



# STRATHFIELD DEVELOPMENT CONTROL PLAN NO 25

79 Courallie Avenue, Homebush West

Adopted by Council on September 2005  
In force from May 2006

<b>AMENDMENTS</b>			
<b>Amendment No.</b>	<b>Description</b>	<b>Adopted by Council</b>	<b>Date Effective</b>

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## 1.0 PART 1 – INTRODUCTION

The Strathfield Planning Scheme Ordinance (PSO) as amended by Strathfield Local Environmental Plan No. 103 (LEP 103) rezones some 6.9 hectares of land at 79 Courallie Avenue to Residential B (2b). The rezoning to Residential B was pursued to allow for the development of multiple-unit housing.

This DCP relates specifically to the site at 79 Courallie Avenue and its purpose is to guide the development of the site and promote its orderly and environmentally sustainable development.

The *Development Concept* illustrates a site layout in terms of locations for buildings, areas of open space, access and circulation which conforms with the controls in this DCP. It also provides an indication of how the site might be developed in accordance with the controls in this DCP that relate to building height and massing. However, the *Development Concept* is indicative only and Council will consider other proposals which achieve the underlying objectives of this DCP in an alternative manner.

Building design will be addressed at the DA stage and this DCP includes broad design principles to encourage high quality urban design and environmentally sustainable development. Design guidelines included in the plan have been prepared as advice to developers in an attempt to encourage innovative and imaginative design based on sound planning principles which promote the quality of the landscape and streetscape character of the site.

### 1.1 Name of this Plan

This Plan is called “Strathfield Development Control Plan No. 25 – 79 Courallie Avenue, Homebush West”. In pursuance of Councils resolution of 4 April 2006, this Development Control Plan shall be in force from 3 May 2006.

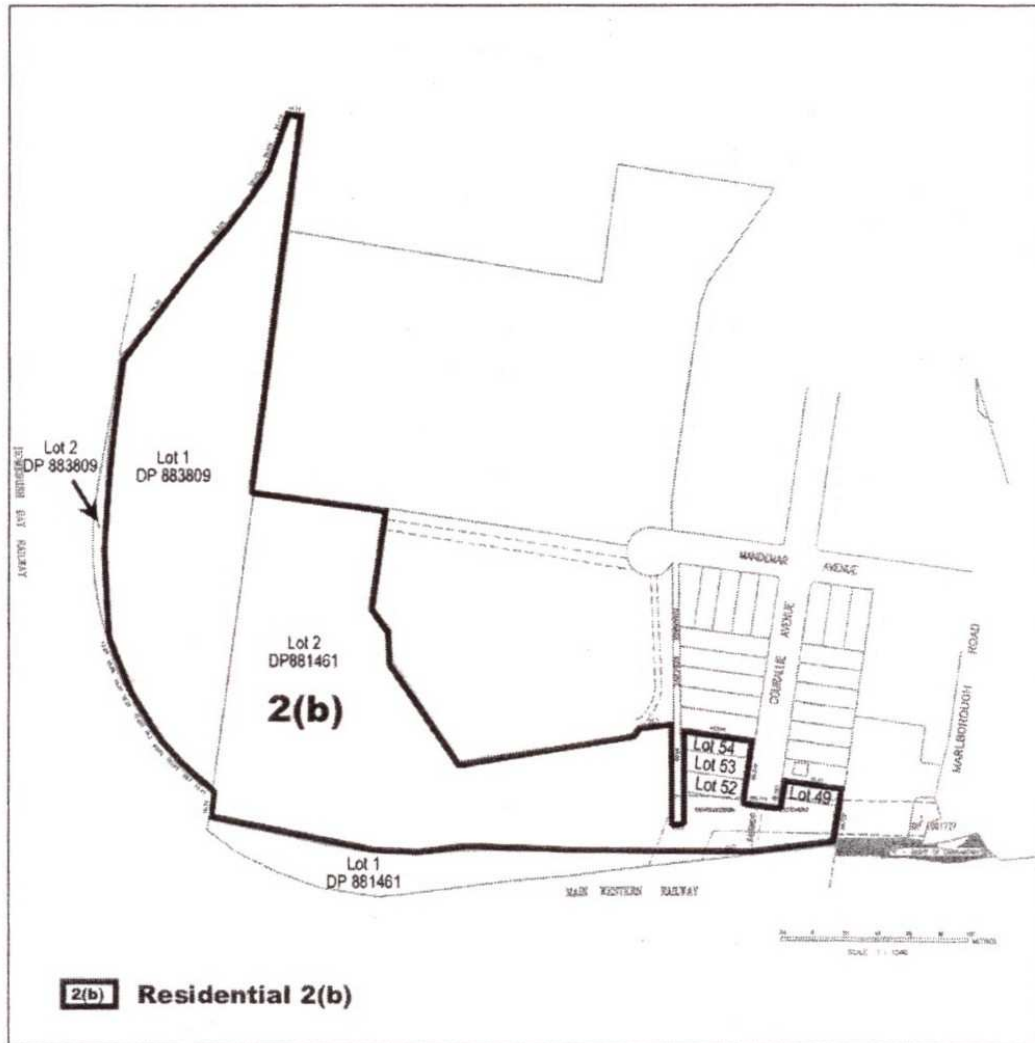
### 1.2 Land to which this DCP applies

This DCP applies to land commonly known as 79 Courallie Avenue shown edged in black on the map marked “Strathfield Local Environmental Plan No. 103” deposited in the office of the Strathfield Municipal Council.

The site is generally known as 79 Courallie Avenue and comprises the following property:

<b>Property</b>	<b>Lot/DP</b>
86 Courallie Avenue	49/11427
79, 81 & 83 Courallie Avenue	52-54/11427
Former Hatrick Chemical site	2/881461
Former State Rail Authority site	1/883809

**Figure 1** identifies the site at 79 Courallie Avenue and shows the land to which this Plan relates.



**Figure 1 - Land to which the 79 Courallie Avenue DCP applies**

### **1.3 Purpose of this DCP**

The primary purpose of this DCP is to provide detailed controls for development on the site to accompany Strathfield PSO and LEP 103.

### **1.4 Objectives of this DCP**

The objectives of this DCP are:

- to facilitate appropriate redevelopment of the site within sound urban planning and environmental parameters;
- to establish broad planning principles, which will ensure the efficient, orderly and ecologically sustainable development of multiple-unit housing on the site;
- to provide a framework for the development of the site in terms of future character, building form, open space, parking, site access and circulation;
- to ensure that the layout of buildings is in accordance with good planning practice and appropriate to the site and its surrounds;

- to promote residential development that is attractive, functional, innovative and of a high quality;
- to promote the residential amenity for future residents of the site and protect and preserve the amenity of residents in the properties that adjoin the site;
- to provide an acceptable acoustic environment for residents through appropriate design, layout and construction measures, which mitigate noise and vibration impacts from the nearby road and rail transport activities;
- to ensure suitable provision is made for pedestrian and cyclist links across the site;
- to ensure that adequate provision is made for landscaped open space for the enjoyment of residents;
- to promote high quality landscaped areas which compliment the overall development and which promote streetscape quality; and
- to identify principles that designers and architects should consider in preparing designs for the site.

