



4.0

Residential Development

4.0 RESIDENTIAL DEVELOPMENT

4.1 Site Responsive Design

4.1.1 Cut and Fill

OBJECTIVE

1. To minimise the extent of cut and fill within residential allotments.
2. To protect and enhance the aesthetic quality of the area by controlling the form, bulk and scale of land forming operations.
3. To ensure that filling material is satisfactory and does not adversely affect the fertility or salinity of soil, or the quality of surface water or groundwater.
4. To ensure that the amenity of adjoining residents is not adversely affected by any land forming operation.

CONTROLS

1. DAs are to illustrate where it is necessary to cut and/or fill land and provide justification for the proposed changes to the land levels.
2. Proposals requiring significant moving and filling of earth will be considered if they contribute to the overall quality of the development and the urban design outcomes for the area. A Validation Report will be required to be submitted to Council prior to the placement of imported fill on site. All fill shall comply with the Department of Natural Resources – “Site Investigation for Urban Salinity” and the DECC Contaminated Sites Guidelines – “Guidelines For the NSW Site Auditor Scheme (2nd edition) - Soil Investigation Levels for Urban Development Sites in NSW.”
3. Earth moved from areas containing noxious weed material must be disposed of at an approved waste management facility, and transported in compliance with the *Noxious Weeds Act 1993*.
4. No earthworks shall be undertaken whereby excavation exceeds 500mm or fill exceeds 500mm from the present surface level of the property without approval from Council.
5. On sloping sites, site disturbance is to be minimised by use of split level or pier foundation housing designs.
Council will consider greater cut for basement garages.
6. Retaining walls within residential allotments are to be no greater than 500mm high at any point on the edge of any residential allotment. A combined 1m maximum retaining wall height is permissible between residential lots (2 x 500mm). Where terraced walls are proposed the minimum distance between each step is 0.5m. A variation to the retaining wall heights can be considered with supporting justification and concurrence of the adjoining neighbour.

7. The maximum height of voids within individual allotments is 3m (see **Figure 34**).
8. All retaining walls proposed for the site are to be identified.

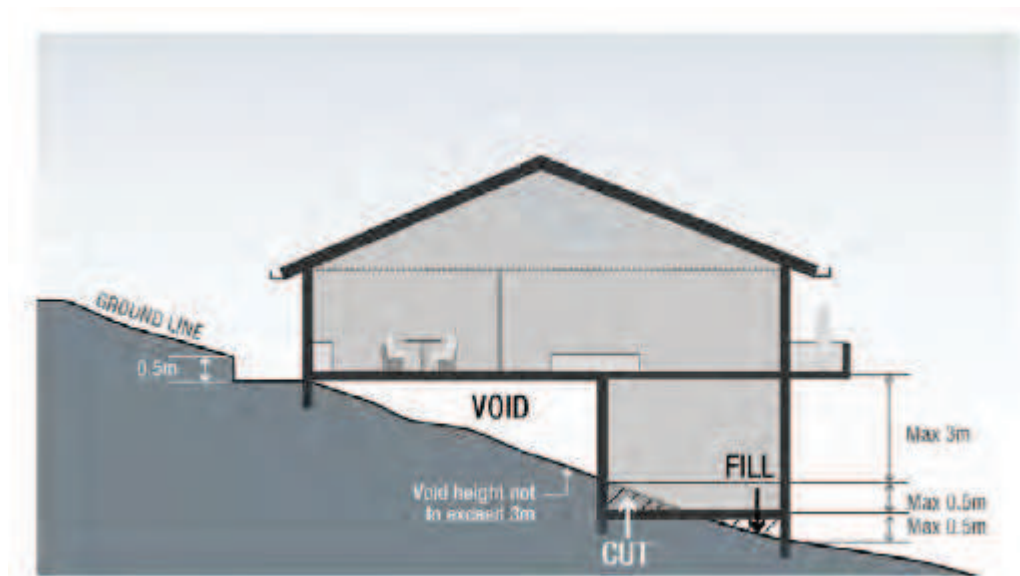


Figure 34. Maximum Cut and Fill with residential blocks

4.1.2 Safety and Surveillance

OBJECTIVES

1. To ensure that the siting and design of buildings and spaces decreases the opportunities for committing crime through casual surveillance.
2. To ensure that development encourages people to use streets, parks and other public places without fear of personal risk.

CONTROLS

1. Dwellings should be designed to overlook streets, lanes and other public or communal areas to provide casual surveillance. In the case of corner lots habitable windows are to be oriented to overlook the side street.
2. The design of all development, in particular, the public domain and community facilities is to enhance public surveillance of public streets and open space/conservation areas.
3. Encourage a sense of community ownership of open and public spaces (eg parks, footpaths, etc) through appropriate design of publicly accessible areas.

4. Use of roller shutters other than garages is not permitted on doors and windows facing the street. Any security railings must be designed to complement the architecture of the building.
5. Developments are to avoid the creation of areas for concealment and blank walls facing the street.
6. Pedestrian and communal areas are to have sufficient lighting to ensure a high level of safety. These areas must be designed to minimise opportunities for concealment.
7. All development should aim to provide casual surveillance of the street as a means of passive security. This should be achieved by maximising outlooks and views, but minimising the overlooking of neighbouring properties. Opportunities for casual surveillance from dwellings / studios are to be incorporated into the design of shared driveways and where rear access is proposed from laneways.
8. All developments are to incorporate the principles of Crime Prevention through Environmental Design (CPTED).

4.1.3 Sustainable Building Design

OBJECTIVES

1. To ensure that developments are environmentally sustainable in terms of energy and water use.
2. To reduce consumption of potable water and waste water discharge.
3. To maximise opportunities for natural ventilation in residential development.
4. To prevent further air pollution or disturbance to amenity of nearby residents from the use of open fire places and slow combustion stoves.

CONTROLS

1. New residential dwellings, including a residential component within a mixed use building and serviced apartments intended or capable of being strata titled are to be accompanied by a BASIX Certificate and are to incorporate all commitments stipulated in the BASIX Certificate.
2. Buildings and developments not affected by BASIX are to achieve a 40% reduction of baseline potable water consumption. Where the building or development is water intensive (ie. high water user), specific water conservation objectives must be resolved with Council.
3. Building envelopes, depths and internal layouts of all residential development is to facilitate natural ventilation.
4. Open fire places and slow combustion stoves are prohibited.

4.2 Dwelling Design Controls

Under the provisions of the Precinct Plan, development consent is generally required for all dwellings in all residential zones, except where applications meet the criteria for complying development. This section establishes objectives and controls for the following types of residential accommodation as defined in the Growth Centres SEPP:

- dwelling houses;
- semi-detached dwellings;
- attached dwellings;
- abutting dwellings;
- multi-dwelling housing;
- dual occupancy dwellings;
- manor homes;
- residential flat buildings;
- secondary dwellings; and
- studio dwellings.

Additional controls for attached or abutting dwellings, secondary dwellings, studio dwellings, dual occupancies, multi-dwelling housing, manor homes, residential flat buildings and shop top housing are contained in **Section 4.3**.

It is acknowledged that innovative dwelling designs are evolving particularly on lots <300sqm, and design solutions may be developed that meet the objectives but do not comply with the relevant controls. In density bands $\geq 25\text{dw}/\text{Ha}$, there is the opportunity to vary the dwelling design controls where agreed to as part of an integrated housing development application at subdivision approval.

Note: Reference should be made to the Glossary for descriptions of the various dwelling types, and to the relevant Precinct Plan for statutory definitions of land uses.

4.2.1 Summary of Key Controls

The following **Table 10** summarises the types of lots and housing. **Table 10** is diagrammatic only and directs readers to the relevant **Tables 12 to 15** containing the main development controls.

The key controls should be read in conjunction with the controls in the clauses that follow.

Table 10. Summary of lot and dwelling types

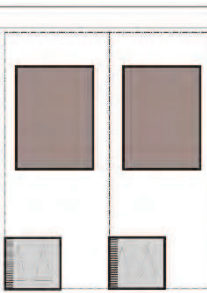
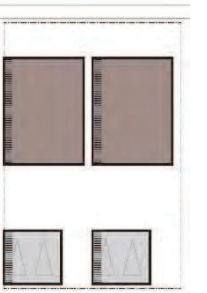
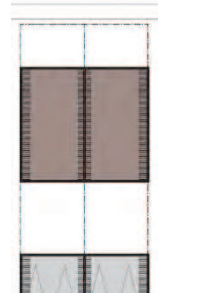
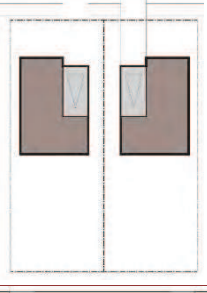
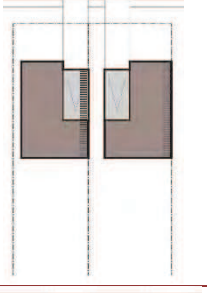
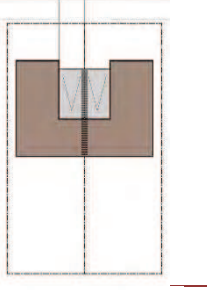
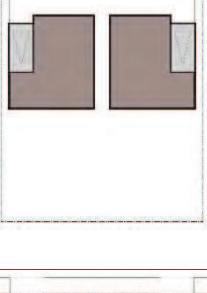
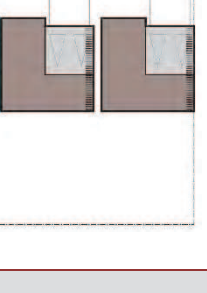
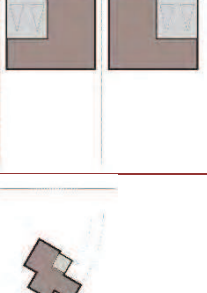
Access	Lot Width	Detached	Zero lot	Abutting/Attached	Controls Table
Rear access	≥4.5m				Table 11
	7>9m				Table 12
Front access	≥9≥15m				Table 13
	>15m				Table 14
	Environment al Living Zone				Table 15

Table 11. Summary of key controls for lots with frontage width $\geq 4.5\text{m}$ for rear accessed dwellings

Element	Control	
Front setback (min)	4.5m to building facade line; 3.5m to building façade fronting open space 3.0m to articulation zone; 2.0m to articulation zone fronting open space.	In density bands $\geq 25\text{dw}/\text{Ha}$ 3m to building façade line, 1.5m to articulation zone.
Side setback (min)	Zero Lot, Attached or Abutting Boundary (benefited lot) Ground floor: 0m Upper floor: 0m	Detached Boundary 0.9m. If lot burdened by zero lot boundary, side setback must be within easement: 0.9m (single storey zero lot wall) 1.2m (double storey zero lot wall)
Maximum length of zero lot line on boundary	Attached/abutting house: 15m (excludes rear loaded garages) upper levels only. No limit to ground floor.	Zero lot house: 15m (excludes rear loaded garages)
Rear setback (min)	0.5m (rear loaded garages to lane)	
Corner lots secondary street setback (min)	1.0m	
Building height, massing and siting	In density areas $\leq 20\text{dw}/\text{Ha}$: 2 storeys maximum (3rd storey subject to clause 4.2.5 (1))	In density areas $\geq 25\text{dw}/\text{Ha}$: 3 storeys maximum
Site Coverage	Upper level no more than 40% of lot area. Refer also clause 0(3)	
Soft landscaped area	Minimum 15% lot area. The first 1m of the lot measured from the street boundary (excluding paths) is to be soft landscaped.	
Principal Private Open Space (PPOS)	In density areas $\leq 20\text{dw}/\text{Ha}$: Min 16m^2 with minimum dimension of 3m.	In density areas $\geq 25\text{dw}/\text{Ha}$: Min 16m^2 with minimum dimension of 3m. 10m^2 per dwelling if provided as balcony or rooftop with a minimum dimension of 2.5m.
Solar access	In density areas $\leq 20\text{dw}/\text{Ha}$: At least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June) to at least 50% of the required PPOS of both the proposed development and the neighbouring properties.	In density areas $\geq 25\text{dw}/\text{Ha}$: At least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June) to at least 50% of the required PPOS of: - all affected neighbouring properties and, - at least 70% of the proposed dwellings.
	For alterations and additions to existing dwellings in all density areas, no reduction in the existing solar access to PPOS of the existing neighbouring properties.	
Garages and car parking	Rear loaded garage or car space only for lots of this type. Minimum garage width 2.4m (single) and 4.8m (double). 1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces.	

Table 12. Summary of key controls for lots with frontage width $\geq 7\text{m}$ and $< 9\text{m}$ for front accessed dwellings

Element	Control	
Front setback (min)	4.5m to building facade line; 3.5m to building façade fronting open space 3.0m to articulation zone; 2.0m to articulation zone fronting open space 5.5m to garage line and minimum 1m behind the building line	
Side setback (min)	Zero Lot, Attached or Abutting Boundary Ground floor: 0m Upper floor: 0m	Detached Boundary 0.9m. If lot burdened by zero lot boundary, side setback must be within easement: 0.9m (single storey zero lot wall) 1.2m (double storey zero lot wall)
Max length of zero lot line on boundary	15m	
Rear setback (min)	4m (ground level) and 6m (upper levels)	
Corner lots secondary street setback (min)	1.0m	
Building height, massing and siting	In density areas $\leq 20\text{dw}/\text{Ha}$: 2 storeys maximum (3rd storey subject to clause 4.2.5 (1))	In density areas $\geq 25\text{dw}/\text{Ha}$: 3 storeys maximum
Site Coverage	Upper level no more than 50% of lot area	
Soft landscaped area	Minimum 15% lot area. The first 1m of the lot measured from the street boundary (excluding paths) is to be soft landscaped.	
Principal Private Open Space (PPOS)	In density areas $\leq 20\text{dw}/\text{Ha}$: Min 16m ² with minimum dimension of 3m.	In density areas $\geq 25\text{dw}/\text{Ha}$: Min 16m ² with minimum dimension of 3m. 10m ² per dwelling if provided as balcony or rooftop with a minimum dimension of 2.5m.
Solar access	In density areas $\leq 20\text{dw}/\text{Ha}$: At least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June) to 50% of the required PPOS of both the proposed development and the neighbouring properties.	In density areas $\geq 25\text{dw}/\text{Ha}$: At least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June) to at least 50% of the required PPOS of: - all affected neighbouring properties and, - at least 70% of the proposed dwellings.
	For alterations and additions to existing dwellings in all density areas, no reduction in the existing solar access to PPOS of the existing neighbouring properties.	
Garages and car parking	Single width garage or car space only. Carport and garage minimum internal dimensions: 3m x 5.5m. 1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces. The garage must be less than 40% of the total area of the front façade.	
Layout	Driveway locations must be paired to preserve on-street parking spaces in front of lots. In density bands $\leq 25\text{dw}/\text{Ha}$, total lot frontage of this lot type not to exceed 20% of the block length due to garage dominance and on-street parking impacts.	

