# PART B GENERAL DESIGN PROVISIONS

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# B1 WASTE

This Part aims to minimise waste and maximise resource recovery during the demolition, construction and ongoing management of a property, and facilitate safe and efficient waste and recycling collection from all premises throughout Waverley.

This Part applies to all works requiring a development application (DA).

## 1.1 DEMOLITION AND CONSTRUCTION

Construction and demolition contribute significantly to all waste going to landfill. Much of this waste is clean excavated material, concrete, bricks and timber. This waste is an inevitable part of a project but does present a significant opportunity to increase efficiency and profitability while encouraging sustainable practices.

**Objectives**

(a) To minimise waste generated during demolition and construction.
(b) To maximise the re-use of clean excavated material, concrete, bricks and timber.
(c) To ensure the safe removal and disposal of hazardous building materials.

**Controls**

(a) Separate collection bins or waste storage areas are to be provided giving consideration to slope, drainage, vegetation, access and handling requirements and may include:
    (i) Landfill waste;
    (ii) Recyclable waste;
    (iii) Materials to be re-used on-site; and / or
    (iv) Excavation materials (refer to Annexure B1-1 for common building materials that can be re-used and recycled).
(b) All sandstone must be re-used.
(c) All storage areas are to be located within the property boundary and identified on the site plans as part of the Site Waste & Recycling Management Plan (SWRMP).
(d) Where on-site space is limited, approval may be granted by council to place a skip bin on a footpath or other public area (refer to Annexure B1-7).
(e) Waste and recycling containers/skips may only be provided by persons/companies holding a current permit granted by council.
(f) Asbestos and other hazardous material is to be managed under the *Protection of the Environment Operations Act 1997* and council's Asbestos Policy 2005.
(g) Materials that cannot be reused or recycled should be disposed of at an approved landfill site and specified in the SWRMP.
(h) Records are to be retained on-site demonstrating lawful disposal of waste.
(i) Easy vehicular access to waste and recycling material storage areas must be provided.
(j) Construction materials are to be stored away from waste and recycling materials to enable easy access for waste collectors.
(k) All waste and recycling is to be stored in way that prevents damage from the elements and reduces odour, health risks and windborne litter.

## 1.2 ONGOING MANAGEMENT

Waste is a key consideration in the design and ongoing management of all developments to ensure the efficient use and reuse of waste and ensure that it does not impact on the amenity of the surrounding area.

**Objectives**

(a) To ensure waste and recycling systems are easy to use and complement waste and recycling services.
(b) To promote safe practices for storage, handling and collection of waste and recycling.
(c) To prevent stormwater pollution that may result from poor waste and recycling storage and management practices.
(d) To minimise amenity impacts during the storage, use and collection of waste and recyclables.

### 1.2.1 Storage

*All Development*

(a) Sufficient space must be provided to accommodate the storage of waste and recycling (in separate containers) likely to be generated on the premises between collections and any associated equipment. Approximate waste and recycling rates for various commercial and residential developments are provided in Annexure B1-2.
(b) All waste and recycling must be inside council approved bins or skips, with lids closed to reduce littering, stormwater pollution, odour and vermin. Waste and recycling not presented in the correct manner will not be collected.
(c) Council will supply and service 140L and 240L bins. Where a building consists of 40 or more units, 660L bins can be used, subject to negotiation with council. The use of 660L bins will only be considered where:
    (i) the building has more than 20 units; and
    (ii) adequate off site access for waste collection vehicles is provided and is in accordance with relevant Australian Standards.
(d) For developments with over 40 units, a compactor may be used subject to negotiation with council.
(e) Any volume reducing equipment must be installed in accordance with the manufacturers design specifications. The equipment must be installed on either a concrete plinth 75mm high or on legs at least 150mm high and have a space between the unit and the walls to enable easy access for cleaning and maintenance. Compaction rates must not be set higher than 2:1.
(f) All organic waste should be either treated in a composting or worm farming system or stored in a council approved bin or skip (refer to Annexure B1-5).
(g) Waste and recycling receptacles must be stored at all times within the boundary of the site and screened from the public and commercial domains.
(h) No incineration devices are permitted.
(i) Waste and recycling storage rooms must be:
    (i) Constructed of concrete or other approved materials at least 75mm thick;
    (ii) Finished with a smooth even surface;
    (iii) Coved at the intersection with walls and plinths with a ramp to the doorway where necessary;

(iv) Graded and drained to the sewerage system and approved by Sydney Water;
(v) Fitted with a close fitting and self-closing door that can be opened from within the room;
(vi) Fitted with smoke detectors in accordance with the relevant Australian Standards.
(vii) Equipped taps supplying of hot and cold water, mixed through a centralised mixing valve with a hose cock and fitted with an aerator to increase water efficiency;
(viii) Designed to include a clear and easy-to-read "NO STOPPING" sign and "DANGER" sign on the external face of waste storage rooms where appropriate;
(ix) Designed to ensure waste-water from the cleaning of the waste storage area and bins, is not to drain into the stormwater system; and
(x) Fitted with childproof compacters or mechanical devices where used in the storage of waste.

*Multi Dwelling and Multi Unit Housing Development*

(a) A room or caged area with a minimum volume of 4m³ must be allocated for the storage of discarded bulky items, such as old furniture, awaiting council pick up.
(b) Developments containing more than 3 habitable storey's must:
    (i) Provide a system for convenient transportation of waste and recyclable material to the communal waste and recycling storage area (see Annexure B1-6); and
    (ii) Provide a waste and recycling compartment/area on each floor with sufficient capacity to store at least 1 day volume of waste and recycling likely to be generated on that floor.
(c) Both waste and recycling bins/crates must be stored together.

*Commercial Development*

(a) Kitchens, office tea rooms and the like are to be designed with sufficient space for the interim storage of recyclable, organic and regular waste in separate receptacles.
(b) 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.
(c) Sufficient space must be allocated on site for the storage of reusable items such as crates and pallets.
(d) Separate space must be allocated for the storage of liquid wastes and oils etc. The liquid waste storage areas must be undercover, bunded and drained to a grease trap.
(e) Liquid waste from grease traps must only be removed by licensed contractors approved by Sydney Water and NSW EPA.
(f) All new developments are to provide adequate storage for waste to accommodate future change of uses including grease traps is to be provided.
(g) For commercial premises whose waste contains 20% or more food waste or other waste which is considered by council to have potential amenity impacts, a daily waste collection is required, unless an alternative is agreed upon with council.

*Mixed Use Development*

(a) There must be at least two separate centralised waste and recycling storage rooms or areas, one for commercial waste and one for residential waste. Storage rooms be self-contained and have separate keys and locking systems.

### 1.2.2 Access

*All Development*

(a) Waste and recycling storage areas must be located in a position convenient for both users and waste collection personnel.

(b) The path for bins between the waste and recycling storage area and the vehicle collection point must be free of steps and kerbs.

(c) Collection from within the boundary of the property is only possible upon prior negotiation with council.

(d) Where collection vehicles are required to drive into a property to collect waste and recycling, the site must be designed to allow collection vehicles to enter and exit the property in a forward direction and have adequate vehicle clearance.

(e) Access roads must comply with the Building Code of Australia, all relevant Australian Standards and Annexure B1-3.

*Commercial Development*

(a) Developments containing more than 3 habitable storey's must provide a system for convenient transportation of waste and recyclable material to the communal waste and recycling storage area in line with Annexure B1-6.

### 1.2.3 Amenity

*All Development*

(a) Waste and recycling storage areas must be visually and physically integrated into the design of the development.

(b) Waste and recycling storage areas must be designed and located to avoid adverse impacts on the amenity of adjoining sites including noise and odour.

(c) All waste and recycling receptacles must be put out for kerb-side collection no earlier than the previous evening.

(d) All waste and recycling receptacles must be removed from the kerb-side or laneway as soon as possible on the same day as the collection service.

*Mixed Use Development*

(a) Noise and odour generated from the commercial component of the development must not impact on residents in the same site.

(b) Residential units must be insulated from noise if adjacent or above the waste and recycling storage facility, compaction equipment or collection and vehicle access points.

### 1.2.4 Management

*Multi Unit, Multi Dwelling, Commercial and Mixed Use Development*

(a) The design of the waste and recycling management system must identify responsibility for cleaning of waste receptacles and storage areas and for transfer of bins within the property, to the collection point and back to the storage areas.

(b) Clear and easy to read signs identifying the different waste receptacles and where in the storage area these should be positioned must be displayed.

*Commercial Development*

(a) All businesses must have written evidence, held on site, of a valid and current contract with a licensed collector of waste and recycling.

(b) The waste and recycling management (including composting) and collection system, along with allocated responsibilities should be clearly outlined in contracts with cleaners, building managers and tenants.

# B2 ENERGY AND WATER CONSERVATION

Energy efficient buildings, through their design, construction and choice of appliances and heating and cooling systems not only reduce the consumption of non renewable resources and the level of green house gas emissions into the atmosphere, they are also more economically efficient and increase the level of all year round comfort for its users.

*State Environmental Planning Policy (Building Sustainable Index: BASIX) 2004* applies to residential developments and aims to ensure homes or apartments are designed to minimise potable water usage and energy usage.

An applicant is required to lodge a BASIX certificate with their development application with council for:

- New residential buildings;
- Alterations and additions to existing residential buildings where the estimated construction cost of the work is more than $50,000 and where development approval is required; and
- New swimming pool (or pool and spa) with a capacity of 40,000 litres or more.

More information is available at the following link: www.basix.nsw.gov.au.

Applicants are encouraged to exceed minimum BASIX scores.

## 2.1 PASSIVE ENERGY DESIGN

Passive solar buildings are designed so that windows, walls, and floors are able to collect, store, and distribute solar energy in the form of heat in winter and reject solar heat in the summer. A passively designed house reduces the need for the use of mechanical and electrical (active heating and cooling) systems, saving energy and costs.

**Objectives**

(a) To encourage passive solar design through site layout, design and construction to reduce the need for active heating and cooling systems.

**Controls**

(a) Development is to be designed and constructed to reduce the need for active heating and cooling system by incorporating passive design measures through site design and analysis. Considerations include:
   (i) Physical characteristics of the site;
   (ii) Site context, such as adjacent buildings or structures affecting the site, relationship of the site to the street, identification of key features such as views and orientation;
   (iii) Overshadowing caused by existing buildings;
   (iv) The orientation of true solar north, and a range of 30 degrees east and 20 degrees west of true north;
   (v) Trees on, or affecting the site, identifying location, type, size and condition; and
   (vi) Prevailing seasonal winds, sun and shade characteristics.

(b) Development should be orientated to ensure optimum solar access and natural ventilation is achieved.

(c) Shade north and west facing windows from direct summer sun by external shading devices such as awnings, upper floor balconies, eaves and overhangs.

(d) Minimise east and west facing windows as they are difficult to shade. Where this is not possible use vertical shading devices such as blinds and shutters.

(e) Insulation should be used in external walls and roofs to reduce heat escaping from a building in winter and to maintain a lower internal temperature in summer.

(f) Position internal walls and partitions to allow for any prevailing passage of air through the building.

(g) Minimise undue passive solar impacts especially for east-west running blocks for properties to the south.

## 2.2 WATER CONSERVATION

Water is our most valuable natural resource. Fresh water only makes up a small percentage of all the earths' water and therefore must be used in a sustainable way. Businesses account for nearly one third of Sydney's daily water use. Reducing water consumption reduces not only water costs but can reduce wastewater, energy and chemical treatment costs.

**Objectives**

(a) To reduce water consumption.
(b) To encourage sustainable water use practices.

**Controls**

(a) All new development is to demonstrate the measures proposed to reduce water consumption.
(b) All new fittings and fixtures are to be installed with the highest Water Efficiency Labelling and Standards (WELS) scheme star rating available at the time of development.
(c) Rainwater tanks or storage must be installed in all new developments and major alterations/additions to provide water for non-potable uses. If this is not feasible, justification for this must be provided.
(d) Sub-meters are to be provided for individual tenants or floors in new commercial developments.
(e) Dry basket arrestors are to be provided to floor wastes in food preparation areas and be shown on plans submitted.
(f) Premises shall have a floor waste point (drainage) to prevent polluted water from reaching the footpath.
(g) Dehumidification from air conditioning systems must be harvested and reused on site provided it is treated to an adequate level suitable for the reuse application, otherwise a piped connection to council's stormwater drainage system is required and there is to be no discharge to the footpath.

## 2.3 GREEN ROOFS AND WALLS

Green roofs and walls are being increasingly installed as a way of improving the aesthetic quality of buildings while also increasing the building performance through their high insulation characteristics, improved local air temperature and quality, increased potential fauna habitat and improving stormwater quality and runoff.

**Objectives**

(a) To encourage the use and installation of green roofs and walls to increase building performance, thermal comfort, fauna habitat, localised air temperature and aesthetics of the urban environment.

**Controls**

(a) The green roof is to be planted with native plants (preferably locally indigenous) or with species for food production.
(b) A statement from a structural engineer is required showing that the roof or wall is capable of supporting the chosen type of green roof or wall.
(c) A description of the structure and makeup of the green roof or wall that demonstrates its long term waterproofing performance is required.
(d) The green roofs or walls are not to detract the heritage significance of a building.
(e) Green roofs are not to be used as recreational areas and access is to be for servicing the green roof only.
(f) Stair overruns or associated equipment or structures should not block views of neighbouring properties.

## 2.4 ACTIVE ENERGY

Unlike passive heating and cooling, active heating, cooling and energy systems involve the use of mechanical and electrical systems. Where active systems are required it is encouraged that these are in the form of active solar technologies which convert solar energy into usable light and heat, cause air-movement for ventilation or cooling, or store heat for future use rather than air conditioning units and the like.

**Objectives**

(a) To encourage the installation and use of active solar technologies.
(b) To ensure development takes into consideration neighbouring active solar technologies in the design of the building.

**Controls**

(a) The use of solid fuel heating in all new dwellings is prohibited.
(b) Solar hot water systems are encouraged to be installed in all new developments and major alterations and additions. Where solar access is poor, alternative high efficiency systems are to be used, such as:
    (i) High efficiency gas storage system;
    (ii) High efficiency electric heat pump; or
    (iii) Instantaneous gas hot water for premises with low level hot water usage or intermittent water usage.
(c) Ceiling fans and passive cooling systems are preferred over air-conditioning systems.
(d) Where mechanical ventilation or air-conditioning is required it must:
    (i) Have sufficient controls so it is used only when required;
    (ii) Should be an energy efficient reverse cycle air conditioning system that achieves one star less than the maximum possible under the Australian Government air conditioning energy rating standard.
    (iii) New or replacement air conditioning units are to have a minimum 2-star rating for cooling only. Reverse cycle air conditioning units are to have a minimum of 2-star rating on one cycle and 2-star rating on the alternate cycle.
    (iv) Dehumidification from air conditioning systems must be harvested and reused on site provided it is treated to an adequate level suitable for the reuse application, otherwise a piped connection to council's stormwater drainage system is required and there is to be no discharge to the footpath.
(e) The installation and expansion of photovoltaic panels is encouraged in new and existing developments.
(f) Where photovoltaic panels are proposed it would be desirable that the panels be parallel and flush with the pitch of the roof and incorporated into the design of the building.
(g) The use and location of photovoltaic panels and solar hot water heating systems should take into consideration the potential permissible building form on the subject property and/or adjoining properties.
(h) Development and major tree plantings should maintain solar access to existing photovoltaic solar panels and solar hot water heating systems having regard to their performance, economic viability and reasonableness of the location.

(i) For developments with multiple floors, multiple tenants or that is strata subdivided, electrical sub-metering is required.

(j) Buildings are to incorporate energy saving systems for lighting. This includes the use of:

  (i) Natural lighting where possible;
  (ii) Energy efficient lights such as T5 fluorescents, CFLs, or LEDs; and
  (iii) Sensor lighting so that lights are only used when necessary.

(k) New roofs and/or ceilings are to be insulated with a minimum R3.2 rating, and new walls must be insulated to a minimum R2.8 rating.

(l) All new development shall be designed to include an internal ventilation shaft to ensure future alterations do not place the shaft in an unsuitable location.

(m) Lighting technologies i.e. sensors, timing switches, dimmers, two way lighting, diffused light, use of high efficiency lamps are encouraged.

(n) New gas heaters must be rated no less than one energy star below the maximum available at the time of installation.

## 2.5 ENERGY ASSESSMENT

(a) An energy assessment report must accompany a development application for the following development types:

(i) New mixed use development with a gross floor area of 1000m² or greater;

(ii) Alterations to a mixed use development with a gross floor area of 1,000m² or greater.

(iii) Additions to a mixed use development that results in a gross floor area over 1000m².

(iv) New commercial development with a gross floor area of 1000m² or greater;

(v) Alterations to commercial development with a gross floor area of 1,000m² or greater.

(vi) Additions to a commercial development that results in a gross floor area over 1000m².

The energy assessment report is to include:

(i) Modelling of the predicted operational energy demand and greenhouse gas emissions of the proposed development.

(ii) Proposals to reduce the predicted operational energy use and greenhouse gas emissions of the site and calculations to show the energy use and greenhouse gas emission reductions attributable to each proposal including:

- Design of site, buildings and services.
- Use of on-site energy efficient technologies.
- Use of decentralised energy where feasible, such as district heating and cooling and combined heat and power.
- Use of on-site renewable energy technologies where feasible.

# B3 BIODIVERSITY

Waverley contains 5.9 hectares of remnant bushland, occurring as scattered pockets on cliff edges, in parklands, road reserves and within private property, providing habitat and food for native wildlife. Since European Settlement Waverley has lost over 99% of its original vegetation. Due to their local significance, these remnants must be protected. These areas also contain the threatened plant species, Sunshine Wattle, and the threatened ecological community, Eastern Suburbs Banksia Scrub.

Areas of introduced native and non-native vegetation have also been recognised as providing important habitat for native wildlife. Habitat corridors link areas of remnant vegetation with recognised habitat areas.

Council acknowledges the intrinsic value of remnant vegetation or bushland, as well as the habitat and other environmental values of revegetated areas and the need to protect them from the degrading influences of surrounding development.

## 3.1 REMNANT VEGETATION

**Remnant vegetation** or bushland is taken to be the original (pre 1788) native vegetation which has survived to this day. It includes both undisturbed and disturbed remnant vegetation. It also includes remnant vegetation which has colonised disturbed areas, where there was no vegetation for a period. The native plants species that grow within these remnants are referred to as indigenous. Remnant vegetation does not included native species that have been planted or introduced to the area.

**Indigenous plants** are those plant species growing within remnant vegetation or bushland.

Within Waverley's remnant vegetation, the plant species Sunshine Wattle, *Acacia terminalis* ssp *terminalis*, and the ecological community, Eastern Suburbs Banksia Scrub (ESBS) are listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, and on the NSW *Threatened Species Conservation Act 1995*.

*Sunshine Wattle* has a persistent soil seed bank which may last for up to 50 years (DECCW, 2007:8). Sites that are undeveloped should be protected to encourage regeneration from the seed bank.

The following objectives and controls relate to land identified in the Biodiversity maps located within WLEP 2012 as remnant vegetation or land adjoining remnant vegetation.

**Objectives**

(a) To retain, protect and enhance remnant native vegetation for local wildlife and benefits to the community.
(b) To protect and promote the recovery of threatened species, populations, and endangered ecological communities.

**Controls**

(a) For all development (excluding minor alterations and additions, retrofits and the like) a stormwater management plan must be submitted with the development application that demonstrates the proposed measures that will be adopted to ensure no adverse environmental impact on the remnant vegetation. Such measures could include sediment fencing to retain stockpiles on site or geotechnical fabric to protect stormwater drains.

(b) For all new development and major alterations and additions a landscape plan is to be submitted with the development application. The Plan is to include a plant species list, showing the botanical and common names of plants, pot size of plants, number of plants and the area of origin of the plant material. For properties containing or adjoining remnant vegetation the landscape plan should be consistent with the remnant section of the planting palette in the relevant plan of management.

(c) A minimum of 90% of the proposed plantings (not including turfed areas) are to be indigenous or local native plants listed in Annexure B2 - 1.

(d) All noxious weeds on the property at the time of development are to be removed by a suitably qualified person

(e) Trees with hollows are to be retained for habitat wherever possible to provide habitat for arboreal fauna. Consideration must be given to the potential risk of damage to public or property as determined by a suitably qualified arborist.

(f) Council may require additional supporting information for an application including the following:

  (i) Vegetation management/protection plan; and

  (ii) Flora or fauna impact assessment.