## **1.5 Relationship to other DCP's and policies**

Development of the site is governed by Strathfield PSO, as amended by LEP 103. This DCP is site specific and in addition to the controls in this DCP, development applications for multiple unit housing on the site will have regard to the provisions and controls in Council's other relevant DCP's including Part C – Multiple Unit Housing Developments of the Strathfield Consolidated Development Control Plan 2005. If there is any inconsistency between controls in this DCP and Council's other DCP's the controls in this DCP shall prevail as they relate to the site.

### **1.5.1 This DCP should be read in conjunction with**

- i) Strathfield Planning Scheme Ordinance 1969;
- ii) Strathfield Stormwater Management Code;
- iii) Strathfield Fencing Guidelines for Existing Domestic Swimming Pools;
- iv) Strathfield Fencing Guidelines for New Domestic Swimming Pools;
- v) Strathfield Tree Preservation Order & Tree Management Strategy;
- vi) Council's Significant Tree Register & Recommended Tree List;
- vii) Strathfield Landscaping Code;
- viii) Council's Street Tree Plan of Management;
- ix) Building Code of Australia (BCA);
- x) Exempt and Complying Development within the Strathfield Municipality (refer to SPSO);
- xi) Council's Guidelines for Completing Applications;
- xii) Section 94 Contributions Plan

### **1.5.2 Additional Provisions**

- A. This DCP adopts the following provisions of the Strathfield Consolidated Development Control Plan 2005:
  - a) Part C – Multiple – Unit Housing
  - b) Part E – Child Care Centres
  - c) Part H – Waste Management
  - d) Part I – Provision of Off Street Parking Facilities
  - e) Part J – Erection and Display of Advertising Signs and Structures

- f) Part K – Development on Contaminated Land
  - g) Part L–Public Notification Requirements for Development and Complying Development Applications.
- B. For the purposes of clause 1.5.2 above, any reference in those Parts to the Consolidated Plan is taken to be a reference to this DCP.
- C. A provision of this DCP will have no effect to the extent that:
- a) It is the same or substantially the same as a provision in the SPSO or another environmental planning instrument (**EPI**) applying to the same land; or
  - b) It is inconsistent with a provision of the SPSO or another EPI applying to the same land; or its application prevents compliance with a provision of the SPSO or another EPI applying to the same land, and the provision in the SPSO or another EPI will apply.

## 1.6 Definitions

These definitions should be read in conjunction with Council's principle planning instrument, the Strathfield PSO and the Environmental Planning & Assessment Act, 1979.

In this DCP:

**“Balcony”** means a part of a building external to the outer walls directly accessible from within the building for the exclusive usage of the occupant, at a level one storey or more above the ground, unenclosed on the longest outer side except for an approved balustrade.

**“Bedroom”** means any room within a dwelling identified as a bedroom or capable of being used as a bedroom such as a study, library, rumpus room, enclosed balcony, and the like.

**“Building”** means any fixed structure which is either wholly or partly enclosed by walls and which is roofed and includes any part of a building.

**“Development Control Plan”** has the meaning ascribed to it in Section 72 of the EP&A Act 1979.

**“Deep soil landscaping”** means landscaping of natural ground, which is not over any built structure.

**“Landscaped Area”** means the portion of a site which is designed, developed and capable of being maintained and used as naturally planted gardens, and/or unenclosed pedestrian terraces or walkways; excluding garbage collection and handling spaces, vehicular driveways, parking, manoeuvring, loading, unloading, and ramp spaces and other appurtenant works; provided that if the Council deems such a space to be readily accessible and/or suitable in location, treatment and appearance for acceptance as landscaped open space, then areas on top of constructed decks, flat roofs, and/or terraces, swimming pools, stairs, gazebos, and areas under covered ways, may be included within this definition.

**“Multiple-Unit Housing”** means housing comprising more than one dwelling, such as townhouses, other buildings containing 2 or more dwellings or other similar forms of housing.

**“The Site”** means the land identified as 79 Courallie Avenue as depicted on Figure 1.

**“Storey”** means any floor regardless of use but does not include a parking area within a basement of not more than 1200mm above natural ground level at any point, a loft within a dwelling unit or an attic contained within the roof space of the building.

**“Townhouse”** means a dwelling within a 2 storey building containing 2 or more dwellings, where each dwelling has, within its curtilage, pedestrian access and open space at ground level for the exclusive use of the occupants of the dwelling.

## **1.7 Use of these guidelines**

The DCP is divided into three (3) parts:

**Part 1** sets out what the plan is called, where the plan applies, the purpose of the plan, the objectives of the plan and how it relates to other plans.

**Part 2** sets out the planning principles for the site, which form the basis for the *Development Concept*.

**Part 3** provides the *Development Concept* and the development controls which apply to the site.

Where the applicant proposes an alternative way of achieving the objectives of the DCP, the Statement of Environmental Effects submitted with the DA must clearly demonstrate how this is to be achieved in a manner at least as satisfactory as that of a fully complying scheme.

## **1.8 Development Applications**

Council’s normal requirements for development applications, including details to be submitted, number and type of plans required and a schedule of fees are detailed on the development application form available from the Technical Services Department.

However, Council may request additional information in support of an application before it makes a decision. It is in both the applicant’s and the Council’s interests that fully documented applications are submitted. Apart from considering the guidelines and *Development Concept* in this DCP applicants are strongly advised to consult with the Council’s Technical Services Department prior to preparing development applications, to discuss site specific issues and for guidance on the type of supporting information and documents required.

## **1.9 Legislative Changes**

New Clauses 1.5.1 and 1.5.2 have been added in order to comply with Part 3 of the Environmental Planning and Assessment Act 1979, introduced under Schedule 2 of the Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005 No. 43.



## **2.0 PART 2 - PLANNING PRINCIPLES**

### **2.1 Density, bulk and scale**

- To ensure that maximising the development potential of the site is balanced with environmental and aesthetic considerations and that the scale of development is appropriate to surrounding uses including the integration with the industrial zone and rail corridor uses.
- To promote the medium density development of the site in the form of multiple-unit housing with an amount of retail and community uses to support the residential uses.
- To ensure that building envelopes (in terms of height, scale and set back) respect the desired character, topography and built form of the site and locality.
- To relate building forms to public and private open spaces across the site.
- To allow adequate daylight, sunlight and ventilation to living areas and private open spaces of new development.
- To provide a high level of amenity for future occupants.
- To preserve significant trees and landscape elements on the site.
- To integrate the site with the adjoining existing and future residential community.

