URBIS

ASPECT INDUSTRIAL ESTATE

Development Control Plan

Prepared for
MIRVAC
5 March 2021

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Jacqueline Parker
Associate Director	Genevieve Beard
Senior Consultant	Grace Macdonald
Project Code	P0013978
Report Number	Final

urbis.com.au

CONTENTS

FIGURES

TABLES

1. INTRODUCTION

1.1. AIMS AND OBJECTIVES OF DCP

This Plan is known as the Aspect Industrial Estate (AIE) Development Control Plan (DCP) 2021 (**AIE DCP**). It has been prepared in accordance with the provisions of Division 6 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and Part 3 of the *Environmental Planning and Assessment Regulation 2000* (**EP&A Reg**).

The principal aims of the AIE DCP are listed as follows:

- To integrate State and local planning inputs to enable the delivery of environmentally, economic and socially sustainable development.
- To provide suitably located industrial land to support the economic growth of the city.
- To provide connections to required services to meet the future needs of the Precinct.
- To facilitate development that is integrated with local road and freight networks
- To ensure minimal environmental and amenity impact to sensitive receivers, such as riparian lands.

The primary aim of the AIE DCP is to facilitate the redevelopment of the land in accordance with the provisions of the *State Environmental Planning Policy (Western Sydney Employment Area) 2009* (WSEA SEPP).

The DCP includes specific objectives that address the principal development standards listed within the WSEA SEPP and the planning principles developed during the precinct planning process. The associated investigations undertaken to inform the SEPP amendment.

1.2. STRUCTURE OF THE DCP

The DCP is structured into six sections as outlined within the following table.

Table 1 DCP Structure

1 – Introduction	Outlines the principal aims and objectives of the DCP, the land to which it applies and its relationship to other plans.
2 – Urban Design Principles	Outlines the urban design principles to be achieved on the AIE Development Area.
3 – Land Use and Staging	Provides detailed development controls to guide the siting and design of the future development of the site, including subdivision, staging, urban design principles, built form, and streetscape and landscape design.
4 – Transport, Access and Car Parking	Details the transport and traffic-related matters, including traffic generation, vehicle access, car parking, public transport, cycling, walking and road widening.
5 – Stormwater and Flooding	Outlines the stormwater and flooding issues, including flood management, stormwater quantity and quality management and rainwater harvesting and re-use.
6 – Environmental Management	Describes the key environmental issues relevant to the site and its context and the potential impacts arising from future development. These include biodiversity, riparian, heritage conservation, ecologically sustainable development, noise

1.3. LAND TO WHICH THIS DCP APPLIES

The DCP applies to land within the AIE Development Area that is zoned IN1 General Industrial and E2 Environmental Conservation under the provisions of WSEA SEPP.

As shown in **Figure 1** below, the affected land includes Lots 54-58 in DP 259135 which is owned by the proponent. The area to which the DCP applies is unaffected by the 1:100 year flood event.

Figure 1 Land to which this DCP applies

Source: Mirvac

1.4. RELATIONSHIP TO OTHER PLANS

This DCP has been prepared to provide detailed development controls to guide the preparation and assessment of development proposals on land located within the AIE Development Area.

Penrith Local Environmental Plan 2010 and *Penrith Development Control Plan 2014* do not apply to land within AIE Development Area. The land use provisions and development standards within the WSEA SEPP and the detailed development controls within this DCP comprise the principal planning provisions relevant to the development.

1.5. FUTURE DEVELOPMENT IN THE PRECINCT

The development of land within the Mamre Road Precinct will need to pay particular attention to the following key principles:

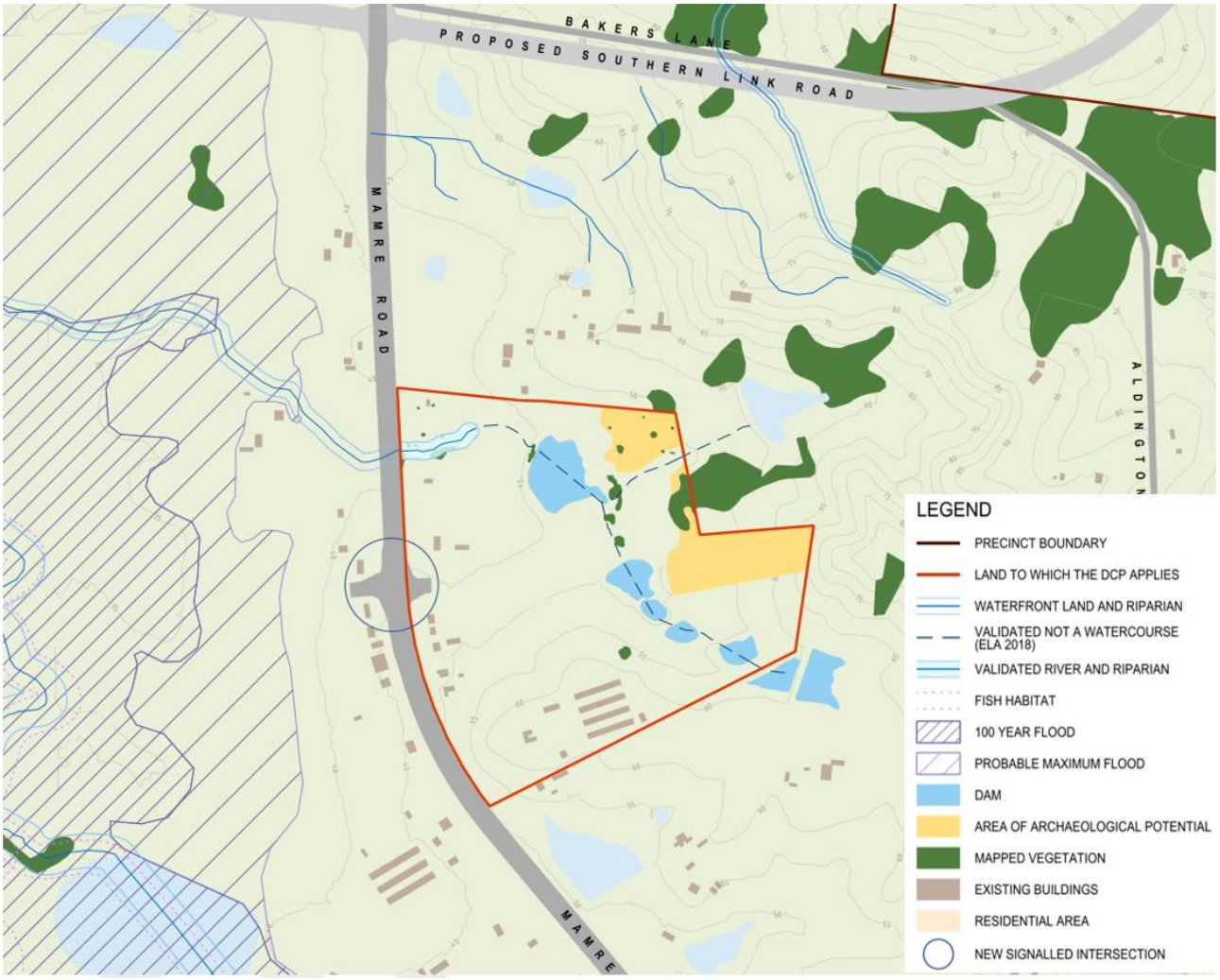
- Ensure that future development is sympathetic to residential land in the surrounding area.
- Ensure that future development takes into consideration the overland flooding levels associated with South Creek and its tributaries.
- Provide suitable access to future developments, while maintaining vehicular safety along Mamre Road.

- Ensure suitable public amenities and service infrastructure is provided to accommodate development.
- Ensure future development does not result in pollution of waterways, in particular South Creek and its tributaries.
- Ensure future development appropriately identifies and respects areas of significant biodiversity and cultural value.
- Provide a design response that promotes the green grid and fosters connections to the east and west of the site.

2. URBAN DESIGN PRINCIPLES

The urban design principles for the site were established in the precinct planning process, including a comprehensive assessment of the site opportunities and constraints as outlined in **Figure 2**.

Figure 2 Site opportunities and constraints map



The site investigations identified the site is unaffected by the 1% AEP and PMF flood events as defined within the South Creek Floodplain Risk Management Study and Plan (Advisian February 2020) as adopted by Penrith City Council on 27 April 2020.

The AIE Development Area will allow industrial uses, such as warehouse and distribution centres, and provide employment opportunities in accordance with the objectives of the SEPP WSEA. In addition, it establishes a riparian corridor to promote revegetation of native species and provides green grid linkages to Wianamatta-South Creek to the west and environmental conservation land to the east. The AIE Development Area does not rely upon the redevelopment of other areas throughout the wider Mamre Road Precinct and will not compromise the future development opportunities of remaining areas in the Precinct.

The development area of the AIE is on undulating land with access to the existing regional road network and utility services. An environmental conservation corridor traverses the site. This corridor is degraded due to a series of farm dams on the site. Significant rehabilitation and revegetation is required to restore this corridor, and contribute to the objectives listed under E2 Environmental Conservation.

The site is centrally located along Mamre Road within the Western Sydney Employment Area and is located in the Mamre Road Precinct immediately adjacent to the existing Erskine Business Park. The future industrial development of the AIE Development Area will be compatible with the scale and types of uses that are operating nearby and complimentary to the 24-hr operations at the Western Sydney Airport. Detailed consideration has been given to the existing and likely future development within the balance of the Mamre Road Precinct, including the rural residential dwellings to the east, the Anglican School, Emmaus Catholic College and Retirement Village to the north, and the potential future use of developable land to the south.

The controls in this DCP have been included to address the potential impacts on the amenity of existing development in the Mamre Road Precinct, including views and acoustics. Consideration has been given to the potential urban footprint within the Precinct, having regard to the way in which access, traffic and utility services could be integrated together.

Part of the DCP outlines the matters to be considered when undertaking all types of development within the precinct. These controls should be considered during the initial stages of subdivision planning to determine the suitability and the development potential of the land.

3. PRECINCT PLANNING OUTCOMES

3.1. MAMRE ROAD PRECINCT STRUCTURE PLAN

The Mamre Road Precinct Structure Plan (**Figure 3**) forms the basis for urban development in the Precinct by setting out:

- The major road network and potential access points.
- A potential intermodal terminal and associated integrated freight network to connect with the proposed Western Sydney Freight Line.
- The open space and drainage networks.
- The locations of critical infrastructure, including potential intermodal terminal and Warragamba Pipeline.
- The potential locations of land uses including employment lands, utilities, service hubs and recreation.
- Areas requiring protection or special consideration because of environmental, heritage or amenity values.

Objectives

(a) To ensure that development in the Precinct occurs in an orderly manner.

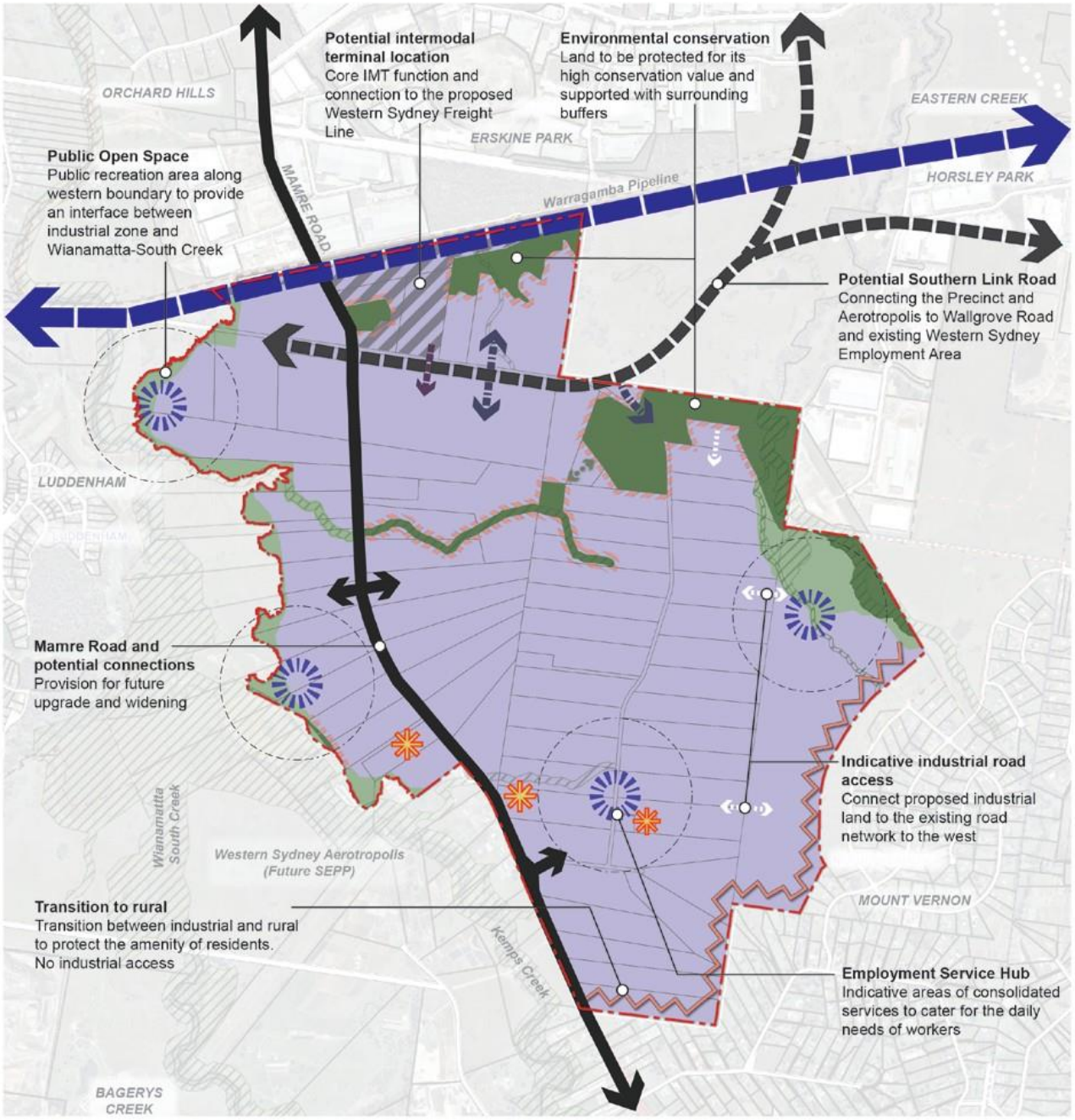
(b) To ensure the Precinct is based on coordinated planning and delivery of infrastructure, land uses, supporting facilities and protection of the environment.

(c) To ensure that infrastructure, services and amenities are sufficient to support growth and development in the Precinct.

Controls

1. All development applications are to be generally in accordance with the Precinct Structure Plan (**Figure 3**).
2. When assessing development applications, the consent authority will consider the extent to which the proposed development is consistent with the Structure Plan, including cumulative and precedent implications for the planned infrastructure, and services and amenities provision.
3. Any proposed variations to the general arrangement of the Structure Plan, must be demonstrated by the applicant, to the consent authority's satisfaction, to be consistent with the Precinct Vision.

Figure 3 Mamre Road Precinct Structure Plan



3.2. BIODIVERSITY

3.2.1. General Principles for Biodiversity Conservation

The biodiversity framework for the Precinct comprises lands zoned E2 Environmental Conservation, RE1 Public Recreation, designated riparian corridors, including the Wianamatta-South Creek corridor, as well as private lands containing remnant vegetation (refer to Figure 3). The Precinct seeks a balance between biodiversity conservation and urban development to deliver the dual outcomes of environmental protection and employment generation.

The overarching biodiversity principle is to avoid, minimise and offset the impacts of development and land use change on biodiversity. Existing native trees should be preserved, wherever possible, to deliver biodiversity outcomes and support the ecological function of the Cumberland subregion while improving liveability and supporting urban development in Western Sydney.

The siting and layout of a development at the initial concept stage must consider the location of existing trees with a view to their preservation and new trees with a view to their survival. Existing trees shall not be removed without the written consent from the relevant consent authority.

3.2.2. Biodiversity Certification

The CPCP aims to protect threatened plants and animals, while supporting the delivery of housing, infrastructure and open and green spaces. The CPCP will meet the requirements for a strategic biodiversity certification under the *NSW Biodiversity Conservation Act 2016* (BC Act) and strategic assessment under the Australian *Government's Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Objectives

(a) To ensure the requirements of strategic biodiversity certification under the Cumberland Conservation Plan are implemented, as it applies to the Mamre Road Precinct (if approved).

(b) To protect threatened species and threatened ecological communities and ensure populations persist and the condition of suitable habitat improves at the landscape scale.

Controls

1. Development is to be sited, designed and managed to avoid or mitigate potential adverse impacts on significant natural areas and habitat.
2. Development located on land that has the potential to impact biodiversity prior to the approval of the CPCP is to be accompanied by a Biodiversity Development Assessment Report submitted as part of the Development Application.
3. Where development is proposed to impact on an area of native vegetation, it will be demonstrated that no reasonable alternative is available. Suitable ameliorative measures will also be proposed (e.g. weed management, rehabilitation, nest boxes).
4. A Weed Eradication and Management Plan outlining weed control measures during and after construction is to be submitted with the development application.

3.2.3. Biodiversity Conservation and Management

Objectives

(a) Increase and improve landscape connectivity through conservation and restoration of native vegetation to enable plant and animal communities to survive in the long term.

(b) Ensure consistency with the requirements of the relevant biodiversity certification for the subject land where applicable.

(c) Mitigate indirect and ongoing impacts of development and associated works on threatened ecological communities to improve and enhance condition over the long term.

(d) Avoid and minimise impacts to biodiversity from development and mitigate residual impacts unable to be avoided or minimised.

(e) Retain and protect significant, intact native vegetation areas identified within the Cumberland Plain Conservation Plan (CPCP) and provide for areas with a size and configuration that will allow for the survival and improvement of the native vegetation communities in the long term.

(f) Retain and protect wetlands with high ecological significance in patches of a size and configuration which will enable existing plant and animal communities to survive and improve in the long term.

(g) Ensure construction and operational works minimise impact to native vegetation and ecological communities.

(h) Reduce the risk to biodiversity and habitat in areas of bushfire risk and maintain threatened species through appropriate fire regimes over the long-term.

(i) Manage and enhance spatial variability of biodiversity to ensure species have habitat available for refuge from fires.

(j) To promote the conservation of urban bushland, avoid key biodiversity areas and ensure environmental integrity.

(k) To protect and preserve native vegetation and biological diversity in accordance with the principles of ecologically sustainable development.

(l) To retain native vegetation in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term.

(m) To protect and enhance habitat for threatened species and endangered ecological communities.

(n) To provide a biodiversity corridor system linking remnant native vegetation across the Precinct with the riparian biodiversity system, including along Wianamatta-South Creek, Kemps Creek and Ropes Creek.

(o) To outline management arrangements to enable the establishment of a biodiversity corridor and its ongoing maintenance.

(p) To maintain the function of the floodplain to convey and store floodwaters to limit material adverse impacts of flooding on the development, its users and surrounding properties.

(q) Ensure the extent and spread of weeds including weeds of national significance (WONS) are minimised during the construction and operation of the development and managed towards eradication.

Controls

3.2.3.1. Environmental Conservation and Recreation Zones

1. Minimise clearing of native vegetation within land zoned E2 Environmental Conservation and RE1 Public Recreation and riparian corridors. Note: Clause 33K of WSEA SEPP also applies.
2. No clearing of native vegetation shall occur within the Precinct without consent.
3. A Vegetation Management Plan (VMP) for the rehabilitation and conservation of native vegetation and habitat is to be prepared for land located within E2 Environmental Conservation, RE1 Public Recreation or a riparian corridor.
4. Asset Protection Zones (APZs) for bushfire protection purposes are to be located within land zoned for IN1 General Industrial, electrical easements and/or open grass flood ways.
5. Provide a green vegetated landscape setback or public road to all land zoned E2 Environmental Conservation, RE1 Public Recreation, RE2 Private Recreation in accordance with Section 4.2.3. The landscape buffer should generally be vegetated with endemic tree species and shrubs.
6. The following infrastructure will be considered within the landscape buffer, providing impacts on the Environmental Conservation and Recreation zoned lands can be minimised:
   - Pedestrian and shared pathways.
   - Street furniture and utilities.
   - Stormwater and drainage infrastructure (refer to section 2.6.1).
7. In general, development should address lands zoned Environmental Conservation and Recreation zoned lands, and the associated buffer area to ensure the lands are managed appropriately, to provide amenity

for workers and visitors, and passive surveillance. Ideally, a subdivisional road would be located between the buffer and development.

8. Where a vegetated landscape setback is provided to Environmental Conservation and Recreational lands and retained in private ownership, the consent authority may consider increased site coverage to offset the cost of delivering and managing the setback. This is to be considered on a case by case basis.
9. A Threatened Species Assessment is to be undertaken for sites within 500m of an E2 Environmental Conservation zone to determine the presence of threatened species or their habitat. Building setbacks for particular threatened species, if present, are required in accordance with 2.

Table 2 Prescribed building setbacks for specific threatened species

Species	Setback control
Grey-headed flying fox	Grey-headed flying fox camp requires 100m setback to any buildings and development. The setback area should be maintained free of flying fox roosting habitat.
Raptors	Raptor nests require a 500m circular setback from where nests are located in extensive undisturbed bushland. Where nests are located closer to existing developments, a minimum circular setback distance of 250m should be maintained along with an undisturbed corridor at least 100m wide extending from the nest to the nearest foraging grounds.

3.2.3.2. General Biodiversity Management

10. Development applications are to contain a Landscape Plan showing the location, extent and area of any existing native vegetation on the development site.
11. A Flora and Fauna Assessment is to be submitted with all subdivision development applications.
12. Avoid impacts to habitat features which provide essential habitat for threatened species and other fauna including large trees including dead trees at (>50cm diameter at breast height) and avoid impacts to soil within the dripline of the retained trees.
13. Mitigation to be undertaken in accordance with the following best practice guidelines for threatened ecological communities:
14. Best Practice Guidelines: Cooks River/Castlereagh Ironbark Forest (NSW DECC, 2008) within and adjacent to the TEC.
15. Recovering Bushland on the Cumberland Plain: Best Practice Guidelines for the Management and Restoration of Bushland (NSW DECC, 2005).
16. Where practical, prior to development commencing, applicants are to:
17. Provide for the appropriate re-use of native plants (including but not limited to seed collection) and re-use of topsoil that contains known or potential native seed bank.
18. Relocate native animals from development sites. Applicants should refer to the former Office of Environment and Heritage's Policy on the Translocation of Threatened Fauna in NSW.
19. Weeds of National Significance (WONS) and on the National Environmental Alert List under the National Weeds Strategy are to be managed and eradicated. Proponent to reference NSW Weed Wise for current weed identification and management approaches.
20. All subdivision design and bulk earthworks are to consider the need to minimise weed dispersion and promote weed eradication. A Weed Eradication and Management Plan, outlining weed control measures during and after construction, is to be submitted with any subdivision development application.
21. Pest control techniques implemented during and post construction are to be in accordance with regulatory requirements for chemical use and address the relevant pest control strategy and are to reduce the risk of secondary poisoning (e.g. from Pindone or second- generation rodenticides).

22. Vegetation to which Part 3 of State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 applies is the same vegetation that must not be ringbarked, cut down, lopped, topped, removed, injured, wilfully destroyed or cleared without a development consent or permit granted by Council.

23. High intensity lighting is to be designed to avoid light spill into adjoining natural areas. Australian Standard AS 4282 or updates to that standard are to be considered as a minimum.

24. Where a development footprint contains or is within 100 m of known microbat colonies or habitat likely to support microbat colonies, street lighting must not attract insects such as warm coloured LED light.1

25. There noise or lighting adjacent to land zoned E2 Environmental Conservation is likely to impact wildlife, the proponent must manage light spill, and timing of noise producing activities, including installing appropriate noise treatment barriers along major roads and other attenuation measures.

26. Ensure that appropriate mitigation strategies (including fauna-sensitive road design elements) are employed to minimise vehicle strike during and after road construction and upgrading.

27. Traffic calming measures are required in all development areas not subject to wildlife (including koala) exclusion fencing[2], for example:

    a. Local roads with speed limit restrictions for areas adjacent to Environmental Conservation and Recreation zoned lands.

    b. Roads adjacent to wildlife habitat areas will be signposted in accordance with Austroads, RMS technical guidelines, Council Guidelines and relevant Australian Standards.

    c. Traffic calming devices such as speed humps and audible surfacing to be installed along perimeter roads adjacent to Environmental Conservation and Recreation zoned lands.

    d. Fauna-friendly road design structures such as underpasses, fauna bridges and overpasses should be installed and maintained by the proponent for a time period consistent with any approval conditions. Reference to the RMS Biodiversity Guidelines is to be made.

28. Ensure movement of fauna is facilitated within and through wildlife corridors by:

29. Ensuring that activities do not create barriers to the movement of fauna along and within wildlife corridors.

30. Separating fauna from potential construction hazards through the pre-construction and construction process.

31. Adopt and implement open structure design for roads adjacent to known populations of Cumberland Plain Land Snail in accordance with actions under the Save our Species Program (EES, 2020).

3.3. NON-INDIGENOUS HERITAGE

Objectives

(a) To protect the heritage significance of intact heritage items.

(b) To ensure adequate curtilage and landscape setting for intact heritage items.

(c) To ensure the integrity of the intact heritage item and its setting is retained by the careful siting and design of new buildings and alterations and additions to existing buildings.

(d) To ensure that the subdivision of land on which an intact heritage building is located does not isolate the building from its setting or context, or adversely affect its amenity or privacy.

(e) To ensure that new development is carefully sited so as to avoid causing physical damage to intact heritage items especially where sited within the same curtilage as the heritage item.

