Draft Wilton Growth Area Development Control Plan 2019 - Appendices

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Appendix A Glossary

Note: definitions for terms are also included in the Dictionary contained within the *Growth Centres SEPP*, and in the event of any inconsistency, the definition in the Growth Centres SEPP takes precedence over the definitions in this DCP.

"Access Streets and Laneways" provide local residential access to a small number of dwellings and serve a shared vehicular-pedestrian-cyclist use. They are intended to encourage a safe, low vehicle speed environment in which the residential function is dominant. Access streets function at the lowest level of the road hierarchy. They generally have development on one side and are located along drainage or open space reserves or along access-denied roads. The construction and dedication of access streets is the responsibility of the developer.

"Articulation zone" includes verandahs, porches, awnings, shading devices, bay windows, pergolas and the like. A carport is not considered part of the activation zone.

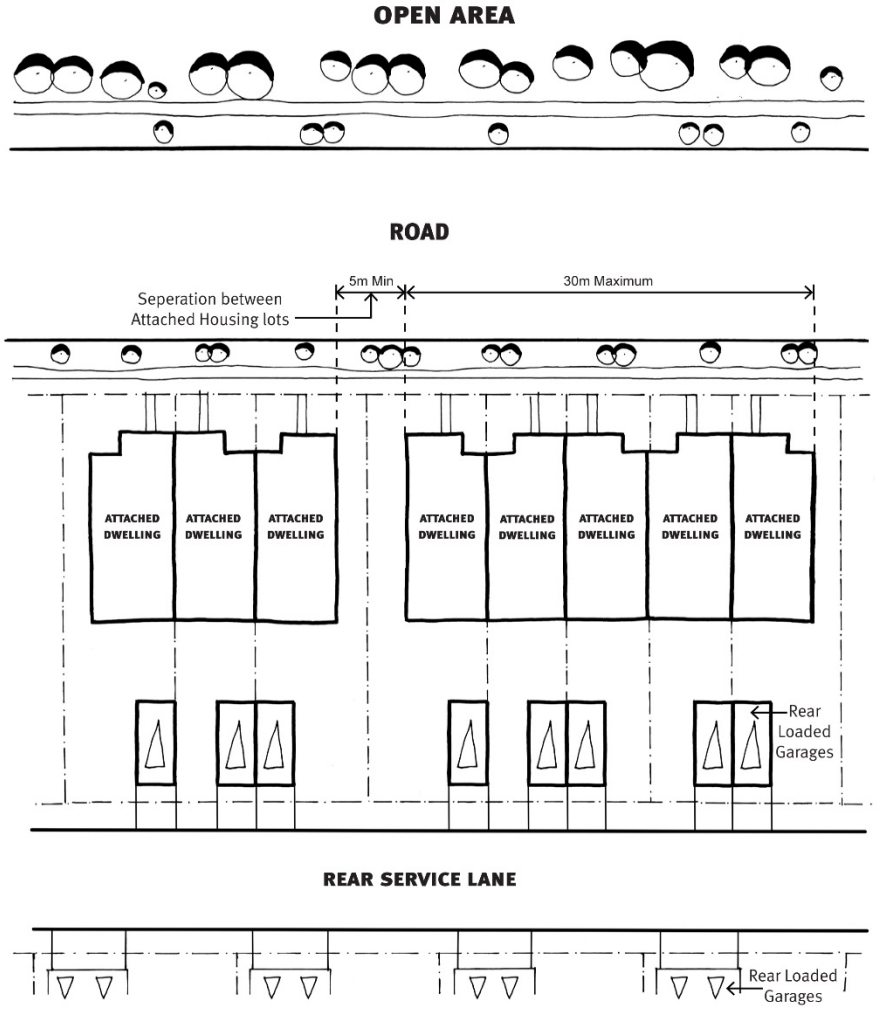
"Active Frontages" are defined as one or a combination of the following:

- entrance to retail;
- shop front;
- glazed entries to commercial and residential lobbies;
- café or restaurant if accompanied by an entry from the street;
- active office uses, such as reception, if visible from the street; and
- public building if accompanied by an entry.

"Attic" means a room within the main roof space of a building that has a 1.5m minimum wall height at edge of the room, a minimum 30-degree ceiling slope and does not incorporate or access a balcony.

"Attached dwellings" are 3 or more dwellings or separate allotments that are joined by at least one-party wall. See **Figure 1**.

Figure 1



Attached Dwellings

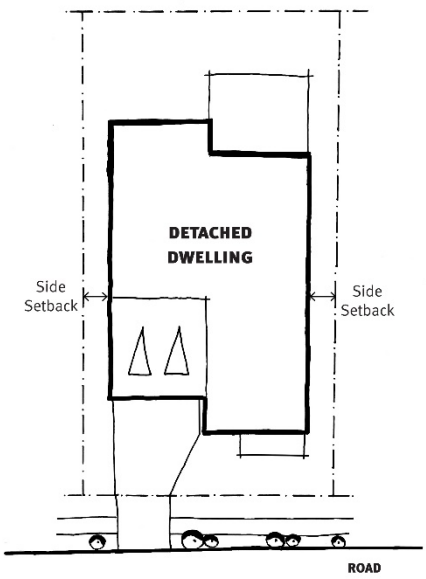
"Arterial roads" are roads marked as such on **Figure 13** of this DCP. They are major roads that carry the majority of inter-regional traffic. Vehicular access from adjacent land is denied to ensure both the efficiency of the road and the safety of road users.

"Building footprint" means the area of land measured at finished ground level that is enclosed by the external walls of a building.

"Collector roads" are roads marked as such on **Figure 14** of this DCP. They are the main internal roads that carry local traffic through the residential neighbourhoods to the sub-arterial and arterial roads and provide access to major attractors within the precinct such as retail, commercial and educational facilities.

"**Detached Dwelling"** is a building containing one dwelling, on a single block of land, that is not attached to any other dwelling. See **Figure 2.**

Figure 2



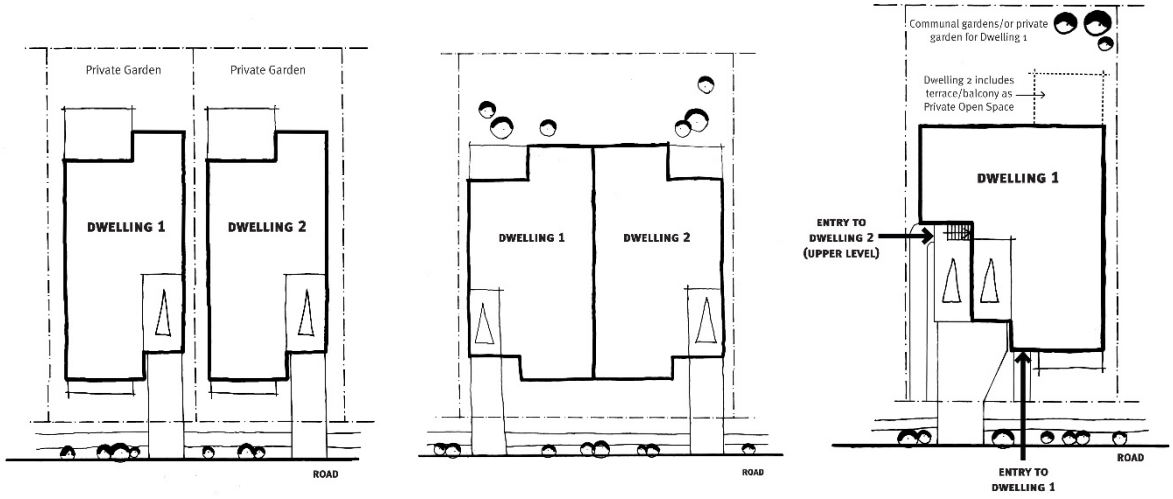
Detached dwelling

"Dual Occupancy" means two dwellings on a single allotment of land. The dwellings may be attached to each other or separate and detached.

Dual occupancy housing includes:

- the alteration or addition to an existing dwelling-house erected on an allotment to create two dwellings;
- the erection of another detached dwelling-house in addition to one already erected on an allotment, but only if not more than two dwellings will be created as a result of the development being carried out;
- the erection of a single building containing two dwellings on one allotment.
- the erection of two detached dwellings on one allotment. The dwelling may or may not be strata subdivided. See **Figure 3**.

Figure 3



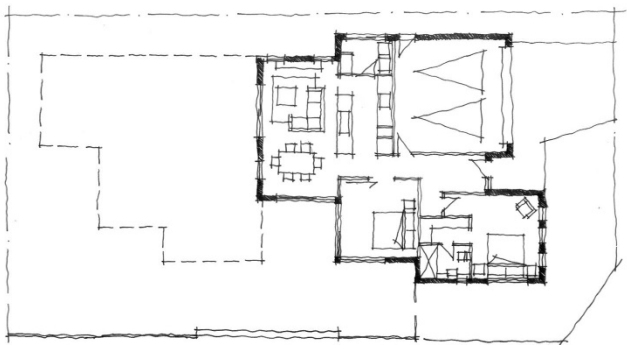
Dual Occupancy Dwellings – detached; attached; two storeys

"Dual Occupancy – Lifehouse Dwellings" - The life house is a housing initiative that is designed to facilitate the changing lifestyle needs of the home buyer. When built, the Lifehouse can respond to the current need of the resident. In time, as the residents' needs change, the dwelling can grow/downsize according to their needs, without them having to go through the expense of relocating. See **Figure 4**.

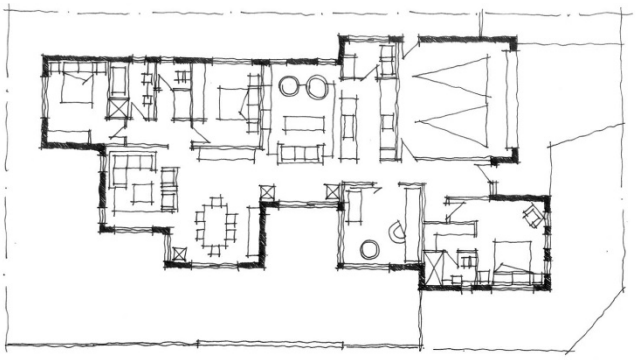
Lifehouse dwellings:

- can only occur on corner lots where eventual dual access will be possible to both dwellings;
- can be built on a single level, on split level or on as two storey dwellings. The development of Stage 2 must comply with separation controls nominated in Australian Standards and the Building Code of Australia (BCA), enabling the final dual occupancy division of Stage 3 to progress without major works.
- must have all stages of the development designed and approved as part of the initial DA regardless of the proposed staging of construction and subdivision.

Figure 4



Phase 1: Establish the home



Phase 2: Grow to suit occupant

Phase 3: Downsize and strata subdivide to suit occupant (optional)

Lifehouse Dwelling (single level)

"Flood Planning Levels (FPLs)" are the combinations of flood levels (derived from significant historical flood events or floods of specific AEPs) and freeboards selected for floodplain risk management purposes, as determined in management studies and incorporated in management plans. Flood planning area is the area of land below the FPL and thus subject to flood related development controls. The concept of flood planning area generally supersedes the 'flood liable land" concept in the 1986 Manual. Flood Prone Land is land susceptible to flooding by the PMF event. Flood Prone Land is synonymous with flood liable land.

"**Habitable room**" means any room or area used for normal domestic activities, including living, dining, family, lounge, bedrooms, study, kitchen, sun room, home entertainment room, alfresco room and play room.

"**Non-habitable**" room spaces of a specialised nature not occupied frequently or for extended periods, including bathrooms, toilets, pantries, walk-in wardrobes, corridors, lobbies, photographic darkrooms and clothes drying rooms.

"**Landscaped area**" means any part of a site, at ground level, that is permeable and consists of soft landscaping, turf or planted areas and the like. It does not include driveways, parking areas, hard paved drying yards or other service areas, swimming pools, tennis courts, undercroft areas, roofed areas (excluding eaves <450mm to fascia board), outdoor rooms, balconies, rooftop gardens, terraces, decks, verandahs and the like.

"Local roads" are roads marked as such on **Figure 15** of this DCP. The function of the subdivisional roads, which may include minor loop roads and cul-de-sacs, is to provide access to residential properties.

"Outdoor room", also known as an 'alfresco room' is a semi enclosed space (at least 1 side open) located adjacent a living / dining / kitchen area of a dwelling that sits within the main roof line of a dwelling.

"Principal dwelling" means the largest dwelling house on a lot, measured by gross floor area.

"Principal private open space" means the portion of private open space which is conveniently accessible from a living zone of the dwelling, and which receives the required amount of solar access.

"Private open space" means the portion of private land which serves as an extension of the dwelling to provide space for relaxation, dining, entertainment and recreation. It includes an outdoor room.

"**relevant structure plans**" means:

(a) South East Wilton structure plans:

i. *Wilton 2040: A Plan for the Wilton Growth Area* dated 28 September 2018 and published on the Department's website, and

ii. the South East Wilton Precinct Structure Plan dated 13 December 2017 and published on the Department's website.

(b) North Wilton structure plans:

i. *Wilton 2040: A Plan for the Wilton Growth Area* dated 28 September 2018 and published on the Department's website, and

ii. the North Wilton Precinct Structure Plan dated 11 October 2018 and published on the Department's website.

"Riparian Corridor" means the core riparian zone and vegetated buffer as shown in the relevant precinct structure plans.

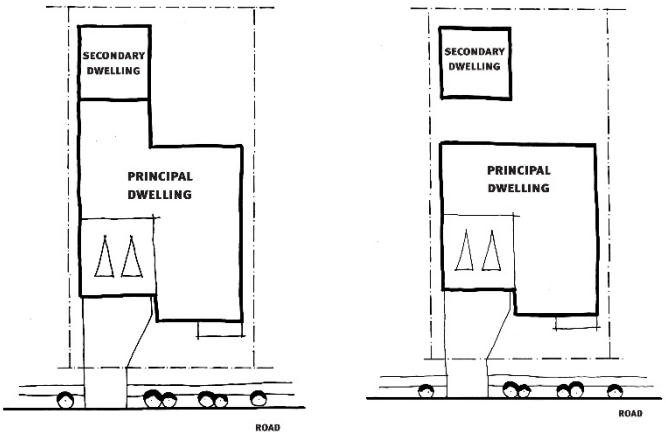
"Secondary Dwellings" - Secondary dwellings are dwellings that are separate to the principle dwelling, have a separate access and have a maximum internal floor area of 110m^2.

Secondary dwellings must form a part of the DA submission for the main dwelling. A secondary dwelling that has its own separate access and parking can be strata subdivided at the time of DA approval or after the dwelling has been established.

Types of secondary dwelling:

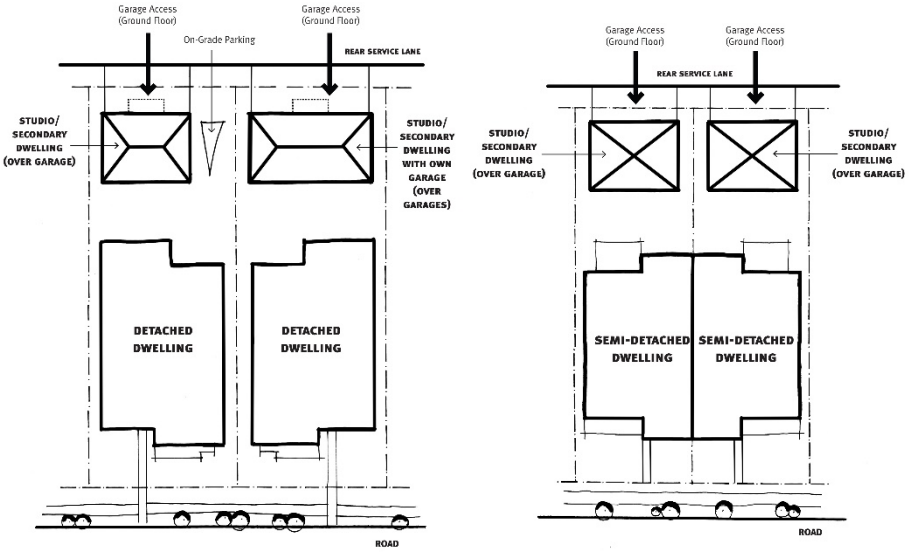
- On grade studio unit (at ground level – See **Figures 5 and 7**) within the principle dwelling lot. This is only permitted within detached dwelling lots;
- Above garage studio units (See **Figures 6, 8 and 9**). This is only permitted on detached dwelling lots and semi-detached dwelling lots that have garages with rear access.