### **2.2 Site access and circulation**

- To maintain the principle point of vehicular access to the site from Marlborough Road.
- To provide a quantum of residential development and access and circulation arrangements that have an acceptable impact on the regional road network and residential development in the locality.
- To provide easy, convenient and safe access to all buildings.
- To promote pedestrian access within the site.
- To provide suitable pedestrian/cycle paths across the site and appropriate links to surrounding roads and footpaths.

### **2.3 Parking**

- To provide sufficient on-site car parking to satisfy the parking demand likely to be generated by development of the site.
- To ensure that parking facilities are to be designed and located in accordance with relevant RTA guidelines and Australian Standards.
- To enable the efficient use of car spaces and accessways, including safe manoeuvrability for vehicles between the parking areas and the street.
- To encourage the integrated design of access and parking facilities to minimise visual and environmental impacts and contribute to the character of the site.

### **2.4 Environmental Amenity**

- To ensure that there is no net increase in adverse environmental impacts as a result of any redevelopment of the site.

- To protect the acoustic and visual privacy and amenity of surrounding residents.
- To provide adequate acoustic and visual privacy and amenity for future residents of the site, with particular regard to the adjoining industrial uses and railway lands.
- To provide reasonable solar access, privacy and security of adjoining properties and users.
- To identify that:
  - (i) Lot 1, DP 883809 on the site is suitable for redevelopment for the purposes of residential land use with minimal access to soil including units; and
  - (ii) Lot 2, DP 881461 and Lots 49, 52, 53 and 54 in DP 11427 on the site are suitable for redevelopment for the purposes of residential land uses with access to soil, including townhouses or villas.

## **2.5 Open space and landscape**

- To significantly improve the landscape quality of the site.
- To provide adequate open space for the recreational needs of residents.
- To ensure open landscaped space relates well to the living areas of dwellings.
- To provide planted avenues and open spaces which contribute to the public domain.
- To provide planting along site boundaries to maintain a screen to the adjoining railway and industrial uses and to provide the sense of enclosure afforded the site.
- To utilise planting as a means of introducing an appropriate scale to new development.
- To encourage use of open space areas by ensuring that all new landscape areas are well located and of a consistently high quality and appropriate character.
- To retain existing vegetation where appropriate.
- To ensure adequate land is provided around the building for landscaping, ventilation and sunlight penetration to buildings.

## **2.6 Energy Efficiency and Water Conservation**

- To locate buildings and open space areas so that existing and proposed dwellings have reasonable access to sunlight, shade and have optimal outlook and aspect; and
- To achieve a high level of energy efficient urban housing, using passive solar design, that provides residents with all year round comfort and reduces energy consumption; and
- To conserve water via the use of rainwater tanks and water-saving appliances; and
- To encourage the use of devices which promote energy efficiency and water conservation and which respect the residential qualities of the areas in which they are located; and

- To promote the reduction of greenhouse gas emissions through ensuring a thermally efficient building envelope and the use of greenhouse gas friendly hot water systems; and
- To encourage building materials and insulation which assist in thermal performance and maintain internal comfort levels; and
- To encourage recycled building materials where appropriate.

## **2.7 Safety and security**

- To ensure a safe environment by promoting crime prevention through environmental design.
- To ensure personal and property safety and surveillance for residents and visitors and enhance perceptions of community safety.

## **2.8 Site remediation**

- To ensure that the site is suitable for residential development.
- To accurately identify and remediate any contamination of the site.

## **2.9 Building design and materials**

- To provide design solutions which will assist in achieving residential development which is attractive, functional and convenient for residents.
- To ensure a choice of housing is available on the site.
- To encourage the use of materials in new developments that are compatible with the character of surrounding developments and the streetscape in terms of type, form and colour.
- To ensure that housing is accessible to older people and people with mobility disabilities.
- To encourage building materials and insulation which assist in thermal performance and maintain internal comfort levels.
- To encourage recycled building materials where appropriate.
- To reduce the demand on building resources by promoting the adaptive reuse of buildings.

## **2.10 Site facilities**

- To preserve and protect the amenity and property of residents, property owners and the community.
- To ensure that site facilities and essential services and amenities are well integrated into residential developments, and are unobtrusive; and
- To ensure that site facilities are adequate, convenient and easy to maintain.
- To ensure that garbage collection and recycling facilities are adequate for the garbage and recycling waste generated by the site. Refer to Part H of Strathfield Consolidated Development Control Plan 2005 – Waste Management.

## **2.11 Site drainage and water management**

- To protect the physical environment and receiving waters of the catchment.
- To encourage the installation of water saving appliances in new developments.

## 3.0 PART 3 - DEVELOPMENT CONCEPT AND CONTROLS

### 3.1 Development Concept

The *Development Concept* provides an indication of how the site could be developed in accordance with the controls set out in this section of the DCP.

The *Development Concept* illustrates how the site could be developed so that the location of land uses, access and circulation roads, public open spaces, building envelopes and height comply with the controls in this DCP. A copy of the Development Concept is included at **Figure 2**.

All future development occurring on the site shall address the ongoing management controls and requirements which have been established for the adjoining land at 22 Mandemar Avenue (the Ford Tip Site) in regard to noise and odour emanating from the associated treatment plants. The applicant/s is required to contact Council's Technical Services Department in this regard.

