

Liverpool Development Control Plan 2008
Part 2.5
Land Subdivision and Development in
Middleton Grange

August 2023

Part 2.5 must be read in conjunction with Part 1

Refer to Part 3.8 for Non Residential Development in Residential Zones

Liverpool Development Control Plan 2008

Part 2.5 Middleton Grange

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1. Preliminary

Applies to

1. Part 2.5 applies to the land, shown in Figure 1.
2. Part 1 also applies to the land shown in Figure 1.
3. Part 3.7 applies to the building of Residential Flat Buildings on land shown in Figure 1.
4. Part 3.8 also applies for non residential development on the land.
5. Parts 3.1 – 3.6 do not apply to the land.

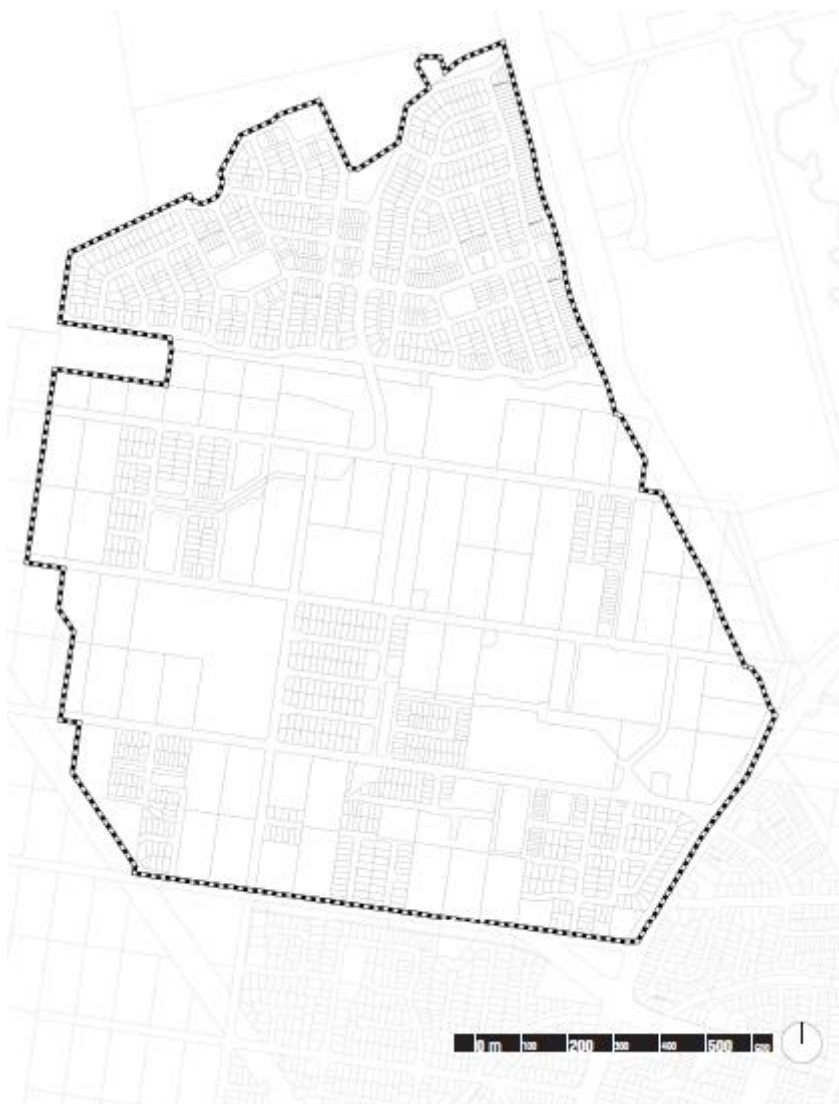


Figure 1 Land to which this Part applies

Background

The suburb of Middleton Grange was rezoned on 18 June 2004. The area was originally subject to Liverpool DCP No. 48, which came into force on 26 June 2002.

Planning Principles

Middleton Grange will evolve as a place that optimises the public transport network and facilitates access between home and work, a place that is safe and attractive and is characterised by quality urban design and architecture.

Development will be environmentally sustainable – cycling and walking will be attractive alternatives to the private car, the neighbourhood will be highly accessible and the physical features of the area will be retained and enhanced. A distinctive feature of Middleton Grange will be its connections and proximity to the Western Sydney Parklands and the incorporation and regeneration of a significant swathe of Cumberland Plain Woodland into the urban fabric providing a continuous biodiversity link.

Places will be distinctive and memorable with higher density living located around areas of highest amenity. The community will be served by local community facilities, parks and sports fields, as well as the convenience of local shops.

At the centre of the suburb will be the local centre, supporting the provision of goods and services, social infrastructure, open space, recreation, entertainment and community facilities that create a focal point for residents and a sense of place within the wider community.

This Part supports this by articulating the following principles:

1. Encourage community and stakeholder collaboration in development decisions.
2. Take advantage of compact building design that is also sensitive to the environment.
3. Ensure that land use is appropriate and that any development uses the development site to its best advantage.
4. Relate the density of development to access to transport and services.
5. Create a range of housing opportunities and choices.
6. Create workable neighbourhoods – ensure a civic focus.
7. Foster distinctive, vibrant communities with a strong sense of place and which reinforce Connection to Country.
8. Preserve and enhance open space, natural features and critical environmental areas.
9. Strengthen existing communities – consider employment options and issues such as safety and recreational facilities for the wider community.
10. Provide a variety of transportation choices – accessibility is the key.
11. Make development decisions predictable, fair and cost-effective.

Objectives

Accessibility

To ensure a clear relationship between accessibility and land use by:

- a) Promoting a movement system that gives appropriate priority to walking, cycling, public transport, and private vehicles.
- b) Guaranteeing a movement system that relates accessibility demand to location of development type.
- c) Ensuring that servicing is able to be carried out appropriately.
- d) Ensuring movement priorities, traffic speeds and street and road designs are appropriate to the location and give priority to pedestrians and children.
- e) Guaranteeing adequate accessibility for emergency vehicles.
- f) Building upon existing movement patterns and infrastructure by utilising the existing street layout.

Social Benefits

To establish affordable and accessible facilities and resources that allow people to maintain wellbeing, live and recreate by:

- a) Making appropriate provision for social and community needs.
- b) Providing for a full range of housing types, form and tenure.
- c) Establishing a hierarchy of recreation facilities and parks/reserves.
- d) Ensuring that development creates a 'people place' by giving priority to people and human relationships through housing mix and safety.
- e) Accommodating life-long educational and learning needs.

Environmental Benefits

To ensure a clean, safe and healthy environment that builds on existing resources and produces quality built and natural assets by:

- a) Establishing appropriate drainage and floodplain management that contributes positively to the area.
- b) Developing solutions to manage environmental issues on-site.
- c) Ensuring that waste disposal is effective and efficient and that recycling is utilised at every opportunity.
- d) Ensuring a high standard of water and air pollution management and water quality.
- e) Maintaining and enhancing the quality of the natural environment.
- f) Connecting and enhancing vegetation corridors and providing links between the Western Sydney Parklands and the Hinchinbrook Creek Corridor.
- g) Promoting the conservation of flora and fauna, including the retention of Cumberland Plain Woodland.
- h) Promoting the development of place and a quality built environment with people and human relationships as a central consideration.

Economic Benefits

To establish economic capital that is accessible and meets the needs of the community by:

- a) Ensuring appropriate accessibility to employment.
- b) Ensuring the area's needs is identified in a local context through provision of local facilities and services.
- c) Ensuring the provision of employment floorspace is responsive to current demands.
- d) Ensuring infrastructure is sufficient to meet current and predicted need.
- e) Providing appropriate locations for local institutions.

2. Controls for Public Domain

2.1 Street Network

Street Network

Background

Middleton Grange shall be an accessible place linked to its surroundings with streets, pedestrian and cyclist pathways and public transport. Good transport linkages contribute to a connected, vibrant and mobile community, where all are able to safely and conveniently access services and facilities, and where dependence on private vehicles is minimised. The local centre will provide an accessible focal hub for the community, which is connected to the broader suburb by streets, pedestrian pathways, shared zones and a cycle network.

Objectives

- a) To provide an attractive residential street environment.
- b) To provide attractive streets and public domain environment within the local centre.
- c) To provide for safe vehicular access and active transport links within the local centre.
- d) To provide for the safe and efficient circulation of traffic.
- e) To provide for the safe and efficient movement of pedestrians with particular regard to the provision of clear and safe access routes for people who have a disability.
- f) To provide for efficient movement of local bus services and direct pedestrian access for all members of the community including those with disabilities.
- g) To provide a focal point for public transport activity through the local centre.
- h) To reduce local vehicle trips, and travel distances.
- i) To guarantee adequate accessibility for emergency vehicles.

Controls

1. The subdivision of land, design and layout of streets shall be in accordance with Figure 2.
2. The layout of streets within the local centre shall be in accordance with Figure 3.
3. All streets shall be designed and constructed in accordance with Figures 2 – 7.
4. All intersections shall be designed in accordance with the Austroads and Transport for NSW Road Design Guide and the specifications set out in the Transport and Traffic Assessment (see *Background Reports to the Master Plan*).
5. No vehicular access to properties directly from Cowpasture Road and Fifteenth Avenue will be permitted. Access shall be via a service street or local street.
6. Barrier Kerb shall be used adjacent to parks, schools, collector streets and local centre streets. Roll kerb shall be used on all other streets.
7. Barrier kerb shall be installed for the entire length of bus zones and for 10m on the approach of the bus stop.
8. The design of bus stops and bus stop shelters shall be in accordance with Council's technical specifications.
9. Tree planting can be located either within the carriageway or road verge.
10. Laneways leading to cul-de-sacs or 'dead ends' are not permitted.
11. Laneways are not to incorporate acute angle bends into the design.

