



City of Sydney

# Sydney Development Control Plan 2011

Glebe Affordable Housing Project

February 2011



Prepared by City of Sydney

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## Section 1: Introduction

### 1.1 Name

This plan is called the *Sydney Development Control Plan 2011 – Glebe Affordable Housing Project*.

### 1.2 Commencement

The plan was adopted by Council on 14 February 2011 and came into effect on 1 July 2011.

### 1.3 Land and development to which this DCP applies

This development control plan (DCP) applies to land covered by *Sydney Local Environmental Plan 2011 – Glebe Affordable Housing Project*, as shown on the [DCP application map](#).

### 1.4 Relationship to other planning instruments and control plans

This DCP has been made in accordance with Section 74C of the *Environmental Planning & Assessment Act 1979* and complements the provisions of the *Sydney Local Environmental Plan 2011 – Glebe Affordable Housing Project* (the LEP).

Where there is any inconsistency between this DCP and the LEP, the LEP prevails. The DCP provides more detailed provisions than those in the LEP for development on the site.

The provisions in this DCP provide specific guidance for development on land covered by this DCP, and complement any other applicable DCPs. In the event of any inconsistencies between this DCP and any other DCP, the provisions in this DCP prevail to the extent of the inconsistency.

In this DCP, **Consent Authority** means the City of Sydney Council, in its capacity under the *Environmental Planning & Assessment Act 1979*, or the Central Sydney Planning Committee; and **Council** means the City of Sydney Council in its capacities outside the *Environmental Planning & Assessment Act 1979*, such as a land owner, authority under the *Local Government Act 1993*, or similar.

### 1.5 Objectives

The objectives of this DCP are to:

- (a) Enable future development to make the best use of the subject land's proximity to public transport, infrastructure, services and community facilities;
- (b) Improve connectivity between surrounding locations by providing a better east-west connection between Glebe and Ultimo, and enabling future access northward towards Wentworth Park;
- (c) Enable the delivery of a range of affordable and social housing options that reflects the diversity of ages, family relationships,

socio-economic backgrounds and employment fields in the local population;

- (d) Create a high quality public domain, with new streets, landscaping and open space, that:
  - (i) improves permeability;
  - (ii) facilitates community interaction;
  - (iii) is accessible and safe for the whole community;
  - (iv) receives a high amount of sunlight; and
  - (v) sustainably manages water demand;
- (e) Ensure building design:
  - (i) defines the street and the public domain, and contributes to the desired urban character the area;
  - (ii) is environmentally innovative, durable and of a high quality;
  - (iii) limits opportunities for crime;
  - (iv) incorporates useable and attractive common open spaces; and
  - (v) integrates with surrounding development, public places and parks;
- (f) Ensure development respects, preserves and responds to the heritage significance of surrounding heritage conservation areas and items;
- (g) Encourage development to promote walking, cycling and public transport use through design, layout and management of buildings;
- (h) Encourage a diversity of transport options, by reducing car usage and creating opportunities for cycling, car sharing and public transport;
- (i) Provide safe, well designed development that is inviting and accessible to all members of the community;
- (j) Encourage buildings and landscape elements to achieve leading performance and innovation benchmarks for:
  - (i) energy efficiency;
  - (ii) water re-use, on-precinct and local area stormwater management;
  - (iii) appropriate selection of materials;
  - (iv) recycling of materials;
  - (v) waste management;
  - (vi) minimisation of pollution and carbon emissions;

- (vii) minimisation of flood risk to life and property through appropriate design;
- (viii) on-going management measures to prioritise walking, cycling and public transport usage; and
- (ix) remediation and acid sulfate soils management; and
- (k) Contribute towards Sustainable Sydney 2030 targets for carbon emission reductions and affordable and social housing provision.

## 1.6 Information required in a Development Application

A development application is to include all the relevant information as required by the "Application for Development Form". This form is available on the City of Sydney website at [www.cityofsydney.nsw.gov.au](http://www.cityofsydney.nsw.gov.au).

### Statement of Environmental Effects

- (1) A Statement of Environmental Effects is required to be submitted with every development application. The purpose of the Statement of Environmental Effects is to demonstrate:
  - (a) how the development achieves the objectives of this DCP;
  - (b) the impact of the development on the public domain;
  - (c) how the development will minimise any environmental impact; and
  - (d) how the proposal complies with provisions of the applicable environmental planning instruments, this DCP and any relevant Council codes and policies.
- (2) The Statement of Environmental Effects is to include an analysis of the development context which includes:
  - (a) Existing situation;
  - (b) Proposed development;
  - (c) Response to urban context;
  - (d) Gross floor area calculations and considerations;
  - (e) Heritage implications;
  - (f) Traffic;
  - (g) Car parking;
  - (h) Traffic and pedestrian conflicts;
  - (i) Reflectivity;
  - (j) Noise effects and acoustics;
  - (k) Wind effects;
  - (l) Privacy impacts;

- (m) Social impacts;
  - (n) Shadow assessment;
  - (o) Daylight to residential units;
  - (p) Waste management;
  - (q) Stormwater management;
  - (r) Energy efficiency;
  - (s) Construction effects;
  - (t) Response to Section 79C of the *Environmental Planning and Assessment Act 1979*; and
  - (u) Copy of the land title highlighting encumbrances.
- (3) Detailed reports on these issues, where relevant, may be required by the consent authority and are to be appended to the Statement of Environmental Effects.



## Section 2: Site layout and building envelopes

### 2.1 Street layout and subdivision

#### Objectives

- (a) Align and connect new streets with the surrounding street network, maximising visual and physical connectivity between sites;
- (b) Improve pedestrian, cycle and vehicular access and movement permeability through large sites;
- (c) Achieve adequate separation between buildings so as to provide for low angle views to the sky;
- (d) Improve access to public open spaces;
- (e) Provide access and an address for development;
- (f) Ensure lot sizes and street frontages can support the desired building type/ use and achieve internal spaces appropriate to their function; and
- (g) Ensure strata subdivision is appropriate to the proposed development.

#### Provisions

- (1) Street reservations, either new or realigned, are to be provided as shown in the [Site layout map](#).
- (2) Newly created allotments are to have size, dimension, shape, orientation and alignment to enable future buildings to face the street, optimise solar access and meet all relevant provisions of this plan.
- (3) Within a strata or community title subdivision:
  - (a) any non-contiguous spaces, used for parking, storage or the like, that are associated with an individual unit are to be included as a part lot of the same strata allotment as that unit;
  - (b) any landscaping, access areas or directory board signage that are not part of an individual allotment are to be common property; and
  - (c) any creation of separate retail and commercial strata titles is to include a range of unit sizes suitable for a diversity of uses.
- (4) The strata subdivision of boarding houses is not permitted.

### 2.2 Development capacity distribution

Clause 4.4 (2A) of the LEP effectively establishes a maximum FSR of 1.9:1, for development incorporating at least an equivalent to a FSR of 1.1:1 of 'social housing premises'.

Were that GFA to also equate to half of the total overall dwellings, the Affordable Rental Housing SEPP (2009) would also allow an FSR bonus of 0.5:1. This would create a total permissible FSR of 2.4:1.

Taking the site area, for the entire site covered by the LEP, to be 15,944m<sup>2</sup>, this equates to a total GFA of approximately 38,265m<sup>2</sup>. In order to provide

for suitable building massing across the overall site, that permissible GFA would not be distributed equally across the site area.

This provision outlines the indicative distribution of the total permissible GFA using the base (1.3:1) and bonus (0.6:1) FSR in the LEP, and the bonus FSR (0.5:1) from the ARH SEPP (2009).

#### **Objective**

- (a) Ensure the development capacity created through the FSR control in the LEP and ARH SEPP 2009, and the subsequent bulk and scale, is distributed across the site area such that:
  - (i) environmental amenity is preserved;
  - (ii) transition is provided to reflect surrounding character; and
  - (iii) higher density is situated to the east and north, and lower density the west and south, near existing low density neighbourhoods.

#### **Provision**

- (1) The amount of gross floor area for development within the boundaries shown in the Gross floor area distribution map is not to exceed the amount of gross floor area shown in that area on the Gross floor area distribution map.

### **2.3 Height in storeys and building edge height**

#### **Objectives**

- (a) Provide more detail on the distribution of building height, within the height controls established in the LEP; and
- (b) Establish maximum number of storeys permissible to ensure development:
  - (i) reinforces the neighbourhood character;
  - (ii) provides a positive contribution to the public domain; and
  - (iii) maximises the level of sun access.

#### **Provisions**

- (1) Development is not to exceed the maximum number of storeys for the land as shown in the Height of buildings in storeys map.
- (2) The building edge height, meaning the vertical height in storeys of the outermost edge of the building envelope, is not to exceed the maximum number of storeys shown in the Building edge height map.
- (3) Any building above the building edge height is to be set back from the building edge by a minimum of 3m.
- (4) In spite of the above provisions, minor encroachments above building edge height will be considered, provided:
  - (a) it can be demonstrated the encroachment will not result in a reduction in sunlight access, residential amenity or privacy;

- (b) it does not diminish the establishment of a consistent street wall height;
  - (c) any development within the encroachment is for common circulation areas, not individual dwellings; and
  - (d) any development within the encroachment does not exceed the maximum number of storeys permitted in the Height of buildings in storeys map.
- (5) Where the upper level setback area incorporates screening or the like, the design of the screens or other structures is to be secondary to the main front wall of the building.

## 2.4 Setback and street presentation

### Objectives

- (a) Ensure development contributes to the comfort and attractiveness of the City's streets by ensuring that:
  - (i) consistency is achieved in the alignment of the building and street edge; and
  - (ii) buildings address and define streets and public spaces;
- (b) Achieve development that provides high level of pedestrian amenity; and
- (c) Create suitable separation from buildings on neighbouring properties to protect amenity, privacy and solar access.

### Provisions

- (1) Buildings are to be set back from the property boundaries as shown in the Setback area map. The construction of buildings is not permitted within these setback areas.
- (2) Where the Setback area map does not require development to be set back from a property boundary adjacent to a street or lane, buildings are to be aligned to the boundary for:
  - (a) a minimum of 70% of the frontage, for residential development;
  - (b) a minimum of 95% of the frontage, for development with an active street frontage; and
  - (c) any street corners.
- (3) Where a building has multiple street frontages, the primary street frontage, is to be to the street closer to the east-west axis, to maximise opportunity for northerly aspects of dwellings.

## 2.5 Building width, depth and separation

### Objectives

- (a) Provide articulated massing and fine grain urban form along street frontages, composed of smaller-scale, individual building elements

that fit together to create a human scale to the urban fabric and provide places with character and visual interest;

- (b) Ensure that the scale and modulation of development responds to the context of its setting;
- (c) Provide permeability between buildings, and adequate separation to achieve privacy, sun light access and open space; and
- (d) Ensure building depth maximises potential for cross ventilation and dual aspects within dwellings.

**Note:** Fine grain traditionally results from small allotments with many landowners developing a diverse range of individual buildings over a long period of time. This quality of development can be lost where large sites are under single ownership, or where large areas are developed within a short period of time. In this context, a finer grain approach needs to be consciously adopted, using variation in the scale, form and architectural resolution of development.

### Provisions

- (1) Buildings are to be separated, either within a site or on neighbouring sites, by the suggested dimensions in the RFDC, unless satisfactory sunlight access, urban form and privacy can be demonstrated. Reduced building separations may be acceptable when:
  - (a) the intermediate space is a public space, or is screened or planted to provide privacy;
  - (b) habitable rooms or balconies have outlooks in other directions that exceed the RFDC building separation requirement that is not being met;
  - (c) at least one of the habitable spaces is secondary (such as a bedroom);
  - (d) balconies off secondary habitable spaces increase privacy with solid balustrades; or
  - (e) a single (fifth) storey does not meet the building separation requirements of the RFDC, but lower storeys comply.

In all events a reduced building separation is not to reduce solar access to a primary living space (such as a lounge or dining room) and primary living spaces are to be separated (glass line to glass line) from other primary living spaces by at least 18m.

- (2) Separation between buildings should be aligned with streets, lanes, public spaces, or pedestrian connections; or where it creates views to a public open space, heritage item or significant building.
- (3) Building envelope depth, including balconies, is not to exceed those shown in the [Building envelope depth map](#). Minor areas with greater envelope depth will be considered, where satisfactory sunlight access, urban form, residential amenity and privacy can be demonstrated.

- (4) The maximum internal plan depth of a building must not exceed 18m, from glass line to glass line, where 'glass line' means the inside face of windows on the external walls of a building.

## Section 3: Public domain

### 3.1 Publicly accessible open space

#### Objectives

- (a) Ensure that the design of publicly accessible open space is of a high quality, provides for a variety of both passive and active uses, and can evolve over time to respond to community needs;
- (b) Ensure an increase in the total amount of publicly accessible open space within the local government area; and
- (c) Ensure publicly accessible open space and facilities are designed to serve and attract people from a wider catchment than individual developments.

#### Provisions

- (1) Publicly accessible open space, meaning open space that is either publicly or privately owned and where access to the general public is maintained 24 hours per day, seven days per week, must be provided at locations identified in the Publicly accessible open space map.
- (2) Publicly accessible open space should be clearly differentiated from adjacent private open spaces or buildings, and should be accessible from a variety of points within the wider public domain that make it clear that the open space is publicly accessible;
- (3) Publicly accessible open space should:
  - (a) have clearly defined pedestrian entrances and paths, appropriate seating, and zones for activities that are clearly defined and encourage use;
  - (b) maximise access for people with mobility difficulties, through appropriate design and location of paths and entrances;
  - (c) not be constrained by contaminated land restrictions or property easements; and
  - (d) be generally flat and suitable for its intended purpose.
- (4) Publicly accessible open space is to be designed to maximise the safety and security of all users, in particular by:
  - (a) providing open sightlines and landscaping that allows high levels of public surveillance by users and residents;
  - (b) providing external lighting (in accordance with AS1158) that makes any potential 'hiding spots' visible; and
  - (c) encouraging pedestrian use through the design of entrances and paths.
- (5) All publicly accessible open space is to be designed to maximise the amenity of users by ensuring:
  - (a) shade from strong sun is available between September and March, for at least 20% of the area used for passive recreation; and
  - (b) protection from strong winds is provided to any space that is open to winds from the south.

### 3.2 Landscaping of open space

#### Objectives

- (a) Ensure that open space is strategically located to assist with stormwater management; and
- (b) Incorporate high quality landscaping and provide green spaces for the city.

#### Provisions

- (1) High quality landscape design to create interest and character is to be provided through the general (but not exclusive) use of indigenous tree species, landmark sculptural elements, pavement design and other appropriate elements to the satisfaction of the consent authority.
- (2) Publicly accessible open space must contribute to the development of a continuous canopy of native vegetation to encourage native fauna habitat corridors between major open spaces and water bodies.
- (3) With the exception of civic spaces, pathways, and small areas ancillary to activity areas, the character of publicly accessible open space is to primarily be soft landscaped.
- (4) Publicly accessible open space is to provide for deep soil planting, and shall have no car parking or access underneath.
- (5) Generally, water used for irrigation of publicly accessible open space is to be drawn from recycled water or harvested rainwater sources.
- (6) The design of publicly accessible open space is to include:
  - (a) native drought-tolerant plants and grasses;
  - (b) water retaining media mixed into soil; and
  - (c) sub-surface drip irrigation systems controlled by timers using soil moisture or rainfall sensors.
- (7) Pervious paving is to be used for all low traffic and pedestrian areas.
- (8) Landscape design is to be compatible with flood risk, for example, where dense planting, fences and walls are proposed they are not to be located on a flow path.
- (9) Landscaping, plant species and structures such as walls are to be designed and constructed to withstand temporary flood inundation.

### 3.3 Street design

#### Objectives

- (a) Provide a street hierarchy that responds to the desired character of the locality, establishes a framework for pedestrians and cyclists, and encourages sustainable travel behaviour; and

- (b) Encourage water sensitive urban design and locate services within the road reservation.

### Provisions

**Note:** Section 2.1 of this DCP outlines required changes to the existing road network.

- (1) All roads, footways and street lighting are to be designed and constructed in accordance with Council's standard policies, specifications and design codes and relevant Australian Standards.
- (2) Where works are proposed to change or create roads, footways, stormwater drains or public domain, the applicant is to submit with a development application:
  - (a) detailed levels and longitudinal and cross sections for all roads and footways;
  - (b) detailed designs demonstrating how the proposed development will connect into the existing Council stormwater system; and
  - (c) detailed design demonstrating the function and capacity of any rain gardens.
- (3) All lighting to roads and footways is to be designed and constructed in accordance with Council's standard policies, specifications and design codes and relevant Australian Standards.
- (4) New streets or vehicle access ways are to be designed:
  - (a) to encourage pedestrian use;
  - (b) to ensure cul-de-sacs or other dead-end spaces are not longer than 75m, and are straight with a direct line of sight from adjoining public space to the deepest point.
- (5) Footpath widths are to be at least 1.5m wide and, where a building is not set back from the footpath, splayed at street corners. Footpaths are to be designed to:
  - (a) ensure cyclists and pedestrians, regardless of mobility impairments, are able to move comfortably and safely;
  - (b) facilitate tree plantings in the verge;
  - (c) allow for licensed footpath arrangements for cafes, restaurants, or businesses with appropriate road displays; and
  - (d) enable cycling on and off streets.
- (6) Where appropriate, the use of pedestrian crossing facilities such as footpath extensions at corners, pedestrian refuges and mid-block zebra crossings on raised thresholds are to be incorporated into the general street design.
- (7) Where feasible, new streets are to incorporate water sensitive urban design techniques such as vegetated swales or rain gardens to



improve the quality of groundwater and water entering the waterways and tree bays.

- (8) Street trees are to be planted along all new roads.

**Note:** Refer to the Council's Street Tree Master Plan for a list of appropriate tree species. The Street Tree Master Plan is available at [www.cityofsydney.nsw.gov.au](http://www.cityofsydney.nsw.gov.au)

- (9) New streets are to integrate essential services within the street reservation.

- (10) Street furniture is to be compatible with the range of street furniture in the public domain code and relevant Council public domain plans including street lights, street signs (as appropriate), bicycle parking stands, bus shelters, seating, and rubbish bins.

- (11) New streets and lanes 6m or wider are to be dedicated to Council.

