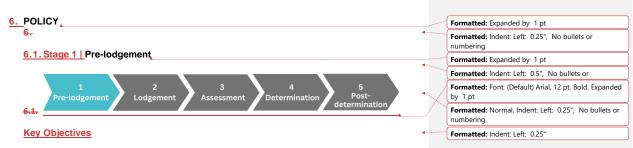
4. DEFINITIONS

- **4.1.** A word or expression in this policy has the same meaning as it has in the *Environmental Planning & Assessment Act 1979* (the Act), and any instruments made under the Act, unless it is otherwise defined in this Policy.
- 4.2. In this policy-
 - 4.2.1. Act means the Environmental Planning and Assessment Act 1979.

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To provide an informative and timely pre-lodgement service to ensure once an application is lodged, it can be considered, and relevant advice provided.

Council provides the following pre-lodgment services:

6.1.1. Education

Information is provided on the Council website to assist applicants in submitting their application in the form of fact sheets and checklists, which provide guidance on information required to be submitted with the development application.

Applicable planning policies and instruments including State Environmental Planning Policies, Local Environmental Plans, and Development Control Plans, are available via Council's ePlanning Portal. Online tools and services to check the developments permissibility and eligibility are also available for Council's Fast Track Streamlined Assessment program.

6.1.2. Planning Advisory

Council encourages applicants to discuss and seek guidance on development proposals prior to lodgement. Council's Planning Advisory service is available to customers during core business hours, to provide verbal advice or a formal written response to inquiries (fees apply for formal written responses to inquiries). You can attend in person at Council's Customer Service Centre or alternatively via telephone, with the general advice provided, and made without prejudice.

6.1.3. Pre-Development Applications

For certain types of development applications, Council encourages applicants to submit a Pre-Development Application to discuss development concepts, prior to submitting a Development Application (fees apply).

Liverpool City Council strongly encourages a Pre-Development Application meeting for the following types of developments:

- Residential multi-unit developments, residential flat buildings, mixed use developments with both residential and commercial and large scale subdivisions;
- Commercial development (other than minor additions/alterations or change of use/fitout applications);
- Industrial development (other than minor additions/alterations or change of use/fitout applications);
- Proposals within the Western Sydney Aerotropolis, and

Other development where significant site constraints exist (discuss with Council's Planning Advisory Team in the first instance).

Concept plans and a summary of the proposal are required to be provided with any Pre-Development Application. Once the documentation has been received, Council's Panel Support Officer will contact the applicant with a meeting appointment.

Detailed written advice will be issued following the meeting. The Pre-Lodgement written advice timeframe is set as a Key Performance Indicator (KPI) within Council's Delivery Program and Operational Plan (DPOP), that being:

Pre-Lodgement meeting minutes will be provided to applicants within 10 business days of meeting date, for 90% of applications.

Note: Pre-Development applications are for development applications made under Part 4 of the Act only

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6.2. Stage 2 | Lodgement



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Key Objectives

- To ensure that all applications have met the relevant requirements for lodgement.
- To ensure that any additional information requested by Council, prior to the lodgement of the application, is reasonable and is consistently applied
- To ensure the timely lodgement of applications, and the notification and referral of applications as required.

6.2.1. Submission

Applications are required to be submitted to Council via the NSW Planning Portal. An application is not deemed as lodged until the application is accepted by Council, and full payment of the relevant fees and charges have been paid.

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6.2.2. Preliminary Review

Upon submission to the NSW Planning Portal, Council will undertake a preliminary review of the application, to ensure all relevant details are provided on the form, all mandatory documents have been provided, and the application is ready for assessment.

During the preliminary review, applications that are unclear, illegible, or fail to provide the required information will be returned to the applicant, together with detailed advice setting out the issues that must be addressed prior to re-submission.

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6.2.3. Payment of Fees

Following the preliminary review, if the application is acceptable, Council will process the application at which point a development application reference number and a tax invoice are issued for payment.

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Failure to make payment by the due date will result in the application being returned via the NSW Planning Portal

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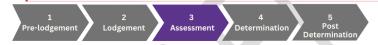
6.2.4. Lodgement

Upon payment of fees, the application is deemed to be lodged with Council, at which point the assessment period starts.

Under the Environmental Planning and Assessment (Statement of Expectations) Order 2024, applications are to be lodged by Council as soon as practicable and within an average timeframe of:

- 14 days from submission, from 1 July 204 to 30 June 2025
- 7 days from submission, from 1 July 2025 onwards,

6.3. Stage 3 | Assessment



Key Objectives

 To undertake an assessment in a timely manner in accordance with relevant matters for consideration.

6.3.

6.3.1. Allocation & Assessment

The application will be allocated to, and assessed by a Development Assessment Planner under the provisions of the Act, EP&A Regulation, and any instruments made under the Act.

Where Council has a perceived or actual conflict of interest, the application will be allocated to an external planning consultant to assess, and the application will be case managed by a Council Development Assessment Planner.

6.3.2. Communication & Updates

Council Officers will contact the applicant at key points during the assessment process.

Applicants will receive notification of the Development Assessment Planner managing their application at the time of allocation.

Applicants are encouraged to contact the allocated Development Assessment Planner in the first instance for all enquiries and requests for updates. The applicant nominated is to be the main point of contact with the Development Assessment Planner, and other stakeholders should seek to limit communication to through the applicant.

6.3.3. Community Consultation

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The Act, along with Council's Community Participation Plan, dictate which applications trigger the need for notification, advertising, public exhibition, or an additional type of community engagement.

Council encourages respondents to make submissions during these periods, —and respondents should- make their submission via Council's ePlanning Portal.

Respondents will receive an acknowledgment of their submission, as well as notification of the application's determination status once the application has been finalised.

6.3.4. Concurrences & Referrals

When reviewing a development application, Development Assessment Planners must consider a range of effects the development may have including but not limited to, traffic, bushfire risks, flooding risks, pollution, infrastructure and building design, and safety.

The nature of these effects may require advice or agreement from other NSW Government agencies, Internal Referral Officers, or neighbouring Councils. These requirements are known as concurrences and referrals.

Concurrences and referrals may generate a request for additional information to support the development application.

6.3.5. Requests for Additional Information or Amendments

If the development application does not provide sufficient information for assessment, or a concurrence and/or referral requires additional information, the Development Assessment Planner will request the applicant to provide further information or amendments via the NSW Planning Portal. A specified timeframe will be outlined for the information to be submitted via the NSW Planning Portal, and a tax invoice will also be uploaded to the NSW Planning Portal, which itemises the fees and charges associated with the assessment of information lodged in response to Council's request.

The applicant may be advised to withdraw their application via the NSW Planning Portal, where the development application requires significant amendment, or where information cannot be provided within the specified timeframe. Applicants who withdraw their application may be entitled to a partial refund of development application fees paid.

Applicants can discuss their options and issues raised by the Development Assessment Planner within the specified timeframe, as required.

Extensions of time to the specified timeframe will only be granted in exceptional circumstances, and are to be made in writing to the Development Assessment Planner.

If any proposed amendments to the application results in an increased environmental impact, the application may be re-notified to surrounding properties (fees apply).

Failure to provide the requested information, or withdrawal of the development application prior to the timeframe specified, will result in the determination of the development application based upon available information, which could result in a refusal.

6.3.6. Panels

Design Excellence Panel

The following applications will be issued to Council's DEP for advice, during the development application process.

- · All residential flat building,
- Medium-density developments of thirty (30) units or more,
- New developments within the Liverpool city centre over three (3) storeys,
- New buildings or major extensions to existing development within business zones (outside of the Liverpool city centre) which are three (3) storeys or more,
- · Any development which has an interface with significant public space,
- Any development deemed by the Manager Development Assessment and/or Manager City Planning to have a potentially significant impact on the amenity of the locality or region; and/or
- Any new building or major extensions to existing buildings (except for low-density residential development) adjacent to the Georges River, or any new industrial or commercial development adjacent to environmentally sensitive land or vegetation.

Further information on the DEP process can be found via the Liverpool City Council *Design-Excellence Panel Charter and Procedure* dated 29 June 2022.

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6.4. Stage 4 | Determination



Key Objectives

- To ensure that the application is determined in a timely manner.
- To ensure that applications are determined by Council or the relevant Planning Panel, as delegated
- To ensure that the determination provides certainty and minimises the need for either modification or further approvals, as far as possible.
- To ensure the decision upholds the integrity of the planning system.

<u>Determination timeframes are set as per Ministerial Expectations under the Environmental Planning and Assessment (Statement of Expectations) Order 2024.</u>

Council is to:

- Determine applications as soon as practical and whichever is the lesser of council's previous financial year average, or an average of:
 - 115 days from lodgement, from 1 July 2024 to 30 June 2025
 - o 105 days from lodgement, from 1 July 2025 to 30 June 2026
 - o 95 days from lodgement, from 1 July 2026 to 30 June 2027
- 85 days from lodgement, from 1 July 2027 onwards

 Assess Regionally Significant DAs and refer them to the relevant planning panel for determination as soon as practical and within an average of 250 days from lodgement. Formatted: Expanded by 1 pt

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The following additional KPIs have been adopted within Council's DPOP relevant to **Development Assessment:** Determine development applications of a minor nature (dwellings, secondary dwellings, ancillary residential structures) within 40 business days for 90% of applications. Formatted: Indent: Left: 0.25" Development applications are largely determined by the Development Assessment Department under Delegated Authority, however, certain applications are required to be determined by the Liverpool Local Planning Panel or the Sydney Western City Planning Panel. Formatted: Indent: Left: 0.25' **Liverpool Local Planning Panel** Formatted: Indent: Left: 0.35' In accordance with Schedule 2 of the Local Planning Panels Direction - Development Formatted: Indent: Left: 0.25' Applications 23/02/2023, developments of the kind specified are to be determined by the LPP. These include: Conflict of interest, Formatted: Indent: Left: 0.5" Contentious development, Departure from development standards, and/or Sensitive development. Sydney Western City Planning Panel Formatted: Indent: Left: 0.2" A comprehensive list of applications determined by the Sydney Western City Planning Panel are itemised within Schedule 6 of State Environmental Planning Policy (Planning Systems) 2021. 6.5. Stage 5 | Post Determination Options Formatted: Expanded by 1 pt **Pre-lodgement** Key Objectives To ensure the Applicant and other relevant stakeholders are notified of decisions in a timely manner. Formatted: Font: (Default) Arial, 12 pt, Bold, Expanded 6.5.1. Notice of Determination Formatted: Normal, Indent: Left: 0.25". No bullets or numbering Notices of Determination (NODs) are available in real time via the NSW Planning Portal, once the determination is finalised. Applicants will be sent an e-mail containing the NOD and Formatted: Font: (Default) Arial, 12 pt, Bold 6.5.2. Post Determination Options Formatted: Normal, Indent: Left: 0.5", No bullets or numbering 6.5.1. Review off Determination Formatted: Font: (Default) Arial, 12 pt, Bold Formatted: Normal, Indent: Left: 0.5", No bullets or Applicants may request a review of a determination or decision made in accordance with Section 8.2 of the Act. 9

Review of determination or decision applications must be lodged via the NSW Planning Portal in a timely manner, following the original determination, to allow Council sufficient time to complete an assessment.

6.5.2. Modification of Consent

Applicants that have obtained development consent may seek to modify the development consent in accordance with Section 4.55 of the Act.

Applications to modify a consent must be lodged via the NSW Planning Portal.

For modifications applications lodged due to an administrative error, Council may choose to waive the associated modification application fees, pending review of the application.

6.5.3. Other Options

Should an application be determined as a refusal, applicants can lodge a new application, or alternatively, lodge an appeal with the NSW Land and Environment Court.

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7. RELEVANT LEGISLATIVE REQUIREMENTS

Environmental Planning & Assessment Act 1979
Environmental Planning & Assessment Regulation 2021
State Environmental Planning Policy (Precincts – Western Parkland City) 2021
Liverpool Local Environmental Plan 2008;
Liverpool Local Development Control Plans.
Local Planning Panels Direction – Development Applications dated 23 February 2023
Liverpool Design Excellence Panel Charter and Procedure dated 29 June 2022
Environmental Planning & Assessment (Statement of Expectations) Order July 2024
Other relevant environmental planning instruments, codes and planning policies.

8.7. RELATED POLICIES & PROCEDURE REFERENCES

Department of Planning and Environment's Development Assessment Best Practice Guide dated March 2017

Conflict of Interest Council-related Development Applications Policy 2023

<u>Liverpool City Council Delivery Program & Operational Plan (DPOP) 2022-2023</u>

AUTHORISED BY

Council Resolution

EFFECTIVE FROM

This date is the date the policy is adopted by Council resolution.

REVIEW DATE

xx 20252026

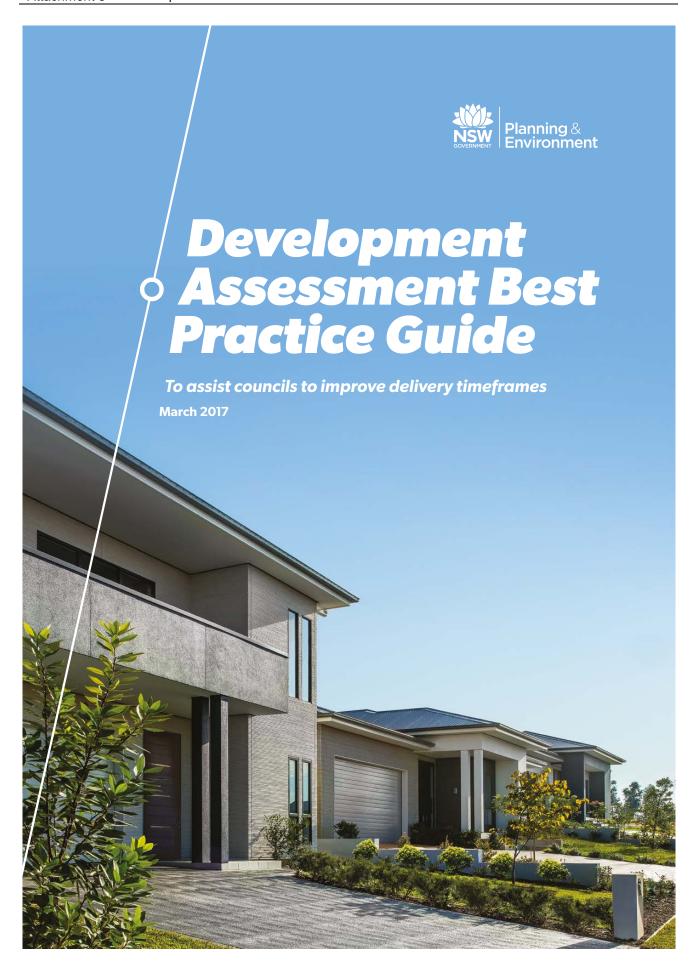
This policy must be reviewed every two years or as legislation is updated.

VERSIONS

Versio		Changes made	Date	СМ
1.0	Manager Development Assessment	New policy	Xxx 2023 2024	xxxx

THIS POLICY HAS BEEN DEVELOPED IN CONSULTATION WITH

Development Assessment (Planning & Compliance)
Community Standards (Planning & Compliance)
Governance (Corporate Support)



Foreword

A strong economy and booming job market makes New South Wales (NSW) a place where people want to live.

That's why more people are moving here from interstate and fewer people are leaving.

It's also the strong economy that gives us a chance to think innovatively about how we can approve new homes faster to meet projected growth. NSW will need to provide homes for another 2.1 million residents by 2036.

Councils play a vital role in delivering housing in NSW, as they process and determine the majority of development applications (DAs).

The DA process is a key link in the housing supply chain and impacts on how efficiently new housing can be delivered to the market.

In recognition of this, the Premier of NSW has set a priority for faster housing approvals, with a target of 90 per cent of housing approvals to be determined within 40 days.

That's why we have developed the Development Assessment Best Practice Guide – to assist in delivering the Premier's housing target.

The guide has been tested in a pilot project, which has shown that when best practice processes and procedures are applied, determination times improve.

Councils are the experts in local development, and this guide has been developed in collaboration with a steering committee of councils, to draw upon their expertise and to ensure the guide reflects the needs of council staff.

To ensure this guide reflects the needs of councils and those submitting DAs, it will be reviewed six months after release which will allow councils to evaluate the guidelines and provide feedback.

The NSW Planning Portal is another key resource that will work hand-in-hand with the guide to provide faster housing approvals. The portal will soon have the functionality for online lodgement of DAs, which will significantly improve the DA process, bringing great benefits to council staff and, to the lives of people in NSW.

Currently, a number of individual councils allow some applications to be lodged electronically. The new portal will become the central point for all online DA lodgement and complying development certificates.

The guide will help councils focus on delivering a high level of service to their customers prior to lodgement, so they receive an assessment ready DA.

Receiving assessment ready DAs will create a more efficient assessment process, which will lead to improved service for all customers and faster housing approvals for the people of NSW.

The Hon Anthony Roberts MP Minister for Planning and Housing

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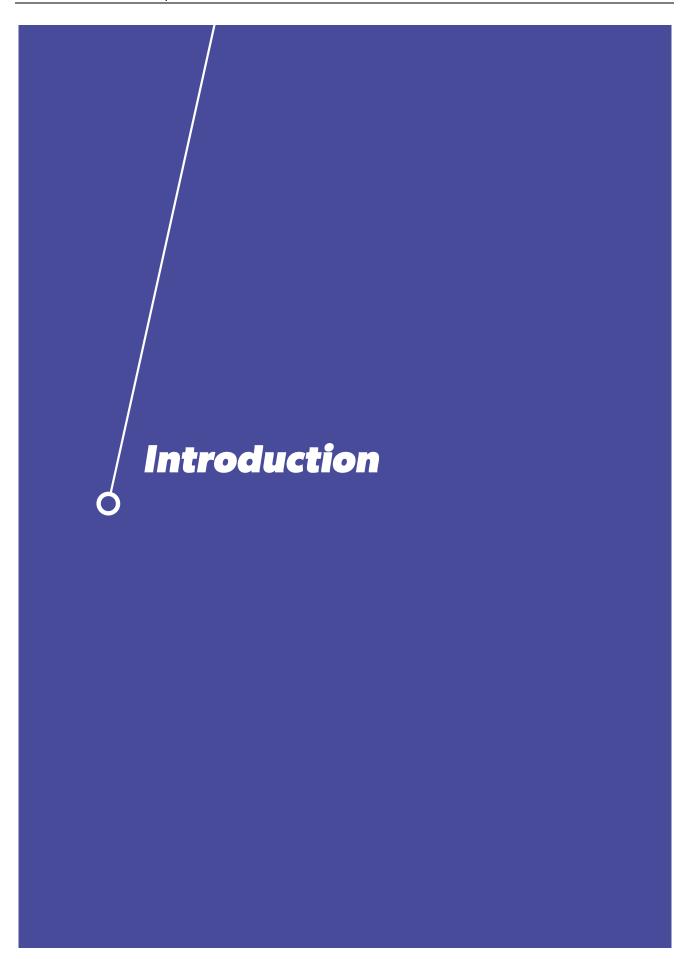
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Boosting the supply of homes in NSW in a timely matter is a key priority for the NSW Government for a number of reasons:

- It will provide certainty to the housing market by bringing new housing online sooner – making it easier for people to find or build homes.
- It will help meet demand as Sydney plans for an additional one million people over the next 10 years.
- Building new and sustainable communities and increasing supply is important for housing affordability.
- A strong housing market is integral to the NSW economy – driving investment, and generating jobs and wealth.

The development assessment process is a key link in the housing supply chain and impacts on how efficiently new housing can be delivered to market. In recognition of this the Premier of NSW has set a priority for **Faster Housing**Approvals, with a target of 90 per cent of housing approvals to be determined within 40 days.

The majority of development applications (DAs), including housing applications, are processed and determined by local government which means that councils play a vital role in delivering housing in NSW. In light of the Premier's target it is timely to review development assessment processes to identify opportunities for improvement for all DA types.

In recent years there have been a number of initiatives to improve the approval process for housing. This includes the introduction of complying development to fast track approvals for simple housing and other development types. Where such applications meet certain criteria they can be determined by a council or accredited certifier without the need for a full DA. The NSW Government is committed to ongoing improvement to the complying development system to make it easier and therefore more attractive to people wanting to build a home.

The government will soon launch its online application lodgement system, which will be a component of the NSW Planning Portal. The system will transform the development assessment process, creating a single point where applicants can access information about what is needed for an application and submit it.

Underlying the online lodgement system are the Secretary's Requirements which will replace Schedule 1 of the *Environmental Planning and Assessment Act 1979*. These set clear minimum requirements for applications including administrative and technical documentation. The aim of the Secretary's Requirements are to ensure that once an application is received it is fit for assessment and determination purposes.

To complement these initiatives and to assist councils in meeting the Premier's target, and to improve the processing of all DAs, the Department of Planning and Environment, in collaboration with Camden, Campbelltown, Central Coast, Canterbury-Bankstown, Blacktown, Liverpool and Parramatta councils, has prepared this Development Assessment Best Practice Guide (the guide). The guide is a collection of best practice assessment processes as identified by leading local government practitioners.

The guide promotes a number of underlying principles that, if consistently applied throughout the assessment process, will lead to improved determination times. The guide draws on leading practices and procedures being used by councils which have proven to assist in the timely determinations of DAs.

These include:

- Targeted pre DA services.
- · Efficient lodgement and triage practices.
- Notification procedures commensurate with impacts.
- Corporate accountability for assessment timeframes in the form of key performance indicators.
- Delegations that support a consistent, targeted and efficient decision making process.

Importantly, the principles, procedures and practices adopted in this document should be used to guide the assessment and determination of all local and regional DAs to ensure that efficiency gains are achieved for all types of applications.

The guide has been prepared for use by:

- Customer service staff the first point of call either at the front counter, over the phone or responding to electronic correspondence.
- Assessment officers building surveyors and planners who are responsible for assessing applications.
- Senior assessment staff and management –
 usually those who have delegations to determine
 applications. Generally, from the senior planner
 level up to the director and general manager.
- Technical officers engineers and others who provide specialist advice as part of the development assessment process.
- Administration officers administrative professionals, including administration officers to decision making authorities, who support the development assessment process.
- Elected government officials and other decision makers – councillors or panel members in understanding their roles and responsibilities in the development assessment process.

This guide promotes best practice principles and approaches for those directly interacting with the council development assessment process and is consistent with the automated actions that take place when an application is submitted on the NSW Planning Portal.

Unless stated otherwise, reference to days within the guide equates to calendar days.

Best practice principles and approaches underpinning the assessment process



This guide addresses the procedure and process of the assessment, not the assessment merit.

To ensure that the majority of determinations can be delivered within the 40 day target timeframe, the following procedural principles should be adopted:

Investment in the pre-lodgement stage:

The quality and adequacy of DAs, the speed in which they can be assessed and determined, and the standard of the built form outcome are generally influenced by the amount and type of resources councils invest in the pre-lodgement stage.

Councils that invest time and resources at the pre-lodgement stage receive applications that have better responses to policy and compliance requirements. The lodgement of an 'assessment ready' DA allows the assessment officer to focus on assessing and determining the application rather than liaising with the applicant to get the application to a standard where it can actually be assessed. Better quality of information also allows the assessment officer to have a thorough appreciation of the proposal and its built form implications.

Formalise assessment timeframes within council:

Adopting clear performance targets for council staff relating to assessment timeframes ensures that the development assessment process is transparent, accountable and outcomes focused.

Jurisdictional comparisons across Australia indicate that consent authorities that have statutory timeframes and/or implement key performance criteria at senior levels are more likely to have good delivery timeframes.

Councils should adopt key performance indicators in line with the Premier's target as follows:

- General manager/director/team leaders:
 90 per cent of DAs determined within 40 days.
- Team leaders/assessing officers/referral officers: Undertake assessment stage within 35 days.

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Delivery focused assessment processing:

Establishing a culture that supports efficient and consistent development assessment - driven by the assessing officer, and supported by all levels of management and services - is fundamental to improving delivery times.

Applications that are not capable of being assessed and determined on the information submitted at lodgement are likely to have resource implications for assessments, workloads and morale.

Issues and concerns regarding design and compliance should be resolved as far as practical during the pre-lodgement stage. Where DAs are deemed deficient following lodgement, the applicant should be encouraged to withdraw the application, it should be rejected or it should be determined on the information before council. Councils that have adopted a corporate and performance based approach to the assessment of DAs have demonstrated improved assessment timeframes and increased staff satisfaction. To deliver a consistently corporate based approach to development assessment requires all users to be clear on their respective roles, accountabilities and responsibilities during the process. To achieve this, an Assessments Efficiency Partnership Agreement has been prepared to provide clarity around the roles of the different users of this guide and how all individuals in the process should work together to drive efficiency. The agreement is included as Appendix A.

Standardise:

The adoption of standardised processes and procedures can help to reduce assessment timeframes - these may include standardised report templates, conditions, delegation instruments, policies around notification, 'Stop the Clock', advertising, and operational procedures for decision making forums.

Development standards and development controls should be streamlined. Adopting performance based development controls, as opposed to traditional prescriptive instruments will generally lead to better planning outcomes and help ensure that requests for variations are minimised and do not become standard practice.

Councils are encouraged to adopt all necessary measures to support the assessment officers and establish a more efficient development assessment process.

Business system improvement and online tools:

Councils with high volumes of DAs should implement measures to enable digital management of all development assessment processes including lodgement, assessment, determination and file management. Councils that have invested in software to manage lodgement, assessment and determination of DAs have reduced assessment and administrative workloads. Digital business systems also provide a more integrated and secure document management system, reduce the cost of archiving and they consolidate property information in a centralised and accessible manner.

Such software can also assist integration with the NSW Planning Portal.

Incentives:

Incentives are an important driver for applicants, and can be leveraged by councils to reduce assessment timeframes.

Successful initiatives that have been adopted by some councils include:

- Fast tracked assessment process for applications that have been subject to pre-lodgement meetings or panels.
- Fast tracked assessment process for applications that are fully compliant and do not require notification or referral.
- Refunds or partial refunds on lodgement fees for applications that are withdrawn at the Preliminary Assessment stage for being incomplete or inadequate.

Assessing officer workloads:

In general, assessing officers are capable of achieving the 40 day assessment timeframe when they manage up to 25 relatively straightforward DAs at any one time.

Where officers have more than 25 relatively straightforward DAs, and/or where a significant proportion of the applications are complex, assessment timeframes increase proportionally.

Level of assessment officer support for applicants during the assessment process:

It is the practice of some councils to provide a high level of ongoing support throughout the assessment process for certain applicants, including 'Mum and Dad' applicants. While the rationale behind this business practice is acknowledged, it is counter intuitive to a timely determination. Such practices include:

- Consistently accepting incomplete and inadequate applications.
- Ongoing discussions around design and compliance related issues that should have been resolved or agreed to at the pre-lodgement stage.
- Issuing multiple Stop the Clock and Further Information requests.
- Allowing lodgement of multiple revisions of architectural plans.

Councils should make every effort to provide a high level of support to applicants throughout the prelodgement stage. This includes ensuring adequate staff are available to walk applicants through DA requirements, documents and processes, to the extent required to ensure an assessment ready DA is submitted. This will allow assessment officers to focus their efforts on a speedy merit assessment. Focusing financial and resource investment on pre-lodgement support will result in the submission of quality DAs and improved assessment timeframes.

Management:

Supportive and competent management is critical to a successful development assessment team.

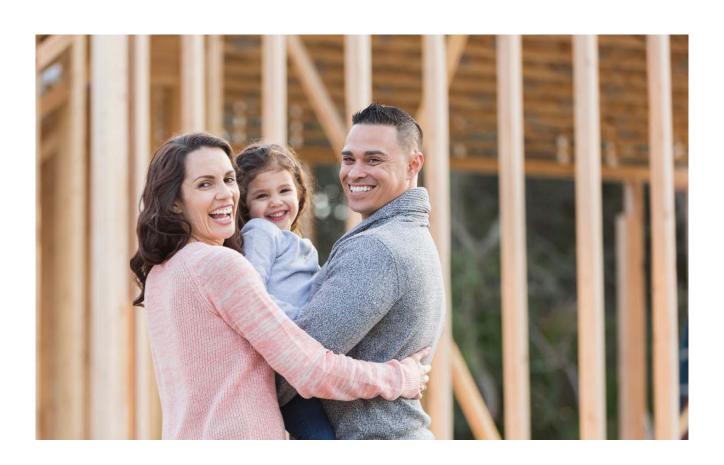
Directors, managers and team leaders should be responsible for tracking and monitoring the assessment timeframes and be accountable for performance. This includes reallocation of applications when necessary, employing additional staff and ensuring timeframes are met at all times, including when assessing officers are on leave.

The processing of some DAs is delayed by the inability of assessment officers to resolve an issue or solve a problem. Senior officers or management should be available to assist and facilitate resolution in such circumstances. Senior staff should ensure they are available for regular 'directions meetings' as a forum to guide junior officers and better manage their DA case loads.

Delegations:

While noting that delegations at council level often reflect varying planning issues facing different Local Government Areas, councils should make every effort to maximise and standardise development assessment delegations to ensure a consistent and efficient decision making process. Delegations should:

- Facilitate decisions which reflect the nature of the DA.
- Acknowledge the judgement of their professional staff, particularly in planning and environmental management.
- Seek the continued merit assessment at the appropriate level to minimise politicisation of the decision making process.





DEVELOPMENT ASSESSMENT BEST PRACTICE PROCESS MAP

Days	Actions	Responsibility	
N/A	Pre-lodgement advisory services.	Duty assessment officer including	
	Pre-lodgement meetings with	planners and surveyors	
	applicants and referral authorities (where relevant).	Senior assessment staff and technical officers	



LODGEMENT, NOTIFICATION, REFERRAL AND ALLOCATION

Days	Actions	Responsibility
1–6	Applicant submits DA which is checked for completeness and adequacy against the Secretary's Requirements.	Assessment officers
	Lodgement processed.	Customer service staff
	Clearing house.	Senior assessment staff, technical officers and other specialist council staff
	Updates, file management, completing exhibition and notification requirements, completing internal and external referrals, delivering file to assessing officer with any notes or conditions from the clearing house.	Administration officers



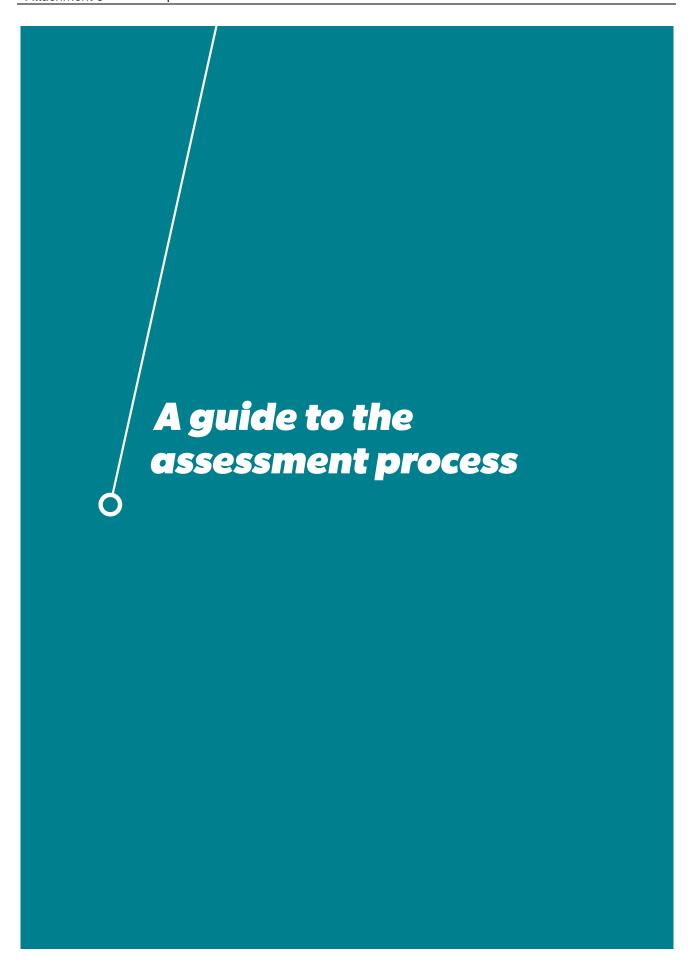
3	Days	Actions	Responsibility
SSESSMENT	6–30	Preliminary Assessment.	Assessment officers
		Stop the Clock.	
		Final Assessment.	
reliminary Issessment	6–15	Site visit.	Assessment officers and specialist council staff
		Advise applicant of report back date.	Assessment officers
		Review of application for compliance with relevant legislation and planning instruments.	Assessment officers
		Referrals to be completed.	Specialist council staff
		Identify issues and non-compliances, consider referral comments and submissions, complete assessment report.	Assessment officers
		Directions meeting where required.	Assessment officers and more senior officers
		Report back email or phone call to applicant.	Assessment officers
		 Fast Track applications may be finalised and proceed to determination stage. 	Assessment officers
Stop the Clock	15	Incomplete and/or major deficiencies: applicant is to be given 14 days to withdraw application or it will be rejected or refused.	Assessment officers
		Letter to be sent if minor amendment or information required. Applicant must respond within 14 days or the application will be refused.	Assessment officers
	15	Update(s) to Planning Portal where necessary.	Administration officers
inal Assessment	15–30	Review of minor amendments and additional information, complete assessment report.	Assessment officers



	Days	Actions	Responsibility
DETERMINATION			
Fast Track	15–20	Peer review.	Equal or more senior officer
applications	20–25	Determination by delegated authority.	Per instrument of delegation
Standard applications	30–35	Peer review.	Equal or more senior officer
	35-40	Determination by delegated authority.	Per instrument of delegation
	35–40	Determination by council, IHAP and JRPP.	Per instrument of delegation



	Days	Actions	Responsibility
POST- DETERMINATION			
Fast Track applications	25	Contact applicant and advise of determination.	Assessment officers
		Prepare Notice of Determination, and any relevant consent and stamped plans.	Administration officers
		Check determination material.	Assessment officers
		Provide determination package to applicant.	Administration officers
Standard applications	40	Contact applicant and advise of determination.	Assessment officers
		Prepare Notice of Determination, and any relevant consent and stamped plans.	Administration officers
		Check determination material.	Assessment officers
		Provide determination package to applicant.	Administration officers



This section sets out the general practice requirements and associated timeframes for each stage of the development assessment process.

Stage 1 | Pre-lodgement

Key Objective

 To provide informative and timely pre-lodgement services to ensure once an application is lodged it can be considered and determined in an expeditious manner.



PRE-LODGEMENT ADVISORY SERVICES

To be determined by council/applicant

Dedicated services providing general advice on DAs including: requirements for lodging a DA, and relevant development standards and development controls, likely assessment stream and timing.

PRE-LODGEMENT MEETING

- A formal meeting with council officers to discuss lodgement requirements, assessment processes and design review where required by State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (SEPP 65).
- Council provides detailed advice on all aspects of the development process including compliance requirements, design and planning.
- Council/applicant may request a follow up meeting prior to lodgement to review the DA for completeness and address any outstanding issues.

The pre-lodgement process is a key stage in the development assessment process. It should enable applicants to:

- Determine whether or not their development proposal could be dealt with as a complying development as opposed to lodging a full DA.
- Ensure they are aware of all administrative and information requirements prior to lodging a DA.

 Be familiar with their roles and the roles and responsibilities of council staff and decision makers in the assessment and determination process.

Councils should ensure that their websites include a link to the NSW Planning Portal and a dedicated Planning and Development section that provides council specific resources for applicants including an explanation of the process, FAQs and contact details for Pre-lodgement Advisory Services. **Pre-lodgement advisory services** should be encouraged for all DAs, provided free of charge (although fees can be charged for pre-DA and Design Excellence meetings). These services should be accessible during business hours and staffed by suitably qualified officers.

Pre-lodgement advisory services should cover:

- General queries for straightforward DAs.
- Advice on the type of professional services that may be required in the preparation of applications.
- Information on when approvals from other authorities and state agencies may be required.
- Clear information on council requirements and expectations for DAs including compliance with relevant development standards and controls.
- Booking requirements for pre-lodgement meetings and panels (see below).

A record of the pre-lodgement advisory service should be noted on council's electronic property system. The note should only include the address, date and subject matter of the advice. The record of discussion will provide improved continuity of service and advice.

Pre-lodgement meetings should be mandatory for more complex DAs, for example:

- Capital investment value greater than \$2 million.
- Residential flat buildings, multi dwelling housing.
- Complex proposals including those with environmentally constrained sites.

Design Excellence meetings as required under SEPP 65 should occur prior to lodgement where possible to ensure that the design of residential flat building DAs are adequately addressed on the lodged plans.

Pre-lodgement meetings should:

- Be booked and be subject to fees.
- Require applicants to provide concept documentation a minimum of two weeks prior to the meeting.
- Involve professional staff from council, the applicant, and where practical those responsible for the preparation of architectural plans and supporting specialist reports.
- Identify relevant external and internal referral requirements.
- Have in attendance representatives from other authorities or state agencies where it's anticipated external referrals may require significant issues to be addressed.
- Identify key assessment issues and specialist technical requirements, as well as expectations regarding compliance with relevant development standards and controls.
- Be used to provide specific direction on issues of concern so the applicant is clear on the resolution preferred by council.
- Agree to an in-principle timeframe for determination.
- Include formal records of the meeting which are to be copied to the property file and provided to the applicant within two business days.

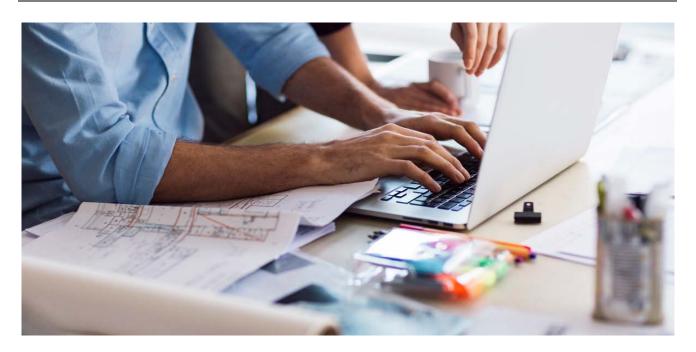
Pre-lodgement meetings should not be required by councils for smaller-scale Fast Track applications.

Secondary pre-lodgement meetings may be necessary for particularly complex applications.

NSW Planning Portal

The NSW Planning Portal allows applicants to identify a site's constraints, the planning controls that apply to it and the information they will be required to submit in any application. Customers should be directed to the NSW Planning Portal to inform themselves at the pre-lodgement stage.

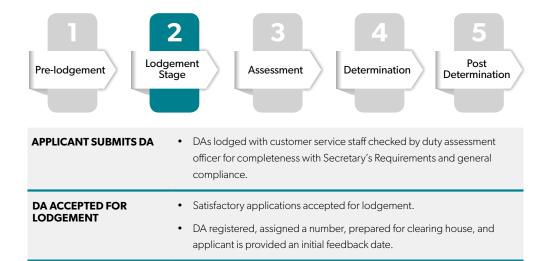
Computers for public use could be set up in the reception area of council offices so applicants can access the NSW Planning Portal, with council customer service staff available to answer any queries.



Stage 2 | Lodgement, notification, referrals and allocation

Key Objectives

- To ensure that all DAs have meet the relevant Secretary's Requirements for lodgement.
- To ensure that any additional information required by council for lodgement is reasonable and consistently applied.
- To ensure expeditious lodgement, notification and referral of all DAs.



CLEARING HOUSE

Days 1-6

- Clearing house conducted twice a week.
- The clearing house triages the application and initiates notification, exhibition, and internal and external referrals.
- The DA is allocated to the assessment officer where required.

GENERAL REQUIREMENTS

Lodgement: DAs should be checked by the duty assessment officer in the first instance. Applications can only be accepted if they satisfy the Secretary's Requirements, are generally compliant with the development standards and are supported by an acceptable level of information.

Councils must be reasonable and consistent when requesting information in addition to the information specified by the Secretary's Requirements.

Evidence of pre-lodgement advisory services, Design Excellence Panel and/or pre-lodgement meetings where applicable, should be provided and the application cross-checked with the formal records. Administration officers should carry out required support services including scanning, copying and other administrative processes. At this point the council should provide the applicant with a report back date at which point the assessment officer will provide an update or initial feedback on the processing of the application. Ideally this should be within 15 days of lodgement.

Electronic lodgement

Applicants will soon be able to lodge their applications online through the NSW Planning Portal. Electronic lodgement is a more efficient form of lodgement, benefiting councils and applicants and should be encouraged.

Clearing house: Councils with a high volume of annual DAs are encouraged to establish a clearing house to vet and triage incoming applications.

The clearing house team should comprise experienced senior planning and technical staff and supporting administration officers that can:

- Identify the appropriate assessment stream (Refer to the 'Assessment' section for explanation of the three DA streams – page 22):
 - 1. Fast Track
 - 2. Standard
 - 3. Other (council, IHAP or JRPP)
- Initiate notification and exhibition requirements.
 Councils should adopt notification and exhibition procedures that are proposal and impact specific and consistent with current government policy.
- Identify internal referrals where required, such as engineering requirements and external referral agencies.
- Identify any relevant standard conditions of approval from technical officers (such as engineers) that could be included to negate the need to seek internal referral.
- Allocate applications to the appropriate assessing officers.
- Identify the relevant decision maker as applicable at that time and ensure target meeting dates and/ or agendas for determination are scheduled.

The clearing house should be supported by administration officers who immediately carry out administrative tasks including:

- Issuing a letter to the applicant confirming lodgement of the DA.
- Arranging notification or exhibition.
- Issuing internal and external referrals.
- Placing copies of notification and referrals on the hard copy (where applicable) and electronic file.
- Placing relevant assessment checklists on file for the allocated assessment officer.
- Placing copies of other relevant information identified by the clearing house team on the file including conditions, comments and target determination/meeting date.
- Delivering the application to the allocated planner.

Best practice notification of DAs

1. Fast Track DAs

Fast Track DAs should not require notification or exhibition. (Refer to the 'Assessment' section for explanation of the three DA streams – page 22).

2. Standard DAs

Notification of any Standard DAs should not exceed 14 days.

In determining the extent of notification, councils should consider the proposed development's impacts on neighbouring properties and the likely level of public interest. It may be that some Standard DAs do not require notification.

3. Other DAs

DAs that require as a minimum notification, as well as possible exhibition. The extent and period of notification and/or exhibition should correspond to impacts and statutory requirements.



PLAN 04

Stage 3 | Assessment

Key Objective

· To undertake an assessment in a timely manner that is reasonable, commensurate with the impacts and delivers a sound planning outcome.



GENERAL REQUIREMENTS

The DA process should be divided into three streams, depending on the type of DA being considered:

1. Fast Track

These are DAs that comply with development standards and development controls, have limited environmental or planning constraints, and do not require notification, advertising or internal or external referral.

These applications are generally minor in nature and unlikely to cause impacts on neighbouring properties.

Fast Track applications can be assessed and determined in the Preliminary Assessment stage (see following page).

2. Standard

Standard DAs require notification; and/or advertising; and/or internal or external referral; and/or detailed consideration of environmental or planning matters as part of the assessment process.

Standard applications require the completion of both the Preliminary Assessment and Final Assessment stages. The Stop the Clock provisions should only be used once and only where absolutely necessary (that is, in response to information received as a result of exhibition or assessment information gaps identified during the preliminary assessment).

3. Other

These are standard DAs that trigger separate assessment and determination requirements including by the elected council, an Independent Hearing and Assessment Panel (IHAP) or Sydney Planning Panel (SPP)/Joint Regional Planning Panel (IRPP).

It is noted that both IHAPs and SPP/JRPPs have their own processing and delivery guidelines that should be considered by assessment officers in their assessment processes.

Preliminary Assessment (days 6-15):

Assessing officers should carry out a site visit with relevant specialist staff and undertake a preliminary assessment in regard to compliance with relevant environmental planning instruments.

Any major planning deficiencies are to be identified and comments from referring areas of council or state authority considered. If the DA includes requests to vary development standards and controls, an assessment should be carried out and a determination obtained from the relevant delegated authority.

A directions meetings should be held between junior and more senior staff at this point to efficiently problem solve complex issues and provide general assessment guidance and strategies where required.

If the DA remains fundamentally incomplete, contains major deficiencies or there are variation requests that cannot be supported in all reasonableness: the applicant should be encouraged to withdraw the application or be advised that the application will either be rejected as invalid or determined on the information currently before council. If the application is otherwise determined to be complete and able to be determined, the assessment officer should also deliver this update to the applicant in accordance with the earlier provided report back date.

If minor amendments are justified, these should be addressed by condition of development consent in the first instance, or if absolutely necessary, Stop the Clock correspondence.

Fast Track DAs should be able to be determined at this stage. Conditions arising from internal referrals should have been provided during the clearing house. Assessment reports for Fast Track DAs should be brief with compliance with relevant standards and controls being clearly determined.

Final Assessment (days 15-30):

All 'Standard' and 'Other' DAs should be finalised as soon as practical following notification/ exhibition/referral taking into consideration all submissions received, including internal and external referrals, and any additional material provided by the applicant.

While council staff should make every effort to resolve issues raised in submissions, the practice of negotiating the withdrawal of submissions should be resisted. Council officers should use their professional judgement in ultimately resolving the matter (by condition if need be) to ensure the determination of the application is not unduly delayed.

Councils in applying conditions on their determinations should consider the following:

- Only applying the conditions where it is essential to eliminate risk of an unfavourable outcome with substantial consequences.
- Ensuring that consents minimise the need for further approvals including deferred commencements.
- Consider providing the applicant a right of response on recommended conditions before determination if non-standard.
- Consider adopting and publishing model conditions on an industry basis (such as housing).

The detailed assessment report should be promptly finalised and supporting determination material prepared for the determining authority.

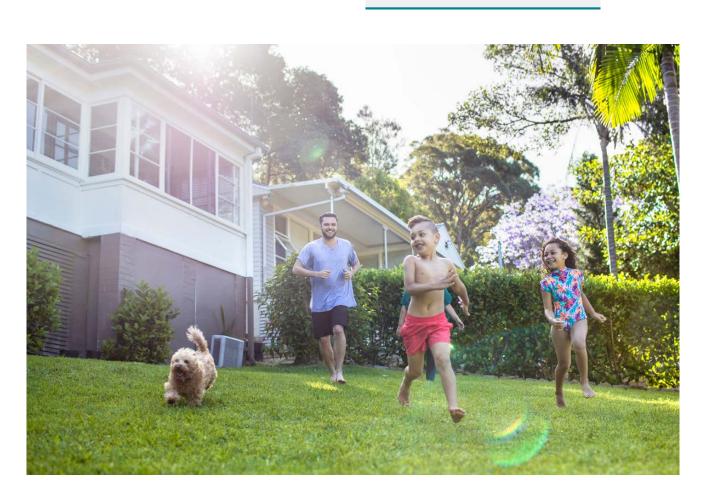
Final Stop the Clock (by day 15): If Stop the Clock correspondence is issued to the applicant, a response is required within 14 days. If the applicant is not able to provide information within 14 days, the council should consider whether the information is critical to the assessment, and if so either encourage the application to be withdrawn or determine the application on the information before it at the time. The Stop the Clock provisions should only be used once and not be as a means to manage caseload.

ASSESSMENT TIMEFRAME:

- Fast Track applications assessed and determined within 6–15 days of lodgement.
- Standard and Other applications assessed within 30 days of lodgement before proceeding to determination stage.

PROCEDURAL TIMEFRAMES:

- Internal referrals should be completed, and comments provided to the assessing planner within 10 days of being allocated the DA.
- Stop the Clock correspondence should be issued no later than 15 days after being allocated to the assessing officer.
- Council should give no more than 14 days to an applicant to respond to Stop the Clock correspondence.



Stage 4 | Determination

Key Objectives

- To ensure that the decision is made in a timely manner.
- To ensure that the level of decision making reflects the nature of the DA.
- To ensure that the determination provides certainty and minimises the need for either modification or further approvals.
- To ensure the decision upholds the integrity of the planning system.



PEER REVIEW Days 30–35	Review by an equal or more senior officer.
DELEGATED Days 35–40	Determinations made under delegated authority.
COUNCIL, IHAP AND JRPP DETERMINATIONS Days 35–40	All documentation expeditiously submitted to decision maker compliant with agenda timeframes.

GENERAL REQUIREMENTS

The determination stage of a DA should be limited to a peer review and then determination by the one relevant authority or delegate. Requests for further information or amendments to plans should have been addressed during the assessment stage and should be avoided immediately prior to determination.

Where applications have unresolved issues or concerns at this late stage in the process with no immediate view of resolution, applicants should be encouraged to withdraw the DA or be advised that a decision will be made on the information before council at that time.

Administrative support teams should issue final documentation upon determination.

Delegations

Development assessment delegations should be maximised and standardised to ensure a consistent and efficient decision making process. For example, the:

General manager and planning staff:

Should determine DAs other than situations such as:

- Where there are more than ten objections by way of individual submissions from different households (note that a petition or pro-forma documents are counted as one objection).
- The development does not comply with an adopted council policy (including a development control plan), development standard in a Local Environmental Plan unless, in the assessment officer's opinion:
 - compliance with the policy is unreasonable and unnecessary in the circumstances;
 - any variation of a development standard has been addressed in accordance with Clause
 4.6 or any other requirements of the council's Local Environmental Plan.
- The development is of Regional or State Significance.
- Notification in writing has been received by at least three councillors that the DA is required to be submitted to the elected council for determination. Any such notification should include reasons or policy position for why the application requires reporting to the council for determination.

Determinations made under delegated authority should include a prior review of the assessment report, a recommendation and draft determination by an equal or more senior officer. Council determinations: Council meetings should be held at least twice a month to facilitate more council determinations within a 40 day period. Prior to the council meeting, the assessment report, recommendation and draft determination should be reviewed by a senior officer or manager. Assessment material including architectural plans and supporting information should be made available seven days prior to the meeting.

IHAP, SPP/JRPP and other determining

authorities: Council should consider the guidelines prescribed by the relevant determining authority in preparing the particular application for decision.

Any comments or assessment report, a recommendation and draft determination must be reviewed by a senior officer or manager.

If there is a need to notify council, this should be done early in the process so as not to delay final determination.

Best practice procedures for council, IHAP, JRPP and other determining authorities

- Councils should have a minimum of two meetings (council, committee or IHAP) a month, DAs should only be considered by the determining authority, meaning a DA should not go to council for information prior to being determined by SPP/ JRPP (unless it is a council DA) nor should a DA go to IHAP for recommendation prior to being determined by council.
- DAs must be considered by the SPP/JRPP, council or IHAP within 10 business days of the manager's/senior assessment officer's endorsement.
- Matters should only be deferred by decision makers in exceptional circumstances where there is a significant risk of a sub-optimal outcome that has significant consequences. There should be a maximum of two decision delays (decision delays comprise deferrals and site visits – a site visit and subsequent consideration at another meeting would equate to the maximum of two decision delays).

ASSESSMENT TIMEFRAME:

Determination, including peer review should be completed in 5–10 business days. DAs being determined by council, IHAPs and JRPPs should be scheduled by the assessing officer during the preliminary phase of the assessment stage to ensure there are no delays.



Stage 5 | Post determination

Key Objective

• To ensure the applicant and other relevant stakeholders are notified of decisions without delay



CONTACT APPLICANT

 Assessing officer to contact applicant by telephone or email to advise of determination.

ISSUE NOTICE

- Administration officers finalise the Notice of Determination, along with any development consent and stamped plans to be posted to the applicant or collected from council.
- Administration officers finalises online reporting and closes file.

GENERAL REQUIREMENTS

An assessing officer should advise the applicant of the decision by telephone or email within one business day. If the assessment officer is not available to do this, it is the responsibility of senior assessment staff to ensure that this is undertaken within the timeframe.

The remainder of the post-determination stage should be carried out by administration officers who arrange for the determination, including any relevant development consent and stamped plans to be posted to the applicant, collected from council offices, or delivered electronically.

Administration officers should also handle all electronic updates including notifications and file archiving following issue of the determination.

ASSESSMENT TIMEFRAME:

One day



Intent

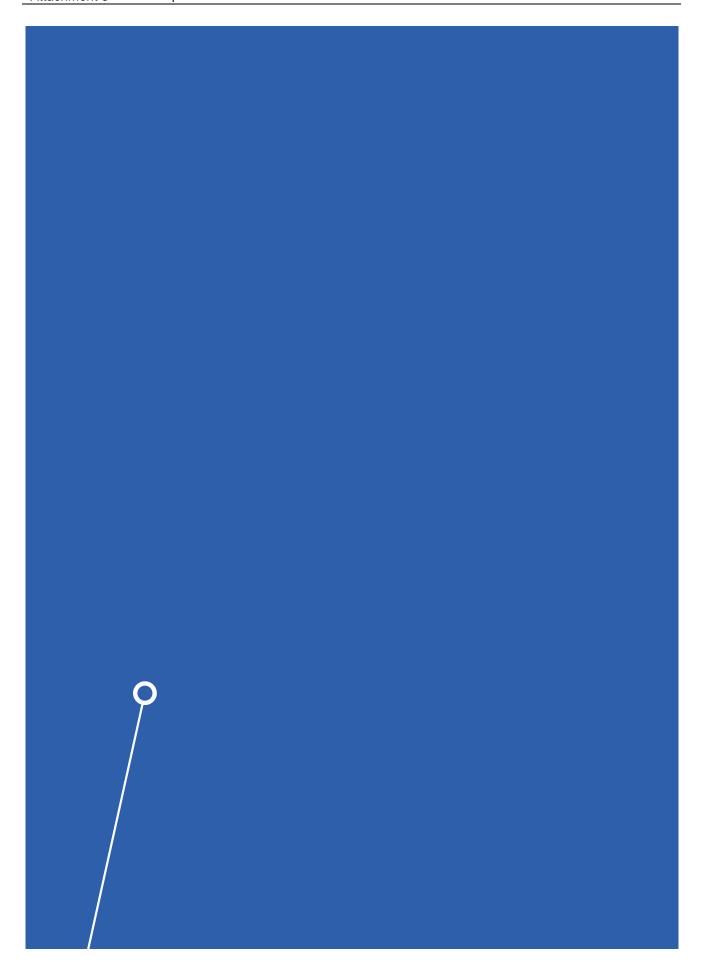
Streamline the assessment process by clarifying roles, responsibilities and communications around the DA process by:

- 1. Putting the responsibility of submitting complete applications with the applicant.
- ${\bf 2.} \ \ {\bf Focussing\ council\ customer\ support\ efforts\ at\ the\ pre-lodgement\ stage.}$
- 3. Committing to timeframes for the assessment officer to report back on applications.
- 4. Limit distractions to assessment officers during the assessment phase of a DA.

Agreement

Applicant	Council
Pre-lodgement and Lodgement	
 Commits to utilising pre-lodgement services and meetings (where appropriate). Provides sufficient information 1–2 weeks prior to a pre-lodgement meeting. Only lodges complete applications. 	 Provides clear and publicly available information on application requirements and pre-lodgement services.
	 Has regular pre-lodgement meetings available to book in advance.
	Ensures all appropriate technical staff and state agencies (where complex concurrence and external approvals may be necessary) are in attendance at pre-lodgement meetings.
	Customer service staff are trained to provide basic submission and process advice on lodgement and pre-lodgement.
	 Has a duty assessment officer available during office hours to answer standard questions on development standards, controls, assessment streams and timing.

Applicant	Council
Assessment	
Allows the assessment officer to undertake the assessment without escalating issues or disrupting	Calls/emails the applicant within two days of receiving the application to:
staff unnecessarily.	Advise they have been allocated the application.
Will only escalate an issue with more senior staff and/or councillors following/after the report back date.	Commit to a report back date (generally at 15 day of lodgement).
Commits to having only a single member of their	Reports back to the applicant by the report back dat to advise:
project team contact council.	The application has been assessed and has been determined.
	The application has a recommendation but is yet to determined by others.
	The application is at neither of these stages and the reasons for this.
	Where an application is yet to be determined, council explains the reasons and commits to a determination timeframe.
	All staff to return applicant's phone calls/emails with 24 hours when made after the report back date.
Determination	
Once given a council/IHAP/SPP/JRPP meeting date igree to not contact assessment officers seeking urther updates or discussions around the merits of the application.	Assessment officer to advise applicants within one business day of decision and/or of any change to decision timing (e.g. if matter is deferred or doesn't make an agenda).



Council Resolution

For Action

Council 28/02/2024

ATTENTION: Executive Assistant to Director Planning & Compliance

(Naidu, Sheela)

SUBJECT: Mt Omei
DUE DATE: 08/03/2024

FILE REF:

TRIM NOTES: Assigned to Planning and Compliance for action.

Once completed please complete in Content Manager and leave a

Manager's comment.

If the Resolution cannot be completed quickly, please leave a Manager's comment at key milestones for an update on progress.

Thanks Susan

ITEM NO: MOU 01 SUBJECT: Mt Omei

Clr Rhodes requested Mayor Mannoun accept a Motion of Urgency in relation to Mt Omei Interim Heritage Order.

She stated it was urgent due to Mt Omei being recognised by NPWS in their own historical evaluation of the property and it found that it recognised historical, social and cultural heritage significance and the need for an Interim Heritage Order, to avoid possible demolition, sale or disposal of the site until NPWS addresses Liverpool Council's correspondence dated 12 January 2023 in accordance with Council's resolution at the December 2022 Council meeting.

In accordance with Clause 9.3 of Council's Code of Meeting Practice, Mayor Manoun, ruled the above matter as urgent and as such it was dealt with at this meeting as shown below:

COUNCIL DECISION

Motion: Moved: Clr Rhodes Seconded: Clr Macnaught

That Council:

- 1. Impose an immediate Interim Heritage Order on the property known as Mt. Omei and as identified in the NPWS Heritage Assessment report.
- 2. Write to NPWS to:
 - a) inform them of the Interim Heritage Order; and
 - b) Request their response to Council's correspondence (12 January 2023) as resolved in the motion (December 2022) Council meeting.
- Bring a report back to April Council meeting 2024 for update and possible heritage consideration.

On being put to the meeting the motion (moved by Clr Rhodes) was declared CARRIED and the

Council Resolution

Foreshadowed motion (moved by Clr Hadid) therefore lapsed.

Division:

Vote for: Mayor Mannoun, Clr Ammoun, Clr Green, Clr Hadid, Clr Harle, Clr Karnib

and Clr Macnaught.

Vote against: Clr Goodman, Clr Hadid and Clr Harle

Foreshadowed Motion Moved: CIr Hadid Seconded: CIr Karnib

That this item be deferred.

This action sheet contains a Resolution of Council and has been produced by Council & Executive Services from the Minutes of a Council meeting

Don't forget:

- Add Trim notes
- Close the action through Trim (but only if the Resolution and all points assigned to you
 have been completed). Or, if not completed then extend the due date in Trim if required
- Save any documentation relating to this resolution as a response document in Trim



Government Gazette

of the State of

New South Wales

Number 103-Planning and Heritage Friday, 22 March 2024

The New South Wales Government Gazette is the permanent public record of official NSW Government notices. It also contains local council, non-government and other notices.

Each notice in the Government Gazette has a unique reference number that appears in parentheses at the end of the notice and can be used as a reference for that notice (for example, (n2019-14)).

The Gazette is compiled by the Parliamentary Counsel's Office and published on the NSW legislation website (www.legislation.nsw.gov.au) under the authority of the NSW Government. The website contains a permanent archive of past Gazettes.

To submit a notice for gazettal, see the Gazette page.

By AuthorityGovernment Printer

ISSN 2201-7534

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Order under clause 6 of Schedule 2 to the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017

Under delegation from the Minister for Planning and Public Spaces, I declare the development specified in column 1 of the table in Schedule 1 to this Order, on the land specified in the corresponding row in column 2 of the table in Schedule 1 to this Order, to be State significant development under clause 6 of Schedule 2 to the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, for the purposes of the *Environmental Planning and Assessment Act 1979* (the Act).

This Order takes effect upon publication in the New South Wales Government Gazette.

Dated: 18 March 2024

Keiran Thomas

Director, Regional Assessments

Planning

SCHEDULE 1

Column 1	Column 2
Development	Land
•	All land identified by Lot and DP references
Subdivision 'Rosarii' (MP 05_0058)",	
approved by the then Minister, Department	
of Planning under section 75J of the Act on	"Residential Subdivision 'Rosarii' (MP
12 December 2007.	05_0058)" as in force on the date of this
	Order.



Memo

To:

John Ajaka, Chief Executive Officer

CC:

Noelle Warwar, A/Director Planning and Compliance

From:

Mark Hannan, Manager City Planning

Date:

7 March 2024

Subject:

Interim Heritage Order Approval - Mount Omei, Casula

Reference: 068391.2024

Purpose

To seek CEO approval for the enactment of an Interim Heritage Order (IHO) for the property known as Mount Omei, situated at Lot 17 Leacock's Lane, Casula (Lot 17, DP554086).

Background

Mount Omei is a property on Leacocks Lane, Casula, located within Leacock Regional Park. Wolf Klaphake, a German-born scientist and inventor who emigrated to Australia, was the patriarch of the family. He constructed a laboratory on the land, along with a homestead and outbuildings in 1946.

In 1976, several years after Wolf's passing, his wife, prominent local artist Alice Klaphake, established South-West Sydney's first private modern art gallery in the former laboratory. The property was bequeathed to the NSW Government by Alice Klaphake, and is currently managed by the National Parks and Wildlife Service (NPWS).

In 2016, the NPWS commissioned Ashley Built Heritage to prepare a Heritage Assessment Report (Attachment 2) for Mount Omei. The Report:

- outlines the history of the property and considers its condition and location;
- concludes that the property is of local significance to the Liverpool LGA and should be retained;
- advocates against the demolition and clearance of the site and the installation of heritage interpretation;
- recommends the allocation of funding for the conservation and maintenance of the buildings located on the property; and
- advocates for the identification of an appropriate tenant, either a NPWS staff member, a member of the local art community, or a general residential tenant.

To date, there has been no response to the recommendations of this Report.

Despite the findings of the Heritage Assessment, NPWS has initiated proceedings with the NSW Civil and Administrative Tribunal to evict the tenant of the property. The eviction will leave

502



Memo

the property vacant, and due to its isolated location, will likely become the target of vandalism and potentially arson.

Analysis

When considering risk, recent Land and Environment Court of New South Wales rulings of Interim Heritage Orders (Beaches Capital Ventures Pty Limited v Wingecarribee Shire Council [2022] NSWLEC 1504 and The Trustees of the Roman Catholic Church for the Diocese of Broken Bay v Willoughby City Council [2024] NSWLEC 1010), found that the absence of a valid Development Consent or Development Application does not preclude the presence of risk of harm or loss. In particular, where a complying development certificate, exempt development or a Review of Environmental Factors (REF) could be undertaken to demolish a structure at any time without Council's knowledge.

Therefore, based on the significance assessment and the legal precedent for risk of harm, the imposition of an Interim Heritage Order to enable a consideration of whether the property should be listed is valid.

The next matter for consideration is whether Council:

- (a) needs time to further investigate the property; and/or
- (b) has sufficient information to make the decision to list or not.

The Report prepared for NPWS (**Attachment 2**) identified the property as being of potential local heritage significance, however it did not recommend the property be locally listed. The Report was primarily focused on the long-term maintenance, conservation and management of the item.

Furthermore, given the age of the Report (2016), it is recommended that further investigation be undertaken to validate whether the Report conclusions still stand.

Recommendation

Council is authorised to make Interim Heritage Orders (IHOs) by Ministerial Order as published in the Government Gazette No. 90 of 12 July 2013. Delegations to administer Councils functions under the Heritage Act 1977 (including the making of Interim Heritage Orders) are held by the Chief Executive Officer (CEO) under Section 378 and sub-delegated to both the Director City Futures and Director Planning and Compliance.

To address the Motion of Urgency (MOU 01) endorsed by Council at the Ordinary Meeting of Council on 28 February 2024, it is recommended the CEO approve the following recommendations:

- That an Interim Heritage Order (IHO) be issued for the property known as Mount Omei (Lot 17, DP554086);
- 2. A Consultant be engaged to undertake a peer review of the Heritage Assessment prepared by Ashley Built Heritage in 2016, and provide recommendations to Council as



Memo

to whether the property is to be included in Schedule 5 of the *Liverpool Local Environmental Plan 2008*; and

3. Write to NPWS to inform them of the Interim Heritage Order once imposed and seek a response to Council's correspondence of 12 January 2023 relating to a Notice of Motion (NOM 03) carried at the Ordinary Meeting of Council on 14 December 2022.

Mark Hannan

Manager City Planning

Attachments

Attachment 1 - Draft Instrument authorising Interim Heritage Order

Attachment 2 - Heritage Assessment - Mount Omei, Leacock Regional Park, Ashley Built

Jonuard the Erder with the date being date Signed by CEO.

