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Part C – South Werrington Urban Village

12.8 – South Werrington Urban Village

12.8.1 Preliminary

12.8.1.1 Background

South Werrington Urban Village (SWUV) comprises approximately 48 hectares of land that has been identified for urban development comprising residential and employment generating uses. SWUV will assist the delivery of housing and employment opportunities in Penrith and integrate with the existing Werrington community north and south of the Great Western Railway.

12.8.1.2 Land to which this section applies

This Section applies to development on land covered by the South Werrington Urban Village as shown in Figure E12.9. This section provides specific controls for the South Werrington Urban village in addition to the general controls elsewhere in this DCP. In the event of any inconsistency between this section and the rest of DCP 2014, the requirements of this section prevail.

Figure E12.9: Land to which this Chapter applies



12.8.1.3 Aims and General Objectives of this Section

The aims of this Section are to:

- a) Support the objectives of Penrith Local Environmental Plan 2010; and
- b) Facilitate the sustainable development of residential, employment and open space areas of the South Werrington Urban Village.

This Section seeks to achieve the following objectives:

A. General

- a) To facilitate and promote the principles of the Werrington Enterprise Living and Learning (WELL) Precinct.

Transport and Accessibility

- a) To integrate public transport opportunities into the planning process,
- b) To respond to the existing and future arterial road network including the Werrington Sub-Arterial,
- c) To provide a sub-arterial and collector road network that links with surrounding areas,
- d) To ensure vehicular, pedestrian and cycle ways link efficiently within and between residential areas and employment areas,
- e) To provide an inter-connective street system that links with the existing Werrington community,
- f) To ensure the proposed land uses relate to regional access routes, public transport routes, the local road network and the open space network,
- g) To provide an interconnected local road network that creates easy access, including truck access to employment areas and accommodates bus movements, and
- h) To provide a logical and interconnected pedestrian and cycleway system linking with surrounding areas.
- i) To ensure that there is adequate land set aside for the proposed east west link road within the land that is zoned for residential development.

Natural Environment

- a) To recognise the natural land form in the design of the urban areas,
- b) To conserve the biodiversity of the site by incorporating woodland areas into the open space system and protecting riparian corridors,
- c) To reduce environmental impact by locating higher density housing closer to the railway station,
- d) To design an integrated stormwater management system consistent with principles of water sensitive urban design, and
- e) To reinforce the importance of the natural landscape settings and areas with heritage conservation values, by protecting views and vistas to and from Frogmore House.

Built Environment

- a) To maximise opportunities for higher density residential development in proximity to Werrington Station,
- b) To respond to the physical, cultural and urban heritage of the area with plans and designs that respect the landform, climate and patterns of land use,

- c) To encourage a contemporary built form of well-designed buildings that consider the amenity of the occupants and neighbours, and
- d) To ensure that the proposed development and built form comply with best practices in ESD and complies with the principles in Penrith Council's Water Action Plan 2005 and Penrith City Council's Green House Gas Reduction Plan.

Social

- a) To provide diversity of housing choice, including affordable housing,
- b) To provide places for recreation that will accommodate casual activities,
- c) To encourage safety and security through passive surveillance of streets and open spaces,
- d) To build on the existing sense of community by integrating with the existing community, and
- e) To provide a range of passive open spaces that can act as meeting places for the existing and future communities.

Economic

- a) To encourage the provision of employment opportunities that are compatible with the existing or desired future adjoining residential development,
- b) To allow for the orderly and economic development of serviceable and accessible land, and
- c) To ensure that employment development is delivered in a manner timely with the adjoining residential development.

12.8.1.4 Supporting Studies

Some additional sources of relevant information for South Werrington Urban Village include:

- a) Community Facilities Study (BBC Consulting)
- b) Archaeology and Heritage Assessment (HLA-Envirosciences Pty Ltd)
- c) Employment Lands Paper (SGS Economics)
- d) Flora and Fauna Assessment (Kevin Mills and Associates)
- e) Assessment of Future Housing Needs and Population Characteristics (BBC Consulting)
- f) Report of Land Capability (Douglas Partners)
- g) Landscape Masterplan and Visual Assessment (Context Landscape Design)
- h) Traffic and Transport Assessment (Traffix)
- i) Bushfire Hazard Assessment (Holmes Fire and Safety and ABAC)
- j) Contamination (Douglas Partners)
- k) Stormwater and Servicing (Patterson Britton & Partners)

These documents are available for reference from Council.

12.8.1.5 Concept Plans

A Concept Plan setting out proposals for the development on each of the different development zones (i.e. Residential and Light Industry) is required to be lodged prior to, or

with, the first subdivision development application for each of the different development zones.

The Concept Plan must meet the objectives and controls of this section and demonstrate:

- a) The proposed urban structure and public domain elements, including Landscape Masterplan.
- b) The distribution of lot types and housing forms to suit a variety of lifestyles, household types and financial capacities for residential zones and consistent with the dwelling yield map in Figure E12.10 and Table E12.3.
- c) The dwelling proportion numbers, types and location of affordable housing lots as required by Council's *Sustainability Blueprint for Urban Release Areas*. This is not necessary for the proportion of affordable housing for the estate delivered via another means such as a monetary contribution through a Voluntary Planning Agreement.
- d) The proposed road hierarchy, sections and details.
- e) The location and design of open spaces.
- f) The location of pedestrian and cycle paths.
- g) Development Staging.
- h) Infrastructure Delivery Strategy.

12.8.2 Structure Plan

12.8.2.1 Vision

A vision for South Werrington Urban Village (SWUV) was established through the Werrington Enterprise Living and Learning Strategy 2004 which is as follows:

“Demonstrating a model for sustainable urban development, that captures its potential arising from proximity to transport linkages and tertiary educational facilities, the WELL precinct will be an internationally renowned destination of choice for business, residents and students. The synergies arising from the collective presence of these groups will energise the Precinct and represent a catalyst for the emergence of creativity and innovation demonstrated in the enterprise, living and learning activities undertaken within the Precinct. Whilst attracting and accommodating a diverse range of land use activities and people, the desirability of the place will be a function of the seamless integration of those people and activities and the cosmopolitan lifestyle choices it subsequently generates and offers.”

The urban form within this Section is derived from the WELL Precinct Strategy including the adopted WELL Concept Plan 2006 and the studies informing this strategy.

12.8.2.2 Urban Structure

The South Werrington Urban Village Structure Plan establishes the structure and form for the planning and future development of the subject lands. The emerging urban structure of SWUV is illustrated at Figure E12.10 – South Werrington Urban Village Structure Plan and characterised by the following performance measures:

Access

- a) The structure plan envisages the construction of the proposed Werrington Arterial. A new major collector road is proposed to link the Werrington Arterial to future employment development to the west. This new link road also provides a separation between the employment and residential land uses. The intersection of the new link road with the Werrington Arterial has been located and designed and can be constructed in stages if

required. The location of the new link road is as shown on the Structure Plan, and is located on the residential zoned land.

- b) A minor north south road is proposed linking Werrington Station with the Great Western Highway and forming an edge between the employment precinct and the land that forms part of the Wollemi School.
- c) The arterial and collector road system are proposed to be designed to accommodate buses and articulated vehicles.
- d) Local streets are proposed to be generally inter-connective and link with existing streets in South Werrington.
- e) A cycle system is proposed to provide movement through the area and linking with surrounding areas including the recreational areas to the east and St Marys. The system links with the proposed cycleway along the western side of the Werrington Arterial with the potential to extend northwards.

Land Use

- a) Employment land is proposed south of the proposed east west collector road and extending to the Great Western Highway. It is proposed that this land would be used for a range of service and light industrial purposes.
- b) Residential development is proposed with the density and form influenced by the topography, proximity to the station and the land use zoning of the existing residential area of South Werrington. Densities are to be consistent with Figure E12.11 and Table E12.3 relating to dwelling yields.

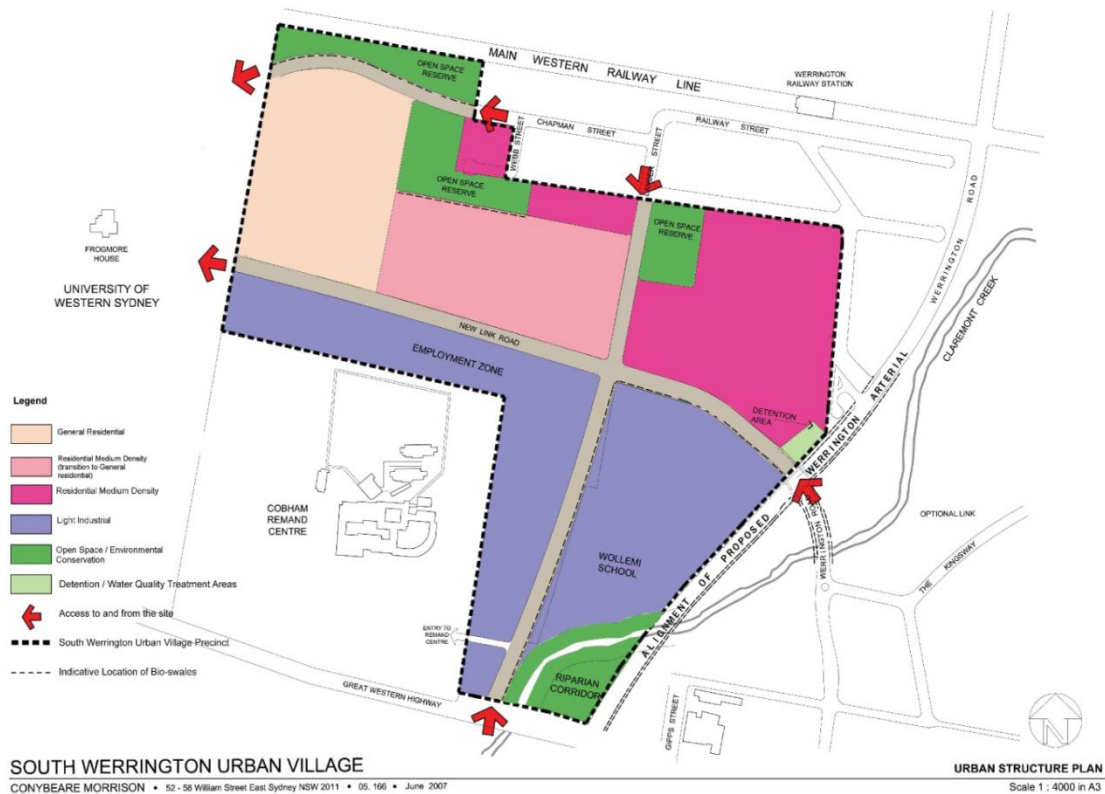
Open Space

- a) Passive Open Space areas are located within SWUV and have been located having regard to a number of factors:
 - i) the findings of the WELL Precinct studies in relation to the location of passive and active open space;
 - ii) the present supply of passive open space in Werrington and the potential for passive parks to act as a meeting place;
 - iii) the presence of woodland communities, predominantly along the northern boundary of the site and along the riparian corridor of Claremont Creek;
- b) Active Open Space are located outside SWUV however will be provided in accordance with WELL wide open space planning principles and the adopted WELL Contributions Plan. Development within SWUV will contribute towards active open space requirements across the WELL Precinct.

Stormwater Management

- a) An integrated approach to stormwater management is proposed that considers the capacity of the existing system and water sensitive urban design that is compatible with the topography and soil types.
- b) A range of measures are proposed to manage stormwater.
- c) The design of Stormwater Management Facilities is to include a schedule of the long term maintenance and operation costs.

Figure E12.10: South Werrington Urban Village Structure Plan



12.8.2.3 Desired Future Character

There are three main character areas within SWUV and they include:

- 1) General Residential:** General Residential allows for a range of housing types with the prominent housing type comprising detached housing on the lower sloped land leading up to Frogmore House. Streets are oriented north south to provide a layering of street trees and rear garden trees up the slope with lots sizes generous to allow glimpses to the ridge behind. The predominant character of the area shall be of low to mid rise roof form interspersed with vegetation. The height and bulk of development and vegetation will not obstruct views to or from Frogmore House.
- 2) Multi Dwelling Housing:** Development closer to the railway station is proposed to be medium density consistent with metropolitan planning policies and Council's *Sustainability Blueprint for New Urban Areas*. Development in the form of townhouses and apartments is proposed with a strong built edge to the street and a preference for dwellings that address the streets. This type of development will transition to the general residential area.

3) Employment Uses: Development south of the proposed east west collector road is proposed for small lot industrial purposes that will not conflict with the existing and intended character and amenity of the residential areas to the north. Development in this location is to present high quality architectural design features with a strong built edge to the street with incorporated landscaping which contribute to the streetscape. The height of development and vegetation will not obstruct views to or from Frogmore House.

12.8.2.4 Dwelling Yields

A. Objectives

- a) To provide a diverse range of housing forms and densities.
- b) To promote a range of dwellings types to meet the needs of diverse age groups and family types.
- c) To provide opportunities for affordable housing.
- d) To provide a range of residential densities that respond to the topography and proximity to Werrington Station.