Figure 5



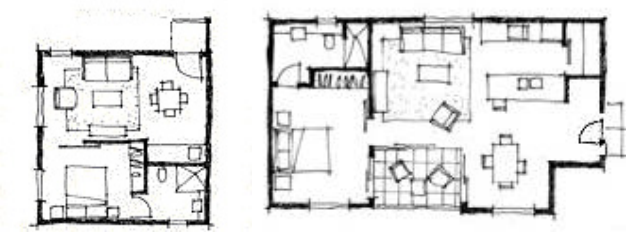
Secondary Dwelling (at ground level)

Figure 6



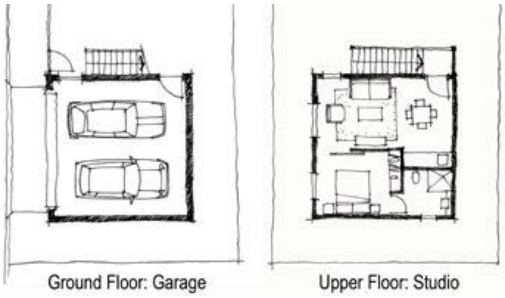
Secondary Dwelling (above garages)

Figure 7



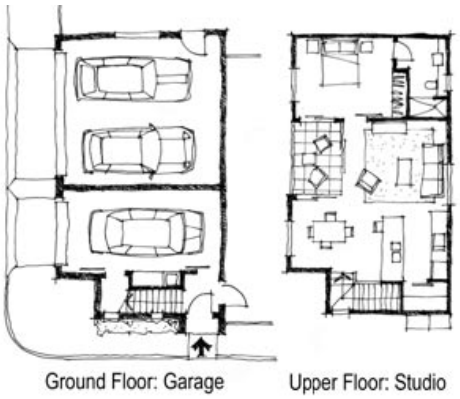
Indicative example of Type 1 Studio – on ground level

Figure 8



Indicative example of Type 2 Studio – above garage (not strata subdivided)

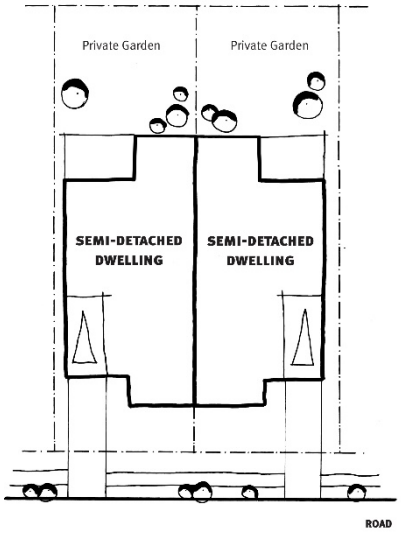
Figure 9



Indicative example of Type 2 Studio – above garage (strata subdivided)

"Semi-detached dwellings" comprise two dwellings that share, and are divided by, one party wall. Whilst their internal layout may be identical, and their external appearance should have continuance of material and style, the external appearance of the two dwellings should not be identical. They should combine to appear as one large house by having varied façade treatment and articulation. Refer to **Figure 10**.

Figure 10



Semi-Detached Dwelling

"Site cover" refers to the percentage of the site area that is occupied by the building footprint, including any outdoor room and garages.

"Sub-arterial roads" are roads marked as such on **Figure 13** of this DCP. Sub-arterial roads link regional and local traffic routes. Access from private properties is generally denied to these roads (except in special circumstances) for reasons of traffic safety and to maintain the capacity and efficiency of the road system. Council is normally responsible for the acquisition and construction of sub-arterial roads.

"**Urban Tree Canopy**" is the total urbanised land area occupied by layer of leaves, branches and stems of trees that cover the ground when viewed from above. It is the measure of the total horizontal extent of the combined tree canopies on a given urban land area.

"Walking Distance" is typically 400m or a 5-minute walk.

Appendix B Neighbourhood Plan Application Requirements

A neighbourhood plan is required to be consistent with the relevant structure plans for the Precinct and the Precinct Schedule. The Precinct Planning Principles contained in **Appendix D** of this DCP (as contained in *Wilton 2040 – A Plan for the Wilton Growth Area* dated 28 September 2018) should be used to inform the neighbourhood plan.

The neighbourhood plan must include plans and documentation showing:

- The detailed location of land uses including residential development (low and medium density), schools, community facilities, utilities, centres and employment land.
- The housing typologies that are proposed in various parts of the neighbourhood, including a fine grain density plan demonstrating how a diversity of housing types will be delivered.
- An assessment of the number of dwellings (indicative lot yield) to be delivered in the neighbourhood against the overall Precinct dwelling cap in the Growth Centre SEPP.
- The public transport corridors, bicycle and pedestrian network.
- Visual character assessment and retention of landscape features and vegetation.
- The open space network and blue/green grid including retention of trees and vegetation forming part of the landscape, utilising the Wilton Green Plan Principles contained at Appendix H of this DCP.
- Any land nominated for public ownership (to be delivered by the *Wilton Growth Area Special Infrastructure Contribution* or the *Wilton Growth Area Section 7.11 Plan*).
- The road network and hierarchy, including sub-arterial, collector and major local roads and road connections between neighbourhoods and to adjoining precincts.
- The management of the water cycle, including stormwater drainage and riparian areas.
- Measures to achieve protection of environmental conservation areas, enhancement of biodiversity and management of habitats.
- Measures to protect indigenous cultural heritage areas and sites and post-contact heritage sites, including buffers to heritage items.
- An urban design concept for town centres located within the neighbourhood.
- Bushfire asset protection zones and neighbourhood bushfire evacuation routes.
- Mitigation measures such as buffers for noise impacts and air emissions (from arterial and sub-arterial roads, the Maldon-Dombarton rail freight corridor, and industrial areas).
- Design responses to constraints related to infrastructure easements, transport corridors and contaminated land. Restrictions on development of sensitive land uses or medium and high density residential land uses adjoining the gas pipeline easement should be determined in consultation with the pipeline operator and by reference to the requirements of AS2885.
- Co-ordination actions with adjoining land owners to ensure cross precinct boundary links are planned for movement networks, conservation and water management.

Appendix C Development Application Lodgement Requirements

Matrix of Development Application Lodgement Requirements

Table 1 below provides an indicative checklist of the Lodgement requirements for all development applications. For the specific documents required for a DA see **Table 2** and **3** below or contact Wollondilly Shire Council.

Table 1

Key: ✓ Required

Document	Subdivision DA	Building DA
A4 Notification Plan	✓	✓
Site Analysis Plan	✓	✓
Architectural Plans		✓
Bushfire Assessment Report	✓	✓
Contamination report	✓	✓
Completed DA form	✓	✓
Crime Risk Assessment Report (Safer by Design Evaluation)		✓
Erosion and Sediment Control Plan	✓	✓
Groundwater Assessment		
Habitat Management Plan	✓	✓
Heritage Impact Assessment		
Landscape Plan	✓	✓
Materials Sample Board of external colours and finishes		✓
Neighbourhood Plan	✓	✓
Noise and Vibration Impact Assessment		✓
Photomontages		✓
Scale model		✓
Shadow Diagrams		✓
Site Water Management Plan		✓
Subsidence Advisory stamped plans	✓	✓
Statement of Environmental Effects	✓	✓
Stormwater Plan	✓	✓
Subdivision Plans (drawn by a registered surveyor)	✓	
Traffic Impact Report	✓	✓
Tree Survey Plan/Arborist Report	✓	✓
Waste Management Plan		✓

Document	Subdivision DA	Building DA
Wastewater report	✓	

Matrix of Lodgement Requirements

Lodgement Requirements for Development Applications

Table 2 below provides a description of the Lodgement requirements for ALL development applications.

Table 2

Lodgement Requirement	
A4 Notification Plan	Site plan and elevations must be shown in an A4 document.
Architectural Plans (or subdivision plans – see below)	Architectural Plans must show dimensioned floor plans, elevations of all facades, including a schedule of external finishes, colours and textures, sections showing heights and finished ground levels.
Completed DA form	Signed by the owner(s) of the development site. This is to be lodged with the applicable DA fee.

Site Analysis Plan	Site Analysis Plan must cover the relevant factors listed below: Site analysis should include plan and section drawings of the existing features of the site, at the same scale as the site and landscape plan, together with appropriate written material. Information may include but is not limited to: • Site dimensions, site areas, north point • Location of site in relation to shops, community facilities and transport • Form and character of adjacent and opposite buildings in the streetscape, including both sides of any street that the development fronts. • Location and use of any existing buildings or built feature on the site. • Location and important characteristics of adjacent public, communal and private open spaces • Location, use, overall height (storeys, metres) and important parapet/datum lines of adjacent buildings • Location and height of existing windows and balconies on adjacent properties facing the site • Location, height and characteristics of adjacent walls and fences • Location of natural features including watercourses, major trees on and other significant vegetation on site, on adjacent properties and street trees, identified by size and botanical or common names • Topography, showing spot levels and contours 0.5metre intervals for the site, adjoining streets and land adjoining the site • Views to and from the site • Prevailing winds • Orientation and overshadowing of the site and adjoining properties by neighbouring structures and trees • Geotechnical characteristics including salinity and groundwater conditions of the site and suitability of development • Pedestrian and vehicular access points (existing and proposed) • Location of utility services, including electricity poles, stormwater drainage lines, natural drainage, kerb crossings and easements • Location of any infrastructure easement of rights of way • Significant noise sources on and in the vicinity of the site, particularly vehicular traffic, train, aircraft and industrial operations noise • Assessment of site contamination, proposed remediation strategy and a statement from a recognised expert that the site can be remediated and made suitable for the proposed uses. As a minimum, the Plan should show the site location, boundary dimensions, site area, north point, existing vegetation and trees, location and uses of existing

Lodgement Requirement	
	adjoining buildings, existing site levels to Australian Height Datum (AHD) and services.
Statement of Environmental Effects	The Statement of Environmental Effects must demonstrate how the proposal meets all relevant objectives and provision of *Wilton Growth Area DCP 2019* and should set out measures to be taken to mitigate any likely adverse impact of the proposal.
Subdivision Plans (or building plans – see above)	Subdivision Plans (drawn by a registered surveyor) must show: • Lot numbers • Lot sizes and dimensions • Lot orientation • Road names/numbers • Road layout • Road widths and locations • Locations of any traffic calming • Existing and proposed levels to AHD • Existing and proposed drainage • Drainage calculations including overland flow. Any details of existing and proposed easements and services affecting or benefiting the subject land.

Lodgement requirements for DAs

Table 3 below provides a description of the Lodgement requirements for certain development applications.

Table 3

Lodgement Requirement	Description	Required for
Bushfire Assessment	A Bushfire Assessment should be prepared in accordance with *Planning for Bush Fire Protection 2018*	DAs where the site is located on Bushfire Prone Land
Contamination Assessment	A Contamination Assessment should be prepared in accordance with *SEPP 55 – Remediation of Land*	DAs where the site has known contamination or has not been investigated for contamination.
Crime Risk Assessment Report (Safer by Design Evaluation)	A Crime Risk Assessment Report must be prepared for each development to demonstrate how it addresses the objectives and controls outlined in **Appendix G** *Crime Prevention through Environmental Design* of this DCP. The report should also demonstrate consistency with Safer by Design Guidelines (2002).	

Lodgement Requirement	Description	Required for
Habitat Management Plan		
Stormwater Plan		
Erosion and Sediment Control Plan		
Groundwater Assessment		
Landscape Plan	Information on the Landscape Plan should include: (a) north point; (b) scale; (c) contours and spot levels; (d) all parks and streets (e) main structures on the site (buildings, car parking, driveways and services areas, walls, fences, paved areas, storage areas etc.); (f) drainage structure and above ground water storage tanks; (g) existing trees to be removed or retained; (h) proposed planting areas; (i) proposed turfed areas; (j) plant species schedule including botanical and common names; (k) details of seating and other outdoor furniture including bins, bollards and signs; (l) details of paving, fencing, wall and edge treatments; (m) lighting; (n) irrigation systems and water requirements; (o) sections and/ or elevations where necessary to describe special features or alterations in levels; and (p) name and contact details of the landscape architect. The plan should identify: (q) Maintenance responsibilities of the landscaped areas should be defined whether by private of Council. (r) Any public open space areas to be maintained by Council need to be designed in accordance with Council's maintenance requirements. All streetscape designs within the Landscape Plan must be in accordance with RMS guidelines.	All Building DAs.

Lodgement Requirement	Description	Required for
Materials Sample Board of external colours and finishes	A materials sample board must be submitted detailing external colours and finishes.	For Building DAs within areas identified for Business Development, Business Park and Medium Density Residential land uses.
Neighbourhood plan		
Noise and Vibration Impact Assessment	A Noise and Vibration Impact Assessment and Management Plan (NVIAMP) must be prepared by a suitably qualified consultant. It must provide an assessment of noise and vibration impacts and identify necessary mitigation measures to minimise the potential environmental impacts from noise and vibration generated by the proposed development.	For Building DAs adjacent to the Maldon-Dombarton Freight Rail Corridor, Picton Road and the Hume Motorway.
Photomontages	Colour photomontages of the proposed development in its context must be submitted.	Building DAs where Council deems it necessary.
Salinity Assessment	A Salinity Assessment must be prepared outlining what actions are proposed to minimise the impact of: • development on the saline environment. Such measures could include minimising/decreasing recharge to saline groundwater tables and waterlogged/evaporation areas by appropriate drainage, strategic tree planting and soil management strategies • the saline environment on development. Such measures could include drainage around buildings, fill rather than cut where practical, the use of building techniques and materials to resist saline attack, and moisture exclusion to prevent salt damage.	Subdivision DAs that involve physical works, including road works, pipes and drainage works or other earthworks. Building DAs where the subdivision salinity assessment requires further assessment at the building stage.
Scale model	A scaled model at either 1:100 or 1:200 of the proposed development should also include reference to adjoining properties.	Building DAs in areas identified for employment land where Council deems it necessary.
Shadow Diagrams	Shadow diagrams for 9am, 12 noon and 3pm at December 21, June 21 and March 21 shall be prepared for the business park land use only. For commercial and light industrial sites, shadow diagrams must be prepared demonstrating that communal areas receive 2 hours of solar access between 11am and 3pm on June 21. Such diagrams should be prepared by an appropriate professional, be based on a survey of the site and buildings on adjoining sites and include details of finished ground levels.	

Lodgement Requirement	Description	Required for
Survey Plan		
Tree Survey/Arborist Report	The Tree Survey Plan/Arborist Report must identify existing trees, trees to be removed and trees to be retained.	Subdivision and Building DAs where trees are proposed for removal.
Traffic Impact Report	Must address the traffic impacts of the proposal on the local road network within the precinct and assessing the adequacy of on-site parking.	Subdivision and Building DAs where the proposed development will generate a traffic impact.
Waste Management Plan	A Waste Management Plan must be submitted in accordance with. The plans and/or accompanying documents (include the waste management plan) should include details of: • The volume and type of waste generated during construction and demolition • How waste is to be stored on site • Method of disposal of recyclable and residual waste • Ongoing management • Bin type, number, size • Location and design of waste storage areas/rooms (residential and commercial) • Method and frequency of collection • Details of Garbage chutes, where applicable • Location of collection points for bin servicing • Responsibility for movement of bins from storage areas to collection points and retrieved after collection. • Responsibility for ensuring the system is maintained in a clean condition free of odour and vermin • Details on how contamination of the recycling will be minimised • Details of collection truck vehicle manoeuvring The WMP must demonstrate and achieve a diversion in the amount of waste generated by the development that is the subject of each application, going to landfill.	Building DAs where the proposed development will generate waste.

Lodgement Requirement	Description	Required for
Water Management Plan	A Water Management Plan must investigate, where feasible, provide for the integrated management and use of water. The Water Management Plan should demonstrate that other water sources have been considered including: • an integrated water collection and recycling system for capturing and recycling of roof water; • the reuse of grey water on site; • the capture and re-use of stormwater from the site; • Where possible, treating and re-using any water generated by the development; and • controlling the quality of waste water and stormwater from the site.	For Building DAs within areas identified for Business Development, Business Park and Medium Density Residential land uses.

Lodgement requirements for specific DAs

Appendix D Precinct Planning Principles

The Wilton Growth Area Precinct Planning Principles contained in *Wilton 2040 – A Plan for the Wilton Growth Area* 28 September 2018 should inform the preparation of the Precinct Schedules and Neighbourhood Plans.

Social Infrastructure

The Precinct Schedule and Neighbourhood Plans must:

- locate large facilities that also service a district or region in the Wilton Town Centre.
- co-locate social infrastructure with new or local open space or integrate facilities as multi-use clusters or social hubs.

Green Tree Canopy/Corridors

The Precinct Schedule and Neighbourhood Plans must:

- create walkability and accessibility to local centres and social infrastructure
- create healthy, liveable places, and respond to climate change, for example by promoting cooling effects
- strengthen resilience in communities and capacity to adapt to future changes
- create opportunities for green canopies and links

Heritage

The Precinct Schedule and Neighbourhood Plans must:

- recognise the history, heritage and character of the Wilton Growth Area in a new urban environment through identifying and retaining European and Aboriginal Cultural Heritage elements within the precincts
- be informed by Aboriginal Cultural Heritage Assessments, including consultation with the Aboriginal Community
- take into account the protection of Aboriginal Cultural Heritage items and places in the design of the precinct layout

Landscape

Protecting and Enhancing Important Habitats

The Precinct Schedule and Neighbourhood Plans must:

- be consistent with the biodiversity conservation measures identified in the draft Cumberland Plain Conservation Plan
- ensure stormwater management design minimises impact on the biodiversity values of conservation areas
- support measures to protect primary koala habitat and corridors in perpetuity, and to restore land to augment and strengthen existing koala corridors
- identify areas where development controls are required to reduce on-going threats to koalas
- be in accordance with the approved strategic bio-certification and strategic assessment

Wilton Green Plan

The Precinct Schedule and Neighbourhood Plans must:

- ensure new/enhanced open space can meet the passive and active recreation needs of the future population and support biodiversity values
- integrate waterway corridors, heritage items and high value landscape features to improve enjoyment and access to these places as part of an integrated open space network
- ensure District Parks and local parks feature a mix of active and passive recreation uses and be directly and safely accessible from collector or arterial roads
- ensure local parks feature a mix of active and passive recreation uses, and are within easy walking and cycling reach of homes
- consider potential for co-locating open space with other social facilities such as social hubs

Waterway Health

The Precinct Schedule and Neighbourhood Plans must:

- incorporate development that protects, maintains or restores waterway health and the community's environmental values and uses of waterways through a risk-based approach to managing the cumulative impacts of development
- ensure an integrated approach to drinking water, wastewater and stormwater services is considered to drive more sustainable water management outcomes
- incorporate development that fosters the relationship between water, landscapes and urban living, to enhance human and social wellbeing, and promote community co-design and governance in urban water strategies.