Table 13. Summary of key controls for lots with frontage width $\geq 9\text{m}$ and $\leq 15\text{m}$ for front accessed dwellings

Element	Control	
Front setback (min)	4.5m to building facade line; 3.5m to building façade fronting open space or drainage land 3.0m to articulation zone; 2.0m to articulation zone fronting open space or drainage land 5.5m to garage line and 1m behind the building line	
Side setback (min)	Detached boundary: Ground Floor: 0.9m Upper Floor: 0.9m	Lots with a zero lot boundary (side A): Ground Floor: 0m (Side A), 0.9m (Side B) Upper Floor: 1.5m(Side A), 0.9m (Side B)
Length of zero lot line on boundary	11m	
Rear setback (min)	4m (ground level) and 6m (upper levels)	
Corner lots secondary street setback (min)	2.0m	
Building height, massing and siting	2 storeys maximum (3rd storey subject to clause 4.2.5 (1))	
Site coverage	Single storey dwellings: 60% Lot $\leq 375\text{sqm}$, upper level no more than 40% of lot area. Lot $> 375\text{sqm}$, upper level no more than 35% of lot area.	
Landscaped area	Minimum 25% of allotment area	
Principal Private Open space (PPOS)	Minimum 20m^2 with minimum dimension of 4.0m. 50% of the area of the required PPOS (of both the proposed development and adjoining properties) should receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June)	
Garages and car parking	Lots $\geq 9\text{m}$ and $< 12.5\text{m}$: Where front accessed, single width garages only. Rear lane or side street accessed double garages permitted. Max. carport and garage door width not to exceed 3m (single) or 6m (double)	Lots $\geq 12.5\text{m}$ and $\leq 15\text{m}$: Front or rear accessed single, tandem or double garages permitted Triple garages are not permitted.
	1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces.	

Table 14. Summary of key controls for lots with frontage width > 15m for front accessed dwellings

Element	Control
Front setback (min)	4.5m to building facade line 3.5m to building façade fronting open space or drainage land 3.0m to articulation zone 2.0m to articulation zone fronting open space or drainage 5.5m to garage line and 1m behind the building line
Side setback (min)	Ground Floor: 0.9m (Side A), 0.9m (Side B) Upper Floor: 0.9m (Side A), 1.5m (Side B)
Rear setback (min)	4m (ground level) and 6m (upper levels)
Corner lots secondary street setback (min)	2.0m
Building height, massing and siting	2 storeys (3rd storey subject to clause 4.2.5 (1))
Site coverage	Single storey dwellings: 50% Two storey dwellings: 50% at ground floor and 30% at upper floor
Landscaped area	Minimum 30% of the allotment area
Principal Private Open Space (PPOS)	Minimum 24m ² with minimum dimension 4m 50% of the area of the required principal private open space (of both the proposed development and adjoining properties) should receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June).
Garages and car parking	Front or rear loaded double and tandem garages permitted Maximum garage door width 3m (Single) and 6m (Double) Triple garages are not permitted. 1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces.

Table 15. Summary of key controls for lots in the Environmental Living Zone

Element	Control
Front setback (min)	4.5m to building facade line Façade articulation is to be behind the front setback Garage setback 1m behind the building façade line
Side setback (min)	Ground Floor: 1.5m Upper Floor: 1.5m (Side A), 3m (Side B)
Rear setback (min)	10m
Corner lots secondary street setback (min)	4.5m
Building height, massing and siting	2 storeys (3rd storey subject to clause 4.2.5 (1))
Site coverage	Single storey dwellings: 35% Two (or more) storey dwellings: 25% ground floor and 15% upper floors
Landscaped area	Single storey dwellings: Minimum 55% of the allotment area Two or more storey dwellings: Minimum 60% of the allotment area
Principal Private Open Space (PPOS)	Minimum 24m ² with minimum dimension 4m 50% of the area of the required principal private open space (of both the proposed development and adjoining properties) should receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June).
Garages and car parking	Front or rear loaded double and tandem garages permitted Maximum garage door width 3m (Single) and 6m (Double) where garages front a public road. Triple garages permitted where at least one garage door is not visible from the street or where the total width of the garages is less than 50% of the total width of the building façade. 1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces.

4.2.2 Streetscape and architectural design

Growth Centres neighbourhoods will be composed of a variety of streets with different but equally appealing characters and built form intensity. In low density precincts, suburban streetscapes will be most common but there will also be some streets with a more urban village character. In higher density precincts, urban village streets will be more common but there will also be some suburban streetscapes. The objective is to avoid a monoculture of the one type of street which is neither a successful suburban or urban street.

Figure 35 *illustrates how the designed combination of built form, lot size, setbacks, garaging and landscaping can create distinctive streetscape characters ranging from the low intensity 'garden suburban' character based on landscaped private space around buildings to the built form intensity and public landscapes of urban streets.*



Garden Suburban



Suburban



Urban

Figure 35. The combination of built form, lot size, garaging & landscape creates different streetscapes.

OBJECTIVES

- a. To ensure that buildings are designed to enhance the built form and character of the neighbourhood by encouraging innovative and quality designs that contribute to unified streetscapes.
- b. To encourage a diversity of house types.
- c. To provide a clear distinction between private and public space and to encourage casual surveillance of the street.
- d. To reinforce significant street intersections particularly on open space and other key strategic areas through articulation of corner buildings.

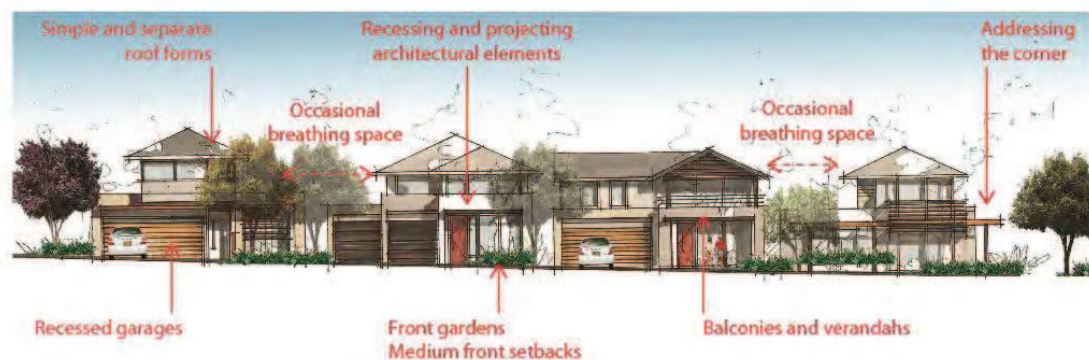
CONTROLS

1. The primary street facade of a dwelling should address the street and must incorporate at least two of the following design features:
 - entry feature or porch;
 - awnings or other features over windows;
 - balcony treatment to any first floor element;
 - recessing or projecting architectural elements;
 - open verandah;
 - bay windows or similar features; or
 - verandahs, pergolas or similar features above garage doors.
2. Corner lot development should emphasise the corner. The secondary street facade for a dwelling on a corner lot should address the street and must incorporate at least two of the above design features. Landscaping in the front setback on the main street frontage should also continue around into the secondary setback.
3. Modulation of the façade should be integral to the design of the building, rather than an unrelated attached element.
4. Eaves are to provide sun shading and protect windows and doors and provide aesthetic interest. Except for walls built to the boundary, eaves should have a minimum of 450mm overhang (measured to the fascia board). Council will consider alternative solutions to eaves so long as appropriate sun shading is provided to windows and display a high level of architectural merit.
5. The pitch of hipped and gable roof forms on the main dwelling house should be between 22.5 degrees and 35 degrees. Skillion roofs, roofs hidden from view by parapet walls, roofs on detached garages, studios and ancillary buildings on the allotment are excluded from this control.
6. Front facades are to feature at least one habitable room with a window onto the street.
7. Carports and garages are to be constructed of materials that complement the colour and finishes of the main dwelling.
8. Streets should be fronted with similar housing types to create a consistent street character. For example, a 'garden suburban' street character will be created where most dwellings are detached on lot widths $\geq 15\text{m}$, perhaps with deeper lots allowing for larger front setbacks and generous landscaping around dwellings. A suburban street character will be created where most dwellings are front loaded, detached or zero lotted on lot widths between 9-15m. An urban street character will be created where most dwellings are zero lotted,

attached/abutting on lot widths less than 9m with rear garages. Streetscape design principles are illustrated at **Figure 36**.



Garden Suburban streetscape principles



Suburban streetscape principles



Urban streetscape principles

Figure 36. Streetscape design principles

4.2.3 Front setbacks

OBJECTIVES

- a. To enable the integration of built and landscape elements to create an attractive, visually consistent streetscape.
- b. To encourage simple and articulated building forms.
- c. To ensure garages do not dominate the streetscape.

CONTROLS

1. Dwellings are to be consistent with the front setback controls and principles in the **relevant Table 11 to Table 15, Figure 37 and Figure 38**.
2. On corner lots, front setback controls are to be consistent with **Figure 39**.
3. To achieve a desired streetscape character, the building façade front setback for a series of lots can be more or less than the setbacks shown in **Table 11 to Table 15** where agreed to as part of the preparation of a Building Envelopes Plan or integrated housing development application at subdivision approval and the front setbacks are attached to the lot titles. However, the front setback to garages must be a minimum of 5.5m.
4. Elements permitted in the articulation zone (shown on **Figure 37, Figure 38 & Figure 39**) include those items listed in Control Streetscape and architectural design4.2.2 (1).
5. Except for rear loaded garages, garages are to be setback at least 5.5m from the street boundary and at least 1m behind the building line of the dwelling.
6. Any building along Windsor Road must have a minimum setback of 20 m from this road.

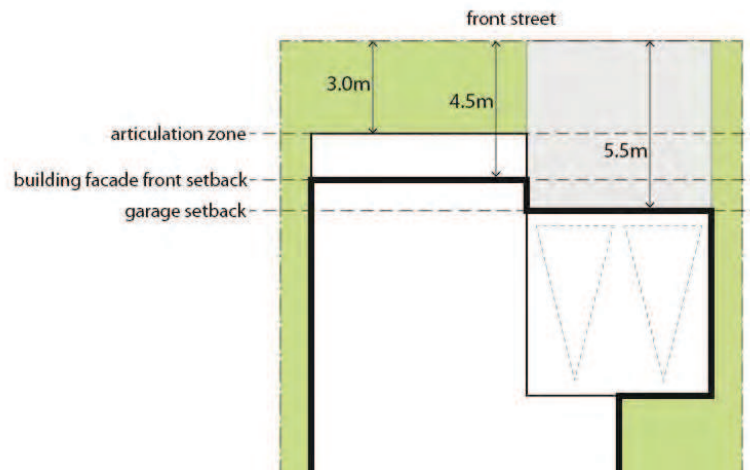


Figure 37. Minimum front setback distances

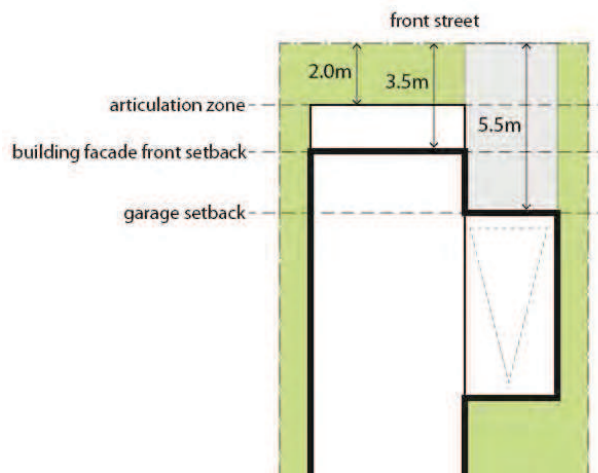


Figure 38. Minimum front setbacks for dwellings fronting open space or drainage land

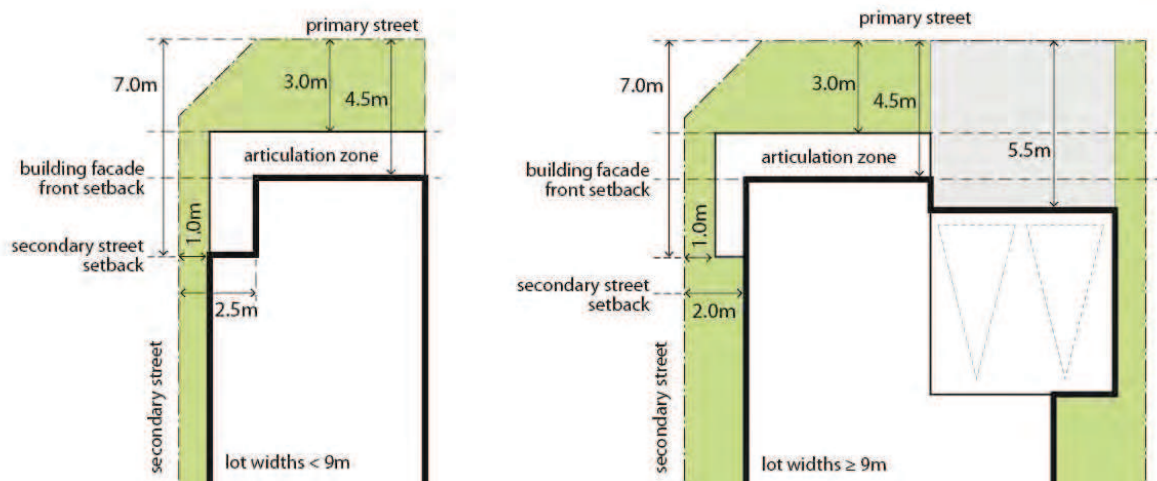


Figure 39. Minimum setbacks for corner lot dwellings

4.2.4 Side and rear setbacks

OBJECTIVES

- a. To create an attractive and cohesive streetscape that responds to the character areas.
- b. To minimise the impacts of development on neighbouring properties.
- c. To provide appropriate separation between buildings.
- d. To create opportunities for articulation on the side walls.

CONTROLS

1. All development is to be consistent with the side and rear setback controls in the relevant **Table 11 to Table 15** and principles in **Figure 40**.
2. The location of a zero lot line (Side A) is to be determined primarily by topography and should be on the low side of the lot to minimise water penetration and termite issues. Other factors to consider include dwelling design, adjoining dwellings, landscape features, street trees, vehicle crossovers and the lot orientation as illustrated at **Figure 40**.
3. For attached or semi-detached dwellings the side setback only applies to the end of a row of attached housing, or the detached side of a semi-detached house.
4. Pergolas, swimming pools and other landscape features/structures are permitted to encroach into the rear setback.
5. The minimum setback to dwellings from a side boundary that adjoins Public Recreation or Drainage land shall be:
 - 3m in the R2, R3 and R4 zones.
 - 4.5m in the Environmental Living zone.
6. For dwellings with a minimum 900mm side setback, projections permitted into side and rear setback areas include eaves (up to 450 millimetres wide), fascias, sun hoods, gutters, down pipes, flues, light fittings, electricity or gas meters, rainwater tanks and hot water units.
7. No overhanging eaves, gutters or services (including rainwater tanks, hot water units, air-conditioning units or the like) of the dwelling on the benefited lot will be permitted within the easement. Any services and projections permitted under **Clause 4.2.4** (6) within the easement to the burdened lot dwelling should not impede the ability for maintenance to be undertaken to the benefitted lot.