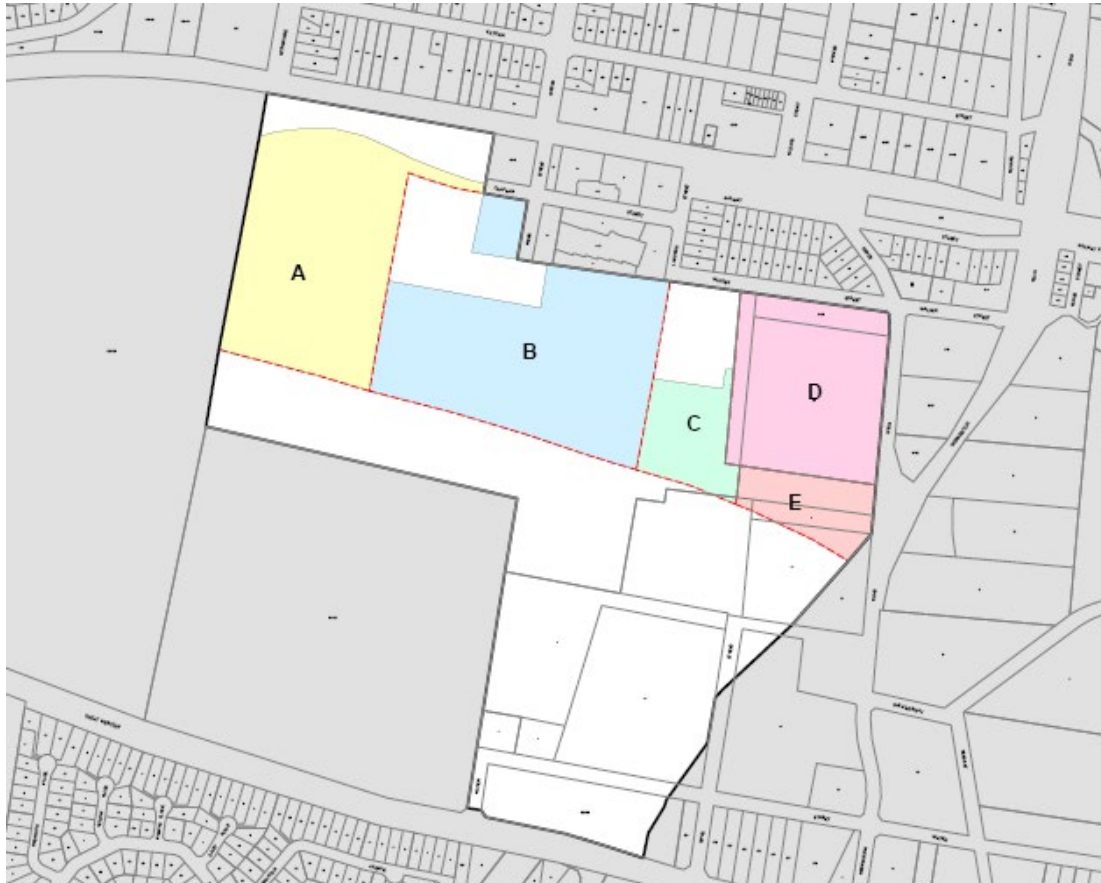
B. Development Controls

- 1) A minimum of 414 dwellings is to be delivered.
- 2) In order to ensure the minimum residential dwelling target is achieved, as part of a subdivision application, an applicant is to demonstrate to Council that the sub-precinct dwelling targets shown in Figure E12.11 and Table E12.3 will be achieved. Subject to agreement of Council and consultation with relevant landowners, dwelling yields may be 'traded' between sub-precincts as long as it meets overall targets and objectives of this DCP. The creation of a super lot or residual parcel is to specify the minimum dwelling yield which that lot is required to deliver.
- 3) Development proposals that seek densities above 414 dwellings must demonstrate that the site can accommodate the increased population with regard to issues including but not limited to potential traffic impacts, open space allocation and environmental constraints. It is recommended that applicants attend a pre-lodgement meeting with Council officers in these instances.

Table E12.3: Dwelling Yield

Sub-Precinct	Minimum dwelling yield
A	78
B	154
C	30
D	122
E	30
Totals	414

Figure E12.11 – Dwelling Yield



12.8.3 Public Domain

12.8.3.1 Responding to the Site's Natural Features

12.8.3.1.1 Riparian Corridors

A. Objectives

- a) To conserve biodiversity by providing linkages between significant natural vegetation units within the City.
- b) To protect, restore and enhance the environmental values and functions of watercourses and riparian corridors along Claremont Creek.
- c) To ensure that important natural features inform the urban structure of the place.
- d) To provide high amenity areas for residents.
- e) To ensure the water quality from the development is maintained or improved.

- f) To convey stormwater flows through the site in a safe manner.

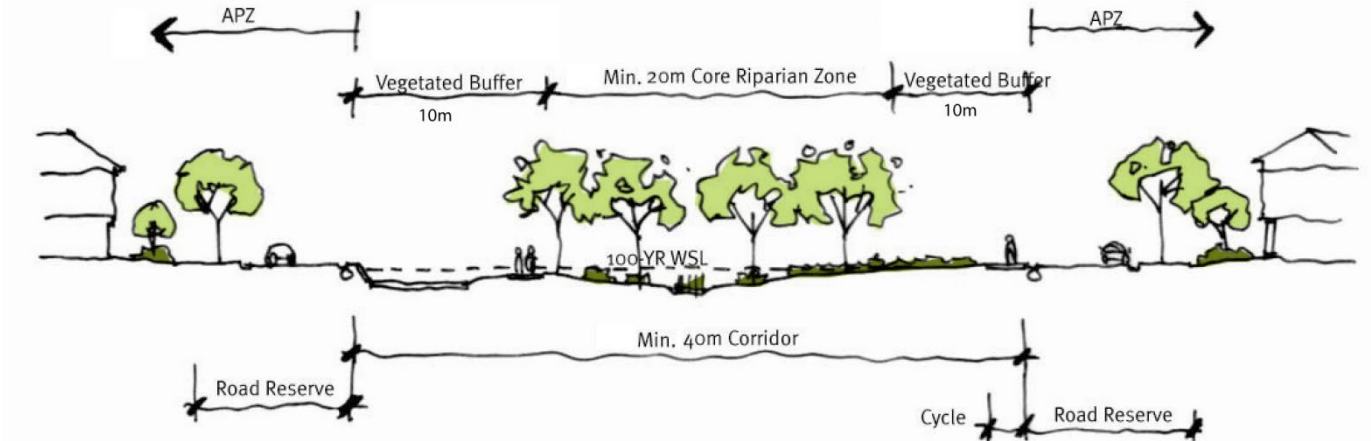
B. Performance Measures

- a) The natural drainage lines of Claremont Creek and its tributaries are conserved as healthy and naturally functioning riparian corridors.
- b) Existing healthy remnant vegetation is retained within those corridors.
- c) Significant revegetation of the riparian corridors occurs as part of development.
- d) The corridors and other topographical features are represented as special places within the urban form.
- e) A Corridor Management Plan shall be submitted and should identify how the corridor will be established is prepared developed and implemented on site as part of its development.
- f) Native vegetation within the riparian corridor is protected and rehabilitated with local provenance species at a density that would naturally occur.
- g) Water quality and water detention infrastructure should not be located within the Core Riparian Zone of the riparian corridor, and may be located in the Vegetated Buffer if:
 - i) No alternative location outside the Vegetated Buffer can be found, and
 - ii) The basin only occupies limited areas; and
 - iii) The basin can be designed in such a way that they will not reduce the function of the adjacent Core Riparian Zone.
- h) The management of the riparian corridor is to consider the long term maintenance and operation costs.

C. Controls

- 1) A minimum corridor width of 40m is to be provided along the Claremont Creek Corridor with 20m being core corridor.
- 2) The profile of the riparian corridor is to be generally consistent with that represented at Figure E12.13 – Corridor Profile Section.
- 3) Asset Protection Zones are to be located outside the Core Riparian Zone and the Vegetated Buffer and any requirements for bushfire Asset Protection Zones (APZ) are not to compromise in any way the extent, form or function of the riparian corridor.
- 4) Any pathways adjacent or adjoining Riparian Corridors are to be consistent with the Department of Water and Energy “ Design and Construction of Paths, Cycleways and Accessways along Watercourses and Riparian Area Guidelines (Version 3, April 2007)”

Figure E12.13: Corridor Profile Section



12.8.3.1.2 Water Management

A. Objectives

- a) To maintain the stability and integrity of the finished creek profile.
- b) To ensure the quality of water leaving the urban areas does not adversely impact upon the health of Claremont Creek.
- c) To provide for stormwater detention.
- d) Reduce the peak flow rate of stormwater run-off from the site for all storms up to the 100 year ARI.

B. Performance Measures

- a) Trunk drainage works are provided as an initial stage of development of the release area.
- b) Stormwater management shall incorporate various strategies and devices and should demonstrate best management practices and may include (but not limited to); pit inserts, underground pollutant traps, bio-retention swales, rain-gardens and educational programs to improve the quality of urban runoff before enters the creek channels.
- c) Stormwater Management Plans for Claremont Creek catchment that identify how the quantity and quality of urban runoff from the site will be managed are prepared and implemented on site as part of its development.
- d) A water quality plan and maintenance plan shall be submitted to Council with applications for subdivision. This plan shall cover all elements of the proposed drainage system that will ultimately be transferred to Council, and shall outline the maintenance schedule to ensure that the system operates at the required standard.
- e) Consideration should be given to evaluating the opportunities for the integration of water supply and re-use of stormwater, grey water and treated effluent.
- f) Reference is to be made to Section 12.8.3.1.5 Salinity in relation to the construction and location of stormwater management devices.
- g) The design of the stormwater infrastructure is to include a schedule of the maintenance and operation costs of the facilities lifecycle.

C. Controls

- 1) Developments must achieve Council's downstream water quality objectives and measures outlined in the Water Management section of this DCP.

12.8.3.1.3 Flood Management

A. Objectives

- a) To manage the risk to life and property assets from flooding events up to PMF.
- b) To allow the riparian corridor to function as a naturally occurring waterway.
- c) To manage flood waters within the site in a safe manner.

B. Performance Measures

- 1) Appropriate areas of land are provided outside the Core Riparian Zone for detention and storage of flood waters.
- 2) Flood waters are safely managed within the riparian corridor.
- 3) A Stormwater Management Plan for Claremont Creek that identifies how the flood waters will be managed is prepared and implemented on site as part of its development.
- 4) Refer to the Water Management section of this DCP for further details.

C. Development Controls

- 1) Stormwater detention is to be provided to reduce post development flows to pre development levels for all storm events and durations.
- 2) Overland flow paths and floodways are to be sized and designed to safely convey flood waters.

12.8.3.1.4 Vegetation

A. Objectives

- a) To protect and embellish local vegetation and habitat.
- b) To integrate significant trees within the landscape of the new urban area.

B. Performance Measures

- 1) Existing mature trees are conserved for their natural functions and aesthetic value.
- 2) Open space is co-located with existing tree copses, where practicable.
- 3) Significant trees located within developable areas are able to be conserved on site, where practicable, as part of the landscaped area of future development.
- 4) No disturbance to existing ground levels occurs within the drip line of existing significant trees.

12.8.3.1.5 Salinity

A. Objectives

- a) To ensure that saline soils, groundwater levels and salinity processes are identified, prior to finalisation of development form.
- b) To ensure that appropriate measures are taken to protect buildings, infrastructure and the natural environment from deterioration associated with salt attack.

B. Performance Measures

- a) Development applications for subdivision shall include a preliminary site investigation, which identifies areas of potential salinity.
- b) A remedial action plan is to be submitted with a development application on land where there is an identified salinity hazard.
- c) Salt and drought tolerant plant species must be used in the landscaping within the site and should be identified in any landscape plans for the site. This also includes appropriate hard landscaping materials and practice.
- d) Detailed designs for stormwater management devices is required to ensure level of excavation and the impact of excavation will have on potential salinity on the site.
- e) Further investigation of the land as well as additional work during construction will be required and may include (but not necessarily limited to):
 - i) Installation of groundwater bores well in advance of construction and monitoring/sampling/analysis before, during and after construction, to assess changes in soil water quality as a result of the proposed development. The bores would be strategically located at exit points from the site into the Claremont Creek System.
 - ii) Routine inspections and earthwork monitoring during construction
 - iii) Detailed geotechnical investigations on a stage-by-stage basis for determination of pavement thickness designs and lot classifications.

C. Controls

- 1) Public and private infrastructure is to be designed and constructed in accordance with the recommendations of the salinity investigation.

12.8.3.1.6 Contamination

A. Objectives

- a) To ensure that contaminated land is identified, prior to finalisation of development form.
- b) To ensure that a remedial action plan is prepared for any identified areas of contamination.

B. Controls

- 1) Development applications for subdivision shall include an assessment of possible contamination prepared by a suitably qualified person which covers the following:
 - a) Likelihood of contamination over the subject area, based on previous land uses.
 - b) Assessments of the nature and extent of contamination in areas identified as likely to be contaminated
- 2) Reference is to be made to the particular requirements of SEPP 55-Contaminated Land in relation to contamination and remedial action plans, if required.

12.8.3.2 Transport and Accessibility

12.8.3.2.1 Road Network

A. Objectives

- a) To provide a clear urban framework for the entire release area that informs the location of land uses.
- b) To identify a clear hierarchy for movement within the subject lands and adjacent urban areas.
- c) To provide a safe and efficient movement network for all users.
- d) To promote public and active transport options.

B. Performance Measures

- a) The street network is a modified grid that facilitates walking and cycling for access to daily activities; and also enables direct local vehicle trips within the neighbourhood and to local activity points.
- b) The suburb has a coherent urban system of compact walkable neighbourhoods which cluster to form a suburb with a high degree of street connectivity.
- c) Neighbourhood identity is reinforced by the location open space areas at focal points within convenient walking distance for residents.
- d) The vehicle, cyclists and pedestrian networks and lot density assist in reducing local vehicle trips, travel distances and speeds, maximising public transport effectiveness, and encouraging walking and cycling to daily activities.

12.8.3.2.2 Vehicular Movement

A. Objectives

- a) To create a legible road hierarchy.
- b) To provide a high degree of connectivity within the site and between the site and the adjoining areas.
- c) To minimise the negative impacts of through traffic.