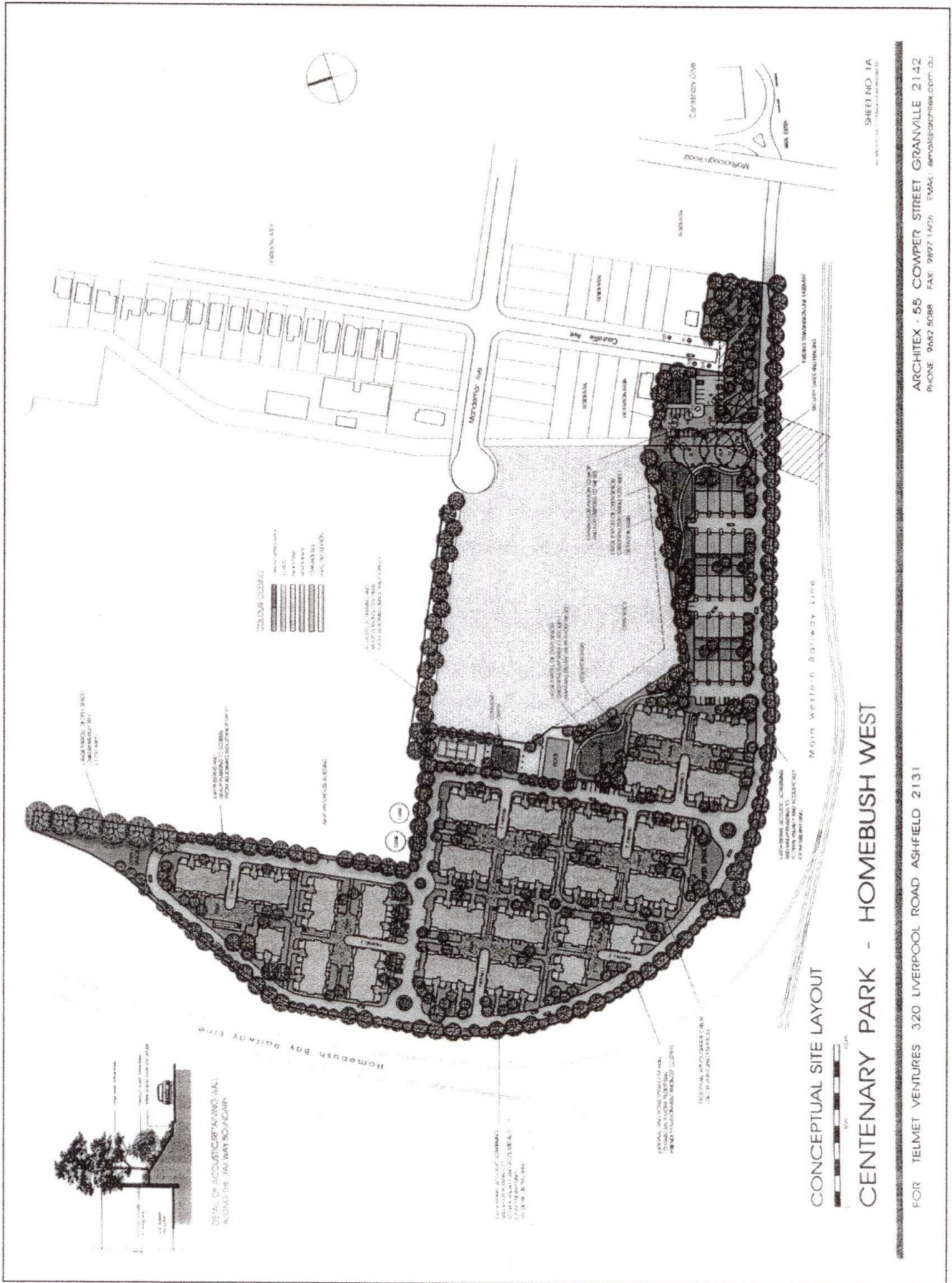


Figure 2 – Development Concept

## **3.2 Development Controls**

The following controls will be used to assess development application in relation to the site.

### **3.2.1 Development Concept**

- (a) Proposals which depart significantly from the *Development Concept* should be supported by arguments as to how they achieve the principles for the development of the site detailed elsewhere in this DCP.

### **3.2.2 Building height**

- (a) Maximum building heights are expressed in storeys and the maximum building height for the site will be 4 storeys.

### **3.2.3 Site layout and road pattern**

- (a) Building envelopes and setbacks from the sites main boundaries will be largely as depicted in the *Development Concept*.
- (b) The development will adopt a perimeter road with a ring road system.
- (b) Sydney Water Corporation requires that all buildings and structures be at least one (1) metre from any easement or public sewer main. Exceptions may be considered on their merit. In all cases, development must comply with the Corporation's requirements for building over or adjacent to sewer mains.

### **3.2.4 Access and circulation**

- (a) Vehicular access to the site will be primarily from Marlborough Road.
- (b) Accessways and driveways shall be designed to provide sufficient manoeuvring areas to enable vehicles to enter and leave the site in a forward direction. Dimensions of access driveways and manoeuvring areas are to be in accordance with the provisions of "Policy and Guidelines for Traffic Generating Developments" published by the RTA.
- (c) Well lit and appropriately located pathways will be included within the site to allow for and encourage walking within the site. A pedestrian path system shall be provided throughout the development. Where adjacent to the road system, paths shall be a minimum of 1.5m in width.

### **3.2.5 Parking**

- (a) Parking for residents will be provided at the following minimum parking rates:
  - 1 bedroom units – 1 space per dwelling
  - 2 bedroom units – 1.5 spaces per dwelling
  - 3 bedroom units – 2 spaces per dwelling
  - 3 bedroom townhouses – 2 spaces per dwellingThe number of spaces provided in any development may be reduced where it can be demonstrated that:
  - the impacts on existing parking conditions will not be unreasonable, including the availability of on-street parking for visitors;

- the projected requirements of people occupying the development, taking into account, age, car ownership details, life cycle and other relevant factors, confirm the likely needs will be less than the minimum required by the schedule;
  - reduced parking requirements of comparable developments have not generated significant impacts; and
  - the site layout and location maximises opportunity for use of public transport.
- (b) Parking for visitors will generally be provided at a rate of 1 space per 5 dwellings.
  - (c) Residents parking is to be located such that it has a minimal impact on visual amenity and where possible will be located out of site. Parking allocation for the residential apartment buildings will generally be provided below ground and parking for town houses will be in the form of garages attached to the dwelling.
  - (d) On site parking for visitors will be permitted and is to be provided in close proximity to the residential buildings to which it relates.
  - (e) Parking for shop uses will be provided at a rate of 1 space per 25m<sup>2</sup> net leasable floor area.
  - (f) The minimum size for spaces is 5.5m x 2.5m (open parking). Minimum internal dimensions of a single lock up garage is to be 3m x 5.5m unobstructed, with any car access opening being at least 2.4m wide.
  - (g) For residential development of 10 or more dwellings a designated car washing bay shall be provided on the site.
  - (h) Car parking spaces may be “stacked” but **only** to the extent of one car space behind one other for each dwelling. Both spaces must belong to the same dwelling.
  - (i) Suitable facilities for accommodating bicycle parking in all residential flat buildings must be provided.