Heritage (2016)

The Hon John Ajaka Chief Executive Officer

Liverpool City Council

=

Page 3 of 3

HERITAGE ACT 1977

INTERIM HERITAGE ORDER NO. 8

Under Section 25 of the Heritage Act 1977 Liverpool City Council does by this order:

- make an interim heritage order to cover the item of the environmental heritage specified or described in Schedule "A"; and
- declare that the Interim Heritage Order shall apply to the curtilage or site of such item, being the land described in Schedule "B".

This Interim Heritage Order will lapse six months from the date that it is made unless the local Council has passed a resolution before that date; and

- in the case of an item which, in the council's opinion, is of local significance, the
 resolution seeks to place the item on the heritage schedule of a local environmental
 plan with appropriate provisions for protecting and managing the item; or
- (ii) In the case of an item which, in the Council's opinion, is of State heritage significance, the resolution requests the Heritage Council to make a recommendation to the Minister for Heritage under section 32(2) of the Heritage Act to include the item on the State Heritage Register.

The Hon. John Ajaka Chief Executive Officer Liverpool City Council

Sydney, 28 October 2020

Re date

Commented [MH1]: Does this date need to be updated to reflect the date the CEO approves the IHO?

Schedule "A"

The property known as Mount Omei, situated at Lot 17 Leacock's Lane, Casula on land described in Schedule B.

Schedule "B"

All those pieces or parcels of land known as (Lot 17, DP554086) in Parish of St Luke's, County of Cumberland.

The Hon John Ajaka Chief Executive Officer Liverpool City Council 505



Ref No.: Contact: Ph: 072825.2024 Lauren Myers 8711 7762 30 April 2024

Katie Littlejohn Manager, Cumberland Area Greater Sydney Branch NSW National Parks and Wildlife Service 71 Memorial Drive SCHEYVILLE NSW 2756

Email: katie.littlejohn@environment.nsw.gov.au

Dear Ms Littlejohn

Interim Heritage Order, Lot 17 Leacock's Lane, Casula - "Mt Omei"

At the Ordinary Meeting of Council on 28 February 2024, Council endorsed the following Motion of Urgency (MOU 01) in relation to Lot 17 Leacock's Lane, Casula known as "Mt Omei":

That Council:

- 1. Impose an immediate Interim Heritage Order on the property known as Mt. Omei and as identified in the NPWS Heritage Assessment report.
- 2. Write to NPWS to: a) inform them of the Interim Heritage Order; and b) Request their response to Council's correspondence (3 February 2023) as resolved in the motion (December 2022) Council meeting.
- 3. Bring a report back to April Council meeting 2024 for update and possible heritage consideration.

The Interim Heritage Order (IHO) was subquently was gazetted in the NSW Government Gazette on 22 March 2024, and prevents the demolition or unsympathetic alteration of the site for up to six (6) months from the gazettal date.

The IHO provides Council with the necessary time to commission a detailed Heritage Significance Assessment to determine whether the property should be listed under Schedule 5 of *Liverpool Local Environmental Plan 2008*.

Council is currently in the process of engaging an Independent Heritage Consultant to prepare the detailed Heritage Significance Assessment which will assist us in determining whether the property should be heritage-listed.

Following completion of the Assessment, Council will provide the NSW National Parks and Wildlife Service (NPWS) with a copy of the Draft Report for review and comment. Any submissions received will be included in the Report to Council recommending next steps.



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170

All correspondence to Locked Bag 7064 Liverpool BC NSW 1871

Call Centre 1300 36 2170 Email lcc@liverpool.nsw.gov.au

Web www.liverpool.nsw.gov.au NRS 13 36 77 ABN 84 181 182 471

In relation to Resolution 2(b) of the Motion of Urgency from 28 February 2024, Council is also seeking a formal response from the NPWS to our correspondence of 3 February 2023 also in relation to Mt Omei. A copy of the correspondence is attached for your reference.

Should you require any further information on this matter, please do not hesitate to contact Thomas Wheeler, Council's Heritage Officer, on 8711 7571 or at wheelert@liverpool.nsw.gov.au.

Yours sincerely

Jason Breton

A/Chief Executive Officer

Attachments:

Attachment 1 – Council correspondence to NPWS – 3 February 2023

If you do not understand this letter/application, please ring the Telephone Interpreter Service (131 450) and ask them to contact Council (1300 362 170). Office hours are 8.30 am to 5.00 pm, Monday to Friday.

ARABIC

إذا لم تستطع فهم هذا الطلب ، الرجاء الاتصال بخدمة الترجمة الهاتفية على رقم 450 131 واسالهم أن يتصلوا بالبلدية على رقم 170 362 1300 . دوام ساعات العمل هي من الساعة 8.30 صباحًا إلى 5.00 بعد الظهر من الاثنين إلى الجمعة.

CHINESE

如您看不懂此信/申請書,請打電話給「電話翻譯服務台」(131 450),請他們聯絡市政廳(市政廳電話1300 362 170)。市政廳辦公時間,星期一至星期五,上午八時三十分至下午五時。

CROATIAN

Ako ne razumijete ovo pismo/aplikaciju, molimo nazovite Službu prevodilaca i tumača (Translating and Interpreting Service - na broj 131 450) i zamolite lh da nazovu Općinu (na 1300 362 170). Radno vrijeme je od 8.30 ujutro do 5.00 popodne, od ponedjeljka do petka.

GERMAN

Wenn Sie diesen Brief/Antrag nicht verstehen können, rufen Sie bitte den Telefon Dolmetscher Dienst (Telephone Interpreter Service) (131 450) an und lassen Sie sich vom Personal mit dem Gemeinderat (Council) in Verbindung setzen (1300 362 170).

Geschäftsstunden sind von 8:30 bis 17:00 Uhr, montags bis freitags.

GREEK.

Αν δεν καταλαβαίνετε αυτή την επιστολή/αίτηση, σας παρακαλούμε να τηλεφωνήσετε στην Τηλεφωνική Υπηρεσία Διερμηνέων (131 450) και να τους ζητήσετε να επικοινωνήσουν με το Δημοτικό Συμβούλιο (1300 362 170). Τα γραφεία του είναι ανοιχτά από τις 8.30π.μ. μέχρι τις 5.00μ.μ. από Δευτέρα μέχρι και Παρασκευή.

HINDI

अगर आप इस पत्र/आवेदन को पद्मकर समझ नहीं पा रहे हैं तो कृपया टेलीफ़ोन संवाद-सहायक सेवा (131 450) को फ़ोन करें और उनसे काउंसिल (1300 362 170) से संपर्क करने को कहें। कार्यालय का समय सोमवार से शुक्रवार तक प्रातः ८:३० बजे से सार्य ५:०० तक है।

ITALIAN

Se non comprendi questa lettera/questo modulo di domanda, telefona al Servizio traduzioni e interpreti al numero 131 450 chiedendo di essere messo in contatto con il Comune (telefono 1300 362 170). Orario d'ufficio: ore 8.30 -17.00, dal lunedi al venerdi.

KHMER

ចើលោកអ្នកមិនយល់ពីអត្ថន័យឬការប្រតិបត្តិនេះទេ សូម ទូរស័ព្ទទៅសេវាបកប្រែកាសាតាមទូរស័ព្ទ (លេខ 131 450) ហើយស្នើសុំឲ្យគេទាក់ទងសាលាក្រុង (លេខ 1300 362 170)។ ពេលម៉ោងធ្វើការគឺម៉ោង 8 កន្លះព្រឹកដល់ម៉ោង 5 ល្ងាច ពីថ្ងៃច័ន្ទដល់ថ្ងៃសុក្រ

MACEDONIAN

Ако не го разбирате ова писмо/апликација, ве молиме да се јавите во Телефонската преведувачка служба на 131 450 и замолете ги да стапат во контакт со Општината на 1300 362 170. Работното време е од 8.30 часот наутро до 5.00 часот попладне од понеделник до петок.

MALTESE

Jekk ma tifhimx din l-ittra/applikazzjoni, jekk joghģbok čempel lis-Servizz ta' l-Interpretu bit-Telefon (131 450) u itlobhom jikkuntattjaw il-Kunslil (1300 362 170). Il-hinijiet ta' l-Uffiččju huma mit-8.30a.m. sal-5.00p.m., mit-Tnejn sal-Ġimgha.

POLISH

Jeśli nie rozumiesz treści niniejszego pisma/podania, zadzwoń do Telefonicznego Biura Tłumaczy (Telephone Interpreter Service) pod numer 131 450 l poproś o telefoniczne skontaktowanie się z Radą Miejską pod numerem 1300 362 170. Godziny urzędowania: 08.30-17.00 od poniedziałku do piątku.

SERBIAN

Ако не разумете ово писмо/апликацију, молимо вас да назовете Телефонску преводилачку службу (131 450) и замолите их да контактирају Општину (1300 362 170). Радно време је од 8.30 ујутро до 5.00 поподне, од понедељка до петка.

SPANISH

Si Ud. no entiende esta carta/solicitud, por favor llame al Servicio Telefónico de Intérpretes (131 450) y pídales que llamen a la Municipalidad (Council) al 1300 362 170. Las horas de oficina son de 8:30 am a 5:00 pm, de lunes a viernes.

TURKISH

Bu mektubu veya müracaatı anlayamazsanız, lütfen Telefon Tercüme Servisi'ne (131 450) telefon ederek Belediye ile (1300 362 170) ilişkiye geçmelerini isteyiniz. Çalışma saatleri Pazartesi - Cuma günleri arasında sabah saat 8:30 ile akşam 5:00 arasıdır.

VIETNAMESE

Nếu không hiểu thư/đơn này, xin Quý Vị gọi cho Telephone Interpreter Service (Dịch Vụ Thông Dịch Qua Điện Thoại), số 131 450, và nhờ họ liên lạc với Council (Hội Đồng), số 1300 362 170. Giờ làm việc là 8 giờ 30 sáng đến 5 giờ 00 chiều, Thứ Hai đến Thứ Sáu. 508



Ref No.: Contact: Ph: Date: 442902.2022 Scott Sidhom 8711 7879 03 February 2023

Katie Littlejohn Manager, Cumberland Area National Parks and Wildlife Service PITT TOWN NSW 2756

email: katie.littlejohn@environment.nsw.gov.au

Dear Ms Littlejohn

I write in relation to the property known as Mt Omei, located within Leacock Regional Park at Casula and the heritage significance assessment undertaken by Ashley Built Heritage in 2016.

In 2016, National Parks and Wildlife Service (NPWS) commissioned heritage assessment and found Mt Omei to have local heritage significance and that the property should be retained for community-related use. Further, the heritage assessment, in conjunction with the parks Draft Plan of Management (2012), recommended developing a strategy for the future reuse of the property and retaining its heritage significance.

Despite this recommendation and the finding of heritage significance, concern has been raised by the community regarding the future of the property and its current abandoned condition. Based on the findings of the heritage significance, Liverpool City Council considers the property to be of local heritage significance and should be retained and managed in accordance with the requirements of Section 170 of the Heritage Act 1977.

Council, at its meeting on Wednesday 14 December 2022, acknowledged the heritage significance of Mt Omei as outlined in the heritage assessment commissioned by NPWS in 2016 and resolved to write to NPWS to reiterate the local heritage significance of the property and seek clarification on NPWS's intentions for the building within Mt Omei.

As such, it is requested that clarification be provided on the current situation at Mt Omei and the future intentions of NPWS for the long-term management of the property. Council is also seeking confirmation that the property has been included on the agency's Section 170 register in accordance with requirements of the Heritage Act 1977.

Should you require any further information on this matter, please do not hesitate to contact Scott Sidhom, Council's Acting Manager City Planning via phone on (02) 8711 7879 or via email at SidhomS@liverpool.nsw.gov.au

Yours sincerely

Lina Kakish

A/Director Planning and Compliance



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170

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HERITAGE ASSESSMENT

DRAFT — 14 June 2024

Mount Omei

Lot 17, Leacock's Lane, Casula, NSW 2170



Cover image: The house (at right) and former laboratory/ art gallery building and ancillary building (at left) in the bushland setting at Mount Omei (BHHH, 2024)

PREPARED FOR:

Thomas Wheeler
Acting Senior Project Manager
Liverpool City Council
33 Moore Street
Liverpool NSW 2170
0436 334 347 |
WheelerT@liverpool.nsw.gov.gu

PREPARED BY:

Bronwyn Hanna History & Heritage 26/2-4 Sugar House Road Canterbury NSW 2193 0403 776 133 info@bhhh.com.au www.bhhh.com.au ABN: 83 115 379 114

© Bronwyn Hanna History & Heritage

1. EXECUTIVE SUMMARY & BACKGROUND

1.1 INTRODUCTION & BACKGROUND

This report provides an assessment of the built heritage significance of the property known as 'Mount Omei', at Lot 17, Leacocks Lane Casula, within the Liverpool City LGA. Encompassing just over three hectares, Mount Omei (pronounced 'oh-may') was originally part of Charles Throsby's Glenfield Estate established in 1809—until it was subdivided off in 1946 and sold to Alice Klaphake (pronounced 'klaPAHka') and her German immigrant husband Wolf. The Klaphakes erected five modest mid-20th century buildings on the property—including a scientific laboratory for use by Wolf until his death in 1967, which was turned into a modern gallery run by Alice from 1976 to 1984, a home for themselves and three garage-workshops. They also extensively replanted the denuded dairy farm landscape.

The property was sold to the NSW Government by Alice Klaphake in 1979, then was reserved as part of Leacock Regional Park in 1997 (NPWS, 2016), while the Klaphake family have continued to live there on a permissive occupancy basis. It is managed by the National Parks and Wildlife Service (NPWS), within the NSW Department of Environment. Although in early 2024 the Klaphakes' son Van Klaphake continues to lease and live at Mount Omei, NPWS has initiated proceedings with the NSW Civil and Administrative Tribunal to evict him, (Hansard, 19 March 2024). As Liverpool City Council noted, 'the eviction will leave the property vacant, and due to its isolated location, will likely become the target of vandalism and potentially arson' (NSW Government Gazette, 22 March 2024).

This report has been commissioned by Liverpool City Council, the local government authority responsible for conserving local heritage items within its LGA. Liverpool City Council has made an Interim Heritage Order (IHO) on the property, gazetted on 22 March 2024 (NSW Government Gazette no.103). This effectively means that for the six-month term of the order, changes cannot be made to the property except with the approval of the Heritage Council of NSW. An IHO is designed to allow the relevant authorities to assess the place's significance and to give it a permanent heritage listing where appropriate, so that its heritage significance will be taken into account when changes are planned.

Mount Omei is not listed on the New South Wales State Heritage Register (SHR), nor is it recognised as a heritage item or within a heritage conservation area on Liverpool City Council's Local Environmental Plan 2008 (NSW State Heritage Inventory). It is not on any NSW Government Section 170 Heritage & Conservation Register—although NSW government agencies 'have a responsibility to lead by example by adopting best practice heritage management strategies, processes and practices' (Heritage NSW HAMS, 2005, forward). Neither is it included in the non-statutory heritage lists of the National Trust of Australia (NSW) or the Register of the National Estate.

By 2012, however, Mount Omei had been recognised as 'potential heritage item' on the 'Historic Heritage Information Management System' of the NPWS (NPWS, 2012, p14). After being reserved as part of Leacock Regional Park in 1997, a 2012 Draft *Plan of Management* for the park recommended that Mount Omei be assessed. If found to have heritage significance, it was further recommended that a 'Heritage Action Statement' be prepared to guide its future management and works (NPWS, 2012, p15).

In 2016 NPWS commissioned Ashley Built Heritage to undertake a heritage assessment of Mount Omei. Ashley's report concluded that Mount Omei was of local heritage significance under all seven heritage criteria laid out by the Heritage Council of NSW (historical, historical associations, aesthetic, social, scientific, rarity and representativeness) (Ashley, 2016, pp39-43). It recommended that the buildings and cultural plantings on the site be retained and conserved. For future management, Ashley recommended the option of establishing an entity to use the place for environmental sustainability and arts programs such as an artist in residence program (Ashley's conclusions and recommendations are included in full at Annexure 3).

This report follows the Heritage NSW guidelines for assessing heritage significance (Heritage NSW, 2023) and is based on analysis of the current condition and known history of the place.

1.2. SUMMARY CONCLUSIONS AND RECOMMENDATIONS

This BHHH assessment of heritage significance of Mount Omei concludes that the Klaphake's 'built precinct', including the house/ gallery/ lookout area (approximately one hectare in area, as pictured in Image 1.5) is of local heritage significance under all seven criteria of the Heritage Council of NSW. It is recommended that this part of the Mount

Omei property be listed on Liverpool City Council's Local Environmental Plan as an item of local significance. It is recommended that the Mount Omei built precinct also be added to the Section 170 Heritage and Conservation Register associated with NPWS. The Mount Omei built precinct should be retained, repaired, conserved and, ideally, made available for community and cultural related purposes.

1.3. THE STUDY AREA

The study area is the property of Mount Omei, located in Leacocks Lane, Casula, Lot 17, DP 554086, Parish of Minto, County of Cumberland, within the Liverpool City Council LGA.

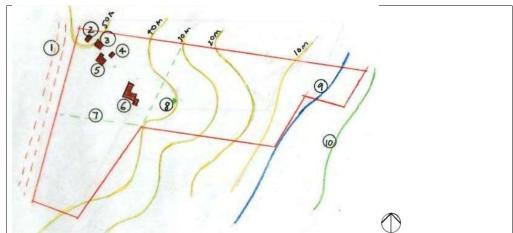


Image 1.1. Site plan of the Mount Omei property, drawn by Geoff Ashley, 2016. Key: 1) Leacocks Lane entrance to Mount Omei 2) 1959 Garage 3) 1946 Garage/studio 4) 1960 Workshop 5) 1946 Former laboratory-gallery 6) 1947-48 House 7) Fencing around house precinct 8) Pond overlooking slopes 9) Glenfield Creek 10) Path/cycleway (Ashley, 2016, p25 and Annexure A).



Image 1.2. Aerial cadastral view of the extent of the 3 hectare Mount Omei property (shaded in yellow), fronting Leacocks Lane to the west (Source: SIX maps)

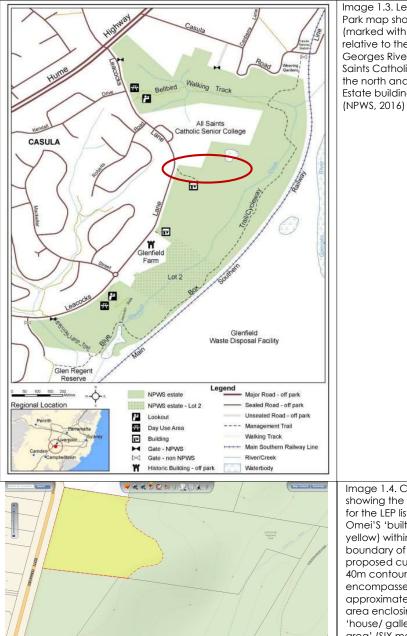


Image 1.3. Leacock Regional Park map showing Mt Omei (marked with red oVanby BHHH) relative to the railway line and Georges River to the east, All Saints Catholic Senior College to the north and remnant Glenfield Estate buildings to the south (NPWS. 2016)

Image 1.4. Cadastral map showing the proposed curtilage for the LEP listing of Mount Omei'S 'built precinct' (shaded yellow) within the overall boundary of Lot 17. The proposed curtilage follows the 40m contour at the east, and encompasses the approximately one-hectare area enclosing the Klaphakes' 'house/ gallery' and 'lookout area' (SIX maps annotated by BHHH, 2024).

1.4. BHHH ASSESSED STATEMENT OF SIGNIFICANCE

Mount Omei's 'built precinct', an area approximately one-hectare in extent, enclosing five buildings and the lookout area in a bushy landscape largely designed and planted by Wolf and Alice Klaphake, is of local heritage significance under all seven NSW Heritage Council criteria.

The Mount Omei property overall has low-level local historical and associational significance as former dairy farming land from the colonial Glenfield Estate, which was located on the outskirts of Sydney and owned at different times by Dr Charles Throsby, explorer, and James Leacock, innovative farmer. The entire Mount Omei property also has potential local scientific significance for contributing both to the 'considerable Aboriginal value and educational potential' identified in Leacock Regional Park by Mary Dallas archaeologists in 1999, and for the archaeological potential of remnant features still in situ from the colonial Glenfield Estate era.

Mount Omei has high historical and associational local significance for the built precinct area of the lot sold in 1946 to German émigré Dr Wolf Klaphake, chemist, and his Australian-born wife Alice, artist, which was transformed into a functional and attractive place for the Klaphakes' scientific, artistic and social activities. In this 'house / gallery/ lookout area' in the north western corner of the lot, Wolf built a laboratory for his experiments in chemistry with commercial applications, which after his death in 1967, was transformed by Alice into the Mount Omei Modern Art Gallery. Focused on showing contemporary art by western Sydney artists, this gallery became 'the centre of the art scene in Sydney's southwest' from 1976 to 1984. Occasional exhibitions have continued to be held there to 2024 under the custodianship of the Klaphake's son Van. As such Mount Omei's 'house/ gallery/ lookout area' is historically significant, rare and representative as a residential property in the urban outskirts which has fostered the local arts community.

The Mount Omei 'house/ gallery/ lookout area' has local aesthetic significance for the five buildings set in a bushy landscape with surrounding gardens—all designed, mainly owner-built and largely planted by the Klaphakes. Although simply constructed in inexpensive materials without professional design input, the mid-twentieth century buildings have been thoughtfully proportioned and oriented in relation to each other, the weather and the bushland setting to form an attractive precinct, sometimes nick-named 'Alice's Wonderland'.

Mount Omei has local social significance demonstrated by dozens of positive newspaper articles about art exhibitions and artists' gatherings held here since the 1970s and the demonstrated regard in which the place is held by the nearby Casual Powerhouse Arts Centre and the Liverpool Arts Society. Local regard was also demonstrated in 2024 by questions being asked about Mount Omei's future in the NSW Parliament, followed by the making of an Interim Heritage Order over the place by Liverpool City Council.

1.5 METHODOLOGY & LIMITATIONS

This report is prepared in accordance guidelines issued by Heritage New South Wales, notably Assessing heritage significance, 2023. It also follows the heritage approach advocated by the Australia ICOMOS Burra Charter 2013 and James Semple Kerr's The Conservation Plan, 7th ed., 2013.

The key occupants of Mount Omei were Wolf Klaphake, Alice Klaphake and Van Klaphake. To avoid confusion arising from them sharing the same surname, this report generally refers to them by their first names. No disrespect is intended.

This study did not attempt any new archaeological assessment, nor any structural assessment of the condition of the buildings, nor any detailed landscape assessment. The report focuses on European occupation of the site rather than the thousands of years of indigenous occupation which preceded it. Apart from Van Klaphake, no local community members have been consulted, Aboriginal or non-Aboriginal. For social significance assessment, the report relies on newspaper articles, Council reports and local community consultation previously undertaken by Ashley Built Heritage in 2016.

1.6. AUTHORSHIP

This report, including photographs, was prepared by Bronwyn Hanna, PhD, M.ICOMOS, unless otherwise identified. Bronwyn has worked for more than 20 years as a heritage specialist in various NSW government agencies and as a heritage consultant for community groups and in private industry. Bronwyn Hanna History & Heritage was established in 2016 (see www.bhhh.com.au).

1.7. DISCLAIMER

The author has no financial or personal involvement in this property.

Proposed Heritage Listing for Lot 17 Leacocks Lane, Casula

Attachment 4 - Draft Heritage Significance Assessment - "Mt Omei" - Bronwyn Hanna History &

Heritage - 14 June 2024

1.8. ACKNOWLEDGEMENTS

The author thanks Van Klaphake (custodian) and Tara Eagleton (Liverpool local studies librarian).

1.9. LIST OF ABBREVIATIONS

AC asbestos-cement sheeting or 'fibro'

Burra Charter: The Australian ICOMOS Charter for Places of Cultural Significance

(2013) guide to caring for heritage places in Australia, available online from Australia

ICOMOS

CPAC Casula Powerhouse Arts Centre
CMP Conservation Management Plan

DP Deposited Plan

Heritage NSW Heritage New South Wales (the office of the Heritage Council of New South Wales,

previously also known as the NSW Heritage office, the Heritage Branch, the Heritage

Division of the Office of Environment and Heritage, OEH)

IHO Interim Heritage Order (made under the NSW Heritage Act 1977)

km Kilometre

LASN Liverpool Arts Society Newsletter LALC Local Aboriginal Land Council LGA Local Government Area

LEP Local Environmental Plan (made by local government Councils)

NPWS National Parks & Wildlife Service (a NSW Government agency, part of NSW

Environment & Heritage)

NSW New South Wales

PA Primary Application (the process required to convert Old System land title into Torrens

Title in NSW)

RAHS Royal Australian Historical Society

S170 Section 170 of the NSW Heritage Act 1977 which requires government agencies to

keep a Heritage & Conservation Register of the heritage places they own and

manage

SHI State Heritage Inventory (Heritage NSW's response to requirement to keep a publicly

accessible list of all statutory-listed heritage places under NSW Heritage Act 1977)

SHR State Heritage Register

2. HISTORY OF THE PLACE

See 'Historical Timeline' in **Annexure 1** for further details and illustrations.

2.1. ABORIGINAL LAND

Australia has been inhabited by Aboriginal people for at least 60,000 years. The traditional owners of the land on which Mount Omei is located are the Darug people. It is now located within the area of the Tharawal Local Aboriginal Land Council (LALC) (NPWS, 2016, ppii, 1).

2.2. COLONIAL HISTORY AND AFTERMATH

The First Fleet of the British penal colony arrived in Sydney Harbour in 1788, settling at Sydney Cove, about 35km north-east of Mt Omei, and opening up the colonisation of the Australian east coast. In 1810 the British Governor Macquarie formally granted a parcel of land (950 acres or 384 ha), to the British colonist Dr. Charles Throsby, an assistant surgeon, magistrate, explorer and land-owner. The land on which Mount Omei would be located was in the north-eastern corner of this grant, which Throsby named 'Glenfield'. Throsby was a colonist who tried to foster peaceful relationships with the traditional owners of the land (Ashley, 2016, p6). The remnant Glenfield colonial buildings have been described as 'arguably the most intact representation of a rural farm complex from the Macquarie period that survives in New South Wales' (Clive Lucas Stapleton, 2007, cited in NPWS, 2016, p13).

Glenfield remained a dairy farm run by the Throsby family until the early 1920s when James Freeland Leacock purchased the estate, including the Mount Omei land. Leacock was an innovative farmer and entrepreneur with many interests including organic farming, land cooperatives and Aboriginal rights (NSW Heritage SHR listing for Glenfield). Leacock subdivided and sold off sections of the Glenfield Estate throughout the 1940s, 1950s and 1960s (NSW Lands CTs Vol.4649 Fol.84 and Vol.5838 Fol.227). Yet, although considerably reduced over time, Glenfield 'continued to operate as a farm until around 2003 when it was purchased by the NSW Department of Planning' (Ashley, 2016, p7).

2.3. THE KLAPHAKES ESTABLISH MOUNT OMEI

Wolf Klaphake (1900-1967) and Alice Klaphake (1909-2004) were a remarkable newlywed couple in 1945. Wolf had been born in Germany in 1900 and obtained his doctorate in

chemistry in Leipzig by 1923. He went to work as a corporate chemist in Berlin while also developing his own inventions. He was not Jewish but he didn't care for Hitler and emigrated to Australia in 1935 where he hoped to build a 'dew condenser' in the desert (Neumann, 2003). That invention fell through, then during World War II Wolf was interned as an 'enemy alien' for four years (1940-1944). In 1945 he met and married Alice (nee Lardi, m. Wilton) (Ashley, 2016; NAA, 2024).

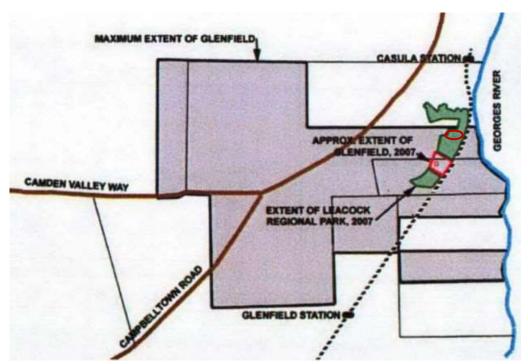


Image 2.1. Diagrammatic map of Charles Throsby's Glenfield Estate, illustrating the maximum extent of the estate in mauve. The red square depicts the approximate size of the remnant Glenfield estate in 2007; the extent of Leacock Regional Park is shown in green; a red oval has been added indicating the approximate location of Mount Omei (Clive Lucas Stapleton, 2007, p3, annotated by BHHH).

Alice had been born in 1909 in Kalgoorlie and was divorced with two nearly grown children in 1945 when she met Wolf. She had trained as a drama / elocution teacher in Perth and acted with the Melbourne Repertory Company; she also worked as a journalist, wrote poetry, and was interested in spiritualism. In late 1945 the couple settled at Minto where, the story goes, they took a train ride into town and liked the look of this hill so decided to buy it.







Image 2.3. Alice Klaphake in the 1940s (CPAC Memorial dedication to Alice Klaphake, 2004).

On 8 July 1946 Alice Gertrude Klaphake, wife of Wolf Klaphake, purchased 6 acres, 23 1/4 perches [2.48 ha] from Leacock's Glenfield Estate for £245 (NSW Lands CT Vol.5888 Fol.220, dealing D859380). Even before this purchase was formally recorded, 'Dr Klaphake' was calling for tenders for the 'erection of a fibro cottage at Casula—plans and spec' (Construction, 5/12/1945 p9 via Trove). They called the place 'Mount Omei'. 'Omei' literally means 'raised eyebrow' in Chinese and the property was probably named after China's sacred Buddhist mountain, Emei Shan (Neumann, 2003). Wolf was a keen student of Chinese language and culture (Ashley, 2016, p9; NAA, 2024).

Wolf & Alice Klaphake bought the Mount Omei property in 1946 when the land was largely denuded from its years as a dairy farm (see Image 2.4). Although their backgrounds were in science and the arts respectively, they turned their intellects to design and quickly set about building a group of modest, vernacular buildings to service their working and domestic needs. According to Ashley's research, the laboratory was the first building to be constructed, probably in stages from 1946 onwards. The family lived in this building until the house was constructed in 1947-48 (Ashley, 2016, pp27, 29). Two sheds and a workshop were also constructed in these early years, and the denuded dairy landscape was extensively replanted with trees. During this early period Wolf and Alice Klaphake also had two children: Van born in 1947 and Zita born in 1949.



Image 2.4. This 1947 aerial image of the Mount Omei property shows the land almost denuded after 130 years of dairy farming as part of the Glenfield Estate, except for some large trees on the northern boundary line. The laboratory building and house are already in evidence. There are new plantings around the house precinct including a 'hook' shaped line of trees to the east delineating the edge of the ridgetop (NSW Lands Historical Imagery; Ashley, 2016, p25).

Wolf used the laboratory to continue working independently as a consultant chemist. 'His business brought him neither riches nor fame. In the years before he died in 1967, he made a living by manufacturing toilet cleaner in his laboratory' (NAA, 2024). Despite (or perhaps because of) the difficulties Wolf encountered in Australia, he has been memorialised with an online biographical account of his time in internment on the website of the National Archives of Australia (NAA, 2024), and a 'radio play' produced by the ABC (2003):

'Wolf Klaphake was gifted, eccentric, naive, intelligent, stubborn, charming, withdrawn, romantic, uncommunicative, generous, intense, exuberant, repressed, depressed. There is little doubt that he was extraordinarily talented' (NAA, 2024).

Alice Klaphake considered selling the Mount Omei property after Wolf's death, but instead decided to stay, and even added another acre or so of land to the property, in 1972 (NSW Lands CT Vol.11816 Fol.132).

2.4. THE MODERN ART GALLERY AT MOUNT OMEI

While Alice maintained her interests in theatre and spiritualism, it was painting and sculpture that became the focus of her activities throughout the 1960s and 1970s. She became close friends with Lenore Rays and Tom Bass and Margo and Gerald Lewers, and was also inspired by painting lessons she took with John Olsen. She joined a Workers Educational Association study group on modern art, where she became friendly with Margaret Whitlam, and connected with the artists at Wedderburn near Campbelltown. Ashley explains:

'Van Klaphake said that Alice started painting at 55 years old, that is in 1961. An article in the Australian Women's Weekly quotes Alice as saying that she first received a commission for a mural for a hotel in Terrigal "after which commissions started pouring in and Alice's hobby became a full-time occupation". In 1975 Alice won the Camden Art Prize. According to the Women's Weekly article Alice was hung in "collections in England, Greece and the United States" (Ashley, 20165, pp15-16, quoting Australian Women's Weekly, 17/11/1976, p69)

Already busy as a successful abstract artist, in 1976 Alice decided to adapt Wolf's laboratory building at Mount Omei into a privately run art gallery specialising in contemporary modern art produced by local and regional artists. From 1976 to 1984, 'Mount Omei had a second life: as the centre of the art scene in Sydney's southwest' (NAA, 2024):

'Dubbed "Alice's Wonderland" by locals the Modern Gallery became a gathering place for local artists and crafts people. Alice was 67 by the time she opened the gallery but she relished the hard work and role of the gallery as a bushland oasis for friends and visitors. She was feisty, energetic and flamboyant . . . 'The Gallery' was a huge success, partly because of Alice's extrovert nature and ability to connect with people, but also because of the quality of the artists she showed. Artists such as the sculptor Tom Bass and painters such as Elisabeth Cummings exhibited there. From this small space a hugely important and influential group of people showcased and developed their work (Ashley 2016, p17-18).

Ashley further explained:

'Alice herself was a strong personality who both charmed and influenced many, including non-artists who say that they were influenced by her and her life philosophies, such as local resident and former NSW State Minister Craig Knowles and

Campbelltown solicitor John Marsden . . . Many individual artists and others who knew of Alice Klaphake and her art gallery have a strong sense of personal association with both Alice and the place' (Ashley, 2016, p41).



Image 2.5. Alice Klaphake pictured in front of her Mount Omei modern gallery in 1977 (Champion, 18/5/1977, from Ashley, 2016, Annexure B newsclippings)

The Casula Powerhouse Arts Centre (CPAC) recognised Alice's major contribution to the arts in Liverpool in 2001 by dedicating an amphitheatre in her name on the banks of the Georges River. Following her death in 2004, the CPAC also held a memorial service in her honour. In addition, CPAC holds about 50 heritage objects and art works associated with Mount Omei, called the 'Klaphake Collection' (Ashley, 2016, pp33, 36; CPAC, 2004). Also in 2003, the Casula Powerhouse Arts Centre proposed that it be given management of the Mount Omei property to help develop a 'Georges River Cultural Corridor' (Ashley, 2016, p22 quoting Kon Gouriotis personal communication); however this proposal was not developed at the time.

2.5. MOUNT OMEI FORMS PART OF LEACOCK REGIONAL PARK

In 1979, in the middle of this period of intense artistic activity, Alice sold the Mount Omei property to the NSW Government's 'Planning & Environment Commission' for \$90,000 (NSW Lands CT Vol.11816 Fol.132, R265258). The sale made no apparent difference to the Klaphakes' living arrangements, nor to the running of the art gallery since Alice, and later Van Klaphake, continued to lease the property on a basis of 'permissive occupancy' (Ashley, 2016, p22). Although Alice formally closed the art gallery in 1984, when she was 75 years old (Ashley, 2016, pp18, 22), there have been ongoing art events held at Mount Omei until very recently (as for example reported in the *Liverpool Leader*, 21/6/2017, 7/3/2018, 20/6/2018; LASN, May-June 2024).

On 11 March 1997, the Mount Omei property was transferred within the NSW Government's property portfolio to the National Parks & Wildlife Service (NPWS). Combined with other land acquisitions in the area, the NPWS reserved 'Leacock Regional Park', including the Mt Omei property, as a new regional park, on 5 September 1997 (Ashley, 2016, pp21-22).

In August 2016, the NPWS noted that Mount Omei had only been recognised as 'potential heritage item' on its 'Historic Heritage Information Management System' and that its heritage significance 'was yet to be determined' (NPWS, 2016, p14). Later in the same year, NPWS commissioned heritage consultant Ashley Built Heritage to undertake a heritage assessment of the place. Ashley assessed the entire Mount Omei property as being of local heritage significance under all seven NSW Heritage Council criteria: historical, historical associations, aesthetic, social, scientific, rarity and representativeness. He recommended that the place be retained, repaired, conserved and made available for community-related purposes (Ashley, 2016, pp43, 51; see Ashley's conclusions and recommendations included in full at Annexure 3). Ashley's recommendations have not been implemented to date.

2.6. INTERIM HERITAGE ORDER FOR MOUNT OMEI

On 19 March 2024 the NSW Member of Parliament for Liverpool, Charishma Kaliyanda, discussed the conservation of Mount Omei in the NSW Parliament's Legislative Assembly where she told the Legislative Assembly that NPWS had initiated proceedings to evict the tenant, Van Klaphake, and described an array of community concerns in response to this.

On 22 March 2024 Liverpool City Council made an Interim Heritage Order (IHO) for six months on the Mount Omei property (Government Gazette 22/3/2024 no.103).



Image 2.6. Liverpool Arts Society Newsletter montage of recent photos of arts people at Mount Omei (March-April 2024, p6).

3. DESCRIPTION

See illustrations in Annexure 2 for further details and images.

3.1. BACKGROUND

The Mount Omei property was sold to the NSW Government in 1979 and has been part of Leacock Regional Park since 1997. Nonetheless it is still in use as a residence by Van Klaphake. Two brief inspections of the property were undertaken by Bronwyn Hanna in June 2024. A site plan for the place prepared by Geoff Ashley in 2016 is given at Image 1.1.

3.2. WRITTEN DESCRIPTION

The cadastral description of Mount Omei is Lot 17 DP 554086 in the Municipality of Liverpool, Parish of St Minto, County of Cumberland.

Mount Omei is 3.17 hectares in area, and is located about 35 kilometres south-west of the City of Sydney and 4 kilometres south of the centre of Liverpool.

The 'built precinct' at Mount Omei occupies about one hectare in area at the top of a hill about 40 metres above the Georges River. From here the eastern side of the Mount Omei property falls steeply down towards Glenfield Creek and a shared walking-cycling path. Further to the east beyond its boundary is the Southern Railway Line and the Georges River. The remnant historic homestead buildings of Glenfield are located about 300m to the south, at 88 Leacock Lane. There is suburban housing closely adjacent on the other side of Leacock Lane, and the All Saints Senior Catholic College is adjacent to the north.

3.2.1. The Mount Omei buildings

Wolf & Alice Klaphake bought the Mount Omei property in 1946 and, in the next fifteen years, and with limited funds, designed and built the five modest vernacular buildings there—with much of the work undertaken by Wolf as owner-builder (for example, see LCC Minutes, 2/7/1957, p2). Wolf also replanted the property extensively.

The two main structures at Mount Omei are the former scientific laboratory used by Wolf, 1946-1967, which was turned into a modern gallery run by Alice, 1976-1984 (#5 in the stie plan at Image 1.1); and their own home constructed 1947-48 (#6). There are also three

ancillary buildings: a garage with skillion wings built in 1946 (#3), another garage built in 1956 (#2) and a workshop-studio built about 1960 (#4).



Image 3.1. View from near the Leacock Lane entrance, with the 1956 and 1946 garages (at left and centre) and the western facade of the former laboratory/ gallery building (at right) (BHHH, 2024).



Image 3.2. View of the eastern entrance to the former laboratory / gallery building (left) and the 1960 studio (right) (BHHH, 2024).



Image 3.3. Interior of the former gallery building sighted June 2024, with the juncture of low-pitched gable roofs between two wings expressed in the ceiling design (BHHH, 2024)



Image 3.4. 2024 view of the Mount Omei house from the north-east across its terrace (BHHH, 2024).



Image 3.5. Enclosed garden area to the east of the house used for picnics, with pond, bunya trees and lookout over the Georges River (BHHH, 2024)

3.2.1.1. Fabric and design of the buildings overall

The five buildings are functional, modest, single-storey, mid-twentieth century, vernacular structures clad in asbestos-cement (AC or 'fibro') with brick foundations and a brick fireplace in the case of the house. They all have concrete or timber floors, fibro or Canite interior wall and ceiling linings, timber joinery and low-pitched corrugated iron roofing (which has largely replaced the earlier AC roofing). There was no known involvement by an architect in their design but they are thoughtfully oriented in relation to each other, the weather and the bushland setting and solidly built with generously sized interior rooms. The house has large window openings opening to the surrounding vegetation, including a feature corner where two windows meet. Pathways between the buildings are lined with gravel.

Innovative aspects of these buildings include: raising the water tanks above the living areas in each of the two main buildings to allow for gravity-fed water; designing the house without corridors in an open-plan manner; using side-lit lamps rather than overhead lighting for a gentler ambience; using the 'Golden Mean' to guide the proportions of important rooms such as the house's lounge room; and consulting spiritual markers akin to 'song-lines' to create harmonious focal points within the buildings, for example, in front of the hearth in the lounge room. The painting of all the building exteriors in white with black contrasting door and window frames is a simple but effective way of providing coherence and variety for the group.

3.2.1.2. Style of buildings overall

An analysis of the buildings at Mount Omei in relation to the standard Australian architectural style text—Apperly, Irving & Reynolds' *Pictorial Guide to Identifying Australian Architecture*—suggests these buildings fall into the 'Inter-War Functionalist' style and the 'Post-War Regional' styles (Apperly, 1989, pp186-187, 218-223).

Apperly's 'Inter-War Functionalist style c.1915-1940' was an Australian response to European modern architecture of the 1920s and 1930s which emphasised 'functionalism', 'clean lines' and 'complete dissociation from styles of the past'. Like the buildings at Mount Omei, it was characterised by simple geometric shapes, light colours, large glass areas and its 'radical, progressive image' typically appealed to 'non-conformist individuals' (Apperly, 1989, p187).

Apperly's 'Post-War Melbourne Regional c.1940-1960' style also has a number of characteristics which apply to the Mount Omei buildings:

'The archetypal Melbourne Regional house was to be found in an outer suburb or in the bush. It was single-storeyed and had a narrow, linear plan. It gained an unassertive horizontality from its low-pitch gabled roofs of corrugated asbestos cement with . . . slim bargeboards . . . walls of bagged and painted brick or varnished boarding . . . large glass areas' (Apperly et al., 1989, p218).

Although Apperly didn't propose a post-war regional style associated with Sydney, other architectural historians have long argued about the existence and characteristics of the 'Sydney School'. Jacqueline Urford's summary of the debates mentions many qualities of the 'Sydney School' which apply to the buildings at Mount Omei, including:

'sympathetic materials, economy, simplicity and an appreciation of the beauty and harmony of nature . . . a concern for honest expression of materials and minimal disturbance of natural sites . . . [creating] a setting for a comfortable, secure and informal lifestyle that minimised barriers between inside and outside through terraces, courtyards and wide, glazed openings . . . sensitive site placement' (Urford, 2012, p674, quoting Jennifer Taylor, 1984).

The Mount Omei buildings were thoughtfully designed and situated by the Klaphakes in a recovered bushland setting to create a functional and inviting place for their scientific, artistic and social activities.

3.2.2. The former laboratory/gallery building (#5 in site-plan in Image 1.1)

Ashley considered that the former laboratory/ gallery building was commenced in 1946 with the construction of the eastern end in double brick. This included a small bathroom with water tank over it (providing gravity-fed water). The building was soon extended to the west, with the additions of three fibro-clad rooms with timber framing, turning it into a 'L'-shaped building with the inside-corner oriented to the north-east. The two arms of the L-shaped building each have their own gabled metal roof and the tower over the water tank has a hipped metal roof. The north room adjoining bathroom, now the kitchen, was apparently Wolf Klaphake's laboratory. In the mid-1970s, Alice Klaphake adapted the building for use as an art gallery, and it is likely that the arched interior openings between rooms were input under her supervision at that time (Ashley, 2016, pp27-28)

3.2.3. The house (#6 in site-plan in Image 1.1)

The Mount Omei house was constructed in 1947-48 in another L-shaped structure with the inside corner again oriented towards the north-east, but here occupied by a concrete-floored terrace. The orientation minimises the house's exposure to westerly winds and gives full access to northern sunlight. The house design is unusual for lacking interior corridors linking the internal spaces. There is a laundry attached to the south east corner of the house with an enclosed water tank raised above to provide gravity fed water to the house (as in the former laboratory / gallery building). Ashley described the house as having 'a good open and generous character with features being the corner windows in the lounge room and the large window area in the kitchen that Alice designed with its aspect over the north facing terrace' (Ashley, 2016, p29).

Although Ashley suggested that the house was designed by Alice Klaphake (Ashley, 2016, p29), Van Klaphake considered his mother was not likely to have drawn any plans herself but that she would have had design input into aspects such as the building's orientation to the north, the view from the kitchen and the special attention given to the area in front of the fireplace as a focal point. Van recalled that Wolf designed the proportions of the rectangular lounge room using the Golden Ratio (Klaphake, 2024, personal communication).

3.2.4. The ancillary buildings (nos 2, 3 and 4 in site-plan in Image 1.1)

Ashley suggests the 1946 garage (#3 in site-plan in Image 1.1) was built by Wolf Klaphake. It is a rectangular, gable-roofed structure with a skillion wing on each side. The building has been used variously for storage, a spare room, a studio, a darkroom for photography and a workshop. Ashley noticed some 'severe termite damage to the studs in the western skillion behind some AC sheeting' in 2016 (Ashley, 2016, p31). Sheets of broken fibro are apparent on the south façade in 2024.

The 1956 garage (#2 in site-plan in Image 1.1) is a rectangular structure with gable roof has a garage with a roller door on the western side, with no internal linings, and a room on the eastern side lined internally with fibro sheeting and a corner louvre window, which was used as a 'quiet room' or 'studio'.

Ashley states that the 1960 Workshop-studio-gallery building (#4 in site-plan in Image 1.1) was built by Wolf Klaphake for himself. It is another simple rectangular building with a gable roof on brick foundations (Ashley, 2016, p32)

3.3. Condition of buildings

In 2016 Ashley assessed the condition of the former laboratory/ gallery building as 'generally in fair condition only, with external deterioration of roofing gutters and fibro external wall claddings . . . Roofing is . . . in fair condition, but the gutters have not been maintained and some of the eaves are rotted' (Ashley, 2016, p33).

He assessed the condition of the house being 'in fair condition in relation to external timbers and external paintwork and good condition internally. However, it is showing lack of external maintenance generally . . . The gutter in the House is asbestos and is worn and should be replaced with a steel gutter' (Ashley, 2016, pp13, 29, 33, 38).

He assessed the two garages and the workshop as being 'in poor condition with termite and dry rot fungus (from water ingress) most evident. Many of the hidden stud frame timbers may be termite effected... The AC sheeting is best protected by encapsulation under paint and so repainting these surfaces should happen as a priority if the buildings are retained' (Ashley, 2016, pp33, 38).

In 2024, the two main buildings (the house and the former laboratory-gallery) have not had major repairs but appear to be in fair-to-good, serviceable condition, although with rusting iron roofs. The 1960 studio and 1956 garage are in fair but still serviceable condition. The 1946 garage is in poor condition, with broken fibro panelling and rotting timber joinery.

3.4. Mount Omei landscape areas and features

This analysis of Mount Omei proposes that the three-hectare property is composed of three main landscape areas. This analysis is similar to that proposed by Ashley in 2016 (pp25-27) except that two of his areas are combined here to make one, understood to be both the laboratory/ gallery and the lookout area together constituting the 'built precinct' ('A') which was designed and inhabited by the Klaphakes.



Image 3.6. Aerial cadastral map of the Mount Omei property with three precincts marked approximately with three red ovals (NSW Lands SIX map annotated by BHHH, 2024).

- A) the Klaphake's 'built precinct' area in the north-western corner of the property, including all the numbered features on Geoff Ashley's site map (Image 1.1) and encompassing both his 'laboratory/ gallery' area and his 'lookout' area. The 'built precinct' includes the five mid-twentieth century buildings set amongst Klaphakes' plantings and linked by gravel pathways. This area also includes the 'sheltered garden area to the east of the house created by a hook' of trees planted by Wolf Klaphake (see image 2.4) with a cleared path to the eastern lookout with a small pond and several planted Bunya pine trees. On the other side of this precinct is the distinctive feature of the steel entrance gates from Leacock Lane with the words 'Mount' and 'Omei' welded into them (Image x.x.).
- B) the steep eastern slopes around the lookout falling down to Glenfield Creek. In 2016 much of this area had been overtaken by the weed African Olive, but was being revegetated by NPWS (Ashley, 2016, p26).
- C) the area to the south of the house-gallery area, adjacent to Leacock's Lane, which
 was purchased by the Klaphakes in 1972, and which includes 'trees planted by
 Klaphake, the site of a tank/cistern from the Glenfield Farm period that was filled in at
 some stage as well as some furrows to retain water that Van said his father formed'
 (Ashley, 2016, p27).

3.5. MOVEABLE HERITAGE

Ashley suggested a range of moveable heritage may be associated with Mount Omei: 'There is a collection of approximately 50 objects . . . held by CPAC titled the Klaphake Collection and this includes some objects from Wolf's laboratory, artworks by Alice and artworks and sculptures by other artists. There are also a number of objects in and around the site that include bird baths and sculptures. Artworks in other galleries include the three paintings by Alice Klaphake held in the Campbelltown Arts Centre' (Ashley, 2016, p33).

3.6. ARCHAEOLOGICAL POTENTIAL

Leacock Regional Park was the subject of an archaeological study by Mary Dallas in 1999 (NPWS, 2016) but this has not been made available during the research for this report. Although this report does not attempt any archaeological assessment, the following comments from Ashley's 2016 report bear repeating:

'The site as a whole is likely to contain European archaeological remains from the Colonial era Glenfield property. There are remains of a dam/weir on Glenfield Creek at the eastern edge of the Mount Omei property and there is a filled in cistern/holding tank at the top of the site . . . from 1952.' (Ashley, 2016, p22)

4. ASSESSMENT OF HERITAGE SIGNIFICANCE

The assessment of significance offers previous and current understandings of the significance and meanings of the place. The Heritage Council of NSW recommend the use of its seven criteria of significance. The conclusive 'Statement of Significance' summarises the assessment of significance in a concise statement.

4.1. BHHH ASSESSMENT OF SIGNIFICANCE UNDER THE HERITAGE COUNCIL OF NSW CRITERIA

4.1.1. Criterion A) Historical Theme (An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

The Mount Omei property in Casula has local historical significance for Liverpool for demonstrating typical early phases of urban development in Sydney. Mount Omei was part of the original grant which formed Charles Thorsby's (iconic) colonial Glenfield Estate in 1810. After being used for dairy farming for over a century, it was subdivided from the estate in 1946 as part of the breaking up of the farmland by James Leacock, resulting in the formation of the suburb of Casula.

The Mount Omei phase of urban development under the ownership of Wolf and Alice Klaphake since 1946 was, by contrast, exceptional. Mount Omei was one of a small number of properties across the peri-urban hinterland of Sydney in the post-war era made by, and for, people with artistic and alternative ideas. The Mount Omei 'Klaphake house/gallery/ lookout area' has local historical significance as an attractive group of vernacular buildings which were largely owner-designed in inexpensive materials, set in a bushland setting they largely planted themselves, for their domestic, scientific, artistic and social activities.

The Mount Omei 'Klaphake house/ gallery/ lookout area' has local historical significance for the 'Modern Art Gallery' run by Alice Klaphake from 1976 to 1984, and exhibiting occasionally since then under the custodianship of Van Klaphake. This gallery fostered the local arts community and has been described as 'the centre of the art scene in Sydney's southwest'.

4.1.2. Criterion B) Historical Associations (An item has strong or special associations with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history or the cultural or natural history of the local area)

Mount Omei in Casula has local historical associations with:

- Dr Charles Throsby (1777-1928), a well-known colonial surgeon, magistrate and
 explorer who was formally granted the land on which Mount Omei is situated in 1810,
 and who built the large and successful dairy farm known as Glenfield. He was
 understood to maintain good relations with the traditional owners of the land.
- James Leacock (d. 1974), who acquired Glenfield in the early 1920s and was an
 innovative dairy farmer and entrepreneur who embraced interests ranging from
 organic farming and land cooperatives to Aboriginal rights. In the 1950s he established
 the first Aboriginal heritage museum in Sydney, known as the 'Austro-Asian Cultural
 Centre'. Leacock subdivided and sold off large swathes of the estate throughout his
 tenure, including the Mount Omei property, resulting in the formation of the suburb of
 Casula.
- Dr Wolf Klaphake (1900-1967), an industrial chemist and inventor who, with his wife Alice, bought the newly subdivided property in 1946, named it Mount Omei and lived and worked in the home and laboratory they purpose-built there, until his death in 1967. Wolf migrated to Australia from Germany in 1935 but was interned as an enemy alien for four years during World War II, an experience which has been commemorated in an online biographical account by the National Archives of Australia (NAA, 2024), and a radio play/ documentary by the ABC (ABC, 2003).
- Alice Klaphake (1909-2004, nee Lardi, m. Wilton), who studied drama and acted with the Melbourne Repertoire Theatre in the 1920s, worked as a journalist and wrote poetry before marrying Wolf Klaphake and buying the Mount Omei property. During the 1960s she studied painting with John Olson and became a successful abstract artist, winning the Camden Art Prize in 1975. She was good friends with other prominent artists such as Margot & Gerard Lewers, Lenore Rays & Tom Bass, and the Wedderburn artists at Campbelltown. Her privately owned Modern Art Gallery at Mount Omei, run from 1976 to 1984, was described as 'the centre of the art scene in Sydney's southwest' (NAA, 2024). Her memory has been honoured by the Casula Powerhouse Arts Centre.
- Van Klaphake, son of Wolf and Alice, who has lived at Mount Omei for much of his life
 and been its custodian for the last twenty years. An expert in Australian botany, he has
 self-published a series of authoritative books on native flora, focusing on eucalypts,

- sedges, grasses and rainforest species. His figures of native birds carved from local timbers have been exhibited in gallery shows at the Mount Omei gallery.
- Artists who exhibited their work at the Mount Omei Modern Art Gallery between 1976 and the present day, including: Bob Baker, James Baker, Juanita Bailey, Lenore Bass, Tom Bass, Fonika Booth, Fred Braat, Joan Brassil, Raymond Coles, Elisabeth Cummings, Gray Dunreath-Cooper, Greg Fawley, Philip Grienke, Hanna Juskovic, Arpad Kinka, Alice Klaphake, Van Klaphake, Gerard Lewers, Margo Lewers, Darryl Lock, Lorraine Maggs, Daphne Miller, John Paice, Carl Plate, Barbara Romalis, Nick Romalis, Colleen Shaliapin, Robyn Smith, Brian Stratton, Robert Sugden, Vince Vozzo and Georgina Worth.
- **4.1.3. Criterion C) Aesthetic Values** (An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or the local area)

Mount Omei's 'house/ gallery/ lookout area', an approximately one hectare precinct at the top of the hill which includes five buildings set amongst trees and gardens, and linked by gravel pathways, has local aesthetic significance. Designed and largely owner-built by Alice and Wolf Klaphake in the mid twentieth century, the buildings are modest, single-storey, vernacular structures constructed in brick and fibro with metal roofing, white painted exteriors with black trim, and generously proportioned interior rooms which provided a functional and attractive place for the Klaphakes' scientific, artistic and social activities. Although simply constructed in inexpensive materials without professional design input, they are thoughtfully proportioned and oriented in relation to each other, the weather and the bushland setting, making an attractive precinct sometimes nick-named 'Alice's Wonderland'.

4.1.4. Criterion D) Social Values (The item has strong or special association with a particular community or cultural group in NSW (or the local area) for social or spiritual reasons)

The one-hectare 'Klaphake house/ gallery/ lookout area' of Mount Omei, which was developed by Alice and Wolf Klaphake in the mid twentieth century, has local social significance for its associations with the local artistic community in Casula, Liverpool and western Sydney. Alice Klaphake's Modern Art Gallery, run from Mount Omei in the 1970s

and 1980s, was described as 'the centre of the art scene in Sydney's southwest'. Although officially closed in 1984 when Alice was 75, exhibitions have continued to be held there occasionally, which has resulted in the place remaining widely known and appreciated by the local arts community.

The Casula Powerhouse Arts Centre (CPAC), located nearby, has demonstrated its special regard for Mount Omei by dedicating an amphitheatre on the banks of the Georges River in Alice Klaphake's name in 2001; by holding a memorial service in her honour after her death in 2004; by keeping a collection of about 50 moveable heritage items and art works associated with Mount Omei, called the 'Klaphake Collection'; and by proposing, in 2003 that CPAC be given management of the Mount Omei property to manage as a community resource and include in a 'Georges River Cultural Corridor'. The Liverpool Arts Society has also recently demonstrated its regard in a number of 2024 newsletter articles advocating to save Mount Omei.

The local social significance of the place was recently attested by the Liverpool Member for Parliament, Charishma Kaliyanda, who told the NSW Legislative Assembly on 19 March 2024 that artists, friends and others who have benefitted from its legacy have been rallying in support of Mount Omei since 2016, when concerns were first raised about its future. Dozens of local newspaper articles have been published about the place since the 1970s. Another demonstration of local regard was the making of an Interim Heritage Order over the place by Liverpool City Council in 2024.

4.1.5. Criterion E) Scientific and Archaeological Values (An item has the potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

Mary Dallas' archaeological investigation of the entirety of Leacock Park in 1988 and 1999 found just one Aboriginal camp site, which was not located at Mount Omei. Dallas nonetheless concluded that the park, including Mount Omei, contained 'considerable Aboriginal value and educational potential' (NPWS, 2016, pp11-12). The identification of historic geographical features associated with the Glenfield Estate by Ashley Built Heritage in 2016, such as fence posts and buried cisterns, suggests that the Mount Omei property has historic archaeological potential, at least at the local level.

4.1.6. Criterion F) Rarity of the Place (An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)

The one-hectare 'Klaphake house/ gallery/ lookout area' of Mount Omei, which was developed by Alice and Wolf Klaphake in the mid twentieth century, is rare at the local level in Liverpool as a domestic precinct with modern buildings which, although simple and vernacular, share attributes with post-war regional styles such as the 'Sydney School'. The house, former laboratory and ancillary buildings were thoughtfully designed and situated in a recovered bushland setting to create a functional and inviting place for scientific, artistic and social activities, sometimes nick-named 'Alice's Wonderfland'. The use of the former laboratory building as a privately-run art gallery, on and off since 1976, is rare in the local context, and has resulted in the place being widely known and appreciated by the local community.

4.1.7. Criterion G) Representative Significance of the Place (An item is important in demonstrating the principal characteristics of a class of NSW's Cultural or natural places; or Cultural or natural environments)

The one-hectare 'Klaphake house/ gallery/ lookout area' of Mount Omei, which was developed by Alice and Wolf Klaphake in the mid twentieth century, has representative significance as the local level in Liverpool as a place associated with artistic activities, largely because of the Mount Omei art gallery run by Alice Klaphake 1976-1984, which has continued to be the site of occasional art exhibitions. Mount Omei is also representative of places associated with alternative lifestyles in western Sydney in the post-war period.

4.2. COMPARATIVE ANALYSIS

This section briefly discusses other places in NSW (and elsewhere in Australia) which have been heritage-listed for qualities comparable to those found significant at Mount Omei, to enable a better understanding of Mount Omei's degree of significance.

4.2.1. Peri-urban residential properties associated with artistic activity

In the mid-twentieth century, a number of communities associated with the fostering of artistic and intellectual culture developed around residential properties in the urban

outskirts of Australian cities, often in alternative settings, which have since been recognised in heritage listings, and sometimes turned into government-supported cultural hubs. These include:

Lewers Bequest and Penrith Regional Gallery, 84-88 River Road, Emu Plains.

The Penrith Council LEP listing entry states: 'The place is of historic significance at a regional level as the former home and workshop of Gerald and Margot Lewers, important artists of the mid twentieth century period in Australia . . . The place is of social significance at a regional level because its function as a regional Art Gallery provides an important and valued resource for the community' (Extract from NSW SHI, LEP listing entry Statement of Significance).

Ashley also mentioned this comparable place because of its links to the Klaphakes: 'Perhaps through her friendship with Lenore Rays and Tom Bass, Alice had became friends with Margo Lewers, who with her husband Gerard were accomplished artists also living on Sydney's peri-urban fringe, at Emu Plains near Penrith. The Nobel-prize winning novelist Patrick White considered the Lewers' home on the banks of the Nepean River to be "one of the focus points of our still tentative civilisation". The Lewers home has now been transformed into The Penrith Regional Gallery & Lewers Bequest, and is a major regional art gallery, house museum and popular café (Ashley, 2016, p14).

Norman Lindsay House, 14-20 Norman Lindsay Crescent, Faulconbridge.

The NSW SHR listing entry states: 'The house, studios, grounds and bush walk which comprise what we know as the Norman Lindsay Gallery Museum, etching studio and grounds, are intrinsically connected to Norman and Rose Lindsay, the Lindsay family generally, and the society of visitors and artists which the place attracted. The Norman Lindsay house and grounds occupied an important place in the artistic, literary and moral history of early to mid-20th century Australia: and as such the place is significant within a national context. The place provides potential to reveal the creative achievement of Norman and Rose Lindsay, and their family in integrating building, landscape and artwork (Extract from NSW SHI, SHR listing entry Statement of Significance)

Varuna house, studio, garden and interiors, 139-141 Cascade Street, Katoomba

The Blue Mountains LEP listing entry states: "Varuna's association with a major novelist and today with a stream of writers in residence, inspired by Eleanor Dark's custom built creative environment, give it a high level of significance at the state level. Its studio, garden and furnishings have maintained a high degree of integrity since the Darks lived there and the continuing association with the family emphasises its significance, especially its high local significance socially and



Image 4.1. (NSW SHI LEP listing image)



Image 4.2. (NSW SHI SHR listing image)



Image 4.3. (NSW SHI LEP listing image)

aesthetically' (NSW SHI, LEP listing entry Statement of Significance).

Dobell House, 47 Dobell Drive, Wangi Wangi.

The NSW SHR listing entry states: 'As well as being Dobell's home from 1942-1970, it was also the place where he painted numerous works... Dobell House is further associated with the artist, having been designed by Dobell, originally as a two-room weekender, then modified by him, through the series of additions which included the second-storey studio' (Extract from NSW SHI, LEP listing entry Statement of Significance).

Bungonia, 77 Myola Road, Newport.

The Northern Beaches Council LEP listing entry states: 'built c.1890 by A.G. Yewen as a house for his family, has historic and aesthetic significance as a sandstone cottage dating from the early development of Newport used as an artists' colony. It is the oldest surviving building on Bungan Head, being part of the early subdivision . . . The house also has associations with prominent artists, writers, philosophers and political thinkers such as Norman Lindsay, Fullwood and Minns who all stayed there . . . built with local natural materials to simple designs made with traditional techniques to reduce their visual impact and harmonise with the natural context and surroundings . . . ' (Extract from NSW SHI, LEP listing entry Statement of Significance).

Haefliger's Cottage, Denison Street, Hill End.

The Bathurst Regional Council LEP listing entry states: 'Haefliger's Cottage is of considerable Local and State significance in its association with the Artists of Hill End of the post WWII period: 1947-1958, and to the present day, but especially artist and Art Critic Paul Haefliger and his wife artist Jean Bellette, colleagues Donald Friend and Russell Drysdale and John Olson . . . [it is] one of the houses occupied by widely recognised artists who used Hill End as an inspirational getaway during the 1950s and 1960s' (Extract from NSW SHI, LEP listing entry Statement of Significance).

Laverty House, 207 Eastern Road, Wahroonga.

The Ku-Ring-Gai Council LEP listing entry states: 'The substantially intact Laverty House is a rare example of an artist's residence still with its functioning and identifiable artist studio. The way of life of the Laverty Family is still clearly evident in the extant planning and fabric of the house and studio. The design of the house and studio is of exceptional interest when planned expansion of the house is understood in order to cater for young couples of modest financial means in the post-war years, of post-war frugality, and of their increasing wealth and family size through later additions and enlargement of the small house nucleus . . . The Laverty House is of local aesthetic significance as its design exhibits the



Image 4.4. (NSW SHI SHR listing image)



Image 4.5. (NSW SHI LEP listing image)



(NSW SHI LEP listing image)



(NSW SHI LEP listing image)

hallmarks of Modernism with its clean lines, simple form, and walls of glass . . . The Laverty House is one of a series of houses within the Ku-ring-gai municipality that demonstrate the emergence of modern architecture in New South Wales, of which the architect Sydney Ancher was a leading proponent. The Laverty House is of local associative significance because of its strong association with renowned architect, Sydney Ancher and his firm, Ancher, Mortlock & Murray and also because of its association with two prominent Australian artists, Ursula and Peter Laverty, who was Head of the National Art School and later Director of the Art Gallery of NSW The Laverty House has the potential to yield information about cultural history in NSW, through its association with the artistic world, which is strongly reflected through the extant building fabric, arrangement and composition of elements on the site, including a purpose-built artist studio' (Extract from NSW SHI LEP listing entry Statement of Significance).

