



Western Sydney Aerotropolis Development Control Plan 2020

Phase 1



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1 Introduction and Administration

1.1 Name of this Development Control Plan

This Development Control Plan (DCP) is the *Western Sydney Aerotropolis Development Control Plan 2020* (also referred to as the DCP). It has been prepared pursuant to the provisions of Section 3.44 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.2 Staging of this Development Control Plan

This Phase 1 DCP identifies the precinct planning principles, objectives and performance outcomes to allow precinct planning to progress.

The Phase 2 DCP will be released once precinct planning for the initial precincts within the Western Sydney Aerotropolis (Aerotropolis) is finalised. The Phase 2 DCP will identify:

- additional performance outcomes including specific precinct outcomes;
- benchmark solutions for all performance outcomes; and
- the objectives, performance outcomes and benchmark solutions for all development and subdivision types that are envisaged within the Aerotropolis (which have not been considered under this Phase 1 DCP).

1.3 Aims of this Development Control Plan

This DCP provides controls which guide development to achieve connectivity, liveability, productivity, and sustainability by:

- a) giving effect to the *Greater Sydney Region Plan* and *Western City District Plan*;
- b) encouraging development that responds to its context and is compatible with the Principles set out in the *Western Sydney Aerotropolis Plan* (WSAP);
- c) recognising and reinforcing the distinctive characteristics of the Western Parkland City;
- d) adopting the principles set in the Government Architect NSW's *Better Placed* and *Greener Places*;
- e) building upon the objectives and principles under the WSAP and *State Environmental Planning Policy (Western Sydney Aerotropolis) 2020* (Aerotropolis SEPP);
- f) protecting and enhancing the green and blue assets of the area;
- g) safeguarding the airport operations of Western Sydney International (Nancy-Bird) Airport (Airport);
- h) encouraging design that maintains and enhances the character and heritage significance of Aboriginal and European heritage items and heritage conservation areas; and
- i) encouraging ecologically sustainable development and reducing the impacts of development on the environment.

1.4 Adoption and Commencement

1.4.1 Commencement of the Development Control Plan

This DCP was adopted by the Minister for Planning and Public Spaces on 4 September 2020 and came into force on 1 October 2020.

1.4.2 Savings and Transitional Provisions or Arrangements

This DCP only applies to Development Applications (DA) lodged on or after 1 October 2020 (the rezoning of land within the initial precincts of the Aerotropolis).

1.4.3 Council's Planning Documents

The *Liverpool Local Environmental Plan 2008* and *Liverpool Development Control Plan 2008* (for land in the Liverpool Local Government Area) and the *Penrith Local Environmental Plan 2010* and *Penrith Development Control Plan 2014* (for land in the Penrith Local Government Area) do not apply to land once a land use zone has been applied in accordance with the Aerotropolis SEPP.

For parts of the Aerotropolis which have not yet been zoned by the Aerotropolis SEPP, all applicable Council local environmental plan and development control plan provisions continue to apply.

1.4.4 Review of the DCP

Penrith and Liverpool City Councils are required to jointly keep this DCP under regular and periodic review.

The review is to be completed through the establishment of a Working Group with representatives from Penrith and Liverpool City Councils, relevant State government agencies, the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications and Western Sydney Airport in attendance.

The review of the DCP is to be undertaken in at least once in a five year period to:

- assess the continued relevance and responsiveness of the DCP's provisions; and the achievement of the objectives of the DCP;
- identify the need for changes to the provisions to better achieve the objectives of the DCP and changes in circumstances; and
- ensure the availability of adequate development capacity under the DCP's provisions.

1.5 Where this Development Control Plan Applies

1.5.1 Land Application

This Phase 1 DCP applies to the initial precincts as identified in the Aerotropolis SEPP and WSAP. The Phase 1 DCP does not apply to the Airport site.

Note: This DCP does not apply to Commonwealth owned land.

1.5.2 Deferred Land

None at this stage.

1.6 How to Use the Development Control Plan

1.6.1 Structure of the Development Control Plan

The Phase 1 DCP is structured into eight chapters, containing objectives and performance criteria which must be considered if a DA is lodged in advance of precinct planning on land to which this DCP applies. Two chapters – Chapters 7 and 8, are provided as placeholders for work to be completed in the Phase 2 DCP.

As precinct planning is completed for each precinct, additional performance outcomes and benchmark solutions will be included in the Phase 2 DCP.

1.6.2 Inconsistency between Provisions

In the event of an inconsistency between a precinct specific provision contained in chapter 2 and other provisions contained throughout the DCP, the precinct specific provisions prevail.

1.6.3 Variations to Development Control Plan Benchmark Solutions

Any variations to DCP benchmark solutions controls must ensure consistency with the intent of the performance outcomes. Where alternative solutions are proposed, the proponent must provide a written variation statement which justifies how the development is meeting the intent of both the objectives and performance outcomes as listed in this DCP.

1.7 Vision for the Aerotropolis

The vision for the Aerotropolis is set out in the WSAP. As stated in that plan, the Aerotropolis will be Greater Sydney's next global gateway, built around the exciting new Airport. It will be an accessible, innovative 24-hour city, connected locally, nationally, globally and digitally, and a prime location for investment. As part of the Western Parkland City, the Aerotropolis will contribute to a significant number of jobs in Western Sydney, including specialisations in defence industries and aerospace, technology, advanced manufacturing, agribusiness, health, education and tourism, powered by next generation, sustainable energy infrastructure within a cool, green, parkland environment.

The WSAP will safeguard the 24-hour operating status of the Airport as land in the Aerotropolis develops and evolves while also including appropriate protections for the community.

The Aerotropolis will be informed and shaped by the narratives of Country to enable future landscapes to preserve and embody Aboriginal values and identity.

1.8 Western Parkland City – Landscape Led Approach

A new approach to planning and urban design is required to create a cool and green Western Parkland City that is smart, connected and engaged in the new economies to deliver the vision for the Greater Sydney Region Plan and Western City District Plan. To achieve this, a landscape-led approach will:

- Recognise regional blue and green infrastructure as a major ‘city shaper’ at the same level of significance as transport and social infrastructure.
- Adopt a ‘landscape led’ approach to planning and urban design as follows:
 - a) **start with Country** – identify and build city structure and places from the landform and water system.
 - b) **retain water in the landscape** – manage the waterway health of the Wianamatta-South Creek Catchment to enable the development of a functional blue-green structure for the Western Parkland City that contributes to flood management and human safety;
 - c) **preserve, extend and restore the green** – develop a green infrastructure framework structured around the Wianamatta-South Creek green spine and tributaries where biodiversity land is conserved, along with remnant vegetation, water features and habitat linkages across ridges to link catchments, cultural values and view lines;
 - d) **locate transit corridors within walking distance to landscape amenity** – align active and public transport networks within an easy walk from urban development and landscape amenity and safeguard proposed transit corridors to enable efficient delivery as growth progresses;
 - e) **orientate urban development towards landscape amenity and connected to transit corridors** – develop fine grain walkable neighbourhoods with creek-oriented schools, community facilities and hubs; and
 - f) **adopt urban typologies** – ensure urban development retains water in the landscape using both public and private landscape spaces including streets to provide a high level of liveability.

1.9 Relationship to other Documents (and Instruments)

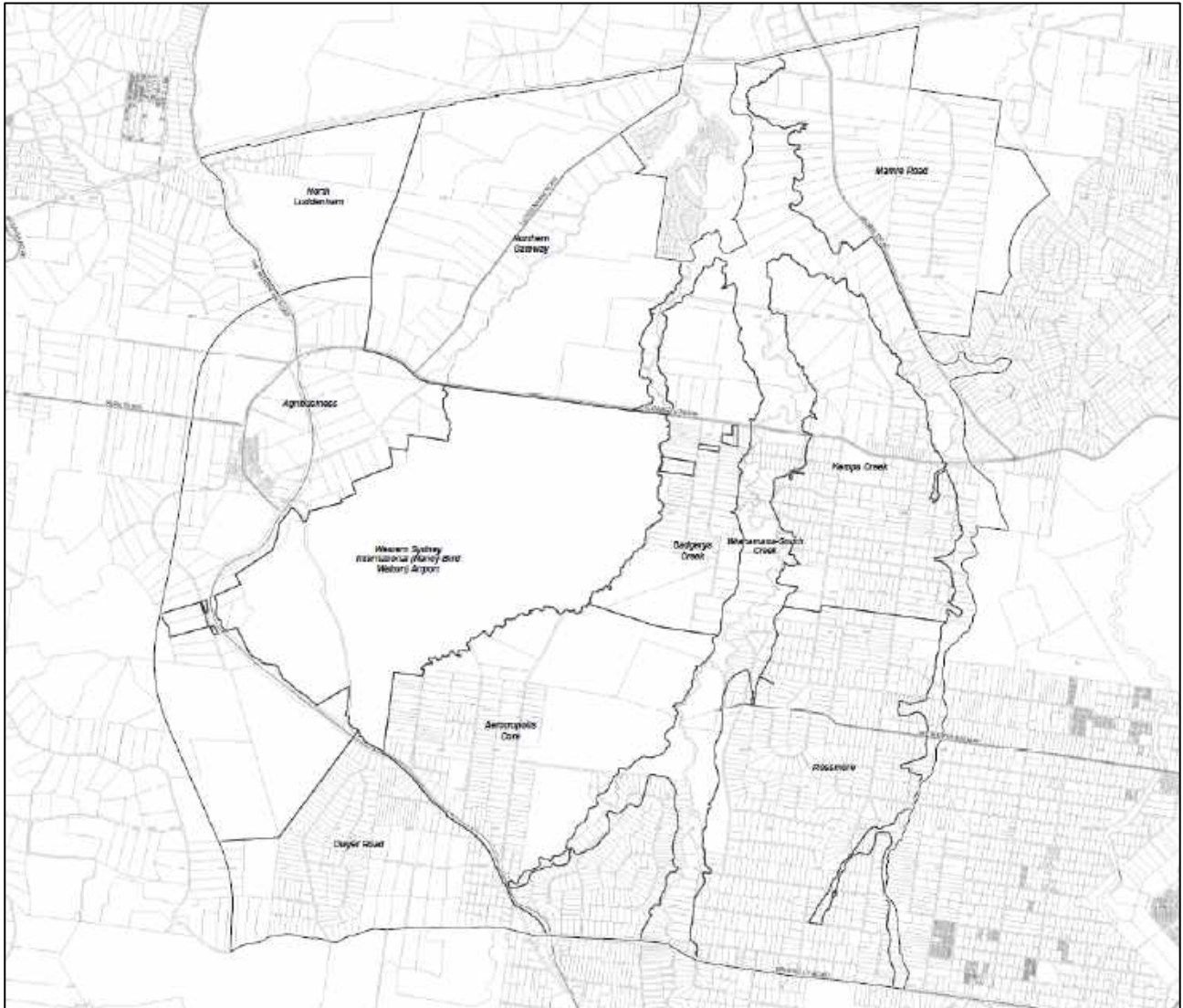
For strategic context, this DCP and subsequent amendments should be read in conjunction with the Western Sydney Aerotropolis Plan, Aerotropolis SEPP, Ministerial Directions 3.5 and 7.8, and *Guideline to Master Planning in the Western Sydney Aerotropolis 2020*.

Where there is any inconsistency between this DCP and the Aerotropolis SEPP, the Aerotropolis SEPP prevails.

1.10 Master Plans

A proponent may prepare a master plan. Refer to *Guideline to Master Planning in the Western Sydney Aerotropolis 2020* for details on the Master Planning Process.

Figure 1: Location of master plans.



Note: No master plans are currently incorporated.