(g) Remnant vegetation is to be protected unless:

  (i) Trees and vegetation are removed/trimmed in accordance with the *Roads Act 1993*;

  (ii) The work needs to be carried out by council, the State Emergency Services, the Rural Fire Service of NSW, or a public authority in response to an emergency;

  (iii) Works are carried out by State or Federal Government Departments or Authorities under current legislative requirements; or

  (iv) The tree or vegetation is a recognised noxious weed (*Noxious Weeds Act 1993*). The applicant must first seek advice from council and council must be notified in writing seven (7) days prior to the commencement of removal work.

## 3.2 HABITAT CORRIDORS AND RECOGNISED HABITAT

**Habitat Corridors** are areas where vegetation provides sufficient habitat features to allow wildlife to move from one area of habitat to another. The vegetation may include remnant bushland, native plantings, weeds and gardens. Wildlife movement allows dispersal, interbreeding and recolonisation to occur, improving long-term viability of the species. Wildlife movement also facilitates pollen and seed dispersal, thus enhancing the viability of plant populations. Continuous corridors are preferable, but discontinuous corridors still contribute to fauna movement and can potentially be improved through habitat enhancement.

**Recognised Habitat** are those areas identified as having landscape features that provide suitable habitat for wildlife. These include structured vegetation (canopy, shrubs and ground covers), dense or clumping vegetation, leaf litter/mulch, logs rocks and water.

**Origin** refers to the location of plant material, where seed or cuttings were sourced to produce the plants. These may be:

- Indigenous – plant material from specimens growing in Waverley remnant vegetation or bushland (preferred)
- Local Native – plant material from Eastern Suburbs, Australia (next preference)
- Native – plant material from other region in Australia (Coastal NSW preferred)

This part refers to land identified in Figure 1 and Figure 2 as Habitat Corridors and recognised Habitat.

**Objectives**

(a) To ensure development contributes to the landscape character of the area.
(b) To enhance planted native vegetation and the ecological functions of habitat corridors
(c) To reconstruct habitat in non-vegetated areas of designated wildlife corridors that will as far as possible, represent the combination of plant species and vegetation structure of the original community.

**Controls**

(a) For all new development a landscape plan is to be submitted with the development application. The plan is to include a plant species list on all landscape plans, showing the botanical and common names of plants, pot size of plants, number of plants and the origin of the plant. For properties containing or adjoining remnant vegetation the landscape plan should be consistent with the habitat section of the planting palette in the relevant plan of management.
(b) A minimum of 50% of the proposed plantings (not including turfed areas) are to be indigenous or local native plants listed in Annexure B2 – 1.
(c) All noxious weeds on the property at the time of development are to be removed by a suitably qualified person.
(d) Trees with hollows will be retained for habitat wherever possible to provide habitat for arboreal fauna. Consideration must be given to the potential risk of damage to public or property as determined by a suitably qualified arborist.
(e) Council may require additional supporting information for an application including the following:
    (i) Vegetation management/protection plan; and/or
    (ii) Flora or fauna impact assessment.

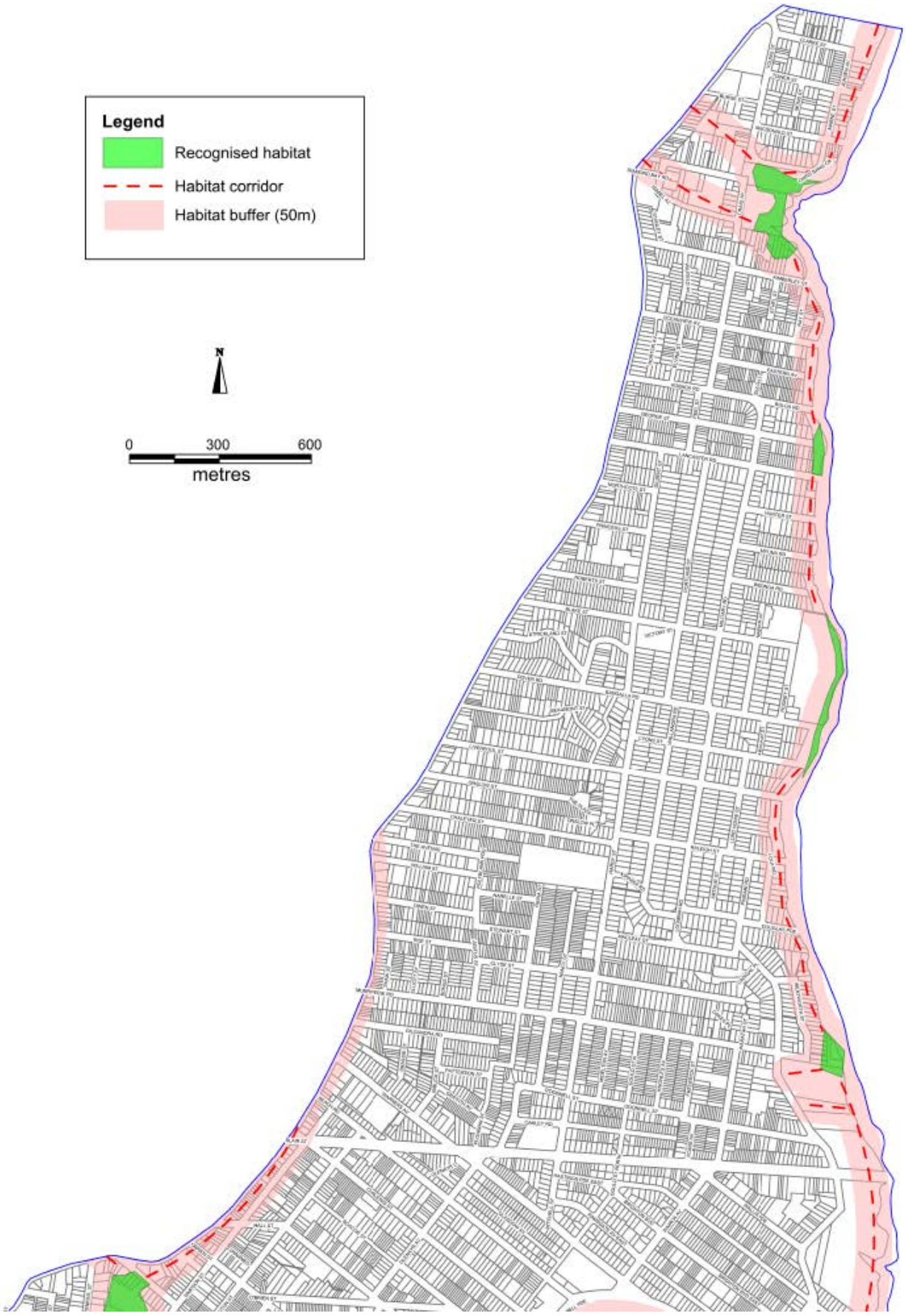



**Figure 1** Habitat corridors and recognised habitat

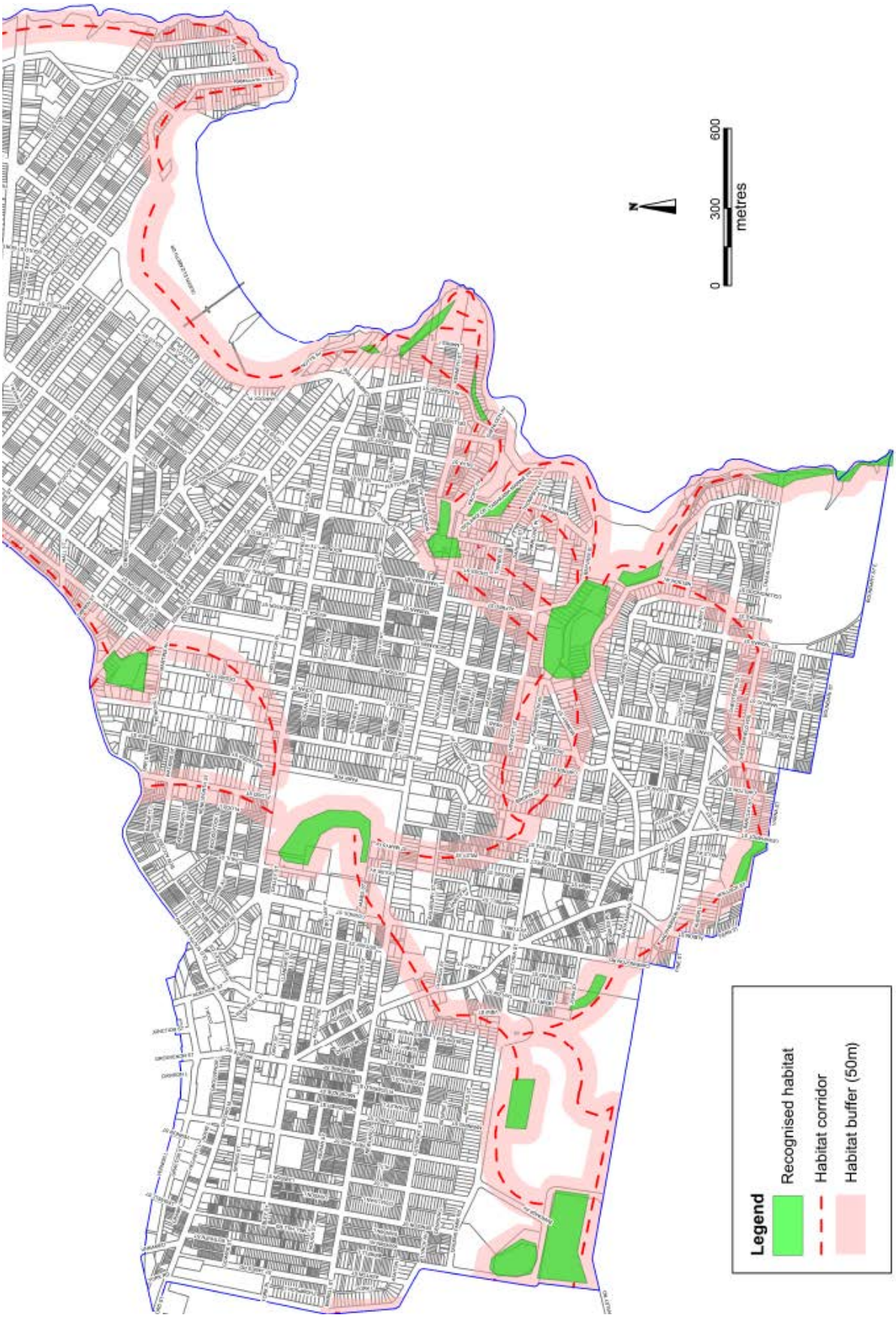



**Figure 2** Habitat corridors and recognised habitat

# B4 COASTAL RISK MANAGEMENT

Coastal risks include risks from erosion, inundation and geotechnical instability. Erosion refers to the wearing away of the land by the action of natural forces. Coastal or tidal inundation is the flooding of coastal lands by ocean waters, which is generally caused by large waves and elevated water associated with severe storms and the peak of the high tide. Geotechnical risks in the coastal zone refer to coastal cliff or slope instability.

Properties identified in Figures 3 and 4 on the following pages must submit as part of a development application, the following:

(a) Coastal Risk Assessment; and/or
(b) Geotechnical Risk Assessment.

Refer to council's Coastal Risk Management Policy 2012 for further information.


**Figure 3** Coastal inundation risk map

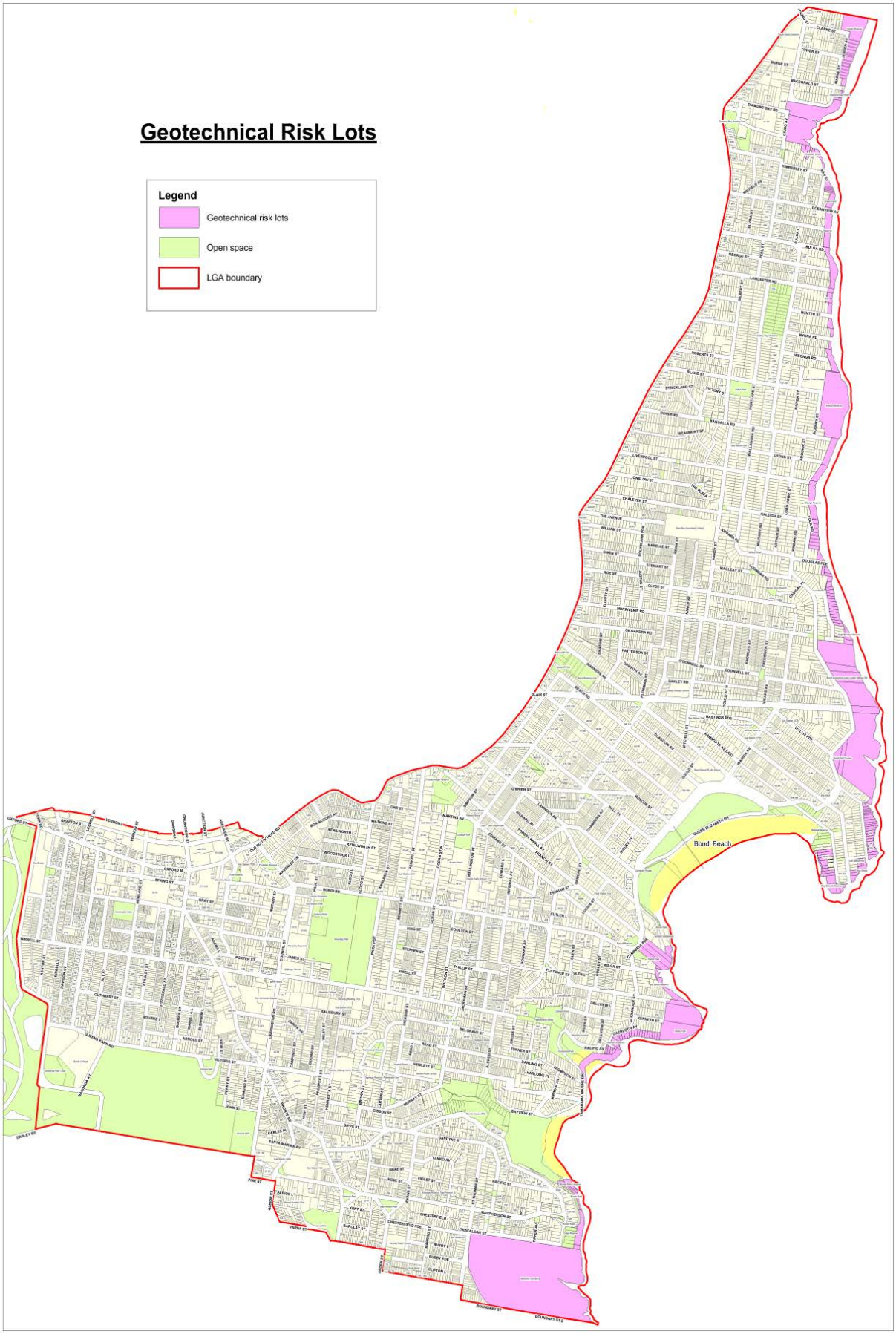



**Figure 4 Geotechnical risk map**

# B5 TREE PRESERVATION

Trees are an integral component of the urban environment. They provide habitat for animals, create a distinctive character for an area, visually soften the built environment and improve the natural environment through improved water infiltration, soil stability and air quality.

This part is to be in conjunction with Clause 5.9 Preservation of Trees of Waverley Local Environmental Plan (WLEP) which outlines additional provisions relating to the protection and preservation of tree and vegetation.

The 'Waverley Tree Management Policy' (WTMP) outlines the requirements for all tree and vegetation related activity. Please refer to the WTMP for additional information relating to the protection of trees and the requirements for applicants.

The objectives and controls in this section provide guidance for trees and vegetation on private land. In the first instance, refer to the WTMP for the relevant requirements. Where there is any inconsistency between the WTMP and this DCP, the WTMP prevails.

## 5.1 GENERAL PROVISIONS

**Objectives**

(a) To ensure the conservation of trees of ecological, environmental, heritage and aesthetic significance.
(b) To ensure development does not impact on the health of a tree on the site or adjoining properties or street trees.
(c) To ensure all works to trees are conducted in accordance with the relevant Australian Standards.

### 5.1.1 When consent is required

**Controls**

(a) An application is required to do work on any part of a tree above or below ground. This applies to any tree with a:
    (i) Height of five metres or over and trunk width of 300mm or over at ground level; or
    (ii) Canopy spread of five metres or over and trunk width of 300mm or over at ground level; or
    (iii) Listing on the Waverley Register of Significant Trees.
(b) If the tree or other vegetation is, or forms part of a Heritage Item or is within a Heritage Conservation Area, then development consent is required. (Refer to Clauses 5.9 and 5.10(3) of WLEP).
(c) Any person who contravenes or causes to be contravened, the provisions of this part of this plan shall be guilty of an offence. In any proceedings under this plan, it shall be sufficient defence to prove that the tree or trees and vegetation were dying or dead or had become dangerous.

### 5.1.2 Trees considered to pose an imminent danger

(a) Except for specified emergency situations, expert advice should always be obtained with respect to hazardous trees to confirm their condition.
(b) Where a hazardous tree is removed (in an emergency situation) due to obvious instability or hazard (e.g. following a storm), Council's Rangers must be notified prior to removal. It is recommended that evidence of the tree's condition be retained for a period of at least six (6) months after the event and produced at Council's request if needed. Such evidence might include a:
    (i) Report by a consulting arborist including photographs; and/or
    (ii) Written statement from the State Emergency Services, if the Service carried out the emergency work at the owner's request.
(c) If trees are removed for the above reasons it is a requirement to plant replacement trees of a suitable native species to maintain canopy cover in Waverley.

## 5.2 PROTECTING TREES ON DEVELOPMENT SITES

Damage to trees on development sites is often caused because of a failure to appreciate their vulnerability, particularly the root system which can decline in health over several seasons following detrimental alterations to the soil environment. It is necessary that development takes into consideration trees both on the site and those on adjoining sites including street trees.

**Objectives**

(a) To ensure development does not impact on the health of a tree on the site or adjoining properties or street trees in accordance with Australian Standard – AS 4970 – Protection of Trees on Development Sites.

**Controls**

(a) When a proposed development may have an impact on trees on the site, on adjoining properties or public trees within 4 metres of the site, the following information is required at these stages:
   (i) Lodgement of Development Application.
      - Tree Retention Value Report; and
      - For trees identified as moderate to high retention and to be protected an Arboricultural Impact Assessment (includes a tree protection plan).
   (ii) Prior to Construction Certificate.
      - Final Tree Protection Plan (if modifications are required);
      - Tree Monitoring Report.

(b) Details of requirements of the above reports are listed in the Waverley Tree Management Policy Development proposals must show all associated building works (including stormwater, hydraulic and sewerage works) located within any tree protection zone.

(c) Selective pruning or removal of trees that conflict with proposed building works may be approved where redesign of the building work is not possible or will result in inferior building performance. However, Council may require the redesign of a development proposal to retain or lessen the impact on a significant or prominent tree.

### 5.2.1 Penalties

Any works carried out without approval, not in accordance with an approval or that is not exempt will be dealt with in accordance with the relevant legislation. This may result in a Penalty Infringement Notice or legal action through either the Local Court or the Land and Environment Court against all parties involved in any breach of WLEP or any conditions of approval.

Where a person is guilty of an offence involving the destruction of, injure or damage to a tree or vegetation, the court dealing with the offence may, in addition to or in substitution for any pecuniary penalty imposed or liable to be imposed, direct that person to:

(a) Repair or remedially prune damaged trees;

(b) Plant new trees and vegetation and maintain those trees and vegetation to a mature growth/or minimum height of five (5) metres, and

(c) Provide security for the performance of any obligation imposed under paragraph (a) & (b) above.

*Note: injure a tree means but is not limited to:* poisoning; spilling or washing off toxic chemicals; applying herbicides to a tree or within its Tree Protection Zone; damage to tree roots from stockpiling materials, soil compaction, filling, excavation or altering soil levels within its Tree Protection Zone; wounding to tree trunks or the breaking or tearing of roots or branches; wounding to trunks or branches from fixing objects using nails, wires, staples or similar fastening materials e.g. attaching signs, swings, platforms or cubby houses.

# B6 STORMWATER

This Part contains planning controls relating to the management of all aspects of the water cycle in an integrated and consistent manner. The planning controls promote the need for long-term sustainable social, ecological and economic outcomes.