Bushfire Protection

The Precinct Schedule and Neighbourhood Plans must:

- ensure that bushfire protection measures including safe evacuation routes are considered in the layout and development of the local street network
- incorporate Asset Protection Zones and perimeter roads in the design of urban development areas based on the level of bushfire hazard exposure

Land Use

Managing Land Use Activities

The Precinct Schedule and Neighbourhood Plans must:

- plan for a well-designed interface between residential and industrial or commercial land to minimise potential for impacts on residential amenity
- minimise air quality impacts on sensitive land uses by application of setbacks from busy road corridors and ameliorative design measures, or install high performance mechanical ventilation systems
- consider potential impacts (noise, odour, safety) of existing and future land uses on existing or future nearby or adjoining sensitive land uses, such as residences, schools, child care centres, hospitals and aged care centres

Built Form

The Precinct Schedule and Neighbourhood Plans must:

- adopt the objectives from the NSW Government Architect's "Better Placed – An integrated Design Policy for the Built Environment of New South Wales" (September 2017) to achieve a better:
    - fit (Locally, Contextually, Of its Place)
    - performance (Sustainable, Adaptable, Durable)
    - outcome for the community (Inclusive, Connected, Diverse);
    - outcome for people (Safety, Comfortable, Liveable)
    - working (Functional, Efficient, Fit for purpose)
    - value (Creating and adding value by increased social, economic and environmental benefits to the community)
    - look and feel (Engaging, Inviting, Attractive)
- plan for diverse typologies to suit a range of ages
- integrate technology that contributes to and promotes achievement of the NSW Government's target of net-zero carbon emissions by 2050
- introduce opportunities for sustainable and efficient use of resources to minimise waste, water and energy from development

Movement

The Precinct Schedule and Neighbourhood Plans must:

- provide a hierarchy of roads to ensure safe, efficient movement of vehicles and pedestrians, the free flow of freight, and minimise conflicts between through and local traffic and residential amenity
- provide convenient and safe walking and cycling connections throughout the neighbourhood, across major roads, and to open space, schools and centres
- ensure homes are within walking distance of a bus stop and that bus routes link key centres, transport hubs, schools, employment opportunities and residential areas
- reserve sufficient land for future transport corridors, social and physical infrastructure to cater for population growth
- ensure adequate site and design development adjoining infrastructure corridors to address potential noise impacts
- connect the Wilton Town Centre and the existing Wilton village
- integrate land use and transport to align travel needs with infrastructure and services to support the land use change
- consider alternative modes of transport in the planning for local road networks, including measures to encourage walking and cycling and access for public transport, community transport and taxis.
- include walking and cycling routes, especially alongside areas where many people move to encourage more active modes of travel
- encourage walking and cycling within and to and from the Growth Area

Wilton Town Centre

The Wilton Town Centre Precinct Plan and Neighbourhood Plans must:

- support the early delivery of a mix of uses to gain a foothold in the market and momentum to reach maturity
- provide flexible land use and lot size controls to enable the centre to evolve in line with the growing population and long-term strategic vision
- deliver the infrastructure necessary to unlock the centre's establishment and growth.
- design high quality public areas based around open spaces that are comfortable for walking. A plaza, town centre park or town square should be a focal point for people to interact and include a variety of formal and informal seating, landscape treatments and weather protection
- provide crossings over Picton road and the Hume Motorway to facilitate safe, convenient and direct access to the district centre from across the Growth Area
- provide end-of-trip facilities alongside vehicle parking in commercial areas to encourage walking and cycling
- underground or sleeve parking areas and large format retail with specialty retail stores that create a more active street front

Appendix E High Ecological Value Waterways: Table of Indicators

Table 4

MAP ATTRIBUTE	DESCRIPTION	INDICATOR	LEGISLATION &/OR POLICY
PU_ID	Wilton Priority Growth Area was broken into 1 hectare hexagons for determining the extent (area, length, presence) of water dependent ecosystems. The 1 hectare hexagons are called planning units, and each unit has a unique identifier.	n/a	n/a
TVALUE	Total extent of water dependent ecosystems and reserves within a planning unit. Extent was based on the sum of the area (m^2), length (m) or presence of an ecosystem, community or species recognised as high value in State Planning Policy and/or Legislation	n/a	n/a
RESERVES	Total extent of National Parks Wildlife Service and Crown Land Estate dedicated to conservation within a planning unit based on the sum of area (m^2)	Reserves	*National Parks and Wildlife Act 1974; Crown Lands Act 1989*
MSW	Total extent of the Moist Shale Woodland in the Sydney Basin Bioregion EEC within a planning unit based on the sum of area (m^2)	Ecologically Endangered Community	*Biodiversity Conservation Act, 2016*
RFEF	Total extent of the River Flat Eucalypt Forest on Coastal Floodplains of the NSW NC, SB and SEC bioregions EEC within a planning unit based on the sum of area (m^2)	Ecologically Endangered Community	*Biodiversity Conservation Act, 2016*
WSDFM	Total extent of the Western Sydney Dry Rainforest and Moist Woodland on Shale EEC within a planning unit based on the sum of area (m^2)	Ecologically Endangered Community	*Biodiversity Conservation Act, 2016*
WSDR	Total extent of the Western Sydney Dry Rainforest in the Sydney Basin Bioregion EEC within a planning unit based on the sum of area (m^2)	Ecologically Endangered Community	*Biodiversity Conservation Act, 2016*
LEPRIP	Total extent of the Local Environment Plan designated riparian zones within a planning unit based on the sum of area (m^2)	Riparian Lands and Watercourses	Standard Instrument Order 2006

MAP ATTRIBUTE	DESCRIPTION	INDICATOR	LEGISLATION &/OR POLICY
PRIHAB	Total extent of the designated Upland Swamp and Alluvial Forest Woodland priority habitat zones within a planning unit based on the sum of area (m^2)	Priority Habitat Areas	Standard Instrument Order 2006
CMSW	Total extent of the Cumberland Moist Shale Woodland PCT within a planning unit based on the sum of area (m^2)	Wetland and Riparian Vegetation	*Biodiversity Conservation Act, 2016; NSW Wetlands Policy*
CRFF	Total extent of the Cumberland River Flat Forest PCT within a planning unit based on the sum of area (m^2)	Wetland and Riparian Vegetation	*Biodiversity Conservation Act, 2016; NSW Wetlands Policy*
GMDR	Total extent of the Grey Myrtle Dry Rainforest PCT within a planning unit based on the sum of area (m^2)	Wetland and Riparian Vegetation	*Biodiversity Conservation Act, 2016; NSW Wetlands Policy*
HSGF	Total extent of the Hinterland Sandstone Gully Forest PCT within a planning unit based on the sum of area (m^2)	Wetland and Riparian Vegetation	*Biodiversity Conservation Act, 2016; NSW Wetlands Policy*
SRS	Total extent of the Sandstone Riparian Scrub PCT within a planning unit based on the sum of area (m^2)	Wetland and Riparian Vegetation	*Biodiversity Conservation Act, 2016; NSW Wetlands Policy*
GDESURF	Total extent of Groundwater Dependant Ecosystems reliant on surface expression of groundwater within a planning unit based on the sum of area (m^2)	Groundwater Dependent Ecosystem	*Water Management Act 2000*
GDESUB	Total extent of Groundwater Dependant Ecosystems reliant on sub-surface expression of groundwater within a planning unit based on the sum of area (m^2)	Groundwater Dependent Ecosystem	*Water Management Act 2000*
RBCI	Total extent of stream lengths recorded as having moderate, good or very good condition within a planning unit based on the sum of length (m), as per the RCI assessment	River Condition Index	*Water Management Act 2000*
HEVAE	Total extent of stream lengths recorded as having medium or high ecological value within a planning unit based on the sum of length (m), as per the HEAVE assessment	River Condition Index	*Water Management Act 2000*

MAP ATTRIBUTE	DESCRIPTION	INDICATOR	LEGISLATION &/OR POLICY
KFH	Total extent of stream lengths as being key fish habitat within a planning unit based on the sum of length (m)	Key Fish Habitat	*Fisheries Management Act 1994*
FNAT	Total extent of stream lengths recorded as having fish nativeness of fair or higher within a planning unit based on the sum of length (m)	Fish Nativeness	Fisheries Policy
FCON	Total extent of stream lengths recorded as having fish condition of fair or higher within a planning unit based on the sum of length (m)	Fish Condition	Fisheries Policy
STRAH4	Total extent of stream lengths recorded as being forth order or greater within a planning unit based on the sum of length (m)	Strahler	*Biodiversity Conservation Act, 2016*
GCOND	Total extent of stream lengths recorded as having geomorphic condition of good or greater within a planning unit based on the sum of length (m), as per the River Styles assessment	River Styles	*Water Management Act 2000*
RPOT	Total extent of stream lengths recorded as having recovery potential of high or conservation within a planning unit based on the sum of length (m), as per the River Styles assessment	River Styles	*Water Management Act 2000*
FISHMP	Total extent of stream lengths recorded as being potential for the threatened species Macquarie Perch within a planning unit based on the sum of length (m)	Threatened Fish Habitat	*Fisheries Management Act 1994*
FISHSHD	Total extent of stream lengths recorded as being potential habitat for the threatened species Sydney Hawk Dragonfly within a planning unit based on the sum of length (m)	Threatened Fish Habitat	*Fisheries Management Act 1994*
BIRDAI	Total number of observations for the important migratory species *Ardea ibis* within a planning unit based on the count of species observations	Migratory Bird Species Sightings	International and bilateral agreements
BIRDHL	Total number of observations for the important migratory species *Haliaeetus leucogaster* within a planning unit based on the count of species observations	Migratory Bird Species Sightings	International and bilateral agreements

MAP ATTRIBUTE	DESCRIPTION	INDICATOR	LEGISLATION &/OR POLICY
BIRDMO	Total number of observations for the important migratory species *Merops ornatus* within a planning unit based on the count of species observations	Migratory Bird Species Sightings	International and bilateral agreements
FLORA1	Total number of observations for the threatened plant species identified as definite indicators of riverine and wetland habitats within a planning unit based on the count of species observations	Threatened Flora Sightings	*Biodiversity Conservation Act, 2016*
FLORA2	Total number of observations for the threatened plant species identified as likely indicators of riverine and wetland habitats within a planning unit based on the count of species observations	Threatened Flora Sightings	*Biodiversity Conservation Act, 2016*
FLORA3	Total number of observations for the threatened plant species identified as possible indicators of riverine and wetland habitats within a planning unit based on the count of species observations	Threatened Flora Sightings	*Biodiversity Conservation Act, 2016*
FAUNAAP	Total number of observations for the threatened fauna species *Anthochaera Phrygia* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNACD	Total number of observations for the threatened fauna species *Chalinolobus dwyeri* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNACS	Total number of observations for the threatened fauna species *Chthonicola sagittata* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNADM	Total number of observations for the threatened fauna species *Dasyurus maculatus* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAFT	Total number of observations for the threatened fauna species *Falsistrellus tasmaniensis* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAGP	Total number of observations for the threatened fauna species *Glossopsitta pusilla* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*

MAP ATTRIBUTE	DESCRIPTION	INDICATOR	LEGISLATION &/OR POLICY
FAUNAHL	Total number of observations for the threatened fauna species *Haliaeetus leucogaster* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAHM	Total number of observations for the threatened fauna species *Hieraaetus morphnoides* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNALI	Total number of observations for the threatened fauna species *Lophoictinia isura* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAMC	Total number of observations for the threatened fauna species *Meridolum corneovirens* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAMA	Total number of observations for the threatened fauna species *Miniopterus australis* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAMF	Total number of observations for the threatened fauna species *Mormopterus norfolkensis* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAMM	Total number of observations for the threatened fauna species *Myotis macropus* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNANP	Total number of observations for the threatened fauna species *Neophema pulchella* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNANC	Total number of observations for the threatened fauna species *Ninox connivens* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAPA	Total number of observations for the threatened fauna species *Petaurus australis* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAPN	Total number of observations for the threatened fauna species *Petaurus norfolcensis* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*

MAP ATTRIBUTE	DESCRIPTION	INDICATOR	LEGISLATION &/OR POLICY
FAUNAPB	Total number of observations for the threatened fauna species *Petroica boodang* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNAPP	Total number of observations for the threatened fauna species *Pteropus poliocephalus* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNASR	Total number of observations for the threatened fauna species *Scoteanax rueppellii* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNASG	Total number of observations for the threatened fauna species *Stagonopleura guttata* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*
FAUNATN	Total number of observations for the threatened fauna species *Tyto novaehollandiae* within a planning unit based on the count of species observations	Threated Fauna Sightings	*Biodiversity Conservation Act, 2016*

High Ecological Value Waterways: Table of Indicators

Appendix F Prescribed Trees and Preferred Species

All native plant species in NSW have been (or will be) assigned to a Growth Form Group (GFG) as part of the process to standardise both assessment and nominations for regeneration. By using GFG, the restoration task can be designed, configured and arranged to allow the restored community to approach or be at the benchmark value for diversity for each of the plant GFG for that Plant Community Type (PCT). Table 5 below provides a categorized list of GFG's and their definition. It also shows the options for exchange in order of planting preference. If a specific species cannot be obtained for the planting, any other species in the same category should be sought first.

Table 5

Growth Form Group (GFG)	Category	Definition	Exchange Options (ordered)
E	EA	Aquatic ferns	EA, FA
E	EB	Tufted ferns without noticeable stem	EB
E	EC	Running or spreading ground-ferns	EC
E	EK	Epiphytic ferns	EK
E	EQ	Tree ferns	EQ, OQ
F	FA	Aquatic forbs	FA
F	FB	Perennial forbs with basal leaves	FB, FD
F	FC	Perennial forbs with cauline (stem) leaves	FC, FG,
F	FD	Chenopod forbs	FD
F	FE	Ephemeral and seasonal and annual forbs	FE
F	FG	Forbs with a grass-like habit	FG, GV, GF
G	GD	Mat-forming or sod grass	GD
G	GF	Rushes	GF, GV, GY, FG
G	GG	Tussock grass	GG
G	GH	Hummock grass	GH
G	GV	Sedges	GV, GF, GY, FG
G	GY	Reed grass	GY, GV, GF, FG
O	OA	Cycads and cycad-like	OA, OP, OX
O	OK	Epiphytes and Lithophytes	OK, EK

Growth Form Group (GFG)	Category	Definition	Exchange Options (ordered)
O	OL	Large vines and lianes with climbing habit	OL
O	OP	Palms and palm-like	OP, OA, OX
O	OQ	Tree ferns	OQ, EQ
O	OT	Small vines, scramblers and sprawling plants with low-growing habit	OT, FB
O	OX	Xanthorrhoeas	OX, OP, OA
S	SA	Multi-stemmed shrubs	SA, SE, SF, SZ, SY, SC, TG
S	SB	Tall shrubs	SB, SY, SE, SF, TG
S	SC	Chenopod shrubs	SC, SZ, SA, FD
S	SD	Low-growing shrubs	SD, FD, FG, GY, GF
S	SE	Shrubs with heavy flowering display over a short period	SE, SF, SY, SB, SA, TG
S	SF	Shrubs with heavy flowering display over a long period	SF, SE, SY, SB, SA, TG
S	SY	Low-growing and heavy-flowering dwarf eucalypts including mallees	SY, TG, SE, SF, SA
S	SZ	Heath-leaved shrubs	SZ, SA, SB
T	TA	Tree species with relatively short lifespans, including many wattles and hakeas	TA, SB, TC, TD, TE
T	TB	Trees with broad crowns and producing deep shade	TB, TI, TD
T	TC	Fast-growing slender trees	TC, TE, SB, TD, SA
T	TD	Fast growing broad-crowned trees	TD, TB, TI
T	TE	Fast-growing eucalypts (Eucalyptus, Corymbia, Angophora)	TE, TC, TF, TG, TH, TI
T	TF	Slow-growing eucalypts	TF, TC, TE, TG, TH, TI
T	TG	Low-growing and heavy-flowering dwarf eucalypts including mallees	TG, SY, SE, SB

Growth Form Group (GFG)	Category	Definition	Exchange Options (ordered)
T	TH	Slow-growing slender trees	TH, TF, TI
T	TI	Slow-growing broad-crowned trees	TI, TH, TF

Growth Form Groups of Native Plants to the Greater Sydney Area

Table 6 outlines the prescribed trees and preferred species (including mature heights and diameters).