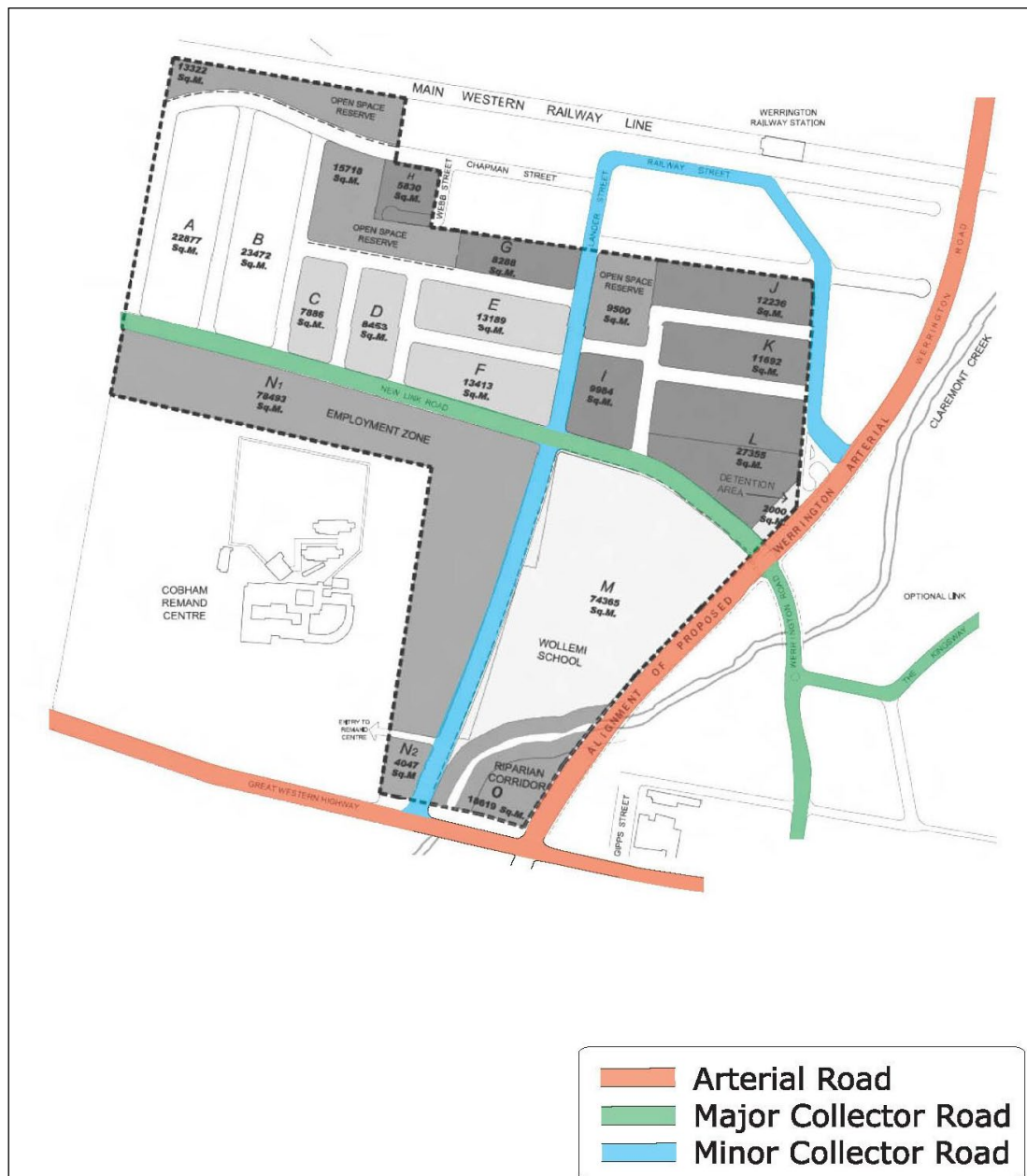
B. Performance Measures

- a) A hierarchy of streets should reflect the function and traffic load of each street in a network, minimise travel distances, maximise access to facilities and services and assist people find their way.
- b) The street network connects with adjacent collector routes and neighbouring streets to maximise movement efficiency and social connection.
- c) The street network takes account of the topography and vegetation and respects any existing or potential site assets.
- d) The street network allows all development to address the street.

C. Controls

- 1) Street blocks are to have a maximum length of 200m and maximum depth of 90m.

Figure E12.14: Road Network Hierarchy



12.8.3.2.3 Public Transport

A. Objectives

- To increase opportunities for use of public transport.
- To enable the efficient operation of bus routes on designated roads.
- To encourage the early introduction of bus services within the estate.

B. Performance Measures

- a) The bus route facilitates connections between the Precincts, the existing residential estates and key facilities adjoining the subject lands, local facilities and the Penrith CBD.
- b) Bus routes and sheltered bus stops are designed, constructed and clearly marked.
- c) The early delivery of bus services as the community grows.

C. Development Controls

- 1) All dwellings within the release area are within 400m distance from a designated bus route as shown on Figure E12.15 Recommended Bus Route.
- 2) The bus route will be designed and constructed in accordance with the road profiles identified at Section 12.8.3.2 – Road Sections.

Figure E12.15: Recommended Bus Route



12.8.3.2.4 Pedestrians and Bicycles

A. Objectives

- a) To promote active transport options by providing safe and convenient routes to and from key focal points within the release area.
- b) To promote an active and healthy lifestyle.
- c) To promote casual social interaction among neighbours.

d) To promote Universal Design principles in all new facilities.

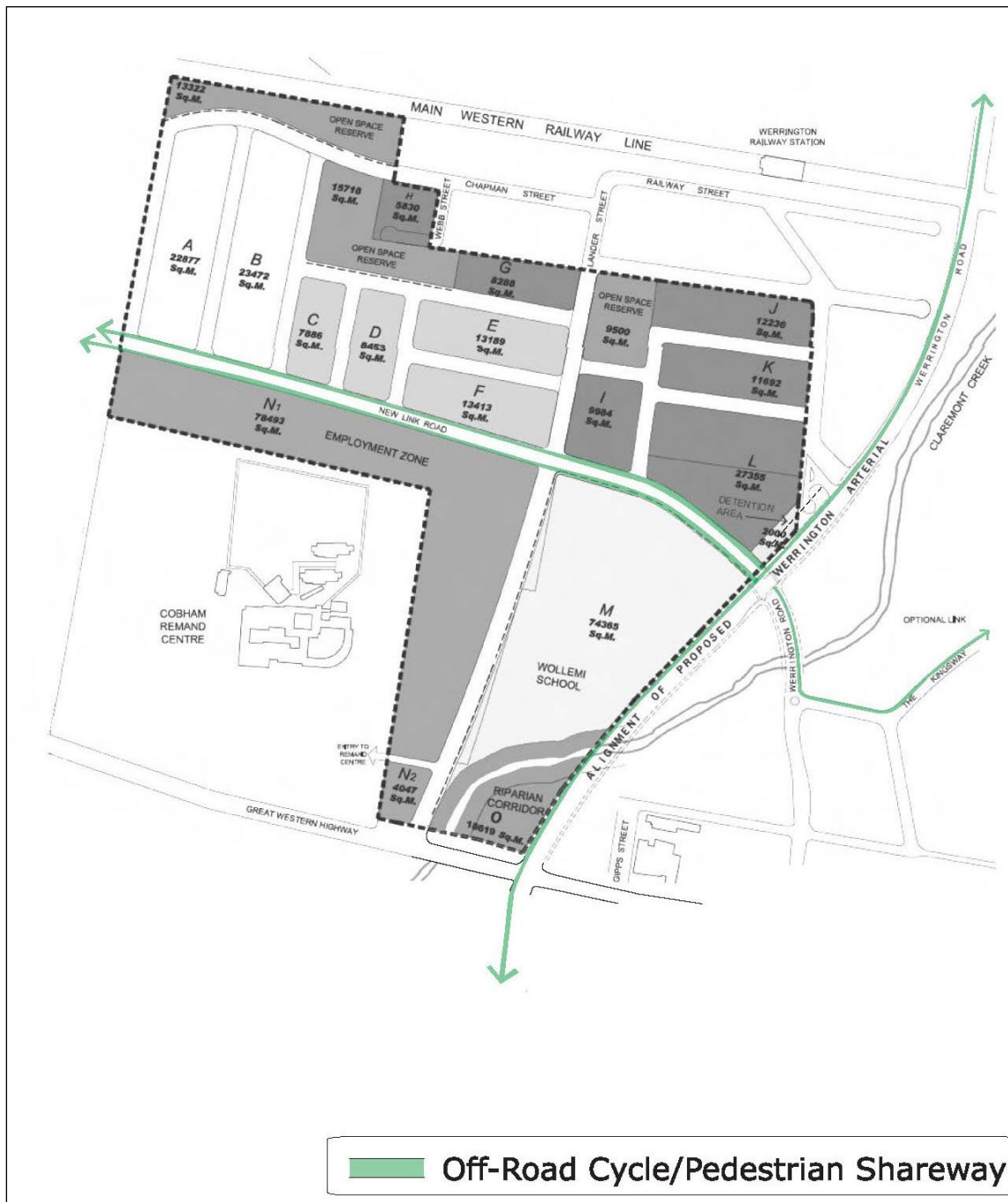
B. Performance Measures

- a) Footpaths are an integrated element of the normal street network.
- b) The cycle network is a combination of on street and dedicated pathways that link the main points of attraction and significant natural features.
- c) Separate pathway will operate within parks and open spaces areas as well as the locations identified at Figure E12.16 – Pedestrian and Cycle Network.
- d) Pathways in open spaces are aligned approximately parallel with its interface to the street to take advantage of the street lighting and allow for casual surveillance by residents and drivers.
- e) Pathways are designed and constructed wherever possible and practical to be of appropriate width, longitudinal gradient and, sight distance.
- f) Kerb details cater for all users, including aged people, people with prams and in wheelchairs, and people with disabilities, and take account of Universal Design principles.
- g) Street landscaping is provided to enhance the appearance of the street and pedestrian environment, including providing protection from the sun.
- h) A primary pathway network is designed, constructed and clearly marked in accordance with Figure E12.16 – Pedestrian and Cycle Network.

C. Development Controls

- 1) All Pathways will be a minimum of 1.5m and be provided to both sides of the road.
- 2) Pathways that form part of the open space network are to be a minimum width of 2.5m.
- 3) Where the pathway aligns with the street network, as identified at Figure E12.16 – Pedestrian and Cycle Network, the road reserve will be widened by 1.3m where it aligns with a local road or minor local road and 1.0m where it aligns with a collector road as determined by Section 12.8.3.3.2 Road Sections, to ensure a 2.5m pathway can be provided.

Figure E12.16: Pedestrian and Cycle Network



12.8.3.3 Streetscapes

12.8.3.3.1 Landscape Character

A. Objectives

- a) To provide an attractive and sustainable residential community.
- b) To ensure development contributes to cohesive streetscape and desirable pedestrian environments.
- c) To provide safe and secure environments for pedestrians and cyclists.
- d) To promote casual social interaction among neighbours.
- e) To encourage an active and healthy and active lifestyle.
- f) To ensure street layouts provide well distributed public open spaces that contribute to the legibility and character of the development.
- g) To promote landscape treatments that are appropriate to the character and constraints of each locality.
- h) To ensure that landscaping is maintained and enhanced as a major element in the streetscape.

B. Performance Measures

- a) The release area landscape includes streets lined with tall tree species.
- b) Streets are designed to establish or enhance the unique character of the precinct by responding to its topography, desirable views or local features.
- c) Street vistas are terminated with views to open spaces, parks and items of significance.
- d) The carriageway is visually contained to promote steady, predictable traffic speeds by:
 - i) Clearly defining the boundary between pedestrian and vehicle zones.
 - ii) Providing on-street parking.
 - iii) Planting street trees at regular spacing.
- e) Boundaries between street verges and private front yards are clearly defined and houses are designed to encourage passive surveillance.
- f) Landscaping helps define boundaries, create continuity and provide shade.
- g) Water sensitive urban design elements are integrated into street verges and shall be designed in such a way that they do not occupy the same zone required for street planting.
- h) On-street parking is provided at a rate appropriate to the anticipated demand while ensuring the landscape character and street function is not compromised.
- i) Design details such as footpath and driveway cross-overs are uniformly applied to make the street character more consistent.
- j) Street signage is designed to be complementary to the overall streetscape design and character and signage clutter is avoided.
- k) Existing mature trees are retained and native street tree plantings, are provided to enhance the appearance of the street and pedestrian environment, including providing protection from the sun.

C. Development Controls

- 1) Street trees are to be provided at a rate of one tree for every 10m of site frontage.
- 2) Street trees are to be provided at minimum size of 75 litres and fitted with tree guards.
- 3) Species selection is to be appropriate to the character and constraints of the locality.
- 4) Footpath verges are to be increased adjacent lots which have building setbacks less than 4.5m and where large street tree planting is proposed.

12.8.3.3.2 Road Sections

A. Objectives

- a) To provide a functional road network which allows good connections with the surrounding areas and encourages safe and convenient access into and through the site,
- b) To provide a safe and efficient movement network for all users.
- c) To encourage responsible driving behaviour, particularly safe travel speeds on residential streets.
- d) To cater for the efficient provision of public utilities.
- e) To incorporate the natural features of the site including the movement of stormwater, existing and new trees.

B. Performance Measures

- a) Streets are designed to ensure vehicle speeds can be controlled and it is clear where vehicles can be parked, cyclists can ride and where pedestrians should walk or cross.
- b) Opportunities for walking and cycling are well provided for.
- c) The materials, line marking and landscaping of the streets clearly delineate the travel lanes from the parking “lanes”.
- d) Where the provision of parking “lanes” is included in the street reserve width, they are landscaped as parking bays and defined by means of line marking and/or built tree planting bays.
- e) Parking on the grassed verge or on parks is restricted.
- f) Intersections are designed for the safe and convenient passage of vehicles, pedestrians and cyclists.
- g) The road layout and design should discourage high speeds and incorporate “traffic calming” devices as required.
- h) The road design shall make provision for the needs of cyclists.
- i) The road layout and design should allow for the safe access of commercial and articulated vehicles to the employment areas.
- j) Upright kerbs are used throughout the suburb.
- k) Development occurs in accordance with the road hierarchy demonstrated at Figure E12.14 – Road Network Hierarchy.