**Note:** Dedication of lesser streets, share ways, laneways and walkways is to be at the discretion of the consent authority, but remain subject to minimum conditions that the public right of way be maintained.

## Section 4: Residential and mixed use development: building design

### 4.1 Application of NSW Residential Flat Design Code 2002

#### Objective

- (a) Ensure development is consistent with the State Environmental Planning Policy 65 – Design Quality of Residential Flat Development, and the NSW Residential Flat Design Code 2002 (RFDC).

#### Provision

- (1) In addition to the provisions within this DCP, the ‘designing the controls’, ‘control checklists’ and ‘rules of thumb’ within the RFDC are adopted by this DCP for residential flat development. Applicants are required to use the RFDC and this DCP when preparing their development proposal. In the event of an inconsistency between the RFDC and a provision within this DCP, the DCP will prevail to the extent of that inconsistency.

### 4.2 Dwelling size mix

#### Objectives

- (a) Ensure development contains a suitable mix of dwellings that caters for a diversity of household sizes and make ups; and
- (b) Enable Housing NSW developments to contain a mix of dwelling sizes that is appropriate to Housing NSW tenants.

#### Provisions

- (1) Development that creates more than 20 dwellings is to provide dwellings within the following proportional ranges:
  - (a) Studio dwellings: 5 – 10% of total dwellings;
  - (b) 1-bedroom dwellings: 10 – 30% of total dwellings;
  - (c) 2-bedroom dwellings: 40 – 75% of total dwellings; and
  - (d) 3-bedroom dwellings or larger: 10 – 30% of total dwellings.
- (2) The proportion of 1-bedroom dwellings may only be greater than 30% when the combined proportion of studio and 1-bedroom dwellings does not exceed 45% of total dwellings.
- (3) Despite the previous provisions, residential developments by, or on behalf of, Housing NSW are to have a dwelling size mix that reflects the needs of the tenants of Housing NSW.

### 4.3 Building typology, layout and design

#### Objectives

- (a) Ensure that a range of housing types is provided;
- (b) Encourage the provision of publicly accessible courtyards in suitable locations which supplement, and are visually connected to, the public open space network of the City;

- (c) Ensure that tall buildings:
  - (i) exhibit high design quality;
  - (ii) are located to reinforce the urban structure and street hierarchy;
  - (iii) minimise overshadowing of neighbouring buildings, and public and private open spaces; and
  - (iv) are “slim line” in form with reduced building bulk; and
- (d) Promote the penetration of daylight into residential, commercial and retail buildings and contribute to flexibility of use of buildings.

#### **Provisions**

- (1) On sites larger than 5,000m<sup>2</sup>, residential development is to provide a range of dwelling types including tall buildings, garden apartments, and maisonette apartments or terrace houses, and at least 5% of the total dwellings are to be terrace houses on a Torrens title or four-storey maisonette apartments; that is two two-storey apartments, stacked vertically as a four-storey development.
- (2) Development within the coverage of this DCP must incorporate buildings designed by at least two architectural or design companies, in order to vary architectural expression and to present development as a diverse group of buildings rather than a single development.
- (3) Buildings around courtyards are to have a variety of building heights to provide visual interest and reduce building bulk. A low angle view of the sky should be achievable from a courtyard to reduce the sense of building enclosure.
- (4) Regular building breaks are to be provided along the street frontage to encourage visual permeability and to provide a visual connection to internal courtyards.
- (5) Courtyards are to be designed and landscaped to:
  - (a) enhance views from residential apartments and create recreational opportunities;
  - (b) be the focal point of a site and incorporate public art and water features where appropriate;
  - (c) where the courtyard is private and does not facilitate a public through route, be highly visible from the public domain through frequent building entrances or building separation; and
  - (d) in residential buildings, be the primary residential open space for the development and generally be between 25% and 30% of the site area.
- (6) The floor plate of a residential building between 7 and 14 storeys in height is to be (excluding balconies) a maximum of 1,000m<sup>2</sup>.
- (7) The minimum floor to ceiling height (clear of obstruction) of each parking level above ground is to be 3.3m to facilitate the conversion

of above ground car parking to other uses.

- (8) New development is to include a variety of internal designs that will allow adaptation to different uses over time by:
  - (a) incorporating internal walls that are can easily be removed;
  - (b) locating services so that they do not impede the future conversion of units into different configurations; and
  - (c) incorporating the ability to separately occupy parts of individual units over time.
- (9) Dwellings comprising two or more bedrooms may be configured as two adjacent apartments provided:
  - (a) both apartments are accessed from a shared private lobby or have dual access; and
  - (b) where a strata plan exists, both apartments are contained within a single strata unit.
- (10) To enable flexibility of use, the floor to ceiling height – measured from the finished floor level to the finished ceiling level – of mixed use buildings is to be 3.6m for the ground floor.
- (11) The floor to ceiling height for habitable spaces of residential developments is to be 2.7m.
- (12) Up to 20% of affordable housing dwellings may be up to 10% smaller than the size specified in the Residential Flat Design Code. Minimum unit size is subject to amenity, demonstrated usable furniture layout and provision of the minimum storage area required in the RFDC.

#### **4.4 Safety and design**

##### **Objective**

- (a) Minimise opportunities for criminal and anti-social behaviour.

##### **Provisions**

- (1) Building design is to maximise opportunities for casual surveillance of the public domain; and any semi-public or common open space.
- (2) Active spaces within buildings are to be located to maximise casual surveillance of streets, laneways, parking areas and other public spaces.
- (3) Passive surveillance is to be provided to internal communal spaces in residential developments (such as playgrounds, clothes lines, barbeque and mail box areas) where they are not visible from a public street. These areas are to be located to be visible from inside some of the dwellings of that development. Windows of living rooms and kitchens should be located for surveillance of such areas.
- (4) The detailed design of the external areas of the ground floor is to minimise blind-corners, recesses and other areas which have the

potential for concealment.

- (5) Building entries are to be clearly visible, unobstructed and easily identifiable from the street, other public areas and other development.
- (6) Where practicable, lift lobbies, stairwells and corridors are to be visible from public areas by way of glass panels or openings.
- (7) The design of individual unit entries is to allow an occupant to view a visitor without opening the door.
- (8) Ground floors of non-residential buildings, the non-residential component of mixed use developments, and the foyer areas of residential buildings, are to be designed to enable surveillance opportunities from outside to inside the building at night. These areas are to be adequately illuminated.
- (9) Lighting is to be provided to all pedestrian paths between public and semi-public or communal areas, parking areas and building entries.
- (10) Development is to clearly delineate by way of design and/or signage those parts which are open to public access; semi-public and/or communal; and private.
- (11) Where dwelling units have individual main entries directly from a public or semi-public space, the entry is to include a clearly defined transitional space (such as a porch, verandah or awning) between public and private areas.
- (12) Public spaces are to include signage indicating the direction of pathways and facilities, including taxi ranks, bus stops, communal facilities and community facilities, where appropriate.
- (13) In circumstances where designs for passive surveillance alone cannot achieve the objective of this provision, a development is to incorporate physical features that limit access to legitimate users and obstruct opportunities for access by others including but not limited to:
  - (a) physical barriers such as grills, bars, fences, and locked gates; and
  - (b) security devices such as intercoms, entry phones, keypads, security cards or other electronic access.
- (14) The design of building details, including the provision of fencing, drainpipes and landscaping, is to be such that illegitimate access is not facilitated by the inadvertent provision of foot or hand-holds, concealment and the like.

#### 4.5 Sun access

##### Objectives

- (a) Ensure new developments do not result in a deterioration of direct sunlight access to public spaces and neighbouring properties; and

- (b) Establish standards for daylight and direct sunlight access in new developments, particularly living areas and open space.

**Provisions**

- (1) Development must result in:
  - (a) neighbouring developments receiving:
    - (i) at least three hours of direct sunlight to 50% of the primary private open space and 50% of windows to habitable rooms; or
    - (ii) the existing levels of direct sunlight;
 whichever is the lesser, between 9am and 3pm on 21 June; and
  - (b) 30% of required common open space receiving at least two hours of direct sunlight between 9am and 3pm on 21 June.
- (2) The development application is to include solar diagrams that, as a minimum, demonstrate compliance with the above provision and include plans and elevations showing the shadows of the proposal at 9am, 12 noon, and 3pm on 21 March, 21 June and 21 December.
- (3) Where the consent authority considers that the level of daylight access to living rooms of proposed dwellings may be inadequate, the applicant may be required to provide a Daylight Report.
- (4) Daylight may be accessed by way of lightwells provided the lightwell:
  - (a) is consistent with the building separation and daylight access requirements of the RFDC;
  - (b) does not provide the only source of daylight to a habitable room;
  - (c) is fully open to the sky;
  - (d) where enclosed on all sides, is directly connected with the ground to facilitate ventilation;
  - (e) where shared with other uses such as indoor atria, voids over entry lobbies or indoor planted areas, do not generate undue noise or visual privacy effects; and
  - (f) provides a reasonable outlook from windows in dwellings and does not include exposed services installations.
- (5) Shading devices are not to substantially reduce potential for daylighting or views.
- (6) Glazing is to contain in-built thermal control properties. Extensive glazing that is unprotected from mid-summer sunlight is to be avoided. Reliance upon high performance tinting or glazing as a mid-summer sun control device is not appropriate.
- (7) Landscaping as a sun control is to be carefully considered and may include:
  - (a) wide canopied deciduous trees, vines and pergolas to the north

of a building that provide shade and reduce glare during warm months and allow solar penetration during cool months; and

- (b) deciduous vegetation to the west and east of buildings to prevent glare, reduce heat intake and the effects of prevailing winds.

#### 4.6 Reflectivity

##### Objectives

- (a) Ensure that building materials do not lead to hazardous, undesirable or uncomfortable glare to pedestrians, motorists, occupants of surrounding buildings and others; and
- (b) Ensure significant increased heat-loading is not imposed on other buildings.

##### Provisions

- (1) The placement, orientation and configuration of building facades, and the facade materials used are not to result in glare that threatens safety or causes discomfort to pedestrians, motorists and others.
- (2) Light reflectivity from building materials used on facades is not to exceed 20%.
- (3) The consent authority may require, as part of the development application, the submission of a report that analyses potential glare and reflectivity from a proposed building design if it is considered that the proposal may not comply with this provision.

#### 4.7 Acoustic privacy

##### Objectives

- (a) Achieve and maintain minimum standards of acoustic privacy in residential dwellings; and
- (b) Ensure acoustic impacts on surrounding uses are mitigated in noise generating developments.

##### Provisions

- (1) An acoustic assessment, prepared by a specialist with qualifications and experience necessary to render them eligible as a full member of the Australian Acoustical Society (AAS), Institution of Engineers Australia (IEA), or the Australian Association of Acoustical Consultants (AAAC), is to be submitted with all development applications. The assessment is to address, at a minimum:
  - (a) impacts on acoustic privacy of proposed residential uses from any surrounding noise sources such as road traffic and commercial and retail uses;
  - (b) impacts on acoustic privacy of surrounding residential uses from any proposed commercial and retail uses; and

- (c) the impact of the development on the surrounding area, through mechanical services, earthworks, excavation and construction phases of development.

**Note:** Development adjacent to a road that may have daily vehicle movements of more than 40,000 vehicles must also comply with *State Environmental Planning Policy (Infrastructure) 2007*.

- (2) Where possible, noise is to be attenuated at its source, with applications demonstrating that proposed attenuation measures:
  - (a) have the consent of relevant parties associated with that noise source; and
  - (b) will endure for the life of the development proposal.
- (3) Dwellings are to be constructed so that in a naturally ventilated situation the repeatable maximum LAeq (1 hour) level does not exceed:
  - (a) for closed windows and doors:
    - (i) in bedrooms between 10pm and 7am, 35dB; and
    - (ii) in main living area at any time, 45dB.
  - (b) for open windows and doors:
    - (i) in bedrooms between 10pm and 7am, 45dB; and
    - (ii) in main living area at any time, 55dB.
- (4) Where natural ventilation of a room cannot be achieved, the repeatable maximum LAeq (1hour) level when doors and windows are shut and mechanical ventilation/ air conditioning is operating in a dwelling it is not to exceed:
  - (a) in bedrooms between 10pm and 7am, 38dB; and
  - (b) in main living area at any time, 48dB.
- (5) These levels are to include the combined measured level of noise from both external sources and the ventilation system operating normally.
- (6) To limit the transmission of noise to and between dwellings, all floors are to have a weighted standardised impact sound pressure level (L'nT,w) less than or equal to 55 where the floor separates a habitable room and another habitable room, bathroom, toilet, laundry, kitchen, plant room, stairway, public corridor, hallway and the like.
- (7) The overall design and layout of dwellings is to include, where appropriate:
  - (a) a limit on window size and number where oriented towards an intrusive noise source;
  - (b) seals at entry doors, to reduce noise transmission from common corridors or outside the building;



- (c) minimisation of the number of party (shared) walls with other dwelling units;
  - (d) using storage, circulation zones, and non habitable rooms within a dwelling to buffer noise from external sources;
  - (e) double or acoustic glazing;
  - (f) operable screens to balconies; and
  - (g) continuous walls to ground level courtyards, where there would be no conflict with streetscape, security or other amenity requirements.
- (8) For the purpose of this DCP:
- (a) **LAeq (1 hour)**, or '**equivalent continuous noise level**', means the level of noise equivalent to the energy average of noise levels occurring over a measurement period (in this case 1 hour). The 'A' refers to a weighting based on the frequency response of the human ear and correlates with subjective reactions to various sounds. Refer to [www.environment.nsw.gov.au/noise/](http://www.environment.nsw.gov.au/noise/) for more information; and
  - (b) **L'<sub>nT,w</sub>**, or '**weighted standardised impact sound pressure level**', means the number used to characterize the impact sound insulation of floors, based on field measurement of the impact sound pressure level in a stated frequency band, corrected for the standardized reverberation time of 0.5 seconds.

## Section 5: Residential and mixed use development: interface with public domain

### 5.1 Building façades, entrances and articulation

#### Objective

- (a) Ensure that the appearance of new development defines and enhances the public domain by:
  - (i) modulating the overall building mass to break down the building bulk;
  - (ii) giving particular attention to articulation and materials where there is close proximity to pedestrian and other human-scale activity including building entries;
  - (iii) incorporating distinctive design features responding to location and building functions;
  - (iv) minimising the proportion of the façade at ground level taken up by building services, vehicle entries, access panels and the like; and
  - (v) relating sympathetically to heritage items and the traditional character of heritage conservation areas.

#### Provisions

- (1) Buildings are to be designed to face the street, and to enhance the public domain through entrances, transparent glass, internal uses at ground level, public art, good quality finishes and well resolved architectural design.
- (2) Where a development comprises a number of buildings and results in a different orientation, a majority of the overall development is to face the street.
- (3) Building façades are to be articulated into smaller elements or distinctive treatments, at a scale or grain that reflects:
  - (a) different uses and/or components of the building;
  - (b) the location of the building relative to pedestrian or outdoor recreation activity;
  - (c) building entries; and
  - (d) the ground floor, lower floors, top floor and roof.
- (4) Within a street block, buildings are to show a variety of facades, articulation, massing and character.
- (5) Extensive expanses of blank glass or solid wall are to be avoided and, where it is unavoidable at ground level, must not exceed 30% of the total area of the ground level facade.
- (6) Where development exposes the blank wall of an adjoining building or incorporates a party wall that will be visible from the public domain, articulation through windows, modelling or some other visually interesting treatment is to be applied to that wall.

- (7) The overall positioning of dwellings and other high use spaces within the development, and the floor planning of individual dwellings is to provide the potential for passive surveillance of the street and public open space.
- (8) Buildings with multiple vertical circulation cores are to have multiple common entries along the street.
- (9) Any dwellings facing the street or public domain and vertically within 2m of street level are to have individual entries from the street, especially where a streetscape has an established terrace rhythm of regular building entrances.
- (10) The ground floor of a building is to be as close as practicable to the level of the adjacent public domain (after considering floor level and basement parking).
- (11) Entrances to dwellings and or the associated transitional spaces are to be designed to encourage personalisation of the space.
- (12) Underground parking areas are to protrude no more than 1.2m above the footpath level and are to be:
  - (a) integrated into the landscape and building design; and
  - (b) not have car ventilation grills on the street frontage unless completely screened by landscaping in a garden bed with a minimum plan depth of 1m.
- (13) Any ground floor car parking and service areas (such as garbage rooms and substations) are to be internalised, such that other uses front the street, such as individual dwelling entrances, common entrances or retail uses.

## 5.2 Active street frontages

### Objective

- (a) Identify locations where ground level active street frontages are desirable, and ensure the design is appropriate to the location and use, and does not detract from the visual appeal and amenity of the streetscape.

### Provisions

- (1) A continuous ground floor active street frontage, meaning any frontage of a building that creates activity on the adjacent street or the wider public domain, is to be provided in the locations identified in the Active street frontage map.
- (2) A ground floor of active street frontage is to have:
  - (a) a minimum of 10 retail tenancies per 100m;
  - (b) a minimum of 95% of each tenancy built to the alignment with the public domain;
  - (c) entrances every 7m to 10m, at the same level as the footpath;

and

- (d) a finished floor level no greater than 500m above the footpath level.
- (3) Entrances to upper floor levels are to be, where possible, provided from an alternative street frontage or, where incorporated into an active street frontage, secondary to the main retail entrances.
- (4) Units along an active street frontage are to be diverse and appropriate to their location, to accommodate a range of uses including evening trading, retail, cafes and restaurants.
- (5) The frontage of ground floor tenancies are to include a majority of clear glazing; and window sills and translucent or tinted glazing or films are not to be more than 1.2m above the footpath level.
- (6) Foyer spaces are not to occupy more than 8m or 20% of any active street frontage of a building, whichever is less.
- (7) Solid non-transparent roller shutters are not permitted. Where security grills or screens are required, they are to be installed at least 1m behind the glazing line and of lattice design with an openness to allow:
  - (a) viewing of the interior; and
  - (b) lighting from the interior to spill onto the footpath.
- (8) Driveways and service entries are not permitted from an active street frontage.