4.2.2. Modern but modest functional design in bushland settings

In the mid-twentieth century it was not only modernist architect but many non-professional designers and builders who dispensed with ornamentation and used inexpensive new building materials (like AC fibro) alongside traditional techniques, to make robust functional buildings carefully situated in bushland settings. These include:

Royal National Park Coastal Cabin Communities

The NSW SHR listing entry states: 'The Royal National Park (RNP) coastal cabin communities of Little Garie, Era and Burning Palms are of State heritage significance as the largest and most intact groups of vernacular coastal weekender cabins remaining in NSW \dots The cabins provide evidence of the development of simple weekender accommodation around Sydney from the 1920s and 1930s starting with tent accommodation that developed into huts and cabins. The cabins also reflect the embracing of Sydney's bush hinterland in the early part of the twentieth century and the reciprocal role the bush had in the development of recreation and conservation philosophy in NSW \dots The cabins themselves are significant for their continuity of use and associations, most of them for over sixty years . . . The cabin communities are significant for their long historic associations with important designers, artists, musicians, writers and poets over time including Gordon Andrews, Max Dupain, Hal Missingham, David Moore and more recently Chris O'Doherty aka Reg Mombasa' (Extract from NSW SHI SHR listing entry Statement of Significance).



(NSW SHI SHR listing image)

Currawong Works Holiday Camp

The NSW SHR listing entry states: '[Currawong is significant] for its aesthetic values as a workers' holiday camp located amongst bushland and surrounded by national park on a magnificent Sydney waterfront. The cottages are aesthetically distinctive as a group and although not architecturally significant form a rare and important composition grouping. They exemplify a style' (Extract from NSW SHI SHR listing entry Statement of Significance)



(NSW SHI SHR listing image)

Ahimsa, 67 Corbran Road, Cheltenham

The NSW SHR listing entry states: 'Ahimsa and surrounding landscape stand as a testimony to Marie Byle's life and vision as a feminist and a conservationist . . . Aesthetically, the small-scale understated buildings fit unobtrusively into the Australian bushland. The peaceful atmosphere of the property gives visitors an insight into the character of the woman who gave the property to the National Trust' (Extract from NSW SHI SHR listing entry Statement of Significance).



(NSW SHI SHR listing image)

Plumwood, 4120 Kings Highway, Monga

The NSW SHR listing entry states: 'Plumwood has... significance... as the home, workplace and inspiration of preeminent environmental philosopher, Dr Val Plumwood... where she wrote her ground-breaking scholarly body of works in the interdisciplinary field of the environmental humanities between the years 1975-2008... Plumwood is of aesthetic value for Dr Plumwood's hand-built stone octagonal residence, her garden design and its setting which is embedded within the surrounding pristine old-growth forest... Dr Plumwood's home is an example of a sustainable eco-house, associated with the 'back-to-earth' rural lifestyle movement and represents ingenuity in its design as a fire-resistant structure' (Extract from NSW SHI SHR listing entry Statement of Significance).



(NSW SHI SHR listing image)

4.3. BHHH STATEMENT OF SIGNIFICANCE

Mount Omei's 'built precinct', an area approximately one-hectare in extent, enclosing five buildings and the lookout area in a bushy landscape largely designed and planted by Wolf and Alice Klaphake, is of local heritage significance under all seven NSW Heritage Council criteria.

The Mount Omei property overall has low-level local historical and associational significance as former dairy farming land from the colonial Glenfield Estate, which was

located on the outskirts of Sydney and owned at different times by Dr Charles Throsby, explorer, and James Leacock, innovative farmer. The entire Mount Omei property also has potential local scientific significance for contributing both to the 'considerable Aboriginal value and educational potential' identified in Leacock Regional Park by Mary Dallas archaeologists in 1999, and for the archaeological potential of remnant features still in situ from the colonial Glenfield Estate era.

Mount Omei has high historical and associational local significance for the built precinct area of the lot sold in 1946 to German émigré Dr Wolf Klaphake, chemist, and his Australian-born wife Alice, artist, which was transformed into a functional and attractive place for the Klaphakes' scientific, artistic and social activities. In this 'house / gallery/ lookout area' in the north western corner of the lot, Wolf built a laboratory for his experiments in chemistry with commercial applications, which after his death in 1967, was transformed by Alice into the Mount Omei Modern Art Gallery. Focused on showing contemporary art by western Sydney artists, this gallery became 'the centre of the art scene in Sydney's southwest' from 1976 to 1984. Occasional exhibitions have continued to be held there to 2024 under the custodianship of the Klaphake's son Van. As such Mount Omei's 'house/ gallery/ lookout area' is historically significant, rare and representative as a residential property in the urban outskirts which has fostered the local arts community.

The Mount Omei 'house/ gallery/ lookout area' has local aesthetic significance for the five buildings set in a bushy landscape with surrounding gardens—all designed, mainly owner-built and largely planted by the Klaphakes. Although simply constructed in inexpensive materials without professional design input, the mid-twentieth century buildings have been thoughtfully proportioned and oriented in relation to each other, the weather and the bushland setting to form an attractive precinct, sometimes nick-named 'Alice's Wonderland'.

Mount Omei has local social significance demonstrated by dozens of positive newspaper articles about art exhibitions and artists' gatherings held here since the 1970s and the demonstrated regard in which the place is held by the nearby Casual Powerhouse Arts Centre and the Liverpool Arts Society. Local regard was also demonstrated in 2024 by questions being asked about Mount Omei's future in the NSW Parliament, followed by the making of an Interim Heritage Order over the place by Liverpool City Council.

4.4. BHHH GRADING OF ELEMENTS OF SIGNIFICANCE

The one-hectare built precinct of Mount Omei including the house/ gallery and lookout areas (as discussed in Section 3.4 and mapped in Image 1.5) which was developed by Alice and Wolf Klaphake in the mid twentieth century, is assessed as being of local heritage significance under all seven NSW Heritage Council criteria. This precinct should be listed on the Liverpool City Council LEP. It is defined by the northern boundary of the property from Leacock Lane to the 40m contour line, along the winding 40m contour line to the southern boundary of the lot, the southern fence-line approximating the previous lot boundary, and the western boundary of the property marked by Leacock Lane.

The eastern and southern areas of Mount Omei (as identified in Section 3.4) are considered to have low-level historical and associational heritage significance. Further archaeological assessment, including consultation with local Aboriginal communities, is required to determine any scientific significance. These other two areas are not recommended for LEP listing at this time.

Within the significant Klaphake built precinct, the two main buildings, which are in generally fair-to-good condition, are of high significance: the house and the former laboratory-gallery building.

Also considered to be of high significance are the gravel pathways and vegetation, especially the mature trees planted by the Klaphakes throughout the precinct. The open garden area near the lookout, with the pond, is also of high significance. The gates marked "Mount Omei' facing Leacock Lane are of high significance.

The three ancillary buildings, the 1946 garage, the 1956 garage and the 1960 studio, are in fair-to-poor condition but are of moderate significance. Other sculptures and landscaping features scattered throughout the property are of moderate significance.

5. CONCLUSIVE SUMMARY AND RECOMMENDATIONS

Mount Omei is not heritage listed on the Liverpool City Council LEP 2008, nor is it known to be heritage listed on any NSW Government Section 170 Heritage and Conservation Register.

The 'built precinct' of the Mount Omei property, approximately 1 hectare in extent as indicated on the map in Image 1.5, is assessed as being of local heritage significance.

It is recommended that the 'built precinct' of Mount Omei be added to the Liverpool City Council LEP as an item of local heritage significance.

It is recommended the 'built precinct' of Mount Omei be added to the Section 170 Heritage and Conservation Register associated with NPWS.

It is recommended that the Mount Omei 'built precinct' be retained, repaired, conserved and, if possible, be made available for community and cultural-related purposes.

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ANNEXURE 1—HISTORICAL TIMELINE FOR MOUNT OMEI

Time immemorial Australia has been inhabited by Aboriginal people for at least 60,000 years. The traditional owners of the land on which Mount Omei is located are the Darug people (NPWS, 2016, ppii).

The nearby Georges River formed a natural boundary between the lands of the Darug people to the west and north, and the lands of the Tharawal people to the east and south. Mount Omei would have been frequented by both groups of Aboriginal people. Today it is located within the area of the Tharawal Local Aboriginal Land Council (LALC), and adjacent to the area of the Gandangara LALC. It is also an area of interest to the Cubbitch Barta Native Title Claimant Aboriginal Corporation (NPWS, 2016, pp2, 11).

Leacock Regional Park was the subject of an archaeological assessment in 1999. No Aboriginal sites were found within the Mount Omei property at that time. One camp ground was identified within the larger park area, near the Lookout. Mary Dallas archaeologists considered the park has 'considerable Aboriginal value and educational potential'. An Aboriginal heritage management strategy was developed for the known and predicted archaeological resources in the park (Mary Dallas, 1988, 1999, cited in NPWS, 2016).

1788 British colonisation

The First Fleet of the British penal colony arrived in Sydney Harbour, settling at Sydney Cove, about 35km north-east of Mt Omei, and opening up the colonisation of the Australian east coast.

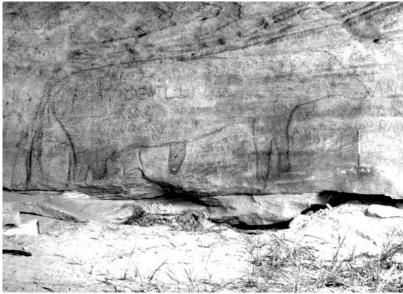


Image A1.1. 'Bull cave' at nearby Minto where a European animal was depicted in traditional Darag style during the early days of the European colonisation of Sydney's south-west.

1810-1920 Glenfield established and owned by Throsbys Charles Throsby was first granted the land for Glenfield by Lieutenant-Governor Paterson in 1809. However all the government grants bestowed by Paterson's interim administration were reconsidered by Governor Macquarie when he arrived in New South Wales on 1 January 1810. While many grants were withdrawn, the Glenfield grant was formalised as 950 acres (384 hectares), and included the land on which Mount Omei would be located (NSW Lands CTs Vol.11816 Fol. 132; Vol.6555 Fol.231; Vol.5888 Fol.220). Throsby established his home at Glenfield, named after the town where he was born in England, and constructed several fine colonial buildings there. His Glenfield Estate, positioned west of the Georges River and bisected by the Great South Road (now Hume Highway) grew to 1130 acres [457 ha] in 1823 (Mayne-Wilson, 2002, p6). Throsby was understood to foster peaceful relations with the traditional owners of the land (Ashley, 2016, p6).

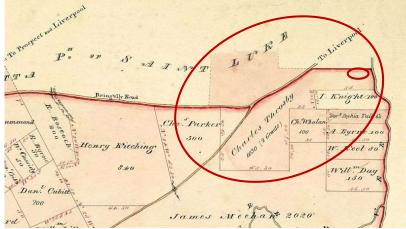


Image A1.2. Extract from Parish of Minto map (undated) showing the early extent of Throsby's Glenfield Estate (950 acres plus 80 acres making 1030 acres [417 ha.]). The grant was known as Portion 272 Parish of St Luke, but the land positioned south of the Great South Road (now Hume Highway) and the Camden Valley Way was actually within the Parish of Minto. The approximate location of Mt Omei is indicated by the smaller oval near the Georges River (NSW Lands HRLV AO 250, annotated by BHHH).

Clive Lucas Stapleton summarised the Glenfield story:

'Glenfield was settled by Dr Charles Throsby, who arrived in New South Wales in 1802 as a surgeon, and went on to lead a varied career in the colony as Assistant Colonial Surgeon, Magistrate, and explorer. Throsby was granted 950 acres (384.45 ha) in 1810 and built the house in 1810-1817. Dr Throsby committed suicide at Glenfield in 1828, aged 51, having experienced increasing financial troubles following a court ruling in favour of his creditors. His nephew, Charles Throsby (the Younger) inherited the Glenfield estate. Following his death in 1854, the estate remained in the Throsby family until 1920. For most of this time, the land was leased to tenants' (Clive Lucas Stapleton, 2007, p3)

The remnant buildings at Glenfield, adjacent to Mt Omei, have been described as 'arguably the most intact representation of a rural farm complex from the Macquarie period that survives in New South Wales' (Clive Lucas Stapleton, 2007, cited in NPWS, 2016, p13).



Image A1.3. The main homestead of Glenfield pictured during an open day after conservation works were completed in 2007 (BHHH, 2007)

1900 Wolf Klaphake's early years in Germany Wolf Klaphake 'was born on 5 March 1900 in Zeitz, a small town in southeast Germany. . . Wolf's father, Josef Klaphake, was the director of the local abattoir. When Wolf was one year old, his father died. Wolf, his sister Kitty and his mother moved to Leipzig, where Wolf went to school. After a six-month stint with an artillery regiment in Belgium, he returned to Leipzig to attend university. In 1923, he graduated with a doctorate and moved to Berlin to work as a chemist for the Schering-Kahlbaum company' (NAA, 2024). He was not Jewish but after his wife Maria was harrassed by Nazi officials for her work as a sexual psychologist, they decided to emigrate (Neumann, 2003).

1909 Alice Klaphake's early years in Australia Alice Lardi (m. Klaphake in 1945) was born on 3 February 1909 in Kalgoolie in Western Australia. The family moved to Perth when she was three. When she was 16 her family moved again, to Victoria, but she stayed on in Perth to study elocution and drama at Trinity College. She moved to Melbourne after graduating in 1926 (CPAC, 2004), where she met and married Trevor Wilton, a theosophist. She was accepted into the Melbourne Repertory Company where she acted in several plays before having her first child. In 1933, after their second child, the family moved to Sydney. By the late 1930s Alice was divorced and living in Minto, near Casula, working as a journalist, writing poetry and pursuing her interests in spiritualism (Ashley, 2016, p11).

1920s Leacock's ownership of Glenfield In the early 1920s James Freeland Leacock, an innovative dairy farmer and entrepreneur who had married into the Throsby family, purchased 376 acres associated with the Glenfield Estate, including the land where Mount Omei would be built. He converted the land title from Old System into Torrens Title in 1924 (NSW Lands PA 26388). The heritage entry for the SHR listing of Glenfield described Leacock:

'His idealism embraced many interests, ranging from organic farming to Aboriginal rights. He undertook many activities on the farm property

which made Glenfield a meeting place for groups concerned for Australian and international justice and many humanitarian issues. Leacock pursued the establishment of communal living, discussion centres and co-operative farming. The first serious co-operative was the Rural Homes (Glenfield) Co-operative Ltd, formed in 1951. In 1960 the co-operative went into insolvency. In 1970 the Glenfield Goodwill Cooperative Society was registered.' (NSW SHI, sighted 31 May 2024)



Image A1.4. Photo of the homestead building, two-storey barn and landscape at nearby Glenfield in c.1924, around the time it was purchased by James Leacock (Frank walker, courtesy of RAHS, reproduced in Mayne-Wilson, 2002, p13)

The 2016 Plan of Management also noted that 'During his ownership, Leacock established the first Aboriginal heritage museum in Sydney in the 1950s known as the Austro-Asian Cultural Centre' (NPWS, 2016, p13 citing Clive Lucas Stapleton, 2007, p27)

Leacock subdivided and sold off sections of the land throughout his tenure (NSW Lands CTs Vol.4649 Fol.84 and Vol.5838 Fol.227). Ashley notes that although 'Glenfield Farm was reduced over time . . . [it] continued to operate as a farm until around 2003 when it was purchased by the NSW Department of Planning' (Ashley, 2016, p7).

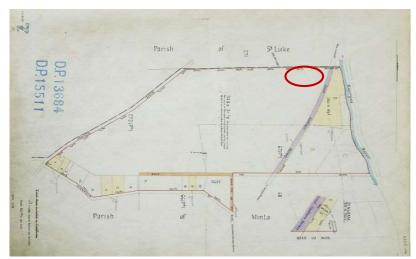
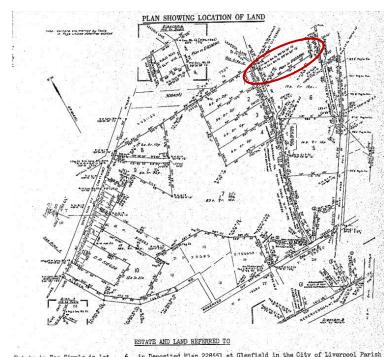


Image A1.5. c.1936 land titles map of James Leacock's Glenfield in 1936, showing the future approximate location of Mount Omei circled in red (NSW Lands CT Vol.4649 Fol.84)



Estate in Fee Simple in Lot 6 in Deposited Plan 228551 at Clenfield in the City of Liverpool Parish of Minto and County of Cumberland being part of Portion 272 granted to Charles Throsty on 1-1-1810.

Image A1.7. c.1969 land titles map showing numerous subdivisions under

Image A1.7. c.1969 land titles map showing numerous subdivisions under Leacock's period of ownership, including the Mount Omei subdivision in the northeastern corner (NSW Lands CT Vol.11213 Fol.17)

1935-1945 Wolf Klaphake's early years in Australia



Wolf Klaphake emigrated from Germany to Australia with his first wife Maria in October 1935. They arrived in Melbourne but had moved to Sydney by 1936. An experienced industrial chemist with a PhD, Wolf had been developing his own inventions in Germany. In 1933, he sold an invention to I.G. Farben, then one of the world's largest chemical corporations, earning him a substantial fee (Neumann, 2003). He also had a design for a 'dew condenser' that he hoped to build in the Australian desert, but the design proved too expensive. Maria Klaphake was also a doctor who specialised in mental health. In Australia Wolf worked first as a consultant chemist, and then for Industrial Microbiology Pty Ltd—a company which he had set up to fund his own research (NAA, 2024; The Sun, 17/10/1935 p46 via Trove).

Image A1.6. Wolf and Maria Klaphake were interviewed and photographed by the local press around the time of their arrival, for example, in this brief article entitled "Water maker" (Labor Daily 18/10/1935 p8, via Trove).

During World War II Wolf was interned as an 'enemy alien' for four years (1940-1944) while Maria was interned for one year (1942-43). Australian security services found evidence of his having joined the Nazi party as he was leaving Germany—he later explained he joined only to enable him to access his finances abroad, and that he had no interest in Nazism. 'In spite of his internment, which he considered grossly unjust, Klaphake decided to remain in Australia. He applied for naturalisation soon after his release. Klaphake's application was granted, and he was naturalised in September 1946.' (Neumann, 2003; NAA, 2024)



Image A1.7. Wolf Klaphake's internment document held by the National Archives of Australia (NAA, 2024).

Maria Klaphake died on 2 March 1945, aged 41, from complications arising from an infection (Ashley, 2016, p9). 'Her husband claimed that his internment was to blame for her death. Maria and Wolf's marriage was no longer a happy one in the final years of her life, but she remained a loyal supporter of her husband to the end.' (NAA, 2024)

1945-1967 Klaphakes purchase and construct Mount Omei buildings According to her son Van, at some stage Alice was running a cafe in Kings Cross with her sister when she met Wolf, presumably in early 1945 after Wolf was released. Alice's two children from her first marriage, Rosemary and Don, were almost grown when Alice and Wolf married in November 1945 and settled in Minto (Ashley, 2016, p12). Two more children were born soon afterwards: Van in 1947 and Zita in 1949.

Perhaps because Wolf was not yet naturalised, it was Alice who purchased the block of land for £245 at Casula which would become Mount Omei, on 8 July 1946 (NSW Lands Dealing D859380). The sale of Mount Omei was formalised in 1948 with the following details: James Leacock sold 6 acres, 23 ½ perches [2.48 ha] from his Glenfield Estate to Alice Gertrude Klaphake, wife of Wolf Klaphake (NSW Lands CT Vol.5888 Fol.220, dealing D859380).

Even before the purchase was recorded, in December 1945, 'Dr Klaphake' was calling for tenders for the 'erection of a fibro cottage at Casula—plans and spec' (Construction, 5/12/1945 p9 via Trove).

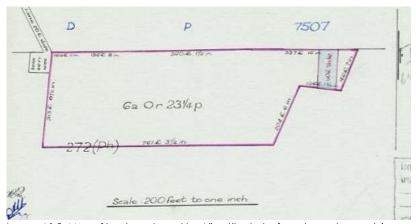


Image A1.8. Map of land purchased by Alice Klaphake from James Leacock in 1946 (NSW Lands CT Vol.5888 Fol.220 via HLRV)

Geoff Ashley discussed the Klaphakes' story about being inspired to buy the Mount Omei property in 1946 after seeing it from the train:

'[The Leacock Regional Park Plan of Management] notes Alice Klaphake saying that she and Wolf saw this land from the train and the next weekend went there and negotiated purchase . . . [Nonetheless] it is possible that there is an historical connection between James Leacock's idealism associated with the co-operative and social justice movements and the Klaphakes who were clearly themselves interested

in "alternative" approaches to land management. It is quite possible that there is an historical relationship between the Klaphake acquisition and the social beliefs of the owner of Glenfield' (Ashley, 2016, p7).

They named the property 'Mount Omei'. 'Omei' literally means 'raised eyebrow' in Chinese and the property was probably named after the sacred Buddhist mountain, Emei Shan, in Sichuan province, China (Neumann, 2003). Wolf had an understanding of 15 languages and was a keen student of Chinese language and culture (Ashley, 2016, p9; NAA, 2024).

'Wolf Klaphake was gifted, eccentric, naive, intelligent, stubborn, charming, withdrawn, romantic, uncommunicative, generous, intense, exuberant, repressed, depressed. There is little doubt that he was extraordinarily talented' (NAA, 2024).

Alice's friend Lenore Rays, who married the sculptor Tom Bass, remembered Alice from their early years in Minto:

'She was a journalist really, but she had two young children to rear ... we were both interested in art in one form or another ... She was beautiful, charismatic, charming. A very interesting person ... an activist ... We were the original drop-out community ... we were seen as strange birds, weird bohemians. Tom was a sculptor, I had been a commercial artist and writing poetry and Alice was ... interested in poetry. Local people couldn't understand us at all but it gave us a lot of freedom.' (Ashley, 2016, p11)

According to their son Van Klaphake, Wolf and Alice built the laboratory (later gallery) building first, in 1946, where they lived until the house was constructed in 1947-48 (Ashley, 2016, pp27, 29). They also constructed two sheds and a workshop during these early years before 1960. The buildings were all single story, modest vernacular buildings constructed with brick foundations, timber framing, fibro cladding and AC roofing (since replaced by corrugated iron roofing). They were largely designed and built by contract builders and Wolf with some input by Alice (Ashley, 2016, pp 29, 41, 43). A Concil report of 1957 notes the construction of garage addition with iron roof for Klaphake with "self" as the builder, costing just £150 (LCC Minutes, 2/7/1957, p2)

Wolf used the laboratory to continue working independently as a consultant chemist. 'His business brought him neither riches nor fame. In the years before he died in 1967, he made a living by manufacturing toilet cleaner in his laboratory' (NAA, 2024).

Wolf Klaphake died of cancer on 5 September 1967, in 1967, aged 67. He has been memorialised 'through a 53 minute radio play/ documentary, A Doubtful Character (Neumann, 2003), a detailed biographical expose of official records about him held by the Australian National Archives in their online 'Uncommon Lives' series, and an entry in the Encyclopedia of Australian Science Biographical (Ashley, 2016, NAA, 2024, Neumann, 2003)

Ashley reports that Alice considered selling Mount Omei after Wolf's death but by the time some interested buyers were found, several years later, she had decided to stay on (Ashley, 2016, p17). Instead, in 1972 Alice Klaphake purchased another acre or so of Glenfield land, then owned by the Rural Homes (Glenfield) Cooperative Ltd, enlarging Mount Omei to its current extent of 7 acres 3 roods (2.84 ha) and creating the current Lot 17 in DP

554086 (NSW Lands CT Vol.11816 Fol.132).

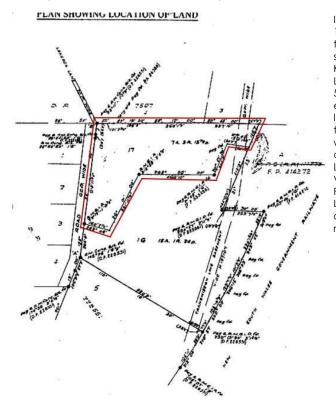


Image A1.9. 1971 land titles map showing Alice Klaphake's Lot 17 DP 554086, enlarged with land added to its southwestern corner (NSW Lands CT Vol.11816 Fol.132, with Lot 17 outlined in red by BHHH).

1976

In 1976, Alice opened her private gallery specialising in 'modern art' in the former laboratory building at Mount Omei. 'After Wolf's death, his widow, an accomplished artist, turned his laboratory into an art gallery. Mount Omei had a second life: as the centre of the art scene in Sydney's southwest' (NAA, 2024).

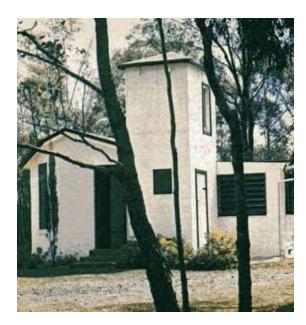


Image A1.10.
1976 Womens
Weekly photo of
the gallery
building: 'The
Moorish look
came from
hiding the water
tank behind a
minature tower'.
(Australian
Women's
Weekly,
17/11/1976, p69,
from Ashley,
2016 Annexure B
newsclippings).

While Alice had maintained an interest in theatre, it was painting and sculpture that became her focus during the 1960s and 1970s.



Image A1.11. Alice Klaphake, Delos Remembered, oil on board, 16 x 20cm, painting donated by solicitor John Marsden to the Campbelltown Arts Centre in 2006 (#2006.54) (Ashley, 2016, p16).

Geoff Ashley describes the creative milieu around Alice in the mid 1970s:

'Alice . . . was interested in the arts generally through her poetry and . . . through friendships with artist such as Lenore Rays and Margo Lewers and their sculptor husbands Tom Bass and Gerald Lewers. Margo Lewers introduced Alice to John Olsen and persuaded her to take up painting classes with him . . . Alice also joined a group of women (including her friend Margaret Whitlam) in a Workers Educational Association study group on modern art. . . Alice made connections with the artists who established themselves at Wedderburn near Campbelltown... Van Klaphake said that Alice started painting at 55 years old, that is in 1961. An article in the Australian Women's Weekly quotes Alice as saying that she first received a commission for a mural for a hotel in Terrigal "after which commissions started pouring in and Alice's hobby became a full-time occupation" [Australian Women's Weekly, 17/11/1976, p69]. In 1975 Alice won the Camden Art Prize. According to the Women's Weekly article Alice was hung in "collections in England, Greece and the United States"... Some of the work of Alice was purchased by Campbelltown solicitor John Marsden who later donated his collection to the Campbelltown Arts Centre who now hold three of Alice's works' (Ashley, 20165, pp15-16)

The Women's Weekly interviewed Alice in 1976, who explained her reasons for developing the gallery:

'There is a tremendous interest in the arts and crafts in this outer western area [of Sydney]. Camden, Campbelltown and Liverpool have their art festivals each year—and for six consecutive years we have promoted the Liverpool Art Prize. With so much going on I felt that there was a need for a permanent showplace—where developing artists could also show their work at a cost that wouldn't hamper that development. Many lent a hand with the new gallery. Margo Lewers, Carl Plate and Arpad Kinka, then occupying the Power Bequest Studio in Paris, were among those represented in the opening exhibition in September 1976.' (Women's Weekly, 17/11/1976, p69)

The Mount Omei Modern Gallery became an important focus of artistic activity in Liverpool for the next decade or so.

'Dubbed "Alice's Wonderland" by locals the Modern Gallery became a gathering place for local artists and crafts people. Alice was 67 by the time she opened the gallery but she relished the hard work and role of the gallery as a bushland oasis for friends and visitors. She was feisty, energetic and flamboyant . . . 'The Gallery' was a huge success, partly because of Alice's extrovert nature and ability to connect with people, but also because of the quality of the artists she showed. Artists such as the sculptor Tom Bass and painters such as Elisabeth Cummings exhibited there. From this small space a hugely important and influential group of people showcased and developed their work . . . [Prominent Australian artist Lloyd] Rees opened a show there [where he] likened the Gallery in terms of its character to the Chapelle

du Rosaire in France designed by artist Henri Matisse' (Ashley, 2016, pp17-18).

1979

In 1979 Alice Klaphake sold the Mount Omei property to the NSW Government agency, Planning & Environment Commission, for \$90,000 (NSW Lands CT Vol.11816 Fol.132, R265258). Since 1979 Alice Klaphake and then Van Klaphake . . . maintained a permissive occupancy of the site (Ashley, 2016, p22).

1984

Alice Klaphake closed down her modern gallery at Mount Omei, at the age of 75, presumably with retirement in mind. Shows have been held there occasionally since then (for example as reported in the *Champion*, 9/10/1985; Knight, 2016; and *Liverpool Leader*, 21/6/2017, 7/3/2018, 20/6/2018)

1980s opening of art galleries in the western suburbs In 1981 the Penrith Regional Gallery and Lewers Bequest became the first local government-run gallery in Western Sydney, as a result of the gifting of their family home by Alice Klaphake's friends Margo and Gerard Lewers. In 1988 the Campbelltown Bicentennial Gallery came into operation, followed in 1994 by Casula Powerhouse Arts Centre (CPAC), located near Mount Omei (Ashley, 2016, p22).

1997

The Mount Omei property was transferred within the NSW Government's property portfolio to the National Parks & Wildlife Service (NPWS), on 11 March 1997. Following several land acquisitions by the NSW Government in the area, Leacock Regional Park, including the Mt Omei property, was reserved as a new regional park on 5 September 1997 (Ashley, 2016, pp21-22).

2001

The Casula Powerhouse Arts Centre built an amphitheatre on the banks of the George River and named it the Alice Klaphake Amphitheatre. The dedication sheet on the day stated:

'In naming this amphitheatre after Alice Klaphake, the communities of Liverpool recognise both her love of the theatre from an early age and her enormous contribution to the region's visual arts. The Alice Klaphake Amphitheatre will be a venue that celebrates and embraces all forms of the performing and visual arts, just as Alice did and continues do so in her life' (quoted in Ashley, 2016, p21)



Image A1.12. Photo of the Alice Klaphake Amphitheatre at the Casula Powerhouse Arts Centre (Ashley, 2016, p23)

2003
Glenfield
purchased
by the NSW
Government
/ Casula
Powerhouse
proposes
managing
Mount Omei

Glenfield operated as a farm until around 2003 when it was purchased by the NSW Department of Planning (as the Planning & Environment Commission had become named) (NPWS, 2016, p13).

Also in 2003, the Casula Powerhouse Arts Centre proposed that it be given management of the Mount Omei property:

'as an education resource focussed on alternative spiritualism and science growing from the interests of Alice and Wolf. The proposal was that the site remain in ownership of OEH [NPWS] but be leased free of charge to CPAC. Apparently the model was similar to the arrangements for the Collingwood House Precinct and the Liverpool Regional Museum and based on the idea of a Georges River Cultural Corridor extending from Liverpool CBD that would encompass the Mount Omei site.' (Ashley, 2016, p22 quoting Kon Gouriotis personal communication).

2004-2024 Van Klaphake After Alice Klaphake's death in 2004, the nearby Casula Powerhouse Arts Centre held a memorial service in her honour (CPAC, 2004). Van Klaphake has continued to live at Mount Omei since then under permissive occupancy agreements with NPWS (Ashley, 2016, pp1, 22).

Van Klaphake grew up at Mount Omei from the late 1940s to the late 1960s, which instigated his life-long interest in nature. This started with bird watching and was followed by his collation as a young man of an outstanding butterfly collection. He has planted many of the trees at Mount Omei, mostly Western Australian varieties. Later in life he has become an expert in Australian botany and self-published a series of authoritative books on native flora, focusing on eucalypts, sedges, grasses and rainforest species. Van also makes botanical drawings and has carved figures of native birds from timbers on site, sometimes included in Mount Omei gallery exhibitions (Ashley, 2016, pp13, 22).



Image A1.13. Bird carving by Van Klaphake (BHHH, 2024)



Image A1.14. Botanical drawing by Van Klaphake (BHHH, 2024)

2007

The most recent subdivision of the Glenfield Estate occurred in 2007 to create two allotments. Lot 1 DP 1126484, a one-hectare parcel containing

the Glenfield Farm buildings, was transferred to the Historic Houses Trust of NSW to restore the buildings and then sell into private ownership, accomplished in 2011. Lot 2, comprising over four hectares, was transferred to NPWS as an extension to Leacock Regional Park.

2012-2016

NPWS released a draft Plan of Management for Leacock Regional Park which noted that Mount Omei was not heritage listed anywhere but that it had been recognised as 'potential heritage item' on the 'Historic Heritage Information Management System' of the government agency. The draft plan recommended that Mount Omei undergo heritage assessment, and if found to be significant, to have a 'Heritage Action Statement' prepared for it to guide its future management and works (NPWS, 2012, pp14, 15). By the time the Plan of Management was finalised in 2016, no heritage assessment had yet been undertaken.

2016

In late 2016 Geoff Ashley was commissioned by NPWS to provide a built heritage assessment of the Mount Omei property. The report concluded that the place was of local heritage significance under all seven heritage criteria (historical, historical associations, aesthetic, social, scientific, rarity and representativeness), and that the property should be retained for community related purposes (Ashley Built Heritage, 2016, p43; Liverpool Council, 2022; see Annexure 3 for the report's conclusions and recommendations in full).

2022

A Liverpool Council ordinary meeting on 14 December 2022 noted the heritage significance for Mount Omei as established in the Ashley Built Heritage report (2016) and resolved to write to NPWS reiterating the local significance of Mount Omei and seeking clarification of its intentions for the buildings there.

March 2024

On 19 March 2024 the NSW Member of Parliament for Liverpool, Charishma Kaliyanda, discussed the conservation of Mount Omei in the NSW Parliament's Legislative Assembly where she told the Legislative Assembly that NPWS had initiated proceedings to evict the tenant, Van Klaphake:

'Back in 2016, when concerns were first raised about the future of Mount Omei, artists, friends and others who have benefitted from its legacy came together to rally in support. They organised exhibitions onsite and ran a campaign to demand answers from the previous Government, but none were forthcoming. In response to the outpouring of community concern for the property, my colleague the member for Leppington, a former Liverpool councillor himself, moved a motion at an ordinary meeting of Liverpool City Council in late December 2022 to note the heritage significance of Mount Omei and request that the council write to the National Parks and Wildlife Service to seek clarification on its intentions for the buildings on the site. Some 15 months have passed since that motion was unanimously passed and correspondence was sent from Liverpool City Council to the National Parks and Wildlife Service. However, the council is yet to receive any correspondence from the service. In response to recent developments, Councillor Karress Rhodes moved an urgency motion to impose an interim heritage order on the site to avoid any possible demolition, sale

or disposal of the site until the council's concerns have been addressed. I was proud to have joined those in favour of the motion in a vote of seven to three.' (Hansard, 19 March 2024).

On 22 March 2024 Liverpool Council made an Interim Heritage Order for six months on the Mount Omei property. Liverpool Council's gazettal outlined the background to the order, explaining that 'the eviction will leave the property vacant, and due to its isolated location, will likely become the target of vandalism and potentially arson' (NSW Government Gazette, 22 March 2024).

The March-April 2024 edition of the Liverpool Arts Society Newsletter ran a three page story about the threat to Mount Omei, calling for the Modern Art Gallery to be saved, stating: 'Mount Omei is, and should remain, a heritage Artspace and Reserve for the people of NSW" (LASN, 2024, p6)

ANNEXURE 2—DESCRIPTION—IMAGES

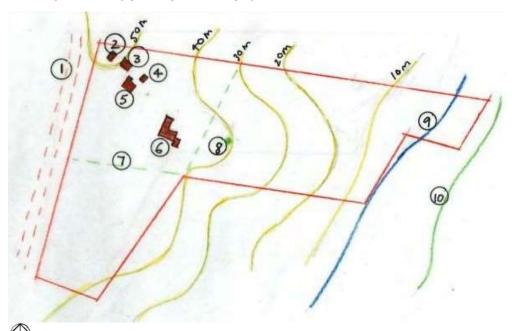


Image A2.1. Site plan of the Mount Omei property, drawn by Geoff Ashley, 2016. Key: 1) Leacocks Lane entrance to Mount Omei 2) 1959 Garage 3) 1946 Garage/studio 4) 1960 Workshop 5) 1946 Former laboratory-gallery 6) 1947-48 House 7) Fencing around house precinct 8) Pond overlooking slopes 9) Glenfield Creek 10) Path/cycleway (Ashley, 2016, p25 and Annexure A).



Image A2.2 Entrance to the Mount Omei property from the suburban Leacocks Lane, bordered by Eucalytus trees and the All Saints Catholic Senior College to the north (at left) (BHHH, 20243).



Image A2.3. Steel entrance gates to the Mount Omei property near '1' in site plan, showing bushy landscaping and the blank western façade of the former laboratory/ gallery building (no. '5' on the Ashley site map at Image 1.1) (BHHH, 2024).

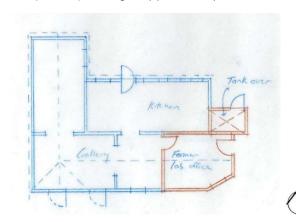


Image A2.4. Mount Omei's former laboratory/ gallery floorplan sketched by Geoff Ashley (2016, p28) (no. '5' in site plan in Image 1.1).



Image A2.5. Eastern (entrance) façade of the former laboratory/ gallery building at Mount Omei (Daily Telegraph, 4 March 2024).



Image A2.6. Eastern side of the former laboratory / gallery building (BHHH, 2024).



Image A2.7. South elevation of the former laboratory/gallery building (BHHH, 2024).



Image A2.8. Southern entry to former gallery building showing brick construction painted white, with frames, grills and signage painted black (BHHH, 2024)



Image A2.9. Mount Omei gallery interior pictured at a 2016 reopening of the venue (Ashley, 2016, p23).



Image A2.10. Former gallery interior showing kitchen & sitting room on the north side of the building (BHHH, 2024)



Image A2.11. Floorplan of the Mount Omei house, built 1947-48. Sketched by Geoff Ashley (2016, pp30, 31) (no. '6' in site plan in Image 1.1).



Image A2.12. Mount Omei house, viewed from the south-west, showing the simple brick chimney and corner-window feature (BHHH, 2024).



Image A2.13. Interior photo of the lounge area of the Mount Omei house with corner window (Ashley, 2016, p31).



Image A2.14. Interior photo of the house's kitchen (Ashley, 2016, p31).

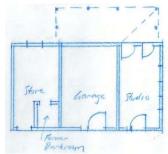


Image A2.15. Floorplan of garage built 1956, sketched by Geoff Ashley (2016, p32).



Image A2.16. Garage built in 1946 showing broken fibro sheeting next to the door opening at left ('3' in site plan in Image 1.1) (BHHH, 2024).

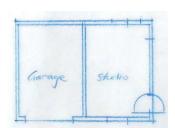


Image A2.17. Floorplan of 1956 garage sketched by Geoff Ashley (2016, p32).



Image A2.18. Garage built in 1956 ('2' in site plan in Image 1.1) (BHHH, 2024).

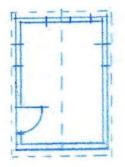


Image A2.19. Floorplan of workshop sketched by Geoff Ashley (2016, p32).



Image A2.20. Workshop – studio built 1960 ('4' in site plan in Image 1.1) (BHHH, 2024).



Image A.2.21. The two shed dating from 1946 is in poor condition (BHHH, 2024).



Image A2.22. Sculpture in the gardens near the former laboratory / gallery (BHHH, 2024).



Image A2.23. Toadstool outdoor seating group positioned near the house (BHHH, 2024)



Image A2.24. Fallen branch balanced over the garden tap (BHHH. 2024)



Image A2.25. Southern gate in fencing around the house and gallery precinct, leading out to views over the slope towards the Georges River (BHHH, 2024)



Image A2.26. View of the bushland slope towards the railway line, cycling path and Georges Rover, on the eastern side of the Mount Omei property (BHHH, 2024).

Heritage - 14 June 2024

ANNEXURE 3—EXTRACTS FROM ASHLEY BUILT HERITAGE REPORT

Ashley Built Heritage, 2016: 'Mount Omei, Leacock Regional Park, Heritage Assessment', unpublished report prepared for National Parks & Wildlife Service, Office of Environment & Heritage, NSW. Digital copy held by Liverpool City Council. Excerpting:

- Assessment of Significance;
- Explanation of 'Option 2'; and
- Conclusions and Recommended Actions.

Application of NSW Heritage Criteria

Criterion (a) Historical

An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).

Mount Omei provides important evidence of a pattern of Australian and NSW history around WWII associated with the experience of migrants and internees. Wolf Klaphake, who established Mount Omei with his second wife Alice, was a pre War migrant from Germany who spent much of the War interned in camps in three different states. His personal history and experiences have been featured in a series by the National Archives of Australia. With a scientific background in chemistry, Wolf Klaphake was drawn to migrate to Australia because of his interest in environmental issues such as water conservation and this was an interest reflected in the plantings and modifications that he undertook at Mount Omei from 1946 to his death in 1967.

The history of Mount Omei and the people associated with it provides evidence of a nontypical pattern of urban development history where people with alternate ideas, such as artists, were attracted to live in the peri-urban hinterland away from Sydney's metropolis, prior to later Post-War suburban expansion. Alice Klaphake (then Wilton) and her friends Lenore Rays and Tom Bass who were living at Minto, Margo and Gerald Lewers living on the banks of the Nepean near Penrith, and the Wedderburn artist cooperative established by Barbara and Nick Romalis, as well as Alice and Wolf themselves moving to Casula, all demonstrate a process where people with alternate ideas, were attracted to live in what at the time were rural areas on the outskirts of metropolitan Sydney. Although it has not been demonstrated in research for this project, there is the potential for a connection with the alternate tenure arrangements established by James Leacock at Glenfield Farm that may have attracted the Klaphakes. Mount Omei is historically important for its role in the development of the arts in the western Sydney region generally, and particularly around Liverpool. The Modern Art Gallery established at Mount Omei by Alice Klaphake, that operated between 1976 and 1984 is important as the first non-government art gallery in south-western Sydney. The Modern Art Gallery had an important role in providing an outlet for local artists who entered local competitions, such as the Camden and Liverpool Art Prizes. Alice Klaphake was also associated with earlier 'outliers' of the arts scene in western Sydney, such as Margo Lewers and also Lenore Rays and Tom Bass at Minto in the late 1930s and early 1940s. The role and importance of places such as the Modern Art Gallery is reflected in the later establishment of regional Council supported facilities such as Casula Powerhouse Arts Centre and regional arts centres run by the Councils of Penrith and Campbelltown.

The Mount Omei site contains remains that reflect an earlier historic phase of development associated with the Glenfield Farm property prior to its subdivision and purchase by the Klaphakes.

The site provides evidence of all of these historic patterns including occupation by members of the Klaphake family from 1946 to the present, the landscape changes by both Wolf and Van

Klaphake as well as five buildings and other structures modified for different uses, such as that made to the original laboratory to create an art gallery. Inclusion guideline satisfied:

- shows evidence of a significant human activity
- is associated with a significant activity or historical phase

Criterion (b) Association

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area).

The Mount Omei site is significant for its association with Wolf, Alice and Van Klaphake. Wolf Klaphake was a very interesting and highly intelligent migrant and scientist whose biography (focusing on this internment during WWII) is published by the Australian National Archives. Alice Klaphake was an artist who won the Camden Art Prize in 1975 (with works held in the Campbelltown Arts Centre Gallery) and as a gallery owner was the inspiration to local artists for a decade or more. Van Klaphake is well known for his publications on the native flora in NSW. Mount Omei is associated with important individuals and artists involved in the regional development of arts in the western Sydney, including the artist Margo Lewers and her sculptor husband Gerald Lewers at Penrith, Barbara and Nick Romalis at Wedderburn near Campbelltown and artists Lenore Rays and sculptor Tom Bass of Minto. Artist Elisabeth Cumming who exhibited at the Mount Omei gallery is a well-known practicing member of Wedderburn group.

The Modern Art Gallery at Mount Omei provided an important venue for local and regional artists to show their work outside the periodic art competitions run by Councils such as those run by Camden and Liverpool Councils. The artists associated the Modern Art Gallery at Mount Omei include: Bob Baker, Juanita Bailey, James Baker, Lenore Bass, Fonika Booth, Frederic Braat, Joan Brassil, Elisabeth Cummings, Rayond Coles, Gray Dunreath-Cooper, Greg Fawley, Philip Grienke, Hanna Juskovic, Arpad Kinka, Darryl Lock, Lorraine Maggs, Colleen Shaliapin, Robyn Smith, Brian Stratton, Robert Sugden and Georgina Worth.

Three of the artists who exhibited at the Modern Art Gallery won the Liverpool Art Prize: Margo Lewers, Carl Plate and Arpad Kinka. Many of the artists who showed at the Modern Art Gallery such as Brian Stratton and Greg Fawley also had a role in teaching in the arts at local institutions such as the Liverpool TAFE and in the NSW Dept of Education and schools in the area. Inclusion guideline satisfied:

- shows evidence of a significant human occupation
- is associated with a significant event, person, or group of persons

Criterion (c) Aesthetic

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).

Mount Omei has significant aesthetic characteristics associated with its landscape character that combine built and modified landscape elements. Together they have aesthetic qualities and form an unusual and pleasing sense of place in a dramatic landscape setting. Owner designed, and mostly owner built, the structures on site while reflecting typical construction materials do strongly reflect the interests and ideas of the Klaphake family.

The aesthetic character of the Mount Omei landscape was well reported in documents, such as newspaper articles during the period when the Modern Art Gallery operated with the overall site dubbed 'Alice's Wonderland' in response to its 'fairy-tale' landscape qualities. The aesthetic qualities of the place have ongoing importance to a number of artists and others associated with the place.

Inclusion guideline satisfied:

- is aesthetically distinctive
- exemplifies a particular taste, style or technology

Criterion (d) Social

An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.

Mount Omei has social significance at a local level for many artists, former artists and arts administrators for its history and strong sense of place. Many individual artists and others who knew of Alice Klaphake and her art gallery have a strong sense of personal association with both Alice and the place. This reflects a contemporary social value in addition to the historic values noted here.

Alice herself was a strong personality who both charmed and influenced many, including non-artists who say that they were influenced by her and her life philosophies, such as local resident and former NSW State Minister Craig Knowles and Campbelltown solicitor John Marsden.

The social significance of Alice and her gallery at Mount Omei is reflected by the acquisition of the Klaphake collection at the Casula Powerhouse Arts Centre (CPAC), the Amphitheatre named after Alice and the plan, not yet implemented, to use Mount Omei as a local arts centre as part of a Georges River cultural route/network. While Alice Klaphake was not directly involved in the establishment of the Casula Powerhouse in the mid-1990s the role she and her gallery had in supporting local and regional arts led eventually to Liverpool Council, with the assistance of the NSW Government in establishing CPAC. Inclusion guideline satisfied:

- is important for its associations with an identifiable group
- is important to a community's sense of place

Criterion (e) Scientific

An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).

There is some research potential for the pre-Mount Omei period of history in the remains on this site associated with the pastoral operations of Glenfield Farm (in-ground water tanks, dams and fences). There is also some research potential in relation to Post-War land cooperatives established by the Glenfield Farm owner James Leacock (for which the Klaphakes may have been involved).

Inclusion guideline satisfied:

- has the potential to yield new or further substantial scientific and/or archaeological information
- provides evidence of past human cultures that is unavailable elsewhere

Criterion (f) Rarity

An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).

Mount Omei has rarity significance as the first private art gallery to operate in southwestern Sydney. The varying uses of buildings on site at different periods (such as the laboratory converted to an art gallery) is also of interest but are not in themselves rare. Inclusion guideline satisfied:

shows rare evidence of a significant human activity important to a community

Criterion (g) Representative

An item is important in demonstrating the principal characteristics of a class of NSW's: cultural or natural places; or cultural or natural environments (or a class of the local area's: cultural or natural places; or cultural or natural environments.)

Mount Omei is representative of places associated with the development of the Post-War arts scene in western Sydney and in particular around Liverpool. It is also representative of the small number of places associated with alternative lifestyles in western Sydney in the Post-War period.

Inclusion guideline satisfied:

- has the principal characteristics of an important class or group of items
- has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity
- is a significant variation to a class of items

Statement of Significance

The Mount Omei site, Lot 17 Leacock's Lane Casula within Leacock Regional Park has historical, historical associations, aesthetic, social and scientific (research potential) significance at a local level, for the Liverpool LGA.

The historic significance of the site relates to themes of social change and migration around WWII, associations with 'alternative' people who chose to settle in rural areas of western Sydney and the important role of the Modern Art Gallery in the establishment of the western Sydney arts scene.

The particular associations of the site include Wolf and Alice Klaphake and their son Van; for differing reasons but all connected to the site. Other associations include regionally important persons in the regional arts history, Margo and Gerald Lewers, Lenore and Tom Bass and Barbara and Nick Romalis. There are many other local and regional artists associated with the Modern Art Gallery at Mount Omei including Elisabeth Cummings and Joan Brassil of the Wedderburn Group of artists.

Mount Omei presents a landscape quality that is a combination of structures, purpose design by the Klaphake family within an open grassed setting with large eucalypt and other trees planted by the Klaphakes set within a broader setting that includes some Cumberland woodland remnant species, all perched high above the Georges River with dramatic views to the city of Sydney to the east.

A key aspect of the significance of Mount Omei are the contemporary individual and community feelings of connection to Alice Klaphake and with the place itself. There is some archaeological potential in the water storage remains of Glenfield Farm that predates Mount Omei. There is some historic research potential associated with the alternative tenure arrangements established by the Glenfield Farm owner James Leacock around the time that the Klaphakes purchased Mount Omei.

Mount Omei has rarity value at a local level representing the first private art gallery in southwestern Sydney. It also has representative value for arts cultural places generally and Post-War places associated with different cultural approaches.

Level of significance

While some aspects of the history and associations of Mount Omei in relation to the arts scene and Alice Klaphakes connection to artists at Penrith and Campbelltown are regional in their scope, it is concluded that the place is of strong local significance for its association with the local arts scene and its particular site character.

Within the heritage values identified it is considered that the historic importance relating to the development of the western Sydney arts and the contemporary social values associated with that history and Alice Klaphake herself are the strongest.

Graded elements of significance

The site as a whole is significant and all parts of Lot 17 show some aspects of this significance. The House is of High significance as the thoughtfully designed family hub and represents the family ownership of the site that compliments the Gallery.

The Gallery is of High significance for its direct association with the arts history and also its use by Wolf as a laboratory.

The Sheds are of Moderate significance and while early and used for similar uses to the House and Gallery at different times they do not express the historic and social values of the House and Gallery. Of the sheds, the older central one with two skillion roofs is the more significant. Other key aspects of significance include the tree plantings by Wolf and Van Klaphake, the entry gate and the views to the city and the open spaces enclosed by trees – including the former U-shaped enclosure east of the house shown on the 1952 air photo. (Ashley, 2016, pp39-44)

Option 2 — Community use for arts and environmental sustainability

This preferred option would see some form or arrangement entered into by NPWS with an entity that would operate a facility at Mount Omei associated with the two key heritage aspects associated with Mount Omei: environmental research/sustainability and local arts programs and activities. This entity would lease the House and the Gallery.

This option has a good fit with three of the specific management objectives in the PoM 2014 noted above in Section 6.2 relating to historic heritage conservation, regional cycleway and attractions and maximising community interest and involvement.

This use would have a good fit with the environmental objectives of NPWS and would bring a good community connection appropriate for a Regional Park, with a separate entity with a strong and clearly defined charter for this use, in a good position to manage the property. Such an entity that could well be connected to or responsible to, a government agency and its community roles, such as Liverpool Council.

In addition to there being a clear demonstration through this project of social heritage value through a local community association, there has also been separate community activism 'to save Mount Omei'. It is recommended that an expression of interest process be undertaken to give the community an opportunity to 'step up' and actively participate in establishing an entity and governance arrangements to allow such a future use to take place. The EOI process would itself be a project where an independent facilitator ran an EOI process and liaised with various stakeholder organisations.

Through informal discussion with staff at the Casula Powerhouse Arts Centre, it appears that the idea of a Georges River Cultural Corridor, while not being actively pursued is still seen as a good idea. While CPAC is a very good institution, it is a large fixed structure and making broader cultural landscape and cultural tourism connections to cultural places along the Georges River such as Glenfield House, Mount Omei, CPAC, the Liverpool Regional Museum and Collingwood House, linked by landscapes such as Leacock Regional Park, provides an attractive future opportunity.

While the proposal from the early 2000s from CPAC to the NSW Government to take over Mount Omei via a lease from NPWS is not active it still remains relevant – especially in relation to the broader Georges River Cultural Corridor and the regional pathway connection identified in the current Leacock Regional Park PoM.

Liverpool Council is very aware of the currently underutilised cultural and recreation opportunity that the Georges River corridor provides and clearly Leacock Regional Park is a key part of the equation to allow this to happen.

Without concluding on a specific future use for the Mount Omei buildings there still appears to be a need for 'independent spaces' 'artist run spaces' that is similar to the theme that was championed by Alice Klaphake.

In recommending that a community based arts/environment entity have the future role in the use and conservation of the Mount Omei site it recognises the strong association that Van Klaphake has with Mount Omei is acknowledged. However, ultimately it is the historical connection to the development of the western Sydney arts scene and the associated contemporary social values with that history that are the most important reasons for local heritage significance and therefore where the best use connected to heritage values lies. While the arts history is the critical aspect of its heritage value, a use that has strong focus on environmental issues would be a highly appropriate reflection of the environmental interests of the Klaphakes that is reflected in the landscape and buildings at Mount Omei.

Mount Omei as a place sums up key objectives of NPWS relating to the environment and culture. The work of Wolf, and Van more recently, in planting trees and to care and sustain this former pastoral landscape together with the work of Alice Klaphake in the local arts scene, seem highly appropriate for NPWS to seek to conserve and provide for a similar future.

Mount Omei as a publicly accessible site and with some form of public use would link well with Glenfield Farm and CPAC and historically it has a connection with both of these places.

The ideal use would see the conservation of all site structures, for example, sheds as artist studios, the gallery as a gallery and meeting place and house and as temporary artist residence (or the gallery as a residence with the House as the gallery/meeting rooms).

If all sheds were not retained in the implementation of a future use then the older central shed that has skillion is the more interesting structure (including use by Wolf as a darkroom) and should be retained as a priority.

(Ashley, 2016, pp49-50)

Conclusions and Recommended Actions

Conclusion

The significance assessment undertaken in this report finds that the Mount Omei property, Lot 17, Leacock's Lane, Casula is locally significant to the Liverpool LGA primarily for its historic and social significance in the development of the western Sydney arts scene and association with Wolf and Alice Klaphkae. The existing cultural landscape comprised of House and Gallery, sheds, tree plantings open spaces and dramatic views across the Georges River valley reflect that important history and also association with Wolf and Alice Klaphake, both of whom are historically locally important.

The five buildings and cultural plantings on site should be retained and conserved. Of the two management options discussed, Option 2 [see below] is preferred where an entity is established to use the place for environmental sustainability and arts programs (such as an artist in residence program) and that an expression of interest project with a business plan component be undertaken to give the local community, in association with an agency such as Liverpool Council / CPAC the opportunity to 'step-up' to assist in the conservation of this site.

Recommendations

The following recommendations are made for the short-term actions that should be undertaken to assist the site use and conservation:

Provide this report to Van Klaphake and indicate the preferred outcome of this report that a
community entity manages the site into the future within Leacock Regional Park and that until
arrangements are finalised that he can continue the tenancy arrangements, if he choses.

- Undertake a full site survey of the property including plant surveys to work out significant plantings and weeds etc.
- Prepare and implement an urgent works buildings repair program to address the condition issues
 noted in this report, including termites, dry rot, rain water management in gutters, downpipes and
 drains, earth building up around structures, urgent timber repair and painting.
- Establish a project to seek community expressions of interest in the use, conservation and
 management of Mount Omei for uses associated with the history of the site, including
 environmental research and sustainable conservation and local arts activities including
 opportunities for local artist run spaces.
- The EOI project should include stakeholder consultation to help develop and refine the offer and
 a business case component to establish governance and funding requirements. The project
 would ideally be under the auspices of a government agency who would have a lease/licence
 with OEH for the site use.
- There would be the need for formal tender lease process after the EOI if an entity is created to
 manage the place.
 Undertake a physical investigation of the site for remains associated with
 Glenfield Farm as noted in this report.
- Undertaken historic research on James Leacock and the co-operative history. (Ashley, 2016, pp50-51)



CONFLICTS OF INTEREST POLICY

DRAFT

Adopted:

TRIM: 271733.2020



POLICY TITLE

DIRECTORATE: City Corporate

BUSINESS UNIT: Governance Legal & Procurement

1. PURPOSE/ OBJECTIVES

This policy is to provide a framework and processes for Council officials to identify and deal with conflicts of interest.

2. **DEFINITIONS**

A conflict of interest occurs when a Council official is in a position to be influenced, or appears to be influenced, by his or her private interests, when doing his or her job. A conflict of interest can involve avoiding personal disadvantage as well as gaining personal advantage. A private interest may include social and professional interests and activities and interests with individuals or groups, including family and friends, as well as financial interests.

A pecuniary interest involves a situation where there is potential for an individual Council official to gain or lose financially from his or her public position such as owning property, having unpaid debts to others, or receiving hospitality or travel.

A non-pecuniary interest does not have a financial component. It can involve personal or family relationships or involvement in sporting, social or cultural activities that could influence the judgement or decisions of a Council official, even though there is no financial benefit to the official.

A Council Official and Designated person includes Mayor, Councillors, Executive management team, Local Planning Panel, and nominated Council staff.

You and Your includes Councillors, members of Council staff, members of Council committees and advisers.

3. POLICY STATEMENT

3.1 Introduction

3.1.1 Council officials must ensure that opportunities do not exist for their interests, or those of any persons close to them, to conflict with the impartial performance of their Council duties. Any potential, real or perceived conflict between an individual's interest and those of Council must be resolved in favour of Council.

3.2 Recognising a conflict of interest

3.2.1 A conflict of interest exists where a reasonable and informed person would perceive that a Council official could be influenced by a private interest when carrying out his or her public duty.

You must avoid or appropriately manage any conflicts of interest. The onus is on you to identify a conflict of interest and take the appropriate action to manage the conflict in favour of your public duty.

3.2.2 Conflicts of interest include both pecuniary interests and non-pecuniary interests.

Not declaring a pecuniary interest is a breach of the *Local Government Act* 1993 (the Act) and the Code of Conduct which could result in an investigation by Chief Executive, Office of Local Government, who can take action and/or recommend disciplinary action. The Chief Executive may refer a complaint to the Ombudsman, Independent Commission Against Corruption or the Director of Public Prosecutions.

3.3 Checklist for identifying a Conflict of Interest

Answering the following questions will assist you in determining if you have a conflict of interest.

3.3.1 What is the situation?

	Yes	No
Would I or anyone associated with me benefit from or be		
disadvantaged by my proposed decision or action?		
Could there be benefits for me in the future that could cast doubt on		
my objectivity?		
Do I have a current or previous personal, professional or financial		
relationship or association of any significance with this person or		
business?		
Would my reputation or that of a relative, friend or associate stand to		
be enhanced or damaged because of the proposed decision or action?		
Do I or a relative, friend or associate of theirs stand to gain or lose		
financially in some hidden or unexpected way?		
Do I hold any personal or professional views or opinions that may lead		
others to reasonably conclude that I am not an appropriate person to		
deal with the matter?		
Have I contributed in a private capacity in anyway to the matter that		
Council is dealing with?		
Have I made any promises or commitments in relation to the matter?		

Have I received a benefit or hospitality from someone who stands to gain or lose from my decision or action?		
Could this situation have an influence on any future employment opportunities outside my current official duties?		
	Yes	No
Could there be any other benefits or facts that could cast doubts on my objectivity?		
Do I still have any doubts about my proposed decision or action?		
Does a relative own a business providing services to Liverpool City		
Council?		

3.3.2 What perceptions could others have?

	Yes	No
What assessment would a reasonable and informed person make of		
the circumstances?		
Could my involvement in this matter cast doubt on my integrity or on		
Council's integrity?		
If I saw someone else doing this, would I suspect that they might have		
a Conflict of Interest?		
If I did participate in this action or decision, would I be happy if my		
colleagues and the public became aware of my involvement and any		
association or connection?		
Is the matter or issue one of great public interest or controversy where		
my decision or action could attract greater scrutiny by others?		

3.3.3 Should I seek help?

	Yes	No
Am I confident of my ability to act impartially and in the public interest?		
Do I feel a need to seek advice or discuss the matter with an objective party?		
Does this person know more about these things than I do?		
Is all the relevant information available to ensure a proper assessment?		
Do I know what Council's code of conduct requires in relation to Conflicts of Interest?		
Do I need to discuss any issues regarding this matter with my supervisor?		
Do I understand the possible penalties that may apply if I proceed with an action or decision with an unresolved Conflict of Interest?		

3.3.4 The actions of Council officials must not only be free from any conflicts but Council officials must ensure that they are clearly seen that their actions are free from any conflicts. A Council official should consider what other people might think about the particular matter, including unsuccessful tenderers, other potential suppliers, other business owners, clients, ratepayers, residents, members of the public, Councillors and members of Council staff.

3.4 What is the difference between a pecuniary and a non-pecuniary interest?

3.4.1 Pecuniary interest

A pecuniary interest is an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person.

You have a pecuniary interest in a matter if your spouse, de facto partner, your relative, your partner or your employer or a company or other body of which you, or your nominee, partner or employer is a shareholder or member.

3.4.2 Non-pecuniary interest

Non-pecuniary interests do not have a financial component. They may arise from personal or family relationships or involvement in sporting, social or cultural activities. They include a tendency toward favour or prejudice resulting from friendship, animosity, or other personal involvement with another person or group.

3.4.3 Disclosure of pecuniary interests at meetings

If you have a pecuniary interest in any matter with which the <u>C</u>ouncil <u>is</u> concerned, and are present at a meeting of the Council or committee at which the matter is being considered, you must disclose the nature of the interest to the meeting as soon as practicable.

You must not be present at, or in sight of the meeting of the Council or committee:

- a) At any time during which the matter is being considered or discussed by the council or committee, or
- b) At any time during which the Council or committee is voting on any question in relation to the matter

A disclosure made at a meeting of Council or committee must be recorded in the minutes of the meeting. You must also complete and submit a Conflict of Interest Declaration Fform for said disclosure.

Please refer to the Code of Conduct for more definitions about the Conflict of Interest

3.4.4 Checklist for Identifying a Pecuniary Interest

The purpose of this checklist is so that you can use it to identify whether you have a pecuniary or non-pecuniary Conflict of Interest.

	Yes	No
Does the matter fall within the legislated definition of a pecuniary interest?		
Is there a realistic expectation that I will, directly or indirectly, gain a financial or other material benefit or suffer a financial or other material loss?		
Will the matter affect my earning capacity or financial situation?		
Do I have a second job or private business that may be affected by the matter?		

Do I have any debts owing to a person who will be affected by the matter?		
Have I accepted hospitality, sponsored travel or other benefits from a person who will be affected by the matter?		
	Yes	No
Is there a realistic expectation that someone in a personal or business relationship with me will, directly or indirectly, gain a financial or other material benefit or suffer a financial or other material loss?		
By nature of my relations with this individual, would any benefit or loss they receive be expected, under normal circumstances, to flow through to me?		

Council officials should be aware of circumstances when they have a pecuniary interests duty (which can involve the interests of other persons such as a spouse or de facto) pursuant to s439AA of the Act. As soon as a Pecuniary Interest of an associate/relative as per Section 443 of the Act is recognised, you must treat it as if it was your own Pecuniary Interest.

If you say yes to any of these questions, then you have a pecuniary interest.

3.4.5 Examples of Pecuniary Interest

Pecuniary Interests – involve an actual or potential financial gain or loss, or other material benefits or costs.

You have shares in a family business which tenders for a contract with Council.

Your spouse owns a company in which you have no direct interest, which tenders for a contract with Council

You have a second job with a company which tenders for a contract with Council.

You own property adjacent to a block of land which is the subject of an application to Council for redevelopment.

You have a private business which may lose custom to a rival concern which has lodged an application with Council for permission to set up new premises near your private business.

Your spouse is an applicant for a job with Council.

3.4.6 Examples of Non-Pecuniary Interest

Non-Pecuniary Interests – do not have a financial or other material component. (They may arise from personal or family relationships or involvement in sporting, social or cultural activities)

Your child is a star player in a local sporting group which submits a grant application to Council.

One of your friends/neighbours has submitted a tender with Council and asks you to keep an eye on its progress.

An old enemy from schooldays who used to bully you is an applicant for a job with Council.

You are the president of a local performing group which seeks sponsorship from Council.

Your children's nearby school will be affected by a new development. The development proposal has been lodged for approval with Council.

You are active in a voluntary organisation and in your spare time you draw up plans for an extension to its premises. These plans are lodged for approval with Council.