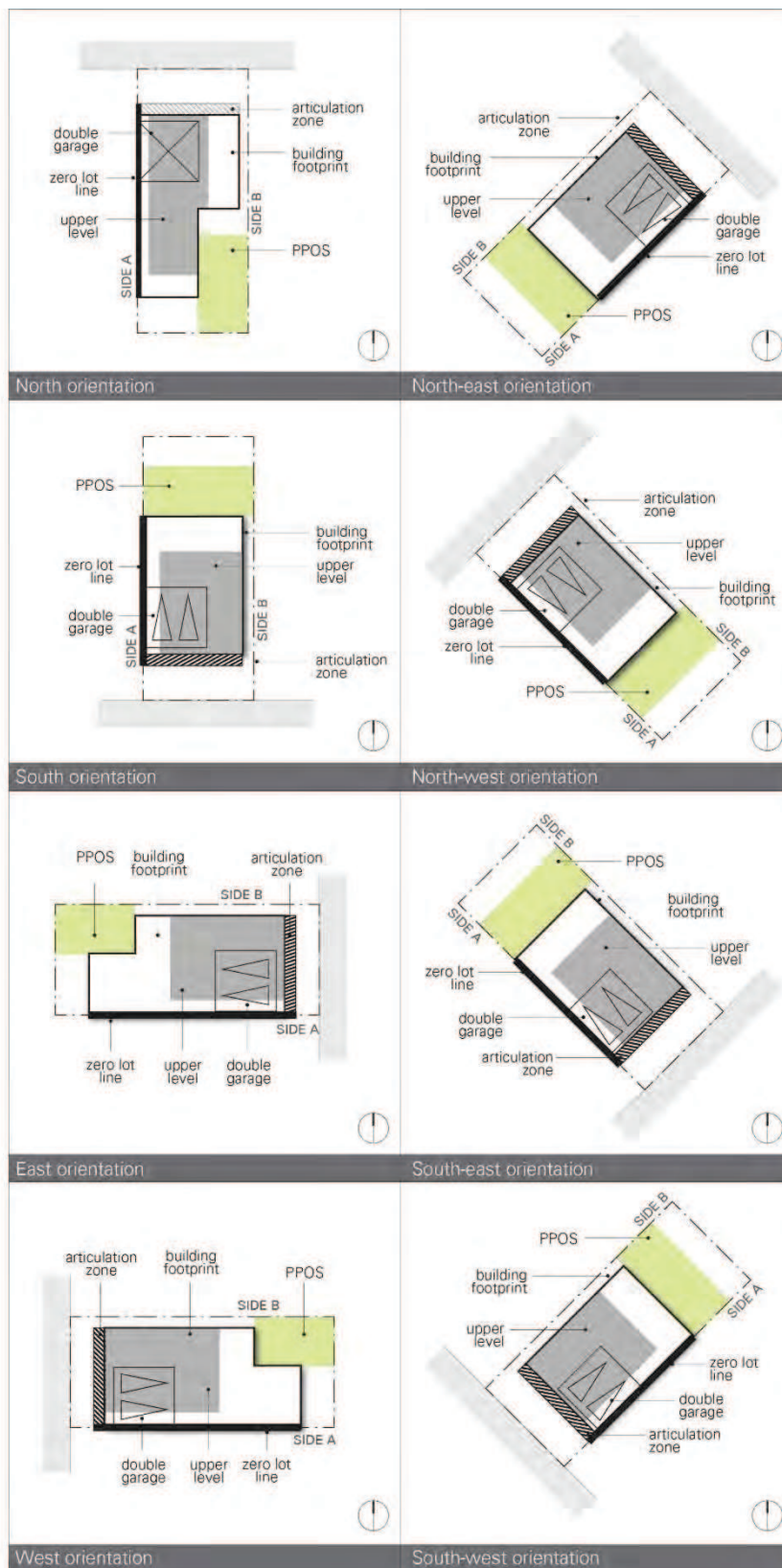


Figure 40. Dwelling and open space siting principles for different lot orientations

8. For battle-axe lots without a street facing elevation setbacks are to be determined in the context of surrounding lots, built form and the location of private open space. An example is shown in **Figure 41**.
9. The upper floor of dwellings on battle-axe lots must be setback so as not to impact adversely on the existing or future amenity of any adjoining land on which residential development is permitted, having regard to overshadowing, visual impact and privacy.
10. For a battle-axe lot with direct frontage to land zoned for a public purpose or a street facing elevation (such as access denied lots), the front setback controls in **Section 4.2.3** are to apply to the lot boundary adjoining the public purpose zone, and side and rear setbacks are to apply to lot boundaries determined relative to the front setback boundary as shown in **Figure 42**.
11. For corner lots $\geq 15\text{m}$ lot width with shallow depths (i.e. approximately square corner lots) the rear setback can be varied to be consistent with the side setbacks in Table 14 and Table 15 provided the minimum private open space and solar access requirements to the proposed and adjoining properties are met.

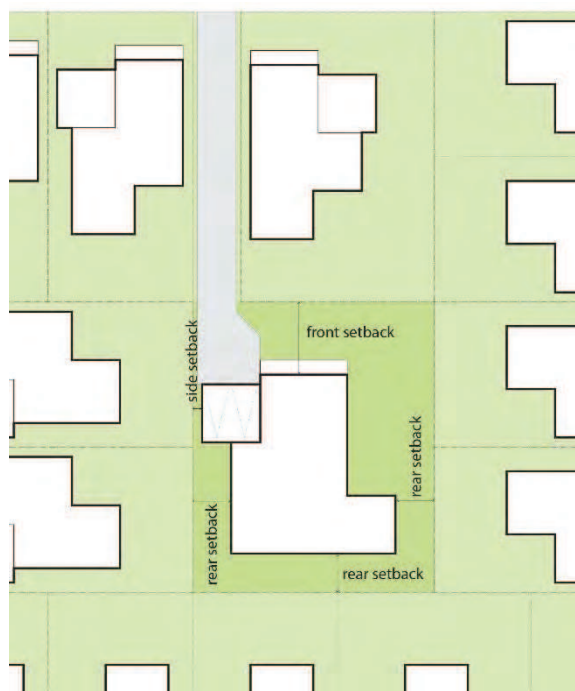


Figure 41. Battle axe lot (without any street frontage) example of setbacks

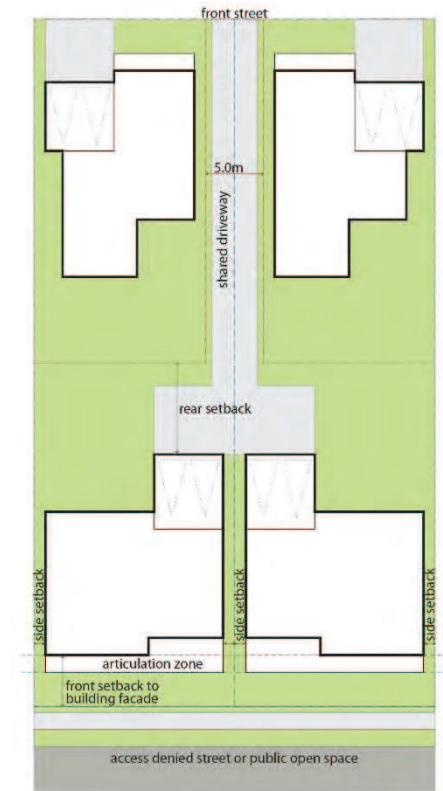


Figure 42. Battle axe lot (fronting access denied road) setbacks

4.2.5 Dwelling Height, Massing and Siting

OBJECTIVES

- a. To ensure development is of a scale appropriate to protect residential amenity.
- b. To ensure building heights achieve built form outcomes that reinforce quality urban and building design.

CONTROLS

1. Dwellings are to be generally a maximum of 2 storeys high. Council may permit a 3rd storey if it is satisfied that:
 - the dwelling is located on a prominent street corner; or
 - the dwelling is located adjacent to a neighbourhood or local centre, public recreation or drainage land, a golf course, or a riparian corridor; or
 - the dwelling is located on land with a finished ground level slope equal to or more than 15%, and is not likely to impact adversely on the existing or future amenity of any adjoining land on which residential development is permitted, having regard to overshadowing, visual impact and any impact on privacy; or
 - the third storey is within the roof line of the building (i.e. an attic).

Note: Reference should be made to clause 4.2.3 of the relevant Precinct Plan for statutory height limits.

2. All development is to comply with the maximum site coverage as indicated in the relevant **Table 11 to Table 15**.
3. Site coverage is the proportion of the lot covered by a dwelling house and all ancillary development (e.g. carport, garage, shed) but excluding unenclosed balconies, verandahs, porches, al fresco areas etc.
4. The ground floor level shall be no more than 1m above finished ground level.
5. Dwellings on a battle-axe-lot without public open space or street frontage are to be a maximum of 2 storeys high.

4.2.6 Landscaped Area

Landscaped area is defined as an area of open space on the lot, at ground level, that is permeable and consists of soft landscaping, turf or planted areas and the like.

OBJECTIVES

- a. To encourage the use of native flora species and low maintenance landscaping.
- b. To contribute to effective stormwater management, management of micro-climate impacts and energy efficiency.
- c. To ensure a balance between built and landscaped elements in residential areas.
- d. To create the desired street character.

CONTROLS

1. The minimum soft landscaped area within any residential lot is to comply with the controls and principles in the relevant **Table 11 to Table 15**. **Figure 43** illustrates areas of a lot that can contribute towards the provision of soft landscaped area and principal private open space.
2. Plans submitted with the development application must indicate the extent of landscaped area and nominate the location of any trees to be retained or planted.
3. Surface water drainage shall be provided as necessary to prevent the accumulation of water.
4. Use of low flow watering devices is encouraged to avoid over watering. Low water demand drought resistant vegetation is to be used for the majority of landscaping, including native salt tolerant trees.

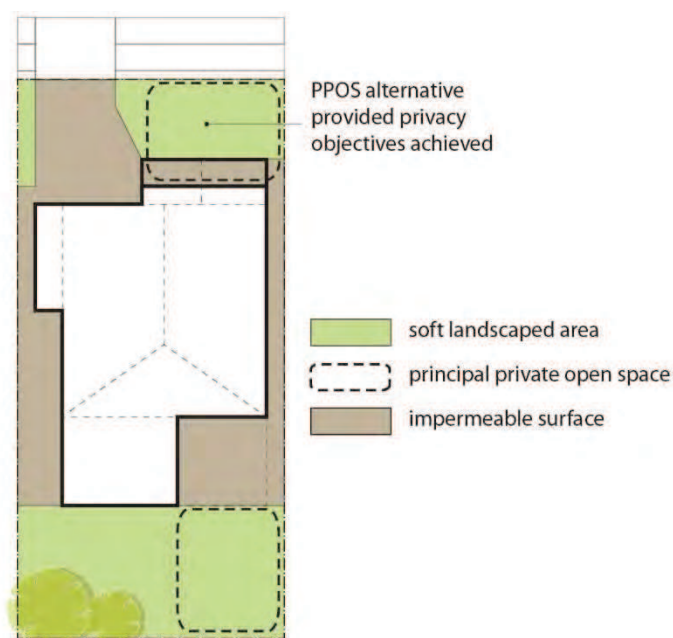


Figure 43. Soft landscaped area and principal private open space

4.2.7 Private Open Space

OBJECTIVES

- a. To provide a high level of residential amenity with opportunities for outdoor recreation and relaxation.
- b. To enhance the spatial quality, outlook, and usability of private open space.
- c. To facilitate solar access to the living areas and private open spaces of the dwelling.

CONTROLS

1. Each dwelling is to be provided with an area of Principal Private Open Space (PPOS) consistent with the requirements of the relevant **Table 11 to Table 15**.
2. The location of PPOS is to be determined having regard to dwelling design, allotment orientation, adjoining dwellings, landscape features, topography.
3. The PPOS is required to be conveniently accessible from the main living area of a dwelling or alfresco room and have a maximum gradient of 1:10. Where part or all of the PPOS is permitted as a semi-private patio, balcony or rooftop area, it must be directly accessible from a living area.
4. Open space at the front of the dwelling can only be defined as PPOS where this is the only means of achieving the solar access requirements of control 1 above. PPOS at the front of a dwelling must be designed to maintain appropriate privacy (for example raised level above footpath or fencing or hedging) and be consistent with the streetscape design controls in **Section 4.2.2**.

4.2.8 Garages, Storage, Site Access and Parking

OBJECTIVES

- a. To control the number, dimensions and location of vehicle access points. To reduce the visual impact of garages, carports, and parking areas on the streetscape.
- b. To provide safe, secure and convenient access to parking within garages, carports and parking areas, with casual surveillance of private driveways from dwellings and from the street.
- c. To minimise conflict between pedestrians and vehicles at the junction of driveways and footpaths.
- d. To provide predominantly on-site parking for residents.

CONTROLS

1. 1-2 bedroom dwellings will provide at least 1 car space.
2. 3 bedroom or more dwellings will provide at least 2 car spaces.
3. At least one car parking space must be located behind the building façade line where the car parking space is accessed from the street on the front property boundary.

Note: A car space may include a garage, carport or other hard stand area constructed of materials suitable for car parking and access. The required car parking spaces specified above may be provided using a combination of these facilities, including use of the driveway (within the property boundary only) as a parking space.

4. Vehicular access is to be integrated with site planning from the earliest stages of the project to eliminate/reduce potential conflicts with the streetscape requirements and traffic patterns, and to minimise potential conflicts with pedestrians.
5. Driveways are to have the smallest configuration possible (particularly within the road verge) to serve the required parking facilities and vehicle turning movements and shall comply with AS2890.
6. The location of driveways is to be determined with regard to dwelling design and orientation, street gully pits and trees and is to maximise the availability of on-street parking.

Notes: Section 3.7 requires plans of subdivision to nominate driveway locations and preferred building envelopes. The design of dwellings should refer to the approved subdivision plans and be consistent with the nominated driveway locations to the greatest practical extent.

Controls for driveways and access to corner lots are contained in **Section 3.6.3 and Figure 28**.