This Part is to be read in conjunction with Council's 'Water Management Technical Guidelines' (WM Technical Guidelines) which provides further details on controls outlined in this Part.

## 6.1 STORMWATER MANAGEMENT

This Part applies to the following development types:

(i) New development;
(ii) Increase in impervious area >30m²; and/or
(iii) Additional storey or extension with additional floor area >30m².

Water Sensitive Urban Design (WSUD) aims to minimise the impacts of development upon the water cycle and achieve more sustainable forms of urban development by integrating stormwater management systems into the landscape. WSUD provides multiple benefits including stormwater retention and detention and water efficiency, whilst addressing the pre-development considerations of flooding, coastal water and groundwater protection, habitat creation and improving visual amenity.

For more information on how to implement WSUD refer to the Sydney Metropolitan Catchment Management Authority website, accessible at the following link: www.wsud.org.

**Objectives**

(a) To integrate water sensitive urban design with landscape and building design.
(b) To reduce the volume of stormwater run-off.
(c) To improve catchment water quality.
(d) To minimise the impacts of urban development upon water balance and surface and groundwater flow regimes.
(e) To promote infiltration within the "Infiltration zone" and reduce stormwater run-off (refer to annexure B in the WM Technical Guidelines).
(f) To encourage the use of soft landscaping and permeable paving as an alternative to impervious surfaces.

**Controls**

(a) On site detention must be provided.
(b) A stormwater management plan is required to be submitted with all development applications (except minor alterations, retrofits and the like).
(c) WSUD principles are to be integrated into the development through the design of stormwater drainage, on-site detention and landscaping and in the orientation of the development rather than relying on 'end of pipe' treatment devices prior to discharge (refer to Figure 5).
(d) WSUD measures are to be employed to prevent contamination of stormwater.

(e) Development is to be s ited and built to minimise disturbance of the natural drainage system.

(f) WSUD elements should be located and configured to maximise the impervious area that is treated.

(g) On site detention is to be designed, installed and maintained in accordance with the WM Technical Guidelines.

(h) Council consent is required for temporary/permanent dewatering and groundwater extraction and use prepared in accordance with the WM Technical Guidelines. The proposal is assessed on merits and where appropriate, referred by council to the relevant Government department for an access licence.

(i) Applications for roof water and stormwater harvesting and reuse and grey water or black water treatment systems will be assessed on merit in accordance with the WM Technical Guidelines.

(j) Methods of disposal of stormwater from the site must be provided using one or a combination of the following:

(i) Infiltration;
(ii) Gravity connection to council's stormwater system;
(iii) Charged system; and / or
(iv) Pump system.

Note: A stormwater system must be c onstructed in accordance with AS/NZS 3500:2003 National Plumbing & Drainage and WM Technical Guidelines.

(k) Depending on the extent of disturbed area, the following plans to manage erosion and sedimentation must be submitted with the development application:

(i) For areas of disturbance less than 250m$^2$, a marked up pl an of proposed works and control measures is required;
(ii) For disturbed areas between 250m$^2$ and 2,500m$^2$, an erosion and sediment control plan is required; and
(iii) For disturbed areas greater than 2,500m$^2$ soil and water management plan is required.

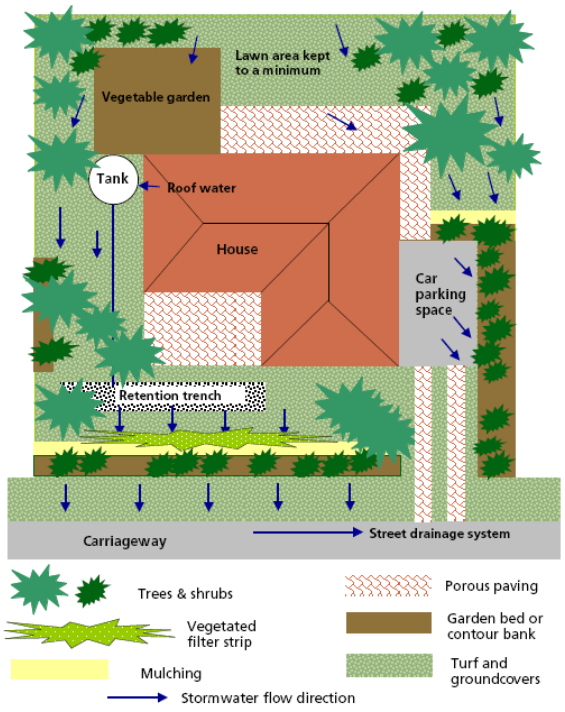



**Figure 5** Example of an integrated stormwater strategy for a dwelling

## 6.2 FLOODING

The WLEP 2012 identifies areas within Waverley that are prone to flooding in a 1 in 100 year Average Recurrence Interval (ARI) flood event. These controls are to be read in conjunction with the WLEP 2012 and the Water Management Technical Guidelines.

**Objectives**

(a) To ensure that development is not subject to undue flood risk.
(b) To ensure all areas identified as 'flood planning area' in WLEP 2012 will minimise the impact of stormwater and flooding on other developments and the public domain.

**Controls**

(a) Habitable floor levels must be set at a minimum of 300mm above the predicted design flood level for a 1 in 100 year storm event.
(b) For all other areas habitable floor levels must be set at a minimum of 150mm above the level of adjacent ground for habitable areas.
(c) Designs must be undertaken in accordance with the Water Management Technical Guidelines.

# B7 ACCESSIBILITY AND ADAPTABILITY

It is important buildings are designed to ensure they are safe, accessible and adaptable.

*Disability Discrimination Act 1992 (DDA 1992)*
The *DDA 1992* makes it unlawful to discriminate against a person with a disability in regards to the provision of access to public buildings for the provision of goods and services, accommodation and employment unless this would cause 'unjustifiable hardship'.

Where a developer or builder believes that complying with the DCP would cause "unjustifiable hardship", an application can be made to be exempted from a particular provision or to provide access for people with disabilities in some other way than provided for in the DCP. It is the responsibility of the applicant to ensure that the development meets the requirements of the *DDA 1992*.

*Access to Premises - Australian Standards*
Access to Premises - Australian Standards provides the technical specifications for access design requirements in the built environment. The Australian Standards clarify the accessibility requirements for premises as implied under the *DDA 1992* and are incorporated within the Building Code of Australia (BCA).

## 7.1 ACCESSIBILITY

This Part provides controls for access to buildings and spaces to provide for equitable access for all people including people with a disability, ageing people with mobility difficulties, parents with prams and other people with temporary disabilities, by providing a continuous path of travel through the built environment.

**Objectives**

(a) To encourage an accessible path of travel to all development.
(b) To provide equitable access within all developments.
(c) To ensure major alterations and additions to existing buildings provides upgraded levels of access and facilities for all people.
(d) To establish accessible dwelling standards for easy modification to cater for occupants with a disability or impairment.

**Controls**

(a) The siting, design and construction of premises available to the public are to ensure an appropriate level of accessibility, so that all people can enter and use the premises. Access is to meet the requirements of the *DDA 1992*, the relevant Australian Standards and the BCA.
(b) Accessible parking for people with a disability must be provided in accordance with the BCA and AS/NZS 2890.1: 2004 parking facilities – Off Street parking and AS 1428: 2003 – Design for Access and Mobility Set.
(c) An Access Management Plan may be required as a means of helping to provide services or facilities to people who would be unable to gain access to the premises (refer to Part A2).

*Commercial Development*

(a) A lift must be provided at ground floor to upper floors in developments with three or more storeys and where aggregate floor area above the ground floor is 400m$^2$ or greater.
(b) 10% of total car spaces provided are to be accessible.

## 7.2 ADAPTABLE DWELLINGS

Adaptable housing is accommodation that is specifically designed to enable easy modification in the future for occupation and visitation by people with a current disability or people who will acquire disabilities gradually as they age.

**Objectives**

(a) To ensure adaptable units are included within residential development in accordance with the relevant Australian Standards.

**Controls**

(a) Adaptable dwellings are to be allocated to all unit sizes to accommodate various household sizes.

(b) In developments with three or more habitable storeys and 10 or more units, a percentage of units shall comply with the provisions of a Class A adaptable unit specified accordance with the Australian Standards, as follows:
   (i) Up to 9 units, the provision does not apply;
   (ii) 10 – 15 units, 1 adaptable unit;
   (iii) 16 – 20 units, 2 adaptable units;
   (iv) 21 – 30 units, 3 adaptable units; and
   (v) 30+ Units - 10% of units.

(c) One accessible car parking space is to be provided for every adaptable residential unit and be a part lot in the strata plan.

(d) Adaptable units must be certified as ‘adaptable housing units’ by an independent, suitably qualified person.

## 7.3 UNJUSTIFIABLE HARDSHIP

It is the responsibility of the applicant to ensure that the development meets the intent of the *DDA 1992*, and the requirements of the Premises Standards and this DCP. However, it is recognized under the *DDA 1992* that in some circumstances the provision of access may cause unjustifiable hardship by being unreasonable, impractical or uneconomical.

Where a developer believes that compliance with the provisions of this DCP and intent of the *DDA 1992* would cause unjustifiable hardship, an application can be made to council to be exempted from a particular provision, or to provide access in some other way than that specified in this DCP. The information that must be supplied by the applicant is set out in detail under the Controls section of this Part.

In accordance with the *DDA 1992*, council's assessment of an application for exemption will consider the extent to which people will benefit or be detrimentally affected by non-compliance with this DCP, the cost of compliance and the ability of the developer to meet the cost. Each claim will be considered by council on its merits as there is no general formula that can be applied to guide what might be considered to be Unjustifiable Hardship.

It must be emphasized that there is always a requirement to provide whatever access is possible up to the point of unjustifiable hardship.

**Objectives**

(a) To have public buildings accessible to all people, consistent with requirements under the *DDA 1992* and the BCA.

**Controls**

(a) Claims of unjustifiable hardship will be considered on a case by case basis and on the merit of the case put forward by the developer.

(b) An application of unjustifiable hardship must be accompanied by a statement that includes the following information:

- (i) The nature of the benefit of detriment likely to occur or be suffered by any persons in relation to the proposed development;
- (ii) Two independent quotes from tradespeople or suppliers for the cost of works to meet the principles of the *DDA 1992*;
- (iii) The space required to carry out works and the effect this may have upon the viability of the proposed work;
- (iv) The impact on the heritage significance of the premises or conservation area (where applicable) and details of the work required to provide access;
- (v) Typographical, technical, operational and safety issues;
- (vi) Details of investigations into different ways in which the space could be configured or used so as to comply with the applicable access requirements; and
- (vii) Details of investigations into design alterations so that future works to improve access are not compromised.

# B8 TRANSPORT

Car parking is one of the most critical planning and transport issues in Waverley. Wherever possible, Council strongly encourages the use of alternative modes of transport such as walking, cycling and public transport and continues to work towards providing better transport connections to the area.

The provision of private (on-site) and public (on-street) parking must be managed in an equitable and environmentally sensitive manner that benefits the community as well as the individual.

When considering applications, the following general principles shall apply:

**Strategies**

- New development that generates the need for car parking should provide adequate parking on the site (refer to Table 2).
- Where it can be demonstrated that new development either does not generate the need for car parking; or that adequate alternate modes of transport are easily available, then on-site car parking may be reduced (refer to Table 3).
- The provision of car parking on-site may not be appropriate in all locations or circumstances and approval will only be granted where the site and locality conditions permit.
- Car parking must be designed to complement the design of the building and streetscape to which it relates and incorporate a range of appropriate materials and design.
- Where site conditions allow, car parking structures should be located behind the front building line. In some circumstances, car parking structures in front of the building line may not be appropriate for streetscape or design reasons.
- Driveways and vehicular access should be designed to minimise the loss of on-street parking wherever possible.
- Car parking for multi storey and other large scale development (residential flat buildings, commercial buildings, mixed use buildings and the like) should be located below ground level.

*Waverley Transport Plan 2011*

This Part has been prepared in the context of the Waverley Transport Plan 2011. The vision of the Waverley Transport Plan 2011 is:

- People regularly use public transport particularly for trips to work and our beaches;
- Roads and intersections are safer and less congested;
- Parking both on street and off street is equitably accessed and effectively managed;
- People frequently walk and ride their bikes particularly for local trips;
- Public transport, cycling and pedestrian alternatives are improved and encouraged;
- All pedestrian routes are high quality, safe and accessible;
- Our bike network and facilities are safe and connected; and
- All stakeholder needs for improvement to transport effectiveness and usefulness are appropriately planned and delivered.

## 8.1 PARKING RATES

The controls for car parking vary across Waverley but are generally based on proximity to existing public transport services, proximity to services and where the provision of parking is constrained. Based on this, Waverley is divided into four Parking Provision Zones. These zones are summarised in Table 2 and the Parking Zone Map in Figure 7.

| Parking Zone | Description | Location | Rate of Provision |
|---|---|---|---|
| **Bondi Junction** | High accessibility to public transport and services, high density and prone to traffic congestion. | • B3 Commercial Core | Low |
| **A** | High accessibility to public transport and services, high density and prone to traffic congestion. | • Properties zoned R4 High Density;<br>• B4 Mixed use; and | Low - Moderate |
| **B** | Good accessibility to public transport and services, medium/ high density and some on-street parking pressures | • Properties outside of Zone A or Zone C. | Moderate |
| **C** | Fair accessibility to public transport and some services, relatively low density and on-street parking available. | • Residential properties north of Murriverie Rd (inc. southern properties) | High |

**Table 1** Parking Provision Zones

### 8.1.1 Car Parking

**Objectives**

(a) To provide car parking rates which reflect the proximity of development to existing public transport, services and the availability of on-street parking.
(b) To balance the need to meet parking demand on site with the need to contain parking and promote sustainable transport.
(c) To establish controls for parking that reflect the characteristics of the area in terms of urban form, land use and proximity to public transport.

**Controls**

(a) Where a DA involves a change of use, the parking rate for the new use is to be calculated as the difference between the parking rates required for both the present and proposed uses (under this Part).
(b) Council reserves the right to require the parking provision rate based on the total requirement for the use if, in its opinion, the DA involves a re-construction of the building.
(c) When calculating the provision of parking spaces or loading facilities, the following method is to be applied:

(i) the number of spaces for each use on the site is to be calculated separately; and

(ii) the total number of facilities or spaces to be provided is to be rounded to the nearest whole number, i.e. 2.15 spaces equals a requirement for 2 spaces and 2.50 spaces equals a requirement for 3 spaces.

(d) Car parking rates are provided in Table 3. Each parking zone is identified in the Parking Zone Map in Figure 7.

| Land Use | Bondi Junction | | Parking Zone A | | Parking Zone B | | Parking Zone C | |
|---|---|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max | Min | Max |
| **Multi Dwelling/Unit Housing and Shop Top Housing** | | | | | | | | |
| 1 Bedroom | 0 | 0.6 | 0 | 0.6 | 0.4 | 0.8 | 0.5 | 1.0 |
| 2 Bedroom | 0 | 0.8 | 0 | 0.8 | 1.0 | 1.2 | 1.0 | 1.4 |
| 3+ Bedroom | 0 | 1.2 | 1.0 | 1.2 | 1.0 | 2.0 | 1.0 | 2.0 |
| **Business/ Office** | 0 | 0.66/ 100m$^2$ of GFA | 0 | 1.0/ 100m$^2$ of GFA | 0 | 1.0/ 100m$^2$ of GFA | 0 | 1.0/ 100m$^2$ of GFA |
| **Retail** | 0 | 1.6/ 100m$^2$ of GFA | 0 | 2.0/ 100m$^2$ of GFA | 0 | 3.3/ 100m$^2$ of GFA | 0 | 3.3/ 100m$^2$ of GFA |

**Table 2** Car Parking Rates

(e) No visitor parking spaces are required for the first 12 residential units. Thereafter, 1 visitor parking space is required for every 4 additional units or part thereof.

(f) For developments requiring more than 50 car parking spaces, a maximum of 2% of the required parking spaces may be specified as "small car spaces", with a minimum length of 5 m etres. Such spaces are to be indicated on the plans submitted and clearly indicated when completed.

(g) Council may also require on-site parking provision be reduced for development fronting "pedestrian-dominated" streets in the Bondi Junction Centre, as shown in the area marked in Figure 6. The exact reduction in on-site parking provision will be determined by council on a case-by-case basis.

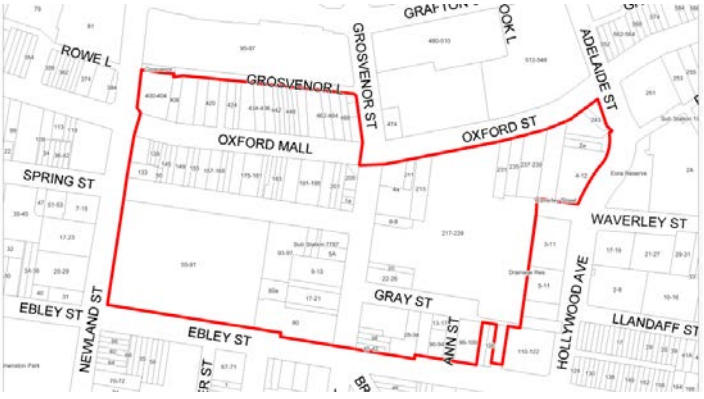
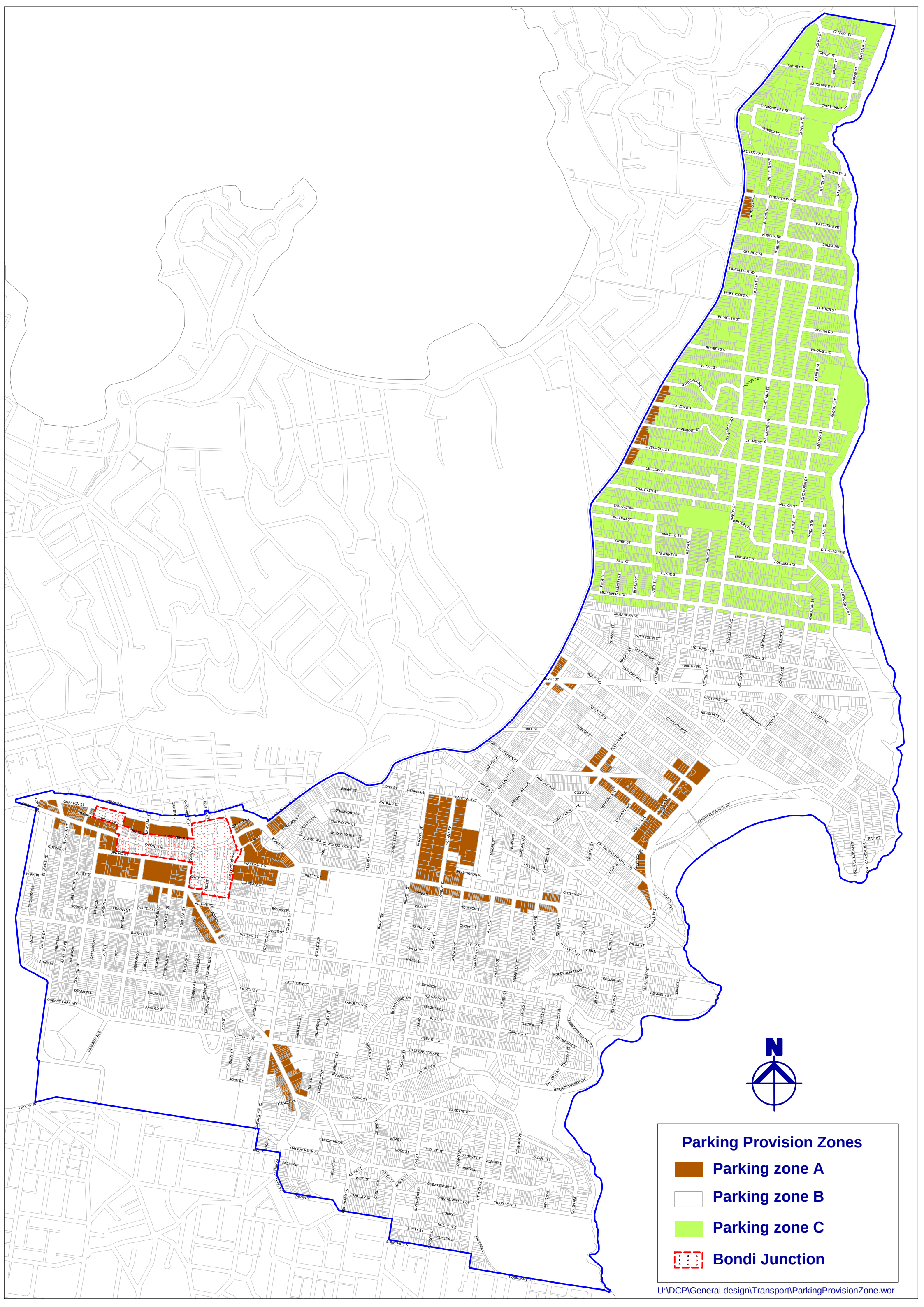



**Figure 6** Pedestrian dominated streets in Bondi Junction Centre


Parking Provision Zones
Parking zone A
Parking zone B
Parking zone C
Bondi Junction
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## 8.1.2 Bicycle Parking

### Objectives

(a) To provide safe and convenient end of trip facilities for residents as well as commuters and employees.
(b) To ensure the quantity of bicycle parking available is sufficient to meet growing demand.
(c) To promote cycling as a healthy and environmentally friendly way to make commuter, shopping and recreational trips.