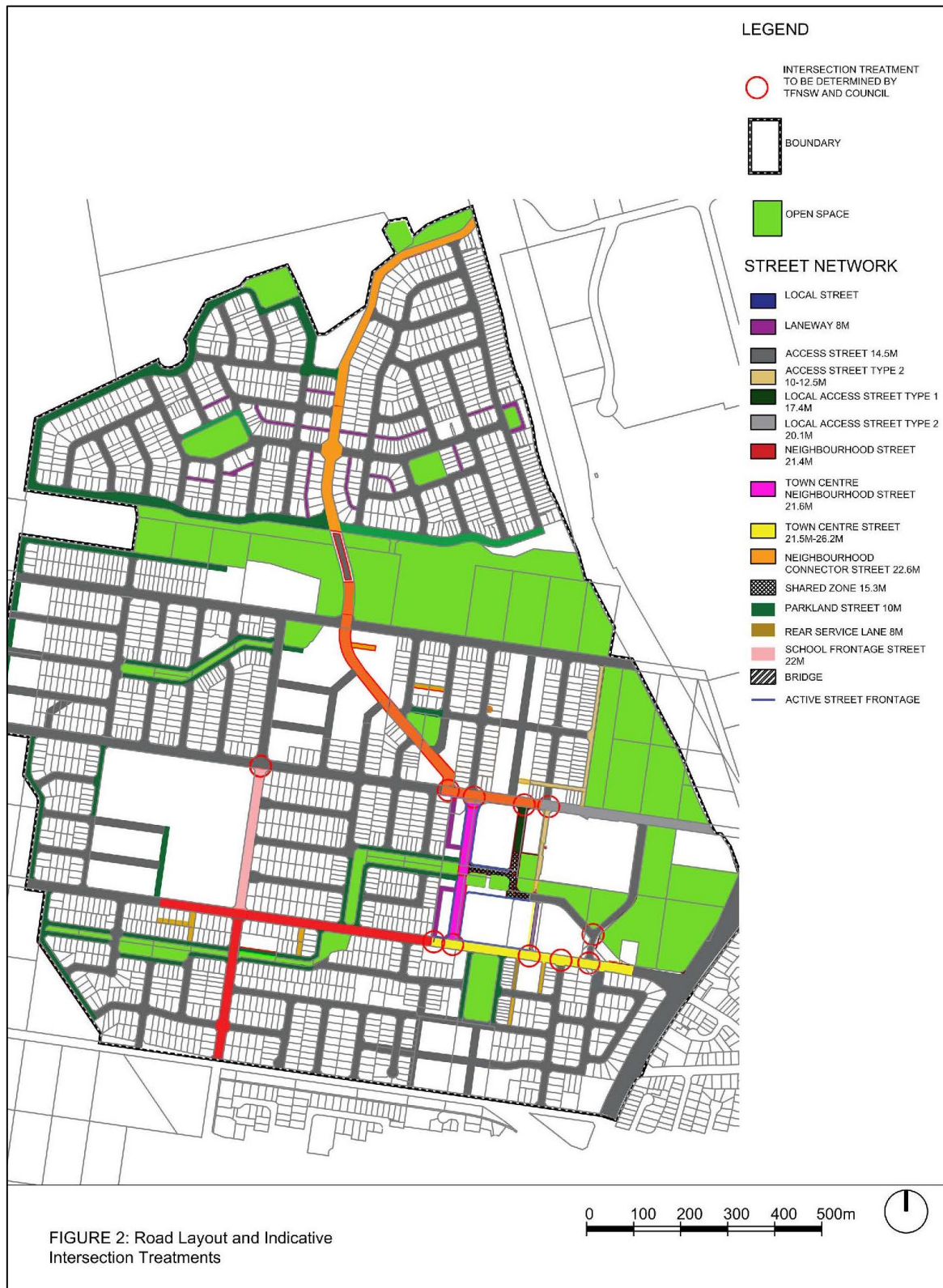


Figure 2 Road Layout and Indicative Intersections Treatments

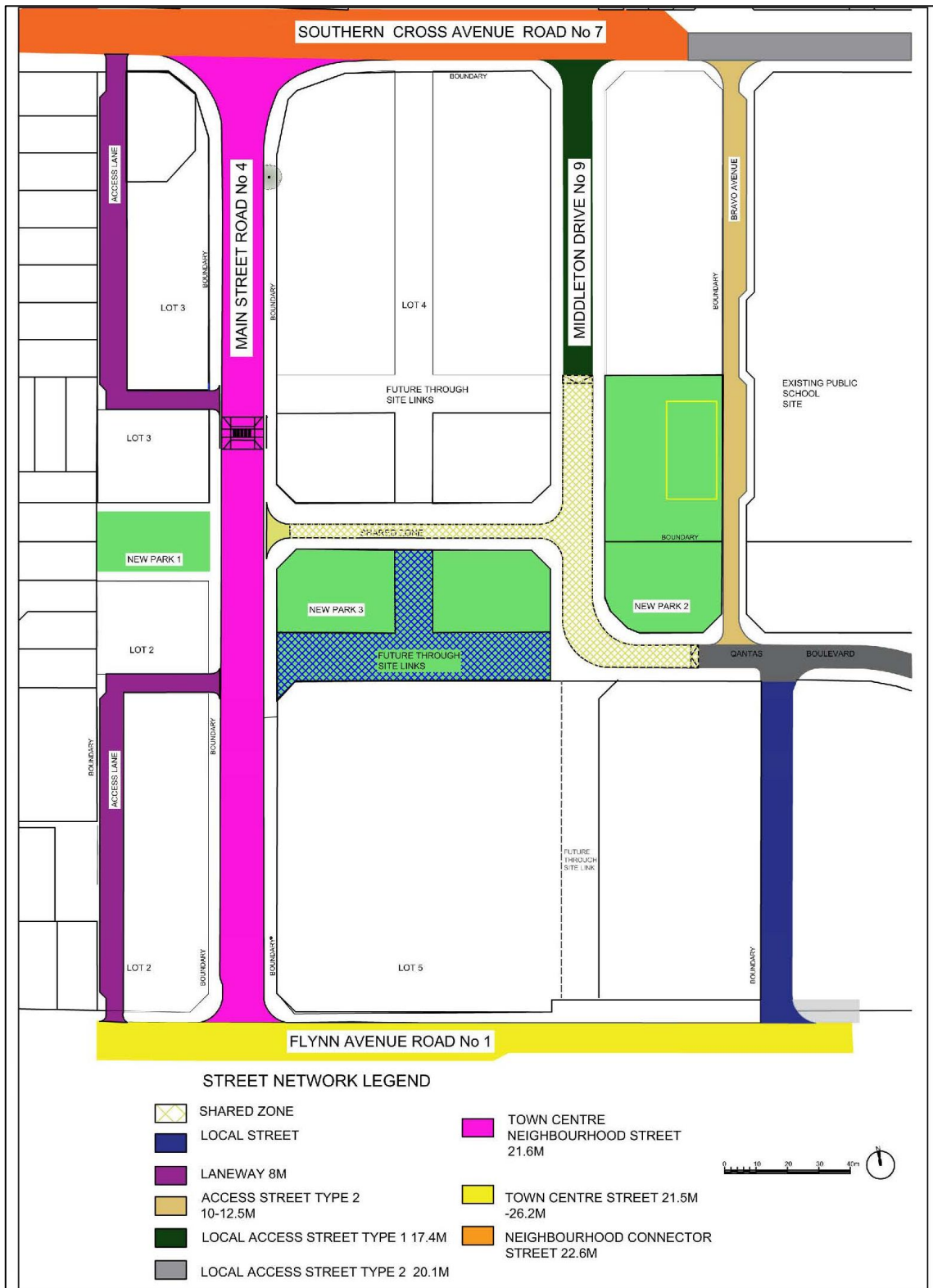


FIGURE 3 Local Centre Street Design

Figure 3 Local Centre Street Design

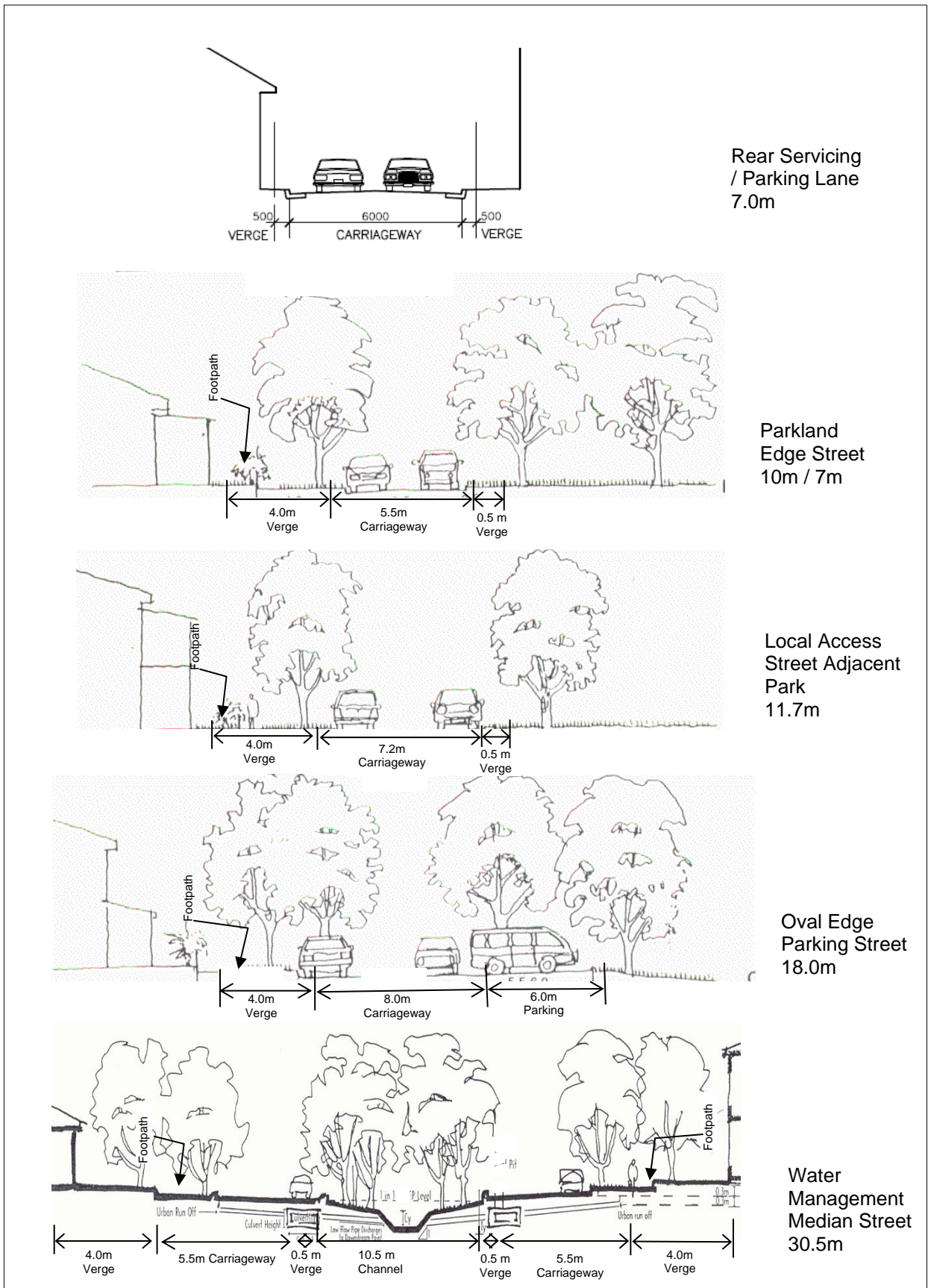


Figure 4 Street Sections

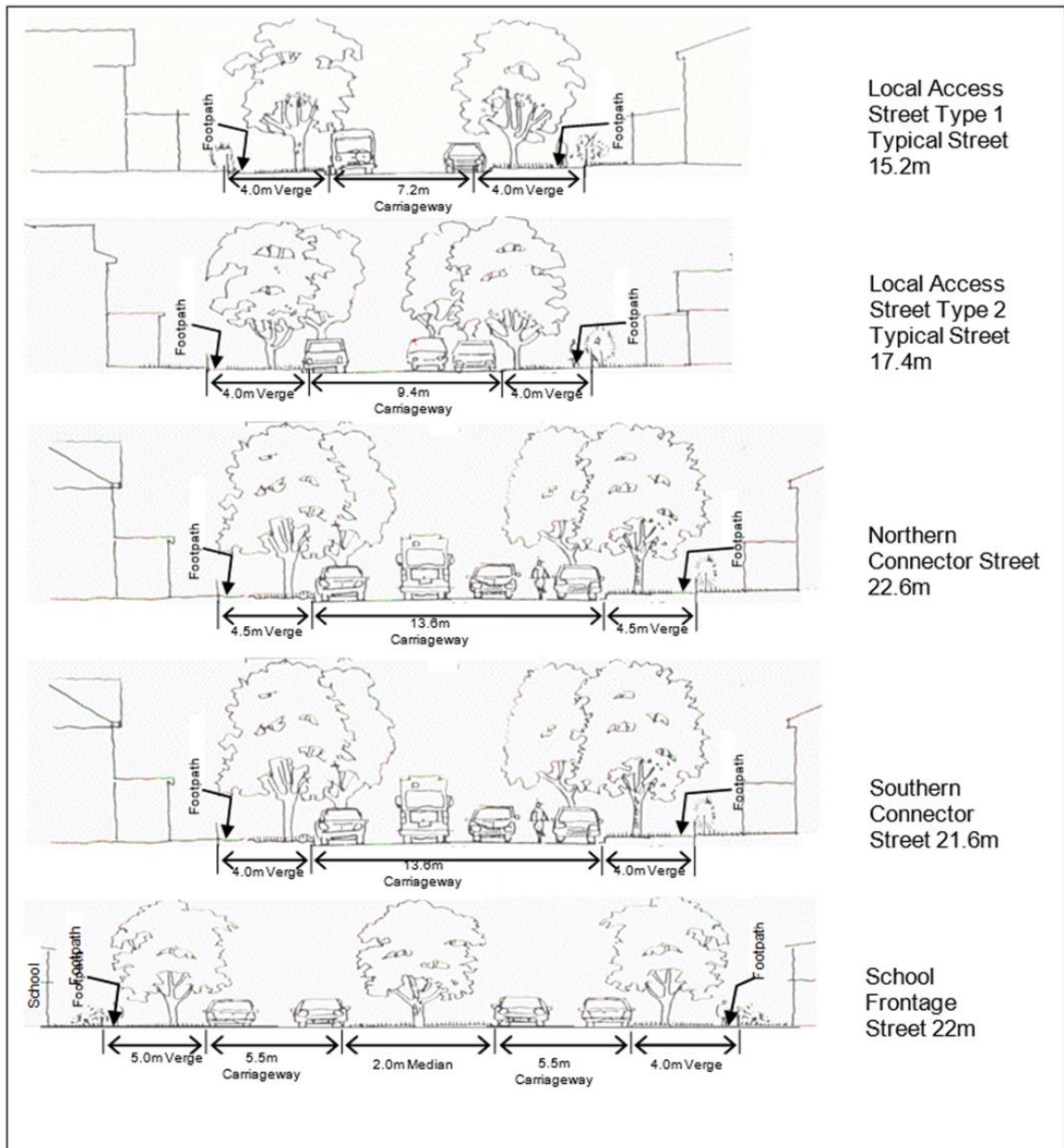


Figure-5 Street Sections

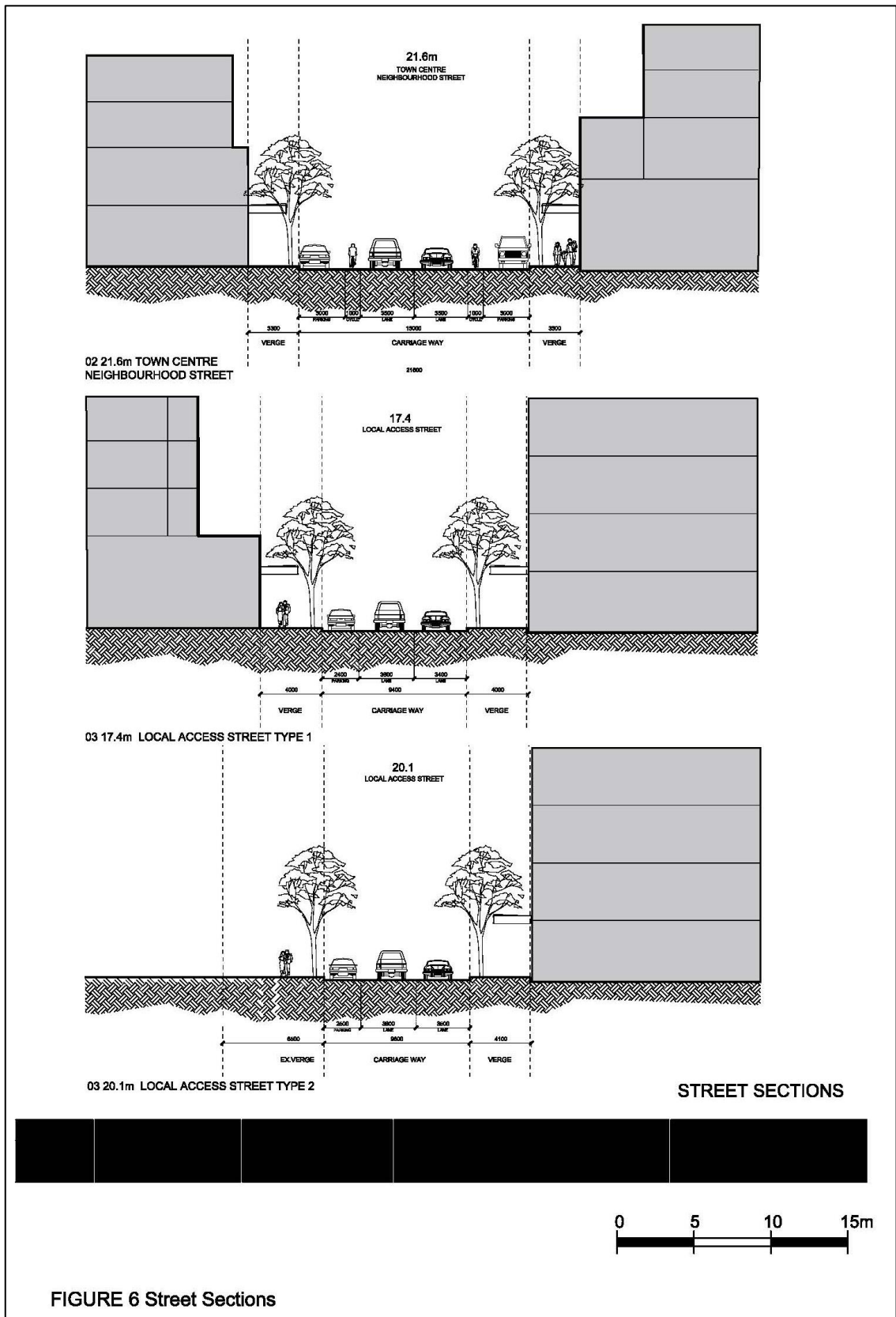


Figure 6 Local Centre Street Sections

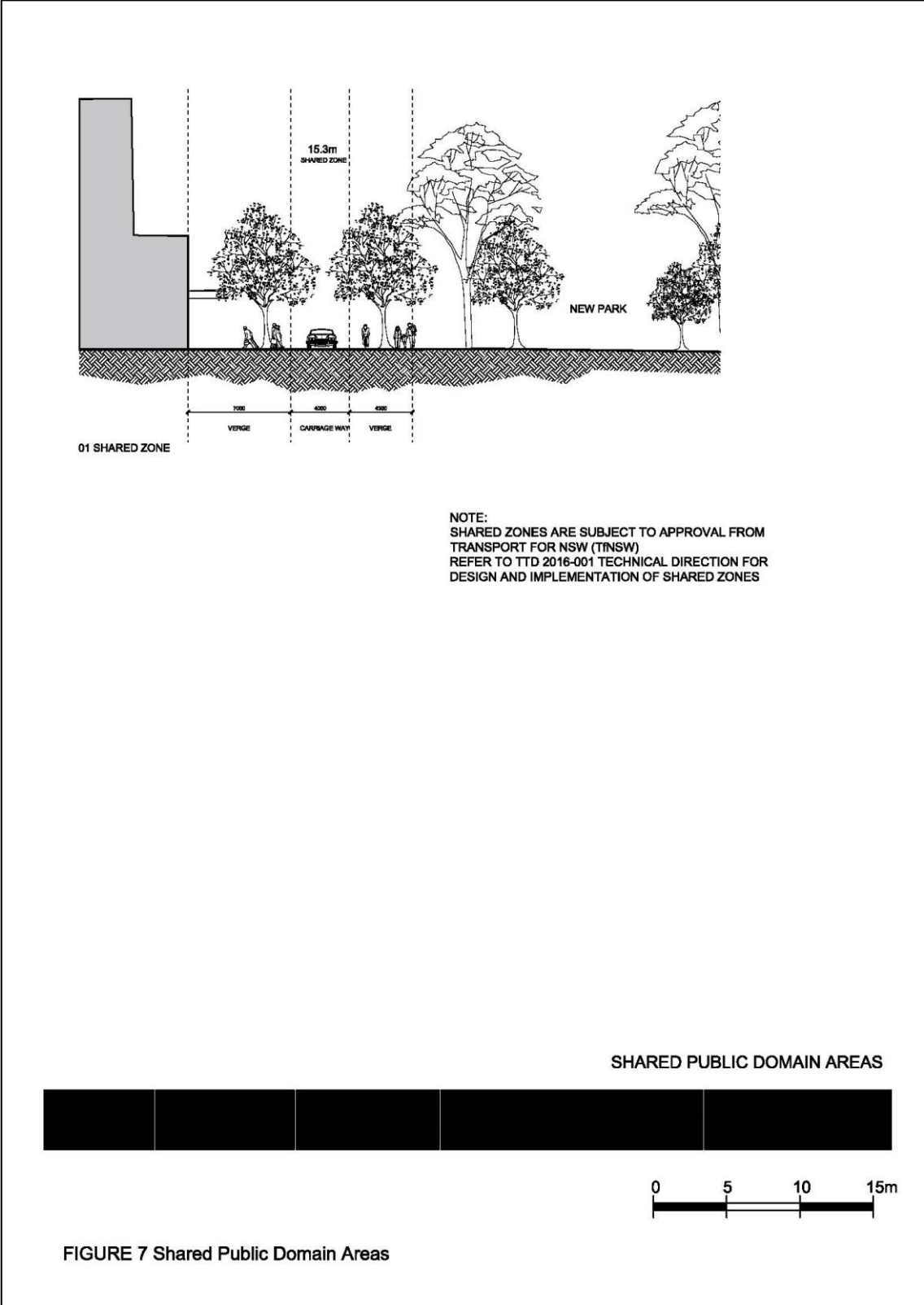


Figure 7 Local Centre Shared Public Domain Street Section

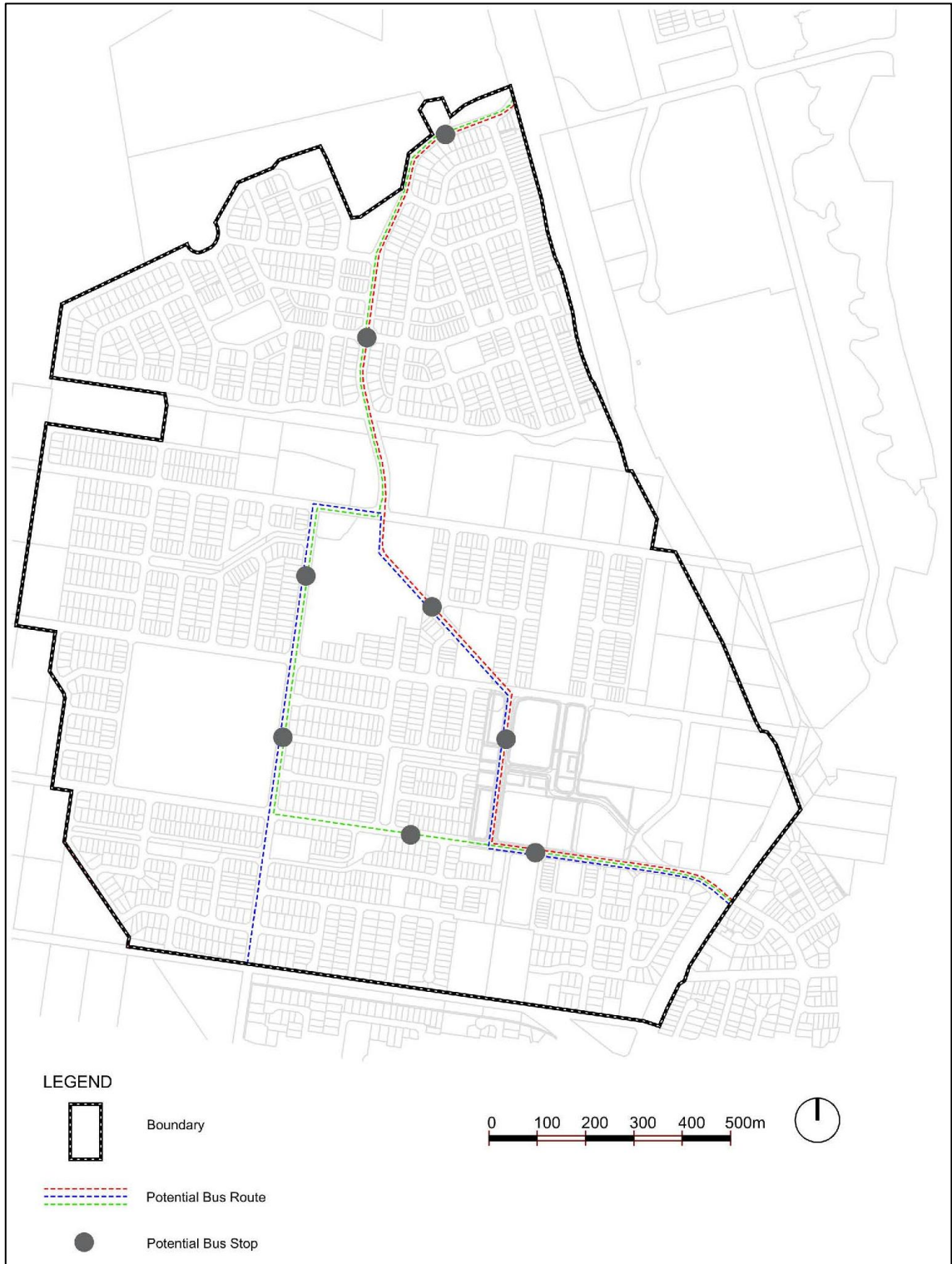


Figure-8 Indicative Bus Routes and Bus Stops

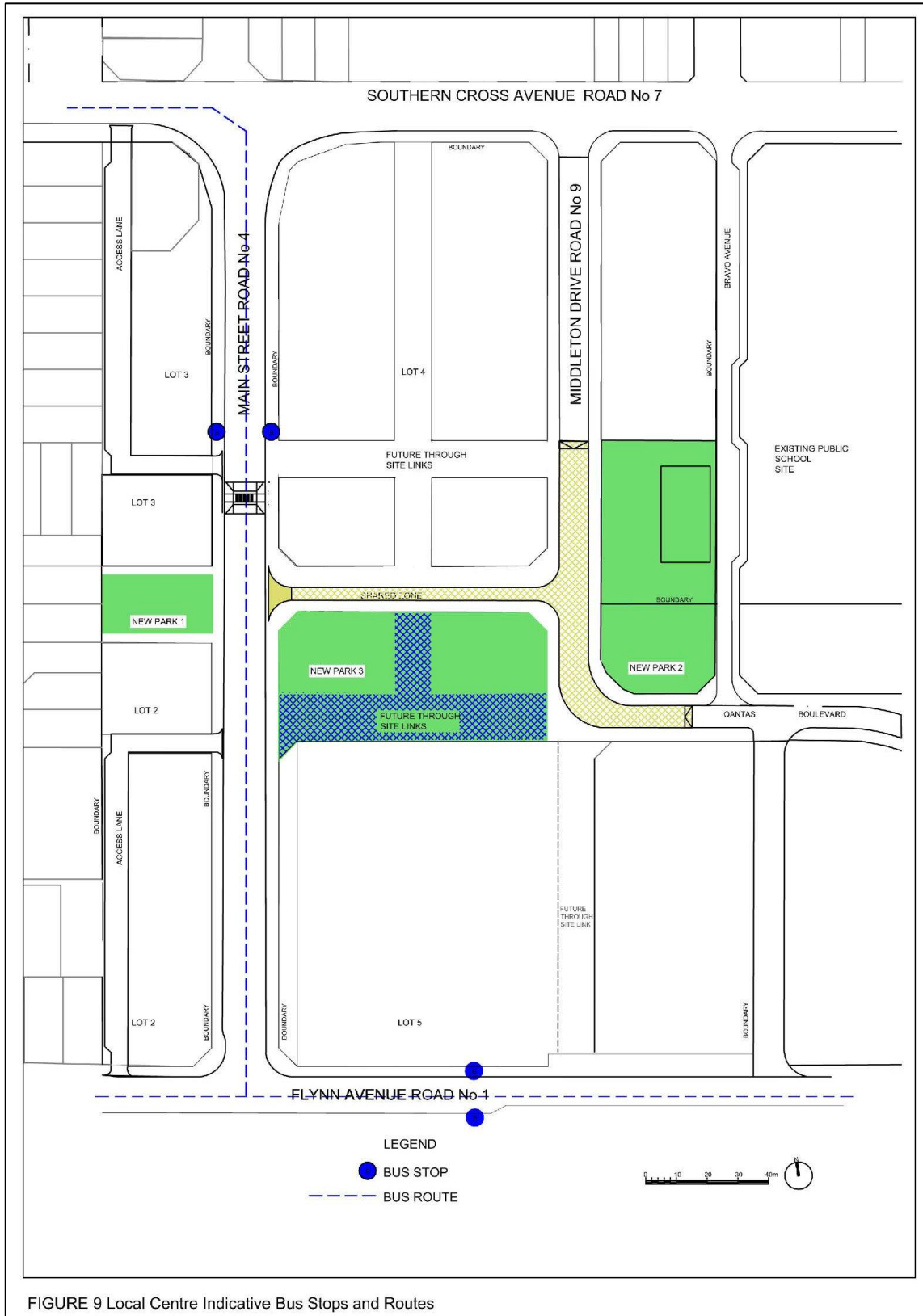


Figure 9 Local Centre Indicative Bus Stops and Routes

2.2 Pedestrian and Cyclist Paths

Background

Pedestrian and cycle facilities in public spaces provide linkages to social and cultural activities and educational facilities, and should be characterised by design excellence appropriate to the area.

Objectives

- a) To encourage walking and cycling for local trips.
- b) To provide adequate infrastructure to support active modes of transport.
- c) To provide high levels of pedestrian and bicycle safety in shared zones.
- d) To provide a permeable and interconnected network of streets and pathways that gives safe, convenient and legible access to areas of attraction both within and beyond the suburb.

Controls

1. Pedestrian and cycle paths shall be provided in conjunction with the subdivision of land, creation of streets and development of open space in accordance with Figures 10 and 11.
2. Shared pedestrian/cycle links, cycle ways, public streets and lanes shall be clearly and frequently signposted to indicate their shared status.
3. Designated cycle lanes on streets shall be clearly indicated by line-markings on the road surface and/or by signs beside the road.
4. Shared pedestrian and cycle paths shall be a minimum 3m wide.
5. Pedestrian footpaths along school frontages shall be a minimum 2.5m wide in accordance with Austroads Design Guidelines.
6. Pedestrian footpaths through the local centre shall be full verge width and paved with a Council approved paver.
7. Designated pedestrian-only paths shall be a minimum of 1.5m wide and located in accordance with Figures 4, 5, 6 and 7.

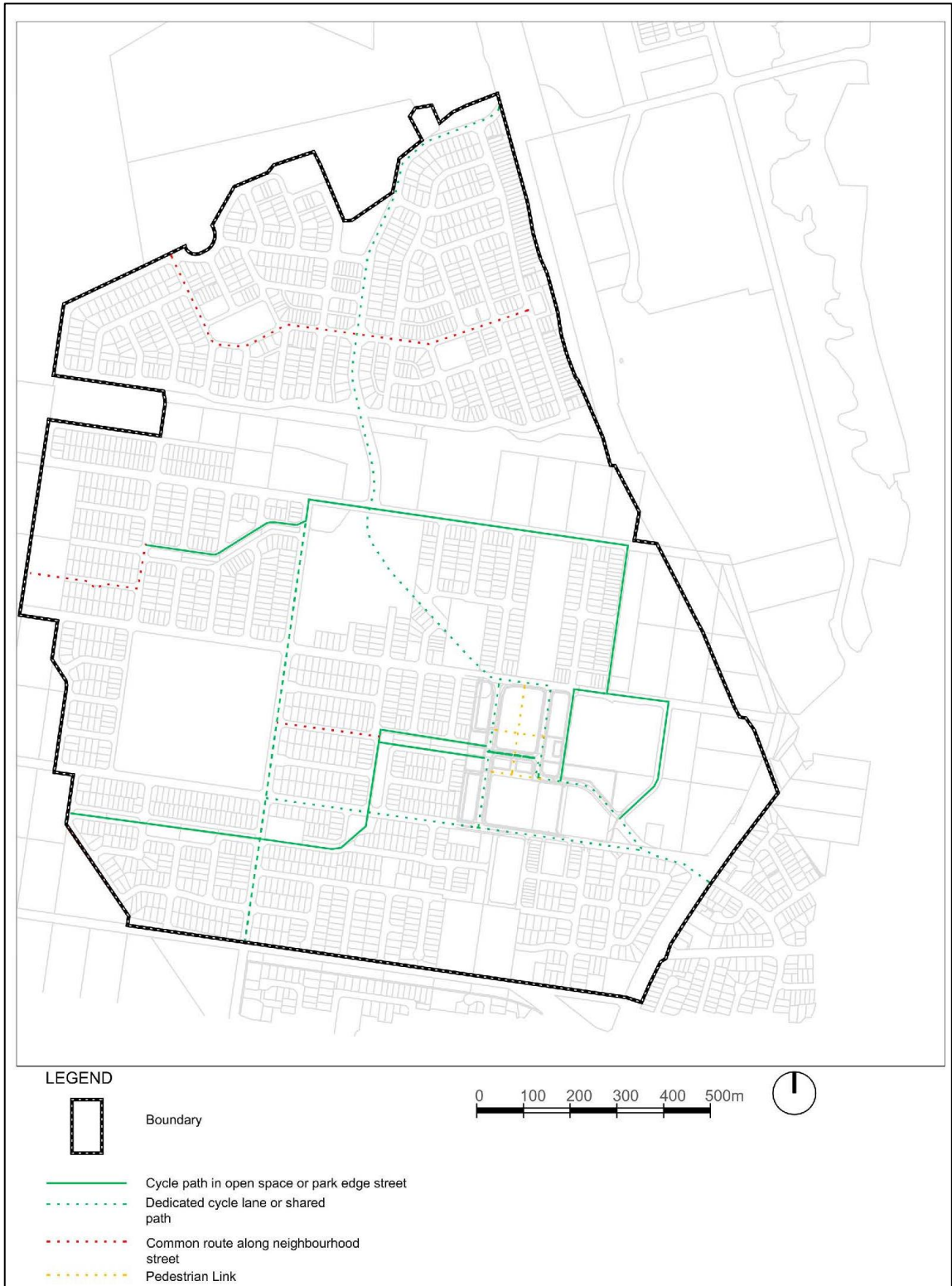


Figure 10 Cycle Paths

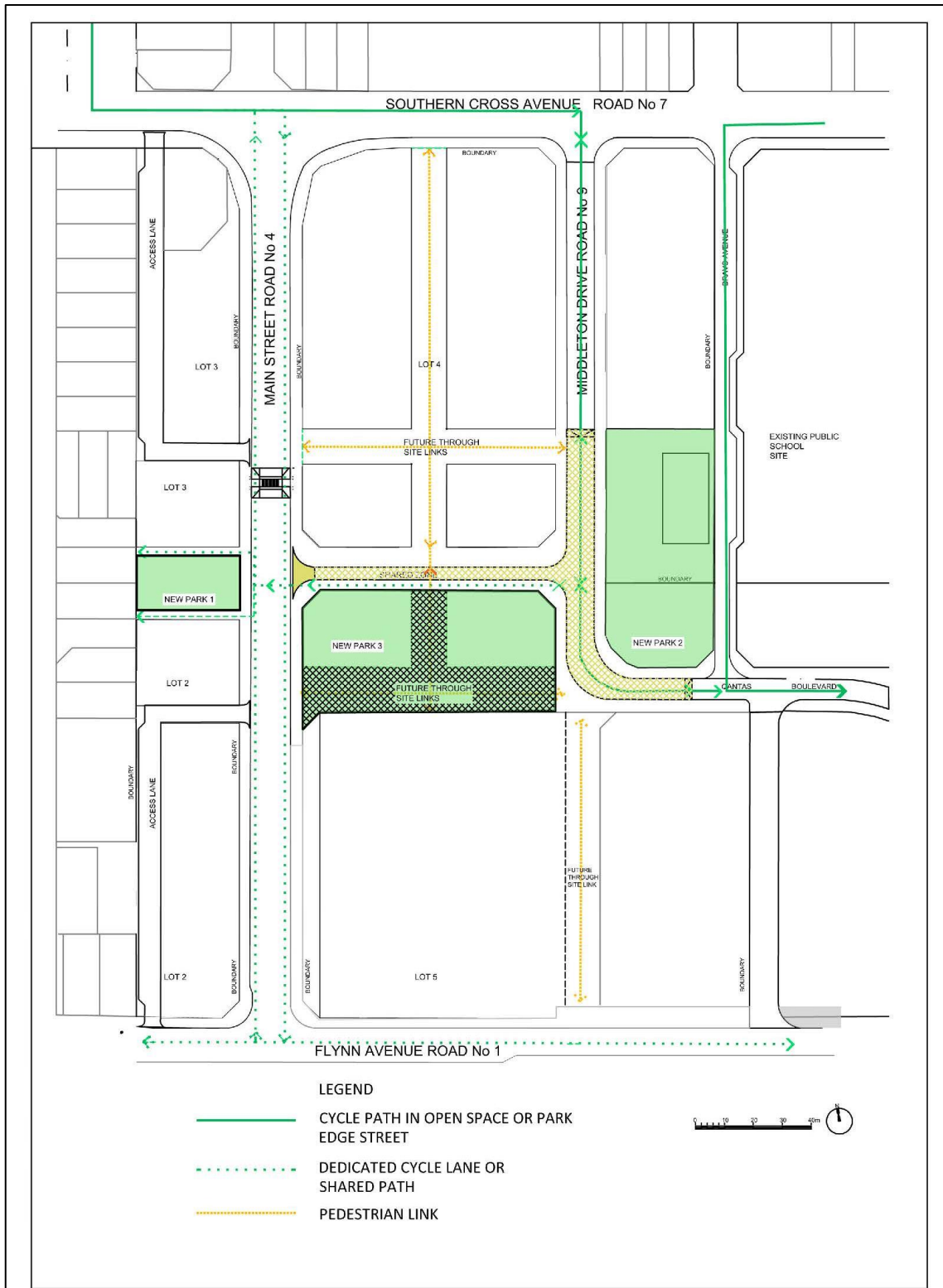


Figure 11 Local Centre Cycle Paths

2.3 Streetscape and Street Trees

Background

Street furniture should maximise pedestrian comfort, convenience and amenity, create visual harmony and be used to define spaces, streets, paths and gateways. Opportunities for public art in significant public domain locations should be explored as part of the development process. The incorporation of trees and landscaping enhance the quality of the public domain, provides protection from the sun and contributes to the 40% tree canopy coverage target.