1.11 Development Application Process

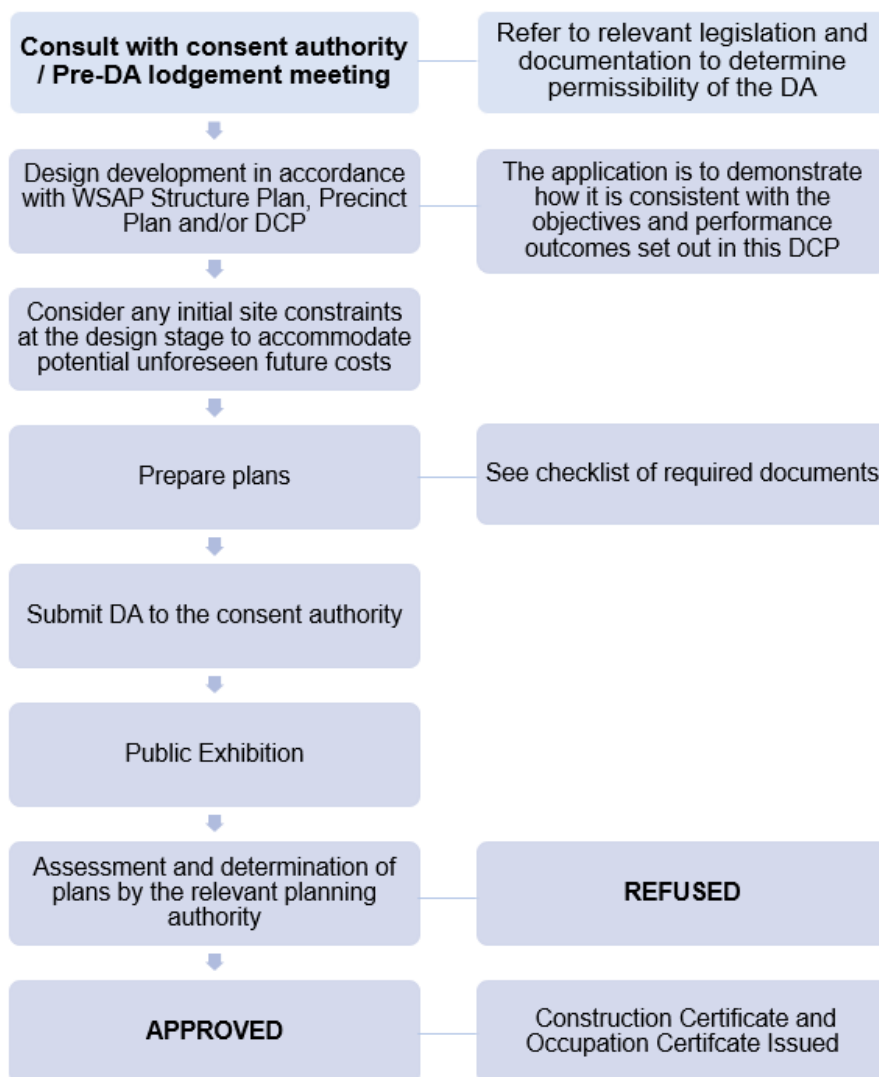
Each DA will be considered on its merits. Documentation that may be required to be submitted includes, but is not limited to the following (refer to Penrith Council and Liverpool City Council website for complete list):

- Statement of Environmental Effects/Environmental Impact Statement;
- Architectural Plans (including Site Plan, Floor Plans, Elevation Plans and Section Plans, Schedule of Materials);
- Acoustic Report;
- Arborist Report;
- BASIX Certification/Building Sustainability Report;
- Building Code of Australia Compliance Report;
- Demolition Plan and Statement;
- Erosion/Sediment Control Plan;
- Flood Report/Flood Impact Assessment;
- Integrated Water Management Plan (incorporating internal and external water re-use);
- Integrated Land Use, Transport and Traffic Assessment Report;
- Airport Safeguarding Assessment Report;
- Biodiversity Development Assessment Report;
- Geotechnical Assessment;
- Heritage Impact Statement/Archaeological Assessment/Connection to Country Strategy;
- Landscape Plans (Public and/or Private Domain);
- Noise Impact Assessment;
- Contamination Assessment;
- Water Quality Impact Assessment;
- Odour Assessment;
- Plan of Management/Security Management Plan;
- Reflectivity Assessment;
- Site and Soil Assessment Report;
- Shadow Diagrams;
- Social Impact Assessment;
- Stormwater Management Strategy;
- Survey Plan;
- View/Visual Impact Assessment;
- Waste Management Plan; and
- Wind Assessment.

Potential applicants should consult with the relevant planning authority before lodgement. Only by doing this can the specific information requirements for a particular type of development be confirmed. This will also ensure the relevant planning pathway applying to development can be clarified early in the process.

The relevant planning authority/consent authority may grant consent to a proposal that does not fully comply with benchmark solutions identified in the Phase 2 DCP, providing the intent of the objectives and performance outcomes are achieved. Where a variation is sought it must be justified in writing indicating how the development is meeting the intent of the objectives and performance outcomes of the relevant DCP provisions. The DA process is summarised in **Figure 2** below.

Figure 2: DA process



1.12 Precinct Planning Principles

Precinct plans, DCPs, master plans and development within the Aerotropolis must satisfy the productivity, sustainability, infrastructure and collaboration and liveability principles contained within **Appendix 1** of the WSAP.

Precinct plans, DCPs and development will only be supported/approve if they are consistent with these principles.

2 Precinct Vision and Place Statements

Note: The Phase 1 DCP only includes precinct vision statements for initial precincts (Aerotropolis Core, Northern Gateway, Wianamatta-South Creek, Badgerys Creek, and Agribusiness). Detailed vision statements for non-initial precincts (North Luddenham, Kemps Creek, Rossmore, Dwyer Precinct) and associated performance outcomes and benchmark solutions will be developed during precinct planning for those precincts. For an overview of each precinct, please refer to the WSAP.

The Western Parkland City sits at the western edge of the Sydney Basin, defined by green edges; Metropolitan Rural Area to the west, National Parks to the west, north and south, and to the east by the Western Sydney Parklands. The Wianamatta-South Creek catchment, including Kemps and Badgerys Creeks, runs north south throughout the length of the Western Parkland City. The topography is gently undulating from low ridges, running generally north south down to the creeks. Approximately half of the area is generally greenfield, the other brownfield.

The 11,200-hectare Aerotropolis sits within the centre of the Western Parkland City, within the greenfield area. South Creek runs north south through the eastern third of the Aerotropolis, with a diagonal tributary within the Aerotropolis Core. Kemps creek defines the eastern edge, and Badgerys Creek from the north runs diagonally to the south west. The ridges rise from the largely flat creek floodplain, creating a gentle undulating topography. This form is accentuated by strong lines of canopy running along the creek edges in the order of 20 metres in height.

2.1 Aerotropolis Core Precinct

2.1.1 Vision Statement

The Aerotropolis Core Precinct will be a diverse, dynamic and sustainable global city precinct supporting a curfew free airport, delivering attractive places for workers, residents and visitors. It will greatly contribute to the Western Sydney Economic Corridor and forms part of the Metropolitan Cluster as identified in the Western City District Plan. It has the potential to deliver 50,000 – 60,000 jobs, leveraging the positive economic impact of the adjacent airport, creating Greater Sydney's next global gateway.

The precinct will be a place of choice to do business, a new high order employment-focused metropolitan centre with a focus on advanced manufacturing, research and development, professional services, creative industries and STEM-focused educational facilities. The Aerotropolis Core will also take advantage of its connection to the Airport and facilitate development of cutting-edge aerospace and defence industries. The precinct will also attract business incubator hubs and shared office workspaces.

Emerging and future technologies, such as 5G will be embraced through flexible and sustainable infrastructure delivery and network installations incorporated into the public realm. This infrastructure will be adaptable over time to accommodate future changes in technology.

The precinct will be planned around a new Sydney Metro station and be supported by commercial and retail uses, creative industries, civil and cultural facilities, and world-class public open spaces. The precinct will support a thriving, inclusive and safe day-time and night-time economy for workers, residents and visitors, both domestic and international.

Residential communities and other noise sensitive land uses within the precinct will not be located within the ANEC/ANEF 20 or above contours, will be within walking distance of the metro station or

other public transport, close to any regional park and the Wianamatta-South Creek corridor activating the riparian lands and making the creek a central lifestyle feature of the area. A diversity of housing types, including affordable housing options/schemes for student, seniors and key workers will create diverse neighbourhoods. Tourist/visitor accommodation will also be provided in the precinct.

The precinct will be walkable, transit-oriented and well-served by transport infrastructure, including a metro station, rapid bus services and an integrated road network. This will ensure the precinct has a high level of accessibility and connectivity to the Airport, other precincts within the Aerotropolis, and the broader transport network. Quality of street art, urban design, tree planting, landscaping, furnishings and material finishes will make streets green, healthy and attractive places for people to enjoy. Carparking will be limited with priority being given to ride and car sharing schemes.

Precinct design will include beyond compliance provisions targeting zero net carbon emissions, creating an environmentally friendly precinct with renewable and sustainable, resilient energy and water systems, and retention of existing native vegetation, where possible. Biodiversity throughout the precinct will also be protected and enhanced through the development process. The precinct will connect to and build upon Country, as well as sympathetically respond to the existing topographical and natural character of the area. Aboriginal and heritage places will be conserved, enhanced and celebrated.

2.1.2 Objectives

- a) Develop a vibrant, connected and permeable 24-hour metropolitan city centre, centred on the metro station and a global destination for business, tourism and social experiences.
- b) To become the premier location of choice for advanced manufacturing and high technology industries in Australia.
- c) Create an aerospace and defence industries sub-precinct comparable with recognised international benchmark precincts.
- d) Create a health and education precinct comparable with recognised international benchmark precincts, incorporating a multiversity with STEM focussed education, leveraging from collaboration with the industrial sectors in neighbouring precincts and underpinned by the superior accessibility of mass transit.
- e) Create a highly distinctive city character with a public domain of outstanding urban design, architectural and landscape merit that responds to site characteristics and context.
- f) Develop street networks and links to rail stations to accommodate public transport infrastructure provision to allow for a 30-minute city and create pedestrian orientated development centred around key destinations and around transport nodes, for example metro station/s.
- g) Significantly reduce reliance on single occupancy private motor vehicles for trips, enabling the majority of trips in Precinct to be undertaken using sustainable forms of transport such as public transport, walking and cycling.
- h) Establish public and private domains which mitigate and adapt to urban heat and support innovative water sensitive urban design.
- i) Protect the operations of the Airport, including 24-hour operations, and provide appropriate protections for the community.

- j) Support and integrate sustainable energy, waste and water as well as a circular economy into development and operations.
- k) Achieve high levels of water retention in the landscape to achieve healthy waterways, contribute to greening and cooling, and facilitate and support effective flood mitigation.
- l) Ensure that design minimises energy and water consumption and optimises water management providing pathways to net zero emissions and enhancement of environment across the entire Aerotropolis.

Note: As precinct planning is completed for each precinct, performance outcomes and benchmark solutions will be provided in Phase 2 of the DCP. In the event of an inconsistency between a precinct specific provisions contained in chapter 2 and other general provisions contained throughout the DCP, the precinct specific provisions contained in chapter 2 prevail.

2.2 Northern Gateway Precinct

2.2.1 Vision Statement

The Northern Gateway will be a major airport interface, serving as a key strategic centre within the Western Economic Corridor – linking the Airport with the Western Parkland City Metropolitan Cluster. The Northern Gateway Precinct will be a key employment precinct with good accessibility and a supporting residential sub-precinct, providing skilled employment and business opportunities north of the Aerotropolis Core and Airport.

The precinct will be complementary to the development focus in the Aerotropolis Core and will evolve as a centre focused on high technology incorporating health, education, knowledge and research. It will build on the approved Sydney Science Park development. The Science Park development will include 30,000m² of retail floorspace and there is potential for retail development in other select locations in the precinct. The Science Park will have a town centre that is transit-oriented and based on the character of university towns. It will deliver commercial buildings and housing to assist with activation. This DCP will not apply to the Science Park. Instead, Council's existing DCP provisions will continue to apply.

High order employment uses will be predominant within the precinct, with desirable uses including (but not limited to) freight and logistics, warehousing, technology, commercial enterprise, offices, industry, creative industry, fresh food markets, education, civic, health, visitor accommodation, recreation and entertainment. The precinct will have synergies with the adjacent Airport Business Park.

The precinct's design and will aim for a target of zero net carbon emissions. Wianamatta-South Creek will be the central structural element to the open space network within the Aerotropolis providing key connectivity linkages and environmental conservation areas. It will provide an important interface to surrounding development. The precinct will build on this connectivity, ensuring that the existing native vegetation, topography and Country connections are founding elements for the design of the precinct. Landscaped connections between Wianamatta-South Creek, Badgerys Creek and Cosgroves Creek will integrate remnant and additional vegetation and green shaded pedestrian paths and cycleways.

Public transport services will provide connections to the Airport and Aerotropolis Core. Rapid bus services to Penrith will also provide additional connectivity in parts of the Northern Gateway. The precinct will have access via Luddenham Road, Elizabeth Drive and the agribusiness precinct to the Airport. New roads including the M12 will be built and will provide new links to the rest of the Aerotropolis, St Marys, Greater Penrith and Greater Sydney.

