

ENERGY

**PART D: ENERGY**

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## SECTION 1 – ENERGY MANAGEMENT

### Objectives

Council promotes optimisation of environmental performance of new and existing buildings through minimisation of energy consumption as a means of achieving the principles of ecologically sustainable development and minimising the negative impacts of development on the environment, in accordance with the objectives of the *Inner West LEP 2022*. Cutting energy demand is the first and most affordable step towards reducing emissions. Council encourages residents and property owners to minimise energy consumption by undertaking alterations and additions to existing buildings or the construction of new buildings in a manner which will minimise the use of manufactured energy to heat, cool or light the building. The building siting and layout, solar access, landscaping and ecologically sensitive design provisions of this Development Control Plan have been developed to reduce energy consumption whilst maximising the amenity of building occupants.

Where passive heating, cooling or lighting is not sufficient for the needs of occupants, Council encourages the use of renewable energy sources. The installation of renewable energy technologies, such as photovoltaic panels, is to be undertaken in ways which reflect Council's heritage, amenity and urban design objectives.

Council supports a reduction in car dependency as a way of minimising energy consumption, as reflected in the objectives of the *Inner West LEP 2022*. To achieve this Council promotes the enhancement of walkable neighbourhoods through the implementation of the urban design principles outlined in Part C – Place of this Development Control Plan. The urban design principles relate to the accessibility, amenity, connectedness, adaptability and sustainability of places and spaces in the municipality.

### Objectives

- O1 To promote energy minimisation in the development and operation of residential and non-residential buildings.
- O2 To encourage the implementation of renewable energy production technologies in residential and non-residential buildings.

### Controls

#### ***Energy minimisation***

- C1 Energy consumption minimisation measures are to be implemented in:
  - a. new residential and non-residential buildings; and
  - b. alterations and additions to residential and non-residential buildings.

Council will apply the relevant solar access, landscaping, building siting and layout provisions of this Development Control Plan to minimise energy consumption.

#### ***Energy efficiency***

- C2 Energy efficiency measures to reduce energy consumption are to be implemented in alterations and additions to an existing dwelling or commercial building. Energy reduction measures are to include but should not be limited to:
  - a. the installation of low energy light bulbs;

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- b. the installation of smart technology such as HVAC (heating, ventilation and cooling) controls to limit/set indoor climate;
- c. improved insulation;
- d. repairs to damaged windows, doors and seals;
- e. ensure windows are operable to enable cross ventilation (where this does not compromise visual and/or acoustic privacy);
- f. avoid blocking up windows or reinstate windows (where previously blocked up) for cross ventilation purposes (where this does not compromise visual and/or acoustic privacy)
- g. unblock ceiling vents and flues to enable the escape of heat through the roof;
- h. ensure the location of windows, doors and internal layout of the building promotes air movement for cooling.

### **Renewable energy production technologies**

- C3 Energy production technologies should, wherever possible, use renewable energy sources. Council may approve the implementation of new or emerging renewable energy technologies where the necessary infrastructure:
- a. will be of a design, including colour of trim and siting, that is sympathetic to the character of the building and its streetscape context;
  - b. will not;
    - i. have an adverse impact on the amenity and solar access of the property or nearby or adjacent properties and occupants;
    - ii. restrict the development potential of nearby and adjacent properties;
    - iii. result in the production of noise, air or water pollution or other adverse environmental impacts;
    - iv. reduce the structural integrity or have an adverse impact on the setting or significance of any property listed as a Heritage Item in Schedule 5 of the *Inner West LEP 2022*; and
    - v. result in negative impacts on amenity, building fabric or heritage values of the building and its setting including streetscape;
  - c. the use, location and placement of solar collectors is to take into account the potential permissible building form on adjacent properties.
- C4 Development consent is required for the installation of renewable energy technologies where the works will not meet the requirements of the following:
- a. Exempt and Complying Development provisions of the *State Environmental Planning Policy (Infrastructure) 2007*

### **Photovoltaic panels**

- C5 Photovoltaic systems are prohibited on any part of a slate roof with decorative features where the property is in a Heritage Conservation Area or is identified as a Heritage Item in Schedule 5 of the *Inner West LEP 2022*.