Controls

1. A Heritage Impact Statement shall be lodged with a development application for subdivision, buildings or works in the vicinity of heritage items including development that:

    a. May have an impact on the setting of a heritage item, for example, by affecting a significant view to or from the item or by overshadowing; or

    b. May undermine or otherwise cause physical damage to a heritage item; or

c. Will otherwise have any adverse impact on the heritage significance of a heritage item within which it is situated.

2. Proposals for subdivision should define an appropriate setting or curtilage for any intact heritage building as part of the Heritage Impact Statement or Conservation Management Plan.

3. In determining the curtilage of an intact heritage building, consideration is to be given to the following:

    a. The original form and function of the heritage building: The type of structure that constitutes the heritage building should be reflected in the curtilage. For example, it may be appropriate that a larger curtilage be maintained around a former rural homestead than that of a suburban building;

    b. Outbuildings: A heritage building and its associated outbuildings should be retained on the same allotment; and

    c. Gardens, trees, fencing, gates and archaeological sites: Features that are considered valuable in interpreting the history and in maintaining the setting of a building should be identified and, where possible, retained within the curtilage.

4. New development shall be of a scale and form that does not detract from the historical significance, appearance and setting of the heritage item. In this way, the following elements require specific consideration:

    a. The height of new development near intact heritage items shall be less than the subject item. Increases in height shall be proportional to increased distance from the items and will be considered on merit;

    b. Views and vistas to the heritage item from roads and other prominent areas are key elements in the landscape and shall be retained;

    c. If the development site can be viewed from a heritage item(s), any new development will need to be designed and sited so that it is not obtrusive when it is viewed from the heritage item(s); and

    d. Curtilages shall be retained around all listed items sufficient to ensure that views to them and their relationship with adjacent settings are maintained.

3.3.1. Gardens, Landscaping and Fencing

1. In order to preserve and maintain an appropriate scale and the visual prominence of a heritage item, the building height of new development shall generally not exceed that of the original heritage item. New development or large additions or alterations must provide a transition in height from the heritage item.

2. Development proposals, which involve largescale redevelopment and alteration to the original character of the heritage item and will negatively impact on the heritage significance of the curtilage, will not be permitted.

3. The colours and materials used in a new development (whether an extension or addition) should complement the colours and materials of the heritage item. New development within the curtilage must not adversely impact upon the significant fabric of a heritage item. Where possible, existing fences that have been identified as significant or that contribute to the overall setting or character of a heritage item are to be retained or repaired, rather than replaced.

4. New fences should either match as closely as possible the original fencing, or if the original fence type is not known, specifically relate to the architectural character and period of the existing heritage item with respect to design, materials, colour and height. Old photographs or careful inspection of remaining fabric can often reveal the original fence type.

5. New development shall not be sited in front of the front building line of the existing heritage item nor shall it extend beyond the established side building lines of the heritage item.

6. New development within the same curtilage as a heritage item shall generally not be larger in scale than the heritage item. Reference shall be made to the building height of the heritage item as the maximum permissible building height of alterations or additions.

7. Vegetation around a heritage item shall be assessed for its value to the item and retained where required.

3.4. ABORIGINAL HERITAGE

Objectives

(a) To manage Aboriginal heritage values to ensure enduring conservation outcomes.

(b) To ensure areas identified as archaeologically or culturally significant are managed appropriately.

Controls

1. Sites of known Aboriginal Heritage and areas of high and moderate–high Aboriginal archaeological potential

2. Undertaking any development or activities on land does not harm Aboriginal objects, development applications must identify any areas of Aboriginal heritage value that are within or adjoining the area of the proposed development, including any areas within the development site that are to be retained and protected (and identify the management protocols for these).

3. Any ground disturbance proposed in areas where cultural material has not been identified and/or is considered of low potential to occur should be subject to a due diligence investigation in accordance with DPIE and/or best practice guidelines (e.g. Due Diligence Code of Practise for the Protection of Aboriginal Objects in NSW). The findings of the due diligence should guide future assessment and approval requirements for the activity (if any).

4. Developments or other activities that will impact on Aboriginal heritage may require consent from the Heritage NSW, DCP under the National Parks and Wildlife Act 1974 (NPW Act) and consultation with the relevant Aboriginal communities.

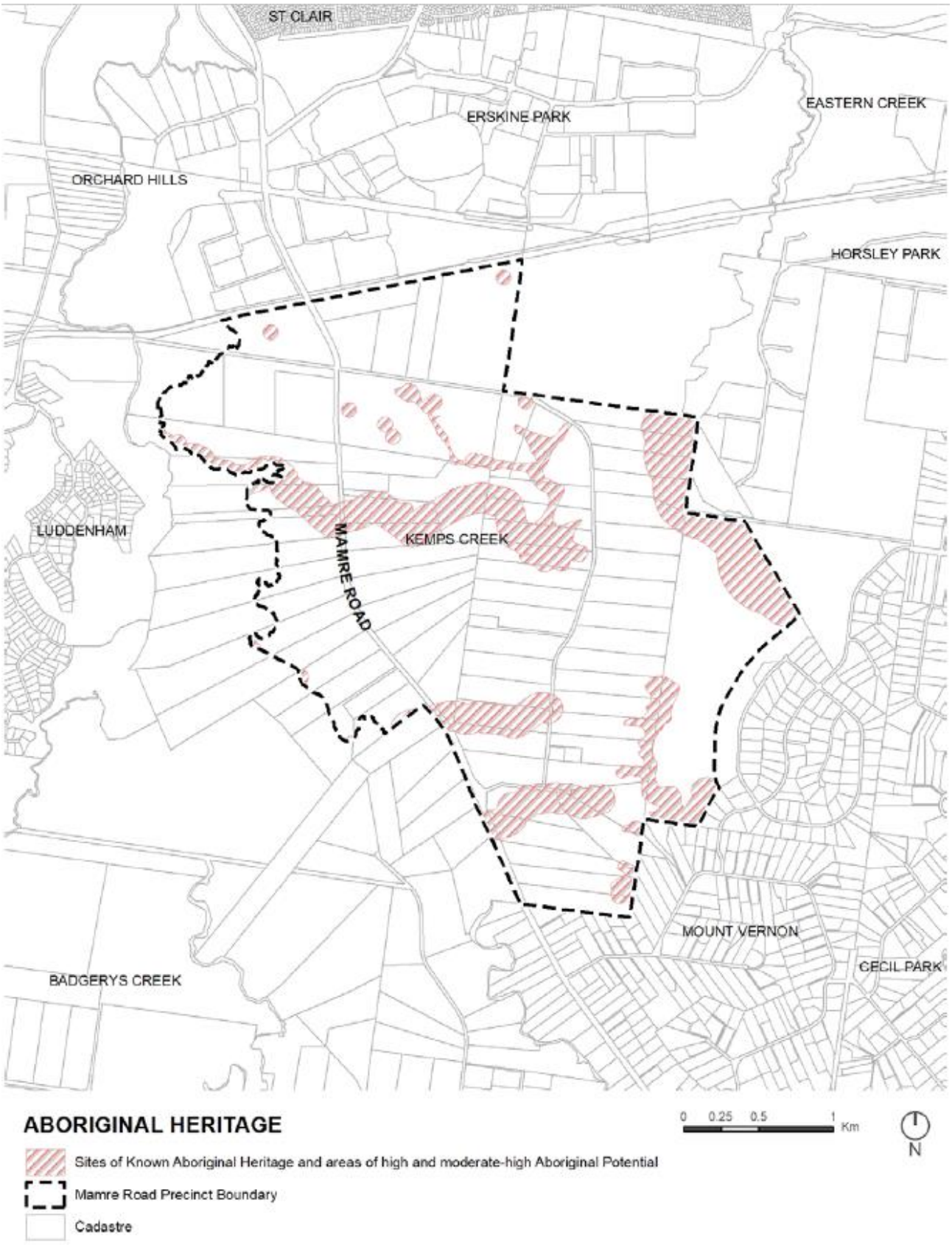
5. Any development application that is within or adjacent to land that contains a known Aboriginal cultural heritage site, as indicated on Figure 4, must consider and comply with the requirements of the NPW Act. An Aboriginal Heritage Impact Permit (AHIP) issued under Part 6 of the NPW Act may be required for any works which directly affect these sites as specified under the relevant planning pathway.

6. Where the necessary consents have already been obtained from Heritage NSW, the development application must demonstrate that the development will be undertaken in accordance with any requirements of that consent.

Notes: Applicants should consult with Heritage NSW to determine requirements for assessment and approval where developments or other works are to be carried out on or near Aboriginal heritage sites. Council or Heritage NSW may require additional investigations to be undertaken as part of a development application to confirm the presence of Aboriginal cultural heritage on the land.

Where works uncover items that may be of Aboriginal cultural heritage, the developer is to consult with Heritage NSW to determine an appropriate course of action.

Figure 4 Areas of high and moderate Aboriginal archaeological potential



3.5. RIPARIAN LAND

Objectives

(a) Effectively manage indirect and ongoing impacts of development adjacent to waterways to ensure vegetation in the riparian area, aquatic fauna, water quality and quantity is protected and maintained.

(b) To minimise disturbance and impact on natural waterbodies.

(c) To improve the ecological condition of aquatic and terrestrial ecosystems.

(d) To retain and restore native vegetation along riparian corridors to promote aquatic and terrestrial ecosystems functioning.

(e) To ensure natural stream design methodologies are adopted to retain watercourse stability.

(f) To ensure appropriate revegetation of riparian corridors is implemented to allow for watercourse stability.

(g) To protect, maintain or restore waterway health through a risk-based approach to managing the cumulative impacts of development.

(h) To ensure waterways are protected in the design and management of the stormwater and wastewater management systems.

(i) To maintain and improve the hydrological regime of wetlands and waterways.

(j) To manage the indirect and ongoing impacts of development to ensure established waterway health targets are achieved and maintained.

(k) To ensure development does not adversely affect aquatic fauna.

(l) To ensure development does not adversely affect water quality or availability, including ground water.

(m) To ensure watercourses and associated riparian vegetation are maintained to contribute to water quality.

(n) To ensure planning, design and development adopt naturalised solutions for riparian lands, in accordance with Clause 33L of the WSEA SEPP.

Controls

3.5.1. Mapped Riparian Corridors (Field-Validated)

1. Within a riparian corridor:
   - All existing native vegetation is to be retained and rehabilitated, except where clearing is required for essential infrastructure including roads or where approval by the Natural Resources and Assessment Regulator is obtained.
   - Native vegetation is to be conserved and managed in accordance with the controls below.

3.5.2. Avoiding Modifications to Natural Waterbodies

2. There should be no modifications to a natural (or historic) waterbody in its dimensions, depth or bank height unless the approval of Natural Resources and Assessment Regulator is obtained, including the enhancement of the ecological outcomes of the watercourse, hydrological benefits and ensure the long-term geomorphic stability of the watercourse.

3. Watercourses should not be modified to maximise flood conveyance unless there are no other means to avoid damage to existing dwellings or infrastructure that cannot be relocated.

4. Natural hydrological processes are to be maintained where possible, including natural vegetation and the flow regimes to maintain creek line stability and the health of terrestrial and aquatic plant communities.

5. Existing flows of surface and ground water should not be altered through construction of channelled flows or the redirection or interruption of flows.

3.5.3. Protection and Enhancement of Riparian Corridors

6. Waterways of Strahler Order 2 and higher will be maintained in a natural state, including the maintenance and restoration of riparian area and habitat such as fallen debris.

7. Realignment of waterways of Strahler Stream Order Number 2 and higher will be subject to approval by the Natural Resources and Assessment Regulator.

8. Waterway crossings such as bridges are to be maintained to retain ecological connectivity and water quality.

9. Road crossings across a waterway of Strahler Order 2 or higher are to be designed to minimise impacts to vegetated riparian area and species movements in accordance with NSW Department of Primary Industries requirements to maintain fish passage.
10. Development within a riparian corridor should be avoided where possible to retain its ecological processes. Where development is unavoidable within the riparian areas, it will be demonstrated in the development application that potential impacts on water quality, aquatic habitat, and riparian vegetation will be negligible or offset in accordance with the vegetated riparian zone and offsetting requirements as specified Natural Resources Access Regulator (NRAR) Guidelines for Controlled activities on waterfront land - riparian corridors.
11. All riparian corridors should comprise a vegetated riparian zone along each side of the watercourse/channel.
12. The vegetated riparian zone should retain or be vegetated with fully structured native vegetation (trees, shrubs and groundcover species).
13. In relation to activities within the vegetated riparian zone, such as cycleways and paths, detention basins, stormwater management devices and essential services, compliance is required with the 'riparian corridor matrix' in the NRAR controlled activities on waterfront land – Riparian corridors (May 2018).
14. The number of vehicular and pedestrian watercourse crossings should be minimised and designed in accordance with the NRAR Guidelines to allow for riparian connectivity and flows.
15. Private and public fencing should be located on the perimeter of the riparian corridor and avoid intersecting across watercourse channels or riparian corridors.
16. A managed buffer zone outside the vegetated riparian zone should be provided (where possible), to provide an additional buffer between development and the vegetated riparian zone. Land uses within the managed buffer zone could include public or private access roads, paths, playgrounds and stormwater management devices.
17. Bushfire asset protection zones should be located outside the vegetated riparian zones.
18. Appropriate widths for vegetated riparian zones are dependent on the Order of Stream in accordance with the Strahler methodology. The width should be measured from the top of the highest bank on both sides of the stream/watercourse, excluding any managed buffer zone, and shall comply with the requirements outlined in **Table 3**. Riparian corridors will be assessed by Council and NRAR on merit.

Table 3 Riparian Corridor widths

Watercourse Type	**Field-Validated Watercourse Name***	**Vegetated Riparian Zone Width (m)**	**Total Riparian Corridor Width (m)**
1st Order	Numerous Unnamed Tributary South Creek 2 Unnamed Tributary South Creek 1 Unnamed Tributary Ropes Creek	10	20
2nd Order	Unnamed Tributary Kemps Creek 1	20	40
3rd Order	Ropes Creek	30	60
Wetland	Ropes Creek Wetland	40	80

* *Note: The above field-validated watercourses have been identified in the Mamre Road Precinct Rezoning: Waterway Assessment (CT Environmental April 2020) and shown on the Mamre Road Precinct Structure Plan. 2nd and 3rd Order Streams have been zoned E2 Environmental Conservation under the*

WSEA SEPP. 1st Order Streams, including those field-validated streams outlined above, will be assessed on merit as part of development applications.

19. Enhancement of riparian corridors should, where possible:
    - Mimic natural hydrological regimes for watercourse treatments;
    - Replicate the natural watercourse through creation of a meandering channel, rather than straight channels;
    - Simulate natural roughness having regard to riparian requirements and flow velocities to sustain vegetation groupings. A watercourse's shape, smoothness of its channel and amount of vegetation in the channel all affect the 'roughness' of that watercourse and the speed of water conveyed in the channel;
    - Minimise ongoing maintenance requirements through channel design;
    - Establish a functional riparian zone and natural channel section;
    - Maintain or create a full assemblage of vegetation with likely natural obstructions;
    - Minimise likely damage to channel banks and vegetation from storm flow through channel design; and
    - Ensure that the channel has the capacity for appropriate flood flows having regard to the steepness of the catchment; channel modifications and future liability for landowners, Council and government agencies.
20. Where a development proposal would significantly affect Key Fish Habitat and/or threatened fish (as defined under the *Fisheries Management Act 1994*), applicants must include an aquatic ecological environmental assessment in accordance with the *Fisheries Management Act 1994*.
21. Water holding structures (e.g. farm dams) that are more than 0.1 ha in area or more than 3 ML in volume within 3 km of the approach boundary to Western Sydney Airport are to be avoided to ensure there is no attraction for water-favouring fowl.

Note: A Controlled Activity Approval under the *Water Management Act 2000* is required for all works located within waterfront land as defined in the Act unless otherwise required under the EP&A Act.

3.5.3.1. Development Adjacent Riparian Corridors

22. Development adjacent riparian corridors is to be managed in accordance with the controls in Section 4 and the controls below.
23. Retain areas of the proteaceae shrubs for the Eastern Pygmy Possum Cercartetus nanus along or adjacent to riparian areas to improve and maintain habitat connectivity
24. Where a development adjoins riparian corridors, Council may require bank stabilisation works, measures to minimise pollution and sedimentation. Reference should be made to the requirements of the Fisheries Management Act 1994.
25. Where industrial land immediately abuts a riparian corridor, development shall be located and designed to achieve a satisfactory interface with the riparian corridor. Consideration must be given to issues such as surveillance of the riparian corridor, built form and design, landscaping, opportunity for public interfaces, where appropriate, and protection from bushfire threat.

3.6. INTEGRATED WATER CYCLE MANAGEMENT

The Aerotropolis contains the Wianamatta-South Creek system with many important riparian areas. Several flow components are considered to be critical for the protection or restoration of river health, ecology and biodiversity. This is particularly important for Wianamatta-South Creek as an ephemeral and perennial system, where geormorphology and ecology are very sensitive to flow. Key flow components include daily flows, baseflows, magnitude and frequency of high (90th percentile) and low (10th percentile) flow events, magnitude and frequency of freshes (between 75-90th percentiles) and periods where there are no flows.

The intent of the integrated water management criteria for the Aspect Industrial Estate is focused on the protection of waterway health.

The primary objective of integrated water cycle management for the Aspect Industrial Estate is to preserve existing stream values by mimicking the natural baseline streamflow duration curve as best as practical.

Mimicking the natural baseline streamflow duration curve may be completed by either of the following options:

1. Meeting the prescribed Mean Daily Flow Volume (L/ha) at any discharge point from the site; or
2. Further rigorous technical analysis and application of various water sensitive urban design measures to better match the existing baseline streamflow duration curve, to the satisfaction of the Consent Authority, than would be achieved through meeting the prescribed Mean Daily Flow Volume (L/ha) as per Option No.1. Key elements of the streamflow duration curve for comparative assessment are to be:
    a. Zero flow periods (Cease to Flow)
    b. Median Flow; and
    c. Seasonal pulses (Freshes)

Or

3. A contextually appropriate approach to meet acceptable water way health outcomes to the satisfaction of the relevant water authority.

3.6.1. Stormwater Management

The *Mamre Road Precinct Integrated Water Cycle Management Strategy* (Sydney Water, 2020) outlines the overarching water management strategy for the precinct. The strategy is designed to meet the interim objectives for flow for Wianamatta-South Creek established by DPIE (EES) which prescribe a stormwater runoff objective of 1.9 megalitres (ML) per hectare per annum, measured at any discharge point to South Creek, Kemps Creek or Ropes Creek.

3.6.1.1. Objectives

(a) Effectively manage indirect and ongoing impacts of development on waterways to meet the interim flow objectives for the entire Wianamatta-South Creek catchment. To do this, stormwater runoff reaching waterways must not exceed a maximum of 1.9 ML/ha/year in line with the *NSW Government Risk-based Framework for considering Waterway Health Outcomes in Strategic Land-use Planning Decisions*.

(b) To ensure that land use planning and urban development is integrated with water cycle management including:

- service planning for potable water, recycled water and wastewater;
- effective management of stormwater volume and quality; and
- water management objectives for the maintenance of healthy waterways.

(c) To encourage design and delivery of infrastructure, servicing and development which builds resilience in Sydney's water supply through encouraging the use of recycled water, optimising stormwater management and maximising efficiency in the use of potable water.

(d) To ensure that the principles of integrated water cycle management inform the design of new development to optimise water, cooling and greening outcomes.

(e) To ensure that water management planning considers whole of life costs and ease of maintenance

(f) To facilitate the delivery of regional water infrastructure where feasible to optimise the efficiency of development and deliver better outcomes for waterways, amenity and liveability.

Controls

3.6.2. Waterway Health and Water Sensitive Urban Design

1. Development must demonstrate how the proposed site design and water sensitive urban design measures contribute to the interim NSW Government stormwater catchment flow objectives for Wianamatta-South Creek Catchment. The combined effect of site design and site water sensitive urban design measures (including on-lot, on street and end of pipe measures) shall contribute no more than 1.9 ML/ha/year in mean annual runoff at any discharge point to South Creek, Kemps Creek or Ropes Creek.

2. Any stormwater harvesting approaches will need to be consistent with a regional wastewater approach and the precinct water balance.
3. All stormwater treatment measures need to be designed with consideration for ongoing operation and maintenance.
4. A Maintenance Plan for stormwater treatment measures is to be submitted with all development applications for approval.
5. All proposed industrial buildings are required to install a rainwater tank on the site for re-use of water in irrigation, industrial processes, toilet flushing, evaporative cooling or for other non-drinking purposes through a separate reticulated water supply system. The size of the tank should be determined in the calculation of required stormwater runoff volume reductions to meet NSW Government interim flow objectives for the Wianamatta-South Creek Catchment.
6. Industrial developments must supply at least 80% of their non-potable demand using non- potable sources including rainwater and recycled water.
7. Applicants should target 35% impervious surfaces within lots and streets to ensure adequate management of stormwater runoff and contribute to mean annual runoff volume and water quality targets. Perviousness is to be calculated in accordance with the following index:
   - Deep soil (one metre or more in depth, connected subsoil) – 100%
   - Shallow soil (less than one metre in depth, not connected to subsoil) – 75%
   - Permeable pavement – 50%
   - Hardstand – 0%
8. Water sensitive urban design measures to retain stormwater within the development footprint are outlined in the Integrated Water Cycle Management controls outlined in this DCP. An example of stormwater retention measures applied to an industrial development is shown in the Table 4.
9. Stormwater management targets may be satisfied on a developer lot, estate, or catchment level.

Table 4 Example Stormwater retention measures

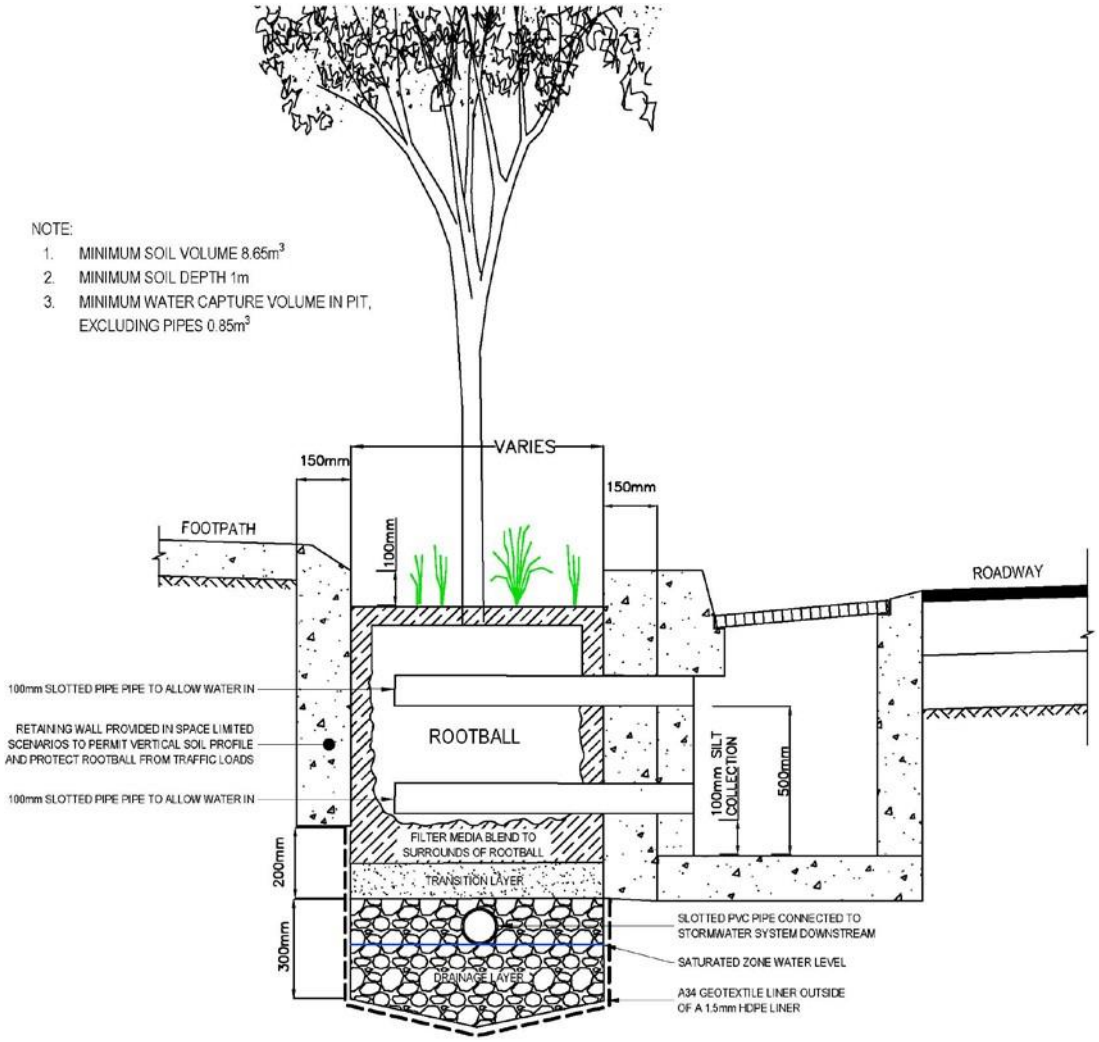
Component	**Potential Measure**
Roof	Compact development typologies Rainwater and stormwater harvesting connected to appropriate reuse Green roofs/walls
Hardstand	Diversion of runoff to deep soil/landscaped areas Bioretention Stormwater harvesting
Driveways, carparks and crossovers	Diversion of runoff to deep soil/landscaped areas Permeable pavement Bioretention
Landscaped areas	Infiltration into deep soil Irrigation from on-site rainwater tanks
Public Open Space	Infiltration into deep soil Estate/precinct scale stormwater harvesting and irrigation
Public roads	Passively irrigated Wianamatta Street Trees

Component	Potential Measure
	Bioretention

3.6.2.1. Trunk Drainage Infrastructure

10. Major trunk drainage elements proposed are shown in indicatively Figure 5. Additional drainage infrastructure may be required to be provided upstream of these identified elements in conjunction with development of sites to achieve the desired stormwater management objectives. Whole of life costs and ease of maintenance will be critical considerations in determining the form of the final drainage option.
11. Existing flows entering the catchment are to be accommodated within the stormwater drainage infrastructure elements provided within development in the precinct.
12. The additional drainage infrastructure is to be constructed by the developer of the land concerned.
13. All land identified by Council as performing a significant drainage function and where not specifically identified in the Contributions Plan, is to be covered by an appropriate “restriction to user” as deemed application by Council, and created free of cost to Council.
14. Trunk drainage infrastructure is to be retained in private ownership, unless otherwise agreed by Council.
15. Trunk drainage infrastructure may be piped, open swale or combination to convey the 100 year Annual Recurrence Interval (ARI) flow.