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)

S	SA	Acacia rubida, Acacia ulicifolia, Adriana tomentosa, Almaleea paludosa, Aotus ericoides, Asterolasia correifolia, Asterolasia rivularis, Astroloma pinifolium, Astrotricha longifolia, Atkinsonia ligustrina, Austromyrtus tenuifolia, Banksia collina, Banksia cunninghamii, Banksia oblongifolia, Banksia paludosa, Banksia robur, Banksia spinulosa, Bauera rubioides, Bertya brownii, Bertya oleifolia, Bertya pomaderroides, Bertya rosmarinifolia, Beyeria viscosa, Bossiaea stephensonii, Breynia oblongifolia, Bursaria longisepala, Bursaria spinosa, Callistemon linearifolius, Callistemon linearis, Callistemon pinifolius, Callistemon rigidus, Cassinia accipitrum, Cassinia aculeata, Cassinia aureonitens, Cassinia compacta, Cassinia cunninghamii, Cassinia denticulate, Cassinia laevis, Cassinia leptocephala, Cassinia longifolia, Cassinia macrocephala, Cassinia quinquefaria, Cassinia sifton, Cassinia thinicola, Choretrum candollei, Choretrum pauciflorum, Comesperma ericinum, Comesperma retusum, Commersonia breviseta, Commersonia dasyphylla, Commersonia rugosa, Conospermum ellipticum, Conospermum ericifolium, Conospermum longifolium, Conospermum taxifolium, Coprosma quadrifida, Coronidium elatum, Correa alba, Corra reflexa, Croton verreauxii, Crowea exalata, Crowea saligna, Cryptandra amara, Cryptandra ericoides, Cryptandra propinqua, Cryptandra spinescens, Cyphanthera albicans, Denhamia celastroides, Denhamia sylvestris, Eupomatia laurina, Exocarpos strictus, Grevillea arenaria, Grevillea aspleniifolia, Grevillea baueri, Grevillea buxifolia, Grevillea caleyi, Grevillea juniperina, Grevillea kedumbensis, Grevillea linearifolia, Grevillea longifolia, Grevillea oleoides, Grevillea phylicoides, Grevillea ramosissima, Grevillea sericea, Grevillea speciose, Grevillea sphacelata, Hakea laevipes, Hakea propinqua, Hakea sericea, Hakea teretifolia, Hibiscus diversifolius, Homalanthus stillingiifolius, Hovea longifolia, Hovea pannosa, Hovea speciosa, Howittia trilocularis, Indigofera australis, Isopogon anemonifolius, Isopogon anethifolius, Keraudrenia corollate, Kunzea ambigua, Kunzea aristulata, Kunzea capitate, Kunzea parvifolia, Kunzea rupestris, Lambertia formosa, Lasiopetalum macrophyllum, Leptospermum epacridoideum, Leptospermum juniperinum, Leptospermum macrocarpum, Leptospermum obovatum, Leptospermum rotundifolium, Leptospermum spectabile, Leptospermum sphaerocarpum, Lomatia ilicifolia, Lomatia myricoides, Lomatia silaifolia, Melaleuca deanei, Melaleuca erubescens, Melaleuca squamea,	SA, SE, SF, SZ, SY, SC, TG

	Melaleuca thymifolia, Melaleuca uncinata, Melicytus dentatus, Myoporum bateae, Myoporum boninense, Myoporum floribundum, Myoporum montanum, Olearia burgessii, Olearia chrysophylla, Olearia microphylla, Olearia myrsinoides, Omphacomeria acerba, Oxylobium arborescens, Ozothamnus argophyllus, Ozothamnus diosmifolius, Ozothamnus ferrugineus, Ozothamnus rufescens, Persoonia acerosa, Persoonia bargoensis, Persoonia glaucescens, Persoonia hirsuta, Persoonia isophylla, Persoonia lanceolata, Persoonia laurina, Persoonia nutans, Persoonia oblongata, Persoonia rigida, Petrophile canescens, Petrophile pedunculata, Petrophile sessilis, Philotheca buxifolia, Philotheca hispidula, Philotheca myoporoides, Philotheca salsolifolia, Philotheca scabra, Phyllota grandiflora, Phyllota phylicoides, Phyllota squarrosa, Pimelea glauca, Pimelea latifolia, Pimelea ligustrina, Pimelea linifolia, Pimelea strigosa, Pittosporum multiflorum, Pittosporum revolutum, Platylobium formosum, Platylobium parviflorum, Podolobium aciculiferum, Podolobium ilicifolium, Polyscias sambucifolia, Pomaderris andromedifolia, Pomaderris aspera, Pomaderris brunnea, Pomaderris cotoneaster, Pomaderris discolor, Pomaderris elliptica, Pomaderris eriocephala, Pomaderris ferruginea, Pomaderris intermedia, Pomaderris lanigera, Pomaderris ledifolia, Pomaderris ligustrina, Pomaderris mediora, Pomaderris phylicifolia, Pomaderris precaria, Pomaderris prunifolia, Pomaderris vellea, Pomaderris velutina, Prostanthera caerulea, Prostanthera cineolifera, Prostanthera cryptandroides, Prostanthera densa, Prostanthera denticulata, Prostanthera hindii, Prostanthera hirtula, Prostanthera howelliae, Prostanthera incana, Prostanthera incisa, Prostanthera lanceolata, Prostanthera linearis, Prostanthera nivea, Prostanthera ovalifolia, Prostanthera prunelloides, Prostanthera rhombea, Prostanthera rotundifolia, Prostanthera rugosa, Prostanthera saxicola, Prostanthera scutellarioides, Prostanthera tallowa, Prostanthera violacea, Psychotria loniceroides, Pultenaea aristata, Pultenaea blakelyi, Pultenaea daphnoides, Pultenaea dentata, Pultenaea echinula, Pultenaea ferruginea, Pultenaea flexilis, Pultenaea glabra, Pultenaea hispidula, Pultenaea juniperina, Pultenaea mollis, Pultenaea parviflora, Pultenaea retusa, Pultenaea rosmarinifolia, Pultenaea scabra, Pultenaea setulosa, Pultenaea spinosa, Pultenaea stipularis, Pultenaea tuberculata, Pultenaea villifera, Pultenaea villosa, Ricinocarpos pinifolius, Ricinocarpos speciosus, Rubus moluccanus, Rubus parvifolius, Rubus rosifolius, Sambucus australasica, Sambucus	

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
		gaudichaudiana, Sannantha pluriflora, Santalum obtusifolium, Senna acclinis, Senna aciphylla, Senna artemisioides zygophylla, Senna barronfieldii, Solanum aviculare, Solanum brownii, Solanum linearifolium, Spyridium Burragorang, Tasmannia insipida, Telopea speciosissima, Tetratheca thymifolia, Viminaria juncea, Westringia eremicola, Westringia fruticose, Westringia longifolia, Wikstroemia indica, Wilkiea huegeliana, Xanthosia pilosa, Zieria compacta, Zieria cytisoides, Zieria furfuracea, Zieria laxiflora, Zieria smithii	
S	SB	Acacia longissima, Acacia penninervis, Alchornea ilicifolia, Alectryon subcinereus, Astrotricha floccosa, Astrotricha latifolia, Banksia ericifolia, Banksia marginata, Banksia penicillata, Boronia thujona, Callicoma serratifolia, Callistemon salignus, Callistemon shiressii, Callistemon sieberi, Correa lawrenceana, Cryptocarya rigida, Diospyros australis, Dodonaea triquetra, Dodonaea truncatiales, Dodonaea viscosa, Duboisia myoporoides, Elaeocarpus reticulatus, Elaeodendron australe, Exocarpos cupressiformis, Ficus coronata, Gossia acmenoides, Hakea constablei, Hakea salicifolia, Helicia glabriflora, Hibiscus heterophyllus, Homalanthus populifolius, Isopogon dawsonii, Leptospermum grandifolium, Leptospermum morrisonii, Leptospermum petersonii, Leptospermum polyanthum, Leptospermum squarrosum, Leptospermum trinervium, Melaleuca armillaris, Melaleuca biconvexa, Melaleuca decora, Melaleuca ericifolia, Melaleuca lanceolata, Melaleuca linariifolia, Melaleuca squarrosa, Monotoca elliptica, Myoporum acuminatum, Myoporum insulare, Myrsine howittiana, Myrsine variabilis, Nematolepis squamea, Notelaea venosa, Petrophile pulchella, Phebalium squamulosum, Philotheca trachyphylla, Pisonia umbellifera, Pittosporum undulatum, Podocarpus spinulosus, Prostanthera lasianthos, Seringia arborescens, Stenocarpus salignus, Synoum glandulosum, Trema tomentosa Xylomelum pyriforme, Zieria arborescens, Zieria caducibracteata, Zieria granulata, Zieria involucrata, Zieria tuberculata	SB, SY, SE, SF, TG
T	SB	Notelaea longifolia, Pararchidendron pruinosum	SB, SY, SE, SF, TG

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
S	SC	Atriplex cinerea, Atriplex semibaccata, Chenopodium auricomum, Chenopodium curvispicatum, Chenopodium nitrariaceum, Maireana microphylla, Rhagodia candolleana, Rhagodia spinescens	SC, SZ, SA, FD
S	SD	Acacia brownii, Acacia hispidula, Acalypha nemorum, Aegiceras corniculatum, Alyxia ruscifolia, Amperea xiphoclada, Astroloma humifusum, Bauera capitata, Bauera microphylla, Boronia rigens, Bossiaea buxifolia, Bossiaea neoanglica, Calotis dentex, Cheiranthera linearis, Chloanthes glandulosa, Chloanthes stoechadis, Chorizema parviflorum, Comesperma defoliatum, Commersonia hermannifolia, Commersonia prostrata, Conospermum tenuifolium, Coronidium oxylepis, Cyphanthera scabrella, Daviesia alata, Grevillea capitellata, Grevillea diffusa, Grevillea montana, Grevillea mucronulata, Grevillea oldei, Grevillea parviflora, Grevillea patulifolia, Hakea bakeriana, Halgania brachyrhyncha, Lasiopetalum ferrugineum, Lasiopetalum parviflorum, Lasiopetalum rufum, Leptospermum rupicola, Leucopogon amplexicaulis, Melichrus procumbens, Notelaea ovata, Olax stricta, Olearia cordata, Oxylobium cordifolium, Oxylobium pulteneae, Persoonia chamaepitys, Persoonia mollis, Philotheca obovalis, Pimelea curviflora, Pimelea spicata, Platysace clelandii, Platysace ericoides, Platysace lanceolata, Platysace linearifolia, Platysace stephensonii, Podolobium scandens, Pultenaea divaricata, Pultenaea linophylla, Pultenaea maritima, Pultenaea microphylla, Pultenaea paleacea, Pultenaea pedunculata, Pultenaea pedunculata, Ricinocarpos bowmanii, Seringia denticulata, Sphaerolobium minus, Sphaerolobium vimineum, Spyridium buxifolium, Spyridium scortechinii, Symphionema montana, Tetratheca decora, Tetratheca ericifolia, Tetratheca glandulosa, Tetratheca juncea, Tetratheca neglecta, Tetratheca rubioides, Tetratheca rupicola, Tetratheca shiressii, Teucrium junceum, Zieria aspalathoides, Zieria bauerlenii, Zieria laevigata, Zieria pilosa	SD, FD, FG, GY, GF
F	SD	Senna barclayana, Senna clavigera, Solanum prinophyllum, Stylidium laricifolium, Swainsona galegifolia, Symphionema paludosum, Teucrium corymbosum, Urtica incisa	SD, FD, FG, GY, GF

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
S	SE	Abrophyllum ornans, Acacia amoena, Acacia buxifolia, Acacia elongata, Acacia falcata, Acacia fimbriata, Acacia floribunda, Acacia jonesii, Acacia linifolia, Acacia longifolia, Acacia myrtifolia, Acacia obtusifolia, Acacia oxycedrus, Acacia paradoxa, Acacia parvipinnula, Acacia stricta, Acacia suaveolens, Acacia terminalis, Acacia trinervata, Boronia anemonifolia, Boronia anethifolia, Boronia barkeriana, Boronia deanei, Boronia floribunda, Boronia fraseri, Boronia ledifolia, Boronia microphylla, Boronia mollis, Boronia pinnata, Boronia rubiginosa, Boronia serrulate, Bossiaea ensata, Bossiaea heterophylla, Bossiaea kiamensis, Bossiaea lenticularis, Bossiaea obcordata, Bossiaea rhombifolia, Bossiaea scolopendria, Callistemon subulatus, Goodia lotifolia, Hakea dactyloides, Jacksonia scoparia, Leionema dentatum, Leionema diosmium, Leionema praetermissum, Leptospermum arachnoides, Leptospermum continentale, Leptospermum emarginatum, Leptospermum laevigatum, Leptospermum parvifolium, Leptospermum polygalifolium, Leucopogon lanceolatus, Logania albiflora, Melaleuca groveana, Melaleuca hypericifolia, Melaleuca nodosa, Melaleuca sieberi, Olearia argophylla, Olearia asterotricha, Olearia elliptica, Olearia erubescens, Olearia glandulosa, Olearia lirata, Olearia tomentosa, Olearia viscidula, Persoonia levis, Persoonia linearis, Persoonia pinifolia	SE, SF, SY, SB, SA, TG
S	SF	Hibiscus splendens	SF, SE, SY, SB, SA, TG
S	SY	Eucalyptus obstans	SY, TG, SE, SF, SA

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
S	SZ	Acacia echinula, Acrotriche aggregata, Acrotriche divaricata, Allocasuarina diminuta, Allocasuarina distyla, Allocasuarina nana, Allocasuarina paludosa, Baeckea brevifolia, Baeckea diosmifolia, Baeckea imbricata, Baeckea linifolia, Brachyloma daphnoides, Calytrix tetragona, Leucopogon appressus, Leucopogon attenuatus, Leucopogon deformis, Leucopogon ericoides, Leucopogon esquamatus, Leucopogon exolasius, Leucopogon fletcheri, Leucopogon juniperinus, Leucopogon margarodes, Leucopogon microphyllus, Leucopogon muticus, Leucopogon neoanglicus, Leucopogon parviflorus, Leucopogon setiger, Leucopogon virgatus, Lissanthe sapida, Lissanthe strigosa, Melichrus urceolatus, Micrantheum ericoides, Micrantheum hexandrum, Micromyrtus ciliata, Mirbelia baueri, Mirbelia pungens, Mirbelia rubiifolia, Mirbelia speciosa, Monotoca ledifolia, Monotoca scoparia, Ochrosperma oligomerum, Olearia ramulosa, Ozothamnus adnatus, Pentachondra dehiscens, Philotheca reichenbachii, Sprengelia incarnata, Sprengelia sprengelioides, Styphelia angustifolia, Styphelia laeta, Styphelia longifolia, Styphelia triflora, Styphelia tubiflora, Styphelia viridis, Woollsia pungens	SZ, SA, SB
T	TA	Acacia decurrens, Acacia filicifolia, Acacia irrorata, Acacia mearnsii, Acacia parramattensis	TA, SB, TC, TD, TE
T	TB	Baloghia inophylla, Celtis paniculata, Cryptocarya glaucescens, Cryptocarya microneura, Cryptocarya obovata, Cupaniopsis anacardioides, Diospyros pentamera, Doryphora sassafras, Ehretia acuminata, Euroschinus falcatus, Ficus henneana, Ficus macrophylla, Ficus obliqua, Ficus rubiginosa, Glochidion ferdinandii, Gmelina leichhardtii, Hedycarya angustifolia, Litsea reticulata, Mallotus philippensis, Melaleuca quinquenervia, Melia azedarach, Neolitsea dealbata, Pennantia cunninghamii, Planchonella australis, Podocarpus elatus, Polyosma cunninghamii, Quintinia sieberi, Sarcomelicope simplicifolia, Schizomeria ovata, Scolopia braunii, Sloanea australis, Streblus brunonianus, Symplocos stawellii, Symplocos thwaitesii, Syzygium australe, Syzygium oleosum, Syzygium paniculatum, Toona ciliata, Tristaniopsis collina, Tristaniopsis laurina	TB, TI, TD

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
S	TB	Melicope micrococca	TB, TI, TD
T	TC	Acacia prominens, Callistemon citrinus	TC, TE, SB, TD, SA
T	TD	Acacia binervata, Acacia binervia, Acacia elata, Acacia falciformis, Acacia implexa, Acacia maidenii, Acacia melanoxylon, Alphitonia excelsa, Callitris muelleri, Casuarina cunninghamiana, Casuarina equisetifolia, Casuarina glauca, Commersonia fraseri, Guioa semiglauca, Lophostemon confertus, Polyscias elegans, Polyscias murrayi	TD, TB, TI
S	TD	Melaleuca styphelioides	TD, TB, TI
T	TE	Angophora costata, Angophora floribunda, Angophora subvelutina, Corymbia maculata, Eucalyptus acmenoides, Eucalyptus agglomerata, Eucalyptus amplifolia, Eucalyptus benthamii, Eucalyptus bosistoana, Eucalyptus botryoides, Eucalyptus capitellata, Eucalyptus consideniana, Eucalyptus cypellocarpa, Eucalyptus dawsonii, Eucalyptus deanei, Eucalyptus dendromorpha, Eucalyptus elata, Eucalyptus eugenioides, Eucalyptus expressa, Eucalyptus fastigata, Eucalyptus globoidea, Eucalyptus hypostomatica, Eucalyptus longifolia, Eucalyptus maidenii, Eucalyptus moluccana, Eucalyptus notabilis, Eucalyptus oreades, Eucalyptus ovata, Eucalyptus pilularis, Eucalyptus piperita, Eucalyptus punctata, Eucalyptus quadrangulata, Eucalyptus resinifera, Eucalyptus saligna, Eucalyptus scias, Eucalyptus sieberi, Eucalyptus sparsifolia, Eucalyptus tereticornis, Eucalyptus umbra, Eucalyptus viminalis	TE, TC, TF, TG, TH, TI
T	TF	Angophora bakeri, Corymbia eximia, Corymbia gummifera, Eucalyptus baueriana, Eucalyptus beyeriana, Eucalyptus crebra, Eucalyptus fibrosa, Eucalyptus haemostoma, Eucalyptus imitans, Eucalyptus oblonga, Eucalyptus paniculata, Eucalyptus parramattensis, Eucalyptus racemosa, Eucalyptus robusta, Eucalyptus sclerophylla, Eucalyptus siderophloia, Eucalyptus sideroxylon, Eucalyptus signata, Syncarpia glomulifera	TF, TC, TE, TG, TH, TI