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- C6 Installation of a photovoltaic system on a property located in a Heritage Conservation Area or that is listed as a Heritage Item in Schedule 5 of the *Inner West LEP 2022* may be granted development consent where it can be shown that the installation will:
- a. be located where:
    - i. the potential for overshadowing by adjacent trees, buildings or general infrastructure is minimal; and
    - ii. orientation of the photovoltaic panel (direction and angle) will ensure an optimum power output;
  - b. be of a design, siting and materials, including colour of trim, that is sympathetic to the character of the building and its streetscape context and which will have minimal visual impact;
  - c. not reduce the structural integrity of or involve structural alterations to any building to which it is attached that may adversely impact the significance of the building;
  - d. not result in negative impacts on amenity, building fabric or heritage values of the building and its setting in the streetscape; and
  - e. not result in any irreversible alteration or damage to the fabric of the building.
- C7 The impact of development on the operation of installed photovoltaic cells on adjoining or near-by sites will not be a ground for refusal of development or modification applications.
- C8 Photovoltaic panels should be cleaned and serviced regularly to ensure optimal power output.
- C9 When obsolete, photovoltaic panels should be removed from the roof and where possible, sent to a recycling facility.

## SECTION 2 – RESOURCE RECOVERY AND WASTE MANAGEMENT

### Background

Waste and resource consumption is a major environmental issue. This is particularly the case as landfill sites become scarce and the environmental and economic costs of waste generation and disposal rise. Government, business and society alike are exposed to the issue of managing the increasingly large volumes of waste generated. Sustainable resource management and waste minimisation are essential in the quest for ecologically sustainable development and accordingly achieving the objectives of *Inner West LEP 2022*.

Waste is inextricably linked to energy and water use, greenhouse gas production, pollution and habitat destruction.

Differing types of development are dealt with below and have differing requirements. All applications will require the submission of a Site Waste Minimisation and Management Plan.

### D2.1 GENERAL REQUIREMENTS

#### Objectives

- O1 Reduce the demand for waste disposal in line with Federal and NSW State Government reduction targets and the Waste Avoidance & Resource Recovery Act 2001.
- O2 Consider the use of resources at all phases of development.
- O3 Provide criteria for the disposal of demolition and construction waste and the design and management of recycling, composting and waste storage and collection facilities within developments.
- O4 To encourage sorting and separation of material to maximise reuse and recycling of building and construction materials, household generated waste and industrial and commercial waste.
- O5 Encourage building design and construction techniques that will minimise waste generation.
- O6 Encourage new technologies to influence and solve waste management including small scale local technologies that can provide local solutions.
- O7 Minimise the overall environmental impacts of waste, in line with the principles of ecologically sustainable development. Waste is inextricably linked to energy and water use, greenhouse gas production, pollution and habitat destruction.
- O8 Provide advice on the preparation of Site Waste Minimisation and Management Plans and other appropriate documentation for submission with applications for development.
- O9 To consider the ongoing management of recycling and waste for the life of the building and uses.

#### Controls

##### ***Site Waste Minimisation and Management Plans***

- C1 A Site Waste Minimisation and Management Plan (SWMMP) will be required to be submitted for all forms of development that involve any construction, demolition or change to the use of the premises and for the ongoing use of a building or place.

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The SWMMP is to be submitted with the development application.

*Note: The design and location of recycling and waste management facilities should be investigated at an early, (i.e. pre development application) stage of the proposal.*

C2 The SWMMP should outline, as appropriate to the proposed development, the:

- volume and type of waste and recyclables to be generated;
- storage and treatment of waste and recyclables on site;
- disposal of residual waste and recyclables;
- operational procedures for ongoing waste minimisation, resource recovery (reuse and recycling) and management once the development is complete; and
- the method of reuse, recycling or disposal and the recycling/ waste management service provider.

A template of a SWMMP is provided in Part 1 of Appendix D “Site Waste Minimisation and Management Template”.

In the absence of project specific calculations, the rates specified in Appendix D2.4 “Waste and Recycling Generation Rates” should be used to inform the compilation of a SWMMP.

### **Plans and Drawings**

C3 For applications that require a SWMMP, plans and drawings (to scale) must be submitted with the application.

C4 For applications that include demolition and construction, the plans and drawings must show the material storage areas for reusable and recyclable materials during the demolition and construction phases, indicating the areas to be excavated, the types and numbers of storage bins required, appropriate signage and the vehicular access to material storage areas.

C5 For the ongoing operation of the use, the plans and drawings must indicate the location and provision for the storage and collection point of waste and recyclables, the access routes and path of travel for moving bins (if collection is to occur away from the storage area/room), design of internal areas, traffic flow, path of travel for collection vehicles and amenity details.

C6 A checklist at Appendix D (Part 2 – Plans and Drawings) must be completed in regards to the requirements for the plans and drawings for all development other than single dwellings, dual occupancies and secondary dwellings.