Quality urban design, landscape including large street trees, furnishing and material finishes will make streets attractive green places for pedestrians and cyclists. Landmark buildings are to be located on corner allotments to reinforce intersections as well as higher elevation points. All buildings will be of high design quality incorporating sustainability, renewable energy systems and environmentally friendly qualities. Carparking will be constructed in a way that it can be used in the short term, and converted to other uses in the longer term, as public transport, car and ride sharing and active transport options develop over time.

New residential development and other noise sensitive development will be complementary to the employment function of the precinct, not be located within ANEC/ANEF 20 or above contours and orientated close to public transport. Residential development within the precinct will be medium to high density and well-integrated into the landscape, as well as oriented to the Wianamatta-South Creek corridor, to take advantage of the creek's natural amenity values.

2.2.2 Objectives

- a) Facilitate an ultra-modern, high technology employment precinct which forms a key node in the context of the Aerotropolis and the Western Economic Corridor.
- b) Facilitate a wide variety of high order employment uses and limited residential development in locations that support the principles of transit-oriented development.
- c) Provide for high quality architectural and design outcomes which take advantage of site characteristics and require buildings to face and activate creek lines, contributing to the character of the precinct.
- d) Facilitate transport infrastructure provision to allow for a 30-minute city, including the alignment of centres with public transport infrastructure to create pedestrian oriented environments.
- e) Support connectivity and staging throughout the precinct, such that the precinct can support temporary uses and develop over time in a manner which minimises the potential for isolated parts of the precincts.
- f) Protect the operations of the Airport, including 24-hour operations, and provide appropriate protections for the community.
- g) Support opportunities for sustainable and efficient use of resources to minimise waste and deliver a circular economy, water and energy from development.
- h) Achieve high levels of water retention in the landscape to achieve healthy waterways, facilitate and support effective flood mitigation.
- i) Ensure that design minimises energy and optimises water management providing pathways to net zero emissions and enhancement of environment across the entire Aerotropolis.

Note: As precinct planning is completed for each precinct, performance outcomes and benchmark solutions will be provided in Phase 2 of the DCP. In the event of an inconsistency between a precinct specific provisions contained in chapter 2 and other general provisions contained throughout the DCP, the precinct specific provisions contained in chapter 2 prevail.

2.3 Wianamatta-South Creek Precinct

2.3.1 Vision Statement

Wianamatta-South Creek represents a unique opportunity to change the way waterways and riparian corridors are planned for and managed. These natural systems provide a high level of amenity services and are embraced as valuable assets, and no longer considered as a cost impediment or constraint.

Wianamatta-South Creek will be rejuvenated into a high-quality central green spine for amenity and recreation within the Aerotropolis in the Western Parkland City. It will provide an opportunity for development within the Aerotropolis to be designed to connect to and care for Country. The precinct encompasses the full extent of Wianamatta-South Creek within the Aerotropolis boundary and strongly integrates with adjoining precincts.

The precinct and tributaries will be the central structural element to the open space network within the Aerotropolis providing key connectivity linkages, environment conservation and water management areas. It will provide an important interface to surrounding development, reducing urban heat and cleaning the air, by providing open space, amenity, biodiversity, and supporting social cohesion and well-being. The blue and green corridor will provide an interconnected corridor for parks, sport playing fields, waterways and potential permanent water bodies, walking and cycling trails, community facilities, and ecological services including flood and stormwater management, nutrient capture, urban cooling, and local habitat for native flora and fauna. Strong access connections into the precinct builds to the structural element of the open space network.

Rehabilitation of these creeks, including replanting of appropriate vegetation to provide canopy cover will encourage residents and visitors to use and enjoy the riparian lands. These creeks will be part of an integrated water cycle management system inclusive of innovative stormwater management and utility provision all within a network of open spaces and trees in a parkland setting. Innovative utility provision will be encouraged.

This precinct will provide a transition between the creeks and the surrounding urban development, with a variety of development located in suitable locations outside of the 1 in 100-year flood planning level. The precinct will also connect to the regional transport network via Elizabeth Drive, Fifteenth Avenue, Bringelly Road and Mamre Road.

2.3.2 Objectives

- a) Protect Wianamatta-South Creek, its tributaries and adjacent high quality green space.
- b) Protect water retention in the landscape and achieve healthy waterways to achieve facilitate urban cooling and support flood mitigation.

- c) Stormwater infrastructure to be consistent with a landscape led approach.
- d) Identify and protect remnant vegetation, tree canopy and other areas of significant vegetation to enable planning within the Aerotropolis to be built around landscape elements.
- e) Protect ridges to preserve view lines and enable provision of open space for active and passive recreation.
- f) Provide suitable land uses, orienting centres in areas with access to green spaces and water, to improve amenity and liveability.
- g) Facilitate development of vibrant, accessible and exemplary green places with a strong sense of place and custodianship, and recognition and celebration of Aboriginal and European heritage spaces.
- h) Protect the operations of the Airport, including 24-hour operations, and provide appropriate protections for the community.
- i) Achieve high levels of water retention in the landscape to achieve healthy waterways, facilitate and support effective flood mitigation.
- j) Ensure that design minimises energy and optimises water management providing pathways to net zero emissions and enhancement of environment across the entire Aerotropolis.

Note: As precinct planning is completed for each precinct, performance outcomes and benchmark solutions will be provided in Phase 2 of the DCP. In the event of an inconsistency between a precinct specific provisions contained in chapter 2 and other general provisions contained throughout the DCP, the precinct specific provisions contained in chapter 2 prevail.

2.4 Badgerys Creek Precinct

2.4.1 Vision Statement

Directly adjoining the Airport to the east, the Badgerys Creek Precinct will support airport operations and the new mixed-use urban centre in the Aerotropolis Core to the south as well as the Northern Gateway to the north. Land uses, buildings and structures may be temporal in nature in the short to medium term and transition to higher order technology, advanced manufacturing and industry uses in the longer term.

In the long term, land uses in the precinct will complement the adjacent Airport. Non-temporal land uses, and larger buildings will incorporate a range of new technology which will support a sustainable precinct reliant on renewable energy, and supportive of responsible water usage.

Interface treatments will be required between existing resource recovery industries and new land uses until they transition to other uses. New enabling industries to facilitate construction of the Aerotropolis may be permitted subject to interface treatments and an ability for the site to transition to higher order uses.

Affected by aircraft noise, this precinct is not suitable for noise sensitive land uses. However, it will meet demand for a range of employment generating uses that do not require or benefit from direct

access to public transport but would benefit from proximity to airport operations. Defence industries and aerospace, advanced manufacturing and technology-based industry may be located within the precinct.

The precinct's design will start with and connect to Country. Wianamatta-South Creek will be the central structural element to the open space network within the Aerotropolis providing key connectivity linkages and environmental conservation areas. It will provide an important interface to surrounding development. The precinct will be in a green landscaped setting with new natural and native linkages which contribute to the provision of positive biodiversity outcomes. Active transport opportunities between Badgerys Creek to the west and Wianamatta-South Creek to the east will also feature in the precinct. Development should take advantage of views to the creek lines surrounding the precinct.

Strong connectivity to other precincts and the rest of Greater Sydney will occur. The precinct will connect to the surrounding regional road network via an upgraded Elizabeth Drive and new airport ring road(s). New link roads will provide direct connections to the Aerotropolis Core and improved access to the Northern Gateway. Staging of development is important and will be reliant on improved road access and public transport provision, including rapid bus transport along Fifteenth Avenue.

Emerging and future technologies will be embraced through flexible and sustainable infrastructure delivery and network installations incorporated into the public realm. This infrastructure will be adaptable over time to accommodate future changes in technology.

2.4.2 Objectives

- a) Facilitate high-quality and innovative development.
- b) Facilitate a wide variety of employment uses.
- c) Facilitate compact urban development well connected to functional, green, private open spaces.
- d) Allow for the successful implementation and integration of the blue-green grid for the Western Parkland City.
- e) Protect the operations of the Airport, including 24-hour operations, and provides appropriate protections for the community.
- f) Encourage the location of enabling land uses that will support the development and construction of the Aerotropolis and transition to permanent employment generating land uses over time.
- g) Require buildings to integrate with creek lines to improve the amenity for workers.
- h) Built form to have a high level of visual interest utilising passive elements that mitigate climatic factors including increased solar gain.
- i) Provide safe, activated, interesting and healthy streets with pedestrian, cycle and public transport movements prioritised.
- j) Innovative development embraces and promotes new and emerging technologies and utility provision.
- k) Support and integrate sustainable energy, waste and water as well as a circular economy into development and operations.

- l) Achieve high levels of water retention in the landscape to achieve healthy waterways, facilitate and support effective flood mitigation.
- m) Ensure that design minimises energy and optimises water management providing pathways to net zero emissions and enhancement of environment across the entire Aerotropolis.

Note: As precinct planning is completed for each precinct, performance outcomes and benchmark solutions will be provided in Phase 2 of the DCP. In the event of an inconsistency between a precinct specific provisions contained in chapter 2 and other general provisions contained throughout the DCP, the precinct specific provisions contained in chapter 2 prevail.

2.5 Agribusiness Precinct

2.5.1 Vision Statement

An Agribusiness Precinct comparable with international benchmark precincts will be located on the western edge of the Airport creating a fresh food and value-added food production hub where goods can be rapidly delivered from farm gate to the national and international market.

The precinct will maintain a landscape led approach to development, building on the existing topography and natural features in the design of the precinct. High quality public open spaces will be provided in the precinct, and areas of biodiversity significance will be protected and enhanced. The Agribusiness Precinct will start with and connect to Country.

The precinct will build on existing, successful agricultural operations on these lands and develop new agricultural and agribusiness opportunities whilst protecting and embracing important vegetation within the landscape. The precinct will capitalise on its excellent connections to road infrastructure – including the Northern Road alignment and Outer Sydney Orbital, and proximity to the Airport, including the land side to air side logistics and freight facilities of the Airport.

The precinct will allow for the development of integrated food and supply chain related industries particularly those that rely on the skills of the growing population in the Western Parkland City. These industries will generate employment opportunities in high technology agriculture that will support local communities in the future with customer-centric digitally enhanced systems, processes and platforms to enable rapid distribution connections to the broader freight chain in Greater Sydney.

This high technology precinct will drive opportunities for education and tourism. Being located within the Sydney basin and adjacent to an international airport will enable visitors locally, domestically and globally to come and learn some of the cutting-edge processes occurring in the agriculture and agribusiness industry in Western Sydney. Similar state-of-the-art agricultural precincts around the world have utilised tourism both to increase their ability to capture visitation, while driving educational opportunities and creating an additional source of income. Buildings will meet world standards in energy efficient design.

It is envisaged that an agriport will be established within the precinct southwest of the Airport, providing for the movement and storage of agricultural commodities through an innovative multi-modal supply chain solution for Greater Sydney, NSW and Australia, adjacent to the freight and logistics precinct on Airport land.

Development within the precinct will include uses that will benefit from opportunities for national and international trade. These uses will include:

- world-leading integrated intensive production enabling the intensive production and value-adding of sustainable, high-quality fresh produce and pre-prepared meals and through circular economy principles that integrate food, energy, water and waste solutions;
- a fresh food hub which will bring a complementary, diversified and expanded fresh food marketplace to the Western Parkland City, that will provide its residents with access to healthy fresh food and becoming a major distribution centre for fresh produce to domestic and export markets;
- state-of-the-art integrated logistics creating land/air side linkages and a fully digital supply chain solution for the Airport, Aerotropolis, Sydney and the regions providing safe, secure and seamless connectivity for freight movements;
- value-added food and pharma industries to enable processing and manufacturing businesses to uplift value by shifting from a commodity focused approach to a value-added sector approach;
- a proposed Australian Centre of Excellence in food innovation will create an industry-led national powerhouse in food science, technology, engineering and mathematics (Food-STEM); and
- commercial and retail development ancillary to agriculture and agribusiness.

The intensive agribusiness hub will be designed with consideration of airport operational safeguarding and landscape considerations. Wildlife can physically impact aircraft, particularly during take-off and landing. Land uses and/or embellishments that could attract wildlife must be considered in the context of airspace safety. This could affect the location of dams and other permanent water bodies, wastewater treatment facilities, landscaping treatments and building/site design.

Access to water (including recycled water), sewerage, drainage, power, gas and telecommunications is important to the success of this precinct. The advantageous location of this precinct presents unique opportunities for a circular economy, as it will draw on the population of the Western Parkland City for employment, as well as provide a food bowl for this region, state, Australia and internationally. Subject to addressing airport safeguarding requirements, the precinct presents possibilities of significant value, including energy generation and smart grid distribution; innovative off-grid energy solutions; recycled water use; and opportunities for renewables and waste solutions. The benefits generated by this precinct will drive benefits for the Western Parkland City through employment and food production. Innovative utility provision will be encouraged.