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
T	TG	Angophora hispida, Eucalyptus apiculata, Eucalyptus burgessiana, Eucalyptus camfieldii, Eucalyptus langleyi, Eucalyptus laophila, Eucalyptus ligustrina, Eucalyptus luehmanniana, Eucalyptus multicaulis, Eucalyptus squamosa, Eucalyptus stricta	TG, SY, SE, SB
T	TH	Allocasuarina littoralis, Allocasuarina torulosa, Allocasuarina verticillata, Banksia integrifolia, Callitris endlicheri, Callitris rhomboidea, Ceratopetalum gummiferum, Codonocarpus attenuatus	TH, TF, TI
T	TI	Acmena smithii, Acronychia oblongifolia, Alectryon tomentosus, Avicennia marina, Backhousia myrtifolia, Banksia aemula, Banksia serrata, Brachychiton acerifolius, Brachychiton populneus, Ceratopetalum apetalum, Choricarpa leptopetala, Cinnamomum oliveri, Citronella moorei, Claoxylon australe, Clerodendrum tomentosum, Croton insularis, Cyclophyllum longipetalum, Decaspermum humile, Elaeocarpus kirtonii, Elaeocarpus obovatus, Eucryphia moorei, Geijera salicifolia, Tristania neriifolia, Trochocarpa laurina	TI, TH, TF
E	EA	Azolla filiculoides, Azolla pinnata	EA, FA
E	EB	Adiantum aethiopicum, Adiantum atroviride, Adiantum diaphanum, Adiantum hispidulum, Blechnum camfieldii, Blechnum catilagineum, Blechnum chambersii, Blechnum minus, Blechnum nudum, Botrychium australe, Christella dentata, Christella hispidula	EB
E	EC	Adiantum formosum, Adiantum silvaticum, Blechnum wattsii, Cheilanthes austrotenuifolia, Cheilanthes distans, Cheilanthes sieberi, Cyclosorus interruptus	EC
E	EK	Arthropteris beckleri, Arthropteris tenella, Asplenium aethiopicum, Asplenium attenuatum, Asplenium australasicum, Asplenium bulbiferum, Asplenium flabellifolium, Asplenium flaccidum, Asplenium polyodon, Blechnum ambiguum, Blechnum gregsonii, Blechnum patersonii, Crepidomanes vitiense	EK
E	EQ	Calochlaena dubia	EQ, OQ

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
F	FA	Alisma plantago-aquatica, Brasenia schreberi, Ceratophyllum demersum, Crassula helmsii, Cycnogetum microtuberosum, Cycnogetum multifructum, Cycnogetum procerum, Cycnogetum rheophilum, Landoltia punctata	FA
F	FB	Ajuga australis, Alocasia brisbanensis, Apium prostratum, Brachyscome microcarpa, Calanthe triplicata, Calotis scapigera, Centella asiatica, Centella cordifolia, Craspedia canens, Craspedia variabilis, Cryptostylis erecta, Cryptostylis leptochila, Cryptostylis subulata, Cymbonotus lawsonianus, Cynoglossum australe, Hackelia suaveolens, Microseris lanceolata, Xanthosia atkinsoniana, Xanthosia dissecta	FB, FD
F	FC	Acaena agnipila, Acaena echinata, Acaena novae-zelandiae, Actinotus minor, Aneilema acuminatum, Aneilema biflorum, Arrhenechthites mixtus, Asperula conferta, Australina pusilla, Boerhavia coccinea, Boerhavia dominii, Boronia nana, Boronia parviflora, Boronia polygalifolia, Bossiaea prostrata, Brachyscome aculeata, Brachyscome brownii, Brachyscome graminea, Brachyscome mittagongensis, Brachyscome spathulata, Brachyscome triloba, Brachyscome trisecta, Brunoniella australis, Brunoniella pumilio, Calomeria amaranthoides, Calotis cuneifolia, Calotis lappulacea, Carpobrotus glaucescens, Centipeda cunninghamii, Chrysocephalum apiculatum, Chrysocephalum semipapposum, Comesperma spaerocarpum, Commelina cyanea, Commelina ensifolia, Coopernookia barbata, Coronidium gunnianum, Coronidium rutidolepis, Coronidium scorpioides, Hackelia latifolia, Hovea heterophylla, Hovea linearis, Monotaxis linifolia, Plectranthus graveolens, Plectranthus parviflorus, Plectranthus suaveolens, Teucrium argutum, Xanthosia stellata, Xanthosia tridentata, Xerochrysum viscosum	FC, FG
S	FC	Coronidium waddelliae	FC, FG
F	FD	Atriplex australasica, Chenopodium glaucum	FD

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
F	FE	Achyranthes aspera, Acianthus exsertus, Acianthus fornicatus, Actinotus gibbonsii, Actinotus helianthi, Alternanthera denticulata, Alternanthera nana, Brachyscome multifida, Bulbine semibarbata, Burchardia umbellata, Burnettia cuneata, Caesia parviflora, Caladenia alata, Caladenia carnea, Caladenia catenata, Caladenia curtisepala, Caladenia filamentosa, Caladenia fuscata, Caladenia hillmanii, Caladenia picta, Caladenia quadrifaria, Caladenia sp. A (aff. reticulata), Caladenia tentaculata, Caladenia tessellata, Caladenia testacea, Caladenia transitoria, Calandrinia calyptrata, Calandrinia pickeringii, Caleana major, Callitriche muelleri, Calochilus campestris, Calochilus gracillimus, Calochilus paludosus, Calochilus robertsonii, Calotis hispidula, Cardamine microthrix, Cardamine papillata, Cardamine paucijuga, Centipeda elatinoides, Centipeda minima, Centipeda nidiformis, Centipeda pleiocephala, Centratherum riparium, Chiloglottis chlorantha, Chiloglottis diphylla, Chiloglottis formicifera, Chiloglottis pluricalliata, Chiloglottis reflexa, Chiloglottis seminuda, Chiloglottis sylvestris, Chiloglottis trapeziformis, Chiloglottis trilabra, Corybas aconitiflorus, Corybas barbarae, Corybas fimbriatus, Corybas fordhamii, Corybas hispidus, Corybas pruinosus, Corybas undulatus, Corybas unguiculatus, Cotula australis, Crassula decumbens, Crassula peduncularis, Crassula sieberiana, Crassula tetramera, Cyanicula caerulea, Cyrtostylis reniformis, Hibiscus trionum, Nyssanthes diffusa, Nyssanthes erecta, Xerochrysum bracteatum	FE
F	FG	Arthropodium milleflorum, Arthropodium minus, Arthropodium species B, Blandfordia cunninghamii, Blandfordia grandifora, Blandfordia nobilis, Bulbine bulbosa, Burmannia disticha	FG, GV, GF
G	GD	Chloris ventricosa, Cynodon dactylon	GD
G	GF	Baloskion fimbriatum, Baloskion gracile, Baloskion pallens, Baloskion tetraphyllum, Centrolepis fascicularis, Centrolepis strigosa, Chordifex dimorphus, Chordifex fastigiatus, Coleocarya gracilis, Ficinia nodosa	GF, GV, GY, FG

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
G	GG	Amphibromus nervosus, Amphipogon strictus, Anisopogon avenaceus, Anthosachne multiflora, Anthosache scabra, Aristida benthamii, Aristida calycina, Aristida echinata, Aristida personata, Aristida ramosa, Aristida vagans, Aristida warburgii, Austrostipa mollis, Austrostipa scabra, Austrostipa setacea, Bothriochloa biloba, Bothriochloa decipiens, Bothriochloa macra, Brachyachne convergens, Bromus arenarius, Capillipedium parviflorum, Capillipedium spicigerum, Cenchrus caliculatus, Cenchrus purpurascens, Chloris divaricata, Chloris divaricata, Cymbopogon obtectus, Cymbopogon refractus	GG
G	GV	Bolboschoenus caldwellii, Bolboschoenus fluviatilis, Bolboschoenus medianus, Bulbostylis barbata, Bulbostylis densa, Carex appressa, Carex breviculmis, Carex brownii, Carex brunnea, Carex chlorantha, Carex declinata, Carex fascicularis, Carex gaudichaudiana, Carex inversa, Carex longebrachiata, Carex maculata, Carex polyantha, Carex pumila, Carex tereticaulis, Caustis flexuosa, Caustis pentandra, Caustis recurvata, Chorizandra cymbaria, Chorizandra sphaerocephala, Cladium procerum, Cyathochaeta diandra, Cyperus bowmannii, Cyperus cyperoides, Cyperus difformis, Cyperus eglobosus, Cyperus enervis, Cyperus exaltatus, Cyperus flavidus, Cyperus fulvus, Cyperus gracilis, Cyperus gunnii, Cyperus haspan, Cyperus imbecillis, Cyperus iria, Cyperus laevigatus, Cyperus laevis, Cyperus leiocaulon, Cyperus lhotskyanus, Cyperus lucidus, Cyperus mirus, Cyperus odoratus, Cyperus platystylis, Cyperus polystachyos, Cyperus procerus, Cyperus sanguinolentus, Cyperus sphaeroideus, Cyperus subulatus, Cyperus tetraphyllus, Cyperus trinervis, Cyperus vaginatus	GV, GF, GY, FG
G	GY	Arundinella nepalensis, Austrostipa elegantissima, Austrostipa pubescens, Austrostipa ramosissima, Austrostipa rudis, Austrostipa verticillata	GY, GV, GF, FG
O	OA	Macrozamia communis, Macrozamia elegans, Macrozamia spiralis	OA, OP, OX

Growth Form Group (GFG)	Category	Species	Replacement groups (in order)
O	OK	Amyema cambagei, Amyema congener, Amyema gaudichaudii, Amyema miquelii, Amylotheca dictyophleba, Bulbophyllum exiguum, Bulbophyllum minutissimum, Bulbophyllum shepherdii, Cestichis coelogynoides, Cestichis reflexa, Cymbidium suave	OK, EK
O	OL	Aphanopetalum resinosum, Carissa spinarum, Celastrus australis, Celastrus subspicatus, Cissus antarctica, Cissus hypoglauca, Cissus sterculiifolia, Clematis aristata, Cynanchum elegans, Maclura cochinchinensis, Melodinus australis, Palmeria scandens, Pandorea pandorana, Parsonsia brownii, Parsonsia straminea, Parsonsia velutina, Piper hederaceum, Ripogonum album, Rubus nebulosus, Sarcopetalum harveyanum, Smilax australis, Stephania japonica, Trophis scandens	OL
O	OP	Cordyline stricta, Crinum pedunculatum, Livistona australis	OP, OA, OX
O	OQ	Cyathea australis, Cyathea cooperi, Cyathea leichhardtiana, Dicksonia Antarctica	OQ, EQ
O	OT	Billardiera mutabilis, Billardiera scandens, Calystegia marginata, Calystegia sepium, Calystegia soldanella, Canavalia rosea, Cassytha glabella, Cassytha paniculata, Cassytha phaeolasia, Cassytha pubescens, Cayratia clematidea, Cephalaralia cephalobotrys, Clematicissus opaca, Clematis glycinoides, Comesperma volubile, Convovlulus angustissimus, Convovlulus erubescens, Cuscuta australis, Grevillea laurifolia, Ipomoea brasiliensis, Kennedia prostrata, Kennedia rubicunda, Parsonsia lanceolata, Parsonsia purpurascens, Passiflora cinnabarina, Passiflora herbertiana, Polymeria calycina, Smilax glyciphylla, Tylophora barbata, Tylophora paniculata	OT, FB
O	OX	Xanthorrhoea arborea, Xanthorrhoea concava, Xanthorrhoea fulva, Xanthorrhoea johnsonii, Xanthorrhoea macronema, Xanthorrhoea media, Xanthorrhoea minor, Xanthorrhoea resinosa	OX, OP, OA

Appendix G Crime Prevention Through Environmental Design

General Requirements

Objectives

- To implement principles of design that eliminate opportunities for crime.
- To ensure that the siting and design of buildings and spaces decreases the opportunities for committing crime through casual surveillance.
- To assist Council in assessing development applications that may have significant impacts on the community.
- To create well designed and defensible environments that contribute to public safety (both real and 'perceived').
- To ensure that development encourages people to use streets, parks and other public places without fear of personal risk.
- To encourage a sense of community ownership of open and public spaces through the adequate and continuing maintenance of the built environment and the appropriate design of publicly accessible areas.

Controls

	Performance Criteria	Design Requirements
a. <u>Fencing</u>	• Fence design should maximise natural surveillance from the street to the building and from the building to the street and minimise the opportunities for intruders to hide.	1. Fences should not inhibit surveillance of the communal areas, pathways and footpath by occupants of the building. Both the height of the fence in relation to the building, as well as the nature of the construction materials need to be considered. 2. Front fences should preferably be no higher than 1m. Where a higher fence is proposed, it will only be considered if it is constructed of open materials e.g. spaced pickets, wrought iron etc. 3. If noise insulation is required, install double-glazing at the front of the building rather than a high solid fence (greater than 1m).

	Performance Criteria	Design Requirements
b. Blind Corners	• Avoid blind corners in pathways, stairwells, hallways and car parks.	1. Pathways should be direct. All barriers along pathways should be permeable including landscaping, fencing etc. 2. Consider the installation of mirrors to allow users to see ahead and around corners. 3. The installation of glass or stainless steel panels in stairwells can also assist in this regard.
c. Communal/Public Areas	• Provide natural surveillance for communal and public areas.	1. Position active uses or habitable rooms with windows adjacent to main communal/public areas, e.g. playgrounds, swimming pools, gardens, car parks etc. 2. Communal areas and utilities e.g. laundries and garbage bays should be easily seen. 3. Where elevators or stairwells are provided, open style or transparent materials are encouraged on doors and/or walls of elevators/stairwells. 4. Waiting areas and entries to elevators/stairwells should be close to areas of active uses and should be visible from the building entry. 5. Seating should be located in areas of active uses. 6. Supermarkets and other stores that provide shopping trolleys should provide an incentive scheme for their return or a retrieval service.

	Performance Criteria	Design Requirements
d. Entrances	• Provide entries that are clearly visible and avoid confusion.	1. Entrances should be at prominent positions. 2. Design entrances to allow users to see into the building before entering. 3. Entrances should be easily recognisable through design features and directional signage. 4. Minimise the number of entry points – no more than 6 to 8 dwellings should share a common building entry. 5. If staff entrances must be separated from the main entrance, they should maximise opportunities for natural surveillance from the street. 6. Avoid blank walls fronting the street. 7. In industrial developments, administration/offices should be located at the front of the building.
e. Site and Building Layout	• Allow natural observation from the street to the dwelling, from the dwelling to the street, and between dwellings.	1. For single dwellings and dual occupancies, orientate the main entrance towards the street or both streets if located on a corner. 2. For townhouses/villas/multiple units, ensure part of the building addresses the street or both streets if located on a corner. 3. Position habitable rooms with windows at the front of the dwelling. 4. Garages and carports should not dominate the front façade of the building. 5. Access to dwellings or other uses above commercial/retail development should not be from rear lanes. 6. Offset windows, doorways and balconies to allow for natural observation while protecting privacy.

	Performance Criteria	Design Requirements
f. <u>Landscaping</u>	• Avoid landscaping which obstructs casual surveillance and allows intruders to hide. • Avoid large trees/shrubs and buildings works that could enable an intruder to gain access to the dwelling or to neighbouring dwellings. • Use vegetation as barriers to deter unauthorised access.	1. Avoid medium height vegetation with concentrated top to bottom foliage. Plants such as low hedges and shrubs, creepers, ground covers, and high canopied vegetation are good for natural surveillance. 2. Trees with dense low growth foliage should be spaced or raised to avoid a continuous barrier. 3. Use low ground cover or high canopied trees, clean trunks, to a height of 2m around children's play areas, car parks and along pedestrian pathways. 4. Avoid vegetation, which conceals the building entrance from the street. 5. Prickly plants can be used as effective barriers. Species include bougainvilleas, roses, succulents, and berberis species. 6. Avoid large trees, carports, skillion extensions, fences, and downpipes next to second storey windows or balconies that could provide a means of access.