Whether the interest is pecuniary or non-pecuniary, in all above circumstances, you will have a conflict of interest if your public duties requires you to become involved in any decision or action regarding the matter.

Once you have recognised that you have a pecuniary or non-pecuniary interest you must complete a Conflict of Interest Declaration Form and remove yourself from the decision-making process.

- 3.5 **Managing Non-Pecuniary Conflicts of Interest**
- 3.5.1 Where you have a non-pecuniary interest that conflicts with your public duty, you must disclose the interest fully and in writing, even if the conflict is not significant. You must do this as soon as practicable.
- 3.5.2 If a disclosure is made at a Council or a committee meeting, both the disclosure and the nature of the interest must be recorded in the minutes. You must also complete and submit a Conflict of Interest Declaration Fform.
- 3.5.3 How you manage a non-pecuniary conflict of interest will depend upon whether or not it is significant. As a general rule, a non-pecuniary conflict of interest will be significant where a matter does not raise a pecuniary interest but it involves:
 - a) a relationship between you and another person that is particularly close, for example, a parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descendant or adopted child of yours or of your spouse, current or former spouse, domestic partner or other person living in the same household; or
 - b) other relationships which are particularly close, such as friendships and business relationships. Closeness is defined by the nature of the friendship or business relationship, the frequency of contact and the duration of the friendship or relationship; or
 - c) an affiliation between you and an organisation, sporting body, club, religious, cultural or charitable organisation, corporation or association that is affected by a decision or a matter under consideration that is particularly strong. The strength of your affiliation with an organisation is to be determined by the extent to which you actively participate in the management, administration or other activities of the organisation;
 - d) membership as the Council's representative of the board or management of an organisation; or
 - e)e) -the conferral or loss of a personal benefit other than one conferred or lost as a member of the community or a broader class of people.

- 3.5.4 If you are not a member of Council staff, and you have disclosed that a significant non-pecuniary conflict of interests exists, you must manage it in one of two ways:
 - a) by not participating in consideration of, or decision making in relation to, the matter in which you have the significant non-pecuniary conflict of interest and the matter being allocated to another person for consideration or determination, or
 - b) if the significant non-pecuniary conflict of interest arises in relation to a matter under consideration at a council or committee meeting, by managing the conflict of interest as if you had a pecuniary interest in the matter by complying with clauses 4.28 and 4.29 in Councils Code of Conduct.
- 3.5.5 If you determine that a non-pecuniary conflict of interest is less than significant and does not require further action, you must provide an explanation of why you consider that the conflict of interest does not require further action in the circumstances.
- 3.5.6 If you are a member of Council staff, the decision on which option should be taken to manage a non-pecuniary conflict of interests must be made in consultation with the CEO or the Chief Financial Officer.
- 3.5.7 A councillor who has a significant non-pecuniary conflict of interest in a matter, may participate in a decision to delegate consideration of the matter in question to another body or person.

3.6 Responsibility for managing a conflict of interest

- 3.6.1 If you have a conflict of interest, or you believe that it is likely that you might have a conflict of interest, you must notify either:
 - a) The CEO or Mayor in writing; or
 - b) The relevant Council or Committee meeting.
- 3.6.2 The objective of notification is to protect both the Council official and the Council.
 - In many cases, only you will be aware of the potential for a conflict of interest. The onus for notification is therefore upon you.
- 3.6.3 If a conflict arises during a meeting, such as a Council or committee meeting, or a meeting of an external body/ committee to which the Council has appointed you, you should inform the meeting of the interest, preferably at the start of the meeting. Depending on the nature of the conflict, it may be appropriate not to vote on the matter. Unless this conflict has been assessed as being only of a minor nature, you must leave the meeting and not participate in discussions on the matter. The disclosure and subsequent

actions will be recorded in the minutes of the meeting and in the case of Council and committee meetings will be recorded in the minutes. You must also submit a Conflict of Interest Declaration Fform.

- 3.6.4 If you are in any doubt regarding a possible conflict of interest, it is preferable to disclose and discuss a possible conflict of interest, rather than conceal the matter.
- 3.7 Procedure for Disclosing Conflicts of Interest

3.7.1 Council Staff

- 1. Identify the existence of a pecuniary or non-pecuniary interest.
- Complete a <u>Conflict of Interest</u> Declaration <u>of Interest</u> Form and forward it to the relevant director.
- 3. The Director will check the <u>Conflict of Interest</u> Declaration <u>of Interest</u> Form before forwarding to the CEO.
- 4. The CEO, if necessary, will nominate another member of Council staff to deal with the matter and f.—Forward the checked Conflict of Interest Declaration of Interest Form to the Head of Governance Coordinator.
- 5. The <u>Head of</u> Governance <u>Coordinator</u> will place the original <u>Conflict of Interest</u> Declaration of <u>Interest Form</u> in the Declarations of Interest Register and ensure a copy is sent to the Council staff member and another copy is placed on the staff member's personnel file.
- 6. The staff member will refrain from any involvement in the matter if they have a pecuniary interest or if they have a significant non-pecuniary interest. If the non-pecuniary interest is minor and their involvement is appropriate, they must ensure that their involvement continues to comply with Council's Code of Conduct and the Conflicts of Interest Policy.

3.7.2 New Employees

In line with direction from NSW Audit, Council has implemented a process to obtain conflict of interest declarations from employees on commencement of employment.

Declared conflicts will be reviewed by the relevant Manager for appropriate action to manage the conflicts. All declarations will be recorded on a central register by the Governance Unit.

3.7.3 Mayor/ Councillor

- 1. Identify the existence of a pecuniary or non-pecuniary interest.
- 2. Complete a <u>Conflict of Declaration of Interest Declaration</u> Form and forward it to the CEO.
- The CEO will check and sign the <u>Conflict of Declaration of Interest Declaration</u> Form before forwarding to the Council Meeting Minute Taker.
- 4. The Mayor/Councillor will ensure that the Declaration of Interest is notified at the Council meeting at which the matter is being considered.

- 5. The Minute Taker will record the details of the interest in the Council Minutes and forward the Conflict of Interest Declaration of Interest Form to the Head of Governance Governance Coordinator.
- 6. The Head of Governance Coordinator will place the original Conflict of Interest Declaration of Interest Form in the Declarations of Interest Register.
- 7. The Mayor/Councillor will refrain from any involvement in the matter if they have a pecuniary interest ——or if they have a significant non-pecuniary interest. If the non-pecuniary interest is minor and their involvement is appropriate, they must ensure that their involvement continues to comply with Council's Code of Conduct and the Conflicts of Interest Policy.

3.7.4 Committee Member

- 1. Identify the existence of a pecuniary or non-pecuniary interest.
- Complete a Conflict of Interest Declaration of Interest Form and forward it to the CEO.
- 3. The CEO will check and sign the Conflict of Interest Declaration of Interest Form before forwarding to the Council Meeting Minute Taker.
- The Committee Member will ensure that the Declaration of Interest is notified at the Council meeting at which the matter is being considered.
- 5. The Minute Taker will record the details of the interest in the Council Minutes and forward the Conflict of Interest Declaration of Interest Form to the Head of Governance Coordinator.
- 6. The Head of Governance Coordinator will place the original Conflict of Interest Declaration of Interest Form in the Declarations of Interest Register.
- 7. The Committee Member will refrain from being present at, or in sight of the Council committee meeting at the time the matter is being discussed if they have a pecuniary interest or if they have a significant non-pecuniary interest. If the non-pecuniary interest is minor and their involvement is appropriate, they must ensure that their involvement continues to comply with Council's Code of Conduct and the Conflicts of Interest Policy.

3.8 Disclosures

3.8.1 Written Disclosures

Annual Disclosures are completed by designated persons. A designated person must make and lodge with the CEO a return in the form set out in schedule 2 of Councils Code of Conduct, disclosing the councillor's or designated person's interests as specified in schedule 1 of Council's Code of Conduct within 3 months after:

- a) becoming a councillor or designated person, and
- b) 30 June of each year, and

- c) becoming aware of an interest you are required to disclose under schedule 1 that has not been previously disclosed in a return lodged under paragraphs (a) or (b); or
- d) on receipt of a Letter of Offer from Liverpool City Council to become a member of Council staff.

Clause 4.32 in the Code of Conduct provides that a general notice given to the CEO in writing by you to the effect that you, your spouse, de facto partner or relative, is:

- a) A member, or in the employment, of a specified company or other body, or
- b) A partner, or in the employment, of a specified person,

unless and until the notice is withdrawn, sufficient disclosure of your interest in a matter relating to the specified company, body or person that may be the subject of consideration by the Council or Council committee after the date of this notice.

Clause 4.10 of the Code of Conduct states that a designated person must disclose in writing to the CEO (or if the person is the CEO, to the council) the nature of any pecuniary interest the person has in any council matter with which the person is dealing as soon as practicable after becoming aware of the interest.

3.9 Political donations exceeding \$1,000

- 3.9.1 Matters before Council involving political or campaign donors may give rise to a non-pecuniary conflict of interest. Councillors should take all reasonable steps to ascertain the source of any political contributions that directly benefit their election campaigns.
- 3.9.2 Where a councillor has received or knowingly benefitted from a reportable political donation:
 - a) made by a major political donor in the previous four years, and
 - b) the major political donor has a matter before Ceouncil,

you must declare a non-pecuniary conflict of interest in the matter, disclose the nature of the interest, and manage the conflict of interest as if you had a pecuniary interest in the mater by complying with clauses 4.28 and 4.29 in the Code of Conduct.

For the purposes of this Part:

- a) a "reportable political donation" has the same meaning as it has in section 6 of the *Electoral Funding Act 2018*
- b) "major political donor" has the same meaning as it has in the

Electoral Funding Act 2018.

- 3.9.3 Political contributions below \$1,000, or political contributions to a registered political party or group by which a Councillor is endorsed, may still give rise to a non-pecuniary conflict of interests. Councillors should determine whether or not such conflicts are significant and take the appropriate action to manage them.
- 3.9.4 If a Councillor has received a donation of the kind referred to in clause 5.16 of the Code of Conduct, then that Councillor is not prevented from participating in a decision to delegate Council's decision-making role to Council staff, or appointing another person or body to make the decision, in accordance with the law.

4. RELEVANT LEGISLATIVE REQUIREMENTS

Independent Commission Against Corruption Act 199488 Local Government Act 1993 Ombudsman Act 1974 Public Interest Disclosures Act 20221994

RELATED POLICIES & PROCEDURE REFERENCES

Model Code of Conduct - Part 4 Pecuniary Interests Department of

Local Government: Pecuniary Interest Guidelines 2006

Office of Local Government Councillor Handbook, December 2021 Division of Local Government, Department of Premier and Cabinet in cooperation with the Local Government Association of NSW and the Shires Association of NSW: Councillor Guide 2012

Independent Commission Against Corruption: Identifying and mManaging

conflicts of interest in the public sector, April 2019 July 2012

Liverpool City Council: Code of Conduct

Liverpool City Council: Code of Conduct Procedures Liverpool City Council: Code of Meeting Practice

Liverpool City Council: Fraud and Corruption Prevention Policy

NSW Ombudsman: Good Conduct and Administrative Practice (3rd2nd edition) 201706

NSW Ombudsman: Public Sector Agencies fact sheet No 3: Managing cConflicts of interests in the NSW Public Sector (April 2019Nevember 2010)

AUTHORISED BY

Council Resolution

EFFECTIVE FROM

This date is the date the policy is adopted by Council resolution.

REVIEW DATE

The policy must be reviewed every two years or more frequently depending on its category or if legislative or policy changes occur.

VERSIONS

The current and previous version of the policy should be set out in the following table.

Version	Amended by	Changes made	Date	TRIM Number
1	Council Resolution	Adopted by Council	23 May 2011	071850.2011
2	Council Resolution	Minor changes approved by CEO	16 August 2013	165804.2013
3	Council Resolution	Minor changes	29 July 2015	144306.2015
4	Council Resolution	Changes in language & style in line with Policy Drafting Standard		271733.2020

THIS POLICY HAS BEEN DEVELOPED IN CONSULTATION WITH

Acting Internal Ombudsman People and Organisational Development

ATTACHMENTS

Conflicts of Interest Declaration Form New Employee Declaration Form





GIFTS AND BENEFITS POLICY

DRAFT

Adopted: 20 August 2021

TRIM: 241760.2021

1. PURPOSE

- 1.1 Council officials must act, and be seen to act, with integrity at all times. The acceptance of a gift or benefit by any Council official may undermine the good reputation of Council and of individual Council officials.
- 1.2 This policy aims to provide guidance to Council officials in identifying, assessing and managing the offer of any gift or benefit in accordance with Council's Code of Conduct and statutory requirements, and to enhance the reputation of Council as an organisation with the highest standards of ethical governance.

2. LEGISLATIVE REQUIREMENTS

Crimes Act 1900 Independent Commission Against Corruption Act 1988 Local Government Act 1993 Public Interest Disclosures Act 19942022

3. DEFINITIONS

Council official includes Councillors, members of Council staff, <u>administrators</u>, members of Council committees, delegates of Council, <u>advisory committee</u> <u>members</u>, conduct reviewers, <u>and</u>-volunteers, <u>Council contractors and</u>, for the <u>purposes of clause 4.16 of the Code of Conduct, Council advisers</u>-

Delegate of Council means a person or body, and the individual members of that body, to whom a function of Council is delegated.

Bribe means a gift or benefit given for the purpose of obtaining favours from, or to influence the decision or behaviour of, a Council official in order to benefit a person or persons or something.

Gift or benefit means any product or service, including hospitality, voluntarily provided to a Council official, as further explained in this policy, at no charge or at a discounted charge or fee, or for any other consideration, as a consequence of the recipient's role as a Council official. It includes gifts or benefits received by immediate family members or associates of a Council official. It includes any circumstance where there was no opportunity given to refuse the gift or benefit. It does not include a political donation or gift which is dealt with under the *Environmental Planning and Assessment Act* 1979, or any other circumstances set out in clause 6.2 of the Code of Conduct.

Token value means the small dollar value of any gift(s) or benefit(s) which may be accepted by a Council official and which also requires a declaration in Council's Gifts and Benefits Register. (This value is set at the amount of \$50 and so any gift or benefit valued at less than the amount of \$50 is generally considered to be of token value in accordance with this policy. The intention of the donor,

however, must also be considered when a Council official is deciding whether or not to accept a gift or benefit of token value.)

4. POLICY STATEMENT

Dealing with offers of a gift or benefit

- 4.1 The acceptance or rejection of a gift or benefit by any Council official must be properly managed so that any such gift or benefit is not provided as a "gift of influence" where there is an intention by the donor to receive favourable treatment. It is equally important how the acceptance of any such gift or benefit might be seen by any impartial observer, regardless of the type or value of the gift or benefit.
- 4.2 All Council officials should be aware that the acceptance of a gift or a benefit may appear to be appropriate in some situations but may be corrupt conduct, or be seen to be corrupt conduct, in other situations. Each situation must be carefully assessed on its own merits. A Council official who requires assistance in dealing with the offer of a gift or benefit should seek advice from the Chief Executive Officer (the CEO) or the Head of Governance Coordinator.
- 4.3 Any gift or benefit which is offered to a Council official, regardless of whether or not the gift or benefit may be kept or returned by the recipient, or is of token value, as defined by this policy, shall be immediately declared by the intended recipient using Council's Gift and Benefit Declaration Form.
- Whenever possible, Council officials are encouraged not to accept gifts or benefits of any kind. A token gift or benefit of less than \$50 in value (other than money or "Cash-like gifts") may be accepted by a Council official, provided that its acceptance is appropriate and does not contravene the provisions of any other clause contained in this policy. Although a token gift or benefit may be less than \$50 in value and may otherwise be accepted it must be declared in the Gifts and Benefits Register.
- A Council official must not accept, under any circumstances, an offer of money or "Cash-like gifts" (cash, cheque, gift vouchers, food and beverage vouchers, credit cards, debit cards with credit on them, phone or internet credit, memberships, lottery tickets or entitlements to discounts), irrespective of the amount of money offered. The details of any such incident must be reported immediately to the CEO.
- 4.6 If the offer of a gift or benefit to a Council official appears to be a bribe or an attempt to influence a Council official in his or her official capacity, the Council official must decline the offer and then inform the CEO immediately, providing details of such an incident. The CEO will inform the Independent Commission Against Corruption and the NSW Police, if appropriate, immediately regarding the details of such an incident.

- 4.7 Council officials shall avoid situations in which the appearance may be created that any person or body, through the provision of hospitality and other gifts or benefits of any kind, is securing or attempting to secure a favour from that Council official and/or from Council.
- 4.8 A gift or benefit must not be accepted by any Council official who is, or could expect to be, or who has been during the past 12 months prior to the date of the offer of the gift or benefit, directly involved in exercising discretionary judgment relating to any matter involving the donor.
- 4.9 Councillors must consider their disclosure obligations when completing their Disclosures by Councillors and designated Persons Return required under Part 4 of the Code of Conduct. If the value or cumulative value of gifts or benefits, from one donor should exceed the amount of \$50 in the return year, the Gifts Section of the return Form must be completed by the recipient, in addition to the recipient making the declaration of such gift(s) or benefit(s) in Council's Gifts and Benefits Register.

Requesting gifts and benefits

- 4.10 The requesting of gifts and benefits by a Council official is strictly prohibited. This constitutes corrupt behaviour which is unlawful.
- 4.11 If a Council official becomes aware of another Council official requesting gifts or benefits, then he or she should report the matter immediately to the CEO. Such disclosure may be treated as a public interest disclosure. The CEO shall report the matter immediately to the Independent Commission Against Corruption.

Gifts and Benefits Register

- 4.12 The details of any offer of a gift or benefit to a Council official, including the details of any offer which must be refused, must be declared in the Gifts and Benefits Register, using the gift and benefit declaration form attached to this policy, even if such an offer of a gift or benefit is accepted or not.
- 4.13 Subject to clause 4.14 below, gift and benefit declaration form, when completed by a particular Council official, must be reviewed as follows:
 - a) For a member of Council staff by the relevant director;
 - b) For the Mayor, Councillors and directors by the CEO;
 - c) For the CEO by the Mayor.
- 4.14 The Gift and benefit declaration form, relating to any offer of cash or its equivalent, must be reviewed by the CEO
- 4.15 All completed and reviewed gift and benefit declaration forms must be forwarded to the <u>Head of</u>-Governance Coordinator for recording in Council's records system and for their details to be entered into the Gifts and Benefits Register.

- 4.16 Gifts or benefits which appear to be associated with a Council officer's official role and which are offered to immediate family members of the official are also subject to this policy and they must be declared in the Gifts and Benefits Register.
- 4.17 The Head of Governance Coordinator is responsible for monitoring the Gifts and Benefits Register and all Gift and Benefit Declaration forms completed by Council officials. The Head of Governance Coordinator shall provide a report to the CEO and the Head of Audit and Risk, at the end of each financial year, setting out the number of completed Gift and Benefit Declaration forms, the types of gifts and benefits declared by Council officials, and any significant trends relating to offers of gifts and benefits so declared by Council officials.

Gifts to immediate family members

4.18 Council officials should take all reasonable means in order to ensure that their immediate family members are also not recipients of offers of gifts or benefits that could be seen as an attempt to influence the behaviour of the Council official. Immediate family members ordinarily include parents, spouses, domestic partners, children, grandchildren and siblings. The Gifts and Benefits Register must also be used to declare and to manage offers of gifts and benefits to immediate family members, as such offers of gifts or benefits could also be seen as being offers associated with the role of the Council official.

Prizes and incentive schemes

A Council official must not enter any competition or receive any prize in any competition where eligibility is based on the Council being in or entering into a customer-supplier relationship with the competition organiser, or sponsored by any entity or person that has business dealings with Council, or receive any other prize, incentive (such as additional points for frequent travel), gift, or benefit, in a competition or raffle, which could create a sense of obligation on his or her part or the part of the donor, or which could affect his or her judgment as a Council official. The details of any offer of a prize or incentive to a Council official must be entered into the Gifts and Benefits Register.

Cultural considerations

4.20 Sometimes people might be tempted to offer a gift or benefit to a Council official because they believe that it is expected or normal practice, because such practice is seen to be customary to business dealings and professional life in many other societies. Nevertheless, culture or traditions, such as the practice of Christmas gift-giving, should never be used as an excuse to accept gifts or benefits, including monetary gifts and other items disguised in parcels, packets or envelopes. Council officials should do their best to ensure that gifts or benefits are refused with an explanation, courtesy and due regard to cultural sensitivities.

Token gifts and benefits

- 4.21 Subject to the provisions of all other relevant clauses of this policy, Council officials may only accept token gifts or benefits which do not create a sense of obligation on their part or the part of the donor, or which cannot affect, or be seen to affect, their discretionary judgement as a Council official. Nevertheless, the details of all token gifts or benefits must be entered into the Gifts and Benefits Register.
- 4.22 Generally speaking, token gifts and benefits include:
 - a) Free or subsidised meals, beverages or refreshments provided in conjunction with:
 - · The discussion of official business;
 - Council work-related events such as training, education sessions and workshops;
 - Conferences;
 - · Council functions or events; and
 - Social functions organised by groups, such as Council committees and community organisations.
 - b) Invitations to and attendance at local social, cultural or sporting events;
 - c) Gifts of single bottles of reasonably priced alcohol to individual Council
 officials at end of year functions, public occasions or in recognition of work
 done (such as providing a lecture/training session/address);
 - d) Ties, scarves, coasters, tie pins, diaries, chocolates or flowers.

Gifts and benefits of value

- 4.23 Council officials shall not accept gifts and benefits that have more than a-token value. Gifts and benefits of value include, but are not limited to:
 - a) tickets to major sporting events such as state or international cricket matches or matches in other national sporting codes (including the NRL, AFL, FFA, NBL) with a ticket value that exceeds \$50;
 - b) corporate hospitality at a corporate facility at major sporting events;
 - c) <u>free or discounted products or services</u> for personal use provided on terms that are not available to the general public or a broad class of persons,
 - d) the frequent use of facilities such as gyms;
 - e) use of holiday homes;
 - f) free or discounted travel;
 - g) artworks.
- 4.24 Subject to clause 4.26 of this policy, any gift or benefit of value must be returned to the person or body that is the donor. If a gift or benefit of value is to be returned

in person, this should be done in the presence of a witness. Details of the circumstances and details of the nature and value of such gift or benefit must be entered into the Gifts and Benefits Register.

- 4.25 When refusal is not an option for a gift or benefit of more than token value:
 - If a Council official receives a gift or benefit in circumstances where such a gift or benefit cannot be reasonably refused or returned (such as at a public event where attempts to return the gift or benefit would cause significant embarrassment, or a wrapped gift which cannot be opened in the presence of the donor, or gifts accepted for protocol reasons or anonymous gifts received through the mail or left without a return address), the Council official should receive the gift or benefit and promptly disclose the circumstances, nature and value of the gift or benefit in the Gifts and Benefits Register.
 - If the gift or benefit is more than token value the gift or benefit must be surrendered to the Council unless the nature of the gift or benefit makes this impractical.
 - In addition, when a gift or benefit of value is received by a Council staff member, the circumstances, nature and value of such a gift or benefit should be reported to the official's director and/ or the CEO.

All such gifts and benefits become Council property and they must be handed over promptly by the recipient to the CEO or to the <u>Head of Governance Coordinator</u> who will provide a receipt on behalf of Council and dispose of the gift or benefit in accordance with this policy.

4.26 Where you have accepted a gift or benefit of token value from a person or organisation, you must not accept a further gift or benefit from the same person or organisation or another person associated with that person or organisation within a single 12 month period where the value of the gift, added to the value of earlier gifts received from the same person or organisation, or a person associated with that person or organisation, during the same 12 month period would exceed \$50 in value.

Disposal of gifts

- 4.27 If a gift or benefit is received by a Council official, which should not be accepted by the Council official and which cannot be returned to the donor, such gift or benefit must be disposed of by Council in a transparent manner.
- 4.28 Some options for the management of the gift or benefit include:
 - a) Sharing the gift amongst all staff (only for perishable food items);
 - b) Donation for lucky door prizes at Council's annual staff function (for non-perishable items or gifts of bottles of wine);

 c) Donation to locally based community organisations, as recommended by the Coordinator Community Development (for toys, books, clothing and the like).

Giving gifts or benefits to other agencies, officials or persons

- 4.29 There may be times when it is appropriate for Council officials to give gifts or benefits to individuals from other public or private bodies such as a modest token of appreciation for a presentation or a gift for protocol reasons.
- 4.30 Permission for the giving of gifts or benefits by Council officials must be obtained from the CEO. However, the Director City Community and Culture may approve the giving of prizes by the Council Library and the donation of tickets for performances or lessons by artists at Casula Powerhouse Arts Centre to community organisations, local schools and worthy young persons from the local community up to a maximum value of \$500.
- 4.31 Gifts of flowers and fruit by Council to members of Council staff or their relatives special circumstances

The CEO or a director may approve:

- A gift of flowers and/or a basket of fruit by Council, up to an amount of \$15000, to be sent to a member of Council staff who is seriously ill (an illness that is life-threatening or that will cause irreversible adverse consequences to human health); or
- A gift of flowers or a donation to a staff members charity of choice, up to an amount of \$15000, on the occasion of the death of a member of Council staff, their spouse, partner, child or parents; or
- At their discretion a gift of flowers and/or a basket of fruit by Council, up to an amount of \$15000 for non-staff members i.e Councillors.

Once approved, the director's office will arrange for a gift of flowers and/ or a basket of fruit on behalf of council to be sent to the recipient.

Only the CEO or director's office can approve and order such gifts.

Management responsibilities

- 4.32 If a particular service unit of Council is experiencing a high incidence of offers of gifts or benefits, Council directors and/ or managers should consider informing regular customers of Council (by personal letter, posters or other means) that gifts or benefits should not be offered to Council officials and that Council would prefer to receive feedback about exceptional service by Council officials through other means such as a letter, fax, email or telephone call.
- 4.33 Council officials should be aware that gifts and benefits are more likely to be offered to them at certain times of the year such as prior to Christmas, during Eid ul-Fitr and during various Asian New Year celebrations.

Certain types of Council officials must not receive any gifts and benefits

- 4.34 Council officials involved in procurement, tendering or sales activities for Council must not accept any gift or benefit from potential or current suppliers or buyers. A contract to supply goods or the opportunity to buy Council assets can be highly profitable to a supplier or buyer. Suppliers and tenderers, in some circumstances, may be tempted to influence procurement decisions by offering gifts or benefits to Council officials responsible for making procurement decisions.
- 4.35 Council officials who are designated persons or who have a financial delegation must not accept any gift or benefit.
- 4.36 The provisions of clause 4.12 of this policy apply even to the offer of any gift or benefit which is refused by Council officials who are referred to in clauses 4.32 and 4.33 above.

Breaches of this policy by Councillors

- 4.37 A breach of this policy by the Mayor or any Councillor will be dealt with in accordance with Council's Code of Conduct and Code of Conduct Procedures.
- 4.38 If the matter tends to show or shows maladministration, corrupt conduct, serious and substantial waste, government information contravention or criminal activity, it will be referred by the CEO to the appropriate investigative agency.

Breaches of this policy by members of Council staff

- 4.39 A breach of this policy by members of Council staff will be dealt with in accordance with any relevant staff agreements, awards, industrial agreements, contracts and Council policies, including the Code of Conduct and Code of Conduct Procedures.
- 4.40 If the matter tends to show or shows maladministration, corrupt conduct, serious and substantial waste, government information contravention or criminal activity, it will be referred by the CEO to the appropriate investigative agency.

AUTHORISED BY

Council (Chief Executive Officer)

EFFECTIVE FROM

20 August 2021

DEPARTMENT RESPONSIBLE

Corporate Services (Governance Unit)

REVIEW DATE

20 August 2023

VERSIONS

Version	Amended by	Changes made	Date	TRIM Number
1	General Manager	None	6 December 2012	268486.2012
2	Group Manager Governance by delegation (minor changes)	Changes relating to Gifts and Benefits Register, breaches of policy and form	6 May 2014	092084.2014
3	Chief Executive Officer	Changes in Council's organisational structure	15 August 2014	189961.2014
4	Chief Executive Officer	Minor changes to clause 4.27	29 February 2016	044708.2016
5	Chief Executive Officer	Minor changes to clauses 4.17 and 4.29	24 May 2016	136928.2016
6	Chief Executive Officer	New clause 4.30	28 December 2016	341927.2016
7	Chief Executive Officer	Application of Council's Plain English directive to document Removal of 4.27 (c) Minor changes to clause 4.5 and 4.23	7 September 2020	231165.2020

THIS POLICY HAS BEEN DEVELOPED AFTER CONSULTATION WITH

Internal Audit

REFERENCES

Independent Commission Against Corruption: <u>Public Service Commissioner Direction 1 of 2014</u>: <u>Managing Gifts and Benefits: Minimum Standards Managing Gifts and Benefits in the Public Sector Toolkit 2006</u>

Liverpool City Council: Code of Conduct

Liverpool City Council: Code of Conduct Procedures

Liverpool City Council: Enterprise Risk Management Policy Liverpool City Council: Fraud and Corruption Prevention Policy Liverpool City Council: Fraud and Corruption Prevention Plan

Liverpool City Council: Ethical Governance: Conflicts of Interest Policy

Liverpool City Council: Internal Ombudsman PolicyEthical Governance: Internal

Investigations Policy

Liverpool City Council: Ethical Governance: Internal ReportingPublic Interest Disclosures

Policy

NSW Ombudsman: Guidelines for state and local government (3rd edition) March

2017Good Conduct and Administrative Practice (2nd edition) 2006



GIFTS AND BENEFIT DECLARATION FORM

As a Council staff member, you must never demand or request a gift or benefit for yourself or for anyone else in relation to your Council work or duties.

Never accept any gift, benefit, travel offer or hospitality from an individual or an organisation that you know has a matter before Council, or against whom Council is taking, or expecting to take, action.

Token gifts (under a value of \$50) may only be accepted in exceptional circumstances. If you have any doubt about a token gift or benefit, please discuss the matter with Council's Governance Coordinator or your manager. All offers of gifts or benefits to you as a member of Council staff (or to an immediate family member or domestic partner) whether accepted or rejected, must be declared and the details entered into Council's Gifts and Benefits Register.

Please fill in the details below:

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TRIM:082318.2020

To the best of your ability please describe the nature of your relationship (or that of your immediate family member) with the company/organisation/person who has (or is proposing to) provide the gift or benefit:
Have you, or an immediate family member previously (or is there a reasonable chance in the future):
A. Purchased, or may purchase, goods or services from the company/organisation/person? Yes No
Assessed, or may assess, any type of application requiring the approval of Council which has been or may be, lodged by the company/organisation/person? Yes
No C. Exercised, or may exercise, any regulatory function relating to the company/organisation/person? Yes No
D. Otherwise dealt with, or may deal with, the company/organisation/person in circumstances where that company/organisation/person is affected or may be affected by any type of decision that you are required to make as a Council official now or in the future: Yes No
NOTE: If you have answered YES to any of the four questions, in this section, the gift or benefit must be refused or surrendered to Council
Description of Gift or Benefit:
Estimated Value: \$
NOTE: If the gift/benefit has a value of more than \$50, must be refused or surrendered
If you have already received the gift or benefit what were the circumstances? Was the gift or benefit given to you personally or was it delivered to Council premises without notice to you?

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TRIM:082318.2020

If you have been offered the gift or benefit, how do y	ou propose to respond? (If you have chosen to or are			
required to, surrender a gift or benefit which has already been received, please deliver it to the				
governance Coordinator with this form)				
Reported by:				
Print Name:				
Position:	Signature:			
Department:	Date:			
Recommendations (if any) or director (for Council st	aff member); Chief Executive Officer (for Directors			
and Councillors); Mayor (for Chief Executive Officer):			
Signed By:	Signature:			
Position:	Date:			
•	er of any gift or benefit in excess of \$50 in value must			
also be reported to and acknowledged by the Chief	Executive Officer.			
Comments by the Chief Executive Officer:				
CEO's Signature:				
Date:				

<u>Please forward this form</u>, when completed, to the <u>Governance Coordinator</u> so that details of this application can be entered into Council's gifts & benefits register.

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SECONDARY EMPLOYMENT POLICY

DRAFT

Adopted: 7 September 2020 XXXX 2024

TRIM: 231155XXXXXX.20202024



ETHICAL GOVERNANCE: SECONDARY EMPLOYMENT POLICY

PURPOSE/ OBJECTIVES

The purpose of this policy is:

- a) To provide the framework for identifying conflicts of interest that may arise from staff engaging in employment or business outside Council;
- b) To set out the process for notifying, approving, prohibiting and reviewing secondary employment.

LEGISLATIVE REQUIREMENTS

Section 353 of the Local Government Act 1993 states:

- (1) The general manager must not engage, for remuneration, in private employment or contract work outside the service of the council without the approval of the council;
- (2) A member of staff must not engage, for remuneration, in private employment or contract work outside the service of the council that relates to the business of the council or that might conflict with the member's council duties unless he or she has notified the general manager in writing of the employment or work;
- (3) The general manager may prohibit a member of staff from engaging, for remuneration, in private employment or contract work outside the service of the council that relates to the business of the council or that might conflict with the member's council duties;
- (4) A member of staff must not engage, for remuneration, in private employment or contract work outside the service of the council if prohibited from doing so under sub-section (3).

CODE OF CONDUCT

In regard to other business or employment, Council's Code of Conduct states:

5.24 A member of staff must not engage, for remuneration, in private employment, contract work or other business outside the service of the council that relates to the business of the council or that might conflict with the staff member's council duties unless they have notified the CEO in writing of the employment, work or business and the CEO has given their written approval for the staff member to engagement in the employment, work or business.

ETHICAL GOVERNANCE: SECONDARY EMPLOYMENT POLICY

- 5.27 Members of staff must ensure that any outside employment, work or business they engage in will not:
 - a) conflict with your official duties
 - b) involve using confidential information or council resources obtained through their work with the council including where private use is permitted
 - c) require them to work while on council duty
 - d) discredit or disadvantage the council
 - e) Pose, due to fatigue, a risk to their health or safety, or to the health and safety of their co-workers.

DEFINITIONS

Act: Local Government Act 1993

Chief Executive Officer (the CEO) means General Manager under the Act and the Code of Conduct.

Conflict of interest: Exists where a reasonable and informed person could believe that a member of Council staff could be influenced by a private interest when carrying out their public duty. A private interest may include social and professional interests and activities and interests with individuals or groups, including family and friends, as well as financial interests. A conflict of interest can occur for a Council member of Council staff if secondary employment:

- a) Compromises the member of Council staff's capacity to perform their duties or meet their work, health and safety obligations;
- b) Is undertaken during the same hours that the person is being employed as a Council member of Council staff;
- c) Is with a business or person that is a customer of Council and may acquire services from Council;
- d) Makes use of any Council facility, equipment, or resources, including telephone, information technology resources, plant and fleet vehicles;
- e) Makes use of or may benefit from commercial or other information that the member of staff possesses by virtue of their employment with Council.

Council refers to Liverpool City Council.

Secondary employment: When a member of staff also works (including casual work, contract work, self-employment, part time work, or other work) on their own behalf or for another person or organisation.

Secondary employment includes:

- a) Employment already held by a person at the time of their initial employment with Council;
- b) Employment undertaken while on any type of leave from Council employment;
- c) Operating a business;
- d) Paid work outside Council;
- e) Providing paid consultancy services to another person or organisation;
- f) Partnerships and directorships of companies;
- g) Voluntary employment in return for a benefit.

Staff refers to members of Council staff.

POLICY STATEMENT

1. General

- 1.1 Employment by Council requires that staff must act in the public interest in accordance with the provisions of the Act, the Code of Conduct and other Council policies.
- 1.2 This Policy applies to all staff, including permanent, full time, part time, contract and casual staff.
- 1.3 In accordance with section 378 of the Act, Directors have been delegated by the CEO to exercise the functions of the CEO in relation to section 353 of the Act.

2. Responsibilities of staff

- 2.1 Staff must not engage in secondary employment if it conflicts with their official duties as a member of staff or, in the opinion of their Director, discredits or disadvantages Council.
- 2.2 Staff are responsible for informing their Director about any paid work that they undertake outside Council, which relates to the business of Council, or which may conflict with their Council duties. An application for approval of secondary employment should be made to their responsible Director, using the form attached to this Policy.
- 2.3 Any secondary employment approved by a Director must not involve the use of Council information, resources or time.
- 2.4 Any secondary employment, including contract work, must be approved by the responsible Director, using the form attached to this Policy, and the secondary

employment must not commence prior to this approval being notified in writing to that member of staff.

- 2.5 If a member of staff already has other employment (including contract work) at the time that they commence work with Council, the approval of their Director must been obtained before this outside employment can be continued.
- 2.6 Staff who are considering entering into outside work should consider the following:
 - a) Will the outside work conflict or interfere with the Council work of the staff member?
 - b) Will performance of the outside work involve the release of confidential information gained through Council?
 - c) Will the outside work discredit or disadvantage Council in any way?
 - d) Will the outside work involve the use of Council resources?
 - e) Will the staff member be required to work while on Council duty?
 - f) Will the outside work breach the work, health and safety obligations of the staff member in their Council employment?
 - g) Is the outside business, organisation or person in, or entering into a contractual relationship with Council?
 - h) Is Council in a regulatory relationship with the outside business, organisation, or person?
 - i) Will the outside work involve the staff member in litigation against another Council or directly in written or oral submissions before another Council?

Answering "yes" to any of the above questions is likely to result in their Director prohibiting performance of the outside work.

- 2.7 Staff must not engage for payment in secondary employment outside the service of Council if prohibited from doing so by their Director or the CEO, or until such time as the staff member has agreed in writing to any terms and conditions set out in their Director's approval or, in the event of a review, the CEO's approval of their secondary employment application.
- 2.8 If the nature of any approved secondary employment changes, or the secondary employment ceases, the particular member of Council staff must notify their Director immediately in writing.
- 2.9 Secondary employment must not take place:
 - a) On Council premises or using Council information or resources, unless such use is duly authorised by their Director and proper payment is made to Council where appropriate; and

b) Within the hours of work for the Council position of the particular staff member (including lunch or similar breaks).

3. Responsibilities of Directors

- 3.1 Directors are responsible for:
 - a) Providing appropriate advice to staff within their directorate regarding possible conflicts of interest that may be associated with particular secondary employment;
 - Evaluating application forms for secondary employment that have been completed by staff within their Directorate, including determining appropriate conditions;
 - c) Determining all applications for secondary employment within their Directorate, other than for the Director. An approval may be subject to any terms and conditions that the responsible Director thinks fit, having regard to the circumstances of the case. Any decision by the responsible Director to prohibit secondary employment is to include the reasons for such a decision.
 - d) Prohibiting staff within their Directorate from engaging in secondary employment, if in the opinion of the Director:
 - The hours of work, work arrangements or nature of duties jeopardise the work, health, safety and efficiency of the particular member of Council staff, other staff or members of the public
 - The proposed employment directly or indirectly conflicts, or potentially conflicts, with the business of Council or with the functions, duties or responsibilities of the particular staff member at Council.
 - e) In the case of prohibition, providing reasons in writing and allowing the particular staff member reasonable notice during which time the staff member will terminate their engagement in outside work.
- 3.2 Approvals for secondary employment will be valid for no more than one year, and will be reviewed annually in September each year. Previous approvals will not necessarily be continued, although continuing approvals will not be unreasonably withheld.
- 3.3 The responsible Director may rescind a previous approval for secondary employment if a member of staff is transferred to another position or location within Council and, if in the opinion of the responsible Director, the secondary employment being undertaken conflicts with the Council duties. Serious issues can arise from the performance of outside work which can affect the work, health and safety of the particular member of staff.

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4. Responsibilities of the CEO

- 4.1 The CEO must not engage for remuneration in secondary employment outside the service of Council without the approval of Council.
- 4.2 The CEO may review a decision by a Director in accordance with clause 7 of this Policy.

5. Responsibilities of the Governance Coordinator

- Upon receipt of the response of the responsible Director to a secondary employment application, the Governance Coordinator will:
 - a) Inform the particular member of staff in writing as to whether their application has been approved, approved subject to conditions, or refused;
 - b) Enter the details of the application in Council's Secondary Employment Register;
 - c) Enter all records pertaining to the application in Council's records system; and
 - d) Forward a copy of the application form, signed by the responsible Director, to the People and Organisational Development Department for inclusion in the personnel file of the particular member of Council staff.

6. Breaches

- A failure to seek approval of secondary employment will be dealt with immediately it is discovered, particularly if the secondary employment:
 - a) Discredits or disadvantages Council;
 - b) Interferes with Council work;
 - c) Involves a conflict of interest;
 - d) Involves confidential information gained through Council;
 - e) Involves the use of Council resources;
 - f) Is conducted in Council time.
- 6.2 Failure to seek approval of secondary employment and engaging in secondary employment outside the service of Council, if such employment is prohibited by their Director or the CEO, may constitute a breach of the Code of Conduct and a breach of the Act. This may also include any failure by a particular staff member to adhere to the terms and conditions attached to an approval for secondary employment provided by their Director or the CEO.
- Sanctions for staff who breach this Policy will depend upon the severity, scale and 6.3 importance of any breach and will be implemented in accordance with any relevant staff agreements, awards, industrial agreements, contracts and Council Policies.

6.4 Failure by a member of Council staff to adhere to this Policy may require the CEO to report the matter to the NSW Independent Commission Against Corruption, in the case of corrupt conduct, or to the Office of Local Government, if their conduct involves a failure to disclose a pecuniary interest pursuant to the Act.

7. Request for a Review

- 7.1 Staff may request a review of the decision made by their Director, including any terms or conditions placed on the approval of their secondary employment by their Director.
- 7.2 This review should be sought through a written submission to the CEO and should be supported by new or additional information.
- 7.3 Staff may invoke the grievance procedures as outlined at clause 375 of the *Local Government (State) Award* 202317. A copy of these procedures is attached to this Policy.

8. Renewal of approvals

- 8.1 Staff must seek renewal of any approval for secondary employment:
 - a) Upon the request of their Director or the CEO;
 - b) When they change their work location or position;
 - c) When the nature of the secondary employment changes.
- 8.2 Written applications to renew an approval to engage in secondary employment should be submitted as soon as possible after the member of staff becomes aware of the changes in the work location, position or nature of the secondary employment which they are undertaking.

AUTHORISED BY

Council (Chief Executive Officer)

EFFECTIVE FROM 7 September 2020

DEPARTMENT RESPONSIBLE

Corporate Services (Governance)

REVIEW DATE 7 September 2022

VERSIONS

Version	Amended by	Changes made	Date	TRIM Number
1	Chief Executive Officer	None	8 July 2013	055176.2013
2	Chief Executive Officer	Changes in organisational structure	9 April 2014	080238.2014
3	Chief Executive Officer	Changes in organisational structure	8 August 2014	181288.2014
4	Chief Executive Officer	Delegation to Directors	2 November 2016	288061.2016
5	Chief Executive Officer	Minor changes	25 January 2019	288061.2016- 006
6	Chief Executive Officer	Minor changes	7 September 2020	231155.2020

THIS POLICY HAS BEEN ADOPTED AFTER CONSULTATION WITH

Joint Consultative Committee

REFERENCES

Campbelltown City Council: Secondary Employment Policy

Liverpool City Council: Code of Conduct

Liverpool City Council: Code of Conduct Procedures

Liverpool City Council: Ethical Governance: Conflicts of Interest Policy

Local Government (State) Award 202347

Attachment A



SECONDARY EMPLOYMENT APPLICATION FORM

Employee full name:					
Employee address:					
Employee position:	Employee department:				
I request approval to (name and address of yo	enter secondary employment ur employer):	outside Council with:			
State the nature of yo	ur secondary employment dut	ties and the number o	of hours involved per week:		
Please provide detail changed since last ye		s you worked and/or	the nature of your duties has		
Chief Executive Officer (t (whether in money or in secondary employment: Will not conflict of Will not involve us Will not discredit Will not require in Will not breach in	on 353 of the Local Government Act hrough my Director) that I am seek kind) outside my present Council e or interfere with my Council work sing confidential information gained he use of Council resources or disadvantage Council he to work while on Council duty ny work health and safety obligation	ing to engage in seconda mployment, as set out a f though Council	ary employment for remuneration bove. I undertake that this		
I also undertake that, it I will notify my Director in		d the nature of my sec	condary employment later changes,		
Employee's signature	c	Date:			
Director's signature:		Date:			
Director's comments ar	nd decision:				
	n, when completed, to the Govern condary employment register.	ance Coordinator so th	at details of this application can be		

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Important: Any personal information that you provide on this form will be used by members of Council staff to process this application. The provision of this information is deemed to be voluntary. However, if you do not provide the information, Council may be unable to process your application. Once collected by Council, this information can be accessed pursuant to the Government Information Public Access Act 2009 and Council's Privacy Management Plan.

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Attachment B

LOCAL GOVERNMENT STATE AWARD 202317 CLAUSE 35: GRIEVANCE AND DISPUTE PROCEDURES

- (i) At any stage of the procedure, the employee(s) may be represented by their union or its local representative/delegate and the employer represented by the Association.
- (ii) The union delegate shall have reasonable time, without loss of pay, to discuss a grievance, or dispute, or concern regarding workplace bullying with management at the local level where prior approval is sought. Such approval shall not be unreasonably withheld.
- (iii) A grievance or dispute shall be dealt with as follows:
- (a) The employee(s) shall notify the supervisor, or other authorised officers of any grievance or dispute and the remedy sought, in writing.
- (b) A meeting shall be held between the employee(s) and the supervisor to discuss the grievance or dispute and the remedy sought within two working days of notification.
- (c) If the matter remains unresolved, the employee(s) may request the matter be referred to the head of the department or other authorised officer for discussion. A further meeting between all parties shall be held as soon as practicable.
- (d) If the matter remains unresolved the general manager shall provide the employee(s) with a written response. The response shall include the reasons for not implementing any proposed remedy.
- (e) Where the matter remains unresolved, it may be referred to the employee's union or representative and by the general manager or other authorised officer to the Association for further discussion between the parties.
- (iv) Subject to section 130 of the Industrial Relations Act 1996 (NSW) the Industrial Registrar may be advised of the existence of a dispute at any stage of this procedure.
- (v) During this procedure and while the matter is in the course of negotiation, conciliation and / or arbitration, the work practices existing prior to the dispute shall as far as practicable proceed as normal. <u>Nothing in this clause shall prevent the employer from temporarily adjusting work practices, where appropriate, to eliminate or control work, health and safety risks.</u>



DRAFT

Adopted: 25 November 2020

TRIM 326193.2020



1. PURPOSE/ OBJECTIVES

The objective of this policy is to protect public resources, (including information and property). Council's reputation and staff. The policy sets the standard of integrity essential in upholding the good reputation of Liverpool City Council (LCC).

Council has a zero tolerance enfor any fraud or corrupt behaviour. The Fraud and Corruption Control Policy is an integral part of Council's wider ethical framework which sets the standard that enables the delivery of responsive and efficient services, earns the trust of the community and creates a sense of pride across the Liverpool local government area.

The policy will establish Liverpool City Council's Fraud and Corruption control Framework and implement strategies and actions to manage fraud and corruption and that address:

- a) Prevention proactive measures designed to help reduce the risk of fraud and corruption occurring in the first place;
- b) Detection measures designed to uncover incidents of fraud and corruption when they occur; and
- c) Response measures designed to take corrective action and remedy the harm caused by fraud and corruption.

2. LEGISLATIVE FRAMEWORK

Independent Commission Against Corruption Act 1988
Local Government Act 1993
Council's Model Code of Conduct

3. **DEFINITIONS**

See Appendix 1

4. POLICY STATEMENT

- 4.1 Liverpool City Council is committed to a work environment that is resistant to fraud and corruption and is dedicated to implementing effective measures to prevent, detect and respond to fraudulent behavior and corrupt conduct.
- 4.2 Residents and ratepayers of the City of Liverpool have a justifiable expectation that the Council, Councillors and members of Council staff should conduct themselves in a manner that fulfils their responsibility to protect public money and property. Therefore, it is vital that Council can demonstrate its commitment to developing and maintaining organisational practices which minimise opportunities for fraud or corruption to occur within Council.
- 4.3 Liverpool City Council's Community Strategic Plan 2022 2032 includes a commitment to Demonstrate a high standard of transparency and accountability through a comprehensive governance framework. organisational vision To make Liverpool fairer, clearer and stronger for all Aspiring to do great things for ourselves, our community and our growing city speaks to the core of its ethical commitment.
- 4.4 Liverpool City Council's organisational values set the standard for conducting business and the behaviors expected of everyone that works at Council. These Values are:
 - Ambitious
 - Authentic
 - Collaborative
 - Courageous
 - Decisive
 - Generous
- 4.5 Council's fraud prevention framework embraces the vision and values adopted for the organisation.



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- 4.6 The 10 key attributes of Liverpool City Council's fraud control framework:
 - a. Leadership
 - b. Ethical framework
 - c. Responsibility Structures
 - d. Fraud Control Policy
 - e. Prevention Systems
 - f. Fraud Awareness
 - g. Third Party Management Systems
 - h. Notification Systems
 - i. Detection Systems
 - j. Investigations systems

4.7 Leadership

- 4.7.1 A successful fraud control framework is led by a committed and accountable executive. Council, the CEO and Senior Management have endorsed Liverpool City Council's fraud control activities. The CEO has ultimate responsibility for fraud control within Liverpool City Council and is supported by the Executive, the Audit Risk and Improvement Committee, the Audit Risk and Improvement Unit and the Governance Unit.
- 4.7.2 Residents and ratepayers of the City of Liverpool have a justifiable expectation that the Council, Councillors and members of Council staff should conduct themselves in a manner that fulfils their responsibility to protect public money and property. Therefore, it is vital that Council can demonstrate its commitment to developing and maintaining organisational practices which minimise opportunities for fraud or corruption to occur within Council.
- 4.7.4 All suppliers, contractors, professional service consultants and volunteers are required to adhere to the Code of Conduct of Council₁. Doing Business with Liverpool City Council a Guide for Consultants, Contractors and Suppliers informs third parties of the expectations standard of conduct that Liverpool City Council requires of all consultants, contractors and suppliers with working with Council.
- 4.7.5 Liverpool City Council will not tolerate fraudulent or corrupt behavior and will take appropriate action against council officers, contractors, volunteers (including committee members), suppliers and elected members who have participated in such behavior, and those who have allowed it to occur.

4.8 Ethical framework

4.8.1 Council is committed to the implementation of controls to minimise the risks of fraud and corruption in Council operations, and to maximise the opportunity for fraud and corruption to be detected. Council maintains an ethical framework of policies, standards and other documents that support staff to prevent fraud and corruption. Council's full set of Policies, Forms, Standards and Procedures are

modified as required and published on Council's Intranet for all staff. Some key elements of the ethical framework at the time of publishing this Policy are identified below.

- a) Risk Management
 - i. Risk Management Plan and Risk Register
 - ii. Enterprise Risk Management Strategy
- b) Finance
 - i. Cash Handling Procedures
 - ii. Petty Cash Handling Procedures
 - iii. Corporate Purchase Card Procedure
- c) Governance
 - i. Procurement Policy and Standards
 - ii. Councillors' Civic Expenses and Facilities Policy
 - iii. CEO's Delegations
 - iv. Sub-delegations to Council Officers
 - v. Fraud and Corruption Prevention Policy
 - vi. Access to Council Information Guide Policy
 - vii. Related Parties <u>Disclosure Transaction</u> Policy
 - viii. Disposal of Council Assets Policy
- viii.ix. Secondary Employment Policy
- d) Ethics
 - i. Code of Conduct
 - ii. Code of Conduct Procedures
 - iii. Internal Reporting Public Interest Disclosures Policy
 - iv. Ethical Conduct Conflicts of Interest Policy
 - v. Ethical Conduct Gifts and Benefits Policy
 - vi. Ethical Conduct Internal Reporting Policy
 - vii.vi. Ethical Conduct Secondary Employment Policy
- e) Human Resource's
 - i. Recruitment and Appointment Policy
 - ii. Employment Security and Workplace Monitoring Policy
 - iii. Fleet Management Policy
 - iv. Secondary Employment Guidelines
 - v.iv. Performance and Misconduct Policy
- f) Other
 - i. Complaints Management Policy
 - ii. Internal Ombudsman Policy
 - iii. Corporate Sponsorship (Incoming) Policy
 - iv. Grants, and Donations and Community Sponsorship Policy
 - v. Records Management PlanStandard

- 4.8.2 Liverpool City Council demonstrates monitors compliance with the ethical framework by conducting Aan Ethical Health Survey for staff, will be conducted every three years by the Coordinator Governance. The Head of Governance Governance survey will conduct a survey focussing on fraud and corruption but include a general tone of and factors which might influence, or negatively impact on, the workplace culture. The survey willshould be a valuable tool, to inform on a number of issues that such as the determinants of misconduct, corruption, and workplace bullying, etc., are similar and intrinsically linked. The survey enables staff to be involved and provide their views on how Council is managing fraud.:
 - a) Creating awareness among staff of the different parts of the strategy, what activities are considered fraudulent and how to respond if fraud is suspected. Liverpool City Council has an on-line ethical behaviour training module for all staff. The training module is complemented by training for all staff on Council Code of Conduct and Values.
 - b) Staff are required, on a biennial basis (their anniversary), to complete the Council's Code of Conduct e-learning training.
 - c) Councillors are provided induction training opportunities after each Council election. Training includes (but is not limited to) Code of Conduct and Code of Meeting Practice.
 - d) An Ethical Health Survey for staff, will be conducted every three years by the Coordinator Governance. The survey will focus on fraud and corruption but include a general tone of factors which might influence, or negatively impact on, the workplace culture. The survey will be valuable tool, to inform on a number of issues that the determinants of misconduct, corruption, workplace bullying, etc., are similar and intrinsically linked. The survey enables staff to be involved and provide their views on how Council is managing fraud.
- 4.8.3 Council does not accept or tolerate the occurrence of fraud or corrupt conduct. Its commitment to deter and to prevent the occurrence of such matters is aligned to the organisational values of:
 - a) Valuing staff;
 - b) Showing leadership at all levels;
 - c) Working together;
 - d) Respecting people by encouraging an honest, courteous, ethical, fair and equitable workplace;
 - e) Communicating effectively by providing open, accessible and honest communication with all stakeholders.

4.9 Responsibilities Structure

4.9.1 Liverpool City Council has clearly defined responsibilities for managing fraud. Responsibilities structure is detailed in Appendix 2.

- 4.9.2 Liverpool City Council has accepted that managing fraud is a core business function and has charged Managers to integrate fraud prevention strategies within their team.
- 4.9.3 Staff working in high risk fraud areas will be provided specifically appropriate training.
- 4.9.4 The Audit Risk and Improvement Committee has a clearly defined charter setting out requirements for review of Council's risk management practices.
- 4.9.5 This document is Council's Fraud Control Policy

4.10 Prevention Systems

- 4.11.1 Liverpool City Council recognises that appropriate policies and procedures must be implemented to regulate and enable monitoring of particular areas of activity. Internal controls are effective at detecting fraud. Liverpool City Council maintains appropriate controls including:
 - a) Segregation of duties
 - b) Approvals and authorisations
 - c) Probity checks
 - d) Reconciliations
 - e) Management reviews
 - f) Risk assessments
 - g) Physical security
 - h) Information security
 - i) Information audit
 - j) Independent reviews internal and external audits
- 4.10.2 The prevention system contains a number of components including:
 - a) Fraud Risk Assessment a proactive effort to identify areas where fraud risks exist, to evaluate how effective controls are to mitigate those risks and determines actions necessary to eliminate any gaps.
 - b) Ethical workforce Liverpool City Council is committed to employing staff that support our ethical values. Council conducts pre-employment screening including reference checks and Working with Children Checks. Council has adopted an Equal Employment Opportunity Management Plan. Embedding the concepts of transparency, accountability and access to government information in all units across Council.
 - c) Pre-employment screening
 - d) **Separation of duties** so that no one person has sole control of duties involving the handling of money, purchasing goods and services etc.

- e) Induction Training staff induction will cover fraud control, staff responsibilities and Council fraud policy including code of conduct which is document<u>edation</u> in the induction package given to all new starters. All new staff are required to read and sign the Code of Conduct.
- f) Post Induction to ensure staff are kept up to date and are reminded of their responsibilities regarding fraud, the following approaches are implemented under this policy:
 - Release of periodic news alerts on the intraernet to include the results of latest fraud risk assessments.
 - Staff are required to complete Code of Conduct refresher (eLEARN) training (every year on their anniversary).
- g) Internal Reporting Systems The internal reporting system enables agencies to receive and act on complaints as well as implement continuous organisational improvement around non-compliance with its procedures and processes. An internal reporting system that allows the identification, reporting, investigation and management of allegations about corruption is also fundamental to deterring corruption and for protecting people who have reported wrongdoing.
 See
- h) Investigation systems including:
 - i. Process of an investigation
 - ii. Maintaining confidentiality
 - iii. Vexatious frivolous or misleading allegations
 - iv. Disciplinary standards
 - v. Whistle Blower Protection
- i) Documenting reported Code of Conduct Issues the Coordinator Governance will maintain a database of all reports of suspected fraud, corruption and maladministration. Managers are required to report suspected or real incidences of fraud to the Coordinator Governance. The database will identify trends and inform any required change to the controls, policies or procedures.
- Review Mechanism to enable regular evaluation of the effectiveness of fraud control strategies.
- k) Adoption of Information and Communication Technology (ICT) Policy to ensure that members of Council staff are aware of their responsibilities in relation to Information and Communication Technology and that the information held by Council is protected and secure.

4.11 Fraud Awareness and Notification Systems

- 4.112.1 Council seeks to create awareness among staff of the different parts of the strategy, what activities are considered fraudulent and how to respond if fraud is suspected. Council has an on-line ethical behaviour training module for all staff. The training module is complemented by training for all staff on Council Code of Conduct and Values.
- 4.11.2 Training programs in ethical behaviour including code of conduct will be provided to all new starters as part of the induction program. Refresher training will be provided biennially on the anniversary of recruitment.
- 4.11.24.11.3 Training will be provided to all Council committee's biennially and after the election of new members.
- 4.11.34.11.4 Liverpool City Council's encourages customers and the community to report complaints alleging misconduct, fraud, corruption or maladministration involving Council staff and Councillors. Information regarding lodging a complaint can be found on Council's web site.
- 4.11.44.11.5 Liverpool City Council will not tolerate any reprisal action against staff and will ensure appropriate action is taken to protect staff who report suspected fraud. Staff who have reported suspected fraud are supported and encouraged to assess the Employee Assistance Program that may be needed as a result of the reporting process.
- 4.11.54.11.6 The channels for making disclosures through Council's internal reporting system are set out in the table Appendix 2:

4.12 Detection and Investigation Systems

Liverpool City Council recognises that appropriate policies and procedures must be implemented to regulate and enable monitoring of particular areas of activity. Internal controls are effective at detecting fraud. Liverpool City Council maintains appropriate internal controls including:

- a) Segregation of duties
- b) Approvals and authorisations
- c) Probity checks
- d) Reconciliations
- e) Management reviews
- f) Risk assessments
- g) Physical security
- h) Information security
- i) Information audit
- j) Independent reviews internal and external audits
- 4.12.1It is the responsibility of Council Directors to ensure that these controls are maintained within their directorates to their best of their ability. All members of

Council staff have a responsibility to manage fraud and corruption risks in the workplace.

4.13 Third Party Management Systems

- 4.14.1 Liverpool City Council is committed to ensuring our customers, contractors and suppliers are aware of our commitment to ethical behaviour. Ethical Behaviour policies are available on the Staff Intranet, Councillor Internet and Council Intranet.
- 4.14.2 Liverpool City Council ensures that consultants, contractors and suppliers are aware of the standards required of them. Each third party must be provided a copy of the document <u>Deloing Bousiness</u> with Liverpool City Council A <u>Geguide</u> for <u>Ceonsultant's Ceontractors and Suppliers</u>.
- 4.14.3 Conduct due diligence assessments.
- 4.14.3 Tender evaluation committees must complete conflict of interest declarations.
- 4.14.4 Tenderers must disclose conflicts of interest as part of the tender process.
- 4.14.5 Contract risk management arrangements adopted.
- 4.14.6 Liverpool City Council must maintain a contracts register in accordance with the *Government Information (Public Access)* Act 2009. The register will be maintained by the Procurement Unit.

AUTHORISED BY

Council Resolution

EFFECTIVE FROM

25 November 2020

DEPARTMENT RESPONSIBLE

Corporate Services (Governance)

REVIEW DATE

25 November 2022

VERSIONS

Version	Amended by	Changes made	Date	TRIM Number
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1	Council Resolution	None	17 March 2008	005517.2009
2	Council Resolution	Complete review and updating	25 February 2015	244591.2014
3	Council Resolution	Complete review and updating	25 November 2020	326193.2020

THIS POLICY HAS BEEN DEVELOPED IN CONSULTATION WITH

The Audit, Risk and Improvement Committee Internal Audit Unit

REFERENCES

Model Code of Conduct – Part 4 Pecuniary Interests Department of Local Government: Pecuniary Interest Guidelines 2006

Independent Commission Against Corruption Liverpool City Council: Code of Conduct

Liverpool City Council: Code of Conduct Procedures

Liverpool City Council: Ethical Governance: Conflicts of Interest Policy Liverpool City Council: Ethical Governance: Gifts and Benefits Policy Liverpool City Council: Ethical Governance: Internal Investigations Policy Liverpool City Council: Ethical Governance: Internal Reporting (Public Interest

Disclosures) Policy

Liverpool City Council: Ethical Governance: Secondary Employment Policy Liverpool City Council: Use of Council-Branded Administrative Resources Policy

NSW Ombudsman: Good Conduct and Administrative Practice: Guidelines for state and local government (3rd2nd edition) 201709

Audit Office of New South Wales: Fraud Control Improvement Kit February 2015
Audit Office of New South Wales: Fraud Controls in Local Councils 22 June 2018

<u>Audit Office of New South Wales: External Public Interest Disclosure Policy 1 October 2023</u>

Independent broad-based anti-corruption Commission Victoria: Controlling Fraud and corruption a prevention checklist

Australian Standard 8001-202108 Fraud and Corruption Controls Standards
Attorney Generals Department: Commonwealth Fraud and Corruption Control
Framework, March 2024Preventing Detecting and Dealing with Fraud August 2017

Appendix 1

Definitions

the Act means the Local Government Act 1993

CEO refers to the Chief Executive Officer of Council.

Corrupt conduct is defined in accordance with Section 8 of the *Independent Commission Against Corruption Act* 19898 as conduct:

- a) Of any person (whether or not a public official) that adversely affects, or that could adversely affect, either directly or indirectly, the honest or impartial exercise of official functions by any public official, any group or body of public officials or any public authority; or
- b) Of a public official that constitutes or involves the dishonest or partial exercise of any of his or her official functions; or
- c) Of a public official or former public official that constitutes or involves a breach of public trust; or;
- d) Of a public official or former public official that involves the misuse of information or material that he or she has acquired in the course of his or her official functions, whether or not for his or her benefit or for the benefit of any other person.

Corrupt conduct includes the conduct of any person (whether or not a public official) that adversely affects, or that could adversely affect, either directly or indirectly, the exercise of official functions by any public official, any group or body of public officials, or any public authority. It could involve, but is not limited to:

- a) Blackmail;
- b) Bribery;
- c) Fraud;
- d) Obtaining or offering secret commissions;
- e) Official misconduct;
- f) Theft.

Corrupt conduct is any conduct of any person (whether or not a public official) that impairs, or that could impair, public confidence in public administration and which could involve any of the following matters:

- a) Collusive tendering;
- b) Fraud in relation to applications for licences, permits or other authorities under legislation designed to protect health and safety or the environment or designed to facilitate the management and commercial exploitation of resources:
- c) Dishonestly obtaining or assisting in obtaining, or dishonestly benefiting from,

the payment or application of public funds for private advantage or the disposition of public assets for private advantage;

- d) Defrauding the public revenue;
- e) Fraudulently obtaining or retaining employment or appointment as a public official.

Disclosures Coordinator is the coordinator to assess, receive and refer public interest disclosures under Council's Ethical Governance: Internal Reporting Policy.

Disclosure Officers are points of contact within the internal reporting system. They can provide advice about the system and the internal reporting policy, receive reports of wrongdoing and assist members of Council staff and Councillors to make reports.

Disclosure refers to informing, exposing, or revealing known or suspected acts of corruption, maladministration or serious and substantial waste by public officials of Council. A public interest disclosure can be made internally in accordance with the process set out in Council's Ethical Governance: Internal Reporting (Public Interest Disclosures) Policy or externally. An external disclosure can be made:

- a) In the case of corruption: to the Independent Commission Against Corruption (ICAC);
- b) In the case of a government information contravention: to the Information and Privacy Commission:
- c) In the case of local government pecuniary interest contravention or serious and substantial waste in local government to the Office of Local Government;
- d) In the case of maladministration and serious or substantial waste: to the NSW Ombudsman.