Figure 5 Wianamatta Street Tree - tree pit



3.6.3. Stormwater Quality

Objectives

(a) Water quality and waterway health values are protected and enhanced through a risk- based approach that mitigates development impacts as documented in the NSW Government's Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions (2017).

(b) Protect, maintain and restore the ecological condition of aquatic systems (including but not limited to wetlands and riparian lands) over time.

(c) Retain and restore native vegetation to promote aquatic ecosystem functioning.

(d) Ensure that waterways are protected in the design and management of the stormwater and wastewater management systems.

(e) Effectively manage indirect and ongoing impacts of development on waterways to ensure that the interim water quality and waterway health values in **Table 5** are maintained.

Table 5 Interim water quality and waterway health values for Wianamatta-South Creek

Pollutant	**Target Value (maximum)**
Total Nitrogen (TN)	1.67 mg/L
Ammonium (NH4)	0.09 mg/L
Total Phosphorous (TP)	0.14 mg/L
Turbidity	29 NTU
Conductivity	1081 uS/cm
pH	7.27-7.69

Controls

1. All development proposals must include a Water Management Strategy. The Water Management Strategy must include a Water Sensitive Urban Design strategy detailing the proposed stormwater flow and quality control measures and how these measures will be implemented as part of the development including ongoing management and maintenance responsibilities. The Strategy should include details of modelling (eg. eWater MUSIC) to reflect how the mean annual runoff targets are met.
2. All stormwater treatment measures, including infiltration, stormwater harvesting, and reuse will need to demonstrate that they do not increase existing urban salinity or result in increased salt loads in waterways, wetlands drainage lines or soils.
3. Where water sensitive urban design basins are not provided to capture all runoff from lots and local roads before discharge to either the stormwater network or to planned regional stormwater infrastructure, Wianamatta Street Trees are to be incorporated into the local road network and designed in accordance with Figure 5. This design includes extended detention (either above tree or within tree sump/pit) of 0.6 m3/tree with pits to include subsurface gravel trenches, lined with waterproof membranes to minimise soil reactivity. All water is to be pre-screened with 200 micron mesh to maximise longevity.
4. When proposed development demonstrates compliance with the interim flow management targets for Wianamatta South Creek, it is expected that the following pollutant load reduction targets Table 6 will be achieved and contribute to the NSW Interim Water Quality objectives for Wianamatta South Creek:

Table 6 Pollutant Load Reduction Targets

Pollutant	**Average Annual Pollutant Load Reduction (%)**
Total Nitrogen (TN)	68

Pollutant	Average Annual Pollutant Load Reduction (%)
Total Phosphorus (TP)	75
Total Suspended Solids (TSS)	95
Gross Pollutants	100

** Note - The State Government is reviewing the load reduction targets for South Creek and the outcome of this review will the determine the final targets for the Aerotropolis Precinct.*

3.7. FLOOD PRONE LAND

Objectives

(a) To ensure development in the floodplain is consistent with the NSW Flood Prone Land Policy and the principles in the NSW Government Floodplain Development Manual.

(b) To ensure floodplain risk management minimises the potential impact of development and other activity upon the aesthetic, recreational and ecological value of the waterway corridors.

(c) To maintain the existing flood regime, velocities and flow conveyance and stream hydrology.

(d) To avoid significant adverse effects on the floodplain environment that would cause erosion, siltation, destruction of riparian vegetation or a reduction in the stability of the riverbank/ watercourse.

(e) To ensure the development does not alter flood behaviour that results in materially adverse impacts to surrounding properties.

(f) To reduce the impact of flooding and flood liability on individual owners and occupiers.

(g) To limit the potential risk to life and property resulting from flood events.

(h) To enable safe occupation and evacuation of flood prone land.

(i) To apply effective planning and development controls to ensure all new developments do not result in flood losses

(j) To apply a “merit approach” to all development and building decisions, which takes account of social, economic and ecological factors as well as flooding considerations.

(k) To ensure development is compatible with the flood hazard and flood behaviour.

(l) To consider adaptability to changing flood risks due to a changing climate.

(m) To ensure the development is in accordance with the principles contained in the Floodplain Development Manual, issued by the NSW Government.

Controls

3.7.1. Submission Requirements

1. Where relevant, a comprehensive Flood Impact Risk Assessment (FIRA) is to be submitted with any development application on land identified as fully or partially flood affected. The FIRA should utilise Council’s existing data and is to provide an understanding of existing flooding condition and developed conditions consistent with the requirements of the NSW Flood Prone Land Policy and Floodplain Development Manual. The FIRA shall determine:
   - A detailed flood behaviour for existing and developed scenarios for the full range of flooding including the 5% AEP, 1% AEP, 0.5% AEP, 0.2% AEP and the PMF Flood Function (floodways and flood storage areas);
   - Flood Hazard; and
   - Flood constraints including evacuation constraints (if applicable).

2. The levels on the survey are required to be verified during construction by a survey certificate. The study shall incorporate:
   - A survey of the main watercourse;
   - A survey of the site; and
   - A detailed flood and drainage investigation which establishes the estimated 20% AEP, 1% AEP (100 year ARI) 0.2% AEP and Probable Maximum Flood levels including overland flow paths.
3. The applicant shall demonstrate to the satisfaction of the consent authority (on the basis of a qualified consultant report) that:
   - The development will not increase the flood hazard, flood levels or risk to other properties;
   - The development has incorporated appropriate measures to manage risk to life from flooding;
   - If the development is to be located within the PMF, a flood evacuation plan will be required;
   - The structure of the proposed building works shall be adequate to deal with the flood behaviour for a full range of floods identified in control 1;
   - The proposed building materials are flood compatible with a full range of floods identified in control 2.7(1);
   - The buildings and their access are sited in the optimum position to avoid flood waters and allow optimal vehicular flood access from the site for evacuation;
   - That the impacts of climate change on flood behaviour has been considered;
   - The proposed redevelopment will not expose any persons to unacceptable levels of risk or any property to unreasonable damage;
   - Compliance of any existing buildings with the Standard - Construction of Buildings in Flood Hazard Area and the accompanying handbook developed by the Australian Building Codes Board (2012);
   - The proposed development will limit impact on riparian corridors and be designed and maintained to allow for natural stream processes; and
   - Fencing does not impede the flow of flood waters/overland flow paths.

3.7.1.1. Flood Hazard Classifications

4. Council will consider development on land subject to the full range of flooding based on understanding of flooding in accordance with the NSW Flood Prone Land Policy and the principles of the Floodplain Development Manual. New development in floodways and flood storages or in high hazard areas in the 1% AEP flood event considering climate change should be avoided.
5. Consideration will be given to such matters as depth and nature of flood waters, whether the area forms flood storage, the nature and risk posed to the development by flood waters, the velocity of floodwaters and the speed of inundation, and whether the development lies in an area classed as a ‘floodway’, ‘flood fringe area’ or ‘flood storage area’.

3.7.1.2. New Development

6. Floor levels shall be at least 0.5m above the 1% AEP (100 year ARI) flood.
7. Flood safe access and emergency egress shall be provided to all new and modified developments.

3.7.1.3. Extensions and Infill Development

8. Where the application is for an extension to an existing building on land at or below the flood planning level or for new development that can be classed as infill development, Council may approve of the development with flood levels below the 1% AEP (100 year ARI) flood if it can be demonstrated by the applicant that all practical measures will be taken to prevent or minimise the impact of flooding. In considering such applications and determining the required floor level, Council shall take into account such matters as:
   - The nature of the business to be carried out;
   - The frequency and depth of flooding;

- The potential for personal and property loss;
- The utility of the building for its proposed use;
- Whether the filling of the site or raising of the floor levels would render the development of the property unworkable or uneconomical;
- Whether the raising of the floor levels would be out of character with adjacent buildings; and
- Any risk of pollution of water from storage or use of chemicals within the building.

9. Any portion of the proposed building extension subject to inundation shall be built from flood compatible materials.

3.7.1.4. Subdivision

10. Generally, subdivision of land below the flood planning level will not be supported. Further provisions relating to the proposed subdivision of such land can be found in the Subdivision Section of this Plan.

11. Subdivisions must comply with 'Designing safer subdivisions guidance on subdivision design in flood prone areas, 2007' Hawkesbury-Nepean Floodplain Management Steering Committee'.

3.7.1.5. Storage of Potential Pollutants above 1% AEP (100 year ARI) Flood

12. All potential pollutants that are stored or detained on-site (such as on-site effluent treatment plants, pollutant stores or on-site water treatment facilities) should be stored above the 1% AEP (100 year ARI) flood. Details must be provided as part of any development application.

3.7.1.6. Overland Flow Flooding

13. Consideration must be given to the impact on any overland flow path. Development is required to demonstrate that any overland flow is maintained for the 1% AEP (100 year ARI) overland flow with consideration for failsafe of flows up to the Probable Maximum Flood (PMF). A merit based approach will be taken when assessing development applications that affect the overland flow.

14. Council's Stormwater Drainage Specification for Building Developments provides information on the details required in the preparation of an overland flow study.

15. Where existing natural streams do not exist, naturalised drainage channels are encouraged to ensure overland flows are safely conveyed via vegetated trunk drainage channels systems with 1% Annual Exceedance Probability capacity plus 0.5m freeboard. Constructed trunk drainage systems potentially increase peak flows by removing flood storage and increase conveyance. Any increase in peak flow must be offset using on-site stormwater detention (OSD) basins.

16. All required stormwater detention is to be accommodated within the development site estate unless otherwise approved at a catchment level with the consent authority.

17. OSD must be sized to ensure no increase in 50% and 1% Annual Exceedance Probability peak storm flows at the Precinct boundary or at Mamre Road culverts. An allowance shall be made for any local roads that bypass OSD or any vegetated trunk drainage systems that increase peak flows through the precinct.

3.7.1.7. Filling of Land At or Below the Flood Planning Level

18. Earthworks up to the PMF must meet the requirements of Clauses 33H and 33J of the WSEA SEPP as well as Sections 2.7 and 4.4 of this DCP.

19. Development consent will not grant consent to filling of floodways and /or critical flood storage areas in the 1% AEP flood. The filling of other land at or below the 1% AEP but outside the floodways and critical flood storage will generally not be supported. In particular, an application to fill land shall also describe the purpose for which the filling is to be undertaken. Council may consider such an application when the following criteria are met:
    - Flood levels are not increased by more than 100mm on surrounding properties by the proposed filling;
    - Downstream velocities are not increased by more than 10% by the proposed filling;
    - Proposed filling does not redistribute flows by more than 15%;
    - The potential for cumulative effects of possible filling proposals in that area is minimal;

- There are alternative opportunities for flood storage;
- The development potential of surrounding properties is not adversely affected by the filling proposal;
- The flood liability of buildings on surrounding properties is not increased;
- No local drainage flow/runoff problems are created by the filling; and
- The filling does not occur within the drip line of existing trees.

20. The above criteria can only be addressed and satisfied by the submission of a detailed flood study report by a qualified engineer. The flood study report would involve both hydrologic and hydraulic analysis of the watercourse and the effects of the proposed filling on flood levels, flow velocities and distribution of flows as listed above. The report needs to address items listed above. Any filling of land also needs to be in accordance with the other provisions in this DCP.

3.8. BUSH FIRE PRONE LAND

Objectives

(a) To minimise the risk to life, property and the environment in the event of a bushfire, including the lives of emergency personnel.

(b) To ensure that all development on bush fire prone land makes adequate provision for access for emergency personnel, vehicles and equipment.

(c) To balance the risk of bushfire to life and property with the other principles in this Plan, including the need to protect and enhance existing vegetation where possible.

(d) To recognise that land not classified as ‘bushfire prone land’ may still be subject to the impact from bushfire, particularly through ember attack.

Controls

1. Land identified as 'bushfire prone land' on the Penrith City Council Bushfire Prone Land Map is to address the bush fire protection measures in the Rural Fire Service publication *Planning for Bushfire Protection 2019* (PBP) (as amended).
2. A Bushfire Assessment Report, prepared in accordance with PBP, must accompany all development applications on land identified as bush fire prone land on the Bushfire Prone Land Map.
3. Development on land within 250m of land zoned RU2, E2, and E4 that is not identified as ‘bushfire prone land’ on the Bushfire Prone Land Map must consider ways to minimise the risk of ember attack, particularly with regard to roof design, building materials and landscape design. These matters must be addressed in the submitted development application.
4. Bushfire hazard reduction work must be authorised by the *Rural Fires Act 1997*.

3.9. SALINITY

Objectives

(a) To avoid or mitigate the impacts of development on salinity processes to prevent any degradation in soils, groundwater or vegetation.

(b) To avoid or mitigate the impacts of salinity on development, including damage to buildings and infrastructure and the loss of productive agricultural land.

(c) To ensure development will not significantly increase the salt load in existing watercourses.

(d) To minimise groundwater recharge where possible.

(e) To minimise disturbance to the natural hydrological system by maintaining good drainage and reducing water logging on the site.

Controls

1. A detailed salinity analysis and Salinity Management Plan will be necessary if an initial investigation shows the site is saline or affected by salinity.

2. Investigations and sampling for salinity are to be conducted in accordance with the requirements of Local Government Salinity Initiative series by the former Department of Natural Resources (2002).

3. The author (company) of the salinity analysis must sign off on the project on completion of works and submit this to Council prior to an occupation certificate being issued, if required within development conditions of consent.

4. Soil erosion and sediment control measures, in accordance with erosion and sedimentation controls in this section, shall be incorporated into the development during its construction and following its completion.

5. Construction techniques shall be employed that prevent structural damage to the development as a result of salinity (see *Building in a Saline Environment*). For example, building footings shall be constructed so as not to impede groundwater movement and building materials that are resistant to salt effects shall be used.

6. All landscape designs should undertake the following practices:

   – Select salt tolerant plant species (generally native trees and shrubs);

   – Use mulch in all garden beds;

   – Minimise landscaping which requires large quantities of water;

   – Use 'water wise' garden and landscape design (including timers, selection of plants with low water needs, grouping plants of similar water usage together, etc); and

   – Use non-corrosive materials when constructing pipes and channels.

7. All works are to conform with the *Western Sydney Salinity Code of Practice June 2003*.

3.10. CONTAMINATED LAND

Objectives

(a) To minimise the risks to human health and the environment from the development of potentially contaminated land.

(b) To ensure that potential site contamination issues are adequately addressed at the subdivision stages.

Controls

1. Prior to granting development consent, the consent authority must be satisfied that the site is suitable, or can be made suitable, for the proposed use having regard to land contamination.

2. All DAs shall be accompanied by a Stage 1 Preliminary Site Investigation prepared in accordance with State Environmental Planning Policy No 55 – Remediation of Land and the *Contaminated Land Management Act 1995.*

3. Where the site has known contamination, or a Stage 1 Preliminary Site Investigation identifies potential or actual site contamination a Stage 2 Detailed Site Investigation must be prepared in accordance with State Environmental Planning Policy No 55 – Remediation of Land and the *Contaminated Land Management Act 1995*. A Remediation Action Plan (RAP) will be required for areas identified as contaminated land in the Stage 2 Detailed Site Investigation.

4. A Site Audit Statement (SAS) (issued by an Accredited Site Auditor) will be required prior to occupation certificate where remediation works have been undertaken to confirm that a site is suitable for the proposed use.

Note: All applicants should consider and assess contamination hazards on their land in accordance with the *Contaminated Land Management Act 1995* and State Environmental Planning Policy No 55 – Remediation of Land, both of which override any controls in this DCP.

3.11. AVIATION SAFEGUARDING

The Mamre Road Precinct is located within the Western Sydney Aerotropolis, approximately 4km north-east of the proposed Nancy-Bird Walton Airport. Figure 6 identifies the location of the Precinct within the Western Sydney Aerotropolis.

Aviation safeguarding controls ensure development does not impact on the airport operation and should be read in conjunction with controls within the WSEA SEPP.

Objectives

(a) To safeguard the future operations of the Western Sydney Airport, including 24-hour operations and provide appropriate protections for the surrounding community.

(b) To ensure compatible development that exhibits design excellence occurs on surrounding land.

(c) To ensure development does not introduce or intensify noise sensitive uses.

Controls

1. An Aviation Safeguarding Assessment is to be submitted with development applications detailing compliance with aviation safeguarding measures and the controls outlined below.

3.11.1. Heights

2. The height of permanent buildings, structures, landscaping and cranes do not impact on the operations of the Airport or create a hazard to the safe navigation of aircraft. Permanent buildings and any ancillary structures must not encroach into protected airspace.

3.11.2. Noise

3. Development is constructed in accordance with Australian Standards AS2021 – Acoustics Noise Intrusion – Building Siting and Construction.

4. Renovations to existing houses or minor extensions within ANEC/ANEF 20 and above must be constructed in accordance with Australian Standard AS2021 – Acoustics – Aircraft Noise Intrusion – Building Siting and Construction.

3.11.3. Protection of Operational Airspace

5. Development does not create a permanent physical or transient obstruction in the operational airspace of the Airport and complies with the *Airports Act 1996* and *Airports (Protection of Airspace) Regulations 1996*.

6. Pursuant to s.183 of the Airports Act 1996 and Reg. 7 of the Airports (Protection of Airspace) Regulations 1996, developments resulting in a temporary physical or transient obstruction in the operational airspace of the Airport must apply for approval of the operation ("controlled activity") set out in the Schedule.

3.11.4. Lighting

7. Development does not impact on the operational aspects of the Airport with regard to light emission and reflective surfaces.

8. External lighting must be downlights or shrouded lights.

3.11.5. Emissions

9. Development must not generate emissions or plumes into the protected airspace which:

    a. Have peak vertical velocities of more than 4.3m/sec.

    b. Incorporate flares.

3.11.6. Wildlife Hazards

10. Development must not attract wildlife which would create a safety hazard in the operations of the Airport.

11. All waste bins are to be designed and installed with fixed lids.

12. Any bulk waste receptacle or communal waste storage area must be contained within enclosures that cannot be accessed by birds or flying foxes.

13. Any stormwater detention within the 8km wildlife buffer is to be designed to fully drain within 48 hours after a rainfall event.

3.11.7. Communications, Navigation and Surveillance Systems

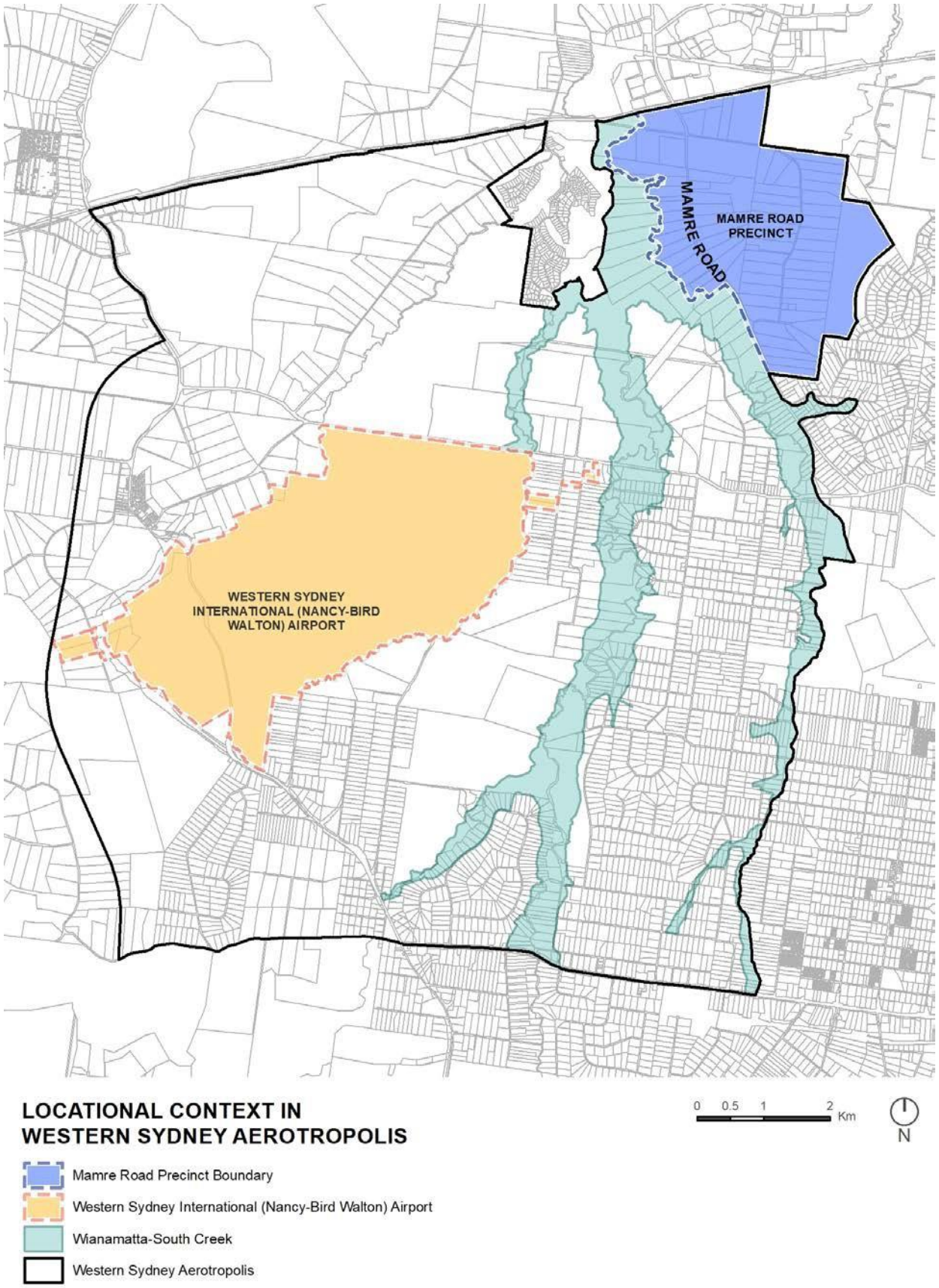
14. Development must not impact upon communication, navigation and surveillance systems.

15. Development within the building restricted area does not create electromagnetic field radiations that will interfere with signals transmitted by the communication, navigation or surveillance facility.

3.11.8. Windshear and Turbulence

16. Development must not generate windshear and/or turbulence.

Figure 6 Location of Nancy Bird Walton Airport



3.12. DEVELOPMENT ADJACENT TO THE WARRAGAMBA PIPELINE

Objectives

(a) To ensure development does not adversely impact on the operation of the Warragamba Pipeline (Figure 7).

Controls

1. Where development (including subdivision) is proposed adjacent to the Warragamba Pipeline corridor, applicants shall consult with Water NSW as part of the process of preparing the development application. Development is to be consistent with *Guidelines for development adjacent to the Upper Canal and Warragamba Pipelines* (former Sydney Catchment Authority). Any written requirements of Water NSW shall be submitted with the development application, including how the requirements have been addressed.
2. Prior written approval shall be obtained from Water NSW for any access that may be required to the Warragamba Pipeline corridor during the investigation and construction phases.
3. Access points to the Warragamba Pipeline corridor for Water NSW staff and contractors to carry out inspections and maintenance shall be retained or provided in accordance with Water NSW requirements.
4. Stormwater systems serving development adjacent to the Warragamba Pipeline shall be designed to ensure that stormwater does not enter the corridor.
5. Appropriate security fencing shall be provided, or existing security fencing retained along the length of development boundaries that directly adjoin the Warragamba Pipeline corridor, in accordance with Water NSW requirements.
6. Road crossings of the Warragamba Pipeline shall be minimised and located and designed in accordance with Water NSW requirements.
7. Earthworks (excavation or filing) and landscaping works carried out adjacent to or crossing the Warragamba Pipeline shall avoid damage to the infrastructure in accordance with Water NSW requirements.

3.13. ELECTRICAL TRANSMISSION LINE EASEMENTS

Objectives

(a) To ensure development does not adversely impact on electrical transmission lines (Figure 7).

(b) To improve amenity and visual impact of electrical transmissions line easements.

Controls

1. Carrying out of development on land affected by the Electricity Transmission Line Easements must be in accordance with the relevant electricity supply authority's requirements.
2. Approved landscape treatment and/or maintenance/rehabilitation of biodiversity corridors or areas shall be carried out on land affected by the Transmission Line Easements.

3.14. UTILITIES SERVICES

Objectives

(a) To ensure development takes into account the availability of existing utility services and required upgrades.

(b) To provide for the timely provision and funding of new, extended and/or upgraded services.

Controls

1. The developer shall liaise with relevant service providers to ensure adequate arrangements have been made to service the development. This includes water and sewer, electricity, gas (where required) and telecommunications.

2. The developer shall submit sufficient evidence at subdivision state to demonstrate the satisfactory arrangements have been made to ensure the delivery and construction utilities and services connections.

3. All utilities are to be accommodated in the road reserve unless otherwise required by the Utility Authority. The design of roads will need to take this into consideration.