East West Road and North South Road

A. Performance Measures

- a) Direct vehicular access to development occurs only where topography and site distances allow safe entry and exit.
- b) Provide for dedicated cycle lane on carriageway.
- c) Provide high accessibility for all road users throughout the release area.
- d) Have a clear lane width able to handle local bus services.
- e) Are of a scale consistent with the higher order role these roads will play in the overall movement network the release area.
- f) Integrate footpaths and establish pedestrian amenity that reflect the linking role these streets will play in the urban fabric.
- g) Be designed to provide safe pedestrian crossing points and lighting in accordance with the relevant Australian Standard.
- h) Are able to comfortably accommodate the co-location of bus shelters and pathways.
- i) Include treatment of intersection of North South road with the East West road.

Local Roads

A. Performance Measures

- a) Provide accessibility between the link road and services the immediate residential lots.
- b) Roads are designed to allow a reasonable free flow of traffic and discourage high speeds.
- c) Speed controls are provided as integrated element of the streetscape and road design and provision is made for the needs of cyclists.

Minor Local Road

A. Performance Measures

- a) Provide limited vehicle access for through traffic look to access or exit the local road network
- b) Regular, minor delays or the need for driver co-operation due to vehicles parking on local roads is an acceptable, traffic calming outcomes.
- c) Maintaining high levels of permeability for non-vehicle road users
- d) Roads are designed to ensure a low speed traffic environment
- e) Informal on street parking constrains traffic movement

Laneways

A. Performance Measures

- a) Lanes are shared zones allowing vehicular traffic for access to rear loaded garages only.
- b) Are to incorporate a change in materials and/or kerb cuts to provide differentiation to other vehicular streets.
- c) Are constructed in plain concrete pavement.
- d) No parking is permitted in Lane Ways.
- e) Designed with a central invert for drainage where topography allows

- f) Studio units built above or adjacent to garages will be encouraged to provide surveillance.
- g) Laneway provide distinctive plantings at lane entry areas.

B. Controls (All road types)

- 1) Roads are to be constructed in accordance with the dimensions identified at Figure E12.17a – E12.17e as per the road hierarchy.
- 2) Any entry and exit to the employment areas must not adversely affect traffic movements on the road network.
- 3) Widening of road may be required where topographical or road curve circumstances dictate.
- 4) Any medians proposed within any road are to be in addition to the road widths detailed in Figures E12.17a – E12.17c.