Objectives

- a) To create a sense of identity for the area.
- b) To enhance public spaces so that they are vibrant, safe and welcoming.
- c) To facilitate cultural identity through art and design in public places.
- d) To create quality streetscapes that is visually attractive and integrates with surrounding street layout.
- e) To preserve and promote a connected tree canopy cover within the streetscape.

Controls

1. Street furniture is to be incorporated into the design of all public spaces and should be consistent in design and style.
2. Street furniture is to be located so as not to impede mobility, generally in accordance with AS 1428:1 - 4.
3. The location and detailing of all proposed street furniture is to be indicated on the Landscape Plan, to be submitted with the development application.
4. Multifunction poles shall be installed within the local centre.

Street Tree Planting

1. Street trees shall be required to be planted in conjunction with the creation of a new street or the extension of an existing street.
2. One street tree shall be planted for each allotment created.
3. The street trees shall be planted prior to the release of the subdivision certificate.
4. The trees shall be provided with protection to ensure their survival during the construction of buildings in the street. Refer to Figure 13 for details.
5. Trees and shrubs on individual streets must be of a uniform species. On streets adjacent to bushland, species indigenous to the area must be planted.
6. The trees planted along the main access avenue are to be; *Lophostemon confertus* or an equivalent tree.
7. Where appropriate, incorporate interpretative streetscape elements reflecting the former land use history on the site having regard to the Heritage Interpretation Plan and Strategy Report.
8. A minimum of one street tree shall be provided per lot frontage. Street trees along side property boundaries shall be provided at the minimum rate of 1 tree per 10m of street frontage.

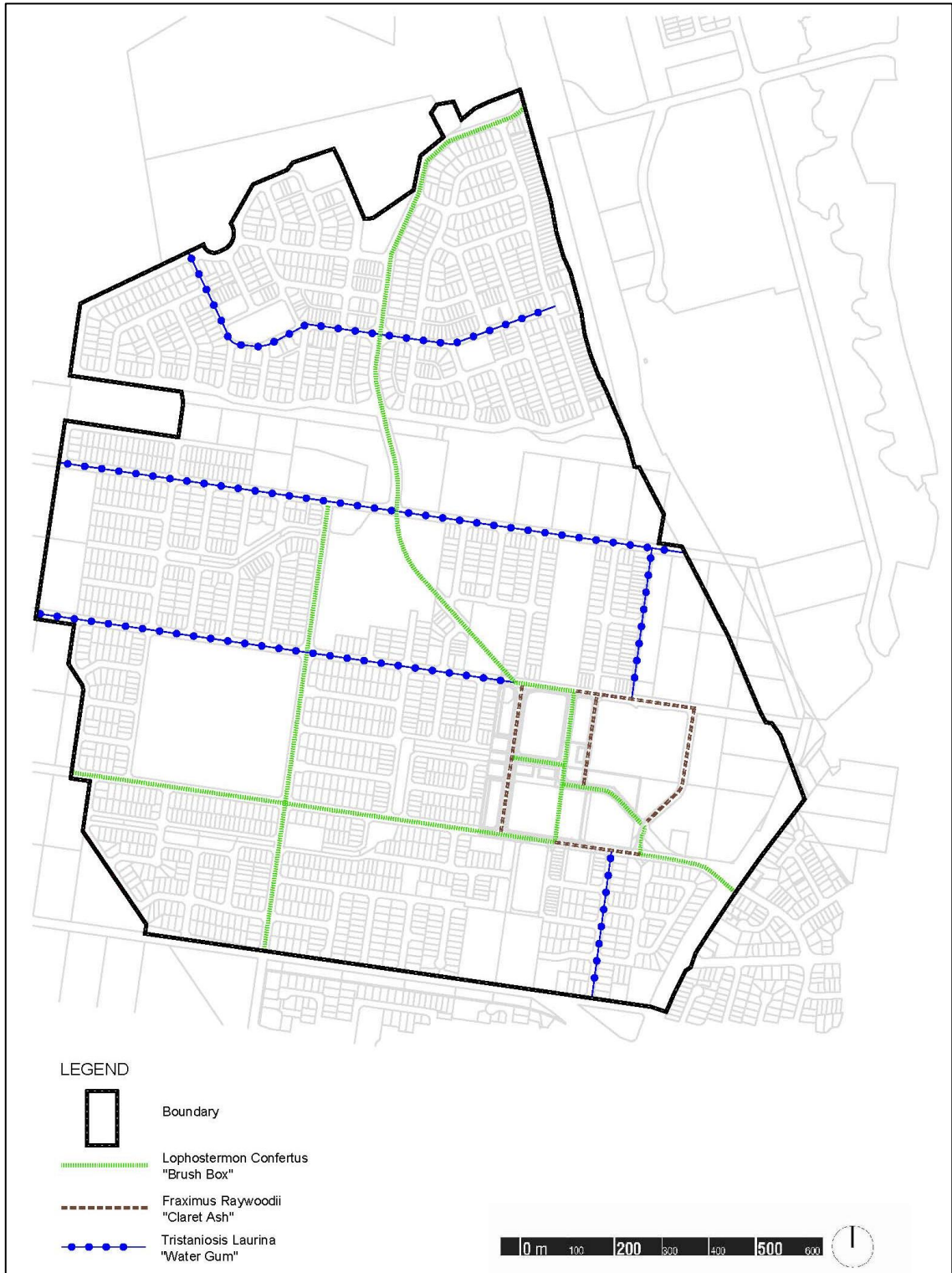


Figure 12 Street Trees

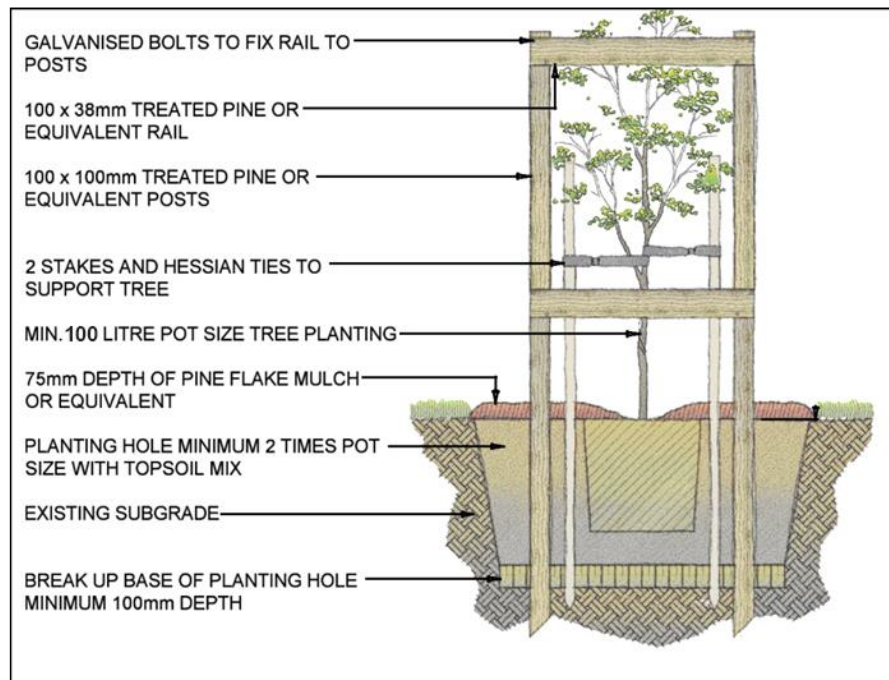


Figure 13 Tree Protection

2.4 Open Space

Background

Open spaces can be designed to promote vibrant social interaction, civic pride and a sense of public ownership and belonging. Landscaped areas and open space within the public domain play a major role in setting the character of the locality. These areas should make the neighbourhood pleasant and welcoming and be convenient to the needs of the community, especially in higher density areas.

Objectives

- a) To ensure adequate provision and distribution of public open space to meet the needs of the residents.
- b) To prioritise open spaces as a focal point for the community.
- c) To retain and integrate existing landscape elements, such as vegetation and topographic features, in the design of new development.
- d) To provide links between the open space areas and community and retail facilities.
- e) To create a variety of linked public spaces that fulfils functional requirements as well as creates attractive and memorable places.
- f) To encourage the use of native species of flora and low maintenance landscaping.
- g) To facilitate greater tree canopy cover within open space areas.

Controls

1. Public open spaces shall be designed and landscaped so as to minimise the need for maintenance. This shall be achieved through the use of appropriate native species. Where public open space is to be provided in conjunction with development, a Landscape Plan shall be submitted with the application showing how the proposed landscaping will minimise maintenance.
2. Existing trees, tree stands and vegetation shall be retained where possible.

3. Pedestrian and cycle paths must be provided as part of open space areas, shown in Figures 10 and 11.

2.5 Stormwater Management

Water Management

Background

Nowadays water cycle management is seen holistically rather than just the conveyance of stormwater. This includes provision of drainage in natural or recreated watercourses. In order to assist applicants to achieve the design objectives, reference shall be made to the relevant extract from '*Water Cycle Management Facilities, Northern, Central and Southern Creeks Engineering Design Plans and Design Report by J Wyndham Prince Pty Ltd, December 2005*' prepared on behalf of Council.

Objectives

- a) To encourage a holistic approach to water cycle management, implementing total catchment management principles.
- b) To integrate water management measures and incorporate water sensitive urban design principles where possible.
- c) To minimise the impact of urbanisation on stormwater quality within the catchment so that stream flows mimic natural pre-development flows by encouraging salinity management principles and water sensitive urban design practices.
- d) To ensure that there are no adverse impacts on existing flood regimes in the surrounding areas, as a result of the proposed development.
- e) To minimise the stormwater run-off through the provision of pervious areas and vegetation, and manage the impacts of salinity through the use of salt tolerant species.
- f) To minimise any risk to human life and damage to vehicles as a result of the inundation of basement car parking, other car parking or driveway areas.

Controls

1. Where any construction within the floodplain, adjacent to a watercourse, drainage depression or an enclosed drainage system is proposed, the development application shall be accompanied by a full hydrologic and hydraulic assessment to allow a determination of the risk and impact by, and on, the development proposal by flooding. The assessment shall include:
 - Analysis of the impact of the development on flood storage capacity, flood conveyance, flood levels, and flow velocities.
 - Identification of the flood risk to both people and property as a result of the development.
 - External and internal catchment hydrology for rainfall events up to the probable maximum flood (PMF), including the 1% Annual Exceedance Probability (AEP) design storm.
 - Predicted extents of flood inundation.
 - Depths and velocities of predicted flood flows to allow effective hazard categorisation.
2. The development shall have no adverse impact on the existing flood regime in the surrounding areas and shall demonstrate the operation of any proposed flood mitigation measures.
3. The trunk drainage system shall be designed to convey the 1 in 100 AEP flood event, with a freeboard of 300 mm. Streets adjacent to trunk drains shall be designed to

carry flows in excess of the drainage system. The crown of the road shall be at least 300mm above the 1 in 100 AEP flood level. Buildings adjacent to these streets shall have habitable floor levels 300 mm above the crown of the road.

4. In the local centre, residential and mixed use developments shall be at least two storeys with the lowest habitable floor level at least 600mm above the crown of the road. Alternatively, the building shall be above undercroft parking or garages with rear lane or car court access.
5. Where drainage depressions pass through a property, adequate provisions must be made for the passage of stormwater runoff with adequate freeboard to building floor levels.
6. In the case of development that increases floorspace it may be necessary to enhance the site's existing drainage provision. This could result in the need to locate drainage services across Council-owned land. In this event it may be necessary to obtain Council approval. Such action needs to be identified and addressed at the development application stage.
7. In the event of Council being requested to approve the location of a piece of infrastructure on its land, it will require:
 - Documentation that such an activity will not prejudice the use of the land for the purpose for which it exists.
 - The possible preparation or amendment to the Plan of Management for the land, and if this action is necessary a fee may be required.
8. Basement car parking must be protected from inundation by floods equal to or greater than the 1% AEP flood + 0.1m.
9. Basement car parking and other car parking areas that are at a level below the 5% AEP flood level or more than 0.8m below the 1% AEP flood level, shall have appropriate warning systems and signs to assist in safe evacuation.
10. All exits from the car parking shall be located such that pedestrians evacuating any location during any flood do not have to travel through deeper water to reach a place of refuge above the PMF.

Creek Zone Management

Note: This section does not apply to the portion of the creek that traverses through the local centre. This portion of the creek will be channelled within a set of box culverts to convey the flow under the local centre to provide a ground level public domain area.

Background

The existing water courses provide an opportunity for the provision of environmentally sustainable vegetated creek corridors.

Where a proposed creek line is located on part of the development site, bulk earthworks are to be carried out to create a channel for the creek as per the '*Water Cycle Management Facilities, Northern, Central and Southern Creeks Engineering Design Plans and Design Report by J Wyndham Prince Pty Ltd, December 2005*'. Works are to include temporary stabilisation of all associated disturbed areas of the creek.

Council is to be responsible for the final construction of the channel and permanent landscaping in accordance with the endorsed '*Landscape Works Design & Management, Knox Partners & Australian Wetlands*' as amended.

Objectives

- a) To maximise opportunities for stream/creek restoration and enhancement that mimics natural stream processes.
- b) To conserve, protect and enhance creek corridors and biological connectivity through the provision of continuous vegetated creek protection zones along either side of the creeks.
- c) To link the creek corridors to other remnant areas of vegetation at the Middleton Grange site by providing supplementary plantings.

Controls

1. Applications to Council must include the following detail:
 - Plans showing in detail the existing creek channels, vegetation (including remnant native vegetation) and geomorphic features.
 - Detailed plans of any channel modification and stabilisation works.
 - A longitudinal stream survey section (if stream works are proposed) of the existing and proposed creek channel bed in sufficient detail to identify changes in bed level and hydraulic features (i.e. pools and riffles).
 - Details on the staging and sequencing of any works within the creek zone.
 - Recommendations on how to address the modified drainage system and reaches.
 - A vegetation management plan shall be in accordance with the endorsed '*Landscape Works Design & Management, Knox Partners & Australian Wetlands*'.
2. Creek lines and creek buffer zones shall be provided in accordance with Figures 14 - 20, Table 1 and the *Water Cycle Management Facilities, Northern, Central and Southern Creeks Engineering Design Plans and Design Report by J Wyndham Prince Pty Ltd, December 2005*.
3. Where subdivision works are to occur prior to the completion of all downstream drainage works, on site facilities may need to be provided in order to limit drainage volume and velocity to that experienced prior to development.
4. Where streets are proposed to cross the creek alignment the structures must be provided as specified in Figure 19. These crossings must be designed to facilitate the movement of aquatic and terrestrial species, and shall incorporate features that allow for light and rainfall penetration beneath the structure sufficient to allow vegetation growth.
5. Weir structures will not be permitted on any creeks.
6. Creek Corridors shall be protected by the provision of vegetated creek corridors (measured from the top of bank) as shown in the plans and cross sections for channel types A, B, C and D (see figures 15-19) and as per *Water Cycle Management Facilities, Northern, Central and Southern Creeks Engineering Design Plans and Design Report by J Wyndham Prince Pty Ltd, December 2005*.
7. All remnant vegetation along the creeks/channel should be protected and enhanced.
8. Any bank stabilisation measures shall use soft engineering techniques that promote an ethos of sustainability and naturalness.
9. Appropriate bushfire buffer zones shall be located within the defined limits of the development site and not be located in the creek corridor.

10. Any assessment of flood impacts and flood modelling must take into account the establishment of a fully structured vegetated creek corridor along the creeks. The Manning's "n" roughness coefficients shall be such that they represent a diverse and fully structured creek corridor (trees, shrubs and groundcover) for discharge determinations.
11. Any hydraulic assessment should consider not only the initial vegetation density but also the final growth, with due allowance for debris build up before and during flooding.

Removal of Water Storage Facilities

Background

A number of water storage facilities (dams) have been identified throughout the Middleton Grange area. The environmental impact of decommissioning these facilities will be minimised through soil and water testing and appropriate disposal techniques.

Objectives

- a) To ensure that dams are removed in a manner that is controlled and prevents damage to the natural environment.
- b) To ensure that contamination is considered and all legal requirements are met.
- c) To ensure that salinity issues are considered prior to the removal of dams.

Controls

1. For sites with existing water storage facilities (dams) the development application must include a dam removal plan which addresses each of the following controls to Council's satisfaction and must also include details of:
 - A water quality and soil test which details any contaminants in both the water and soil at the base of the dam (all testing shall be undertaken by a qualified consultant and NATA accredited laboratory).
 - A salinity hazard test undertaken in accordance with the Department of Water and Energy draft risk map and salinity site assessment guidelines.
2. Sites identified as contaminated must follow and comply with guidelines made and approved by the NSW Environment Protection Authority. Contaminated water should be disposed of at a liquid waste facility.
3. Sites identified as of Salinity Code of Practice management framework.
4. Water identified as not contaminated must be offered to water users in the area for reuse. Should there be no possible reuse option for the water; a controlled release into the creek may be possible.
5. Any controlled release of water into the receiving waters (creek) must ensure against any erosion impact.
6. Any dam decommission must be undertaken in accordance with the—NSW Department of Planning and Environment - Water guidelines. The guideline requires that the receiving waters (creek) be tested to ensure that the dam water will have no adverse impact on the ecology of the creek. It is recommended that any water release is undertaken during high flow events as creek water quality is reduced at this time.