Further details of these requirements are provided in Appendix D (Part 1) “Site Waste Minimisation and Management Plan Template”.

## **D2.2 DEMOLITION AND CONSTRUCTION OF ALL DEVELOPMENT**

### **Controls**

- C7 Where material cannot be reused or recycled it should be disposed of at a lawful/ licensed waste facility as per the NSW government regulatory authority
- C8 Waste and or recycling bins such as skips may only be placed by persons or companies that hold a current licence from Council. On street placement, insurance and other standard conditions apply.
- C9 An area within the development site must be allocated for the storage of materials for reuse, recycling and disposal. Recyclable materials should be separately stored apart from other left over materials for collection by a recycling contractor. This can be facilitated by the process of “deconstruction” where various materials are carefully dismantled and sorted.
- C10 Separated materials should be kept clean where appropriate and protected from weather damage.
- C11 The bins and storage areas at a development site shall be clearly signposted outlining their purpose and content.
- C12 Minimise site disturbance and limit unnecessary excavation.
- C13 Pursue adaptive reuse opportunities of buildings and structures.
- C14 Evidence such as weighbridge dockets and invoices for waste disposal or recycling services must be retained.



## D2.3 RESIDENTIAL DEVELOPMENT

### Controls

- C1 For the development of new dwellings, the site must provide suitable area/s capable of accommodating Council's standard waste and recycling bins as indicated in Appendix D (Part 3) "Indicative Bin Sizes" with convenient access for all dwellings, suitable manoeuvrability space and within easy access to the collection point.
- C2 All dwellings must provide an internal storage area for recyclable and compostable material, of a sufficient size to hold a minimum of a single day's recyclable, compostable and waste material.
- C3 Areas for composting should be available for all residents in rear yards for single dwellings and in the communal area for multi-unit housing. This area should not impact on adjoining properties.
- C4 In sink waste disposal systems are strongly discouraged.
- C5 Consideration of the use of standard material sizes, prefabricated construction methods and by ordering materials "to fit", to limit waste.

### **Multi Dwelling Housing/Residential Flat Buildings**

- C6 Communal on-site waste storage and recycling areas or rooms should be provided where:
- each dwelling does not have a separate area at ground level for the storage of bins;
  - the number of dwellings and number of bins would visually detract from the appearance of the development and surrounding streetscapes (i.e. generally when more than 20 dwellings are proposed);
  - it is necessary for ensuring an efficient collection service; and
  - it is required by Council.
- C7 Communal waste storage and recycling areas (or rooms) should be provided which are:
- located behind the main building alignment;
  - appropriately screened to minimise visual impacts on the development and streetscape;
  - designed in an appropriate manner and size to allow suitable manoeuvrability of bins;
  - designed to accommodate a servicing garbage truck;
  - designed with clearly defined loading areas for collection adjacent to waste and recycling storage rooms; and
  - within easy access for all dwellings and to the collection point.

*Note: These communal waste storage and recycling areas should be located within the basement car park (or in the case when there is no basement, another accessible area that abides by the design criteria above).*

*Appendix D (Section 4) "Waste Recycling/Storage Rooms in Multi Dwelling Housing/Residential Flat Buildings" and (Section 7) "Example of a waste and recycling*

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*storage room(s)" provides further specifications. Appendix D (Section 5) "Garbage Truck Dimensions for Residential Resource Recovery/Waste Collection", Appendix D (Section 7) "Example of a Waste and Recycling Storage Room(s)" and Appendix D (Section 8) "Vehicle Access and Turning Circles" should be referred to for further information.*

- C8 Developments that are four storeys or higher are to provide waste chute rooms on each floor. Chute rooms are to provide a chute for the disposal of general waste as well as space for commingled and paper and cardboard 240L recycling bins and 240L organic waste bin(s). Enough bins are to be provided to accommodate the equivalent of two days' of material for the dwellings serviced.

*Note: Waste chute rooms are to be designed in accordance with the provisions under Appendix D (Section 9) "Waste chutes".*

- C9 Council may require developments to provide interim storage areas within the development or on separate floors. The interim storage areas must be large enough to accommodate and manoeuvre the number and size of bins required by Council (for waste, recycling, paper/cardboard and organics and the like).

An appropriate system for the transportation of recycling and waste bins from each floor must be provided.

- C10 Communal on site waste storage and recycling areas or rooms must be capable of accommodating and manoeuvring Council's required number of standard waste and recycling bins as set out below.

