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1. **Where does this Plan Apply?**

This Plan applies to land zoned 2(e1) and 2(e2) Residential under the Sutherland Shire Local Environmental Plan 2000 (SSLEP 2000). It applies to development applications for cluster housing.

2. **What is Cluster Housing?**

Cluster housing means three or more dwellings grouped on a site to take advantage of good building areas or views and to conserve large areas of open space.

The number of dwellings on a site should be the same as the number of allotments that could be created through a conventional subdivision in the same zone.

The dwellings are grouped on a site to take advantages of good building areas and views including:

- To provide solar access
- To prevent overlooking and overshadowing
- To preserve views across the site
- To avoid the loss of existing trees and bushland vegetation and natural rock ledges and to conserve large areas of open space including:
  - Any remnant bushland vegetation
  - Any portion of the greenweb
  - Any area suited to the outdoor recreation of occupants
  - Any area containing natural vegetation or rock ledges
  - Any area between the foreshore building line and the water.

3. **What is the Purpose of the Plan?**

The purpose of the Plan is to enable development which preserves environmentally sensitive areas of the site (generally the steeper and more densely vegetated sections) by grouping the dwellings, services and access within the most suitable areas of the site.

4. **How does this Plan relate to other Plans?**

SSLEP 2000 provides objectives, land use controls and development standards for development in the Shire. The basis for the LEP includes the Housing Strategy and Heritage Study.

Extracts from SSLEP 2000 are shown in *italics*. Other provisions in this DCP may only be varied with a statement, supporting the application, which demonstrates how the objectives are satisfied.

This DCP provides detailed guidelines for cluster housing in addition to the provisions contained in SSLEP 2000.

In addition to this DCP there are other DCPs that apply to land zoned 2(e1) & 2(e2) Residential, including:

- Swimming pools
- Waterfront development
- Private tennis courts
- Landscape
- Bush fire
- Notification of development applications
- Duration of development consents
5. Can the Plan be Varied?

This plan contains two types of planning controls – development standards and controls:

Development Standards are contained in the Sutherland Shire Local Environmental Plan 2000 (SSLEP2000) as amended. Any proposal to vary those standards from the local environmental plan must be accompanied by a formal objection to the standard under the provisions of the State Environmental Planning Policy No. 1.

More detailed provisions consisting of objectives and controls have been set for all aspects of this plan. Each application will be considered on the individual circumstances and merits of the case in terms of the achievement of the objective.

The Controls that are set out in this plan are generally more detailed than the Sutherland Shire Local Environmental Plan 2000. Any variation to these controls must be supported by a statement demonstrating how the objectives are fully satisfied. Any submission in support of a variation to a standard or control must be in writing and demonstrate how the objectives will be achieved.

6. Does your Proposal need Approval?

You need to submit a development application to obtain consent from Council for most development proposals involving new buildings or subdivision.

Other proposals may be exempt or complying development as set out in the SSLEP 2000. Exempt development does not require approval. Complying development can be approved by Council or a private accredited certifier.

7. Making an Application

After researching this document it is recommended that intending applicants consult directly with Council’s Environmental Assessment staff prior to preparing detailed development plans.

Pre-application consultation with staff can assist in the time taken to assess applications and reduce amendments required to plans. A prerequisite of consultation is the preparation of a Site Analysis and possibly a Development Concept Plan.

To submit a development application you need to complete a Development Application form together with the following plans (5 copies) and information:

Site plan – illustrates the location of all structures both proposed and retained on site and it must include a north point.

Site analysis – identifying existing natural elements of the site, such as; existing vegetation, property dimensions, footpath crossing levels and alignments, slope and topography and all structures on neighbouring properties, including location of windows, doors, balconies, entertainment areas. It must include photos of the site frontage and streetscape. Refer to Section 8 for more detail.

Survey – needs to include existing site levels at the corners of the proposed site, the site contours at 1 metre intervals and the proposed floor levels using a fixed benchmark related to the Australian Height Datum. The plan should also indicate the location of existing structures, easements and services, trees and general site features, as well as north point, existing levels and improvements within the public road to the frontage of the site. If the site is a water front property, it must include the location of the Foreshore Building Line and Mean High Water Mark relative to the Certificate of Title/Deposited Plan registered as at 24 April 1980.

Footpath crossing levels and alignment application – an application for levels and alignments needs to be lodged with Council, prior to setting proposed levels within the site and prior to lodging a Development Application.
Floor plan & FSR calculation – is a fully dimensioned plan which identifies the major use of each of the internal structures within a building, ie balconies, bedrooms, living area, kitchen facilities, bathrooms, doors and windows etc. Where a floor plan is required, it must include the floor space ratio calculation through either hatching, highlight or colour.

Elevations – illustrates all profiles of the proposed development, and includes dimensions of the proposed development, location of windows, doors, roof pitch and eave overhang. It must also include details of surface finishes and construction materials. It should also indicate the existing and finished ground levels and all finished floor, ceiling and ridge levels to AHD.

Sections – illustrates a cross section through the proposed structure, indicating building materials and construction method from the footings right through to the roof.