**Note:** Typically dominated by retail tenancies, active street frontages can also incorporate the entry lobbies to residential dwellings (that are situated above or off the active street frontage), and commercial frontages (where the entry and reception areas are visible from the street). Streets can also be activated passively through a range of means that provide visual interest to the streetscape, including the provision of art work or merchandise displays within windows. How a street is activated is impacted on by factors that include but are not limited to site conditions, whether it is within a shopping strip or centre, and the number of vehicle movements along the street. The provision of building openings, transparent street frontages, quality materials and refined details, and mixed land uses will make streets more diverse and attractive for pedestrians and increase the perception of safety.

### 5.3 Footpath awnings and colonnades

#### Objectives

- (a) Establish the locations where footpath awnings are required and enhance the public domain of these areas;
- (b) Ensure the design of awnings:
  - (i) is effective in providing weather protection;
  - (ii) has regard to the design and positioning of awnings on adjacent buildings;

- (iii) achieves visual continuity and does not contribute to visual clutter in the street;
  - (iv) is of high architectural quality that reflects the architecture of its building and complements the streetscape; and
  - (v) provides good levels of lighting to footpaths and to ground floor spaces within buildings; and
- (c) Discourage the use of colonnades.

### Provisions

- (1) An awning over the footpath is to be provided:
- (a) along the full extent of the street frontage where an active street frontage is required by the Active street frontage map; or
  - (b) for the extent of the street frontage associated with a main entry of any non-residential use located adjacent to the footpath.
- (2) Awnings are to be designed to:
- (a) step in relation to the street level and building entrances;
  - (b) be located between the ground and first floors, to maximise weather protection;
  - (c) on corner buildings, wrap around the corner to extend the sense of a protected and inviting public domain to the side street;
  - (d) ensure gutters are not to be visible from the footpath, or are integral to the awning structure and coloured to suit;
  - (e) ensure downpipes for drainage are fully concealed within or recessed into the ground floor frontage of the building;
  - (f) ensure any signage included on the awning is consistent with the overall design of the awning; and
  - (g) ensure lighting fixtures are recessed into, and integral with, the awning structure and form; with all associated wiring and conduits completely concealed.
- (3) Lighting is required below all awnings to supplement illumination from street lighting and 'spill' lighting from shopfronts and other ground floor uses. Lighting is to comply with requirements for pedestrian areas in the current AS/NZS 1158.
- (4) Colonnades are not permitted, as they obscure views of retail frontages and separate street frontage activity from the street.

## **Section 6: Residential and mixed use development: open space and landscaping design**

### **6.1 Landscaping**

#### **Objective**

- (a) Ensure landscaping:
  - (i) is integrated into building layout and design;
  - (ii) is durable, appropriate to location and of a high quality; and
  - (iii) contributes to the presentation of a development to the public domain.

#### **Provisions**

- (1) A Landscape Plan prepared by a qualified Landscape Architect is to be submitted with the development application that shows the:
  - (a) planting schedule with numbers and species of plants (botanical and common names);
  - (b) number and name (botanical and common names) of mature trees on site;
  - (c) type and detail of paving, fencing, irrigation and other details of external areas of the site;
  - (d) response to other requirements of this provision.
- (2) Natural features, such as cliff lines and rocky outcrops, are to be retained.
- (3) It is encouraged that landscaping limit turf and give precedence to species with low water needs, include native plant species, and select and position trees and shrubs to maximise control of sun and winds.
- (4) Pathways are to have a minimum separation of 1m from walls and planting is to be established in the separation area.
- (5) Landscaping within floodways or overland flow paths is to utilise scour protection techniques to minimise soil erosion.
- (6) Within a floodway or high hazard area, the design of landscape garden beds, and the selection of plants, is to be appropriate to the expected force of floodwaters.

### **6.2 Private open space**

#### **Objectives**

- (a) Ensure private open space of adequate size and dimension is provided to accommodate needs for dwelling tenants; and
- (b) Encourage private open space to be located to maximise:
  - (i) use in conjunction with other living areas;
  - (ii) sun light access; and

- (iii) passive surveillance of public domain and common open spaces.

#### **Provisions**

- (1) Private open space is to have a northern aspect where practicable.
- (2) Private open space is to be directly accessible from the living area of the dwelling and capable of serving as an extension of the living area.
- (3) Private open space for ground floor dwellings is to be located at ground level, where possible, with a maximum gradient of 1 in 20 (ie. 5%).
- (4) Private open space may be in the form of courtyards, decks and/or balconies and is to be provided for at least 90% of dwellings in a development.
- (5) Up to 10% of dwellings in a development may have 'juliet' balconies or a floor to ceiling window to living rooms with a balustrade to the window. This does not apply to 3 bedroom dwellings.
- (6) The private open space is to have the following minimum consolidated area and dimensions for all dwelling sizes in a development:
  - (a) ground level dwellings: 25m<sup>2</sup> with 4m minimum dimension; and
  - (b) upper level units: 10m<sup>2</sup> with 2m minimum dimension.

### **6.3 Common open space**

#### **Objectives**

- (a) Ensure residential developments incorporate suitable common open space to supplement private open space; and
- (b) Ensure common open space is designed to maintain safety, amenity, privacy and sun light access to users and neighbouring developments.

#### **Provisions**

- (1) An area of common open space under common title is to be provided that occupies a minimum 25% of the site area and has a minimum dimension of 6m.
- (2) The calculation of the required area of common open space excludes driveways, parking areas, essential access paths greater than 1.2m wide, indoor gymnasiums and outdoor clothes drying areas.
- (3) Common open space may be located on elevated gardens or roof tops provided that the area and overall design is useful for the recreation and amenity needs of residents, and does not exceed 30% of the common open space required for residential developments, or 66% for mixed use developments.
- (4) The common open space is to be located and designed to achieve good amenity for the dwellings in terms of solar access, natural air

flow and ventilation, and outlook.

- (5) Common open space is to be located and designed to:
  - (a) be seen from the street between building separations;
  - (b) complement existing neighbouring developments;
  - (c) provide for active and passive recreation needs of residents and children (including teenagers); and
  - (d) provide landscaping, composting and worm farms for vegetation waste.
- (6) Unpaved soft landscaped area is to comprise a minimum of 50% of the total area of common open space.
- (7) The common open space is to be designed to:
  - (a) present as a private area for use by residents only;
  - (b) include passive surveillance from adjacent internal living areas and/or pathways;
  - (c) have a northerly aspect where possible; and
  - (d) be separate to any public thoroughfares.

## 6.4 Deep soil

### Objective

- (a) Ensure developments incorporate deep soil areas of sufficient size and dimension to accommodate trees and other significant landscaping elements.

### Provisions

- (1) The minimum amount of deep soil, meaning an area of natural ground with relatively natural soil profiles and excluding pools, non-permeable paved areas and any areas where there is a structure underneath, is to be 10% of the site area.
- (2) An area of the deep soil is to be consolidated and have a minimum area of 100m<sup>2</sup> and minimum dimension of 10m.
- (3) All remaining deep soil areas are to have a minimum dimension of 4m.
- (4) Where site conditions allow, the deep soil is to be consolidated as one area to assist the ease of drainage and to allow for effective deep soil planting.
- (5) Where underground parking is proposed, it is to be generally limited to the building footprint.
- (6) 50% of the area of any porous paving and essential accessible paths up to 1.2m wide can be considered deep soil, providing there is deep soil area to one side that is level with the footpath.



## 6.5 Green roofs

### Objectives

- (a) Encourage green roofs and walls to improve air quality, amenity, ambient air temperature, building insulation, bird habitat, and aesthetic quality of the urban environment; and
- (b) Ensure any habitable green roof areas, such as private or common open space, are designed to minimise any potential adverse impacts.

### Provisions

- (1) Green roofs, meaning roof surfaces that supports the growth of vegetation over a substantial portion of the surface area, are encouraged on all buildings (including alterations and additions), providing it is demonstrated by a structural engineering report that such a structure can be accommodated.
- (2) Any green roof area is to be planted with Australian native plants (preferably endemic to the Sydney region) over a minimum substrate depth of 120mm.
- (3) Green roofs are to be located in accessible, serviceable and visible parts of the roof, such as the roof of lower parts of a development with varying heights.
- (4) Habitable green roof areas designed for use as recreation facilities are to have a high standard of finish and design. A detailed description and plan of roof top design is to be submitted with the development application (as part of landscape plan).
- (5) The design of any habitable green roof area is to address:
  - (a) visual and acoustic privacy,
  - (b) safety,
  - (c) security,
  - (d) roof maintenance and servicing; and
  - (e) wind effects.

## 6.6 Fences

### Objective

- (a) Maintain passive surveillance between public and private spaces, make a positive contribution to the character of the street and, where relevant, be appropriate to the style of the building.

### Provisions

- (1) Front fences are to align with the front boundary or reflect the predominant fence setback along the street.
- (2) The height of a fence is not to exceed:
  - (a) for a front fence or a side fence in front of the front building line:

- (i) constructed with solid masonry: 900mm above footpath level (excluding the height of any retaining wall); and
  - (ii) constructed with open or transparent materials: 1200mm above footpath level (excluding the height of any retaining wall), and 1,500 mm for any associated posts and piers.
- (b) for a side fence behind the front building line or a rear fence: 1800mm above ground level.
- (3) The height of the fence is to step to follow any change in level along the property boundary.
- (4) Fencing is to be designed so that sight lines between pedestrians and vehicles exiting the site are not obscured; and gates do not open over the public roadway or footpath.
- (5) Where a property is located on a corner, a higher side fence will be permitted if required for privacy and/or security.
- (6) Fences are generally not to be constructed in a location that would obstruct overland flow paths of flood waters. Where it is unavoidable such a fence must, in no circumstance, be solid; but rather designed to allow unimpeded flow of flood waters and associated debris and to withstand associated forces.

**Note:** Examples of suitable fences across overland flow paths include 'bottom-up' fences, mesh fences, or picket-style fences.

## 6.7 Tree management

### Notes:

- (1) Clause 5.9 of the LEP is to be read in conjunction with this section of the DCP.
- (2) Other policies that apply to the management of trees within the City of Sydney include the: Urban Tree Management Policy; Street Tree Master plan, and Register of Significant Trees;
- (3) All tree pruning should be undertaken in accordance with Australian Standard 4373-2007, Pruning of Amenity Trees.

### Objectives

- (a) Establish the trees to which cl. 5.9 (Preservation of trees or vegetation) of the LEP applies;
- (b) Ensure the protection of trees within and adjacent to development sites;
- (c) Maximise a healthy tree canopy coverage across the City; and
- (d) Ensure all applications are assessed on the basis of best practice tree management principles.

### Provisions

#### 6.7.1 Application

- (1) Development consent or a permit is required for all works to a tree

with any of the following criteria:

- (a) a height of 5m or more;
  - (b) a canopy spread of over 5m;
  - (c) a single trunk diameter of more than 200mm, measured at a height of 1.4m above ground level; or
  - (d) a multi-trunk species with any trunk diameter exceeding 150mm, measured at a height of 1.4m above ground level.
- (2) No development consent or permit is required for works (pruning, maintenance, removal and replacement) to trees within the public domain undertaken by Council.
- (3) Except where listed on Council's Register of Significant Trees, works (pruning, maintenance, removal and replacement) do not require either a development consent or permit to the following trees:
- (a) *Ailanthus altissima* (Tree of Heaven);
  - (b) *Bamboo* sp (all species and cultivars);
  - (c) *Citrus* sp (all varieties);
  - (d) *Cotoneaster* sp (Cotoneaster);
  - (e) *Eriobotrya japonica* (Loquat);
  - (f) *Ficus elastica* (Rubber Tree);
  - (g) *Gleditsia triacanthos* - not cultivars (Wild Honey Locust);
  - (h) *Lagunaria Patersonia* (Norfolk Island hibiscus);
  - (i) *Ligustrum* sp (Privet);
  - (j) *Morus species* (Mulberry);
  - (k) *Musa species* (Banana);
  - (l) *Nerium oleander* (Oleander);
  - (m) *Olea europaea var. Africana* (African Olive);
  - (n) *Robinia pseudacacia* -not cultivars (False Acacia);
  - (o) *Salix* sp (Willow)
  - (p) *Schefflera actinophylla* (Umbrella Tree); and
  - (q) *Syagrus romanzoffianum* (Cocos Palm).
- (4) Except where listed on the Council's Register of Significant Trees, development consent or a permit is not required for works (pruning, maintenance, removal and replacement) to the following trees that are less than 10m in height and have a diameter less than 300mm measured at a height of 1m:
- (a) *Cinnamomum camphora* (Camphor Laurel);

- (b) *Celtis sinensis* (Chinese Nettle Tree);
  - (c) *Celtis occidentalis* (American Nettle Tree);
  - (d) *Erythrina x sykesii* (Coral Tree); and
  - (e) *Liquidambar styraciflua* (Liquidambar).
- (5) Neither a development consent nor permit is required for the removal of dead and/or imminently dangerous trees where it can be demonstrated by the landowner that pruning or removal is the only reasonable option to avoid an immediate threat of injury or damage to life or property.
- (6) Where a tree is pruned or removed under provision (5) above:
- (a) it is to be demonstrated that the pruning or removal works were undertaken to the minimum extent necessary to manage that threat;
  - (b) the owner is to have recorded the condition that details the cause of the danger, supported by a report from a qualified Arborist (Minimum AQF Level 3 Arboriculture), including photographs of the tree;
  - (c) in the event of tree removal, the Arborist report is forwarded to the City immediately following the removal; and
  - (d) in the event of pruning, the Arborist report is made available to the City on request for a period of 3 months after the pruning works.

**Notes:**

- (1) "Imminently Dangerous" includes but is not restricted to obvious instability of the root plate, evidence of soil heave or cracking, loss of structural roots, root decay, structural defects that are imminently hazardous (for example, included branch attachment that is splitting), internal cracking, storm damage.
- (2) "Australian Qualifications Framework (AQF)" is a national framework for all education and training qualifications in Australia. The AQF for the Arboricultural Industry is listed below:
  - (a) *AQF Level 2 – Tree Worker*
  - (b) *AQF Level 3 – Trade Arborist*
  - (c) *AQF Level 4 – Supervising Arborist*
  - (d) *AQF Level 5 – Consulting Arborist*
- (3) When a permit is required for removal or pruning of trees, Council's application form must be completed. This form includes a section where the works/activities must be described and a drawing of the site that includes the location of the proposed works/activity in the context of its surrounds.
- (4) Following assessment of either the Development Application or the permit application, the Council or consent authority may request additional information to support the application.
- (5) Excepting those activities not requiring approval, a person who removes or prunes a tree without approval shall be guilty of an offence and liable for prosecution. A court, in addition to imposing a financial penalty on the guilty person, may require the person to replace the damaged or destroyed tree/s and maintain such tree/s until maturity.

### 6.7.2 General requirements for Arborist Reports

- (7) An Arborist Report is to be included within the Statement of Environmental Effects that accompanies all development applications:
  - (a) for tree removal or pruning; and
  - (b) where development works will potentially affect trees on the site itself and on neighbouring properties.
- (8) An Arborist Report may be required to assist the determination of tree removal or pruning Permit Applications.
- (9) The Arborist Report is to provide an objective, balanced assessment based upon the tree's health, condition, other site considerations and the type of works proposed.
- (10) All Arborist Reports are to be prepared by a suitably qualified and experienced arborist with a minimum qualification of a Diploma of Horticulture (Arboriculture) (AQF 5) or equivalent unless otherwise stated.
- (11) An Arborist Report is to include:
  - (a) the site address;
  - (b) the author's contact details and qualifications;
  - (c) a statement detailing who (persons, organisation, company) commissioned the arborist to prepare the report;
  - (d) a date of inspection;
  - (e) an executive summary (for larger reports);
  - (f) the report aims;
  - (g) the methodology used;
  - (h) identification of trees on either a detailed site survey plan or site tree survey plan;
  - (i) Genus, Species and Common name of all trees on site;
  - (j) the Diameter (of the trees trunk) at Breast Height (DBH) over bark, measured at 1.4m above ground level;
  - (k) a description of the:
    - (i) height of trees;
    - (ii) spread of trees;
    - (iii) structure of trees; and
    - (iv) health of trees;
  - (l) an analysis of the retention value of trees;
  - (m) an analysis of any contribution the trees provide to the site and

or the locality in terms of significance to the landscape and amenity;

- (n) details of all available management options, including tree pruning or site modification to avoid the removal of the entire trees;
- (o) the recommendations for the removal or retention of the trees; and
- (p) any other information required by the consent authority.

(12) All Arborist Reports are to address the minimum requirements below when required for a:

(a) **Tree hazard assessment (THA):**

- (i) Required when the applicant considers that a tree is potentially hazardous.
- (ii) The THA is to address the specific nature of the identified hazard (for example, the extent of branch decay, propensity for live limb failure, failure at basal cavity, wind throw due to root cutting).
- (iii) Where trunk or limb defect assessment is undertaken, strength loss calculations and cross section mapping are to be included in the THA.
- (iv) The THA is to clearly detail the methodology used in the assessment and evaluation process. This may include assumed occupancy within fall zone/s (targets) and an additional pro forma Hazard Assessment Sheet (for example, ISA Tree Hazard Evaluation Form).

(b) **Tree valuation:**

- (i) Required when it is necessary to determine a bond for the protection of trees on private property or in the public domain that may be impacted by the development.
- (ii) A detailed methodology.
- (iii) Site details including photos of the tree or group of trees.
- (iv) Any valuation must be based on a recognised tree valuation method (for example, the Thyer Method or Burnley Method)

(c) **Landscape plan:**

- (i) Required when the removal of trees will have a significant detrimental impact on the amenity of the area.
- (ii) The scale landscape plan is to include:
  1. the existing site features, location of the proposed replacement trees;
  2. proposed tree species (botanic and common name);

and

3. proposed size (litre, trunk calliper and height) of trees at planting.