7. Driveways are not to be within 1m of any drainage facilities on the kerb and gutter.
8. Planting and walls adjacent to driveways must not block lines of sight for pedestrians, cyclists and motorists.
9. Driveways are to have soft landscaped areas on either side, suitable for water infiltration.
10. Garages are to be designed and located in accordance with the controls in relevant **Table 11 to Table 15**.
11. Garage design and materials are to be consistent with the dwelling design.

FOR FRONT LOADED GARAGES:

12. Single garage doors should be a maximum of 3m wide and double garage doors should be a maximum of 6m wide.
13. Minimum internal dimensions for a single garage are 3m wide by 5.5m deep and for a double garage 5.6m wide by 5.5m deep.
14. Garage doors are to be visually recessive through use of materials, colours, and overhangs such as second storey balconies.
15. Three car garages are only permitted in the Environmental Living and Large Lot Residential zones where:
 - At least one of the garage doors is not directly visible from a public road; or
 - One of the car spaces is in a stacked configuration; or
 - The total width of the garage is not more than 50% of the length of the building facade.

FOR GARAGES ACCESSED FROM A LANEWAY OR SHARED DRIVEWAY:

16. Minimum garage door width of 2.4m (single) and 4.8m (double).
17. All garages, site access and parking will be designed in accordance with the **Department of Planning and Environment Delivery Note: Laneways**

4.2.9 Visual and Acoustic Privacy

OBJECTIVES

- a. To site and design dwellings to meet projected user requirements for visual and acoustic privacy, whilst minimising visual and acoustic impacts of development on adjoining properties.

CONTROLS

1. Direct overlooking of main habitable areas and private open spaces should be minimised through building layout, window and balcony location and design, and the use of screening devices, including landscaping.
2. Habitable room windows with a direct sightline to the habitable room windows in an adjacent dwelling within 9 metres are to:
 - be obscured by fencing, screens or appropriate landscaping; or
 - be offset from the edge of one window to the edge of the other by a distance sufficient to limit views into the adjacent window; or
 - have sill height of 1.7 metres above floor level; or
 - have fixed obscure glazing in any part of the window below 1.7 metres above floor level.
3. The design of dwellings must minimise the opportunity for sound transmission through the building structure, with particular attention given to protecting bedrooms and living areas.
4. In attached dwellings, bedrooms of one dwelling are not to share walls with living spaces or garages of adjoining dwellings, unless it is demonstrated that the shared walls and floors meet the noise transmission and insulation requirements of the Building Code of Australia.

5. Living areas and service equipment such as air conditioning units must be located away from bedrooms of neighbouring dwellings.
6. Dwellings along Hezlett Road, Withers Road and Samantha Riley Drive should be designed to minimise the impact of traffic noise.

4.2.10 Fencing

OBJECTIVES

- a. To ensure boundary fencing is of a high quality and does not detract from the streetscape.

CONTROLS

1. Front fencing shall be in harmony with the street, consistent in design and style with its dwelling and a maximum of 1m high. Separate application is to be made for fences higher than 1m and for courtyard walls. Side and rear fencing are to be a maximum of 1.8m high. Front fences and walls are to not impede safe sight lines for traffic.
2. On corner lots the preferred outcome is for the dwelling to front both street frontages providing a better overall streetscape presentation. Where fencing to the secondary street frontage is proposed, it is not to exceed 1.8m high for more than one third of the length of the secondary road frontage, if relevant.
3. On corner lots the front fencing style is to be continued along the secondary street frontage to at least 1m behind the building line of the dwelling. Side fences higher than 1m are not to extend past the Building Facade Line or Garage Building Line.
4. Where a dwelling is located adjacent to open space, boundary fencing is to be of a high quality material and finish. The design of the fencing is to permit casual surveillance of the open space and provide the dwelling with outlook towards the open space. Fencing that adjoins mews or rear access ways is to permit casual surveillance. Colorbond or timber paling or lapped/capped fencing can only be used internally between dwelling lots.
5. Where cut is proposed on the boundary of a lot, retaining walls are to be constructed with side fence posts integrated with its construction (relevant construction details are required with retaining wall approval). Otherwise retaining walls must be located a minimum of 450mm from the side or rear boundary of the lot containing the cut.

4.3 Additional controls for certain dwelling types

4.3.1 Attached or abutting dwellings

Additional controls for attached or abutting dwellings are outlined below, and should be read in conjunction with those in **Section 4**.

OBJECTIVES

- a. To ensure that the development of attached or abutting dwellings creates an architecturally consistent street character.

CONTROLS

1. It is preferred that garages for attached dwellings are located at the rear of the lot. Where attached dwellings have frontage to a collector road, all vehicle access and parking is to be located at the rear of the lot.
2. Attached or abutting dwellings should have a pleasing rhythm and order when seen together as a group, rather than appear as a random arrangement of competing dwellings. Each dwelling should benefit from the unified design of the whole form, a co-ordinated style and base colour palette. Individuality can be added as small details or accent colours, rather than strikingly different forms.

4.3.2 Secondary dwellings, studio dwellings and dual occupancies

Controls for secondary dwellings, studio dwellings or dual occupancies are in part determined by whether the secondary, principal or dual occupancy dwelling is proposed at the time of the application or at some point in the future to be strata subdivided. Strata subdivisions create the need for separate or common property dwelling entries, parking and open space to service each dwelling.

The **Glossary** of this DCP provides further explanation and examples of secondary dwelling, studio dwellings or dual occupancy types. The controls that follow apply to all forms of secondary dwellings, studio dwellings and dual occupancies.

OBJECTIVES

- a. To enable the development of a diversity of dwelling types.
- b. To contribute to the availability of affordable housing.
- c. To promote innovative housing solutions that are compatible with the surrounding residential environment.
- d. To provide casual surveillance to rear lanes.

CONTROLS - SECONDARY DWELLINGS AND STUDIO DWELLINGS

1. Secondary dwellings and studio dwellings are to comply with the controls in **Section 4.2**, except where the controls in this clause differ, in which case the controls in this clause take precedence.
2. Secondary dwellings and studio dwellings are to comply with the key controls in **Table 16**.
3. The maximum site coverage control for upper floors in the relevant **Table 11** to **Table 15** may be exceeded by the combined upper floor coverage of the secondary or studio dwelling and principal dwelling, providing that:
 - The privacy of the principal dwelling and dwellings on adjoining land is not compromised; and
 - Solar access to the principal private open space of neighbouring lots is not significantly reduced.
4. The maximum gross floor area of a studio dwelling is 75m².
5. The finishes, materials and colours of the secondary dwelling or studio dwelling are to complement the principal dwelling in its construction features.
6. For secondary dwellings, windows and private open spaces must not overlook the private open space of any adjacent dwellings. For studio dwellings, windows and private open spaces must not overlook the private open space of any adjacent dwellings including the principal dwelling. Windows that potentially overlook adjacent lots must either have obscured glazing, be screened or have a minimum sill height of 1.5m above floor level.
7. Secondary or studio dwellings and associated garages may have a zero lot setback to one side boundary and may be attached to another garage/secondary dwelling on an adjoining lot, particularly where the secondary or studio dwelling is associated with an attached or semi-detached dwelling.

Table 16. Key controls for secondary dwellings and studio dwellings

Element	Secondary Dwelling	Studio Dwelling (strata)
On-site car parking	No additional car parking space required.	One additional dedicated on-site car parking space. Car parking space to be located behind building facade line of principal dwelling. Car parking space not to be in a stacked configuration.
Principal Private open space	No separate private open space required.	Balcony accessed directly off living space having minimum size of 8.0m ² with minimum dimension of 2m -
Subdivision	Subdivision from principal dwelling not permitted.	Strata title subdivision only from the principal dwelling on the land
Access	Separate direct access to a street, laneway or shared driveway way not required.	Access to be separate from the principal dwelling and is to front a public street, lane or shared private access way or Combined access for the principal dwelling and secondary dwelling to be through communal land as shown on the strata plan.
Services and facilities	No separate services or facilities required.	Provision for separate services, such as mail delivery and waste collection, and an on-site garbage storage area so that bins are not visible from public street or laneway. To be located on a street address that is able to be accessed by garbage collection and mail delivery services. May be serviced from the front residential street via the principal dwelling lot.

8. Where the secondary or studio dwelling is built to a zero lot line on a side boundary, windows are not to be located on the zero lot wall unless that wall adjoins a laneway, public road, public open space or drainage land.
9. Studio dwellings are to have balconies or living areas that overlook laneways for casual surveillance.
10. Rear garages with secondary or studio dwellings may have first level balconies facing the lane provided the balcony remains within the lot boundary. Where 2m deep, overhanging balconies for private open space requirements of studio dwellings are located along a lane, the application must demonstrate how garages setback underneath avoid creating an overly wide lane and ambiguous space opportunities for illegally parked cars, trailers, bins etc.
11. Where a secondary or studio dwelling is built over a rear garage and separated from the upper levels of the principal dwelling, there must be a minimum separation of 5m between the upper floor rear façade of the principal dwelling and the secondary or studio dwelling.
12. Studio dwellings are to be located at the rear of the lot only where the lot has access from a rear lane or secondary street on a corner lot.
13. Studio dwellings must comply with separation controls nominated in Australian Standards and the National Construction Code.
14. Studio dwellings are not permitted where the principal dwelling is an attached dwelling, unless:
 - The studio dwelling is located above a rear loaded garage; and
 - The studio dwelling has direct access to a public road or laneway; and
 - Garbage and mail facilities are accessible by residents and by service vehicles.

CONTROLS – DUAL OCCUPANCIES

1. Dual occupancies are to comply with the controls in **Section 4.2**, except where the controls in this clause differ, in which case the controls in this clause take precedence.
2. The maximum site coverage control for second storeys in the relevant **Table 11 to Table 15** may be exceeded by the combined 2nd storey coverage of both dwellings in a dual occupancy, providing that:
 - The privacy of the principal dwelling and dwellings on adjoining land is not compromised; and
 - Solar access requirements for the principal private open space can be met for the principal dwelling and dwellings on adjoining lots.
3. The design of both dwellings in a dual occupancy development is to be consistent in construction features, finishes, materials and colours.
4. Detached dual occupancy dwellings are not to include zero lot lines for the second dwelling where the second dwelling is located at the rear of the lot.
5. Dual occupancy development is not permitted on a lot that contains an attached dwelling.
6. Dual occupancy dwellings are permitted at the rear of lots (i.e. behind a dwelling that has frontage to a principal street, whether attached or detached to that dwelling) only where:
 - Each dwelling has direct pedestrian and vehicle access to a public road; and
 - Garbage and mail facilities are accessible by service vehicles and by the occupants of the dwellings.
7. Dual occupancy development referred to in control 6 above is preferred to be located on corner lots.
8. For dual occupancies on corner lots, the rear setback can be varied to be consistent with side setbacks in Section 4.2.4 provided the minimum private open space and solar access requirements to the proposed and adjoining properties are met.
9. Where the dual occupancy dwellings are to be strata subdivided:
 - private open space is to be provided for each dwelling in accordance with the relevant controls in **Table 11 to Table 15**, or
 - shared private open space is to be provided equivalent to 15% of the site area and shown as communal space on the strata plan, and a minimum area of private open space of 10m² with a minimum dimension of 2.5m is to be provided for each dwelling.
10. The minimum landscaped area on a lot containing a dual occupancy development is to be 20% of the site area.
11. Where practical for front loaded driveway access, shared driveway crossings of the nature strip are to be provided to service both dwellings.

4.3.3 Multi dwelling housing

OBJECTIVES

- a. To ensure that the design of multi-dwelling housing is consistent with the character of residential areas within the Precinct.
- b. To ensure the quality of multi-dwelling housing is of a high quality and contributes to the amenity of residents.

CONTROLS

1. Multi-dwelling housing sites are to have direct frontage to a public road (i.e. not on battle-axe lots).
2. Multi-dwelling housing is to comply with the controls in **Table 17**.
3. Controls for adaptable dwellings (requirement triggered by minimum number of dwellings in development, located elsewhere in DCP) also apply to multi-dwelling housing. Adaptable dwellings are preferably to be single level accommodation at ground level and be located on the street frontage.
4. A landscape plan is to be submitted with every application for multi-dwelling housing.
5. Where a multi dwelling housing development includes a studio dwelling with rear lane vehicle access, the controls for a studio dwelling shall apply.

Table 17. Key controls for multi dwelling housing

Element	Controls
Site coverage (maximum)	50%
Landscaped area (minimum)	30% of site area
Principal Private open space (PPOS)	Min 16m ² with minimum dimension of 3m. 10m ² per dwelling if provided as balcony or rooftop with a minimum dimension of 2.5m.
Front setback (minimum)	4.5m to building façade line; 3.0m to articulation zone
Corner lots secondary street setback (min)	2m
Side setback (minimum)	Ground floor 0.9m. Upper floor 0.9m
Rear setback (minimum)	4m (excluding rear lane garages or studio dwellings) 0.5m to rear lane (garages or studio dwellings)
Zero lot line (minimum)	Not permitted on adjacent lot boundaries (except rear lane garages and studio dwellings)
Internal building separation distance (minimum)	5m (unless dwellings are attached by a common wall)
Car parking spaces	1 car parking space per dwelling, plus 0.5 spaces per 3 or more bedroom dwelling, plus 1 visitor space per 5 dwellings. Car parking spaces to be behind building line or garages fronting the street to be set back a minimum of 1m from the building setback Where garages front the street, the maximum width of a garage door is 6m and each garage is to be separated by a dwelling façade or landscaped area.
Garages and car parking dimensions (minimum)	Covered: 3m x 5.5m Uncovered: 2.5m x 5.2m Aisle widths must comply with AS 2890.1 1-2 bedroom dwellings will provide at least 1 car space. 3 bedroom or more dwellings will provide at least 2 car spaces.

4.3.4 Controls for residential flat buildings, manor homes and shop top housing

The controls in **Section 4.3.3** do not apply to residential flat buildings, manor homes and shop top housing, unless specifically referenced in the provisions that follow. The following clauses set out the controls for these types of housing. Additional controls for residential flat buildings and shop top housing may be contained in *SEPP 65 – Design Quality of Residential Flat Development*.

OBJECTIVES

- a. To establish a high quality residential environment where all dwellings have a good level of amenity.
- b. To encourage a variety of housing forms within residential areas.
- c. To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.
- d. To ensure shop top housing and mixed use developments are appropriate in terms of form and scale for their location.
- e. To ensure shop top housing and mixed use developments reflect the role of centres as articulated within Council's Centres Direction.