A4 Notification Plans – is included in letters of notification of a proposed development to neighbours. Must include a complete floor, site and elevation plan reduced to an A4 page/s.

Landscape area calculations – where required, the site plan must also indicate landscape area through hatching, highlight or colour.

Landscape details – plans or drawings that demonstrate the basic ideas and principles of the intended works. The plan should highlight all the proposed landscape area, and the proposed treatment, ie mass planting, paving, lawn etc. The plan should also explain the landscaping principles, purpose and rationale. The location and species of all existing trees on the site should be identified, and it must be indicated whether it is proposed to retain or remove each tree. (Where drainage details are also required, they must be integrated with the proposed landscape concept).

Drainage Details – plans or drawings which illustrate the concept of a stormwater management system from the site to the council drainage system and include a detailed site survey. Where an on-site detention system is required, the type and location must be shown and must be integrated with the proposed landscape design.

Erosion & Sedimentation Control Details – plan or drawing that shows the nature and location of all erosion and sedimentation control measures to be utilised on the site, may be included with the Construction Management Details.

Shadow Diagram – A diagram demonstrating the extent of over shadowing caused by the proposed development on adjoining properties as measured at 10am and 2pm on 21 June and 21 December. The diagram must indicate the progressive impacts on the adjoining property/s.

(Shadow diagrams are compulsory for any two storey or higher sections of a development.)

Construction Management Details – a concept plan that includes the following:
- Locations and types of sediment control fencing
- All weather vehicle egress, including cattle grid or similar
- Hardstand areas for loading and unloading materials including location of crane and concrete pumps
- Location of material storage on site
- Location of any site sheds
- Location of underground services and over head wires
- Location of hoardings and site fence

Frontage Works – a plan that illustrates the proposed location of a footpath crossing for driveway access, footpath paving, kerb and gutter, kerb ramps and road shoulder.

Energy Rating Certificate – Certification from an accredited assessor on the energy rating for the proposed building envelope, hot water system and any clothes drier to be installed.

Statement of Environmental Effects – a description of how the application addresses and satisfies the objectives and standards of SSLEP 2000 and relevant Development Control Plans of Council & S.79(c) of the Environmental Planning and Assessment Act, 1997.

Applicants are advised to use the services of an architect to prepare plans. The Development Application should take into account identified site constraints and objectives of the Development Control Plan.

Applicants should be aware that compliance with the guidelines within this development control plan will not guarantee approval of development applications. The objectives of the plan must be met.

Note:
A development application will not be publicly exhibited until all information required as part of the application is submitted. Incomplete applications will not be publicly exhibited.
8. Site Analysis

All development requires perceptive and effective site planning. Good site analysis and design skills are therefore essential in achieving a pleasant living environment for occupants and minimising the impact on neighbours.

A site analysis establishes the development context by showing graphically the constraints and opportunities on the site in relation to natural elements and existing buildings in the immediate surroundings. It should influence the design and minimise negative impacts on the amenity of adjoining developments and to complement neighbourhood character.

A site analysis is to be submitted with a development application and should indicate (where relevant) in relation to the site:

1. **Contours** – at 1m intervals and related to Australian Height Datum
2. **Existing vegetation** – in particular major trees on the site and street trees, identified by size and botanical names or common names.
3. **Buildings** – location and uses of existing buildings
4. **Views** to and from the site
5. Location of **utility services** and stormwater drainage lines and street crossings.
6. **Orientation**, microclimate and noise sources
7. Any **contaminated soils** and filled areas
8. Fences, **boundaries** and easements
9. Any other **significant site features** eg rock outcrops;

And in relation to the surrounding area:

1. Location, use and height of adjacent and opposite **buildings** – locating window openings facing the site boundary, and private open space
2. **Views and solar access** enjoyed by adjacent residents
3. **Major trees** on adjacent properties
4. The **built form and character** of adjacent and nearby development
5. The **difference in levels** between the site and adjacent properties

The site analysis can be hand drawn but must be to scale, and must be accompanied by a declaration that the information provided is correct and true in every detail. A written statement should also be prepared explaining how the development design has responded to the site analysis and should include an assessment of the bushfire hazard on the site and/or on the adjoining site.

Site analysis can improve design responses. This is an example of site analysis information for a small infill site.
9. Public Notification

All development applications will be publicly notified in accordance with Council’s Notification of Development Applications Development Control Plan.

10. Density

**Objectives:**

1. Development which has regard to topography;
2. Individual allotments with sufficient area for a dwelling and ancillary facilities;
3. A satisfactory balance of buildings and open spaces;
4. A diversity of housing types throughout the Shire.

**Controls:**

1. In 2(e1) Residential zones, the maximum density is 1 dwelling per 550m² of site area for a standard allotment (18 dwellings per hectare) and 1 dwelling per 700m² of site area for an internal allotment;
2. In 2(e2) Residential zones, the maximum density is 1 dwelling per 850m² of site area for a standard allotment (12 dwellings per hectare) and 1 dwelling per 1000m² of site area for an internal allotment;
3. Council will consider a variation to the density requirements in environmentally sensitive areas to encourage Cluster Housing as an alternative form of development to conventional subdivision.