(d) **Development impact analysis:**

- (i) Required when trees are likely to be directly or indirectly affected by a proposed development.
- (ii) Numbering/tagging of trees on site based on a detailed survey of trees on site and within 5m of the subject site.
- (iii) A corresponding numbered tree plan.
- (iv) An accurate, comprehensive assessment of the likely impact of the proposed development on trees, including the:
  1. details of any soil modifications (cut, compacted fill, excavations, etc.);
  2. impact during building construction (hoardings, site/ vehicle access etc);
  3. impact of the proposed building, infrastructure, and stormwater drainage;
  4. impact of the landscape modifications on site trees; and
  5. specific recommendations for tree protection for all trees.
- (v) Where plan drawings are unavailable, the recommendations are to be provided with the notation that:
  1. the plans were not available; and
  2. further arboricultural impact assessment is required.
- (vi) Where it is proposed to subdivide a site the report is to:
  1. reflect any driveway/access and infrastructure construction; and
  2. show the indicative building footprints of the proposed new lots; and
  3. any additional tree loss resulting from the development.
- (vii) Trees on adjoining properties are to be assessed if construction is proposed within the structural root zone.

(e) **Root mapping:**

- (i) Required where excavation associated with the proposed development will impact the tree's root zone.

- (ii) A plan showing the location of all excavation lines in relation to the existing site conditions.
  - (iii) Photographs (including points of reference to determine orientation and location on site) of the completed excavation line.
  - (iv) A schedule of findings for each individual excavation line, that at a minimum includes the:
    - 1. total linear distance of the excavation line;
    - 2. linear distance along the excavation that the root was located;
    - 3. depth at which the root was encountered; and
    - 4. diameter of the root.
  - (v) Any visual variations in roots observed are to be noted (for example, highly visible lenticels).
  - (vi) A section plan of the trench with X (depth) and Y (Length) axes that show all material found within the excavated area (e.g. roots, pipes, etc).
- (f) **Tree maintenance:**
- (i) When new plantings are required as a result of either development or due to the pruning or removal of trees, a tree maintenance plan is to be included with the development application or permit application.
  - (ii) When there are potential impacts on the health of trees from the pruning of aging trees or significant trees, or development works in the vicinity of aging or significant trees, a tree maintenance plan is to be included with the development application or permit application and is to include, as a minimum:
    - 1. a description of the current site and tree maintenance practices;
    - 2. a photographic record indicating the date the photo was taken;
    - 3. detailed recommendations for site and tree remediation works; and
    - 4. a schedule of works including time line and concise details of any recommended product (for example, soil type and supplier) or service.

**Note:** Significant trees are listed on the City of Sydney's Register of Significant Trees. This document is at [www.cityofsydney.nsw.gov.au/Environment/TreeManagement/default.asp](http://www.cityofsydney.nsw.gov.au/Environment/TreeManagement/default.asp)



## Section 7: Environmental Management

### 7.1 Ecologically sustainable development

#### Objective

- (a) Promote the use of renewable energy sources and ways to reduce the use of energy and water resulting from development.

**Note:** Residential development is addressed by BASIX. The provisions of this DCP in relation to reducing greenhouse gas emissions, reducing potable water use, or improving the thermal comfort, do not apply to BASIX affected development.

#### Provisions

##### 7.1.1 Energy efficiency

- (1) Electricity sub-metering is to be provided for any significant end uses that will consume more than 10,000 kWh/a.
- (2) Fridges are to be:
- (a) fitted with doors or, where open fridges are required, fitted with insulating night covers;
  - (b) located where they do not receive direct sunlight, and provided with adequate ventilation.

##### 7.1.2 Water efficiency, harvesting, re-use and recycling

- (3) All new fittings and fixtures for amenities in all non-residential (commercial and industrial) development, the public domain, public and private parks, and community facilities are to be installed to the following minimum Water Efficiency Labelling Scheme (WELS) standards:
- (a) for showerheads: 3 Star
  - (b) for water tap outlets: 6 Star
  - (c) for urinals: 5 Star
  - (d) for toilet cisterns: 4 Star

**Note:** For more details on the Water Efficiency Labelling Scheme, see the WELS website at [www.waterrating.gov.au/](http://www.waterrating.gov.au/)

- (4) Where a non-residential building, the public domain, a public or private park or a community facility is serviced by a dual reticulation system for permitted non-potable uses such as toilet flushing, irrigation, car washing, and fire fighting purposes, the development is to provide connections for the system.
- (5) Separate water meters are to be installed for the make-up lines to cooling towers, swimming pools, on the water supply to outdoor irrigation, and other major uses.
- (6) Where possible, rainwater tanks should be installed for all non-residential developments, including major alterations and additions, and plumbed to appropriate end uses.

- (7) Rainwater harvested from the roof and stored in rainwater tanks can be used for toilet flushing, washing clothes, car washing, swimming pools, water features, cooling tower make up water, and irrigation.
- (8) Development proposals that seek to reuse water runoff from paved surfaces for irrigation and wash down purposes are to incorporate into the development design water treatment measures. These measures are to clean the water to exclude contaminants such as litter, sediment and oil.
- (9) Where possible, water used for irrigation of public and private open space is to be drawn from reclaimed water or harvested rainwater sources. Possible sources include harvested stormwater, and treated greywater and wastewater.

**Note:** Any proposal that involves the installation or operation of a system processing grey water or black water or sewer mining should contact the City of Sydney's Health and Building Department regarding approval under section 68 of the Local Government Act 1993 and licensing under the Water Industry Competition Act 2006.

## 7.2 Waste minimisation, plans and design criteria

### Objectives

- (a) Establish design criteria to ensure the collection and disposal of waste from within developments is healthy, efficient, minimises disruption to amenity, and is conducive to the overall minimisation of waste generated; and
- (b) Ensure that each dwelling has adequate space for waste management.

**Note:** Applicants and designers should also refer to the City of Sydney Code for Waste Minimisation in New Developments 2005.

### Provisions

#### 7.2.1 Construction waste

- (1) A Construction and Demolition Waste Management Plan is to be submitted with the development application and is to contain:
  - (a) types of waste to be produced;
  - (b) likely quantities of waste to be produced;
  - (c) location and construction of on-site storage facilities for waste materials;
  - (d) re-using or recycling methods for waste either on-site or off-site;
  - (e) targets for recycling and re-use, and the person responsible for ensuring targets are met;
  - (f) confirmation that all waste going to landfill is not recyclable or hazardous; and
  - (g) for new buildings and major renovations, the total percentage

(by weight) of construction and demolition waste (for example, bricks, concrete, roof tiles) that is reused on site or diverted for reuse or recycling is to be at least 60%.

### 7.2.2 Waste management plans

- (2) A waste management plan detailing how waste is to be minimised within a development is to be submitted with the Development Application. The waste management plan will be used to assess and monitor the waste management process within a development.
- (3) The waste management plan is to include:
  - (a) demolition and construction phase:
    - (i) a site plan showing storage areas for reusable materials and recyclables during demolition and construction; and the vehicle access to these areas; and
    - (ii) estimations of quantities and types of materials to be reused recycled or left over for removal from the site.
  - (b) occupation of the development:
    - (i) plans and drawings of the proposed development that show the location and space allocated to the waste management facilities;
    - (ii) nomination of the waste collection point for the site;
    - (iii) identification of the path of access for users and collection vehicles;
    - (iv) details of the on-going management of the storage and collection of waste, including responsibility for cleaning, transfer of bins between storage areas and collection points, maintenance of signage, and security of storage areas; and
    - (v) where appropriate to the nature of the development, a summary document for tenants and residents to inform them of waste management arrangements.

### 7.2.3 Minimisation of waste during on-going occupation

- (4) The design of the waste area is to:
  - (a) provide space to store, in separate containers, the volume of waste and recycling likely to be generated during the period between collections;
  - (b) allow for efficient collection by vehicles, with limited need to reverse;
  - (c) allow for all equipment required to handle or manage waste and recycling materials;
  - (d) convenient for both building residents and others users and waste collection staff;

- (e) be in close proximity to the vehicle entrance;
  - (f) be no lower than one level below street level;
  - (g) be designed to prevent the entry of vermin;
  - (h) be well-drained and ventilated;
  - (i) be constructed with materials and surfaces that are easily cleaned;
  - (j) be artificially lit;
  - (k) be provided with hot and cold water supply (except for waste and recycling service compartments located on residential floors of multiple occupancy building);
  - (l) be identified with appropriate signage;
  - (m) minimise the potential for noise and odour, and
  - (n) where visible from the outside of the building, be integrated into the development.
- (5) Waste storage areas servicing premises that are likely to generate large quantities of food waste kept on-site for extended periods are to be refrigerated. In such cases the temperature is to be maintained at or below 5°C with all equipment installed with sufficient space for cleaning.
- (6) The route between the storage area and the waste collection point is to:
- (a) be level and free of steps or kerbs to allow the wheeling of bins; and
  - (b) have a maximum travel distance of:
    - (i) 10m – for bins including 240 L, 660 L & 1,000 L Mobile Garbage Bins (MGB's); and
    - (ii) 3m – for 1,500L and 2,000 L bulk bins (also known as skips).
- (7) The waste collection point is to be designed to:
- (a) allow waste loading operations to occur on a level surface away from gradients and vehicle ramps, and
  - (b) where collection vehicles drive into the building:
    - (i) have a minimum vertical clearance of either 3.6m or 3.8m (clear of all service ducts, pipes, etc), depending on the gradient of the access and the type of collection vehicle; and
    - (ii) collection vehicles are to be able to both enter and exit the premises in a forward direction. Where to meet this requirement a vehicle turntable is proposed, it is to have a capacity of 30 tonnes.

- (8) No waste incineration devices are permitted.
- (9) Where Council collection vehicles are required to enter a building, the:
  - (a) maximum grades are to be 1:20 for first 6m from street, then 1:8 or 1:6 with a transition of 1:12 for 4m at the lower end;
  - (b) minimum driveway width is to be 3.6m; and
  - (c) minimum turning circle radius is to be 10.5m.
- (10) For multi-unit residential buildings, it is preferable for the collection point to be inside the building, for example, in an underground car park, as this reduces noise impact on surrounding residents.
- (11) Where vehicle access is via a ramp, design requirements for the gradient, surface treatment and curved sections are critical and should be analysed at an early stage in the design process.

**Notes:**

- (1) Council's Code for Waste Minimisation in New Developments 2005 provides indicative waste and recycling generation rates for various uses. This policy also establishes the design and construction specifications for waste storage areas, and the typical dimensions of collection vehicles.
- (2) The relevant appropriate location of waste collection and storage should be analysed at an early stage in the design process and will generally comprise the accommodation of vehicles on-site if practicable, or alternative arrangements whereby storage areas are provided adjacent to a point in the street where collection can stand safely.

**7.2.4 Residential flat buildings and serviced apartments**

- (12) A space is to be provided inside each dwelling for the separate storage of one-day's volume of general waste (garbage), recyclables and compostable.
- (13) For buildings with a rise of more than 3 storeys an opening / hopper to a waste and recycling chute is to be provided on each floor such that the total travel distance from any dwelling to a waste chute does not exceed 45m.
- (14) Where a waste and recycling chute system is used:
  - (a) for safety, chute openings / hoppers are to open only into a waste service compartment or room; and
  - (b) the waste service compartment or room on each floor is also to include space for containers for the intermediate storage of recyclables.
- (15) A centralised waste and recycling room is to be provided near the collection point with capacity to store all waste and recycling likely to be generated in the building in the period between normal collection times.
- (16) An additional room or caged area with a minimum volume of 8m<sup>3</sup> is to be allocated for the storage of discarded bulky items and recyclable

electronic goods and sign-marked appropriately.

- (17) Space for composting and worm farming is to be available for all residents in a communal facility or in small private court yards. Composting facilities are to be sited on an unpaved earth surface.
- (18) Noise from the operation of the waste management system is not to impinge on the amenity of residential units, by:
  - (a) not locating chutes next to habitable rooms, and
  - (b) providing insulation to residential units where adjacent to or above chutes, waste storage facilities, chute discharge, waste compaction equipment, and waste collection vehicle access points.

#### **7.2.5 Additional provisions for mixed use developments**

- (19) The waste handling, storage and collection systems for residential waste and commercial waste are to be completely separate and self-contained. This includes separate keys and locking systems.
- (20) Easy access is to be available from each central waste and recycling storage area to the nominated collection point.
- (21) The waste management plan is to separately identify the collection points and management systems for both residential and commercial waste streams.
- (22) Measures are to be taken to ensure that noise and odour from the commercial waste facility does not impact on residents.
- (23) The design and management of the waste management system is to physically and actively discourage commercial tenants from using residential waste facilities.

#### **7.2.6 Additional provisions for non-residential development**

- (24) Kitchens, office tearooms and the like are to be designed with sufficient space for the interim storage of recyclable, organic and regular waste, in separate receptacles.
- (25) Storage facilities for separated waste (paper, containers and organic waste) are to be included in all commercial developments and indicated on the plans.
- (26) Where communal composting areas are proposed they should preferably be managed by a gardener or caretaker and located:
  - (a) in an accessible and visible area to increase awareness so that it is well maintained;
  - (b) having regard to the location of dwellings on site and on adjacent properties and the potential for the area to generate odours; and
  - (c) so that potential run-off is away from site drainage points.
- (27) The waste storage facilities are to be easily accessible to building occupants and removal vehicles and of sufficient size and capacity

to service the building.

- (28) The storage facilities are to be screened from view from any public place or adjoining property.

**Note:** More detailed waste management controls are in the City of Sydney Code for Waste Minimisation in New Developments 2005. Also refer to A Guide to Waste Management Planning (2002), Resource NSW (available at: [www.resource.nsw.gov.au](http://www.resource.nsw.gov.au)).

- (29) All businesses are encouraged to include in their waste contracts provisions that allow for the collection and recycling of high grade and low grade office paper, batteries, equipment containing printed circuit boards, computers, televisions, fluorescent tubes, smoke detectors and other recyclable resources.
- (30) In addition to the standard provision for wastes and recyclables, premises are to allocate sufficient space for the separate storage of:
- (a) recyclable electronic goods;
  - (b) reusable items such as crates, pallets, kegs and the like so that storage in a public place is avoided; and
  - (c) liquid wastes (oils etc). These storage areas must be bunded, and drained to a grease trap, in accordance with the requirements of Sydney Water.
- (31) A waste service compartment (waste and recycling area) is to be provided on each floor of the building and have sufficient capacity to store at least 1 day's volume of waste and recycling likely to be generated on that floor.
- (32) Provision is to be made for the separation of cardboard for recycling on each floor and in the centralised waste storage area. Storage of paper and cardboard is to be in a dry, vermin-proof area.
- (33) If more than 10m<sup>3</sup> of uncompacted waste and recycling is likely to be generated per day: the central waste and recycling room is to be separate from the goods receiving dock; and waste is to be collected in a compaction unit.

### 7.3 Flooding and drainage

#### Objectives

- (a) Assist in the management of stormwater to minimise flooding and reduce the effects of stormwater pollution on receiving waterways;
- (b) Ensure an integrated approach to water cycle management across the City through the use of water sensitive urban design principles;
- (c) Ensure that new development is not subjected to undue flood risk, nor exacerbate the potential for flood damage or hazard to existing development and to the public domain; and

- (d) Ensure that development will minimise the impact of stormwater and flooding on other developments and the public domain both during the event and after the event.

## Provisions

### 7.3.1 Definitions

- (1) For the purpose of this DCP:

- (a) **Annual Exceedance Probability (AEP)** means the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500m<sup>3</sup>/s has an AEP of 5%, it means that there is a 5% chance (that is one-in-20 chance) of a 500m<sup>3</sup>/s or larger events occurring in any one year (see also Average Recurrence Interval);
- (b) **Average Recurrence Interval (ARI)** means the long-term average number of years between the occurrence of a flood as big as or larger than the selected event. For example, floods with a discharge as great as or greater than the 20-year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event;
- (c) **Baseline Annual Pollutant Load** means the expected post-development pollutant load that would be discharged from the site over the course of an average year if no stormwater reuse or treatment measures were applied;
- (d) **major drainage systems** means “overland” drainage routes, which can include roads and recreational areas;
- (e) **minor drainage systems** means all gutters, pipes, culverts, open channels, natural creeks and other stormwater infrastructure;
- (f) **Planning Flood** means the appropriate design flood event for a development which is applied in the setting of conditions for different land uses dependent upon risk to life and property;
- (g) **Probable Maximum Flood (PMF)** means the largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation. The PMF defines the extent of flood prone land, that is, the floodplain; and
- (h) **Water Sensitive Urban Design (WSUD)** means any alternative to the traditional conveyance approach to stormwater management that aims to mitigate environmental impacts on water quantity, water quality and receiving waterways, conventionally associated with urbanisation. WSUD integrates urban planning and design, social and environmental amenity of the urban landscape and stormwater management with stormwater conveyance by reducing peak flows, protection of natural systems and water quality, stormwater reuse and water conserving landscaping.



### 7.3.2 Water Sensitive Urban Design (WSUD)

- (2) Wherever possible, applicants should take an integrated approach to water cycle management for the development and address water conservation, efficiency, stormwater management, drainage and flooding through a coordinated process.
- (3) A suitably qualified engineer with experience in stormwater, drainage and WSUD is to assess the site requirements for the proposed development, and prepare the required site stormwater, drainage and WSUD plans in accordance with the provisions of this DCP with best practice sustainable water management techniques.

### 7.3.3 Flooding

- (4) A site-specific flood study is to be prepared by the applicant in accordance with the NSW Floodplain Development Manual 2005, which is to include, but not be limited to:
  - (a) a detailed topographical survey that defines flow paths, storage areas, and hydraulic controls; and
  - (b) flood modelling that uses appropriate hydrological and hydraulic techniques, and incorporating boundary conditions.
- (5) The flood study is to be undertaken by a suitably qualified and experienced hydrologist.
- (6) The flood study is to show pre development and post development scenarios, and at a minimum is to include the following information:
  - (a) water surface contours;
  - (b) velocity vectors;
  - (c) velocity and depth product contours;
  - (d) delineation of flood risk precincts; and
  - (e) flood profiles for the full range of events for total development including all structures and works (such as revegetation and physical enhancements).
- (7) A site-specific flood study is to assume the 'worst case scenario' conditions for blockages to pipes, culverts and other infrastructure items, such that:
  - (a) kerb inlets are assumed to be 50% blocked;
  - (b) sag pits are assumed to be 100% blocked; and
  - (c) culverts and bridges with an open area less than six metres, measured on the diagonal, are assumed to be 50% blocked.

### 7.3.4 Flood planning levels

- (8) Habitable floor levels in residential development and tourist and visitor accommodation are to be above the 1% AEP event with an additional 500mm freeboard.