Figure 14 Creek Zone Management

Table 1 Minimum Creek Zone Treatments / Widths

	Stretch	Channel Type	Central Creek (m)	Drainage Reserve Width (m)	Total Reserve Width (m)	
Southern Creek	S1	A	3.5	10.5	10.5	
	S2	A	3.5	10.5	10.5	
	S3	B	5.0	16.7	53.0	
	S4	B	5.0	21.2	22.6	
	S5	B	5.0	23.6	25.0	
	S6	LOCAL CENTRE SECTION 3 x 3600mm x1200mm Box Culverts				
	S7	LOCAL CENTRE SECTION 3 x 3600mm x1200mm Box Culverts				
	S8	LOCAL CENTRE SECTION 3 x 3600mm x1200mm Box Culverts				
	S9	B	6.0	26.6	35.0	
Middle Creek	M1	A	3.5	10.5	40.0	
	M2	A	3.5	10.5	10.5	
	M3	C	3.0	13.8	90.0	
	M4	D	Existing	Existing	170.0	
	M5	B	7.0	24.7	188.0	
Northern Creek	N1	D	Existing	Existing	Various	
	N2	B	Existing	Existing	Various	

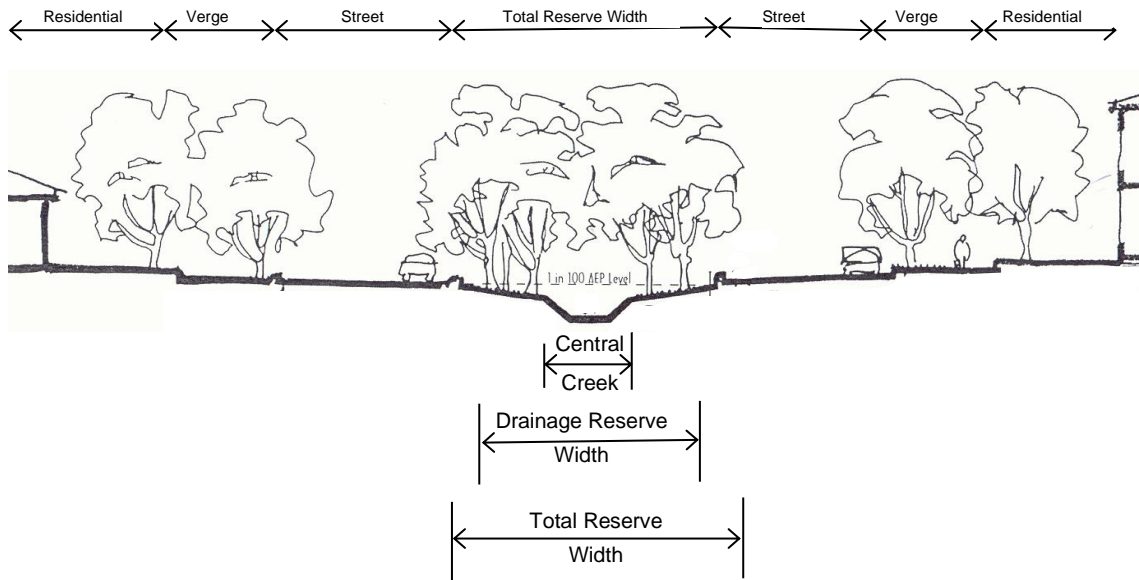


Figure 15 Type A Channel

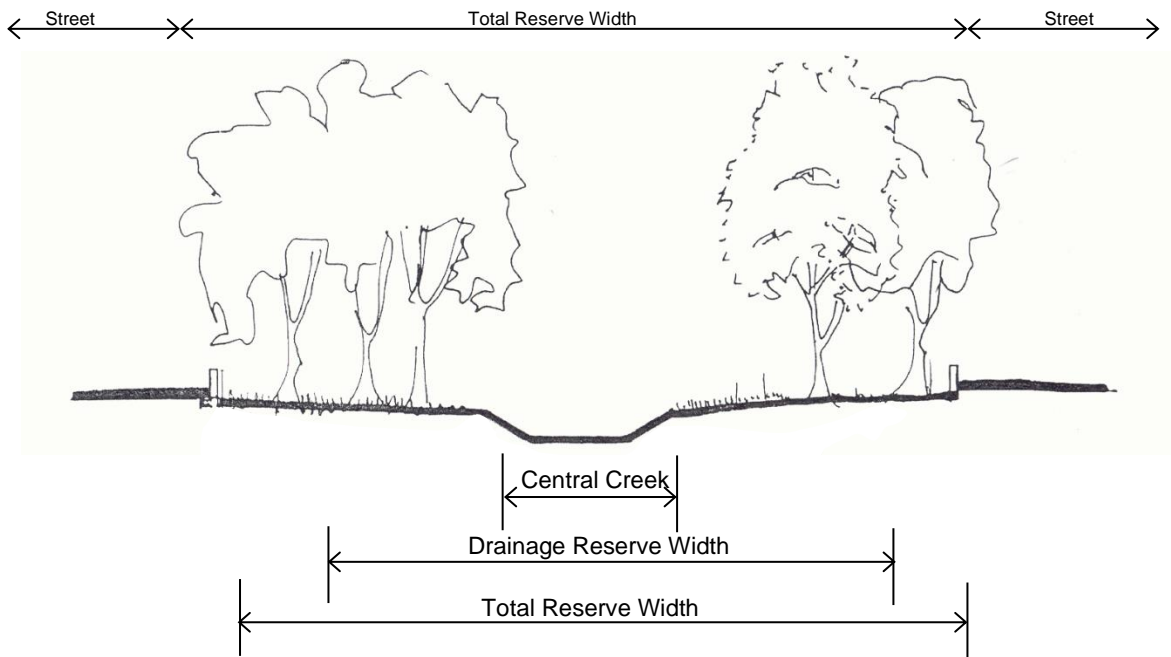


Figure 16 Type B Channel

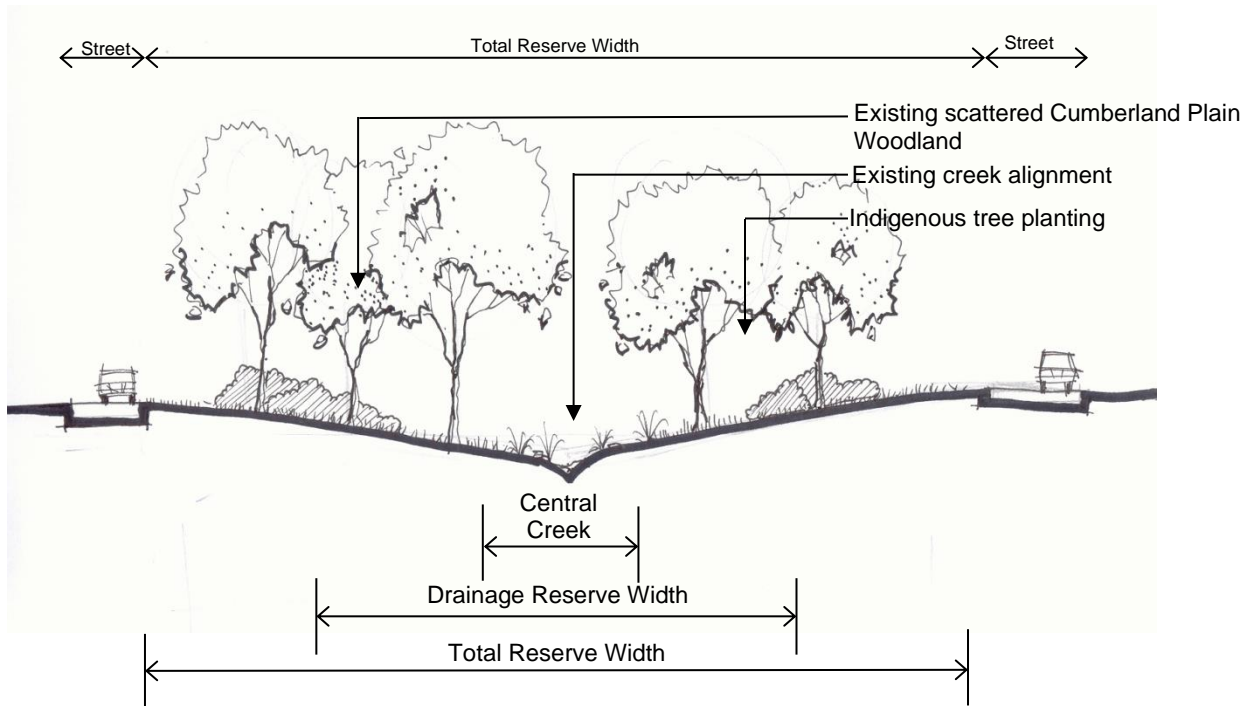
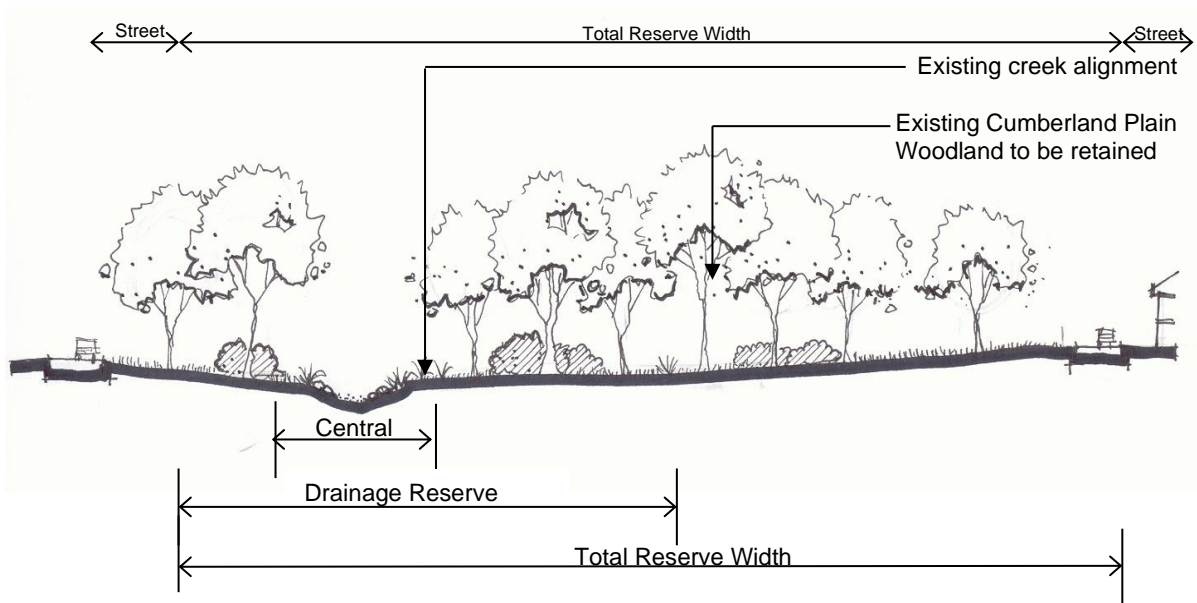


Figure 17 Type C Channel



- Environmental Corridor to contain 100 year ARI
- Creek line to remain in current alignment
- Only minor works permitted within the Environmental Corridor as part of the Stormwater Water Management for the Middleton Grange Release

Figure 18 Type D Channel



Figure 19 Crossing Types

Illustrates the required bridging structure type for each creek crossing.

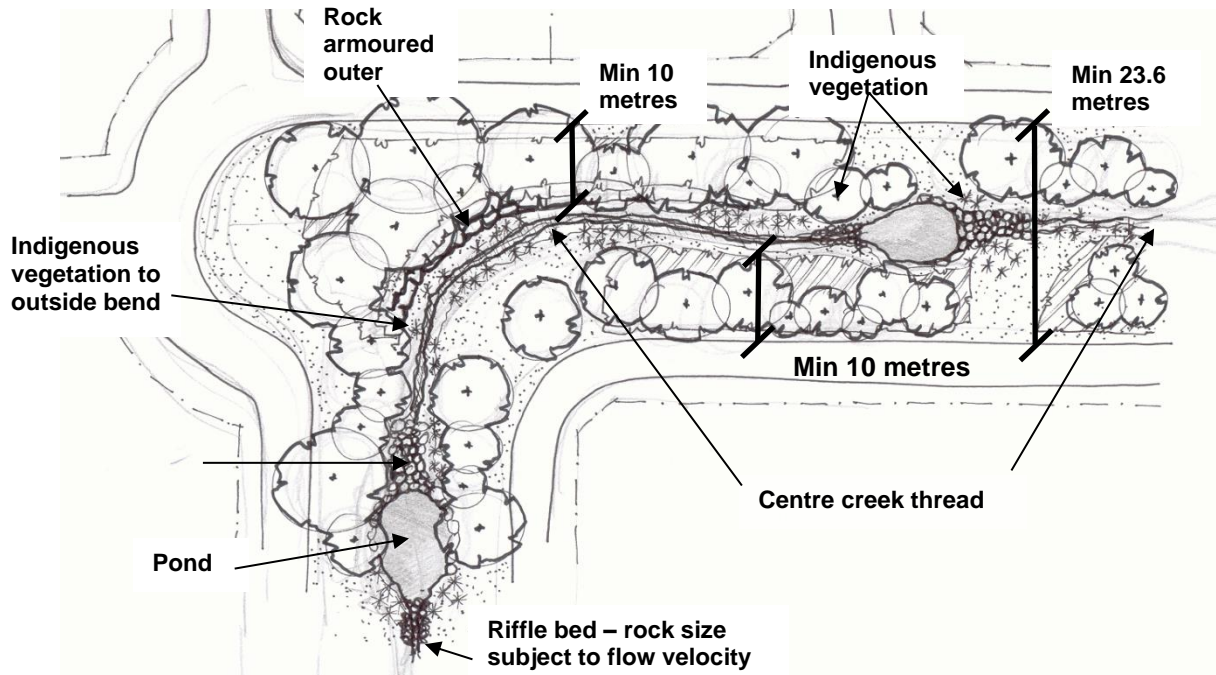


Figure 20 Creek Corridor

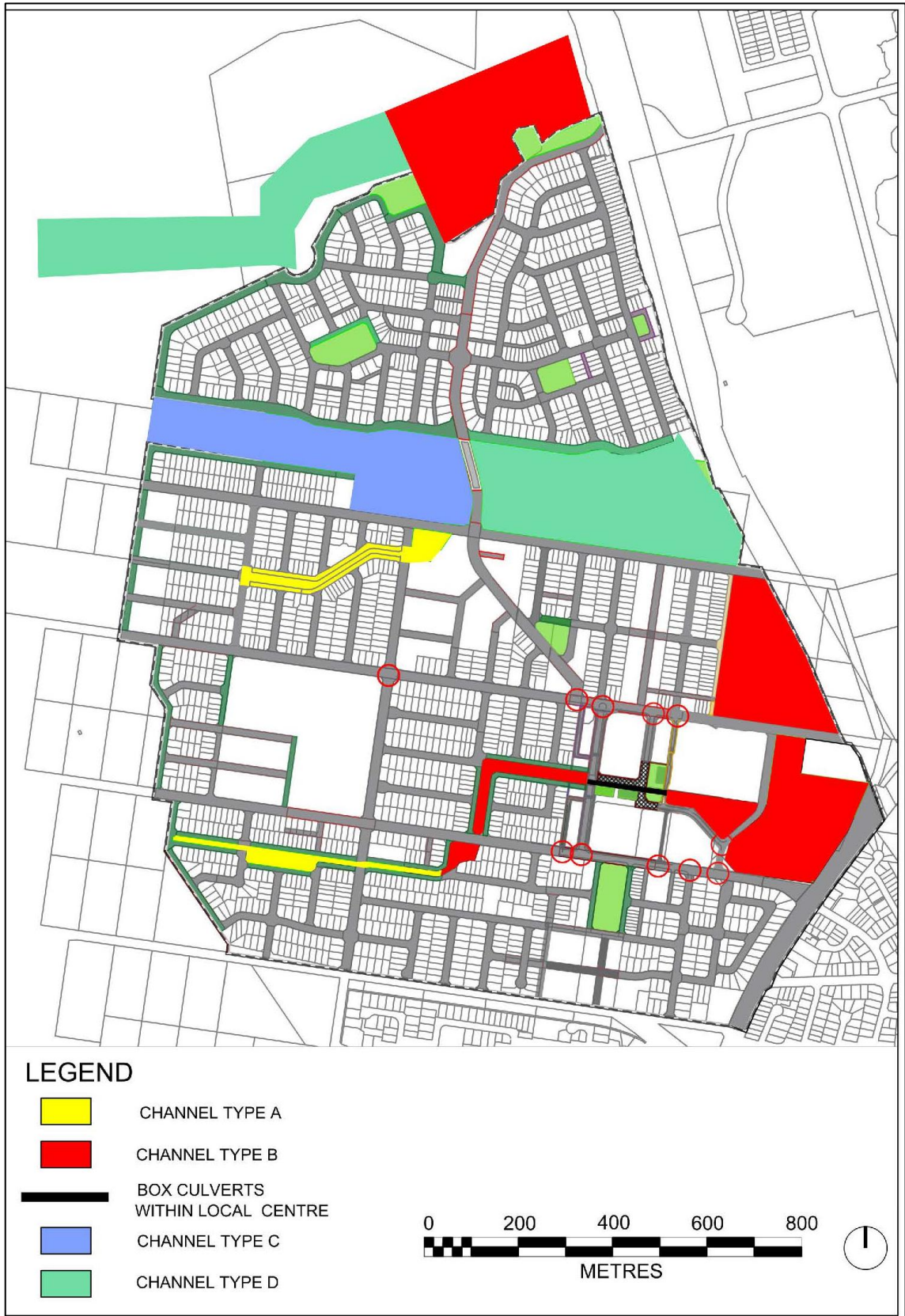


Figure 21 Channel Locations

3. Controls for the Private Domain

3.1 Frontage and Lot Size

Background

The *Liverpool LEP 2008* Dwelling Density map establishes the primary control over density for the Middleton Grange site. The aim is to provide the opportunity for areas of greater density to occur in areas of higher amenity across the site. Highest amenity means proximity to the local centre, public transport stops, open space and environmental land.

The main objective is to provide choice through a mix of housing types and high quality open space. Opportunities for higher density are provided in places of greatest amenity.

The orientation of lots should be designed to maximise solar access to reduce household energy consumption and to make best use of the land available.

Objectives

- a) To provide a range and mix of lot sizes to suit a variety of dwellings types distributed throughout the area.
- b) To locate higher density development in places of greatest amenity, such as near parks and other open spaces, the local centre and along transport nodes.
- c) To ensure lots are orientated to optimise solar access to facilitate micro-climate management, including the application of energy conservation principles.
- d) To ensure all dwellings address the street and overlook open space where possible.
- e) To ensure that lot size and dimensions take into consideration the physical characteristics of the land, in a way which promotes retention of existing vegetation and reduces the incidence of damaging earthworks and retaining wall construction.
- f) To ensure passive surveillance of public space through the effective and functional layout designs of new developments.

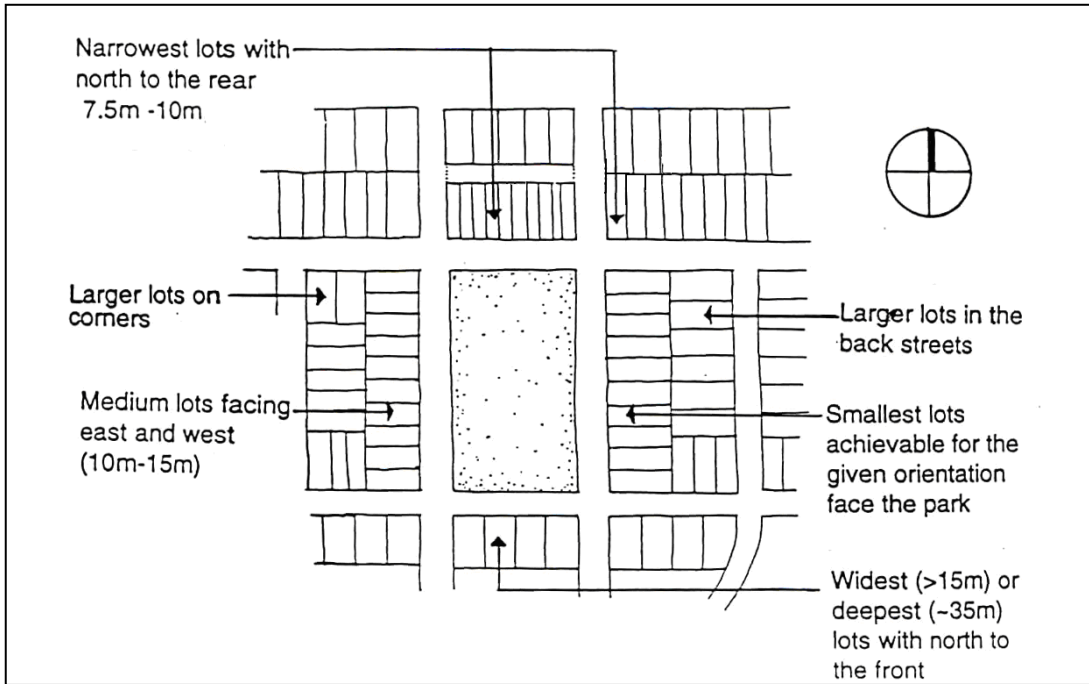


Figure 22 Lot Orientation

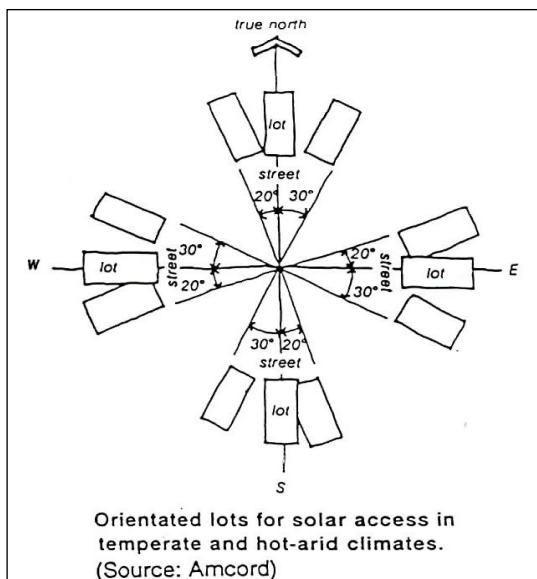


Figure 23 Lot Orientation

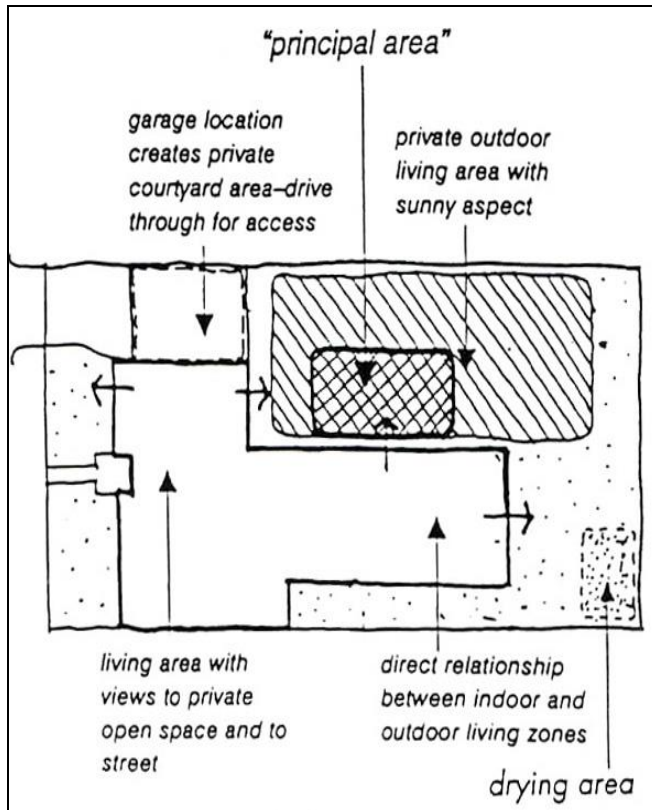


Figure 24 Private Open Space Considerations on an East-West Lot

Controls

1. Subdivision and lot sizes orientation shall comply with Figures 22, 23 and 24.
2. The majority of lots shall be approximately 30m deep.
3. Lot sizes and dimensions shall take into account the slope of the land to minimise cut and fill and the retention of existing trees.
4. Lots less than 300sqm must be designed as part of an integrated dwelling / lot development.
5. Any proposal that creates a residual lot must demonstrate that the required density can be achieved across the residual lot.
6. The minimum lot size for multi dwelling housing is 1,000m².

3.2 Site Planning

Objectives

- a) To ensure that the dwelling house is sensitive to site attributes, such as streetscape character, natural landform, drainage, existing vegetation, land capability, slope, solar access and if relevant, heritage items.
- b) To ensure privacy for residents and neighbours.

Controls

1. The dwelling layout must be designed around the site attributes such as slope, existing vegetation, land capability and/or solar access (See Figure 25).
2. There must be a direct link from at least one living area to the principal private open space.
3. The siting of windows of habitable rooms on the first floor shall minimise overlooking to the principal private open space of neighbouring properties.
4. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over the adjoining property to drain water satisfactorily to a Council stormwater system. Where stormwater drains directly to the street, there may also be a need to incorporate on-site detention of stormwater where street drainage is inadequate. Refer to Water Cycle Management in Part 1.