### **3.2.6 Environmental amenity**

- (a) The design of development will ensure that noise impacts of the railway and industrial land that adjoins the site are minimised through the incorporation of appropriate measures, such as:
  - acoustic boundary treatment (sound walls);
  - heavy screen planting along the site’s sensitive boundaries; and
  - the selection of appropriate insulation and building materials.
 All buildings shall be designed to comply with Australian Standard AS 2107.
- (b) Building design shall ensure that:
  - active communal recreation areas, parking areas, accessways and service equipment areas are separated from bedrooms and minimise the entry of high levels of external noise to dwellings;
  - bedrooms of one dwelling do not adjoin living rooms or garages of adjacent dwellings; and
  - dwellings are designed to locate habitable rooms and private open space away from noise sources and are protected by appropriate noise-shielding devices. Also refer to the State Rail Document *Rail Related Noise and Vibration*.
- (c) The privacy aspects of all development shall be considered in the context of the development itself and its relationship to surrounding development. The siting and layout of buildings shall ensure that windows and doors are to be designed/located to reduce direct overlooking into an adjoining



dwelling. Where the windows are less than 9 metres apart from an adjoining dwelling, the windows in the proposed dwelling:

- are to be offset from the edge of the windows in the adjoining dwelling by a distance of at least 0.5 metres; or
  - have a sill height of at least 1.7 metres above the floor; or
  - have fixed obscure glazing in any part of the window below 1.7 metres above the floor.
- (d) Suitable screening shall be provided within developments when direct overlooking is likely from proposed dwellings to the private open space areas of adjacent existing dwellings, or to balcony or private open space areas of dwellings within the same development.

### **3.2.7 Open Space and landscaping**

- (a) Landscaped area at ground level is to be provided for a minimum of 50% of the site.
- (b) At least 70% of the landscaped area requirement must remain as unpaved or soft landscaping.
- (c) At least 35% of the required landscape area is to be provided as deep soil planting as defined in this DCP. Buildings and basement car parks shall be planned to allow for planting of large trees.
- (d) Large areas of open space shall be provided where safe and durable children's play equipment can be located.
- (e) The landscaping design is to consider the enhancement of locally native plant species on the site.
- (f) A Landscape Concept Plan will be submitted with any DA indicating the location and treatment of landscaped areas and private open space areas and the location, size and species of existing trees and plantings. The landscape concept plan should be in accordance with the landscape and open space principles set out in this DCP. Refer to Council's Landscape Code for details required in the landscape plan.
- (g) The design should consider the retention of all existing trees on the site and any potential impacts on trees and shrubs on adjoining properties.
- (h) Trees and shrubs with invasive root systems must not be planted over service infrastructure.
- (i) Any landscaped area having a width and depth in plan of less than 2m shall not be counted as part of the required unpaved/soft landscaping area unless densely planted for screening purposes.

### **3.2.8 Private Open Space**

- (a) Private open space will be provided adjacent and directly accessible from a living area of each dwelling at the following rates:
  - minimum total balcony area of 12m<sup>2</sup> for 2 bedroom units above the ground floor;
  - minimum total balcony area of 15m<sup>2</sup> for 3 or more bedroom units above the ground floor;
  - minimum courtyard area of 25m<sup>2</sup> for residential apartment units located on the ground floor; and
  - minimum courtyard area of 30m<sup>2</sup> for each townhouse.
- (b) Balconies to apartment units will have a minimum dimension of 1.5 metres and courtyards to apartments and townhouses will have a minimum dimension of 4 metres.



### 3.2.9 Ecologically Sustainable Development

- (a) An Energy Performance Statement is required to be submitted which details and justifies the energy performance of the proposal, covering thermal efficiency, greenhouse gas friendly hot water systems, provision of suitable outdoor space for clothes drying, the inclusion or otherwise of clothes dryers with a minimum SEDA Greenhouse Appliance Score of 3.5. The statement must also address any overshadowing of adjoining properties, energy efficiency influences on the landscape design and general efficient influences on the design in general.

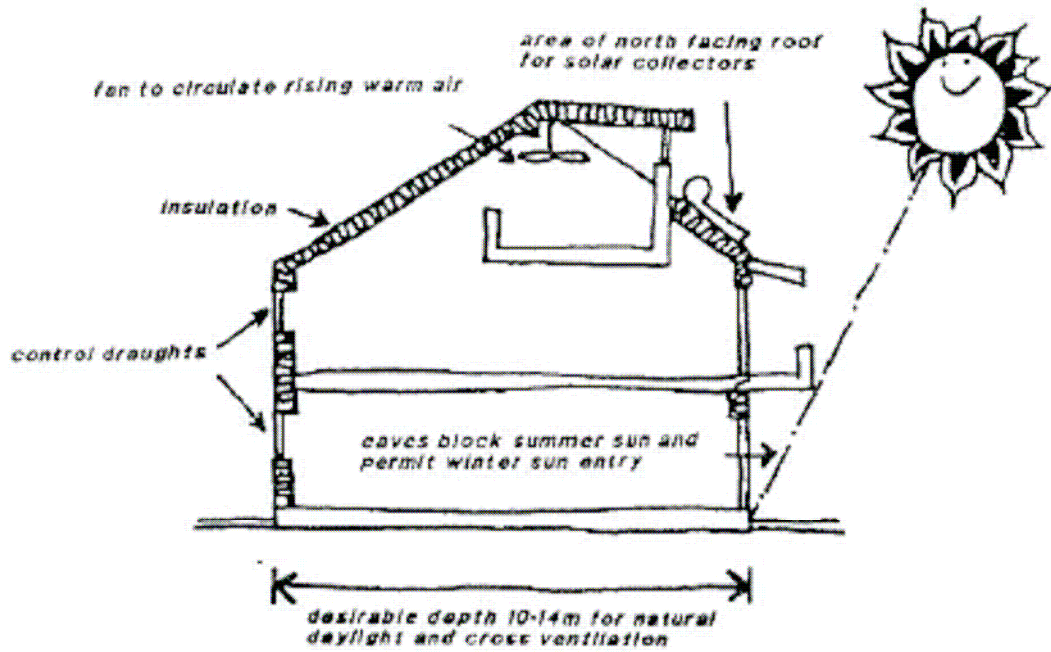
The individual elements to be covered in the Energy Performance Statement are detailed below. Development proposals will generally be required to achieve the performance standards identified below by following the recommended guidelines, however, departures may be acceptable where it can be demonstrated that alternative methods or technologies can provide an equivalent or better energy performance.

#### Energy Efficiency

- All proposals for multiple unit housing developments must achieve, for each unit proposed, a minimum 3.5 stars NatHERS (National House Energy Rating System), or equivalent, rating as assessed by a NatHERS Assessor accredited by the House Energy Rating Management Body (HMB). On gazettal of the new Energy Efficiency provisions of the Building Code of Australia (BCA) performance shall comply with the BCA provisions.
- A NatHERS assessment must be submitted for each unit plan which has a unique solar orientation and position within the development. The Energy Performance Statement must justify why rated units have been selected as 'representative' of the thermal conditions of the non-rated units.