### Controls

(a) Parking for bikes is to be provided at the following minimum rates, except where an apartment in a residential building has a basement storage area on title that is large enough to accommodate a Class 1 bike locker (refer to Table 4).
(b) Areas for bicycle parking will not be included as part of gross floor area or gross leasable area (GLA) for the purpose of calculating car parking provision.

| Land Use | Rate | |
|---|---|---|
| | Resident | Visitor |
| **Multi dwelling/ unit housing** | 1 space per dwelling/unit | 1 space per 10 dwellings/units |
| **Commercial/ retail** | 1/ 150m$^2$ of GFA | N/A |

**Table 3** Bicycle parking rates

(c) Council reserves the right to require a greater provision of bicycle parking than indicated in Table 4, where in council's opinion, the particular nature of the development will generate an increased demand for bicycle parking.
(d) Bike parking is to be provided in accordance with requirements for layout, design and security as set out in the Australian Standard *AS 2890.3 -1993 Parking facilities – Bicycle parking facilities*, including:
    (i) Security Class 1 bike lockers for occupants of residential buildings;
    (ii) Security Class 2 bike enclosures for staff/employees of any land use; and
    (iii) Security Class 3 bike rails/ racks for visitors of any land use.
(e) Where bike parking for tenants is provided in a basement, it is to be located:
    (i) On the uppermost level of the basement;
    (ii) Close to entry/exit points; and
    (iii) Subject to security camera surveillance where such security systems exist.
(f) A safe path of travel from bike parking areas to entry/exit points is to be marked.
(g) Access to bike parking areas are to be:
    (i) A minimum of 1.8m wide to allow passage of a pedestrians and bikes to pass each other (access ways can be shared with vehicles within buildings and at entries to buildings);
    (ii) Accessible via a ramp;
    (iii) Clearly identified by signage; and

(iv) Accessible via appropriate security / intercom systems.

(h) 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.

(i) For retail premises provide minimum 50% of the required bicycle parking at an accessible location on the footpath near the entry to the retail premises.

(j) For non-residential uses, the following additional end-of-trip facilities are to be provided at the following rates:

(i) 1 personal locker for each bike parking space;

(ii) 1 shower/change cubicle for up to 10 bike parking spaces;

(iii) 2 shower/change cubicles for 11 t o 20 bike parking spaces are provided;

(iv) 2 additional showers/cubicles for each additional 20 bike parking spaces or part thereof.

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

### 8.1.3 Motorcycle parking

**Objectives**

(a) To encourage alternative forms of transport.

(b) To ensure the quantity of motorcycle parking available is enough to meet growing demand.

**Controls**

(a) Motorcycle parking spaces are to have dimension of 1.1m x 2.5m.

(b) In all buildings that provide on-site parking, 3 motorcycle spaces are to be provided for every 15 car spaces provided.

(c) Motorcycle spaces are to be indicated on the plans submitted, and clearly identified for motorcycle use only when the development is completed.

## 8.2 LOADING FACILITIES

There is a need to balance parking and loading and ensure that each development has adequate loading and unloading facilities without impacting on amenity and safety.

**Objectives**

(a) Adequate off street loading and servicing facilities shall be provided for all commercial development and any other use where regular delivery of goods are made to or from the site.

(b) The number of loading bays to be provided shall be determined having regard to the scale and type of the use proposed.

**Controls**

(a) The provision of loading and unloading facilities should be provided for all commercial premises. The number of loading bays shall be determined having regard to the scale and type of use proposed. In this regard, details of anticipated volumes and frequency of deliveries is to be provided with the DA. Table 5 provides for minimum loading requirements.

| Use | Rate |
|---|---|
| Industrial uses | 1 per 800m$^2$ GFA |
| Offices, commercial premises & professional consulting rooms | 1 per 4000m$^2$ up to 20,000m$^2$ plus 1 per 8000m$^2$ thereafter |
| Residential flat buildings | 1 per 50+ dwellings |
| Retail | 1 per 400m$^2$ GFA |
| Other uses | Merit Assessment |

**Table 4** Minimum Commercial Loading Rates

(b) The following design principles should be considered in the design of loading facilities including:

- (i) The size and layout of the service area must be designed to facilitate operations relevant to the development;
- (ii) Service areas must be a physically defined area which is not used for other purposes, such as storage of goods and equipment or parking areas;
- (iii) All vehicles must enter and exit the property in a forward direction;
- (iv) Internal circulation must be adequate for the largest vehicle anticipated to use the site; and
- (v) Loading facilities being designed to comply with the requirements of AS 2890.2 -2002 Part 2: Off-Street Commercial Vehicle Facilities.

(c) A development application shall include the following:

- (i) The class and dimensions, including height of the design vehicle accessing the service area.
- (ii) Clearance heights between the access driveway and the loading dock(s).
- (iii) The dimensions of the loading dock(s).
- (iv) Swept wheel paths between the access driveway and the loading dock and the required manoeuvring areas for both entry and exit movements.

## 8.3 PEDESTRIAN/BICYCLE CIRCULATION AND SAFETY

Everyone is a pedestrian at some stage in their journey. This means pedestrians are a highly diverse road user group which includes children, older people, teenagers, joggers, the disabled and mobility impaired. Pedestrians and cyclists are particularly vulnerable in the road environment because most other road users are moving significantly faster, and pedestrians and cyclists have little or no bodily protection in the event of a collision. As a result, council places a very strong focus on pedestrian and cyclist safety.

**Objectives**

(a) To ensure priority is given to pedestrian and bicycle movements.
(b) To maintain bicycle and pedestrian safety.
(c) To provide safe and easy access to buildings.
(d) To provide a safe and accessible public domain.

**Controls**

(a) The location of parking spaces is not to obstruct pedestrian and bicycle access to the premises or major pedestrian and cycling routes.
(b) Within parking areas of larger than 10 car spaces, segregated routes for main pedestrian and bicycle movements must be created making use of line marking, pedestrian crossings, signage and where appropriate speed humps.
(c) Exit points of parking areas of larger than 10 car spaces require the following safety devices installed within the boundary of the property:
    (i) Two stop signs;
    (ii) A white, unbroken line at the exit point appropriate to accompany stop signs;
    (iii) Two fish eye mirrors to improve sighting of pedestrians traversing the public footpath area;
    (iv) Either a boom gate or a speed hump, or both, within 8 metres of the exit point; and
    (v) Speed limit of 8 km per hour with the vehicles lights being left on to be enforced within the property; which should be clearly sign posted.

## 8.4 URBAN DESIGN

The provision of parking should satisfy the parking demand for current and future residents but recognise the need to balance car parking access and urban design outcomes. This Part should be read in conjunction with the Austroads Traffic Management Guides and all relevant Australian Standards.

**Objective**

(a) To ensure the provision of off-street parking is subject to considerations of urban design, streetscape and heritage conservation.

**Controls**

(a) Where off street parking is not characteristic of the street, vehicular access from the street is not permitted.

(b) Applications involving on-site parking spaces shall indicate in the street analysis how the proposal maximises the retention of on-street parking, and retains and improves pedestrian and cyclist amenity. The street analysis must show:
    (i) a comparison between the current and proposed on-street parking; and
    (ii) adequate pedestrian and cyclist accessibility.

(c) Driveways should be provided from rear lanes where possible.

(d) Where only front access is available, car parking shall be provided behind the front building line, unless otherwise indicated in the controls within the DCP.

(e) Car parking and vehicular access must not dominate the streetscape. Landscaping is to be used to soften the impact of such structures/areas.

(f) Car parking and driveway design is to preserve mature and significant trees and vegetation on the site and in the surrounding streetscape.

(g) Existing natural rock faces and heritage listed sandstone walls are not to be removed for the purpose of car accommodation.

(h) Entry gates and structures for car accommodation should be an open design to allow for improved security by way of street surveillance and to reduce any impact on the streetscape.

(i) Vertically stacked parking is only permitted where site constraints (such as horizontal dimensions or vertical relief) prevent full provision of conventional parking.

(j) Stacked parking spaces are to comply with the dimensions for individual spaces and are not acceptable for visitor parking.

(k) Access ways and driveways are to enable vehicles to enter the parking space in a single movement, and to leave the space in a maximum of two turning movements.

(l) The templates provided in Australian Standards must indicate the paths swept by manoeuvring vehicles and must be used by applicants to design access to parking and loading facilities. A minimum clearance of 300mm between the swept path and any building and obstruction is to be maintained.

## 8.5 TRAVEL PLANS

A travel plan is a package of actions designed to encourage safe, healthy and sustainable travel options. By reducing car travel, Travel Plans can improve health and wellbeing, free up car parking space, and make a positive contribution to the community and the environment.

**Objective**

(a) To remove barriers to active travel for all users of developments.
(b) To maximize the number of people who walk, cycle or take public transport to and from the development.

**Controls**

(a) A Green Travel Plan or Workplace Travel Plan is mandatory for all new developments:
    (i) With over 2,500m² for office / commercial/ retail land uses;
    (ii) Including 15 units or more;
    (iii) Where 50 or more employees are proposed; or
    (iv) As deemed necessary by council.
(b) A travel plan must include:
    (i) Targets – this typically includes the reduction of a single occupant car trips to the site for the journey to work and the reduction of business travel.
    (ii) Travel data – an initial estimate of the number of trips to the site by mode is required.
    (iii) Measures – a list of specific tools or actions to support and achieve the targets.

For further information on how to prepare a Green Travel Plan or Workplace Travel Plan go to: www.pcal.nsw.gov.au and www.travelsmart.gov.au

## 8.6 TRAFFIC AND TRANSPORT MANAGEMENT PLANS

A Traffic and Transport Management Plan sets out the procedures to mitigate and minimise the impacts of the development (both construction and operation) on the capacity, performance and safety of the local road network and traffic systems and also addresses the impacts on pedestrians, public transport, parking and cyclists.

**Objectives**

(a) To ensure an adequate assessment is made of the traffic and parking impacts of development on the surrounding road network and adequate measures to ameliorate the impacts are considered.

**Controls**

(a) A traffic and transport management plan is required to accompany a development application for the following developments:
   - (i) Child care centre;
   - (ii) Residential development over 15 units or more
   - (iii) Commercial development with over 2,500m²; or
   - (iv) Other development at the discretion of council.

(b) The study should provide an assessment of the traffic and parking impacts the development proposal may have on the surrounding road network and must address matters such as:
   - (i) Current on street parking restrictions and availability;
   - (ii) Time of peak demand;
   - (iii) Proportion of people using facilities on site;
   - (iv) Hours of operation;
   - (v) Current traffic conditions;
   - (vi) The likely impact of the proposed development on existing traffic flows and the surrounding street system;
   - (vii) Safety of pedestrian and vehicular movements in and around the centre;
   - (viii) How impacts of drop-off and pick up will be accommodated; and
   - (ix) Deliveries to the site.

## 8.7 CAR SHARE

Car sharing enables individuals to reduce or eliminate the need for ownership of a private vehicle. This in turn reduces the space required for car parking and promotes the use of sustainable forms of transport such as walking, cycling and public transport. There is extensive use of car share vehicles in Waverley.

### Objectives

(a) To provide off-street parking opportunities for car share groups, in balance with competing parking demands.
(b) To support alternative methods of transport and reduce the demand on private car ownership.

### Controls

(a) That the maximum amount of car parking spaces for a development is inclusive of the minimum number of parking spaces allocated for car sharing.
(b) A minimum of 1 car share space is to be provided for every 90 residential units.
(c) A minimum of 1 car share space be provided for every 50 commercial car parking spaces.
(d) Car share parking spaces must be publicly accessible at all times, adequately lit and sign posted and located off the street.
(e) 1 car share space can be provided in lieu of 3 car parking spaces.
(f) Car share spaces must comply with the design principles and standards in the DCP and Australian Standards.
(g) Car share spaces must be in optimum positions within the parking area to allow ease of access to car share vehicles by residents and the public.
(h) Car share spaces must be always under the ownership of a building's Owners' Corporation as common property.
(i) Car share spaces must be used and have authorised use by car share vehicles only.
(j) If a car share space is not taken up by a genuine car share provider, they cannot be permanently or temporarily designated for alternative purposes.

# B9 HERITAGE

This Part applies to all land identified under Schedule 5 of WLEP 2012, where development consent is required for certain works. This section aims to ensure that all new works are sensitive and cohesive to the identified significance of the heritage item or conservation area.

*State Heritage Listing*
The State Heritage Register maintained by the NSW Department of Planning and Infrastructure Heritage Branch includes items of Local and State Significance. Works to items identified as being of State Significance require a submission to the NSW Heritage office in conjunction with submission of a Development Application to council.

*Listings with the National Trust of NSW*
Where a building or conservation area is also listed by the National Trust, it is councils practise to refer applications to the Trust for comment. Council will consider submissions made by the National Trust however; council is not obliged to follow the Trusts advice.

*National Heritage Register*
Where a place or object is included in the Register of the National Estate, council is the designated consent authority for all identified buildings.

## 9.1 DEFINING HERITAGE

The heritage aspects of Waverley are shaped by nature and local history. They consist of many diverse elements such as parks, beaches, headlands and trees that contribute to Waverley's distinctive character but to a greater extent it relates to buildings and other manmade structures.

### 9.1.1 Heritage Items

A heritage item has cultural significance meaning aesthetic, historic, scientific and / or social value for future generations. All heritage items have been assessed as having significance under the criteria established by the NSW Heritage Branch of the Department of Planning and Infrastructure. The basic criteria of assessment include historic, aesthetic, scientific and social significance, rarity and association with institutions, groups or individuals of importance to the community.

Council supports the retention of heritage items in their significant form and setting whilst allowing sympathetic development to occur. As significance includes the setting, grounds and often the interior of buildings these aspects must be addressed in development applications.

Where new buildings or new building work is to be carried out in the context of a heritage site it is important that the character, quality and value of the setting, streetscape and listed item be maintained.

### 9.1.2 General Conservation Areas

A General Conservation Area contains a group of buildings where historical origins and relationships between various elements create a distinctive character of heritage. The heritage significance may include subdivision and street pattern, form and scale, the consistency of building materials or the common age of the building stock.

*Contributory Items*
General Conservation Areas contain items of natural or manmade origins and in many cases a combination of both which contribute to the distinctive cultural significance of the Conservation Area. Contributory items are not necessarily listed individually but contribute in form detail and history to the identified cultural significance of the Conservation Area.

Conservation Areas are in many cases the outcome of response to natural features including topography, vegetation and views. Such features are considered contributory to the cultural significance of the Conservation Area and are acknowledged as contributory items.

*Non Contributory Items*

Elements which by virtue of scale, detail, location, form or finish detract from the cultural significance of a Conservation Area are defined as non contributory items. council encourages the alteration and or replacement of such items in a manner enhancing the defined heritage significance of the Conservation Area. The existence of non contributory items in a C onservation Area is not considered a bas is for the introduction of development which is not cohesive with the identified significance of the Conservation Area.

All new development is a heritage conservation area is treated as 'infill development'.

### 9.1.3 Landscape Items and Conservation Areas

A substantial number of items in Waverley are identified as Landscape Heritage Significance. These include natural and manmade or cultivated elements both of planted and non biological forms. Landscape items and conservation areas are to be treated as are other identified heritage items or conservation areas with any development required to maintain and enhance the significance of the landscape item or conservation area.

### 9.1.4 Archaeological Sites

Evidence of past indigenous and non indigenous land use remains throughout Waverley. Evidence located below ground or concealed within later works is identified as an archaeological site. Many of these sites are identified on the basis of previous land uses providing the potential for discovery of archaeological evidence of past activities. Others contain known subterranean deposits or artefacts identified in the listing.

## 9.2 CHARACTER

To maintain the significance of listed heritage items and conservation areas, development should be designed to ensure any contributory features and characteristics of the building and the streetscape in which they are located are both understood and addressed within the design.

The character of a place is shaped by many contributing factors including:

- Topography;
- Distinctive landscape elements;
- The date and style of the buildings;
- The scale and form of the buildings;
- Street and subdivision patterns;
- Materials, building techniques and details; and
- Views, vistas and skylines.

**Objectives**

(a) That alterations and additions to the external appearance of heritage items and contributory buildings respect the contributory features and characteristics of the existing building and streetscape.

(b) That infill development respects and harmonises with the existing character of the area.

**Controls**

*All Development*

(a) Development should identify and respect the contributory features and characteristics of the item or the conservation area and incorporate these features into the design.

(b) The established landscape character of the locality including the height of canopy and density of landscaping should be retained.

(c) Development near a heritage item should respect the visual curtilage of the item.

*Heritage Items and Contributory Buildings*

(a) The design proposal needs to address the following streetscape issues:
    (i) Width of the street between building facades or front walls;
    (ii) Average height of buildings;
    (iii) Average setback of building front walls;
    (iv) Average position of garages, if any;
    (v) Type and size of front fences;
    (vi) Materials of the walls, roof and roof pitch;
    (vii) Type of windows and doors and the modelling of walls;
    (viii) Any individual decorative features; and
    (ix) Architectural style of buildings in the street.

(b) Additions should be located to the rear to minimise the impact from the street (refer to Figure 8).

(c) Where the building form, detailing or use of individual buildings of historic character have been inappropriately altered and changed, any application to up-grade or re-use the buildings must clearly demonstrate that the architectural and streetscape value of the building will be enhanced by the proposal.

**Figure 8** Sympathetic additions located to the rear

*Infill Development*

(a) Contemporary design is acceptable in a conservation area where it is sympathetic to, and respects the context of the conservation area and any heritage item in the vicinity (refer to Figure 9).

(b) New buildings adjacent to buildings of historic character or heritage items should be secondary in prominence to the existing streetscape fabric and draw on the predominant pattern of the existing streetscape.

**Figure 9** Sympathetic infill development

## 9.3 SCALE AND PROPORTION

Scale and proportion are essential to the character and quality of heritage listed items or buildings in a conservation area. Scale refers to the size of the whole building or any of its parts in relation to each other and to people. Proportion refers to the relationship of height to width or depth of each element or the whole building. A large second storey addition to a single storey house will almost always compromise its scale and proportion and therefore its character and value. Scale and proportion are as important for the smaller elements of a building as they are for the larger elements.

### Objectives

(a) That alterations and additions to heritage item and contributory building is consistent with the scale and proportion of the item and/or streetscape.

(b) That infill development recognises the predominant scale and proportion of the setting and responds sympathetically.

### Controls

*Heritage Items and Contributory Buildings*

(a) Alterations and additions should not visually dominate, compete with or conceal the original scale and proportion of the existing building or conservation area.

(b) Alterations and additions should respect the proportions of major elements including doors, windows, roof forms and verandahs (refer to Figures 10-12).