4. Utilities services are to be provided in accordance with the relevant service providers requirements.

5. Development consents will include a condition requiring the applicant to provide evidence that satisfactory arrangements to Sydney Water have been made for water supply and sewer services to the development. Indicative trunk infrastructure is identified in Figure 7.

6. Applicants will be required to deliver water and sewer services upgrades (in accordance with current Sydney Water procurement guidelines) required to meet the anticipated demands for future industrial users.

3.15. TRANSPORT INVESTIGATION AREAS

Objectives

(a) To safeguard the future transport infrastructure essential to the delivery of the Mamre Road Precinct.

(b) To ensure compatible development adjoining transport infrastructure occurs on surrounding land.

(c) To ensure safe, efficient and effective future transport infrastructure with adjoining development to provide access to local, regional and interstate networks.

Controls

3.15.1. Proposed Western Sydney Intermodal Terminal

This section applies to land identified as Transport Investigation Area marked “A” under Clause 33B of *State Environmental Planning Policy (Western Sydney Employment Area) 2009*.

7. Proposed development on land subject to the proposed Intermodal Terminal (refer Section 3.4.3) must make provision for the Intermodal Terminal and any road and rail access points.

8. Applicants must consult with TfNSW in preparing development applications for this land to ensure an appropriate area is available and access is not adversely impacted by development.

3.15.2. Proposed Western Sydney Freight Line

This section applies to land identified as Transport Investigation Area marked “B” under Clause 33B of *State Environmental Planning Policy (Western Sydney Employment Area) 2009*.

9. Proposed development on land subject to the proposed Western Sydney Freight Line (WSFL) corridor (refer Figure 7) must make provision for the WSFL and access to the corridor.

10. Applicants must consult with TfNSW in preparing development applications for this land to ensure an appropriate area is available and future access is not adversely impacted by development.

11. The WSFL corridor is not to be compromised by development, including any key rail and road interfaces with the Intermodal Terminal.

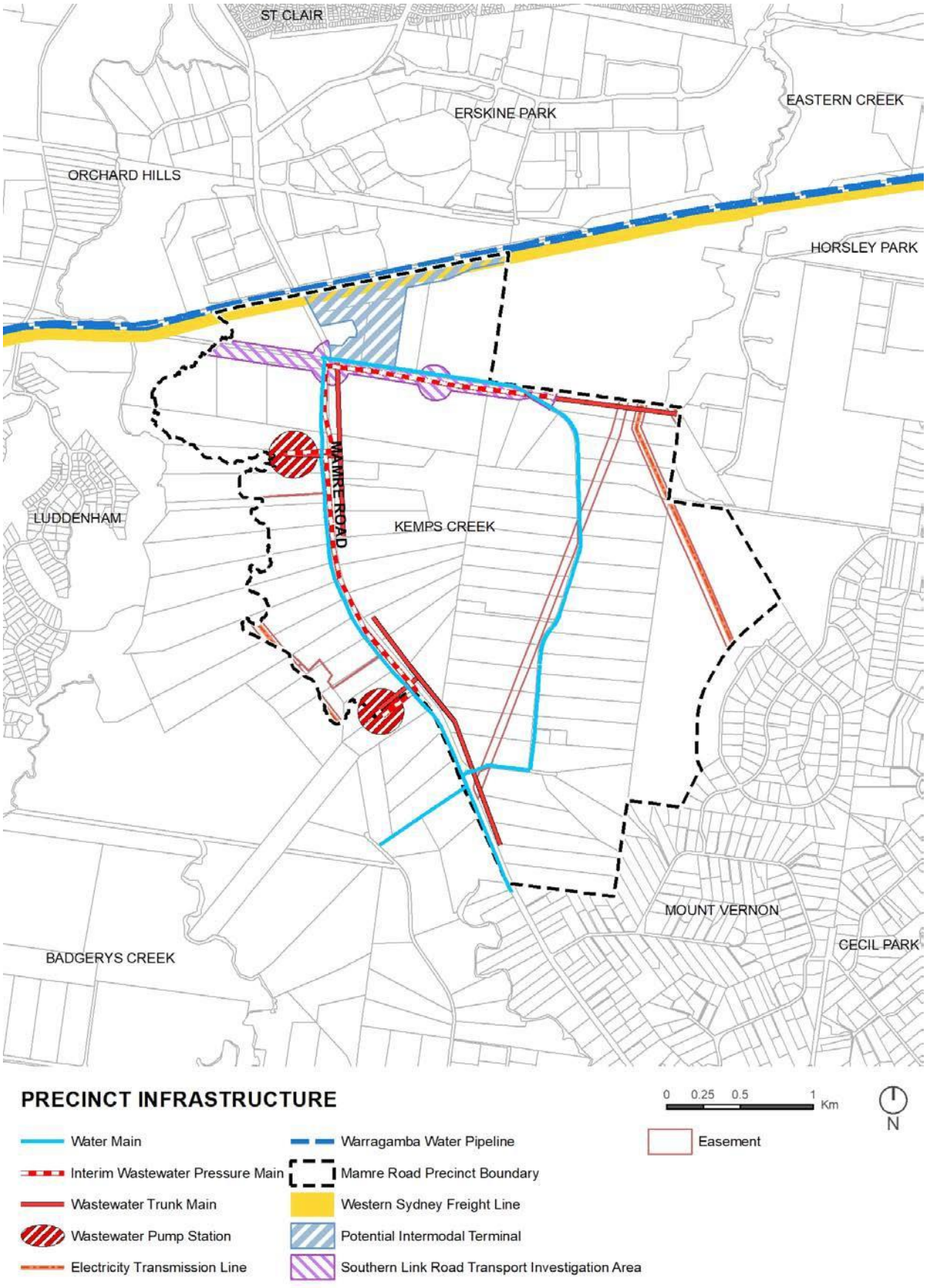
3.15.3. Classified Roads – Mamre Road and Proposed Southern Link Road

This section applies to the Mamre Road corridor and land identified as Transport Investigation Area marked “B” under Clause 33B of *State Environmental Planning Policy (Western Sydney Employment Area) 2009*.

12. Proposed development on land subject to Mamre Road and the proposed Southern Link Road (refer **Figure 7**) must make provision for the upgrade and construction of these roads and future access to the corridors.

13. Applicants must consult with TfNSW in preparing development applications for this land to ensure an appropriate area of land is available and future access is not adversely impacted by development.

Figure 7 Precinct Infrastructure



4. PRECINCT AND SUBDIVISION DESIGN

4.1. SUBDIVISION

Objectives

(a) To achieve maximum flexibility for siting and location of buildings and to achieve an appropriate density of development.

(b) To provide opportunities for parcels of land of varying size and dimensions to satisfy market demand and the needs of the development industry.

(c) To ensure that subdivision design takes into account biodiversity considerations and facilitates minimum impact development to protect remnant native vegetation on the site and on adjoining land as detailed within the CPCP.

(d) To protect, restore and enhance riparian corridors.

(e) To provide opportunities for a range of industrial uses and subdivision sizes.

(f) To ensure that development occurs in a logical and staged manner.

(g) To minimise the number of road entry points to designated roads, thereby allowing more efficient traffic management.

(h) To create the opportunity for innovative and efficient design solutions to subdivision layout.

(i) To create opportunities for large land parcels to be developed in a co-ordinated, unified manner, featuring elements such as a common landscape theme/treatment, similar architectural treatments, and where possible, shared parking areas.

Controls

1. Lots fronting biodiversity areas and corridors are required to have on-site drainage controls that prevent nutrient and erosion impacts on bushland.
2. Lot design should maximise the conservation of natural features, including important fauna habitats, rare or threatened plant habitats, and designated biodiversity areas.
3. Lots adjoining or containing watercourses are required to maintain or establish native vegetation riparian corridors.
4. Perimeter roads should be provided for bushfire control and to improve outlook and amenity, but this should be balanced with the need to minimise impacts on vegetation.
5. Variations to subdivision controls will be considered for lots created for “utility installations” or “utility undertakings” (e.g. electricity substation).
6. Land zoned E2 Environmental Conservation must not be subdivided unless the consent authority is satisfied appropriate arrangements have been made for revegetation and rehabilitation of the land in accordance with a Vegetation Management Plan, including arrangements for ongoing monitoring and management.
7. The subdivision controls are outlined in **Table 7**.
8. Lots adjoining the intermodal terminal and integrated freight network should not preclude the development of the intermodal terminal and co-located freight and logistics development.

Table 7 Subdivision controls

Subdivision element	Area	Control
Minimum Allotment Size	IN1 General Industrial	1,000m^2
	E2 Environmental Conservation	Single contiguous lot

Subdivision element	Area	Control
Minimum Frontage	IN1 General Industrial	40m (excluding cul-de-sacs) and 35m minimum lot width at building line (for lots >5,000m^2) 60m (for lot >10,000m^2)

4.2. VIEWS AND VISUAL IMPACTS

Objectives

(a) To protect the amenity of adjoining residential and rural residential areas and other sensitive land uses.

(b) To protect significant landscape features and view corridors.

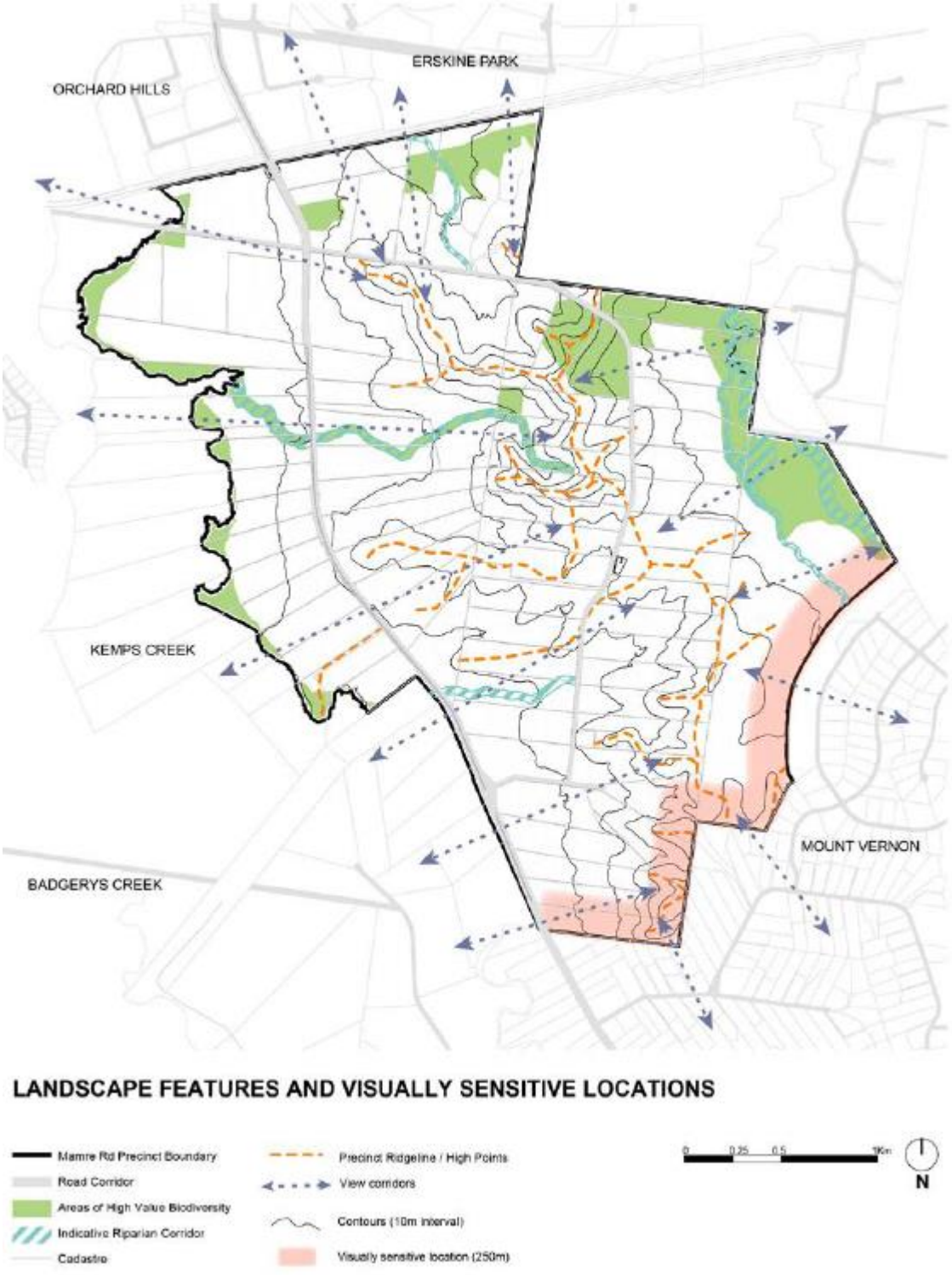
(c) To consider topography and the natural landscape in the design of subdivisions.

(d) To leverage opportunities associated with natural site features to improve the amenity of the built environment for workers.

Controls

1. The design of subdivisions should respond to the significant landscape elements and view corridors. Development applications should demonstrate how the natural features of the site have influenced the design.
2. Subdivision and building design should relate to the scale of adjoining rural residential buildings and consider the use of height transitions and building setbacks.
3. Site design is to combine mounding and vegetation screening to soften the visual impact of the industrial use, particularly on adjoining rural residential uses.
4. Uses and building elements that are likely to adversely impact the visual amenity of adjoining rural residential areas should integrate suitable landscaped screening.
5. Site design should promote visual connections with waterways, conservation areas, and open space.
6. Enable physical ground plane connection between the development and natural areas.
7. Enable visual connection to provide passive surveillance of the open space and public domain.
8. Avoid barriers, such as walls, between environmental conservation open space areas and industrial uses.
9. Creeks and waterways should be integrated as key features of the building and landscape design.
10. Landscape design and plant selection should provide continuity with the existing natural vegetation.
11. Lots adjoining Mamre Road should be designed in a manner that promote high quality landscape character, including vistas.

Figure 8 Landscape features and visually sensitive locations



4.3. INTERFACE WITH MOUNT VERNON RESIDENTIAL AREA

Objectives

(a) To provide a sensitive interface between industrial development and existing rural-residential properties within Mount Vernon.

(b) To ensure the design of subdivision and development at the interface with Mount Vernon responds to the topography of the land and other landscape features.

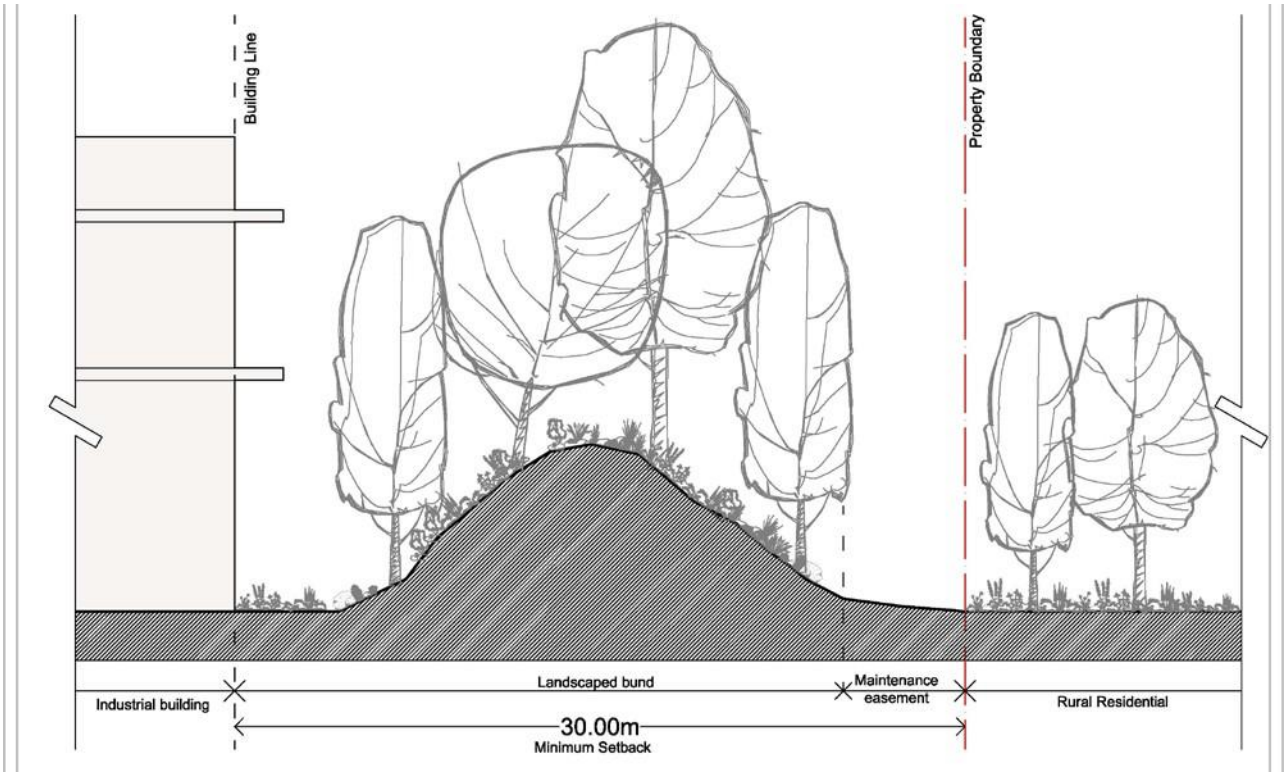
(c) To obscure the visual impact of development when viewed from Mount Vernon and respect the rural-residential context and setting.

(d) To minimise amenity impacts from industrial uses on rural-residential receivers in Mount Vernon, including visual, noise, odour, vibration, overshadowing, privacy and light impacts.

Controls

1. Development applications are to consider the controls under Sections 3.2 and 4.
2. Development applications for land within 250m of the southern and south-eastern Precinct boundary (as indicated in Figure 8) are to include a Landscape Plan prepared by a suitably qualified and experienced consultant which demonstrates a sympathetic transition to adjoining rural-residential development.
3. Development applications for land within the interface area are to be accompanied by a Visual Impact Assessment to address the visual and landscape impacts to sensitive receivers, including appropriate cross-sections.
4. Where Development adjoining a rural residential zone cannot achieve the objectives and requirements under clause 23 of the WSEA SEPP, a minimum 30m building setback is to be provided to property boundaries that directly adjoin a rural residential zone. Access and car parking may be provided within 15m of the setback. An indicative landscape treatment within the interface area is shown in Figure 9.
5. Building and landscape setbacks and treatments are to be in accordance with Sections 4.2 and 4.2.3.
6. Development applications are to include a Lighting Plan that minimises light spill to adjoining residential areas.
7. Loading areas, driveways, rubbish, storage areas and roof top equipment shall, where possible, not be located adjacent to rural-residential properties.

Figure 9 Indicative landscape treatment in the rural residential interface area



4.4. TRANSPORT NETWORK

4.4.1. Road Network, Hierarchy and Design

Objectives

(a) To create an efficient road network which enables a safe access for all users, while minimising through traffic on minor roads.

(b) To incorporate sustainable landscape and drainage opportunities in the design of the

transport network.

(c) To encourage the use of efficient alternate transport, including public transport, bicycles, and pedestrians.

(d) To provide traffic facilities to give safe and efficient access to Mamre Road.

(e) To maintain the capacity of the State Arterial Roads (Mamre Road and Proposed Southern Link Road) by minimising the number of access points.

(f) To provide better connectivity between the precinct and other parts of WSEA.

(g) To protect the landscape character of the Mamre Road transport corridor through an appropriate development setback.

Controls

4.4.1.1. Road Network

1. The Mamre Road Precinct should be developed generally in accordance with the road network map identified in Figure 12. The external road network will generally comprise the arterial roads of Mamre Road and the future Southern Link Road (Movement Corridors), Aldington Road/ Abbots Road as a distributor road and indicative internal road network. The external road network is carefully designed and planned to ensure that development of the precinct to projected capacity is supported.
2. Internal local roads are to be designed to:
   - create a permeable network that is based on a modified grid system;
   - provide access to adjoining properties and not limit development on adjoining properties, including demonstration of impact on the development of adjoining lots;
   - provide for pedestrian and cycle network and minimise travel distances and conflict with industrial traffic;
   - maximise connectivity between industrial areas and community facilities, open space and employment hubs;
   - take account of view corridors and site drainage, and accommodate significant vegetation;
   - provide frontage to and maximise surveillance of open space and riparian corridors;
   - provide views and vistas to landscape features and visual connections to nodal points and centres; and
   - maximise the effectiveness of water sensitive urban design measures.
3. A public road adjoining open space may be developed generally in accordance with **Figure 12**.
4. Access points shall be located so as to optimise safety, traffic flow, landscape opportunity and end user operations. All parking shall be provided either on site or in centralised off-road locations unless approved otherwise.
5. Upgrading of Mamre Road shall be undertaken to accommodate the increases in traffic generated by this development.
6. No direct vehicle access to Mamre Road or Southern Link or distributer roads (AADT > 10,000) are permitted.
7. All intersections within the internal road network shall incorporate traffic facilities, which promote safe and efficient pedestrian, cyclist and traffic movement.
8. The internal road pattern is to facilitate ‘through-roads’ with cul-de-sac to be avoided unless dictated by topography or other constraints.
9. Any additional connection(s) on Bakers Lane need to protect the amenity of existing developments (e.g. schools).
10. The internal road network intersections to be provided at the following minimum intervals:
    - Local to local industrial street 40m-60m;
    - Local to collector / distributor street 100-200m; and
    - Collector / distributor to sub-arterial 400m-500m.

11. The proponent shall have regard to "Guide for Traffic Generating Development", Roads and Traffic Authority of NSW, October 2002.
12. Development shall, where appropriate, be designed to:
    - Allow all vehicles to either leave or enter the site in a forward direction;
    - Accommodate heavy vehicle parking and manoeuvring areas;
    - Avoid conflict with staff, customer and visitor vehicular movements; and
    - Ensure satisfactory and safe operation with the adjacent road system.
13. Full details of the volume, frequency and type of vehicle movements shall be submitted with the development application.
14. In general:
    - Turning circles will be required to be provided to accommodate the largest type of truck which could reasonably be expected to service the site.
    - All developments must be designed and operated so that a standard truck may complete a 3-point or semi-circular turn on the site without interfering with parked vehicles, buildings, landscaping or outdoor storage and work areas; and
    - Large-scale developments shall be designed to accommodate 26m B-double (PBS Level 2 Type B). In the case of the conversion of an existing development, should it appear that a truck turning circle may prove difficult; a practical demonstration may be required.
15. Council will assess the suitability of manoeuvring areas provided for large vehicles by reference to Australian Standard 2890 series and Performance Based Standards ‘An Introduction for Road Managers (National Heavy Vehicle Regulator – May 2019).
16. Adequate space is to be provided within the site for the loading, unloading and fuelling (if applicable) of vehicles.

4.4.1.2. Road Design

17. Proposed industrial roads must comply with the road configurations in Table 8.
18. Main industrial roads to each have a width capable of providing either four travel lanes or two travel lanes and two parking lanes.
19. The internal road network needs to be designed for 26m long B-double (PBS Level 2 Type B) and tested for a 36m long B triple (PBS Level 3 Type A).
20. To improve safety for cyclists, separate cycle paths within the verge to avoid locating a bike lane adjacent to lanes carrying large trucks.
21. The internal road network is to incorporate a footpath of 1.5m on one side (minimum) and shared path of 2.5m (minimum) on the opposing side of the road.
22. The consent authority may consider a reduced road configuration for local roads adjoining open space, subject to road function, public utilities, bollards and fencing. Consideration of reduced widths will solely be at the discretion of Council and only where the finished road design levels match with existing levels of open space and negate the need for any retaining wall or battering. Applications that proposed reduced widths will be assessed by Council with consideration given to:
    - Public access to open space;
    - Function of the road;
    - Impact on existing vegetation;
    - Public amenity;
    - Public safety; and
    - Impact on ability to provide street tree planting.
23. In special circumstances where it can be clearly demonstrated that the road configuration in Table 8 is not appropriate, then the following key principles must be applied to any alternative proposal:

- Road and lane widths must allow for two-way movement and turning movements of design vehicles, including consideration for buses, heavy vehicles, garbage trucks and emergency vehicles;
- Verge widths must consider requirements for utilities, street tree planting, footpaths, shared paths and urban design outcomes;
- Adequate on-street parking must be provided;
- Adequate turning paths must be provided for all design vehicles at intersections and for property access to meet the required design vehicle;
- Road widths must be set to minimise kerbside restrictions and regulatory signage;
- Sufficient width must be provided for specialist drainage functions; and
- Life cycle costs for construction and maintenance must be minimised.

24. Industrial roads are to achieve the following performance objectives:
    - Provide direct access to industrial properties and interconnectivity with the adjoining road network;
    - Provide for all classes of heavy vehicles and appropriate circulation;
    - Provide dedicated on-street parking on both sides of the road;
    - Provide a shared path or on road cycle ways; and
    - Provide lighting in accordance with relevant Australian Standards.
25. Further controls may be applied as part of a development consent based on the individual circumstances of any proposed layout with reference to the adjoining road network.