Ethical Health Assessment Survey suitable survey to determine Council's ethical health as determined by the Governance Unit

Fraud can include deceit, trickery, practice, or a breach of confidence, by which it is sought to gain some unfair or dishonest advantage. Examples of fraud risk include (but are not limited to):

- a) Conducting the affairs of a private business or undertaking in working hours;
- b) Conspiring unfairly with others to manipulate a tender or quotation outcome or procure services;
- c) Falsifying timesheets;
- d) Falsifying travel claims or other vouchers;
- e) Inappropriately manipulating allowance payments;
- f) Stealing equipment or supplies from work;
- g) Turning a blind eye to a service provider who does not provide an appropriate service;

- h) Unauthorised private use of motor vehicles;
- Using Council money or resources for private benefit;
- j) Procurement including tendering and managing supplier interfaces contrary to Council policy and procedure;
- k) Exercising regulatory authority;
- I) Service delivery to public program & contract management;
- m) Revenue collection and administering payments to the public;
- n) Provision of grants and funding agreements.

Government information contravention is a failure to properly fulfil functions under the *Government Information (Public Access) Act* 2009. For example, this could include:

- a) Destroying, concealing or altering records to prevent them from being released:
- b) Directing another person to make a decision that is contrary to the legislation;
- c) Knowingly making decisions that are contrary to the legislation;

Investigating Authority refers to ICAC, the Information and Privacy Commission, the NSW Ombudsman and the Office of Local Government.

Maladministration is defined in the *Public Interest Disclosures Act* <u>2022</u>1994, as being conduct that involves action or inaction of a serious nature that is:

- a) Unlawful;
- b) Unreasonable, unjust, oppressive or improperly discriminatory; or
- a)c) Based wholly or partly on improper motives.
- b) Contrary to law; or
- c) Unreasonable, unjust, oppressive or improperly discriminatory.

Members of Council staff, for the purpose of this policy, include permanent employees of Council, casual employees, trainees, and consultants and contractors who are engaged in employment with Council.

Serious and substantial waste is defined in accordance with the definition provided by the NSW Auditor-General as "the uneconomical, inefficient or ineffective use of resources, authorised or unauthorised, which results in a loss/wastage of public funds/resources". Types of serious and substantial waste include:

- a) <u>Absolute</u>: serious and substantial waste might be regarded in absolute terms where the waste is regarded as significant, for example \$500,000;
- b) <u>Systemic</u>: the waste indicates a pattern which results from a system weakness within the public authority;
- c) Material: the serious and substantial waste is/was material in terms of the public authority's expenditure or a particular item of expenditure or is/was

- material to such an extent so as to affect a public authority's capacity to perform its primary functions;
- d) Material by nature not amount: the serious and substantial waste may not be material in financial terms but may be significant by nature. That it may be improper or inappropriate.

Appendix 2

COUNCIL FRAUD AND CORRUPTION RESPONSIBILITY STRUCTURE					
AUDIT RISK AND IMPROVEMENT COMMITTEE / COUNCIL	CHIEF EXECUTIVE OFFICER	PoBuCoCoSta	ekeholder va age De pre uni Ide cor Mo me dei De dea Imp cor Pro pre wo	velop and in evention stratts entify and mirruption risks onitor and revectanisms in text corruption prevention prevention and rkplace and by examp	pulatory, community) Inplement fraud and corruption tegies for directorates/ work tigate actual potential in the workplace view the effectiveness of inplemented to minimise and on thical conduct in all business initor and review fraud and tention controls in place eness of fraud and corruption ethical conduct in the one of the community of the complements of the community of the complements of the community of the communit
			COORDINATC AND TE	MEMBERS OF COUNCIL STAFF	Ethical behaviour Report suspected incidents of fraud and corruption Compliance with fraud and corruption prevention controls including the Fraud and Corruption Prevention Policy and Code of Conduct

Appendix 3

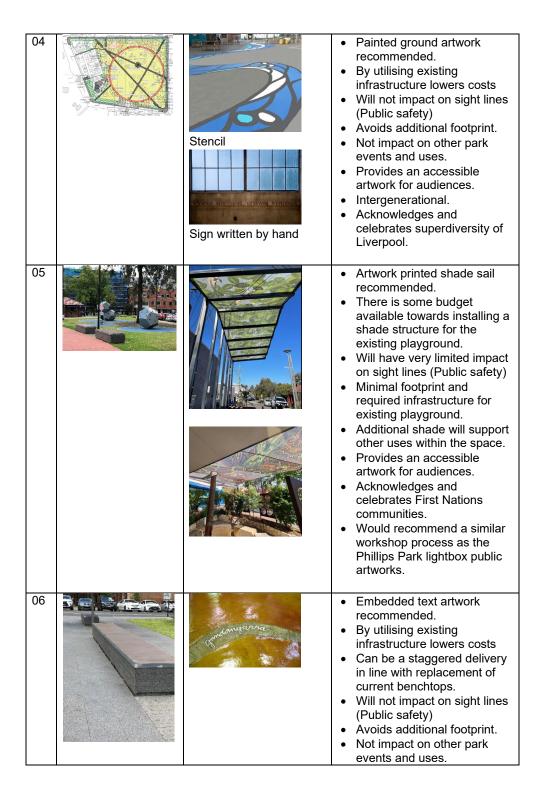
Channels for making disclosures through Council's internal reporting system

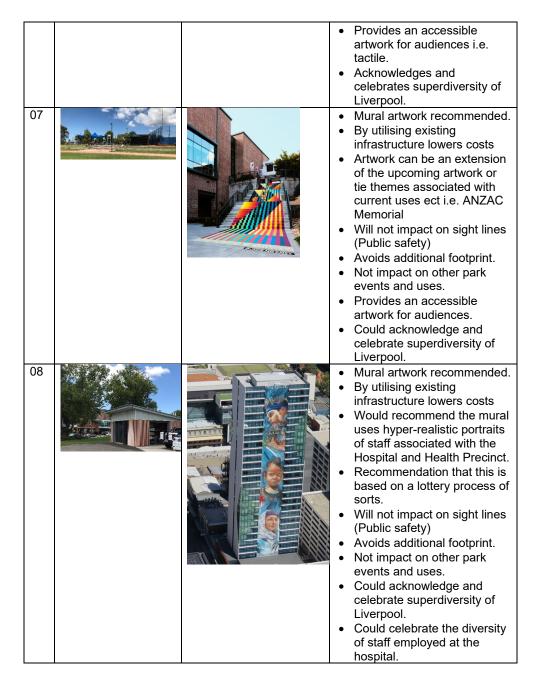
Discloser	Nominated Person	Nature of Disclosure
Member of Council staff	CEO or disclosures officer	Corruption, maladministration, serious and substantial waste (general matters)
Member of Council staff	Disclosures officer or Mayor	Corruption, maladministration, serious and substantial waste involving the CEO
Member of Council staff	Disclosures officer or CEO	Corruption, maladministration, serious and substantial waste involving a Councillor
Councillor	CEO	Corruption, maladministration, serious and substantial waste involving Council administration and management (general matters)
Councillor	Mayor	Corruption, maladministration, serious and substantial waste involving the CEO
Councillor	Mayor	Corruption, maladministration, serious and substantial waste, involving another Councillor
Councillor	CEO or Disclosures Coordinator	Corruption, maladministration, serious and substantial waste, involving the Mayor

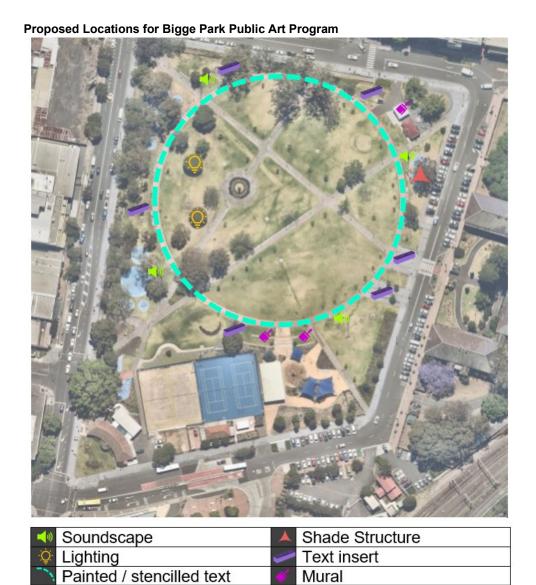
- Note 1: A member of Council staff who wishes to make a public interest disclosure which involves a Councillor may do so by means of an alternative channel rather than the internal reporting system, for example, directly to the CEO, or an investigating authority (ICAC, NSW Ombudsman, or Office of Local Government).
- **Note 2:** A Councillor who wishes to make a public interest disclosure which involves a Councillor may do so by means of an alternative channel rather than the internal reporting system, for example, to the CEO or an investigating authority (ICAC, NSW Ombudsman, or Office of Local Government).
- **Note 3:** If the Mayor wishes to make a public interest disclosure, she/he may do so by channels provided under the *Public Interest Disclosures Act 1994*, for example, to the CEO or to an investigating authority (ICAC, NSW Ombudsman or Office of Local Government).

Proposed Sites & Examples

	Proposed Sites & Examples Recommendation 1: Public Art Program for Bigge Park.				
	Site image	Artwork Examples	Recommendations		
01	Further investigation will be required to identify potential sites.		Suspended artwork recommended. This will ensure sight lines are maintained. (Public safety) Ensure maintenance costs are minimal. To avoid additional footprint. Not impact on other park events and uses. Protect from vandalism. Ensure widest audience.		
02			Soundscape artwork recommended. Artist to work with local communities and create artwork based on lullabies sung in diverse languages. By utilising existing infrastructure lowers costs Will not impact on sight lines (Public safety) Avoids additional footprint. Not impact on other park events and uses. Protect from vandalism lowering maintenance costs. Provides an accessible artwork for audiences, i.e. vision impaired Intergenerational. Acknowledge and celebrate the super diversity of Liverpool.		
03			Liverpool. Lighting artwork recommended. Will not impact on sight lines (Public safety) Avoids additional footprint. Not impact on other park events and uses. Supports nighttime activation. Provides an accessible artwork for audiences. Intergenerational. Vibrant and accessible to intergenerational audiences		







*Suspended sculptural artwork location requires addition investigation to identify suitable locations

Council Resolution

For Action

Council 30/08/2023

ATTENTION: Executive Assistant to Director Planning & Compliance

(Naidu, Sheela)

SUBJECT: Public Art in Bigge Park

DUE DATE: 08/09/2023

FILE REF: 2022/5123 297512.2023

TRIM NOTES: Assigned to Planning and Compliance for action.

Once completed please complete in Content Manager and leave a

Manager's comment.

If the Resolution cannot be completed quickly, please leave a Manager's comment at key milestones for an update on progress.

Bigge Park stands as a cherished public space within our community, offering respite and solace to residents and visitors alike, including visitors from Liverpool Hospital. A Public Arts program in the park has the potential to play a special role in enhancing the cultural experience of the park's patrons.

In this context, it is just to acknowledge the Holy Mother Mary's role as a universal symbol of hope, compassion, and healing. Throughout history, the Mother Mary has been venerated as a source of comfort, especially by those facing illnesses and challenges. Incorporating elements of the Mother Mary's symbolism into the park's artistic endeavours can provide a deeper sense of solace to individuals who frequent the park, particularly those seeking respite or having loved ones in the nearby Liverpool Hospital.

Moreover, the strategic proximity of Bigge Park to Liverpool Hospital highlights the significance of this motion. As a place that witnesses the convergence of diverse emotions and experiences, the park can offer a serene environment for patients, families, and healthcare providers to find moments of reprieve from the demands of medical care. A thoughtful integration of artistic elements that pay homage to the Holy Mother Mary's symbolism can contribute to fostering a sense of calm and hope in those navigating challenging medical journeys.

Taking the above into consideration, I move that Council undertakes a comprehensive investigation into a Public Art program at Bigge Park. This investigation should aim to explore how artistic interventions inspired by the Holy Mother Mary's symbolism can be integrated sensitively into the park's environment, with the goal of providing a space of solace, reflection, and healing. I am confident that this initiative will not only enrich the emotional fabric of our community but also align with our commitment to supporting the well-being of individuals facing health-related difficulties.

Open Item in Minutes

This action sheet contains a Resolution of Council and has been produced by Council & Executive Services from the Minutes of a Council meeting

Don't forget:

- Add Trim notes
- Close the action through Trim (but only if the Resolution and all points assigned to you have been completed). Or, if not completed then extend the due date in Trim if required
- Save any documentation relating to this resolution as a response document in Trim

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GOVERNANCE COMMITTEE MEETING 15 NOVEMBER 2023 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

IPC 01	Public Art at Bigge Park
	Healthy, Inclusive, Engaging
Strategic Objective	Improve liveability and quality of life for the community by delivering vibrant parks, places and facilities
File Ref	325311.2023
Report By	Clare Cochrane - Public Arts Officer
Approved By	Lina Kakish - Director Planning & Compliance

EXECUTIVE SUMMARY

Council is undertaking a comprehensive investigation into a Public Art program at Bigge Park directed by the Council Resolution dated 30 Aug 2023. This interim report provides an update to the Governance Committee with an opportunity to instruct on the initial investigations and methodologies proposed to capture identified themes, narratives and outcomes. The public art program will be designed to support the diverse users of the park by accentuating the existing benefits and providing further opportunities for identified narratives and reflections. This investigation aims to explore how artistic interventions can support the needs of various audiences and users of Bigge Park.

RECOMMENDATION

That the Committee recommends that Council:

- 1. Notes this Interim Report related to a comprehensive investigation into a Public Art program at Bigge Park;
- 2. Provides initial response to public art considerations;
- 3. Provides response to potential public artwork forms being considered in relation to Bigge Park site; and
- 4. Provides further insight and direction to the proposed themes and narratives.

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GOVERNANCE COMMITTEE MEETING 15 NOVEMBER 2023 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

REPORT

Background

Bigge Park, originally Bigge Square, was established as a town common at the formation of Liverpool township in 1810. The Park was initially an allotment of six acres, extending from Elizabeth Street down to Scott Street and alongside the Georges River. Governor Macquarie intended the Park's use to be a Public Marketplace and a location for an annual fair.

The location of the park is representative of Macquarie's approach to urban planning. The Park was centrally located, surrounded by institutional buildings of great importance, which included the Liverpool Hospital and the Gaol.

Bigge Park has numerous memorials to historic figures that influenced both Liverpool and the early colony, as well as memorials celebrating prominent local individuals. The memorials contained within the park hold historic social significance for the park and the locality, in general.

Bigge Park has historical significance at a state level, as an example of the town squares included by Governor Lachlan Macquarie in his plans for the towns he established in the colonies of New South Wales and Van Diemen's land between 1810 and 1822. As an area of public open space in continuous use since it was created, Bigge Park has been a key part of Liverpool for more than 200 years. The park is one of the few colonial places (along with the former Court House, former Liverpool Hospital, St Luke's Church and the street grid plan) remaining which demonstrate the history of the town. The park also has a long history as a place for memorials to important events and persons associated with Liverpool.

Project Site

The current extent of Bigge park is bound by Elizabeth Street to the north, Moore Street to the south, College Street to the east and Bigge Street to the west. Bigge Park is a multifunctional space designed to provide opportunity for active and passive activities as identified in Attachment 1 – Project Site.

Key Considerations

In the 2008 LLEP, Bigge Park, is identified within the Bigge Park Heritage Conservation Area. Additionally, Aboriginal Land Claims by the Gandangara Local Aboriginal Land Council were lodged on 19 March and 3 September 2008 over Bigge Park (except for the Dr Pirie Centre and the Bowling Club site respectively). These matters are yet to be finalised.



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GOVERNANCE COMMITTEE MEETING 15 NOVEMBER 2023 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

Given the above considerations, all works require the approval of Council's Heritage Officer, as well as any third-party stakeholders who may have existing Agreements or Memorandum's of Understanding prior to commencement of works.

Bigge Park being a complex site with multiple existing assets, facilities and stakeholder interests; it is critical to ensure that all relevant internal and external stakeholders are actively engaged in developing the program.

Patrons and Audiences of Bigge Park

Bigge Park provides a critical green space within Liverpool CBD. The Park's patrons engage in a variety of active and passive pursuits. This public space performs a variety of functions and meanings and provides a place for, reflection, time out, meeting point, play, exercise, events and as a pedestrian thoroughfare.

Accessed by residents, childcare services, primary, high, TAFE and university students, as well as CBD workers, hospital staff, patients, their families and visitors. The Park provides a backdrop for respite, recreation, exploration, solace, reflection, and healing. The Park reflects our diverse community and provides accessible and intergenerational access to all.

The site is also a transient space linking, the Health Innovation Precinct, Allied Health Services, Educational institutions, major rail and bus services, surrounding businesses, students, CBD residents and visitors.

This interim report identifies that the residential users combined with a large daily influx of patrons accessing various workplaces, services and institutions, and their associated uses and relationships with the site would require the Bigge Park Public Art program to acknowledge the superdiversity of these audiences.

Public Art Forms, Themes and Narratives

The Council resolution identifies the symbol of the Holy Mother Mary as an opportunity to explore themes associated with hope, compassion, and healing. This interim report acknowledges the importance of these themes and identifies that due to the park's proximity to the hospital the site is accessed and/or overlooked by staff, patients and associated family and friends. As such the existing green space does provide respite, solace, and comfort to those who may face critical incidents in the workplaces, illness, trauma, and bereavement. It's important to address that this site also witnesses great joy, relief, celebration and provides a space for innovative and creative thinking beyond the confines of the built environment.

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GOVERNANCE COMMITTEE MEETING 15 NOVEMBER 2023 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

This interim report acknowledges the themes identified in Council Resolution (i.e., hope, comfort and solace) are intangible by their very nature and speak to complex cultural and personal belief systems. Further investigation into public artworks would benefit the wellbeing of park patrons instigating opportunities to reflect, seek diversion, recalibrate and inspire are required in conjunction with further data and feedback from current park patrons and transitory audiences.

The identified themes of hope, comfort and solace will guide the selection of narratives to be explored within the individual public artworks located within Bigge Park. The concept of a narrative reflective of the Mother Mary is one that is shared across several faiths and identified by various names. The process of representing, through any singular form, a revered figure steeped in complex cultural and idiosyncratic beliefs would fall short of capturing the complex and diverse communities, visitors, patrons and audiences who frequent Bigge Park.

This interim report proposes that the public art program investigate how associated narratives of benevolence, motherhood, belief and love can be reflected in ways that are inclusive and accessible. Through these narratives the extremes of joy, loss and comfort can be explored in creative ways that engage and activate audiences. The narratives explored through the public art program would aim to provide tangible expressions of intangible experience.

Bigge Park is a shared space; a public space awash with exhaustion, elation, loss, and optimism. It is a place that witnesses hurried commuters, boisterous students, children at play, fitness fanatics and coffee sippers. This interim report has touched on the superdiversity of Bigge Park's audiences and identified the diverse ways in which patrons engage and/or pass through space. This park is a place that witnesses a convergence of emotions and experiences. As a multilingual site with complex historical and contemporary narratives, personal and shared, it's important to identify that the development of a public art program would engage with surrounding communities, institutions, and individual users to develop respectful and responsive narratives.

Public Art Opportunities

There are multiple options for implementing public art throughout Bigge Park. In acknowledging the various patrons and the ways in which they access, utilise and experience this public space it is critical to investigate how the artwork forms will provide reflection of this diversity (see Attachment 2 – Public Art Forms).

From early investigations into the park uses, audiences, issues, reports and stakeholder engagement; this interim report recommends further exploration into permanent sound, light, functional standalone and applied public artworks. Council recommends that EOI's and commissioning processes focus on professional public artist collaborating with local artists to ensure meaningful outcomes that reflect the diversity of our communities, continue to build

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GOVERNANCE COMMITTEE MEETING 15 NOVEMBER 2023 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

our LGA's creative industry, and deliver narratives that are meaningful, local and accessible. Through the Bigge Park public art program we have the opportunity to provide acknowledgement and celebration of the stories and beliefs that are shared across our diverse communities.

This interim report recommends that initial investigations focus on public art forms that are light and sound based due to the Parks location. Liverpool hospital employs approximately 4,700 staff has over 1,000 beds and operates 24 hours a day seven days a week. In addition to this, 50.5% of Liverpool's residents are employed fulltime, suggesting that apart from travel to and from work on weekdays and weekends, their experience and potential use of the park would occur outside of business hours. This data exemplifies that a public art program needs to consider day and night-time activation for the park.

Public Arts Program

A Public Arts program in Bigge Park has the potential to support and heighten the benefits to Park users in multiple ways (see Attachment 3 – Benefits of Public Art). It is recommended that public art deliverables reflect our diverse community and increase accessible and intergenerational engagement throughout the space. If implemented the program would need to address the current users, increase use of assets and facilities, address issues of antisocial behaviour and activate positive audience engagement. This project would provide opportunity to acknowledge personal and cultural differences and identify shared narratives.

As identified in Liverpool City Council's Public Art Policy, public art is an investment for and of our communities. Public art increases health outcomes, economic visitation and illustrates Council's commitment to narratives of culture, accessibility, diversity, heritage, and shared aspirations.

It is internationally recognised that public art contributes to the transformation of the urban landscape. Public art provides wayfinding opportunities, allows for creative engagements and best practice placemaking. It actively engages residents and visitors in public spaces as such the recommendation would be to request further insight, feedback and approval from the Governance Committee to investigate a public art program for Bigge Park.

FINANCIAL IMPLICATIONS

As this is an interim report, further discussions and direction is required to determine the overall financial implications to Council. There are no financial implications relating to the recommendations at this stage.

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GOVERNANCE COMMITTEE MEETING 15 NOVEMBER 2023 INFRASTRUCTURE AND PLANNING COMMITTEE REPORT

CONSIDERATIONS

	Encourage and promote businesses to develop in the hospital health and medical precinct (of the City Centre).
Economic	Facilitate economic development.
	Facilitate the development of new tourism based on local attractions, culture and creative industries.
Environment	Support the delivery of a range of transport options.
	Raise awareness in the community about the available services and facilities.
	Provide cultural centres and activities for the enjoyment of the arts.
	Support policies and plans that prevent crime.
	Preserve and maintain heritage, both landscape and cultural as urban development takes place.
	Promote community harmony and address discrimination.
	Support access and services for people with a disability.
	Deliver high quality services for children and their families.
	Undertake communication practices with the community and stakeholders across a range of media.
	Foster neighbourhood pride and a sense of responsibility.
	Facilitate the development of community leaders.
Civic Leadership	Encourage the community to engage in Council initiatives and actions.
	Provide information about Council's services, roles and decision making processes.
	Deliver services that are customer focused.
	Actively advocate for federal and state government support, funding and services.
Legislative	To be considered as part of the final report.

ATTACHMENTS

- 1. Attachment 1 Project Site
- 2. Attachment 2 Public Artwork Forms
- 3. Attachment 3 Benefits of Public Art

3

INFRASTRUCTURE AND PLANNING COMMITTEE

ITEM NO: ITEM 01 **FILE NO:** 325311.2023

SUBJECT: Public Art at Bigge Park

COMMITTEE DECISION

Motion: Moved: Mayor Mannoun Second: Clr Green

That the Committee recommends that Council:

- Notes this Interim Report related to a comprehensive investigation into a Public Art program at Bigge Park;
- 2. That the CEO is to commence an immediate process looking at art and any other necessary lighting and infrastructure within Bigge Park;
- 3. Open an Expression of Interest (EOI) process with artists;
- 4. Prepare a report to come back to Council in April 2024; and
- To activate the creating of the concept of a circular walkway and to examine the concept.

On being put to the meeting the motion was declared CARRIED.

Minutes of the Governance Committee Meeting held on Wednesday, 15 November 2023 and confirmed on Tuesday, 13 February 2024

Chairperson



POLICY AND GOVERNANCE IMPLICATIONS:

In reviewing the optimal model for the Alliance, the following aims were considered:

- To ensure the completion of City Deal commitments was monitored and the State and Commonwealth Governments held to their original promises;
- To build upon the strong foundation of member council peer relationships developed since the signing of the Relationship Framework to identify and drive region-wide initiatives that tackle our 'wicked problems' and produce significant benefits for our communities (preferably funded by grants);
- To conduct research and build the evidence base for the needs of our communities in the Western Parkland City;
- To optimise Councils' investment through best practice governance and management.

To ensure that the most appropriate and effective model was targeted, Morrison and Low were engaged to conduct research into all possible options and present their recommendations (See Attachment B). Effectively, two models were recommended as meeting our needs best, as outline below:

Operating Model 1 – s358 Entity

This is the model that is used by the other ROCs although the type of entity they chose to set up differs. NSROC and SSROC set up Incorporated Associations while WSROC chose a company limited by guarantee. While both these options (and others) would be available to us if we set up an s358 entity, the intention is to set up an Incorporated Association.

The key advantages of this model are:

- It is its own legal entity (with its own ABN) separate from its individual members, which means it can enter and enforce contracts in its own name and open a bank account.
- Members are only liable for the amounts each Member owes in respect of their membership with no risk of being forced to assume debt incurred by the entity.
- It can continue even though its members may change.

The key risks of this model are:

- It must meet annual reporting obligations.
- It is not the preferred model for OLG or Unions as there are concerns about the control that can be applied to protect staff or prevent poor practices once established.

















It should be noted that it is forecast a change to this model would incur approximately \$32,000 per annum in additional fees.

Operating Model 2 - s4000 Joint Organisation

This is the model that is implemented by the NSW State Government across all regional and rural areas and allows for Councils to work together for better regional outcomes and to fund place-based activities and advocate for their joint needs. OLG oversees the governance and administration of the JOs and requires financial and annual statements and audits. To date, this model has not been utilised within the urban context and there are no Joint Organisations established within Greater Sydney.

The key advantages of this model are:

- The model exists under the Local Government Act and hence allows for the ongoing oversight of the Office of Local Government.
- A State Government representative sits on the Board as a non-voting member, providing a communication channel into the Government that can be leveraged.
- It is its own legal entity and hence can open a bank account and apply for grants funding.
- It continues even though its members may change.
- It can employ staff under the same awards as Local Government and hence entitlements are transferable.

The key risks of this model are:

- The establishment would require Ministerial approval (and/or regulatory change).
- Board meetings must be open to the public and be publicised, which may work
 against the expressed desire of being nimble and flexible in responding to events as
 they unfold.
- It must fit within the onerous OLG framework, which has significantly high costs associated with it.
- It must meet annual reporting obligations.
- There is a potential for duplication of existing council processes (such as audits. ARIC committees etc).

It should be noted that it is forecast a change to this model would incur approximately \$43,000- \$128,000 per annum in additional fees.

Having been presented with these options, the Mayors made a decision to pursue the shift to an s358 entity.

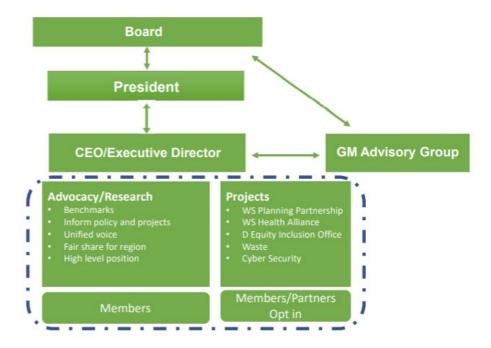
GOVERNANCE STRUCTURE

The Governance structure will not differ significantly from the one already in place. It will consist of a Board made up of one delegate from each Member Council (as determined by each Council, which may be the Mayor). From this membership, a President will be elected at elections conducted bi-annually in accordance with the provisions of the Local Government Act 1993 and the regulations for the election of the Mayor.

The Board and President will only function to determine the strategic business plan of the organisation, monitor its performance and ensure its outcomes and provide due oversight of its financial dealings.

It will hence be completely separated from Member Councils, both from a financial perspective and from a management perspective.

It should be noted that we are proposing that all related bodies that work on regional issues for the eight Member Councils will be brought across under The Parks umbrella, including the Western Sydney Planning Partnership, Western Sydney Health Alliance and Macarthur Strategic Waste Alliance. This will streamline financial contributions, create a more direct and effective reporting line and ensure there are no duplications within the various work plans.



IMPACT ON EXISTING STAFF

- All existing staff within The Parks' Executive Office, the Western Sydney Health Alliance, the Western Sydney Planning Partnership and the Macarthur Strategic Waste Alliance are on contracts that have been intentionally designed to terminate by June 2025, at the latest.
- The contracts for the Executive Director and Executive Assistant of The Parks terminate at the end of March 2025.

- The Program Manager, Digital Equity and Inclusion Program is a seconded position until
 end June 2024, as the program will be finished and reported on in June 2024. This
 employee will then return to her substantive role within Campbelltown City Council
- The Regional Waste Coordinator position is appointed until June 2025, with ongoing funding for this position being currently reviewed by the EPA.
- The Program Manager for the Western Sydney Health Alliance is appointed until February 2025.
- The three positions within the Western Sydney Planning Partnership of the Director, Associate Director – Planning and Policy and Office Manager have been extended until June 2025.

Therefore, as the staff of the current s355 alliance entities are either seconded across from member councils or on contracts, there will be no need to make anyone redundant.

Where appropriate, any existing council staff will be transferred to the employment of the entity and, as is set out in the Constitution, will be employed on the same terms and conditions consistent with their previous employment with Council. All incumbents will also be eligible for and encouraged to apply for the positions in the s358 entity.

Once the entity has been established and the newly defined positions of Executive Director, Executive Assistant, Program Manager Western Sydney Health Alliance and Director, Western Sydney Planning Partnership have been developed and recruited, the entity will guarantee the continued employment of any staff for a period of at least 3 years.

The entity will also adopt an agreement to refer any industrial disputes to the NSW Industrial Relations Tribunal.

ESTABLISHMENT TIMELINE

May-June 2024: It is anticipated that following the consideration by the eight member councils of their participation in the organisation and endorsement by those happy to proceed, this information will be collated into the final business case and sent on to OLG and the Minister for consideration.

We are hoping to achieve this by the end of May (with an extension to the middle of June if required, based on council meeting times).

June/July 2024: Any additional evidence or supporting documentation will be supplied to LG as per their requests to finalise our application.

August/September: Permission from the Minister is received and the administrative procedures to establish the Incorporated Association would be completed.

October/November: After the election once the new Councils have become acclimatised , we would move to call a Board meeting and elect a new President. We would also seek to gain approval for the new Position Description for the revised Executive Director role.

January/February 2025: Recruitment of the Executive Director position would be completed and this position filled.

Elements	Unincorporated Organisation	Incorporated Organisation				Trust	County Council	Joint Organisation	
		Co-Operative	Company Limited by Guarantee	Incorporated Association	Incorporated Joint Venture	Incorporated Limited Partnership	Trust	County Council	Joint Organisation
Enabling Legislation	Section 358, Local Government Act 1993	Section 358, Local Government Act 1993	Section 358, Local Government Act 1993	Section 358, Local Government Act 1993	Section 358, Local Government Act 1993	Section 358, Local Government Act 1993	Section 358, Local Government Act 1993	Section 387, Local Government Act 1993	Section 400O, Local Government Ac 1993
Examples			Western Sydney Regional Organisation of Councils South Eastern Queensland Council of Mayors	Northern Sydney Regional Organisation Councils, Riverina Eastern Regional Organisation of Councils, South Sydney Regional Organisation of Councils.				Currently nine County Councils in NSW.	Currently 13 Joint Organisations in NSW.
Governance and Accountability	Ownership and control apportioned equally amongst Members. Governance arrangements governed by the terms of the Agreement/MoU.	Ownership and control apportioned equally amongst Members. Co- operative must have at least five (5) Members at all times.	Governed by Board of Directors appointed by Company Members.	Ownership and control apportioned equally amongst Members. Governed by Committee of Management.	Joint Venture is managed by Board, with Directors appointed by JV Members and reflective of Members' proportional interest in the JV.	Partnership Agreement outlines right and duties of each Partner.	Directors, who have the trust objective to meet the Statement of Business Intent.	Governing Body comprises representatives nominated by each Member Council (may be Councillors, not necessarily the Mayors).	representatives as determined by the Board. General Managers of each Member Council entitled to attend Board Meetings.
Governance Issues and Considerations	As there no legal formalities, there are minimal costs to establish. Some costs may be expected in drafting a formal Agreement/MoU; ongoing Governance costs could be contained within one Member's operations.	Co-operative must keep various registers and produce Annual Report, but these could be contained within existing resources.	Company will need to adopt Constitution and comply with all applicable requirements of the Corporations Act 2001. As detailed below, additional reporting obligations attached to financial reporting/auditing requirements could lead to additional costs.	Incorporated Association is relatively simple and straightforward to establish.	Joint Venture model is geared towards profit-making enterprises, but JVs can take a number of legal forms. Typically used for projects that are high-risk and involve large capital costs.		independent with requisite experience and skills. Establishment of Trust more complex and costly	Governing Body comprises representatives nominated by each Member Council (may be Councillors, not necessarily the Mayors).	Governing Body comprises the May of each Member Council, and potentially additional voting representatives as determined by the Board. General Managers of each Member Council entitled to attend Board Meetings.
Strategic Planning	No legislated strategic planning requirements.	No legislated strategic planning requirements.	No legislated strategic planning requirements.	No legislated strategic planning requirements.	No legislated strategic planning requirements.	No legislated strategic planning requirements.	No legislated strategic planning requirements.	County Councils plan and report under a modified integrated Planning and Reporting (IP&R) framework. The County Council prepares a Strategic Business Plan rather than a Community Strategic Plan.	Joint Organisations do not directly undertake IP&R, but they do have a streamlined planning and reporting framework under the Local Government (General) Regulation 2021. This includes preparing a long term Statement of Strategic Regional Priforities as well as an Annual Performance Statement.
Legal Status and Trading	Not a seperate legal entity from its Members. As such, Members are personally liable for the debts and liabilities of the group.	Separate Entity.	Separate Entity.	Separate Entity.	Separate Entity.	Separate Entity.	Separate Entity.	Separate Entity.	Separate Entity.
Financial Limitations	Cannot establish bank account or hold funds.	Can open bank account and hold funds.	Can open bank account and hold funds.	Can open bank account and hold funds. However, where income exceeds S5 million, total assets exceed \$5 million or current assets exceed \$2 million. Incorporated Association may be requested to transition to alternative corporate structure such as Co-Operative or Company Limited by Guarantee, both of which provide a more robust legisaltive framework.	Can open bank account and hold funds.	Can open bank account and hold funds.	Can open bank account and hold funds.	Can open bank account and hold funds.	Can open bank account and hold funds.
Financial Reporting	No financial reporting requirements, unless otherwise specified in Agreement/MoU.	Minor financial reporting obligations, including preparation of basic Financial Statements. An audit may be required if specified in Co-Operative's rules or requested by Member(s).	Dependant on annual/ consolidated revenue. If less than \$250,000, no requirements. If greater than \$250,000 but less than \$1 million, Company must prepare a Financial Report and Directors' Report and may elect to have its Financial Report reviewed. If Company has revenue greater than \$1 million, the Financial Report must be audited.	Dependant on total revenue and assets . income is less than \$250,000 and assets less than \$500,000, the Incorporated Association must prepare basic Financial Statements. If income and assets are greater than \$250,000 and \$500,000, respectively, the Financial Statements must be prepared in accordance with Accounting Standards and be subject to audit.	Joint Venture will need to produce Financial Statements.	Partnership will need to produce Financial Statements.	Trust will need to prrepare Financial Statements and lodge tax returns. Income and capital gains may be distributed in accordance with Trust Deed.	Subject to same financial reporting and external audit requirements as local councils.	Subject to same financial reporting and external audit requirements as local councils.
Risk Liability	Risk carried by Members. No separate legal stucture, so no risk mitigation/containment strategy.	Risk contained within Co-Operative structure. However, as with Incorporated Associations; office bearers carry Director Duties akin to Company Directors.	Risk contained within the Company structure. However, Directors carry greater exposure as they are typically subject to Director Duties requirements.	Risk contained within Incorporated Association structure. Committee Members who are office bearers carry Director Duties, akin to Company Directors.	Risk contained within the company structure of the JV.	Partnership must have at least one General Partner with unlimited liability, meaning if the Partnership cannot fulfil its obligations, the General Partner(s) will be held personally liable.	Risk contained within the Company and Trust structure .	Risk transitioned from Member Councils to County Council.	Risk transitions from Member Councils to Joint Organisation.
Costs	Nil.	Minor - Establishment costs would include various registration fees, higher than those attached to Incorporated Association establishment. Further costs expected with transfer of assets, resources and data/information.	Minor - Establishment costs would include registration fee (approx. \$800). Further costs expected with transfer of assets, resources and data/information. Ongoing costs would include preparation of Financial Report and Directors' Report, as well as external audit.	Minor - Establishment costs would include registration fee (\$186). Further costs expected with transfer of assets, resources and data/information.	Significant - Establishment costs would include legal fees, coupled with cost of transfer of assets, resources and data/information.	Significant - Establishment costs would include legal fees, coupled with cost of transfer of assets, resources and data/information.	Significant - Establishment costs would include legal fees, coupled with cost of transfer of assets, resources and data/information.	Moderate - Limited establishment costs, which could be carried by individual Members. May be costs associated with transfer of assets, resources and data/information.	Moderate - Limited establishment costs, which could be carried by individual Members. May be costs associated with transfer of assets, resources and data/information.
Assessment	This option is unlikely to be suitable. It would largely represent a confluention of the existing arrangements, which are no longer fit for-purpose given the size of Sydney Parklands and		This option may be suitable. This option carries marignally higher administrative/governance costs to an incorporated Association, dependant on revenue (e. Need to prepare Financial Report and dispendant on revenue (e. Need to prepare Financial Report and otherwise Report and the revenue Financial Report and suitable and the revenue Financial Report and financial SSS, 000, this option may not be preferable as reporting obligations are greater and more frequent than those of an incorporated Association. This option would be attractive if the Member Councils were seeking to trade or do business on a national level; as this is not the case, the Incorporated Association could be a more appropriate model. The Company would also operate under a different regulator (ASIC), whereas an Incorporated Association would fall under State regulation.	This option may be suitable. An Incorporated Association is relatively inexpensive to establish, and ongoing governanceadministrative arrangements could be met by existing resources. While smaller to a Company Lumbed by Contention model: the option by be Contention model: the option of the Contention of the Contentio	This option is unlikely to be suitable and not recommended. The model is better suited to a profit-making venture.	This option is unlikely to be suitable and not recommended. The model is better suited to a profit-making venture.	This protion is unlikely to be suitable and not recommended. The model is better suited to a profit-making venture in which asset and income distribution would be expected.	This option is not likely suitable. County Councils lend themselves to service delivery functions (e.g., water services, noxious weed services, noxious weed services, waste services) in a defined several services, and services are lend to several services. The services was the services of the service	This option may be suitable. Joint Organisations are designed to be advocacy organisations and there are well-established Joint Organisations throughout NSW that have demonstrated a south drack coord i advocacy and strategic collection of the control of the control of Granisations currently established in nettopolian NSW. If this option to be pursued, further discussions will be required with OLG to ascertain NSW Government position on establishing a metropolitan Joint Organisation.



The Parks, Sydney's Parkland Councils, Inc.

CONSTITUTION

Incorporated under the Associations Incorporation Act 2009 (NSW)















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Part 1 Preliminary

1 Definitions

(1) In this constitution:

Additional Expenditure Statement has the meaning given in clause 42(3).

Annual Budget means the annual budget for the association as approved by members at an annual general meeting, as contemplated by clause 42.

association means The Parks, Sydney's Parkland Councils, Inc., being the association governed by this constitution, the Act and the Regulations.

committee member means a member of the committee.

Council has the meaning determined by clause 7.

Executive Director means the person appointed by the committee to manage the daily activities and deliver the objectives of the association.

exercise a function includes perform a duty.

function includes a power, authority or duty.

General Manager means either the General Manager or Chief Executive Officer of a Member Council.

GMAG or **General Managers' Advisory Group** means the group appointed under clause 23.

Member Council means a Council which has been admitted to membership of the association.

register of members means the register of members maintained under clause 9.

secretary, of the association, means:

- (a) the person holding office under this constitution as secretary, or
- (b) if no person holds that office the public officer of the association.

special general meeting, of the association, means a general meeting of the association other than an annual general meeting.

subcommittee means a subcommittee established under clause 22.

the Act means the Associations Incorporation Act 2009.

the Regulation means the Associations Incorporation Regulation 2022.

Note: The Act and the *Interpretation Act 1987* contain definitions and other provisions that affect the interpretation and application of this constitution.

(2) The Interpretation Act 1987 applies to this constitution as if it were an instrument made under the Act.

Note: The Act, Part 4 deals with various matters relating to the management of associations.

2 Name

The name of the association is The Parks, Sydney's Parkland Councils, Inc.

3 Mission

The purpose of the association is to provide strong local government leadership, to work co-operatively for the benefit of the Western Parkland City, and to advocate effectively on agreed regional positions and priorities.

4 Objectives

The objectives of the association are to:

- (1) strengthen the role of Local Government in matters that affect the Western Parkland City, particularly where the region may be affected by Commonwealth or New South Wales Government policies;
- (2) assess the needs, disadvantages and opportunities of Member Councils' Local Government Areas and to make representations, submissions and promotions relative to meet such needs, disadvantages and opportunities to Commonwealth and State Governments and other appropriate bodies;
- (3) improve the quality of and access to transport, community, social, cultural and environmental services infrastructure:
- (4) provide a cohesive and united regional voice representing Member Councils:
- (5) develop and exchange knowledge and tools to support the role and build the capacity of Member Councils, and by doing so improve the quality and efficiency of Local Government service delivery throughout the Western Parkland City Region;
- identify and address current and emerging regional issues through research and the development of evidence-based rationales; and
- (7) ensure the association develops as a highly credible and cost-effective organisation.

5 Member Council participation

Member Council participation in the association is governed by sections 355, 357 and 358 of the *Local Government Act 1993* (NSW), and is subject to such participation being adopted or ratified by the Member Council.

6 Powers

- (1) Subject to (but without limiting its powers under) the Act, the Regulation, this constitution, and any resolution passed by the committee in general meeting, the association has the power to:
 - make submissions to Governments and other agencies in respect of the areas of its Member Councils, consistent with the objectives of the association and its then current business plan;
 - (b) carry out the objectives of the association;
 - (c) receive and apply funds in respect of:
 - (i) the staffing of the association;

- the carrying out of projects or studies agreed to by the association; or
- (iii) any other purpose that is authorised by the association.
- (2) The association must not itself become a member of another corporation.
- (3) Subclause (1) does not affect the right of an individual Member Council to act in its own right on any matter.
- (4) For the purpose of performing any powers, duties or functions, the association may make use of the services of an employee of a Member Council if the prior approval of the relevant General Manager or CEO of the Member Council has been obtained.

Part 2 Members of association

7 Membership

- (1) The following entities only (each a *Council*) are eligible for membership of the association:
 - (a) Blue Mountains City Council;
 - (b) Camden Council;
 - (c) Campbelltown City Council;
 - (d) Fairfield City Council;
 - (e) Hawkesbury City Council;
 - (f) Liverpool City Council;
 - (g) Penrith City Council; and
 - (h) Wollondilly Shire Council.

The initial members of the association are those Councils on whose behalf an application for registration of the association was made under the Act.

- (2) If any Council is dissolved, amalgamated or otherwise ceases to exist:
 - (a) the council (whether newly formed or otherwise) that becomes the council for any area within the existing Council's area automatically becomes a "Council' for the purposes of this constitution; and
 - (b) if the Council is an existing Member Council:
 - (i) the council (whether newly formed or otherwise) that becomes the council for any area within that Member Council's area, continues as the Member Council for the purposes of this constitution upon becoming the council for that area; and
 - unless and until the Member Council is constituted by elected councillors, the representation in respect of the Member Council is to be determined in accordance with clause 18.

8 Membership applications

- (1) An application to be a member of the association must be:
 - (a) made in writing;
 - (b) in the form determined by the committee or the GMAG; and
 - (c) lodged with the secretary.
- (2) The committee may determine that an application may be made or lodged by email or other electronic means.
- (3) The secretary must refer an application to the committee as soon as practicable after receiving the application.
- (4) The committee must approve or reject the application. The application is approved if 70% or more of the committee members approve the application, else the application is rejected.
- (5) As soon as practicable after the committee has decided the application, the secretary must:
 - (a) give the applicant written notice of the decision, including by email or other electronic means if determined by the committee, and
 - (b) if the application is approved inform the applicant that the applicant is required to pay the entrance fee and annual subscription fee (pro rated where an applicant is approved part way through a year) payable under clause 10, within 28 days of the day the applicant received the notice.
- (6) The secretary must enter the applicant's name in the register of members as soon as practicable after the applicant pays the entrance fee and annual subscription fee in accordance with subclause (5)(b).
- (7) The applicant becomes a member once the applicant's name is entered in the register.

9 Register of members

- (1) The secretary must establish and maintain a register of members of the association.
- (2) The register:
 - (a) may be in written or electronic form, and
 - (b) must include, for each member:
 - (i) the member's full name;
 - (ii) a residential, postal or email address;
 - (iii) the date on which the person became a member; and
 - (iv) if the person ceases to be a member the date on which the person ceased to be a member;
 - (c) must be kept in New South Wales:
 - (i) at the association's main premises, or
 - (ii) if the association has no premises at the association's official address;

- (d) must be available for inspection, free of charge, by members at a reasonable time; and
- (e) if kept in electronic form must be able to be converted to hard copy.
- (3) If the register is kept in electronic form, the requirements in subclause (2)(c) and (d) apply as if a reference to the register is a reference to a current hard copy of the register.
- (4) A member may obtain a hard copy of the register, or a part of the register, on payment of a fee of not more than \$1, as determined by the committee, for each page copied.
- (5) Information about a member, other than the member's name, must not be made available for inspection if the member requests that the information not be made available.
- (6) A member must not use information about a member obtained from the register to contact or send material to the member, unless:
 - (a) the information is used to send the member:
 - (i) a newsletter;
 - (ii) a notice for a meeting or other event relating to the association; or
 - (iii) other material relating to the association, or
 - (b) it is necessary to comply with a requirement of the Act or the Regulation.

10 Fees and contributions

- (1) The entrance fee to be paid to the association by a person whose application to be a member of the association has been approved is:
 - (a) \$1; or
 - (b) such other amount as determined by the committee from time
- (2) A member must pay to the association an annual subscription fee of:
 - (a) \$1; or
 - (b) such other amount as determined by the committee from time to
- (3) From time to time, the association may undertake projects in which Member Councils may wish to participate. Any fees associated with such projects (including any instalments and dates for payment) must be notified to Member Councils in advance, and Member Councils who have opted to participate in such projects must pay such fees (including as to instalments and dates for payment) when due.
- (4) Each Member Council must also pay, on a basis agreed by all Member Councils from time to time, its proportion of the association's expenditures:
 - (a) as set out in the then current Annual Budget;
 - (b) as set out in any Additional Expenditure Statement; and
 - (c) in the exercise of the association's powers under clause 6.

- (5) For the purposes of subclause (4)(a) and (4)(b), a Member Council's contribution shall be determined by resolution of the association at the time of adopting the Annual Budget or Additional Expenditure Statement (as the case may be).
- (6) Any agreed fees or contributions under this clause 10 must be made by each Member Council within the date specified by the association.

11 Members' liabilities

The liability of a member of the association to contribute to the payment of:

- (1) the debts and liabilities of the association; and
- (2) the costs, charges and expenses of the winding up of the association, is limited to the amount of any outstanding fees and contributions for which the member is liable under clause 10.

12 Disciplinary action against members

- (1) A person may make a complaint to the committee that a member of the association has:
 - (a) failed to comply with a provision of this constitution; or
 - (b) wilfully acted in a way prejudicial to the interests of the association.
- (2) The committee may refuse to deal with a complaint if the committee considers the complaint is trivial or vexatious.
- (3) If the committee decides to deal with the complaint, the committee must:
 - (a) serve notice of the complaint on the member;
 - give the member at least 14 days from the day the notice is served on the member within which to make submissions to the committee about the complaint; and
 - (c) consider any submissions made by the member.
- (4) The committee may, by resolution passed by 70% or more of the committee members, expel the member from the association or suspend the member's membership if, after considering the complaint, the committee is satisfied that:
 - (a) the facts alleged in the complaint have been proved, and
 - (b) the expulsion or suspension is warranted.
- (5) If the committee expels or suspends the member, the president or the secretary must, within 7 days of that action being taken, give the member written notice of:
 - (a) the action taken, and
 - (b) the reasons given by the committee for taking the action, and
 - (c) the member's right of appeal under clause 13.
- (6) The expulsion or suspension does not take effect until the later of the following:
 - the day the period within which the member is entitled to exercise the member's right of appeal expires, or

(b) if the member exercises the member's right of appeal within the period - the day the association confirms the resolution under clause 13.

13 Right of appeal against disciplinary action

- (1) A member may appeal against a resolution of the committee under clause 12 by lodging a notice of appeal with the secretary within 7 days of being served notice of the resolution.
- (2) The member may include, with the notice of appeal, a statement of the grounds on which the member intends to rely for the purposes of the appeal.
- (3) The secretary must notify the committee that the secretary has received a notice of appeal.
- (4) If notified that a notice has been received, the committee must call a general meeting of the association to be held within 28 days of the day the notice was received.
- (5) At the general meeting:
 - (a) no business other than the question of the appeal is to be transacted;
 - (b) the member must be given an opportunity to state the member's case orally or in writing, or both;
 - (c) the committee must be given the opportunity to state the committee's case orally or in writing, or both; and
 - (d) the members present must vote by secret ballot on the question of whether the resolution should be confirmed or revoked.
- (6) The appeal is to be determined by a simple majority of votes cast by the members (excluding the member the subject of the appeal).

14 Resolution of internal disputes

- (1) The following disputes must be referred to a Community Justice Centre within the meaning of the Community Justice Centres Act 1983 (NSW) for mediation:
 - a dispute between 2 or more members of the association, but only if the dispute is between the members in their capacity as members, or
 - (b) a dispute between 1 or more members and the association.
- (2) If the dispute is not resolved by mediation within 3 months of being referred to the Community Justice Centre, the dispute must be referred to arbitration.
- (3) The Commercial Arbitration Act 2010 (NSW) applies to a dispute referred to arbitration.

15 Membership entitlements not transferable

A right, privilege or obligation that a person has because the person is a member of the association:

(1) cannot be transferred to another person, and

(2) terminates once the person ceases to be a member of the association.

16 Cessation of membership

- (1) A Member Council ceases to be a member of the association if it:
 - (a) resigns in accordance with subsection (3);
 - (b) is expelled from the association; or
 - (c) fails to pay any fees payable by it under clause 10 within 3 months of the due date, and does not pay such fees within a further 1 month after the Executive Director issues a default notice to that Member Council notifying the Member Council that unless the Member Council pays such fees it will cease to be a member.
- (2) The committee may, in its absolute discretion by resolution passed by 70% or more of the committee members, on payment of all arrears of fees due, readmit any member whose membership ceases as contemplated by subclause (1)(c).
- (3) A Member Council may resign as a member by giving at least 12 months' written notice to the secretary.
- (4) On the expiration of such notice, the member ceases to be a member, no fees or contributions shall be refunded to the member, no funds will be distributed to the member, and this constitution remains in force between the remaining members of the association.
- (5) If a Member Council ceases to be a member of the association, the secretary or public officer must make an appropriate entry in the register of members recording the date on which the member ceased to be a member (on the expiration of the period of notice).

Part 3 Committee

Division 1 Constitution

17 Functions of the committee

Subject to the Act, the Regulation, this constitution and any resolution passed by the association in general meeting, the committee:

- (1) is to control and manage the affairs of the association;
- (2) may exercise all the functions that may be exercised by the association, other than a function that is required to be exercised by the association in general meeting, and
- (3) has power to do all things that are necessary or convenient to be done for the proper management of the affairs of the association,

and in particular, the committee must:

- (4) monitor the performance of the association;
- (5) prepare and adopt a business plan for the association;
- (6) prepare and adopt an Annual Budget, having regard to then current business plan for the association;

- (7) review the business plan and Annual Budget as required; and
- (8) set policy direction for the association, consistent with the association's objectives.

18 Composition of committee

- The committee must consist of one representative from each Member Council.
- (2) The initial members of the committee will consist of one representative from each initial member of the association, as nominated by that member to the public officer.
- (3) The Mayor of each Member Council must, at its first ordinary meeting after any Council election relating to that Member Council, appoint a delegate (or confirm the appointment of an existing delegate) to be the Member Council's representative on the committee. The delegate may be the Mayor of the Council.
- (4) Each such delegate shall hold office on the committee until the appointment of a successor delegate.
- (5) A committee member's position becomes vacant if that committee member:
 - (a) ceases to hold office at his/her Member Council;
 - (b) resigns from this/her Member Council; or
 - (c) resigns from the committee by letter addressed to the committee; or
 - (d) is replaced by his/her Member Council at any time.
- (6) Where a committee member's position becomes vacant, the relevant Member Council concerned must, at the first convenient ordinary meeting after such vacancy occurs, appoint another delegate.
- (7) Where the appointed delegate of a Member Council is unable to and does not attend a meeting of the committee, the relevant Member Council may appoint an alternate delegate for the purposes of that meeting. The alternative delegate has the same voting rights as the appointed delegate provided the appointed delegate does not attend the meeting.
- (8) Where a delegate has missed 3 consecutive committee meetings without notification, the committee shall write to the delegate's Member Council seeking an alternative delegate be appointed to the committee.

19 Role of president

- (1) The Member Councils must elect one of the committee members to be the president of the association. The first president, however, must be elected by the committee at the first committee meeting of the association.
- (2) Elections for the role of president must be conducted every 2 years in accordance with the provisions of the *Local Government Act 1993* (NSW), and the regulations for the election of Mayors.
- (3) Nomination of candidates for the role of president may be made either:

- (a) in writing and submitted to the public officer at least 7 days before the date of the next relevant annual general meeting; or
- (b) moved and seconded by members and agreed to by the candidate verbally at the next relevant annual general meeting.
- (4) If only one nomination is received, the candidate nominated is taken as elected.
- (5) If more than one nomination is received, a ballot is to be held.
- (6) The ballot for the election of the role of president is to be conducted at the relevant annual general meeting in any usual and proper manner that the committee directs.
- (7) The president must determine the conduct of committee meetings, which must conform as far as practicable with the Code of Meeting practice established under section 360 of the *Local Government Act* 1993 (NSW).
- (8) The president may nominate an alternate committee member to preside and chair a meeting of the committee if the president will be absent from that meeting.
- (9) Unless otherwise directed by resolution of the association, the president shall:
 - (a) chair meetings of the committee;
 - (b) act as a spokesperson for the association;
 - (c) exercise leadership and give direction to the association;
 - (d) represent the association to other agencies and Governments;
 - (e) present the association and its decisions in a positive way to the community, media, Government and other interested groups;
 - (f) together with the GMAG, authorise the expenditure of funds within the then current Annual Budget; and
 - (g) call special general meetings as required.
- (10) The president may delegate any of the above functions to the chair of the GMAG and the Executive Director, as required.
- (11) At a meeting of the committee, the president (or if the president is absent, the alternate committee member nominated by the president under clause 19(8) to preside and chair that meeting of the committee) does not have a second or casting vote.

20 Vacancies in office

In addition to the matters set out in clause 18(5), a casual vacancy in the office of a committee member arises if the committee member:

- (1) dies;
- (2) resigns from office by written notice given to the secretary;
- (3) is prohibited from being a director of a company under the Corporations Act 2001 (Cth), Part 2D.6;
- (4) is convicted of an offence involving fraud or dishonesty for which the maximum penalty is imprisonment for at least 3 months; or

(5) becomes a mentally incapacitated person.

21 Secretary

- (1) The committee must appoint a secretary to the association.
- (2) The secretary may also be the public officer of the association.
- (3) As soon as practicable after being elected as secretary, the secretary must lodge a notice with the association specifying the secretary's address.
- (4) The secretary must keep minutes of:
 - (a) all elections of committee members;
 - the names of committee members present at a meeting of the committee or at a general meeting; and
 - (c) all proceedings at committee meetings and general meetings.
- (5) The minutes must be:
 - (a) kept in written or electronic form; and
 - (b) for minutes of proceedings at a meeting signed, in writing or by electronic means, by:
 - (i) the member who presided at the meeting; or
 - (ii) the member presiding at the subsequent meeting.

22 Delegation to subcommittees

- (1) The committee may:
 - (a) establish 1 or more subcommittees to assist the committee to exercise the committee's functions; and
 - (b) appoint 1 or more members of the association to be the members of the subcommittee.
- (2) The committee may delegate to the subcommittee the exercise of the committee's functions specified in the instrument, other than:
 - (a) this power of delegation; or
 - (b) a duty imposed on the committee by the Act or another law.

Note: The *Interpretation Act 1987*, section 49 deals with various matters relating to delegations.

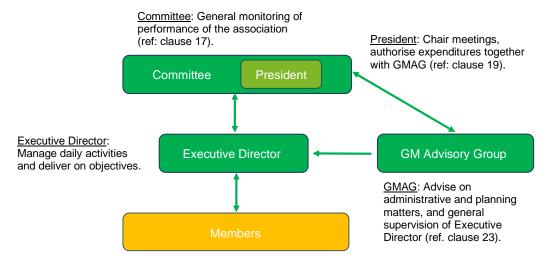
23 General Managers' Advisory Group (GMAG)

- (1) The committee must establish a General Managers' Advisory Group (**GMAG**) as a subcommittee under clause 22.
- (2) The GMAG must comprise of the General Manager of each Member Council, and must include the secretary.
- (3) The chair of GMAG must be appointed by the committee.
- (4) The role of GMAG is to:
 - advise on administrative and planning matters relating to the association;

- (b) exercise general supervision of the Chief Executive Officer or Executive Director of the association;
- (c) supervise the use of the association's resources, including the authorisation of expenses (within the then current budget as approved by the committee) in accordance with the association's financial delegations and authorisations schedule;
- (d) submit reports and recommendations to the committee for policy decision; and
- generally supervise projects and activities approved in the then current business plan.

24 Overview of governance structure

Without affecting the remainder of this constitution, an overview of the governance structure of the association is as follows:



Division 2 Procedure

25 Committee meetings

- (1) The committee must meet at least every 2 months each year (unless otherwise determined by the committee) at the place and time determined by the committee.
- (2) Additional meetings of the committee may be called by any committee member.
- (3) The procedure for calling and conducting business at a meeting of a subcommittee is to be as determined by the subcommittee.

Note: The Act, section 30(1) provides that committee meetings may be held as and when the association's constitution requires.

26 Notice of committee meeting

(1) The secretary must give each committee member written notice of a meeting of the committee at least seven days, or another period on which the committee members unanimously agree, before the time the meeting is due to commence.

- (2) The notice must describe the general nature of the business to be transacted at the meeting, which must include:
 - (a) matters of which notice has been given by a Member Council or its committee member;
 - (b) matters which the president thinks fit to submit to the meeting;
 - (c) consideration of reports from the GMAG;
 - (d) consideration of any recommendation or report by any committee; and
 - (e) consideration of any recommendation or report by any State Government department or community group.
- (3) The only business that may be transacted at the meeting is:
 - (a) the business described in the notice; and
 - (b) business that the committee members present at the meeting unanimously agree is urgent business.

27 Quorum

- (1) The quorum for a meeting of the committee is a majority of the total number of appointed committee members.
- (2) No business may be transacted by the committee unless a quorum is present.
- (3) If a quorum is not present within half an hour of the time the meeting commences, the meeting is adjourned:
 - (a) to the same place; and
 - (b) to the same time of the same day in the following week.
- (4) If a quorum is not present within half an hour of the time the adjourned meeting commences, the meeting is dissolved.
- (5) This clause does not apply to the filling of a casual vacancy to which clause 20 applies.

Note: The Act, section 28A provides for the filling of vacancies on the committee to constitute a quorum.

(6) The quorum for a meeting of any subcommittee (including the GMAG) is a majority of the total number of appointed subcommittee members.

28 Observers

- (1) The following may attend and observe committee meetings and subcommittee meetings (including the GMAG):
 - (a) a councillor of a Member Council; and
 - (b) a senior staff member of a Member Council.
- (2) With the consent of the those members of the committee or subcommittee (including the GMAG) at the meeting, observers may be invited to speak at the meeting.

29 Voting

- (1) A decision supported by a majority of the votes cast at a meeting of the committee or a subcommittee at which a quorum is present is the decision of the committee or subcommittee.
- (2) In the event of a vote being equal, the matter must be submitted again to the committee (or subcommittee as the case may be) for vote, and if the second vote is also equal, the matter remains unresolved and is not passed.

30 Acts valid despite vacancies or defects

- Subject to clause 27(1), the committee may act despite there being a casual vacancy in the office of a committee member.
- (2) An act done by a committee or subcommittee is not invalidated because of a defect relating to the qualifications or appointment of a member of the committee or subcommittee.

31 Transaction of business outside meetings or by telephone or other means

- (1) The committee may transact its business by the circulation of papers, including by electronic means, among all committee members.
- (2) If the committee transacts business by the circulation of papers, a written resolution, approved in writing by a majority of committee members, is taken to be a decision of the committee made at a meeting of the committee.
- (3) The committee may transact its business at a meeting at which 1 or more committee members participate by telephone or other electronic means, provided a member who speaks on a matter can be heard by the other members.
- (4) The member presiding at the meeting and each other member have the same voting rights as they would have at an ordinary meeting of the committee for the purposes of:
 - (a) the approval of a resolution under subclause (2); or
 - (b) a meeting held in accordance with subclause (3).
- (5) A resolution approved under subclause (2) must be recorded in the minutes of the meetings of the committee.

Note: The Act, section 30(2) and (3) contains requirements relating to meetings held at 2 or more venues using technology.

Part 4 General meetings of association

32 Annual general meetings

- (1) The association must hold the association's first annual general meeting within 18 months of the day the association was registered under the Act.
- (2) The association must hold subsequent annual general meetings within:

- (a) 6 months of the last day of the association's financial year, or
- (b) the later period allowed or prescribed in accordance with the Act, section 37(2)(b), with the intent that the meeting be held immediately following the last business meeting of the committee (proposed to be held in November of each year).
- (3) Subject to the Act and subclauses (1) and (2), the annual general meeting is to be held at the place and time determined by the committee.
- (4) The business that may be transacted at an annual general meeting includes the following:
 - (a) confirming the minutes of the previous annual general meeting and any special general meetings held since the previous annual general meeting;
 - receiving reports from the committee on the association's activities during the previous financial year;
 - (c) electing office-bearers and ordinary committee members;
 - receiving and considering financial statements or reports required to be submitted to members of the association under the Act; and
 - (e) an annual budget which must include:
 - the amount of proposed revenue and expenditure by the association;
 - (ii) the amount in hand available for such expenditure; and
 - (iii) any additional amount required to be raised to meet such expenditure.

Note: The Act, section 37(1) and (2) provides for when annual general meetings must be held

33 Special general meetings

- (1) The committee may call a special general meeting whenever the committee thinks fit.
- (2) The committee must call a special general meeting if the committee receives a request made by at least 5% of the total number of members.
- (3) A request under subclause (2):
 - (a) must be in writing;
 - (b) must state the purpose of the meeting;
 - (c) must be signed by the members making the request;
 - (d) may consist of more than 1 document in a similar form signed by 1 or more members;
 - (e) must be lodged with the secretary; and
 - (f) may be in electronic form and signed and lodged by electronic means.
- (4) If the committee fails to call a special general meeting within 1 month of a request under subclause (2) being lodged, 1 or more of the members

(5) A special general meeting held under subclause (4) must be conducted, as far as practicable, in the same way as a general meeting called by the committee.

34 Notice of general meeting

- (1) The secretary must give each member notice of a general meeting:
 - if a matter to be determined at the meeting requires a special resolution - at least 21 days before the meeting; or
 - (b) otherwise at least 14 days before the meeting.
- (2) The notice must specify:
 - (a) the place and time at which the meeting will be held;
 - (b) the nature of the business to be transacted at the meeting;
 - if a matter to be determined at the meeting requires a special resolution - that a special resolution will be proposed; and
 - (d) for an annual general meeting that the meeting to be held is an annual general meeting.
- (3) The only business that may be transacted at the meeting is:
 - (a) the business specified in the notice; and
 - (b) for an annual general meeting business referred to in clause 32(4).
- (4) A member may give written notice to the secretary of business the member wishes to raise at a general meeting.
- (5) If the secretary receives a notice under subclause (4), the secretary must specify the nature of the business in the next notice calling a general meeting.

35 Quorum

- (1) The quorum for a general meeting is a majority of the total number of members
- (2) No business may be transacted at a general meeting unless a quorum is present.
- (3) If a quorum is not present within half an hour of the time the meeting commences, the meeting:
 - (a) if called on the request of members is dissolved, or
 - (b) otherwise is adjourned:
 - to the same time of the same day in the following week, and
 - (ii) to the same place, unless another place is specified by the member presiding at the meeting at the time of the adjournment or in a written notice given to members at least 1 day before the adjourned meeting.
- (4) If a quorum is not present within half an hour of the time an adjourned meeting commences, the meeting is dissolved.