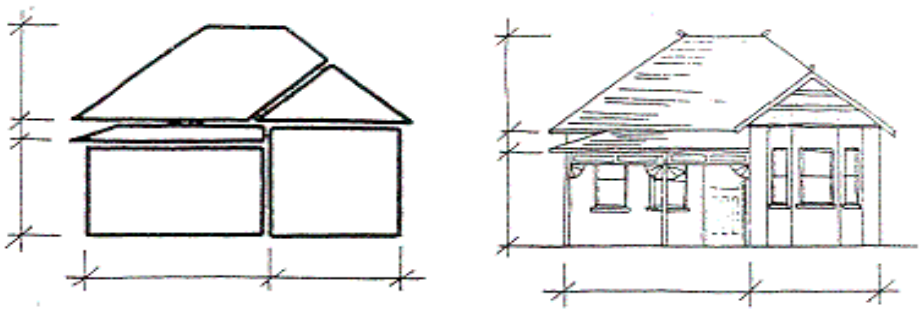


**Figure 10** Consideration of scale and proportion

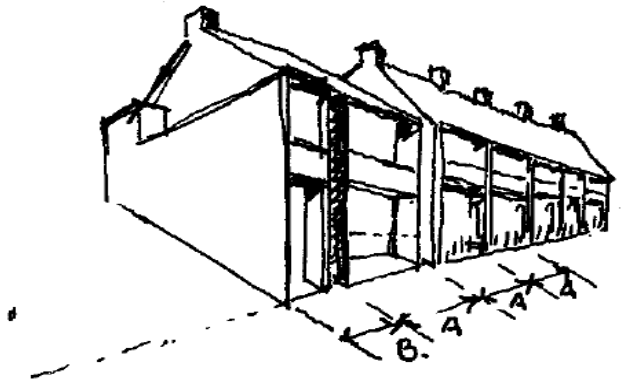



**Figure 11** Consideration of scale and proportion within a row of terrace houses

**Figure 12** Unsympathetic additions in relationship to the scale of the original dwelling

*Infill Development*

(a) Infill development should be cohesive in scale, proportion and finish to the surrounding streetscape and buildings (refer to Figure 13).

(b) Infill development should maintain and enhance the skyline profiles of established settings.

(c) Where the scale of the roof is much larger than that of adjacent buildings, the roof should be broken up into smaller elements to reduce bulk.

(d) Setbacks should be provided to upper levels.

**Figure 13** Sympathetic infill development

## 9.4 SITING

Front and s ide boundary setbacks are a major contributor to the character and significance of a heritage item or conservation area. It is important to note the general pattern of setbacks and site planning in the street when siting new buildings or additions.

**Objectives**

(a) That the existing heritage character of the streetscape including setbacks, siting and landscaping is maintained.
(b) To ensure adequate curtilage and landscape setting is provided.
(c) The siting of alterations and additions to existing and new buildings retains the integrity of the heritage item, its setting, and the conservation area.

**Controls**

*All Development*

(a) Development should conform to the predominant front setbacks in the streetscape.
(b) Front and rear setbacks should ensure the retention of the existing landscape character of the heritage item or conservation area.
(c) Any significant historical pattern of subdivision and lot sizes is to be retained.
(d) Development should respect or utilise the topography and existing vegetation of the land such as rock outcrops and mature trees.

*Heritage Items and Contributory Buildings*

(a) Extensions should be kept to the rear of the site where possible. If there is insufficient space for a rear extension, side extensions should be setback as far as possible from the street.
(b) Subdivision or site amalgamation involving heritage items or contributory buildings should not compromise the setting or curtilage of buildings on or adjoining the site.
(c) Construction, demolition or modification should not adversely affect the existing setting of the item or area.

## 9.5 MATERIALS AND COLOUR

The construction of the majority of older buildings was solid and well executed. Areas of consistent and notable heritage value are characterised by predominant building materials, textures and ranges of colour, detail and decoration. Detailing and decoration in consistent materials, finishes and colours provide aesthetic quality to listed heritage items and identified conservation areas (refer to Annexure B9-1).

**Objectives**

(a) To ensure the selection of materials and colours is harmonious with the item or conservation area.
(b) To ensure infill development considers the materials and colours characteristics of the conservation area.

**Controls**

*Heritage Items and Contributory Buildings*

(a) Council may require a proposed colour palette to be submitted with the development application.
(b) Original construction and in particular original finishes should be maintained where possible.
(c) Changes to materials on elevations visible from the public domain are discouraged.
(d) Alterations and additions should use materials similar to or compatible with the original material used.
(e) The selection of materials and colours is to be based on an understanding of the original finishes and matches, as closely as possible, those used in the item or conservation area.
(f) Colours for alterations and additions should be consistent or harmonious with existing building to help integrate new and old.
(g) Previously unpainted surfaces should not be painted. Painting of original stone or face brickwork causes fretting and eventually substantial damage as it traps moisture inside. Similarly, clear sealer such as silicone should be avoided.
(h) Original face brickwork and stonework should not be rendered.
(i) Bricks should match the existing brick and mortar colours as well as the type of joint and brick laying pattern.
(j) New building work constructed of timber should match the existing building elements made of timber (e.g. frames, weatherboarding, fascias, brackets, columns, friezes, etc).
(k) Cast iron or wrought iron elements, should be reinstated where possible. Decorative wrought iron was often used as a substitute early in the 20th century featured in both balustrading and fences.

*Infill Development*

(a) Infill buildings should recognise characteristics materials, textures and colours used locally and in adjacent buildings.
(b) Materials and colours of surrounding buildings need not be simply copied but used as a point of reference.
(c) Modern materials can be used if their proportions and details are harmonious within the surrounding historic context.

## 9.6 ROOFS AND CHIMNEYS

Characteristic roof forms materials and chimneys form part of the aesthetic qualities of buildings. Generally 19th and early 20th Century buildings feature distinctive chimneys and roof forms and finishes. Chimneys located to side and rear areas of buildings serve to provide cohesion to the overall building, the character of the setting and or Conservation Area. Later structures may also feature roof forms closely related to the style ad period of construction.

**Objective**

(a) To retain and maintain the characteristic roof forms and chimneys of heritage items and conservation areas.
(b) To ensure new roof profiles are consistent with the established skyline profiles of the conservation area.

**Controls**

*Heritage Items and Contributory Items*

(a) Skyline profiles of original roofs and chimneys should be retained where possible.
(b) Where chimneys are paired across party walls, treatment of finishes and detailing is to be consistent between properties.
(c) Substitution of finishes and removal of details including chimneys is only permitted where council approves a cohesive replacement finish or detail.
(d) Attic rooms are to use existing roof forms which retain the streetscape appearance of the existing building.
(e) Roof extensions are to match the existing roof in form, pitch and eaves and be in proportion with the existing building.
(f) The use of modern roofing materials is discouraged as they can significantly alter the character of the building.
(g) New tiles or slates should match the existing tiles/slates as closely as possible and concrete tiles are not considered a suitable replacement material.

*Infill Development*

(a) New roof profiles are to be secondary to the established skyline profiles in the Conservation Area and are to enhance the established character of the existing skyline (refer to Figure 14).

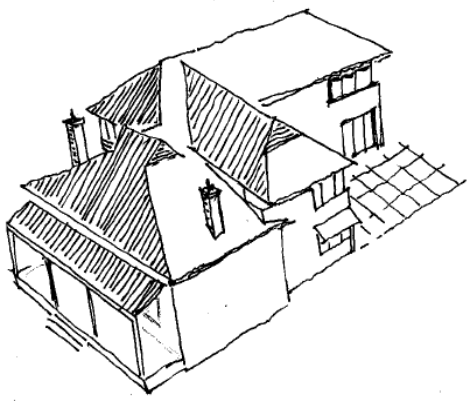


**Figure 14** New roof forms are to be secondary to the established skyline profile

## 9.7 VERANDAHS AND BALCONIES

Responding to the climate of Waverley, many of the listed buildings and contributory buildings within Conservation Areas retain verandahs and balconies detailed in the style of the original building. Verandahs and balconies form an integral aspect of heritage buildings particularly from the 19th and early 20th Century.

### Objectives

(a) To encourage the retention and reinstatement of early verandahs and balcony forms.
(b) That alterations and additions do not detract from original balconies and verandahs.

### Controls

*Heritage Items and Contributory Buildings*

(a) All original verandahs and balconies should be retained and restored (refer to Figure 15).
(b) Infilling or enclosure of verandahs and balconies is not supported.
(c) Additional verandahs should not compete with an original verandah or balcony.

**Figure 15** Original verandahs should be retained

## 9.8 GARDEN ELEMENTS

Elements of hard and soft landscaping from the time of original construction form aspects of heritage listing and contribute to the character of Conservation Areas. Garden and boundary retaining walls using coursed local sandstone occur throughout Waverley and form a valued aspect of the areas heritage.

### Objective

(a) That the landscape settings and elements of heritage items or buildings within a conservation area are retained or reinstated.

### Controls

*Heritage Items and Contributory Buildings*

(a) Original and contributing elements of hard and soft landscaping are to be retained on heritage listed sites and where occurring in Conservation Areas.

(b) High walls or fences and unsympathetic garden treatment (e.g. rockeries, dense plantings that are out of character) are discouraged.

(c) New hard and soft landscaping is to be provided with regard to the:
    (i) stability of existing significant fabric;
    (ii) retention and enhancement of original hard and soft landscaping; and
    (iii) character of the site and/or Conservation Area.

## 9.9 BUILDING FACADES

The facade is generally one side of the exterior of a building, especially the front, but also sometimes the sides and rear. The facade of a building is one of the most important elements of a building from a design standpoint, as it sets the tone for the rest of the building.

**Objective**

(a) To retain the existing façade of the original building.

**Controls**

*Heritage Items and Contributory Buildings*

(a) Where a building façade provides the core character detail and aesthetic qualities of an item the extent of a cohesive alteration and addition may extend to removal of other areas of the listed structure provided the façade remains in conjunction with a full structural bay or room depth and there remains a cohesive interface of new and existing works.

(b) Alteration or removal of original facades which are of heritage significance is not supported.

(c) Proposed works are to be sympathetic to and not detract from the style and character of the building.

## 9.10 FENCING AND GATES

Fences and gates to street frontages historically reflected the aesthetic characteristics of associated buildings and provide an important element in the cohesion and quality of streetscapes. Appropriate fencing can unify and make a pos itive contribution to the character and quality of a street. Boundary fence designs can have a significant impact on the streetscape given their proximity to the street (refer to Figure 16).

### Objectives

(a) To retain, repair and reconstruct original fencing.
(b) To ensure fencing makes a positive contribution to the character and quality of the street.
(c) To ensure new fencing is consistent with and does not detract from the heritage item or streetscape.

### Controls

*Heritage Items and Contributory Buildings*

(a) Where original fences remain to listed buildings or within Conservation Areas these are to be retained and enhanced by appropriate maintenance and sympathetic landscaping.
(b) Planting and maintenance of existing plantings is to avoid tree or plant growth that damages existing fences or gates.
(c) Fences and boundary walls employing masonry (principally stone or face brick) construction are not to be rendered, painted or coated with other materials unless the finish is known to be a detail of the original construction.
(d) Front fences should not obscure building facades.
(e) New fence heights and form should be appropriate to the character of the heritage item or to the conservation area.
(f) Where an or iginal fence has been lost, new fencing should try to match the original style.
(g) Sandstone fencing, foundations, etc should be retained and sympathetically incorporated into any new additions or alterations. Restoration /repair of slate /stone must be carried out by specialists.

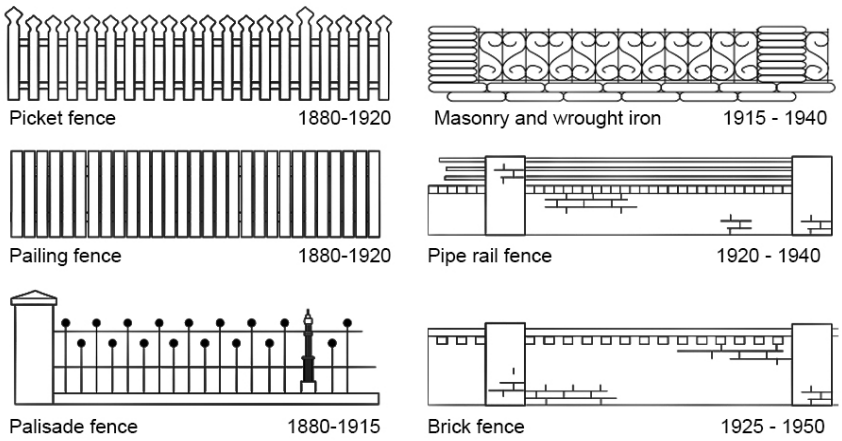



**Figure 16** Examples of period fences

## 9.11 DETAILING

Common details within an area establish neighbourly resemblance and contribute to its significance. The significant features and elements of a heritage item or conservation area are often reflected in details such as windows, doors and decorative woodwork, metal work, stonework or cement render. Although it is rarely necessary to make exact copies of original features, attention to the quality of details is important.

**Objectives**

(a) To encourage the retention and maintenance of original detailing.
(b) To ensure alterations and additions have a level of detail that is appropriate to the architectural character and style of the heritage item or conservation area.
(c) To ensure infill development has regard to the architectural character and style of the conservation area.

**Controls**

*All Development*

(a) Landscape details such as fences, garden walls and planting treatment which contribute to the area should be retained where possible.
(b) New windows should match the existing in size and detail, including the existing sill details, window heads, and stained or patterned glass type. Window should not be enlarged or altered.

*Heritage Items and Contributory Buildings*

(a) Development should be designed to enhance original detailing of buildings.
(b) Original details should be retained and repaired where possible.
(c) Where original details have been removed or replaced with modern materials, consideration should be given to reinstating original features.
(d) Decorative elements should not be introduced on heritage items and contributory buildings unless documentation or physical evidence indicates the elements previously existed.
(e) Alterations and additions should adopt a similar character, which uses external finishes, colours, and textures that compliment the heritage fabric, rather than mimic inappropriate decoration or detailing (refer to Figure 17).

*Infill Development*

(a) Modern details should defer to and be cohesive with traditional details that contribute to the character of the area.

**Figure 17** Sympathetic detailing of additions

## 9.12 LANDSCAPE CONSERVATION AREAS

Waverley retains areas of natural and manmade landscape including the ocean shoreline, parklands, residual coastal valleys, and streetscapes characterised by terraced sandstone retaining walls and mature avenue planting.

**Objective**

(a) Retain all aspects of Landscape Conservation Areas which contribute to the identified heritage significance of the area.

**Controls**

*All Development*

(a) New works in the vicinity of Landscape Conservation Areas and natural settings are to acknowledge the significant character, detail and context of the setting.

(b) Any new works must consider the visual and physical impact upon the setting.

(c) Any new work should avoid the removal of fabric whether plant material, manmade feature or natural formation and any works likely to cause long or short term impact upon the setting e.g. change in ground water flow, reflected light, illumination of natural planting and stability of natural or manmade features.

## 9.13 COMMERCIAL PROPERTIES

Waverley's heritage includes commercial and retail buildings and streetscapes from the later 19th and early 20th Century. They provide distinctive settings of grouped building frontages aligned to the street and characterised by distinctive detailing to ground level shopfronts, upper floor workrooms/ residences and parapet lines.

Shops and other main street structures of the 19th and early 20th Century frequently featured balconies and post supported verandahs extending over the public footpath. Removed in the late 1940's these elements provided key aesthetic aspects of early shopping streets and corner stores.

**Objective**

(a) The original characteristics of traditional neighbourhood retail buildings are retained and enhanced.

**Controls**

*All Development*

(a) Generally, the facade at street alignment shall comprise a canopied shop front at ground level, and first floor facade above the awning.
(b) The height of the building at the facade shall take into consideration existing parapets and other facade details of established surrounding development.
(c) Additional floors should be setback from the street alignment to ensure a two storey elevation to the facade is maintained where appropriate (refer to Figure 18).
(d) Consideration will be given to a variation of the established alignment in the case of a comprehensive development incorporating a pedestrian open space function.
(e) Developments on corner sites should be designed to accentuate the corner, and provide the transition between one streetscape and the next. Existing corner splays shall be retained.
(f) Signage shall be restricted to under awning shop fronts, awning fascias and as suspended under awning signs.
(g) Signage above the awnings shall be limited to appropriate areas allocated for such a purpose in the original facade design (parapets for example).
(h) Flush mounted, or projecting wall signs shall not be permitted above the awning. Council will consideration to the architectural qualities of the building when addressing the suitability of the proposed sign.
(i) Pitched or domed awnings of glass or canvas construction shall not be permitted where they interrupt a run of traditional awnings.

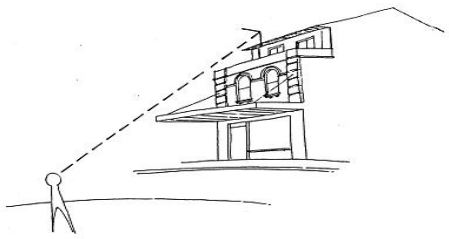


**Figure 18** Additional floors should be setback from the street alignment

*Heritage Items and Contributory Buildings*

(a) Details of earlier shop front features should be retained.

(b) The maintenance and restoration of detailing to commercial/ retail groups is encouraged (refer to Figure 19).

(c) Horizontal proportions should be considered both in new development, and in the redevelopment of old facades. Consistency should be achieved through:

- (i) parapet height;
- (ii) string course both at parapet level, and to the remainder of the facade;
- (iii) window proportions (sill and lintel height);
- (iv) awning height and continuity; and
- (v) top hamper proportions and window kick plate height.

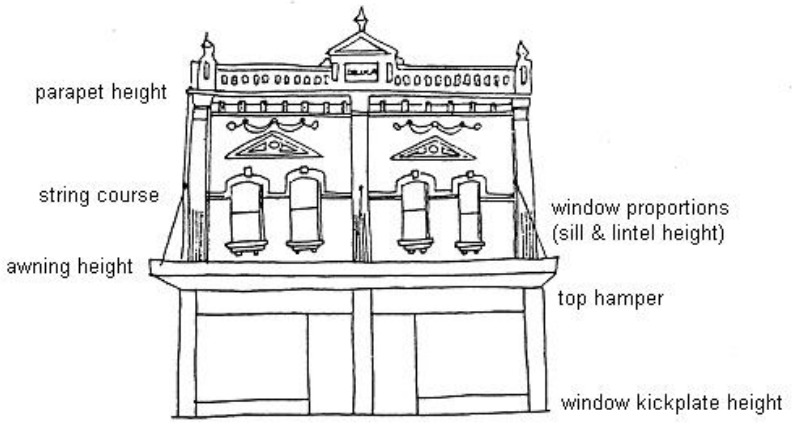



**Figure 19** Overall consistent design of elements

(d) Where shopfront groups are listed as heritage items the following issues are to be considered:

- (i) the extent and quality of conservation and restoration of street frontages;
- (ii) the interface of new and existing works; and
- (iii) the impact of new works on t he existing fabric, streetscape and overall setting.

(e) Where it is proposed to retain the street facade and construct new works to the remainder of the site, assessment will be based upon the above the impact of skyline profiles on the retained façade the setting and the cohesion of the works (refer to Figure 20).

(f) Existing shop fronts should not be bricked up or replaced by roller shutters.

(g) Existing box section awnings, either cantilevered, or suspended by tie rods, should be retained.

(h) New awnings should match the form of adjacent awnings and maintain the same alignment, to ensure unity in streetscape details.

(i) Reinstatement of balconies and verandahs to street frontages is supported.

(j) Alterations to individual shop facades above awning level will not be permitted where that facade is part of a homogeneous or symmetrical group of facades.

(k) A row of shops which are homogeneous or symmetrical in style should adopt a uniform tonal distribution over the facade, without limiting the individual expression of colour on each shop.

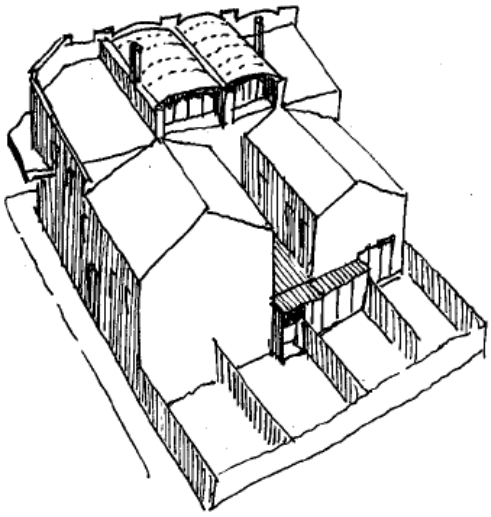


**Figure 20** Rear extensions to commercial properties

*Infill Development*

(a) New development should conform to the established street front building alignment for the extent of its height.

(b) New under awning shop fronts should be s imply detailed with large areas of glazing and narrow mullions/framing.

(c) The height of new development at the street alignment should not exceed the height of existing buildings.

(d) New development should conform to the established street front building alignment for the extent of its height.

(e) New under awning shop fronts should be s imply detailed with large areas of glazing and narrow mullions/framing.

## 9.14 DEMOLITION

Heritage places are deemed to possess an intrinsic value to the local community. It is preferred that a heritage place be maintained and 'conserved' although there are some instances where demolition could be approved. Demolition requires council consent and such an application would require supporting documentation justifying the application which would then be publicly notified and assessed by council officers.