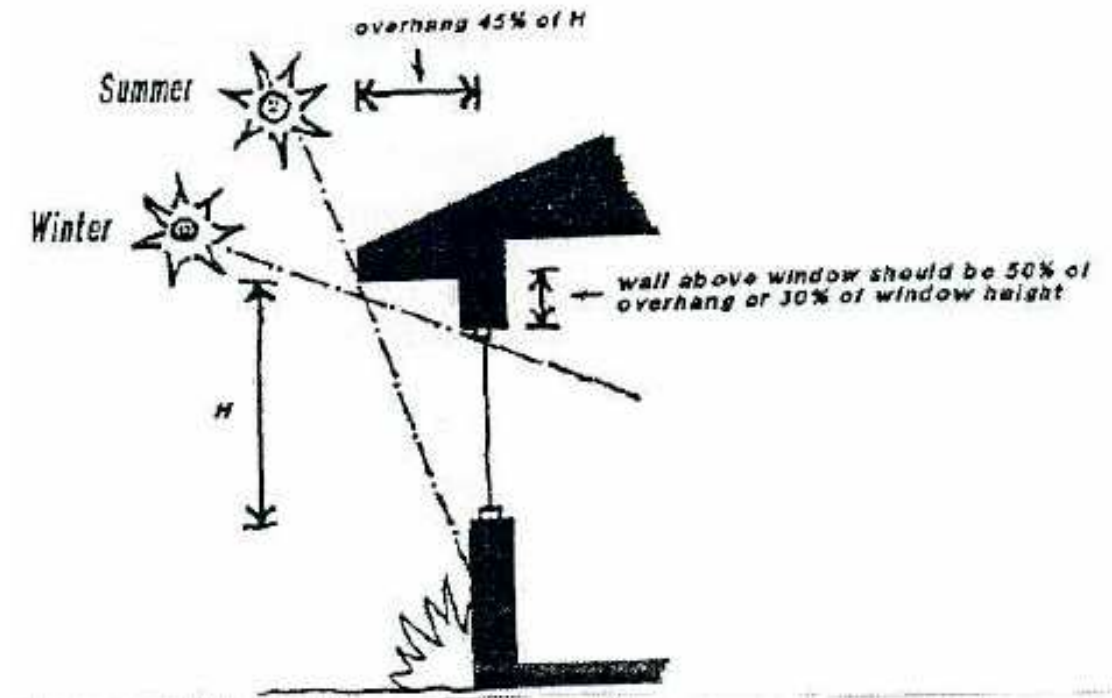
#### Solar Access

- To the extent that existing developments and site orientation allow, site layout and design shall ensure:
  - reasonable solar access to the site;
  - the protection of solar access to neighbouring properties;
  - buildings to maximise the benefits of solar access in terms of reducing winter heat loss and the impact of summer afternoon sun (refer to **Figures 3 and 4**);
  - adequate natural light to the living areas of dwellings for normal domestic duties; and
  - orientation to the north, with priority in dwelling layout being given to living areas and bedrooms (refer to **Figure 5**).



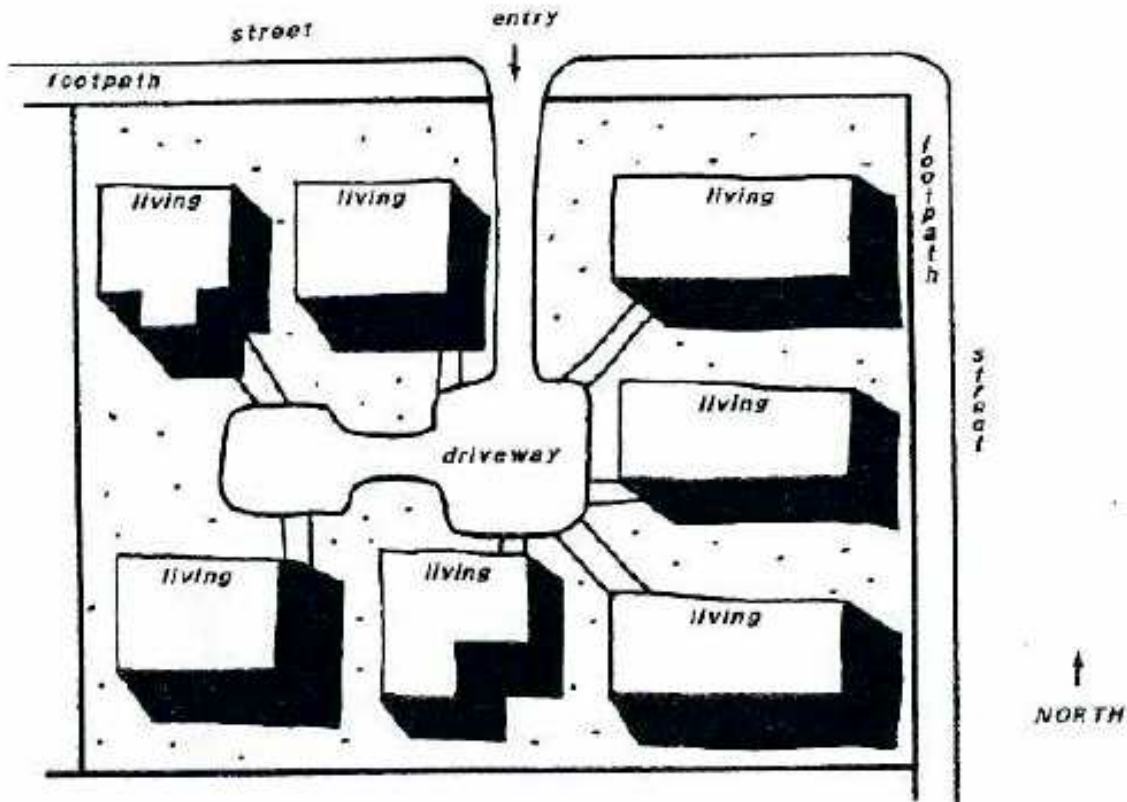
**Figure 3** - Buildings designed to maximise benefits of energy efficiency

Source: *Urban Form, Urban Design & Energy Use: Occasional Paper Series 2 Paper 2*



**Figure 4** - Buildings designed to maximise benefits of solar access

Source: *Urban Form, Urban Design & Energy Use: Occasional Paper Series 2 Paper 2*.