CONTROLS

1. In density areas of 20dw/Ha and 25dw/Ha, manor homes may only be located on corner lots.
2. Residential flat buildings are to:
 - be located on sites with a minimum street frontage of 30m, and
 - have direct frontage to an area of the public domain (including streets and public parks), and
 - not adversely impact upon the existing or future amenity of any adjoining land upon which residential development is permitted with respect to overshadowing impact, privacy impact or visual impact.
3. All residential flat buildings are to be consistent with:
 - the guidelines and principles outlined in *SEPP No. 65 – Residential Flat Development*; and
 - the primary controls set out in **Table 18**, which take precedence over the above where there is any inconsistency.
4. In all residential flat building developments containing 10 dwellings or more, a minimum of 10% of all apartments are to be designed to be capable of adaptation for access by people with all levels of mobility. Dwellings must be designed in accordance with the Australian *Adaptable Housing Standard (AS 4299-1995)*, which includes 'pre-adaptation' design details to ensure visitability is achieved.
5. Where possible, adaptable dwellings are to be located on the ground floor. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.
6. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the *Australian Adaptable Housing Standard (AS 4299-1995)*.

7. Car parking and garages allocated to adaptable dwellings must comply with the requirements of Australian Standards for disabled parking spaces.
8. A landscape plan is to be submitted with every application for residential flat buildings.

Table 18. Key controls for residential flat buildings, manor homes and shop top housing

Element	R2, R3 zones (shop top housing only)	R3, R4 zones (residential flat buildings)	R2, R3, R4 zones Manor home	B1, B2, B3 and B4 zones
Site coverage (maximum)	50% of site area	50%	50% of site area	N/A
Landscaped area (minimum)	30% of site area	30% of site area	30% of site area	N/A
Communal open space	15% of site area where the development includes 4 or more dwellings	15% of site area	Not required.	15% of site area. This control is able to be varied where the applicant demonstrates the development has good access to public open space or where the area of private open space is more than the minimum specified below.
Principal Private open space (PPOS)	Min. 8m ² per dwelling with min. dimension of 2.0m	Min. 10m ² per dwelling with min. dimension of 2.5m	Minimum 16m ² per dwelling with min. dimension of 3.0m; or Min. 8m ² per dwelling with min. dimension of 2.0m if provided as balcony or rooftop.	Min. 8m ² per dwelling with min. dimension of 2.0m
Front setback (minimum)	Determined by ground floor setback	6m Balconies and other articulation may encroach into the setback to a maximum of 4.5m from the boundary for the first 3 storeys, and for a maximum of 50% of the façade length.	4.5m to building façade line. 3m to articulation zone. 5.5m to garage line and 1m behind the building line.	<i>Residential flat buildings:</i> 4.5m to building façade line <i>Shop top housing:</i> 0m for first floor 4m for floors above first floor
Corner lots secondary street setback (minimum)	3m	6m	2m	<i>Residential flat buildings:</i> 4.5m to building façade line <i>Shop top housing:</i> 0m for first floor 4m for floors above first floor
Side setback (minimum)	2m	Buildings up to 3 storeys: 3m Buildings above 3 storeys: 6m	Buildings up to 2 storeys 1.5m	Refer to Other Part of DCP regarding B zonings.
Rear setback (minimum)	4m (excluding garages)	6m	4m (excluding rear garages)	8m

Element	R2, R3 zones (shop-top housing only)	R3, R4 zones (residential flat buildings)	R2, R3, R4 zones Manor home	B1, B2, B3 and B4 zones
Zero lot line (minimum)	Not permitted	Not permitted	Not permitted to adjacent lots	Permitted on side boundaries only
Habitable room/balcony separation distance (minimum) for buildings 3 storeys and above	12m	12m	N/A	Refer to Other Part of DCP regarding B zonings
Car parking spaces	1-2 bedrooms: 1 space (min) 3 bedrooms or more: 2 spaces (min) — may be provided in a 'stack parking' configuration. Garages to be set back 1m behind the building line	1 space per dwelling, plus 0.5 spaces per 3 or more bedroom dwelling. May be in a 'stack parking' configuration. Car parking spaces to be located below ground or behind building line 1 visitor car parking space per 5 apartments Bicycle parking spaces: 1 per 3 dwellings	1-2 bedrooms: 1 space (min) 3 bedrooms or more: 2 spaces (min) — may be provided in a 'stack parking' configuration.	1 space per dwelling, plus 0.5 spaces per 3 or more bedroom dwelling. May be in a 'stack parking' configuration. Car parking spaces to be located below ground or behind the building 1 visitor car parking space per 5 apartments (may be above ground) Bicycle parking spaces: 1 per 3 dwellings
Garage Dominance	N/A	A maximum of two garage doors per 20m of lot frontage facing any one street frontage.	A maximum of two garage doors facing any one street frontage.	N/A
Garages and car parking dimensions (min)	Covered: 3m x 5.5m Uncovered: 2.5m x 5.2m Aisle widths must comply with AS 2890.1			

Element	R1 zone (residential flat buildings as part of mixed use developments)	R3 zone (residential flat buildings)	R3 zone (manor homes)	B1 and B2 zones (manor homes)	B1 and B2 zones and R1 zone in Hezlett Road centre (shop top housing developments and residential flat buildings as part of mixed use developments)
Building and ceiling height	The applicable height of buildings standard under Clause 6.6 of the North Kellyville Precinct Plan equates to the following maximum building heights in storeys: 7 metres: 2 Minimum floor to ceiling heights are: 3.3m for commercial floors 2.7m for residential floors	N/A	N/A	N/A	The applicable height of buildings standard under Clause 6.6 of the North Kellyville Precinct Plan equates to the following maximum building heights in storeys: 7 metres: 2 storeys 10 metres: 3 storeys Minimum floor to ceiling heights are: 3.3m for commercial floors 2.7m for residential floors
Site coverage (maximum)	N/A	50% of site area	50% of site area	N/A	N/A
Landscaped area (minimum)	Required within setbacks and common open space areas	30% of site area	30% of site area	N/A	Required within setbacks and common open space areas
Communal open space	20m² per dwelling where the development includes 5 or more dwellings 75% must be provided at ground level and well landscaped Common open space must only be accessible by the residents of the development	15% of site area	Not required.	15% of site area. This control is able to be varied where the applicant demonstrates the development has good access to public open space or where the area of private open space is more than the minimum specified below.	20m² per dwelling where the development includes 5 or more dwellings 75% must be provided at ground level and well landscaped Common open space must only be accessible by the residents of the development

Element	R1 zone (residential flat buildings as part of mixed use developments)	R3 zone (residential flat buildings)	R3 zone (manor homes)	B1 and B2 zones (manor homes)	B1 and B2 zones and R1 zone in Hezlett Road centre (shop top housing developments and residential flat buildings as part of mixed use developments)
Principal Private open space (PPOS)	Ground level 4m x 3m Min 10m ² per dwelling with minimum dimension 2.5m	Min. 10m ² per dwelling with min. dimension of 2.5m	Minimum 16m ² per dwelling with min. dimension of 3.0m; or Min. 8m ² per dwelling with min. dimension of 2.0m if provided as balcony or rooftop.	Min. 8m ² per dwelling with min. dimension of 2.0m	Ground level 4m x 3m Min 10m ² per dwelling with minimum dimension 2.5m
Front setback (minimum)	Zero if active frontage provided 3m if no active frontage provided 3m for residential floors above the first level	6m Balconies and other articulation may encroach into the setback to a maximum of 4.5m from the boundary for the first 3 storeys, and for a maximum of 50% of the façade length.	4.5m to building façade line. 3m to articulation zone. 5.5m to garage line and 1m behind the building line.	Residential flat buildings: 4.5m to building façade line Shop top housing: 0m for first floor 4m for floors above first floor	Zero if active frontage provided 3m if no active frontage provided 3m for residential floors above the first level
Corner lots secondary street setback (minimum)	As per front setbacks	6m	2m	Residential flat buildings: 4.5m to building façade line Shop top housing: 0m for first floor 4m for floors above first floor	As per front setbacks
Side setback (minimum)	6m where adjoining low density residential development 3m where not adjoining low density residential development Zero setback may be considered where the development adjoins a business zone or a public road or laneway	Buildings up to 3 storeys: 3m Buildings above 3 storeys: 6m	Buildings up to 2 storeys 1.5m	Refer to Other Part of DCP regarding B zonings.	6m where adjoining low density residential development 3m where not adjoining low density residential development Zero setback may be considered where the development adjoins a business zone or a public road or laneway
Rear setback (minimum)	As per side setbacks	6m	4m (excluding rear garages)	8m	As per side setbacks
Zero lot line (minimum)	N/A	Not permitted	Not permitted to adjacent lots	Permitted on side boundaries only	N/A

Element	R1 zone (residential flat buildings as part of mixed use developments)	R3 zone (residential flat buildings)	R3 zone (manor homes)	B1 and B2 zones (manor homes)	B1 and B2 zones and R1 zone in Hezlett Road centre (shop top housing developments and residential flat buildings as part of mixed use developments)
Habitable room/balcony separation distance (minimum) for buildings 3 storeys and above	12m	12m	N/A	Refer to Other Part of DCP regarding B zonings.	Refer to Other Part of DCP regarding B zonings.
Access and entries	Separate site and building access points are to be provided for the residential and commercial components of developments.	N/A	N/A	N/A	Separate site and building access points are to be provided for the residential and commercial components of developments.
Car parking spaces	In accordance with The Hills DCP 2012 Part C Section 1 – Parking Preferred location for parking is within a basement or to the rear of developments	1 space per dwelling, plus 0.5 spaces per 3 or more bedroom dwelling. May be in a 'stack parking' configuration. Car parking spaces to be located below ground or behind building line 1 visitor car parking space per 5 apartments Bicycle parking spaces: 1 per 3 dwellings	1-2 bedrooms: 1 space (min) 3 bedrooms or more: 2 spaces (min) – may be provided in a 'stack parking' configuration.	1 space per dwelling, plus 0.5 spaces per 3 or more bedroom dwelling. May be in a 'stack parking' configuration. Car parking spaces to be located below ground or behind the building 1 visitor car parking space per 5 apartments (may be above ground) Bicycle parking spaces: 1 per 3 dwellings	In accordance with The Hills DCP 2012 Part C Section 1 – Parking Preferred location for parking is within a basement or to the rear of developments
Garage Dominance	N/A	A maximum of two garage doors per 20m of lot frontage facing any one street frontage.	A maximum of two garage doors facing any one street frontage.	N/A	N/A
Garages and car parking dimensions (min)	Covered: 3m x 5.5m Uncovered: 2.5m x 5.2m Aisle widths must comply with AS 2890.1				

Element	R1 zone (residential flat buildings as part of mixed use developments)	R3 zone (residential flat buildings)	R3 zone (manor homes)	B1 and B2 zones (manor homes)	B1 and B2 zones and R1 zone in Hezlett Road centre (shop top housing developments and residential flat buildings as part of mixed use developments)
Other controls	Refer to the Residential Flat Building or Business Sections of The Hills DCP 2012 for controls relating to unit size/mix, visual privacy, solar access, private open space, ventilation, storage and waste management.	N/A	N/A	N/A	Refer to the Residential Flat Building or Business Sections of The Hills DCP 2012 for additional controls relating to unit size/mix, visual privacy, solar access, private open space, ventilation, storage and waste management.

4.3.5 Site Servicing

OBJECTIVES

- a. To ensure that site facilities are functional and accessible to all residents and are easy to maintain.
- b. To ensure that site facilities are thoughtfully integrated into the development and are visual and physically unobtrusive.
- c. To minimise the impact of service access on pedestrians and retail, commercial and residential frontage.
- d. To minimise the visual and acoustic impact of site servicing.

CONTROLS

Controls for Residential Flat Buildings and Multi Dwelling Housing:

- 1. Garbage, mail box structures, service meters and the like are to be integrated with the overall design of the buildings and/or landscaping. Garbage storage areas are not permitted in front setbacks.
- 2. Provide communal or individual laundries to every dwelling and at least one external clothes drying area per building.
- 3. Loading facilities must be at the rear of each development.
- 4. Service access is permitted from rear lanes, side streets or right of ways.

4.3.6 Adaptable housing

OBJECTIVES

- a. To ensure a sufficient proportion of dwellings include accessible layouts and features to accommodate changing requirements of residents.
- b. To ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

CONTROLS

1. 10% of all apartments are to be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995).
2. Where possible, adaptable dwellings are to be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities.
3. The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).
4. Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard for disabled parking spaces.



5.0

Special Area Controls

5.0 SPECIAL AREA CONTROLS

Special Area Controls outline the objectives and design principles relating to areas that require detailed planning including the North Kellyville Local Centre, Hezlett Road Neighbourhood Centre, Stringer Road Neighbourhood Centre and 45 Hezlett Road.

5.1 Overall controls

The overall controls apply to the retail and commercial development within North Kellyville Local Centre, Hezlett Road Neighbourhood Centre and Stringer Road Neighbourhood Centre.

5.1.1 Active Street Frontages and Address

OBJECTIVES

1. To promote pedestrian activity and safety in the public domain.
2. To maximise active street fronts in the local and neighbourhood centres.
3. To define areas where active streets are required.
4. To provide an identifiable and desirable street address to residential buildings outside of areas where active street fronts are required.
5. To clearly and consistently define the street edge.
6. To allow for outlook to and surveillance of the street.

CONTROL

Active Street Frontages

1. Active frontage uses are defined as one of a combination of the following at street level:
 - entrance to retail,
 - shop front,
 - glazed entries to commercial and residential lobbies occupying less than 50% of the street frontage, to a maximum of 12m frontage,
 - café or restaurant if accompanied by an entry from the street,
 - active office uses, such as reception, if visible from the street, and/or
 - public building if accompanied by an entry.
2. Active street fronts, built to the street alignment, are required on the ground level of all retail and commercial development, and on areas identified in **Figure 44** and **Figure 45**.
3. Large format retail such as supermarkets and parking areas are to be sleeved or hidden by retail and

commercial uses as shown in **Figure 44**.

4. Ground floor residential uses (other than entries to lobbies to residential uses above ground level) are not permitted on the town centre Main Street.
5. Active ground floor uses are to be at the same general level as the footpath and be accessible directly from the street.
6. Restaurants, cafes and the like are to consider providing openable shop fronts.
7. Only open grill or transparent security shutters (at least 50% visually transparent) are permitted to retail and commercial frontages.
8. On corner sites, shop fronts are to wrap around the corner.
9. Entrances are to be visible to the street and well lit.

Street Address

1. Street address is defined as:
 - a building that is not raised more than an average of 700mm above street level, up to a maximum of 1m,
 - contains entries, lobbies and habitable rooms with clear glazing overlooking the street, and
 - excludes car parking areas.
2. Provide multiple entrances for large developments including an entrance on each street frontage.
3. Provide direct 'front door' access to ground floor residential units.
4. Residential buildings are to provide not less than 65% of the lot width as street address.
5. In mixed-use buildings, a separate street address is required to retail, commercial and residential uses.

5.1.2 Awnings

OBJECTIVES

1. To provide shelter for public streets where most pedestrian activity occurs.
2. To address the streetscape by providing a consistent street frontage in the centres.