Table 8 Summary of Preferred Road Typologies for Mamre Road Precinct

Component	**Local Industrial Rd (Type 1 A) (AADT <**5,000)	**Local Industrial Rd (Type 1B) (AADT > 5,000 – 10,000)**	**Distributor/Collector Rd (Type 2) (AADT > 10,000)**
Design Speed	60km/h (signposted 50km/h)	60km/h (signposted 50km/h)	70km/h (signposted 60km/h)
Pedestrian and cycle path (within verge width)	Verge 1 – 1.5m path Verge 2 – 2.5m shared path	Verge 1 – 1.5m path Verge 2 – 2.5m shared path	Verge 1 – 1.5m path Verge 2 – 2.5m shared path
Through traffic lane	2 x 3.5m = 7.0m	2 x 3.5m = 7.0m	2 x 3.5m = 7.0m
Kerbside lane (No Parking)	2 x 3.14 = 6.28m	2 x 4.0m = 8.0m	2 x 4.2m = 8.4m
Median widths*	N/A	N/A	0.8m* (mid-block) 5.0m* (at intersections)
Road carriageway width	15.0m (mid block)	15.0m (mid-block)	16.2m (mid-block)
			20.4m (intersections)
Verge width (both sides of road)	Verge 1 = 4.0m Verge 2 = 5.0m	Verge 1 = 4.0m Verge 2 = 5.0m	Verge 1 = 4.6m Verge 2 = 5.6m
Street tree planting	1.9m (both sides of road)	1.9m (both sides of road)	2.5m (both sides of road)
	24.0m (mid-block)	24.0 (mid-block)	26.4m (mid-block)

Component	Local Industrial Rd (Type 1 A) (AADT <5,000)	Local Industrial Rd (Type 1B) (AADT > 5,000 – 10,000)	Distributor/Collector Rd (Type 2) (AADT > 10,000)
Road reserve width (total)			30.6m (intersections)

*Subject to road modelling and intersection design confirmation

Figure 10 Typical Local Industrial Road

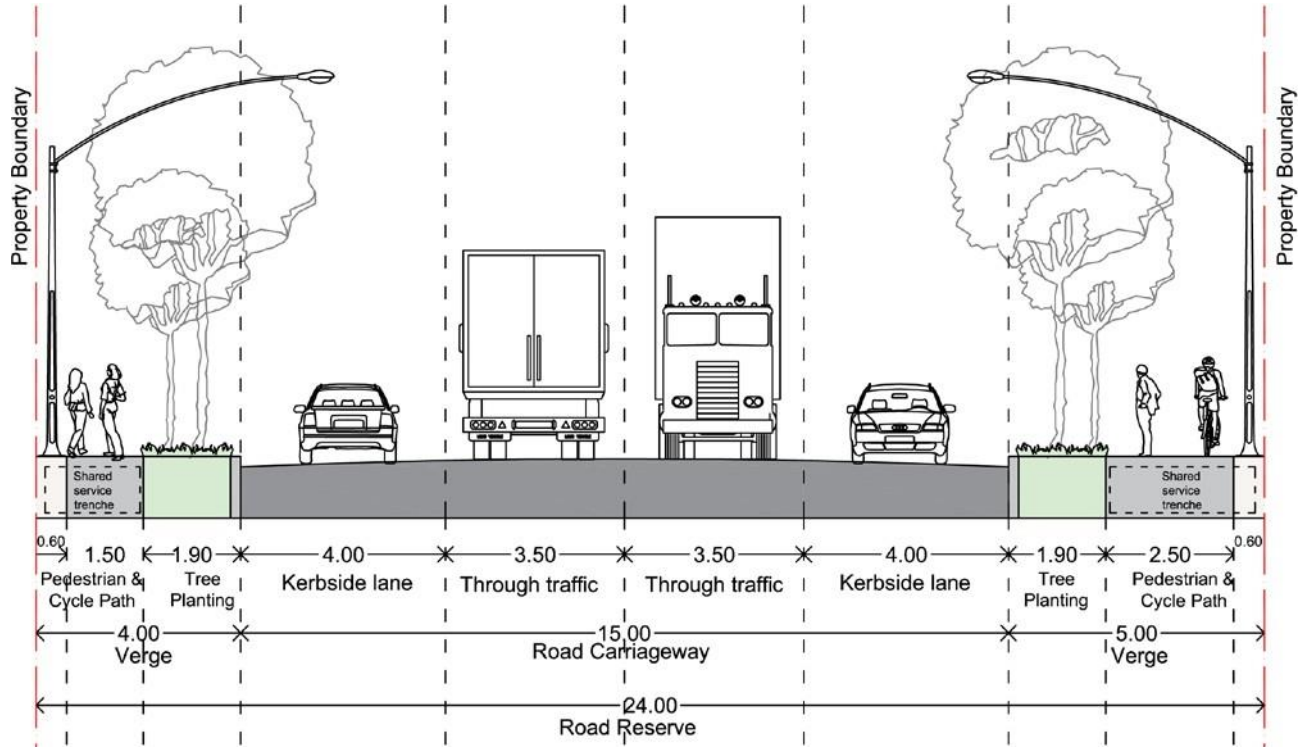


Figure 11 Typical Distributor/Collector Road

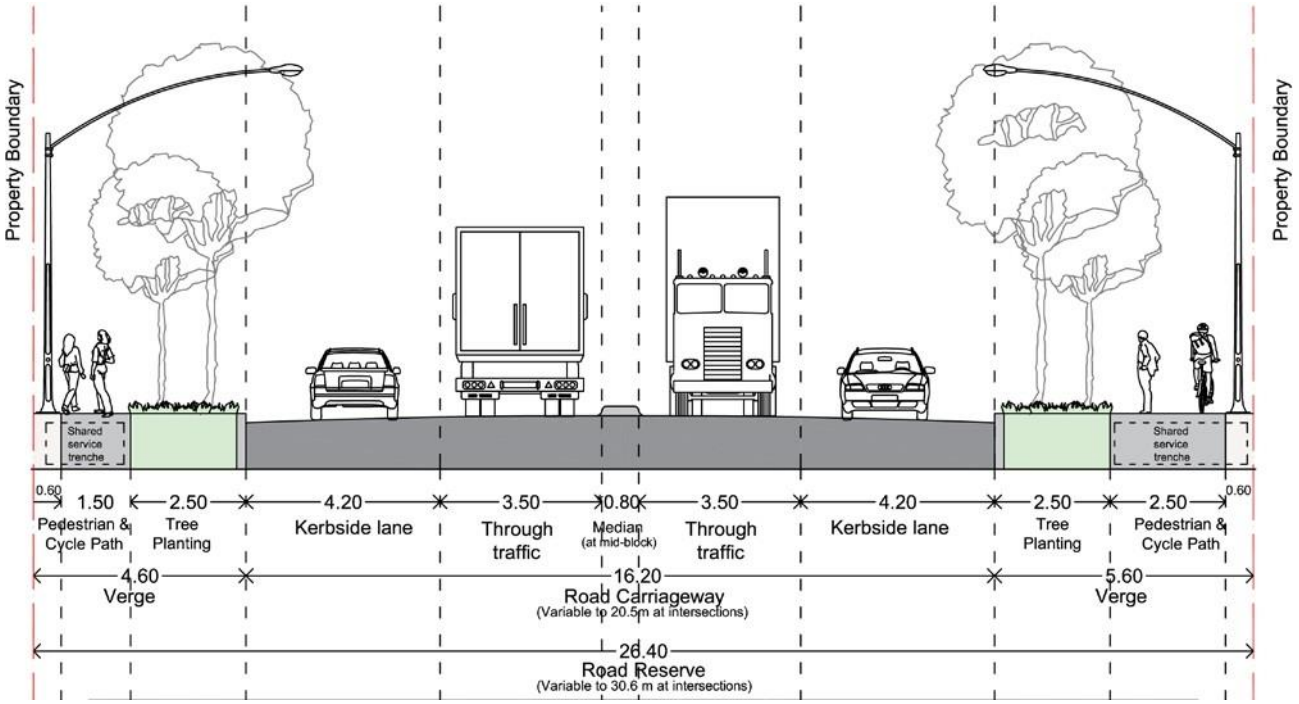
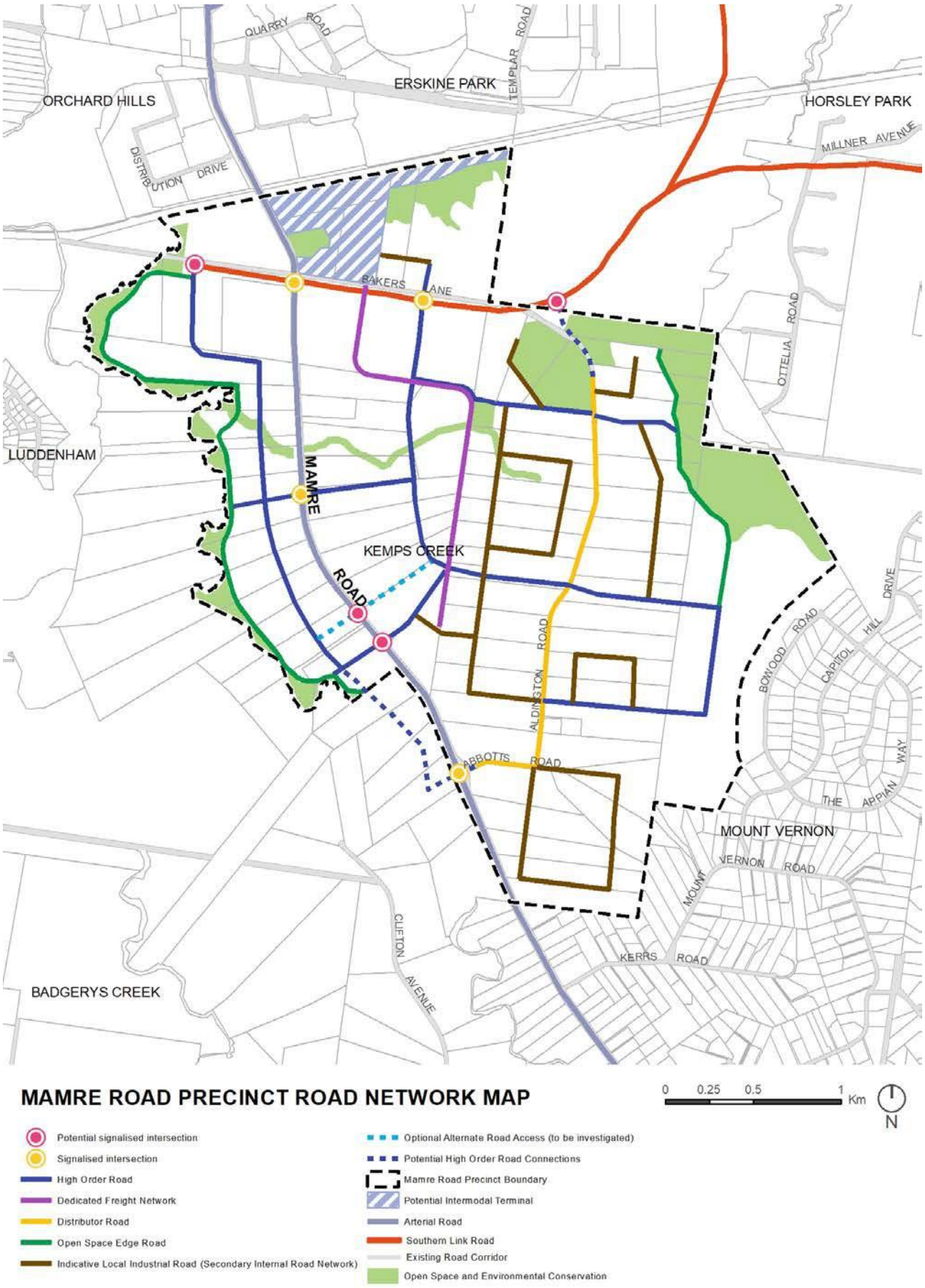


Figure 12 Precinct road network and hierarchy



4.4.2. Traffic and Transport Assessments, Studies and Plans

Objectives

(a) To reduce travel demand including the number of trips generated by development and the distances travelled, especially by car.

(b) To promote and facilitate the use of public transport as a more sustainable alternative to the private car for personal travel.

(c) To ensure that transit infrastructure is effectively integrated with other development, to maximise safety, security and convenience for transit users.

(d) To promote and facilitate walking and cycling within transit oriented precincts by establishing and maintaining high levels of amenity, safety and permeability in the urban form.

(e) To encourage the orderly and economic provision of road and intersection works.

(f) To ensure that existing roads and intersections are upgraded to provide a satisfactory level of service consistent with the volume and nature of traffic generated by the proposed development.

Controls

1. A Transport Management and Accessibility Plan (TMAP) is to be prepared for all significant developments. The TMAP is to address the objectives and controls in this section.

2. Development applications for major development proposals should be accompanied by an appropriate Traffic and Transport Report. The Traffic and Transport Report should detail the assessed impact of projected pedestrian and vehicular traffic associated with the proposal, with recommendations on the extent and nature of the traffic facilities necessary to preserve or improve the safety and efficiency of the adjacent road system.

3. A Traffic and Transport Report must be provided for applications required to be referred to the Transport for New South Wales (TfNSW) under Column 2 and a Traffic Impact Statement for Column 3 of SEPP (Infrastructure) 2007.

4. Depending on the scale, type and nature of the use proposed, Council may determine that a Traffic and Transport Report or Traffic Impact Statement is required for certain development which is not listed under Column 2 or 3 of SEPP (Infrastructure) 2007.

5. Any Traffic Report or Traffic Impact Statement is required to address the following issues:

   – The objectives of this section relating to transport and land use;

   – The objectives of this section relating to traffic management and safety;

   – The objectives and controls of this section relating to traffic generating developments; and

   – The objectives and controls in Section 4.7.1.

Note: Any development identified in Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007 is either referred to TfNSW (Column 2 developments) or Council's Local Traffic Development Committee (Column 3 developments) for assessment and conditions as required.

4.4.3. Western Sydney Intermodal Terminal and Freight Network

Objectives

(a) To protect the opportunity for the proposed Western Sydney Intermodal Terminal and a potential integrated freight network within the Mamre Road Precinct.

(b) To plan for potential future dedicated freight access from the intermodal terminal to surrounding industrial precincts.

(c) To plan for a potential freight network of dedicated freight roads with provision for future expansion to surrounding areas.

(d) To not preclude the transition to an automated guided vehicle (AGV) freight network in

the long term.

(e) To minimise freight vehicle impacts and interfaces with traffic on the public road network, particularly Mamre Road, the future potential Southern Link Road and internal local, distributor and estate roads.

Controls

1. Development within the Precinct shall not preclude the delivery of the Intermodal Terminal and integrated freight network.

4.4.3.1. Intermodal Terminal

2. Land identified for the intermodal facility is to be integrated with a dedicated road freight network to the south, via a dedicated crossing of future Southern Link Road, as identified in Figure 14.

4.4.3.2. Integrated Freight Network

3. Development is not preclude the future delivery of an integrated freight network by preserving a dedicated freight corridor as shown in Figure 14.
4. The dedicated freight corridor is to have a minimum width of 10m and not prohibit the construction of the freight road meeting the design standards as identified in Table 9 and Figure 13.
5. Development applications including or adjacent to the potential dedicated freight corridor shall make provision for the dedicated freight corridor as identified in Figure 14.
6. Development applications for lots with an identified access point (refer to Figure 14) shall demonstrate how access to and from the dedicated freight corridor will be achieved within the development site.
7. All fire compliant access roads are to be a minimum of 8.0m wide to safeguard for a precinct-wide integrated freight network unless development applications can demonstrate how an integrated freight network can be safeguarded within their development.

Table 9 Dedicated Freight Network – Road Typology

Component	**Minimum dimension**
Through traffic lane	2 x 3.5m = 7.0m
Parking lane	N/A
Shoulder width (to front of kerb)	0.5m each side
Road carriageway width	8.0m
Verge width	1.0m
Road reserve width	10.0m

Note: Road reserve width must include provision for earthworks/batters and structures such as guardrails and retaining walls.

Figure 13 Typical Dedicated Freight road cross section

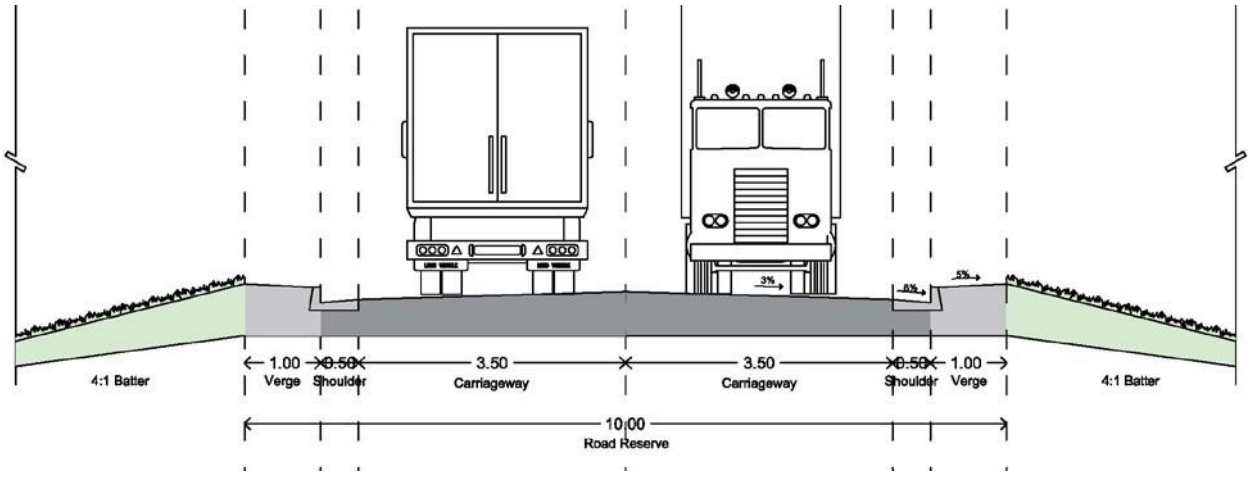
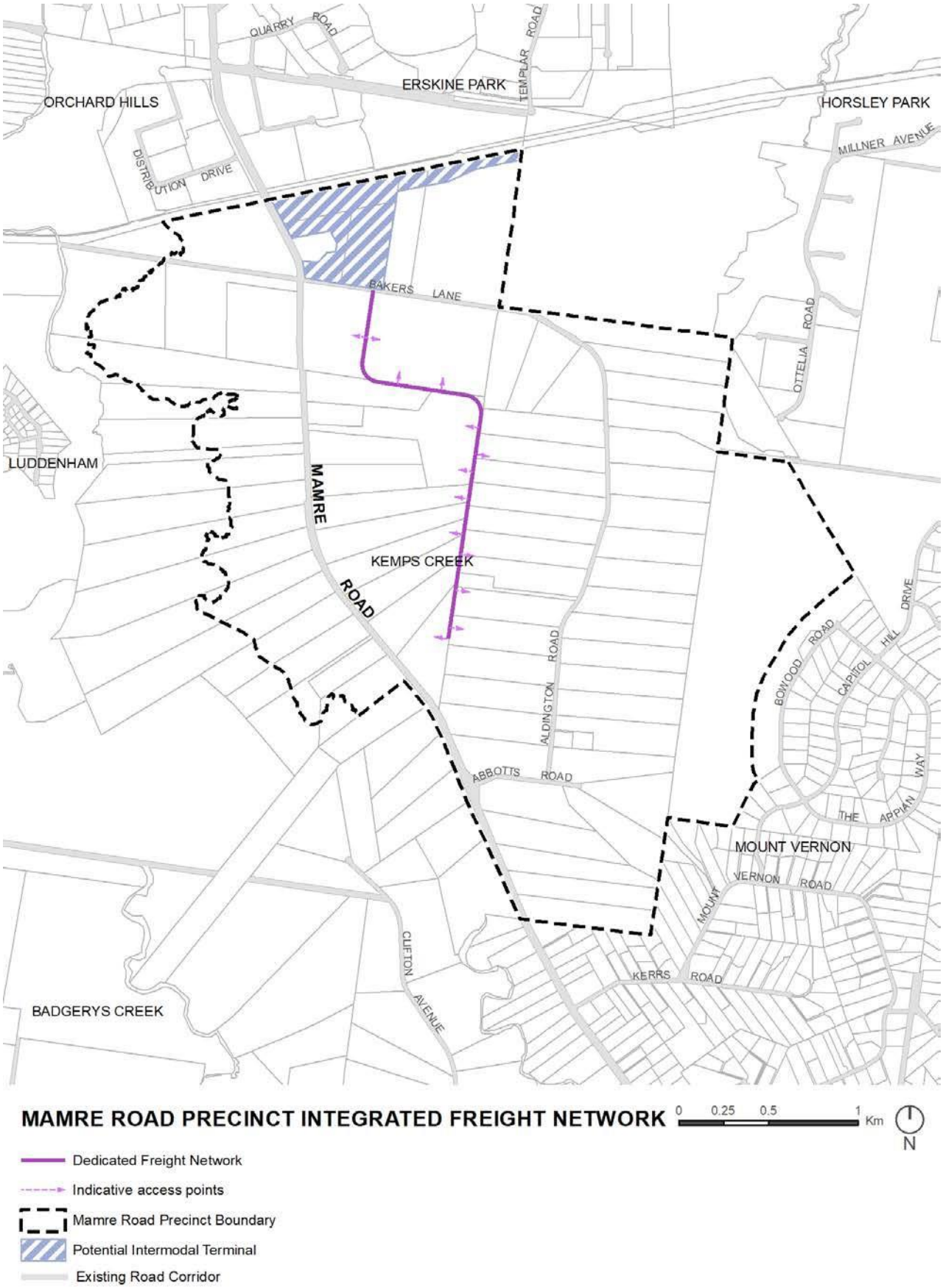


Figure 14 Integrated Freight Network



4.4.4. Public Transport, Pedestrian and Cycle Network

Objective

(a) To encourage the use of public and active transport through the provision of integrated bus routes, and pedestrian and cycle routes.

(b) To design major routes as 'integrator arterials' with extensive and frequent opportunity for pedestrians to move safely along and across them.

(c) To design and detail new developments to promote and support personal mobility for daily activities.

(d) To provide pedestrian pathways through parks for recreation purposes wherever practicable.

(e) To encourage bicycle use by providing sufficient number of secure and accessible bicycle parking spaces with new developments.

(f) To provide for a future bus link to the M4 Motorway.

Controls

4.4.4.1. Desired Public Transport, Pedestrian and Cycle Network

1. Bus stops shall be provided as determined by bus operators and TfNSW in consultation with Council.
2. Pathways for cyclists and pedestrians are to include regional active transport connections, and links to key catchments and employment hubs across WSEA.

4.4.4.2. Public Transport

3. The road network is to ensure public transport (i.e. buses) is made available along key roads to support early adoption of good travel practices by future workers.
4. The design of the internal road network to identify the future public bus network and coverage. Any required infrastructure and bus services to be provided at the early stages of development (refer to TfNSW – Guidelines for Public transport Capable Infrastructure in Greenfield sites).
5. Public transport use is to be enhanced by providing good pedestrian connections from places of employment to transport networks or nodes.

4.4.4.3. Pedestrian Connections

6. Footpaths should have ramps at all kerb corners for wheelchairs and pram access and cater for all people with diverse abilities in line with current Australian Standards.
7. Street lighting in accordance with the provisions of AS1158 should be present in all urban streets.
8. To enable comfortable passage for all people with diverse abilities, footpaths must be:
   - Provided on both sides of the road;
   - A minimum of 1.5m wide on one side;
   - A minimum of 2.5m shared path on the opposing side.;
   - A minimum of 3.0m for 100m on approach routes to predictable destinations such as employment hubs and parks; and
   - A minimum width of 3.5m for gravel shared paths for recreational use within open space and environmental corridors.
9. A durable, non-slip surface and even paving is to be designed and constructed for minimum maintenance. Continuous pathways, uninterrupted by variations in surface material must be provided.
10. Gradients from pathways to streets are to be minimal, safe and comfortable for people with limited mobility and those using wheelchairs, prams and trolleys in line with current Australian Standards.
11. Gradients and ramps must be aligned with desired paths of travel for pedestrians and cyclists.

12. A smooth transition from ramps to roads is to be provided for people using wheelchairs or prams. Ramps should be designed in accordance with appropriate design guidelines and be as wide as the pathway or marked crossing point to eliminate squeeze points at transition areas.

4.4.4.4. Cycleways

13. All cycle routes and facilities are to be consistent with the relevant requirements of “Austroads Cycling Aspects of Austroads Guides” and Roads and Maritime Services’ “Bicycle Guidelines” including line-marking, signage and logos and Council policies regarding bicycle access.

14. The minimum width of off-street shared cycle and pedestrian pathways is to be 2.5m.

15. The minimum width of 3.5m for gravel shared paths for recreational use within open space and environmental corridors.

16. Pedestrian and cycle routes and facilities in public spaces are to encourage way finding and be convenient, safe, well lit, clearly defined, functional and accessible to all.

17. Shared paths and pedestrian refuge islands are to be designed to be fully accessible by all in terms of access points and gradients, in accordance with Australian Standard 1428:1-4.

5. GENERAL REQUIREMENTS FOR INDUSTRIAL DEVELOPMENT

5.1. SITE ANALYSIS

Objectives

(a) To ensure development considers the physical and natural features of the site and the immediate surrounding area.

Controls

1. All development applications are to be accompanied by a Site Analysis Plan.

5.2. BUILT FORM DESIGN CONTROLS

5.2.1. Building Height

Objectives

(a) To encourage building forms that respond to the topography of the site and the relative position of the allotment to other allotments and the street.

(b) To ensure a scale of buildings which minimises the impact of development on adjoining residential areas, including views.

(c) To minimise the impact of buildings upon the surrounding public realm, including areas of environmental significance, landscape value and residential uses.

Controls

1. Building height should respond to the scale of existing adjoining development, incorporating lower elements towards the street, pedestrian paths, adjoining rural-residential areas and areas of environmental value.

2. Buildings should not exceed a maximum height of 16m from proposed pad level within 250m of a rural-residential zone. For all other sites, a maximum building height of 20m from proposed pad level is permitted.

3. Should the nature of the business require a taller built form (above 20m), the proponent must demonstrate that the taller element will mitigate solar and visual impacts to the surrounding uses and public amenity. The development application must be accompanied by a visual impact assessment by a suitably qualified consultant.