	Performance Criteria	Design Requirements
g. Lighting	• Providing lighting to enable natural surveillance, particularly in entrances/exits, service areas, pathways and car parks. • Ensure lighting does not produce glare or dark shadows.	1. Use diffused lights and/or movement sensitive lights. 2. Direct these lights towards access/egress routes to illuminate potential offenders, rather than towards buildings or resident observation points. 3. Lighting should have a wide beam of illumination, which reaches to the beam of the next light, or the perimeter of the site or area being traversed. 4. Avoid lighting spillage onto neighbouring properties as this can cause nuisance and reduce opportunities for natural surveillance. 5. As a guide, areas should be lit to enable users to identify a face 15m away. 6. Illuminate possible places for intruders to hide. 7. Use energy efficient lamps/fittings/switches to save energy. 8. Leave some lights on at night or use sensor lights. 9. Locate additional lighting below awnings to provide adequate illumination to the footpath areas.

	Performance Criteria	Design Requirements
h. <u>Building Identification</u>	• Ensure dwellings are clearly identified by street number to prevent unintended access and to assist persons trying to find the dwelling.	1. Each individual dwelling should be clearly numbered. 2. Unit numbers should be clearly provided on each level. 3. Each building entry should clearly state the unit numbers accessed from that entry. 4. Street numbers should be at least 7cm high and positioned between 1m and 1.5m above ground level on the street frontage. 5. Street numbers should be made of durable materials preferably reflective or luminous and should be unobstructed (e.g. by foliage). 6. Location maps and directional signage should be provided for larger developments.

	Performance Criteria	Design Requirements
i. Security	• Provide an appropriate level of security for individual dwellings and communal areas to reduce opportunity for unauthorised access. • Use security hardware and/or personnel to reduce opportunities for unauthorised access.	1. Install intercom, code or card locks or similar for main entries to buildings including car parks. 2. Install quality locks on external windows and doors. 3. Install viewers on entry doors to allow residents to see who is at the door before it is opened. 4. Main entry doors for buildings should be displayed requesting residents not to leave doors wedged open. 5. *Australian Standard 220* - door and window locks should be installed in all dwellings. 6. Consider installing user/sensor electronic security gates at car park entrances, garbage areas and laundry areas etc, or provide alternative access controls. 7. Entry to basement parking should be through security access via the main building. 8. External storage areas should be well secured and well lit. 9. If security grills are used on windows they should be operable from inside in case of emergencies. 10. Ensure skylights and/or roof tiles cannot be readily removed or opened from outside. 11. Consider monitored alarm systems. 12. Provide lockable gates on side and rear access. 13. Consider building supervisors or security guards.

	Performance Criteria	Design Requirements
j. Ownership	• Design dwellings and communal areas to provide a sense of ownership. • Create the impression that the place is well looked after and well "cared for".	1. To distinguish dwellings or groups of dwellings use design features e.g. colouring, vegetation, paving, artworks, fencing, furniture etc. Physical and/or psychological barriers, e.g. fences, gardens, lawn strips, varying textured surfaces can be used to define different spaces. 2. Ensure the speedy repair or cleaning of damaged or vandalised property.
k. Maintenance	• Create the impression that the place is well looked after and well "cared for". • Use materials that reduce the opportunity for vandalism.	1. Ensure the speedy repair or cleaning of damaged or vandalised property. 2. Provide for the swift removal of graffiti. 3. Provide information advising where to go for help and how to report maintenance or vandalism problems. 4. Strong, wear resistant laminate, impervious glazed ceramics, treated masonry products, stainless steel materials, anti-graffiti paints and clear over sprays will reduce the opportunity for vandalism. Flat or porous finishes should be avoided in areas where graffiti is likely to be a problem. 5. Where large walls are unavoidable, consider the use of vegetation or anti-graffiti paint. 6. Alternatively, modulate the wall, or use dark colours to discourage graffiti on vulnerable walls. 7. External lighting should be vandal resistant. High mounted and/or protected lights are less susceptible to vandalism. 8. Communal/street furniture should be made of hardwearing vandal resistant materials and secured by sturdy anchor points or removed after hours.

	Performance Criteria	Design Requirements
l. Mixed Land Uses	• Where permitted, provide appropriate mixed uses within buildings to increase opportunities for natural surveillance, while protecting amenity.	4. Locate shops and businesses on lower floors and residences on upper floors. In this way, residents can observe the businesses after hours while the residences can be observed by the businesses during business hours. 5. Encourage 'Multiple uses' of land to encourage activity that complements casual surveillance. 6. Incorporate car wash services, taxi ranks and shop kiosks etc within car parks.
m. Spaces	• Spaces should be clearly defined to express a sense of ownership and reduce illegitimate use/entry.	1. Physical and/or psychological barriers, e.g. fences, gardens, lawn strips, varying textured surfaces, can be used to define different spaces.
n. Public Facilities (ATMs telephone, help points, bicycle storage etc)	• Locate public services in areas of high activity.	1. Locate public facilities in highly visible locations that are well lit and, where possible, near activities with extended trading hours e.g. restaurants, convenience stores. 2. Locate public facilities away from possible places to hide, e.g. fire exits. 3. Design ATMs to incorporate mirrors or reflective materials so that users can observe people behind. 4. Provide directional signs to key services and landmarks, e.g. railway station, taxi ranks, library etc.

	Performance Criteria	Design Requirements
o. Shopfront	• Allow for natural surveillance and a suitable streetscape appearance.	1. Shopfronts should remain consistent with or improve on the existing streetscape 2. Ensure surveillance between the shopfront and the street by retaining clear sight lines and limiting promotional material on windows. 3. Avoid displaying merchandise on the footpath.
p. Building Materials	• Use building materials, which reduce the opportunity for intruder access.	1. Use toughened or laminated glass at ground floor. 2. Roller shutters should be in the form of an opaque or clear security grille rather than a solid material.
q. Hours of Operation	• Provide adequate security to buildings with extended hours of operation.	1. Allocate security guards to patrol the surrounding areas of the building and instruct patrons when they leave the building to be mindful of residential uses in close proximity and to keep noise levels down.

Car Parks

These requirements apply to commercially operated car parks, Council and commuter car parks, and to car parks associated with retail, commercial, industrial and other uses.

	Performance Criteria	Design Requirements
a. Lighting	• Provide adequate lighting.	1. Illuminate all external edges and access points to car parks during opening hours of the car park. 2. To allow for the adjustment of driver and pedestrian vision, lighting intensity to covered or underground car parks should be graded. Brighter light should be used at entrance and pedestrian access ways and dimmer light should be used elsewhere. 3. Lighting should be sufficiently bright to enable a car park user to see into the rear seat of a parked car before they enter the car.
b. Materials	• Use materials that enhance natural surveillance within the car park.	1. Encourage the use of transparent materials for walls and doors. 2. Paint the ceilings and walls of the car park in light colours to enhance brightness. 3. Reflective film can be used on windows overlooking car parks. Potential intruders will not know if they are being observed during daylight hours.
c. Security Grills	• Allow natural observation.	1. Consider the installation of open style security grills to individual parking spaces rather than separate garaging. 2. Where feasible include security grills from underground car parks to the street to provide some surveillance.

	Performance Criteria	Design Requirements
d. Site and Building Layout	• Design car parks to allow for natural surveillance and ensure clear sight lines throughout the parking area. • Ensure ease of access and safety within the car park.	1. Avoid large expanses of car parks. Where large expanses of car parks are proposed, provide surveillance such as security cameras. 2. Access to lifts, stairwells and pedestrian pathways should be clearly visible. 3. Avoid hidden recesses. 4. Locate disabled parking spaces in highly visible and convenient areas. 5. Locate car parks in areas that can be observed by adjoining uses. 6. Minimise the number of entry and exit points. 7. Pedestrian corridors should be created for large developments. 8. Where possible, locate entry/exit points in close proximity and close to the car park operator or shops, cafes etc. 9. Staff car park should be separated and secured.
e. Security	• Provide security and reduce opportunity for unauthorised access.	1. Use security devices, such as an intercom or remote lock facility in multi-level car parks where appropriate. 2. For larger developments, locate a help point on each parking level and/or allocate security staff. 3. For a multi-level car park, use only a limited area of the car park outside peak hours. 4. Consider the installation of boom gates or similar devices at entrances and exits of the car park.

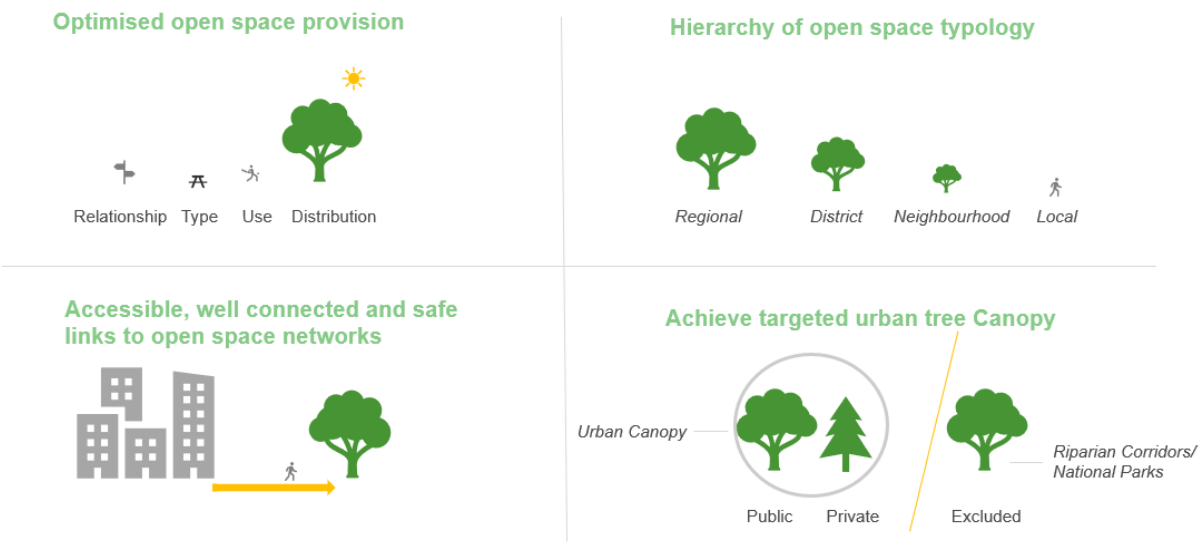
	Performance Criteria	Design Requirements
f. Signage	• Ensure that parking areas are clearly identified by signage to prevent unintended access and to assist persons trying to find their car.	1. Provide signage that is clearly visible, easy to read and simple to understand. 2. Use strong colours, standard symbols and simple graphics for signs. 3. Upon entering the car park provide both pedestrians and drivers with a clear understanding of direction to stairs, lifts and exits. 4. In multi-level car parks, use creative signage to distinguish between floors to enable users to easily locate their cars. 5. Advise users of security measures that are in place and where to find them e.g. intercom systems. 6. Provide signs at the car park advising users to lock their cars. 7. Where exits are closed after hours, ensure this information is indicated at the car park entrance.

Appendix H Wilton Green Plan Principles

1.0 Objectives

The Green Plan establishes a framework for the provision of open space and urban tree canopy within the Wilton Growth Area. A set of core objectives in **Figure 11** have been developed to ensure the best outcomes for the new community at Wilton.

Figure 11



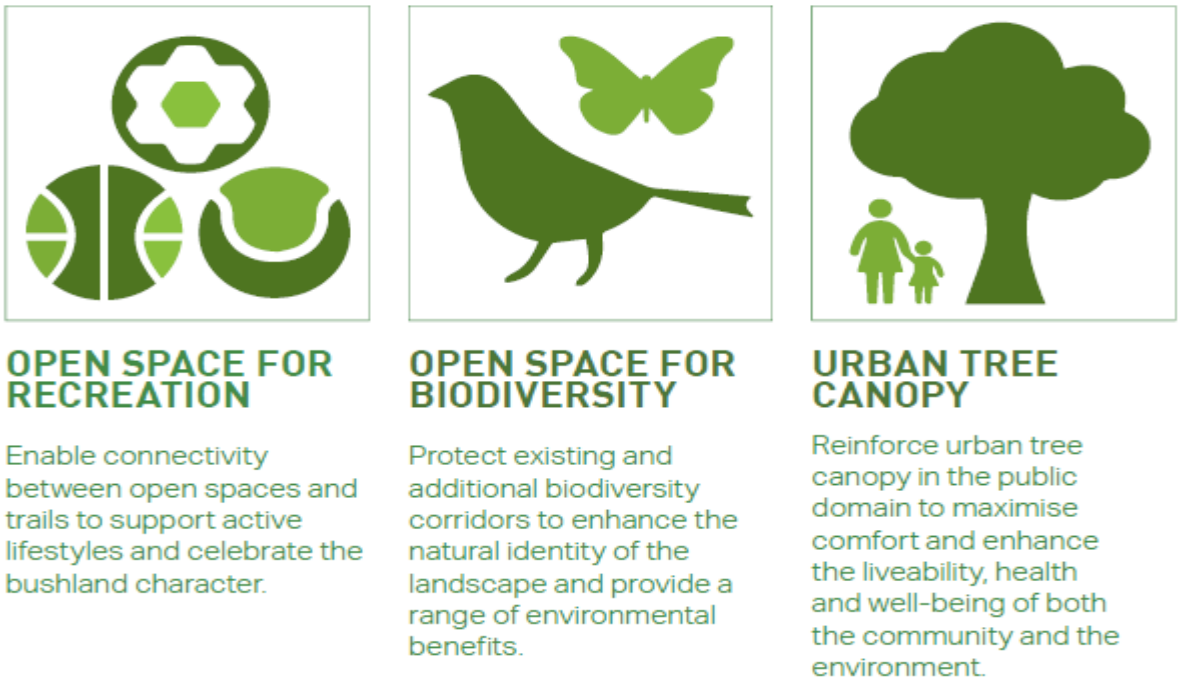
Wilton Green Plan Objectives

The Green Plan will investigate a balanced approach to the objectives listed above. The objectives are set to ensure the Wilton community will have equitable open space with a variety of uses accessible to the present and future community.

2.0 Overarching Principles

To support the implementation of the long-term open space for recreation, open space for biodiversity and urban tree canopy vision for the Wilton Growth Area, a series of overarching principles have been identified. These overarching principles in **Figure 12** will set the foundations for the design response of the Green Plan.

Figure 12

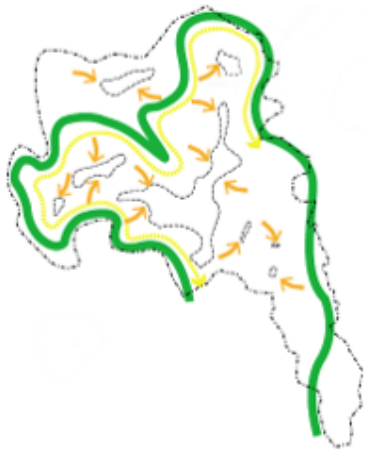


Wilton Green Plan Overarching Principles

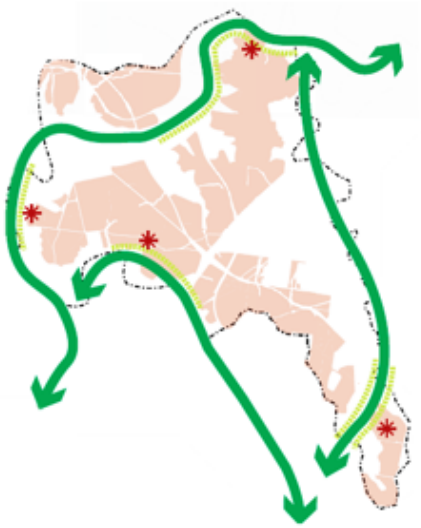
Based on the overarching Green Plan Principles, seven place specific design principles have been generated to guide the decision-making process in the assessment and interventions of open space and urban tree canopy. **Figure 13** describes what these principles are and an outline how to achieve this.

Figure 13

DESIGN PRINCIPLE	TO ACHIEVE THIS...
1 – Connecting the Community  A system of hierarchical green links and linear parks, which will establish a continuous network of open space that will connect the community with the surrounding nature	• Implement a network of enhanced pedestrian and cycling links to connect the conservation lands and river trails to the greater network of open space throughout Wilton and beyond. • Link the proposed new town centres, schools and other community facilities with a network of open spaces. • Align Green Links with pedestrian and active transport desire lines including sub arterial and collector roads. • Align and connect Green Links with ecological fringe where applicable. • Implement safe (in line with CPTED principles), comfortable and high-quality finish

2 – APZ and Fire Protection
 
A landscape-managed edge within the Asset Protection Zones will build a multi-functional physical buffer offering fire safety, recreational opportunities and ecological protection
	• Retain and utilise the APZ to create a framework for publicly accessible linear parks along the bushland edges
	• Activate required APZ through:
	  ○ Open space provision which responds to site characteristics and condition
	  ○ Incorporating water sensitive urban design outcomes
	  ○ Native flora and fauna protection
	  ○ Community interaction and education of the conservation areas to build awareness and sense of ownership.
	• Co-locate open space within the identified evacuation zones as identified in the "Strategic Bushfire Assessment – Wilton Growth Area by Ecological Australia.