Figure E12.17a: East West Link Road

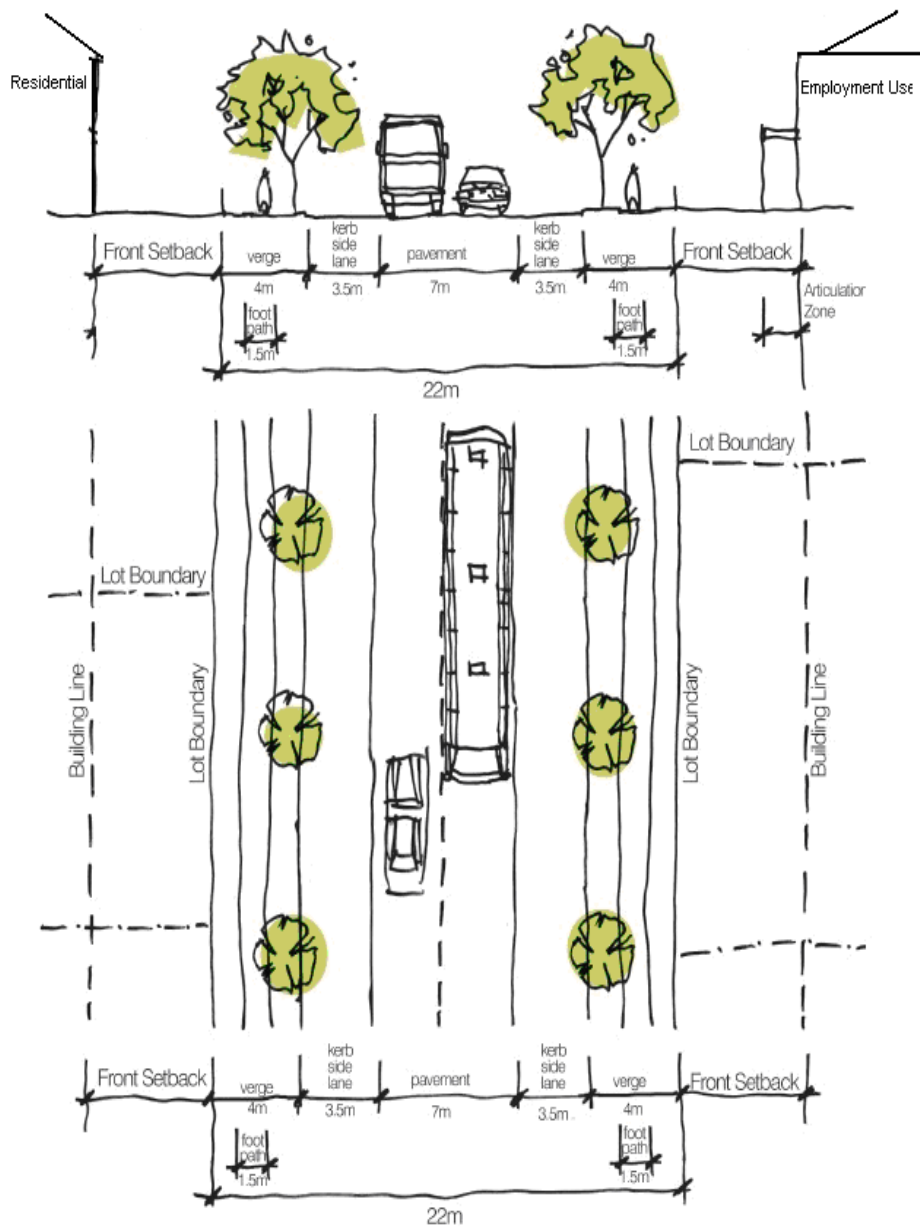


Figure E12.17b: North South Road

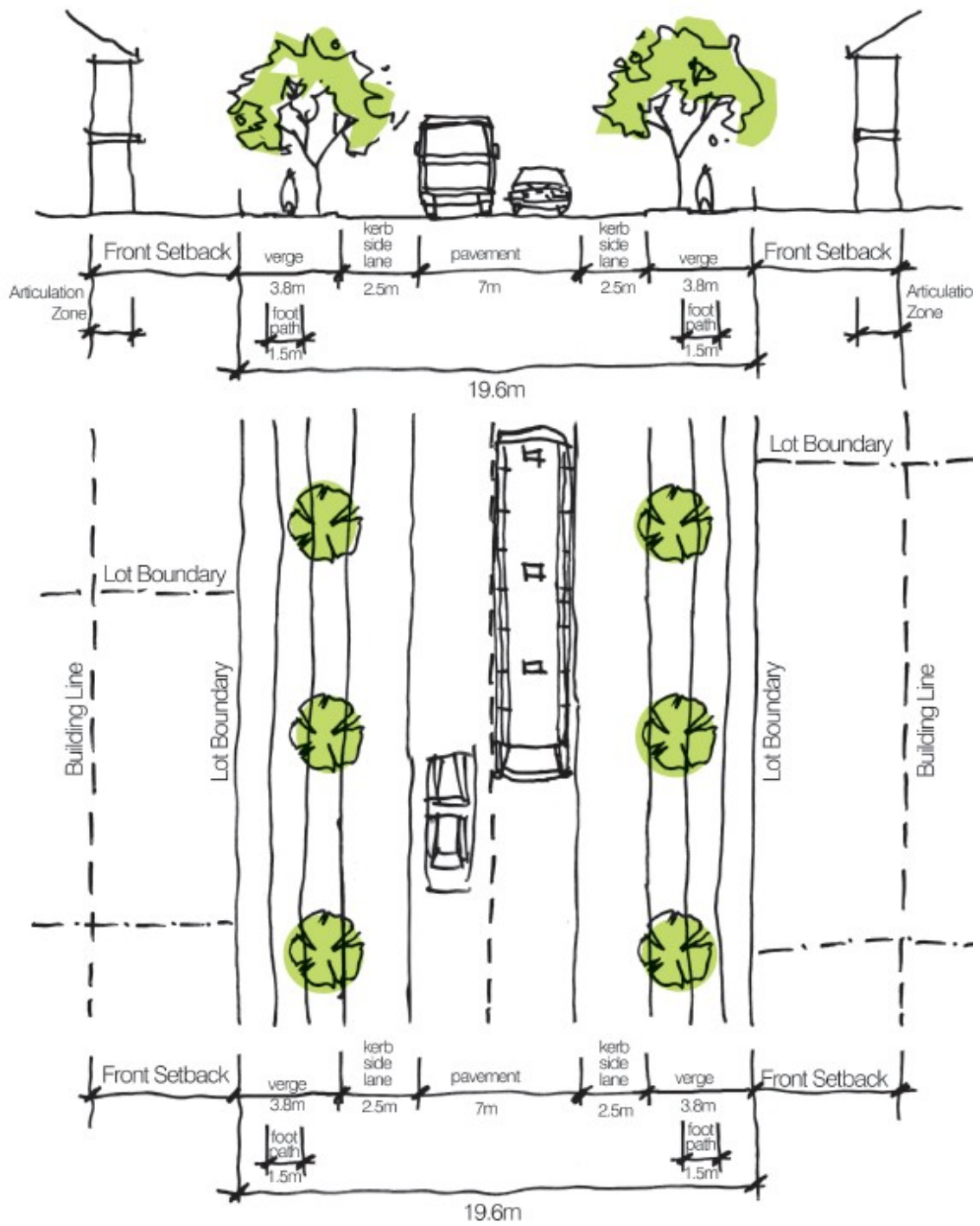


Figure E12.17c: Local Road

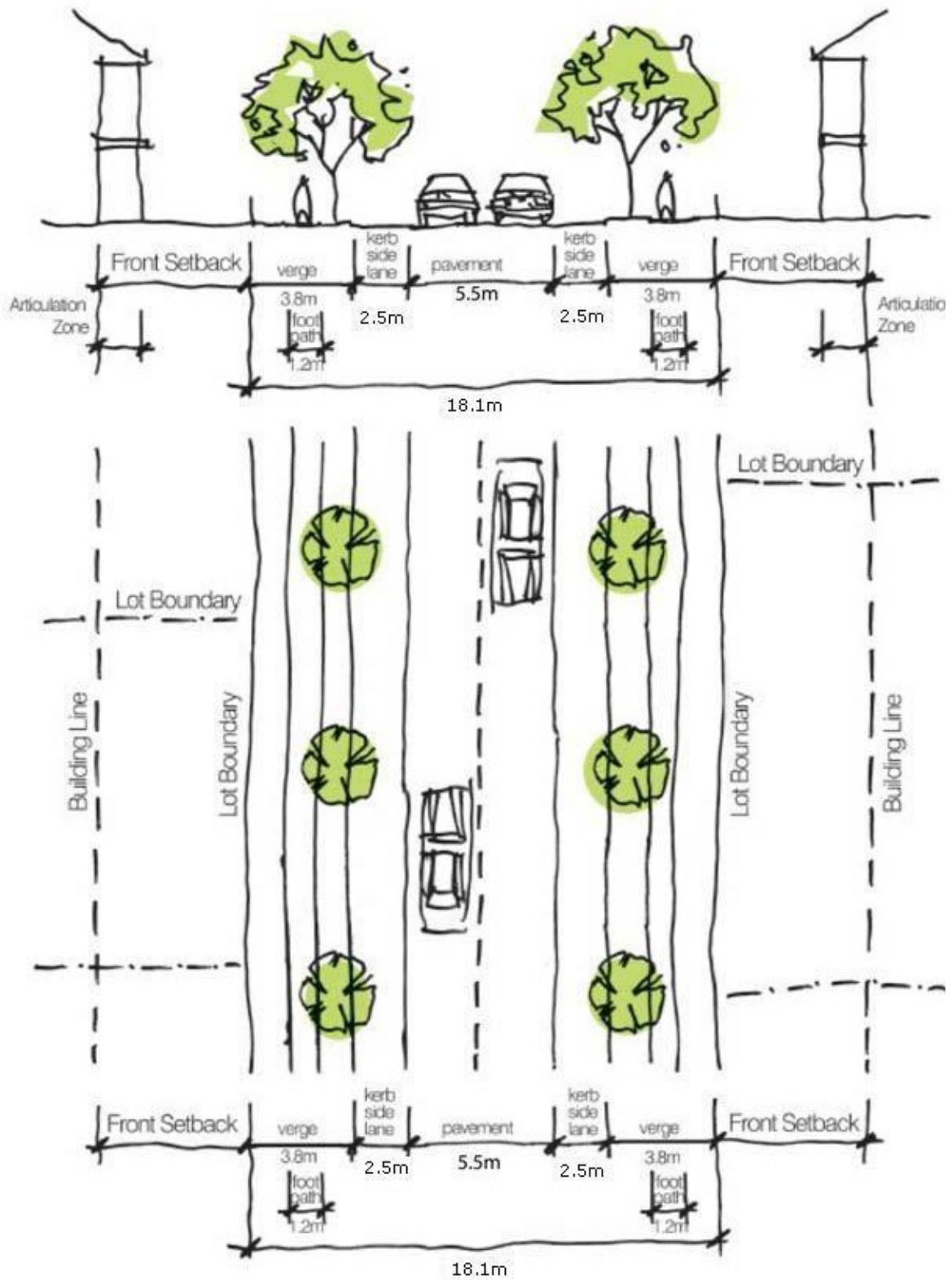


Figure E12.17d: Minor Local Road

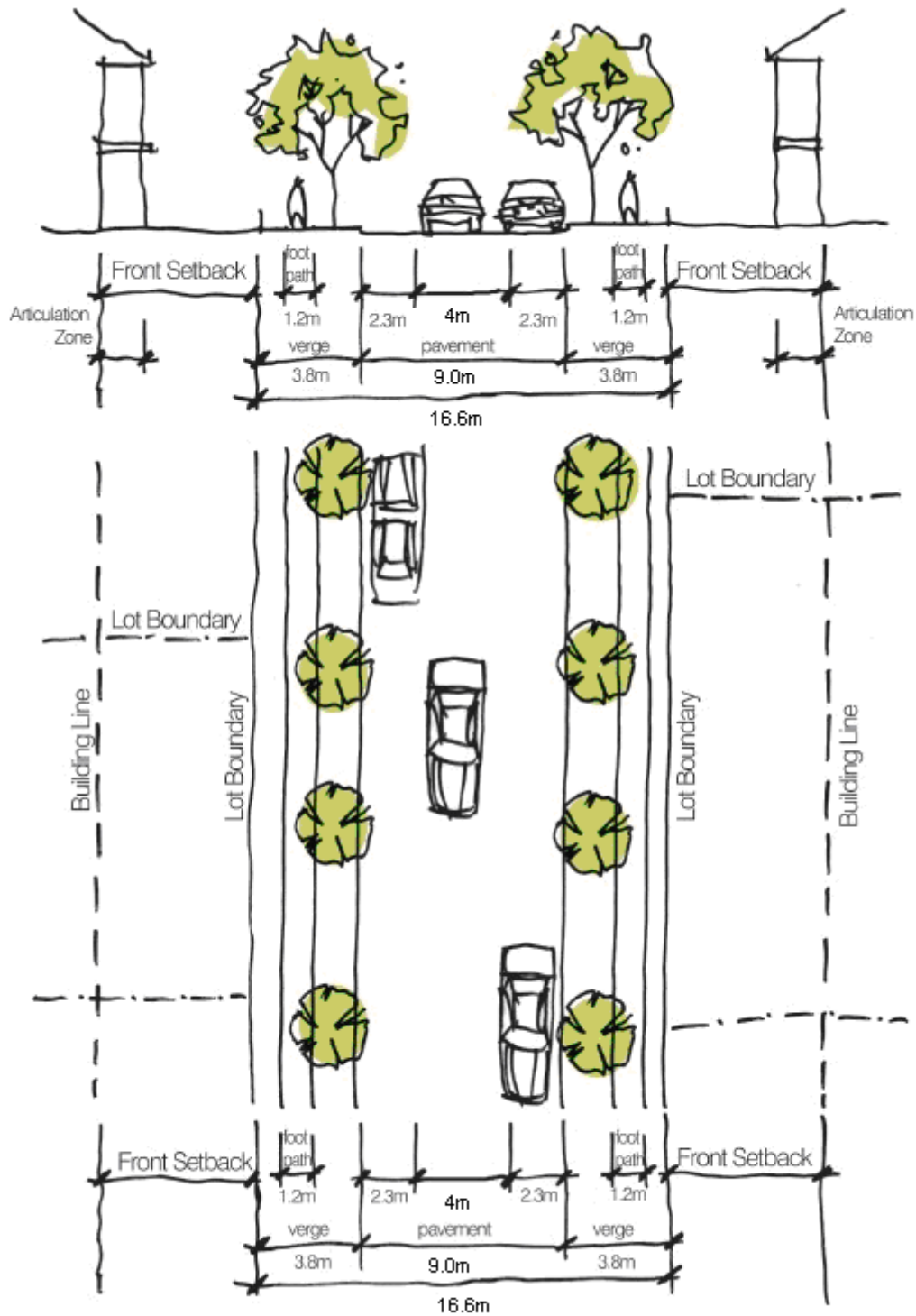
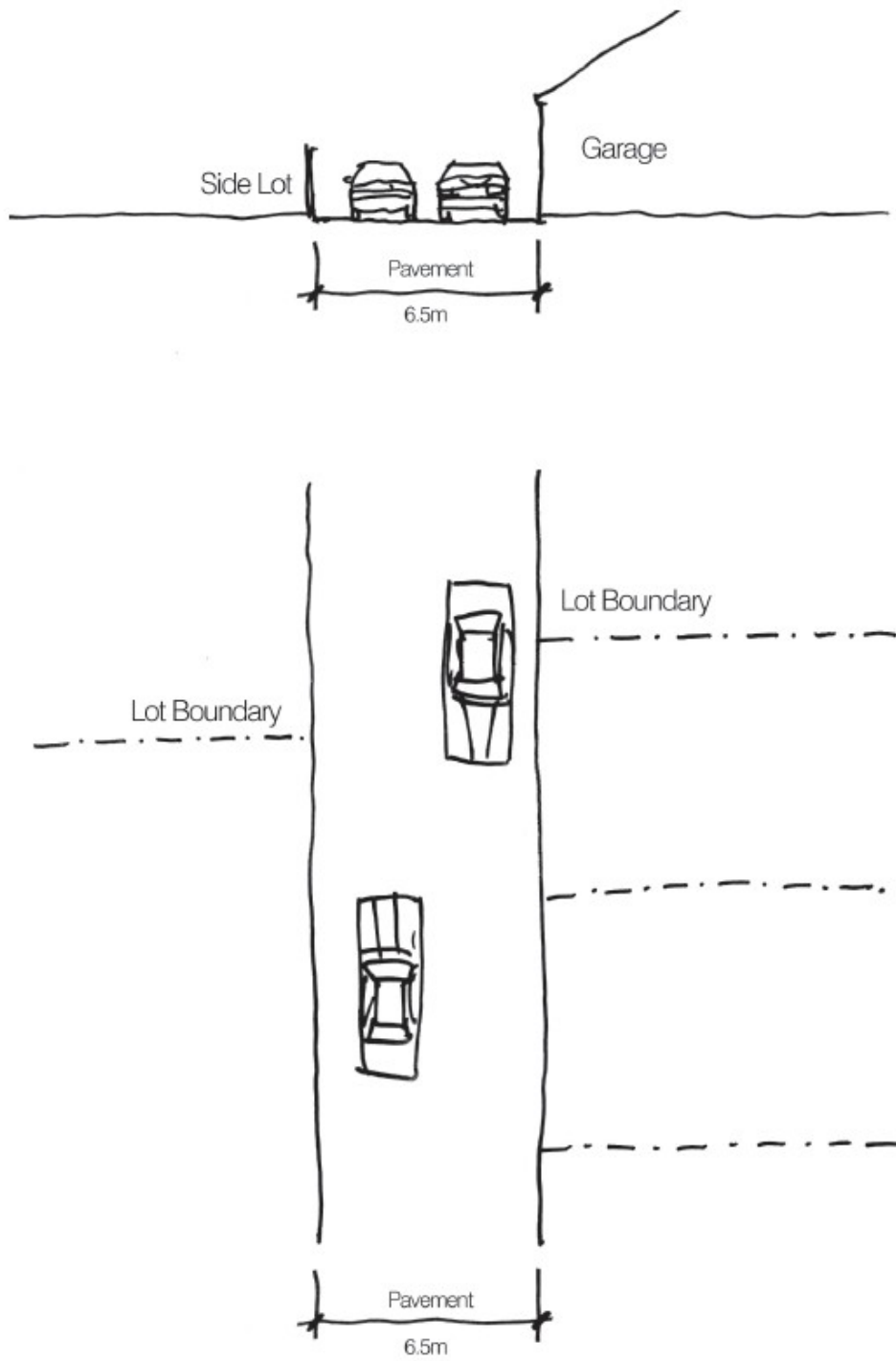


Figure E12.17e: Laneways



12.8.3.4 Passive Open Space and Environmental Conservation Areas

A. Objectives

- a) To encourage community interaction by creating desirable gathering spaces, using parks as local meeting places providing a range of passive recreation activities.
- b) To conserve and appreciate remnant woodland areas including biodiversity and native fauna habitat.
- c) To provide high amenity areas for adjacent residential development.

B. Performance Measures

- a) Existing vegetation is retained and enhanced by additional complementary plantings.
- b) Parks create a precinct focus for the surrounding neighbourhood.
- c) Parks are generally bounded by streets with buildings oriented towards the open space providing outlook and passive surveillance.
- d) There are no back fences of development facing public open space.
- e) The parks provide linkages between the broader pedestrian and bicycle networks.
- f) Playground facilities are provided within the parks.
- g) Seating and shade opportunities are provided within the parks.

C. Development Controls

- 1) The indicative location of neighbourhood parks and environmental conservation areas are indicated on the Structure Plan (Figure E12.10 – South Werrington Urban Village Structure Plan).
- 2) The design of the parks is to be in accordance with the concept landscape plans indicated in Figures E12.18a and E12.18b.
- 3) Lighting shall conform with the Australian Standards including AS1158, AS1680 and AS2890.
- 4) Development applications that include the creation of open space areas must be accompanied with a Vegetation Management Plan for those areas and shall outline procedures for such matters as (but not limited to); identifying revegetated areas, bushfire control, weed control, public access control, fencing and treatment of 'edge' zones.

Figure E12.18a: Western Local Park Concept Plan

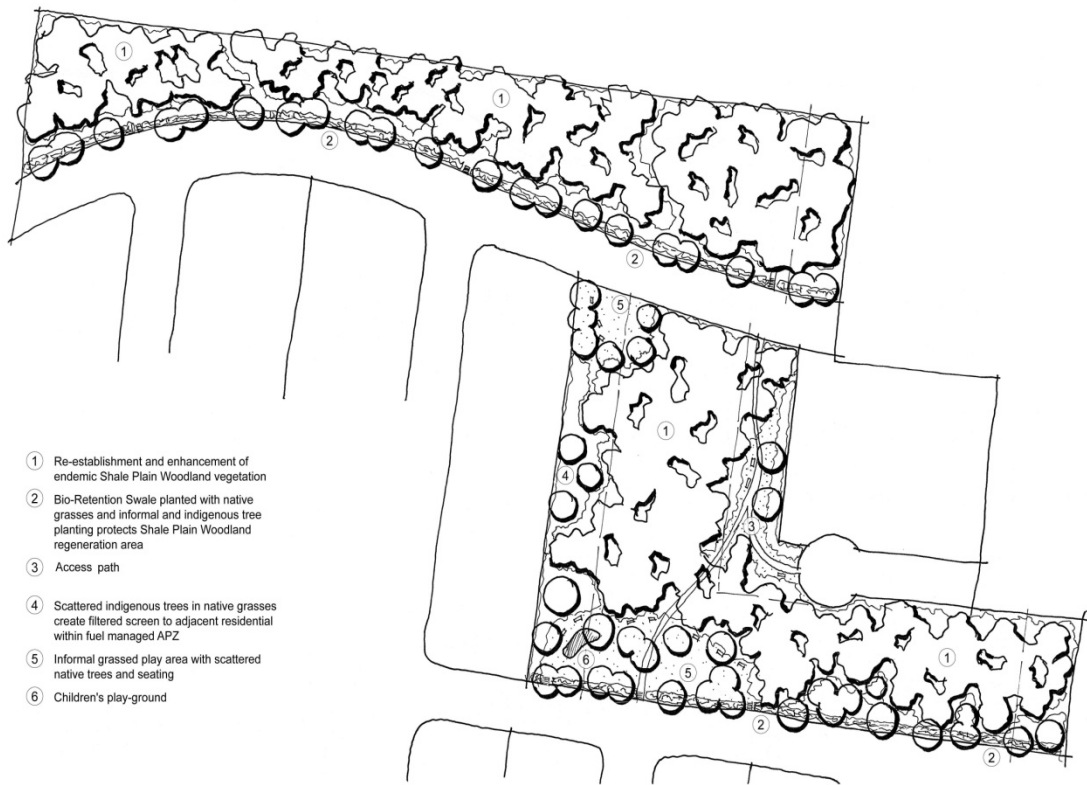
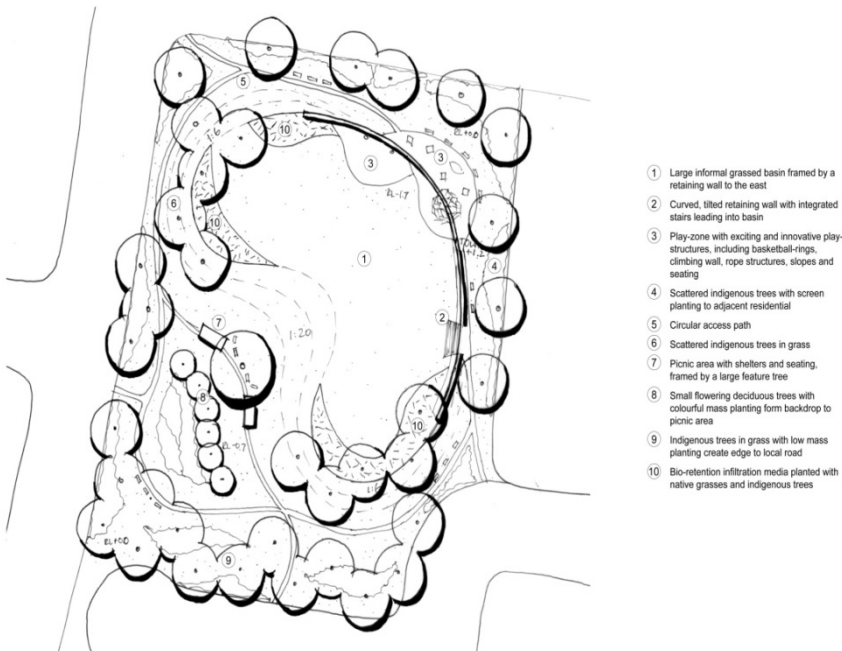


Figure E12.18b: Eastern Local Park Concept Plan and Northern Environmental Conservation Area (private land)



12.8.3.5 Public Facilities

A. Objective

- a) To ensure that facilities to be provided in the public domain can be effectively managed and maintained.