**Objectives**

(a) To ensure both listed items and buildings which contribute to the significance and character of Conservation Areas are conserved.
(b) That replacement development enhances the character of the conservation area.

**Controls**

(a) Unless identified alternately, heritage listing of buildings encompasses the whole building and site including outbuildings and boundary enclosures.
(b) Demolition of a heritage item or contributory building in a conservation area will generally not be supported, unless there are overriding reasons such as extreme structural damage.
(c) Demolition of a non contributory building within or adjacent to a Conservation Area and replacement by an appropriately designed infill building is generally supported provided the proposed infill development is consistent with the objectives and controls outlined in this Part.

## 9.15 ABORIGINAL SITES

A number of Aboriginal cultural heritage sites occur within Waverley and have been included within the WLEP 2012. This Part provides additional controls to ensure the ongoing management of these sites (refer to Figure 21).

**Objectives**

(a) To effectively manage and protect currently identified aboriginal heritage sites.
(b) To protect any undetected aboriginal heritage sites.

**Controls**

(a) Development on land where there are known Aboriginal Archaeological Values as identified in WLEP 2012.
    (i) Development applications on land on which there is an item of aboriginal archaeological significance are required to be supported by an Aboriginal archaeological heritage assessment prepared in accordance with the requirements of the *National Parks and Wildlife Act 1974*.
    (ii) An Aboriginal archaeological assessment is to include appropriate recommendations to inform the long term management of the item of significance.
(b) An applicant must refer to the *National Parks and Wildlife Act 1974* should an object be discovered when undertaking development.

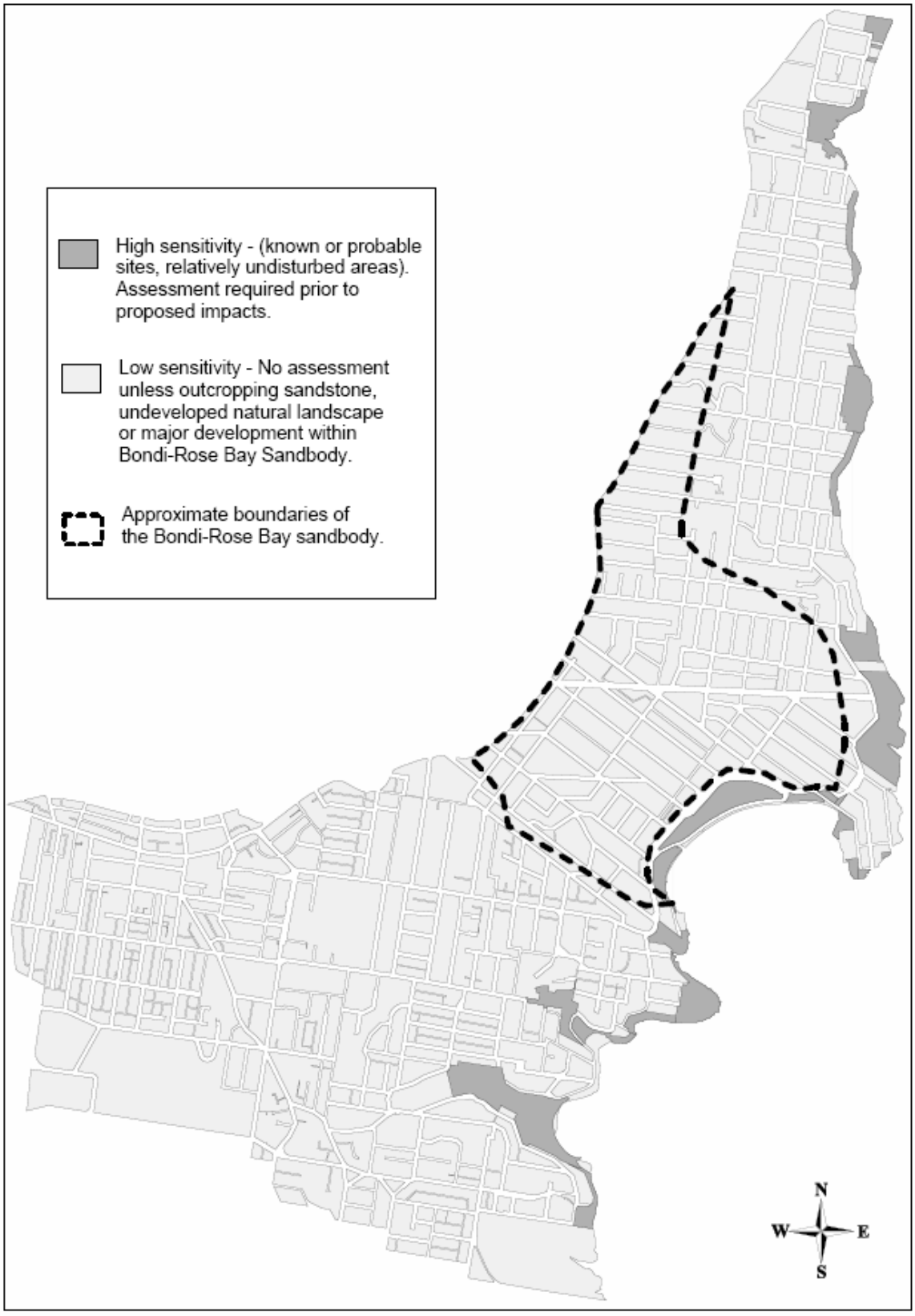



**Figure 21** Areas of Aboriginal Archaeological value

## 9.16 QUEENS PARK CONSERVATION AREA

The Queens Park Conservation Area (QPCA) has been identified as an area that has unique physical qualities and an intrinsic residential character that should be preserved (refer to Figure 22).

When proposing a development in the QPCA area applicants need to address Clause 5.10 – Heritage conservation of Waverley LEP 2012 (LEP). This section contains additional performance criteria and controls that complement the considerations in the LEP. The performance criteria and controls in this section prevail over any similar provisions in Part C1 – Residential Development.

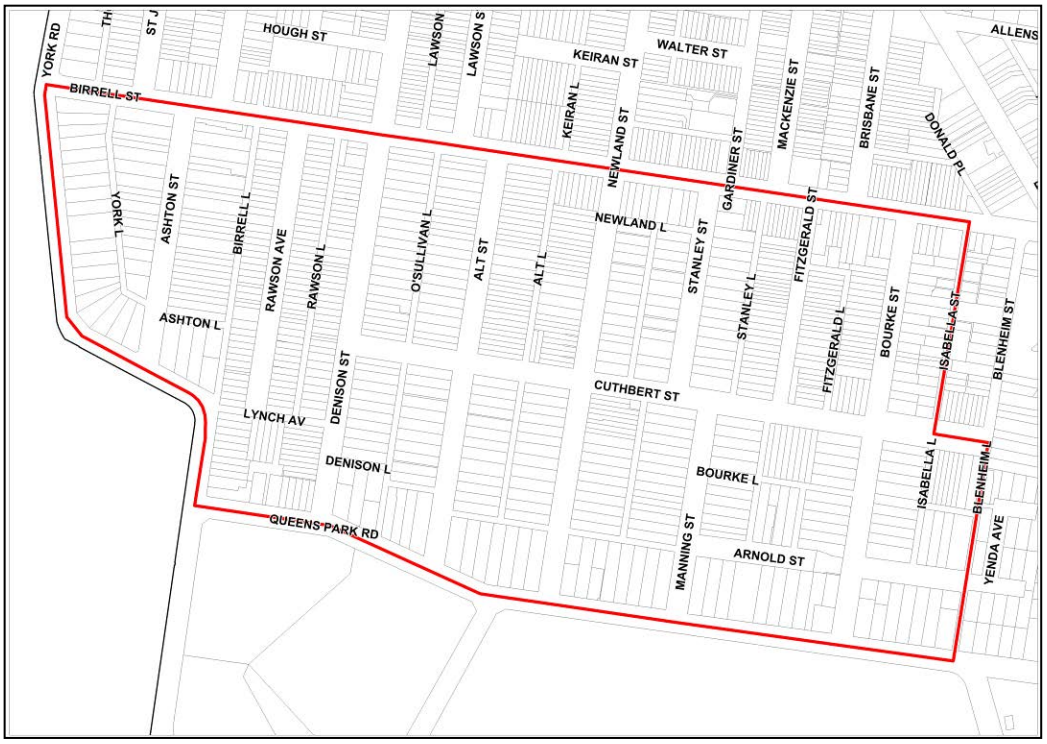



**Figure 22** Queens Park Conservation Area

### Existing Character Elements

The area contains a collection of predominantly nineteenth century and early twentieth century architectural styles and should be read in the context of the history of urban development in Bondi Junction, Mill Hill, Centennial Park and surrounding areas. The village character of this area is created through a collage of features and artefacts that are still reflective of the era in which the area was developed. The distinctive character elements exhibited in the area are outlined below:

### Physical Setting – Topography

The area slopes down from Bondi Junction in the north and east, to Queens Park in the south and Centennial Park in the west. The area, while generally gently sloping, tends to be steeper towards the eastern end. Here, distinctive natural sandstone outcrops form part of the eastern edge of the park and also appear in the split level platform of Cuthbert Street and Arnold Street.

### Subdivision

Streets in the area are arranged in a grid pattern with most blocks containing internal rear service lanes. The subdivision pattern features three categories of lot size, reflecting the type of dwellings in the area. Small sized lots (typically 100m² to 250m²) dominate the north-eastern portion of the study area. These lots typically contain Victorian terraces and other attached dwelling styles (refer to Figure 23).

**Figure 23** Example of Victoria terraces in the area

In the central and southern part of the area, lots tend to be larger (typically 200m² to 400m²) reflecting the semi detached and detached villa dwelling typology (refer to Figure 24).

**Figure 24** Example of semi-detached dwellings in the area

The largest lots (500m² to 800m²) are present on the western and southern edges of the area, fronting onto Queens Park Road and York Road. These lots contain bungalow style dwellings with a large front set back, and a small number of residential flat buildings (refer to Figure 25).

**Figure 25** Example of the detached bungalow dwelling style in the area

### Views and Vistas

North-south street axes provide important view corridors to Queens Park. Formal tree plantings in these streets frame views to the open parkland in the distance. Properties in the upper eastern portion of the area enjoy distant views of parklands and the city to the west.

### Open Space

Queens Park and Centennial Park are expansive areas of open space bordering the character area to the south and west respectively. These parklands are significant landmarks and provide a contrast to the compact residential character of the area.

**Landscaping**

Vegetation is an important element to the character of this area. Formal plantings of mature fig trees are the most distinguishing characteristic of the inner residential streets and provide a uniting theme throughout the study area. The sense of enclosure created by the avenues of mature trees is in contrast to the openness of the parkland bordering the area to the south and west (refer to Figure 26).

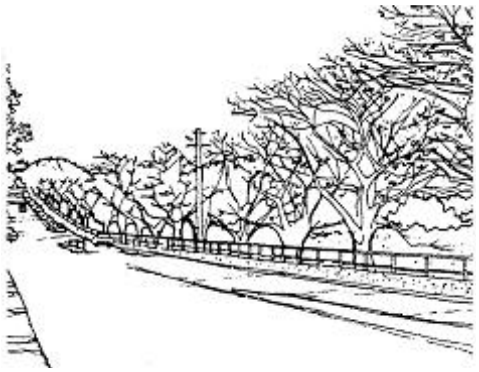


**Figure 26** Open views, established street trees and rock outcrops are a unique character of Queens Park

**Residential Character – Streetscapes**

Three distinct types of streetscape character are found within the area. Streets which carry larger volumes of local through traffic (e.g. Birrell Street, Queens Park Road, York Road), inner residential streets (e.g. Manning Street, Alt Street, Ashton Street) and rear access lanes.

The streets with higher volumes of through traffic have a wider carriageway, relatively narrow verges and smaller scale and less dense street plantings. These features contribute to a wider, more open streetscape (refer to Figure 27).

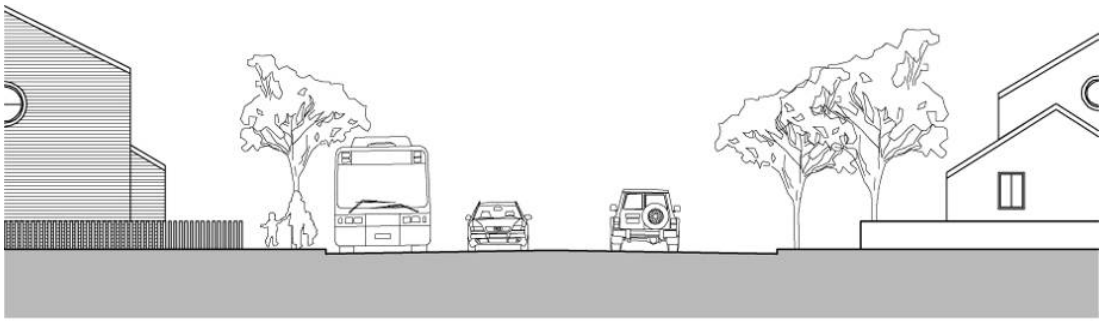


**Figure 27** Typical section of a street with high volumes of through traffic

Inner residential streets are characterized by mature trees forming a canopy. These streets are foliage shaded, with a cooler microclimate, and wider verges (refer to Figure 28).

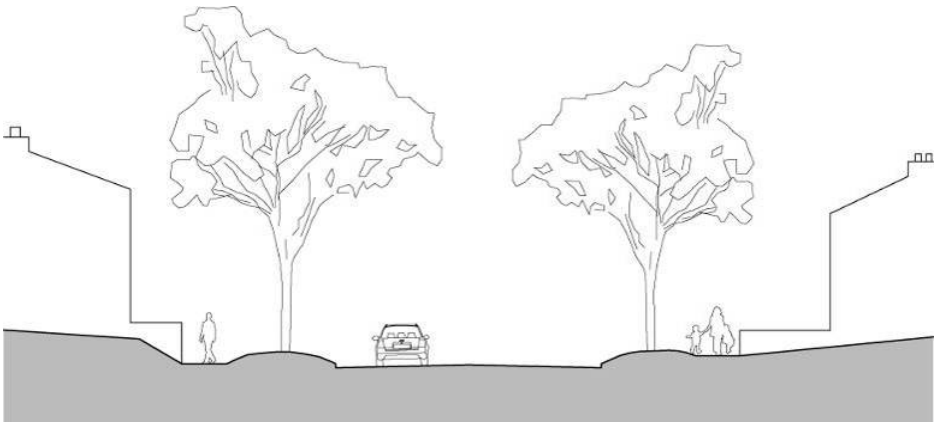


**Figure 28** Typical section of an inner residential street

The narrow, corridor like rear access lanes are dominated by garage doors, high fences, walls, landscape screening, and a variety of building setbacks (refer to Figure 29).

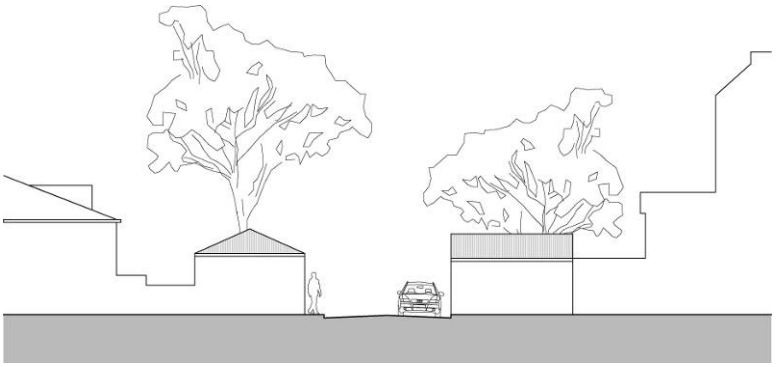


**Figure 29** Typical section of a rear access lane.

A variety of front fence styles and setback conditions typify the range of dwelling styles represented in the area. Shallow front setbacks with cast iron front fences are part of the original character of Victorian terraces. While most remain intact, some have been replaced with higher, rendered brick fences. Detached and semi-detached dwellings typically have deeper front setbacks, with low brick or timber picket front fences being the most common styles (refer to Figure 30)

Low, stepped brick fences are used on steeper sites and where no rear lane access is provided, garage doors and sloped landscaping face the street (refer to Figure 31).

**Architectural Style**

The area is one of the oldest precincts in the Municipality, containing many manmade and natural heritage items, including remnants of walls, stables, buildings, caves and trees. Any development must be sensitive to these items.

A variety of architectural styles reflect the various eras of development in the study area. These include the Victorian Terrace, sandstone Post Regency cottage, Victorian Gothic, Edwardian and Federation semidetached dwellings and l arger Federation, Californian and Modern bungalows. Most dwellings are clustered in groups of similar style. Repetition of building elements such as shingled gables, chimneys, doors and windows, terraces, entrances, fences, etc. establishes a coherent streetscape character based on detail and rhythm.

Recent development has increased the vocabulary of the character of the area. New dwellings and alterations and additions range from minor dormer windows to contemporary architecture.

**Figure 30** Example of low and transparent fences which correspond to the established existing character elements.

**Figure 31** Stepped fences on steeper sites

**Controls**

Any property within the Queens Park Heritage Conservation Area must have regard for the following Desired Future Character Objectives and Performance Criteria. This Part is to be r ead in conjunction with Part C1 – Dwelling House and Dual Occupancy Development. Where there is any inconsistency, this Part will prevail.