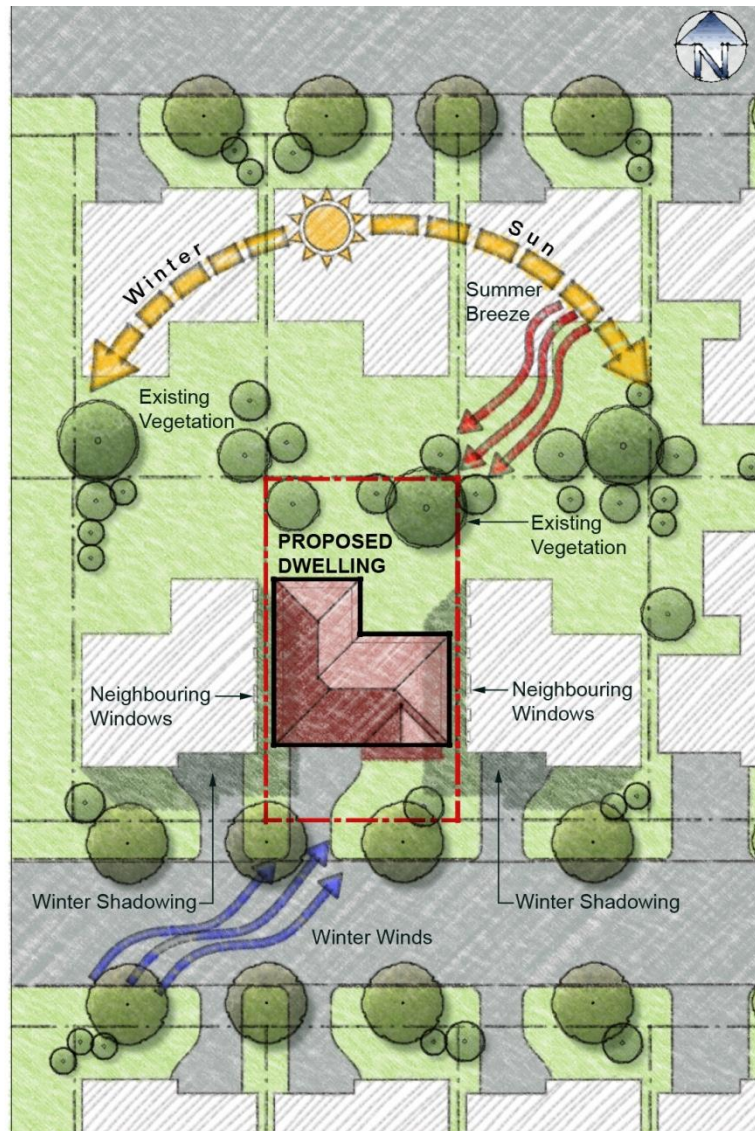


Figure 25 Example of a site analysis plan

3.3 Setbacks

Objectives

- a) To set dwellings back from the street and adjacent properties to provide reasonable space for landscaping, private open space and solar access.
- b) To set dwellings back from each other to provide visual and acoustic privacy.
- c) To create a streetscape that provides a desirable and safe environment.
- d) To establish a streetscape of a scale and sense of enclosure appropriate to the locality.
- e) To provide an appropriate area capable of allowing the growth of trees and shrubs.
- f) To discourage vehicular parking across street verges and footpaths.

Controls

Front and Secondary Setbacks

1. Dwelling houses, semi detached dwellings, attached dwellings and multi dwelling housing shall be setback in accordance with Table 2.

Table 2 Front and Secondary Setbacks

Height	Front Setback	Secondary Setback	
		Lots under 450m ²	Lots 450m ² and over
Ground floor	4.5m	2.0m*	2.5m
First floor	4.5m	2.0m*	2.5m

* The dwelling setback may be reduced to 1m for a maximum length of 4m.

- For dwellings fronting RE1 Public Recreation or a Connector Street, the front setback may be reduced to 3m (see Figure 2). A front verandah, porch or patio may be built to within 1.8m of the front boundary. The garage setback is to be maintained at a minimum of 5.5m.
- For all other lots, verandahs, balconies, eaves and other sun control devices may be built to within 2m for the front boundary.
- On the secondary setback encroachments must not be constructed within 1m from the property boundary.
- Garages must be set back a minimum of 1m behind the main face of the dwelling (the main face is the first wall of a habitable room).
- The secondary setback is the longest length boundary.
- Garages that address the secondary frontage must be setback 1m or 5.5m and greater. Garages are not permitted to be setback between 1 – 5.5m.
- Garages that address a laneway must be setback no greater than 1m depending on site services such as sewer, light posts etc.
- Corner sites shall provide a frontage to both streets and should articulate their corner location with an architectural feature such as a wrap around verandah, bay window, corner entry or roof feature.

Side and Rear Setbacks

- Buildings shall be setback from the side and rear boundaries in accordance with Table 3.

Table 3 Side and Rear Setbacks

Item	Side Setback	Rear Setback
Single storey dwelling houses	0.9 m	4.0 m
Second storey component of dwelling houses	1.2 m	7.0 m
Living room doors (including family rooms and rumpus rooms)	4.0 m	4.0 m
First floor with windows to habitable rooms and neighbouring private open space	4.0m	7.0m

Note: Building encroachments may only occur if it is seen as beneficial for open space, solar access and the internal layout of the dwelling. The dwellings living areas should lead out to open space.

Zero lot lines

- Walls are generally to be 180mm clear of the side boundary to allow for gutter and eaves overhang.
- The length of a zero lot line wall is limited to 50% of the adjacent side wall boundary.
- No windows are permitted in a zero lot line wall.

4. A maintenance easement of at least 900mm shall be provided on the adjoining boundary. Refer to figure 26.

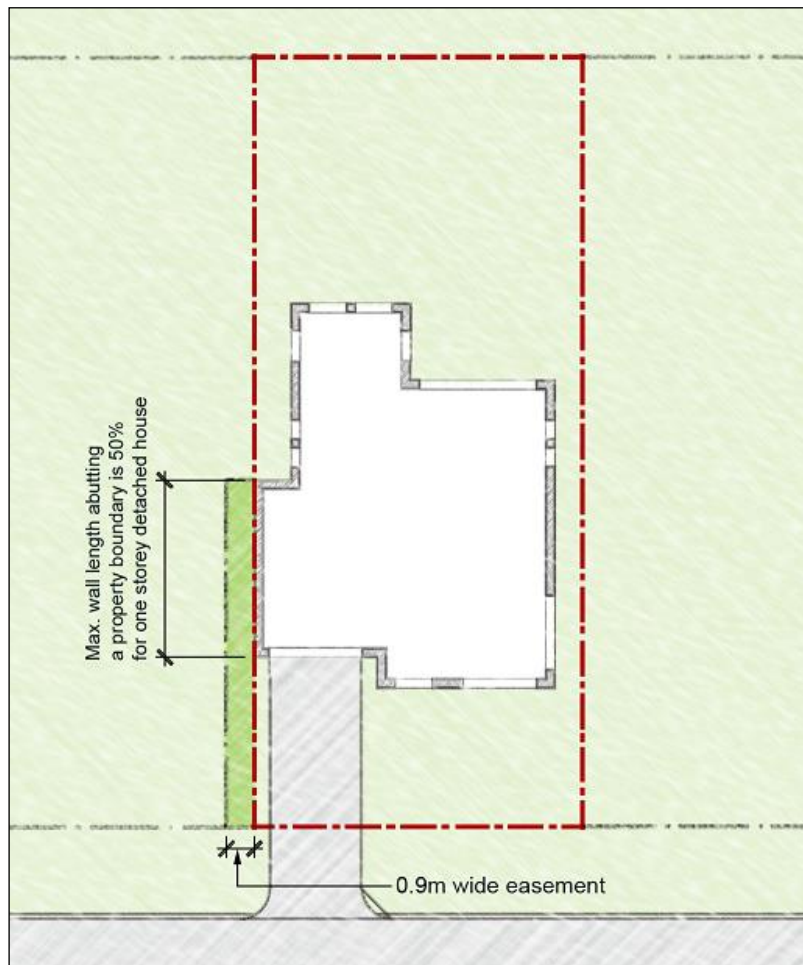


Figure 26 Zero Lot Lines

3.4 Dwelling Typology

Objectives

- a) To provide for certainty as to the location of dwelling types.
- b) To provide for the orderly development of Middleton Grange.
- c) To provide for areas of higher density near areas of high amenity such as parks and creeks.
- d) To provide for areas of higher density near services, public transport services and the local centre.

Controls

1. In order to establish dwelling density and certain character through built form, Table 4 identifies building types for each dwelling density category.

Table 4 Permitted Building Types

Dw/ha	Building Types
30 dw/ha	Attached, Semi-detached Dwellings Shop Top Housing (Only in the E1 zone, or as part of a neighbourhood shop) Small lot housing Studios Multi Dwelling Housing (Terraces, Townhouses or Villas)
23 dw/ha	Attached, Semi-detached Dwellings Detached dwelling Small lot housing Studios Multi Dwelling Housing (Terraces, Townhouses or Villas)
15 dw/ha	Attached, Semi-detached Dwellings Detached dwellings Small lot housing Studios Multi Dwelling Housing (Terraces, Townhouses or Villas)

Shop-top Housing

Around the local centre there are opportunities for residential apartments or shop-top housing above retail, commercial or home office/home business. Building forms should contain sufficient flexibility for later change of use as the area matures. Buildings shall be broken into modules of around 6m in order to create a vertical rhythm of facades, to avoid long unbroken frontages to developments.

Multi Dwelling Housing

Opportunities are provided for row housing in small groups, duplexes, triplexes or terraces. They are located in areas of higher amenity and may contain home businesses. These need rear lanes for parking and servicing.

Small Lot Dwellings

These locations provide the opportunity for small lot housing forms generally with north facing (good solar access) rear yards and with rear lane car access or single stacked parking down the side. These can be free standing but will often have a zero lot line on one boundary.

Dwelling House

These locations are suitable for free standing traditional one and two storey houses often in prime or feature locations (corner site, wider streets). The larger lots provide the opportunity for large traditional family homes.

Secondary Dwellings (Studios)

Objectives

- To provide an alternate form of housing in master planned neighbourhoods that include community facilities.
- To provide for a variety of housing types to cater for varied socio-demographic households.
- To provide for passive surveillance to laneways and private accessways.

Controls

Type 1 Studio

Type 1 Studios are a room or rooms constructed above a detached garage associated with the main dwelling on the lot. The studio is primarily designed to be used by the occupants of the main dwelling. The studio shall comply with the following:

1. The studio shall be located on corner blocks or addressing secondary streets and on laneway entries and bends to improve surveillance.
2. Located on lots with a minimum size of 300sqm.
3. Must be detached from other studios.
4. Maximum gross floor area: 45sqm.
5. No additional car parking space is required.
6. The studio shall be located above the garage, carport or like structure for the principal dwelling on the land.
7. There may be no subdivision of the studio from the principal dwelling on the land.
8. Windows are not permitted on elevations which directly face the adjoining lots private open space.
9. Garages with studios above are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
10. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.
11. Studios shall not reduce the minimum required amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 3.5 of this Part.

Type 2 Studio –

Type 2 Studios are a room or rooms constructed above a detached garage that is intended to be separately strata titled to allow for independent living from the principal dwelling on the lot. The studio shall comply with the following:

1. The studio shall be located on corner blocks with laneway vehicle access.
2. Located on lots with a minimum size of 350sqm.
3. Maximum gross floor area: 75sqm.
4. Studio to be located above the garage, carport or like structure for the principal dwelling on the land and are to be detached from other studios.
5. One additional dedicated on-site car parking space is required to be associated with the Type 2 studio.
6. Car parking space is not to be located in front building setback of the principal dwelling.
7. Car parking space is not to be in a stacked configuration.
8. The studio must include provision of a balcony accessed directly off living space having minimum size of 6sqm, plus a minimum 10sqm ground level service yard with space for clothes drying facilities. The balcony shall not protrude over any property boundary.
9. Type 2 studios may be strata subdivided from the principal dwelling, or dwellings on the land.
10. Garages with studios are to be constructed 1.5m from the rear boundary and may have a zero lot setback to one side boundary.
11. A studio must have a minimum separation of 4m from the first floor of the principal dwelling on the lot.

12. Pedestrian access to studios is to be from the street frontage and not the laneway.
13. Provision for separate services and an on-site garbage storage area e.g. separate letter box.
14. Studios shall not reduce the minimum amount of solar access to any dwelling's (adjoining or on the principal dwelling) private open space as stipulated in Section 3.5 of this Part.
15. Windows are not permitted on elevations which directly face the adjoining lots private open space. Windows may be permitted on the elevation facing the principal dwelling on the lot where they have a minimum sill height of 1.7m.
16. Screened access ways (e.g. staircases) for studios to prevent viewing into adjoining private open space areas.

3.5 Landscaped Area and Private Open Space

Landscaped area is defined in *Liverpool LEP 2008*.

Private open space is an area within the site (usually at the rear) that is set aside for outdoor activities. Clotheslines, BBQ areas, pergola (unroofed structure), patio, garden sheds and pools can be included in the private open space.

Principal Private open space is an area that is directly accessible from at least one living room and is included in the private open space calculations (the principal private open space area may be paved or sealed).

Landscaped Area

Objectives

- a) To provide an area to allow vegetation to mature.
- b) To reduce the impact to neighbouring properties and natural waterways from stormwater runoff.
- c) To reduce the amount of impervious areas.
- d) To enhance the existing streetscape and soften the visual appearance of the dwelling.
- e) To maximise the amount of landscaped area within the front setback of the dwelling.

Note: All proposed developments require a landscape plan to be submitted with the development application.

Controls

1. A minimum of 25% of the site area shall consist of Landscaped Area, this may include lawn, deep rooted trees, garden beds and mulched areas.
2. A minimum unincumbered area of 4 x 6m shall be provided in the rear setback to accommodate deep rooted trees.
3. A minimum of 50% of the front setback area shall be Landscaped Area.
4. A minimum unincumbered area of 3 x 3m shall be provided in the front setback to accommodate deep rooted trees.

Private Open Space

Objectives

- a) To ensure that a minimum amount of Private Open Space is provided for outdoor activities.
- b) To ensure that Private Open Space is clearly defined for private use.
- c) To ensure that Private Open Space is private, landscaped, screened from overlooking and receives an adequate amount of solar access.

Controls

1. Each dwelling must provide a minimum of 50sqm of Private Open Space.
2. Areas less than 2.5m in width do not qualify as Private Open Space.
3. Private Open Space areas are not permitted within the primary street setbacks.
4. Private Open Space must have an area for clothes drying with at least 2 hours of full sun between 9.00am and 5.00pm at 21 June.
5. The Private Open Space shall include the Principal Private Open Space of 25sqm, which is directly accessible from the main living area and has a minimum dimension of 4m.
6. The Principal Private Open Space must receive 3 hours of sunlight to at least 50% of the area between 9:00am and 5:00pm on 21 June.
7. Where the Principal Private Open Space has a predominately northern aspect Clause 6 (above) does not apply.

Multi Dwelling Housing

8. Each dwelling shall provide a minimum private open space area, which is not covered by a roof in accordance with Table 5.

Table 5 Private Open Space

Dwelling Size	Private Open Space
Small <65m ²	30m ²
Medium 65 - 100m ²	40m ²
Large > 100m ²	50m ²

9. Areas less than 1.5 m in width does not qualify as Private Open Space for the purpose of the above table.
10. Private Open Space must be directly accessible from the main living area.
11. A minimum of 50% of the Private Open Space must receive 3 hours of sunlight between 9:00am and 5:00pm on 21 June.

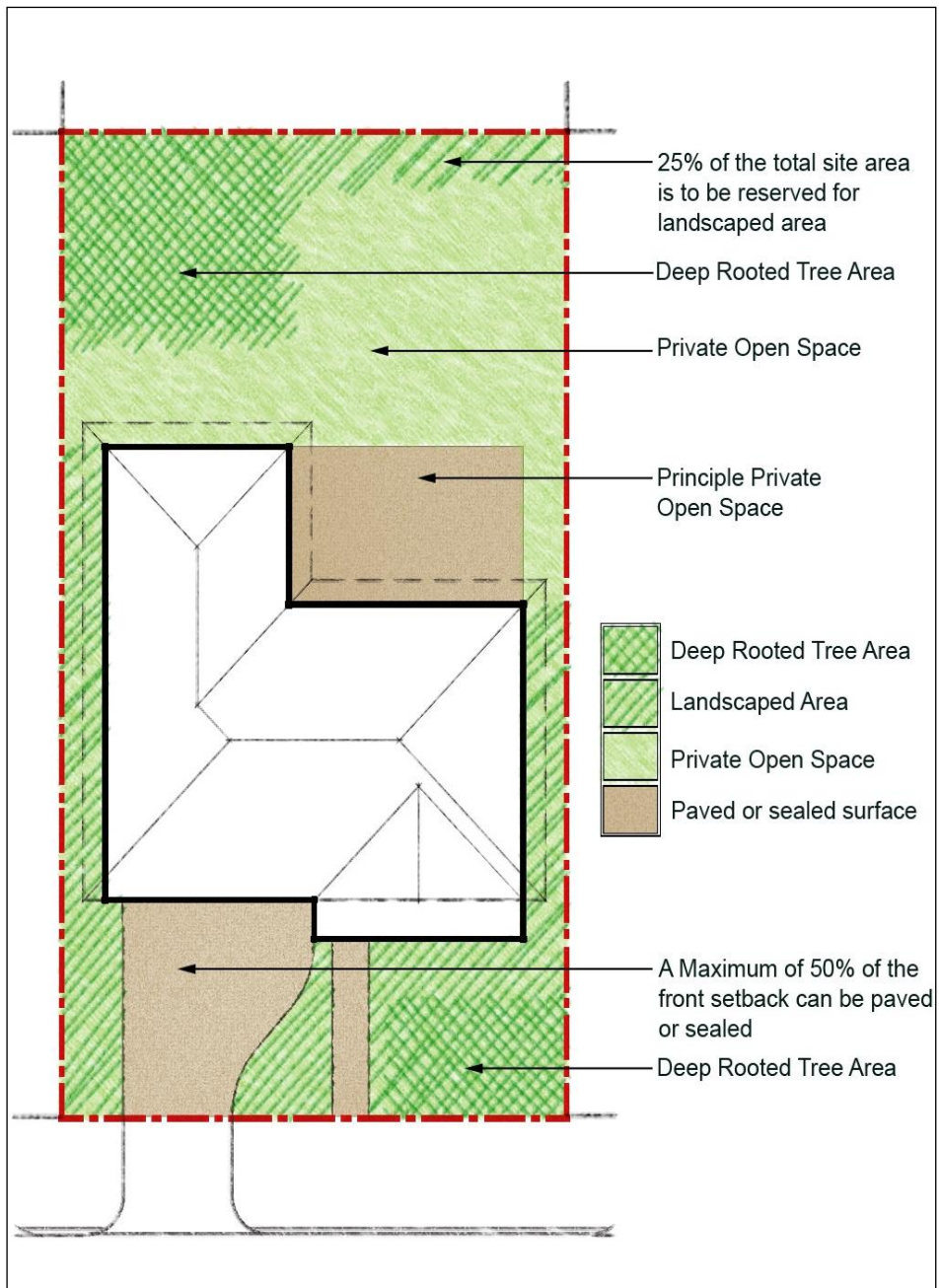


Figure 27 An example of Landscaped Area and Private Open Space



Figure 28 An example of Landscaping for Multi Dwelling Housing

3.6 Cut and Fill, Building Design, Streetscape and Layout

Cut and Fill of Land

Objectives

- a) To reduce the incidence of change in natural ground levels.
- b) To encourage the architectural designs of dwellings which suit the contours of the land.
- c) To provide controls for cut and fill of land designed to minimise the incidence of soil erosion and subsequent sedimentation of waterways.
- d) To ensure that development on adjoining properties is not threatened or prejudiced by proposed cut and fill practices.
- e) To discourage and eliminate, where possible, the construction of retaining walls on allotment boundaries.
- f) To minimise overshadowing of neighbouring dwellings, their private open space or any solar panelling.

Controls

1. The maximum cut on a site must not exceed 600mm.
2. All retaining wall structures shall be masonry construction and designed by a suitably qualified person, or constructed as specified by the manufacturer of the product. The retaining wall shall be constructed wholly inside (within) the boundary of the site.
3. All slab constructions for dwellings that are above natural ground level are to be constructed using dropped edge beams to retain fill. The maximum fill within the confines of the slab must not exceed 1m. All fill must be contained within the dwelling footprint. Refer to Figure 29.
4. Contaminated fill, either imported or found on site is not permitted.

Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut, Council will require the completion of such retaining wall(s) PRIOR TO the release of the occupation certificate.

5. Where an applicant considers that an allotment has characteristics which warrant exemption from this policy, an application for exemption may be made by the submission of a development application to Council for consideration. In addition to normal requirements the submission should include:
 - A plan showing existing contours (at 0.5m intervals) of the subject site and all adjoining sites.
 - A plan showing future contours (after proposed cut and fill) of the subject site and all adjoining sites.
 - Full details of any proposed retaining wall(s).

Note: In the event of approval being granted to the erection of retaining wall(s) to contain proposed cut and fill, Council will require the completion of such retaining wall(s) PRIOR TO the commencement of any building works.

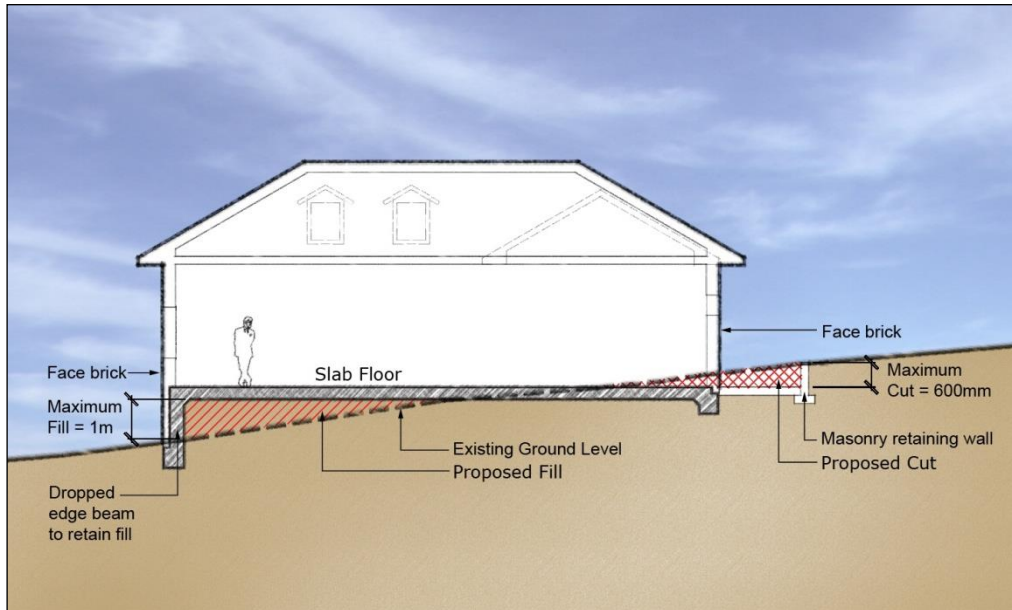


Figure 29 Cut and Fill requirements

Building Envelopes

Background

The orientation and site cover of a building has significant implications for residential amenity. Building envelopes determine the orientation and footprint of a dwelling, as well as the total volume of the dwelling.

Objectives

- a) To facilitate the efficient use of the site area.
- b) To maximise private amenity within the building.
- c) To minimise the impacts of development on neighbouring properties in regard to views, privacy and overshadowing.
- d) To ensure that buildings are sited so as to provide for solar access and both visual and acoustic privacy.
- e) To provide an acceptable scale of development.