Existing agricultural lands within this precinct will be retained and further developed in conjunction with the objectives of this precinct. Some general employment uses may be considered to the north of Elizabeth Drive. New residential development will only be appropriate if ancillary to agriculture and where not located within the ANEC/ANEF 20 or above contour.

The transition of land from its current land uses will gradually occur over the next 20 to 30 years. Precinct planning is to make provision to address the transition and management of agricultural land uses and ensure that adequate buffers are provided between incompatible uses in the interim to manage potential conflicts that may arise, for example the impact that noise, odour and farm chemicals and amenity. Development within the Agribusiness Precinct will need to address airport safeguarding requirements.

Luddenham Village will be integrated into the Aerotropolis by acting as a vital link between the Airport and this agribusiness precinct. The Village will provide support services to the workers and residents within the precinct.

2.5.2 Objectives

- a) Provide a world class agribusiness precinct that will deliver fresh and value-added Australian food production from farm gate to the global market.
- b) Provide an integrated intensive production and state-of-the-art integrated logistics hub to deliver a multi modal supply chain solution for Greater Sydney, NSW and Australia.
- c) Accommodate agricultural value-added industries and freight and logistics facilities that benefit from access to the Outer Sydney Orbital and air-side access to the Airport.
- d) Integrate sustainable energy, waste and water as well as a circular economy into development and operations.
- e) Allow for the successful implementation of the blue-green grid for the Western Parkland City.
- f) Incorporate the values of Aboriginal people of Western Sydney into building design and landscaping.
- g) Luddenham Village will provide local services supporting the precinct.
- h) Encourage education opportunities related to agriculture and agribusiness.
- i) Embrace tourism opportunities presented by the development of the Airport.
- j) Ensure development of the precinct in a logical and staged manner.
- k) Innovative development embraces and promotes new and emerging technologies.
- l) Protect the operations of the Airport, including 24-hour operations and provide appropriate protections for the community.
- m) Achieve high levels of water retention in the landscape to achieve healthy waterways, facilitate and support effective flood mitigation.
- n) Ensure that design minimises energy and optimises water management providing pathways to net zero emissions and enhancement of environment across the entire Aerotropolis.

Note: As precinct planning is completed for each precinct, performance outcomes and benchmark solutions will be provided in Phase 2 of the DCP. In the event of an inconsistency between a precinct specific provisions contained in chapter 2 and other general provisions contained throughout the DCP, the precinct specific provisions contained in chapter 2 prevail.

3 Natural Environment

Many different types of landforms make up Western Sydney's topography. The Sydney Basin Bioregion lies on the east coast and covers a large part of the catchments of the Hawkesbury-Nepean, Hunter and Shoalhaven river systems. It consists of a geological basin filled with near horizontal sedimentary rocks (primarily sandstones and shales) of Permian to Triassic age that overlie older basement rocks of the Lachlan Fold Belt and the New England craton. Erosion over time has created a landscape of ranging from broad plains to dissected plateaux of deep, steep-sided gorges and relatively flat ridges across which an east-west rainfall gradient and differences in soil determine the vegetation, with a coastal rain shadow valley along the Nepean River.

This landscape is dominated by eucalypt-dominated forests and woodlands and sclerophyll heaths with occasional rainforests in the more protected locations and riparian gallery forests along the main watercourses.

At a smaller scale, many interesting landscape features are present which are important for local microclimates. The drainage patterns influence the habitat for many species.

3.1 Biodiversity

Biodiversity or 'biological diversity' includes the variety and variability within and among living organisms, and the ecological complexes in which they occur. It encompasses multiple levels of organisation, including genes, species, populations, communities, ecosystems and the physical, chemical and ecological relationships within and between them. Planning for the Aerotropolis is to be consistent with the Western Parkland City landscape led approach.

Protecting Biodiversity

Western Sydney is home to some of the last remaining critically endangered plant communities on the Cumberland Plain as well as other threatened flora and fauna. This vegetation and its location within the Aerotropolis have been identified via a number of biodiversity conservation programs including the Biodiversity Certification and Strategic Assessment programs that presently exist under *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* and land identified in the draft *Cumberland Plain Conservation Plan (CPCP)*, which is anticipated to be finalised in 2020.

Biodiversity conservation plans provide a landscape scale approach to protecting biodiversity upfront in the planning system. These plans are designed to improve ecological resilience and function over the long term. When an area of land is biocertified, it switches off the need for a site-by-site assessment of biodiversity impacts when development applications are made under the EP&A Act, but only if site proposals comply with any relevant biodiversity measures.

3.1.1 Objectives

- a) Avoid, minimise and mitigate impacts to biodiversity from future development.
- b) Enhance landscape connectivity through conservation and restoration of native vegetation, wildlife habitat and migration corridors to enable plant and animal communities to survive in the long term, whilst not conflicting with aviation safety.
- c) Improve the biodiversity and ecological values of the area by addressing indirect and prescribed impacts across the Aerotropolis.
- d) Ensure ecological function of the landscape is maintained to provide benefits to the natural and human environment.

- e) Manage weeds and pests in strategic locations to reduce threats to biodiversity.
- f) Ensure construction and operational works comply with best practice standards.

3.1.2 Performance Outcomes

PO1	Human-induced disturbances to biodiversity at urban interfaces are minimised.
PO2	Impacts to biodiversity such as vegetation disturbance are avoided or minimised on land identified for conservation, land avoided from development due to biodiversity values or on land that is part of a green infrastructure network within the Aerotropolis.
PO3	Landscape and urban design features complement biodiversity values.
PO4	Native vegetation is retained in open space networks and the wider green infrastructure system.
PO5	Wildlife corridors are protected and enhanced to facilitate the connected movement of native animals through the landscape and increase habitat connectivity. Native vegetation is also maintained and improved in wildlife corridors.
PO6	Riparian corridors and aquatic habitats are protected and enhanced to facilitate the movement of terrestrial and aquatic species.
PO7	Habitat features are protected, enhanced and retained to maintain and/or improve populations of threatened, vulnerable and endangered species.
PO8	Ongoing and indirect impacts arising from development on threatened species and ecological communities are mitigated.
PO9	Development responds to landscape to protect natural contours, drainage and vegetation.

3.2 Native Vegetation

This section provides detail on the requirement for development within the Aerotropolis to achieve and enhance native vegetation communities.

3.2.1 Objectives

- a) Conserve, manage and enhance the remaining native vegetation, including along ridgelines, to increase habitat and tree canopy cover within the Aerotropolis.
- b) Retain and protect native vegetation areas and provide for the improved management of remnant native vegetation communities with a size and configuration which are able to survive and develop in the long term.
- c) Ensure that native vegetation contributes to the character and amenity of Aerotropolis.

3.2.2 Performance Outcomes

PO1	Native vegetation communities, significant tree habitat and canopy are protected and enhanced.
PO2	Ongoing and indirect impacts arising from development on native vegetation are mitigated.
PO3	Native vegetation and tree canopy within open space areas are maintained and enhanced.

3.3 Waterway Health

Waterways and Riparian Areas

Freshwater waterways are important features of Western Sydney and riparian areas are the interface between land-based and waterway ecosystems. NSW Office of Water defines a riparian corridor as *“a transition zone between the land, also known as the terrestrial environment, and the river or watercourse or aquatic environment”*.

Riparian corridors provide a variety of functions within urban landscapes. They play a major role in bank stabilisation, reducing erosion scour and sedimentation problems within rivers and creeks. Vegetated areas along the creek lines function as ‘buffer zones’ to surrounding land and help filter nutrients, pollutants and sediments before they reach the creek itself and degrade the quality of water flowing throughout the Aerotropolis.

Riparian vegetation also provides distinct habitat resources for aquatic and terrestrial species and essential linkages that facilitate the movement of terrestrial flora and fauna between larger areas of habitat. Riparian areas generally support a higher diversity and density of flora and fauna. In the Cumberland landscape these riparian areas may represent the main vegetation community patches left in the landscape so are vital for connectivity.

The importance of riparian areas is recognised in State legislation such as the *Water Management Act 2000* (WM Act). Under the *EP&A Act*, development within 40m of a watercourse is Integrated Development and requires approval under the WM Act. Under the *Water Management (General) Regulation 2018* hydro line spatial data is a dataset of mapped watercourses and waterbodies in NSW and assessed in line with the WM Act.

The Aerotropolis contains the Wianamatta-South Creek system with many important riparian areas. These creeks and supporting riparian areas support some rare and important species listed under the *Fisheries Management Act 1994*.

3.3.1 Objectives

- Protect, maintain and restore the ecological condition of aquatic systems (including but not limited to wetlands and riparian lands) over time.
- Retain and restore native vegetation to promote aquatic ecosystems functioning.
- Ensure that waterways are protected in the design and management of the stormwater and wastewater management systems.

- d) Effectively manage indirect and ongoing impacts of development waterways to ensure established water quality and waterway health values are achieved and maintained.

3.3.2 Performance Outcomes

PO1	Waterway values are protected and enhanced through risk-based approaches that mitigate development impacts. * *Risk-based framework for considering waterway health outcomes in strategic land-use planning decisions.
PO2	Where Key Fish Habitat occurs, proposed development incorporates the current policies for fish friendly instream structures and bridges (e.g. Fish Passage Requirements for Waterway Crossings).
PO3	Proposed development demonstrates that stormwater management practices and infrastructure achieve stormwater quality and flow management targets.

3.4 Stormwater and Water Sensitive Urban Design

Stormwater results from an excess of rainwater which falls onto roads, roofs, gardens and parks in such volumes that it drains into local waterways. Urbanisation of the Wianamatta-South Creek Catchment will continue to have a significant impact on the health of the waterways and riparian corridors, which can threaten ecological, social, cultural and economic values and uses of waterways.

3.4.1 Objectives

- Avoid or minimise the adverse impacts of urban stormwater on the land on which development is to be carried out, adjoining properties, riparian land, native vegetation, waterways, groundwater dependent ecosystems and groundwater systems.
- Protect and enhance water quality, by improving the quality of stormwater runoff from urban catchments to help achieve local water quality and health objectives.
- Integrate stormwater management systems into the landscape in a manner that provides multiple benefits, including water quality protection, stormwater retention and detention, public open space, habitat improvement and recreational and visual amenity.

3.4.2 Performance Outcomes

PO1	Impervious areas directly connected to the stormwater system shall be minimised. Runoff from impervious areas such as roofs, driveways and rainwater tank overflows shall be directed onto grass and other landscaped areas designed to accept such flows.
PO2	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.

PO3	Any stormwater harvesting approaches will need to be consistent with a regional wastewater approach and the precinct water balance.
PO4	All stormwater treatment measures need to be designed with consideration for ongoing operation and maintenance.

4 Risk Minimisation and Management

4.1 Airport Safeguarding

4.1.1 Objectives

- a) Safeguard the future operations of the Airport, including 24-hour operations and provide appropriate protections for the surrounding community.
- b) Ensure compatible development that exhibits design excellence occurs on surrounding land.
- c) Development does not introduce or intensify noise sensitive uses.

4.1.2 Performance Outcomes

Heights

PO1	The height of buildings, structures, landscaping and cranes do not impact on the operations of the Airport or create a hazard to the safe navigation of aircraft.
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Noise

PO2	Development is appropriately located and designed to prevent or minimise adverse impacts from aircraft noise.
PO3	Development is constructed in accordance with Australian Standards AS2021 – Acoustics Noise Intrusion – Building Siting and Construction.
PO4	Residential development must be located in accordance with the Aerotropolis SEPP and associated mapping.
PO5	Renovations to existing houses or extensions within ANEC/ANEF 20 and above must be constructed in accordance with Australian Standard AS2021 – Acoustics – Aircraft Noise Intrusion – Building Siting and Construction.

Protected Operational Airspace

PO6	Development does not create a permanent or temporary physical or transient obstruction in the protected operational airspace of the Airport and complies with the Airports Act 1996 and Airports (Protection of Airspace) Regulations 1996.
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Lighting

PO7	Development does not impact on the operational aspects of the Airport with regard to light emission and reflective surfaces.
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Airport Public Safety Areas

PO8	Development in public safety areas does not increase the risk to life or property.
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Emissions

PO9	Emissions do not create air turbulence, or impact visibility or engine operation in the operational airspace of the Airport.
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Wildlife Hazards

PO10	Development does not cause wildlife to create a safety hazard in the operational airspace of the Airport.
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Communications, Navigation and Surveillance Facilities

PO11	Any development in the mapped building restricted area must include an aviation impact assessment.
PO12	Development must not impact upon communication, navigation and surveillance systems.