## Views and vistas

| Desired Future Character Objectives | Performance Criteria |
|---|---|
| 1.1 To reinforce existing views in the north-south street corridors. | 1.1 Appropriate landscape species and plantings are used to reinforce and f rame existing vistas, particularly in the typical north-south street corridors. |

## Streetscape

| Desired Future Character Objectives | Performance Criteria |
|---|---|
| 2.1 To reinforce the existing street character, through appropriate dwelling facades, building setbacks, fence and landscaping. | 2.1 New development and alterations and additions to existing dwellings should be compatible and consistent with development both in the immediate vicinity and in the overall context of the street. |
| 2.2 To encourage dwelling styles that integrates with the established front, rear and side streetscapes. | 2.2 Where properties have side street or rear lane frontages, alterations and additions reinforce the desirable side or rear streetscape. |
| 2.3 To maintain streetscape character through consistent building setback, particularly where a building is part of a row of identical buildings. | 2.3 Building setbacks, terraces, balconies and rooflines are consistent within the defined street corridor and pr ovide uniformity to a group of terraces, or mirror an attached semi. |

| | |
|---|---|
| 2.4 To promote fencing design which is consistent with the original style of the dwelling and character of the street, while providing for surveillance and promoting a wider ambience for pedestrians. | 2.4(a) Low and transparent front fences in front yards are desirable, especially where setbacks are minimal. This provides surveillance to the street, and a wider ambience for pedestrians, and gives a better scale to the building façade (refer to Figure 32).<br><br>2.4(b) Front fences should be of a low or transparent style and where masonry is used it should be no higher than 600mm, while transparent fences may not exceed 1200mm in height.<br><br>2.4(c) Rear fences should be between 1.8m and 2m in height. |
| 2.5 To progressively improve the existing cluttered character of rear access lanes. | 2.5(a) Where rear lane access to a property exists or is provided, garages and driveways should be located at the rear.<br><br>2.5(b) Where no rear lane access is provided, garages should be either setback behind the line of the dwelling frontage, or incorporated within the building design (for new dwellings). Where the streetscape is dominated by garages located up to the front boundary, garages may be allowed in front of the dwelling. Driveway width shall be minimised to maximise on street parking availability and landscaping used to unify the garage and dwelling with the landform. |

**Figure 32** Low fences are desirable, especially where setbacks are minimal.

## Landscaping

| Desired Future Character Objectives | Performance Criteria |
|---|---|
| 3.1 To conserve the existing inner residential street landscape character and view corridors which have been established by the colonnades and canopy of existing fig trees. | 3.1 Overly dense landscaping or large trees are not desirable in the front of dwellings as they darken the street corridor and undermine the character of the existing street tree plantings (refer to Figure 33). |
| 3.2 To establish soft landscaping at the front of dwellings compatible with its style and setback. | 3.2(a) On steeply sloping or split level sites landscaping is planted so as to allow for a visual connection between the building facades and the street (refer to Figure 34).<br><br>3.2(b) Soft landscaping is used to reinforce important character elements in the front of dwellings, especially detached dwellings and larger sites. |

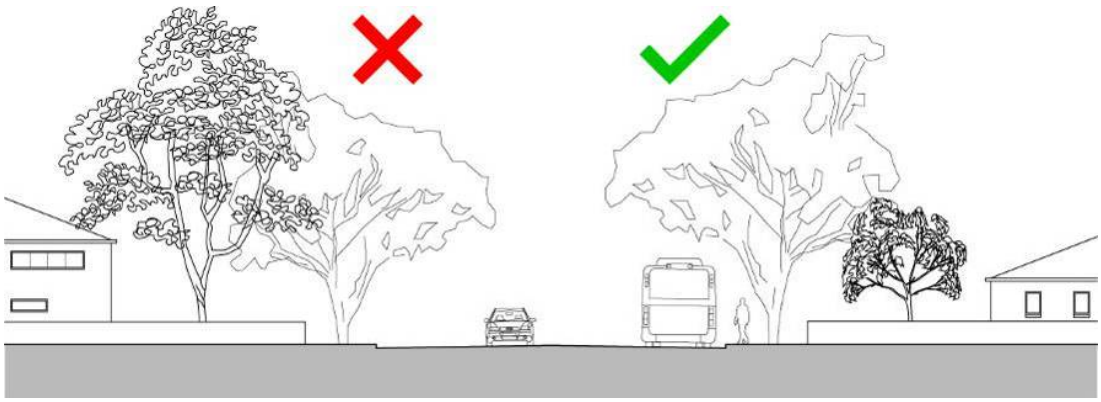


**Figure 33** Where mature street trees exist, avoid high and over dense landscaping in the front of dwellings

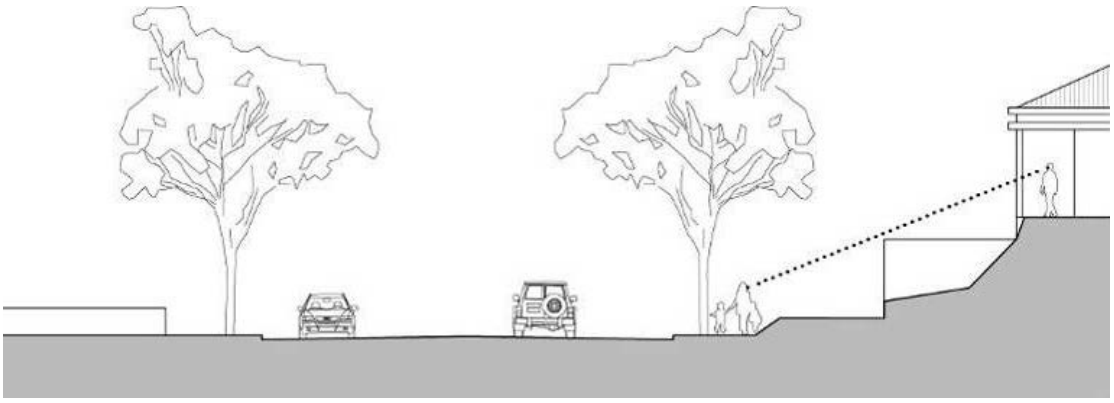


**Figure 34** A visual connection to the street is important to cultivate surveillance and is in keeping with the established character

## Architectural style

| Desired Future Character Objectives | Performance Criteria |
|---|---|
| 4.1 To reinforce the various established architectural styles of dwellings through sensitive alterations and a dditions and appropriate new developments. | 4.1 Where the existing building or structure contributes to a historical or coherent theme of the street, re-use or refurbishment of the existing building is encouraged. |
| 4.2 To emphasise balance and symmetry in alterations and additions to detached, semi detached and attached dwellings. | 4.2(a) Alterations and additions to existing dwellings incorporate appropriate or compatible architectural vocabulary, consistent with the period of the building's original development (refer to Figure 35).<br><br>4.2(b) The incorporation of garages, carports or other areas to accommodate motor vehicle parking within the building envelope of existing dwellings is discouraged where alternate locations on the land are available or where the design will detract from the architectural appearance of the existing dwelling.<br><br>4.2(c) Where a b uilding sits in a row with identical architectural style and similar details, e.g. gable, roofscape, entrance, terrace roof, chimney, windows, door, fences, etc. the bulk and rhythm are maintained.<br><br>4.2(d) New dwelling development is sympathetic to the established architectural style in the vicinity and preserves the area's character.<br><br>4.2(e) Where terrace and semi detached dwellings have a small front setback, their façade detail and building elements, such as doors, windows, balustrades, mouldings or tiles are sensitively integrated with the streetscape character. |
| 4.3 To reinforce the existing pitched roofscape as the desired character of the area and promote consistency in roofing materials. | 4.3 Flat roofs are to be avoided where they detract from the established roof character of the locality. Where they are visible from the street, roofing materials and details shall be compatible with the established streetscape character. |

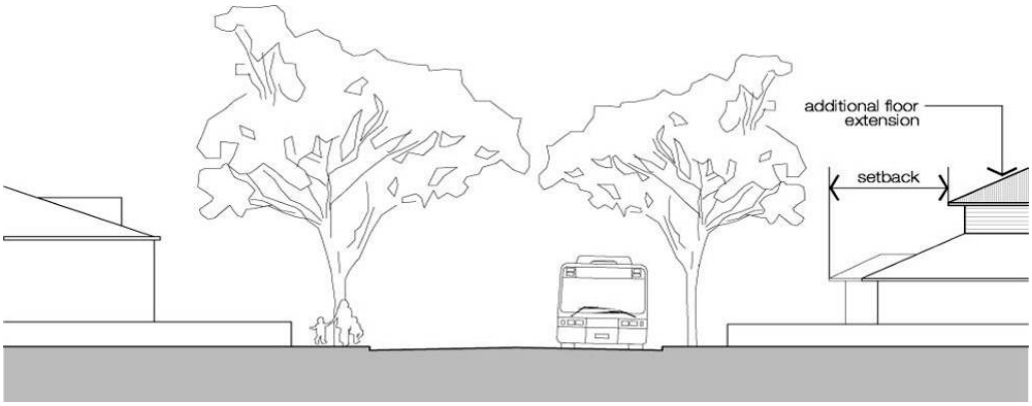



**Figure 35** An example of alterations and additions which are sensitively undertaken and are within the existing envelope. First floor additions are set back in order to minimise the impact upon the street character

# B10 SAFETY

The aim of these controls is to ensure that the way in which the site and the buildings within the site are laid out, enhance security and feelings of safety and clearly delineate between private and public space.

This Part should be read in conjunction with NSW Government's Crime Prevention and the Assessment of Development Applications – Guidelines under Section 79C of the *Environmental Planning and Assessment Act 1979*.

## 10.1 BUILT FORM

The design of a building can reduce opportunities for crime and contribute to the security and safety of residents and visitors.

**Objectives**

(a) To provide for a safe environment for residents, visitors and workers and minimise the opportunities for criminal and anti-social behaviour.

(b) To encourage the design and management of the built environment to reduce the opportunity for crime.

**Controls**

(a) Maximise casual surveillance by orientating buildings towards the street.

(b) Active spaces including windows of habitable rooms within the buildings are to be located to maximise casual surveillance of public spaces such as streets, laneways, parking areas and communal areas such as play areas, swimming pools, gardens and the like.

(c) The design of building details including the provision of fencing, drainpipes and landscaping is to be such that illegitimate access is not facilitated through the creation of footholds, concealment and the like.

(d) Minimise blind corners, recesses and other external areas which have the potential for concealment.

(e) Pathways and entries providing access to, around and within the site should be designed to ensure good visibility for and of the user.

(f) Building entries are to be clearly visible, easily identifiable from the street and unobstructed.

(g) Pedestrian routes to and from car parking spaces including to lift lobbies are to be as direct as possible with clear sightlines.

(h) All entrance and exits, service areas must be clearly identifiable after dark by appropriate lighting.

(i) All lighting on the site should be designed so it doesn't produce areas of glare and shadow or create a nuisance for neighbours.

(j) Details of all lighting for public areas must be submitted with a development application for multi-unit housing i.e. details of location, type and intensity.

(k) Ensure landscaping does not jeopardise security of the site by avoiding planting large trees/shrubs which obscures sightlines.

(l) Fencing which is used to delineate private space is to be used in a way which enhances safety by maximising opportunities for casual surveillance between the dwellings and the street frontage.

(m) Materials should minimise opportunities for vandalism.

(n) Flat or porous finishes should be avoided in areas where graffiti is likely to be a problem. Use non porous material such as glazed ceramics or treated masonry products.

(o) Where large blank walls are unavoidable, consider the use of a "green screen" i.e. planting vegetation in front of the wall or using vegetation to cover the wall itself. Alternatively use vandal resistant paint or artwork to reduce opportunities for graffiti or articulate or modulate the wall.

(p) Ensure individual dwellings are equipped with security devices.

# ANNEXURES

## ANNEXURE B1-1
## EXAMPLES OF BUILDING MATERIAL REUSE

| Material | Reuse/recycling potential |
|---|---|
| Concrete | Reused for filling, levelling or road base |
| Bricks and Pavers | Can be cleaned for reuse or rendered over or crushed for use in landscaping and driveways |
| Roof Tiles | Can be cleaned and reused or crushed for use in landscaping and driveways |
| Untreated Timber | Reused as floorboards, fencing, furniture, mulched or sent to second hand timber suppliers |
| Treated Timber | Reused as formwork, bridging, blocking and propping, or sent to second hand timber suppliers |
| Doors, Windows, Fittings | Sent to second hand suppliers |
| Glass | Reused as glazing or aggregate for concrete production |
| Metals (fittings, appliances and wiring) | Removal for recycling |
| Synthetic Rubber (carpet underlay) | Reprocessed for use in safety devices and speed humps |
| Significant Trees | Relocated either onsite or offsite |
| Overburden | Power screened and used as topsoil |
| Garden Waste | Mulched, composted |
| Carpet | Can be sent to recyclers or reused in landscaping |
| Plasterboard | Removal for recycling, return to supplier |

Note: More information is available at the following link: http://www.epa.nsw.gov.au/warr/index.htm

# ANNEXURE B1-2
# WASTE AND RECYCLING GENERATION RATES

Based on a study by the Southern Waste Board in 2001 the approximate waste and recycling generations rates for a two person dwelling are as followed.

| Generation rates | |
|---|---|
| **Waste stream** | **Waste stream** |
| Garbage | 80 L/unit/week |
| Paper and cardboard recycling | 25 L/unit/week |
| Other Recycling | 15 L/unit/week |

Use these figures to estimate the storage space required inside each residential dwelling for the storage of at least two days worth of waste and recycling.

Councils bin allocation for multi-unit residential buildings, boarding houses, backpackers and serviced apartments is as follows:

- 1 x 240 L bin for garbage per 3 units – collected weekly
- 1 x 240 L bin for paper/cardboard per 8units – collected fortnightly/alternate weeks
- 1 x 240 L bin for other recyclables per 8 units – collected fortnightly/alternate weeks
- 1 x 80L, 140 or 240L bin for garden waste where council considers a suitable amount of garden waste may be generated.
- 1 X 660 L bins may be considered in consultation with council
- Where units of 3 bedrooms or more are built, council may require additional Bins, space or collection services.

Councils bin allocation and services for single dwellings is as follows:

- 1 x 140L Bin for garbage
- 1 x 140L Bin for paper/cardboard recycling
- 1 x 140L Bin for other recyclables
- 1 x 80L, 140L or 240L MGB for garden waste where council considers a suitable amount of garden waste may be generated
- Garbage collected weekly
- Recycling collected on alternate weeks, ie. each collected fortnightly.
- Further information on council's waste services is available in the Waste Avoidance and Resource Recovery Part.

Councils bin allocation and services for commercial buildings is as follows:

- 2 x 240L bin for garbage
- 2 x 240L bin for paper/cardboard recycling
- These rates may be varied on a case by case basis depending on the business type.

| Premises type | Waste generation | Recyclable material generation |
|---|---|---|
| Backpackers hostel | 40L/occupant space/week | 20L/occupant space/week |
| Boarding house, guest house | 60L/occupant space/week | 20L/occupant space/week |
| Food premises: | | |
| Butcher | 80L/100m$^2$ floor area/day | Variable |
| Delicatessen | 80L/100m$^2$ floor area/day | Variable |
| Fish shop | 80L/100m$^2$ floor area/day | Variable |
| Greengrocer | 240L/100m$^2$ floor area/day | 120L/100m$^2$ floor area/day |
| Restaurant/Café | 10L/1.5m$^2$ floor area/day | 2L/1.5m$^2$ floor area/day |
| Supermarket | 240L/100m$^2$ floor area/day | 240L/100m$^2$ floor area/day |
| Takeaway food shop | 80L/100m$^2$ floor area/day | Variable |
| Hairdresser, beauty salon | 60L/100m$^2$ floor area/week | Variable |

| Premises type | Waste generation | Recyclable material generation |
|---|---|---|
| Hotel, licensed club, motel | 5L/bed space/day<br>50L/100m$^2$ bar area/day<br>10L/1.5m$^2$ dining area/day | 1L/bed space/day<br>50L/100m$^2$ bar area/day<br>50L/100m$^2$ dining area/day |
| Offices | 10L/100m$^2$ floor area/day | 10L/100m$^2$ floor area/day |
| Shop less than 100m$^2$ floor area | 50L/100m$^2$ floor area/day | 25L/100m$^2$ floor area/day |
| Shop greater than 100m$^2$ floor area | 50L/100m$^2$ floor area/day | 50L/100m$^2$ floor area/day |
| Showroom | 40L/100m$^2$ floor area/day | 10L/100m$^2$ floor area/day |

# ANNEXURE B1-3
# VEHICLE DIMENSIONS AND TURNING CIRCLES

| Rear Loading Bin Collection Vehicle Dimensions | |
|---|---|
| Length | 10.6m |
| Width | 2.8m |
| Height | 4.3m |
| Wheelbase | 5.25m |
| Turning circle | 16.5m between kerbs |

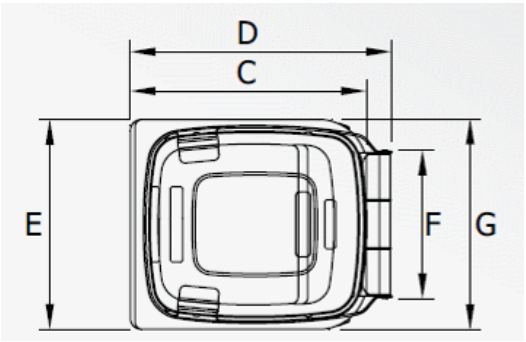
**Access and Turning Provisions**

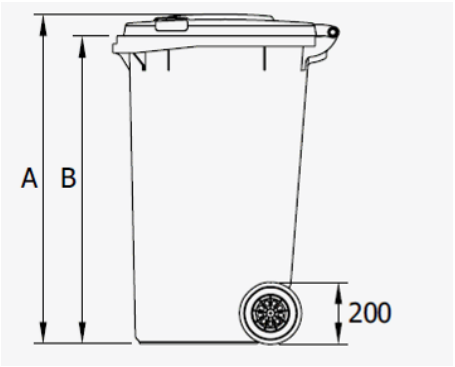
Any turning circle considerations must make allowances for driver steering error and overhangs. The steering error allowance should be at least 0.6 metres (absolute minimum) on both sides of the wheel path and 1m as desirable minimum. Best design practice for access and egress from a development calls for a separate entrance and exit to allow the collection vehicle to travel in a forward direction at all times. Where there is a requirement for the collection vehicles to turn at a cul-de-sac head within a development, the design should incorporate a bowl, 'T' or 'Y' shaped arrangement. The design aspects that must be taken into account include the following:

- The weight, height and length of council collection trucks.
- Placement of waste and recycling bins outside each home, or in a common collection area.
- Parked cars greatly inhibit the turning of collection truck.
- Trucks should only be expected to make a three-point turn to complete a U-turn.
- Allow for collection vehicle overhang and possible interference with bins and road furniture.

## ANNEXURE B1-4
## COUNCIL SUPPLIED BIN DIMENSIONS

| Bin Type | 80L | 140L | 240L | 660L |
|---|---|---|---|---|
| A (HEIGHT) | 840mm | 925 mm | 1060 mm | 1235 mm |
| B | 795mm | 870 mm | 990 mm | - |
| C | 480mm | 550 mm | 660 mm | - |
| D (DEPTH) | 510mm | 615 mm | 730 mm | 1360 mm |
| E (WIDTH) | 450mm | 535 mm | 585 mm | 1235 mm |
| F | 300mm | 395 mm | 400 mm | - |
| G | 450mm | 535 mm | 585 mm | - |




**Source:** Sulo Waste Management

## ANNEXURE B1-5
## COMPOSTING AND WORM FARMING GUIDELINES

A composting facility must be provided in all residential use developments. Such facility may comprise either:

- A dedicated area on the site for the accommodation of a sufficient number of commercially available compost bins or worm farms, or
- A purpose designed compost area incorporated in the landscaped (low waste garden) area of the site.

**Location**
Conveniently accessible from all dwellings and reasonably close to the waste storage area. The facility should be located so as not to cause any nuisance to the occupants of the building on this or neighbouring sites.

**Size**
The capacity of compost bins for single dwellings is discretionary and will depend on the circumstances in the individual case. In new dwelling houses, an area of 1000mm x 1000mm should be provided.

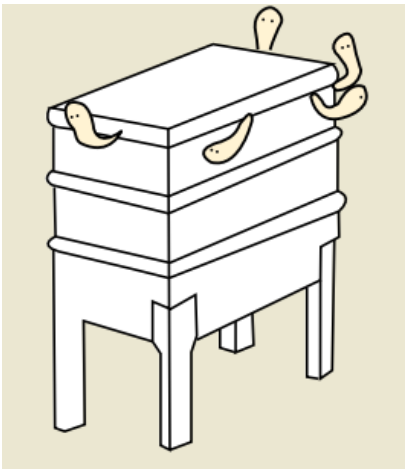
In multi- unit residential buildings, provision should be made for:

- A dedicated area to accommodate sufficient compost bins having a minimum capacity of 30 litres for each dwelling unit; or

- A purpose designed compost structure having a minimum capacity of 1 cubic metre for every 6 dwelling units or part thereof.

**Construction**
A permanent compost facility may be three-sided, two-compartment structure made of solid timber or masonry, with a cover for weather protection.

**Compost Bin**



**Worm Farm**

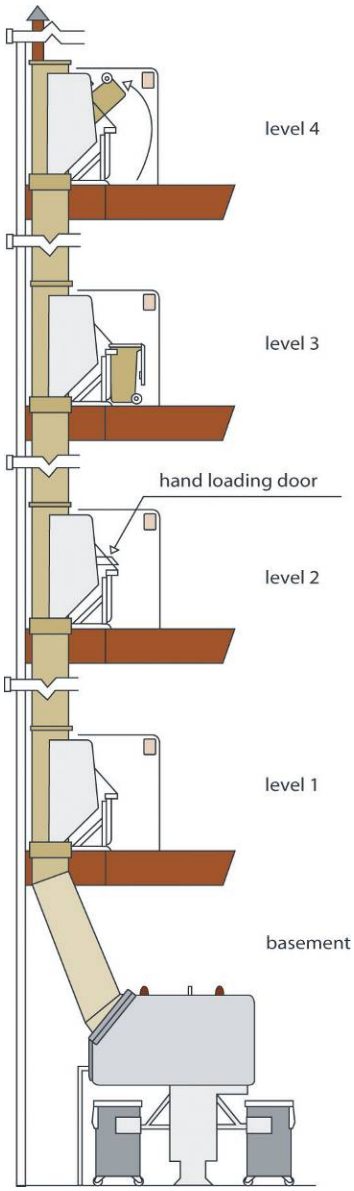
Examples of composting and worm farming containers and structures

**Note:** More information is available at http://compostrevolution.com.au/

## ANNEXURE B1-6
## GARBAGE CHUTES, COMPACTORS AND SERVICE LIFTS GUIDELINES

**Garbage chute design**

- Garbage chutes must be constructed in accordance with the requirements of the *Building Code of Australia (BCA).*
- Garbage chutes must be located and insulated in a manner that reduces noise impacts.
- Chutes, service openings and charging devices must be constructed of material (such as metal) that is smooth, durable, impervious, non-corrosive and fire resistant.
- Chutes, service openings and charging devices must be capable of being easily cleaned.
- Chutes must be cylindrical and should have a diameter of at least 500mm.
- There must not be any bends (or sections of reduced diameter) in the main shaft of the chute.
- Internal overlaps in the chute must follow the direction of waste flow.
- Chutes must deposit rubbish directly into a bin or compactor located within a waste/recycling storage room.
- A cut-off device must be located at or near the base of the chute so that the bottom of the chute can be closed when the bin or compacting device at the bottom of the chute is withdrawn or being replaced.
- The upper end of a chute should extend above the roofline of the building.
- The upper end of a chute should be weather protected in a manner that doesn't impede the upward movement of air out of the chute.