Controls

1. The building footprint for single detached dwellings is not to occupy more than 55% of the site and the total impervious area is not to exceed 75% of the total site area. A minimum of 25% of the site area must be pervious surfaces.
2. The building footprint for denser development (i.e. attached/zero lot housing, terrace, townhouse or villa development) is not to occupy more than 60% of the site and the total impervious area is not to exceed 75% of the total site area. A minimum of 25% of the total site area must be pervious surfaces.

Building Design and Appearance

Objectives

- a) To encourage designs that will enhance the character of the neighbourhood.
- b) To promote variation of building facade and design.
- c) To ensure that the building enhances the streetscape through the use of suitable built form design and landscaping.
- d) To ensure buildings address all street frontages.

- e) To discourage garages and in particular garage doors from visually dominating the streetscape.
- f) To ensure that the building design, detailing, colour and finish add visual interest to the street and shall complement the street.
- g) To ensure habitable rooms address the street.
- h) To encourage balconies over garages on two storey dwellings.

Controls

1. All dwelling houses are to be orientated to the street (See Figure 30).
2. The front pedestrian entrance must be visible from the street.
3. The front building facades shall be articulated. This articulation may include front porches, entries, wall indents, changes in finishes, balconies and/or verandahs.
4. Eave overhang must provide for sun shading and protect windows and doors. Eaves should have a minimum overhang of 400mm and be provided to a minimum of 70% of the dwelling.
5. Dwelling houses that face two street frontages or a street and public space shall address both frontages by the use of verandahs, balconies, windows or similar modulating elements.

Two storey dwellings

1. To break up the bulk of two storey dwellings balconies built above garages are encouraged (See Figure 30).
2. The maximum total length of the side walls of the first floor component of a dwelling shall be a maximum of 30m as measured from any point within 3m of that side wall (for example 12m + 18m = 30m) (See Figure 31).



Figure 30 Example of Building Appearance (**Indicative Only – Not to Scale**)

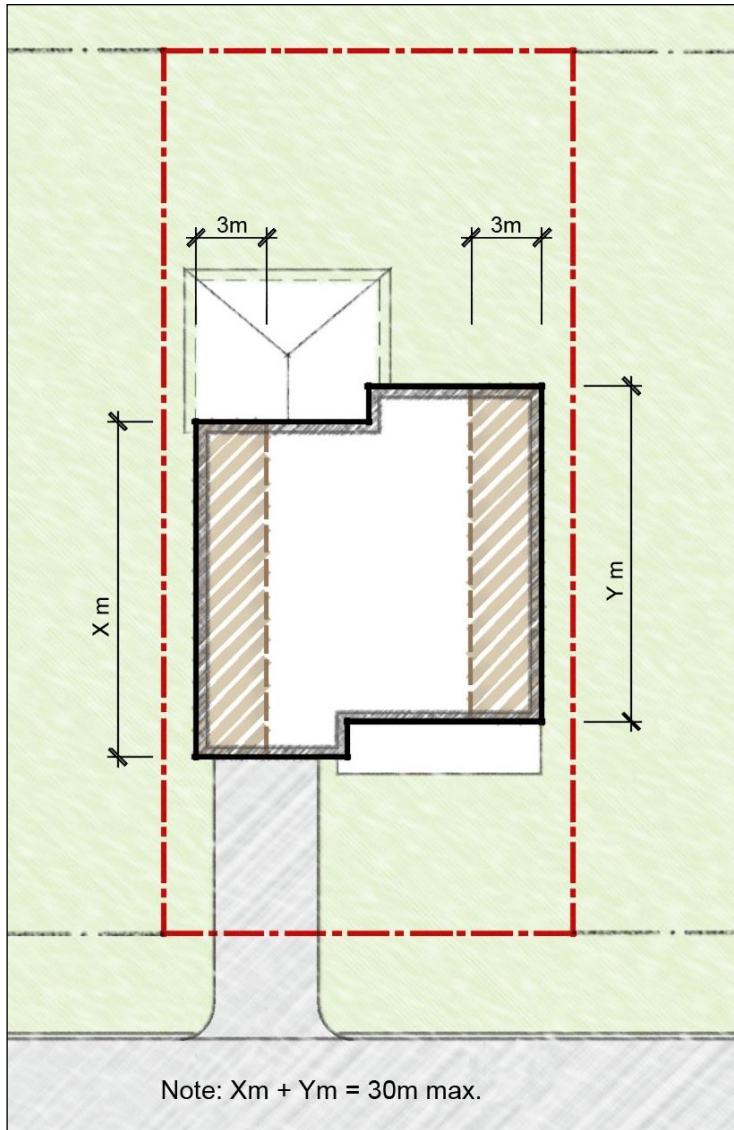


Figure 31 Maximum total first floor wall length of a two storey dwelling

Garages and Carports

1. The maximum width of garage doors or carports must be no greater than 50% of the building frontage width.
2. Garages and carports must be designed to be the minor element of the façade
3. Garage roofs shall be incorporated into the roof design of the house. Separate roofs for garages are discouraged, unless actually separated from the dwelling.
4. Garages and carports are to be compatible with the building design in terms of height, roof form, detail, materials and colours.
5. Carports may be built in front of the garage *only if* the carport is:
 - No larger than 5.5 x 6m.
 - Built of a similar colour and materials of the house.
 - Setback 2m from the front property boundary.
 - Compatible with the local streetscape.

6. The conversion of garages to living space may only be permitted if:
 - At least one car parking space is provided behind the front setback.
 - The additional living area does not result in the building exceeding the maximum permitted floor space ratio.

Internal Design of Dwellings

Objectives

- a) The internal design must contribute to personal safety and to the protection of property by permitting casual surveillance of public spaces from private windows and entries.
- b) To provide passive surveillance from rooms addressing the street or any adjoining open space.
- c) To encourage the internal design of the dwelling to take advantage of cross ventilation.
- d) To locate amenity rooms (such as laundries, bathrooms, toilets) to the side and rear of the development.
- e) To ensure that each dwelling shall provide a sufficient amount of storage for elements such as garden and sports equipment.

Controls

1. All dwellings shall have habitable rooms located to the front of the dwelling for security and surveillance to the street.
2. Living rooms should take advantage of northern aspects.
3. Access to private open space must be from at least one living room.
4. The internal layout of the dwelling is encouraged to incorporate cross ventilation.
5. Bathrooms, ensuites, laundries and walk in wardrobes should be located to the side or rear of the dwelling.
6. Each dwelling must provide a minimum storage area of 8m³.
7. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).
8. Dwelling entries must be orientated to the street.

3.7 Landscaping and Fencing

Landscaping

Objectives

- a) To retain existing mature trees within the site in a way which ensures their ongoing health and vitality.
- b) To provide privacy, summer shade and allow winter sun.
- c) To enhance the existing streetscape and visual appearance of dwellings.
- d) To encourage landscaping that is appropriate to the natural, cultural and heritage characteristics of its locality.
- e) To ensure the visual impact of development is minimised and integrated into the streetscape.

Controls

1. A minimum of one tree is to be provided within the front setback area of every residential dwelling. This may include existing trees that are to be retained within the front setback area. Newly planted trees are to have a minimum pot size of seventy-five litres.
2. Trees planted on the northern side of private open space and habitable rooms are to be deciduous.
3. Planting of vegetation at the front of higher density development must consider the need for passive surveillance. Excessively dense vegetation that creates a visual barrier must be avoided.
4. Any tree with a mature height over 8 m should be planted a minimum distance of 3 m from the building or utility services or alternatively incorporate measures to prevent damage to the building or utility services.
5. A landscape plan must be lodged with all development applications, and is to provide the following details
 - The location of any existing trees on the property, specifying those to be retained and those to be removed.
 - The location of any trees on adjoining properties that is likely to be damaged as a result of excavations of other site works.
 - The position of each shrub and tree species proposed to be planted. Each plant is to be identified by a code referring to a plant schedule on the plan.

Fencing

Objectives

- b) To provide a clear transition between public and private areas.
- c) To provide a visual element within the streetscape.
- d) To ensure fencing enhances the streetscape.

Controls

1. Wall finishes must have low reflectivity.
2. Where noise insulation is required, consider the installation of double-glazing or other noise attenuation measures at the front of the building rather than construction of a high solid form fence.

Primary Frontage

1. The maximum height of a front fence is 1.2m.
2. Fences should not prevent surveillance by the dwelling's occupants of the street or communal areas.
3. The front fence must be 30% transparent.
4. The use of palisade style fencing above 0.6m in height and integrated with landscaping is encouraged.
5. Front fences shall be constructed of masonry, timber and/or vegetation and must be compatible with the proposed design of the dwelling.

Secondary Frontage

1. Side fences and walls must be a maximum of 1.8m in height, and constructed of masonry, timber and/or landscaped (see Figure 32).
2. For side walls or fences along the secondary frontage, a maximum height of 1.2m is required for the first 9m measured from the front boundary, the remaining fence / wall

may then be raised to a maximum of 1.8m (see Figure 32). The secondary setback is the longest length boundary.

3. Side fencing facing a public street or open space must not be constructed of sheet metal.

Boundary Fences

1. The maximum height of side boundary fencing within the setback to the street is 1.2m.
2. Internal boundary fences shall be lapped and capped timber or metal sheeting.



Figure 32 Fence treatments on secondary frontage

3.8 Car Parking and Access Arrangement

Objectives

- a) To provide car parking facilities on site that are convenient, safe and have sufficient space for vehicular manoeuvrability, whilst being visually unobtrusive.
- b) To minimise the need for on-street car parking from new dwellings.

Controls

1. Two car parking spaces shall be provided for each dwelling.
2. At least one car parking space must be provided behind the front setback.

3. A car parking space is to have a minimum dimension of 2.5 x 5.5m.
4. A single garage is to be a minimum of 3m wide internally and unobstructed.
5. All parking spaces for adaptable housing units shall comply with AS 2890:1 for disabled car parking.

Access Arrangement including Private Driveways

Objectives

- a) To provide safe and convenient access to garages, carports and parking areas.
- b) To clearly define public and private spaces, such that driveways are for the sole use of residents.

Controls

1. Private driveways shall have the smallest configuration possible to serve the required parking facilities and vehicle turning movements.
2. Private driveways shall be constructed as one of three general types, depending on block geometry and garages to be accessed, as in Figure 33.
3. Higher density development fronting to collector streets shall have rear access through laneways, car courts and the like.
4. Development on corner lots on collector streets shall have access from the street perpendicular to the collector street.
5. The access arrangement shall be in accordance with Australian Standard AS2890.

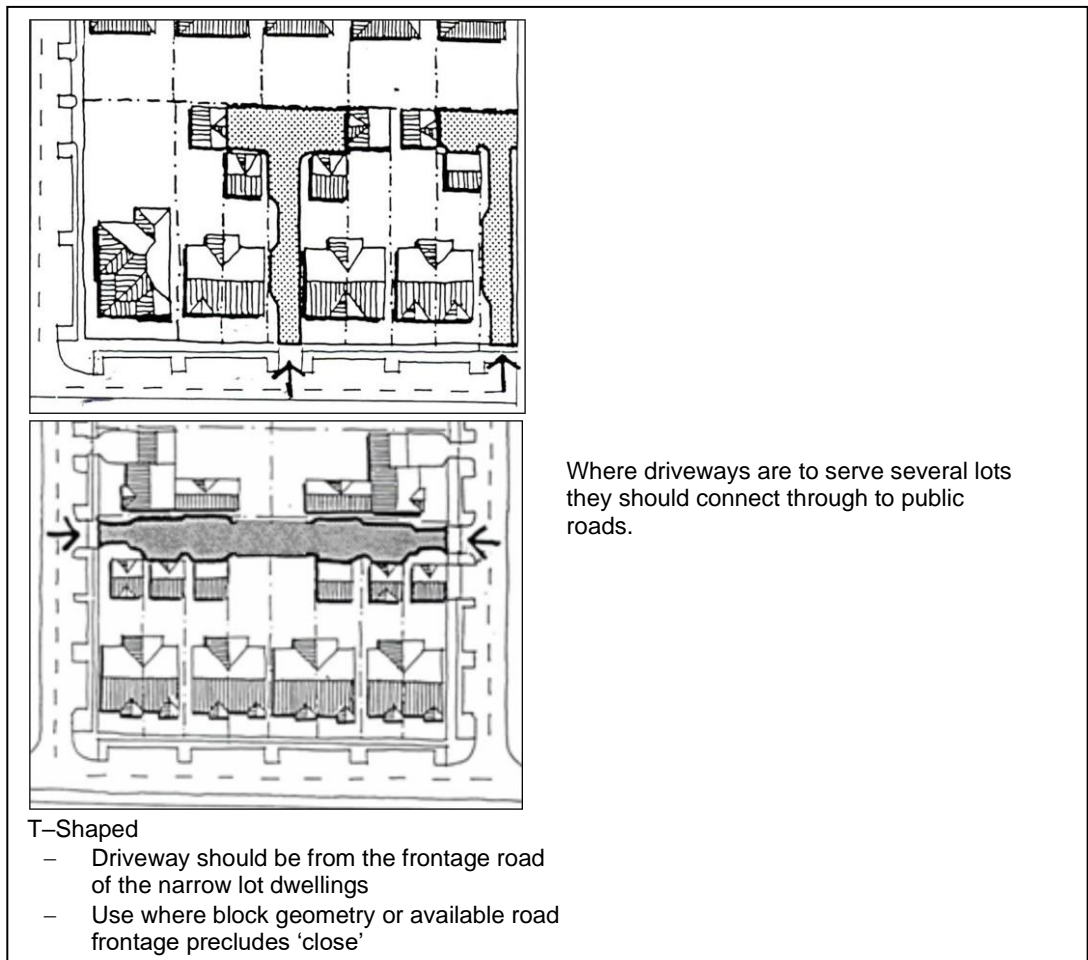


Figure 33 Private Driveways

3.9 Amenity and Environmental Impact

Overshadowing

Objective

To minimise overshadowing of neighbouring dwellings and their private open space.

Controls

1. Adjoining properties must receive a minimum of three hours of sunlight between 9am and 5pm on 21 June to at least:
 - One living room, rumpus room or the like.
 - 50% of the private open space.

Privacy

Objective

To site and design buildings in a manner which protects the visual privacy of adjoining dwellings and their private open space.

Controls

1. Habitable room windows facing side boundaries are to be offset by at least 1 m from any habitable room windows in an adjoining dwelling (See Figure 34).
2. Habitable room windows on the first floor that face the side boundary are to avoid unreasonable overlooking by having a minimum sill height of 1.5 m, except where they face a street or public open space (See Figure 34).
3. Building siting, window location, balconies and fencing must consider the importance of the privacy of on site and adjoining buildings and private open spaces.
4. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.

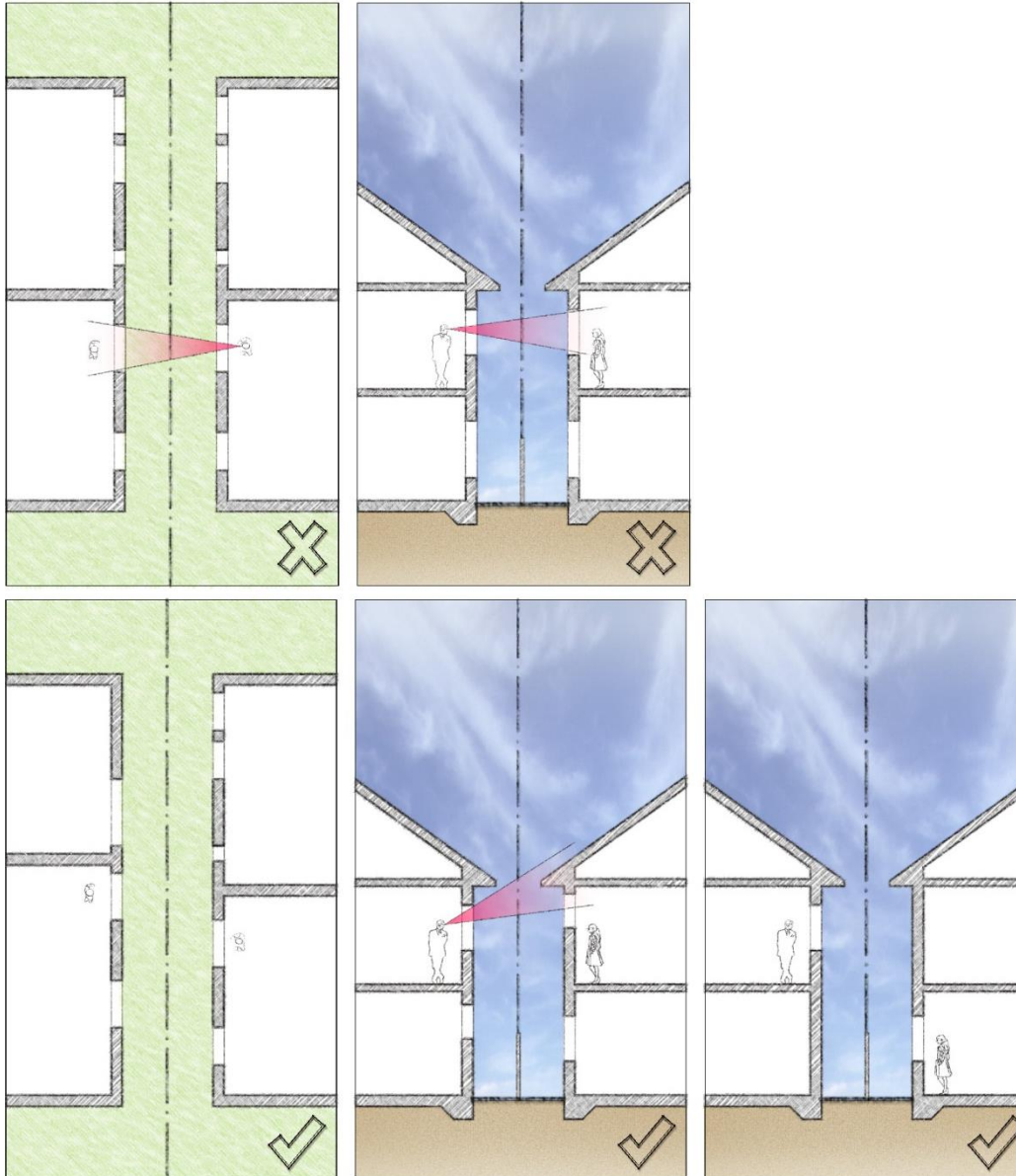


Figure 34 Privacy and Amenity

Acoustic Privacy

Objective

To ensure appropriate noise and vibration attention measures are incorporated into residential development.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. Developments in areas adversely impacted upon by traffic related noises must incorporate the appropriate noise and vibration mitigation measures into the design in terms of the site layout, building materials and design, orientation of the buildings and location of sleeping and recreation areas.
3. Where party walls are provided they must be carried to the underside of the roof covering and be constructed in accordance with Part F5 of the *Building Code of Australia*.

4. The proposed buildings must comply with the current relevant state guidelines and criteria as well as Australian Standards for noise and vibration and quality assurance.

3.10 Site Services

Objectives

- a) To ensure that the required services are provided.
- b) To ensure that the services provided are easily protected or maintained.

Controls

Letterboxes

1. Letterboxes shall to be provided for each dwelling on site, easily accessible from the street, able to be securely locked and provided in accordance with Australia Post requirements.
2. Freestanding letterbox structures should be designed and constructed of materials that relate to the main building.
3. Residential numbering should be attached to the letterbox so that it is clearly visible from the street frontage. Numbers should be 75 mm in height, reflective and in contrast to the backing material.

Frontage works and damage to Council infrastructure

1. Where a footpath, road shoulder or new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council will assess any applications for works involving Council infrastructure.
3. Where there are no existing street trees in front of the site it may be a condition of consent that street trees be provided in the footpath area immediately in front of the site.

Electricity Substation

In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. Where this is the case, the shorter side of the substation should be orientated towards the street frontage and be adequately screened. This will involve dedication of the area as a public road to allow access by the electricity provider.

4. Local Centre

Background

The creation of a vibrant local centre is essential for the sustainability of the community. The local centre shall be a key social focal point and public transport node within the locality. It serves local retail demand without detracting from large nearby centres. The local centre is intended to serve the convenience needs of the Middleton Grange residents, as such the main retail centre is to be located to ensure ease of access for residents whether by private vehicle, public transport, walking or cycling.

The incorporation of residential uses in conjunction with commercial/retail developments will assist to make the Middleton Grange local centre a vibrant active community hub, whilst also offering housing diversity and choice for the suburb.

Note: Refer also to Part 3 Controls for the Private Domain where residential development that is not shop top housing is proposed.

Objectives

- a) To facilitate the development of the Middleton Grange local centre.
- b) To create a lively focal point for the community, which is economically and socially viable and provides employment floor space consistent with the employment targets for Middleton Grange in the Liverpool Local Strategic Planning Statement (LSPS).
- c) To encourage a mix of uses – residential, retail, commercial and social infrastructure.
- d) To encourage architectural features that creates a distinctive identity and sense of place for the locality.
- e) To create an area that by its scale, street relationship, built form, detailed design and materials, contrasts with the surrounding residential area to create an urban focus.
- f) To encourage upper floor uses in the form of commercial offices, suites and shop-top apartments.
- g) To ensure streets show priority to active and public forms of transport, landscaping and other streetscape infrastructure.
- h) To ensure a uniform approach to signage and street furniture throughout the local centre.
- i) To encourage the development of active street frontages to provide a pedestrian friendly environment.
- j) To ensure high quality publicly accessible open space is prioritised and central within the local centre.

Controls

1. The central open spaces and community centre are to serve as the focal point of the local centre. Development proposals must demonstrate the impact of associated pedestrian movements in relation to the open space and have architectural treatments which complement and frame the open space area.
2. Development that includes non-residential upper floor area must demonstrate:
 - That the development will not result in the total non-residential upper floor area of all buildings on the land exceeding 10,000 m²;
 - That the development is consistent with the Liverpool LSPS 'Connected Liverpool 2040' (as published in March 2020); and
 - That the inclusion of non-residential upper floor area in the development is justified having regard to the economic impact assessment prepared in relation to the development application.

4.1 Subdivision, Frontage and Allotment Size

Background

Development in the local centre may also incorporate shop top housing. To achieve shop top housing, the site will need to meet the minimum requirements for dwelling size, provide an attractive façade to public spaces and achieve functional layouts. The site will also need to be sufficient size to provide an adequate internal layout and private open space for the dwellings.

Objectives

- a) To ensure that land in the local centre can accommodate shop top housing including the car parking and loading provisions.
- b) To ensure that there is sufficient frontage and area for any dwellings in conjunction with the business use.

Controls

Excluding Lots 1, 2 and 3, sites must have a minimum street frontage of 20 m.

4.2 Site Planning

Objectives

- a) To ensure that the development provides a gradual transition to surrounding residential areas and is compatible –in terms of amenity and built form with these residential areas and open space.
- b) To ensure that the development is compatible with the adjoining business development.
- c) To ensure that the development reflects the character of the locality and environment.
- d) To ensure that the development contributes to the public domain and attractiveness of the centre for its users.
- e) To ensure that the detailed design of the local centre is coordinated, achieves a high quality urban design outcome and provides a high standard of amenity for future and existing residents.