4.2 Flooding

4.2.1 Objectives

- a) Minimise the flood risk to life and property.
- b) Ensure development does not adversely impact flood functions.
- c) Provide protection of the natural environment.
- d) Floodplains are to be used for amenity and recreation opportunities as well as flood function, where appropriate.
- e) Ensure post-development flows do not exceed pre-development flows into and through the Pipelines Corridor.

4.2.2 Performance Outcomes

PO1	Ensure the siting and layout of development responds to flooding affectation and maintains personal safety at all times. The site layout and ultimate footprint of the development should be compatible with the flood risk. This includes applying subdivision design for greater resilience to flooding.
PO2	Manage the passage of floodwaters through the floodplain.

PO3	Avoid intensification and new development on land subject to the 1 in 100-year flood event.
PO4	Fill should not reduce the capacity of the floodplain.
PO5	Fill should remain stable and not be affected by erosion and scour.
PO6	Development must not change the flood characteristics of the area, and is to consider cumulative impacts of development, outside the site including: a) loss of flood storage; b) loss of or changes to flood flow paths; c) acceleration or obstruction of flood flows; d) increase in the depth, duration or velocity of flood waters; or e) any reduction in flood warning times elsewhere on the floodplain.
PO7	Prevent intensification of inappropriate use of land within high flood risk areas or floodways.
PO8	Ensure development is sited to enable vehicular egress in the event of a flood.
PO9	Ensure public safety and the environment are not adversely affected by the detrimental impacts of floodwater on hazardous materials manufactured or stored in bulk.
PO10	Ensure essential services infrastructure within a site (including electricity, gas, water supply, wastewater and telecommunications) maintains its function during and immediately after flood events.
PO11	Development must be designed and constructed so that it remains structurally sound for the life of the development, considering the flood events likely to impact the structure, foundations/footing system and external walls. Development must be designed to prevent flotation, collapse or permanent lateral movement (as per ASCE24-14).
PO12	Flooding and drainage characteristics upstream or downstream of the site are not worsened by development, including any proposed works on natural creeks. The development is to also 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 river bank/watercourse.
PO13	Fencing must be designed and constructed so that it does not impede and/or direct the flow of floodwaters, add debris to floodwaters or increase flood affectation on surrounding land.
PO14	Development is to be in accordance with NSW Governments <i>Flood Prone Land Policy and Floodplain Development Manual</i> .
PO15	Post-development flows that enter or are conveyed across the Pipelines corridor must be equal to or less than the pre-development flows for each storm event up to and including 1% AEP event.

PO16	Developments need to consider the cumulative impact of flooding risk on the Warragamba Pipelines Corridor and the need to protect this infrastructure from flooding impacts.
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4.3 Bushfire Hazard Management

4.3.1 Objectives

- a) Protect life, property and community assets from bushfires.
- b) Minimise the impacts of development in relation to bushfires.
- c) Assist government agencies, land management authorities and landholders in developing fire management practices.

4.3.2 Performance Outcomes

PO1	Development is provided with a safely located, freely accessible and adequate water supply for firefighting purposes.
PO2	Development uses adequate buffers and Asset Protection Zones and avoids areas of medium and high bushfire risk.
PO3	Siting of buildings, lot design and design of development provides for the safety of people and property by mitigating the bushfire risk.
PO4	The manufacture or storage of hazardous materials in bulk must consider the impacts of bushfire on public safety and the environment.
PO5	For development that will result in multiple buildings or lots, roads and access are designed to mitigate against bushfire hazard by ensuring adequate access for: a) firefighting and other emergency vehicles; and b) the evacuation of people in the event of an emergency.
PO6	For development that will result in multiple buildings or lots, fire breaks are provided that: a) adequately and effectively separate the development site from surrounding vegetation to mitigate against bushfire hazard; b) have sufficient width to enable continuous access for firefighting and other emergency vehicles, residents and equipment; and c) are in secure tenure and are maintained.
PO7	Development is to be in accordance with <i>Rural Fires Act 1997</i> , <i>Planning for Bushfire Protection 2006</i> and <i>Planning for Bush Fire Protection Pre-Release 2018</i> .
PO8	Ensure more than one evacuation route is provided for any lots affected by bushfire risk. The two (or more) access paths should not converge at any point, and would ideally head in opposite directions so as to minimise the likelihood that both are severed during a fire.

4.4 Odour

4.4.1 Objectives

- a) Manage and mitigate the impacts of development in relation to odour.

4.4.2 Performance Outcomes

PO1	Development does not unreasonably affect the amenity and environmental quality of the locality, nearby residential premises, sensitive uses or public spaces due to odour impacts.
PO2	Residential development and other sensitive land uses do not encroach upon existing or approved uses that may impact upon the amenity of those proposed uses in terms of odour nuisance.
PO3	Putrescibles waste generated as a result of the development does not cause odour nuisance issues for adjoining land uses.
PO4	Construction work is undertaken in a manner which does not cause unacceptable impacts on surrounding areas as a result of odour.
PO5	Development is to be in accordance with <i>Technical framework: Assessment and management of odour from stationary sources in NSW</i> .

4.5 Noise and Vibration

4.5.1 Objectives

- a) Manage and mitigate the impacts of development in relation to noise and vibration.

4.5.2 Performance Outcomes

PO1	The generation of noise and vibration from the development does not cause environmental harm or nuisance to adjoining properties or other noise sensitive land uses. Development should: a) be located in appropriate areas; b) propose best practice design and noise attenuation measures; and c) propose operational practices that will minimise noise nuisance for adjoining sensitive land uses.
PO2	Noise sensitive land uses are located to avoid adverse impacts from transport corridors or noise generating developments (e.g. the Airport, entertainment venues, child care centres or industrial zones).
PO3	Mechanical plant and equipment do not adversely impact on the acoustic and vibration amenity of adjoining sites.

PO4	The construction phase of the development does not cause adverse acoustic impacts on surrounding sensitive uses/receivers.
PO5	Industrial development is to be in accordance with <i>Protection of the Environment Operations Act 1997</i> and <i>NSW Industrial Noise Policy 2000</i> .

4.6 Air Quality

4.6.1 Objectives

- a) Manage and mitigate the impacts of development in relation to air quality.
- b) To protect air quality for sensitive uses, including adjoining busy roads and rail corridors.
- c) For development located in or adjacent to road corridors and intersections, to incorporate site layout and building design features that address higher level of air emissions generally found in transport corridors.

4.6.2 Performance Outcomes

PO1	Air emissions resulting from development, including the siting of vents and stacks, do not cause environmental harm or nuisance, and surrounding land uses are not exposed to concentrated levels of air contaminants.
PO2	Proposed sensitive land uses are adequately separated from existing lawful land uses that produce air emissions.
PO3	Development is to be in accordance with <i>Protection of the Environment Operations Act 1997</i> and other Environmental Protection Authority guidelines for air quality.

4.7 Acid Sulphate Soils and Salinity

4.7.1 Objectives

- a) Manage and mitigate the impacts of development in relation to acid sulphate soils and salinity.

4.7.2 Performance Outcomes

PO1	Accurately identify the extent and location of acid sulphate and high salinity soils.
PO2	Development avoids disturbing acid sulphate and high salinity soils or is managed to prevent the release of acid and metal contaminants.
PO3	No environmental harm, or damage to physical infrastructure is caused as a result of exposure of acid sulphate soils or potential acid sulphate soils.

PO4	Development is designed to minimise the exposure of high salinity soils and to avoid the impacts of soil or groundwater salinity on building and infrastructure.
PO5	Development does not significantly disrupt natural soil, increase water infiltration to soil and subsurface groundwater systems, spread or increase existing urban salinity or result in increased salt loads in waterways, wetlands drainage lines or soils.

4.8 Contaminated Land

4.8.1 Objectives

- a) Manage and mitigate the impacts of development in relation to contaminated land.
- b) Ensure all land is suitable for its intended use.

4.8.2 Performance Outcomes

PO1	Development or changes of land use are not adversely impacted by contaminated land.
PO2	Development is located and designed to ensure that users and nearby sensitive land uses are not exposed to unacceptable levels of contaminants.
PO3	Any landfill utilises appropriate materials that do not result in pollution or contamination of land or water.
PO4	Development is to be in accordance with <i>Contaminated Land Management Act 1997</i> and <i>State Environmental Planning Policy 55 – Remediation of Land</i> .

4.9 Land Stability

4.9.1 Objectives

- a) Manage and mitigate landslide risk to maintain the safety of people, property and infrastructure.
- b) Retain scenic qualities, landscape character and natural topography.
- c) Ensure that development responds to the site conditions, excavation is minimised, and the site is properly retained.

4.9.2 Performance Outcomes

PO1	Development on sloping or potentially unstable sites maintains the safety of people, property and infrastructure from the risk of landslide.
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PO2	Public safety and the environment are not adversely affected by the impacts of landslide on hazardous material made or stored on the subject site.
PO3	The siting, form, bulk, scale and design, of development minimises impacts on the natural landform and landscape character.
PO4	Development includes measures that ensure: a) the long-term stability of the development site; b) the need for significant earthworks is avoided; c) landslide hazards are avoided; and d) the risk of erosion is avoided.
PO5	Vegetation clearing is avoided and additional planting is undertaken to strengthen landslide risk areas.

5 General Provisions

5.1 Character and Place

5.1.1 Urban Design

5.1.1.1 Objectives

- a) Ensure development responds to the existing topography, connects to Country and implements the Western Parkland City – Landscape Led Approach.
- b) Development is designed for effective waste and resource recovery by allowing for waste services to occur in a safe, seamless and timely manner.
- c) Provide a high-quality connected public domain which is attractive, safe, functional, activated, accessible, sustainable, and culturally diverse.
- d) Provide for a range of integrated, functional, attractive and accessible open space and recreation areas.
- e) Locate compact and higher density development close to public transport.
- f) Ensure high levels of permeability in order to support walking and access to public transport.
- g) Systems are designed to be innovative and maximise waste separation and resource recovery. Best practice waste management collective systems and technologies are supported, where appropriate.

5.1.1.2 Performance Outcomes

Western Parkland City – Landscape Led Approach

PO1	Ensure the layout of the urban structure integrates, protects and appropriately responds to the land form and water systems.
PO2	Ensure that urban development retains water in the landscape using both public and private landscape spaces including streets to provide a high level of liveability.
PO3	Develop a green infrastructure framework including high-quality open space and increased tree canopy, structured around the Wianamatta-South Creek green spine and tributaries, biodiversity land to be conserved, remnant vegetation, water features, habitat linkages across ridges to link catchments, cultural values and view lines.
PO4	Align active and public transport networks within an easy walk from urban development and landscape amenity to encourage social connectivity.
PO5	Orient urban development towards landscape and transport amenity, developing fine grain walkable neighbourhoods with creek-oriented schools, community facilities and hubs.

Public Domain

PO6	Development contributes to the amenity, activity, vibrancy, diversity and safety of streets and the public domain through the day and night.
PO7	Development protects sunlight to parks, streets and public domain.
PO8	Provide public domain that prioritise pedestrians, cycling and public transit use, with public open space located within walking distance of local centres, housing and jobs consistent with the Premiers Priorities.
PO9	Development protects and shares high-quality views to significant scenic landscapes, particularly ridges, creek lines and riparian corridors.
PO10	Provide increased tree canopy that is consistent with Greener Places, integrates with built form, enhances scenic landscapes and provides sufficient shade and amenity in centres.
PO11	Provide high-quality landscaped open space that is green, integrated, connected as part of the green grid, multi-functional, accessible and of sufficient size to enable recreational and passive activities.
PO12	Implement a sustainable landscape maintenance and management plan.
PO13	Co-locate open space with other community assets to enhance the local character and retain significant items of cultural or heritage significance.
PO14	Ensure that public art is an integrated and cohesive part of new development.
PO15	Ensure facilities provided for waste and recycling services in developments and public places do not impact on amenity for residents, neighbours and the public such as visually unpleasant waste storage areas, noise, traffic and odours from waste collection services.

Urban Development

PO16	Provide a range of urban typologies which minimises urban heat island effects and appropriately respond to the urban context and topography of the area including stormwater and rainwater retention and re-use, recycling and efficient use.
PO17	Provide a fine grain compact urban form including block sizes which will improve permeability, access to public transport and maximise opportunities for green space.
PO18	Development enables integrated water management, including stormwater and rainwater retention and re-use, recycling and efficient use. It is to be guided by an integrated water management plan.
PO19	Ensure waste and recycling collection infrastructure is integrated within developments and where possible across separate developments while addressing storage, safety, efficiency, accessibility to waste, reuse and recycling services without compromising the safety and amenity of the public domain.