Example of a garbage chute system

**Garbage chute service room design**

- The service opening (for depositing rubbish into the main chute) on each floor of the building must be located in a dedicated service room.
- The charging device for each service opening must be self-closing and must not project into the main chute.
- Branches connecting service openings to the main chute are to be no more than 1m long.
- Each service room must include containers for the storage of recyclable materials. Signage regarding the materials that can be recycled should be displayed near these containers.
- Each service room must be located for convenient access by users and must be well ventilated and well lit.
- The floors, walls and ceilings of service rooms must be finished with smooth, durable materials that are capable of being easily cleaned.
- Service rooms must include signage that clearly describes the types of materials that can be deposited into the garbage chute and the types of materials which should be deposited into recycling bins.

**Management**

- Garbage chutes are not to be used for the disposal of recyclable materials. Signage to this effect should be displayed near service openings.
- Arrangements must be in place for the regular maintenance and cleaning of garbage chutes and any associated service rooms, service openings and charging devices.
- Arrangements must be in place for the regular transferral of recyclable materials (which are stored in service rooms) to the main waste/recycling storage room.

**Service Lifts**

- A service lift (or service elevator) may be appropriate in place of a waste chute in developments where a caretaker is to be employed.
- A service lift is a dedicated elevator system for the transport of waste and recycling containers and other equipment required for the operation of the development.
- A waste service compartment must be provided on each floor of the development to allow residents to store waste and recyclables.
- Resident's place their waste and recyclables in bins provided and these are transported daily by the caretaker to the waste storage room.
- Each service room must be designed with sufficient space for the storage of two day's waste and recycling for all residents on that level.
- Developers will need to check with council whether this option is acceptable.

**Compactors**

- Compactors are used to compress the waste (or recyclables) into smaller collection containers.
- The compaction ratio is typically set at around 2:1. Higher ratios are not used as they may result in heavier bins, causing OH&S problems, mechanical damage and breakage of recyclable materials.
- Best practice compaction systems compact directly into a 240 litre bin or a skip, reducing the requirement of manually loading the compacted waste into bins or skips.
- Compactors are extremely useful for mixed garbage, if used for recyclables extreme care must be taken not to cross contaminate the recycling streams.
- Compactors are less useful for steel containers and should not be used for glass.
- Compactors require regular maintenance. In particular, systems fed from a chute can be prone to blockages or failure of the "electronic eye", which can result in garbage overflowing or backing up the chute. As a result if the 2:1 compaction ratio, the requirement for garbage storage bins is halved. This information was sourced from: Resource NSW (The Department of the Environment and Conservation), "Better Practice Guide for Waste Management in Multi-Unit Dwellings", 2002.

  Source: *Better Practice Guide for Waste Management in Multi-Unit Dwellings, DECC, 2008.*

# ANNEXURE B1-7
# PLACING A WASTE STORAGE CONTAINER IN A PUBLIC PLACE

To place a waste storage container (skip) in a public place, such as on a roadway or footpath, a Building Waste Container Company registered with council must be used.

For the purposes of this Part, a waste storage container means a bulk container, commonly known as a skip, that is used for the temporary storage and transportation (by a registered vehicle) of waste and recycling materials generated by building demolition and construction activities, as well as general household rubbish. Also for the purposes of this Part, a public place means the whole of a public roadway, including any footway and grass verge, but does not include a public park or reserve which is land used for public recreation and like purposes.

A waste container may be placed in a public place, only where there is no suitable space available on the user's premises. council permits this to encourage source separation and recycling of waste materials. council encourages the use of multiple containers or careful scheduling of single container collections to enable separation of re-useable and recyclable materials. Details of the container must be marked on the plans presented to council when applying for a construction certificate.

**Approval Requirements**

Permission to supply and locate a building waste container / skip is granted subject to compliance with the following conditions:

1. The Company holds a current council permit to place a waste storage container in a public place;
2. The Company have lodged an appropriate security deposit with council to cover the costs for repair of any damage caused to public property;
3. Containers will be positioned in conformity with the "Interim Guidelines for the Placement of Building Waste Containers" as prepared by the Roads and Traffic Authority of N.S.W;
4. Containers shall not exceed a width of 2.5m;
5. No containers shall be located in a public reserve without the prior approval of council;
6. Containers shall not be left on a roadway longer than seven (7) days;
7. Containers shall bear the name and telephone number of the supplier;
8. Suppliers agree that the site where containers are being placed will be left in a clean and tidy condition with all spillage removed from the area;
9. Suppliers are to be responsible for any incidence of damage arising from poor placement of containers or spilt debris; and
10. Suppliers are to agree in writing to indemnify council against any public liability claim arising from the placement of containers on council's roadways and such insurance cover to indemnify Waverley council for a minimum amount of $10,000,000.

When placing a waste storage container / skip in a public place the following provisions must be complied with:

1. Public safety and convenience must be preserved;
2. The container will not cause any damage to public property;
3. The container is a size appropriate to the location;
4. The container is clearly identifiable;
5. The container is clearly visible to traffic;
6. The container does not restrict or obstruct traffic visibility;
7. The container does not disturb or obstruct the free flow of pedestrian or vehicular traffic; and
8. The container does not disturb normal stormwater flow.

## ANNEXURE B2 - 1
## RESIDENTIAL PLANTING LIST

All species on this list are generally recommended for use throughout Waverley, however, the selection of appropriate plant species for each site should be recommended by a suitably qualified landscape or bushland regeneration professional. Alternative species may be approved by council.

Two asterisk (**) next to common names indicates that they are an indigenous species and common in Waverley's remnant vegetation communities and are recommended for a range of plantings. One asterisk (*) indicates the species is a local native and is also preferred. Plan the sourcing of plant material in advance of any development to ensure availability of indigenous species.

| TREES | | |
|---|---|---|
| **Genus** | **Species** | **Common Name** |
| *Acmena* | *smithii* | Lilly Pilly |
| *Backhousia* | *citriodora* | Lemon Myrtle |
| *Banksia* | *integrifolia* | Coastal Banksia |
| *Banksia* | *serrata* | Old Man Banksia* |
| *Ceratopletalum* | *apetalum* | Coachwood |
| *Cupaniopsis* | *anacardioides* | Tuckeroo |
| *Elaeocarpus* | *reticulatus* | Blueberry Ash |
| *Eucalyptus* | *botryoides* | Bangalay |
| *Eucalyptus* | *gummifera* | Red Bloodwood |
| *Eucalyptus* | *obstans* | Port Jackson Mallee |
| *Glochidion* | *ferdinandi* | Cheese Tree* |
| *Ficus* | *rubiginosa* | Port Jackson Fig |

| SHRUBS: Medium-Large | | |
|---|---|---|
| **Genus** | **Species** | **Common Name** |
| *Acacia* | *longifolia* | Sydney Golden Wattle ** |
| *Angophora* | *hispida* | Dwarf Apple |
| *Banksia* | *ericifolia* | Heath-leaved Banksia ** |
| *Banksia* | *oblongifolia* | Fern-leaved Banksia |
| *Banksia* | *marginata* | Silver Banksia * |
| *Ceratopetalum* | *gummiferum* | NSW Christmas Bush |
| *Dodonaea* | *triquetra* | Common Hop Bush |
| *Grevillea* | *speciosa* | Red Spider Flower |
| *Hakea* | *dactyloides* | Finger Hakea |
| *Hakea* | *gibbosa* | Needlebush |
| *Hakea* | *teretifolia* | Dagger Hakea * |
| *Kunzea* | *ambigua* | Tick Bush |
| *Lambertia* | *formosa* | Mountain Devil |
| *Lasiopetalum* | *ferrugineum* | Rusty Petals |
| *Leptospermum* | *laevigatum* | Coastal Tea Tree |
| *Leptospermum* | *polygalifolium* | Tantoon, Yellow tea-tree |
| *Leptospermum* | *squarrosum* | Pink tea-tree |
| *Leucopogon* | *ericoides &/or juniperinus* | Pink bearded-heath |
| *Melaleuca* | *armillaris* | Bracelet Honey-myrtle ** |
| *Ozothamnus* | *diosmifolius* | Paper Daisy |
| *Ricinocarpus* | *pinifolius* | Wedding Bush |

| SHRUBS: Small-Medium | | |
|---|---|---|
| **Genus** | **Species** | **Common Name** |
| *Acacia* | *myrtifolia* | Myrtle Wattle |
| *Acacia* | *suaveolens* | Sweet Wattle* |
| *Acacia* | *ulicifolia* | Prickly Moses* |
| *Astroloma* | *pinifolium* | Pine Heath* |
| *Baeckea* | *imbricata* | Baeckea** |
| *Bauera* | *rubioides* | River Dog Rose** |
| *Bossiaea* | *heterophylla* | Variable bossiaea* |
| *Brachyloma* | *daphnoides* | Daphne Heath* |
| *Breynia* | *oblongifolia* | Coffee Bush* |
| *Callistemon* | *citrinus* | Crimson Bottlebrush** |
| *Callistemon* | *linearis* | Narrow-leaved Bottlebrush* |
| *Correa* | *alba* | Coastal Correa |
| *Crowea* | *saligna* | Crowea |
| *Darwinia* | *fascicularis* | Darwinia |
| *Dillwynia* | *retorta* | Heathy Parrot Pea* |
| *Lomatia* | *silaifolia* | Crinkle Bush |
| *Melaleuca* | *nodosa* | Prickly-leaved paperbark** |
| *Melaleuca* | *thymifolia* | Thyme Honey-Myrtle |
| *Monotoca* | *elliptica* | Tree-broomed heath** |
| *Olearia* | *tomentosa* | Toothed Daisy –Bush* |
| *Pimelea* | *linifolia* | Slender Rice flower* |
| *Platysace* | *lanceolata* | Native Parsnip* |
| *Phebalium* | *squamulosum* | Silvery Phebalium |
| *Pultenaea* | *linophylla* | Halo Bush Pea* |
| *Westringia* | *fruticosa* | Coastal Rosemary** |

| GRASSES/SEDGES | | |
|---|---|---|
| **Genus** | **Species** | **Common Name** |
| *Baumea* | *juncea* | Baumea** |
| *Carex* | *pumilla* | Carex** |
| *Danthonia* | *linkii* | Wallaby Grass |
| *Dianella* | *caerulea* | Blue Flax Lily** |
| *Dianella* | *congesta* | Coastal Flax Lily** |
| *Dichelachne* | *crinita* | Long Hair Plume Grass** |
| *Echinopogon* | *caespitosus* | Tufted Hedgehog Grass |
| *Entolasia* | *marginata* | Bordered panic* |
| *Lachnagrostis* | *billardierei* | Common Tussock Grass** |
| *Ficinia* | *nodosa* | Knobby Club Rush** |
| *Imperata* | *cyllindrica* | Blady Grass* |
| *Lachnagrostis* | *billardierei* | Common Tussock Grass** |
| *Lomandra* | *longifolia* | Spiny-headed Mat rush** |
| *Microleana* | *stipoides* | Weeping Grass* |
| *Themeda* | *australis* | Kangaroo Grass |
| *Xanthorrhoea* | *resinosa* | Grass Tree |
| *Zoyzia* | *macranthra* | Prickly Couch* |

| CLIMBERS/GROUNDCOVER | | |
|---|---|---|
| **Genus** | **Species** | **Common Name** |
| *Billardiera* | *scandens* | Hairy Apple Berry* |
| *Carpobrotus* | *glaucescens* | Pig Face** |
| *Centella* | *asiatica* | Gotu Cola* |
| *Dichondra* | *repens* | Kidney Weed* |
| *Gonocarpus* | *teucrioides* | Germander Raspwort |
| *Hardenbergia* | *violacea* | False Sarsaparilla |
| *Hibbertia* | *scandens* | Golden Guinea Flower |
| *Mirbelia* | *rubiifolia* | Mirbelia |
| *Pandorea* | *pandorana* | Wonga Wonga Vine* |
| *Stephania* | *japonica var. discolor* | Snake Vine |
| *Tetragonia* | *tetragonioides* | Warragal Greens** |
| *Viola* | *hederaceae* | Native violet |

| FERNS | | |
|---|---|---|
| **Genus** | **Species** | **Common Name** |
| *Adiantum* | *aethiopicum* | Maidenhair Fern* |
| *Cyathea* | *cooperi* | Australian Tree Fern* |
| *Doodia* | *aspera* | Rasp Fern |
| *Histiopteris* | *incisa* | Bats Wing Fern** |
| *Hypolepis* | *muelleri* | Harsh Ground Fern* |
| *Pellaea* | *falcata* | Sickle fern* |
| *Pteridium* | *esculentum* | Common Bracken* |
| *Sticherus* | *flabellatus* | Umbrella Fern* |

## ANNEXURE B9- 1
## CHARING CROSS CONSERVATION AREA

The following map highlights the study area, as well as an ex tract of the Charing Cross heritage conservation area (refer to Figure 36).

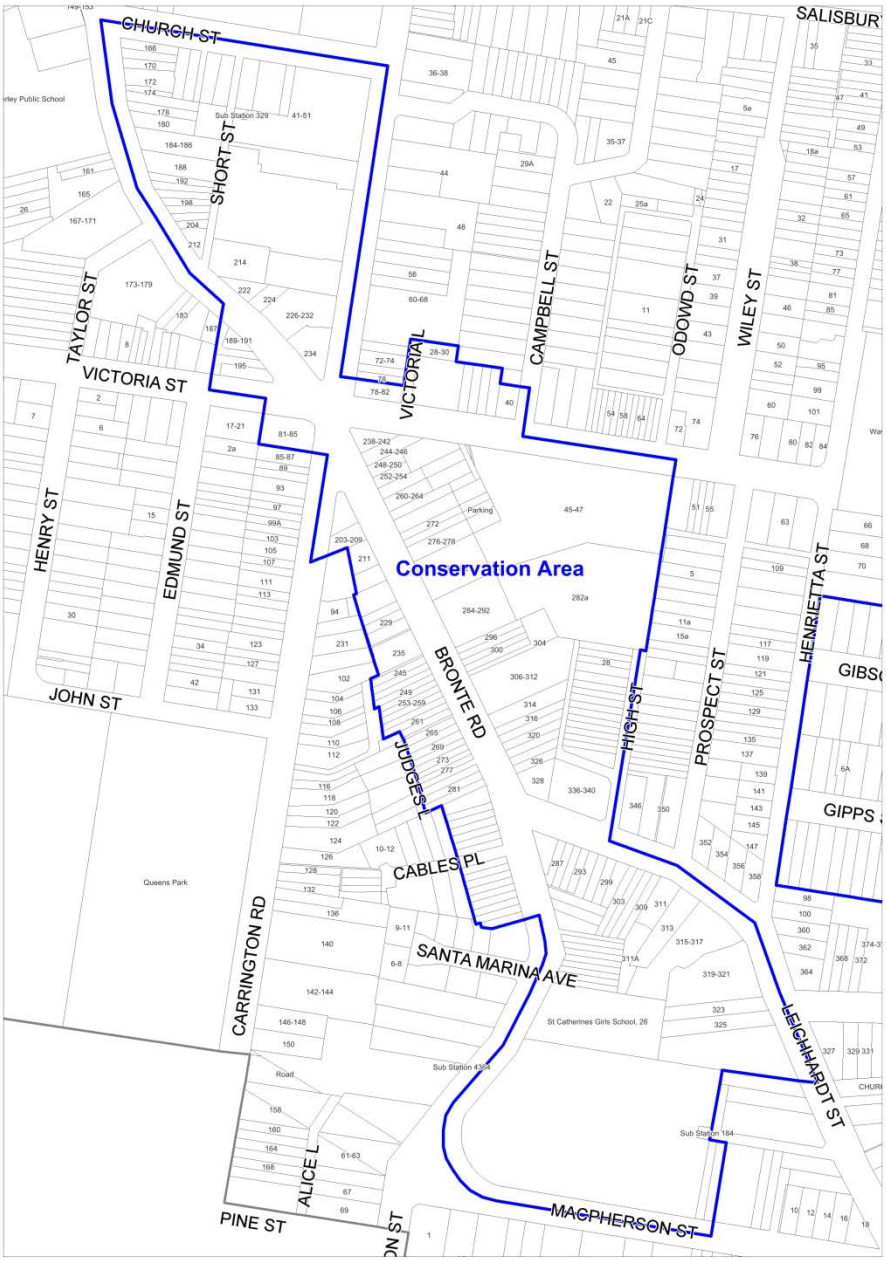



**Figure 36** Charing Cross heritage conservation area

This Annexure provides recommendations for future conservation opportunities as well as appropriate colour schemes for the identified properties or property groups. Furthermore, the Charing Cross Streetscape Study provides a physical description of every building or building group within the study area and general recommendations for the overall improvement of the streetscape. All of the buildings included in the study are located in the Charing Cross heritage conservation area.

**Conservation of Original Fabric**

A large amount of original fabric still exists in the street facades of the conservation area, particularly in the upper wall areas above the awnings. However, much of it has been compromised by later additions or is covered by unsympathetic paint schemes. It is recommended that each period of building be respected for its individual contribution to the development of the area and that future treatment will be consistent with the original character of the building.

Original shopfronts are becoming increasingly rare and remaining examples should be conserved. Partial or missing examples of original fabric can be restored or reconstructed to aid interpretation and appreciation of the streetscape, however, this must be done with care and be based on evidence, thorough research and inspection of the physical evidence on site by an experienced conservation architect.

**Colour Schemes**

Cleaning and repainting the facades of the buildings in the study area would be an improvement to the presentation of the street. Many individual buildings have unsympathetic colour schemes that are inconsistent with the style of the building and with the grouping in which they were built. It is desirable that the colour scheme of each building or group of buildings be informed by the period in which it was built and by physical investigation of the early paint layers on the exterior fabric. A conservation architect or heritage practitioner could carry out paint scrapes to determine the early colours. These colours could then be interpreted in a colour scheme that suits the current owners or tenants. Correct tonal relationships (the use of light and dark colours on various elements) are more important than exact replication of hues.

The accompanying inventory sheets for each building or group of buildings contain recommended colour schemes which are based on the period, style, and current treatment of the buildings. For example, in some cases where original face brickwork has been painted over, the colour scheme provides a recommendation to paint the brickwork brown to simulate face brick. These recommended colour schemes are speculative, relying on knowledge of original colour schemes of other buildings of similar periods, and are not based on physical intervention. It is preferable to undertake paint scrapes to determine the original colour scheme of each building, however, if this is not possible, the recommended colour schemes would result in a more historically relevant appearance of the streetscape.

Colour terms used in the inventory sheets relate to the Australian Standard 2700 - Colour Standards for General Purposes as follows:

| Colour name | AS2700 colour name | AS2700 code |
|---|---|---|
| Biscuit | Raffia | X31 |
| Bridge grey | Light grey | N35 |
| Bronze green | Deep bronze green | G63 |
| Brown (to simulate brickwork) | N/A – approve by sample | |
| Buff | Oatmeal | Y54 |
| Copper beech | Dark brown | X65 |
| Cream | Sandstone | Y53 |
| Crimson | Maroon | R65 |
| Deep Brunswick green | Bottle green | G11 |
| Eau-de-Nil | Palm green | G44 |
| Forest green | Holly | G12 |

| Colour name | AS2700 colour name | AS2700 code |
|---|---|---|
| French grey | Storm grey | N42 |
| Grey green | Banksia | G53 |
| Indian red | Deep indian red | R64 |
| Manilla | Manilla | Y45 |
| Mid-brown | Brown | X54 |
| Mountain blue | Blue jay | T24 |
| Off-white | Off-white | Y35 |
| Olive | Mist green | G54 |
| Pale grey (to simulate render) | N/A – approve by sample | |
| Pink brown | Cinnamon | X45 |
| Sea green | Lichen | G55 |
| Vellum | Surf green | G43 |
| Venetian red | Venetian red | R62 |
| White | N/A | N/A |

**Recommended Finishes**

All render and plaster should have a semi-gloss finish. All timber and metalwork should have a gloss finish.