CONTROLS

1. Provide continuous street frontage awnings to all new commercial and retail developments within the town centre and village centres.
2. Wrap awnings around corners on street corner buildings.
3. Cantilever awnings from buildings are to have a minimum soffit height of 3.2m and a maximum of 4m.
4. Low profile awnings with slim vertical fascias and/or eaves (not to exceed 300mm) are encouraged.
5. Awnings are to be a minimum of 3m deep (dependant on street width) and setback from the kerb a minimum of 1.2m to allow clearance for street furniture, trees etc.
6. Awnings must be complementary to each other and maintain continuity.
7. Steps for design articulation or to accommodate sloping streets are to be integrated with the building design and should not exceed 700mm.
8. Vertical canvas drop blinds are permissible along the street edge, but they are not to carry advertising or signage.
9. Provide under awning lighting to facilitate night use as well as improve public safety. Lighting is to be recessed into the soffit of the awning, or wall mounted onto the building.
10. Any under awning signage is to maintain a minimum clearance of 2.8m from the level of the pavement.
11. All residential buildings are to be provided with awnings or other weather protection at their main entrance area.

5.1.3 Signage

OBJECTIVES

1. To permit adequate identification and business advertising that achieves a very high level of design quality in terms of graphic design, its relationship to the architectural design of buildings and the character of streetscapes.

2. To promote signage that complements the scale and character of a building.
3. To avoid the creation of visual clutter on buildings and streetscapes.
4. To ensure compatibility with the desired urban character of adjacent land uses.
5. To consider the amenity of residential development and the visual quality of the public domain.
6. To ensure that advertising signs do not adversely affect the safety of motorists and other road users.

CONTROLS

General Signage:

1. Signage must be integrated into the building façade and achieve a high degree of compatibility with the architectural design of the supporting building having regard to its composition, fenestration, materials, finishes, and colours. Architectural features of the building are not to be obscured.
2. One under-awning sign is permitted on each shop or commercial premises. at a rate of one sign per 8m of shop front.
3. Signs including real estate signs and temporary signs are not allowed to stand on the top of awnings.
4. The total area of all signs is not to exceed 1m² of advertising area per 1m of shop frontage. This includes signs painted on blinds or windows.
5. Signs that contain additional advertising promoting products or services not related to the approved use of the premises or site (such as the logos of brands or products) are not permitted.
6. Signs painted on, or applied to the roof, are prohibited.
7. Signs in excess of a total of 50 square metres in area are to be considered on their merits.
8. Directional signage and public notices are to have a coordinated appearance and help to establish the town centre as a unique destination and place.

Illuminated Signs:

1. Illumination (including cabling) of signs is to be:
 - concealed, or
 - integral with the sign, or
 - provided by means of carefully designed and located remote or spot lighting.
2. The ability to adjust the light intensity of illuminated signs is to be installed where the consent authority considers necessary.
3. Restricted hours shall be imposed on the operation of illuminated signs where continuous illumination is considered to impact adversely on the amenity of residential buildings, serviced apartments or other visitor accommodation, or have other adverse environmental effects.

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

Signage and Road Safety:

1. Signs are regarded as prejudicial to the safety of road users if they:
 - obscure or interfere with road traffic signs and signals or with the view of a road hazard, oncoming vehicles, or any other vehicle or person, or an obstruction which should be visible to drivers or other road users,
 - give instructions to traffic by use of the word 'stop' or other directions, which could be confused with traffic signs,
 - are of such a design or arrangement that any variable messages or intensity of lighting impairs drivers' vision or distract drivers' attention, and
 - are situated at locations where the demands on drivers' concentration due to road conditions are high such as at major intersections or merging and diverging lanes.

5.1.4 Parking

OBJECTIVES

1. To provide an appropriate level of on-site car and bicycle parking provision in North Kellyville to cater for a mix of development types and location.
2. To minimise the visual impact of on-site parking.
3. To integrate parking facilities with the overall site planning and landscape.
4. To encourage the use of bicycles.

CONTROLS

1. On-site car and bicycle parking is to be provided in accordance with the standards set out in **Table 19** and **Table 20**.
2. The parking area per vehicle is to be in accordance with AS 4299 and AS/NZS 2890.6.
3. All outdoor parking areas shall be appropriately screened by planting and/or fencing.
4. At grade car parks shall provide landscaping and tree planting in accordance with BHSC DCP Part D Section 1 - Parking.
5. Basement parking must be provided for Mixed Use Development. Basements are not to be raised more than 1m above ground level.
6. In the local centre and neighbourhood centres, parking and servicing is to be located to the rear of buildings, or below grade, to minimise impacts on the streetscape and pedestrian amenity.
7. Above ground parking structures are not permitted except in the central mixed use blocks in the town centres. Where fronting a street or public space (excluding service lanes), above ground parking is to be set a minimum of 8m behind the building façade.
8. Rear lanes should be utilised where possible to access parking areas.
9. All bicycle parking is to be in secure and accessible locations. Bicycle parking for employees is to have weather protection.
10. Refer **Sections 4.3.3 & 4.3.4** of this DCP for residential flat building and multi dwelling housing parking provisions.
11. Refer to The Hills DCP 2012 Part C Section 1 – Parking for shop top housing parking provisions.

Table 19. On site car parking for commercial/retail premises

Use	Requirement
Retail Uses	1 space per 25 square metres GFA (Gross Floor Area) for supermarkets and Discount Department Stores; 1 per 50 square metres GFA for main street, village centre and other retail.
Commercial	1 space per 50 square metres GFA.
Educational Establishments	1 space per full-time employee or classroom, whichever is greater, plus 1 space per 10 students over the age of 17 years. Where development includes the provision of a church or community facilities in conjunction with a school, additional parking must be provided at half the applicable rate.
Child Care Centres	1 space per employee plus 1 space per 6 children enrolled for visitors and/or parent parking

Table 20. On site bicycle parking for commercial/retail premises

Use	Requirement
Retail	Provide the following minimum rates of bicycle parking. • Supermarkets: • 1 space per 750 square metres of GFA for employees; • 1 space per 1000 square metres of GFA for shoppers. • Speciality shops: • 1 space per 300 square metres of GFA for employees; • 1 space per 300 square metres of GFA for shoppers. • Neighbourhood shops: • 8 bicycle spaces minimum.
Commercial	Provide the following minimum rates of bicycle parking. • Employee: • 1 space per 150 square metres of GFA. • Visitor: • 1 space per 750 square metres of GFA.
Community Centres	• 6 bicycle spaces at the community centre.
Parks	• 16 bicycle spaces at sports grounds;
Primary and High Schools	• One bicycle space per 5 students above Grade 4 at primary and high schools.

5.1.5 Site Servicing

OBJECTIVES

1. To ensure that site facilities are functional and accessible to all residents and are easy to maintain.
2. To ensure that site facilities are thoughtfully integrated into the development and are visual and physically unobtrusive.
3. To minimise the impact of service access on pedestrians and retail, commercial and residential frontage.
4. To minimise the visual and acoustic impact of site servicing.

CONTROLS

Commercial / Retail Premises and Mixed Use Development

1. Garbage, mail box structures, service meters and the like are to be integrated with the overall design of the buildings and/or landscaping. Garbage storage areas are not permitted along the primary street frontage.
2. Provide adequate space within any new development for the unloading and loading of service vehicles.
3. Loading facilities must be located to the rear of each development.
4. Ventilation stacks are to be utilised wherever possible to vent shops and basements.
5. All service areas are to be screened from existing developments.
6. Service access is permitted from rear lanes, side streets or right of ways.

5.2 North Kellyville Local Centre

OBJECTIVES

1. To create a vibrant local centre that provides amenity to the North Kellyville Precinct.
2. To ensure that the detailed design of the Local Centre is undertaken in a coordinated manner in order to achieve a high quality urban design outcome.
3. To ensure that the North Kellyville Local Centre is well served by public transport.
4. To provide a good range of retail and commercial services for the local population whilst minimising risk of over supply and adverse economic impact on existing centres.

CONTROLS

1. The North Kellyville Local Centre is to be located generally in accordance with **Figure 2**. An indicative layout plan of the Local Centre is shown at **Figure 44**.
2. The Local Centre is to be consistent with the following principles -

Function and uses:

1. A maximum of 15,000m² GFA for retail and commercial premises.
2. Incorporate a range of retail, commercial and community uses to serve the needs of the community.
3. Incorporate higher density housing and mixed use development.
4. Concentrate intensive retail uses along and fronting Withers Road and Hezlett Road.
5. Locate active uses at ground floor, throughout the Local Centre, in particular fronting the Main Street and all open space.
6. Provide a mix of uses that promote an active and vibrant town centre.

Built form:

1. Provide a range of building heights, up to a maximum of 4.3 storeys with a transition in heights to surrounding residential areas.
2. Relate building heights to street widths and functions to promote a comfortable urban scale of development.
3. Define streets and open spaces with buildings that are generally built to the street edge, have a consistent street wall height and provide a continuous street frontage along all key streets.
4. Sleeve all large format retail premises and decked parking areas with active uses. Blank walls visible from the public domain are to be avoided.
5. Promote diversity and activity along the main street with a variety of frontage widths for retail shops.
6. Building heights are to take into account view lines and solar access to the public domain.

7. Residential and mixed use development is to be consistent with the guidelines and principles outlined in *SEPP No. 65 – Residential Flat Development* and the *Residential Flat Design Code* (Urban Design Advisory Service and Planning NSW 2002).
8. A high quality built form and energy efficient architectural design that promotes a 'sense of place' and modern character for the Local Centre.
9. Waste storage and collection areas are to be accommodated and designed appropriately to minimise impacts, in particular within mixed use development.

Parking and access:

1. Access to parking, loading docks and waste collection areas must not be provided from Withers Road nor Hezlett Road frontages.
2. Basement, semi-basement or decked parking is preferred over large expanses of at-grade parking.
3. At grade parking areas are to be generally located behind building lines and within the centre of street blocks away from street corners. Notwithstanding this, Council will consider transitional arrangements for parking where an application is supported by a staging plan that indicates compliance with the above desired parking location principles upon ultimate development.
4. Parking is to be provided in accordance with Part D, Section 1 of BHSC DCP 2007. Opportunities for shared parking provision for complementary uses within the local centre are to be provided.
5. On-street parking is to be provided on all streets within the Centre to contribute to street life and surveillance and designed in accordance with AS 2890.5-1993.

Public domain:

1. Parks and plazas are to act as a focal point for the Local Centre and community activities and are to be designed to ensure adaptability and flexibility in use and function over time.
2. Incorporate a town square / civic plaza, adjacent to the main street which provides an urban landscape setting and a civic focus for the community.
3. Provide high amenity, pedestrian streets with generous footpath widths.
4. Incorporate the principles of Crime Prevention Through Environmental Design (CPTED) and Safer by Design (NSW Police) into all development within the Local Centre.
5. Weather protection for pedestrians is to be provided in key locations.
6. Provide a high quality landscape design including a co-ordinated package of street furniture and lighting that enhances the character of the Local Centre.
7. Provide street tree and open space planting that establishes generous shade for pedestrians.
8. Design all signage and advertising in a co-ordinated manner.
9. Site servicing and loading facilities, waste storage and other infrastructure is to be designed to minimise visual impact on the public domain and impacts on neighbours.



Figure 44. Indicative layout of North Kellyville Local Centre

5.2.1 Hezlett Road Neighbourhood Centre

OBJECTIVES

1. To create a vibrant, mixed use Neighbourhood Centre that provides a range of small-scale retail, business and community uses which serve the needs of people who live and work in the surrounding neighbourhood.
2. To ensure that the detailed design of the neighbourhood centre is undertaken in a co-ordinated manner in order to achieve a high quality urban design outcome.
3. To provide opportunities for medium density housing.

CONTROLS

1. The Hezlett Road Neighbourhood Centre is to be located generally in accordance with **Figure 2**.
2. The Neighbourhood Centre is to be consistent with the indicative layout shown in **Figure 45** and the following principles -

Function and uses:

1. Provide for a maximum of 3,000m² GFA for retail and commercial premises within the neighbourhood centre to cater for the needs of the local population.
2. Incorporate a range of local retail, commercial and community uses to serve the needs of the local community.
3. Incorporate residential and shop-top housing adjacent to public open space areas Hezlett Road.

Built form:

1. Provide a range of building heights, up to a maximum of 4 2 4 storeys.
2. Buildings are to define the entry to the residential areas and open spaces adjacent to the neighbourhood centre and are to be generally built to the street edge.
3. Avoid blank walls visible from principal street and the public domain. Large format retail premises are to be sleeved where appropriate with active uses.
4. Residential and mixed use development is to be consistent with the guidelines and principles outlined in *SEPP No. 65 – Residential Flat Development* and the *Residential Flat Design Code* (Urban Design Advisory Service and Planning NSW 2002).
5. Establish a high quality built form and energy efficient architectural design that promotes a 'sense of place' and modern character for the Neighbourhood Centre.

Parking and access:

1. Access to parking, loading docks and waste collection areas must not be provided from Hezlett Road.

2. Locate at grade parking areas generally behind building lines and screened from streets and public open space.
3. Opportunities for shared parking provision for complementary uses within the local centre are to be provided.
4. On-street parking is to be provided within the Centre and designed in accordance with AS 2890.5-1993.

Public domain:

1. Provide a high quality landscape design including a co-ordinated package of street furniture and lighting that enhances the character of the Centre.
2. Provide street tree and open space planting that establishes generous shade for pedestrians.
3. Incorporate the principles of Crime Prevention through Environmental Design (CPTED) and Safer by Design (NSW Police) into all development within the Neighbourhood Centre.
4. Site servicing and loading facilities, waste storage and other infrastructure is to be designed to minimise visual impact on the public domain and impacts on neighbours.



Figure 45. Indicative layout of Hezlett Road Neighbourhood Centre

5.2.2 Stringer Road Neighbourhood Centre

OBJECTIVES

1. To encourage the activation of the area around the playing fields by provision of cafes and restaurants.
2. To create a vibrant, mixed use Neighbourhood Centre that provides a range of small-scale retail, business and community uses which serve the needs of people who live and work in the surrounding neighbourhood.
3. To ensure that the detailed design of the neighbourhood centre is undertaken in a co-ordinated manner in order to achieve a high quality urban design outcome.
4. To provide opportunities for medium density housing.

CONTROLS

1. The Stringer Road Neighbourhood Centre is to be located generally in accordance with **Figure 2**.
2. The Neighbourhood Centre is to be consistent with the indicative layout shown in **Figure 46** and the following principles.

Function and uses:

1. Provide for a maximum of 1,000m² GFA for retail and commercial premises within the neighbourhood centre to cater for the needs of the local population.
2. Incorporate a range of local retail, and community uses to serve the needs of the local community.
3. Incorporate residential and shop-top housing adjacent to public open space areas.