Interface with Transport and Surrounding Land Uses

PO20	Encourage vibrant, interactive, safe and accessible places in the centres surrounding the metro stations, transport nodes and bus linkages, with interfacing land use mix, density and development typologies achieving appropriate outcomes within station and public transport walking catchments.
PO21	Provide suitable interfaces between industrial areas, trade gateways, intermodal facilities, transport corridors and surrounding land uses.
PO22	Limit incompatible uses in areas exposed to urban hazards (including but not limited to uses including intense freight, industrial, rural and infrastructure activities).

5.1.2 Street Design and Network Layout

5.1.2.1 Objectives

- Design streets which are attractive, green, sustainable, safe, functional, adaptable, and integrated, that support successful places and strong communities through the allocation of street space to achieve the local place vision and desired outcomes, prioritising pedestrian amenity.
- Reflect the important and varied role streets play in urban environments; as public spaces, places for social interaction, service provision, movement connections, water and flood management, biodiversity and environmental functions.
- Prioritise public transport infrastructure provision to deliver and support the 30-minute city and meet current and future demand.
- Prioritise healthy living, including design to mitigate and adapt to heat, and design for active transport.

5.1.2.2 Performance Outcomes

Street Design

PO1	Provide streets which are attractive, functional and safe for all street users at all times of the day.
PO2	Prioritise pedestrian, cycle and public transport movements.
PO3	Contribute to the amenity of the place and integrate with surrounding land use and adjoining built form.
PO4	Increase opportunities for community, social and recreational uses of street space.
PO5	All streets should be green, shaded, landscaped and provide an urban tree canopy which does not cause wildlife to create a safety hazard in the operational airspace of the Airport.

PO6	All streets must provide sufficient space for footpaths, street trees, planting, utility services, stormwater drainage and filtration, and lighting/multi-purpose poles.
PO7	Carriageway widths and impervious road surfaces (vehicular and pedestrian) should be minimised.
PO8	Alternatives to high heat absorbing and reradiating materials (such as asphalt) should be used where possible.
PO9	Provide minimum appropriate levels of on street car parking, to support the adjacent land use. Parking provided should be prioritised towards ride and car sharing schemes with the aim of designing streets that are suitable for walking and cycling and close to amenities.
PO10	Streets are designed to be resilient to natural and man-made hazards.
PO11	Street design is to consider the Western Sydney Street Design Guidelines.
PO12	All streets providing access to waste and recycling services must be designed to accommodate the safe travel and manoeuvring of waste collection vehicles.

Street Networks

PO13	Street networks must be safe system compliant and should be integrated, accessible, legible and permeable, and prioritise walking, cycling via separated cycleways and public transport.
PO14	Street layouts should respond to the existing landscape and topography.
PO15	Street networks should provide direct, convenient and comfortable connections through neighbourhoods and centres, and to essential attractions and services.
PO16	Street networks should maximise opportunities to interchange between transport modes and co-locate interchange points with other destinations.
PO17	Development is located on roads that are appropriate for the nature of traffic generated, having regard to the safety and efficiency of the transport network.
PO18	Streets are to be able to adapt to changing modes and innovative and new technologies.
PO19	Development does not compromise the orderly provision and staging of the transport network.
PO20	Water sensitive urban design systems should be integrated in streets to maximise retention and reuse of stormwater to reduce the load on end of pipe infrastructure and minimise downstream impacts on local waterways. Optimise opportunities for innovative urban water management such as passive irrigation of street trees and measures to reduce and/or slow stormwater runoff.
PO21	Street networks, including pedestrian and cycle networks, should reflect the function and role of streets based on the hierarchy of street types, as shown in Table 1 below.

Table 1: Aerotropolis street types, role and modal priorities

Local Street Types	
Local Streets	Slow speed environments within residential neighbourhoods that may encourage community uses and informal sharing of street space between all street users. They provide traffic calming and maximise verge space for street tree planting.
Residential Laneway	Narrow, rear access slow speed environments that discourage vehicular thoroughfare and encourage informal sharing of street space between all street users.
Local Collector	Slow speed streets to and through neighbourhoods. Usually carrying buses and connecting to key local destinations. Generally, consideration of environment and local life predominate, and improved amenity is encouraged over the use of vehicles on these roads.
Mixed Use Street Types	
High Street	Predominantly applicable to commercial and mixed use centres where ground floor building uses require high quality public domain amenity and generous verge space for street activities.
Retail Laneway	Facilitate service, delivery and basement access in commercial and town centres. They also provide an opportunity to incorporate high quality, intimate public spaces that offer a unique variation in the public life of centres.
Industrial Street	Serve residential, commercial, and industrial precincts, with a mix of general traffic, buses, and heavy commercial and industrial vehicles with particular design requirements.
Sub-arterial Road	Higher-order neighbourhood streets, that typically facilitate the connection of the arterial road network to local street networks, although with a greater emphasis on placemaking outcomes, and may still include active transport and pedestrian amenity.

5.1.3 Building Design

5.1.3.1 Objectives

- Provide an attractive, innovative, sustainable and functional built form that achieves the parkland vision through high-quality design and connection to Country.
- Provide well designed active street frontages to ensure activities within buildings can positively contribute to the public domain.
- Deliver high-quality architectural, urban and landscape outcomes as well as a structured process to support high-quality design.

- d) Reduce the opportunity for crime and illegal dumping to be committed through environmental design.
- e) Encourage high-quality public art in the public and private domain.
- f) Ensure buildings are designed to be accessible, maximise solar access, protect privacy, enhance view sharing and provide functional private open space.
- g) Ensure buildings are designed with innovative IWM facilities to enable and encourage people to participate in circular economy activities and water recycling and re-use opportunities.

5.1.3.2 Performance Outcomes

Built Form Principles

PO1	Buildings, site layout and landscaping are designed to care for and connect to Country.
PO2	Provide a diverse range of dwelling and types and sizes to meet a range of household sizes and income needs.
PO3	Provide appropriate heights, massing, articulation and façade treatments.
PO4	Buildings are designed to be accessible.
PO5	Building design positively integrates with the public domain, streets and open space.
PO6	Buildings are designed to minimise carbon output and resources, maximising natural ventilation and light through passive design, solar access, protect privacy, enhance view sharing and maximise internal and external thermal comfort.
PO7	Development is designed to encourage travel by public transport, walking and cycling providing appropriate end of trip facilities.
PO8	Car parking and access, service bays, building plant and structures located and designed to avoid dominating or detracting from pedestrian amenity or streetscape character.
PO9	Provide innovative and environmentally responsible design that achieves energy efficiency, renewable energy outcomes, retains water within the landscape and reduces the urban heat island effect.
PO10	Building massing responds to context including built environment and the public domain including significant land forms and landscape.
PO11	Implement crime prevention through environment design (CPTED) principles into built form and building design.
PO12	Provide well designed waste and recycling facilities in all new developments to ensure waste management services are safe, efficient, cost effective, maximise recycling and reuse, and facilities contribute to the built form and liveability of the community.

Active Frontages

PO13	Provide active uses on ground level frontages to streets and public open spaces in centres which foster casual, social and business interaction.
PO14	All ground floor uses are of high design quality addressing the public domain providing a high level of casual surveillance.
PO15	Provide continuity of ground floor shops along street and lanes and promote outdoor dining areas, with sufficient space for generous tree canopy and awnings.
PO16	Encourage frequent building entries that face and open towards the street and minimise large driveways and servicing on all active frontages.

Public Art

PO17	Ensure that high quality public art is an integrated and cohesive part of new development.
PO18	Recognise former uses through interpretive public art.

Solar access

PO19	Design, orientate and site development to maximise and prioritise solar access to the living areas of dwellings and open spaces and, all other areas of the development.
PO20	Development retains high levels of solar access to the neighbouring properties and the public domain.

Visual and Acoustic Privacy

PO21	New development is designed so that its occupants enjoy high-quality visual and acoustic privacy, whilst not producing adverse privacy impacts for adjoining and nearby properties.
PO22	Development is designed and constructed to minimise noise intrusion from existing and planned transport corridors, including road and rail, and aircraft noise to avoid adverse impacts on amenity for users/residents.
PO23	Noise attenuation measures are compatible with the intended scale, form and character of the area.

Private Open Space

PO24	Common and private open space is sufficient in size and configuration including with respect to context and building typologies.
PO25	Common and private open space is designed and located to maximise solar access and amenity, while also providing opportunities for shading

PO26	Common and private open space is designed to receive a high level of privacy.
PO27	Maximise green private open space include tree canopy, planting and pervious surfaces.

Landscaping

PO28	Preserve and increase the tree canopy cover (with appropriate species) and landscaping to reduce ambient temperatures and urban heat island.
PO29	Promote connection to Country by using Indigenous plant species, where appropriate.
PO30	Maximise pervious surfaces across the site.
PO31	All hard stand surfaces associated with car parking and driveways are to be offset from boundaries and buildings to provide landscaping opportunities, soften the visual impact and provide protection from glare.
PO32	Provide treatments that foster attractive outlooks to and from the public domain, as well as to and from public and private open spaces within the site.
PO33	Implement a sustainable landscape maintenance and management plan.

Design Excellence Processes

PO34	Ensure all building and public domain development addresses NSW Policy objectives for good design as outlined in <i>Better Placed</i> .
PO35	Ensure building and public domain design is in accordance with the relevant design excellence guideline, including where a competitive design or other process may be required and that the process extends into detailed design including materiality and delivery.

5.1.4 Role and Hierarchy of Centres

5.1.4.1 Objectives

- Effectively manage Western Sydney's network of centres and interface with Sydney Metro and other public transport modes.
- Establish new centres – metropolitan, strategic, local and rural towns/villages, as identified in the *Metropolis of Three Cities*.
- All centres to prioritise pedestrian, active transport, and public transport access over private vehicles to promote healthy and active neighbourhoods.
- Ensure that new centres are suitably spaced and provide sufficient services so as to enable walkable communities.

- e) Integrate health and education precincts to support job agglomeration and community infrastructure.
- f) Develop a social and cultural framework to enliven centres and place of gathering.

5.1.4.2 Performance Outcomes

Metropolitan Centres

PO1	Provide access to a large number and range of jobs and services delivering a well-connected city – a 30-minute city.
PO2	Provide a polycentric urban structure across the Aerotropolis, Liverpool, Greater Penrith, and Campbelltown-Macarthur.
PO3	Establish metropolitan centres around Metro/mass transit nodes and highly accessible areas.
PO4	Support creative and cultural uses, where appropriate.

Strategic Centres

PO5	Allow the private sector to decide where and when to invest, consistent with the sequencing of appropriate infrastructure.
PO6	Co-locate a wide mix of land uses, in particular employment including health and education, supported by limited residential development, in appropriate locations.
PO7	Provide high levels of amenity, accessibility within a walkable and cycle friendly environment.
PO8	Establish strategic centres around metro/mass transit nodes and highly accessible areas.

Local Centres

PO9	Establish walkable communities by increasing the level of residential development within walking distance to day-to-day goods and services.
PO10	Provide fine grain urban form with a diversity of commercial spaces, community and public places, and co-location of services and infrastructure.
PO11	Enable connectivity to metropolitan and strategic centres through an accessible and integrated transport (i.e. buses) and road network.

Rural Villages

PO12	Provide a mix of rural industries, local services, tourism and businesses and provide the day-to-day needs of employees and visitors.
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PO13	Encourage growth and intensification of business activity where they maintain or enhance local character.
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5.1.5 Night Time Economy

5.1.5.1 Objectives

- Support a safe, diverse, inclusive, vibrant and accessible night time economy for the Aerotropolis.
- Support the Aerotropolis Core as a 24-hour, global centre for workers, residents and visitors coming to and from the Airport using high quality public and active transport.

5.1.5.2 Performance Outcomes

PO1	Provide a thriving night time economy with diverse options and broad community appeal.
PO2	Night time uses are located in appropriate areas and designed to have minimal adverse impacts on the amenity and safety of patrons, nearby residents and the broader community.
PO3	Night time uses are accessible by appropriate public transport.

5.1.6 Digital Technology

5.1.6.1 Objectives

- Support the Western Parkland City as a connected open data digital city and global innovation hub to improve life of the individual citizen, future populations, businesses and communities.
- Innovative development embraces and promotes new and emerging technologies and utility provision.

5.1.6.2 Performance Outcomes

PO1	Deliver the Western City Digital Action Plan.
PO2	Incorporate enabling infrastructure in all streets and development.
PO3	Ensure coordinated delivery of telecommunications infrastructure and sharing of pits and data exchange facilities between Government, industry and developers.
PO4	Where feasible digital technology is integrated into building design or street furniture.
PO5	Buildings and infrastructure are designed to cater for changing needs and emerging technologies.