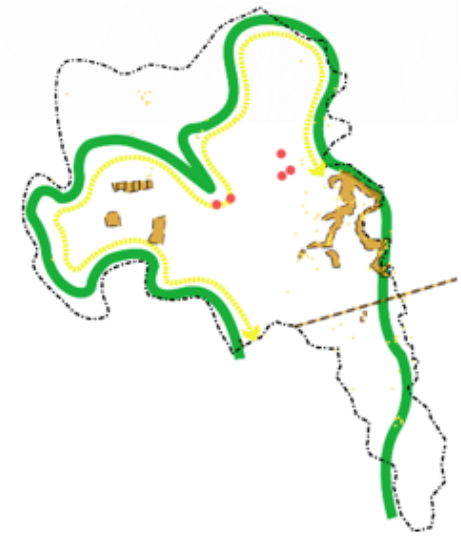
3– Koala Sensitive Urban Design (KSUD)



Urban design strategies to guide future development to protect the koala corridors and the existing native fauna

- Open space strategy to support the conservation and protection of the native flora and fauna, including Koalas and their movement corridors
- Identify potential pinch-points within conservation land as possible locations for the interaction of the community and the native flora and fauna. This could include Koala identification of lookout points
- Co-locate open space adjoining areas within the identified conservation areas for protection by maximising buffer zones from urbanised areas

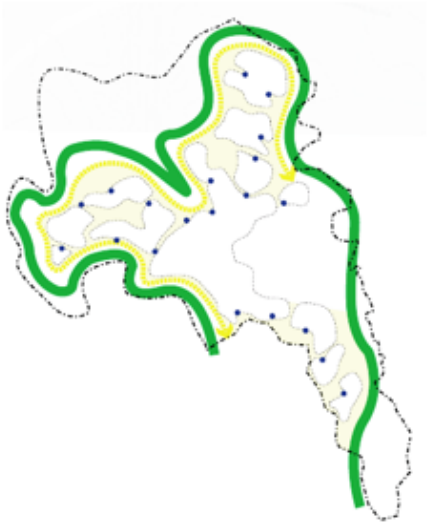
4 – Heritage and Character



Protect, enhance and respond to the unique landscape character and heritage of the Wilton Growth Area. Co-located open space to incorporate heritage assets and landscape features to provide unique site responsive open spaces for the community

- Retain and protect historically significant heritage sites
- Investigate opportunities to create a diversity of open space experiences through the conservation and interpretation of key heritage sites and artefacts for the education and enrichment of the community
- Develop a Green Link strategy that aligns with pedestrian and active transport desire lines orientated towards the identified heritage sites

5–Equal Distribution of Sport and Recreational Facilities



Sports and recreational facilities will be distributed across development link the facilities with the green corridors

- Provide a diverse range of accessible community spaces and recreational facilities in and around the Precincts to ensure streets and open spaces are activated
- Ensure equitable and an even distribution of open space (both sports and passive recreational) within Wilton Growth area
- Assess quality of existing open space within a minimum 400- 500m walking catchment for 95% of the residents of the future development
- Implement high quality open spaces with a clear hierarchy of typology allowing for a diversity in programming

6 – Water Sensitive Urban Design (WSUD)

The water running off the development will be treated through a combination of WSUD strategies and water treatment bodies located along the landscaped managed edge. Once treated, the water will be partially harvested, recycled and reused within the community, and partially diverted into selected water courses of the Nepean River

- Open space strategy to support and align with Water Sensitive Urban Design strategies
- Establish APZ to support staged water treatment process at it discharges into natural river and creeks including bioretention and biofiltration processes
- Open space and urban tree canopy to support capture and reuse of water onsite

7 – Cooling Wilton

Strategies to protect the existing tree canopy will be implemented as a part of "Cooling Wilton". This will be complemented by the Green Links connecting the open space network, contributing to an overall cooling of Wilton.

- Retention of mature vegetation and tree clusters where possible
- Enhance and increase the urban tree canopy within the Wilton Growth Area including streets, open spaces, government and privately-owned land.
- Consider street tree planting species that support the local character and assist in delivering an increased urban tree canopy
- Implement guidelines within private lots to maximise urban tree canopy outcomes
- Set an urban tree canopy strategy to implement and achieve set canopy targets and contribute to multiple benefits, including Urban cooling of the Wilton Growth Area

Wilton Green Plan Design Principles

Appendix I Biodiversity Controls

Generally, the following clauses apply to land that interfaces with an environmental protection zone or environmentally sensitive area. The urban interface is up to 200m from the boundary with the environmental protection zone and includes the Asset Protection Zone. If there is a fauna exclusion fencing in place, development controls relating to urban development in the interface area (such as residential fencing design and traffic control for fauna such as Koalas) should not be applied.

1.0 Biodiversity Objectives

Controls for the following objectives are located in **Part 2.0** below.

1.1 Bushland

Objectives

a) Retain and protect remnant bushland to enable existing plant and animal communities to survive and develop in the long term
b) Enhance size and connectivity through ecological restoration patches of a sufficient size and configuration to support new habitat for plant and animal communities
c) Provide for the improved management of remnant bushland habitat
d) Mitigate indirect and ongoing impacts of development on bushland values from increased disturbance, stormwater runoff or alteration of drainage patterns, rubbish dumping, infestation with weeds and exotic plants or the intrusion of vehicles
e) Integrate remnant bushland with adjacent open space and include these areas as part of management provisions for neighbourhoods.

1.2 Wildlife Corridors

Objectives

a) Retain and protect bushland habitat within existing wildlife corridors
b) Encourage ecological restoration of bushland to increase habitat connectivity for wildlife corridors
c) Mitigate indirect and ongoing impacts of development on wildlife corridors
d) Provide appropriate signage for the public on the management, use and conservation value of wildlife corridors.

1.3 Threatened and Significant Species

Objectives

a) Retain, protect and enhance habitat features necessary to maintain and increase populations of threatened and other significant plants, animals and communities.
b) Improve the management of retained and protected habitat features.
c) Mitigate indirect and ongoing impacts of development on threatened and other significant plants and animals.

1.4 Koala Habitat

Objectives

a) Retain, protect and increase koala populations and their habitats.
b) Provide for the improved management of retained koala habitat.
c) Mitigate indirect and ongoing impacts of development on koala populations and their habitats.
d) Provide appropriate signage regarding threats to koalas and the use and management of koala habitat adjacent to urban areas.

1.5 Waterways and Riparian Areas

Objectives

a) Retain and restore native vegetation within the riparian management areas.
b) Improve the water quality, bank and bed stability and ecosystem functions of waterways and riparian habitats in Wilton Growth Area.
c) Provide for the improved management of riparian and aquatic habitats as part of riparian management areas for species such as Red-crowned Toadlet and White-bellied Sea eagle.
d) Mitigate indirect and ongoing impacts of development on riparian and aquatic habitats in Wilton Growth Area.
e) Provide appropriate signage regarding the conservation value and species residing in riparian areas within the Wilton Growth Area neighbourhoods.
f) Ensure that development does not adversely impact upon the riparian management areas and to protect, conserve, enhance and manage:
    a. the ecological, scientific, cultural, aesthetic and educational values of waterways and riparian land
    b. bed and bank stability.
    c. edge effects at the riparian corridor / urban interface.
    d. water quality within waterways and the quality of water entering waterways.
    e. aquatic and riparian vegetation and habitats.
    f. ecological processes within riparian lands including connectivity along waterways for a range of terrestrial and aquatic species.
    g. waterways as natural systems.

1.6 Key Habitat Features

Objectives

a) Retain and protect other key habitat features that commonly occur outside of bushland and provide essential habitat for threatened and other fauna.
b) Provide for the improved management of these habitats and adjacent areas.
c) Mitigate indirect and ongoing impacts of development on other key habitat features and the fauna that need them.
d) Engage with the public to help improve the broader understanding of the conservation value and species residing in other habitat features.

1.7 Climate Change

a) Ensure that the management of retained and protected environmentally sensitive areas minimises any adverse impacts of climate change on biodiversity

b) Improve the ability of flora and fauna populations to adapt and respond to climate change
c) Mitigate indirect and ongoing impacts of development that may exacerbate the impacts of climate change on biodiversity.

2.0 Ecological Development Controls

The following objectives and development controls apply to all *biodiversity objectives* listed above.

In the Wilton Growth Area under this section of the DCP, neighbourhood plans should:

- specify the biodiversity elements (an individual indicator of biodiversity) that the adjacent development must avoid for environmentally sensitive areas.
- specify any setbacks, buffers or other measures required to minimise the ongoing impacts of the development on biodiversity values.
- specify actions to avoid or minimise impacts to environmentally sensitive areas in accordance with legislative requirements and current development best practice.
- specify how environmentally sensitive areas and any associated ecological setbacks are to be protected and managed.
- consider cumulative impacts for each neighbourhood plan area.
- provide flexibility in development controls where improved biodiversity outcomes are demonstrated that address development impacts.

2.1 Ecological Setbacks

Objectives

1. Avoid key biodiversity areas and ensure adjacent ecological setback distances (including any identified native and protected vegetation) are established.

Table 7

Environmentally sensitive areas	Ecological Setbacks from Urban Development (m)
Bushland	
Listed ecological communities (TECs)	30
Over-cleared Plant Community Types (as shown in Bionet Vegetation Classification)	20
Over-cleared NSW landscapes (as shown in the NSW Landscapes dataset)	20
Old growth[a]	30
Important wetlands[b]	50
Other wetlands, including lands not mapped but meeting the definitions in the *Fisheries Management Act 1994*	20
Any woody vegetation on a slope greater than 18 degrees	20
Pre-existing protected habitat[c]	20 m or as above, whichever is larger
Wildlife Corridors	
Land within a defined wildlife corridor[d]	20
Threatened and Significant Species	30
Areas within a species polygon for threatened fauna or other significant fauna that are known or predicted to occur at the site	30
Areas within a species polygon for threatened flora or other significant flora that are known to occur at the site	30
Koala Habitat	

Environmentally sensitive areas	Ecological Setbacks from Urban Development (m)	
Important koala habitat identified in the Wilton Growth Area (CPCP when approved)	20	
Primary or Secondary koala habitat	20	
Isolated or scattered primary koala food trees with evidence of koala activity	20	
Any other areas where koalas are present	20	
Waterfront land[e]	VRZ width (each side of watercourse)	Total RC width
First order stream (Strahler ordering scheme)	10	20m + channel width
Second order stream	20	40m + channel width
Third order stream	30	60m + channel width
Fourth order or fifth order stream	40	80m + channel width
Sixth order stream and above	50	100m + channel width
Estuarine area	50	
Wetland	40	
Flying Fox Camps	100	
Year round or intermittently occupied flying fox camp	20	
Other habitat features	50	
Very large native trees	20	
Stags and hollow-bearing trees[f]	20	
Raptor nests[g]	250	

Environmentally sensitive areas	Ecological Setbacks from Urban Development (m)

Notes

*Where more than one priority item applies, or an ecological setback/buffer is specified in another adopted plan or policy (e.g. a locality plan), the larger value for the ecological setback/buffer must be used.
*A further development setback of 100m is required to separate residential, commercial and educational buildings.
a) Old-growth forest is ecologically mature forest where the effects of disturbances are now negligible. See http://www.epa.nsw.gov.au/resources/pnf/OGRFreviewFieldIdent.pdf for details.
b) Important wetlands: wetlands protected under NSW State or Commonwealth legislation or policy.:
Other wetland: a wetland, other than an Important wetland. Wetland has the same meaning as a wetland under the Environmental Planning and Assessment Regulation 2000 – Schedule 3, viz:
(i) natural wetland including marshes, mangroves, backwaters, billabongs, swamps, sedgelands, wet meadows or wet heathlands that form a shallow waterbody (up to 2m in depth) when inundated cyclically, intermittently or permanently with fresh, brackish or salt water, and where the inundation determines the type and productivity of the soils and the plant and animal communities, or
(ii) artificial wetland, including marshes, swamps, wet meadows, sedgelands or wet heathlands that form a shallow water body (up to 2m in depth) when inundated cyclically, intermittently or permanently with water, and are constructed and vegetated with wetland plant communities.
c) Pre-existing protected habitat include land afforded some level of protection through either formalised (BSA, Reserve, set-aside), regulated (E-zoned) or identified as a development consent
Distances are measured from the top of the bank of the waterway (not the centreline) where relevant
d) Land within a defined corridor includes land that provides connectivity or stepping stones across landscape or as indicated in any local, regional, NSW State or national biodiversity strategies/plans (CPCP when approved).
e) Riparian corridors (RC) are to be provided within the Riparian Protection Areas in accordance with the NSW Office of Water requirements. The Officer of Water recommends a RC width, including a vegetated riparian zone (VRZ), based on watercourse order as classified under the Strahler System of ordering watercourses. The width of the RC and the VRZ should be measured from the top of the highest bank on both sides of the watercourse.
f) A larger development setback may need to be considered to prevent damage to built structures in the event of considering tree failure or stag fall.
g) This does not include the white-bellied sea eagle – see specialist species controls below.

Setbacks to environmentally sensitive areas in Wilton Growth Area

2. Unless adequate pre-existing biodiversity offset arrangements have been made under a Council-endorsed strategic planning process (e.g. a master plan) or a State or Federal government approval, clearing of bushland or other habitat will generally not be supported unless in accordance with the *State Environmental Planning Policy (Vegetation in Non-rural Areas) 2017* and all of the following apply:
    a. the clearing does not result in a significant decrease in habitat connectivity (specified in accordance with the NSW Biodiversity Assessment Methodology (BAM).
    b. there are no other suitable locations for the proposed activity in the neighbourhood or development site.
    c. an ecological setback of at least 30m is maintained to environmentally sensitive areas.
3. In the case of pre-existing offsetting arrangements or other biodiversity management measures secured under a Council-endorsed strategic planning process (e.g. a master plan) or a State or Federal government approval, such offset arrangements or management measures shall be:
    a. implemented to the extent to which they are relevant to the development application under consideration; and
    b. only varied because of specific impacts of the development, or new information not previously considered.

4. For development involving subdivision:
    a. a development envelope(s) is to be formally defined for lots greater than or equal to one hectare in area to ensure that future development of the subdivided lot(s) avoid any relevant environmentally sensitive areas and associated ecological setbacks.
    b. any proposed lot(s) with an area less than one hectare shall identify restrictions to retain large trees (as defined by vegetation formation and identified in the Bionet Vegetation Classification database), stags or hollow-bearing trees and include setbacks for land subject to other restrictions as identified in the relevant neighbourhood plan.
    c. where a development approval permits subdivision to lots of less than 1 ha and the area subject to development includes environmentally sensitive areas identified in the relevant neighbourhood plan, those areas are not to be included within any lot of less than 1ha.
5. The intent is such that, where development is to produce a subdivision, any environmentally sensitive areas (as identified in the relevant neighbourhood plan) are included in a larger lot or lots, to ensure retention and opportunity to manage those environmentally sensitive lands, and not unnecessarily encumber landholders on relatively small parcels.

2.2 Protection of Environmentally Sensitive Areas and Ecological Setbacks

1. Environmentally sensitive areas and ecological setbacks areas that are within the same lot (or lots) in neighbourhood plans or to which a development application applies are to be protected (where-ever possible) in perpetuity as protected habitat and conservation lands as follows:

Table 8

Development Type and Scale		**Protection Requirement**
Precinct / LEP Zoning	**Number of lots possible**	**Environmentally sensitive areas and ecological setbacks**
Neighbourhood Plan, Subdivision in: • Urban Development Zone	>= 25	a) all relevant environmentally sensitive areas across the entire site; and b) any associated ecological setbacks identified adjacent or within the development envelope(s); and c) ecological setbacks to important wetlands, estuarine areas, second order streams or streams of greater order across the entire site.
	6-24	a) all relevant environmentally sensitive areas within 100 m of the development envelope(s); and b) associated ecological setbacks within 100 m of the development envelope(s); and c) important wetlands, estuarine areas, second order streams or streams of greater order and associated ecological setbacks across the entire site.

Development Type and Scale		Protection Requirement
	<= 5	a) all relevant environmentally sensitive areas within 100m of the development envelope(s); and b) associated ecological setbacks within 100 m of any proposed development envelope(s).
Subdivision in E2 Environmental Conservation Zone		Wherever necessary to protect environmentally sensitive areas.
Larger-scale developments not involving subdivision		a) all relevant environmentally sensitive areas across the entire site and within 200m of the development envelope(s); and b) associated ecological setbacks within 200m of the development envelope(s).
Other Development		To be determined on a case-by-case basis. Only if considered necessary to protect environmentally sensitive areas (and areas of native vegetation community within 30 m (non-woody types) or 100 m (woody types as defined in NSW Biodiversity Assessment Methodology (BAM).

Advisory Notes

a) Calculated as the total area of the lot (or lots in the same ownership) / minimum lot size identified in the LEP for the zone that will apply following the development of the land
b) A dwelling entitlement is required to ensure long-term protection and management by the owner.
c) Lots under 1.0 ha are not to contain environmentally sensitive areas.
d) To be determined during assessment on a case by case basis but does not include dwellings and associated uses.
e) including any contiguous bushland as defined by being a patch of native vegetation community within a distance as defined in BAM and being of a particular vegetation formation.