4. Building height must ensure direct solar access to, open space and environmental areas, between the hours of 11:00am and 2:00pm at the winter solstice, 21 June. Shadow diagrams must be submitted demonstrating this outcome.

5. Building services located on the roof (such as HVAC, lift motor room, exhaust fans, etc) must be accommodated within the maximum permissible height of the building.

6. A Visual Impact Assessment to be submitted with development applications demonstrating that development will not create an unacceptable impact on the scenic quality of:

   – The precinct, particularly when viewed from elevated locations.

   – Wianamatta-South Creek.

   – Adjoining rural-residential areas.

5.2.2. Building Setbacks

Objectives

(a) To provide a consistent streetscape design and landscaped transition to the public realm.

(b) To provide space for pedestrian and cycling circulation across the precinct.

(c) To provide an open streetscape with substantial areas for landscaping.

(d) To enhance the visual quality of development and the urban landscape.

(e) To screen undesirable views and minimise the visual impact of hard surface areas.

(f) To ensure new development retains existing trees or significant stands of vegetation in the overall site layout.

(g) To minimise the impact of overshadowing to adjoining buildings and open space.

Controls

1. Building setbacks are to be in accordance with the standards outlined in Table10.

Table 10 Building setback requirements

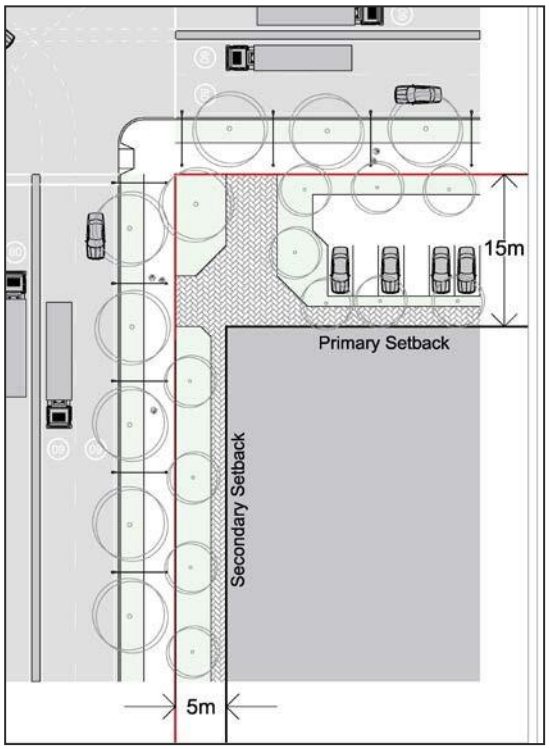
Location	Distance (m)
Lots fronting designated roads (Mamre Road and Potential Southern Link Road)	20
Lots fronting key access roads (distributor and collector roads)	12
Lots fronting all other roads (local estate roads)	7.5
Secondary road frontages (corner lots)	5
Rear and side boundaries	5
Lots adjoining existing rural-residential development in Mount Vernon	Refer to Section 3.3
Lots adjoining Warragamba Water Supply Pipeline (unless specified elsewhere in this DCP)	5
Lots adjoining the proposed Intermodal Terminal	20
Lots adjoining the proposed WSFL corridor	5
Lots adjoining land zoned E2 Environmental Conservation, RE1 Public Recreation, and RE2 Private Recreation (unless otherwise specified elsewhere in this DCP)	10m setback within E2, RE1 and RE2 zone

2. Notwithstanding Control (1) above, no development other than the following development is permitted within the defined setback for any road, other than Mamre Road and potential Southern Link Road:
   - Landscaping;
   - Maintenance/rehabilitation of biodiversity corridors or areas;
   - Utility services installation;
   - Accessways and driveways (not permitted in setbacks to designated roads);
   - Fire access roads;
   - Approved signage;
   - Street furniture; or
   - Drainage works.
3. Setbacks may incorporate an off-street parking area if it can be demonstrated that the location of the car parking area:

- Is set behind a landscaped area which is at 50% of the required setback;
- Promotes the function and operation of the development;
- Enhances the overall design of the development by implementing design elements, including landscaping, that will screen the parking area and is complementary to the development; and
- Does not detract from the streetscape values of the locality.

4. The design of setbacks and hardstand areas should seek to minimise the visual impacts of the development (see also Landscaping).
5. Additional setbacks may be applicable to avoid construction over easements.
6. For corner sites, setbacks must also ensure clear vehicular sight lines for perpendicular traffic (Figure 15).

Figure 15 Corner site setbacks



5.2.3. Landscaping

Objectives

(a) To provide functional areas of planting that enhance the presentation of a building.

(b) To provide vegetated buffers to areas of environmental and recreational value.

(c) To screen undesirable views.

(d) To reduce building energy consumption.

(e) To select tree species that are “low maintenance” planting to reduce the impact of green waste.

(f) To provide wildlife habitats.

(g) To contribute to the overall character of the locality.

(h) To contribute to the Greater Sydney Regional Plan canopy cover target of 40%, including by retaining existing paddock trees, windrows, and large canopy trees where possible, and adding to the existing canopy.

Controls

1. Landscaped area is to be provided generally in accordance with the requirements set out in Table 11.

Table 11 Minimum landscape requirements

Location	Requirement
Lots fronting designated roads (Mamre Road and Potential Southern Link Road)	10m landscape setback to the road frontage
Lots fronting key access roads (distributor and collector roads)	3.75m or average 50% of the setback along the road frontage
Lots fronting all other roads (local estate roads)	Average of 50% of setback along the road frontage
Rear boundary	2.5m from the rear boundary
Side boundary	No minimum requirement
Lots adjoining existing rural-residential development in Mount Vernon	Refer to Section 3.3.
Lots adjoining land zoned E2 Environmental Conservation, RE1 Public Recreation, and RE2 Private Recreation (unless otherwise specified elsewhere in this DCP)	5m landscape setback from the edge of the E2, RE1 and RE2 zoned land unless separated by a public or private road, path or drainage channel.

2. A Landscape Plan prepared by a Landscape Architect is to be submitted with all development applications.
3. Outdoor recreation areas for staff should be integrated into landscaped areas, where possible, to provide shade and an appropriate level of amenity and comfort.
4. Minimum of 11% of the site area is to be pervious. Achieved via either landscaping or the use of permeable paving materials.
5. Landscaped front setbacks should include canopy trees whose mature height is in scale with the proposed development.
6. Tree planting in the form of island planter beds should be provided at a rate of one planter bed per 10 car spaces within car parks to reduce the heat effect and soften the hard surfaces.
7. Where practical existing remnant vegetation within front, rear and side setback areas shall be retained and enhanced as an integral part of the landscaping proposals for each development.
8. Where sites back onto designated roads or the main access roads, and where levels allow, setback areas should be provided with mounded landscape screens.
9. Screen planting with evergreen shrubs and trees is required to screen car parks, vehicular manoeuvring areas, garbage areas, storage areas from the street frontage.
10. Paving, structures and wall materials should complement the architectural style of buildings on the site.
11. The selection of proposed trees and other landscaping plants is to consider:
    - The preferred trees identified in the Penrith Council Street and Park Tree Management Plan.
    - The use of relevant local native vegetation communities that occur, or once occurred in the area rather than exotic plant or non-local native species.

- The re-use of native plants or topsoil removed during subdivisions works or earthworks.
- The contribution to the management of soil salinity, water levels and soil erosion.
- Tree species being low maintenance and drought tolerant.
- The capacity of the species to contribute to tree canopy cover.
- That invasive turf (including Kikuyu) must not be used in areas adjoining, remnant vegetation within open space areas and riparian corridors.
- A diverse range of flora species for both street and suburban plantings to increase species disease resilience.
- Service authority requirements in easement locations.

12. Street planting is to have a minimum container pot of 55-75L at occupancy certificate or asset dedication stage.
13. Sufficient area/space is to be made available to allow trees to grow to maturity.
14. Consolidate landscape areas to maximise space for deep soil, tree growth and aesthetic opportunities.
15. No plant species that are considered a weed shall be used.
16. Groundcovers should be considered as a grass alternative in areas not specifically designed for pedestrian use.

5.2.4. Building Design

Objectives

(a) To encourage innovation and a high standard of architectural design, utilising quality materials and finishes.

(b) To ensure development achieves a high level of sustainability and environmental performance.

(c) To encourage articulated and varied frontages and rooflines to minimise perceived bulk and scale, particularly where facing or visible from public roads.

(d) To ensure that new development contributes to the creation of a visually cohesive urban environment.

(e) To support passive surveillance of the adjoining public realm.

Controls

1. Developments with a construction cost of $1 million or more are to demonstrate a commitment to achieving no less than 4 stars under Green Star or 4.5 stars under the Australian Building Greenhouse Rating system (now part of the National Australian Built Environment Rating System (NABERS)), where appropriate.
2. An access report is required where disabled access is a requirement of the *Disabilities Discrimination Act 1992*.

5.2.4.1. Siting/ Building Orientation

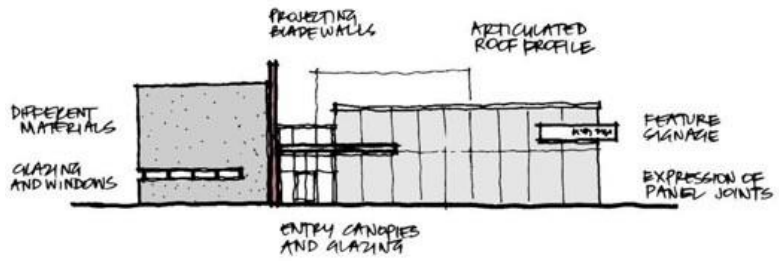
3. The design and layout of buildings must consider local climatic factors.
4. Buildings should take advantage of a north or north-easterly aspect to maximise passive solar illumination, heating and natural cross-ventilation for cooling.
5. Western orientations should be avoided to prevent excessive heating and the reliance on mechanical services to provide cooling.
6. Trees should be planted around the building to create shade, screening and wind breaks.
7. Building design should minimise impacts of overshadowing within the site and on adjoining development.
8. Buildings should be oriented so that the building frontage is parallel with the primary street frontage.

9. Setbacks on corner sites should enable clear sight lines for the expected vehicular traffic.
10. Building siting must allow for adequate setbacks landscaping, water sensitive urban design, tree planting and to strengthen envisaged character of the area.
11. Building siting and orientation should avoid construction over existing and required easements.
12. Building elevations oriented towards rural-residential areas shall be minimised. Where site constraints create difficulties in complying in this regard, elevations shall be appropriately articulated to soften building scale.

5.2.4.2. Architectural Design

13. The design of buildings must reflect an industrial and commercial character of the precinct while responding to the adjacent scale and rural character of the area.
14. Office facades along the main street frontage(s) must provide a minimum of 30% glazing to strengthen passive surveillance and streetscape character.
15. Utilise a mix of materials and colours on the visible facades, to provide articulation and visual interest to the street.
16. Where the rear or side of a building is visible from a publicly accessible area, provide articulation or utilise a textured surface treatment in order to provide visual interest.
17. External finishes should be of low reflectivity to minimise glare and reflection to surrounding areas.
18. The colour and material palette should utilise muted tones of the natural landscape and avoid incompatible bright bold colours and textures. The consent authority will have regard to the use materials in assessing development.
19. Elevations fronting the street or public reserves or those that are visible from public areas and adjoining rural-residential areas, must present a building form of architectural and design merit having regard to the nature of large industrial buildings. The construction of large, blank wall surfaces is not permitted in visually sensitive locations.
20. Large expanses of wall or building mass will not be supported, and as such should be broken up by the use of suitable colour relief, building articulation, fenestration or alternative architectural enhancements.
21. The use of large, uninterrupted areas of single colour metal cladding or untreated concrete surfaces for wall construction is not supported. Applicants shall vary material colours or finishes for external walls to provide attractive streetscapes and quality building designs (refer Figure 16 and Figure 17).

Figure 16 Acceptable design solutions to articulate large buildings (elevation and plan view)



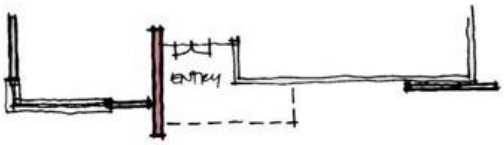
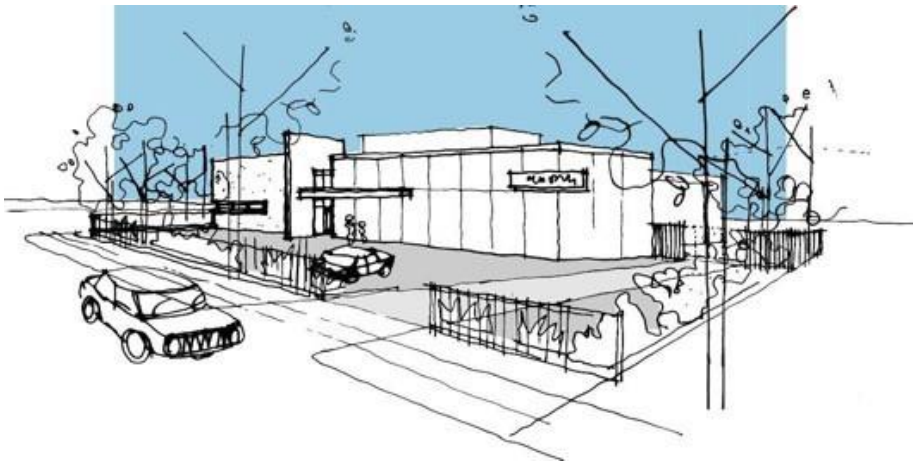


Figure 17 Sketch perspective of acceptable design solutions to articulate large buildings

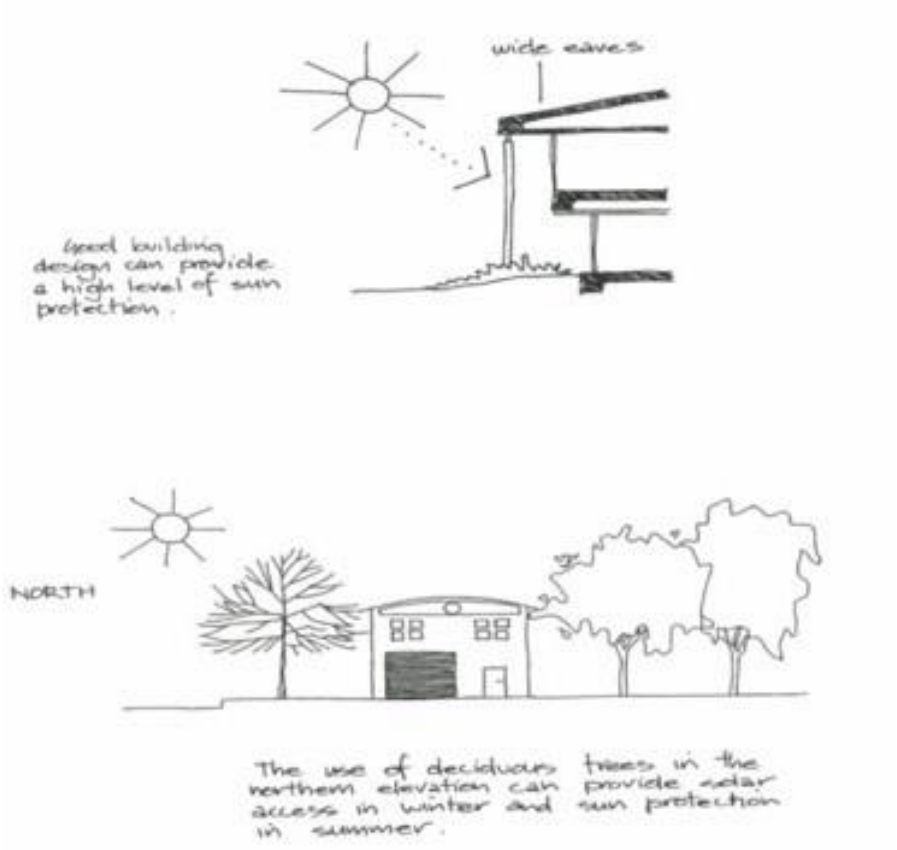


22. Loading areas are to be screened from the view of primary road frontages through physical and/or vegetation screening.
23. Details of samples of external materials and finishes shall be submitted with the Development Application.
24. External materials should not have an index of reflectivity above 20%. A reflectivity statement is to be submitted with all building development applications.
25. Energy efficient design principles should be employed in all building designs (refer Figure 18).
26. Walls shall be articulated to provide more varied streetscapes, particularly where visible from public roads or adjacent residential areas.
27. Part of the cross-section of buildings shall be projected to reduce apparent height and scale of external walls, including:
    - awnings and/or upper storeys that project above footpaths;
    - roofs with eaves that project beyond external walls; or
    - colonnades.
28. Entrances to buildings must be highlighted by architectural features consistent with the overall design of the building.
29. Courtyard and screen walls should be in the same material as the building facades.
30. Particular care should also be taken in:
    - designing roof elements; and
    - locating plant and mechanical equipment including exhausts, so as to reduce their visual impact from elevated locations.
31. Any office and administration component is to be designed as an integral part of the overall building.
32. The main office administration component is to have a designated entry point that is highly visible and directly accessible from visitor parking.
33. The entry, design and layout of the main office or administration component is to consider the principles of Universal Design and incorporate, if possible:
    - A level or graded path from the car park area to the entrance.
    - A level entry (no steps).
    - An accessible toilet.
    - Easy access doors and corridors.
    - Accessible placement of switches, power points and window controls.

5.2.4.3. Roof Design

34. Roof design must provide visual interest and variation from the streetscape.
35. Roofs forms should generally be of low pitch to reduce the bulk of buildings.
36. Roof forms should help to visually articulate the use within the building. This may include transitions between foyer, office and larger warehouse uses.
37. Building services located in / on the roof, such as HVAC systems, lift motor rooms, exhaust fans, must be screened from the façade with an integrated built element such as parapets.
38. Roof design must provide natural illumination to the interior of the building.

Figure 18 Energy efficient design



5.2.5. Design of Storage Areas

Objectives

(a) To ensure that external storage of goods does not detract from the visual amenity of industrial areas, streetscapes or adjoining residential areas.

Controls

1. All external storage areas must be located behind the front building setback. In addition, when assessing development applications involving external storage of goods, the following will be taken into consideration:
   - The proposed height and on-site arrangement of stored goods;
   - The visual impact of the storage area and how this is proposed to be minimised (orientation, screening with landscaping and/or solid fencing, etc.);
   - Access arrangements; and
   - Safety issues.

2. For sites with multiple frontages, either to roads or other public spaces, the location and orientation of external storage areas shall minimise visual impact from all potential viewpoints.

5.2.6. Storage, Transportation and Processing of Chemical Substances

Objectives

(a) To ensure that the use, storage or transportation of any chemical substance/s do not have any detrimental impact on the environmental quality of the surrounding area.

(b) To ensure any proposed development involving the storage, transportation and processing of chemical substances shall have regard to the requirements of State Environmental Planning Policy No. 33 - Hazardous and Offensive Development.

Controls

1. A Chemical Use and Storage Report is to be submitted with any Development Application which involves the storage, transportation and/or processing of chemical substances, except in the following circumstances:
   - The use of chemicals is for routine cleaning and the chemicals to be used are of household or hospital grade.
   - The total quantity of chemicals to be routinely used or stored on the site does not exceed 100 litres.
   - The chemicals to be used or stored are not of sufficient acidity, alkalinity or strength to cause significant harm on skin contact, or to the environment if a spill were to occur.
   - The application outlines the methods proposed to be used to minimise the potential for spills.

5.2.7. Signage and Estate Entrance Walls

Objectives

(a) To promote an integrated design approach to all signage in character with the locality and its architectural and landscape features.

(b) To provide a quality entrance statement and signage at each of the entrance points to the Estate.

(c) To prevent the proliferation of signs.

(d) To minimise the visual impact of signage.

(e) To prevent distraction to motorists and minimise the potential for traffic conflicts.

(f) To permit the adequate display of information concerning the identification of premises, the name of the occupier, and the activity conducted on the land.

(g) To encourage a coordinated approach to advertising where multiple occupancy of sites occur.

Controls

1. All advertising is required to be:
   - Constructed of high quality, durable materials;
   - Considered in conjunction with the design and construction of buildings;
   - Restricted generally to one sign per occupant identifying the name of the occupants and/or products manufactured or produced on the site; and
   - Contained wholly within the site.
2. The dimensions of free standing pylon signage must not exceed 10m in height from finished ground level and 2m width. No signage is permitted in the bottom 2m of the structure.
3. Building identification signage should have a maximum advertising area of up to 0.5 square metres for every metre of lineal street frontage.
4. Sky signs and other roof signs that project vertically above the roof of a building are not permitted.

5. Flat mounted wall signs for business identification signage are to be no higher than 15 metres above existing ground level.

6. Signs should generally be confined to the ground level of the building, awning or fascia, unless it can be demonstrated that the building is of a scale, architectural style and in a location that would be enhanced by signage at different elevations.

7. The sign is to be contained fully within the confines of the wall or awning to which it is mounted.

8. In the case of multiple occupancy of a building or site:

   – Each development should have a single directory board listing each occupant of the building or site. Only one sign is to be placed on the face of each premises

   – The minimum distance between under awning signs shall be 3m.

   – Multiple tenancies in the same building should use consistent sign size, location and design to avoid visual clutter and promote business identification.

5.2.7.1. Illuminated Signage

9. Illuminated signs are not to detract from the architecture of the supporting building during daylight.

10. Illumination (including cabling) of signs is to be either:

    – Concealed.

    – Integral with the sign.

    – Provided by means of carefully designed and located remote or spot lighting.

11. The ability to adjust the light intensity of illuminated signs is to be installed where the consent authority considers it necessary.

12. A curfew may be imposed on the operation of illuminated signs where continuous illumination may impact adversely on the amenity of residential buildings or have other adverse environmental effects.

13. Up-lighting of signs is prohibited. Any external lighting of signs is to be downward pointing and focused directly on the sign and is to prevent or minimise the escape of light beyond the sign.

14. A maximum of one illuminated sign is permitted on each elevation of each of each warehouse building unless otherwise approved on a merit basis.

15. All illuminated signage shall be oriented away from residential receivers.

5.2.8. Lighting

Objectives

(a) To provide adequate external security lighting for business establishments, whilst ensuring there is no adverse impact upon the use and enjoyment of adjoining premises and surrounding areas, particularly residential and rural areas.

(b) To provide suitable lighting along the road network to enhance landscaping.

(c) To illuminate parts of the site for security reasons and to provide increased safety in accordance with the principles of Crime Prevention through Environmental Design (CPTED).

(d) To minimise energy waste by providing the correct lighting orientation and minimising overspill lighting.

Controls

1. Lighting details shall be provided as part of any relevant development application.

2. Lighting design should address the principles of CPTED, where there is significant pedestrian activity, late night work-shifts or safety and security issues.

3. Adequate lighting should be provided to meet security requirements without excessive energy consumption. Lighting powered by solar batteries or other renewable energy sources is encouraged. The use of sensor lighting, both internally and externally, should be considered.

4. Where premises are used outside daylight hours, car parks and entrances shall be adequately illuminated.

5. Lighting is to be designed or directed so as to not cause light spill onto adjoining sites where there could be an impact on the adjoining site's operations, safety or amenity.

5.2.9. Fencing

Objectives

(a) To ensure that the design and location of fencing is integrated within the development and is suitable for its purpose and setting.

(b) To ensure that the security needs of the development are satisfied in a manner which complements the surrounding landscape design and streetscape quality.

(c) To ensure that fencing is consistently located behind the landscaped front setback and is of a consistent high quality.

(d) To provide security where appropriate while maintaining open lines of sight from the street.

Controls

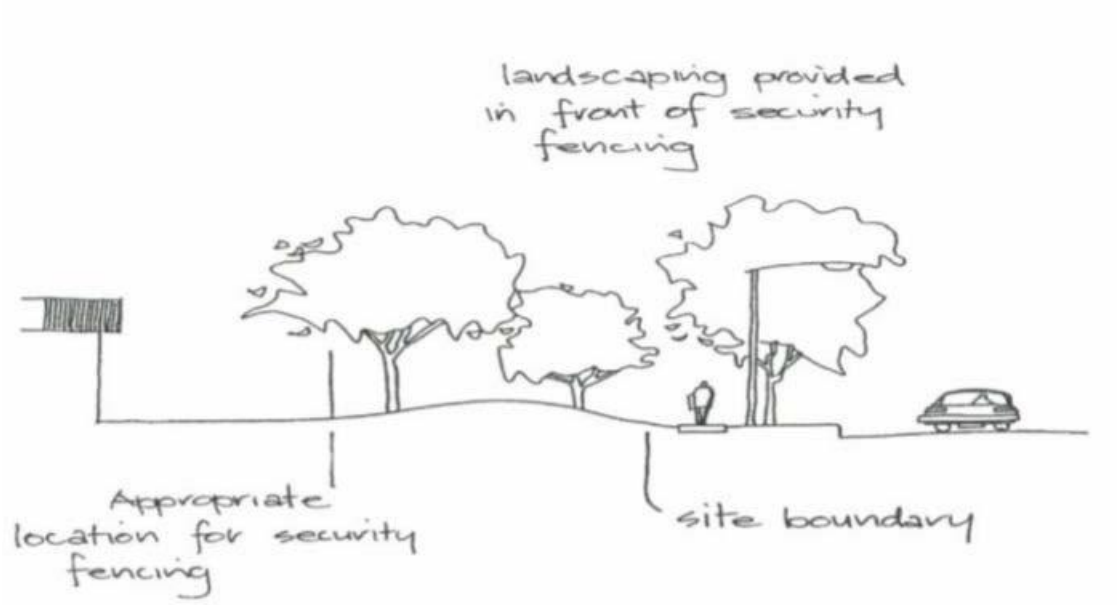
1. Fencing along street frontages should provide open style fencing, which does not obstruct views of landscaping from the street or reduce visibility.