- C11 For multi-unit developments that propose 20 or more dwellings or where required by Council, a dedicated room or caged area must be provided for the temporary storage of discarded bulky items which are awaiting removal for reuse or disposal. This room is to provide a minimum area of 0.63m<sup>2</sup> per unit. The storage area must be readily accessible to all residents and must be located close to the main waste storage room or area.

- C12 Communal waste storage and recycling areas or rooms must have bin wash facilities (trapped gully and water taps) and be clearly labelled with appropriate signage that indicates recycling and waste bin areas. It is preferable that residents and building maintenance staff have access to a hot and cold water supply for the cleaning of bins and the waste storage areas. These areas should be weatherproof and easy to clean, with the wastewater discharged to the sewer.

- C13 The waste storage and recycling areas or rooms must be serviceable by Council's own waste and recycling vehicles and/or private collection contractors. Where collection vehicles must enter private property, design should be carried out in accordance with the requirements specified in Appendix D (Section 8) "Vehicle access and Turning Circles" and the *Australian Standard 2890.2 Parking Facilities* as amended.

- C14 Within multi unit residential developments, an area is required to be nominated onsite for communal composting. This area is to be incorporated in any submitted landscaping plans. The operation of the facility is to be the responsibility of the owners' corporation. In determining the siting of this communal composting facility the following should be considered:

- a. location and proximity to proposed and adjoining development, odour and the location of the drainage system;

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- b. the facility should be purpose built in design; and
- c. appropriate signposting, to ensure that inappropriate waste is not added.

C15 The use of waste and recycling compaction equipment is prohibited.

### **Waste**

#### **Single Dwellings**

C16 The amount of waste (domestic garbage) service provision is a maximum of 120 litres per dwelling per week.

*Note: Households can choose a 55-litre, 80-litre or 120 litre bin which will result in differing rates of payment of the Domestic Waste Charge according to bin capacity.*

#### **Multi Dwelling Housing/Residential Flat Buildings**

C17 Multi-unit housing generally share 240 litre garbage bins (red lid) for domestic garbage. All calculations for waste and recycling storage rooms are to be based on the dimensions of a 240L bin. The maximum garbage service for a single unit is 120 litres per week.

*Note: The waste/recycling room needs to be designed to ensure that it can accommodate this maximum 120L service per unit. Waste bin allocation will be rounded up to the nearest 240L bin.*

### **Recycling**

#### **Single Dwellings**

C18 A 120L yellow lid recycling bin for comingled containers (i.e. bottles / cans) per household.

C19 A 120L blue lid bin for paper and cardboard per household.

#### **Multi Dwelling Housing/Residential Flat Buildings**

C20 Multi-unit housing developments generally share both 240L co-mingled and 240L paper and cardboard recycling bins. The maximum recycling service is 60L per dwelling per week (collected fortnightly). It is evenly split between the two recycling bin types.

C21 Allocation of the 240L recycling bins is to be rounded up to the nearest 240L bin for each bin type (co-mingled and paper & cardboard).

*Example of recycling bin allocation calculation:*

*A 12 dwelling development generates 720L of recycling per week (60L x 12 dwellings). As recycling is collected fortnightly, the bin capacity to store this recycling is doubled. 1,440L of recycling bin capacity is therefore required. This is split between the two recycling bin types (comingled and paper & cardboard), resulting in the need 3 x 240L of each bin type, or 6 x 240L recycling bins in total.*

C22 Accommodation for potential swap over to 660L bins must be made if waste or recycling material storage requirements meet or exceeds 660L for any waste or recycling bin type.

## **Garden Organics Bin**

### ***Single Dwellings***

C23 A 240L lime green lid bin for organics per household

### ***Multi Dwelling Housing/Residential Flat Buildings***

C24 Where the development generates garden organic material (contains open space areas) a 240L bin (green lid) is provided which is generally shared as required based on the landscape component of the development.

Appendix D (Section 3) "Indicative Bin Sizes" provides Council's standard bin sizes

## **Ongoing Management of Residential Development**

C25 For single dwellings, each dwelling shall have their own bins with individual householders taking responsibility for on-street placement and removal.

C26 For multiple residences, agents of the owners' corporation are to ensure that waste is transported to the collection areas at appropriate times on collection days. Arrangements must be in place in regards to the management, maintenance and cleaning of all waste/recycling management facilities.