B. Controls

- a) The nature of facilities to be provided in the public domain shall include (but not limited to):
 - i) Seating
 - ii) Bins
 - iii) Lighting
 - iv) Signage
 - v) Drainage facilities
 - vi) Shade structures
 - vii) Public art
 - viii) Fencing
- b) Development applications shall include detailed designs and a management and maintenance plan for all facilities proposed for the public domain. The plan shall include suggested maintenance schedule, outlining the nature and frequency of works required. The purpose of the maintenance plan is to enable Council to properly assess the future maintenance requirements of proposed public domain infrastructure.

12.8.4. Private Domain

12.8.4.1 Subdivision

A. Objectives

- a) To provide block sizes that maximise access to solar orientation.
- b) To provide a subdivision pattern that accommodates a range of dwelling densities and lot sizes.
- c) To provide lot sizes and shape that reflects the broader urban structure.
- d) To promote the most appropriate locations for higher density housing forms.
- e) To ensure development responds to site topography and natural constraints and opportunities.
- f) To ensure lots have total areas and dimensions that allow dwellings, ancillary buildings, private outdoor open space, landscaped areas, vehicle access and parking to be located and constructed appropriately.

B. Performance Measures

- a) Lots are designed to maximise efficiency in house plans and useable external areas by having a regular shape.
- b) Lots are oriented to facilitate siting of dwellings and private open space to take advantage of winter solar access and summer sun deflection.

- c) Lots identified to accommodate higher density housing forms will be around open space areas.
- d) Larger lots frontages provided on street corners to allow development to address both street frontages.
- e) Lot sizes and dimensions take into account site topography and reduce the need for earthworks and retaining wall construction.
- f) Lot sizes and dimensions allow for retention of existing trees as part of subsequent site development.
- g) Lots front streets and overlook open spaces to provide passive surveillance of those areas.

C. Controls

- 1) Minimum lot dimensions for residential development are identified in Section 12.8.5- Residential Development Types.
- 2) Single dwelling lots are to be a minimum of 25m deep.
- 3) North-south oriented lots shall vary in depth to provide longer, narrower lots on the south side of the street and shorter, wider lots on the north side.
- 4) Lots with an east-west axis shall have a minimum width of 12m, unless they are intended for use by attached dwellings.
- 5) On north-south roads, allotments may need to be widened to provide for solar access and prevent overshadowing of dwellings and private open space.
- 6) Where land slopes are generally greater than 5%, road and allotment design should provide for dwellings to be generally parallel with the contours to minimise earthworks. Special care should also be taken in the configuration of roads and allotments to:
 - a) minimise boundary retaining walls, particularly associated with building to boundary
 - b) minimise potential overlooking
 - c) maintain solar access, where slopes face south. A greater distance between dwellings will generally be required to achieve the same solar access as on level sites or north facing slopes.
- 7) Excavations associated with a cut and fill platform for all single dwellings, single dwelling additions and Class 10 buildings are limited to a maximum of 1m.
- 8) Construction on sloping sites where the combined cut and fill will exceed 1m shall incorporate raised floor or split level type construction.
- 9) Lots are to be designed to meet dwelling yields detailed in Table E12.3 and Figure E12.11.

12.8.4.2 Site Planning

12.8.4.2.1 Principal Private Open Space

A. Objectives

- a) To provide a high level of residential amenity with opportunities for outdoor living within the property.
- b) To enhance the spatial quality, outlook, and usability of private open space.

c) To optimise solar access to the living areas and private open spaces of the dwelling.

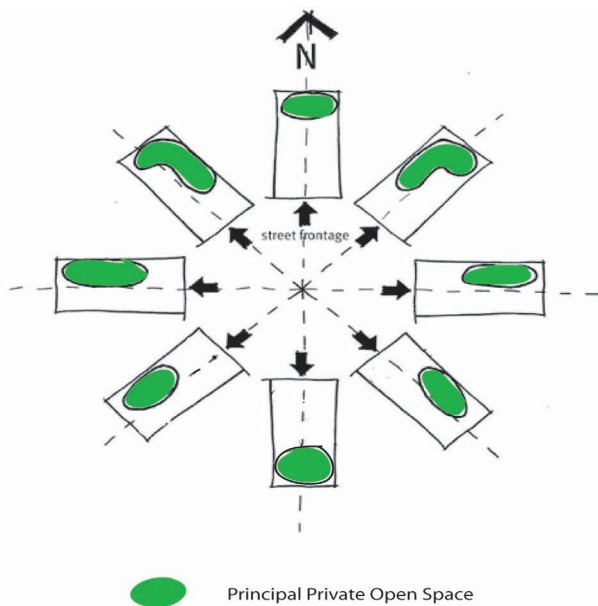
B. Performance Measures

- a) Principal private open spaces are the primary organising element of site planning and dwelling design.
- b) Private open spaces should be located at ground level in rear yard areas that maximise opportunities to obtain solar access for all dwelling types other than apartments.
- c) Development with a northern orientation provides secondary private open spaces area at the street frontages through the use of courtyards and balconies.
- d) The principal private open spaces should have a direct interface with primary internal living area of its dwelling.
- e) Development should achieve the preferred location for open space location as demonstrated at Figure E12.19 – Private Open Space Siting.

C. Development Control

- 1) Dwellings will achieve the minimum standards for Principal Private Open Space as identified at Section 12.8.5 – Residential Development Forms.

Figure E12.19: Private Open Space Siting



12.8.4.2.2 Garages and Parking

A. Objectives

- a) To provide sufficient and convenient parking for residents and visitors.
- b) To reduce the visual impact of garages, carports, and parking areas on the streetscape and improve dwelling presentation.
- c) To promote safe public domain areas.

B. Performance Measures

- a) Garages provide flexible accommodation for vehicles, storage, and covered areas for outdoor recreation.

- b) Studios are provided over garages to rear lanes to provide surveillance, work from home or residential accommodation opportunities.

C. Controls

- 1) Front garages are to be setback behind the front most element of the house and integrated as part of the dwelling façade.
- 2) Garages are to be constructed in materials and colours which blend the garage doors into the main building.
- 3) Double garages are the maximum garage size allowed for single dwelling houses.
- 4) Where a dwelling provides vehicular access to the street the garage will be setback a minimum of 5.5m from the front boundary.
- 5) Stacked parking is an acceptable outcome provided it is accommodated entirely within the property.
- 6) Vehicle crossings between the street and front boundary shall be constructed in plain concrete only.
- 7) Garages are to be provided per AS 2890.1 Off Street Parking, for full door opening including:
 - a) Minimum widths of 3.2m for single garages.
 - b) Minimum width of 5.8m for double garages.

12.8.4.2.3 Building Footprints

A. Objectives

- a) To provide a variety of streetscapes that reflects the character of different precincts.
- b) To create an attractive and cohesive streetscape within local precincts.
- c) To maximise provision of solar access to dwellings.
- d) To minimise the impacts of development on neighbouring properties in regard to view, privacy, and overshadowing.
- e) To encourage the efficient and sustainable use of land.
- f) To allow for landscaped rear yard areas.
- g) To promote public safety of public domain areas.
- h) To manage risk from bushfire events.

B. Performance Measures

Front Setbacks

- a) Front setbacks are site responsive and will be determined for individual lots as part of the Subdivision Approval process given consideration to the following matters:
 - i) Future dwelling type.
 - ii) Orientation of lots.
 - iii) Provision of front yard open space and associated fencing.
 - iv) Availability of direct vehicle access to the street.
 - v) Relevant role of street in local road hierarchy.

- vi) Proximity to open space areas.
- vii) Location within Neighbourhood Centre.
- viii) Requirements to provide Asset Protection Zone.

Rear Setbacks

- a) Landscaping provision that allows trees in the rear yard area to provide a vegetated backdrop to the development.

C. Development Controls

Front Setbacks

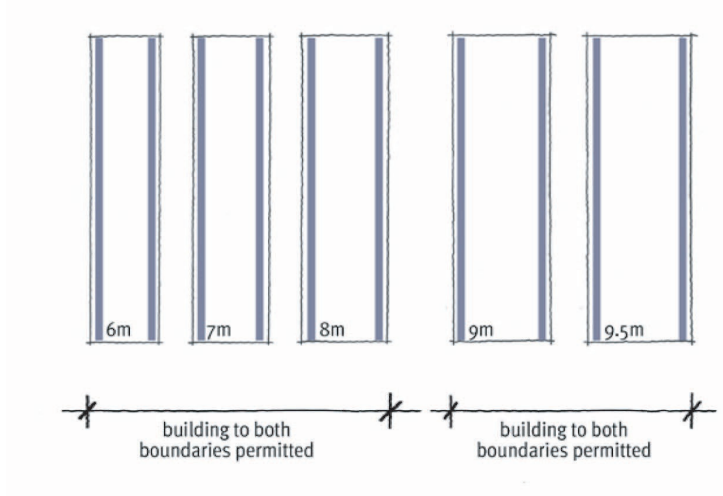
- 1) Front setbacks are identified in Section 12.8.5 – Residential Development Forms, for each dwelling type.

Side Setbacks

- 1) The width of the lot will determine the ability of the site to provide zero lot lines.
- 2) Where only one side of a lot can provide a zero lot line, then Figure E12.20 – Zero Lot Lines will be used to determine which of those boundaries accommodates that zero lot line.
- 3) A maintenance easement of at least 900 millimetres is to be provided on the boundary adjacent to the zero lot line.
- 4) All other side setbacks will be a minimum of 900mm.
- 5) Fascias, gutters, downpipes, eaves (up to 450 millimetres wide) and chimneys flues may encroach into the side setback.
- 6) No windows are provided in zero lot line walls.

Figure E12.20: Zero Lot Lines (all 3 figures below)

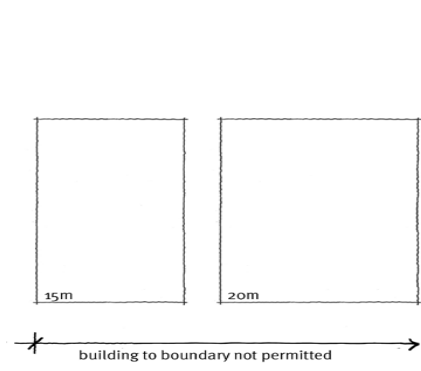
Attached dwellings



Semi Detached dwellings



Detached dwellings



12.8.4.3 Building Envelope

A. Objectives

- a) To ensure development is appropriately scaled to suit the dwellings local context.
- b) To ensure building heights achieve built form outcomes that reinforce quality urban and building design.
- c) To protect reasonable amenity expectations of neighbouring sites.

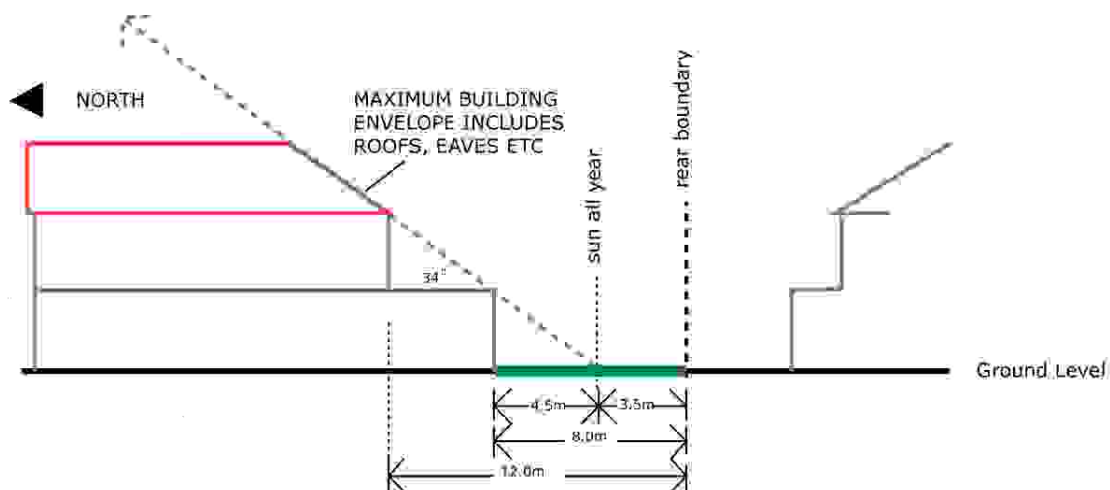
B. Performance Measures

- a) Building heights are site responsive and will be determined for individual lots as part of the Subdivision Approval process given consideration to the following matters:
 - i) Future dwelling type.
 - ii) Orientation of lots.
 - iii) Relevant role of street in local road hierarchy.
 - iv) Site topography.
 - v) Key street intersections.

C. Development Controls

- 1) Areas of Principal Private Open Space should achieve at least 3 hours of sunlight to 50% of the required private open space area between 9am and 3pm on 21 June.
- 2) Buildings should be designed to ensure that 40% of the Principal Private Open Space area of adjoining dwellings sites receives a minimum of 3 hours of sunlight between 9.00am and 3.00pm on 21 June.
- 3) Dwellings with a northern orientation that share a rear boundary with residential development will achieve the building height envelope as identified at Figure E12.21 – Building Envelope from Rear Boundaries.
- 4) Dwellings that share a rear boundary with a private driveway or rear lane is not required to achieve the building envelope.

Figure E12.21: Building Envelope from Rear Boundaries



12.8.4.4 Dwelling Design

A. Objectives

- a) To provide simple and articulated building forms.
- b) To provide a high quality and cohesive streetscape.
- c) To promote an architectural style that is contemporary and innovative.
- d) To promote a safe public domain area.
- e) To promote energy efficient and sustainable development.
- f) To reduce the dominance of garages on the streetscape.
- g) To identify appropriate design responses for corner lots.