5.1.7 Urban Ecology and Sustainability

5.1.7.1 Objectives

- a) Support sustainable management of water in urban areas through intelligent and integrated management of water resources for local greening and cooling.
- b) Support integrated management within urban environments to capture, treat and re-use stormwater and wastewater before it has the chance to pollute and/or degrade our creeks, rivers and riparian vegetation.
- c) Support and implement the vision of the Greater Sydney green grid, through strategically planned, designed and managed green infrastructure that supports healthy, green and sustainable communities and connects communities to the natural environment.
- d) Green infrastructure is to be comprised of a network of green and blue spaces, which include 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.
- e) Minimise the amount of waste generated and waste going to landfill, by designing waste out of developments and implementing circular economy principles within all developments.
- f) Protect, conserve and enhance the biodiversity values of trees and other vegetation in the Aerotropolis and conserve threatened species and ecological communities in nature.
- g) Protect and enhance trees that contribute to the landscape character and scenic qualities.

5.1.7.2 Performance Outcomes

Water Sensitive Urban Design

PO1	Achieve an integrated land use planning approach to the provision of potable and recycled water and the management of wastewater and stormwater.
PO2	Stormwater infrastructure to be designed to have dual functions of water cycle management and recreation/amenity.
PO3	Integrate water into the landscape and urban form to enhance ecological, visual, social, economic and cultural values.

Design for Climate, Urban Heat and Thermal Comfort

PO4	Use cool materials, low-reflectivity roofing and other building materials, streets pavements that are low reflectivity and pervious.
PO5	Building materials used should contribute to internal and external thermal comfort, minimise the necessity for mechanical heating and air conditioning.
PO6	Integrate waterways and recycled water reuse into site design, maximise permeable surfaces, implement innovative solutions to retain water within the landscape.

PO7	Protect, enhance and extend the urban tree canopy. Prioritisation of established, older growth trees.
PO8	Prioritise healthy and resilient living, including targets for internal and external thermal comfort and energy efficiency.

Green Infrastructure

PO9	Provide a comprehensive network of green spaces, natural systems and semi-natural systems that support sustainable communities.
PO10	Preserve high-quality vegetation on ridges to crease an interconnected web of well-located open spaces connected through the Western Parkland City.
PO11	Provide multi-functional connected high-quality active and passive open spaces adjacent to riparian corridors which connect ridges to the Wianamatta-South Creek spine.

Tree Preservation

PO12	New development takes into account existing vegetation in the site planning, design, development, construction and operation of the development.
PO13	Native vegetation which supports habitat for native fauna and biodiversity is protected and enhanced.
PO14	Trees are maintained in an appropriate manner that balances community safety with health, resilience and environmental outcomes.
PO15	Removal of trees in the Aerotropolis must be in accordance with the <i>State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017</i> and <i>Biodiversity Conservation Act 2016</i> .
PO16	All existing mature shade providing trees be retained.

Circular Economy

PO17	Implement circular economy principles as set out in the NSW Circular Economy Policy Statement throughout all lifecycle stages of the development.
PO18	Implement resource recovery, re-use and recycling of waste in all stages of the development including construction and operation.
PO19	Implement innovative waste management storage and collection systems that are healthy, efficient and minimises disruption to amenity.
PO20	Utilise sustainable energy, water and waste systems to encourage a circular economy that improves efficiency and results in low-carbon developments.

5.1.8 Design Requirements for New or Upgraded Waste or Resource Management Facilities

5.1.8.1 Objectives

- a) To ensure new or upgraded Waste or Resource Management Facilities deliver best practice environmental performance controls.

5.1.8.2 Performance Outcomes

PO1	Any wastes received, processed, handled and stockpiled must be undertaken in an enclosed building.
PO2	No waste or finished waste products are to be stored outside of the building to prevent land pollution.
PO3	Outside surfaces must be sealed hardstand or vegetated.
PO4	There is no pollution of waters (including surface and groundwater) except in accordance with an Environment Protection Licence issued under the Protection of the Environment Operations Act 1997.
PO5	Polluted water (including process waters, wash down waters, polluted stormwater or sewage) is captured on the site and directed to reticulated sewer where available or else collected, treated and beneficially reused, where this is safe and practicable to do so and will not harm the environment.
PO6	Bunding is designed and installed in accordance with relevant Australian Standards and the Dangerous Goods Act 1975.
PO7	Emissions do not cause adverse impact upon human health or the environment.
PO8	No offensive odour beyond the boundary of the premises.
PO9	Measures to ensure air quality impacts and dust emissions are prevented from activities from the premises.
PO10	The protection of amenity from adverse impacts due to noise from operations and activities associated with the development.
PO11	Any storage, treatment and disposal of waste is done in accordance with Environment Protection Licencing issued under the Protection of the Environment Operations Act 1997 where required.
PO12	Satisfying the requirements of the NSW Fire and Rescues NSW's Fire safety guideline: Fire safety in waste facilities.
PO13	Demonstrating consistency with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

5.2 Affordable Housing and Housing Diversity

5.2.1 Objectives

- a) Integrate affordable housing as part of all developments with a residential component.
- b) Provide for affordable housing of high quality and amenity, in a size and configuration to meet a diverse range of housing needs.
- c) Establish and maintain a socially diverse residential population representative of all income groups, by providing housing for very-low, low- and medium-income earners.
- d) Attract and accommodate key workers.

5.2.2 Performance Outcomes

PO1	Development provides affordable housing with a residential component at a rate as per affordable rental housing targets.
PO2	Ensure affordable housing is retained for perpetuity, unless it can be offset locally.
PO3	Ensure housing diversity, to address transitional local demographics changes and needs, including the provision of smaller dwellings, seniors housing, key workers housing and student accommodation.
PO4	Allow for build to rent and innovative housing delivery models.
PO5	Integrate (by keeping the same standard of external appearance) and by providing innovative solutions of affordable housing into regular residential development.

5.3 Services and Utilities

5.3.1 Objectives

- a) Ensure development occurs in a logical and staged manner in line with surrounding sequence of utility services/infrastructure provision.
- b) Ensure appropriate utilities and services are planned and delivered to meet future demand.
- c) Protect existing utilities infrastructure, including the Warragamba pipeline corridor.
- d) Contribute to and supports a circular economy.
- e) Ensure utilities and services are undertaken in a manner that is safe, efficient, cost effective and does not negatively impact on liveability and the environment.

5.3.2 Performance Outcomes

PO1	Adequate provision of utility supply/services including, water, wastewater, recycled water, energy, waste and resource recovery, and telecommunications for future needs of the intended use.
PO2	Development near utility services: a) does not adversely affect the function of the service; b) does not place an additional load on the service; c) protects the infrastructure from physical damage; and d) allows ongoing necessary access for maintenance purposes.
PO3	Infrastructure is integrated with and efficiently extends existing networks and allows for resource recovery hubs and co-location of similar users. This includes enabling private sector utility services solutions.
PO4	Infrastructure is designed and located to integrate with building design, prevent illegal access and/or connection and not be visible from the public domain or designed and landscaped to make a positive contribution to the public domain.
PO5	Embrace and install smart innovative technologies.
PO6	Provide the necessary utilities to support community events and activities.

5.4 Access and Carparking

5.4.1 Objectives

- a) Ensure development makes appropriate provision for transport, access, servicing and end of trip facilities to meet the needs of development, reduce the demand for private car parking over time and facilitate, an environmentally sustainable transport network.

5.4.2 Performance Outcomes

Access

PO1	Site design is to prioritise the safe and convenient movement of pedestrians and cyclists over vehicle movements in line with envisaged movement function, having regard to sight lines, legibility, weather protection, the needs of children, elderly and people with disabilities.
PO2	Vehicle access arrangements and queuing areas are appropriate and minimise any adverse impact on infrastructure, road networks, safety, adjoining properties, amenity and street trees.
PO3	Where required, safe and convenient set-down and pick-up areas are to be provided for passengers.

Car Parking

PO4	To reduce the number of vehicle movements through high pedestrian and cycle precincts and streets, alternatives to onsite carparking provisions will be considered, especially in town centres. Where on-site carparking is provided, it should: a) be limited; b) prioritise ride and car sharing schemes; c) be designed so that it can transition to alternative uses over time; and d) consider the provision of electric vehicle charging stations on-site.
PO5	Alternatives to impermeable surfaces are to be encouraged in carparking and driveway design.
PO6	Car parking areas, pathways and other elements of transport network infrastructure are designed to enhance public safety by discouraging crime and anti-social behaviour.
PO7	Any part of the parking area designated as a vehicle cleaning or repair area is designed and constructed to avoid adverse impact on water quality or Council's wastewater or stormwater infrastructure.

Servicing

PO8	Provision is made for the on-site loading, unloading, manoeuvring and access by service and refuse vehicles that: a) is adequate to meet the demands generated by the development; b) is able to accommodate the design service vehicle requirements; c) does not unduly impede vehicular, cyclist and pedestrian safety and convenience within the site. d) does not adversely impact amenity, and e) does not dominate the road frontage or detract from streetscape character.
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6 Heritage and Cultural Conservation

Heritage planning aims to ensure that the significant elements of the past are appropriately managed and respected by new development. Heritage conservation does not preclude change but rather responds to different constraints and opportunities.

6.1 Heritage Items

Development in the vicinity of a heritage item can have an impact upon the heritage significance of the item. The determination of the setting of a heritage item should consider the historical property boundaries, significant vegetation and landscaping, archaeological features, and significant views to and from the property.

6.1.1 Objectives

- a) Ensure that development in the vicinity of heritage items is designed and sited to protect the heritage significance of the item and its setting.
- b) Ensure that the development of land or a building in the vicinity of a heritage item is undertaken in a manner that complements the heritage significance of the site or area.

6.1.2 Performance Outcomes

PO1	Encourage the retention of existing heritage items and their significant elements.
PO2	Ensure development is based on the understanding and conservation of the heritage significance of the item, being sympathetic and respectful to the value of heritage places and celebrate Country.
PO3	Encourage heritage items to be used for purposes that are appropriate to their heritage significance, including adaptive reuse where appropriate.
PO4	Maintain the setting of the heritage item including the relationship between the item and its surroundings.
PO5	Encourage the removal of inappropriate alterations and additions, and the reinstatement of significant missing details and building elements.
PO6	Maintain a sufficient curtilage around an item to minimise the impact of new development.
PO7	Minimise the impact of new development adjacent to or within the vicinity of a heritage item.
PO8	Promote the protection of places which have the potential to have heritage significance but are not identified as heritage items or places.
PO9	Ensure that the subdivision of land on which a heritage building is located does not isolate the building from its setting or context, or adversely affect its amenity or privacy.

6.2 Historic Archaeology

The relics provisions of the *Heritage Act 1977* apply across NSW. A Heritage Act approval will generally be required to undertake excavation within an area which has the potential to feature historic relics. This approval requirement is in addition to any requirements of the EP&A Act.

Within an undeveloped area, the likelihood for historic archaeology may seem low, however evidence of original homesteads, agricultural structures and other land occupation may still remain. These relics need to be managed sustainably and ensure where possible they are retained on site to conserve their significance.

6.2.1 Objectives

- a) Ensure adequate protection and appropriate management of archaeological resources.
- b) Ensure that as much archaeology of Local, State and potential National heritage significance is retained *in situ* as possible and interpreted within the new developments.

6.2.2 Performance Outcomes

PO1	Encourage the retention of significant relics identified on site.
PO2	Ensure development is based on the understanding and conservation of the relic.
PO3	Encourage interpretation of the relic to improve understanding within the community.
PO4	Enhance the significance of the relic through integration into future development.
PO5	Minimise the impact of new development adjacent to or within the vicinity of a relic.

6.3 Aboriginal Culture and Heritage

Engaging with Aboriginal culture and heritage is more than physical objects and places of significance and require a better understanding of and connection to Country, including narratives and the relationship between places.

Country, for First Peoples, relates not only to the cultural group and land to which they belong, it is also their place of origin in cultural, spiritual and literal terms. Country includes not only the land but also waters and skies, the journeys between them and incorporates the tangible and intangible, knowledges and cultural practices, identity and reciprocal relationships, belonging and wellbeing.

Aboriginal heritage consists of objects and places that are of significance to Aboriginal people because of their traditions, observances, law, customs, beliefs and history. It may comprise of physical or non-physical elements.

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

This section applies to assessable development to land:

- a) In which Aboriginal sites, places or relics have been previously identified.
- b) Within an identified cultural landscape.
- c) That has not been cleared.