**Figure 5** - Orientation of living areas to the north

- Residential buildings are to be designed to maximise solar access to living areas and private open space. The following **guidelines** indicate the preferred levels of solar access for new developments, and any departures from these standards will require justification that resulting energy efficiency and solar access is acceptable:
  - the main living areas and at least 50 percent of the principal private open space of each dwelling shall have at least three hours of sunlight between the hours of 9am and 3pm on June 22 (winter solstice); and
  - solar access to the windows of habitable rooms and to the majority of private open space of adjoining properties must be substantially maintained or achieved for a minimum period of 3 hours between 9.00am and 3.00pm at the winter solstice (June 22).
- Solar access to existing neighbouring solar collectors including solar hot water systems and photovoltaic systems must be maintained or enhanced.
- Shadow diagrams are required to accompany all applications, and are to include:
  - details of the existing shadows affecting the property;
  - projected shadow impacts of the proposed development to the site and adjacent properties at 9am, midday and 3pm, 22 December (summer equinox) and 21 June (winter solstice); and
  - details of windows/living areas of adjacent properties likely to be shadow affected by the proposal.

Note: Shadow casts in elevation (to determine the extent of overshadowing impact) may be required if windows of adjoining buildings are affected.

- Shadow diagrams are required to be in accordance with the Department of Environment and Planning's (now Department of Planning) 'Technical Bulletin 13: Sunlight Indicators'.

### **Natural Space Heating and Cooling**

- It is desirable that the use of artificial heating and cooling devices be minimised. Heating and cooling needs should be considered at the design stage.
- Residential flat developments shall be designed/oriented in a manner which minimises heat gain during summer and maximises solar access during winter, thereby reducing the need for artificial cooling and heating (and the associated consumption of natural energy resources).
- The need to artificially heat each dwelling unit during winter, for example, can be minimised via the techniques indicated below.
  - The orientation of living areas to the north so as to make full use of available heat from the sun.
  - The use of deciduous trees (rather than non-deciduous trees) to the north of the building so as to allow for improved solar access during winter.
  - The use of thermal mass to retain solar heat made available during the day. Thermal mass refers to the ability of a material to store and retain heat. Dense materials such as brick and concrete have a high heat storage capacity. For example, an internal brick wall that receives direct sunlight during the day (preferably only) in winter will store heat that is then released during the evening.
- The need to artificially cool a residential flat unit during summer, (via air conditioning) for example, can be minimised via the techniques indicated below.
  - The shading of windows and walls (particularly those which face east and west) with both horizontal and vertical shading devices, including appropriately sized eaves and louvres.
  - The shading of windows and walls via appropriately located trees.
  - The positioning of windows and openings so as to capture prevailing breezes.
  - The positioning of windows and openings so as to allow for cross-ventilation.
  - The use of ceiling fans to maintain movement of air.
  - Allowing windows to be locked in a slightly-open position so as to admit cool air yet maintain security.

### **Natural Lighting**

- Residential units are to be designed so as to maximise natural lighting. The need to artificially light each unit during the day can be minimised by allowing as much natural light as possible to enter the building. Minimised use of artificial lighting results in reduced electricity consumption. Natural light can be achieved via large north, east and south facing windows; glass bricks and translucent, glazed or otherwise treated glass which allows for the transmittal of light but which maintains privacy.

The installation of some of the above features will require shading devices, either externally or internally such as eaves, pergolas,

verandahs, awnings or a solar blind to be incorporated within the building design to provide maximum shading in summer and minimum shading in winter.

- In order to reduce the consumption of conventional non-renewable resources in new developments, all internal and external common areas within a multiple unit housing development are to be lit utilising renewable energy resources generated on site and or supplemented by green energy generated off-site.
- To improve pedestrian safety in public places at least one lamp post on each street frontage is to be installed as part of the development which provides light onto public pedestrian footpath areas. For sites in excess of 30 metres one lamp post is to be provided for each 15 metres.

**Building Materials**

- Building materials and insulation that assist in providing acceptable thermal conditions are to be used wherever possible.
- Materials of high thermal mass should be used for living areas and located to receive maximum sun during cooler months.
- Existing buildings which are in sound condition can be converted in whole or in part for multiple unit dwellings.

**Water Management**

- A greenhouse gas friendly hot water system that achieves a minimum 3.5 SEDA Hot Water Greenhouse Score must be installed for all multiple unit housing developments. Systems which comply with this requirement are outlined in the table below.

Water heater Type		Green house Score
Solar-Gas boost *	Storage	5
Gas	Instantaneous	4
Gas-Storage	High Efficiency	4
Electric-Storage	Heat Pump	4
Gas-Storage	Low Efficiency	4
Solar-Electric Boost*	Continuous	4
Solar-Electric Boost*	Off Peak 2	4
Electric	Instantaneous	2
Electric	Continuous	1
Electric-Storage	Storage (Off Peak 1, Off-Peak 2)	1



**ACCEPTABLE**

**UNACCEPTABLE**



\* greater than 50% solar contribution

- Installation details of proposed solar hot water systems are required to be submitted including:
  - Position on roof and orientation;
  - Type of system – eg split system, direct or indirect system;
  - Size of system and colour of tank and collectors;
  - Specifications for attaching the system to the host structure.
- Solar water heaters should generally be located below the ridge line of a roof. Where possible, a solar water heater should be located on a section of roof that is not visible from the street or that is otherwise set back from the street. Particularly in situations where north-facing sections of roof face the street, consideration will need to be given to the visual impact of a solar water heater upon the quality of the streetscape.
- A minimum of 5% of the roof area shall be occupied by solar hot water systems, or an alternate energy source that generates an equivalent or less amount of greenhouse gas emissions.
- For the purpose of child safety and energy conservation, all new or replacement hot water systems should include a mixing device which delivers hot water at a maximum temperature of 50 degrees Celsius to all taps, shower heads and other outlets.

### **Water Saving Devices**

- Wherever possible, developments are required to be fitted with appliances and plumbing hardware which have a “AAA” Australian Standards Water Conservation Rating and meet the manual of Assessment Procedure for Water Efficient Appliances SAA MP64-1995 which aim to reduce water consumption, including those devices indicated below:
  - Shower head which allows 9 litres flow or less per minute.
  - Water tap which allows 9 litres flow or less per minute.
  - Dual flush toilet with maximum 6/3 litre capacity dual flush cistern or approved dual flush equivalent.
  - Low water use dishwasher and washing machine.
  - A rainwater collection tank(s) must be included in all multiple unit housing developments. The use of tank water for outdoor purposes such as garden watering should have the effect of ‘saving’ higher-grade water. The size of the rainwater tank will be based on the following calculation:
    - First 10 dwellings – minimum 500 litres per dwelling = 5000litres
    - Each dwelling thereafter – additional minimum 250 litres per dwelling
    - Water tank(s) are to be located underground. Where it is not possible to locate a water tank wholly underground, it should at least be located behind the front building line. Care should be taken to reduce the visibility of the water tank from the street.
    - The water tank(s) and any associated support structure and plumbing should be the same colour as the development or a colour which complements the building.
    - The water tank(s) should be located at least 900mm from any property boundary.
    - The top of any aboveground tank(s) is to be located below the top of the nearest fenceline or 1.8 metres, whichever is the lesser.
    - The water tank(s) should be positioned to collect rainwater which falls on the roof of the building(s). Tank water is to be used for non-drinking/non-consumption purposes only. Taps associated with the tank(s) are to be clearly marked ‘NOT FOR DRINKING’.