36 Adjourned meetings

- (1) The member presiding at a general meeting may, with the consent of the majority of the members present, adjourn the meeting to another time and place.
- (2) The only business that may be transacted at the adjourned meeting is the business remaining from the meeting at which the adjournment took place.
- (3) If a meeting is adjourned for at least 14 days, the secretary must give each member written notice, at least 1 day before the adjourned meeting, of:
 - (a) the time and place at which the adjourned meeting will be held, and
 - (b) the nature of the business to be transacted at the adjourned meeting.

37 Procedure and presiding member

- (1) The procedure at a general meeting of the association shall conform as far as possible with the procedure for meetings of Council and Committees as prescribed by regulations made under the *Local Government Act 1993* (NSW), and in accordance with this constitution and standing orders adopted by the association which are not in conflict with these, and subject to such arrangement as may be made from time to time by the association.
- (2) GMAG, the Executive Director, and senior staff of the association may speak at general meetings of the association as required by the discussion, business or agenda item.
- (3) The following person presides at a general meeting:
 - (a) the president; or
 - (b) if the president is absent 1 of the members present at the meeting, as elected by the other members.
- (4) The person presiding at the meeting does not have a second or casting vote.

38 Voting

- (1) A member is not entitled to vote at a general meeting unless the member has paid all money owed by the member to the association.
- (2) Each member has 1 vote.
- (3) A question raised at the meeting must be decided by:
 - (a) a show of hands; or
 - (b) if clause 40 applies an appropriate method as determined by the committee; or
 - (c) a written ballot, but only if:
 - the member presiding at the meeting moves that the question be decided by ballot; or
 - (ii) at least 2 members agree the question should be determined by ballot.

- (4) If a question is decided using a method referred to in subclause (3)(a) or (b), either of the following is sufficient evidence that a resolution has been carried, whether unanimously or by a majority, or lost, using the method:
 - (a) a declaration by the member presiding at the meeting; or
 - (b) an entry in the association's minute book.
- (5) A written ballot must be conducted in accordance with the directions of the member presiding.
- (6) A member cannot cast a vote by proxy.
- (7) In the event of a vote being equal, the matter must be submitted again to members for vote, and if the second vote is also equal, the matter remains unresolved and is not passed.

39 Postal or electronic ballots

- (1) The association may hold a postal or electronic ballot, as determined by the committee, to decide any matter other than an appeal under clause 13.
- (2) The ballot must be conducted in accordance with Schedule 2 of the Regulation.

40 Transaction of business outside meetings or by telephone or other means

- (1) The association may transact its business by the circulation of papers, including by electronic means, among all members of the association.
- (2) If the association transacts business by the circulation of papers, a written resolution, approved in writing by a majority of members, is taken to be a decision of the association made at a general meeting.
- (3) The association may transact its business at a general meeting at which 1 or more members participate by telephone or other electronic means, provided a member who speaks on a matter can be heard by the other members.
- (4) The member presiding at the meeting and each other member have the same voting rights as they would have at an ordinary meeting of the association for the purposes of:
 - (a) the approval of a resolution under subclause (2); or
 - (b) a meeting held in accordance with subclause (3).
- (5) A resolution approved under subclause (2) must be recorded in the minutes of the meetings of the association.

Note: The Act, section 37(3) and (4) contains requirements relating to meetings held at 2 or more venues using technology.

Part 5 Administration

41 Change of name, objects or constitution

An application for registration of a change in the association's name, objects or constitution made under the Act, section 10 must be made by:

- (1) the public officer, or
- (2) a committee member.

Note: The Act, section 10 provides that the application can only be made pursuant to a special resolution passed by the association.

In addition to the requirements under the Act, any proposed change to the association's constitution must be approved by the NSW Minister for Local Government.

42 Annual Budget and Additional Expenditure Statements

- (1) At each annual general meeting of the association, the committee must present an annual budget to the members for approval. If approved by members, that annual budget becomes the then current Annual Budget for the association. If the members do not approve the annual budget, the then most recently approved Annual Budget continues until superseded by another Annual Budget approved by members.
- (2) An Annual Budget must include:
 - the amount of proposed revenue and expenditure by the association for the financial year;
 - (b) the amount of revenue available for such expenditure; and
 - any additional revenue required to be raised to meet such expenditure.
- (3) In the event of any additional expenditure which is not covered by an Annual Budget, the association must prepare a statement (**Additional Expenditure Statement**) showing:
 - (a) the amount and nature of the additional expenditure;
 - (b) the amount of revenue available to meet the expenditure after allowing for estimated ordinary expenditure for the balance of the financial year; and
 - (c) the additional amount required to be raised to meet the additional expenditure.

43 Funds

- (1) Subject to a resolution passed by the association, the association's funds may be derived from the following sources:
 - (a) the entrance fees and annual subscription fees payable by members:
 - (b) fees for projects in which Member Councils have opted to participate;

- (c) any other fees and expenditures payable by Member Councils under clause 10;
- (d) grants and donations; and
- (e) other sources as determined by the committee.
- (2) Subject to a resolution passed by the association, the association's funds and assets must be used to pursue the association's objects in the way that the committee determines.
- (3) As soon as practicable after receiving money, the association must:
 - (a) deposit the money, without deduction, to the credit of the association's authorised deposit-taking institution account; and
 - (b) issue a receipt for the amount of money received to the person from whom the money was received.
- (4) A cheque or other negotiable instrument must be signed by 2 authorised signatories, which must include the president and the chair of the GMAG.

Note: The Act, section 36 provides for the appointment of authorised signatories.

- (5) All payments by the association made shall be reported to the committee.
- (6) The accounts of the association must be kept according to the same principles as the accounts of a Member Council, and in such books and form as are approved by the auditors.

44 Staffing

- (1) The association has the power to employ persons, on such terms as determined by the committee from time to time.
- (2) The association must comply with the requirements of the Local Government Act 1993 (NSW) and its regulations in relation to the engagement of employees.

45 Auditor

- (1) The association must appoint an auditor to audit the accounts of the association each year.
- (2) The audited accounts for the association must be presented to Member Councils at the annual general meeting each year.

46 Insurance

The association may take out and maintain insurance as appropriate for the association's assets and liabilities, including (where applicable) to minimise the risks in the areas of property, public liability, workers compensation, professional indemnity and directors and officer's insurance.

47 Non-profit status

Subject to the Act and the Regulation, the association must not conduct the association's affairs in a way that provides a pecuniary gain for a member of the association.

Note: See the Act, section 40.

48 Service of notices

- (1) For the purposes of this constitution, a notice may be given to or served on a person:
 - (a) by delivering the notice to the person personally;
 - (b) by sending the notice by pre-paid post to the address of the person; or
 - (c) by sending the notice by electronic transmission to an address specified by the person for giving or serving the notice.
- (2) A notice is taken to have been given to or served on a person, unless the contrary is proved:
 - for a notice given or served personally on the date on which the notice is received by the person;
 - (b) for a notice sent by pre-paid post on the date on which the notice would have been delivered in the ordinary course of post; or
 - (c) for a notice sent by electronic transmission:
 - (i) on the date the notice was sent, or
 - (ii) if the machine from which the transmission was sent produces a report indicating the notice was sent on a later date—on the later date.

49 Custody of records and books

Except as otherwise provided by this constitution, all records, books and other documents relating to the association must be kept in New South Wales, at the association's main premises, in the custody of either of the following persons, as determined by the committee:

- (1) the public officer;
- (2) a member of the association; or
- (3) if the association has no premises at the association's official address, in the custody of the public officer.

50 Inspection of records and books

- (1) The following documents must be available for inspection, free of charge, by members of the association and representatives of the NSW Office of Local Government (**OLG**) at a reasonable time:
 - (a) this constitution;
 - (b) minutes of committee meetings and general meetings of the association; and
 - (c) records, books and other documents relating to the association.
- (2) A member or OLG may inspect a document referred to in subclause (1):
 - (a) in hard copy, or
 - (b) in electronic form, if available.

- (3) A member or OLG may obtain a hard copy of a document referred to in subclause (1) on payment of a fee of not more than \$1, as determined by the committee, for each page copied.
- (4) The committee may refuse to allow a member or OLG to inspect or obtain a copy of a document under this clause:
 - that relates to confidential, personal, commercial, employment or legal matters, or
 - (b) if the committee considers it would be prejudicial to the interests of the association.

51 Financial year

The association's financial year is:

- (1) the period commencing on the date of incorporation of the association and ending on the following 30 June; and
- (2) each period of 12 months after the expiration of the previous financial year, commencing on 1 July and ending on the following 30 June.

Note: The Regulation, section 21 contains a substitute clause 44 for certain associations incorporated under the *Associations Incorporation Act 1984*.

52 Distribution of property on winding up

- (1) Subject to the Act and the Regulation, and subclause (2), in a winding up of the association, the surplus property of the association must be transferred to another organisation:
 - (a) with similar objects, and
 - (b) which is not carried on for the profit or gain of the organisation's members.
- (2) Surplus property that is property supplied by a government department or public authority, including an unexpended portion of a grant, if any, must be returned:
 - (a) to the department or authority that supplied it, or
 - (b) to a body nominated by the department or authority.
- (3) In this clause:

surplus property has the same meaning as in the Act, section 65.



PROPOSED SERVICE DELIVERABLES

To date, The Parks Executive Office has developed a Delivery Program that is aligned to the Local Government pillars of Infrastructure and Collaboration, Liveability, Productivity and Sustainability. The last Program such developed was for the period of 2022-2024 and already covered a range of projects and programs that were regionally-focused and designed to bring benefits to all eight Member Councils (attached to this document).

While a new Delivery Program will be developed in line with the new entity once it has been established, there are a number of ongoing programs that will be carried through, as below:

Infrastructure and Collaboration			
Planning	IC1: Work closely with the Authority in the ongoing development		
	of Bradfield City Centre to ensure its connectivity and contribution		
	to the wider Western Parkland City.		
	IC2: Provide collated feedback on the Western City Plan and work		
	with DPHI to ensure it meets the needs of Member Councils.		
	IC3: Work with Member Councils to develop a prioritised list of		
	major infrastructure projects.		
	IC4: Contribute to the discourse on housing and play a		
	collaborative role to resolve the issues in this space.		
	IC5: Continue to advocate for the protection of Metropolitan Rural		
	Areas (MRAs).		
Western Sydney	IC6: Implementation of land acquisition in growth areas.		
Planning Partnership	IC7: Develop the strategy for infrastructure funding for infill		
	growth in established areas.		
	IC8: Smart infrastructure planning and implementation.		
	IC9: Transport infrastructure structure planning through		
	implementing network plans.		
	IC10: Implementation of a framework for walkable 15-minute		
	neighbourhoods.		
	IC11: Develop plans for affordable rental housing supply.		
	IC12: Improve housing diversity and choice.		
	IC13: Plan for the supply of serviced employment lands.		
	IC14: Develop a metropolitan rural and environmental area		
	strategy.		
	IC15: Contribute to local disaster adaptation planning		
	IC16: Conduct a review of transport impact assessment and		
	parking standards.		
	IC17: Promote the street design standards model LEP and DCP		















	provisions.
	IC18: Collaborate with Aboriginal Land Councils in planning
Transport	IC19: Advocate for an integrated transport plan for the Western
Transport	Parkland City that supports passenger and freight movements.
	IC20: Contribute to the co-design of rapid bus services for Western
	Parkland City communities including routes to and from
	Campbelltown, Liverpool, Penrith and through Fairfield and
	Camden
Vibrant City Centres	IC21: Drive initiatives to activate our strategic centres and develop
Vibrant City Centres	world class metropolitan centres connected to and enhanced by
	Bradfield.
Relationship Building	IC22: Support the implementation of effective Tripartite Forum
Relationship building	meetings through the identification of important topics and
	transparent communication.
Advocacy	
Advocacy	IC23: As the Local Government representative within the tri-level (City Deal) Delivery Office, strongly advocate for the needs of local
	government and provide the communication channel to ensure
	the three levels of government continue to collaborate on delivering the joint vision for the Western Parkland City
	· · · · · · · · · · · · · · · · · · ·
	IC24: Continue to conduct research and build the evidence base
	for the needs of the Western Parkland City
	IC25: Continue to advocate tirelessly for the delivery of the Sydney
	Metro – Western Sydney Airport North-South Rail Link and the
	South West Rail Link extension and further, to connect all strategic
	centres in the Western Parkland City to the airport and
	metropolitan cities via rail.
	IC26: Continue to build the profile of The Parks through
	participation in key events and working on significant projects in
	collaboration with State Government agencies and the other
Live ob Hite.	ROCs.
Liveability	
Digital Equity and	L1: Share the pilot program results across other Council areas and
Inclusion Program	share other best practice case studies.
Ü	L2: Continue to work with State and Federal Government agencies
	to improve digital equity in the Western Parkland City by accessing
	further funding to overcome the issues identified in the ADII
	report.
Western Sydney	L3: Work with the Program Manager, Chair and Steering
Health Alliance	Committee to determine the work plan and address issues in the
	Western Parkland City related to health outcomes including:
	- Development of a White Paper on Walking and Cycling
	Strategy;
	 Developing an online community of practice and resources
	as a follow up to our Increasing resilience to climate
	change report;
	- Organise a webinar on land use planning for equity in
	1 S. Barrise a free man of raina ase plaining for equity in

	health outcomes;				
	 Health Lens Toolkit developed and its use in Land Use 				
	Planning advocated for across stakeholders;				
	- Work in partnership to develop tools to increase the usage				
	of walking tracks and open spaces in the WPC;				
	 Development of a WPC Healthy Food and Drink Policy; 				
	- Provide support in building the capacity of the healthcare				
	precincts.				
Productivity	r				
•					
Economic	P1: Work with WPCA to finalise the EDS and implement the Action				
Development	Plan, as per the Roadmap, including:				
	Developing a regional coordination body for economic				
	development;				
	2. Creating an action plan to operationalise and monitor the				
	implementation of the EDS;				
	3. Overseeing a regional level review of housing and				
	employment lands;				
	4. Reviewing procurement policies to drive regional tendering				
	and support local work opportunities;				
	5. Support the manufacturing and freight & logistics sectors;				
	6. Leverage WPCA's aerotropolis industry forum to build				
	networks and identify supply chain opportunities.				
	P2: Work on opportunities to publicise and simultaneously				
	broadcast business-focused workshops across all Business Hubs to				
	leverage available resources and maximise value/impact.				
	P3: Grow tourism capabilities and work with Destination NSW to				
	improve and understand tourism data and develop tourism				
	packages and build the Western Parkland City brand.				
	P4: Proactively engage with the 24 hour Commissioner and other				
	relevant Government agencies to grow the night-time economy				
	across the Western Parkland City				
Investment Attraction					
investment Attraction	P5: Revise and distribute the Investment Prospectus for the				
	Western Parkland City. Keep it updated/relevant.				
	P6: Provide support to WSIAO to help progress investment				
Consort City	opportunities across the WPC.				
Smart City	P7: Oversee the implementation of the remaining two projects in				
	the Cyber Security Uplift Program, ensuring that all member				
	councils gain the benefits of the vCISO service and access the				
	cyber security framework template.				
	P8: Continue to drive the development of the Open Data Portal				
	with a focus on enabling economic, social and environmental				
	outcomes.				
Surplus Government	P9: Continue to support initiatives to utilise surplus government				
Land	land to drive jobs growth.				

Sustainability	
Greater Sydney Waste	S1: Contribute to and support the development of an
Leadership Forum	infrastructure and processing capacity plan for Greater Sydney
	S2: Collaborate on the cataloguing of waste projects and reports
	S3: Collaborate and support the economic analysis of local
	government waste procurement and potential alternate delivery
	models
Circular Economy	S4: Support and provide information to the mapping of key
	material flows and associated net zero waste emissions
	S5: Contribute to the development of Organic Waste and Circular
	Technologies Pattern Books
	S6: Support the Program Manager for the Materials Management
	Alliance to run a Regional Procurement program for difficult waste
	products such as e-waste, tyres, solar panels and so on.
	S7: Work with Peclet and the Open Data teams to trial a pilot
	'waste generators- waste takers' matching program focused on
	the pet food sector.

STRATEGIC ALIGNMENT

Linked to Delivery/Operational Plan

All the Customer Service Programs, Delivery Programs and Operational Plans of the eight member Councils align with the Western City Plan, which itself derives from *The Metropolis* of *Three Cities Report*, produced by the Greater Sydney Commission.

The Metropolis of Three Cities foresaw Sydney's future as a metropolis of three unique but connected cities: a Western Parkland City west of the M7, a Central River City with Greater Parramatta at its heart and an Eastern Harbour City. It outlined Ten Directions to deliver desired outcomes under the four key themes of Infrastructure and Collaboration, Liveability, Productivity and Sustainability, as per below. Many of these identified 'directions' became incorporated into the Western Sydney City Deal, for which The Parks office was designed to track and assist in its implementation but also all are included in the Western City Dsitrict Plan.

Each of the Ten Directions are outlined below and the Programs/Actions contained within The Parks' Delivery Program that align with each are identified.

Infrastructure and Collaboration

A City Supported by Infrastructure – aligning infrastructure to growth through GICs and in a way that will meet future needs. This includes better utilisation of existing assets.

The Parks' aligned actions: IC3, IC6, IC7, IC8, P1, P9

 $^{^{\}rm 1}$ A Metropolis of Three Cities, Greater Sydney Commission, p.?

A Collaborative City – Focusing on government, industry and local communities collaborating to maximise use of resources such as public spaces.

The Parks' aligned actions: IC2, IC4, IC18, IC22, IC23, IC26, P6, P7, P8

Liveability

A City for People – Ensuring that services and infrastructure meet communities' changing needs and that the use of available public land is optimised for social infrastructure. Also that our communities are healthy, resilient and socially connected, irrelevant of their demographic profile.

The Parks' aligned actions: IC24, L1, L2, L3, P8

Housing the City – Providing housing supply and a range of diverse housing types through the development of housing strategies and housing targets

The Parks' aligned actions: IC4, IC11, IC12

A City of Great Places – Developing well-designed and appealing places that bring our communities together and in which environmental heritage is identified, conserved and enhanced.

The Parks' aligned actions: IC5, IC14, IC17, IC21, P4

Productivity

A Well-connected City – Focusing on integrating land use with transport planning to create walkable, 30 minute cities and a network of strategic centres that offer jobs, goods and services.

The Parks' aligned actions: IC9, IC10, IC16, IC19, IC20, IC25

Jobs and Skills for the City – Leveraging the construction of the Western Sydney International Airport and Aerotropolis as economic catalysts and connecting them to the Western Parkland City and beyond to boost local jobs and economic growth. Foster internationally competitive health, education, research and innovation precincts.

The Parks' aligned actions: IC1, IC13, L3, P1, P2, P3, P4, P5, P6, P9

Sustainability

A City in its Landscape – Protect the waterways, bushland, rural and urban areas and the biodiversity that each represents and create a cool and green parkland city with scenic and cultural landscapes and enhanced public open spaces.

The Parks' aligned actions: IC2, IC5, IC10, IC14, IC17, IC18, IC21, IC24, L3, P3

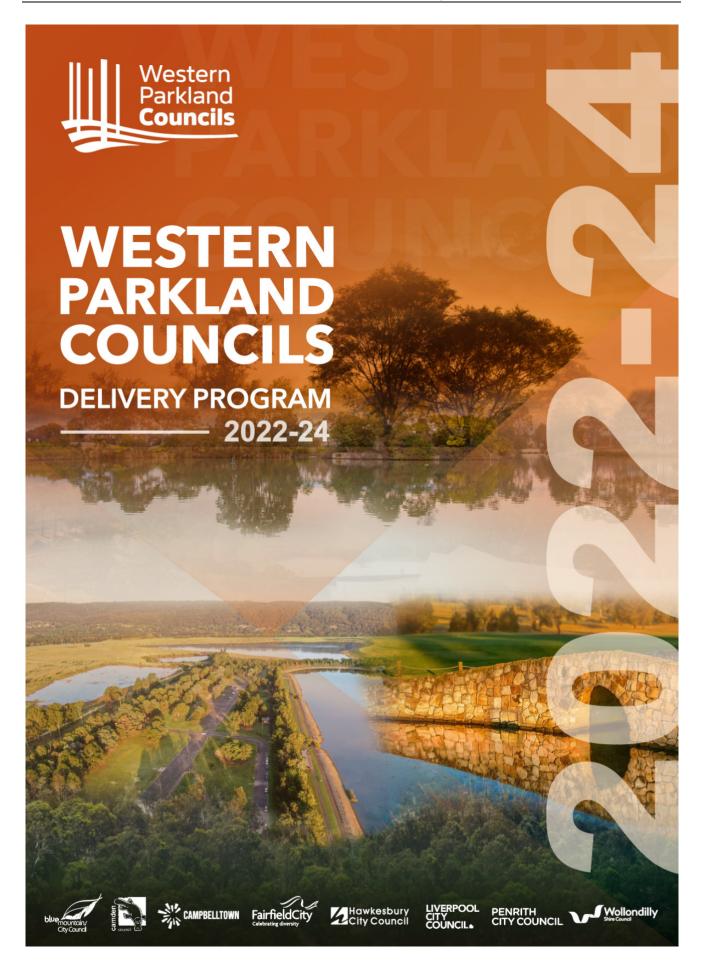
An Efficient City – Implement strategies to contribute to net-zero targets and mitigate against climate change impacts, with a focus on the development of a circular economy.

The Parks' aligned actions: S1, S2, S4, S5, S6, S7

A Resilient City – Help our people and places to be resilient and adapt to climate change and reduce their exposure to natural and urban hazards such as heatwaves, bushfires and floods.

The Parks' aligned actions: IC15, L3, P8, S6

As can be seen, by having The Parks shift to an s358 entity, it would enable the continued and enhanced pursuit of region-wide initiatives that will help realise the vision set out for the Western Parkland City in both The Metropolis of Three Cities and the Western City Plan while simultaneously contributing to its member councils' economic performance and community service responsibilities.



MESSAGE FROM THE MAYORS

This year marks four years since the City Deal was signed in March 2018 between the eight Councils of the Western Parkland City and the Australian and New South Wales Governments and three years since the Councils committed formally to working collaboratively for our region through the formation of the Western Parkland Councils.

During that time, many strategic regional priorities have been identified and progressed, opportunities for inter-governmental collaboration have been explored and a clear advocacy agenda has been developed. A strong and healthy relationship between the eight local government partners has been fostered and a mutual respect and understanding continues to be solidly in place.

This past year has continued to see our region confronted by significant challenges. We first had the bushfires, then the floods, and then the impact of COVID 19 with its long and severe lockdowns that led to jobs losses, financial pressures, health insecurities, and sadly, the loss of loved ones. The ongoing impacts of so many ordeals within a relatively short period of time has taken a significant mental toll on many in our communities and challenged us as leaders to support their resilience. Despite this, there is much to be grateful for.

We are proud of how our communities have come together to help each other, support each other and start rebuilding. We are also proud of and grateful to all our amazing staff who have worked hard to minimise disruption of services to the community despite the restrictions and resourcing issues. It is said that when the going gets tough, the tough get going and that is truly what the communities of the Western Parkland Councils have done. They have shown they are tough, resilient and willing to work hard and contribute to this region.

As Mayors, we consider it an honour and a privilege to be elected to serve these communities. We have made great progress, with many exciting local projects also on the horizon such as state of the art sporting facilities, town centre improvements and recreational facilities just to name a few.

We are keen to raise the profile of our metropolitan centres and enhance what already makes our region a great place to live. We are committed to seizing the economic opportunities that the new **Western Sydney Airport** and the development of Bradfield will bring, including the creation of more **local jobs** for our residents.

Our aim is also to make the Western Parkland City an even better place to live, play and raise a family by increasing the number and quality of parks, gardens and public spaces, continuing to maintain our footpaths and roads and ensuring they are high quality, strengthening our appeal as a tourist destination and protecting our environment.

We will continue to leverage off the City Deal and the tri-level government partnerships to ensure the Western Parkland City receives the infrastructure and services it requires to successfully manage the growth that is occurring while still being able to maintain the unique character of our cities, towns, centres and villages, rural and scenic beauty of our landscapes and a sustainable environment.

This Delivery Program sets out the activities we will pursue as a collective to achieve outcomes for our communities.



Cr Mark Greenhill OAM Mayor | Blue Mountains City Council



Therese Fedeli

Cr Therese Fedeli

Mayor | Camden Council



George Greiss Mayor | Campbelltown City Council



Frank Carbone
Mayor | Fairfield City Council



Patrick Conolly

Mayor | Hawkesbury City Council



Ned Mannoun

Mayor | Liverpool City Council



Tricia Hitchen
Mayor | Penrith City Council



Matt Gould

Mayor | Wollondilly Shire City Council



Acknowledgement

The Western Parkland Councils acknowledge the traditional owners of the lands that include this region: the Darkinjung, Dharawal, Dharug and Gundungurra peoples, and the living culture of the traditional custodians of these lands.

We also respectfully recognise that the traditional owners have occupied and cared for this Country over countless generations, and celebrate their continuing contribution to the life of this region.

DELIVERY PROGRAM 2022-2023



	ving values underpin the Western Parkland alliance and our shared vision for how the councils will work together:	
UNITED	We are one partnership with many goals. We take individual and collective responsibility for achieving shared objectives	
CLEVER	We strive for excellence, embrace change and find clever ways to make sure our region will thrive and flourish in a sustainable and enduring way	
COMMUNITY MINDED	We hold conversations, build relationships and act in the best interests of our eight communities—they are at the heart of all we do	1
FAIR	We work together across all eight Council areas to achieve shared successes that will benefit our communities equitably	
RESPECTFUL	We commit to a partnership that acknowledges and respects the opinions, needs and perspectives of each Member Council, regardless of size or status	- C
TRUSTED	We are open, honest and straightforward with each other and our communities and lead by example	
	e Western Parkland City is one of the fastest growing areas of Aus a thriving region of diverse communities, economic opportu vironmental wonders that links Greater Sydney to the rest of New South	ınity and

ABOUT THE REGION

The Western Parkland City is one of the fastest growing areas of Australia – a thriving region of diverse communities, economic opportunity and environmental wonders.

The region's large tracts of bushland, scenic hills, floodplains, gorges, rivers and waterways weave through urban neighbourhoods, farmland, rural towns and villages. The area is framed by enviable World Heritage-listed landscapes and intersected by the Hawkesbury-Nepean and Georges Rivers and South Creek.

This is a region where town and country meet, from the peri-urban lands that continue to feed Greater Sydney to established, flourishing centres that offer a mix of jobs, educational opportunities and places to socialise. The diverse history and landscape of this area supports a polycentric region with places of unique heritage and character and new suburbs and centres continuing to emerge in response to rapid growth.

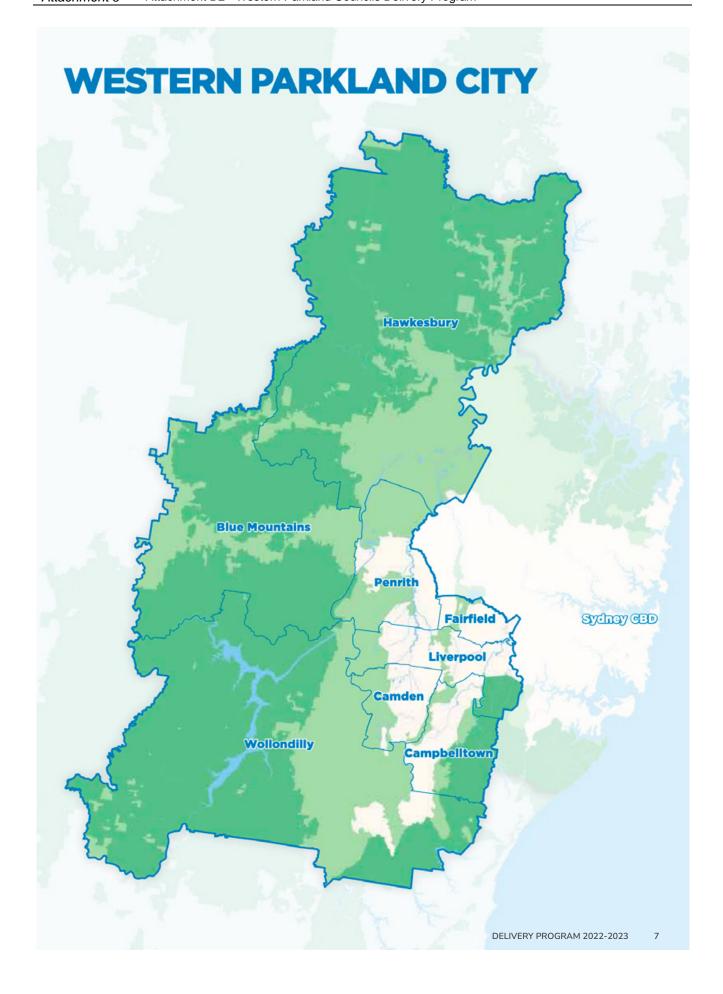
People and businesses benefit from a diverse economy powered by health, education and retail sectors, hospitality and industrial activities including advanced manufacturing, trade and logistics, tourism and mineral resources.

Governments at all levels have recognised the importance of the Western Parkland City to the economic future of Australia, with investment in key infrastructure worth more than \$20 billion committed and major transport, health and education projects currently underway.



















DELIVERY PROGRAM

This Delivery Program has been compiled in consultation with the Lead Officers and General Managers of all eight Western Parkland Councils and is designed to encompass the objectives and overall strategic intents of each. It draws upon the Western Parkland Councils 2020-21 Delivery Program, the Western Parkland Councils Joint Action Plan, the Western Sydney Planning Partnership Strategic Work Plan and Western Sydney Health Alliance Strategic Plan. It also considers the commitments of the Western Sydney City Deal, the Western City District Plan and other important regional initiatives. This Delivery Program outlines the key actions the Western Parkland Councils will work on together between 2022 and 2024 in the realisation of our vision for the region.

The Delivery Program is presented using the four themes identified in the framework for the Western City District Plan.



Complimentary to the actions outlined in this Delivery Program, the Western Parkland Councils will continue to support the governance arrangements for the Western Sydney City Deal through the Delivery Office as well as the operations of both the Western Sydney Planning Partnership and Western Sydney Health Alliance.

MONITORING PERFORMANCE

Given the complexity of the Western Parkland City environment and the various changes in approach necessitated by urban and natural hazards, changing political environments and shifts in economic realities and social trends, regular monitoring and reviews are essential. By so doing, we can ensure this document remains pertinent and our activities logical and appropriately designed to meet our strategic objectives. We will also seek opportunities to augment the proposed actions when additional funding can be secured for innovative sector or industry-specific projects and/or new beneficial partnerships can be established that allow for further regional initiatives, such as with the various Regional Organisations of Councils, Resilient Sydney or community groups.

The Western Parkland Councils will monitor and report annually on the implementation of the activities and projects outlined in this Delivery Program. In addition, we will monitor the performance measures being tracked by the Western Parkland City Authority in its reporting on the Western Sydney City Deal Commitments, which encompass:

- Realising the 30 minute City by delivering public transport for the Western Parkland City
- Creating 200,000 jobs by supercharging the Western Parkland City
- Skilling our residents in the region and initiating new education opportunities
- Respecting and building on local character, enhancing liveability and improving the quality of the local environment
- Innovative approaches to planning and delivery of housing
- Getting on with delivering the Western Parkland City through enduring tri-level governance.

In addition we will monitor the review of the District Plan due for completion by the Greater Cities Commission (formerly Greater Sydney Commission) and the four key measures that they track progress against, namely:

- Jobs, education and housing
- 30 minute City
- Walkable places
- Addressing urban heat

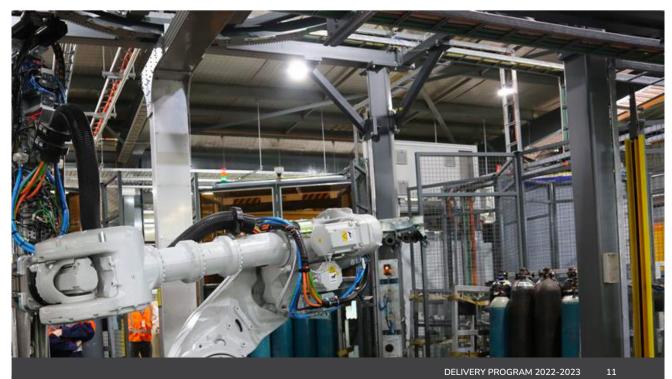
Lastly the Western Parkland Councils has been integrally involved in the three year review of the Western Sydney City Deal and as such, will oversee the implementation of its recommendations, many of which are designed to 'refresh' the City Deal and make it more effective and applicable to the current environment.











INFRASTRUCTURE & COLLABORATION



Given the pace and volume of growth within the Western Parkland City, ensuring that we build the infrastructure our communities need in the right places at the right time is absolutely critical. This requires not only good planning and due consideration of both current and future needs but comprehensive collaboration between all three levels of government, industry and the community. By identifying place-based infrastructure priorities, we should be able to better align growth with infrastructure and both maximise the use of existing infrastructure while understanding the relative costs and benefits of new developments.

While we understood and supported the Airport and Aerotropolis being the original focus for the PICs and acknowledge the expansion to include the Leppington corridor, there is still so much of the Western Parkland City that requires the same attention. In particular, we believe the next stage of work should be focused on developing the evidence base for coordinated infrastructure and housing planning for the Macarthur region and the southern part of the South-North Rail. It is important to remember that the realisation of the entire South-North rail line, from Schofields to Macarthur(and east to Leppington) was and is the centrepiece of the City Deal and the 'non-negotiable' project put forward by all eight Councils as a group.

One of our core priorities is to enhance the connectivity of our region and improve all key transport links, which includes rapid bus services, road and motorway networks and active transport. This will improve the liveability of the region for residents by providing easy access to jobs, and supporting the growth of local industries so that all our communities can benefit from the developments taking place.

Digital connectivity is also crucial and as the COVID 19 lockdowns showed us, becoming an essential daily tool for work, study, play and health. We will continue to advocate for an inclusive, digitally capable region with fast, reliable and affordable digital connectivity. We remain committed to working in partnership with the relevant NSW State and Federal Government agencies to provide strong leadership and the local government view in representing our communities' needs. We will continue to promote the region's requirements and to advocate for appropriate investment in critical infrastructure, as and when it is required.





CURRENTLY FULLY RES	OURCED NOT CURRENTLY FULLY RESOURCED (ie requires additional funding from partners)	22/23	23/24
PRINCIPLE	ACTIONS		
Blueprint/EDR	Work collaboratively with WPCA to finalise the Blueprint and Economic Development Roadmap	•	_
3 Year Review	Work collaboratively with WPCA and the Federal Government to finalise the 3-year review and launch the report publicly.	•	_
	Undertake the implementation of the agreed recommendations	•	•
Planning	Support the review of the City and District Plans with the WSPP & GCC	•	•
	Participate in the design and implementation of 5G infrastructure trials	0	0
	Contribute to the detailed co-design of rapid bus services for WPC communities including routes to and from Campbelltown, Liverpool, Penrith and through Fairfield	0	0
30 Minute City	Push for a commitment to a roads package that supports passenger and freight movement and enables a 30-minute city.		•
Smart City	Work closely with the Smart Places team to implement the Digital Action Plan, and identify and implement WPC-wide initiatives that incorporate digital solutions into future infrastructure planning	•	•
	Work with the WSPP on smart infrastructure specifications and (green) street infrastructure strategies	•	•
Vibrant City Centres	Drive initiatives to activate our strategic centres and develop world class metropolitan centres enhanced by Bradfield	•	•
Advocacy	Implement the WPC Advocacy Strategy, including the development and building awareness of Key Messages	•	•
	Continually advocate for the delivery of the Sydney Metro – Western Sydney Airport South-North Rail Link and the South West Rail Link Extension	•	•
	Advocate for a commitment to connect all strategic centres in the Western Parkland City to the airport and metropolitan cities via rail	•	•

CURRENTLY FULLY RES	OURCED OURCED (ie requires additional funding from partners)	22/23	23/24
PRINCIPLE	ACTIONS		
Advocacy	Advocate for the finalisation of all freight corridors to the new intermodal (rail/road)	•	•
	Advocate for an integrated transport approach, which includes the Outer Sydney Orbital Project, corridor gazettal, Strategic Business Case development and so on	•	•
	Social Media Strategy and Marketing Campaign	•	•
	Distribution of a regular newsletter	•	•
	Run inaugural annual Western Parkland Councils conference	•	•
	Participate in the various Committees and groups related to the development of the Aerotropolis so as to be able to advocate for Councils and ensure that State and Federal Governments are aware of and able to leverage existing strengths and capabilities within the broader Western Parkland City	•	•
Relationship Building	Build relationships with State and Federal Government representatives/ Departments and ongoing commitment to tri-level governance to achieve shared goals. Consider further Relationship Agreements	•	•
	Work with the various ROCs on Circular Economy and Waste strategies	•	•
	Build relationships and alliances with relevant non-government organisations such as universities, business chambers, community organisations and so on	•	•
	Find new ways for three levels of Government to work together and 'fail forward' including exploration of innovative funding models	•	•

LIVEABILITY



Our vision for the Western Parkland City is that it is an appealing and eminently liveable city. One that offers its residents the amenities, built and natural environments, social stability and equity, educational opportunity, diversity of affordable housing, access to good, local jobs and cultural, entertainment and recreation opportunities that allow a high quality of life. To achieve this, we need to ensure we have the infrastructure and services in place to meet people's needs both now and in the future, both creating and renewing great public places, centres and open spaces.

We are already blessed to enjoy World Heritage listed bushland, historic and picturesque towns and villages, a network of beautiful rivers, peaceful rural vistas, and multicultural hubs bursting with diverse cultural experiences and areas rich in Aboriginal history. We can offer it all - suburban and rural lifestyles with city benefits.

However, the needs of our communities are diverse. We know that we can expect significant population growth over the next 20 years and that while couples with children are likely to remain the dominant household type, our populations are aging and the number of single person households is growing. Some of our communities will begin again (as restrictions due to COVID 19 ease) to welcome large numbers of migrants and refugees, placing additional pressure on services.

We also know that we need a greater range of and more affordable housing choices for our residents and we need to tackle the growing challenges of extreme weather events such as floods and bushfires as well as urban heat. We also need to ensure that we consider, plan and provide for the changing needs of our communities as they age and our demographics shift, by providing the schools, playgrounds, sports fields, libraries, community centres, aged care and health care facilities they need.



LIVEABILITY PROGRAM

Jointly funded by the three levels of government, the Western Parkland City Liveability Program has been responsible for providing vital community infrastructure such as parks, sporting facilities, playgrounds, water parks, rejuvenated town centres and art and cultural event spaces. To date, 12 projects have been completed with 16 left to complete this year and next. These projects not only contribute to the liveability of the Western Parkland City through improved facilities, they also have created new jobs and acted to stimulate the local economies.



CURRENTLY FULLY RESO	OURCED OUT CURRENTLY FULLY RESOURCED (ie requires additional funding from partners)	22/23	23/24			
PRINCIPLE	ACTIONS					
Housing Diversity/ Affordability	Support Councils to continue to work with the State Government through the Planning Partnership in the development and implementation of a regional affordable housing strategy	•	0			
Digital Equity and Inclusion	Establish a Digital Equity and Inclusion Office to research, collate data and develop case studies of the deepest pockets of digital inequity within the Western Parkland City	•	0			
Liveability	Work with Councils to pursue capital work projects funded under the Liveability Program	•	•			
Active Transport	Identify and deliver active regional transport connections					
Resilience	Document and share best practice case studies regarding responses to drought, bushfires, flooding and the COVID 19 pandemic to inform improved emergency management and business continuity and plans	0	0			
	Finalise Increasing Resilience to Climate Change report, and raise awareness and undertake implementation of its recommendations	•	0			
Health and Wellbeing	Determine WSHA's future strategic work plan in consultation with Councils and other stakeholders	•	_			
	Drive the creation of a world class health and education network throughout the Western Parklands City	0	0			
Advocacy	Advocacy Advocate for the health and well-being of the communities of the Western Parkland City	•	•			













PRODUCTIVITY



Within the economic powerhouse of a State that is New South Wales, the Western Parkland City is an area experiencing unprecedented growth. Our population is predicted to grow at a rate of 2.4% a year, bringing the population up to 1.7 million people by 2036; representing 25% of NSW's population growth over this period. Major Government investment is being made with a new 24 hour international airport taking shape and a 22nd century city being built from the ground up next door in Bradfield (Aerotropolis).

Across the 3 metropolitan centres of Liverpool, Penrith and Campbelltown, as well as strategic centres throughout the City, we already have a range of businesses as well as significant and diverse industrial precincts, which offer value add opportunities and supply chain connections. We need to build on these while also looking strategically to exploit the opportunities being offered by the airport, such as food export and agribusiness opportunities and freight and logistics links. We also need to be proactive about ensuring we link existing industry strengths into the various precincts being developed within the Aerotropolis such as defense, education and health and advanced manufacturing so that it can be a catalyst for economic growth.

We will continue to focus on how to activate our strategic centres to improve amenity and liveability but also access for our residents to local jobs. We will also work harder to promote the amazing opportunities that exist now as well as those to come in terms of investment.

We plan to identify industry clusters and build on our existing capabilities as well as implementing strategies to foster innovation and build globally competitive capabilities such as our health and education sector.

A key aspect of productivity is having the appropriate tools, systems and equipment in place so we will continue to work closely with key NSW State and Federal Government partners as well as industry and community organisation stakeholders to ensure the Western Parkland City is a Smart City.

While not listed as an action within this section, it should be noted that ensuring the transport connectivity networks are in place to ensure our workers and residents are able to access the airport and Aerotropolis easily is absolutely fundamental, and hence remains a high priority.

30 - MINUTE CITY

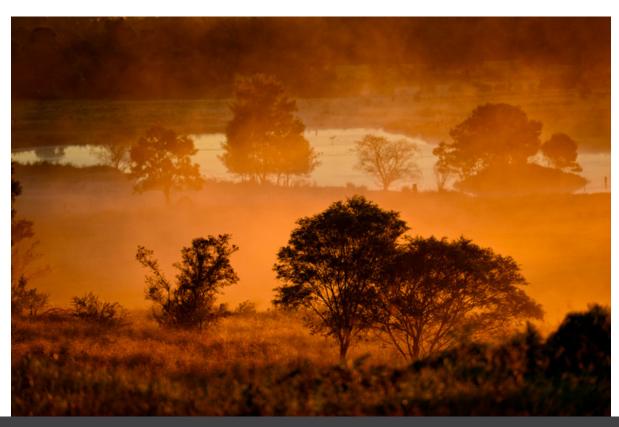
As part of our drive towards realising highly liveable strategic centres, we remain focused on implementing a 30 minute city, while daring to dream of a 15 minute one! What does this mean?

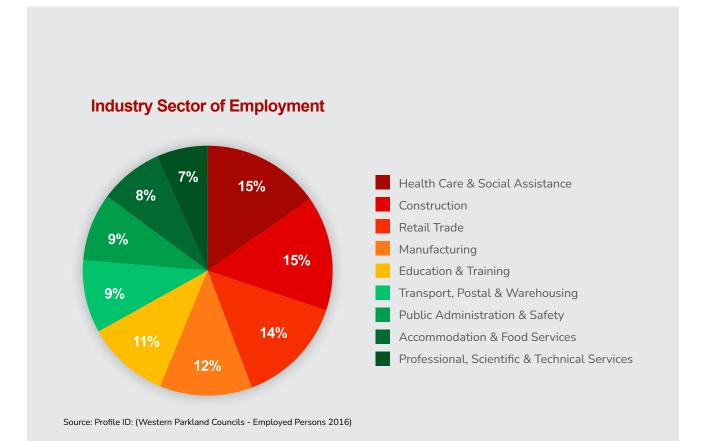
It means that when making decisions regarding where transport options, housing, jobs, educational facilities, health care facilities and amenities are located, we do so with the overarching strategy of ensuring it will provide efficient and easy access, within 30 minutes, for our communities. We want people to be able to go to their job or go to school, enjoy an evening out or utilise essential professional services without having to travel further than 30 minutes. COVID19 and the shift to online working models has both heightened this need and helped to bolster support to move in this direction.



EMERGING INDUSTRY OPPORTUNITIES

- 1. With the opening of a 24 hour 7 day a week international airport that will sit near major road networks, intermodals and the planned Western Sydney Freight Line, significant opportunities exist for the already large Freight and Logistics sector to expand.
- 2. The easy access to national and international markets this sector will in turn provide to the Agribusiness sector will also drive growth in this industry. We are blessed to have in our region leading research institutions such as the Elizabeth Macarthur Agricultural Institute, the Australian Botanic Gardens (and recently opened Herbarium), University of Sydney's innovative agricultural production methods.
- wonderful opportunity to leverage our existing World Heritage listed eco-tourism assets, adventure facilities, arts and cultural experiences, creative industry events and agri-tourism offerings exists, which should see our **Visitor Economy** grow fast.
- 4. We are hugely proud of the beauty of our rural and scenic vistas and are determined not to lose them. As a result, we are equally driven to focus on implementing measures and tools that will contribute to a Circular Economy, and allow a transition to an industrial ecology.







CURRENTLY FULLY RE	SOURCED ONT CURRENTLY FULLY RESOURCED (ie requires additional funding from partners)	22/23	23/2
PRINCIPLE	ACTIONS		
Investment Attraction	Develop and distribute a new Investment Prospectus for the Western Parkland City	•	_
	Collaborate with WSIAO to develop tangible actions to drive industry/business development	•	
	Provide support to WSIAO and act as a concierge to help progress investment opportunities across the WPC	•	
Economic Development	Work collaboratively with WPCA to finalise the EDR and conduct 'deep dives' into each targeted industry	•	C
	Collate information on Business Hubs in the region and create a 'landing page' on the Western Parkland Councils website linked to each.	•	-
	Work on opportunities to publicise and simultaneously broadcast business focused workshops across all the Business Hubs to leverage available resources and maximise value/impact	•	
	Develop and implement a series of workshops designed to appeal to various industry segments so as to collect data on industry composition and identify key opportunities for growth	0	
	Work with the Department of Enterprise, Investment and Trade to bring key stakeholders together to develop and implement initiatives focused on economic growth	•	C
	Develop a Western Parkland City Destination Management Plan linked to the region's history and iconic environment (blue-green grid) and employment and economic outcomes	0	C
	Proactively engage with the 24 hour Commissioner and other relevant Government agencies to improve conditions and opportunities to grow the night-time economy across the Western Parkland City	•	C
Post COVID 19 SME support	Create a 'one stop shop' of resources, tools, advice and support for SMEs to recover post COVID and build community resilience to plan, prepare and respond to shocks and stresses	0	

CURRENTLY FULLY RES	OURCED OUT CURRENTLY FULLY RESOURCED (ie requires additional funding from partners)	22/23	23/24	
PRINCIPLE	ACTIONS			
Waste and Circular Economy	Conduct research to identify waste streams and gain a clear picture of waste outputs and inputs in the region	•	0	
	Seek grant funding for the implementation of projects that focus on the reduction, reuse and/or recycling of waste streams to drive towards a circular economy			
NETM Skills Development				
Local Jobs for Local People	Participate in Local Job Taskforces and share key intelligence so as to increase the number of local jobs	•	•	
Smart City	Smart City Work with the Smart Places team in the identification of and implementation of Smart City initiatives to drive the ongoing implementation of the Digital Action Plan	•	•	
	Drive the development of the Open Data portal with a focus on enabling economic, social and environmental outcomes	0	0	
Surplus Government Land/Serviced Employment Lands	Continue to drive initiatives to identify and facilitate projects that utilise surplus government land to drive jobs growth	0	0	













SUSTAINABILITY



The Western Parkland City is blessed with an abundance of green open spaces and bushland and is criss-crossed by waterways including the Hawkesbury Nepean River, South Creek and the Georges River. In fact, around 63% of the Western Parkland City is protected natural areas including world heritage and nature reserves, drinking water catchments and cultural heritage areas. While we are lucky to have been so endowed by a rich natural environment, it is incumbent on us, as it is on the rest of the world, to adopt more sustainable practices. We must act now to preserve our 'green and blue grid' and protect the biodiverse ecosystems it represents by both optimising and protecting existing assets. We must become more efficient and innovative in the generation, use and re-use of energy, water and waste, and investigate ways to manage our water and tree canopies in

environmentally friendly ways that provide naturally cool oases in our urban landscapes.

As recent events such as the bushfires, droughts and floods have shown us, we must become more resilient and less vulnerable to the shocks and stresses of such natural and urban hazards. We can do this by working together to reduce the exposure of our communities to such challenges, drawing upon recent experiences and learning from each other to develop better management practices and increase resilience. We must also play an active role in identifying the steps, and encourage all stakeholders within government, industry and the community in the adoption on circular economy approach so as to achieve a low carbon and more sustainable future.

CURRENTLY FULLY RES	DURCED NOT CURRENTLY FULLY RESOURCED (ie requires additional funding from partners)	22/23	23/24
PRINCIPLE	ACTIONS		
Circular Economy	Conduct research to identify waste streams and gain a clear picture of waste outputs and inputs in the region	•	0
	Work with relevant stakeholders to build awareness of and proactively work towards adopting a Circular Economy policy	•	0
Sustainability	Sustainability Work with relevant stakeholders to create and implement a comprehensive regional biodiversity strategy that protects and preserves our environmental assets and parkland character and biodiversity	0	0
	Advocate for sustainable building developments	•	•
Microfactory	Microfactory Pursue funding to set up UNSW's Microfactory in the Western Parkland City		0
Positive Perceptions of the Western Parkland City	Utilise social media and any available forums and channels to promote positive images of the Western Parkland City that encourage investment and fuel community pride, making it a "City of Choice"	•	•

CONTACT

WESTERN PARKLAND COUNCILS

contact@wpcouncils.nsw.gov.au www.wpcouncils.nsw.gov.au

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References

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Disclaimer

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THE PARKS' RISK MANAGEMENT PLAN

Strategic (failed business decisions), Operational (breakdowns in internal processes/procedures), Financial (financial loss), External (uncontrollable sources)

Category	Risk Description	Ri	sk Level		Mitigation Controls
	•	Severity	Likelihood	Risk	
Financial risk	Non-payment of membership fees by Member Councils	Moderate	Unlikely	2	Controls for this situation are set out clearly in our Constitution
	Inability to secure additional grant funding as required	Minor	Unlikely	2	The entity will be established with the appropriate amount of base funding to employ the essential personnel. Additional projects and programs of work will only be taken on when funding is secured.
	Transfer of any debts incurred to Member Councils	Moderate	Rare	1	We will not incur debt and should it unintentionally be created, the Constitution ensures that this will not transferred to any Member Council.
Cyber security risk	Possible security risk for our stakeholders in the event that we are hacked and our customer data accessed or that we are the victim of phishing, baiting or malware.	Moderate	Unlikely	2	We will invest in software security solutions and educate employees on a regular basis about how to keep our data safe.
Operational risk	Lack of internal capability and/or capacity within stakeholders limiting the necessary level of systemic change required	Minor	Unlikely	2	Consult and engage closely with key stakeholders to achieve timely input, manage expectations and ensure engagement in the process.
	Possible escalation of input costs due to unforeseen/unexpected expenses	Moderate	Unlikely	2	Careful monthly financial accounting will be in place and quarterly reports given to the Board. Should costs escalate, steps will be taken to limit these through project cancellations or deferrals.

	Inefficiencies in record management, WH &S and staff training practices or technology and equipment	Moderate	Unlikely	2	Advice from Member Councils will be sought followed by implementation of identified 'best practice' approaches.
	Products/services remain superior and competitive in terms of offering and cost to Member Councils	Minor	Unlikely	2	Regular engagement with key stakeholders to understand their needs so as to be as responsive as possible will be implemented and careful consideration given to any 'customer' feedback.
	Possibility that a climate change emergency damages the office we are in	Moderate	Rare	1	We will develop a contingency plan to shield against such external events. It will be possible to be housed over the short-term within one of the Member Councils' buildings.
Reputational Risk	A negative perception of and/or negative publicity regarding the organisation either internally or externally.	Moderate	Unlikely	2	We will pay attention to how our organisation is being portrayed online and being included in relevant forums and will respond in a timely manner. We will commit to enacting good governance practices with transparency in our financial dealings and always acting with integrity and in the public interest.
Market risks	General economic downturn	Moderate	Unlikely	2	Flexibility and agility will be key as we maintain a focus on our economic, political and social environment and respond accordingly.
	Effects of competition leading to loss of Member Councils	Minor	Unlikely	2	If we remain focused on and responsive to the needs of our stakeholders, they will remain as members.
	Changes in demographic growth and hence needs of the community in the Western Parkland City	Moderate	Unlikely	2	To date, we have been able to understand and respond to the different needs of the communities within each LGA by working closely with each Member Council and this would continue.

Human Resource risk	The loss of experienced and talented staff to larger organisations	Moderate	Unlikely	2	A comprehensive HR strategy that complies with the Local Government Act as well as all necessary general and state employment laws and regulations should prevent this.
Network/interface risks	Withdrawal of the support network provided by Member Councils	Moderate	Unlikely	2	We would build a network of subcontractors that would be able to provide the essential services we would need such as accounting, audits, HR, and IT.
Industrial Relations risk	Effects of strikes or other forms of industrial action	Moderate	Rare	1	We will ensure that best practice regulations to protect employees are in place
Legislative/ government risk	Changes in legislation under the Local Government Act that might affect delivery of services	Moderate	Rare	1	We will remain in regular contact with OLG to remain abreast of any proposed changes to react flexibly and in a timely manner
	Lack of compliance with state/Federal regulations	Moderate	Rare	1	We will establish expected behaviour by outlining it in a manual and then communicating this to our employees.
Political risk	Changes in membership. When Council elections are held and/or when there are significant shifts in the political, economic or social landscape, it may be that newly elected Councils no longer view membership in The Parks as being in their Council's best interests.	Moderate	Likely	4	This is being mitigated by utilising exert external legal advice and the experience of the Executive Director and General Managers Group.

	RISK MATRIX								
	LIKELIHOOD								
		CERTAIN	LIKELY	UNLIKELY	RARE				
IMPACT	SEVERE	5	4	3	2				
IMP,	MAJOR	5	4	3	2				
	MODERATE	4	4	2	1				
	MINOR	4	3	2	1				

Risk level	Priority	Risk level	Priority
1 - 4	Low risk – minimal action required	5 - 8	Moderate risk – Needs corrective action within 3 months
9 - 12	High risk – Needs corrective action within 1 month	13 - 16	Severe risk – Needs immediate corrective action

Office of Local Government

Formation of Corporations and Entities (Section 358) Guideline

January 2022

Strengthening local government





Access to services

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Office hours

Monday to Friday 9.00am to 5.00pm (Special arrangements may be made if these hours are unsuitable) All offices are wheelchair accessible.

Alternative media publications

Special arrangements can be made for our publications to be provided in large print or an alternative media format. If you need this service, please contact us on 02 4428 4100.

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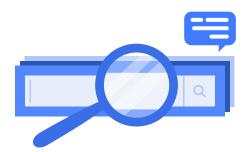
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Part A – Overview





1. How to use these Guidelines

These guidelines are issued pursuant to section 23A of the *Local Government Act 1993* (the Act). They form part of a suite of Office of Local Government (OLG) guideline documents available for use by council staff involved in the management of council projects. These guidelines set out procedures and processes to be followed when councils are considering making an application to the Minister for consent to the creation of or involvement in a separate entity outside of the council structure. These guidelines outline matters that councils will need to address when making an application to the Minister. The Minister will then determine whether to approve the application to form an entity under section 358 of the Act.

The Guideline is divided into four parts to aid the user in quickly finding the information required:

Part A provides a general overview and background information on the formation of corporations or other entities.

Part B outlines the review process for applications to form a corporation or other entity separate to the council including the documents required to be submitted to OLG.

Part C covers specific complex scenarios that might be encountered by the council during the Section 358 application process.

Part D provides templates and flowcharts detailing the process.

1.1 Introduction: Purpose of Guidelines

Section 358 was included in the Act as a means of clarifying the ways that a council may carry out trading or similar functions. However, the options available to councils were restricted so that councils could not be seen to be risking ratepayer's money and public assets in unrestricted business activities. In more recent years, experience in NSW and other states has confirmed that there are risks associated with the lack of oversight and transparency into entities which are not amenable to regulation under the Act.

Since 1993 the risks of allowing councils to operate through entities have become better understood. In more recent years, experience in this, and other states, has confirmed that the creation of separate entities outside the structures of the Act has risk. A particular risk is the lack of oversight and transparency into the workings and operations of separate entities which are not amenable to regulation under the Act. The entities are often 'gifted' council assets (including land) and these assets are then held and operate under a special purpose corporate vehicle (SPV). The oversight and operation of this SPV is then not subject to the usual oversight mechanisms which apply to councils and Joint Organisations (JOs).

This has relevance in the context of the council's decision to create an entity. In terms of oversight, directors of council entities are able make decisions about the expenditure of funds at their own discretion. While the directors may be subject to obligations imposed by the Corporations Law or the Associations Incorporation Act 2009, the entity will not be subject to internal council procedures or typical local government oversight mechanisms, such as procurement processes and gifts and benefits registers.



Councils should always explore options to carry out their project within existing structures first before considering forming an entity outside of the local government framework

Under the Act, the role of the Governing Body (the elected representatives of the council) is to direct and control the affairs of the council in accordance with the Act (s. 223). Even though incorporated associations and corporations are subject to regulatory oversight by other agencies, that does not mean that council-created entities should not be accountable within the regulatory framework set out in the Act. For this reason, the Act imposes restrictions on the formation of entities which fall outside the normal council structure.

The central focus of section 358 of the Act is the public interest. Having regard to the Guiding Principles in Chapter 3 of the Act, the public interest is best served by encouraging councils to explore the use of available mechanisms within the Act before resorting to the creation of an entity, particularly one regulated outside the Act.

The Formation of Corporations and Entities (Section 358) Guidelines are part of a suite of Office of Local Government (OLG) guideline documents available for staff involved in the management of council projects and outline what councils must do to comply with the requirements of the Act in relation to the formation of corporations or other entities to manage projects and/or council related business.

Mere compliance with these guidelines is not the test for determining whether approval is 'in the public interest.' In making an application to the Minister the council needs to understand that it carries the onus to 'demonstrate, to the Minister's satisfaction' that the formation of the corporation "is in the public interest" (section 358(3)).

In determining whether the granting of consent is in the public interest the Minister may:

- take into account matters, other than the guidelines, which the Minister considers are relevant to the application.
- disregard any of the matters in the guidelines where the Minister considers there is good reason why they should not apply in the circumstances of that application.

The Minister has an unfettered discretion to consent to an application but in circumstances where the intent of a council can be achieved without the complexity or necessity to create a separate entity or it is open to the council to achieve the desired outcome by other available means, the council should anticipate it will be asked to first consider those alternative approaches and provide a cogent explanation as to why those alternative approaches are not in the public interest.

2. Where to send applications

All correspondence to and communications with the Coordinator General – Planning Delivery and Local Government and the Minister for Local Government in relation to a proposed Section 358 Application should be made through OLG's Head Office in Nowra. Preferably, they should be in writing. No direct contact should be made with the Minister or the Minister's staff.

The address of OLG's Nowra Office is:

Director Legal – Office of Local Government Level 2 5 O'Keefe Ave Nowra NSW 2540

The postal address for OLG is:

Locked Bag 3015 Nowra NSW 2540

The telephone number is:

(02) 4428 4100

The facsimile number is:

(02) 4428 4199

Email:

olg@olg.nsw.gov.au

3. Glossary

3.1 Acronyms

The following acronyms are used throughout the document:

Act The Local Government Act 1993

CE Chief Executive

GM General Manager

IPR Integrated Planning and Reporting

OLG Office of Local Government

PPP Public Private Partnership

TCorp Treasury Corporation

3.2 Definitions

The following definitions may assist in understanding the Guidelines:

Act

An **Act** is legislation passed by the Parliament. Acts, (not including Schedules to Acts) can only be amended by another Act of Parliament. Acts set out the broad legal/policy principles.

Regulation

Regulations are commonly known as "subsidiary legislation" and require publishing in the Government Gazette to become legal. These are the guidelines that dictate how the provisions of the Act are applied. They may also contain pro forma official forms that are required under the Act. Regulations and schedules to Acts can only be amended by a notice published in the Government Gazette.

The definitions in the Dictionary section of the Act are also applicable.

4. Legislative framework for corporations and entities under section 358

The formation of new corporations or entities separate from the council are regulated by two main sources of legislation, the *Local Government Act 1993* (the Act) and the *Local Government (General) Regulation 2005* (the Regulation).

Local Government Act 1993 (the Act), Chapter 12, Part 1, Section 358

The Act contains requirements for all councils in NSW, including county councils, to comply with when considering the formation of a corporation or other entity, or acquiring a controlling interest in a corporation or other entity.

The Act provides that the Departmental Chief Executive (CE) of OLG may from time to time prepare, adopt or vary guidelines relating to the exercise by a council of any of its functions. Pursuant to section 23A of the Act, a council must take any relevant guidelines issued under section 23A into consideration before exercising any of its functions. These Guidelines are issued under section 23A of the Act.

The Act also contains other relevant provisions that specify the overarching principles which it is expected councils will refer to when dealing with any project, regardless of the delivery mechanism, including:

- Section 8A, Guiding principles for councils, which sets out principles to follow in the exercise of functions generally, in decision making and in community consultation.
- Section 8B, Principles of sound financial management, which provides guidance for investment in responsible and sustainable infrastructure, sound policies and processes as well as funding decisions and risk management practices.
- Section 8C, Integrated planning and reporting principles that apply to councils.
- Section 55, Tendering requirements.
- Section 358, Restrictions on the formation of corporations and other entities.
- · Part 12, Loans, which regulates council borrowing.

Councils should refer to OLG Publications for other relevant guidelines, circulars and publications www.olg.nsw.gov.au/publications.

Local Government (General) Regulation 2005, Part 13, Division 7, Clause 410

The Regulations outline entities which are excluded from the restrictions under section 358 of the Act.



The S358 guidelines are issued under section 23A of the act

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5. What is a Corporation or Entity?

Section 358 of the Act restricts councils in forming or participating in the formation of a corporation or other entity without first obtaining the consent of the Minister for Local Government. This restriction also extends to acquiring a controlling interest in a corporation or other entity.

For the purposes of section 358 of the Act 'entity' is defined broadly to mean any partnership, trust, joint venture, syndicate or other body (whether or not incorporated). It does not include any such entity that is of a class prescribed by the Regulation as not being within this definition.

Whether an entity is a 'corporation' will depend on the nature of the entity and whether it has been incorporated. Associations may be incorporated under the provisions of the Associations Incorporation Act 2009 (NSW), whilst companies may be incorporated under the provisions of the Corporations Act 2001 (Cth).

The restrictions on the formation of corporations and other entities does not prevent a council from being a member of a co-operative society or a company limited by guarantee and licensed not to use the word "limited" in its name.

6. Alternatives to section 358 entity or corporation

Prior to making an application under section 358 councils must give full consideration to and analyse options that are available under the Act to carry out the intended project. If a council proceeds with an application, it is a requirement that the council provide an analysis undertaken to demonstrate that it has given full consideration to other options, and the basis upon which it has determined those options are not suitable.

The following are some examples of alternatives that are available under the Act. Councils are not limited to these specific examples:

6.1 Direct management by council

Pursuant to section 355 of the Act a function of a council may be exercised by the council itself by means of the councillors or employees, or by its agents or contractors. In circumstances where a council has the funding and skills available to undertake a project or service delivery, direct management of the project by a council has the benefit of complete oversight and control by the council.



"Entity" means any partnership, trust, joint venture, syndicate or other body

6.2 Business Units

A council may establish a separate business unit within its existing structure in order to provide projects or services either to the council or the community. A business unit is distinguishable from the council structure as it is created for a defined purpose and in order to undertake a specific activity for commercial purposes. The services provided by a business unit are available on a commercial basis to both the council and potentially other organisations such as other councils, private businesses, government departments etc. A business unit operates with the council being the owner of the business, specifying the level and type of service provided by the business, whilst also being a customer of the business. The business unit itself is the service provider and the owner and manager of any assets used to provide those services. At all times the business unit operates within the local government legislative framework.

Some examples of successful business units operated by NSW councils include business units that provides waste services, airports, laboratory services, and certification services.

6.3 Operating through a council committee

Pursuant to section 355 of the Act, a council may exercise its functions by way of a committee of the council. In forming a committee, councils can determine the functions, powers, membership and voting rights of that committee. Membership is not restricted to councillors and therefore can incorporate other individuals or business representatives.

A committee can be delegated any decision-making powers other than those outlined in section 377 of the Act. However a committee can only exercise a council's regulatory function under chapter 7 of the Act if all members are councillors or council employees. At all times the committee and the activities carried out by the committee operate within the local government legislative framework.