- (9) If the depth of flow in the 1% AEP is less than 250mm, then the freeboard equals 2 times flow depth (for example, 200mm flow depth = 400mm freeboard) but not less than 300mm.
- (10) Non-habitable floor levels of residential development and tourist and visitor accommodation (such as above ground garage or laundry) are to be above the 1% AEP event.
- (11) Development for the following purposes is to be above the PMF level:
- (a) Housing for elderly and for people with disabilities;
  - (b) Schools and child care centres; or
  - (c) Critical facilities, including hospitals and ancillary service; communication centres; police, fire and SES stations; major transport facilities; sewerage and electricity plants; any installations containing infrastructure control equipment; and any operational centres for use in a flood.
- (12) Where flood planning levels require the ground floor level to be raised above the adjoining street level, the difference in level is to be minimised. On sloping sites, the ground floor level is to be stepped to minimise the difference in level between the public domain and the adjacent internal areas.
- (13) The floor level of commercial developments is to be above the 1% AEP.
- (14) Entrances to an underground/basement car parking area, which is where the floor of the car parking area is more than 1m below the surrounding natural ground, with a single property owner with not more than 2 car spaces are to be a minimum level of 500 mm above the 1% AEP.
- (15) Entrances to an underground/basement car parking area with more than 2 car spaces are to be a minimum level of 500 mm above the 1% AEP or a level that is determined based on a review of the PMF, whichever is the higher.
- (16) Vents and openings in an underground/basement must be above the flood planning level.
- (17) Above ground car parking areas are to be provided above the PMF level.

### 7.3.5 Flood behaviour

- (18) Flood behaviour for the full range of flood events (up to and including the PMF), must not be altered as a result of development. A development application is to include a report by a suitably qualified hydrologist that shows the impact of development on flood behaviour.
- (19) The development proposal is to show that as a result of development:
- (a) there is no increase in the extent of the flood high hazard on any

property, including the public domain;

- (b) there is no increase in peak water level(s) at any point upstream or downstream of the proposed development, measured with a tolerance of 50mm;
- (c) the capacity of any floodway is not restricted, unless it is to provide on-site stormwater detention;
- (d) there is no overall loss of on-site flood storage capacity; and
- (e) the likelihood of flood damage to existing development is not to be increased as a result of new development.

### **7.3.6 Development design on a floodplain**

- (20) When the consent authority requires an assessment of the structural soundness of proposed buildings during potential flood events, a suitably qualified and experienced structural engineer is to undertake this assessment. This assessment is to address the following impacts at a minimum: hydrostatic pressure; hydrodynamic pressure; impact of debris; and buoyancy forces.
- (21) Foundations are to be included in the structural analysis.
- (22) Flood compatible materials are to be used to construct any part of a building or structure lower than the relevant Flood Planning Level.
- (23) All services associated with the development are to be flood proofed to the relevant Flood Planning Level or the PMF level, whichever is higher. Flood proofing is to be undertaken using a combination of measures sufficient to ensure that the structure and building contents are able to withstand the forces due to the ingress or passage of floodwaters, including debris
- (24) All flood sensitive equipment is to be waterproofed to the relevant Flood Planning Level or the PMF level, whichever is higher.

### **7.3.7 Development in a floodway or high hazard area**

- (25) The design of development in a floodway or high hazard area is to be able to withstand:
  - (a) hydrodynamic pressure from the approach velocity of the floodwaters in the Planning Flood nominated in the flood planning levels;
  - (b) hydrostatic pressure from the peak water level generated by the Planning Flood nominated in the flood planning levels; and
  - (c) the impact loading due to flood-borne debris.
- (26) Development of land entirely within a floodway or a high hazard area, for the appropriate Planning Flood nominated in the flood planning levels, is permissible where:
  - (a) the developed land is less than 1,000m<sup>2</sup>; or
  - (b) the development can demonstrate that flows can be

accommodated on-site, with a 10% reduction in flow volume, and a 10% reduction in flow depth across the site.

- (27) For development that is partly within a defined floodway or high hazard area for the appropriate Planning Flood, the development application is to demonstrate that the floodway and/or the high hazard floodwaters can be appropriately accommodated such that the floodway or high hazard area is limited to roads, or other suitable overland flow paths.

### **7.3.8 Safety and evacuation**

- (28) Any proposed development on a floodplain is required to:

- (a) provide evacuation points that allow people to relocate to a flood-free area (for example, above the PMF or relevant Flood Planning Level, whichever is higher); and
- (b) provide warning signs for areas of high hazard and/or floodway, with directions to the nearest evacuation location.

- (29) Where a proposed pedestrian footpath or other pedestrian corridor is located within a floodway and/or high hazard area, sufficient evacuation routes must be located along the corridor or footpath to allow for evacuation from the floodway and/or high hazard area.

- (30) A minimum of two evacuation routes are required for any open space area. Where an open space passive or active recreational area is located within a floodway and/or high hazard area, sufficient evacuation routes must be located within the open space area to allow for evacuation from the floodway and/or high hazard area.

- (31) No children's play equipment, or children's fenced off open space recreation areas, are to be located within a floodway and/or high hazard area.

- (32) All underground car parks are to provide at least one additional pedestrian exit (other than the main entry point). This exit must allow for vertical evacuation to a freely accessible area above the PMF or the relevant Flood Planning Level, whichever is higher.

### **7.3.9 Drainage**

- (33) A suitably qualified engineer with experience in drainage design is to assess the site drainage requirements for the proposed development, and prepare the required site drainage plan in accordance with the provisions of this DCP.

- (34) Major drainage systems are to be designed to convey flows:

- (a) above the 20% AEP event for properties less than 1,000m<sup>2</sup>; and
- (b) above the 5% AEP design event for all other properties.

- (35) The development proposal is to show how the major drainage system is designed to address any site specific conditions, and how it connects into the downstream drainage system.

- (36) Major drainage systems are to be designed in a manner that ensures that personal safety is not compromised.
- (37) Minor drainage systems are to be designed to convey all minor flows:
- (a) up to the 20% AEP event for properties less than 1,000m<sup>2</sup>; and
  - (b) up to the 5% AEP for all other properties.
- (38) The discharge of minor flows from a proposed development to the kerb is not permitted where a direct connection can be made to an existing stormwater pipe, unless it can be demonstrated that there is sufficient capacity within the existing gutter and the resulting velocity and depth within the gutter remains below 400mm.
- (39) Where the proposed development is located on a floodplain, high level overflows are permitted for roof drainage systems where the overflow is set above the 1% AEP level.
- (40) Where connection is proposed to the existing stormwater infrastructure, there must be minimal impact (less than 10%) on the capacity of the infrastructure. The development proposal is to show the level of impact on the existing stormwater infrastructure as a result of the proposed new connection.
- (41) Major drainage systems are to be designed in a manner that ensures that personal safety is not compromised.

#### **7.3.10 Stormwater management**

- (42) The post development run-off from impermeable surfaces (such as roofs, driveways and paved areas) is to be managed by stormwater source measures that:
- (a) contain frequent low-magnitude flows;
  - (b) maintain the natural balance between run-off and infiltration;
  - (c) remove some pollutants prior to discharge into receiving waters;
  - (d) prevent nuisance flows from affecting adjacent properties; and
  - (e) enable appropriate use of rainwater and stormwater.
- (43) A local drainage management plan is required for development on sites of 1,800m<sup>2</sup> or more.
- (44) This management plan is to address:
- (a) the hydrology of the locality and its relationship to the drainage system;
  - (b) the distribution of soil types and the scope for on-site infiltration;
  - (c) any expected rise in ground water level due to development;
  - (d) the role of the principal landscape components on the site for water conservation and on-site detention;

- (e) the scope for on-site stormwater detention and retention, including the collection of water for re-use;
- (f) how any detrimental impacts on the existing natural hydrology and water quality are proposed to be minimised;
- (g) how pedestrian safety is to be ensured; and
- (h) integration of drainage management responses and open space areas.

**Note:** Stormwater drains are only designed to accept rainwater. Other concentrated matters in the stormwater system may result in pollutants entering natural waterways. The management of stormwater and other drainage within a site should maximise opportunities to 'hold and use the rain where it falls'. Reference should be made to Council's Code of Standard Requirements for the Discharge of Stormwater from Private Properties, Council's Stormwater Pollution Policy 'The Muck Stops Here', and Sydney Coastal Council's Stormwater Pollution Control Code for Local Government.

### 7.3.11 On-site detention

- (45) On-site detention is not required for a development on the floodplain, as defined by the 100 year ARI.
- (46) Where the site conditions allow, a common on-site detention system is to be provided for larger development, instead of multiple individual on-site detention systems.
- (47) Rainwater tanks are not permitted as a form of stormwater drainage detention.
- (48) The 1% AEP flows generated from the development of a site with an area less than 1,000m<sup>2</sup> is to be equivalent to the 20% AEP flows generated from the pre-developed site with no detention.
- (49) The development of a site with an area of 1,000m<sup>2</sup> or greater is to incorporate staged on-site detention such that the:
  - (a) stage 1 – 10% AEP flows generated from the developed site are equivalent to 50% AEP flows generated from the pre-developed site with no detention; and
  - (b) stage 2 – 1% AEP flows generated from the developed site are equivalent 20% AEP flows generated from the pre-developed site with no detention.

### 7.3.12 Stormwater retention

- (50) The design of the development proposal is to ensure that the post-development stormwater volumes generated from the site during an average rainfall year are:
  - (a) 70% of the volume if no measures were applied to reduce stormwater volume; or
  - (b) the equivalent volume generated if the site were 50% pervious (grass),
 whichever results in the greater volume of detention required.

### 7.3.13 Detention devices

- (51) Stormwater detention devices are to be designed to ensure that the overflow and flowpath have sufficient capacity during all design rainfall events, discharges to the public stormwater system without affecting adjoining properties, and is free of obstructions, for example, fences.

### 7.3.14 Filtration and bio-retention devices

- (52) Where filtration and bio-retention devices are proposed, they are to be designed to capture and provide temporary storage for stormwater.
- (53) Where swales are proposed, they are to be incorporated into open space, and road and footpath design in accordance with best practice sustainable water management techniques.

### 7.3.15 Stormwater pollutant load

- (54) Development of a site with a site area greater than 1,000m<sup>2</sup> is to undertake a Stormwater Quality Assessment to demonstrate that the development will achieve the post-development pollutant load standards indicated below:
- |  |   |
|--|---|
| (a) litter/vegetation larger than 5mm: | 0% reduction on the Baseline Annual Pollutant Load;     |
| (b) total suspended solids:            | 85% reduction on the Baseline Annual Pollutant Load;    |
| (c) total phosphorous:                 | 5% reduction on the Baseline Annual Pollutant Load; and |
| (d) total nitrogen:                    | 45% reduction on the Baseline Annual Pollutant Load;    |
- (55) The Stormwater Quality Assessment is to be prepared by a suitably qualified engineer with experience in WSUD and include:
- (a) Modelling of pollutant load standards with an industry standard water quality model;
  - (b) The design of WSUD measures used to achieve the post-development pollutant load standards; and
  - (c) Maintenance schedules of any proposed WSUD measure that requires maintenance and/or full replacement including the likely recycling disposal location of any wastes that may be generated.
- (56) Development on a site with a site area less than 1,000m<sup>2</sup> is to be designed so that the flow of pollutants from the site due to stormwater is reduced.

**Note:** WSUD techniques include (but are not limited to) street tree planter bio-retention systems, rain garden bio-retention systems, bio-retention swale systems and gross pollutant traps.

## 7.4 Social Impact Assessment

### Objectives

- (a) Identify any need for community facilities or services generated through new developments; and
- (b) Identify potential social impacts of new developments and appropriate mitigation strategies.

### Provisions

- (1) A Social Impact Assessment is to be included within the Statement of Environmental Effects that accompanies all development applications.
- (2) The Social Impact Assessment is to be prepared by a suitably qualified social planner and is to include:
  - (a) the identification of potential social impacts generated by the proposed development and recommendation of appropriate mitigation measures; and
  - (b) an analysis of the potential demographic composition of the proposed development and any likely additional demand for community infrastructure.



## Section 8: Vehicle and bicycle facilities

### 8.1 Managing transport demand

#### Objective

- (a) Ensure that the transport demand generated by development is managed in a sustainable manner.

#### Provisions

- (1) All development applications are to include a 'Transport Impact Study' addressing the potential impact of the development on surrounding movement systems, where the proposed development is:
- (a) a non-residential development of more than 1,000m<sup>2</sup> GFA;
  - (b) a residential development of 25 or more new dwellings; or
  - (c) likely to generate significant traffic impacts according to the consent authority.
- (2) All development applications are to include a 'Green Travel Plan' outlining initiatives to promote walking, cycling and the use of public transport, where the estimated peak trip generation of the proposed development is greater than:
- (a) 99 vehicles per hour for non-residential development;
  - (b) 59 vehicles per hour for residential development.
- (3) All development applications are to include a 'Transport Access Guide', and a strategy for its future availability to residents, employees and visitors, unless the proposed development is:
- (a) an individual dwelling houses;
  - (b) a residential development of fewer than 25 new dwellings;
  - (c) a non-residential developments less than 1,000m<sup>2</sup> GFA; or
  - (d) a business employing fewer than 10 people at any given time.
- (4) All development applications that propose alterations to existing road networks or conditions are to include a detailed study outlining:
- (a) the expected impacts on traffic operations, such as 'rat runs', intersection 'bottle necks', and interaction with adjacent or nearby streets; and
  - (b) mitigation and traffic calming strategies proposed to eliminate or minimise such impacts, such as one way traffic flow, or turning restrictions.

#### Notes:

- (1) 'Managing Transport Demand' refers to the measures taken which minimise the need to travel and the length of trips, particularly by cars, and encourage travel by the most sustainable mode of transport, (DIPNR, ILUT, 2001).
- (2) Refer to Transport and Parking Guideline for further information on how to determine parking requirements, process for requiring particular reports, Transport Impact Studies, Green Travel Plans; and Transport Access Guides.

## 8.2 Vehicle parking

### Objective

- (a) Ensure any car parking facilities provided, ancillary to other land uses, are for a variety of vehicle types, are equally apportioned, and include car share, motorcycle, and accessible parking facilities.

**Note:** Applicants should refer to the relevant provisions of the LEP when determining the maximum number of car parking spaces permitted for a development.

### Provisions

- (1) For developments under a strata subdivision:
- (a) car parking spaces are to be allocated to dwelling units and be a part lot on the dwelling unit title on the strata plan;
  - (b) the number of car parking spaces allocated to a dwelling unit must not exceed the 'per unit' rate used to calculate the maximum permitted spaces in the LEP; and
  - (c) no part of the common property is to be used for the parking or storage of vehicles or boats except for:
    - (i) visitor car parking spaces, which are to be used only by visitors to the building;
    - (ii) car share parking spaces, which are to be used in accordance with provisions of this DCP.
- (2) Where owners, tenants or occupiers of a property are restricted from participation in the Council's 'resident parking scheme' the conditions of consent are to include details of the restriction and the signage required to advise tenants of the restriction.

#### 8.2.1 Visitor parking spaces

- (3) All visitor parking spaces, which are time-limited car parking spaces for the exclusive use of people visiting a site, are to be:
- (a) when part of a strata subdivision, retained as common property by the Owners Corporation of the site, and at no time are to be allocated, sold or leased to an individual owner/occupier;
  - (b) grouped together in the most convenient locations relative to car parking area entrances, pedestrian lifts and access points; and
  - (c) separately marked and clearly sign-posted.
- (4) Development applications are to indicate how visitor parking is to be accessed, including arrangements for access (intercoms, etc.) if visitor parking is accessed through a security gate.

#### 8.2.2 Motorcycle parking spaces

- (5) Area provided as parking for motorcycles is to be included in the maximum number of car parking spaces permitted by the LEP, at

a rate of five motorcycle parking spaces, or part thereof, per car parking space.

- (6) In all buildings that provide car parking spaces, the area equal to one car parking space is to be provided as separate parking for motorcycles for every 100 car parking spaces provided, or part thereof.
- (7) The design and layout of motorcycle parking is to comply with the requirements of Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking.
- (8) Each motorcycle parking space is to be designated and located so that parked motorcycles are not vulnerable to being struck by a manoeuvring vehicle.

### 8.2.3 Car share parking spaces

- (9) Development of residential accommodation must provide at least one car share parking space, which is car parking space for the exclusive use of car share scheme vehicles, for every 80 dwellings. Car share parking spaces are included in the maximum number of car parking spaces permitted for a development in the LEP.
- (10) The number of car share parking spaces required is to be rounded to the nearest whole number if it is not a whole number.
- (11) All car share parking spaces are to be:
  - (a) retained as common property by the Owners Corporation of the site, and not sold to an individual owner/occupier at any time;
  - (b) made available for use without a fee or charge;
  - (c) publicly accessible at all times and visible from the public domain wherever possible;
  - (d) located together in the most convenient locations relative to car parking area entrances and pedestrian lifts or access points;
  - (e) located in a well lit place that allows for casual surveillance;
  - (f) located adjacent to a public road and integrated with the streetscape through appropriate landscaping where the space is external;
  - (g) signed for use only by car share vehicles; and
  - (h) made known to building occupants and car share members through appropriate signage which indicates the availability of the scheme and promotes its use as an alternative mode of transport.
- (12) It is preferable for car share parking spaces to be publicly accessible so that scheme members do not require specific security access to the space. A development application is to demonstrate how the car share parking space is to be accessed, including arrangements for

access if car share parking is accessed through a security gate.