Built form:

1. Maximum building height is 2 storeys.
2. Buildings are to define the entry to the residential areas and open spaces adjacent to the Centre and are to be generally built to the boundary.
3. Avoid blank walls visible from the public domain.
4. Residential and mixed use development is to be consistent with the guidelines and principles outlined in *SEPP No. 65 – Residential Flat Development* and the *Residential Flat Design Code* (Urban Design Advisory Service and Planning NSW 2002).
5. Establish a high quality built form and energy efficient architectural design that promotes a 'sense of place' and modern character for the Neighbourhood Centre.

Parking and access:

1. Access to parking, loading docks and waste collection areas must not be provided from the Main Street of the Neighbourhood Centre.

2. Parking is to be provided in accordance with Part D, Section 1 of BHSC DCP 2007. Opportunities for shared parking provision for complementary uses within the local centre are to be provided.
3. On-street parking is to be provided within the Centre and designed in accordance with AS 2890.5-1993.

Public domain:

1. Provide street tree and open space planting that establishes generous shade for pedestrians.
2. Incorporate the principles of Crime Prevention through Environmental Design (CPTED) and Safer by Design (NSW Police) into all development within the Centre.
3. Site servicing and loading facilities, waste storage and other infrastructure is to be designed to minimise visual impact on the public domain and impacts on neighbours.



Figure 46. Indicative Layout Plan of Stringer Road Neighbourhood Centre

5.2.3 45 Hezlett Road, “Yalta”

OBJECTIVES

1. To conserve the heritage significance of “Yalta”.
2. To protect and enhance the heritage curtilage of Yalta.
3. To ensure that the development around Yalta respects the heritage value of the building.

CONTROLS

1. The location of the 45 Hezlett Road “Yalta” is as shown in **Figure 47**.
2. All development in and around 45 Hezlett Road should be in accordance with the requirements of State Environmental Planning Policy - Sydney Region Growth Centres 2006 (Amendment No 3)
3. All development must comply with the curtilage requirement indicated in **Figure 48**.
4. Prior to any development that affects 45 Hezlett Road, an assessment of heritage significance is to be undertaken which addresses the significance assessment criteria contained in the NSW Heritage Manual. An applicant is to demonstrate to Council how any proposed development that affects 45 Hezlett Road responds to any identified archaeological constraints. If any relics are to be retained in situ, an applicant is to outline all management measures to ensure ongoing protection of the relics.
5. Single storey development respecting the character of Yalta is encouraged in the immediate surrounding area.
6. The visual impact of dwelling houses and around the site should be minimised through appropriate siting, landscaping and the use of materials.



Figure 47. European archaeological heritage significance

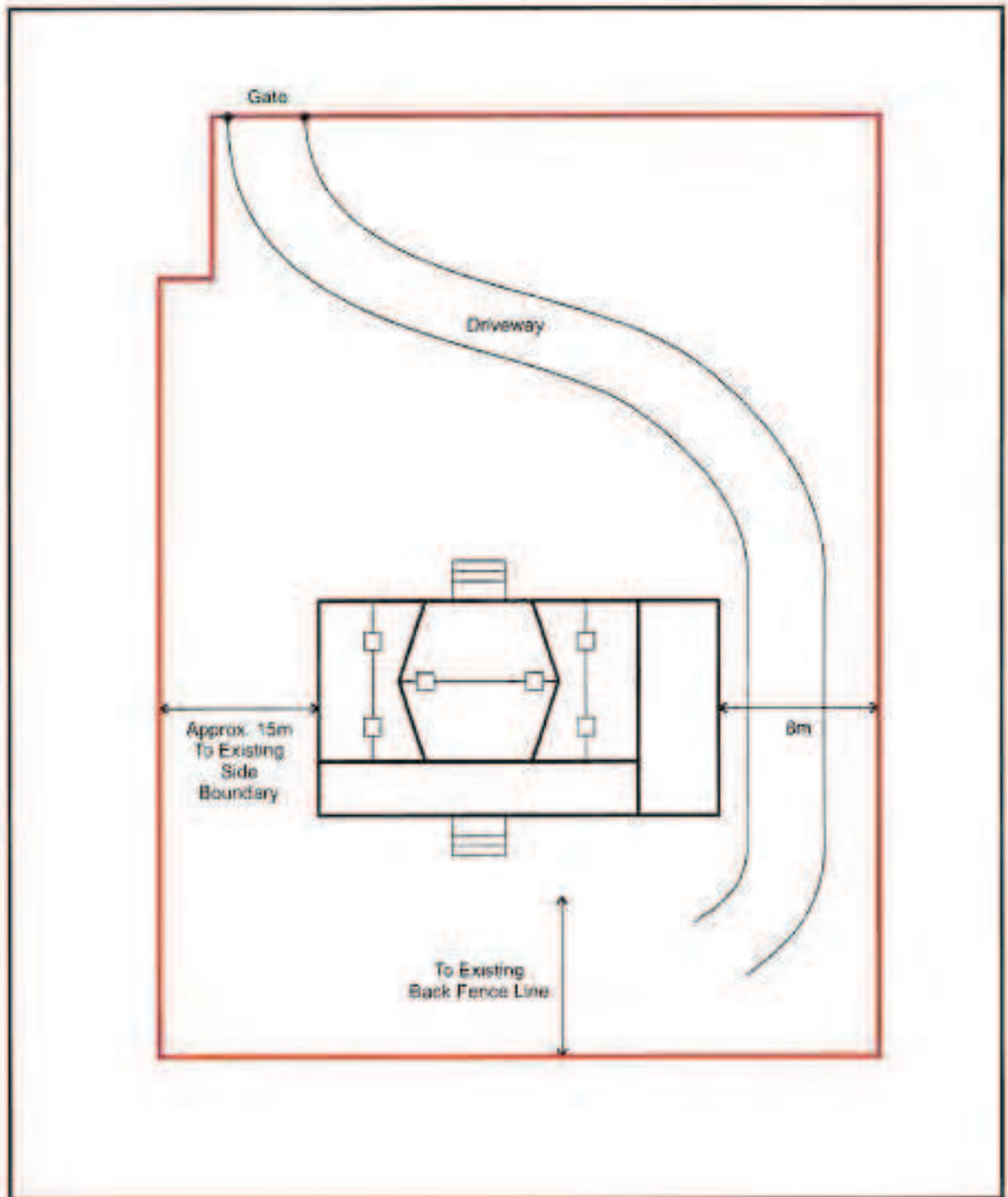


Figure 48. Curtilage plan for Yalta

THIS PAGE IS INTENTIONALLY BLANK



6.0

Managing The Environment

6.0 MANAGING THE ENVIRONMENT

This section outlines the objectives and development controls relating to general Environmental Management of issues that apply across the entire North Kellyville Precinct including conservation areas, integrated stormwater management, soils and salinity, Aboriginal and European heritage, bushfire hazard management, tree retention and biodiversity, contamination and acoustics.

6.1 Integrated Stormwater Management

OBJECTIVES

1. To ensure that appropriate stormwater management measures are implemented to maximise opportunities to maintain and enhance the quality and integrity of urban waterways through both the construction and occupation phases of development, while encouraging and creating an urban form where risks to life and property, as a result of either minor or major flooding, are minimised;
2. To maximise opportunities for a best practice Water Sensitive Urban Design approach at the individual lot, overall development and regional scales;
3. To ensure water quality in receiving waterways is not adversely affected by pollutants typically resulting from urban development;
4. To ensure the impacts on waterway channel bed and bank erosion is limited by minimising the changes in flow rates, runoff volumes and flow durations within receiving waterways;
5. To ensure that stormwater runoff is treated as a valuable resource, that development maintains and/or restores the natural water balance and the re-use of stormwater for non-potable purposes is maximised;
6. To minimise the impact of nuisance flooding to a level acceptable to the community; and
7. To reduce the impacts typically associated with urbanisation on receiving waterways and wetlands, including a reduction in streamflow erosion potential.

CONTROLS

All development proposals are to provide for integrated stormwater management measures in accordance with the publication "North Kellyville Masterplan - Water Cycle Management Strategy" (Worley Parsons, 2008) and as summarised below.

1. All habitable rooms shall have floor levels of a minimum of 500mm above the 1 in 100 year Annual Recurrence Level (ARI) flood level.
2. All stormwater drainage designs are to comply with the most up to date revision of Council's "Design Guidelines Subdivisions/Developments".
3. Post-construction (occupation) phase stormwater management objectives are to be achieved by all development through the innovative application of Water Sensitive Urban Design (WSUD). WSUD is to be adopted throughout all development to provide sustainable and integrated management of land and water resources, incorporating best

practice stormwater management, water conservation and environmental protection measures.

The overall water quality and stream erosivity performance objectives applicable to the North Kellyville Precinct have been provided by the NSW Department of Environment and Climate Change (DECC). Those performance objectives are set out in **Table 21**.

Table 21. DECC water quality and stream erosivity performance objectives for the North West Growth Centres

	WATER QUALITY				ENVIRONMENTAL FLOWS
	% reduction in pollutant loads ¹				Stream Erosion Index
	Gross Pollutants (>5mm)	Total Suspended Solids	Total phosphorus	Total Nitrogen	(Post development duration of flows above 'stream forming flow') / (natural duration of flows above 'stream forming flow') ²
Stormwater management objective	90	85	65	45	3.5 - 5 ³
'Ideal' stormwater outcome ⁴	100	95	95	85	1

1. Load based objectives are expressed as the reduction in pollutant loads required, compared to the proposed development with no stormwater management measure.
 2. For the purposes of these objectives, the 'stream forming flow' is defined as 50% of the 2 year ARI design flowrate estimated for the catchment under natural conditions.
 3. Development proposals should be designed to achieve a value as close to one as practical.
 4. These 'ideal stormwater outcomes' reflect the stormwater outcomes considered necessary to protect the receiving environment from the impact of urban development (i.e. achieve the environmental values). They are included to demonstrate the gap between environmental objectives and the extent to which those objectives can be met by 'best practice' water sensitive urban design, and encourage the attainment of outcomes beyond the stormwater management objectives, where practicable.
3. The WSUD strategy prepared for all development is to take into account water quality and stream erosivity objectives, together with attenuating flow rates and runoff volumes to acceptable levels following urban development.

The report by Worley Parsons describes a suite of hydrological, hydraulic and water quality modelling which has been undertaken to support implementation of the required WSUD approach.

For the purposes of that modelling, the North Kellyville Precinct has been subdivided into two hydrological catchments, each identified by the receiving waterway name. The catchments are:

- Smalls Creek Catchment
- Cattai Creek Catchment

The modelling has identified the rates of total detention storage volume requirements, together with WSUD infrastructure and surface area requirements, on a per developable hectare basis for the Precinct.

WSUD infrastructure recommended for implementation in the North Kellyville Precinct includes:

- Rainwater Tanks
 - Raingardens (bio-retention basin)
 - Road side swales (bio-infiltration)
 - Gross Pollutant Traps (GPTS)
 - Combined constructed wetlands and detention basins.
4. For all development in the Smalls Creek Catchment a minimum detention storage volume of 239m³ per hectare is required. Typically, this storage volume may be made up by each element of WSUD infrastructure, as shown in **Table 22**.

Table 22. Storage volume within the Smalls Creek Catchment

Smalls Creek Catchment WSUD Element	Percentage (%) of Contribution of WSUD Element to Catchment Requirement
Rainwater Tanks	5
Raingardens	8
Swales	30
Detention Basins	57

5. For all development in the Cattai Creek Catchment a minimum detention storage volume of 185m³ per hectare is required.

Typically, this storage volume may be made up by each element of WSUD infrastructure, as shown in the **Table 23**.

Table 23. Storage volume within the Cattai Creek Catchment

Cattai Creek Catchment WSUD Element	Percentage (%) of Contribution of WSUD Element to Catchment Requirement
Rainwater Tanks	5
Additional Active Storage	6
Raingardens	8
Swales	26
Detention Basins	55

6. The percentage contribution of each WSUD element to catchment detention storage requirements, as noted above, are provided as a guide only.

Applicants are able to prepare individual WSUD strategies, provided the total detention storage requirements for each catchment are achieved.

7. WSUD elements are also required to make a contribution towards achieving the water quality and stream erosivity objectives, noted above.

In order to achieve those objectives, the outcomes of the water quality modelling undertaken for the North Kellyville Precinct has estimated the surface areas of WSUD infrastructure elements on a per developable hectare basis for each catchment, as indicated in **Table 24**.

Table 24. Area of WSUD infrastructure elements per hectare by catchment

WSUD Element	Element Surface Area Per ha	
	Smalls Creek	Cattai Creek
Raingardens	130m ² /ha	104m ² /ha
Road Side Swales	380m ² /ha	257m ² /ha
Constructed Wetlands	190m ² /ha	50m ² /ha

As noted in control 7 above, applicants are able to prepare individual WSUD strategies, provided the water quality and stream erosivity objectives are met.

8. Design methodologies for WSUD infrastructure elements are to comply with the requirements of the following publications:
 - Australian Runoff Quality (Engineers Australia 2005)
 - Water Sensitive Urban Design Technical Guidelines for Western Sydney (NSW Government Stormwater Trust and UPRCT, May 2004)
9. All residential dwellings are required to provide a rainwater tank as part of the WSUD strategy, and such tank is to be plumbed specifically for washing machine use. External use is also permitted however the recycled water system supplied by Sydney Water must be connected to all toilets for flushing purposes, and at least one external tap.
10. Minimum rainwater tank sizes are as follows:
 - Smalls Creek Catchment: 3000 litres (3kl)
 - Cattai Creek Catchment: 4000 litres (4kl)

Larger tanks than the minimum requirement are permitted.

The additional 1000 litres of storage required for rainwater tanks in the Cattai Creek Catchment is to be allocated to stormwater detention only.

Each rainwater tank is to be provided with potable water trickle top-up with a back flow prevention device, complying with Sydney Water requirements.

11. In accordance with the recommendations made in the publication "Guidance on the Use of Rainwater Tanks" (enHealth, Commonwealth Government 2004), diversion of the "first flush" of up to 180 litres is to be incorporated into the design of the rainwater tank and associated plumbing based on a minimum first flush of 1L/m² of roof area.

12. To encourage innovation in the preparation of the WSUD strategy for each development, applicants may substitute hydrological and water quality modelling to establish WSUD infrastructure needs.

To assist the preparation of such modelling, the following MUSIC model parameters recommended for use in the North Kellyville Precinct by DECC, are provided in **Table 25** and **Table 26**. All hydrological, water quality and stream erosivity objectives must be demonstrated to be achieved when undertaking substitute modelling.