6.4 Joint Organisation

Pursuant to section 355 of the Act, a council may exercise its functions jointly with other council/s, that is by way of a joint organisation. A joint organisation operates as a way for councils, state agencies and other interested groups to collaborate on short and long term projects, by pooling resources and focusing on the strengths that each member organisation can bring to the project. Joint organisations are particularly beneficial for the delivery of infrastructure and investment that will service a region as opposed to one individual council area. More information about joint organisations can be found on OLG's website – www.olg.nsw.gov.au/joint-organisations-strengthen-regional-nsw.

7. Relationship with PPP Requirements

In the event that the Minister's approval is obtained under section 358 and a new corporation or entity is formed for the purpose of carrying out a Public Private Partnership (PPP) Project, councils must also adhere to OLG's PPP Guidelines in respect of the PPP. These guidelines are available on OLG's website www.olg.nsw.gov.au/publications.

Integrated Planning and Reporting (IP&R)

The Act provides that Integrated Planning and Reporting (IP&R) must be at the centre of all council plans, activities, resourcing decisions and improvement strategies. As such, any project or works considered by a council as having potential to be undertaken by a corporation or other entity must have undergone a clear planning process that links it to the council's Local Strategic Planning Statement made under section 3.9 of the Environmental Planning and Assessment Act 1979, Community Strategic Plan, the Delivery Program and the Operational Plan which are powered by the Resourcing Strategy (Integrated Planning and Reporting Guidelines for Local Government in NSW, 2018).

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Integrated Planning and reporting must be at the centre of all council plans and activities

Fundamentally, the identification of a project which requires, for its viability, the quarantining of a significant council asset (especially land) is a policy decision that will have an on-going impact. The principles of sound financial management require that such decisions should be made after careful consideration with an eye to financial effects on future generations. The starting point is the incorporation of the IP&R principles into council's decision-making so that council can readily demonstrate that it has consulted with its community and identified strategic goals to meet those expressed needs and aspirations in a fashion that enables the council to deliver them within council resources.

9. Council Responsibilities

Having regard to provisions of the Act, in particular the Guiding Principles set out in Chapter 3 of the Act, councils have responsibilities that go beyond the responsibilities of a private sector entity or corporation. For example, land owned and controlled by a council is a public asset which is required to be held, administered and used for the benefit of the public and to assist the council in providing the services and facilities it is

charged to provide for the community. Similarly, all rates, charges and fees paid to and collected by a council are public assets. Separate corporations or entities do not fall within the control of the Act and as such may evolve to serve a more businessoriented purpose that ultimately is not in the best interest of the public.

A project undertaken by a separate corporation or entity may entail the provision or contribution by the council of public land or funds to initialise works. Once transferred however, financial and governance information may not be easily visible to the council, OLG and the public, and as such processes may not be as transparent to the public as they would be under traditional council arrangements.

It is the primary role and responsibility of council to ensure that a rigorous assessment of all available options in accordance with these guidelines and giving consideration to the Guiding Principles is undertaken before an application is submitted to the Minister or arrangements are otherwise entered.



Council's responsibilities to act in the best interest of the public go far beyond those of a private sector entity

Part B – Section 358 Application Process



10. Documents required for submission to OLG

In order to comply with the requirements under the Act, a council must submit any proposal to form a corporation or entity to the Minister for approval prior to forming an entity

A checklist of documents required for submission to OLG and/or the Minister for assessment can be found in Part D, Form 2.

The following provides more detailed information on each of the required items.

10.1 Council Resolution and Council Self-Assessment Questionnaire (pre-EOI)

Council must pass a resolution to make the necessary application to the Minister for approval to create the entity. This step signals the council's intention to deliver a project or service via a separate entity. It is vital at this early stage that the council determines what it expects delivery of the project via this mechanism will deliver to the community in terms of the public interest. It is expected that at this step council will have before it the material it is intending to submit to the Minister via OLG for assessment under these guidelines and that a resolution is passed on the basis of that material.

A copy of the minutes showing that the council resolved to make an application to the Minister for approval pursuant to section 358 and a copy of the relevant council reports is required.

Council should also complete the self-assessment questionnaire (see Part D, Form 1). The questionnaire aims to draw attention to certain characteristics of an application that may require further attention.

The completed questionnaire is to be submitted to OLG together with the required documents for the initial assessment.

The General Manager(s) of the council(s) involved must certify that the self-assessment and other documents have been prepared in accordance with these Guidelines. This will need to be attached to each submission made to OLG.

10.2 Justification Documents

10.2.1 Clear statement of proposed function or service deliverables for the proposed new entity

Council must provide a clear statement of proposed service deliverables including easily measured key performance indicators for the new entity.

Council must satisfy itself that undertaking delivery of the proposed functions and service delivery will be appropriate having regard to the broad range of council functions expressed in the Act. The council already has power under the Act to deliver the provision of goods, services and facilities and [to carry out] activities that are appropriate to the current and future needs within its local community and of the wider public, subject to the Act, the regulations and the law generally.



A Self-Assessment Questionnaire and accompanying documents must be submitted to OLG as part of an application for approval to form a new Corporation

10.2.2 Statement of how the proposed function or service deliverables fit with Council's Strategic Planning Documents

The proposal must have an overall positive effect regarding public or community interest. Council can demonstrate this by providing evidence on how the proposal meets the requirements of the integrated planning and reporting framework. OLG's IP&R guidelines include requirements for councils to prepare a community strategic plan, a resourcing strategy, delivery program and operational plan. Council must comply with all appropriate and relevant steps and provisions in those guidelines and show how the proposed formation of a new entity fits with the above plans. Council is advised to provide relevant excerpts from the plans and to demonstrate how the project relates to each of them.

10.2.3 Statement of how the proposal is consistent with the functions of the council or an existing service that the council provides.

To demonstrate that provision of a service and/or facility is in the public interest the following should be provided in support of the application:

- Evidence supporting the need for the creation of the proposed entity and the delivery of community or public needs
- Detail on the general appropriateness of the council's involvement in the corporation (or other entity) especially if other options are available
- An explanation as to how corporatisation or involvement in the entity would improve the council's economic performance and the ability of the council to carry out its responsibilities
- An explanation of what measures will be employed to ensure that the activities of the corporation or entity will be fully accountable to the community in a manner similar to the requirements imposed on the council under the Act.

10.2.4 Clear analysis of all available options to deliver the proposed functions or services.

The report considered by council prior to passing a resolution to make a section 358 application to the Minister should detail all possible delivery vehicles considered for the proposed functions or services. The report must outline pros and cons of each option and must include an analysis of options to keep the functions within existing council arrangements under the Act.

In making an application, the council is required to identify which alternative options were considered by the council and, in respect to each alternative option, analyse those options and address why that alternative solution would not be in the public interest. If the council has received separate and independent advice on the options it would be beneficial to an application to include that information.

10.2.5 Justification of why the intent/purpose of the proposed new entity cannot be achieved within the existing Local Government Structure

The council needs to demonstrate why the intent/purpose of the entity cannot be attained within the existing local government structure and why an external entity is required. This should be addressed and explained in the application by also making reference to the analysis made under item 9.2.4 and commentary as to why an option within existing arrangements is not available. It is not sufficient to simply state, for example, that the proposed option is more tax effective or that it is for the purpose of obtaining Deductible Gift Recipient (DGR) status from the Tax Office.

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10.3 Governance Arrangements

10.3.1 Outline of the proposed governance arrangement for the new entity and how it will be separated from council

Different projects or service delivery ventures present different challenges and require individually tailored management and governance structures. While the most appropriate governance structure will ultimately be the subject of negotiation between the parties, it is appropriate that councils decide, at an early stage, why a section 358 entity is the preferred management structure for the proposal and what the eventual governance and legal structure should look like.

Applications must also demonstrate that the provision of initial capital (including working capital) of the corporation/entity can be funded without impacting the council's current program. Where the creation of the entity is necessary to protect council from legal risk, the application must indicate how the council (both as a corporate body and its members personally) will be protected from any liability that might arise as a result of the activities of the corporation/entity (including the activities of other partners). Any profit or loss sharing arrangements must be fully explained so that the risk to the council can be understood.

Where the creation of the entity is necessary to provide legal separation, the application should address three main areas or activities of the proposed corporation or entity. These are:

- Legal structure (including liability of the council, councillors and council staff)
- Financial separation (confirmation that the accounting for the corporation or other entity is separate to the council's accounts)
- Management separation (details of the management structure of the corporation or other entity).

The appropriate structures and processes will depend on (among other things) the type and complexity of the project and the stakeholders involved.

10.3.2 Mandated provisions for governance documents of new entity

Council should provide a copy of the proposed governance documents for the entity (Eg. constitution for a company, trust deed for a Trust) including mandated provisions requiring directors of the new entity to remain subject to internal council procedures. The governance documents must include clauses which replicate local government oversight mechanisms which would otherwise apply to a council operating under the Act. This includes, but is not limited to:

- Provision that the governance document may not be amended without first obtaining the consent of the Minister for Local Government
- Provision that the company or entity may not become a member of another corporation
- Provision clearly specifying the objects of the entity, which must be consistent with both the functions of council and any existing service that council provides
- In the instance of a company, provision that the company has the powers set out in the *Corporations* Act 2001 (Cwlth) only to the extent conducive or incidental to carrying out the company's objects
- Provision that council and OLG will have access to the accounting records and all other documents of the entity at all reasonable times
- Provision that the entity will take adequate insurance policies to minimise the risks in the areas of property, public liability, workers compensation, professional indemnity and directors and officer's insurance
- Provision that the entity will be required to appoint an auditor and to publish and submit to council an annual report incorporating audited annual financial reports on the business operations of the entity.
- Provision that separate accounts will be kept meeting the requirements of both the Local Government Act and the Corporations Act (where relevant)
- Provision that the entity and its officers will be subject to local government oversight mechanisms including procurement processes and the gifts and benefits register.



Beware of potential loss of assets and land through the S.358 Process!

In order to retain full transparency of financial and nonfinancial reporting in relation to activities undertaken by the new entity, council must provide a proposed reporting framework to be mandated in the governance documents of the new entity.

As the governance documents must include an express provision that any changes to the governance documents are subject to the Minister's consent prior to further approval, a separate section 358 application will have to be submitted to the Minister together with the necessary resolution and all supporting documents, as applicable, under these guidelines justifying the amendments sought.

10.3.3 Clear outline of any provision of public assets and council funds to the new corporation or entity

A detailed breakdown of contributions by council to the new entity must be provided. This must include the value of all cash, labour, staff time, materials, assets and land.

Careful thought should be given to requirements that the council could put in place to reduce the risk of losing assets and/or land through the process of forming a new entity (see 9.3.4).

10.3.4 Risk Assessment and Risk Management Plan as per the relevant AS/NZS

It is essential that, at an early stage in the evolution of a proposed formation of a new entity, council develops and puts into operation an appropriate risk management plan for the proposal.

One major consideration in the formation of a separate entity is the potential transfer of risk from the new entity onto the council. This is highly undesirable, and any such risk transfer must be carefully analysed by the council. This analysis should take the form of a Risk Allocation Table or a similar risk analysis tool which identifies risks including actual and preferred risk allocation.

Before risk can be appropriately treated, all potential risks must be identified and analysed. For this purpose, a council should identify, and appropriately document, all actual or potential risk elements associated, or likely to be associated, with the project in accordance with the relevant Australian Standard.

The allocation of any identified risk to the council related parties (such as directors, elected officials, chief executive officers, senior executives, line managers and staff) as well as any mitigation strategies (such as treatment and control options) should also be included. The risk assessment should include sensitivity testing to identify best and worst-case scenarios.



Beware of potential risk transfers from the new entity onto Council!

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Depending on the nature of the proposed new entity and its proposed purpose, a number of risk categories may need to be included in the risk matrix or allocation table. More general guidance for the preparation of a risk management plan appropriate to the nature and size of the proposal can be obtained from the relevant Australian Standard.

The following provides example risk elements to consider (other elements may need to be considered depending on the situation):

Financial risks: such risks would include the availability of funds, chances of missing out on required grant funding, the conditions attaching to any loans and/or debt, prospects for re-financing the new entity project should it become necessary, taxation matters and interest rates.

Operational risks: matters for consideration in this context would be issues such as the possible escalation in input costs, projected maintenance/refurbishment costs, failure (financial or technical) of subcontractors, and products/services remaining contemporary/ competitive in terms of technology and cost to the public.

Market risks: such risks would include general economic downturn, the effects of competition or downturn in any market segment the project relies on in any way, demographic issues and their effect on demand for services/facilities to be provided by the project and any inflationary consequences.

Network/interface risks: such issues would include the effect of withdrawal or varying (either in provision or price) of a complementary or support network/ service, and the interaction between any core service of council/government and contracted services under the agreement.

Industrial relations risk: the possible effects on the project of strikes or other forms of industrial action.

Legislative/government or sovereign risk: this should include any risks associated with exposure to changes in law or regulations that may affect the delivery of works and services by the new entity.

Risks associated with asset ownership: Considerations must include the risk of losing land and/or public assets by providing such assets to the new entity without adequate contractual protection to ensure council will receive back its fair share of land or stratum entitlements via appropriate channels.

Force majeure: the risk that the inability to meet contracted outcomes is caused by major external events either pre or post completion.

Political risk: this should include considerations of the political climate and whether or not the proposal will cause significant political upheaval.

Compensation claims risk: this should provide insights into any potential for compensation claims to council due directly or indirectly to the proposal.

10.3.5 Statement of impacts on existing council staff

Council should undertake an analysis of potential impacts on existing staff and must provide that analysis together with strategies to mitigate negative impacts. Council must address the following:

- · Will the proposal result in existing council staff being transferred to the employment of the entity and if so, will the staff be employed on terms and conditions consistent with their previous employment with the council?
- Will the entity guarantee the continued employment of transferred staff for a period of at least 3 years?

Will the entity adopt an agreement to refer any industrial disputes to the NSW Industrial Relations Tribunal? Will the proposal result in existing council staff being made redundant?



There is no fee for the assessment of a section 358 application

10.3.6 Statement of impacts on council's financial position

A careful analysis of potential impacts of the proposal on the council's short-term and long-term financial position must be undertaken. It will be at the Minister's discretion whether the scale of impacts will be acceptable. An assessment of the council's overall financial viability will be made on the basis of data that the council is routinely required to supply to OLG. However, the council should also provide details about the costs expected to be incurred, and revenues expected to be received, by the council as a result of being involved in the corporation or other entity.

10.3.7 Other

OLG may request other independent specialist consultant reports on certain aspects of the proposal, which will need to be funded and commissioned by council.

11. Assessment of Application

Following assessment of the application, OLG will make a recommendation to the Minister on the council's proposal. As part of OLG's assessment of a council's application, we will have regard to the information provided in accordance with Part B section 9.

Advice will be issued as to whether the council can proceed with the formation of the proposed corporation or entity and if approved, whether conditions are attached to the approval.

The Minister has discretion to consent to an application. Councils should note that compliance with these guidelines does not guarantee that an application will be approved.

11.1 Review Timeframe

The time it takes OLG and the Minister to assess a section 358 application will depend on the nature of the proposal and the clarity of the material provided. Council should ensure that generous assessment timeframes are built into critical project timelines where necessary.

11.2 Fees

Whilst there is no fee charged for the review of section 358 applications, OLG and/or the Minister may request the council to provide additional independent specialist or consultant reports on contentious issues in relation to the proposed arrangements, such as financial management, governance issues, risk management or similar. Any fees for such specialist advice are to be borne by the council.

11.3 Withdrawing a Section 358 Application

Council may withdraw a section 358 application at any time. This must be done in writing to OLG. Withdrawing a section 358 application does not preclude the council from re-submitting the application for assessment at a future point in time.

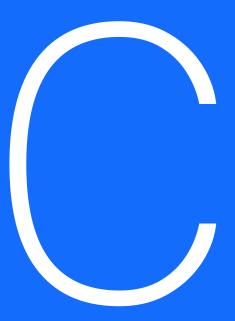
11.4 No Appeal against Minister's decision

The sole purpose of the requirement to gain the Minister's approval for the formation of a corporation or entity that is separate to council is to protect the public interest and the need for financial transparency for the use of public money. There is no appeal to the Minister against the Minister's decision. However there is no limit to the number of times an application can be resubmitted to the Minister.

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Part C – Specific Scenarios





Additional Approvals from the Minister may be required for loans or special rates variations

12. Treatment of Multi-Council Applications

If a section 358 application involves multiple councils, a combined application must be submitted to OLG. However all required documents, certifications and council resolutions must be provided for each council involved.

13. Unsolicited Proposals

Many councils receive unsolicited proposals from the private sector concerning developments. Such proposals can provide great opportunity for council to bring forward developments that may otherwise not have been considered. Unsolicited proposals still need to be market tested to ensure they achieve value for money. Any potential project evolving from an unsolicited proposal must also undergo rigorous testing against the councils strategic planning documents to ensure consistency with the council's and the community's long-term strategic direction.

14. Financing and Borrowing approvals

Where some of the funds to finance the project are to be borrowed, the council will need to establish an appropriate case for such borrowings, given the need for the council to comply with the provisions of Part 12 of Chapter 15 (see section 621 and following sections) of the Act. The intention to borrow must also be outlined in the council's draft Operational Plan.

The approval of the Minister may be needed under sections 622 and 624 of the Act. The council should have regard to any relevant OLG publications, available on OLG's website www.olg.nsw.gov.au/publications.

Section 410(3) of the Act will also need to be complied with, and appropriate approvals obtained from the Minister for Local Government, in respect to a proposal to access any internal loans, that is, the movement of moneys out of a restricted fund, such as a water or sewerage fund.

Where some of the council sourced funds are to be raised by way of increased rates or charges over and above those allowed under the rate pegging provisions of the Act, approval from the Minister for a special rate variation will also be needed pursuant to Part 2 of Chapter 15 of the Act.



Unsolicited proposals must still undergo rigorous testing against IP&R

Part D – Appendices



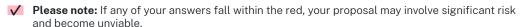
Form 1: Section 358 Application – Council Self-Assessment Questionnaire

Council Name:

Proposed new corporation or entity:

Purpose of the proposed new corporation or entity: (1 paragraph)

QUESTION	YES	NO
Is there a viable option to provide the proposed functions or services without the need for a separate entity or corporation?		
Is council intending to provide land or another asset to the new corporation or entity?		
Is there likely to be a risk of council losing money or asset/ land value if the corporation/entity fails to deliver the proposed services?		
Is there likely to be a transfer of risk from the newly formed entity to council?		
Is the proposed service/function of the new entity consistent with council's community responsibilities?		
Has the delivery of the service/function/project via a new corporation or entity been planned for as per council's IPR documentation?		
Is the application to form a new entity related to a Public Private Partnership (PPP) proposal?		
Does the formation of the new entity involve other agencies or councils?		
Is the success of the new entity reliant on external grant funding?		
Does the delivery of services or functions via the new entity require borrowings (please specify whether TCorp or bank borrowings will be used)?		
Will council ensure that the new entity conforms to the same reporting and governance mechanisms that councils are subject to under the Local Government Act?		
Will existing council staff be negatively impacted by the proposal?		



V Please note: If any of your answers fall into the blue, OLG may request further information.

Form 2: Required Documents Checklist – S.358 Application

	Text Section	Section Required Documentation		OLG check
1	Form 1 and section 9.1	S.358 Application Council Self-Assessment Questionnaire		
2	9.1	GM Certification that the information provided to OLG is correct		
3	9.1	Council Resolution to make a Section 358 Application to Minister and submit material to OLG for assessment		
4	9.2.1	Clear statement of proposed function or service deliverables for the proposed new entity		
5	9.2.2	Statement of how the proposed function or service deliverables fit with Council's Strategic Planning Documents		
6	9.2.3	Statement of how the proposal is consistent with the functions of the council or an existing service the council provides		
7	9.2.4	Clear analysis of all available options to deliver the proposed functions or services. This must include options to keep the functions within existing council arrangements under the Local Government Act		
8	Justification of why the intent/purpose of the proposed new entity cannot be achieved within the existing Local Government Structure			
9	9.3.1 Outline of the proposed Governance Arrangements for the new entity and how it will be separated from council			
10	9.3.2	Proposed governance documents including mandated provisions for directors of the new entity to remain subject to internal council procedures and typical local government oversight mechanisms		
11	9.3.2	Proposed financial and non-financial reporting framework for the new entity		
12	9.3.3	Clear outline of any provision of public assets and council funds to the new corporation or entity		
13	Proposed structure of profit/loss sharing between council are the new entity			
14	9.3.4 Risk Assessment and Risk Management Plan as per the relevant AS/NZS			
15	9.3.5 Statement of impacts on existing council staff			
16	9.3.6 Statement of impacts on council's financial position			
17	9.3.7	In some cases, OLG may request independent specialist consultant reports on certain issues, which will need to be funded and commissioned by council.	OLG will notify council of any need of special reports if and when required	
18		Notification to OLG of any major variation in the proposed arrangements.	OLG and/or the Minister may request updated versions of any of the above documents	

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References and Further Reading

ANZSOG Institute for Governance at the University of Canberra. (n.d.). *Arm's length Entities in Local Government*.

Department of Treasury and Finance, Tasmania. (2008). *Guidelines* for Tasmanian Government Businesses, Subsidiary Companies and Joint Ventures.

ICAC. (2018). Direct Negotiations: Guideline for Managing Risk.

NSW Government. (n.d.). NSW Government Procurement Policy.

NSW Government Website. (2014). Guide for Submission and Assessment of Unsolicited Proposals.

NSW Legislation. (1993). Local Government Act No 30.

NSW Legislation. (2005). Local Government (General) Regulation.

Office of Local Government. (2018). Integrated Planning an Reporting Guidelines for Local Government in NSW. Edition 2 – Planning for a sustainable future.

Queensland Government Treasury. (2009). Corporate Governance Guidelines for Government Owned Corporations.

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ELECTRIC VEHICLE CHARGING STATIONS ON PUBLIC LAND POLICY

Adopted: tbc

TRIM tbc



ELECTRIC VEHICLE CHARGING STATIONS ON PUBLIC LAND POLICY

DIRECTORATE: Operations

BUSINESS UNIT: tbc Environment

1 PURPOSE/ OBJECTIVES

The purpose of this document is to provide guidelines for the installation and management of electric vehicle (EV) charging infrastructure on Liverpool City Council (Council) public land.

1.1.1 Council has identified a need to increase the availability of publicly accessible EV chargers to create an equitable public charging network, responding to the current gaps and future charging needs and developments within the LGA.

2 **DEFINITIONS**

Accessible parking bay	A parking bay configured to allow accessibility for people with disability, including circulation for people who use a wheelchair.
CCS2 plug	Combined Charging system (CCS) Combo 1 and 2 are based on Type 1 and 2 plugs by adding two additional pins at the base. CCS's are made for DC fast charging. However, the connectors can be used for both AC and DC charging up to 350kW.
Council (public) land	Refers to all land under the ownership, care, control or management of Liverpool City Council, including, but not limited to, operational land, community land, road reserves, facilities and assets (including street furniture), on-street parking bays and parking on Council land or facilities. Council property includes land on which

	existing electricity supply infrastructure is installed, such as the land under substations and power poles.	
Charging network	Refers to the broader system of EV chargers across Liverpool.	
Electric vehicle (EV)	A vehicle that is powered by an electric motor, which gains electricity from internal batteries charged by connecting with an external energy source, otherwise known as a battery-electric vehicle (BEV) or plug-in hybrid (PHEV). This includes cars, utility vehicles, trucks, vans and others.	
E-rideable	An electric rideable device such as e-bikes and e-scooters.	
EV charging infrastructure	Refers to charging infrastructure and supporting equipment essential for the charging of EVs and in some cases, micromobility devices such as e-bikes and e-scooters. It includes the EV charging station itself, plug, cabling and supporting works such as physical works, distribution boards, switchboards and circuit cabling.	
Expression of Interest	A formal response from a Third-Party operator demonstrating their capabilities and offer for the installation of EV charging infrastructure on Council land.	
Level 1 charger	Level 1 chargers are existing power points (10-15A, single phase), used in combination with a special, untethered cable, which must be connected both from the EV to the wall.	
Level 2 charger	Level 2 chargers are dedicated AC EV chargers up to 7kW (32A single phase) or 22kW (three-phase).	
Level 3 charger	Level 3 chargers are fast and ultra-fast DC chargers, with power ranging from 25kW to 350kW (40-500 Amp, three phase).	
Street furniture	Includes parking meters, telephone booths, rubbish bins or recycling bins, planter boxes, street signs, benches and bollards. It does not include electricity or lighting poles or bus stops.	
TfNSW	Transport for NSW	
Third-Party provider	Refers to a private supplier/operator of EV charging infrastructure.	

Type 2 plug	Type 2 plugs are single-phase plugs with three-phase		
	capabilities. When used in private bays, they have charging power levels of up to 22kW.		

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3 POLICY STATEMENT

3.1 Policy Principles

- 3.1.1 The following principles provide a framework to ensure that EV charging infrastructure installed on Council land supports the community equitably and sustainably, through:
 - An equitable roll out of chargers that fills in charging network gaps, in which all Liverpool residents retain reasonable access to parking.
 - ii. **An enjoyable charging experience** at locations that maximise opportunities for amenities and other attractions near the chargers.
 - iii. **Safe and secure chargers** that are thoughtfully located, designed and managed so that they are safe to use and vandalism is discouraged.
 - iv. A long-term solution where charger availability and compatibility is maintained over the long term and charger decommissioning does not negatively impact residents.
 - v. **Integrated design** that ensures that charging facilities blend in with the landscape of Liverpool streets and surrounding land.
 - vi. A sound financial investment that provides long-term returns to Council.
 - vii. **Enabling zero-emission travel** for residents who rely on cars, but do not have access to charging at home.
 - viii. **Providing guidance for providers of EV charging infrastructure,** over appropriate locations for charger installation and Council design requirements.

3.2 Policy Scope

This Policy applies to all EV charging infrastructure that is installed on Council land. This includes charging infrastructure for EVs, and in some cases e-rideables, that is intended for public and/or Council use. It does not apply to EV charging infrastructure installed for private use. It provides the overarching direction for the provision of EV charging infrastructure across Liverpool to service residents, businesses and visitors. It does not apply to EV charging infrastructure installed on private land.

3.3 Role of Council

Council intends to partner with Third-Party providers to install and manage EV charging infrastructure, while maintaining an overarching coordination role to ensure the charging network across Liverpool meets broader planning objectives.

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EV charging infrastructure may be owned by Council or owned by a Third-Party provider in an agreement with Council.

3.4 Policy application

3.4.1 Eligibility of provider

- a) Council will determine preferred locations for EV charging infrastructure for consideration by the Third-Party provider. The eligibility of a provider will be determined through an expression of interest (EOI) process outlined in Section 3.4.4.
- b) Council will not accept EOIs outside of the response window.
- c) In some cases, EV charging infrastructure may be permitted without development consent on Council owned and managed land in accordance with the State Environmental Planning Policy (Transport and Infrastructure) 2021 Section 2.124. However, the provider will still be required to obtain approval from, and enter into an agreement with, Council as the land owner.
- d) The provider must be eligible to operate a business in Australia and NSW.
- e) The provider must agree to hold and maintain for the duration of their contract with Council relevant insurance to cover its obligations under the contract.

3.4.2 Obligations of provider

- a) The installation of any EV charging infrastructure on Council land under an agreement with Council will require consultation with Council and will be subject to the charging network, technical and design requirements outlined in this Policy and its future amendments.
- b) The provider will need to comply with relevant policies, standards and legislation including those listed in Section 4 and 5.
- c) The provider will financially commit to the cost of the EV charging infrastructure (including installation, operation, maintenance, and decommissioning) as set out in the agreement with Council.
- d) The provider will need to manage public health and safety, including ensuring it meets its responsibilities in the event of a public safety incident at a charging location adhering to the Council design requirements for safety and security outlined in Section 3.7.5.

e) For on-street chargers located within the road reserve, the provider will be subject to necessary approvals under section 138 of the Roads Act 1993.

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- f) Where the EV Charging installation is to be publicly accessible, the provider must ensure the operational hours of the charger are aligned with the hours of operation for the site where it is located.
- g) The provider must conduct regular maintenance checks as required, in line with the terms of the agreement signed with Council.
- h) Before entering into an agreement with Council, the provider is required to consult with the electrical distribution network operator to ensure there is sufficient local capacity or determine whether grid upgrades to the local distribution network are required.
- The provider may be required to make a financial contribution to grid augmentation works to increase electrical capacity if deemed necessary by Council.
- j) The provider will be responsible for the cost and removal of EV charging infrastructure at the time specified in the agreement with Council. Council reserves the right to request earlier removal of the equipment if the installation is demonstrated to be unsafe or causing negative impacts to the community. The costs and responsibility for removal will be bourne by the provider.
- k) In the event of deliberate or inadvertent damage is caused to an EV charger, the provider will be required to repair the damage and the costs will be bourne by the provider.

3.4.3 Obligations of Council

- a) Council is responsible for assessing all written requests for EV charging installation from Third-Party providers in line with the EOI process described in Section 3.4.4. This includes ensuring each application aligns with the broader charging network across Liverpool to maintain an equitable roll-out.
- b) Council is responsible for ensuring the charging network, technical and design requirements of this Policy are being complied with and that all EV charging installations align more broadly with other relevant Council policies.
- c) Council will enforce parking restrictions and fines where appropriate, to encourage turnover of vehicles in charging bays as outlined in Section 3.7.6.
- d) Council will maintain a record of all EV charging locations installed on Council land and make this information available to the public.
- e) Council will confirm that prospective EV charging locations have adequate grid capacity following the consultation by the provider outlined in Section 3.4.2 h). Council will then coordinate with the electrical distribution network operator for associated grid upgrades if required.
- f) Council will update this Policy according to:

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- The evolution of the charging network across Liverpool as EV uptake increases.
- ii. New Council policies or state/federal legislation changes.
- iii. Technological advancements in EVs and EV charging infrastructure.

Any amendments to the Policy will be communicated to Third-Party providers with existing partnership agreements with Council.

- g) Council is responsible for complying with relevant policies, standards and legislation including those listed in Section 4 and 5.
- h) Council is responsible for safeguarding and improving the health and safety of the people of Liverpool and will ensure the provider takes reasonable steps to comply with their obligations in Section 3.4.2 d).

3.4.4 EOI process

In instances where Council intends to partner with Third-Party providers to install and manage EV charging infrastructure, Council may utilise the following EOI process:

- i. Council develops a brief and releases an EOI that seeks proposals from the market for a Third-Party provider to install EV charging infrastructure at Council selected location(s).
- ii. Third-Party providers prepare a proposal outlining how they intend to meet the brief, including their planned process of installation and commercial model for charging fees.
- iii. Council selects the preferred Third-Party provider and enters into an agreement with them in the form of a licence or contract. This agreement would provide non-exclusive rights over the public land and may outline compensation to Council for use of the public land This may include relevant profit share for revenue generated by the EV charging infrastructure.
- iv. The Third-Party provider prepares a plan for consultation with network distribution operators and the installation, operation and decommissioning of EV charging infrastructure at the Council selected location(s).
- v. Council reviews the plan and evaluates it against the charging network, technical and design requirements of this Policy. This evaluation process will be completed by relevant units within Council. Council may request necessary amendments to the selected application to ensure it aligns with these requirements before the agreement is signed.
- vi. The plan is approved.
- vii. The Third-Party provider installs, maintains and operates the charging site under the terms of the agreement.

- viii. Council reviews the progress of the agreement annually and may seek to vary the terms where necessary.
- ix. At the agreed time of decommissioning the Third-Party provider removes the EV charging infrastructure and returns the site to the agreed form in the agreement.

3.5 Charging network requirements

Council may identify suitable locations for EV charging infrastructure across the following locations.

3.5.1 Operational facilities (staff-only access)

For Council land that functions as an operational facility used by Council staff (such as offices and fleet depots), charging suitability has been summarised in the table below.

Council will support chargers in locations that:	Council will be less willing to support chargers in locations that:
✓ House Council fleet vehicles✓ Provide parking for Council staff and	× Do not currently provide parking bays for Council fleet or staff vehicles
there is a demonstrated desire for an EV charger from staff	× Have a short-term lease/licence that is unlikely to be renewed

3.5.2 Public off-street locations

Council land that contains off-street parking facilities (such as library car parks, CBD parking lots and green spaces with dedicated car parks) will be preferred over onstreet locations to maintain urban amenity and flexibility of land use within Liverpool. The table below summarised the types of locations that will be supported by Council and the types of locations that are less preferable.

	ouncil will support chargers in cations that:	Council will be less willing to support chargers in locations that:	
√	Are within ~250m of a destination such as a shop, café, restaurant or park	×	Are well serviced by public transport routes (such as immediately adjacent bus stops)
✓	Have limited or no access to public transport	×	Are subject to redevelopment plans in the near future
✓	Can demonstrate visitation for 2 or more surrounding land uses to capture economic benefits and not result in unnecessary vehicle trips	×	Are in car parks where there is a recognised shortage of parking

Council will support chargers in locations that:	Council will be less willing to support chargers in locations that:
 Have spare electrical capacity on the local electrical network 	

3.5.3 Public on-street locations

On-street charging will only be considered in locations where there is no or limited opportunity for off-street chargers. For Council land that contains on-street parking facilities (such as residential or CBD streets), charging suitability has been summarised in the table below.

Council will support chargers in locations that:	Council will be less willing to support chargers in locations that:	
 ✓ The surrounding area (~400m catchment) has an undersupply of off-street parking ✓ Are subject to parking restrictions that limit long-stay parking during the day (overnight parking may be permitted in residential areas) ✓ Are planned for parking and no other uses in the long-term ✓ Are in areas characterised by medium or high density land uses ✓ Have limited or no access to public 	chargers in locations that: × Serve only dwellings with off-road parking available × Serve only a single household × Are adjacent to roads over 50km/h × Are not located in a parking bay, or do not allow two vehicles to pass one-another on narrow streets × Have nearby off-street parking facilities × Are likely to be subjected to redevelopment or land use changes	
transport ✓ Can demonstrate visitation for 2 or more surrounding land uses to capture economic benefits and not result in unnecessary vehicle trips ✓ Have spare electrical capacity on the local electrical network	in the near future × Have limited space for charging infrastructure without encroaching on footpaths/driveways or result in the removal of other desired uses, such as greenery, bike racks or dining.	

3.6 Technical specifications

3.6.1 Charging levels and typologies

Council will support a combination of charging speeds across Liverpool to service different trip types and charging demand. These speeds and suitable locations are as follows:

	Charging power	Charging speed	Suitable locations
Level 1	2.5 – 7kW	10-20km range added per hour	Long-term parking locations where vehicles will be charged over 8-12 hours. Includes fleet depots, all-day parking lots and residential areas where there is high demand for on-street parking to service residents with limited access to off-street parking.
Level 2	7 – 25kW	Up to 40km of range added per hour	Medium-term parking locations where vehicles will be charged over a few hours (1.5 – 5 hours). Includes shops, hospitals and recreation areas.
Level 3	25 – 350kW	Up to 150km range per hour or fully charged vehicle in 10-45mins	Short-term parking locations with high charging demand, where vehicles will be fully charged or topped up in a short period of time (less than 45mins). Includes along motorways or on-street CBD locations.

3.6.2 Charging technology and compatibility

Council will support the installation of EV charging infrastructure that is consistent with the NSW preferred EV charging standards and principles outlined in the NSW Government Future Transport 2056 – NSW Electric and Hybrid Vehicle Plan and adheres to the following technological requirements:

- i. All EV charging infrastructure should be able to be used by any EV user, including vehicle and system compatibility.
- ii. The use of CCS2 charging plugs for DC fast chargers and Type 2 charging plugs for AC charging.
- iii. Preference for connected and smart chargers, to maximise energy efficiency, manage operational load and demand on the local electricity network. This includes hardware and software with the ability to introduce time restricted charging to improve equitable access.

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iv. All EV charging infrastructure is installed with the ability to be operational at all times of day and night.

3.6.3 Fees and pricing

- a) EV charging infrastructure should have open payment options such as credit/debit cards in addition to EV charging payment apps.
- b) Pricing models should encourage charging during periods of low electrical demand (for example during off-peak or shoulder periods) to help manage potential grid stress as EV uptake increases.
- c) For Council owned and managed EV charging infrastructure, usage fees will be reviewed annually by Council.

3.6.4 Renewable energy

All proposals for EV charging infrastructure should utilise 100% renewable electricity, either through onsite generation (such as solar PV) or a Power Purchase Agreement from a reputable provider.

3.6.5 Software

- a) EV charging software used by a Third-Party allows for secure data collection of information such as the duration of charging sessions and data sharing with Council at least every 6 months.
- b) EV charging software must be fitted with the ability to introduce time restricted charging to improve equitable access.

3.7 Design requirements

3.7.1 Visibility and identification

The provider is responsible for ensuring EV charging infrastructure and ancillary infrastructure (such as signage and line marking) is clearly visible, accessible and easily found by all users, through consideration of the following design features:

- All EV charging bays must be fitted with appropriate signage to clearly identify the bay is reserved for EV charging only. This signage is to be consistent with Council/TfNSW requirements and include the maximum duration of stay.
- b) All EV charging bays should incorporate a white EV charging pavement symbol that is consistent with TfNSW recommendations until a standard symbol is adopted across NSW. This symbol is to be accompanied by the words 'EV charging only' painted in white.

In special circumstances this requirement can be amended as long as sufficient alternative identification can be provided to the satisfaction of council.

c) Installations with the 'use last approach' will require signage consistent with the RAA Guidelines for Accessible EV Charging Stations to identify the priority bay as outlined in Section 3.7.2 b).

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- d) Adequate lighting should be provided at the site for the safety and security of users and to assist with identification of the charging station, parking bay, signage and usage instructions at night.
- e) For off-street locations wayfinding signage should be placed along the nearest main road to assist EV drivers with locating the charging bay. This signage will need to comply with relevant Council standards and where possible should seek to minimise streetscape clutter by utilising existing signposts.
- f) The use of advertising by a Third-Party must be included in the written proposal to Council and must comply with the Liverpool Signage on Council Land Policy and other relevant guidelines including the Outdoor Media Association Code of Ethics. Separate approvals may be required for advertising in accordance with the State Environmental Planning Policy 2021 and section 138 of the Roads Act 1993.

3.7.2 Parking configuration

- a) EV charging infrastructure should be readily accessible for all users. All installations will at minimum need to consider the following design measures:
 - i. Where possible EV charging stations should be positioned between parking bays to provide access to plugs from two adjacent bays.
 - ii. Preference will be given to installations that consider improved accessibility through 'Priority Bay Use Last' designation as outlined in Section 3.7.2 b).
 - iii. Any EV charging infrastructure placed in an Australian Disability Parking Scheme (ADPS) permit bay must be compliant with the Disability Discrimination Act 1992, including compliance with AS2890.5/ AS2890.6.
 - iv. All EV charging bays will align with Council's specifications and relevant Australian Standards including the *Liverpool Streetscape and Paving Guidelines*.
 - v. All EV charging bays must be designed to facilitate safe and easy access for drivers to connect charging plugs into their vehicle. This includes ensuring charging cables have an appropriate length to reach all points of the vehicle (front, rear or side charging points) when charging in an on-street or off-street parking bay.
 - vi. Restrictions for 'front parking only' or 'rear to kerb only' should be avoided for EV charging bays to allow access for different vehicle models.

b) In line with the vision of the Liverpool Disability Inclusion Action Plan, Council supports the 'use last approach' to encourage increased availability of accessible charging spaces beyond reservation of a single bay under the Australian Disability Parking Scheme.

The approach encourages at least one EV charging bay (the 'priority bay') in an installation to be designed with accessible mobility features, but does not require the charging space to be reserved for ADPS permit holders. This reduces the risk for underutilisation of the technology and makes the installation still financially attractive for Third-Party providers. EV drivers without ADPS permits are able to use the priority bay only when all other EV charging bays are full.

Priority bays with accessible mobility features should be designed to align with the general circulation requirements and signage outlined in the RAA Guidelines for Accessible EV charging stations.

3.7.3 Amenity

EV charging infrastructure, especially on-street installations have the potential to detract from urban amenity if not carefully managed. Council will support proposals that seek to maintain urban amenity, including consideration of the following:

- a) EV charging infrastructure does not create an obstruction or hazard to pedestrians, cyclists, and other micro-mobility users.
- b) Any lighting included as part of the EV charging infrastructure is considerate of nearby residents and does not create unnecessary glare or discomfort.
- c) EV charging infrastructure minimises noise from cooling fans and is placed strategically to reduce discomfort for nearby sensitive receivers.
- d) Kerbside equity is maintained at community spaces such as parks and libraries, by limiting the number of EV charging bays to ensure parking is still available for visitors who do not own an EV.
- e) The design and colour scheme of EV chargers should blend in with the urban environment, either using similar colours to other nearby painted street furniture, or by using neutral colours and materials where other street furniture is unpainted.
- f) Advertisements with sound are prohibited.

3.7.4 Availability and utilisation

All EV charging installations should implement design measures to improve access and availability of the charging station for as many users as possible. This will be supported by parking enforcements and controls from Council outlined in Section 3.7.6. EV charging infrastructure should consider inclusion of the following design features:

- a) Dynamic pricing mechanisms to encourage users to shift their vehicle once it approaches a full charge. This includes overstay fees, time based and/or power based billing systems.
- b) Signage that states the maximum duration of stay for a charging EV.
- c) Contact information and instructions to assist users with reporting faults with the EV charging equipment.

3.7.5 Safety

All EV charging installations will need to prioritise safety for both EV drivers and the community. The provider will be responsible for compliance with relevant legislation and safety standards, with consideration of the following further design measures:

- a) EV charging parking bays and charging stations should be located to ensure safe sight distances for pedestrians, cyclists and other motorists travelling within or adjacent to the parking facility.
- b) All EV charging installations are to include appropriate cord management features such as cable and plug holders. Additionally, the location of EV charging infrastructure in relation to the bay should not result in charging cables posing a trip hazard for pedestrians, cyclists or other road users.
- c) EV charging infrastructure should have clear usage instructions for drivers and include safety features such as:
 - i. Charging commences only once the EV charging station verifies a safe connection to the vehicle.
 - ii. Cables are secured and locked during charging to prevent tripping hazards.
 - iii. Charging is automatically stopped once the EV is fully charged.
 - iv. Isolation with an in-built electrical safety device in the event of an electrical fault.
- d) Crime prevention through Environmental Design principles are applied.
- e) EV charging bays should allow passive surveillance and not create blind spots, to protect the safety of users. EV charging infrastructure in locations covered by existing CCTV networks will be preferred.
- f) EV charging infrastructure locations should avoid flood-prone areas where possible. Where this is unavoidable, suitable mitigation measures should be applied in accordance with relevant Council policies and Australian standards.
- g) Moving or dynamic advertisement (including electronic displays) is not permitted when it is viewable by road users (including a driveway).

3.7.6 Parking controls and enforcement

Enforcing appropriate parking controls for EV charging bays will be important for improving the accessibility of chargers for EV drivers and ensuring installations provide optimal value. In general, EV charging bays should:

- a) Retain existing parking time limits and payment requirements.
- b) Be reserved for EV charging only, using the signage and line marking described in Section 3.7.1. Vehicles found parked in the bay that are not charging will be subject to maximum fines of up to \$2,200 in accordance with Section 203B and 203C of the Road Rules 2014.

3.7.7 Environment and heritage

EV Charging infrastructure has the potential to impact Liverpool's natural environment and cultural heritage. Providers will need to ensure they comply with the *Liverpool Local Environmental Plan 2008* and relevant State Environmental Planning Policies. Council will support proposals that seek to conserve and protect the natural environment and heritage places, including consideration of the following:

- c) EV charging installations should avoid impacts on natural assets, such as trees and bushland. In the event impacts cannot be avoided, suitable mitigation measures will need to be put in place.
- d) EV charging installations should avoid impacts to cultural heritage assets, values and uses. In the event impacts cannot be avoided, suitable mitigation measures will need to be put in place.

4 RELEVANT LEGISLATIVE REQUIREMENTS

- 4.1.1 This Policy should be read in conjunction with relevant state and federal legislation, including:
 - State Environmental Planning Policy (Transport and Infrastructure) 2021. This Policy describes the requirements for public authorities, electricity providers and residents to install EV charging infrastructure under various consent pathways (with or without consent and exempt development).
 - Roads Act 1993. This act requires that a person shall not carry out works or
 erect structures on a public road without approval of the roads authority. Section
 138 requires consent from Council as the roads authority for any works or
 activities in a public road, including all parts of the road reserve such as
 footpaths.
 - Road Rules 2014. Outlines rules for vehicles and road users on roads and related areas in NSW.
 - Local Government Act 1993. This act sets out principles for Council decision making.
 - National Construction Code Section J9D4. Specifies the minimum requirements for EV charging provision for new developments.

- Disability Discrimination Act 1992. Australian law that prohibits discrimination against a person with disability in various areas of public life.
- Australian Consumer Law. Regulates the accuracy and fairness of marketing, advertising and selling to consumers. This may be relevant for EV charging installations that incorporate advertising.
- AS2890.5 Parking facilities, Part 5 On-street Parking. Sets out the minimum requirements and recommendations for the provision of on-street parking and
- AS890.6 Parking facilities, Part 6 Accessible Car Parking Requirements. Sets
 out the minimum requirements and recommendations for the provision of offstreet parking facilities for people with disabilities.
- AS/NZS 3000:2018 Electrical installations. Sets out the requirements for the design, construction and verification of electrical installations.
- AS/NZS 4417.2:2020 Regulatory compliance mark for electrical and electronic equipment, Part 2: Specific requirements for particular regulatory applications.
- AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting. Specifies requirements for the control of the obtrusive effects of outdoor lighting.

5 RELATED POLICIES & PROCEDURE REFERENCES

- Future Transport 2056 NSW Electric and Hybrid Vehicle Plan. Outlines the preferred charging standards and principles for EV charging infrastructure in NSW.
- RAA Design Guidelines for Accessible EV Charging Stations. Provides guidelines for EV charging infrastructure parking configurations and technology to improve accessibility for people with disability, based on Australian and international standards.
- Community Strategic Plan
- Liverpool Climate Action Plan
- Local Strategic Planning Statement
- Liverpool Disability Inclusion Action Plan
- Liverpool Signage on Council Land Policy
- Liverpool Streetscape and Paving Guidelines
- Outdoor Media Association Code of Ethics
- Liverpool Local Environmental Plan 2008
- Transport for NSW Road User Space Allocation Policy

- Western Sydney Street Design Guidelines
- Liverpool City Centre Public Domain Technical Manual

6 AUTHORISED BY

Council Resolution

7 EFFECTIVE FROM

tbc

8 REVIEW DATE

The policy will be reviewed every two years or more frequently depending on changes to legislation, standards and/or technological advancements.

9 VERSIONS

The current and previous version of the policy should be set out in the following table.

Version	Amended by	Changes made	Date	TRIM Number
1	Not applicable	New Policy	tbc	tbc

10 THIS POLICY HAS BEEN DEVELOPED IN CONSULTATION WITH

tbc

11 ATTACHMENTS

tbc



Liverpool City Council

Electric Vehicle Charging Stations on Public Land Policy

Overarching Strategy Document

Reference: EVPLP_0001

Rev B | 26 June 2024



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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 300647-00

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Document Verification

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File reference

Revision	Date	Filename	Draft Report		
A	26/03/2024	Description	Initial draft report for Council review and works		
			Prepared by	Checked by	Approved by
		Name	Sinead Thompson	Jason Hoad	Mitch Lee
		Signature	1		
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		Description	Updated repor	rt to incorporate Cou	ıncil feedback.
			Prepared by	Checked by	Approved by
		Name	Sinead Thompson	Annabel Kerr / Jason Hoad	Mitch Lee
		Signature	1		
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

Issue Document Verification with Document

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Acknowledgement of Country



We proudly acknowledge and respect the Traditional Custodians of the land that now resides within the Liverpool City Council's boundaries, the Cabrogal Clan of the Darug Nation.

We acknowledge that this land was also accessed by people of the Dhurawal and Darug Nations.

We Honour their Ancestors and Elders, past and present, whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

Executive summary

Transport is responsible for between one quarter to a third of global carbon emissions¹. Transition to zero-emission electric vehicles (EVs) could eliminate half of our transport-related emissions, while also reducing operational costs for private owners and fleet managers. Local governments that do not prepare for wider uptake of EVs and support broader community use could find themselves missing out on unlocking these early adopter benefits.

Ongoing investment in relevant policies, grants and incentives in NSW and growing availability of EVs on the consumer market are accelerating EV take-up. The 2021 NSW Government Electric Vehicle Strategy projecting EV sales to increase to 52% of total vehicle sales by 2030-31. As a result, there are a growing number of private operators with increasing interest to work with local government, including Liverpool City Council (Council), to install EV charging stations on public land.

Arup have been appointed to assist Council with developing an Electric Vehicle Charging Stations on Public Land Policy (the Policy) and create a supporting Strategy document (this report) to shape with the roll-out of EV charging infrastructure on public land. The Strategy covers Council's role in facilitating EV chargers across Liverpool, the types of chargers to accommodate private vehicles, current conditions and transport trends and desired place-based charging network. Separately, the Policy sets out the standards and obligations for the installation of public EV charging infrastructure on Council owned and managed land.

Current conditions in Liverpool

Households in Liverpool own more cars than the state average. In 2021, the average number of cars owned by each household in Liverpool was 1.98, compared to 1.71 across NSW overall. Areas of Liverpool with a high proportion of these dwellings (particularly apartments) such as around the Liverpool CBD, Warwick Farm and in urban renewal areas may need support from Council to assist residents with charging at-home.

As of 2023, there are just 8 charging locations across Liverpool, clustered along the Camden Valley Way between Casula and Prestons, and around Edmondson Park shopping centre and train station. The charging availability is summarised in Figure 1.

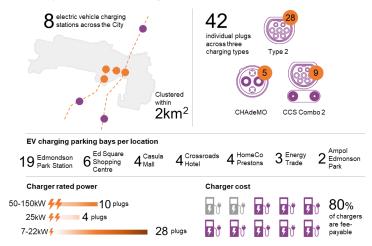


Figure 1 - Existing charging network in Liverpool

¹ 16.2% of global carbon emissions is attributed to electricity and fuel to power transport. Further emissions are embodied in the use of energy in industry, cement production and waste disposal associated with infrastructure (Ritchie et al. 2020)

Network principles and the role of Liverpool Council

Council has a role to ensure that the installation of EV Charging infrastructure promotes equitable access for the community and aligns with wider planning priorities. The principles in Table 1 were derived from discussions between representatives from Council's various teams and adopted in April 2024. They provide a framework to ensure that EV charging infrastructure installed on Council owned and managed land supports the community equitably and sustainably.

Table 1 - Network principles for the Liverpool Electric Vehicle Charging Stations on Public Land Policy

1	Equitable	An equitable roll out of chargers that fills in network gaps, in which all Liverpool residents retain reasonable access to parking.
2	Enjoyable	An enjoyable charging experience, at locations that maximise opportunities for amenities and other attractions near the chargers.
3	Safe and secure	Safe and secure chargers, that are thoughtfully located, designed and managed so that they are safe to use and vandalism is discouraged.
4	Sustainable long-term	A long-term solution, where charger availability and compatibility is maintained over the long term and charger decommissioning does not negatively impact residents.
5	Integrated	Integrated design, means that charging facilities blend in with the landscape of Liverpool streets.
6	A sound investment	A sound financial investment, that provides long-term returns to Council.
7	Supports net-zero	Enables zero-emission travel, for residents who rely on cars, but do not have access to charging at home.
8	Provide assurance	Provide guidance for providers of EV charging infrastructure, over appropriate locations for charger installation and Council design requirements.

Three ownership models that have emerged in Australia for the provision of privately and publicly accessible EV charging infrastructure on Council owned and managed land:

- Council-led Council owns and installs EV chargers and directly provides charging services.
- Partner Council partners with a Private Third Party(ies) to install chargers at selected locations. The
 Third Party manages and operates the chargers in accordance with the License Agreement with Council.
- Private sector-led Third parties select site in collaboration with Council and apply to Council. The
 Private Third Party owns the EV chargers and manage the charging services in accordance with the
 License Agreement with Council.

It is likely a combination of these models will be needed for the roll-out of EV charging infrastructure on Council land across Liverpool.

Council also has an influence role to play for supporting EV uptake on privately owned land. This could be through initiatives such as lobbying to the NSW State Government for subsidies or policy change, or through providing educational materials and resources to Liverpool businesses, strata managers, developers and residents.

Desired charging network

In Liverpool, EV charging should cater for charging needs **at-home**, **at-work**, **at-destination** (off-street), **on-street**, **on-route** and at multimodal **charging hubs**. With their longer charging times, lower-level chargers are more suitable for at-home charging, whereas higher charging levels are more suited for at-destination, on-street and at charging hubs where dwell times are lower.

It is also important to consider the types of land Council owns and manages and the surrounding urban context. To help define this, Liverpool can be broken down into six 'Charging Zones' shown in Figure 2.

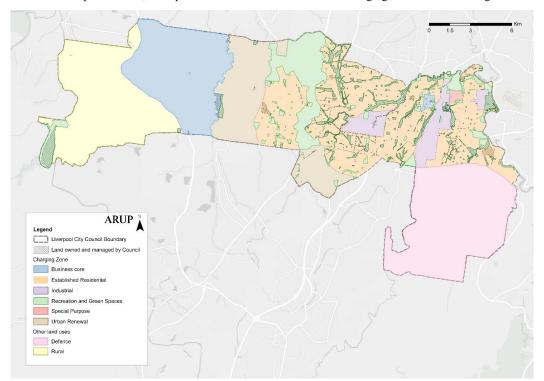


Figure 2 – Liverpool Charging Zones

A description of each charging zone, the overarching network design principles and Council's role in facilitating the roll-out is described in Table 2. These zones provide strategic direction for the installation of EV charging infrastructure across Liverpool.

Table 2 – Liverpool charging zones, design principles and Council's role

Charging Zone	Network design principles	Council's Role
The Business Core currently includes the Liverpool CBD and Aerotropolis. It describes areas that act as commercial and administrative hubs, characterised by a mix of business, retail and high-density housing. The key charging typologies are: Workplace Destination On-street.	Business activities are not disrupted Streets are walkable and cyclable. Increase public transport and active travel mode share over time and a shift away from private vehicles. Future-proof on-street parking spaces for transition to other uses over time.	Facilitate EV charging in councilowned at-grade and rooftop car parks in the Liverpool CBD. Facilitate e-rideables charging to promote active transport use in and around the Liverpool CBD. Limit on-street EV charging provision. Encourage businesses to provide chargers for their employees on their land where there is a business need.
Established Residential Neighbourhoods describe areas of Liverpool that are predominately residential and offer a range of amenities, housing options and community places. The key charging typologies are:	Streets remain walkable and cyclable and are not cluttered by EV charging infrastructure. Over time these established areas could diversify in land use, with a growing number of essential destinations within walking distance of residents. EV	Council owns a number of community hubs such as libraries and community centres. Council can attract visitors to these places by providing EV chargers. Facilitate e-rideables charging, particularly adjacent to shopping

Charging Zone	Network design principles	Council's Role
At-homeDestinationOn-street.	charging placement should not encourage greater car use in these instances.	centres to promote active transport use around suburbs.
Urban Renewal Neighbourhoods refer to areas of Liverpool undergoing planned development in the near future, including the urban rural fringe. The key charging typologies are: At-home Destination Workplace.	Charging provision should evolve alongside other developments and remain flexible to future land uses.	Minimised role given charging provision on Council land is less likely to be needed as the NCC updates will facilitate home charging for new apartment buildings. Council could leverage visitor bays for charging provision through the acquisition of land for community spaces in the future or develop existing lots. Opportunity to encourage EV uptake for new residents through provision of chargers on Council land. Opportunity for Council to consider minimum EV charging provision in Development Control Plans for urban renewal areas.
Recreation and Green Spaces refer to the extensive network of parks and nature reserves owned by Council as well as leisure centres. They consist of open spaces, sporting and recreation destinations, most of which have off-street parking facilities, while others have on-street parking bays. The key charging typologies are: Destination On-street.	EV charging should only be placed in existing parking assets and not encourage additional bays to be built. Active transport (walking and cycling) to, from and within recreation and green spaces should be prioritised. Provision should be aligned to existing parking availability and demand, e.g. small parks without existing carparks may not need chargers.	Provide EV chargers in visitor bays to encourage attendees to explore green spaces. Limit the number of spaces converted to chargers to safeguard parking for those who cannot transition to an EV yet.
The Industrial charging zone refers to both light and heavy industrial precincts. These areas are typically well connected for long trips through access to motorways and are likely to feature heavy vehicle trips. The key charging typologies are: Workplace Charging Hub On-street.	Safety should be prioritised. Provision of chargers should only occur in selected locations where safe parking and pedestrian access can be achieved. Industrial activities are not negatively impacted.	Council has an opportunity to support industrial fleets to electrify and generate a revenue stream, if Councilled ownership arrangements are pursued on public land. Encourage industry to provide chargers on private property to reduce the demand on the public network.
Special Purpose areas are characterised by land uses such as hospitals, shopping centres and tourism sites. They attract visitors from within and outside Liverpool. Special purpose areas generally have off-street parking provision or are well supported by public transport. The key charging typologies are: Destination Workplace On-street.	EV charging infrastructure should not impact the movement of high pedestrian volumes during peak times. Chargers should be placed in existing parking spaces only.	Council owns a number of street facing and rooftop carparks adjacent to special use areas. There is opportunity for Council to support visitors to charge their vehicles on council owned land.

Implementation and Next Steps

To help guide implementation of the Policy, Council may choose to:

- Develop a standard license agreement between Council and Third-Party providers that will be agreed to as part of the EOI process (Section 3.4.4 of the Policy).
- Develop a set of design guidelines for the physical characteristics and aesthetic of proposed EV charging installation.
- Develop a set of criteria to assess and compare expressions of interest from Third-Parties.
- Develop a standard procedure for collecting and responding to complaints raised by the public over EV Charging infrastructure.

Beyond the Policy, there are other steps Council can take to shape the EV charging network across Liverpool. Projects being undertaken by other NSW and Australian councils that could be considered include:

- Fleet transition strategy for Council's own fleet, including evaluation of potential EV charging sites and infrastructure requirements to power the fleet.
- Public EV charging strategy and action plan to articulate Council's role in supporting residents and businesses in Liverpool to make the switch to EVs.

1. Introduction

The Electric Vehicle Charging Stations on Public Land Policy sets the standards and obligations for the installation of public charging infrastructure on Council-owned and managed land. This Overarching Strategy Document provides the framework used in determining Council's role in facilitating a sustainable and equitable transition to EVs in Liverpool, defined by transport conditions and preferred locations for charging infrastructure.

1.1 Context

Across the world, the journey to transition how energy is generated and consumed has been ongoing for agencies and businesses for the last few decades. Whether through policy, community pledges or multilateral emissions reduction targets, the global shift towards more sustainable practices that benefit present and future generations can be felt across the market, built environment and availability of resources.

Transport is responsible for between one quarter to a third of global carbon emissions². This is through the movement of people and goods, connecting us to places we work, live and play. With the majority of vehicles on the Australian market requiring the burning of fossil fuels for energy, a shift in how we power our vehicles will contribute to eliminating around half of these emissions. The world's largest economies have already committed to transition away from fossil fuelled internal combustion engine vehicles (ICEV) toward zero-emission electric vehicles (EVs).

At the end of 2023, around 7.5% of all new vehicles sales in Australia were electric, with sales in NSW on par with this number³. In Liverpool, new EVs made up just over 1% of new vehicle registrations in the 2023 calendar year. In comparison with the rest of the world, where EVs accounted for roughly 18% of total new vehicle sales, NSW and Liverpool is lagging. If this continues, NSW could be left behind dealing with older polluting vehicles, expensive fuel import costs, hotter urban centres and diminished air quality.

However, with the publication of the Federal Government's and NSW Government's separate EV Strategies, and ongoing investment in EV policies, grants and incentives in NSW, this number is projected to be on the rise exponentially. In parallel, there are a growing number of private operators with increasing interest to work with Council to identify locations for the installation of public EV charging stations. For Liverpool, this will be imperative for supporting wider community uptake of EVs and encouraging additional use of car sharing, e-bikes and e-scooters and other emerging sustainable transport options. It will also set a direction for supporting low and zero emission vehicles to help achieve Net Zero for Council operations by 2036 and by 2050 for the community.

This is a crucial step for Liverpool over the next decade as greenfield suburbs continue to develop and town centres emerge and become more urbanised. As the community adjusts to urban heat and high temperatures, as well as the longer travel distances compared to inner-Sydney local government areas (LGAs), residents and visitors to Liverpool will continue to rely on vehicles some of the time, even as public transport, walking and cycling infrastructure is improved.

1.2 Purpose

The Policy that Liverpool has developed, informed by this Strategy document, will assist in offering certainty to the community and industry, while providing an impartial assessment of locations most suited to unlock the benefits of the installation of public EV charging infrastructure and services. The Policy and

² 16.2% of global carbon emissions is attributed to electricity and fuel to power transport. Further emissions are embodied in the use of energy in industry, cement production and waste disposal associated with infrastructure (Ritchie et al. 2020)

³ Electric Vehicle Index, Australian Automobile Association, 2024

Strategy covers Liverpool's role in facilitating EV chargers across Liverpool, the types of chargers to accommodate private vehicles, current conditions and transport trends, a desired place-based charging network and the standards and obligations for the installation of public EV charging infrastructure on Council owned and managed land.

The Strategy explores these themes across the following seven chapters:

Chapter 2

Market analysis

An outline of the local, regional, national, and global EV market including broader benefits and potential demand.

Chapter 4

Current conditions in Liverpool

Investigates the existing context in the LGA such as the characteristics and opportunities of existing transport modes, emissions and the infrastructure network.

Chapter 6

Desired charging network

Proposes suitable charging locations and requirements based on the existing and future land and transport planning in the LGA.

Chapter 8

Next steps

Further material to help guide implementation of the Policy and continue to shape the EV charging network in Liverpool.

Chapter 3

Charging infrastructure

An overview of EV charging terminology, such as levels, modes and types, including a summary of relevant statutory planning levers.

Chapter 5

Network principles and role of Liverpool

A discussion of the potential role Council could play in facilitating the EV charging network.

Chapter 7

Policy implementation

Provides a responsibility matrix that indicatively outlines the teams within Council responsibility for delivering on the Policy.

2. Market analysis

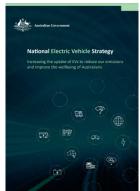
2.1 The broader picture

2.1.1 International

As the transport sector continues to be the largest contributor to global GHG emissions⁴, there is increasing importance for a transition to ZEVs to reduce the reliance on fossil fuels. At the 2021 United Nations Climate Change Conference (COP26), the Accelerating to Zero Coalition (A2Z) and ZEV Declaration was launched, pledging a global collaborative effort to work towards all sales of new cars and vans to be zero emission by 2040 and by no later than 2035 in leading markets. As of September 2023, there are 228 signatories, which includes 30 leading markets, 11 emerging markets and developing economies, 78 state governments and numerous automotive manufacturers, fleets and other organisations.

Most recently at COP28 in December 2023, the first 'global stocktake' of progress against the Paris Agreement goals took place, resulting in a clear decision to speed up action to end the use of fossil fuels. Particularly, the stocktake for the ZEV transition showed that a total of 52 countries have introduced policies or outlined their commitment to phase-out ICEs. This conference also saw the launch of the Global Zero Emission Vehicles Transition Roadmap, which compiled efforts by leading markets to accelerate the transition to ZEVs in non-signatory countries and emerging markets.

2.1.2 Federal Government



The Australian Government plays an important role in coordinating the strategic direction for infrastructure and influencing the domestic market, particularly controlling imports, tax and policies. Australia's *Climate Change Act 2022* mandates a 43% reduction in GHG emissions across all sectors of the national economy compared to 2005 levels by 2030 and net zero emissions by 2050 yet is one of the leading global markets that has not signed up to the ZEV Declaration.

In April 2023, the Australian Government released its first National Electric Vehicle Strategy, setting a framework for supporting EV uptake across the following objectives:

- A New Vehicle Efficiency Standard (NVES), mandating a specific average carbon emissions standard for any manufacturer wishing to sell new light vehicles in Australia.
- Up to \$500 million through the Driving the Nation Fund to develop a world-class national charging infrastructure network, planned to provide charging stations every 150km, on average, along major highways.
- Updates to the National Construction Code (NCC) in relation to the minimum charging infrastructure requirements in new buildings and renovations.
- Electric Car Discount Legislation including for new ZEVs and PHEVs car loans.