Controls

The siting of buildings and the development should:

1. Provide safe pedestrian, cycle and vehicle access to and from the public street.
2. Be compatible with nearby residential and business development in terms of appearance, overshadowing, privacy, views, setbacks and height.
3. Address the street and consider its presentation to the public domain.
4. Adopt setbacks consistent with Figure 35.
5. Consider the impact on existing and potential pedestrian links.
6. Stormwater from the site must be able to be drained satisfactorily. Where the site falls away from the street, it may be necessary to obtain an easement over adjoining property to drain water satisfactorily to a Council stormwater system. Refer to Water Cycle Management in Part 1.

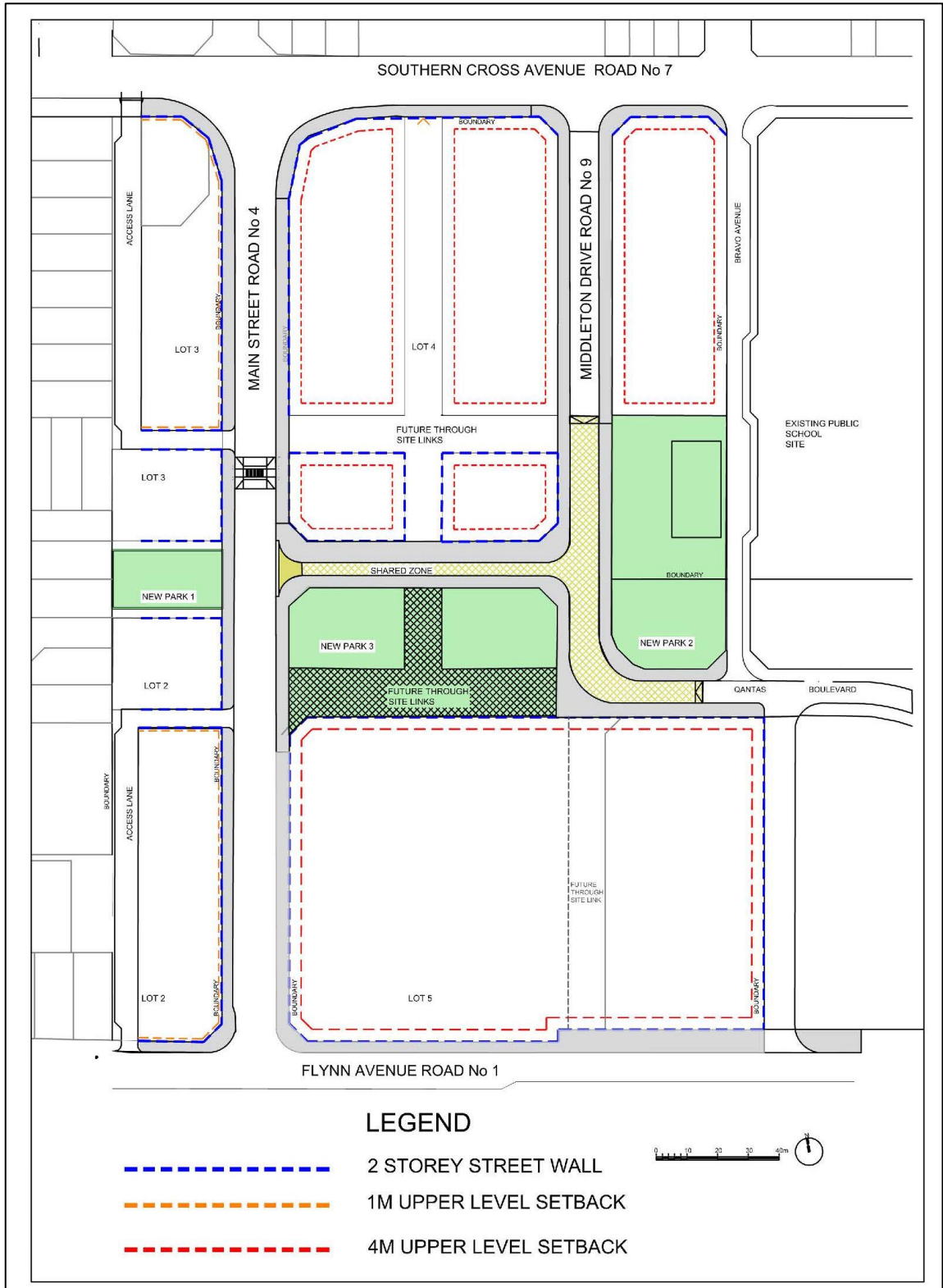


Figure 35 Local Centre Street Setbacks

4.3 Pedestrian Areas and Through Site Links

Background

Active street and building frontages provide safety and security to a street or shopping centre by enabling casual surveillance. Having access from the street or public areas to as many uses as possible provides active and lively streets and public areas.

Pedestrian areas within centres can provide an attractive meeting place for residents and shoppers. It also has the potential to generate additional business for retailers by providing areas for outdoor eating, and a place for local community group promotions.

Objectives

- a) To ensure active street frontages on public streets.
- b) To encourage the provision of permeable, safe and attractive pedestrian areas.
- c) To provide strong north south and east west connections through the centre for pedestrians.
- d) To ensure through site links are delivered to facilitate adequate pedestrian access and support pedestrian activity.

Controls

1. Active street frontages and pedestrian through site links shall be provided in accordance with Figure 36.
2. Pedestrian areas should minimise any changes in levels and allow universal access to the shops from the car parking area and public footpaths.
3. Pedestrian areas should be separate from loading areas.
4. Sufficient area shall be provided to permit landscaping and tree planting within pedestrian areas and car parking areas.
5. Outdoor Dining Areas may be permitted in public footpath areas. Refer to section 4.11.
6. Development shall maintain the open space parcels as the focal part of the local centre by encouraging pedestrian movement through open space.
7. Pedestrian areas should maximise opportunities for casual surveillance and show consideration of Crime Prevention through Environmental Design principles.
8. Pedestrian areas should be designed and detailed to achieve a high-quality finish.

Primary Active Frontages

Primary active frontages are the areas within the local centre characterised by the greatest pedestrian circulation and interaction.

1. Development along the primary active frontage (See Figure 36) should incorporate uses that attract pedestrian activity along ground floor street frontages.
2. A minimum 75% of the length of a frontage should be activated. Areas not activated should only be used for vehicular access, entrance and lobbies or fire services.
3. Development along the primary active frontages should contribute to the public domain and:
 - a) Facilitate diverse activities and uses;
 - b) Minimise blank walls, service entries and uninteresting facades;
 - c) Demonstrate a high standard of finish and high architectural detail; and
 - d) Include legible entrances and maximise transparent glazing.

Secondary Active Frontages

Secondary active frontages are areas within the local centre which are not identified as primary, however, still play an important role in creating attractive, safe and welcoming streets and pedestrians areas.

1. Secondary active frontages should seek to maximise activation, with up to 75% of the frontage activated.
2. Development along secondary active frontages (See Figure 36) should contribute to the public domain and:
 - a) Demonstrate a high standard of finish and appropriate architectural detail;
and
 - b) Intersperse services and blank walls with active frontages to avoid long stretches of inactivity and uninteresting facades.

4.4 Local Centre Open Space

Background

Open spaces are important publicly accessible spaces where people can relax, exercise, play and enjoy the natural environment. Walkable, accessible, well-designed open spaces are integral to the character and life of towns and cities. The quantum, design, landscaping and adaptability of the Middleton Grange local centre provides an opportunity to promote social interaction, civic pride and a sense of place. It creates a place for people to gather and feel safe; where children can play; where active uses can promote life and vibrancy; and where the community can come together throughout the year.

Open space within the local centre should be pleasant and convenient to the needs of the community.

Objectives

- a) To ensure adequate provision of publicly accessible open space to meet the needs of the residents of Middleton Grange.
- b) To make open space within the local centre the focal point of the community.
- c) To provide continuity between open space areas within the local centre and connections to the built form interface.
- d) To be sufficiently adaptable to allow for the closure of roads and the creation of a large contiguous open space area for community events and festivals.
- e) To create a variety of linked publicly accessible open spaces that fulfil functional requirements as well as create attractive and memorable places.
- f) To encourage the use of native species of flora and low maintenance landscaping.
- g) To provide areas of hard and soft landscaping.
- h) To provide a connected tree canopy cover for shading and relief from the urban heat island effect

Controls

1. Open space within the local centre shall be provided generally in accordance with Figure 37 and be embellished to a high standard.
2. New Park 3 shown in Figure 37 shall be a minimum size of 2,500sqm.
3. Roads identified as 'shared zone' in Figure 37 are to be designed to maintain a slow speed environment at all times to ensure pedestrian safety and to support their closure and the creation of a large area of contiguous open space to support community events and festivals.
4. Open space landscaping is to provide at minimum 40% tree canopy cover to ensure there is adequate shading to improve comfort and safety .
5. A detailed Landscape Plan (prepared by a suitably qualified AILA registered Landscape Architect) shall be submitted with the development application illustrating the design, layout and function of open space within the local centre and identifying how it will be managed and maintained to Council's satisfaction. The Landscape Plan should seek to achieve the following design criteria:
 - a) Incorporate a palette of high quality and durable materials, including robust and drought tolerant landscaping species;
 - b) Include clear, accessible, safe, and convenient linkages between the three primary open spaces and the broader open space network;
 - c) Integrate stormwater management and urban tree canopy;
 - d) Include design elements, furniture, and infrastructure to facilitate active and passive recreation, community gatherings, and social interaction;

- e) Maximise the safety and security of users consistent with 'Safety by Design' principles;
- f) Encourage pedestrian use through the design of open space pathways and entrances;
- g) Provide opportunities to access both sunlight and shade;
- h Incorporate appropriate levels of lighting to maximise hours of use; and
- i) Allow for accessibility at all times (24/7).

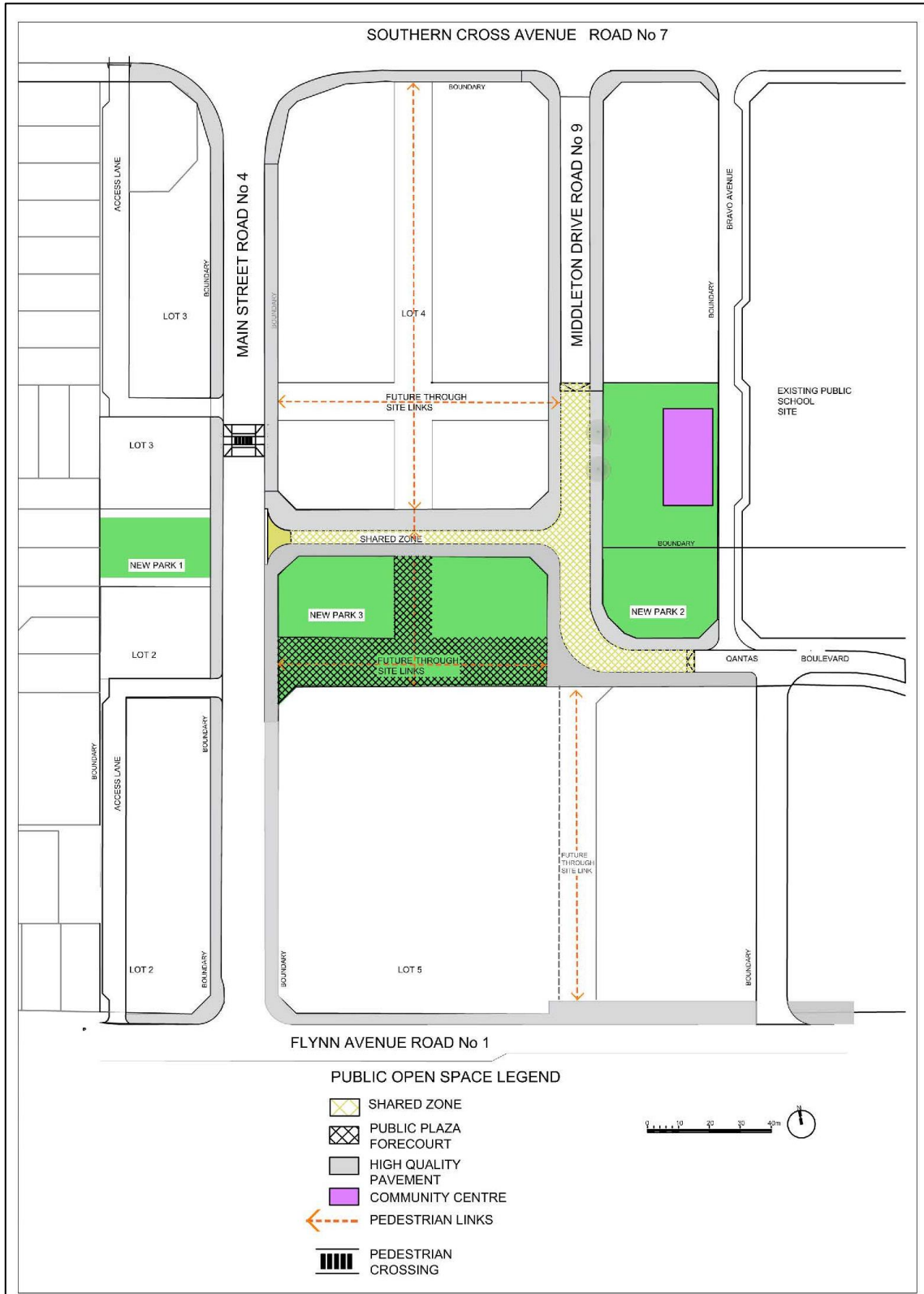


Figure 37 Local Centre Open Space

4.5 Building Form, Streetscape and Layout

Objectives

- a) To ensure the height and scale of a development appropriately transitions to adjoining development.
- b) To provide adequate amenity to the occupants and residents of a development in terms of solar access, visual and acoustic privacy, and natural ventilation.
- c) To ensure a development does not detrimentally affect the amenity of nearby residential development.
- d) To minimise overshadowing and ensure open space and pedestrian areas in the local centre receive adequate solar access.
- e) To ensure a development is integrated with the public domain and contributes to an active pedestrian-orientated environment.
- f) To maximise natural surveillance so that people feel safe at all times.
- g) To ensure pedestrian entrances and exits are clearly visible from the street.
- h) To promote high quality architectural design.
- i) To ensure corner sites are developed as visually significant elements in order to promote a strong and legible character.
- j) To ensure weather protection to pedestrians.
- k) To ensure roof forms contribute to the proposed character of the centre and residential areas.

Controls

Building Form

1. Articulate building walls addressing the street to add visual interest.
2. Development adjoining open space shall address the open space and avoid blank walls.
3. All buildings to be designed and built to have upper floors. Buildings shall be a minimum of two storeys in height.
4. Floor to ceiling heights of the ground floor shall be a minimum of 3.5m to allow for adaptive re-use.

Building Materials

1. Highly reflective finishes are not permitted above the ground floor.
2. Colour and materials of the buildings shall be of a high standard, creating a built form identity for the local centre.
3. Robust and sustainable materials shall be selected to ensure minimal maintenance is required.

Entrances

1. Orientate entrances to buildings towards the public street and provide clear lines of sight between entrances, foyers and the street.
2. The common lobby to a home unit development should face the street.
3. Where the ground floor of a business development, mixed-use development, and shop-top housing faces the street, the ground floor must incorporate shopfront style windows with clear glazing so that pedestrians can see into the premises and vice versa.

Street Frontage

1. Buildings shall be modulated to create a vertical rhythm to the street facade. Modules of around six metres are expected which allow for typical construction techniques. No long, unbroken facades will be permitted.
2. All developments must address the street and provide a quality street frontage. Retail and commercial developments must have active street frontages and entries fronting the street
3. Ground floor uses are to be at the same general level as the footpath and be accessible directly from the street.
4. Provide predominately glazed shop fronts to all ground floor retail areas.
5. Developments on corner sites shall address the corner and the secondary street frontage.
6. Avoid blank or solid walls and the use of dark or obscured glass on street frontages.
7. Roller shutters that obscure windows are not permitted.
8. Provide opportunities for table seating along shop frontages.
9. Any Automatic Teller Machine (ATM) must be located at a highly visible location at street level, and must be well lit at night and incorporate mirrors or reflective materials so that users can observe people behind them.
10. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Awnings

1. Provide continuous street frontage awnings to all new developments.
2. Wrap awnings around corners on street corner buildings.
3. Awnings must be complementary to each other.
4. Canvas blinds along the street edge are permitted.
5. Awnings must take into consideration the growth of street trees, lighting and other street furniture.

Roof Forms

1. Minimise the bulk and mass of roofs and the potential for overshadowing from roofs.
2. Provide eaves with a minimum length of 400mm in dwellings with pitched roofs.
3. Where flat roofs are proposed, lift overruns and rooftop plant and machinery are to be obscured from view by parapets or designed to be incorporated within rooftop activities/features.
4. Incorporate lift overruns and service plant etc into the design of the roof.
5. Wherever possible, provide landscaped and shaded areas on roofs to serve as communal private open space for residents of the building.
6. Developments should feature solar panels on rooftops and provide suitable surface area for solar collection where there is adequate access to sunlight.

Material and Finishes

1. Avoid expanses of any single material.
2. Utilise high quality and durable materials and finishes, such as face brick with / without coloured render; and plain glass windows.
3. Avoid large wall tiles, rough textured render, polished metal and curtain walls or reflective glass.

Dwellings above shops

1. Dwellings and balconies in upper storeys shall address the street, rear laneway and any adjacent open space.
2. Access to dwellings above shops must be from the front street.
3. Dwellings above shops should be designed to facilitate flow through ventilation.
4. Entrances shall be designed to accommodate movement of furniture.

Adjoining Residential Areas

1. Development should minimise the impact on privacy of adjoining and nearby dwellings.
2. Development is to be sensitive to adjoining and nearby dwellings and avoid adversely impacting on residential amenity.

Car parking structures

1. Where car parking structures is provided above or below ground level its design shall be integrated into the design of the building.
2. Natural ventilation shall be provided to basement where possible using ventilation grills and structures.
3. Above ground car parking structures shall be appropriately screened and where possible, incorporate public art as part of the screening.
4. Structures shall be ideally designed as flat slabs to allow flexibility for additional uses.
5. The roof level of the car parking structure is to incorporate shading devices.

Residential Ground Floor Development

This section applies to ground floor residential development located within the local centre.

Objectives

- a) To maximise opportunities for ground level activation within the local centre.
- b) To support greater housing mix and facilitate working from home opportunities.
- c) To provide flexibility in building design whilst ensuring a uniform and consistent street setback.
- d) To encourage high quality home businesses and small office/home office (SOHO) on the ground floor.

Controls

1. The layout of ground floor residential units located along the street frontage shall be designed to support home business / SOHO uses.
2. Amenities shall be provided on the ground floor of the residential unit including at minimum the provision of a bathroom.
3. Floor to ceiling heights of the ground floor shall be a minimum of 3.5m to enable both residential and non-residential uses.
4. Residential development with ground floor areas adjacent to, or within 1.4m of the adjoining public domain should have direct access from the public domain.
5. The ground floor of residential development is to be at or near ground level and, in any case, no more than 1.4m above pavement level.

4.6 Landscaping and Fencing

Objectives

- a) To ensure appropriate landscaping in local centres.
- b) To ensure the protection of existing trees on neighbouring residential zoned land.
- c) To ensure the visual impact of development is minimised and integrated into the streetscape.
- d) To improve the amenity of the local centre.
- e) To create well landscaped and designed central open spaces.

Controls

1. Where trees are planted around high use facilities such as car park areas, children's play areas and walkways, they should have clean trunks to a height of 1.8m.
2. Landscaping on any podium level or planter box shall be appropriately designed and irrigated by:
 - a. Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established;
 - b. Providing appropriate soil conditions, irrigation methods and drainage;
 - c. Ensure planter proportions accommodate the largest volume of soil possible. Minimum soil depths will vary depending on the size of the plant. However, soil depths greater than 1.5m are unlikely to have any benefits for tree growth;
 - d. Providing square or rectangular planting areas rather than long narrow linear areas.
3. In relation to control 2 above, the following are recommended as minimum standards for a range of plant sizes:
 - a) Large trees such as figs (canopy diameter of up to 16m at maturity)
 - i. Minimum soil volume 150m³.
 - ii. Minimum soil depth 1.3m.
 - iii. Minimum soil area of 10 x 10m or equivalent.
 - b) Medium trees (8m canopy diameter at maturity).
 - i. - Minimum soil volume 35m³.
 - ii. - Minimum soil depth 1m.
 - iii. - Approximate soil area of 6 x 6m or equivalent.
 - c) Small trees (4m canopy diameter at maturity).
 - i. - Minimum soil volume 9m³.
 - ii. - Minimum soil depth 0.8m.
 - iii. - Approximate soil area of 3.5 x 3.5m or equivalent.
 - d) Shrubs: Minimum soil depths 500 – 600mm.
 - i. - Ground cover: Minimum soil depths 300 – 450mm.
 - ii. - Turf: Minimum soil depths 100 – 300mm.
 - iii. - Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.
4. Where landscaping is to be provided a detailed landscape plan shall accompany a development application. A suitably qualified AILA registered Landscape architect must prepare all Landscape Plans submitted with the development application. Refer to Part 1 for requirements for Detailed Landscape Plans.

5. Landscaped areas within-the local centre shall generally involve the provision of trees and shrubs in mulched garden beds around car parking areas and where pedestrian areas are provided. In particular the landscaping shall involve the following:
 - Mulched garden beds shall incorporate ground covers that will cover the ground area.
 - Large shrubs shall be used as screen planting where there is a need to screen certain areas such as outside storage.
 - Shrubs shall only be planted in mulched garden beds.

4.7 Car Parking and Access Arrangement

Objectives

- a) To ensure the provision of appropriate off-street parking for business areas.
- b) To ensure car parking and loading facilities are in the most appropriate location given the urban design needs for the centre.
- c) To ensure car parking areas are attractive and do not dominate the streetscape.
- d) To support and encourage sustainable transport modes as an alternative option.

Controls

1. Car parking and loading areas shall be located off rear laneways where there is a rear laneway.
2. The design and layout of servicing areas shall incorporate the potential for nearby pedestrian movement.
3. The access arrangement to carparks shall be in accordance with Australian Standard AS2890.
4. Loading facilities in proximity to residential development shall provide appropriate noise mitigation measures.
5. Electric vehicle charging stations shall be provided in the centre for public use.

4.8 Amenity and Environmental Impact

Objectives

- a) To provide adequate amenity to the occupants of buildings and to neighbouring residential development in terms of solar access, and visual and acoustic privacy.
- b) To ensure buildings and businesses provide safe and easy access for people.
- c) To provide useable private open space for dwellings.

Controls

Privacy

Development shall be designed to minimise overlooking of adjoining and nearby residential development.

Lighting

External lighting to a development must give consideration to the impact of glare on the amenity of adjoining and nearby residents.

Safety

1. Where the hours of operation are after sunset, the car parking areas and any other public areas shall be provided with lighting to provide a safe environment for users of the premises after hours.

2. A Noise Impact Assessment Statement prepared by a qualified Acoustics Engineer may be required to be submitted with the application depending on the scale and location of the proposed use to show that the use can operate satisfactorily in the business area.

4.9 Site Services

Objectives

- a) To ensure that the required services are provided.
- b) To ensure that the services provided are easily protected or maintained.
- c) To ensure that service infrastructure does not detract from the public domain.

Controls

Where services or utility infrastructure are orientated towards the street frontage, adequate screening shall be provided to Council's satisfaction.