Table 25. Recommended Stormwater Quality Parameters for MUSIC modelling

Land use	Storm Flow						Base Flow					
	Total		Total		Total		Total		Total		Total	
	Suspended		Phosphorus		Nitrogen		Suspended		Phosphorus		Nitrogen	
	Solids						Solids					
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>(all values expressed as log₁₀ mg/l)</i>												
General urban												
Residential	2.15	0.32	-0.60	0.25	0.30	0.19	1.20	0.17	-0.85	0.19	0.11	0.12
Industrial												
Commercial												
Rural	1.95	-	-0.66	-	0.30	-	1.15	-	-1.22	-	-0.05	-
Roads	2.43	0.32	-0.30	0.25	0.34	0.19	-	-	-	-	-	-
Roofs	1.30	0.32	-0.89	0.25	0.30	0.19	-	-	-	-	-	-
Forest/Natural	1.60	0.32	-1.10	0.25	-0.05	0.19	0.78	0.17	-1.52	0.19	-0.52	0.12

Note: SD = standard deviation, TSS = total suspended solids, TP = total phosphorus and TN = total nitrogen

* Rural EMC values taken from Chapter 2 - Review of Stormwater Quality and Runoff, CRC for Catchment Hydrology, October 2003

Table 26. Soil and Groundwater Parameters for MUSIC Modelling in Western Sydney

	Units	Urban	Non-Urban
Impervious area parameters			
Rainfall threshold	mm/day	1.4	1.4
Pervious area parameters			
Soil storage capacity	mm	170	210
Initial storage	% of capacity	30	30
Field capacity	mm	70	80
Infiltration capacity coefficient – a		210	175

	Units	Urban	Non-Urban
Infiltration capacity coefficient – b		4.7	3.1
Groundwater properties			
Initial depth	mm	10	10
Daily recharge rate	%	50	35
Daily baseflow rate	%	4	20
Daily deep seepage rate	%	0	0

13. During the construction phase of development, the relevant Stormwater Management Objectives for New Development as set out in the most up to date revision of "Managing Urban Stormwater : Soils and Construction" (NSW Department of Housing) must be complied with, in full.

Erosion and sediment control measures are to be implemented and regularly maintained on site, while sediment trapping measures are to be located at all points where stormwater runoff can enter inlets to stormwater systems, or where runoff may leave the construction site.

14. Where community title subdivision is proposed under *State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Amendment No. 3)*, the urban development WSUD Parameters established by the North Kellyville Water Cycle Management Strategy must be implemented.

6.2 Aboriginal Heritage

OBJECTIVES

1. To protect and manage areas and elements of identified Aboriginal archaeological heritage of the Precinct.
2. To incorporate elements of Aboriginal heritage within the redevelopment of the Precinct.

CONTROLS

1. Properties with potential Aboriginal archaeological significance are shown in Figure 49.
2. Aboriginal cultural heritage shall be avoided where possible in zones where impacts may occur (such as constrained land/environmental living).
3. Within areas where impacts to Aboriginal heritage cannot be avoided development of potential Aboriginal archaeological significance shall not proceed without appropriate investigation and consultation with the relevant local Aboriginal groups and until a Plan of Management has been prepared that addresses the ongoing management of any archaeological deposits within the Conservation Areas.
4. Aboriginal cultural heritage shall be conserved where no impacts occur. The locations of Aboriginal sites should be identified in a conservation management plan to ensure the sites are not inadvertently damaged as a result of construction works or future land uses.
5. Section 90 consent under the *National Parks and Wildlife Act 1974* will be required for all impacted archaeological sites. Section 90 consent should only cover that part of the site that will be impacted. Consent should be obtained prior to any works which will directly affect these sites. It will be necessary to obtain an excavation permit pursuant to Section 60 or Section 140 of the *Heritage Act 1977*.
6. Test/salvage excavation of Aboriginal sites or areas of archaeological potential is warranted for some of the recorded archaeological sites and potential archaeological deposits which will be impacted by future development. A section 87(1) permit under the *National Parks and Wildlife Act 1974* should be obtained for these sites.

6.3 Bushfire Hazard Management

OBJECTIVES

1. To prevent loss of life and property due to bushfires, by discouraging the establishment of incompatible uses in bushfire-prone areas.
2. To ensure adequate fuel management of asset protection zones in accordance with RFS fuel management standards.
3. To define construction standards that applies to lots within 100 m of bushfire prone vegetation.

CONTROLS

1. Subject to detailed design at DA stage, the indicative location and widths of APZs are to be provided generally in accordance with the following:
 - are to be located wholly within the Precinct;
 - may incorporate roads and flood prone land,
 - are to be located wholly outside of vegetation shown in the Native Vegetation Protection Map and Riparian Protection Area Map and fuel management not impacting on vegetation within these areas in any way,
 - may incorporate Managed Ecological Zones (refer to North Kellyville Waterfront Land Strategy)
 - may be used for open space and recreation subject to appropriate fuel management,
 - are to be maintained in accordance with *Planning for Bushfire Protection 2006* (NSW Rural Fire Service),
 - may incorporate private residential land, but only within the building setback,
 - are not to burden public land, and
 - are to be generally bounded by a perimeter fire trail/road that is linked to the public road system at regular intervals in accordance with *Planning for Bushfire Protection 2006*.
2. Reticulated water is to meet the standards contained within *Planning for Bushfire Protection 2006*. Water supply is to be via a ring main system, engineered to the requirements of Australian Standard AS 2419.1 – Fire Hydrant Solutions.
3. Vegetation management within public parks and community title areas is to be subject to completion of a Fuel Management Plan that is to be integrated within the Park Plan of Management.
4. Buildings adjacent to APZs are to be constructed in accordance with the requirements of Appendix 3 of *Planning for Bushfire Protection 2006* and Australian Standard 3959-1999 - Construction of Buildings in Bushfire Prone Areas.
5. Where an allotment fronts and partially incorporates an APZ it shall have an appropriate depth to

accommodate a dwelling with private open space and the minimum required APZ. The APZ will be identified through a Section 88b instrument.

6. Temporary APZs, identified through a Section 88b instrument, will be required where development is proposed on allotments next to undeveloped land. Once the adjacent stage of development is undertaken, the temporary APZ will no longer be required and shall cease.
7. Roads are to be designed in accordance with acceptable solutions as defined within *Planning for Bushfire Protection 2006*.

6.4 Tree and Bushland Protection

The retention of trees and bushland in new development areas provides a range of benefits including a contribution to the character of the neighbourhood, spatial definition and environmental values.

OBJECTIVES

1. To ensure bushland is substantially retained and protected and that development enhances and complements this bushland.
2. To ensure through appropriate protection mechanisms that development and subdivision adjacent to bushland do not detrimentally affect the continued survival of that bushland.
3. Provide a basis for increasing lot areas and altering lot shapes to enable the retention of trees and bushland.

CONTROLS

1. Where it is likely that mature trees will be removed either through the creation of a residential lot or through its subsequent development Council will require:
 - The lot area to be increased beyond the minimum 450m² so as to ensure mature tree(s) are retained; or
 - The lot boundaries to be rearranged to ensure mature tree(s) are retained; or
2. Prior to submission of a development application for the purposes of subdivision, the applicant is to prepare a Tree Management Plan utilising the services of a qualified arborist. This report will ensure an understanding of the condition of existing trees, which will assist in analysing the site opportunities, and is to be submitted at subdivision application stage. The Tree Management Plan must incorporate a survey of all trees as defined under Council's Tree Management Plan and all bushland, as defined by SEPP 19 - Bushland in Urban Areas.
3. Protective fencing is to be provided around trees and bushland to be retained to prevent damage. Fences are to be constructed at the drip-line of existing vegetation as a minimum to prevent damage within the drip-line/protection zone by limiting access into it.

6.5 Contamination Management

OBJECTIVES

1. To minimise the risks to human health and the environment from the development of potentially contaminated land.
2. To ensure that potential site contamination issues are adequately addressed at the subdivision stages.

CONTROLS

1. When redevelopment is proposed on a site a Stage 1 – Preliminary Site Contamination Investigation is required for all subdivision unless it can be demonstrated that such an investigation is not required, such as in bushland areas where it can be established that there has only been a continuous residential landuse;.
2. Subdivisions applications which propose development on Area's of Environmental Concern (AEC) as identified at **Figure 50** shall be accompanied by a Stage 2 – Detailed Site Investigation prepared in accordance with Council's Policy – Management of Contaminated Lands. A Stage 2 assessment will also be required where the Stage 1 report identifies that the site is potentially contaminated. A Remediation Action Plan (RAP) will be required for areas identified as contaminated land in the Stage 2 Investigation.
3. All investigation, reporting and identified remediation works must be in accordance with the protocols of Council's Policy – Management of Contaminated Lands, the NSW EPA's (now DECC) Guidelines for Consultants Reporting on Contaminated Sites and SEPP 55 – Contaminated Land.
4. Prior to granting development consent, the Council must be satisfied that the site is suitable, or can be made suitable, for the proposed use. Remediation works identified in any Remediation Action Plan (RAP) will require Council consent prior to the works commencing.
5. Council may require a Site Audit Statement (SAS) (issued by a DECC Accredited Site Auditor) where remediation works have been undertaken to confirm that a site is suitable for the proposed use.



Figure 50. Areas of Environmental Concern

6.6 Subdivision Earthworks

OBJECTIVES

1. To minimise topsoil and vegetation removal and “land-shaping” on land where residential subdivisions are being constructed.

CONTROLS

1. Earthworks shall be minimised to locations where the construction of roads require earthworks to be undertaken.
2. Such earthworks may extend into the proposed allotments for the purpose of providing suitable vehicle access to the identified building platform referred to in **Section 4**.
3. Vegetation and topsoil are not to be removed or disturbed in areas outside of the above areas of proposed construction.
4. All proposed public open space areas are to be fenced and are not to be disturbed or used for any purpose during the construction of a subdivision.
5. Subdivision applications must provide a plan showing the existing pre-development and proposed finished ground levels to enable an assessment of the extent of earthworks proposed and assessment of the relationship between the finished road levels and proposed building platform levels.

6.7 Waste Management

OBJECTIVES

1. To ensure sufficient storage and collection of wastes and recyclables during demolition and construction stages of development.
2. To minimise waste generation and disposal to landfill via use of the waste hierarchy and careful source separation, reuse and recycling.
3. To ensure the provision of adequate and appropriate storage areas for waste and recyclables.

CONTROLS

1. A Waste Management Plan is to be submitted with all development, with the exception of single dwelling housing. The Plan is to address:
 - best practise recycling and reuse of construction and demolition materials.
 - how recycled material, garbage and other waste generated by clearing, excavation and construction are to be stored and controlled,

- the type and volume of waste expected to be generated during construction, and
 - handling methods and location of waste storage areas, including that such handling and storage has no negative impact on the streetscape, building presentation or amenity of occupants and pedestrians.
2. Provide adequate space within the main building for separation of waste material for recycling. Locate such facilities away from windows to habitable rooms.
 3. Garbage storage areas must be located so as to not cause any negative impacts, in terms of visual appearance, noise or smell, to adjoining properties, or to the street.
 4. Separate garbage from recycling chutes so that waste is divided into separate waste streams in order to recycle materials.
 5. Where present, rear lanes are to be used for garbage collection.
 6. Utilise ventilation stacks wherever possible to vent shops and basements.

6.8 Riparian Corridors

Note: At the time of adoption of this DCP, the Growth Centres Commission in conjunction with the Department of Water and Energy is pursuing a process that will involve the 'Precinct-wide sign-off' of Controlled Activity Approval under the Water Management Act 2000.

As part of the work, a Waterfront Land Strategy is being prepared by the Growth Centres Commission. Once this process has been confirmed, an amendment to this DCP will be undertaken to incorporate the approval process for all riparian corridor works.

OBJECTIVES

1. To protect, restore and enhance the environmental values and functions of water courses and riparian corridors.
2. To ensure that the development has a neutral or beneficial impact on the quality and quantity of water and water courses.
3. To allow for some limited use of riparian corridor buffers for low impact recreation activities such as walking and cycling.

CONTROLS

1. Riparian corridors are to be provided in accordance with **Figure 51** and designed in accordance with the specific objectives and controls set out in **Table 27** and the North Kellyville Waterfront Land Strategy.
2. Infrastructure services, stormwater infrastructure, water quality treatment ponds, flood compatible activities (ie playing fields), pedestrian and cycleways, and asset protection zones are to be located outside of the CRZ. These uses are permitted within the vegetated buffer if the impact on riparian functions is minimal and its integrity maintained. Water quality treatment devices are permissible within the CRZ providing that they are vegetated dry basins, are above top of bank, do not increase flood levels and are consistent with the North Kellyville Waterfront Land Strategy.
3. The location of access ways to and within a vegetated buffer is not to compromise the ecological integrity of any existing riparian vegetation, the streambed or bank stability.
4. The impact of pedestrian and cycleways, general access points to riparian corridors and road crossings is to be minimised by using ecologically informed design principles (for example, elevated accessways that allow sunlight to penetrate and vegetation to grow beneath).
5. All CRZs are to be rehabilitated and revegetated with appropriate native vegetation having regard to its drainage function and vegetation management for bushfire protection. A Vegetation Management Plan is to be submitted to Council as part of the residential subdivision DA for residential areas adjacent to a riparian corridor. The Vegetation management Plan is to:

- identify existing trees to be retained,
 - be consistent with DWE guidelines, and
 - indicate the location, type and size and all new plant species.
6. Where wetlands are proposed, a management strategy outlining ownership, ongoing management, annual maintenance costs and initial development costs shall be submitted with any development application.

Table 27. Riparian corridors objectives and controls

Specific objectives		Specific controls	
Category 1			
(1)	To provide a continuous, vegetated riparian corridor for the movement of flora and fauna species through and beyond the catchment.	(1)	Restore and rehabilitate the CRZ with local provenance native vegetation.
(2)	To provide extensive habitat and connectivity between habitat nodes for both terrestrial and aquatic fauna.	(2)	Ensure vegetation in the CRZ and vegetated buffer is at a density that would occur naturally.
(3)	To maintain the viability of native riparian vegetation.	(3)	Minimise the number of road crossings.
		(4)	Maintain riparian connectivity by using pierced crossings in preference to pipes or culverts.
		(5)	Ensure lateral connectivity for in-stream function.
Category 2:			
(1)	To maintain and restore the natural functions of a stream and its aquatic and terrestrial qualities.	(1)	Restore and rehabilitate the CRZ with local provenance native vegetation.
(2)	To maintain the viability of native riparian vegetation.	(2)	Ensure vegetation in the CRZ and vegetated buffer is at a density that would occur naturally.
(3)	To provide suitable habitat for local and terrestrial aquatic fauna.	(3)	Minimise the number of road crossings and ensure riparian connectivity is maintained.
		(4)	Provide lateral connectivity for in-stream function.
Category 3:			
(1)	To retain, maintain and restore where possible the natural functions of a stream, including bed and bank stability to protect local water quality.	(1)	Emulate or preserve, wherever possible, a naturally functioning stream.
		(2)	Filling is to be avoided in order to retain the natural stream bed and bank profile.
		(3)	Engineered drainage solutions are to be used as a last resort within CRZs with the appropriate WSUD approaches to be used within sensitive areas