Protection Requirements

2.3 Management of Protected Habitat

1. The following areas that are within the same lot (or lots) to which the development application applies are to be managed under an approved Habitat Management Plan for the duration specified:

Table 9

Development Type and Scale		Management Requirement	
LEP Zoning	Number of possible lots[1]	Applies to:	Minimum duration:
Subdivision in Urban Development Zone	>= 25	Any areas protected under **clause 2.2.1**	In perpetuity
	6-24		Establishment period, plus 10 years maintenance

Development Type and Scale		Management Requirement	
	<= 5		Establishment period, plus 5 years maintenance
Subdivision in E2 Environmental Conservation Zone		Any areas protected under **clause 2.2.1**	To be determined on a case-by-case basis. Only required if considered necessary to manage sensitive and/or significant areas likely to be affected by development
Larger scale developments not involving Subdivision[2]		Any areas protected under **clause 2.2.1**	In perpetuity
Other Development		To be determined on a case by case basis consistent with **clause 2.2.1**. Only required if considered necessary to manage sensitive and/or significant areas likely to be affected by development	

Advisory Notes

1. Calculated as the total area of the lot (or lots in the same ownership) / minimum lot size identified in the LEP for the zone that will apply following the development of the land

2. To be determined during assessment on a case-by-case basis but does not include dwellings and associated uses.

Management requirement

A Habitat Management Plan also covers protected habitat, Koala Management Areas and Riparian Management Areas.

2. In cases where the protection and/or management requirements under clauses 2.2.1 and/or 2.3.1 do not precisely match the development under consideration, the protection or management requirements shall be determined on a case-by-case basis generally consistent with the nature and scale of development specified in under clauses 2.2.1 and/or 2.3.1.
3. The Habitat Management Plan referred to in clause 2.3.2 above, must include measures that:
    a. restore and enhance any retained native vegetation community patch;
    b. ensure that any ecological setback is managed as an ecological buffer to improve the ecological integrity of the retained bushland or other habitat feature;
    c. appropriately manage and control environmental weeds and pest animals as relevant to the site;
    d. in the case of any area(s) identified as wildlife corridors, improve habitat connectivity;
    e. in the case of any area(s) containing identified populations of any threatened flora, threatened fauna, other significant flora or other significant fauna, address their ongoing management, relative to the impacts of the development and the requirements of any relevant recovery plan;

f. in the case of any area(s) affected by koala habitat, address the ongoing management of any koalas or their habitat relative to the impacts of the development and the requirements of any relevant recovery plan;

g. acknowledge any individual Koala Plan of Management required under *SEPP 44 - Koala Habitat Protection* and integrate (or cross reference) any provisions that cover the same areas as the Habitat Management Plan;

h. in the case of waterways and riparian areas, ensure that:

   i. the waterway itself and the associated ecological setback is managed as an ecological buffer to minimise erosion and sedimentation and is vegetated with native vegetation appropriate to the site (including ecological restoration if needed), and

   ii. where it applies, livestock are excluded from accessing the waterway (except designated crossings);

i. in the case of any other key habitat features ensure that the feature is retained, and the area is managed to encourage the continued use by appropriate fauna species;

j. consider the likely impacts of climate change and implement contemporary best practice management to mitigate any adverse impacts on the viability of local flora or fauna populations, or the ecological integrity of their habitats including, where relevant and possible, allowing for floodplain vegetation affected by climate change related increases in tidal inundation or rises in the ground water table;

k. provide for the ongoing management of any biodiversity offset;

l. consider and effectively minimise the ongoing threats from the development in accordance with Part 3.0 below or where otherwise identified as part of the development consent process;

m. where applicable, manage threats to ecological values from areas adjacent to the development site.

4. Implementation of the Habitat Management Plan referred to in **clauses 2.3.1** and **2.3.3** above shall commence no later than the physical commencement of the development. In the case of staged development, implementation of the Habitat Management Plan shall clearly and proportionally reflect the staging of the development particularly in relation to the location and impacts of development.
5. Where development consent is granted subject to final approval of a Habitat Management Plan, there shall be no physical commencement until the Habitat Management Plan has been approved by Council.
6. Council shall not grant consent for development subject to final approval of a Habitat Management Plan unless it is satisfied that the draft Habitat Management Plan submitted with the development application is compliant with the provisions of **clause 2.3.3**.
7. Council may consider accepting the dedication of lands requiring a Habitat Management Plan under **clause 2.3.3** providing adequate arrangements are made to resource the required management actions.

Additional Urban Development Controls

2.4 Waterways and Riparian Areas

1. In relation to development adjoining waterways and riparian areas Council may, where considered appropriate require bank stabilisation works, arrangements for public access, measures to minimise pollution and sedimentation and/or measures to reduce the impacts of biting insects.

2.5 Dam De-watering

6. Where it is intended to dewater and back fill a dam as part of the development application, a dam de-watering report is required to be submitted if any of the following circumstances apply:
    a. the dam volume is in excess of 200m3
    b. the site containing the dam has the potential to be contaminated; e.g. previous or current agricultural uses (including market gardens, poultry farms) and industrial uses
    c. the water from the dam is proposed to be discharged into the stormwater drainage system or local creek (refer to restrictions on release of exotic fishes from the FM Act)
    d. the dam is less than 100m from a road, and/or
    e. as directed by Council.
7. Measures must be taken in line with the FM Act and the *National Parks and Wildlife Act 1974* to ensure that any fauna inhabiting the water body, or surrounding vegetation, are treated humanely and relocated before development activities commence.

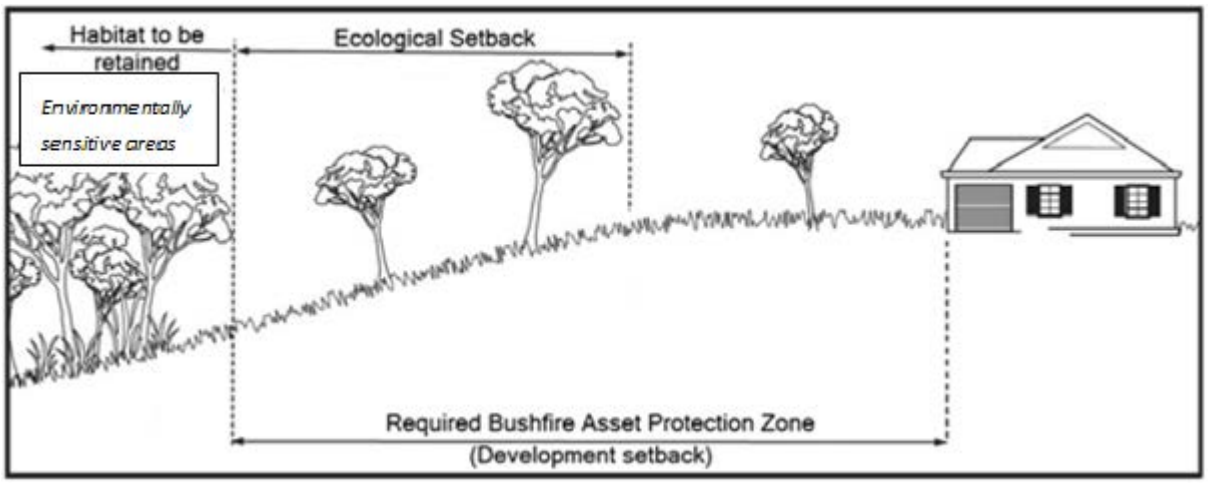
    Note: Dam dewatering may require approval by WaterNSW.

2.6 Development Setbacks

2.6.1 Bushfire

1. Development setbacks required to manage potential bushfire risk shall not overlap with environmentally sensitive areas referred to in clause 2.1.1 or other retained areas of native vegetation community. Infrastructure such as urban stormwater basins and passive recreation areas shall be co-located in the APZ. Typical scenario under clause 2.4.1.1 showing the development setback for the required bushfire asset protection zone (APZ) measured from the edge of the retained habitat. In almost all cases required APZ distance will exceed the ecological setback required under clause 2.1.1.

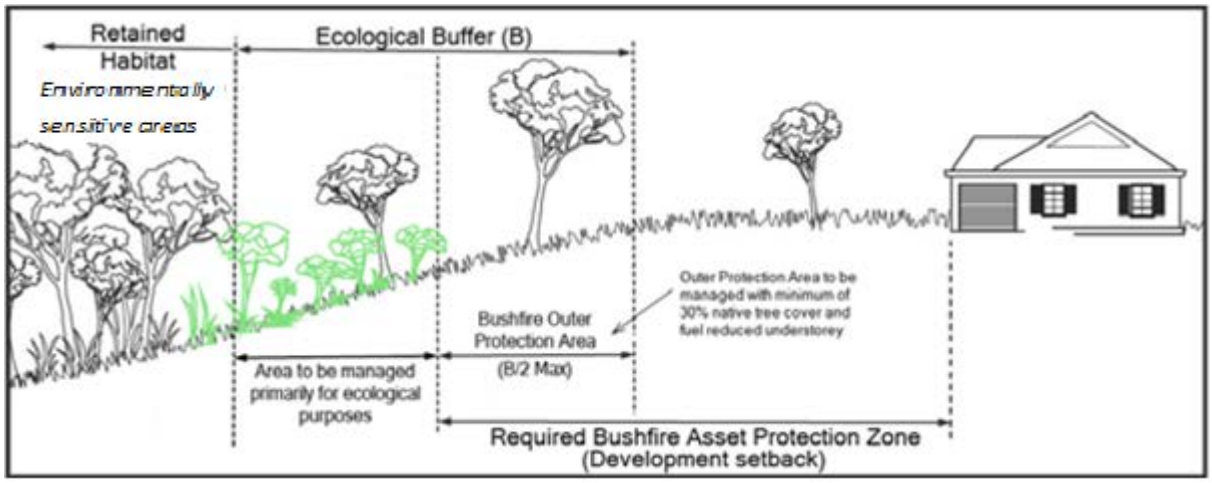
Figure 14



Typical APZ Requirement

2. A development setback required to manage potential bushfire risk may overlap with an ecological setback to be managed as an ecological buffer in a Habitat Management Plan where:
    a. no more than the outer half of the ecological buffer is used for that purpose; and
    b. the overlap is managed to maximise ecological values within the scope of the bushfire management requirements (i.e. maintaining a minimum of 30 per cent crown cover of native tree canopy cover and a fuel-reduced understorey).

Figure 15



Bushfire and ecological setbacks/buffers (Note: buffer referred to in above diagram is same meaning as ecological setback)

3. A clearing entitlement under the NSW Rural Fire Service 10/50 Vegetation Clearing Code of Practice for NSW (or similar subsequent provision) shall be regarded as a development setback.

2.6.2 Specialist Species Setbacks

1. In relation to any flying fox camp, residential, commercial and educational buildings shall be located no less than 100m from the outer edge of the flying fox camp or the relevant ecological buffer where a Habitat Management Plan is required under clause 2.3.3. This area shall be maintained largely free of suitable flying fox roosting habitat.
2. In relation to squirrel glider habitat, clearing must account for angles for squirrel glider movement according to table below.

Table 10

Height of trees	Distance between trees	Classes of Vegetation Formations
5	9.0	Heathlands, Forested Wetlands, Freshwater Wetlands, Saline Wetlands (mangrove)
10	18.0	Woodlands, Heathlands, Dry Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest, Saline Wetlands (mangrove), Semi-arid Woodlands
15	28.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest, Semi-arid Woodlands

Height of trees	Distance between trees	Classes of Vegetation Formations
20	37.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest, Semi-arid Woodlands
25	46.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest, Semi-arid Woodlands
30	55.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest
35	64.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest
40	74.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Forested Wetlands, Grassy Woodlands, Rainforest
45	83.0	Dry Sclerophyll Forest, Wet Sclerophyll Forest, Rainforest
50	92.0	Wet Sclerophyll Forest, Rainforest

Table showing the height of tree, relative distance between tree and the likely formations needed for suitable squirrel glider movement

Survey for squirrel gliders is year-round but sites with bipinnate acacia, autumn winter flowering trees and shrubs such as Eucalyptus robusta and Banksia species (integrifolia etc.) should be subject to a more retracted survey period of between March-August.

3. In relation to the white-bellied eagle, where nests are located in extensive undisturbed bushland a minimum circular buffer distance of 500m should be maintained. Where nests are located closer to existing developments a minimum circular buffer distance of 250m should be maintained, along with an undisturbed corridor at least 100m wide extending from the nest to the nearest foraging grounds.

3.1 Roads

Objectives

a) Avoid locating new roads in environmentally sensitive areas
b) Ensure that appropriate mitigation strategies (including fauna-sensitive road design elements) are employed to minimise environmental impacts during and after road construction and upgrading
c) Ensure that roads (including roadsides and fauna mitigation structures) are maintained to minimise impacts on wildlife.

Controls

1. Roads and associated civil infrastructure are considered part of the development envelope and their location shall be consistent with the provisions of Part 2.0 above.
2. In Koala Management Areas or cases where Council considers that ongoing wildlife impacts are likely to arise from new or upgraded roads the proponent may be requested to carry out additional fauna surveys to determine the likely impacts on biodiversity and explore fauna friendly road design options such as speed limits, traffic calming, signage, exclusion fencing and fauna crossing structures.
3. Where ongoing wildlife impacts are likely, the road design within the Koala Management Area is to incorporate best practice fauna-friendly design features to facilitate safe unimpeded wildlife movement and minimise any other ongoing impacts on biodiversity

values, paying particular attention to the requirements of any threatened fauna or other significant fauna within 50m.

4. Appropriate environmental safeguards are to be employed to minimise biodiversity impacts during road construction and upgrading.
5. Measures are to be in place to ensure that any fauna-friendly road design features referred to in **clause 3.1.3** above are monitored and maintained to minimise impacts on wildlife.
6. Fauna-friendly road design structures shall be maintained by the proponent for a time period consistent with any approval conditions.
7. Where a Habitat Management Plan is required under **clause 2.3.3** above, any measures or related conditions of consent to mitigate road impacts on biodiversity shall be incorporated into the Habitat Management Plan and implemented accordingly.

3.2 Fencing and Barriers

Objectives

a) Ensure the use of fauna friendly fencing in situations where wildlife are likely to move between areas of suitable habitat
b) Require fauna exclusion fencing (or other measures) to prevent wildlife from entering areas likely to represent a significant mortality risk
c) Ensure that fencing or other structures do not unreasonably restrict movement in the landscape or inadvertently direct native animals into dangerous situations
d) Ensure that, where appropriate, fencing, barriers or other measures are used to limit or control access by humans to environmentally sensitive areas.

Controls

1. Fencing must be designed to permit the free movement of native fauna in situations where wildlife are likely to move between areas of suitable habitat (unless within Koala Management Areas that are designed to specifically exclude such movement as along roads or exclusion from urban development).
2. Neighbourhood design and application of fencing design in Koala Management Areas shall consider the potential impacts on biodiversity, paying particular attention to threatened fauna or other significant fauna, to ensure that fencing or other structures do not inadvertently direct native animals into dangerous situations.
3. To reduce the risk of significant fauna mortality risk arising from crossing from one area of suitable habitat to another (e.g. busy roads) or entering built up areas (e.g. urban development with dogs) fauna exclusion fencing (or other measures) shall be used in Koala Management Areas. Such measures shall be designed to minimise any other ongoing impacts on biodiversity values, paying particular attention to the requirements of any threatened fauna or other significant fauna.
4. Any fauna exclusion fencing or other measures (including temporary structures to perform the same task) shall be constructed and operational prior to physical commencement.
5. Fencing design shall include suitable clearances to maintain functionality and allow for access for replacement and routine maintenance.
6. All exclusion fencing, fauna friendly fencing or other structures designed to protect fauna shall be monitored and maintained to minimise impacts on wildlife.
7. Where appropriate, fencing, barriers or other measures shall be used to limit or control human access to environmentally sensitive areas.

8. Where a Habitat Management Plan is required under **clause 2.3.3** above, any wildlife fencing measures or related conditions of consent shall be incorporated into the Habitat Management Plan and implemented accordingly.

3.3 Noise and Lighting

Objectives

a) Avoid locating excessively noisy developments adjacent to environmentally sensitive areas
b) Ensure that any residual noise impacts on wildlife arising from development are appropriately mitigated
c) Mitigate the impacts of artificial lighting on native fauna where there is an elevated risk of disturbance and/or mortality.

Controls

1. In cases where Council considers that wildlife impacts are likely to arise from noise or lighting, the proponent may be requested to carry out additional fauna surveys to determine the likely impacts on biodiversity, paying particular attention to threatened fauna or other significant fauna, and explore appropriate mitigation measures including, but not limited to, suitable buffers to environmentally sensitive areas, traffic speed restrictions, timing of noisy activities and/or installing appropriate noise barriers.
2. Council shall require any development layout, landscaping, infrastructure and open space plans to mitigate the impacts of noise or light on biodiversity values.
3. Where the development envelope contains or is within 100m of known microbat colonies or habitat likely to support microbat colonies, street lighting must be of a type that does not attract insects.
4. Sports field lighting, lighting within carparking areas and in association with any industrial or commercial-scale retail development (or similar high-intensity outdoor lighting) shall be designed to avoid light spill into adjoining natural areas. Australian Standard AS 4282 or updates to that standard are to be considered as a minimum.
5. Where a Habitat Management Plan is required under **clause 2.3.3** above, any measures or related conditions of consent to mitigate noise and lighting impacts shall be incorporated into the Habitat Management Plan and implemented accordingly.