- (13) The car share parking space requirement may be satisfied by leased parking off-site only where:
- (a) the applicant demonstrates to the satisfaction of the consent authority that, due to security constraints, the required car share parking spaces cannot be reasonably provided on-site;
  - (b) the leased spaces are publicly accessible at all times and located within 200m of the development;
  - (c) the leased spaces are not leased from residential development;
  - (d) access to leased spaces is free for persons using the premises for the duration of their use of the premises; and
  - (e) the consent authority considers the arrangements for leased space to be acceptable.
- (14) A development application that proposes leased spaces off-site to satisfy requirements for car share parking spaces is to:
- (a) demonstrate that pedestrian access between leased spaces and the development is convenient and safe; and
  - (b) be accompanied by a Management Plan outlining:
    - (i) proof of access to leased spaces;
    - (ii) the proposed leasing arrangements and duration;
    - (iii) the method of operation of leased spaces (for example, voucher system, card system); and
    - (iv) the means of directing customers or visitors to leased spaces.
- (15) Car share parking spaces may be allocated or leased to an individual owner/occupier only where:
- (a) it has been demonstrated to the consent authority that no car share organisation is able to make use of the space;
  - (b) the space is placed on a register of inactive car share spaces by Council and which is to be held and maintained by Council; and
  - (c) within 90 days of receipt of a notice from a car share organisation, the Owners Corporation is to:
    - (i) terminate any non car share leases for the space; and
    - (ii) make the space available to the car share organisation for use as a car share space.
- (16) A covenant is to be registered with the strata plan advising of any car share parking space. The covenant is to include provisions that the car share parking space(s) cannot be revoked or modified without prior approval of Council.

- (17) Residents of new developments in which a car share parking space is provided are not eligible for resident parking schemes.

**Note:** It is recommended that an applicant discusses the provision and operation of car share spaces with the operators of such schemes prior to submission of a development application.

#### 8.2.4 Accessible car parking spaces

- (18) In residential developments, the proportion of car parking spaces provided that are accessible car parking spaces, which are car parking spaces for the exclusive use of a person with a mobility impairment, is to be not less than the proportion of dwellings in the development that are adaptable or accessible dwellings. Accessible car parking spaces are included the maximum number of car parking spaces permitted for a development in the LEP.
- (19) For every 20 visitor car parking spaces provided in a development, or part thereof, one visitor car parking space is to be an accessible visitor car parking space. Accessible visitor car parking spaces are included in the maximum number of visitor car parking spaces permitted for a development in the LEP.
- (20) A child care centre that proposes to provide car parking spaces, at least one car parking space is to be an accessible car parking space. Accessible car parking spaces are included the maximum number of car parking spaces permitted for a development in the LEP.

#### Notes:

- (1) Car parking spaces must also be provided in accordance with the Building Code of Australia.
- (2) For seniors housing developments, accessible parking must be provided in accordance with *State Environmental Planning Policy (Seniors Living) 2004*.
- (21) Accessible parking is not required in car parking areas where a parking service is provided and direct access to any of the car parking spaces is not available to the general public or occupants.
- (22) For residential developments under a strata plan, accessible car parking spaces are to be allocated to adaptable or accessible units, or as visitor parking. Accessible car parking spaces allocated to adaptable or accessible dwelling units are to be a part lot to that unit's title in the strata plan.
- (23) Accessible parking is to be designed in accordance with the relevant provisions of:
- (a) Australian Standard 1428.1-2001 Design for access and mobility. Part 1: General requirements for access - New building work;
  - (b) Australian Standard 1428.2-1992 Design for access and mobility. Part 2: Enhanced and additional requirements - Buildings and facilities; and
  - (c) Australian Standard 2890.1-2004 Parking facilities. Part 1:

Off-street car parking.

- (24) Designated accessible car parking facilities are to be:
- (a) located at the closest point to each accessible public entrance;
  - (b) linked to an accessible entrance to the building or to a wheelchair accessible lift by a continuous accessible path of travel, and preferably under cover;
  - (c) a minimum length of 5.5m and have a minimum vertical clearance of not less than 2.5m; and
  - (d) a minimum width of 3.8m. An overlap allowance of a maximum of 500mm may apply when, parallel to the parking space, there is an adjoining walkway or similar surface which is:
    - (i) at the same level as the car parking space;
    - (ii) firm and level, with a fall not exceeding 1 in 40 in any direction;
    - (iii) not another car parking space; and
    - (iv) not less than 1m in width.
- (25) Both the designated parking space and the continuous accessible path of travel are to be clearly signposted.
- (26) The signage for the accessible parking space is to be painted on the surface of the paved space and signposted at a height of not less than 1.5m centrally located at the end of the space.
- (27) The provision of accessible parking is to be signposted at the entrance of the car park.
- (28) Where there are a total of 5 or less car parking spaces the designated spaces are not required to be signed to restrict their use only for people with disabilities.

### **8.3 Bicycle parking and associated facilities**

#### **Objective**

- (a) Encourage a greater proportion of trips to be made by bicycle, by ensuring parking and appropriate facilities such as change rooms, showers and secure areas for bike parking are provided in all developments.

#### **Provisions**

- (1) Developments must provide, at a minimum, parking for bicycles at the rates outlined in Table 1:

Table 1: Bicycle parking rates

<i>Proposed use</i>	<i>Resident or employee bicycles</i>	<i>Customer or visitor bicycles</i>
<b>Residential</b>		
Residential accommodation (unless specified below)	1 per dwelling	1 per 10 dwellings
Home occupation or home industry	1 per dwelling	1 per dwelling
Seniors housing or a hostel	1 per 10 staff and 1 per 20 self-contained dwelling units	1 per 30 dwellings
Boarding house	1 per 6 rooms	1 per 6 rooms
<b>Commercial</b>		
Retail premises (except restaurants)	1 per 25m <sup>2</sup> public area	2 plus 1 per 100m <sup>2</sup> over 100m <sup>2</sup> GFA
Restaurant	1 per 100m <sup>2</sup> public area	2 plus 1 per 100m <sup>2</sup> over 100m <sup>2</sup> GFA
<b>Community</b>		
Child care centre	1 per 10 staff	2 per centre
Information or education facility	1 per 1,000m <sup>2</sup> GFA	1 per 200m <sup>2</sup>
Place of public worship	-	Greater of 1 per 15 seats or 1 per 40m <sup>2</sup> GFA

- (2) Where a proposed use is not included in Table 1, an applicant is to provide bicycle facilities to accommodate Council's mode share target for trips by bicycle as described in the 'Bicycle Strategy and Action Plan 2007-2017'.
- (3) Where the calculated number in Table 1 is not a whole number, the minimum number of bicycle parking spaces is the nearest whole number.
- (4) Bicycle parking facilities are to be provided in addition to other parking requirements.
- (5) The design, layout and security of bicycle parking are to comply with the minimum requirements of AS2890.3 – 1993 Parking Facilities Part 3: Bicycle Parking Facilities.
- (6) Where a dwelling in a residential development has a basement storage area on title that is large enough to accommodate a bicycle and is no smaller than a Class 1 bicycle locker, no additional bicycle parking is required for that dwelling.

- (7) Secure bicycle parking facilities are to be provided in accordance with the following:
- (a) parking for occupants of residential buildings to be Class 1 bicycle lockers;
  - (b) parking for staff/employees of any land uses to be Class 2 bicycle facilities; and
  - (c) parking for visitors of any land uses to be Class 3 bicycle rails.

**Note:** Classes of bicycle parking facilities are defined in the Australian Standard AS2890.3 – 1993 Parking Facilities Part 3: Bicycle Parking Facilities.

- (8) Where bicycle parking for tenants is provided in a basement, the bicycle parking area is to be located:
- (a) on the uppermost level of the basement
  - (b) close to entry/exit points; and
  - (c) subject to security camera surveillance where such security systems exist.
- (9) A safe path of travel from any bicycle parking area to entry/exit points is to be marked.
- (10) Access to any bicycle parking area is to be:
- (a) a minimum of 2.2m wide to allow passage of pedestrians and bicycles to pass each other (access ways can be shared with vehicles within buildings);
  - (b) accessible via a ramp;
  - (c) clearly identified by signage; and
  - (d) accessible via appropriate security / intercom systems.
- (11) Bicycle parking for visitors is to be provided in an accessible on-grade location near a major public entrance to the development and is to be signposted.
- (12) For non-residential uses, the following facilities for bicycle parking are to be provided at the following rates:
- (a) 1 personal locker for each bicycle parking space provided;
  - (b) 1 change room for up to and including 10 bicycle parking spaces provided;
  - (c) 2 change rooms with separate male and female facilities where 11 or more bicycle parking spaces are provided;
  - (d) 1 shower for up to and including 10 bicycle parking spaces provided;
  - (e) 2 showers where between 11 and 20 bicycle parking spaces are provided; and



- (f) 2 additional showers for each additional 20 bicycle parking spaces or part thereof.

**Note:** Showers are to be provided in both male and female change rooms.

- (13) Storage, change room and shower facilities are to be located close to the bicycle parking area, entry/exit points, and within an area of security camera surveillance where there are such building security systems.

## 8.4 Service vehicle loading spaces

### Objective

- (a) Ensure sufficient space is provided for service vehicles to load and unload equipment, and carry out any service work required.

### Provisions

- (1) Separate service vehicles loading spaces, which are spaces for the exclusive use of service vehicles visiting a development, are to be provided in addition to all other parking requirements and are not to be shared with space provided for any other purpose.
- (2) The minimum number of service vehicle loading spaces required for new development is:
  - (a) For residential accommodation:
    - (i) 1 space for the first 50 dwellings, or part thereof; plus
    - (ii) 1 space for every subsequent 100 dwellings, or part thereof.
  - (b) For shops:
    - (i) 1 space for every 350m<sup>2</sup> of gross floor area, or part thereof, for the first 2,000m<sup>2</sup>; plus
    - (ii) 1 space for every 8,000m<sup>2</sup> of gross floor area, or part thereof, thereafter.
  - (c) For other uses:
    - (i) 1 space for 1,750m<sup>2</sup> of gross floor area, or part thereof, or to meet needs.
- (3) For mixed use developments, the total number of service vehicle loading spaces is calculated on a pro rata basis of spaces required for the different uses within the building.
- (4) The total requirement identified above may be reduced for developments with a gross floor area in excess of 50,000m<sup>2</sup>, where it can be demonstrated to the satisfaction of the consent authority that:
  - (a) the proposed uses are complementary in terms of servicing demand; and
  - (b) at least one space per tenancy for business owners is provided.

**Note:** Servicing demand should be demonstrated through the submission of a Parking and Access Report with a development application. Refer to Transport and Parking Guideline for further information on Parking and Access Reports.

- (5) Service vehicle loading spaces are to be:
- (a) used only by service providers, but not for the storage of goods or equipment;
  - (b) clearly signed and designated;
  - (c) located near vehicle entry points and near lifts;
  - (d) screened from the street where possible; and
  - (e) located completely within the boundary of the site, clear of parked vehicles and through traffic.
- (6) Service vehicle loading spaces are to have minimum dimensions of 2.6m width, 5.4m length and 2.5m unobstructed vertical clearance and at least one service vehicle loading space must be capable of accommodating the following service vehicle type:
- (a) for a child care centres: light rigid vehicle;
  - (b) for residential accommodation, a retail premises, and an information and education facility: medium rigid vehicle; and
  - (c) for place of public worship: heavy rigid vehicle.
- (7) For the purpose of this clause:
- (a) **heavy rigid vehicle** means a rigid vehicle with 3 or more axles and a gross vehicle mass (GVM) of more than 8 tonnes;
  - (b) **light rigid vehicle** means a rigid vehicle with a gross vehicle mass (GVM) of more than 4.5 tonnes but not more than 8 tonnes; and
  - (c) **medium rigid vehicle** means a rigid vehicle with 2 axles and a gross vehicle mass (GVM) of more than 8 tonnes.

**Note:** Where justified, the consent authority may vary the type of service vehicle as defined by AS 2890.2-2002 Off-street parking Part 2: Commercial vehicle facilities.

## 8.5 Passenger pick up spaces

### Objective

- (a) Ensure that developments likely to require pick up and drop off areas provide adequate facilities on site to meet this demand.

### Provisions

- (1) Subject to urban design and streetscape considerations, passenger pick-up and set-down facilities for taxis, private vehicles and buses or coaches may be required by the consent authority in a convenient off-street location close to pedestrian entrances, of sufficient

dimension to accommodate the following:

- (a) for seniors housing: one vehicle per 100 beds, or part thereof, and one bus;
- (b) for a child care centre: one vehicle per five children (of the maximum permitted capacity); and
- (c) for a place of public worship: one vehicle and, for developments with over 100 seats, one bus.

**Notes:**

- (1) The design standard for a bus pick-up and set-down facility is as required for a 'heavy rigid vehicle' parking space under AS 2890.2-2002 Off-street parking Part 2: Commercial vehicle facilities.
  - (2) Seniors housing developments must also provide ambulance and bus facilities as required by *State Environmental Planning Policy (Seniors Living) 2004*.
- (2) Separate passenger pick-up and set-down facilities are to be provided in addition to all other parking requirements and are not to be shared with space provided for any other purpose.
  - (3) Passenger pick-up and set-down facilities are to be:
    - (a) clearly signed and designated; and
    - (b) time limited to no more than 30 minutes at any one time.
  - (4) If the consent authority considers that the proposed arrangements for passenger pick-up and set-down by buses or coaches will lead to undesirable on-street traffic and parking conditions, the development may be restricted (by a condition of consent) from receiving buses and coaches.
  - (5) The use of on-street space for passenger pick-up/set-down may be possible in exceptional circumstances if off-street provision is impractical or detrimental to pedestrian amenity and urban design. Any proposed use of on-street space for passenger pick-up/set-down should be discussed at an early stage with Council and will require the approval of the Sydney Traffic Committee.

## 8.6 Car wash bays

### Objective

- (a) Ensure adequate space is provided for the washing of vehicles.

### Provisions

- (1) Separate car wash bays, which are spaces used only for the washing of cars, are to be provided in addition to all other parking requirements and are not to be shared with parking provided for any other purpose.
- (2) Car wash bays are to be provided within residential development at the rate of:

- (a) 1 bay for any development comprising between 20 and 100 dwellings; and
  - (b) 1 bay per 100 dwellings, or part thereof, for any development comprising more than 100 dwellings.
- (3) For buildings under a strata title, car wash bays are not to be at any time be allocated, sold or leased to an individual owner/occupier and shall be strictly retained as common property by the Owners Corporation of the site.
- (4) The minimum dimensions of any car wash bay are to be 3.5m x 5.5m.

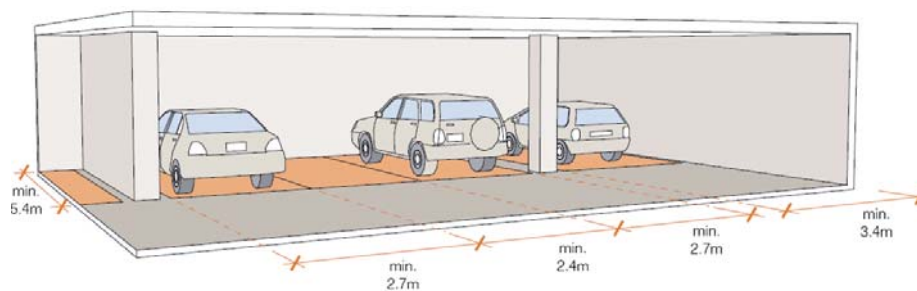
## 8.7 Parking area design

### Objectives

- (a) Ensure any parking provided is of a standard and dimension that enables the use of a parking area as intended;
- (b) Limit visual intrusion of car parking areas on public domain; and
- (c) Provide for landscaping in any open car parking areas.

### Provisions

- (1) The design, layout, signage, line marking, lighting, and physical controls relating to parking areas and spaces are to comply with the minimum requirements of:
- (a) Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking, and
  - (b) Australian Standard AS 2890.2 – 2002 Off-street parking Part 2: Commercial vehicle facilities, where the parking area is required to accommodate service vehicles.
- (2) All parking spaces and aisles are to be designed to accommodate the B85 vehicle as defined in the Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking.
- (3) The dimensions of a standard car parking space are:
- (a) 5.4m long; and
  - (b) 2.4m wide or 2.7m wide where the space is adjacent to wall or other solid obstruction and 3.4m where the space is located in a blind aisle (Figure 1).



**Figure 1:** Parking space dimensions

- (4) Where design and site constraints dictate, the provision of some spaces to a smaller standard will be considered provided such spaces:
  - (a) have a minimum dimension of 2.3m wide by 5m long;
  - (b) in residential buildings where car parking spaces are on a strata title, are not allocated for use by residents, and are limited to no more than 1 space per 5 visitor parking spaces;
  - (c) in other developments, are limited to no more than 1 space per 20 overall car parking spaces; and
  - (d) are clearly identified for use by 'small cars' by signs, colour coding or both.
- (5) Circulation roadways, aisles and ramps are to be designed to accommodate the B99 vehicle as defined in the Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking.
- (6) Vehicle ramps are to be located inside the building and are not to be visible from the public domain.
- (7) Car parking areas are to:
  - (a) be well lit, visible, and avoid hidden and enclosed areas to allow for casual surveillance;
  - (b) include, where hidden and enclosed areas such as staircases and lift lobbies cannot be avoided, mirrors or similar devices;
  - (c) be well ventilated;
  - (d) provide natural rather than mechanical ventilation where practicable; and
  - (e) be subordinate in appearance to the main building.
- (8) Car parking spaces are not to be located in areas used for the manoeuvring of service vehicles.
- (9) Soft landscaping is to be established around the perimeter of ground level car parking areas to:
  - (a) minimise the visual impact of the car parking area by providing screening from the street; and
  - (b) integrate with streetscape planting.

- (10) One tree per 4 car spaces is to be provided within ground level parking areas in addition to perimeter planting. This planting is to:
- (a) improve pedestrian amenity;
  - (b) maximise shade for vehicles; and
  - (c) break up large areas.
- (11) The trees are to be planted in bays with a minimum dimension of 2m and depth (deep soil) of 1m. The bays are to be provided with a raised kerb barrier and native ground cover planting.
- (12) Landscaping in and around car parking areas is:
- (a) not to hinder the visibility of either drivers or pedestrians, with open sightlines maintained between parking areas, public streets and paths;
  - (b) utilise Australian native plant species that are not prone to drop fruit, seedpods/ gumnuts, branches, sap and bark; and
  - (c) not conflict with lighting and services.
- (13) Car parking areas and access aisles should be designed, surfaced and graded to reduce run-off, allow stormwater to be controlled within the site, and provide for natural infiltration of stormwater runoff through landscaping.
- (14) Where at, or above-ground, parking cannot be avoided, such as in flood prone areas, the car parking structure:
- (a) is to be located to the rear or side of buildings and not visible from the street and public domain;
  - (b) is to be incorporated into the building and screened by other uses;
  - (c) when visible from the exterior of the building, is to be designed with materials, details, proportions and landscaping to complement the building and adjoining buildings; and
  - (d) is to be designed for flexible use, including appropriate floor to ceiling heights allowing future conversion to another use.