6.3.1 Objectives

- a) Preserve items and sites of Aboriginal cultural and archaeological significance located within the Aerotropolis.
- b) Ensure development is designed to care for and connect to Country.

6.3.2 Performance Outcomes

PO1	Development does not result in the demolition or removal of or damage to the Aboriginal heritage place or object.
PO2	Development retains, conserves and does not detract from the features and values of the Aboriginal heritage place or object.
PO3	Development is compatible with the Aboriginal heritage significance of the place.
PO4	Development is designed to care for and connect to Country.
PO5	New development adjacent to or within the vicinity of an item or place of Aboriginal heritage significance should have no impact on that item or place.

7 Subdivision Design

The Phase 2 DCP will set out the objectives, performance outcomes and benchmark solutions for all subdivision outcomes within the Aerotropolis. These will be developed during precinct planning. It is anticipated that these will be developed for the following subdivision purposes:

- agribusiness;
- commercial;
- industrial;
- mixed use;
- residential; and
- tourism.

8 Potential Development Types

The Phase 2 DCP will set out the objectives, performance outcomes and benchmark solutions for desirable development types within the Aerotropolis. These development types include:

- agribusiness;
- commercial;
- industrial;
- mixed use;
- residential; and
- tourism.

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.
Benchmark solutions	means by which a development may achieve the intent of a planning objective or performance outcome.
Acid sulfate soils	naturally occurring sediments and soils containing iron sulfides (principally pyrite) or their precursors or oxidation products, whose exposure to oxygen leads to the generation of sulfuric acid (for example, by drainage or excavation).
Active street frontage	ground floor business or retail building street frontage that has direct and level entry and openings allowing physical and visual access that encourages interaction between the inside of the building and the adjoining external areas, including footpaths, road reserves or public spaces. Active street frontages support pedestrian safety and amenity and provide an interface between the public and private domain.
Aerospace	the branch of technology and industry concerned with the research, design, manufacture, operation and maintenance of aircraft, space craft, and their components and supporting services.
Agribusiness	businesses associated with the production, processing, marketing and distribution of agricultural products, especially at a large and integrated scale.
Agriculture	is generally associated with traditional primary production. It includes the cultivation of land for the growing of crops and breeding of animals.
Agriport	a high-tech food production facility that enables industry collaboration at scale to intensively and sustainably produce fresh value-added high-quality produce and pre-prepared food.

Term	Definition
Amenity	the 'liveability' of a place that makes it pleasant and agreeable for individuals and the community. Amenity includes, but is not limited to, the enjoyment of sunlight, views, privacy and quiet.
Ancillary development	development that is subordinate or subservient to the dominant purpose for which a site is used or proposed to be used.
ANEC – Australian Noise Exposure Contours	anticipated forecasts of future noise exposure patterns based on indicative flight paths around an airport that constitute the contours.
ANEF – Australian Noise Exposure Forecast	endorsed forecasts of future noise exposure patterns around an airport that constitute the contours on which land use planning authorities base their controls.
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 defensible 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).
Better Placed	an integrated design policy prepared by the NSW Government Architect.
Blue-green grid	an interconnected network of natural and semi-natural landscape elements (sometimes referred to as blue or green infrastructure), including water bodies, urban canopy and open spaces.
Business incubator	a company that helps new and startup companies to develop by providing services such as management training or office space.
Circular economy	a whole-of-system approach that requires accounting of the full cost and life-cycle of materials, which retains the value of materials in the economy for as long as possible, reducing the unsustainable depletion of natural resources and impacts on the environment.

Term	Definition
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.
Communications, navigation and surveillance facilities	are facilities that allow: a) pilots to navigate when en-route between airports; b) pilots to utilise terminal area navigation aids to conduct instrument approach procedures; c) dialogue between pilots and Air Traffic Control; and d) Air Traffic Control to monitor and confirm an aircraft location.
Country	for Aboriginal peoples, Country relates not only to the cultural group and land to which they belong, it is also their place of origin in cultural, spiritual and literal terms. Country includes not only the land but also waters and skies, and incorporates the tangible and intangible, knowledges and cultural practices, identity and reciprocal relationships, belonging and wellbeing.
Consent Authority	the same meaning as in Section 4.5 of the <i>Environmental Planning and Assessment Act 1979</i> .
Conservation (heritage)	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)	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	land in, on or under which a substance is present at a concentration above that normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.

Term	Definition
Controlled activities	any activity that infringes an airport's protected operational airspace and requires approval before it can be carried out. Controlled activities include: a) permanent structures, such as building; b) temporary structures, such as cranes; and c) any activities causing intrusions into the protected operational airspace through glare from artificial light or reflected sunlight, air turbulence from stacks or vents, smoke, dust, steam or other gases or particulate matter.
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.
Cumberland Plain Conservation Plan (CPCP)	will address impacts on biodiversity from urban growth through a conservation program that includes commitments and actions designed to improve ecological resilience and function over the long-term. The CPCP will enable land to be certified for development and areas avoided from development to be conserved where suitable. The CPCP will enhance a network of green spaces, natural and semi-natural systems throughout Western Sydney.
Defence	branch of industry concerned with the research, design, manufacture, operation and maintenance of military equipment, supplies and services.
Design excellence	the highest level of architectural, urban and landscape design. Design excellence processes can include review panels, competitive design competitions. All processes require a form of design excellence assessment.

Term	Definition
Development	as per the <i>Environmental Planning and Assessment Act 1979</i>, Development is any of the following: a) the use of land; b) the subdivision of land; c) the erection of a building; d) the carrying out of a work; e) the demolition of a building or work; and f) any other act, matter or thing that may be controlled by an environmental planning instrument.
Development application	an application for consent under Part 4 of the <i>Environmental Planning and Assessment Act 1979</i> to carry out development but does not include an application for a complying development certificate.
Development control plan	provides detailed planning and design guidelines to support established planning controls.
Ecologically sustainable development	same meaning as in Section 6 (2) of the <i>Protection of the Environment Administration Act 1991</i>. ecologically sustainable development requires the effective integration of social, economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs: a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: i. careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and ii. an assessment of the risk-weighted consequences of various options, b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the

Term	Definition
	environment are maintained or enhanced for the benefit of future generations; c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration; d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as: i. polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement; ii. the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste; and iii. environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.
End of trip facilities	are designated places that support cyclists, joggers and walkers in using alternative ways to travel to work rather than driving or taking public transport. These types of facilities also benefit people who exercise during their lunch break. End of trip facilities include: • secure bicycle parking; • locker facilities; and • change rooms.
Environmental planning instrument	an environmental planning instrument (including a state environmental planning policy or local environmental plan but not including a Development Control Plan) made, or taken to have been made, under Part 3 of the <i>Environmental Planning and Assessment Act 1979</i> and in force.
Floodplain	an area of land which is subject to inundation by floods.

Term	Definition
Greater Sydney	the local government areas within the boundary shown on the map in the <i>Greater Sydney Region Plan</i> and Schedule 1 of the <i>Greater Sydney Commission Act 2015</i> .
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.
Greener Places	an integrated design policy prepared by the NSW Government Architect to guide the design, planning and delivery of green infrastructure across NSW.
Habitat	includes: a) an area periodically or occasionally occupied by a species or ecological community, and b) the biotic and abiotic components of an area.
Hazardous material	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.
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.
Irrigation	the supply of water to land or crops to help growth, typically by means of channels.
Local centre	smaller-scale places that vary from a few shops on a corner to a vibrant main street and generally serve a local population.
Local environmental plan	same meaning as in the <i>Environmental Planning and Assessment Act 1979</i> . a local environmental plan made under Division 3.4 of Part 3 of the <i>Environmental Planning and Assessment Act 1979</i> .

Term	Definition
Master plan	optional plan created under Aerotropolis SEPP for large sites.
National Airports Safeguarding Framework	national land use planning framework to improve community amenity by minimising aircraft noise sensitive developments near airports and improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions on various safety related issues.
Obstacle Limitation Surface (OLS)	designed to protect aircraft flying in visual conditions close to an airport by defining a volume of airspace to be protected from development, primarily modelled on the layout and configuration of proposed runways.
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 that permits or facilitates the infiltration or penetration of water such as grass, landscaping or porous paving.
Precinct planning	identifies the development intent and development capacity across a precinct by allocating land uses, densities, housing types, built form, infrastructure and environmental and open space.
Private open space	same meaning as in the <i>Standard Instrument - Principal Local Environmental Plan</i>. an area external to a building (including an area of land, terrace, balcony or deck) that is used for private outdoor purposes ancillary to the use of the building.
Procedures for Air Navigation Services – Aircraft Operations surfaces (PANS OPS)	the primary surface for protecting aircraft operating under non-visual (instrument guided) conditions generally located above the OLS. Separate procedures for each runway and for the type of navigation system being used and the multiple surfaces are combined to form the PANS-OPS.
Public domain	any publicly or privately owned space that can be accessed and used by the public and/or is publicly visible.

Term	Definition
Public safety area	a designated area at the end of an airport runway within which development may be restricted in order to control the number of people on the ground at risk of injury or death in the event of an aircraft accident on take-off or landing.
Public space	includes parks, green spaces, plazas, libraries, streets, landscapes, museums, and public transport.
Remediation	a) removing, dispersing, destroying, reducing, mitigating or containing the contamination of any land; or b) eliminating or reducing any hazard arising from the contamination of any land (including by preventing the entry of persons or animals on the land).
Ride and car sharing	an arrangement in which a passenger travels in a private vehicle driven by its owner, for free for a fee.
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.
Road reserve	includes the following components: a) footway; b) kerb and gutter; c) road carriageway; and d) 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.
Signage	any sign, notice, device, representation or advertisement that advertises or promotes any goods, services or events and any structure or vessel that is principally designed for, or that is used for, the display of signage, and includes any of the following: a) an advertising structure;

Term	Definition
	b) a building identification sign; c) a business identification sign; and but does not include a traffic sign or traffic control facilities.
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.
State environmental planning policy	environmental planning instruments that address planning issues of State significance.
State Environmental Planning Policy (Sydney Region Growth Centres) 2006	is the environmental planning instrument which sets controls for the North West and South West Growth Centres of Sydney.
STEM (science, technology, engineering and mathematics)	an approach to learning and development that integrates the areas of science, technology, engineering and mathematics.
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).
Strategic centre	characterised by a high proportion of knowledge intensive jobs, existing or proposed major transport gateways and increased economic activity.
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.
Threatened species	a) a critically endangered species, an endangered species or a vulnerable species listed in Schedule 1 of the <i>Biodiversity Conservation Act 2016</i> ; or b) a listed threatened species within the meaning of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Tributary	a river or stream flowing into a larger river or lake.

Term	Definition
Urban heat island effect	an agglomeration of hard and dark-coloured surfaces such as roads and roofs cause excessive localised warming.
Urban typologies	precinct-scale snapshots of various forms of urban development incorporating built form, roads and subdivision pattern and open space.
Variation statement	a written statement accompanying a DA demonstrating how the objectives and relevant control and/or performance outcome will be achieved if an alternative to the 'benchmark solutions' is proposed.
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	the whole or any part of a watercourse, wetland, waterbody (artificial) or waterbody (natural).
Western Economic Corridor	the new economic agglomerations around the Western Sydney International (Nancy-Bird Walton) Airport, including the Aerotropolis.
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 Parkland City Authority (WPCA)	NSW Government body (formerly the Western City and Aerotropolis Authority) established to facilitate the delivery of the Western Parkland City. The WPCA works across all three levels of Government to jointly plan, design and deliver the best possible outcomes in infrastructure, liveability, investment attraction, job growth and sustainability.
Western Parkland City Metropolitan Cluster	comprises the Aerotropolis; Liverpool; Greater Penrith; and Campbelltown-Macarthur.
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.

Term	Definition
Western Sydney Aerotropolis Plan	provides the vision, principles and planning framework for the Western Sydney Aerotropolis.
Western Sydney Airport	Commonwealth business enterprise established in August 2017 to build the new Airport.
Western Sydney International (Nancy-Bird Walton) Airport	the declared airport site located on approximately 1,780 hectares of land at Badgerys Creek. The airport will be developed in stages and will ultimately comprise two parallel runways serving approximately 82 million passengers annually. The Airport will operate 24/7 without a curfew.
Western Sydney Planning Partnership	local government-led initiative comprising of representatives of all eight Western Parkland City councils as well as Blacktown Council, and representatives from the NSW Department of Planning, Industry and Environment, Transport for NSW, Sydney Water and the Greater Sydney Commission.
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.