Letterboxes and House Numbering

1. A common letterbox structure must be located close to the main pedestrian entrance of a building and not adversely impact on street amenity.
2. The street number of a building must be visible from the street and made of a reflective material to allow visitors and emergency vehicles to easily identify the location of the building.

Frontage works and damage to Council assets

1. Where a footpath, road shoulder, new or enlarged access driveway is required to be provided this shall be provided at no cost to Council.
2. Council must be notified of any works that may threaten Council assets. Council must give approval for any works involving Council infrastructure.

Electricity Substation

In some cases it may be necessary to provide an electricity substation at the front of the development adjacent to the street frontage. Where this is the case, the shorter side of the substation should be orientated towards the street frontage and be adequately screened. The front boundary treatment used elsewhere on the street frontage shall be used at the side and rear of the area. This will also involve dedication of the area as a public road to allow access by the electricity provider.

Waste management

1. Development involving dwellings shall provide at least two waste storage areas to separately cater for the dwellings and non-residential uses on an allotment.
2. A development must provide a waste storage area inside every food premises, and inside any shop that is capable of accommodating a food premises.
3. A development must locate a waste storage area inside the building, or adjacent to a lane where it is convenient and safe for residents, tenants, and waste collection trucks to access the waste storage area and the location and floor level are to the satisfaction of Council.
4. Waste disposal facilities shall be provided for development involving residential flat buildings or shop top housing. These shall be located adjacent to the driveway entrance to the site or at the rear if a rear lane is provided.
5. Any structure involving waste disposal facilities shall be located as follows:
 - Setback 1m from the front boundary to the street.
 - Landscaped between the structure and the front boundary and adjoining areas to minimise the impact on the streetscape.

- Not be located adjacent to an adjoining residential property.
- Details of the design of waste disposal facilities are shown in Part 1 of the DCP.

4.10 Shop Top Housing

Background

Middleton Grange local centre will provide for mixed use development, with a range of non-residential uses across lower levels and residential floorspace above. This vertical mix of uses will increase activity through the day and night which in turn will improve the passive surveillance over public areas. Ground floor uses will activate the local centre streets and open spaces and maximise pedestrian circulation and amenity.

Building Design

Objectives

- a) To ensure there is adequate amenity for residential development within the local centre.
- b) To provide housing diversity.
- c) To provide smaller dwelling types in convenient locations close to transport, goods and services and usable open space areas.

Controls

All residential and mixed use developments shall be at least two storeys with the lowest habitable floor level at least 500 mm above the crown of the road.

Building Appearance and Streetscape

Objectives

- a) To ensure an attractive streetscape, which is consistent with the environment of a centre.
- b) To promote high architectural quality in shop top housing.
- c) To ensure that new developments have facades which define and enhance the public domain and desired street character.
- d) To ensure that building elements are integrated into the overall building form and facade design.

Controls

1. Shop top housing shall comply with *State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development*, and should consider the Apartment Design Guide.
2. Building facades shall be articulated and roof form is to be varied to provide visual variety.
3. The pedestrian entrance to shop top housing shall be from the primary street frontage of the development. Entrances from laneways are not acceptable.
4. Driveway walls adjacent to the entrance of a basement car park are to be treated so that their appearance is consistent with the basement or podium walls.
5. A master antenna shall be provided for any development of more than three dwellings and be located so that it is not visible from the street or any public open space.
6. Consider the relationship between the whole building form and the facade and / or building elements. The number and distribution of elements across a façade determine simplicity or complexity. Columns, beams, floor slabs, balconies, window openings and fenestrations, doors, balustrades, roof forms and parapets are

elements, which can be revealed or concealed and organised into simple or complex patterns.

7. Compose facades with an appropriate scale, rhythm and proportion, which respond to the building's use and the desired contextual character. This may include but is not limited to:
 - Defining a base, middle and top related to the overall proportion of the building.
 - Expressing key datum lines in the context using cornices, a change in materials or building setback.
 - Expressing the internal layout of the building, for example, vertical bays or its structure, such as party wall-divisions.
 - Expressing the variation in floor-to-floor height, particularly at the lower levels.
 - Articulating building entries with awnings, porticos, recesses, blade walls and projecting bays.
 - Selecting balcony types which respond to the street context, building orientation and residential amenity.
 - Cantilevered, partially recessed, wholly recessed, or Juliet balconies will all create different facade profiles.
 - Detailing balustrades to reflect the type and location of the balcony and its relationship to the façade detail and materials.
8. Design facades to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls, depending on the facade orientation.
9. Express important corners by giving visual prominence to parts of the facade, for example, a change in building articulation, material or colour, roof expression or increased height.
10. Co-ordinate and integrate building services, such as drainage pipes, with overall facade and balcony design.
11. Co-ordinate security grills/screens, ventilation louvres and car park entry doors with the overall facade design.

Roof Design

Objectives

- a) To provide quality roof designs, which contribute to the overall design and performance of shop top housing.
- b) To integrate the design of the roof into the overall facade, building composition and desired contextual response.
- c) To increase the longevity of the building through weather protection.

Controls

1. Relate roof design to the desired built form. This may include:
 - Articulating the roof, or breaking down its massing on large buildings, to minimise the apparent bulk or to relate to a context of smaller building forms.
 - Using a similar roof pitch or material to adjacent buildings, particularly in existing special character areas or heritage conservation areas.
 - Minimising the expression of roof forms gives prominence to a strong horizontal datum in the adjacent context, such as an existing parapet line.
 - Using special roof features, which relate to the desired character of an area, to express important corners.

2. Design the roof to relate to the size and scale of the building, the building elevations and three-dimensional building form. This includes the design of any parapet or terminating elements and the selection of roof materials.
3. Design roofs to respond to the orientation of the site, for example, by using eaves and skillion roofs to respond to sun access.
4. Developments should feature solar panels on rooftops and provide suitable surface area for solar collection where there is adequate access to sunlight.
5. Minimise the visual intrusiveness of service elements by integrating them into the design of the roof. These elements include lift over-runs, service plants, chimneys, vent stacks, telecommunication infrastructures, gutters, downpipes and signage.
6. Where habitable space is provided within the roof optimise residential amenity in the form of attics or penthouse dwellings.
7. Where possible, provide landscaped and shaded areas on roofs to serve as communal private open space for residents of the building.

Building Entry

Objectives

- a) To create entrances which provide a desirable residential identity for the development.
- b) To orientate the visitor.
- c) To contribute positively to the streetscape and building facade design.

Controls

1. Provide as direct a physical and visual connection as possible between the street and the entry.
2. Achieve clear lines of transition between the public street, the shared private, circulation spaces and the dwelling unit.
3. Ensure equal access for all.
4. Provide safe and secure access by:
 - Avoiding ambiguous and publicly accessible small spaces in entry areas.
 - Providing a clear line of sight between one circulation space and the next.
 - Providing sheltered well-lit and highly visible spaces to enter the building, meet and collect mail.
5. Generally provide separate entries from the street for:
 - Pedestrians and cars.
 - Different uses, for example, for residential and commercial users in a mixed-use development.
6. Design entries and associated circulation space of an adequate size to allow movement of furniture between public and private spaces.

Balconies

Objective

- a) To ensure that balconies contribute positively to the facade of a building.
- b) To ensure balconies are functional and responsive to the environment thereby promoting the enjoyment of outdoor living for dwelling residents.
- c) To ensure that balconies are integrated into the overall architectural form and detail of shop top housing.

- d) To contribute to the safety and liveliness of the street by allowing for casual overlooking and address.

Controls

1. A minimum of 10sqm of open space in the form of a balcony shall be provided for each dwelling.
2. Private open space areas should be an extension of indoor living areas and be functional in size to accommodate seating and the like.
3. Balustrades on balconies at lower levels shall be of solid construction.
4. Balconies may project up to 1m from the façade of a building.
5. Balustrades must be compatible with the façade of the building.
6. Balconies should where possible be located above ground level to maximise privacy for occupants, particularly from the street.
7. Balconies should be located on the street frontage and boundaries with views.
8. Primary balconies should be:
 - Located adjacent to the main living areas, such as living room, dining room or kitchen to extend the dwelling living space.
 - Sufficiently large and well proportioned to be functional and promote indoor/outdoor living. A dining table and two chairs (smaller apartment) and four chairs (larger apartment) should fit on the majority of balconies in any development.
9. Consider secondary balconies, including Juliet balconies or operable walls with balustrades, for additional amenity and choice in larger dwellings, adjacent to bedrooms or for clothes drying, site balconies off laundries or bathrooms.
10. Design and detail balconies in response to the local climate and context thereby increasing the usefulness of balconies. This may be achieved by:
 - Locating balconies facing predominantly north, east or west to provide solar access.
 - Calculating the depth of balconies to allow sunlight access to the dwelling below.
 - Utilising sunscreens, pergolas, shutters and operable walls to control sunlight and wind.
11. Provide primary balconies for all dwellings with a minimum depth of 2m.
12. Design balustrades to allow views and casual surveillance of the street while providing for safety and visual privacy. Design considerations may include:
 - Detailing balustrades using a proportion of solid to transparent materials to address site lines from the street, public domain or adjacent development. Full glass balustrades do not provide privacy for the balcony or the dwelling's interior, especially at night.
 - Detailing balustrades and providing screening from the public, for example, for a person seated looking at a view, clothes drying areas, bicycle storage or air conditioning units.
13. Operable screens increase the usefulness of balconies by providing weather protection, daylight control and privacy screening.

Sunlight Access

Objectives

- a) To ensure that daylight access is provided to all habitable rooms.

- b) To provide adequate ambient lighting and minimise the need for artificial lighting during daylight hours.
- c) To provide residents with the ability to adjust the quantity of daylight to suit their needs.

Controls

1. Plan the site so that new shop top housing is orientated to optimise northern aspect.
2. Ensure direct daylight access to communal open space between March and September and provide appropriate shading in summer.
3. Ensure daylight access to habitable rooms and private open space, particularly in winter use skylights, clerestory windows and fanlights to supplement daylight access.
4. Promote two-storey and mezzanine, ground floor dwellings or locations where daylight is limited to facilitate daylight access to living rooms and private open spaces.
5. Ensure single aspect, single-storey dwellings have a northerly or easterly aspect - locate living areas to the north and service areas to the south and west of the development.
6. Avoid south facing dwellings.
7. Design for shading and glare control, particularly in summer:
 - Using shading devices, such as eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.
 - Optimising the number of north-facing living spaces.
 - Providing external horizontal shading to north-facing windows.
 - Providing vertical shading to east or west windows.
8. Consider higher ceilings and higher window heads to allow deeper sunlight penetration.
9. On west facing windows, vertical louvre panels or sliding screens protect from glare and low afternoon sun.
10. On north facing windows, projecting horizontal louvres admit winter sun while shading summer sun.
 - Using high performance glass but minimising external glare off windows.
 - Avoid reflective films.
 - Use a glass reflectance below 20%.
 - Consider reduced tint glass.
 - Limit the use of lightwells as a source of daylight by prohibiting their use as the primary source of daylight in habitable rooms.

Where they are used:

- Relate lightwell dimensions to building separation, for example, if non-habitable rooms face into a light well less than 12m high, the lightwell should measure 6 x 6m.
- Conceal building services and provide appropriate detail and materials to visible walls.
- Ensure light wells are fully open to the sky.
- A combination of louvres provides shading for different times of the day.

Internal design

Objective

To ensure that the internal design of buildings provide a pleasant environment for the occupants and residents of adjoining properties.

Controls

1. All staircases should be internal.
2. Minimise the length of common walls between dwellings.
3. Basement car parking shall be located beneath the building footprint.
4. Where possible natural ventilation shall be provided to basement car parking.
5. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings.
6. Minimise the location of noise sensitive rooms such as bedrooms adjoining noisier rooms such as bathrooms or kitchens or common corridors and stairwells.
7. Where common walls are provided they must be carried to the underside of the roof and be constructed in accordance with Part F5 of the *Building Code of Australia*.
8. Locate active use rooms or habitable rooms with windows overlooking communal/public areas (e.g. playgrounds, gardens).

Security

Objectives

- a) To ensure that buildings are orientated to allow surveillance from the street and adjoining buildings.
- b) To ensure that entrances to buildings are clearly visible and easy to locate in order to minimise the opportunities for intruders.
- c) To ensure buildings are safe and secure for residents and visitors.
- d) To contribute to the safety of the public domain.

Controls

1. Entrances to buildings should be orientated towards the front of the site and facing the street.
2. The main entrance to dwellings or other premises should not be from rear lanes and should be designed with clear directions and signage.
3. Blank walls addressing the street frontage and other public places should be avoided.
4. Minimise the number of entry points to buildings.
5. Reinforce the development boundary to strengthen the distinction between public and private space by:
 - Employing a level change at the site and/or building threshold (subject to accessibility requirements).
 - Signage.
 - Entry awnings.
 - Fences, walls and gates.
 - Change of material in paving between the street and the development.
6. Optimise the visibility, functionality and safety of building entrances by:
 - Orienting entrances towards the public street.
 - Providing clear lines of sight between entrances, foyers and the street.
 - Providing direct entry to ground level dwellings from the street rather than through a common foyer.

- Direct and well-lit access between car parks and dwellings, between car parks and lift lobbies and to all unit entrances.
7. Improve the opportunities for casual surveillance by:
 - Orienting living areas with views over public or communal open spaces, where possible.
 - Using bay windows and balconies, which protrude beyond the main facade and enable a wider angle of vision to the street.
 - Using corner windows, which provide oblique views of the street.
 - Providing casual views of common internal areas, such as lobbies and foyers, hallways, recreation areas and car parks.
 8. Minimise opportunities for concealment by:
 - Avoiding blind or dark alcoves near lifts and stairwells, at the entrance and within indoor car parks, along corridors and walkways.
 - Providing well-lit routes throughout the development.
 - Providing appropriate levels of illumination for all common areas.
 9. Control access to the development by:
 - Making dwellings inaccessible from the balconies, roofs and windows of neighbouring buildings.
 - Separating the residential component of a development's car parking from any other building use.
 - Providing direct access from car parks to dwelling lobbies for residents.

Natural Ventilation

Objectives

- a) To ensure that dwellings are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants.
- b) To provide natural ventilation in non-habitable rooms, where possible.
- c) To reduce energy consumption by minimising the use of mechanical ventilation, particularly air conditioning.

Controls

1. Utilise the building layout and section to increase the potential for natural ventilation. Design solutions may include:
 - Facilitating cross ventilation by designing narrow building depths and providing dual aspect dwellings, for example, cross through dwellings and corner dwellings.
 - Facilitating convective currents by designing units, which draw cool air in at lower levels and allow warm air to escape at higher levels, for example, maisonette dwellings and two-storey dwellings.
2. Select doors and windows (that open) to maximise natural ventilation opportunities established by the dwelling layout.
3. Provide appropriate building depths to support cross ventilation.
4. Avoid single-aspect dwellings with a southerly aspect.
5. Design the internal dwelling layout to promote natural ventilation by:
 - Minimising interruptions in air flow through a dwelling.
 - Grouping rooms with similar usage together.

Storage Areas

Objective

To provide for the need of residents to be able to store personal items adjacent to the car parking area.

Controls

1. A secure storage space is to be provided for each dwelling with a minimum volume 8m³ (minimum dimension 1sqm). This must be set aside exclusively for storage as part of the basement or garage.
2. Storage areas must be adequately lit and secure. Particular attention must be given to security of basement and garage storage areas.

Planting on Structures

Objectives

- a) To contribute to the quality and amenity of communal open space on podiums and internal courtyards.
- b) To encourage the establishment and healthy growth of trees in urban areas.

Controls

1. Design for optimum conditions for plant growth by:
 - Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established.
 - Providing appropriate soil conditions, irrigation methods and drainage
 - Ensure planter proportions accommodate the largest volume of soil possible. Minimum soil depths will vary depending on the size of the plant. However, soil depths greater than 1.5m are unlikely to have any benefits for tree growth.
 - Providing square or rectangular planting areas rather than long narrow linear areas.
2. The following are recommended as minimum standards for a range of plant sizes:
 - Large trees such as figs (canopy diameter of up to 16m at maturity)
 - Minimum soil volume 150m³.
 - Minimum soil depth 1.3m.
 - Minimum soil area of 10 x 10m or equivalent.
 - Medium trees (8m canopy diameter at maturity).
 - Minimum soil volume 35m³.
 - Minimum soil depth 1m.
 - Approximate soil area of 6 x 6m or equivalent.
 - Small trees (4m canopy diameter at maturity).
 - Minimum soil volume 9m³.
 - Minimum soil depth 0.8m.
 - Approximate soil area of 3.5 x 3.5m or equivalent.
 - Shrubs: Minimum soil depths 500 – 600mm.
 - Ground cover: Minimum soil depths 300 – 450mm.
 - Turf: Minimum soil depths 100 – 300mm.
 - Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.

Car Parking

Objectives

- a) To provide convenient, accessible and safe on site car parking for residents and visitors.
- b) To minimise driveway crossings to maximise on street parking and landscaped nature strips.
- c) To integrate the location and design of car parking with the design of the site and building without compromising street character, landscape or pedestrian amenity and safety.
- d) To integrate the location and design of car parking with the design of the site and the building.

Controls

1. Visitor car parking shall be clearly identified and may not be stacked car parking.
2. Pedestrian access ways and driveways shall be separated.
3. Driveways shall be designed to accommodate removalist vehicles.
4. Give preference to underground parking, whenever possible by:
 - Facilitating natural ventilation to basement and sub-basement car parking areas, where possible.
 - Integrating ventilation grills or screening devices of car park openings into the facade design and landscape design.
 - Providing safe and secure access for building users, including direct access to residential dwellings, where possible.
5. Where above ground enclosed parking cannot be avoided, ensure the design of the development mitigates any negative impact on streetscape and street amenity by:
 - Avoiding exposed parking on the street frontage.
 - Hiding car parking behind the building facade. Where wall openings (windows, fenestrations) occur, ensure they are integrated into the overall facade scale, proportions and detail.

Pedestrian Access

Objectives

- a) To promote shop top housing which is well connected to the street and contributes to the accessibility of the public domain.
- b) To ensure that residents, including users of strollers and wheelchairs and people with bicycles, are able to reach and enter their dwelling and use communal areas via minimum grade ramps, paths, access ways or lifts.

Controls

1. Optimise accessibility to the development through site planning.
2. Provide high quality accessible routes to public and semi-public areas of the building and the site, including major entries, lobbies, communal open space, site facilities, parking areas, public streets and internal roads.

Privacy

Objectives

- a) To locate and design buildings to meet projected user requirements for visual and acoustic privacy and to protect privacy of nearby residents.
- b) To avoid any external impacts of a development, such as overlooking of adjoining sites.

- c) To provide reasonable levels of visual privacy externally and internally, during the day and at night.
- d) To maximise outlook and views from principal rooms and private open space.

Controls

1. Building siting, window location, balconies and fencing should take account of the importance of the privacy of on site and adjoining buildings and outdoor spaces.
2. Windows to habitable rooms should be located so they do not overlook such windows in other dwellings within the development or areas of private open space.
3. Landscaping should be used where possible to increase visual privacy between dwellings and adjoining properties.
4. Design building layouts to minimise direct overlooking of rooms and private open spaces adjacent to dwellings by:
 - Balconies to screen other balconies and any ground level private open space.
 - Separating communal open space, common areas and access routes through the development from the windows of rooms, particularly habitable rooms.
 - Changing the level between ground floor dwellings with their associated private open space, and the public domain or communal open space.
5. Use detailed site and building design elements to increase privacy without compromising access to light and air by:
 - Offsetting windows of dwellings in new development and adjacent development windows.
 - Recessed balconies and/or vertical fins between adjacent balconies.
 - Solid or semi-solid balustrades to balconies - louvres or screen panels to windows and/or balconies.
 - Fencing.
 - Vegetation as a screen between spaces.
 - Incorporating planter boxes into walls or balustrades to increase the visual separation between areas.
 - Utilising pergolas or shading devices to limit overlooking of lower dwellings or private open space.

Acoustic Impact

Objective

To ensure a high level of amenity by protecting the privacy of residents within shop top housing.

Controls

1. Noise attenuation measures should be incorporated into building design to ensure acoustic privacy between on-site and adjoining buildings.
2. The proposed buildings must comply with the relevant state guidelines and criteria and the current relevant Australian Standards for noise and vibration and quality assurance.
3. Arrange dwellings within a development to minimise noise transition between dwellings by:
 - Locating busy, noisy areas next to each other and quieter areas next to other quiet areas, for example, living rooms with living rooms, bedrooms with bedrooms.

- Using storage or circulation zones within a dwelling to buffer noise from adjacent dwellings, mechanical services or corridors and lobby areas.
- Minimising the amount of common walls with other dwellings.
- Design the internal dwelling layout to separate noisier spaces from quieter spaces by grouping uses within a dwelling - bedrooms with bedrooms and service areas like kitchen, bathroom, and laundry together.

4.11 Restaurants/Outdoor Cafes

Background

There is an increasing trend to have outdoor dining in conjunction with restaurants and cafes. This contributes to the activity in business areas. There is however a potential conflict between the users of outdoor dining areas and users of the footpath areas.

Objectives

- a) To ensure that outdoor cafes enhance the economic viability for centres.
- b) To ensure that outdoor cafes activate and enhance the streetscape to create attractive and vibrant surroundings.
- c) To preserve or enhance public amenity, safety and access.

Controls

These controls apply to outdoor dining areas on public footpaths. Other than hours of operation, these controls do not apply to outdoor dining areas located on privately owned land.

Building Form, Streetscape and Layout

1. Locate outdoor cafe seating a minimum of 1m from the kerb and to maintain at least 1.5m between seating and the building frontage for pedestrian passage.
2. There shall be no increase in the number of chairs and tables at each individual cafe site to that approval without further approval from Council.
3. Outdoor cafe furniture shall remain at least 3m away from any change in direction of kerb and gutter, as occurs at street corners and from any bus stop or taxi stand.
4. Outdoor cafe furniture shall remain at an appropriate distance from any pedestrian crossing, disabled parking spaces, post box, public telephone, street sign, street tree or other street structure.
5. Outdoor cafe sites shall allow appropriate public access across the footpath between kerb and property boundary. This control does not apply within purpose built Council designed 'al fresco' dining areas.
6. The siting of outdoor cafe areas shall allow for pedestrian road crossing areas.

Written Consent

Written consent from neighbouring tenants to establish outdoor cafe seating in front of other premises must be provided to Council before such seating is permitted.

Car Parking and Access

1. No additional car parking is required for any outdoor eating area.
2. Bollards may be needed to be provided to protect the seating area from errant vehicles.

Amenity and Environmental Impact

The hours of operation shall be restricted to between 7:00 am to 9:00 pm, unless otherwise varied by Council.

Landscaping

Planter boxes should be provided to enclose eating areas.

Site Services

1. If any of Council's street furniture or other items such as garbage bins, seats and planter boxes has to be removed for the installation of outdoor cafe seating, then that removal and any subsequent re-erection in the vicinity shall be at the permit holder's expense and shall be completed to Council's satisfaction.
2. Any additional lighting to normal street lighting shall be provided at the applicant's expense and shall be completed to the satisfaction of Council.
3. Any illuminations shall be appropriately managed during operations of the premises.

Permit

Applicants need to provide public liability insurance for outdoor café areas and sign a permit agreement with Council.

**LIVERPOOL
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