## 8.8 Tandem, stacked and mechanical parking

### Objective

- (a) Ensure tandem, stack and mechanical parking areas are suitably designed and located.

### Provisions

- (1) Access to mechanical parking installations is to be by means of access roadways designed in accordance with Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking.
- (2) Tandem or stack parking will only be permitted where:

- (a) no inconvenience arises from their use;
  - (b) each tandem or stacked parking arrangement is limited to a maximum of two spaces;
  - (c) the maximum parking limit for spaces is not exceeded;
  - (d) in residential buildings and small commercial / retail developments, the spaces are attached to the same strata title;
  - (e) in residential buildings and serviced apartments, they are used for tenant parking only;
  - (f) in commercial or retail development, they are used for staff parking only;
  - (g) they are not used for service vehicle parking; and
  - (h) the manoeuvring of stacked vehicles is able to occur wholly within the premises.
- (3) Mechanical parking installations will be considered for developments involving the adaptive reuse of existing buildings where site or building constraints prevent standard parking arrangements, and no inconvenience arises from their use.
- (4) Mechanical parking installations, tandem or stacked parking are not to be used for visitor parking or parking for car share schemes.
- (5) Where development includes a mechanical parking installation, such as car stackers, turntables, car lifts or another automated parking system, the development application is to include a Parking and Access Report.
- (6) The minimum length of a tandem space is to be 10.8m.
- (7) For the purpose of this clause:
- (a) mechanical parking installations include, but are not limited to, mechanical car stackers, car lifts and turntables;
  - (b) stacked parking refers to sharing a parking space vertically through use of mechanical car stacker; and
  - (c) tandem parking refers to two or more vehicles sharing a parking space at the same level configured nose to tail.

## **8.9 Vehicle access and interface with public domain**

### **Objectives**

- (a) Limit the impacts of vehicle entrances and car parking areas on the public domain and street network; and
- (b) Ensure parking areas are designed to integrate with the rest of the building façade and reflect the local character.

### Provisions

- (1) Vehicle entrances are to be either located in the preferred locations shown on the Vehicle entrance map or in a location that does not result in additional disruption to streetscapes and traffic movement than the preferred locations. Multiple vehicle entrances in a single streetscape are to be avoided.
- (2) Adjoining developments should share vehicle access points. Internal on-site signal equipment is to be used as necessary to allow shared access.
- (3) For developments greater than 1,000m<sup>2</sup> of gross floor area, vehicular access to a site is not to be located where the safety of users of the access way and the street system is likely to be compromised. Vehicular access is not to be located:
  - (a) within 10m of an uncontrolled intersection (including intersections with laneways);
  - (b) within 25m of the property boundary adjacent to a signalised intersection;
  - (c) within 60m of the approach side of an intersection on a state road and within 30m on its departure side;
  - (d) within 12m of a 'stop' or 'give way' sign or hold line at intersections;
  - (e) opposite a busy side road for a distance of 6m beyond the alignment of the property boundaries adjacent to that side road;
  - (f) opposite a busy driveway for a distance of 6m beyond the alignment of the driveway edges;
  - (g) within 15m of the alignment of an intersection where the proposed vehicle access is to be used by service vehicles;
  - (h) within 30m of the alignment of an intersection where the proposed vehicle access is used by service vehicles to access 3 or more loading spaces;
  - (i) where there is insufficient 'weaving' distance to or from a nearby road that could be used by traffic generated by the development;
  - (j) within 2m of other access driveways or within 1m of any common boundary, except where access is off a laneway;
  - (k) within 20m of the approach to, and 10m of the departure from a pedestrian crossing; or
  - (l) to a designated arterial or sub-arterial road when an alternate access can be provided.
- (4) Vehicle entrances are to be designed so that vehicles do not queue or reverse across pedestrian crossings or footpath.
- (5) The design, layout, signage, line marking, physical controls and sight distances associated with all access driveways to off-street



parking areas and queuing areas are to comply with the minimum requirements of:

- (a) Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking, and
  - (b) Australian Standard AS 2890.2 – 2002 Off-street parking Part 2: Commercial vehicle facilities, where the parking area is required to accommodate service vehicles.
- (6) Applications for new vehicular access need to demonstrate there will be no adverse impact on streetscape continuity determined in reference to the:
- (a) public domain of the street;
  - (b) character of the built form;
  - (c) character of the front garden settings of dwellings, where applicable; and
  - (d) continuity of footpath awnings.
- (7) Vehicular access is to be designed to give priority to pedestrians and bicycles by:
- (a) maintaining the grade of the footpath;
  - (b) continuing the type of footpath material; and
  - (c) minimising the area of footpath required for the kerb ramp.
- (8) Vehicle access and egress is to be a single crossing with a maximum width of 3.3m over the footpath, and perpendicular to the kerb alignment.
- (9) Vehicle access is to be designed to avoid reversing movements into or out of a public street for all developments other than dwelling houses.
- (10) All queuing for parking areas is to occur on-site and not on adjoining public streets.
- (11) On-site parking may be refused where the required access arrangements would have an adverse impact on on-street parking.
- (12) Porte cocheres are not permitted.
- (13) Service vehicle access is to be combined with parking access and provided in accordance with other controls for vehicular access in this DCP.
- (14) Security doors to car parking areas must be set back from the building line by at least 1m.

# Maps

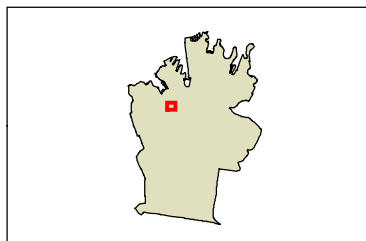


# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

DCP application map

### Legend

- Subject land
- DCP excluded
- Property



0 40 Metres

Scale: 1:1,500 @ A4

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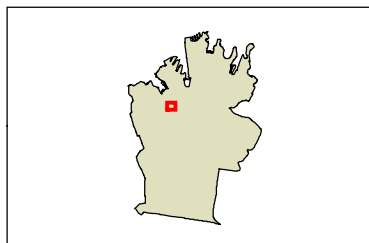
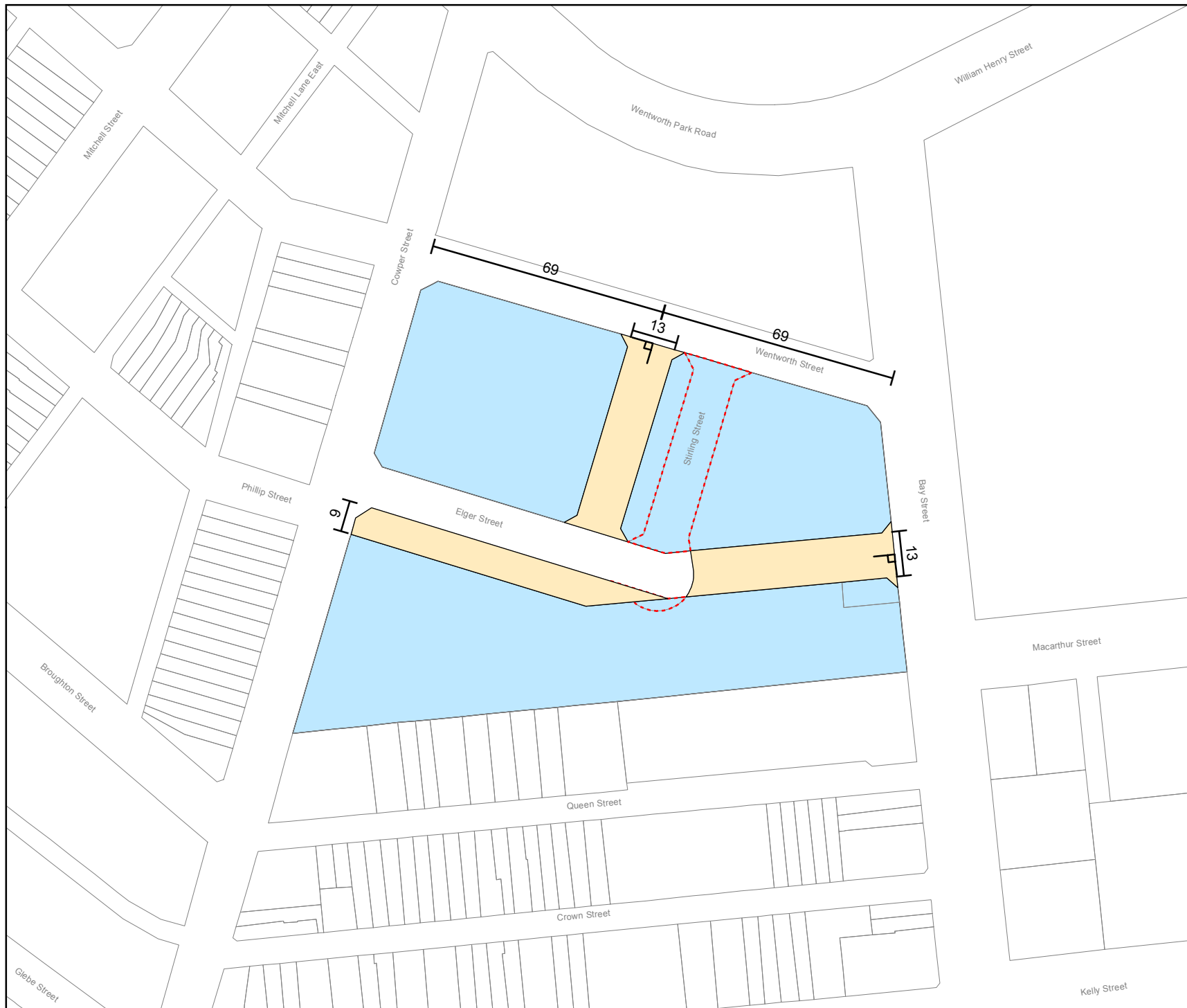
# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Site layout map

### Legend

-  New road reserve
-  Removed road reserve
-  New blocks
-  Property

Measurements are in metres



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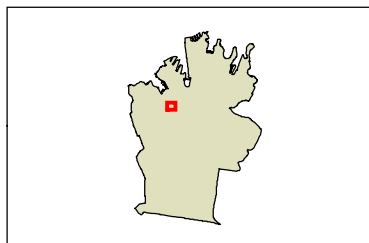


# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Gross floor area map

### Legend

-  Gross Floor Area (GFA)
-  Property



0 40 Metres

Scale: 1:1,500 @ A4

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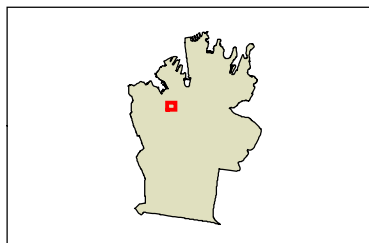


# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Height of buildings in storeys map

### Legend

- 1 Storey
- 4 Storeys
- 5 Storeys
- 6 Storeys
- 7 Storeys
- 8 Storeys
- 9 Storeys
- 10 Storeys
- Property



0 40 Metres

Scale: 1:1,500 @ A4

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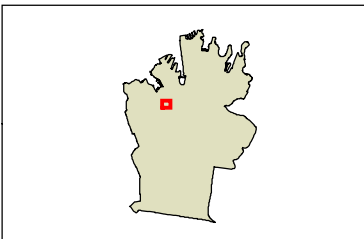
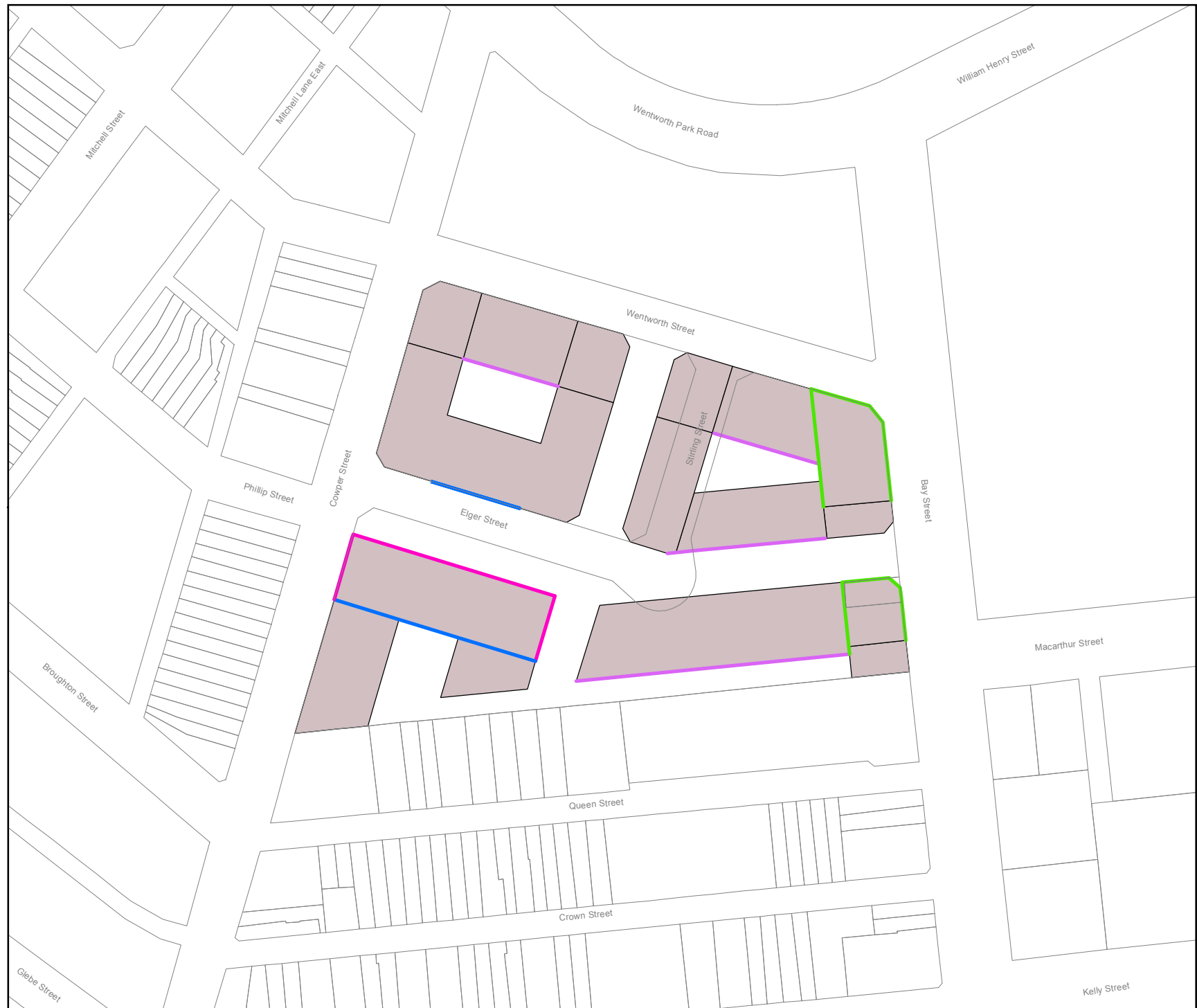


# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Building edge heights map

### Legend

- 4 Storeys
- 5 Storeys
- 6 Storeys
- 8 Storeys
- Building envelopes
- Property



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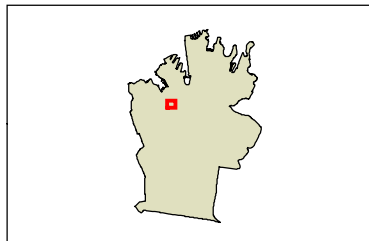
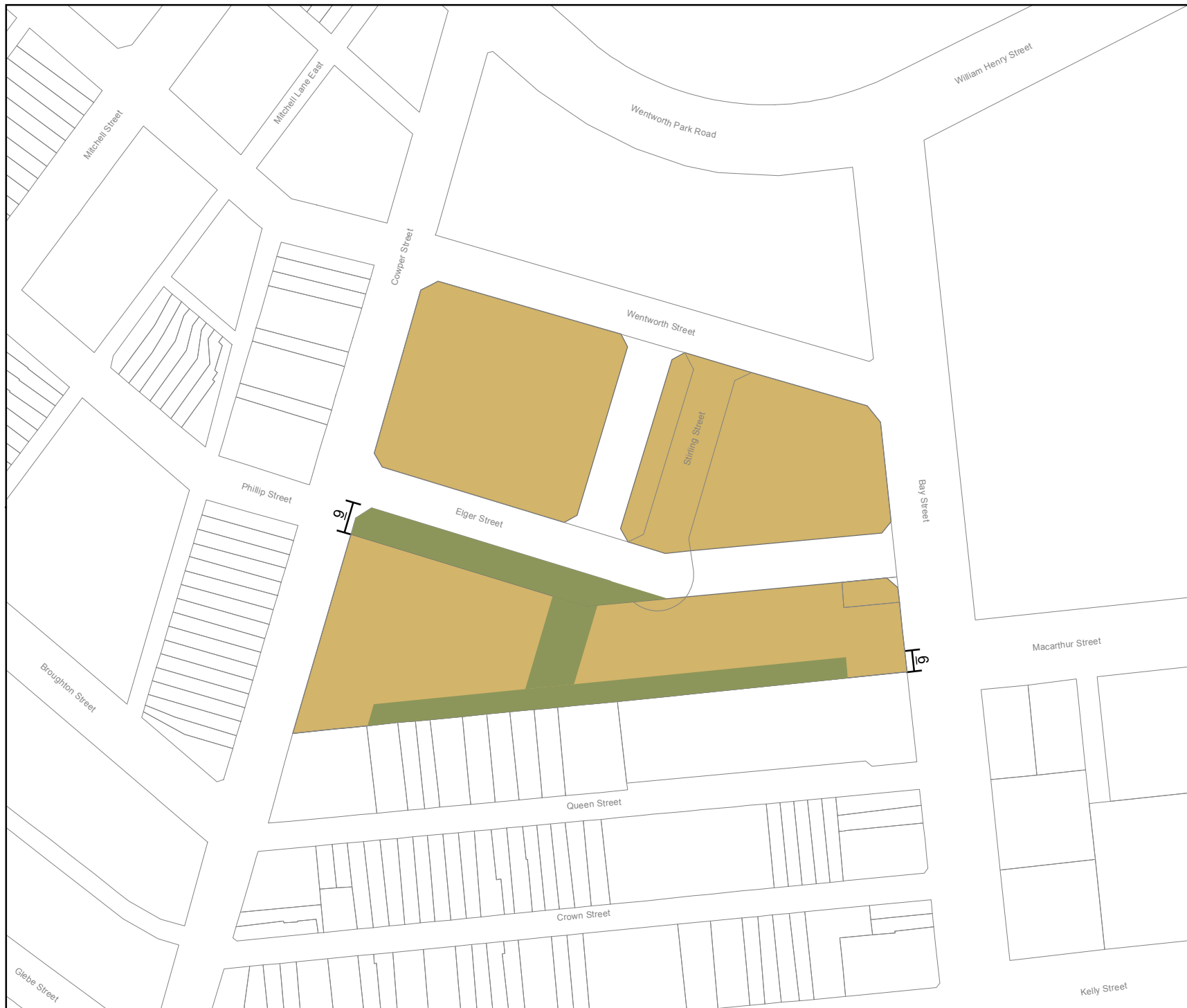
# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Setback area map