⁴ Steering transportation toward sustainability, Accelerating to Zero Coalition, 2024

2.1.3 States and Territories

State and Territory governments have an interest in taking action that supports the roll-out of charging infrastructure and increasing the proportion of EV sales to meet national and global emissions targets. As of 2021, the NSW, SA, VIC, and ACT Governments are signatories of the global ZEV Declaration and most of the State and Territory governments have set specific emissions and ZEV transition targets and begun their own initiatives. In particular, the ACT has one of the most ambitious approaches, aiming for net zero emissions by 2045, 80-90% ZEV new car sales by 2030, and a total of 180 public chargers installed by 2025.

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2.1.4 NSW Government







The NSW Government is increasingly supporting the uptake of EVs and associated charging infrastructure in alignment with the State's goal of reaching net zero emissions by 2050, as set out in the NSW Net Zero Plan Stage 1: 2020 – 2030. Released in June 2021, NSW's Electric Vehicle Strategy shapes the State's pathway to ZEVs and is currently targeting 52% new car sales being EVs by 2030-2031, up from 8.54% during Q4 of 2023 (BEVs and PHEVs). Overall, the Strategy's actions will contribute to lowering emissions by 12.6 million tonnes each year by 2050. The Strategy's key initiatives include:

- EV Charging Grants for kerbside, fast, and destination charging infrastructure as well as charging in apartment buildings.
- \$171 million to build 'EV Super Highways' across the State.
- Updates to the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) meaning that the installation of EV charging infrastructure can be installed under exempt development in certain situations. This includes private homes or car parks (commercial, public, or private) and certain privileges for public authorities and electricity supply authorities.
- Allowing EVs to drive in transit lanes.
- A Road User Charge to be introduced once EVs reach 30% of market share in NSW, predicted to be as of July 2027, to create an equitable road funding system whilst encouraging the growth of EV.
- EVs to be exempt from Stamp Duty once the Road User Charge starts.

2.2 Why EVs?

EVs are becoming increasingly more accepted as an alternative to ICE vehicles in reducing the nation's carbon footprint and supporting progress on Australian and international emissions targets, especially if powered by renewable energy. With targets being introduced on federal and state levels across the country as mentioned previously, it is becoming more imperative for local governments to plan for their widespread adoption and support the rollout of supporting infrastructure, principally infrastructure to charge them.

Beyond contributing to the decarbonisation of the transport sector, transitioning to EVs also offers wideranging social, economic, business and health benefits. This includes:

Helping to create cleaner and healthier communities through removing all localised carbon monoxide
and nitrogen oxide, half of PM₁₀ and volatile organic compounds and two thirds of PM_{2.5} emissions,
reducing cumulative emissions and enhancing air quality⁵.

⁵ Recharging the economy 2019, Electric Vehicle Council, NRMA, PwC, St Baker Energy Innovation Fund

- Reducing operational costs for private owners and fleet managers through a reduction in dependence
 on liquid fuels and running costs for less part-intensive vehicles. In a study undertaken for the National
 EV Strategy, it was estimated that EV owners could save up to \$2,000 each year in fuel costs compared
 to ICE vehicles as well as paying lower maintenance costs.
- Presenting new economic opportunities through the manufacturing of parts, upgrades to grid
 infrastructure, particularly in renewable energy generation, and jobs in advanced transport.

LGAs that do not prepare for wider uptake of EVs and support broader community use, could find themselves missing out on unlocking these benefits that would come from being early adopters. While incentives and new vehicle sale targets have proved effective in overseas markets to encourage adoption of EVs, a critical part of planning to support growing uptake is the rollout of charging infrastructure. The private sector has already begun acquiring land and installing chargers across NSW in strategic locations to support their own objectives, primarily with a commercial focus. While the market, if left on its own, will likely contribute to the development of charging infrastructure across the state, the resultant network may not have equity or responsibility to the community as key drivers of its development. To avoid unintended city impacts of an ad-hoc, market-led rollout, Council can use its resources to guide the rollout of publicly accessible chargers to fill network gaps, ensure broader objectives are met and ensure the network remains an attractive and competitive market.

2.3 Potential demand

Australia's EV adoption and impact is small scale compared to EV market leaders such as China and Europe, where 15 and 17% car sales are EVs respectively. In Australia, as of the end of 2023, just under 9% of all new car sales were EVs. However, policy support is likely to impact the supply and demand for EVs in Australia, showing that we are at the bottom of the 'hockey stick' for EV uptake, as shown in Figure 3 below. Particularly, the implementation of the NVES is likely to help overcome key barriers to EV uptake such as model choice, affordability, and supply. According to the 2021 NSW Government Electric Vehicle Strategy, EV sales are projected to increase to 52% of total vehicle sales by 2030-31.

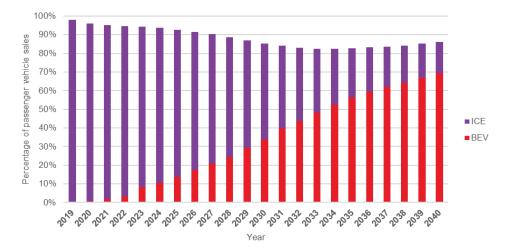


Figure 3 – Australian Passenger Vehicle Sales projections to 2040 (Source: BloombergNEF EV Outlook)

3. Charging infrastructure

3.1 Charging an EV

Charging infrastructure has typically been categorised by levels, modes and types.

3.1.1 Charging levels

'Level' refers to the voltage and the power of the charging system. The higher the voltage, the higher the power output and the quicker an EV will charge. There are three different levels offered by today's technology, as summarised below.

Level 1 (slow)

Level 1 chargers are typically used in standalone domestic homes to 'top up' daily use of EVs. They are existing power points (10-15A, single phase), used in combination with a special, untethered cable, which must be connected both from the vehicle to the wall. This method adds between 10-20km of range per hour when charging. Level 1 chargers are commonly used with the goal of fully recharging an EV overnight.

Level 2 (fast)

Level 2 chargers are dedicated AC EV chargers up to 7kW (32A single phase) or 22kW (three-phase). These are typically installed in homes, apartment complexes, shopping centres and other locations where vehicles are parked for a long period of time. Level 2 cables are typically untethered to a wall attachment and infrastructure requires a dedicated circuit, heavy gauge wire and is commonly hardwired to comply with standards. This method adds up to 40km of range per hour and delivers a full recharge overnight.

Level 3 (rapid/ultra rapid)

Level 3 chargers are fast and ultra-fast DC chargers, with power ranging from 25kW to 350kW (40-500 Amp, three phase). They are typically found at commercial locations like expressways, shopping centres, and hubs. At 350 kW, these chargers can deliver up to \sim 350km of range in 10 minutes, with a full charge only taking 10-15 minutes.

Typical characteristics

- 2.5-7kW
- 8-12 hours full charge
- At-home charging
- Unearthed and AC household outlet, Type 1 & 2 plugs
- \$ <\$500 + installation

Typical characteristics

- **4** 7-22kW
- 1.5-5 hours full charge
- At-work/destination charging
- Unearthed and AC with wall attachment, Type 1 & 2 plugs
- \$ \$900-\$3,000 + installation

Typical characteristics

- 25-350kW
- 10min-1.5 hours full charge
- On-route/hub charging
- Tethered DC only, all plugs
- \$ >\$25,000 + installation

3.1.2 Charging modes

'Mode' refers to the electronic communication between the vehicle and the power source. Therefore, the mode determines the extent to which the charger can determine the percentage of charge, avoid overcharging and ensure batteries are charged in a safe and sustainable manner. Modes are governed by four different categories shown below.

Mode 1



A Mode 1 charger is directly connected from the vehicle to a standard at home socket without specialist safety systems. Their use has been banned in the US and UK over safety concerns. They are typically associated with Level 1 charging and are mostly used for scooters and electric bikes.

Mode 2



A Mode 2 charger is a direct home socket to vehicle system, but unlike Mode 1 it has a control box safety system attached to the AC cable. These are commonly used in Level 1 charging and can support both simple and smart charging.

Mode 3



A Mode 3 charger is permanently connected to the electricity network and is typically associated with Level 2 charging. They take the form of wall boxes, commercial charging points and automatic charging systems.

Mode 4



A Mode 4 charger supplies DC power and Is often called a rapid or super charger. It requires a current converter external to the vehicle to convert from AC to DC and can recharge vehicles much faster than the other three modes. They are associated with Level 3 charging.

3.1.3 Charging types

'Type' refers to the model of plug associated with the charging cable and the vehicle inlet. There are two main plug types which are commonly used across different EV models and manufacturers. As well as specialty plugs which are either special to manufacturers (e.g., Tesla) or have special uses (e.g., CHAdeMO), as summarised below.



Type 1 plugs are single-phase plugs that allow for a charging power level of up to 7.4kW. These are typically used in residential charging settings and are also known as J1772 plugs. Type 1 plugs are typically associated with Level 1 charging.



Type 2 plugs are single-phase plugs with three-phase capabilities. When used in private bays, they have charging power levels of up to 22kW. In public charging stations, Type 2 plugs can have power levels of up to 43kW. Most public charging stations are equipped with Type 2 sockets, however EVs can typically be charged by a Type 1 and 2 plugs. Type 2 plugs are typically associated with both Level 1 and 2 charging.



Tesla superchargers are bespoke modified Type 2 plugs which can only be used by Tesla vehicles. By using two of the plug's pins for DC charging, Tesla plugs are able to deliver more power than standard Type 2 plugs of up to 120kW.



CHAdeMO are plugs used at DC charging stations which can be installed as a second socket by vehicle manufactures next to the AC charging socket on the EV. These plugs are typically associated with Level 3 charging, delivering high power of over 50kW.



Combined Charging system (CCS) Combo 1 and 2 are based on Type 1 and 2 plugs by adding two additional pins at the base. CCS's are made for DC fast charging. However, the connectors can be used for both AC and DC charging up to 350kW. Similar to CHAdeMO plugs, CCS plugs are typically associated with Level 3 charging.

3.2 Statutory planning

There is no exact science behind the number of chargers required per EV on the network, however statutory planning levers have been implemented in leading markets to provide minimum requirements for their installation based on building type and use. The provision of chargers therefore relates to the proportion of total parking bays required in a development to support the installation of infrastructure.

Across the world, statutory planning controls have been implemented on the international, national and city level. In Australia, local governments have begun introducing their own guidance around the proportion of parking bays in developments must allow for the installation of charging infrastructure. However, this largely follows the national requirements set by the National Construction Code (NCC). In NSW, the amendment to the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP) seeks to encourage the installation of EV charging infrastructure through public-private partnerships on public land. While these two planning levers are likely to be instrumental in increasing the abundance of charging stations throughout Liverpool, it is still necessary for Council to understand their own role to ensure chargers are rolled out in strategic locations and contribute to broader community benefits.

3.2.1 National Construction Code

The NCC outlines the minimum requirements that need to be met when constructing a new building or refurbishing an existing building (depending on the size of the refurbishment).

The latest volume, 2023, states that for a Class 2, 3, 5, 6, 7b and 9 buildings with at least 9 carparking spaces, provision shall be provided by installing electrical distribution boards dedicated for EV chargers (quantity depending on the class of building). Table J9D4 of the NCC (Table 3) stipulates that any one electrical distribution board should not service more than 24 chargers per storey and that load management cannot be curtailed to deliver under 12kW in an 8-hour working day.

Table 3 - Electric vehicle distribution board requirements for each storey of a carpark (Table J9D4 of NCC)

Carpark spaces per storey for electric vehicles	Electrical distribution boards for electric vehicle charging per storey
0 – 9	0
10 – 24	1
25 – 48	2
49 – 72	3
73 – 96	4
97 – 120	5
121 – 144	6
145 – 168	7

Carpark spaces per storey for electric vehicles	Electrical distribution boards for electric vehicle charging per storey
> 168	One additional distribution board for each additional 24 spaces or part thereof.

Furthermore, the NCC also outlines the minimum requirement for the provision of EV chargers in the parking facility of new or refurbished developments, as summarised below for different building uses.

Apartment building

100% EV-Ready spaces

Where 100% of parking spaces in apartment buildings need to be installed with infrastructure for an EV owner to use their own cable to charge their vehicle.

Office building

10% EV-Ready spaces

Where 10% of parking spaces in office buildings need to be installed with infrastructure for an EV owner to use their own cable to charge their vehicle.

Destination (shop, café, etc.)

20% EV-Ready spaces

Where 20% of parking spaces in destination carparks need to be installed with infrastructure for an EV owner to use their own cable to charge their vehicle.

3.2.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) sets out the requirements that need to be met in order for EV charging infrastructure to be installed with or without development consent on land owned or controlled by a public authority. It provides specified criteria for design, placement and installation of charging stations, as well as the interface with the *Roads Act 1993* for chargers installed on public roads.

4. Current conditions in Liverpool

4.1 Transport trends

4.1.1 Car ownership

Figure 4 shows that the proportion of car-owning households in Liverpool has increased by 2% between 2011 and 2021. The proportion of households with cars on average is similar to the rest of NSW, although are more likely to own two or more cars. In 2021, the average number of cars owned by each household is 1.98, compared to 1.71 across NSW overall. The proportion of households that own three or more vehicles has increased similarly, from 20% in 2011 to 23% in 2021.

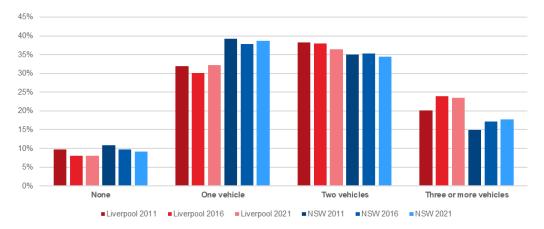


Figure 4 - Number of vehicles per dwelling, as a percentage of all dwellings (ABS Census data 2011-2021)

Spatially, car ownership is not evenly distributed within the Liverpool LGA. Figure 5 shows that the average number of cars owned per household increases in the western half of the LGA; these areas have some of the highest car ownership rates in the state. The eastern suburbs of Liverpool, Moorebank, Green Valley and Prestons have car ownership rates similar to that of the rest of Sydney.

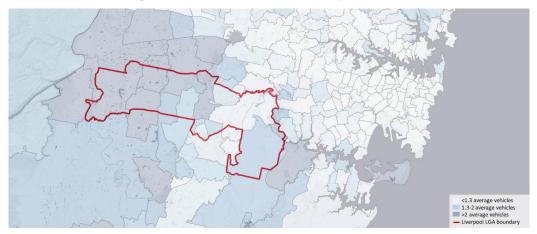


Figure 5 – Average vehicles per dwelling, by postcode (ABS Tablebuilder)

Figure 6 shows the connection between vehicle ownership and household income. Across NSW, approximately 27% of households with a total weekly income of under \$500 own at least one car. In

Liverpool, this average is higher, at around 33%. In contrast, the wealthiest households in Liverpool own less cars in comparison with the state average.

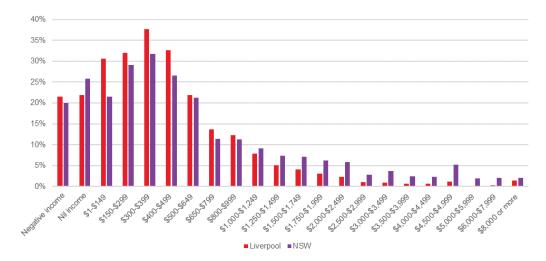


Figure 6 - Portion of households which own at least one vehicle, by weekly income bracket (ABS Tablebuilder)

Together, this information indicates that Liverpool has high levels of car ownership, particularly in the western suburbs, and from households at the lower end of the income spectrum, relative to the rest of NSW. Across the last 10 years this trend has remained stable, with a slight increase in the number of dwellings owning three or more vehicles. Without any significant investments in public and/or active transport infrastructure in the area, these ownership trends are likely to continue. It also suggests that the demand for EV chargers could be higher in Liverpool than other parts of NSW, given higher car ownership, particularly as EVs become more price competitive.

4.1.2 Workforce commute

According to the 2021 census, 63.8% of Liverpool's resident workers travel outside of the LGA to their place of work. This includes 3,031 residents who have no fixed place of work and likely rely on the use of a personal passenger vehicle for their daily commute.

Figure 7 shows the main mode used for trips to work, for residents of Liverpool and for NSW overall. Given the 2021 census was undertaken during a period of restricted travel during the Covid-19 pandemic, results shown exclude the "Worked at Home" category.

This data shows that most residents of Liverpool use vehicle modes (as the driver or passenger of a car, truck or motorcycle) to travel to work. This proportion has increased by 9% since 2016, from 81% in 2016 to 90% in 2021. This reflects the broad trend in NSW, noting that overall vehicle mode share in Liverpool is higher than the NSW average.

These graphs use a simplified mode share, where multi-modal trips are categorised into Public Transport where a train, tram, bus or ferry mode is present. Of the journeys to work taken by Liverpool residents in 2021, 23% of the trips in the "Public Transport" category also used a vehicle mode for part of their journey. In effect, the proportion of residents interacting with vehicles on their journey to work is therefore higher than these graphs indicate. This highlights the importance of providing infrastructure to charge EVs at public transport interchange locations, in addition to along routes for full journeys and at destinations.

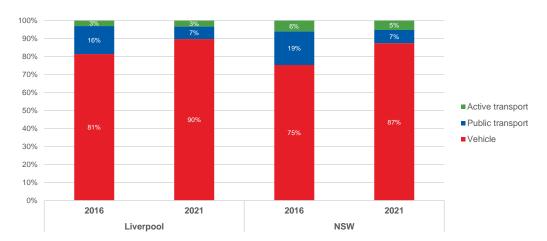


Figure 7— Simplified Journey to Work mode share, excluding Work at Home, 2016 and 2021 (Source: ABS Tablebuilder)

4.1.3 EV registrations

In total for 2023, there were 618 EVs registered in the Liverpool LGA, and 22,900 in the rest of NSW. The portion of EVs registered in Liverpool postcodes is lower than in the rest of NSW (0.28%, compared to 0.42%) as shown below. Across Liverpool, the proportion of EVs range from 0.88% (in 2172, Voyager Point) to 0% (in 2555, Badgerys Creek).

Table 4 – NSW vehicle registrations by postcode, 2023 (EV Index— AAA— Data Dashboard, Map 8)

Note: Postcodes identified as being within Liverpool LGA may not be exclusively within the LGA boundary.

		Total 2023 registrations		Portions by	
Postcode		BEV	ICE	BEV	
	All other NSW postcodes	22 900	5 442 370	0.49/-	

Postcode	BEA	ICE	BEV	ICE
All other NSW postcodes	22,900	5,442,379	0.4%	99.6%
All Liverpool postcodes (see Note)	618	218,679	0.3%	99.7%
2168	28	25,777	0.1%	99.9%
2170	162	76,630	0.2%	99.8%
2171	74	25,925	0.3%	99.7%
2172	15	1,688	0.9%	99.1%
2173	27	8,286	0.3%	99.7%
2174	50	6,667	0.7%	99.3%
2178	4	3,043	0.1%	99.9%
2179	44	11,121	0.4%	99.6%
2555	-	108	0.0%	100.0%
2556	11	2,184	0.5%	99.5%
2557	61	13,797	0.4%	99.6%

fuel type

	Total 2023 registrations		Portions by fuel type	
2565	83	20,918	0.4%	99.6%
2745	59	21,917	0.3%	99.7%

4.1.4 Mobility as a service providers

The concept of future mobility and mobility as a service (MaaS) has grown in Australia, with a number of operators with assets within the Liverpool LGA. While EV charging may primarily be the responsibility of these providers as they transition to electric technologies, the provision of infrastructure to charge them is likely to be located on public land, which would fall under the interest and oversight of Council. A summary of current NSW MaaS operators and their relevance to Council is provided below.

Service	Provider	Available in Liverpool?	Detailed availability		
Carshare	GoGet	√	Liverpool, Warwick Farm, Moorebank and Holsworth suburbs		
	Uber Carshare (formerly Car Next Door)	✓	Whole LGA		
	Popcar	×	None		
	Flexicar	Hertz	×	None	
Micromobility	Beam Escooters	×	None		
	Lime – Ebikes	✓	Whole LGA		
On-demand shuttle buses	TfNSW	×	None		

4.2 Emissions profile

Since 2018 there has been little change in the contribution of transport towards the emissions profile of Liverpool and all of NSW (Figure 8). The transport sector accounts for 13% of Liverpool LGA emissions, and 20% in all of NSW. If fugitive, agricultural and land use emissions are excluded, transport becomes 25% across NSW, with no change in Liverpool.

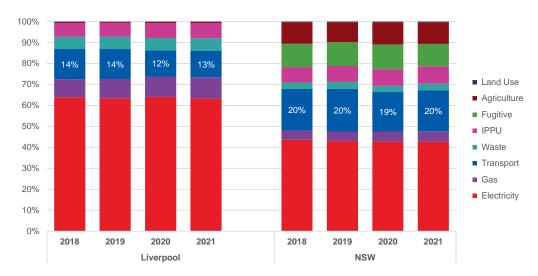


Figure 8 – CO2e emissions profile for Liverpool and NSW, with transport sector emissions20ighlightedd (Source: Snapshot Climate)

For vehicle electrification to create a meaningful reduction in emissions, the source of the electricity must be considered. Over the last 10 years, the proportion of the NSW electricity grid supplied by zero-emission renewable sources (hydro, wind and solar) has been increasing; however, coal still provides around 55% of the energy for the state (Figure 9). Around 5-10% of electricity is 'imported' from VIC and QLD, both of which have majority fossil-generating compositions.

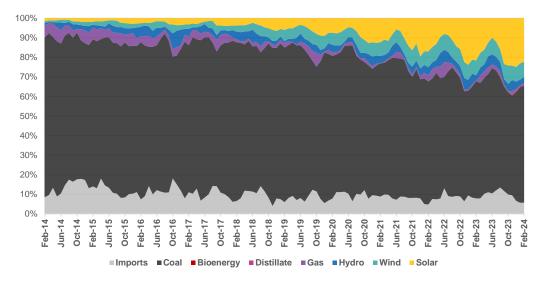


Figure 9 - Monthly energy generation composition in NSW, 2014-2024 (Source: OpenNem)

For Liverpool, this means that a transition towards renewable powered electric transport (including private vehicles, public transport vehicles, waste and freight, and aviation) can make a significant contribution to the emissions profile of the City and the state, provided the electric modes are powered by zero-emission renewable sources. Local renewable generation opportunities and renewable power purchase agreements should be considered in combination with electric vehicle infrastructure.

4.3 Dwelling structure

Dwelling types play a key role in the ability for residents to charge their EV at-home. Typically detached dwellings have greater access to off-street parking and are more suited for charging EVs at home. Difficulties arise in medium or high density dwellings where shared car parking facilities may not provide a charging port in every bay.

According to the 2021 census, 73% of dwellings in Liverpool were detached houses, 10% were townhouses and 16% of dwellings were apartments (Figure 10). Areas of Liverpool with a high proportion of these dwellings (particularly apartments) may need support from Council to assist residents with charging at-home. Figure 11 shows the proportion of apartments by postcode across the LGA, where it ranges from <1% in Bringelly and Badgerys Creek to over 90% in Liverpool (suburb) east of the Hume Highway and over 75% in Warwick Farm.

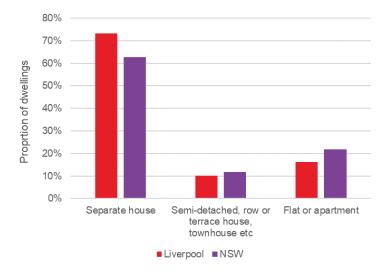


Figure 10 - Proportion of dwelling structures in Liverpool and NSW according to the 2021 census

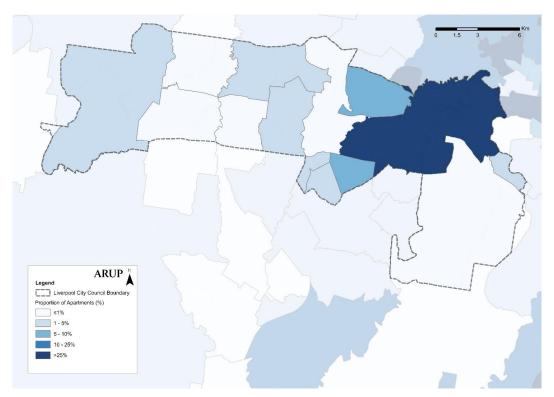


Figure 11 – Proportion of dwellings listed as apartments in the 2021 census by postcode

4.4 Electrical infrastructure

There are a variety of land uses in the Liverpool LGA that each have varying demands on the electricity network across different densities. The urban form of Liverpool has also matured from east to west, with density from the Sydney CBD expanding along the City's major corridors, including South Western Motorway and Hume Highway. As density expands and urban areas develop, more strain is put on the electrical infrastructure, impacting the performance and spare capacity on the electricity network.

The installation of EV charging stations, if connected to the grid, will introduce a new asset dependent on the network. In planning a network of chargers that is sustainable on the grid, Council will need to be cognisant of where spare capacity exists on the network in relation to public land earmarked for charging. If not, there is the risk of encountering challenges in installation and gaining approvals for grid connections, or power outages requiring grid augmentation projects.

Figure 12 shows a geographical indication of residual distribution zone substation capacity in 2030, based on substation capacity minus the forecast peak season demand. The green areas show locations on the network with sufficient capacity for most applications, whereas red areas show locations where investment may be required in future to retain reliability given increased electricity demand. For much of Liverpool's more built-up, mixed-use areas from Holsworthy to Busby, the installation of EV chargers of any Level are not expected to create problems in supporting public use from now until 2030. Areas of concern arise west of Busby, as the network begins to age and increased development is planned.

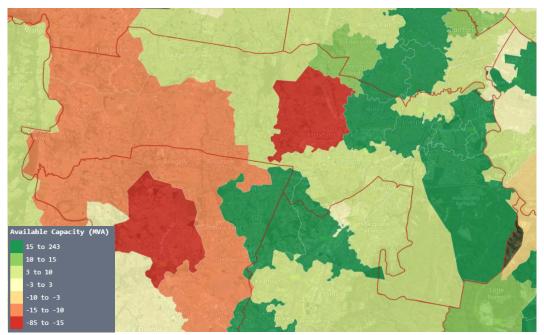


Figure 12 – Spare capacity on the electricity network in 2032 (Source: Network Opportunity Maps, Energy Networks Australia, 2024)

4.5 Climate resilience

Impacts of climate change have already been felt cross NSW, particularly in the form of extreme and more frequent heatwaves, rainfall events and flooding. These events have the potential to affect the performance, resilience and accessibility of zero-emission technologies, namely batteries and EV charging infrastructure. Studies from particularly heat prone areas around the world, such as the Middle East, have shown that the physical stress on batteries and potential damage to charging infrastructure is 20% higher than average when experiencing temperatures above 40°C. Flood-prone areas can also restrict access to chargers, not to mention the increased risk of fires and electrocution when batteries come into contact with excess water.

The Liverpool LGA is located on a number of floodplains, with many areas subject to flooding and in close proximity to two major rivers, the Nepean and Georges Rivers. Site selection studies and the prioritisation of applications for EV charging infrastructure installation should consider this risk to ensure that chargers are accessible and within reach to EV users at all times of the year. The design of charging infrastructure should also seek to reduce the impacts of heat or flooding, through locating chargers on higher ground and undercover, where natural canopy or shade is provided.

4.6 The existing and planned public charging network

According to PlugShare, at the time of writing, there are a total of 8 charging locations across the Liverpool LGA consisting of 42 plugs⁶ (see Figure 13). They are clustered along the Camden Valley Way between Casula and Prestons, and around Edmondson Park shopping centre and train station. There is a noticeable gap in charging infrastructure south of Cabramatta, along the east-west corridor between Green Valley and Holsworthy. 10 of these plugs are over 50kW, meaning they can fully charge a mid-size EV in under an hour

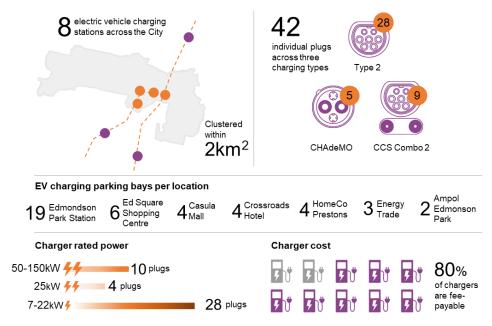


Figure 13 – Existing charging network location, plug type, speed and cost (Source: PlugShare)

⁶ PlugShare.com

5. Network principles and role of Liverpool Council

5.1 Network principles

As EV uptake accelerates, Council's role is to effectively allocate its resources to guide the roll-out of EV charging infrastructure to promote equitable access for the community and alignment with wider planning priorities.

The following principles are derived from discussions between representatives from Council's various teams and adopted in April 2024. They provide a framework to ensure that EV charging infrastructure installed on Council owned and managed land supports the community equitably and sustainably.

Table 5 - Network principles for the Liverpool Electric Vehicle Charging Stations on Public Land Policy

1	Equitable	An equitable roll out of chargers that fills in network gaps, in which all Liverpool residents retain reasonable access to parking.	
2	Enjoyable	An enjoyable charging experience, at locations that maximise opportunities for amenities and other attractions near the chargers.	
3	Safe and secure	Safe and secure chargers, that are thoughtfully located, designed and managed so that they are safe to use and vandalism is discouraged.	
4	Sustainable long-term	A long-term solution, where charger availability and compatibility is maintained over the long term and charger decommissioning does not negatively impact residents.	
5	Integrated	Integrated design, means that charging facilities blend in with the landscape of Liverpool streets.	
6	A sound investment	A sound financial investment, that provides long-term returns to Council.	
7	Supports net-zero	Enables zero-emission travel, for residents who rely on cars, but do not have access to charging at home.	
8	Provide assurance	Provide guidance for providers of EV charging infrastructure, over appropriate locations for charger installation and Council design requirements.	

5.2 The role of Liverpool Council

The shift to EVs and the broader decarbonisation of transport is complex, because it involves a wide range of actors with differing levels of influence over the stages of delivery. From network principles and policy planning, through to installation, maintenance and removal, involvement will sway. The EV charging market has been building momentum and this has been felt through a range of private entities seeking to supply charging to vehicle owners in Liverpool. This has been identified as requiring intervention to ensure the resultant network is equitable and Council can unlock economic, social and operational benefits that come with leveraging their owned and managed land.

5.2.1 Lead, partner or influence

Three ownership models that have emerged in Australia for the provision of privately and publicly accessible EV charging infrastructure on Council owned and managed land. Each model presents different benefits and shifts the responsibility for upfront costs, maintenance costs and revenue to varying stakeholders. Going forward, Council will use these factors in the decision-making process to determine which procurement model is preferred. A summary of these models is provided below in Table 6.

Council also has an influence role to play for supporting EV uptake on privately owned land. This could be through initiatives such as lobbying to the NSW State Government for subsidies or policy change, or through providing educational materials and resources to Liverpool businesses, strata managers, developers and residents.

Table 6 - Comparison of models for providing EV chargers on Council land

	Council-led Council owned and operated	Partner Council selected locations, private or joint ownership and operation	Private sector-led Council approvals, privately owned and operated
Land ownership	Council	Council	Council
Business model	Council owns and installs EV chargers and directly provides charging services.	Council partners with a Private Third Party(ies) to install chargers at selected locations. The Third Party manages and operates the chargers in accordance with the License Agreement with Council.	Third parties select site in collaboration with Council and apply to Council. The Private Third Party owns the EV chargers and manage the charging services in accordance with the License Agreement with Council.
Is the EOI process in the Policy used?	No	Yes	Yes
Organisational change	High	Moderate	Low
Responsibility for site selection	Council	Council	Private Third-Party
Ownership of EV Charging Infrastructure	Council	Shared or Private Third-Party	Private Third-Party
Capital and operational costs	Full cost to Council	Shared or borne by the Private Third-Party.	Full cost to the Private Third-Party
Installation, maintenance, operation and decommissioning	Council maintains direct control and can undergo a staged approach. Resources required to manage and maintain.	Council can share or avoid the risk of operating and maintaining assets.	Council can avoid all costs and risks of operating and maintaining assets.
Revenue from charger use	Direct revenue stream for Council. Control over fees and enforcement.	Revenue stream can be shared subject to negotiation. Council can request renumeration for private land use.	Revenue likely to be held entirely by the Private Third-Party, although Council can request renumeration for private land use.

	Council-led Council owned and operated	Partner Council selected locations, private or joint ownership and operation	Private sector-led Council approvals, privately owned and operated
Data sharing and securing	Council	Shared between Council and the Private Third Party	Shared between Council and the Private Third Party
Key challenges and risks	Competition with private sector.	Additional risks around contractual arrangements and probity. Limited control over marketing. Uncertainty around revenue capture.	Misses out on opportunities for revenue. Network driven by commercial return by private sector could lead to inequal access or high fees. Minimal control over marketing. Timeframe could be slow due to limited demand.
Suitability	A Council-led model could be more favourable in public applications if funding and risk tolerance changes over time. May only be suitable for small applications that support direct Council operations, such as offices and depots. While funding from a grant is possible, this model should not be relied upon.	Council can leverage the market to supply EV charging for public use and Council operations while avoiding key risks and costs. To effectively use its limited resources, this model would allow Council to coordinate the rollout and provide preferences of locations and placement to achieve equitable network outcomes in most applications. Council benefits from leveraging the expertise of partners.	For the rural and low-density context of Liverpool, the rollout of chargers could be disproportionately slower in comparison to the rest of NSW due to lower demand. This could drive up costs where chargers are provided or lead to longer wait times for EV owners. Council does not bear the cost or risk, however, loses opportunities for revenue and control over locations.

6. Desired charging network

Studies have shown us that EV owners have varying preferences that impact how and when to charge. These preferences are termed 'charging behaviours' and differ based on key factors such as infrastructure available, power of the chargers, location and cost. When planning for EV charging infrastructure, charging behaviours provide an insight into customers' expectations for charging times and the number of chargers required in different places. This section discusses the role Council could play in facilitating the rollout of chargers, depending on the types of chargers and the place characteristics of where chargers are located.

6.1 Charging typologies

There are a range of different typologies that have potential applications in different contexts across the Liverpool LGA: at-home, at work, at destination and on-route, including on-street and at 'charging hubs'. These typologies help to describe the types of charging infrastructure that is most suitable, for example lower charging level for at-home applications due to longer average charging times vs. higher charging levels for destination or on-route applications due to shorter average charging times. A summary of general charging levels most common among the various charging typologies is shown in Figure 14, with a detailed discussion of each charging typology on the following pages.



Figure 14 – Charging levels associated with each typology



At-home charging

As many as 80% of EV users charge their vehicle athome overnight as it tends to be the most convenient and cost-effective way of charging. Users can also have more control over which energy sources to use, such as home solar power. Challenges surrounding at-home charging arise when EV users have limited access to off-street parking and when energy supply is poorly distributed.

Charging requirements: Slow (Level 1).

Likely users: Providing at-home charging is the responsibility of residents, property developers and strata bodies with off-street parking availability.



At-work charging

Workplace charging tends to be the second most popular location that users charge their EV. However, it can encourage vehicle-based trips to work as opposed to more sustainable modes of transport and relies on available parking spaces that can be designated for EV charging purposes.

Charging requirements: Fast (Level 2) or Slow (Level 1).

Likely users: Employees and business fleets. Property developers, tenants and employers are responsible for installation.



On-street charging

On-street charging encourages vehicle-based trips and has several challenges relating to accessibility and equity. To ensure an equitable rollout of charging infrastructure, it is typically used by local councils only in circumstances where off-street parking is particularly constrained and provided in partnership with private charging operators.

Charging requirements: Slow (Level 1) or Fast (Level 2)

Likely users: EV users without access to off-street, athome charging.



Destination charging

Destination charging often takes place at shopping centres, retail or leisure centres, and supermarkets by users who don't have the ability charge their vehicle athome. Destination charging is installed by property developers, tenants, Council, and third parties at their discretion which can lead to a lack of overarching strategic direction.

Charging requirements: Fast (Level 2) – users can stop for a longer time to allow their vehicle to charge. An exception to this includes hotels which could opt to use slow overnight charging.

Likely users: Destination visitors.



On-route charging

On-route charging is associated with longer journeys, which might require a full charge of the EV battery using rapid or ultra-rapid charging stations or a 'pit stop' to quickly charge an EV. These are ideally placed at regular intervals along highways and can support regional journeys.

Charging requirements: Rapid/Ultra Rapid (Level 3).

Likely users: Users on longer leisure/business trips, freight and logistics.



Charging hub

Charging hubs are dedicated clustered facilities that can also support longer journeys requiring rapid charging speeds. They are an emerging charging type similar to existing service stations and can be combined with compatible land uses, in metropolitan or regional areas.

Charging requirements: Rapid/Ultra Rapid (Level 3).

Likely users: taxis, buses, business fleet, Park n Ride/multi-modal transport users, car share/rental companies, freight and logistics.

6.2 Place-based approach

Aside from local roads, 88% of Council land is on recreation and green spaces, with the remaining divided across residential, industrial, agricultural and business land uses. When planning for charger placement on this land, it's important to consider not only the types of land Council owns and manages, but also the surrounding urban context. This dictates the combination of charging typologies and corresponding ownership arrangements that would be most appropriate. To help define this, Liverpool can be broken down into six 'Charging Zones' shown in Figure 15.

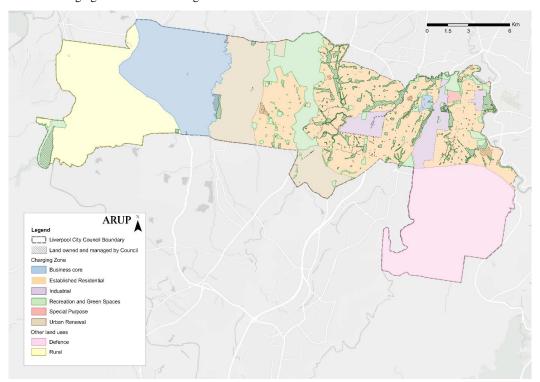


Figure 15 - Liverpool Charging Zones

These six charging zones include:

- Business Core: Areas that act as commercial and administrative hubs, characterised by a mix of business, retail and high-density housing.
- Established Residential Neighbourhoods: Areas of Liverpool that are predominately residential and offer a range of amenities, housing options and community places. They are not anticipated to undergo substantial development or change in character of functional role in the next 10 years.
- Urban Renewal Neighbourhoods: Refer to areas of Liverpool undergoing planned development in the
 near future, including the urban rural fringe. Unlike established residential areas, the future urban form
 of these neighbourhoods is yet to be determined and will feature a higher proportion of new builds.
- Recreation and Green Spaces: Refer to the extensive network of parks and nature reserves owned by Council as well as leisure centres.
- Industrial: Refers to both light and heavy industrial precincts. These areas are typically well connected
 for long trips through access to motorways and are likely to feature heavy vehicle trips.

 Special Purpose: Areas characterised by land uses such as hospitals, shopping centres and tourism sites. They attract visitors from within and outside Liverpool.

Defence and **Retained Rural** areas have been excluded from this analysis as they do not form part of Council land.

In each charging zone, a different combination of charging typologies can be applied to achieve the best outcome for Council and the community. Each charging typology was rated against two criteria:

- 1. **Likely demand:** The expected demand for the charging typology based on the trips and activities of residents and visitors in this charging zone.
- Planning alignment: The typology's alignment with broader transport and planning objectives for this charging zone.

Using these criteria, each charging typology can be located on the prioritisation matrix, shown in Figure 16. Charging typologies located in the top-right quadrant should be prioritised; at the other end of the scale, charging typologies located in the bottom-left quadrant should be discouraged. Elsewhere, the charging typology can be implemented selectively across the charging zone. The outcome of this process is the basis for the desired charging network, outlined in the following section.

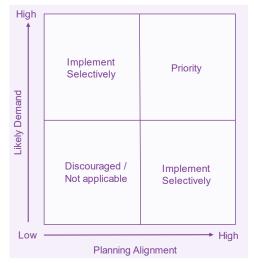


Figure 16 - Prioritisation matrix

Liverpool's future charging network 6.3

This section presents the desired charging mix for each charging zone, with reference to the prioritisation matrix introduced in the previous section.

6.3.1 **Business Core**

The Business Core currently includes the Liverpool CBD and Aerotropolis. It describes areas that act as commercial and administrative hubs, characterised by a mix of business, retail and high-density housing.

Charging demand is driven by:

- High employment density (workforce)
- High number of destinations (visitors)
- Residents living in strata complexes or apartments without access to on-site charging.

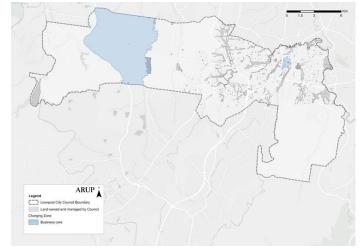


Figure 17 - Business Core charging zone

Network design principles for EV charging in the Business Core

- Business activities are not disrupted
- Streets are walkable and cyclable.
- Increase public transport and active travel mode share over time and a shift away from private vehicles
- Future-proof on-street parking spaces for transition to other uses over time.

Key risks

Overprovision of chargers encourages increased car usage in the Liverpool CBD.

Council's role in providing EV charging in the **Business Core**

- Facilitate EV charging in council-owned atgrade and rooftop car parks in the Liverpool CBD.
- Facilitate e-rideables charging to promote active transport use in and around the Liverpool CBD.
- Limit on-street EV charging provision.
- Encourage businesses to provide chargers for their employees on their land where there is a business need.

- Bigge Park car park
- Elizabeth Drive car park.

Key charging typologies for the Business Core

The key charging typologies for the Business Core are:

- 1. Workplace charging
- 2. Destination charging
- 3. On-street charging

A detailed discussion of how each of these charging typologies should be applied in the Business Core is given in Table 7.

The prioritisation matrix is shown in Figure 18. At-home charging is considered less critical for the Business Core because of the low residential density. Additionally Charging hubs and Onroute charging facilities do not align with wider planning objectives for the Business Core.

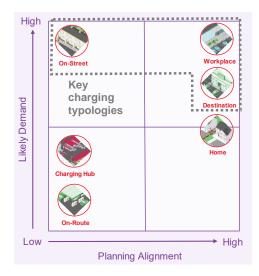


Figure 18 – Prioritisation matrix for the Business Core

Table 7 - Charger recommendations for the Business Core

	Justification	Recommended application	
Workplace	The Business Core has the highest employment density across Liverpool and will remain one of the key employment destinations even as the Aerotropolis is established. While Liverpool is working towards mode shift towards public transport and active transport, private vehicles are likely to cater for a significant proportion of work trips, and businesses providing car parking for employees may be expected to consider providing EV charging infrastructure. At Council workplaces, EV chargers could be installed for staff or pool vehicle use, with an emphasis on providing charging for vehicles that service trips that are not practical by other modes.	Level 2 charging (1.5 – 5 hours full charge) at Council workplaces.	
Destination	Destination charging is required to support visitors using amenities within Business Core. To support integrated transport outcomes, off-street parking locations should be prioritised where parking services multiple different land uses.	 Level 2 (1.5 – 5 hours full charge) installed in off-street car parks with 1 – 4 hour parking restrictions. Level 3 charging (10 – 45 minutes full charge) installed in off-street car parks with 30 minute – 1 hour parking restrictions. 	
On-street	On-street charging provision should be limited to discourage private car use within CBD streets. Chargers should only be placed in locations where there is a demonstrated demand for them, a lack of off-street parking nearby and/or designated parking bays are unlikely to be repurposed in the next 10 years (expected operational life of asset).	 Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge). Level 2 appropriate for on-street car bays with 1-4 hr parking. Level 3 appropriate for car bays 30 min - 1 hr. 	

6.3.2 Established Residential Neighbourhoods

Established Residential
Neighbourhoods describe areas of
Liverpool that are predominately
residential and offer a range of
amenities, housing options and
community places. They are not
anticipated to undergo substantial
development or change in character
of functional role in the next 10
years.

Charging demand is driven by:

- Residents wanting to charge their own EV. However, it is likely that many residents can charge at home if they have offstreet parking.
- Residents living in strata complexes or apartments without access to on-site charging.

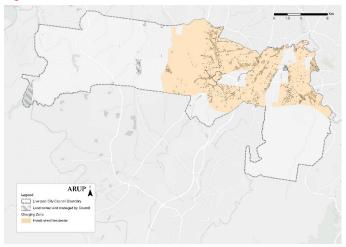


Figure 19 – Established Residential Neighbourhoods charging zone

Network design principles for EV charging in Established Residential Neighbourhoods

- Streets remain walkable and cyclable and are not cluttered by EV charging infrastructure.
- Over time these established areas could diversify in land use, with a growing number of essential destinations within walking distance of residents. EV charging placement should not encourage greater car use in these instances.

Key risks

- Lack of charging equity residents who are unable to charge at home will need to be supported by public chargers in their neighbourhoods.
- Most carparks at local centres are privately owned, limiting Council's ability to influence the roll-out. Opportunity exists for Council predominately at carparks adjacent to local centres.

Council's role in providing EV charging in Established Residential Neighbourhoods

- Council owns a number of community hubs such as libraries and community centres.
 Council can attract visitors to these places by providing EV chargers.
- Facilitate e-rideables charging, particularly adjacent to shopping centres to promote active transport use around suburbs.

- · Hinchinbrook community centre
- Grassland adjacent to Green Valley Village Shopping Centre
- Green Valley Library.

Key charging typologies for Established Residential Neighbourhoods

The key charging typologies for the Established Residential Neighbourhoods are:

- 1. At-home charging
- 2. Destination charging
- 3. On-street charging

A detailed discussion of how each of these charging typologies should be applied in Established Residential Neighbourhoods is given in Table 7.

The prioritisation matrix is shown in Figure 18; Charging hubs and On-route charging facilities do not align with wider planning objectives for Established Residential Neighbourhoods. Workplace charging is likely to have a low demand in Established Residential Neighbourhoods due to the lower number of workplaces.

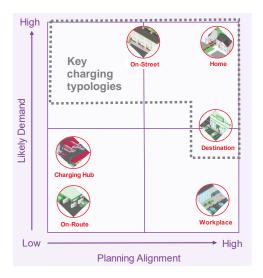


Figure 20 - Prioritisation matrix for Established Residential Neighbourhoods

Table 8 - Charger recommendations for Established Residential Neighbourhoods

	Justification	Recommended application
Home	Where possible, at-home charging should be encouraged over public infrastructure to prevent negative impacts on street amenity for people walking, cycling or using public transport. It is important to recognise that home charging will not be possible for all residents, particularly those in established apartments or strata-managed complexes.	Level 1 charging (2.5-7kW, 8-12 hours full charge)
Destination	Chargers could be provided in visitor parking bays to encourage the use of council facilities such as libraries and community centres, while also supporting those who cannot charge at-home. Small green spaces adjacent to activity centres can be used to provide e-rideable charging facilities to encourage active transport use to those centres.	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge). Level 2 appropriate for off-street car parks with 1-4 hr parking. Level 3 appropriate for car parks 15min – 1 hr. Level 1 charging (general power outlet is appropriate for e-bikes)
On-street	On-street charging should be implemented selectively to discourage an increase of traffic along suburban streets and to prevent negative impacts to residential amenity. Chargers should be placed in locations that seek to leverage an existing use such as a library or sports facility.	Level 2 charging (7-25kW, 1.5-5 hours full charge).

Urban Renewal Neighbourhoods

Urban Renewal Neighbourhoods refer to areas of Liverpool undergoing planned development in the near future, including the urban rural fringe. This includes suburbs such as Edmondson Park and Leppington. Unlike established residential areas, the future urban form of these neighbourhoods is yet to be determined and will feature a higher proportion of new builds. Charging requirements will be dependent on future urban form, but are likely to follow residential or mixed

Charging demand is driven by:

- Residents wanting to charge their own EV.
- Visitors at community spaces.
- New developments will be subject to the NCC requirements for charging provision which should reduce the reliance on the public charging network (See Section 3.2.1).

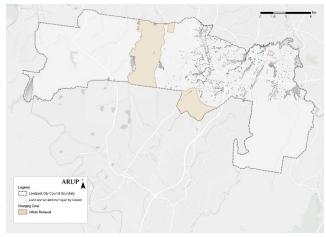


Figure 21 - Urban Renewal Neighbourhoods charging zone

Network design principles for EV charging in Urban Renewal Neighbourhoods

Charging provision should evolve alongside other developments and remain flexible to future land uses.

Key risks

- Areas are likely to undergo land use change in the near future potentially for residential and mixed-use spaces. Uncertainty over future urban form and land-use makes planning for fixed charging installations difficult.
- Council does not have jurisdiction over community title streets and facilities in privately developed areas, (sites that are traditionally Council land). This limits the influence can Council can have over the rollout of EV charging infrastructure.
- Council owns limited developed land within urban renewal zones.

Council's role in providing EV charging in Urban Renewal Neighbourhoods

- Minimised role given charging provision on Council land is less likely to be needed as the NCC updates will facilitate home charging for new apartment buildings.
- Council could leverage visitor bays for charging provision through the acquisition of land for community spaces in the future or develop existing lots.
- Opportunity to encourage EV uptake for new residents through provision of chargers on Council land.
- Opportunity for Council to consider minimum EV charging provision in Development Control Plans for urban renewal areas.

Example locations for chargers include:

- South Creek Lot
- Badgers Creek Road reserve

Liverpool City Council EVPLP_0001 | Rev B | 26 June 2024 | Arup Australia Pty Ltd Electric Vehicle Charging Stations on Public Land Policy Overarching Strategy Document

• Devonshire Road Lot.

Key charging typologies for Urban Renewal Neighbourhoods

The key charging typologies for the Urban Renewal Neighbourhoods are:

- 1. At-home charging
- 2. Destination charging
- 3. Workplace charging

A detailed discussion of how each of these charging typologies should be applied in Urban Renewal Neighbourhoods is given in Table 7.

The prioritisation matrix is shown in Figure 18; Charging hubs and On-route charging facilities do not align with wider planning objectives for Urban Renewal Neighbourhoods. On-street charging is likely to have a low demand in Urban Renewal Neighbourhoods due to the requirement for new developments to cater for this demand on-site (see NCC requirements in Section 3.2.1, rather than on-street).

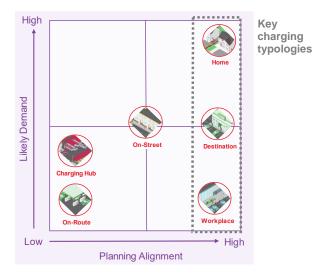


Figure 22 - Prioritisation matrix for Urban Renewal Neighbourhoods

Table 9 - Charger recommendations for Urban Renewal Neighbourhoods

· · · · · · · · · · · · · · · · · · ·	Justification	Recommended application
Home	Where possible, at-home charging should be encouraged over public infrastructure to prevent negative impacts on suburban amenity. Home charging should be supported in new builds by the NCC.	Level 1 charging (2.5-7kW, 8-12 hours full charge)
Destination	Should Council choose to develop lots within the Urban Renewal Neighbourhoods alongside other developments, chargers could be provided in visitor parking bays to encourage the use of Council facilities such as libraries and community centres.	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge). Level 2 appropriate for off-street car parks with 1-4 hr parking. Level 3 appropriate for car parks 15min – 1 hr.
Workplace	Future development could lead to the areas becoming mixed use with a combination of residential housing and workplace buildings. Businesses providing car parking for employees may be expected to or have an interest in providing EV charging infrastructure. At Council workplaces, EV chargers could be installed for staff or pool vehicle use.	Level 2 charging (7-25kW chargers, 1.5-5 hours full charge).

6.3.4 Recreation and Green Spaces

Recreation and Green Spaces refer to the extensive network of parks and nature reserves owned by Council as well as leisure centres. They consist of open spaces, sporting and recreation destinations, most of which have offstreet parking facilities, while others have on-street parking bays. They are often surrounded by residential areas.

Charging demand is driven by:

• Visitors using the parks/leisure centres.

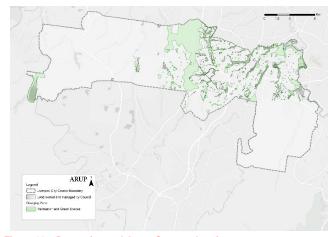


Figure 23 – Recreation and Green Spaces charging zone

Network design principles for EV charging in Recreation and Green Spaces

- EV charging should only be placed in existing parking assets and not encourage additional bays to be built.
- Active transport (walking and cycling) to, from and within recreation and green spaces should be prioritised.
- Provision of EV chargers should be aligned to existing parking availability and demand, e.g. small parks without existing carparks are unlikely to need EV chargers.

Kev risks

- Curbside equity at public parks is lost as a result of parking spaces for ICEVs being replaced by too many EV charging bays, restricting access for those who cannot transition to an EV.
- Overnight parking may create safety and security risks for both the infrastructure and EV drivers using the charger.
- Overprovision of chargers leads to mode shift of residents driving to parks rather than walking.

Council's role in providing EV charging in Recreation and Green Spaces

- Provide EV chargers in visitor bays to encourage attendees to explore green spaces.
- Limit the number of spaces converted to chargers to safeguard parking for those who cannot transition to an EV yet.

- Elouera Bushland Reserve
- Amalfi Memorial Park
- Gulguer Nature Reserve.

The key charging typologies for Recreation and Green Spaces are:

- 1. Destination charging
- 2. On-street

A detailed discussion of how each of these charging typologies should be applied in Recreation and Green Spaces is given in Table 7.

The prioritisation matrix is shown in Figure 18; Charging hubs and On-route charging facilities do not align with wider planning objectives for Recreation and Green Spaces. Similarly Workplace and At-home charging are not applicable.

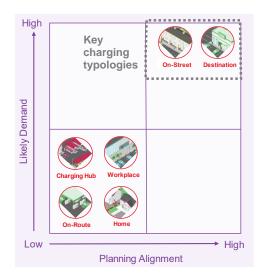


Figure 24 - Prioritisation matrix for Recreation and Green Spaces

Table 10 - Charger recommendations for Recreation and Green Spaces

	Justification	Recommended application	
Destination	Destination charging within existing bays can be used to encourage the community to use green spaces. Larger parks and sports grounds where visitors are likely to stay for more than an hour are suitable for Level 2 chargers. Local parks within established residential areas can be fitted with chargers to help support those who cannot charge at home.	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge).	
On-street	On-street parking is the only option at some parks such as Dunbier Park. Provision of chargers could be used to support those who cannot charge at home, whilst also encouraging the community to use green spaces. Charging locations should be carefully	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge).	
	selected to maintain park amenity and curbside equity. Active transport (walking and cycling) to the parks should be prioritised over car use.		

6.3.5 Industrial

The Industrial charging zone refers to both light and heavy industrial precincts. These areas are typically well connected for long trips through access to motorways and are likely to feature heavy vehicle trips.

Charging demand is driven by:

- Industrial heavy vehicles visiting Liverpool from other destinations.
- Local industrial businesses seeking to charge their vehicles.

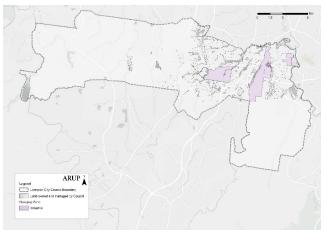


Figure 25 - Industrial charging zone

Network design principles for EV charging in Industrial areas

- Provision of chargers should only occur in selected locations where safe parking and pedestrian access can be achieved.
- Industrial activities are not negatively impacted.

Key risks

- Bottlenecking in streets of large vehicles trying to access chargers.
- Safety of drivers leaving their vehicles while charging.

Council's role in providing EV charging in Industrial areas

- Council has an opportunity to support industrial fleets to electrify and generate a revenue stream, if Council-led ownership arrangements are pursued on public land.
- Encourage industry to provide chargers on private property to reduce the demand on the public network.

- Enterprise Circuit long vehicle parking area
- Junction Road lot.

The key charging typologies for the Industrial charging zone are:

- 1. Workplace
- 2. Charging Hub
- 3. On-street

A detailed discussion of how each of these charging typologies should be applied in the Industrial charging zone is given in Table 7.

The prioritisation matrix is shown in Figure 18; Destination, On-route and At-home charging types are not applicable to the types of land within industrial precincts.

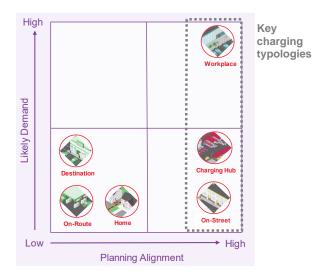


Figure 26 - Prioritisation matrix for the Industrial charging zone

Table 11 - Charger recommendations for the Industrial charging zone

	Justification	Recommended application	
Workplace	Industrial businesses are expected to provide EV charging infrastructure over time for their fleets.	Mix of Level 1 and Level 2 charging (2.5-7kW, 8-12 hours full charge / 7-25kW chargers, 1.5-5 hours full charge).	
Charging Hub	Council could develop their owned land into charging hubs to support industrial businesses to charge their vehicles. These locations would require larger land parcels at accessible locations.	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge).	
On-street	Chargers could be provided in safe on-street parking locations such as long vehicle rest bays to provide common user charging options.	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10–45- minute full charge).	

Special Purpose

Special Purpose areas are characterised by land uses such as hospitals, shopping centres and tourism sites. They attract visitors from within and outside Liverpool. Special purpose areas generally have off-street parking provision or are well supported by public transport.

Charging demand is driven by:

Visitors from across Liverpool and Greater Sydney.

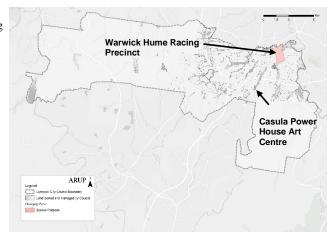


Figure 27 - Special purpose charging zone

Network design principles for EV charging in Special Purpose areas

- EV charging infrastructure should not impact the movement of high pedestrian volumes during peak times.
- Chargers should be placed in existing parking spaces only.

Overprovision of chargers encourages mode shift away from public transport to private

Council's role in providing EV charging in Special purpose areas

Council owns a number of street facing and rooftop carparks adjacent to special use areas. There is opportunity for Council to support visitors to charge their vehicles on council owned land.

- Casula Powerhouse Arts Centre
- Car park at Warwick Hume Racecourse.

The key charging typologies Special Purpose areas are:

- 1. Destination
- 2. Workplace
- 3. On-street

A detailed discussion of how each of these charging typologies should be applied in Special Purpose areas is given in Table 7.

The prioritisation matrix is shown in Figure 18; Charging Hubs and On-Route typologies do not align with wider planning objectives for Special Purpose areas. Additionally, at-home typologies are not applicable for Special Purpose areas.

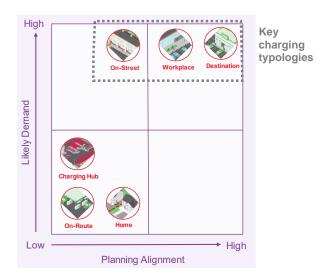


Figure 28 - Prioritisation matrix for the Special Purpose charging zone

Table 12 - Charger recommendations for the Industrial charging zone

	Justification	Recommended application
Destination	Special Purpose precincts draw visitors with specific purposes at these destinations (e.g. hospitals, art galleries). Special Purpose precincts may also attract a larger number of visitors for events (e.g. Warwick Farm Racecourse).	Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10–45- minute full charge).
Workplace	Special Purpose Precincts are also often major employment hubs, whether this be hospitals or sporting venues. Businesses providing car parking for employees may be expected to or have an interest in providing EV charging infrastructure.	Level 2 charging (7-25kW chargers, 1.5-5 hours full charge).
On-street	On-street parking spaces are provided for some special use precincts, particularly within the Liverpool CBD. However off-street parking should be prioritized for charger placement to maintain flexibility of land use.	 Mix of Level 2 and Level 3 charging (7-25kW chargers, 1.5-5 hours full charge / 25-350kW chargers, 10-45- minute full charge). Level 2 appropriate for off-street car parks with 1-4 hr parking. Level 3 appropriate for car parks 15min – 1 hr.

7. Policy Implementation

7.1 Responsibility Matrix

Successful implementation of the Policy will require a whole of Council approach. The matrix below identifies which teams within Council could be involved with the various aspects of the Policy. This is indicative only and is expected to change based on provider, location and updates to Council operations.

Table 13 - Policy responsibility matrix

Category	Scope	Actions	Responsible
Policy, strategy, and collaboration	Collaboration with partners	Collaborate with NSW Government, WSROC on EV programs and schemes	Transport with input from • Environment
			Strategic Planning.
		State Government, Federal Government submissions	City Economy (grants) Transport.
		WSROC – Western Sydney Energy Program projects	Environment with input from Facilities Management Transport.
	Policy and Strategy	Incorporate EV charging principles into relevant strategic planning documents	Planning with input from Transport Urban Design Environment Community Planning Community Standards and Regulation.
		Incorporate EV charging requirements into Development Control Plans and Master Plans	Planning with input from Transport Urban Design Environment Community Planning Community Standards and Regulation.
		Public Domain Manual incorporates EV chargers	City Design and Public Domain.
	Community engagement	Promote EV benefits and charging infrastructure	 Environment City Futures.
Procurement and funding	Grant applications	NSW and Australian government grants for expanding public EV charging network	City Economy (grants team) Environment Strategic Planning Commercial Development.

Category	Scope	Actions	Responsible
	Network requirements	Feasibility studies, determine locations	Commercial Development Transport City Economy Property Services.
	Network requirements	Network requirements – Operational facilities	Facilities Management.
	Procurement	Implement procurement process for EV charging infrastructure	 Procurement Governance Facilities Management Commercial Development.
Procurement and funding	Public charging stations	Template lease/license agreement, other fees	Commercial Development with input from • Legal.
		EV proposal assessment	Commercial Development with input from Planning Transport Local Traffic Committee Facilities Management (Parking).
Infrastructure Development	EV design configuration	Parking configuration	 Transport Commercial Development Planning Facilities Management (Parking).
		Signage, visibility and identification	City Design and Public Domain Commercial Development Planning Transport.
Operation, safety, maintenance, and compliance	Service availability, safety and utilisation	Parking controls and enforcement	Compliance and Community Standards Facilities Management (Parking).
		Safety and community complaints	Commercial Development Community Standards and Regulation.
		Software	Commercial Development Community Standards and Regulation.

8. Next steps

There are a number of next steps Council can take to help guide implementation of the Policy and continue to shape the EV charging network in Liverpool. The information provided in this Strategy document should act as a starting point to support development of any further material suggested in this section.

8.1 Policy implementation

To help guide implementation of the policy, Council may want to develop the following:

- **License Agreement:** Develop a standard license agreement between Council and Third-Party providers that will be agreed to as part of the EOI process (Section 3.4.4 of the Policy).
- Design guidelines: Develop a set of design guidelines for the physical characteristics and aesthetic of
 proposed EV charging installation. This could include specification of pavement symbols, line markings,
 minimum width of bays, advertising restrictions, etc. This could take the form of a standalone EV
 Charging Infrastructure Design Guidelines document, or be incorporated into other Council documents
 such as the Liverpool City Centre Public Domain Technical Manual or equivalent.
- **EOI evaluation criteria:** Develop a set of criteria to assess and compare expressions of interest from Third-Parties. The charging network, technical and design requirements outlined in the Policy form a starting point, however Council may wish to adapt their existing procurement procedures to include evaluation criteria for EOIs received for EV Charging infrastructure.
- Complaints procedure / process: Develop a standard procedure for collecting and responding to complaints raised by the public over EV Charging infrastructure, including assigning management responsibility to the relevant department(s). Council is unlikely to be the first point of contact, given the Policy outlines the requirement for providers to include contact information and instructions for reporting faults as part of the EV Charging installation (see Section 3.7.4 c). Therefore, Council may want to include a clause in the License Agreement that requires the provider to give Council a report of the number and nature of complaints received. It is possible the public may still call Council to report faults and therefore Council will need a process in place for reporting these faults to the Third Party provider.

Additionally, Council should consider the impact of the Policy on any other Development Control Plans or relevant policies/strategies and update them accordingly. Council will also need to review and update the Policy alongside the uptake of EVs. In particular, the *Charging Network Requirements* that outline where Council will support and be less willing to support chargers may change overtime as more people transition to EVs.

8.2 Supporting mechanisms

Beyond the Policy, there are other steps Council can take to shape the EV charging network across Liverpool. The list below highlights some other projects being undertaken by other Councils across NSW and Australia that could be considered by Liverpool:

- Fleet transition strategy: Develop a strategy to transition Council's own fleet to zero emission vehicles
 (ZEVs). This could involve an assessment of existing fleet makeup and utilisation to inform selection of
 equivalent ZEVs for each vehicle class. The strategy should also evaluate potential EV charging sites and
 infrastructure requirements to power the fleet.
- Public EV charging strategy and action plan: Develop a public facing EV charging strategy and action
 plan to articulate Council's role in supporting residents and businesses in Liverpool to make the switch to
 EVs. An example is the City of Canada Bay EV Charging Strategy and Action Plan. This strategy could
 include:
 - An assessment of current EV uptake in Liverpool and the projected demand in the future.

- Maps of the desired place-based charging network including the number and type of chargers. This
 should draw on the principles of the desired charging network presented in Section 6 but would take
 this a step further through greater analysis.
- Action plan for council identifying their role, goals and targets.