- Overflow from the water tank(s) is to be piped directly to the approved stormwater drainage system. Where stormwater for a particular property is required to be directed to on-site stormwater detention (OSD) storage (as per Council's Stormwater Management Code) then the overflow from the water tank(s) must also be directed to the OSD storage.
  - Plumbing from the water tank(s) is to be kept separate from the 'potable' reticulated water supply system.
  - The water tank(s) inlet is to be screened to prevent entry of any foreign/animal matter and insects such as mosquitos. The water tank(s) should be enclosed.
  - No part of the water tank(s) or support stand is to rest on a wall footing.
  - The water tank(s) is to be installed in accordance with the manufacturer's specifications.
  - Where relevant, the design of any water tank(s) support structure is to be in accordance with the requirements of a qualified practising structural engineer or to the maker's specifications.
  - A pump associated with the tank(s) is to be no louder than 5dBA above background noise levels.
- Developers are required to investigate the treatment and re-use of 'Grey' water for non-potable uses as part of the development.

#### **Energy Conserving Appliances**

- The use of energy smart appliances and lighting including dryers, dishwashers, refrigerators and washing machines is encouraged.
- Energy smart appliances are those that use less energy to do the same job as other less efficient models. The Label Star Energy Rating System gives a rating to a range of appliances based on their energy efficiency. The more stars you see, the more efficient the model.
- Energy Smart light includes the use of fluorescent and compact fluorescent globes, self timing systems, dimmers, motion sensors and specific purpose switches. The use of natural lighting should be maximised wherever possible.

#### **3.2.10 Safety and security**

- (a) The security aspects of all development shall be considered in the context of the proposed development itself. The siting and layout of buildings shall ensure that:
  - shared pedestrian entries can be secured and serve a limited number of dwellings; and
  - buildings adjacent to public streets or spaces are designed to allow casual surveillance and should have at least one habitable room window facing that area
- (b) External common areas such as pathways and entrances shall be provided with appropriate artificial lighting at low levels to provide safe access at night.

#### **3.2.11 Building design and materials**

- (a) Development applications will demonstrate designs for buildings which display a contemporary style which contributes to the visual amenity of the area.

- (b) A schedule of materials and finishes is to be provided with any DA.
- (c) Designs will have regard to the principles of good residential flat building design as set out in Planning NSW *Residential Design Pattern Book*.
- (d) For residential flat developments, at least one main entry which is convenient and provides a barrier free access must be provided for access (complying with AS1428.1) to ground floor units.
- (e) Access to common areas should be direct and without unnecessary barriers. Obstructions which cause difficulties should be avoided. These include:
  - uneven and slippery surfaces
  - steep stairs and ramps
  - narrow doorways, corridors and paths
  - devices such as door handles that require two hands to open.
- (f) Colours used on the proposed finishes are to be natural/subdued tones that are not bright or white so that they do not detract from the streetscape. Where cement rendering or textured finishes are proposed to be used, the colours of the proposed finishes are to be provided by way of colour charts submitted with the development application.

### **3.2.12 Site facilities**

#### **Electricity and telecommunications**

- (a) All electricity and telecommunications supply to the development and throughout the site is to be placed underground.

#### **Garbage and recycling**

- (b) Please refer to Part H of Strathfield Consolidated Development Control Plan 2005 – Waste Management.

#### **Letterboxes**

- (c) Provision shall be made for mail delivery service by Australia Post in accordance with the following:
  - DELIVERIES TO BE PROVIDED TO ONE POINT AT EACH PROPERTY;
  - the point of delivery should entail the least possible deviation by delivery staff from the public footpath;
  - letterboxes shall be between 900mm and 1200mm from the ground;
  - letterboxes are not to be surrounded by trees, shrubs and rocks that make it difficult to deliver mail; and
  - letterboxes are to have Australia Post approved minimum dimensions (230mm wide x 330mm long x 160mm high and the slot should be the full width of the box (230mm), 30mm deep and be positioned at least 130mm above the base of the box.
- (d) Letterboxes are to be positioned so as to avoid any unsightly or untidy appearance from the street frontage.


#### **TV Antennas**

- (e) A master antenna and/or satellite receiving dish is to be provided for any development of more than two dwellings.

**Clothes Drying Facilities**

- (f) Where clothes dryers are proposed to be installed as part of the development, these must achieve a minimum SEDA Greenhouse Score of 3.5. The Greenhouse Score is found by comparing the Label Energy Star rating to the Greenhouse Score on the table below.


Label Energy Rating	Greenhouse Score
4.5	6.0
4.0	5.5
3.5	5.0
3.0	4.5
2.5	4.0
2.0	3.5
1.5	3.0
1.0	2.5
0.5	2.0



**ACCEPTABLE**

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**UNACCEPTABLE**



**3.2.13 Drainage and water management**

- (a) In accordance with Council’s Stormwater Management Code, the development is required to include a system of on-site stormwater detention and provision for overland flow of stormwater.
- (b) In accordance with Council’s Stormwater Management Code the development is required to provide and regularly maintain during construction measures to prevent sediment and polluted waters discharging from the site.
- (c) Run-off from roofs or paved surfaces is to be passed to surface storage devices which allow the slow release of stored water into the development’s landscaping or use for the purposes of car washing.
- (d) All costs associated with providing any additional capacity of stormwater and drainage services as well as water and sewerage supply shall be met by the developer in accordance with Council’s or Sydney Water’s requirements.
- (e) A management plan is required in relation to excavation and site works outlining the following:
- Excavation works are to be staged to minimise the length of time unlined excavations are open to accumulate stormwater.
  - Excavations are to be bunded and covered following excavations and prior to lining of the excavations to prevent the accumulation of stormwater.
  - The final detention basins are to be entirely sealed, with no potential for infiltration of stormwater into the ground.
  - The detention basins are to be designed to ensure that overflow onto the Ford site will not occur.

### **3.2.14 Swimming pools**

For swimming pool requirements refer to Section 6.6 of Part A of Strathfield Consolidated Development Control Plan 2005 – Dwelling Houses and Ancillary Structures.

### **3.2.15 Section 94 Developer Contributions**

Council has the ability under the Environmental Planning and Assessment Act to charge a developer/applicant a monetary contribution towards the provision of community infrastructure such as open space, traffic management and community facilities. Please refer to Council's Section 94 Developer Contributions Plan for details of contributions.