2. Palisade fencing is encouraged.

3. Solid fences above 1 metre in height are not permitted along street frontages.

4. No fencing other than a low ornamental type may be erected at the front or secondary street site boundary. Should the applicant elect to use high security fencing, such fencing must be located either behind the landscape setback or alternatively within the landscaped area midway between the site front or secondary boundary and the building line (refer to Figure 19).

Figure 19 Location of security fencing adjoining public roads



5.2.10. Ecologically Sustainable Design

Objectives

(a) To save energy through well considered passive building design applications.

(b) To improve the environmental performance and efficiency of buildings.

(c) To improve worker health, satisfaction and retention rates and to improve productivity.

(d) To improve environmental protection of downstream waters.

(e) To minimise the volume of potable water consumed.

(f) To minimise the volume of water consumed by irrigation systems.

(g) To promote landscape design that is both beneficial and appropriate for an industrial setting.

(h) Encourage development designed to minimise energy usage.

(i) Encourage development to consider the application of energy efficient technology and systems.

Controls

5.2.10.1. Building Design

1. Development applications should demonstrate Ecological Sustainable Design (ESD) measures have been incorporated into the design. An architect or appropriate building design consultant with demonstrated ESD skills should be engaged to consider the following issues:

   – Scale and massing of the built form.

   – Building and window orientation.

   – Window size and glass type.

   – Roof materials and colour.

   – Thermal mass and floor material.

   – Façade material, colour and surface treatments.

   – Insulation.

   – Landscape to provide amenity, shade and moderation of the building microclimate.

   – External shading to reduce summer heat particularly on windows and roofs.

   – Natural ventilation with generous, all weather openings which take advantage of the height of the spaces.

   – Natural light preferred over artificial.

   – Utilise extensive roof areas for energy and water collection.

5.2.10.2. Building Services (Excluding Manufacturing Plant and Operations)

2. Building services, excluding manufacturing plant and operations, should promote the following ESD measures:

   – Separate metering of water and electricity is required for buildings with multiple uses or multiple tenants.

   – Zoning of lighting to match use, and movement sensitive lighting controls.

   – Shut-off valve at stormwater outlets is required to trap any toxic spills into piped stormwater systems.

   – Waterless urinals are required at a minimum.

   – Energy efficient lighting to be used throughout.

   – Gas boosted solar hot water for staff amenities (kitchen, toilets, showers) unless approved otherwise.

   – A suitably sized rainwater and recycled water storage tank is required for toilet flushing, irrigation or other permissible non-potable water uses.

   – Strategic use of translucent/transparent wall and roof cladding to increase natural light.

- Waste heat recovery systems which use waste heat from refrigeration systems or other sources for uses such as preheating hot water.
- Alternatives to cooling towers such as air-cooled systems, ground source heat rejection or pond heat rejection.
- State of the art energy storage systems combined with the use of photo voltaic cells for roof areas.

5.2.10.3. Air Quality and Visual and Thermal Comfort

3. Measures to improve air quality and visual and thermal comfort include:
   - Ventilation systems are to be designed to supply a generous amount of fresh air through the use of natural cross flow ventilation.
   - Low VOC paints and low-formaldehyde floor covering, adhesives and furniture are to be used.
   - Provision of natural light over artificial light.
   - Control of direct sun in working areas.
   - Two component artificial lighting is required which includes reflected light to ceiling and task lighting for desks.
   - Radiant heat is to be controlled though glazed facades by shading and/or performance glass.
   - Occupant control of comfort parameters (e.g. operable windows, control of temperature and air flow).
   - Protection from excessive noise, particularly when windows are open or between production and office areas.
   - Provision of quality landscaped outdoor amenity areas for staff for lunch and recreation.
   - Hydronic heating and ceiling fans.
   - Materials with low reflectance values, Solar Reflective Index (SRI) < 4.0 are to be used.

5.2.10.4. Water Servicing

4. In areas where a recycled water scheme is planned:
   - stormwater harvesting measures respond to the balance of demand for water from recycled and stormwater sources;
   - street trees are to be indirectly connected to the recycled water network for irrigation during periods of drought;
   - where a recycled water system is to be delivered as part of individual development proposals, reticulation should be designed in consultation with Sydney Water.
5. Where dual reticulation is being provided for future recycled water delivery, the recycled water supply be designed to supplement stormwater harvesting in a way that does not compromise waterway health objectives.
6. Rainwater tanks shall not be topped up with recycled water unless approved by Sydney Water.
7. Water use within the landscape (for uses such as irrigation, ponds, water features) must be supplied from non-potable sources such as recycled water, roof water, harvested stormwater or other non-licensed water sources and treated to the Australian Guidelines for Recycled Water.
8. All buildings not covered by the State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004:
   - That are installing any water use fittings must demonstrate minimum standards defined by the Water Efficiency Labelling and Standards (WELS) Scheme. Minimum WELS ratings are 4 star dual-flush toilets, 3 star showerheads, 4 star taps (for all taps other than bath outlets and garden taps) and 3 star urinals. Water efficient washing machines and dishwashers are to be used wherever possible.
   - To install rainwater tanks to meet 80% of non-potable demand including outdoor use, toilets and laundry.
   - To incorporate passive cooling methods that rely on improved natural ventilation to supplement or preclude mechanical cooling.

5.3. AMENITY

5.3.1. Noise and Vibration

Objectives

(a) Establish design criteria for noise emissions from industrial or other employment-generating development.

(b) Establish acoustic environmental goals for existing and future adjacent residential areas.

(c) Establish noise contributions for individual allotments within the employment zones when related to residential boundaries.

Controls

1. Any machinery or activity considered to produce noise emissions from a premise shall be adequately sound-proofed so that noise emissions are in accordance with the provisions of the *Protection of the Environment Operations Act 1997*.

2. The use of mechanical plant and equipment may be restricted in areas close to sensitive receivers, such as adjoining rural residential development. Developers in all areas should ensure through design of their development that no offensive noise is emitted.

3. Where it is considered likely that a development may cause an adverse impact on nearby rural or residential areas, an acoustic report from a qualified acoustical engineer will be required to be submitted for consideration with the development application. The acoustic report will need to demonstrate that the proposed development will not create any adverse impact.

4. All development shall comply with the requirements of relevant Australian Standards and State Government policies and guidelines relating to noise.

5.3.1.1. Erection of Buildings:

5. An acoustic report shall be required for developments that are likely to generate high noise levels and for development within 500m of residential areas and other sensitive noise receivers, including seniors housing, places of public worship and educational establishments. The acoustic design report should refer to the relevant Australian Standards and State Government policies and guidelines relating to noise.

6. If an acoustic report is not required at the development application stage, conditions will be imposed as part of the development consent which requires compliance with the relevant Australian Standards and State Government policies and guidelines relating to noise. Applicants must have regard to the criteria and demonstrate a standard of acoustic treatment for the building to comply with such criteria.

7. It is essential that potential developers investigate noise amelioration features to be included in building design, which will assist in achieving compliance with Council's acoustic criteria. Having regard to the surrounding topography, it is critical that the roof element of all buildings be acoustically capable of controlling potential breakout noise.

5.3.2. Trading and Operating Hours of Premises

Objectives

(a) To ensure the amenity of adjoining residential and rural areas is preserved.

(b) To ensure development is provided the flexibility in trading/operating hours to ensure it is competitive and productive.

Controls

1. The hours of operation for premises involved in any type of employment generating activity shall be 24 hours a day/ 7 days a week

5.3.3. Air Quality

Objectives

(a) To maintain existing air quality and improve local air quality where possible.

(b) To ensure future development does not adversely affect existing air quality.

Controls

2. The emission of air impurities is to be controlled and limited to the standards allowed by the *Protection of the Environment Operations Act 1997*, to the satisfaction of Council and the Environmental Protection Authority at all times.

3. An Air Quality and Odour Assessment is required for industrial development that in the opinion of the consent authority, may have an impact on the air quality of in the region.

4. An assessment of the merits of the proposal will be made at the development application stage. However, applicants should be able to demonstrate that the most efficient means of minimising emissions are being utilised.

5.4. EARTHWORKS AND RETAINING WALLS

5.4.1. Development on Sloping Sites

Objectives

(a) To take into account the stability of land having regard to its topography, geology and soils as part of site planning principles.

(b) To minimise the extent of earthworks when creating a building site.

(c) To minimise disturbance of vegetation that stabilises land, particularly on sloping sites.

(d) To encourage reuse of fill material from within the precinct.

Controls

1. A Geotechnical Report is to be submitted with development applications proposing earthworks that change the levels of a site.

2. Level transitions must be managed between lots and not at the interface to the public domain.

3. Excavation and fill in excess of 4.0 metres may be permitted to allow for the establishment of a level construction pad providing the excavations are adequately retained and drained in accordance with engineering requirements.

4. Finished ground levels adjacent to the public domain or public road dedication be no greater than 4.0m above the finished road level (or public domain level).

5. Where a level difference results in retaining walls exceeding 3.0m in height above an adjoining public domain or public road dedication, the resulting landscape setback must be increased to accommodate tiered retaining walls.

6. Cut or fill retaining walls up to 3.0m in height and fronting the public domain are to be setback 2.0m into the property boundary and the setback is to be suitably landscaped. The setback and retaining wall is included in the landscape setback.

7. Fill retaining walls exceeding 3.0m in height and fronting public domain, are to be stepped with a minimum 1.5m provided between each tier. A maximum height of 3.0m for each retaining wall element is permitted unless otherwise approved on a merit basis.

8. All retaining wall elements higher than 1.0m are to be suitably fenced for safety.

9. Where fill material is required to be imported to the site, all material is required to be Virgin Excavated Natural Material (VENM) or Excavated Natural Material (ENM) or material received under an EPA Resource Recovery Order and Exemption.

10. Any fill that is being transported from a development can only be transported to sites that are lawfully able to receive such material The EPA legislation and guidelines should be consulted and consent should be sought for any such activity where required.

11. Any VENM, ENM or material received under an EPA Resource Recovery Order and Exemption must be validated by a suitably qualified person to demonstrate that it is fit for its intended use.

5.4.1.1. Limitations on Earthworks

12. All retaining walls proposed for the site are to be identified in the development application for the proposed development. Use of materials that complement the natural environment is encouraged.

13. During any earthworks, any topsoil should be preserved on site for re-use or blending with general fill for re-use. Topsoil should be stockpiled and covered to avoid dust or erosion. Refer to the Landscape Design Section of this Plan for controls on stockpiling topsoil on site.

14. Earthworks in the floodplain must consider Section 2.7 of this DCP and Clause 33H within the WSEA SEPP.

5.4.2. Erosion and Sediment Control

Objectives

(a) To minimise site disturbance during the construction and operation of developments and land uses.

(b) To reduce the amount of erosion and/or sedimentation of land within the Penrith LGA.

(c) To maximise the amount of vegetation retained on development sites and ensure its protection during construction and operation of the development.

(d) To protect the natural environment, particularly natural water bodies, from erosion and sedimentation.

(e) To encourage prompt rehabilitation of development sites by the implementation of revegetation strategies.

Controls

1. All applications for subdivision and development which involve site disturbance must be accompanied by an Erosion and Sediment Control Plan (ESCP).

2. Soil erosion and sediment control measures are to be provided on-site before the commencement of any earthworks or development activity, in accordance with the approved ESCP. These must be maintained throughout the course of construction until disturbed areas have been revegetated and the soil stabilised. The applicant will be required to provide certification to this effect, which is to be lodged with Council prior to construction.

3. All erosion and sediment control measures are to be installed to the satisfaction of Council or the proposed Certifier, in accordance with best management practices recommended by recognised authorities (including *Managing Urban Stormwater – Soils and Construction*).

4. The work supervisor is responsible for ensuring that all erosion and sediment control measures are implemented in accordance with conditions of approval and are maintained until a final inspection has indicated that the site is sufficiently rehabilitated and stabilised.

5. The decision to install a particular mechanism to prevent erosion and/or sedimentation depends on the location and type of activity proposed and may vary from site to site.

6. The Principal Certifying Authority (PCA) (i.e. Council or Private Certifier) may require erosion and sediment control works to be carried out in addition to, or in variation from, the approved ESCP, should circumstances necessitate it. Any variations are to be approved by PCA and implemented in accordance with this section and current best practice guidelines, where relevant.

7. All erosion and sediment control measures should be maintained for the duration of the specified maintenance period. An established, stabilised ground cover must be in place and approval should be obtained from the Certifying Authority before removing erosion and sediment control measures.

5.4.2.1. Additional Measures for Large Sites

8. Where an application is for a site over 2,500m^2 and there will be substantial earthworks, the applicant is required to address a number of additional measures in the ESCP, including:

   – Identify all areas likely to cause pollution of waterways from the transport of stormwater run-off containing sediment and silt and implement appropriate devices to stop the risk of pollution;

   – Divert clean water around the construction site to prevent contamination;

- Retain as much natural vegetation as possible and limit site disturbance;
- Control stormwater that enters the construction site from upstream;
- Divert stormwater from undisturbed upper slopes onto stable areas;
- Retain and stockpile all excavated topsoil on site for future landscaping and to minimise risk of erosion;
- Prevent sediment/silt from entering adjoining public or private property (especially drains) by installing sediment control devices at the low side of sites and wash down areas;
- Provide a single, stabilised entry/exit point to the site;
- Prevent sediment, including building materials, from reaching the road or Council's stormwater system. Sediment is to be removed by sweeping, shovelling or sponging. Under no circumstances shall sediment be hosed;
- Where a work zone permit over public property is applicable, ensure that appropriate debris control devices are implemented to prevent spillage of building materials into stormwater drains;
- Compact all drainage lines when backfilling;
- Connect downpipes to the stormwater system as early as possible;
- Revegetate all disturbed areas, after on-site works are completed, in order to stabilise the surface; and
- Maintain all sediment control devices during earthworks and construction to standards acceptable to the PCA.

5.5. UTILITIES

5.5.1. General Principles for the Provision of Services

Objectives

(a) To ensure that adequate services are available to facilitate development.

(b) To ensure the co-location of services where possible.

Controls

1. The consent authority shall require as conditions of any development consent that arrangements satisfactory to:
   - Sydney Water will be made for the provision of water and sewerage services;
   - Endeavour Energy have been made for the supply of electricity;
   - Arrangements satisfactory to the relevant telecommunications authority will be made for the provision of telecommunications services; and
   - Council have been made for the drainage of the land.
2. A Utilities Plan is to be submitted with all subdivision and new building development applications.
3. Electricity and telecommunication mains are to be placed underground unless temporary provision have been agreed with the relevant utility authority. Where technically feasible, compatible public utility services shall be coordinated in common trenching to maximise cost-effectiveness.
4. New premises are to be provided with state of the art telecommunications infrastructure utilising optic fibre or DSL technology to enable companies to access broad band services using high speed, high reliability telecommunications.

5.5.2. Council Engineering Works and Construction Standards

Objectives

(a) To ensure a consistent approach to the design and construction of engineering works.

(b) To set performance standards for the design and construction of engineering works.

Controls

1. All engineering works shall be undertaken in accordance with the provisions of Council's standards, as amended:
   - Stormwater Drainage Specifications for Building Developments;
   - Council's Water Sensitive Urban Design (WSUD) Technical Guidelines;
   - Engineering Design Specifications for Civil Works; and
   - Engineering Construction Specifications for Civil Works.

5.6. WASTE MINIMISATION AND MANAGEMENT

Objectives

(a) To facilitate sustainable waste management within the City of Penrith in accordance with the principles of Ecologically Sustainable Development.

(b) To manage waste in accordance with the 'Waste Hierarchy' to:
   - Avoid producing waste in the first place;
   - Minimise the amount of waste produced;
   - Re-use items as many times as possible to minimise waste;
   - Recycle once re-use options have been exhausted; and
   - Dispose of what is left, as a last resort, in a responsible way to appropriate waste disposal facilities.

(c) To assist in achieving Federal and State Government waste minimisation targets as set out in the *Waste Avoidance and Resource Recovery Act 2001* and NSW Waste Avoidance and Resource Recovery Strategy 2007.

(d) To minimise the overall environmental impacts of waste by:
   - Encouraging development that facilitates ongoing waste avoidance and complements waste services offered by both Council and/or private contractors;
   - Requiring on-site source separation and other design and siting standards which assist waste collection and management services offered by Council and/or the private sector;
   - Encouraging building designs and construction techniques that minimise waste generation;
   - Maximising opportunities to reuse and recycle building and construction materials as well as other wastes in the ongoing use of a premise; and
   - Reducing the demand for waste disposal.

Controls

1. Applicants are to submit a Waste Management Plan when lodging a development application for:
   - Demolition or construction of buildings.
   - Change of use of buildings.
   - Subdivision of land and/or buildings.
   - Alterations to 50% or more of the existing gross floor area of buildings, or additions to buildings resulting in a 50% increase (or more) to the existing gross floor area.
2. The Waste Management Plan must be supported by scaled waste management drawings that are to assist in demonstrating compliance with the provisions of this Plan.
3. A Waste Management Plan will also be required for applications for a Complying Development Certificate.
4. The Waste Management Plan enables Council (or the Certifying Authority) to assess the waste likely to be generated by the development and ensure that appropriate actions are taken so as to properly manage the generation, storage and disposal of wastes.

5. Waste storage and collection areas should be:
   - Flexible in their design so as to allow for future changes in the operation, tenancies and uses;
   - Located away from primary street frontages, where applicable;
   - Suitably screened from public areas so as to reduce the impacts of noise, odour and visual amenity; and
   - Designed and located to consider possible traffic hazards (pedestrian/vehicular) likely to be caused by the storage and collection of waste.
6. The following features will need to be considered in the design of waste storage and collection areas:
   - Dry recyclables including containers, paper, cardboard and toners for printers and photocopiers should be separated from other waste, for recycling;
   - Food scraps should be placed in specialised containment bins and collected on a regular basis (particularly where large volumes of perishable wastes are generated);
   - Refrigerated garbage rooms should be provided where there are large quantities of perishable wastes and infrequent collections; and
   - Clinical or hazardous and liquid waste should be placed in specialised containment bins and collected by specialised services.
7. Grease traps must be provided where there is a likelihood of liquid waste entering the drainage systems (contact Sydney Water to obtain trade waste requirements).
8. Communal storage/collection facilities are recommended where:
   - The design makes it difficult for all tenants to have ready access to a collection point; or
   - The site characteristics restrict vehicle entry.
9. Where a communal facility exists, each tenant should have a designated area which is clearly signposted.
10. Should a collection vehicle be required to enter the property, the driveway and manoeuvring area must be suitable for a collection vehicle in terms of both its strength and design.
11. The system for waste management must be compatible with the collection service(s) to be used whether Council or private contractor.
12. Swept paths demonstrating adequate manoeuvring area are to be provided with the application.

5.7. ACCESS AND PARKING

5.7.1. Parking

Objectives

(a) To ensure the provision of an appropriate number of vehicular spaces having regard to the activities proposed on the land, the nature of the locality and the intensity of the use.

(b) To require parking areas to be designed and constructed in accordance with the Australian Standards for efficient and safe vehicle circulation and parking.

(c) To reduce pedestrian and vehicle conflicts on development sites.

(d) To facilitate an appropriate level of on-site parking provision.

(e) To minimise the visual impact of on-site parking.

(f) To provide adequate space for parking and manoeuvring of vehicles (including service vehicles and bicycles).

(g) To support the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking.

Controls

5.7.1.1. Provision of Parking Spaces

1. Parking provided on site is to meet AS 2890 and where appropriate, AS 1428. On-site car parking is to be provided to a standard appropriate to the intensity of the proposed development as set out in Table 12.
2. For existing developments, a new use must not commence or the floor area be increased until the required car park spaces have been provided on the site, corresponding to the activities outlined in Table 12.
3. Employee rates identified in Table 12 are to be based on the initial use identified at the time of lodgement of the development application.
4. In the absence of specific requirements relevant to particular developments, the parking requirements in the RTA's "Guide to Traffic Generating Developments" (as updated) and Australian Standard AS 2890.1 and 2 - 2004 should be referred to as a guide. In the absence of all data, the applicant should revert to the use of first principles.
5. Where relevant, development shall provide on-site loading facilities to accommodate the anticipated heavy vehicle demand for the site.
6. Stacked parking will not be permitted.
7. Car parking above ground level is to have a minimum floor to ceiling height of 2.8m so it may be adapted to another use in the future.
8. Underground/basement car parking is not permitted.
9. Car parking and associated internal manoeuvring areas provided over and beyond the requirements of this DCP shall be calculated as part of the development's gross floor area.

Table 12 Minimum parking rates

Activity	**Parking Requirement**
Freight Transport Facilities	1 per transport vehicle present at peak vehicle accumulation plus 1 per 2 employees, or to be determined by a car parking survey of a comparable facility
Industries	1 space per 200m^2 of gross floor area or 1 space per 2 employees, whichever is the greater
Vehicle Body Repair Workshops/ Vehicle Repair Stations	3 spaces per 100m^2 of gross floor area or 6 per work bay, whichever is the greater
Warehouses or distribution centres	1 space per 300m^2 of gross floor area or 1 space per 4 employees, whichever is the greater.
Ancillary office space	1 space per 40m^2 of gross floor area
Neighbourhood shops	1 space per 40m^2 of gross leasable area
Other Uses	In accordance with RMS Guidelines or if there are no parking guidelines for a specific use, then a site specific car parking analysis will be required. This may require the applicant to submit a car parking report from a suitably qualified traffic consultant.
Accessible Parking	Accessible car spaces should be in accordance with the Access to Premises Standards, Building Code of Australia and AS2890.

Activity	Parking Requirement
Bicycle Parking	Bicycle parking in accordance with the suggested bicycle parking provision rates for different land use types in the document 'Planning Guidelines for Walking and Cycling' (NSW Government 2004). Bicycle parking spaces should comply with AS2890.3:1993 Bicycle Parking Facilities.

5.7.1.2. Design of Parking and Manoeuvring Areas

10. Car space dimensions must comply with the relevant Australian Standards.
11. The movement of pedestrians throughout the car park should be clearly delineated and be visible for all users of the car park to minimise conflict with vehicles. The car parking and manoeuvring layout should be in accordance with the provisions of AS 2890.1 - 2004.
12. Provision of parking spaces for disabled persons should be in accordance with the Access to Premises Standards, the Building Code of Australia and AS2890.
13. All car parking areas to be constructed of hard standing, all weather material, with parking bays and circulation aisles clearly delineated.
14. Vehicle access is to be integrated into the building design as to be visually recessive.
15. The design of parking and access areas is to address Water Sensitive Urban Design (WSUD) principles (refer Section 2.6).
16. All vehicles must be able to enter and leave the site in a forward direction without the need to make more than a three point turn.
17. Internal directional signs are to be provided to assist site visitors in locating parking areas.
18. The design of the car park should ensure that passive surveillance is possible and, where appropriate, incorporate active measures such as cameras and security patrols. Car parks should be designed to minimise dark areas through the provision of appropriate lighting.
19. Access to security parking shall be designed to ensure the access mechanism is accessible to the vehicle driver on the entry side of the driveway.
20. Provision should be made for all vehicles to enter and exit a secure (i.e. boom-gated) area in a forward direction.
21. Visitor parking should be provided outside the secured parking areas.
22. The design of car parks should ensure adequate separation of staff/visitor parking and loading dock circulation areas for heavy vehicles.
23. Vehicular ramps less than 20m long within developments and parking stations must have a maximum grade of 1 in 5 (20%). Ramp widths must be in accordance with AS2890.
24. Loading docks associated with the development shall be provided on-site, with all loading and unloading activities occurring on-site.
25. All loading and unloading areas are to be:
    - Integrated into the design of developments;
    - Separated from car parking and waste storage and collection areas;
    - Located away from the circulation path of other vehicles; and
    - Designed for commercial vehicle circulation and access complying with AS 2890.2.
26. Secure multi-deck car parks should incorporate communication devices such as:
    - Intercoms at boom gates;
    - Public address systems;

- Telephones; or
- Emergency alarms.

27. To ensure users of secure multi-deck car parks are easily able to determine the location of exit and access points, security intercoms or similar and appropriate signage are to be included.
28. All surfaces in the car park should be designed to limit heat retention to reflect as much light as possible.
29. All potential entrapment points should be avoided, e.g. under stairs, blind corners and wide columns. Adequate lighting and mirrors should be used when certain design features are unavoidable.
30. Access, parking, manoeuvring and loading facilities for industrial development shall be in accordance with AS 2890.2 - 2004 and Performance Based Standards 'An introduction for road managers' (National Heavy Vehicle Register – May 2019) to accommodate vehicle types as outlined in Table 13.
31. A development is required to cater for vehicles larger than the minimum specified above where the development is for uses such as a transport depot, warehouse, etc. All service vehicles must enter and exit the development site in a forward direction.
32. Reversing of heavy vehicles must only occur in designated loading bays and loading docks. No reversing of heavy vehicles is permitted in carparks or areas where pedestrians may be permitted.

Table 13 Minimum design vehicle requirements for industrial developments

Site Area	**Design Vehicle**
Up to 1,500m^2	Medium Rigid Vehicle (MRV)
1,500m^2 to 4,000m^2	Heavy Rigid Vehicle (HRV)
4000m^2 to 20,000m^2	Articulated Vehicle (AV)
Greater than 20,000m^2	26m B-double (PBS Level 2 Type B)

5.7.2. Bicycle Parking, Facilities and Storage

1. Applicants should comply with the suggested bicycle parking provision rates for different land use types in the document 'Planning Guidelines for Walking and Cycling' (NSW Government 2004).
2. Bicycle parking spaces must be provided in accordance with AS2890.3:2015 Bicycle Parking Facilities.
3. The following associated bicycle facilities are to be provided:
   - Change and shower facilities for cyclists are to be conveniently located close to the bicycle storage areas; and
   - Where the building is to be strata-titled, the bicycle storage facilities and shower/change facilities are to be made available to all occupants of the building.
4. Bicycle parking spaces must:
   - Be located to provide convenient access from surrounding bicycle routes and main building entrances;
   - Not interfere with reasonable access to doorways, loading areas, access covers, furniture, services and infrastructure;
   - Not cause a hazard; and
   - Be adequately lit during periods of use.
5. A bicycle rail must:
   - Be securely fixed to a wall or to the floor or ground;
   - Be in a highly visible location for bicycle security (when not in a compound);
   - Be of a shape that allows a cyclist to easily lock the bicycle frame and wheels; and

- Be located to allow easy access to park, lock and remove the bicycle.