B. Performance Measures

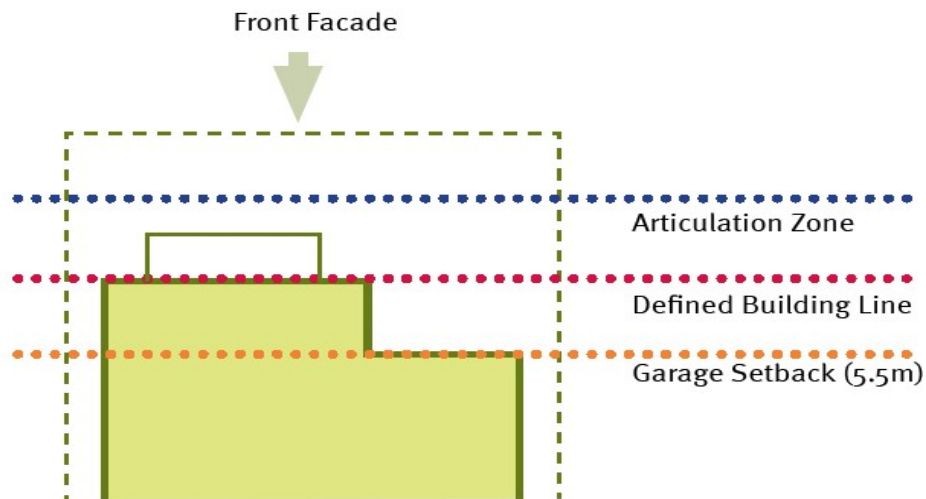
- a) All development addresses the street and is provided with a clear, legible and well lit pedestrian entry.
- b) The street elevation is well articulated by the use of awnings, verandahs, balconies and feature elements on the front facades of dwellings.
- c) Development achieves the principle of three layers of rear setbacks as illustrated at Figure E12.21 Building Envelope from Rear Boundaries.
- d) The finished ground level of development is raised above the street level to improve the outlook and enhance visual privacy from within the dwelling and front verandahs.
- e) Garages will be recessed or capped by overhanging elements that provide shading over the garage opening.
- f) Dwellings orientate living spaces to the north, sleeping areas to the east or south and utility areas to the west or south.
- g) Dwellings provide shading of north, east and west facing windows with pergolas and awnings.
- h) Buildings are to be designed to allow cross ventilation by positioning windows and doors opposite each other within rooms.
- i) Material and external finishes of buildings in bushfire hazard areas comprise appropriate construction standards for those areas.
- j) Built forms on corners provide important place making and way finding elements in the streetscape.
- k) Corner sites provide a frontage to both streets and articulate their corner location with an architectural feature such as, but not limited to a wraparound verandah, bay window, corner entry or roof feature.
- l) Dwellings provide adaptable house floor plans for the inclusion of a home office/business activity area.

C. Development Controls

- 1) Building elements (Verandahs, awnings, etc.) may project forward of the front building setback line by a maximum of 1.5m, as demonstrated in Figure E12.22 – Setbacks and Articulation.

- 2) Building elements projecting forward of the front building setback are limited to a maximum of 60% of the dwelling width.
- 3) Eaves are required over all walls except those on zero lot lines.
- 4) External building materials/finishes are to be varied across front elevations of buildings.
- 5) Retaining walls are to be constructed with appropriate masonry materials.

Figure E12.22: Setbacks and Articulation



12.8.4.5 Visual and Acoustic Privacy

A. Objectives

- a) Ensure buildings are designed to achieve the highest possible levels of visual and acoustic privacy.
- b) Protect visual privacy by minimising direct overlooking of habitable rooms and private open space.
- c) Contain noise within dwellings and minimise the intrusion of noise from outdoor areas.
- d) Ensure that noise generated by adjoining land use such as the proposed Werrington Arterial and Great Western Railway line are adequately addressed in the design and construction of development on the site

B. Performance Measures

- a) Windows to upper storeys are located on front or rear facades where possible.
- b) Offset second storey windows of living areas that face directly to windows, balconies or private open space of adjoining properties.
- c) First floor balconies or living room windows do not directly overlook private open space of adjoining dwellings unless suitable screening is provided.
- d) The design of attached dwellings minimises the opportunity for sound transmission through the building structure, with particular attention given to protection bedrooms and living areas.

- e) Living areas and service equipment are located away from bedrooms of neighbouring dwellings.
- f) Noise sensitive areas are located away from the noise emitting sources.

C. Development Controls

- 1) Habitable room windows with a direct sight line to habitable room windows in adjacent dwellings are to be avoided, however within 9.0m must be obscured by fencing, screens, or sufficient landscaping;
- 2) A screening device is to have a maximum of 25% permeability to be considered effective.
- 3) In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.
- 4) Residential development adjacent the proposed Werrington Arterial and the Main Western Railway will consider the relevant provisions in the Infrastructure SEPP.

12.8.4.6 Fencing

A. Objectives

- a) Creates a clear distinction between public and private domain areas.
- b) To ensure front fences contribute to the streetscape.
- c) Maintain safety in the public domain.
- d) Rear and side fencing provide privacy to open space areas.

B. Performance Measures

- a) Delineation of front property boundaries is achieved through use of landscaping, low fences or changes of site level.
- b) Front fences are open in style or “see through” construction (eg picket fence).
- c) Side property fences in front of the building line shall be treated as the front fence.
- d) Side property fences are terminated at the front building line and returned to finish against the building.

C. Development Controls

- 1) Fences to the street frontage:
 - a) are to be a maximum of 900mm in height.
 - b) may be a maximum of 1.2m in height where they define the primary open space of a dwelling.
- 2) Side property fences are to be a maximum of 1.8m high.
- 3) Fences to corner lots that accommodate single dwelling houses are to be a maximum 900mm high on both the primary street frontage and secondary street frontage to a point 10m from the dwelling frontage where it may then increase to 1.8m in height.
- 4) Solid front fences at 1.8m in height are to provide for a 1.2m landscape strip in front of the fence for its entire length.

- 5) Fences to corner lots that accommodate multi-unit housing forms are to be a maximum of 900mm on the primary street frontage and 900mm in height along the secondary street frontage in areas in front of the built form or 1.2m if they define the primary open space areas.
- 6) Front fencing shall have a minimum opening ratio of 50%.
- 7) Where solid fences are required to satisfy acoustic abatement, these fences shall not exceed 8.0m in length without some articulation or detailing to and must be softened on the street side with a landscaping strip of 1.2m minimum.
- 8) Prefabricated metal fencing is not permitted to the street frontage.

12.8.4.7 Site Facilities

A. Objectives

- a) To ensure that adequate provision is made for site facilities.
- b) To ensure that site facilities are functional and accessible to all residents and are easy to maintain.
- c) To ensure that site facilities are thoughtfully integrated into development and are unobtrusive.

B. Performance Measures

- a) Development demonstrates that the design takes into account garbage bin storage and collection without reducing the amenity of the dwelling or neighbouring lots.
- b) Garbage bin storage and mail box structures are to be integrated with the overall design of buildings and/or landscaping and are not visible from the street or rear lane way.
- c) External clothes drying areas are to be provided for all residential development.

12.8.5 Residential Development Forms

12.8.5.1 All Housing Types

A. Performance Measures

- a) Dwellings are designed to incorporate the option of 'live-work' activities (home-based businesses).
- b) To encourage quality designed dwellings that make a positive contribution to the streetscape and amenity of the neighbourhood.
- c) To provide definition of public domain by ensuring development addresses the streets and open spaces.
- d) To promote housing choice, variety and affordability.

12.8.5.2 Integrated Housing

A. Performance Measures

- a) Proposals where development includes subdivision which results in 3 or more dwellings on separate lots creating lots smaller than the minimum lot size for that type of development is to be considered as an Integrated Housing proposal.

- b) Any proposal for integrated housing shall be designed by an architect registered with The NSW Architects Registration Board.

12.8.5.3 Apartments

A. Performance Measures

- a) Provide more urban orientated development and encourage higher density development in walking distance to Werrington Station.
- b) Be compatible in scale with the future mass and character of adjacent buildings.
- c) Provide parking on site and underground where possible.

B. Controls

Lot Dimensions	
Minimum Lot Size	650m ²
Minimum Lot Frontage	25m
Private Open Space	
Ground floor private open space	
Minimum Area	20m ²
Minimum Dimension	2.5m
Upper floor private open space	
Minimum Area	10m ²
Minimum Dimension	2m
Communal open space	
Per 10 dwellings	10m ²
Building setbacks	
Front	3m
Secondary Frontage	2m
Side	<ul style="list-style-type: none"> • 1.5m without opening to a habitable room • 3m opening to a habitable room
Rear	5m
Garage to rear lane/secondary frontage	0m

Other requirements	
Built Form	Development must utilise multiple entries and circulation cores in buildings with a length greater than 15m.
Adaptable Dwellings	10% of dwellings shall be adaptable per AS1428.1-1998- Design for Access and Mobility.
Vehicle Manoeuvring	Provide turning movements per AS 2890.1-2004.

Figure E12.23: Apartment Design Principles



12.8.5.4 Attached Dwellings

A. Performance Measures

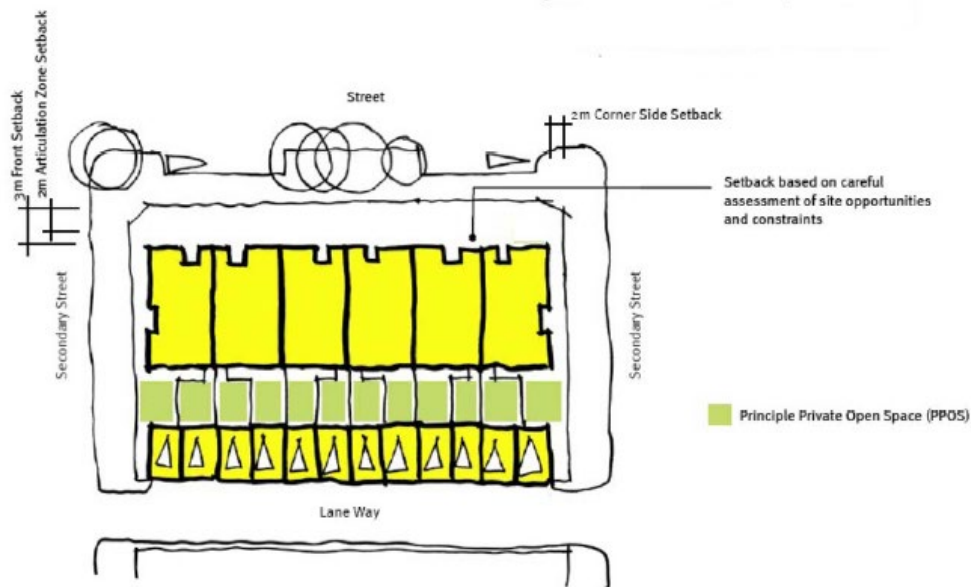
- a) Provide for parking with a rear loaded garage accessed from a rear lane or shared driveway.
- b) Integrate studio units located above a ground level garage are at ground level, located at the rear of the site in some locations.
- c) To encourage medium density development in close proximity to the railway station.

B. Controls

Lot Dimensions	
Minimum Lot Size	195m ² – 230m ²
Minimum Lot Frontage	6m – 9.5m
Private Open Space	
Minimum Area	20m ²
Minimum Dimension	4m
Landscaping Site Coverage**	40%
Building setbacks	
Front	3m
Secondary Frontage	2m
Side	0m
Rear	
Lots with a northern orientation	8m
All other lots:	
- Ground floor	4m
- Upper floor	6m
Garage to rear lane/secondary frontage	0m

** Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

Figure E12.24: Attached Dwelling Design Principles



12.8.5.5 Semi Detached Dwellings

A. Performance Measures

- Have the appearance of a larger home, but comprise of 2 dwellings on separate Titles.
- When located on corner lots, semi-detached dwellings should provide distinct entries for each unit usually located on different street frontages.
- Dwellings have an adaptable design which can incorporate options for home-based business activities.
- When located at a corner provide vehicle access is to be provided off different street frontages.

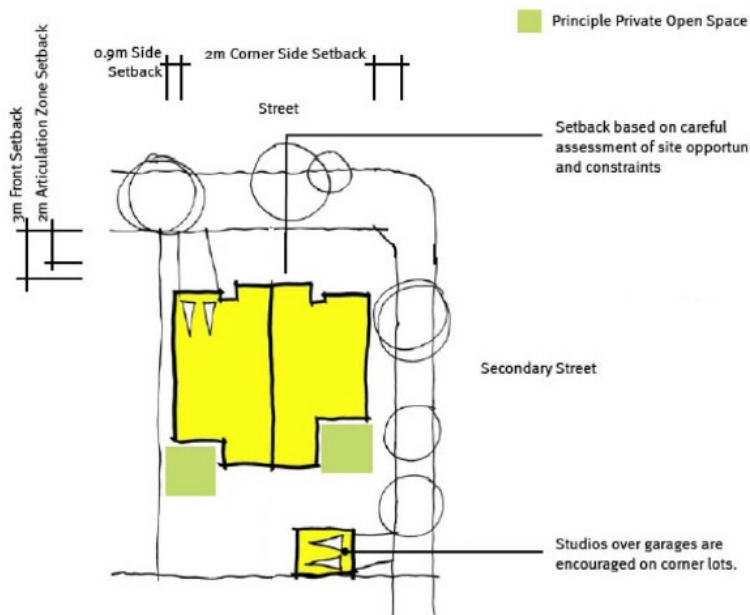
B. Controls

Lot Dimensions	
Minimum Lot Size	230m ² – 450m ²
Minimum Lot Frontage	12m – 15m
Private Open Space	
Minimum Area	30m ²
Minimum Dimension	4m
Landscaping Site Coverage**	40% of total site area

Building setbacks	
Front	3m
Secondary Frontage	2m
Side	0m (defined boundary) 0.9m
Rear	
Lots with a northern orientation	8m
All other lots:	
- Ground floor	4m
- Upper floor	6m
Garage to rear lane/secondary frontage	0m

** Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

Figure E12.25 Semi Detached Design Principles



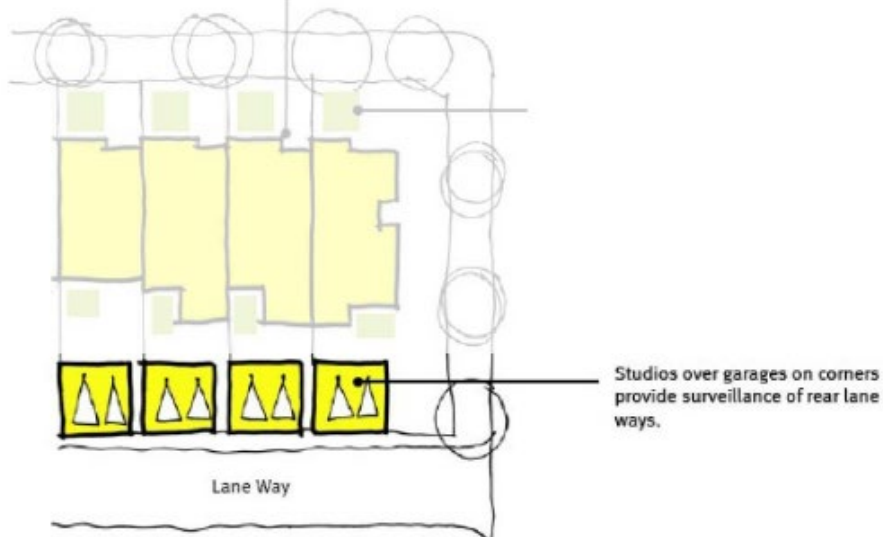
12.8.5.6 Studios

A. Performance Measures

- Be located above garages that are accessed from rear lanes or shared driveways.
- Provide their own sleeping, living, kitchen and bathroom areas.
- Provide casual surveillance over rear lanes or shared driveways.