*Note: Bins are to remain in their on-site storage area at all times other than for their placement at the collection point on the nominated collection day and then returned to their storage area within 12 hours of collection.*

## D2.4 NON-RESIDENTIAL DEVELOPMENT

### Controls

- C1 Typical waste generation rates for various non-residential uses are provided in Appendix D (Section 2) "Waste Generation Rates". These rates should be considered in the design of all developments.
- C2 Waste and recycling storage and collection areas and/or rooms are to be provided that:
- ensure that the system for waste management is compatible with the collection service;
  - provide for the onsite separation of reusable and recyclable materials;
  - provide for appropriate signage;
  - are suitably enclosed, covered and maintained;
  - ensure an acceptable method for the transportation of waste from each level or tenancy to the waste and recycling storage and collection areas;
  - provide for an appropriately designed and well located waste storage and recycling area and/or room with suitable manoeuvrability; and
  - provide for clear access for staff and collection services.

Further details can be found in Appendix D (Section 6) "Non Residential Development Waste and Recycling Storage Areas".

- C3 Where these waste and recycling storage and collection areas are not internally located, they should be located behind the main building alignment and appropriately screened to minimise visual impacts on the development and streetscape.
- C4 Communal waste and recycling areas shall be provided in the following circumstances:
- for multiple occupancy tenancies; or
  - where design and/or site characteristics make it impractical for all tenancies to have separate collection points.
- C5 Each tenancy within the building or complex shall have a designated and clearly defined space within a communal waste and recycling area, if provided. Each designated space shall provide sufficient commercial containers to accommodate the quantity of waste and recyclable material generated.

Appendix D (Section 7) "Example of a Waste and Recycling Storage Rooms" provides further details.

- C6 Where collection vehicles must enter private property, design should be carried out in accordance with the requirements specified in Appendix D (Section 8) "Vehicle Access and Turning Circles" and the *Australian Standard 2890.2 Parking Facilities* as amended.
- C7 Details are to be provided of compliance with any environmental health and safety requirements relating to on site storage and removal of waste materials such as refrigerated waste rooms, grease traps and the like.

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- C8 Waste disposal and recycling areas should be flexible in design allowing for future changes of use or tenancy.
- C9 An internal waste/ recycling cupboard must be provided for every kitchen area in a development which is of a sufficient size to hold at a minimum a single day's recyclable, compostable and waste material.
- C10 Consideration should be given to the provision of composting areas and/or organics recycling on-site. Composting equipment may also be considered providing that it's usage meets any state and federal legislative requirements.
- C11 The use of waste and recycling compaction equipment is prohibited.
- C12 In sink waste disposal systems are strongly discouraged.

### **Ongoing Management of Non-Residential Development**

- C13 For all developments, details must be provided in the Site Waste Minimisation and Management Plan which indicate the ongoing management of waste on site, such as lease conditions, caretaker on site and the like.
- C14 Non-residential developments with multiple tenancies shall provide an acceptable method for the transportation of waste and recycling from each level or unit to a waste and recycling storage area. This should provide direct and convenient internal access which is available to all levels and tenants such as a goods lift or by a caretaker.
- In these circumstances, space must be provided per floor for the temporary storage of waste and recyclables.
- C15 All commercial tenants must keep written evidence on site of a valid contract with a licensed waste contractor for the regular collection and disposal of the waste and recyclables that are generated on site.
- C16 Consideration should be given to the following:
- a. where separation of glass is undertaken it should be carried out within the premises during the hours 8am to 5pm to ensure minimal noise impacts on surrounding properties;
  - b. production of hazardous waste requires particular attention and should be checked with the Council and NSW Department of Environment and Heritage; and
  - c. premises which generate at least 50 litres per day of meat, seafood or poultry waste must have that waste collected on a daily basis or must store that waste in a dedicated and refrigerated waste storage area until collection.
- C17 Grease traps must be provided, where appropriate in accordance with Sydney Water's Trade Waste Pre-treatment Guidelines. Where possible, grease traps must be installed outside the building or in a dedicated grease trap room. Grease traps must not be accessed through food handling and storage areas.

*Note: A Trade Waste Agreement shall be obtained from Sydney Water prior to the discharge of trade wastewater to the sewerage system.*

## **D2.5 MIXED USE DEVELOPMENT**

### **Controls**

- C1 Mixed use development must incorporate separate and self-contained waste management systems for the residential and non-residential components.
- C2 The residential waste management system must be designed in accordance with the controls related to residential development and the non-residential waste management system must be designed in accordance with the controls for non-residential development.

An example of a waste and recycling storage room is provided in Appendix D (Part 7) “Example of a Waste and Recycling Storage Room(s)”.