6. A bicycle compound or a bicycle locker must:
   - Be located to provide convenient access to other bicycle facilities including showers and change rooms;
   - Be fully enclosed;
   - Be able to be locked; and
   - If outside, provide weather protection for the bicycle.

5.7.3. Access and Driveways

Objectives

(a) To ensure satisfactory arrangements are made for access to any development or new allotment created by subdivision.

(b) To require that access internal to the development is adequate to accommodate traffic generated by the development and the minimum design vehicle type.

(c) The minimise the impact of vehicle access points on the quality of the public domain.

(d) To minimise the impact of driveway crossovers on pedestrian safety and streetscape amenity.

(e) To minimise stormwater runoff from uncovered driveways and parking areas.

(f) To ensure that accessways and driveways provide safe access from a property to a public road.

(g) To ensure driveways do not negatively impact on pedestrian mobility.

Controls

5.7.3.1. General Requirements

1. The road access to the site should provide for safe entry and exit. All vehicles must enter/exit the site in a forward direction.
2. The entry and exit from the site should provide for appropriate traffic sight distance in both directions, in accordance with the provisions of AS2890.1 and 2 - 2004 for car parking and commercial vehicles respectively.
3. The design of the development driveway should take into consideration the traffic volumes of the surrounding road network.
4. Driveways should be:
   - Located taking into account any services located within the road reserve, such as power poles, drainage inlet pits and existing street trees;
   - Setback a minimum of 6m from the perpendicular of any intersection of any two roads; and
   - Located to minimise noise and amenity impacts on adjacent residential development.
5. The driveway crossing and access roads shall be designed in accordance with the provisions of AS2890.1 and 2 - 2004 for car parking and commercial vehicles respectively.
6. Driveway widths must comply with the relevant Australian Standards and swept turning paths tested for larger vehicle types such as B-double (PBS Level 2 Type B).
7. Site specific driveway designs should be designed for sites which require access arrangements for 36m B-triple (PBS Level 3 Type A).
8. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard (AS2890.1).

9. The required threshold should be set within the property to prevent cross fall greater than 4% within the footway area.

5.7.3.2. Design

10. All driveways are to be sealed from the point of the public road up to and including the hard-stand parking areas.

5.7.3.3. Construction Standards

11. Roads shall be constructed to Council's standards in consultation with Council's Engineering Services Unit and Council's 'Guidelines for Engineering Works - Development and Subdivision'.

5.7.3.4. Dedication

12. New road reservations and rights-of-way shall be dedicated or created at no cost to Council.

5.7.3.5. Access to Allotments Created in Subdivision

13. New allotments must have direct access to dedicated public roads.

14. Bushfire requirements must be considered when designing access roads for subdivisions of land which is classified as 'bushfire prone land'. Access arrangements must include adequate provision for turning areas and emergency access.

5.7.3.6. Responding to Topography

15. Natural contours should be followed when designing and constructing driveways. Driveways should be located to retain as much of the property's vegetation as practicable.

16. Any new private access roads or driveways that connect to a public road should be sealed with asphalt or another suitable surface from the public road to prevent erosion and minimise dust and dirt transfer.

5.7.4. Site Access and Servicing

Objectives

(a) To ensure the safe and efficient movement into and out of an industrial development without adversely affecting the existing and future service and safety levels of the road.

(b) To ensure industrial development provides sufficient parking on-site to accommodate all parking demands generated by the development while ensuring safe and efficient movement of vehicles within the site.

(c) To encourage the development of a parking layout that enhances the function and appearance of the industrial development.

(d) To ensure that cyclist and pedestrian needs are adequately and safely accommodated in all industrial areas.

Controls

1. Development that fronts Mamre Road, the Potential Southern Link Road, or a classified road, shall ensure that:
   - The allotment of land was created in accordance with a subdivision approved pursuant to this DCP; and
   - Access to the allotment is in accordance with the access arrangements approved with the subdivision.
2. Development shall, where appropriate, be designed to:
   - Allow all vehicles to enter and leave the site in a forward direction;
   - Accommodate heavy vehicle parking and manoeuvring areas;
   - Avoid conflict with staff, customer and visitor vehicular and cycle movements; and
   - Ensure satisfactory and safe operation with the adjacent road system.

3. In determining access and servicing requirements, the consent authority will take the following into consideration:
   - The location, type and scale of the proposed development;
   - The compatibility of the location and design of the car park with adjoining properties;
   - Traffic Authority Guidelines and comments of the Local or Regional Traffic Committee(s); and
   - The potential for the development to generate heavy vehicle movements.
4. Full details of the volume, frequency and type of vehicle movements shall be submitted with the development application.
5. In general, turning circles will be required to be provided to accommodate the largest type of truck which could reasonably be expected to service the site. All developments must be designed and operated so that a standard truck may complete a 3-point or semi- circular turn on the site without interfering with parked vehicles, buildings, landscaping or outdoor storage and work areas. Large scale developments shall be designed to accommodate 26m B-double (PBS Level 2 Type B).
6. The suitability of manoeuvring areas provided for large vehicles will be assessed by reference to the Standard Vehicle Turning Templates which appear in Figures A.5a (small rigid truck), A.7a (large rigid truck) and A.9a (large articulated truck) of the Roads and Maritime Services publication *Policies Guidelines and Procedures for Traffic Generating Developments* and turning templates for either 26m B-doubles (PBS :Level 2 Type B) or 36m long B-triple (PBS Level 3 Type A).
7. Adequate space is to be provided within the site for the loading, unloading and fuelling (if applicable) of vehicles.
8. Car parks, aisles and manoeuvring areas shall be designed with function and safety in mind, and have minimum dimensions conforming with the Australian Standards 2890 Parking Facilities. The relevant parts of this standard are AS2890. 1 Off-street parking, AS2890.2 Commercial vehicle facilities and AS2890.3 Bicycle parking facilities.
9. Where the nature of the industrial development will attract clients/visitors to the site, the following elements shall be included in the car park design:
   - The internal (vehicular) circulation network is to be free of disruption to circulating traffic and ensure pedestrian safety;
   - The car park should, where possible, be designed with wheel stop kerbs only, rather than a barrier kerb between parking areas and pedestrian pathways;
   - The movement of pedestrians throughout the car park is clearly delineated by all users of the car park and minimises conflict with vehicles; and
   - Where parking spaces are to be provided for people with disabilities, these spaces are to be:
     - Suitably located near entrances to the building, lifts and access ramps (if required);
     - Provided in accordance with AS1428.1 Design for Access and Mobility; and
     - Supplemented by the installation of appropriate tactile pavement treatments where required.

5.8. EMPLOYMENT SERVICE HUBS

Objectives

(a) To facilitate the development of employment service hubs that provide consolidated small- scale retail and services to meet the daily convenience needs of the local workforce.

Controls

1. Indicative locations for employment service hubs are identified in the Mamre Road Precinct Structure Plan (Figure 3). Alternate location for an employment service hub may be considered, if:
   - It is located at least 1km from other existing and/or planned employment service hubs;
   - It does not preclude the provision of an employment service hub in a more accessible location.

2. Development applications must demonstrate that the size, function and proposed use serves the daily convenience needs of the workforce in the zone or is for the benefit of the local workforce and businesses.
3. Employment service hubs must not have an unreasonable impact on the viability of any other nearby established centre within an industrial or business zone.
4. Uses are to be located within the primary street frontage to generate activity and interest on the street.
5. Active transport paths and bicycle parking should be prioritised and incorporated into the design of the development.
6. The built form should address co-located open space areas.
7. Outdoor furniture and shading shall be provided.

DISCLAIMER

This report is dated 5 March 2021 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of MIRVAC **(Instructing Party)** for the purpose of Development Control Plan **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A DICTIONARY

Term	Definition
1 in 100 chance per year flood	a flood that has a 1% chance of occurring in any given year within a 100-year cycle.
5G	is the fifth-generation cellular network technology.
Acid sulfate soils	As defined under the Standard Instrument - Principal Local Environmental Plan.
Aerotropolis	is a metropolitan area whose infrastructure, land-use and economy are centred on the Western Sydney International Airport and includes the outlying corridors, and aviation orientated business and residential development that benefit from each other and their accessibility to the Western Sydney International Airport. See Western Sydney Aerotropolis
Allotment (or lot)	means an area of land contained within the boundaries as detailed in its certificate of title.
Amalgamation	two or more lots joined to form a single development site.
Ancillary Structures	Structures that are subordinate or subservient to the dominant purpose for which a site is used or proposed to be used.
Annual Exceedance Probability (AEP)	means the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage.
Arterial Road	Same meaning as in the RTA Guide to Traffic Generating Developments Version 2.2 (October 2002).
Articulation	the architectural treatment of the exterior of a building using the different building elements that make up that part of the building. It involves how the building's exterior surfaces, edges, corners and materials unite to give the building its form.
Asset protection zone	a fuel-reduced area surrounding a built asset or structure which provides a buffer zone between a bush fire hazard and an asset. The APZ includes a defendable space within which firefighting operations can be carried out. The size of the required asset protection zone varies with slope, vegetation and Fire Danger Index (FDI).
Australian Standard (AS)	are documents published by Standards Australia setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. These standards establish a common language which defines quality and safety criteria.
Awning	means a predominantly horizontal structure that projects from the host building to provide weather protection, such as for a window or pedestrian area
BC Act	Biodiversity Conservation Act 2016

Term	Definition
Bicycle Parking facility	means an area reserved or designed for short term parking of bicycles, and includes a device to which the bicycle frame and wheels can be locked.
Biodiversity	Refer to State Environmental Planning Policy (Western Sydney Employment Area) 2009
Biodiversity offsets	measures that compensate elsewhere for the adverse impacts of an action, such as clearing for development. Biodiversity offsets protect and manage biodiversity values in one area in exchange for impacts on biodiversity values in another.
Biodiversity Offset scheme (BOS)	Refer to the Biodiversity Conservation Act 2016.
Biofiltration (swale)	is a grassed or landscaped channel that both treats and conveys stormwater
Blue-green grid	an interconnected network of natural and designed landscape components, including water bodies and green and open spaces.
Buffer	means a distinct separation between developments or land-uses that require separation for amenity, environmental protection or other reason/s.
Bush fire prone land	Refer to Environment Planning & Assessment Act 1979.
Bushland	means land on which there is vegetation which is either a remainder of the natural vegetation of the land or, if altered, is still representative of the structure and floristics of the natural vegetation.
Classified roads	Refer to the Roads Act 1993.
Clearing vegetation	As defined under the Standard Instrument - Principal Local Environmental Plan.
Climate change	a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
Collector road	is a local road that carries local traffic to the sub-arterial and arterial roads, and/or provides access to attractors within the precinct such as retail, commercial and educational facilities.
Communal open space	outdoor space located within the site at ground level or on a structure that is within common ownership and for the recreational use of employees of the development. Communal open space may be accessible to employees only, or to the public.
Communication, Navigation and Surveillance facilities (CNS facilities)	are facilities that allow: pilots to navigate when en-route between airports; pilots to utilise terminal area navigation aids to conduct instrument approach

Term	Definition
	procedures; dialogue between pilots and Air Traffic Control (ATC); and Air Traffic Control to monitor and confirm an aircraft location.
Consent Authority	Refer to Environment Planning & Assessment Act 1979.
Conservation (heritage)	means all the processes of looking after a place so as to retain its cultural significance. This includes preservation, protection, maintenance, restoration, reconstruction and adaptation
Conservation (vegetation management)	means all the processes and actions of looking after a place so as to retain its natural significance and includes protection, maintenance and monitoring. Conservation may also include regeneration, restoration, enhancement, reinstatement, preservation or modification, or a combination of more than one of these. Conservation includes conserving natural processes of change (as opposed to artificially accelerated changes).
Contaminated land	Refer to Environmental Planning and Assessment Act 1979 and State Environmental Planning Policy No. 55.
Contributions plan	Refer to Environment Planning & Assessment Act 1979.
Conveyance	means a direct measure of the flow carrying capacity of a particular cross-section of a stream or stormwater channel. (For example, if the conveyance of a channel cross-section is reduced by half, then the flow carrying capacity of that channel cross section will also be halved).
CPCP	Cumberland Plain Conservation Plan
Crime prevention through environmental design (CPTED)	is a multi-disciplinary approach to deterring criminal behaviour through environmental design. Crime prevention through environmental design strategies rely upon the ability to influence offender decisions that precede criminal acts. The four principles of the approach are: surveillance access control territorial reinforcement; and space management.
Critical Infrastructure	means infrastructure providing services that are essential for everyday life such as energy, water, transport, communications or health
Dedicated freight corridor	A strip of land protected from incompatible development to allow the future delivery of a dedicated freight road which would provide dedicated movement for freight between the future intermodal terminal and development sites in the Mamre Road Precinct.
Deep soil zones	area/s of soil within a development that are unimpeded by buildings or structures above and below ground.

Term	Definition
Development	Refer to Environment Planning & Assessment Act 1979.
Development application	Refer to Environment Planning & Assessment Act 1979.
Development control plan	Refer to Environment Planning & Assessment Act 1979.
Drip line of a tree	means the horizontal extent of the canopy of the tree projected to ground level.
Easement	means a right to use or travel over a specified strip of land belonging to another. For example, easements may be required for repairs, drainage of sewage, electricity purposes, services, water supply and right of access.
Ecologically sustainable development	Refer to Environment Planning & Assessment Act 1979.
Emergency	means a situation due to an actual or imminent occurrence (such as fire, flood, storm, earthquake, explosion, terrorist act, accident, epidemic or warlike action) which: endangers, or threatens to endanger, the safety or health of persons or animals in the State, or destroys or damages, or threatens to destroy or damage, property in the State, and which requires a significant and co-ordinated response.
Endangered ecological community	Refer to Biodiversity Conservation Act 2016 and/or Environment Protection and Biodiversity Conservation Act 1999 (Cth).
Endemic	means local and restricted to a particular area, although the level of endemism can be very broad (e.g. endemic to Australia) or very narrow (e.g. endemic to land in a certain locality).
Environmental planning instrument	Refer to Environment Planning & Assessment Act 1979.
Environmentally sensitive area	Same meaning as in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
Erosion	means the process by which the detachment, drawing in, suspension and transport of soil occurs by wind, water or gravitational effects. Erosion leads to sedimentation.
Fabric (heritage)	means all the physical material of the place including elements, fixtures, contents and objects.
Façade	means the external face of a building, generally the principal face, facing a public street or space.
Flood	means a relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flowpaths associated with major drainage, and/or oceanic inundation resulting from super-elevated ocean levels. It excludes waves overstopping coastline defences and tsunamis.

Term	Definition
Flood Hazard	means the potential for damage to property or persons due to flooding.
Flood hazard (high) or high flood hazard	occurs when there is possible danger to life and limb; there is potential for structural damage; and social disruption and financial losses could be high.
Floodplain	an area of land which is subject to inundation by floods up to and including the probable maximum flood event, that is, flood prone land.
Flood prone land	means land impacted up to the level of the probable maximum flood and identified in a map adopted by the relevant council or published by the Government.
Flood Prone Land maps	means maps held by Penrith City Council or Government which indicate relevant flood information
Flood storage areas	means those parts of the floodplain that have the important flood function of temporary storage of floodwaters during the passage of a flood.
Floodplain Development Manual	As per the Local Government Act 1993 and its supporting guidelines which facilitate the implementation of the NSW Flood Prone Land Policy
Floodways	means those areas of the floodplain whose flood function results in a significant discharge of water during floods. They are often aligned with naturally defined channels. Floodways are areas that, even if only partially blocked, would cause a significant redistribution of flood flow, or a significant increase in flood levels.
Greater Sydney Region	the region comprising the local government areas within the boundary shown on the map in the Greater Sydney Region Plan and Schedule 1 of the Greater Sydney Commission Act 2015.
Green infrastructure	the network of green and blue spaces which includes waterways, bushland, parks, open spaces and tree canopy that are strategically planned, designed and managed to support a good quality of life in an urban environment.
groundwater	means any moving or stationary body of water or moisture occurring underneath the land surface, but not below the geological basement
Habitat	includes: an area periodically or occasionally occupied by a species or ecological community, and the biotic and abiotic components of an area.
Hardstand area	means the area of a site through which water cannot infiltrate, and includes the area of the building footprint, garages, water tanks, outbuildings, and non-porous driveways, paths and courts, but excludes the water surface area of swimming pools
Harm an Aboriginal object	Refer to the National Parks and Wildlife Act 1974

Term	Definition
Hazardous material	Means materials that have the potential to pose a significant risk to human health, life or property, or to the biophysical environment. These may include materials that are radioactive, flammable, explosive, corrosive, oxidising, asphyxiating, bio-hazardous, toxic, pathogenic, or allergenic. Compressed gases and liquids or hot materials that may be hazardous in specific circumstances may also be included.
Hazardous waste	means any waste that because of its physical, biological or chemical properties, is capable of causing a danger to the life or health of any living thing if it is released into the environment, and/or is, or contains a hazardous material described in the Protection of the Environment Operations Act 1997, e.g. can include dangerous goods, poisons, coal tar or coal tar pitch waste, lead-acid or nickel-cadmium battery waste, lead paint waste arising from non-residential premises and other waste containing hazardous components.
Impervious surface	means land or material that is not readily penetrable by water. Impervious areas occur where the soil surface is sealed, eliminating rainwater infiltration and natural groundwater recharge
Infill development	the erection of a new building or buildings on land within an existing developed area. It may involve erection of building/s on a vacant site or following the total demolition of existing building/s.
Integrated freight network	the network of freight only corridors including the north-south spine and fire access roads.
Integrated water cycle management	an approach to the management of water that considers aspects of water including rainwater, stormwater, groundwater, water supply and use, reuse and treatment.
Kerb	means a raised edge used for bordering the carriageway of a road.
Landmark building	means a building of high quality and unique architectural style designed to be highly responsive to a specific site and its features, that utilises architectural elements to be easily seen and recognised as a point of reference and navigating tool for pedestrians, cyclists and vehicles.
Local environmental plan	Refer to Environment Planning & Assessment Act 1979.
Local road	is a road that has a low speed limit and a small footprint, serves local communities and that is generally conducive to walking and cycling. These roads are used primarily for access to abutting properties.
Major road	means an arterial or sub-arterial road.
Managing Urban Stormwater: Soils and Construction (Blue Book)	means Managing Urban Stormwater: Soils and Construction (4th edition, Landcom, 2004), commonly referred to as the “Blue Book” and as in force at the commencement of State Environmental Planning Policy (Infrastructure) Amendment 2018.

Term	Definition
Operational airspace	is the volume of airspace above a set of imaginary surfaces, the design of which is determined by criteria established by the International Civil Aviation Organisation (ICAO). These surfaces are established with the aim of protecting aircraft from obstacles or activities that could be a threat to safety. Operational airspace includes: prescribed airspace (Commonwealth Airports); Obstacle Limitation Surface (OLS) and Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS) (other NSW Strategic Airports); the area identified on any Height Restriction Map for Defence Airfields.
Performance outcome	a general statement of the means of achieving the intent of the applicable objectives of this development control plan.
Permeable surface	a surface which permits or facilitates the infiltration or penetration of water e.g. grass areas, landscaping, porous paving and the like.
Planning for Bush Fire Protection	means the version of the NSW Rural Fire Service Publication Planning for Bush Fire Protection prescribed by the Environmental Planning and Assessment Regulation 2000.
Probable maximum flood (PMF)	the largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation, and where applicable, snow melt, coupled with the worst flood producing catchment conditions.
Public domain	any permanent space, whether publicly or privately owned, that can be accessed and used by the public and/or is publicly visible or any publicly owned temporary space that can be accessed and used by the public and/or is publicly visible.
Raingarden	is a small bioretention system with vertical sides, typically located on residential lots, that treats stormwater runoff by filtration through special soil and plants. Treated stormwater is discharged from the garden to an external stormwater drainage system
Remediation	a) Same meaning as in State Environmental Planning Policy No 55—Remediation of Land.
Retaining wall	means a wall which is external to a building or work and is used to retain cut or fill and may incorporate provision for drainage.
Right of way	As per the Conveyancing Act 1919.
Riparian corridor	the channel which comprises the bed and banks of a watercourse (to the highest bank) and the vegetated riparian zone adjoining the channel.
Riparian zone	means the terrestrial environment adjoining the channel within a riparian corridor (see diagram for riparian corridor).

Term	Definition
Road reserve	includes the following components: footway kerb and gutter road carriageway ancillary items to any of the above - any stormwater drainage asset, road/street furniture, edging, lighting, poles, services, signage etc.
Salinity	the salt content in water or soil.
Scale	means the size of a building and/or its elements and its relationship with the surrounding elements of the built environment or landscape, viewed from ground/pedestrian level.
Secondary road	Defined under the Roads Act 1993.
Sediment	means solid material, either mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by air, wind, water or gravity
Sedimentation	means the deposition of sediment, usually in such locations as a watercourse, gully, depression, sediment trap or dam, or along a fence line or an area of low slope.
Signage	As defined under the Standard Instrument - Principal Local Environmental Plan.
Site	site means the allotment(s) of land on which a development is located or is proposed to be carried out.
Site audit	Defined under Contaminated Land Management Act 1997.
Siting	means the placement of the structure, both on its lot and within the wider landscape. It includes setbacks and the direction that the building faces, for example, whether it is sited parallel to the street (in the usual manner), sideways (to face the side boundary), or set at an angle relative to the street.
Solar access	is the ability of a building, part of a building or open space to continue to receive direct sunlight without obstruction from other surrounding buildings or impediments, not including trees.
Species	includes: a defined subspecies, and a taxon below a subspecies, and a recognisable variant of a subspecies or taxon, and a population of a particular species (being a group of organisms, all of the same species, occupying a particular area

Term	Definition
Stack parking	means a parking arrangement in which two or more vehicles are stacked one above another using a car-stacker system.
State environmental planning policy	Refer to Environmental Planning and Assessment Act 1979.
State Environmental Planning Policy (Western Sydney Employment Area) 2009	the NSW Government established the Western Sydney Employment Area to provide businesses in the region with land for industry and employment, catering for transport and logistics, warehousing and office space.
Stormwater	untreated water that originates from rainfall or snow/ice melt and soaks into the ground (infiltrate), is held on the surface and evaporates, or runs off to streams, rivers or other water bodies (surface water).
Stormwater management	means the processes or practices used to control stormwater.
Streetscape	the character of a street and its close surrounds defined by the spatial arrangement and visual appearance of built and landscape features when viewed from the street.
Sub-arterial road	Same meaning as in the RTA Guide to Traffic Generating Developments Version 2.2 (October 2002).
Threatened ecological community	Refer to Biodiversity Conservation Act 2016, and Environment Protection and Biodiversity Conservation Act 1999.
Threatened species	Refer to Biodiversity Conservation Act 2016, and Environment Protection and Biodiversity Conservation Act 1999.
Transport corridor	means a linear tract of land dedicated to at least one main line for transport. Transport corridors can be road, rail or canal and are generally high capacity routes. Transport corridors typically connect two major ‘anchor’ destinations, with many destinations in between
Tributary	a river or stream flowing into a larger river or lake.
Under awning sign	means a sign that is below and attached to the underside of the awning of a building.
Urban canopy	means the layer of leaves, branches, and stems of trees that cover the ground when viewed from above.
Urban heat island effect	an agglomeration of hard and dark-coloured surfaces such as roads and roofs cause excessive localised warming.
Verge (also footway)	means that part of a road as is set aside or formed as a path or way for pedestrian traffic (whether or not it may also be used by bicycle traffic).
Visually prominent site	means a site that is situated at a highly visible location including ridge top locations, escarpments, environmentally sensitive sites on sloping land, elevated allotments, corner sites, road bends, vista end points and any site that has the potential to dominate the visual amenity.

Term	Definition
Waste	Refer to Protection of the Environment Operations Act 1997
Water sensitive urban design	is an approach that integrates water cycle management into urban planning and design. It is used to help mitigate and reduce the impacts of development on our local waterways and retain water in the landscape.
Waterway	As defined under the Standard Instrument - Principal Local Environmental Plan.
Western Parkland City	is made up on the council areas of Penrith, Liverpool, Campbelltown, Hawkesbury, Wollondilly, Camden, Fairfield and Blue Mountains, and incorporates the existing centres of Liverpool, Greater Penrith and Campbelltown-Macarthur, with the new Airport and Aerotropolis geographically at its centre.
Western Sydney Aerotropolis	encompasses 11,200 hectares of land roughly bounded by the Warragamba pipeline to the north, Kemps Creek to the east, Bringelly Road to the south and the future Outer Sydney Orbital Road to the west.
Western Sydney Airport	a Commonwealth business enterprise established in August 2017 to build the new Airport.
Wianamatta-South Creek	Wianamatta-South Creek runs from Narellan to Hawkesbury and forms part of the Hawkesbury-Nepean catchment.
Wianamatta-South Creek Catchment	includes most of the Cumberland Plain of Western Sydney and is a defining central element of the Western Parkland City and the Aerotropolis.
Wildlife buffer	Refer to Aerotropolis SEPP.
WSEA	Western Sydney Employment Area.

URBIS