- d) Windows and private open spaces do not overlook the private space of any adjacent dwellings.
- e) Do not overshadow the private open space of living space of any adjacent dwelling.
- f) Balconies or verandahs do not overhang vehicle access areas.

Figure E12.26 Studio Design Principles



12.8.5.7 Detached Dwellings

A. Performance Measures

- a) Allow for landscaped side setbacks to provide visual separation between dwellings and a more spacious streetscape environment.
- b) To provide for more detached dwellings in the general residential zone which transitions to the medium density zone.

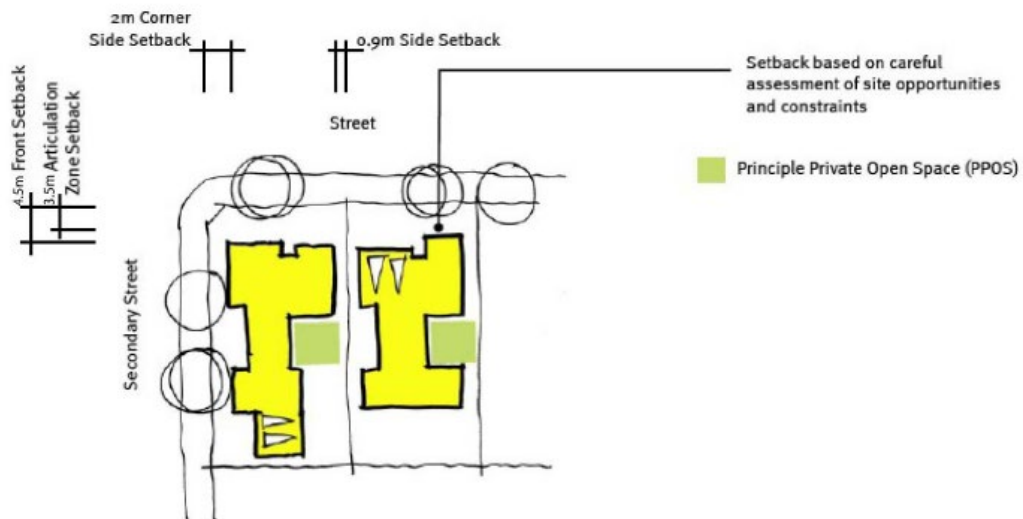
B. Controls

Lot Dimensions	
Minimum Lot Size	450m ²
Minimum Lot Frontage	15m – 18m
Private Open Space	
Minimum Area	50m ²
Minimum Dimension	4m
Landscaping Site Coverage**	40% of total site area

Building setbacks	
Front	4.5m
Secondary Frontage	2m
Side	0.9m
Rear	
Lots with a northern orientation	
- Ground floor	8m
- Upper floor	12m
All other lots:	
- Ground floor	4m
- Upper floor	6m
Garage Frontage	5.5m
Garage to rear lane/secondary frontage	0m

** Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

Figure E12.27 Detached Dwelling Design Principles



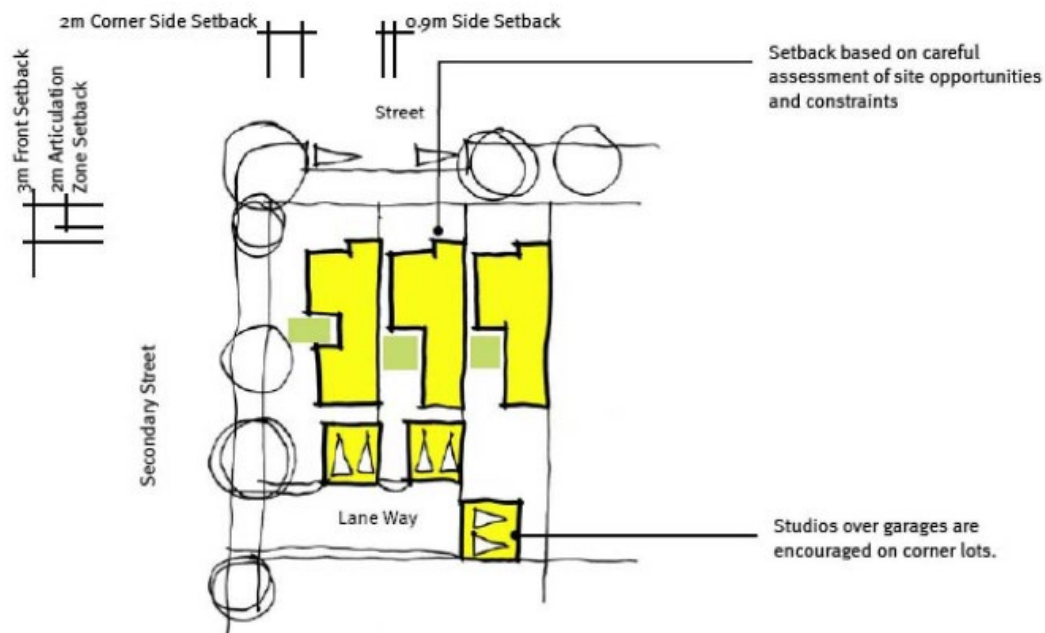
12.8.5.8 Built to Boundary Dwellings

A. Controls

Lot Dimensions	
Minimum Lot Size	230m ² – 450m ²
Minimum Lot Frontage	9.5m – 15m
Private Open Space	
Minimum Area	40m ²
Minimum Dimension	4m
Landscaping Site Coverage**	50% of total site area
Building setbacks	
Front	4.5m
Secondary Frontage	2m
Side	0m (defined boundary) 0.9m
Rear	
Lots with a northern orientation	8m
All other lots:	
- Ground floor	4m
- Upper floor	6m
Garage to rear lane/secondary frontage	0m

** Any landscaped area having a dimension less than 2m shall not be included in the calculations of landscaped areas.

Figure E12.28 Built to Boundary Design Principles



12.8.6 Development for Employment Purposes

A. Performance Measures

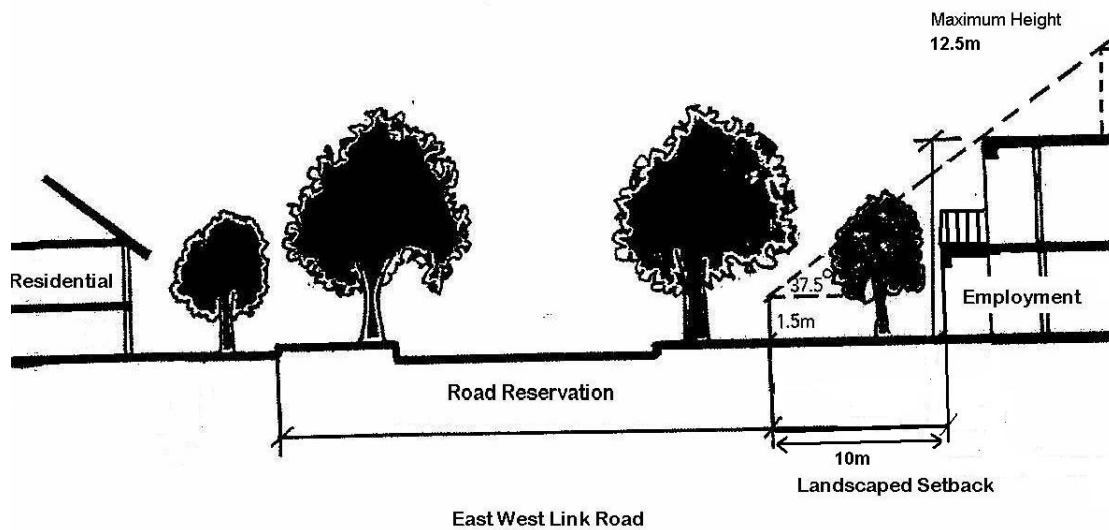
- a) Development for employment purposes should be planned and designed to be compatible with the existing and intended desired character of the locality.
- b) Development for employment purposes shall consider views and vistas to and from Frogmore House.
- c) Particular attention is paid to:
 - i) The development site including setbacks,
 - ii) Urban form including:
 - traditional building design features
 - Building design to incorporate articulation and interest to street frontages and should be of a contemporary and innovative design
 - provide landscaped frontages to the street.
 - orientation of building entrances.
 - continuously occupied rooms facing the street.
 - detailed consideration of significant townscapes or landscapes.
 - Signs.
 - iii) driveways and parking including:
 - provision of on-site parking appropriate to the proposed use, and in accordance with the Access and Parking section of this DCP, the RMS or Australian standards.

- minimise site coverage by paved areas.
 - conceal garages from views available from public parks and streets.
 - locate driveways and parking areas away from any neighbouring residential development.
 - Shared driveways between developments within the employment zones are encouraged
 - All vehicles to enter and leave in a forward direction.
- iv) building envelope and setbacks:
- to achieve a two storey appearance.
 - to provide for effective landscaped separation from adjacent developments.
- v) protect the privacy of adjacent properties.
- vi) sufficient areas are provided for storage and building services to meet requirements generated by the proposed development and located to protect the amenity of adjacent developments. These storage areas are to be suitably screened from nearby streets and the Great Western Highway.
- vii) provision is made for on-site stormwater detention and treatment.

B. Controls

Minimum Lot Size	2,000m ²
Minimum Lot	25m
Minimum Front Building Setbacks	10m
Council may consider a minor variation to the front setback but only where the proposal demonstrates a high level of architectural treatment plus an improved landscaping outcome.	
Height	Development will be carried out within the building height plane demonstrated in Figure E12.29 – Building Height Plan (Cross Section) to a maximum of 12.5m.

Figure E12.29: Building Height Plane - Cross Section of Employment development to Residential Development through proposed East West Link Road



Landscaping

- 1) A detailed landscape plan shall be submitted in accordance with the Landscape Design section of this DCP.
- 2) Landscaping within all setback areas shall be of a similar scale to the buildings on the site.
- 3) All unbuilt areas of the site not required for loading, car parking, or vehicle access should be landscaped.
- 4) 60% of any landscaped area shall provide for trees that grow to a height that exceeds the building height on the site and where possible be endemic to the area.

Drainage

- 1) On site stormwater detention systems are to be implemented to control the rate of runoff from the site to limit or reduce the rate of runoff to existing conditions or better.
- 2) A preliminary stormwater drainage plan is to be submitted with a development application for industrial uses on the site.
- 3) The onsite stormwater detention system must be designed, constructed and maintained in accordance with requirement of Councils OSD technical specifications.
- 4) Rainwater tanks are not to be located in the front setback and shall be integrated into the design of the building.

Fencing

- 1) No front fencing is permitted forward of the building line.
- 2) Security measures are to be integrated into the building design to avoid use of security fencing.
- 3) Should any fencing be required it is to be integrated into the landscaping theme to minimise visual impacts while providing associated site security. Chain wire, untreated metal, prefabricated metal and wooden fencing is not permitted.

Design

- 1) Architectural features shall be included in the design of the industrial buildings to provide for a more visually interesting industrial area that does not detrimentally affect the amenity and visual character of the locality or adjoining residential properties. Such features shall include:
 - a) Distinctive parapets or roof forms,
 - b) Visually interesting facades
 - c) Architectural emphasis on built form,
 - d) Variety of window patterns,
 - e) Variation in unit design within building group
 - f) Entrance areas to be visually prominent within the overall building form
- 2) Additional design features can also include (but not limited to):
 - a) Balcony
 - b) Canopy
 - c) Awnings
 - d) Entrances
 - e) Recesses
 - f) Consideration of external materials and finishes
- 3) Roofing is to be constructed of non-reflective pre-painted metal with mid-tone colouring.
- 4) Buildings located on corner lots need to address both street frontages and reinforce the corner by massing and façade orientation.

Access

- 1) Development fronting the proposed East West Link road shall provide access to the western side of the property to reduce the impacts of cut into the site.
- 2) No parking spaces are to be provided within the front building setback.
- 3) Onsite parking and manoeuvring areas are to be in accordance with AS 2890.1 and AS2890.2. Lots greater than 2,000m² shall cater for articulated vehicles.