### Legend

- Setback area
- New blocks
- Property

Measurements are in metres



0 40 Metres

Scale: 1:1,500 @ A4

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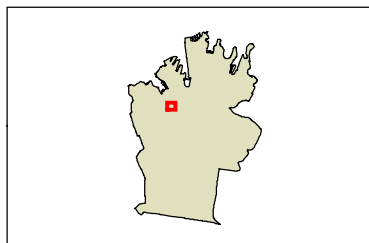
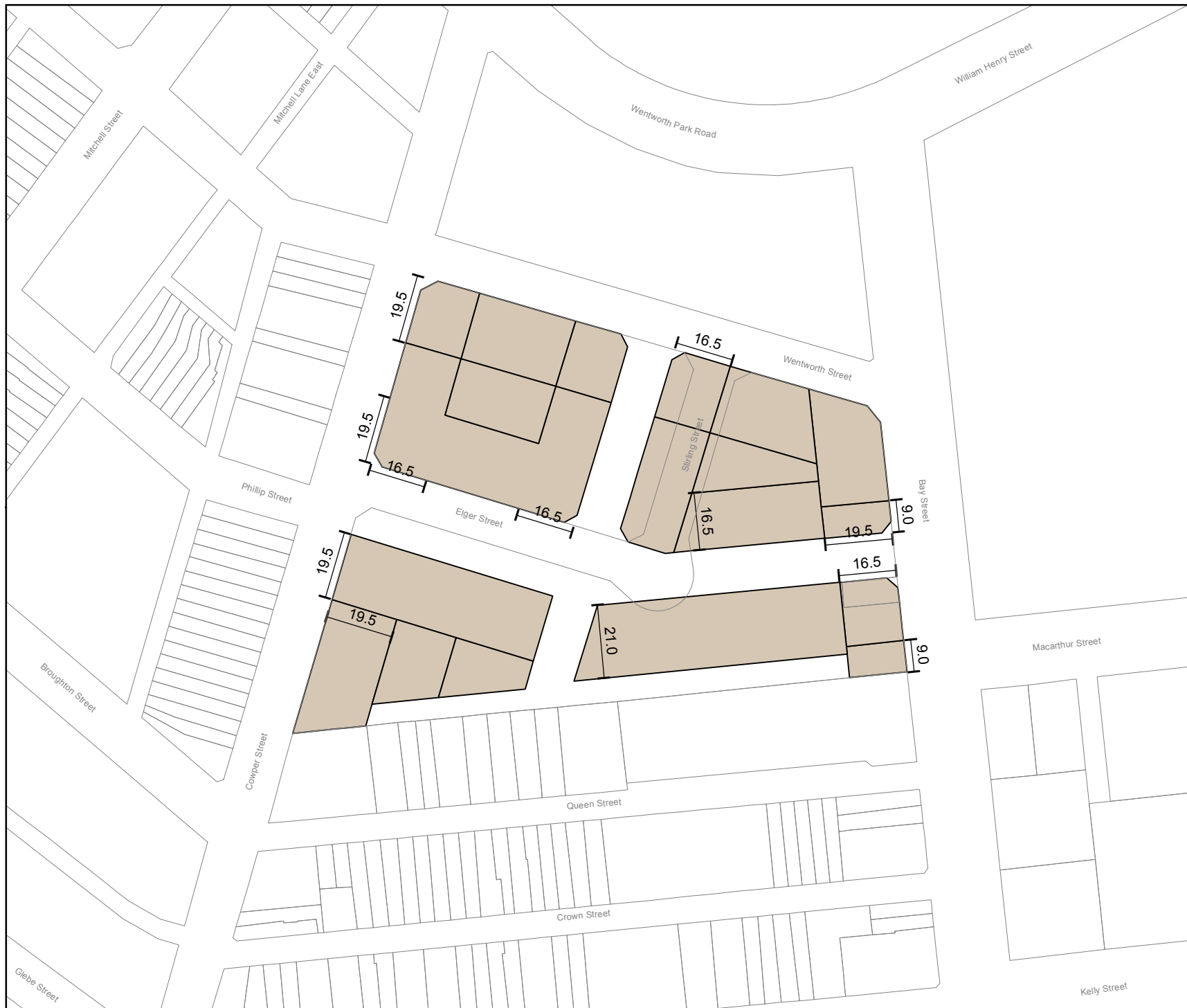
# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Building envelope depth map

### Legend

-  Building envelopes
-  Property

Measurements are in metres



0 40 Metres

Scale: 1:1,500 @ A4

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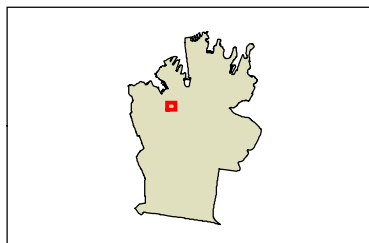
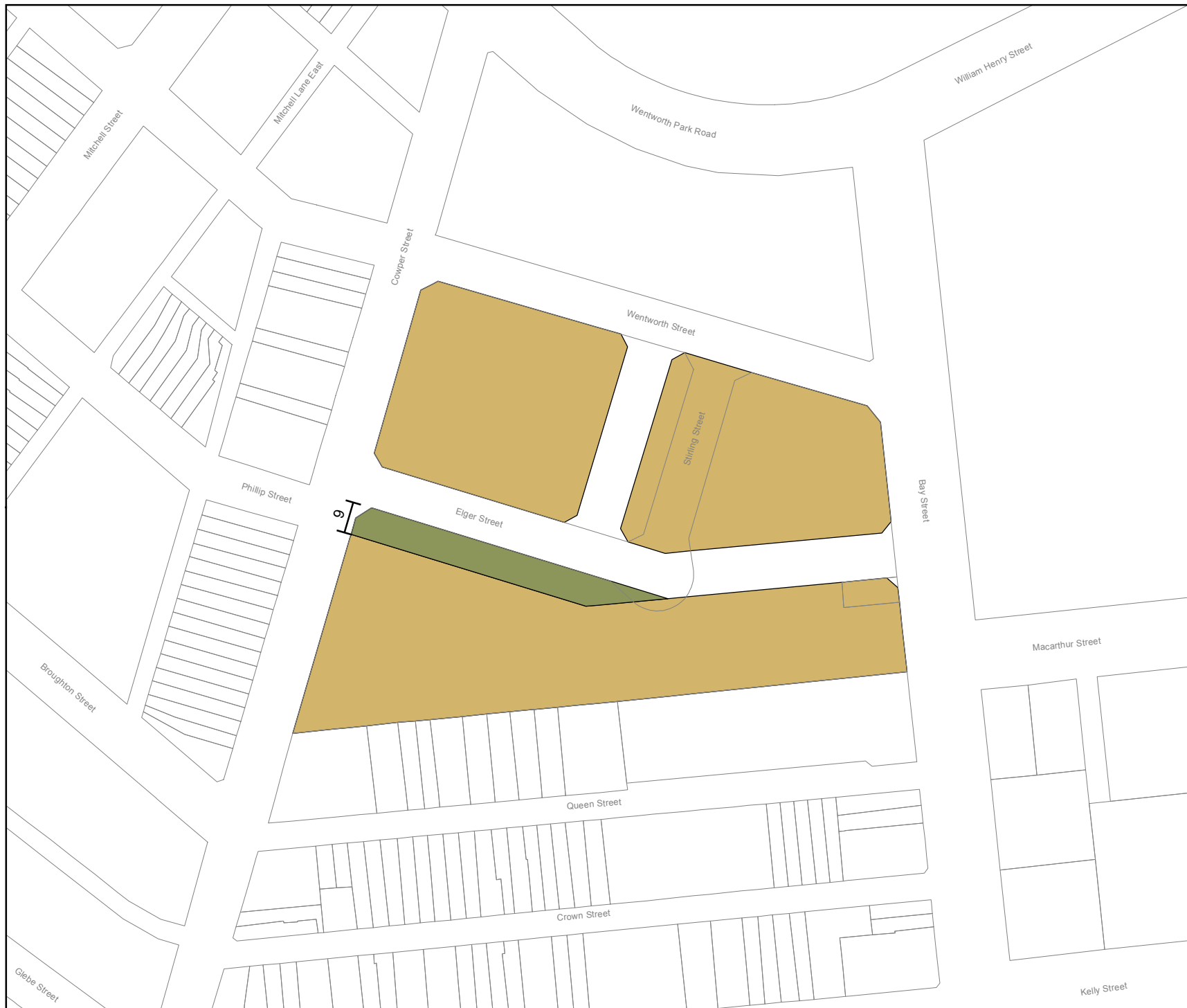
# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Publicly accessible open space

### Legend

-  Publicly accessible open space
-  New blocks
-  Property

Measurements are in metres



0 40 Metres

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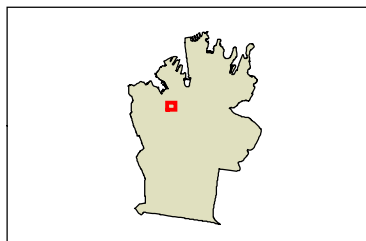
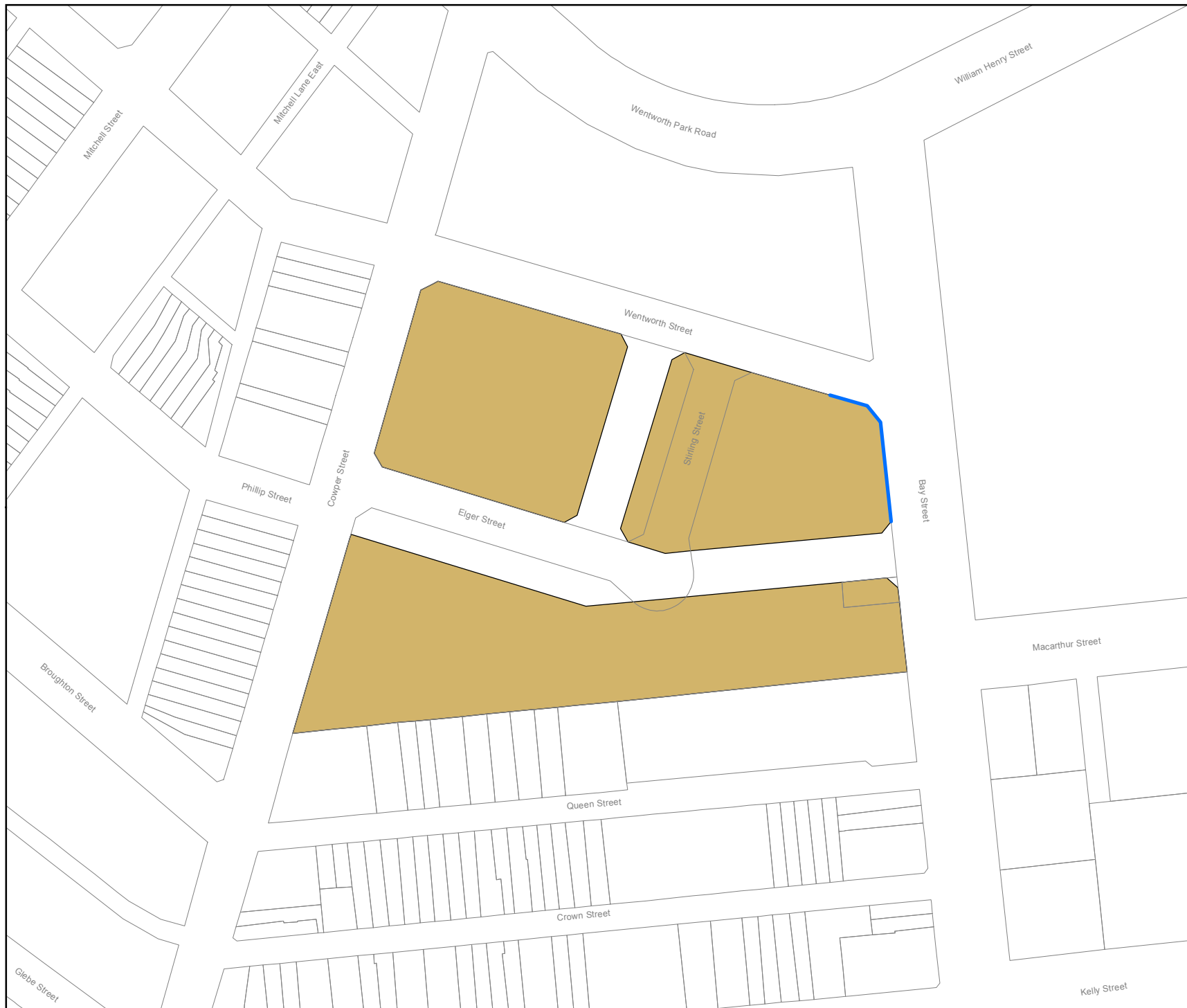


# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Active street frontage map

### Legend

-  Active street frontages
-  New blocks
-  Property



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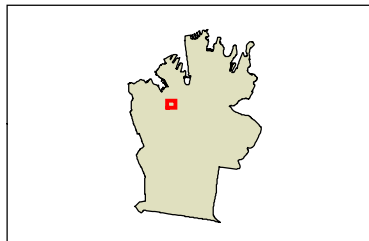
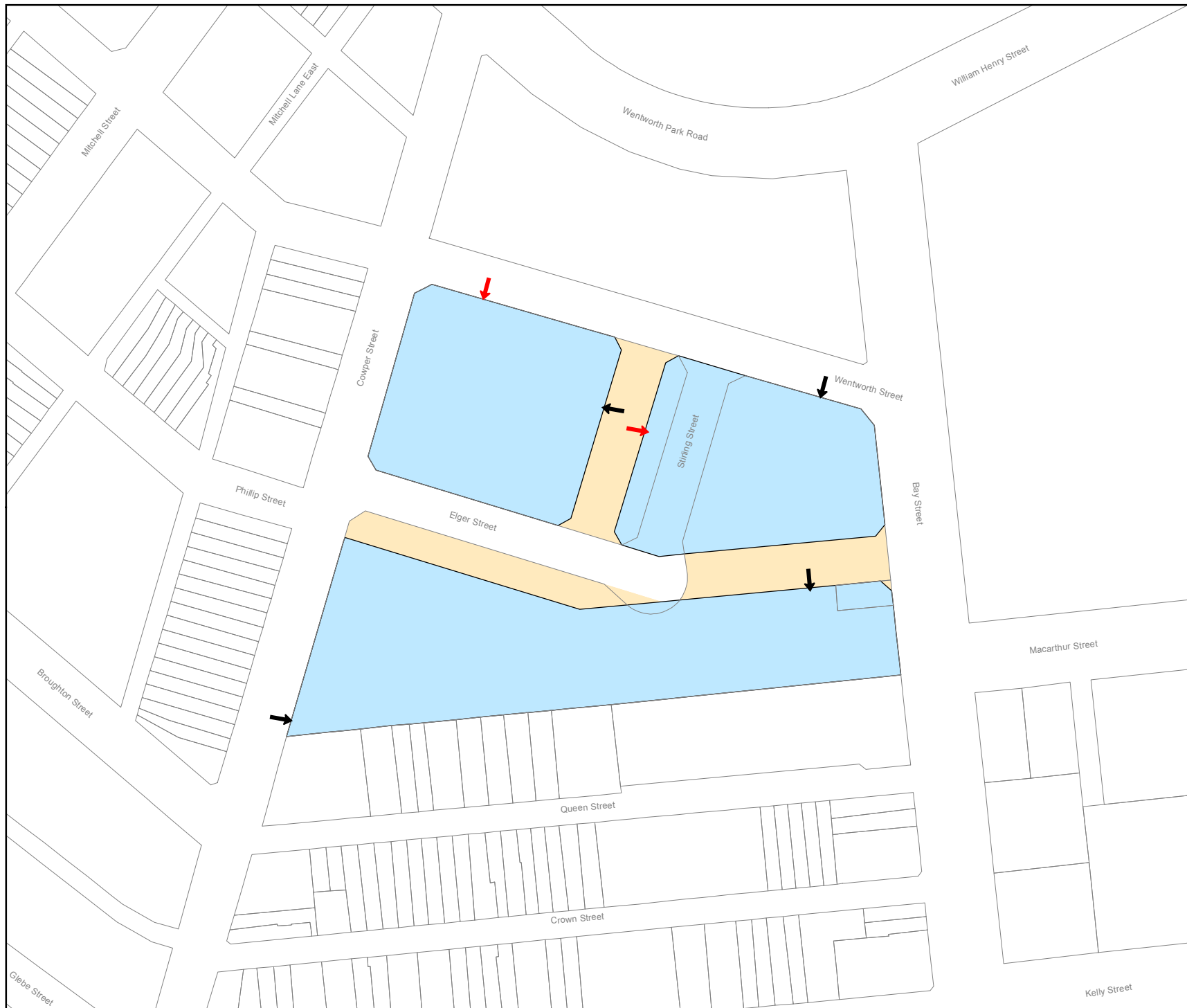


# Sydney Development Control Plan 2011 - Glebe Affordable Housing Project

## Vehicle entrance map

### Legend

- Alternative preferred vehicle entrance
- Preferred vehicle entrance
- New streets
- Property



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