11. Development Site Areas

**Objectives:**

1. Development sites with sufficient area to provide adequate access, open space and building separations;
2. Orderly overall development;
3. Development sites which have regard to the relationship with adjoining developments.

**Controls:**

1. Cluster development will only be considered on sites which meet the following minimum requirements:

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<th>Minimum allotment sizes</th>
<th>2(e1)</th>
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<td>Minimum allotment widths</td>
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*The area of an access corridor is not to be included when the size of an internal allotment is calculated.*
12. Height

Objectives:

1. Dwellings with minimum visual impact when viewed from the water, road or adjoining lands;
2. Dwellings which are in proportion to the site and adjoining development.

Controls:

1. A building must not exceed a height of:
   a) 7.2 metres to any point on the uppermost ceiling; and
   b) 9 metres to the highest point on the roof.

   Basement carparking must not exceed 1.5 metres above ground level to the top of the slab.

   **Height** is measured vertically from the ground level.

   **Ground level** is the ground surface of a site as it was prior to any cutting, filling or grading of the site.
   Where the existing ground level differs from the ground level, ground level shall be as determined by Council after taking into account any information concerning its location.

2. Two storey limit at any one point. Dwellings may be stepped down a steep site.

   **Storey means:**
   a) the space between two floors; or
   b) the space between any floor and its ceiling or roof above; and
   c) foundation areas, garages, workshops, storerooms and the like, where the height between ground level and the top of the floor above is 1.5 m or more.
   A storey which exceeds 4.5 m is considered as two storeys.

3. Where a dwelling would comply with the height requirement, except for the absence of a flat ceiling (e.g. rake ceiling), a variation will be considered if the objectives are satisfied.
13. Foundation Height

Objectives:

1. Dwellings that have a minimum intrusion into the natural landscape;
2. Dwellings that have a minimum impact on the amenity of adjoining development and surrounding properties;
3. Dwellings that are related to the contours of the site.

Controls:

1. A maximum foundation height of 1.5 m.

14. Building Line

Objectives:

1. An open streetscene with substantial areas for planting;
2. Developments which are compatible with the character of surrounding detached housing areas, in respect of the quantity and quality of open space adjacent to the street.

Controls:

1. A building line of 7.5 m from a road is required. The line is measured at right angles to the front boundary;
2. Courtyard fences will be permitted forward of the building line, provided these fences comply with the Residential Fencing Development Control Plan;
3. In Menai, fences are not permitted forward of the building line.

[Diagram showing the building line, dwelling, courtyard fence, and 7.5m building line measured at right angles to the front boundary.]
15. Foreshore Building Line

The objectives and standards for the Foreshore Building Lines are contained in Clause 20 of SSLEP 2000 as follows:

1) The objectives of the clause are:
   a) preservation and enhancement of the natural features and vegetation of the area where the land meets the water;
   b) restoration of the land below the foreshore building line, so far as practicable, to a natural state, with a minimum intrusion of man-made structures;
   c) no development below the foreshore building line other than development excepted by this clause;
   d) a significant reduction in the number of structures below the foreshore building line, particularly on redevelopment;
   e) conservation and enhancement of waterfront development of heritage value;
   f) avoidance of adverse ecological effects on the waterways; and
   g) public use of the intertidal areas below the mean high water mark or high water mark where appropriate.

2) In this clause, "foreshore building line" means the line shown on the maps by a broken black line on an allotment of land, which is parallel to (and at the distance specified on the maps from) the mean high water mark or high water mark of tidal water as shown on the Certificate of Title for the allotment at 24 April 1980, regardless of any reclamation, other works or changes occurring since that date.

   Where the "Foreshore Building Line" results in a foreshore building line which is at a distance of less than 7.5 metres from the landward boundary of a waterfront reserve or the present mean high water mark of tidal water, or no such line is shown on the maps, the foreshore building line is taken to be a line parallel to and 7.5 metres from the landward boundary of the reserve or (if there is no such reserve) the present mean high water mark as defined by a current Certificate of Title.

3) A person must not erect a building or carry out a work on land between a foreshore building line and the tidal water in respect of which the line is fixed.

4) However, subclause 3) does not apply to:
   a) boat sheds;
   b) watercraft facilities;
   c) in-ground swimming pools, no higher than 300mm above ground level at any point;
   d) works, including mechanical works, to enable pedestrian access;
   e) landscaping and barbecues.

5) The council must not grant development consent to any development on an allotment of land having a foreshore building line, or to any development below the present mean high water mark on an allotment or within a 7(a) zone adjoining the allotment, unless it is satisfied that the following buildings or works (if any) will be removed before, or within a reasonable time after, the development is carried out:
   a) any building or work on the allotment between the foreshore building line and the current mean high water mark or high water mark as defined by a current certificate of title, not being a building or work specified in subclause 4); or
   b) any building or work below the mean high water mark or high water mark as defined by a current certificate of title, being a building or work on the allotment or on land adjacent to the allotment which is in the same ownership as the allotment or to which the owner or occupier of the allotment has some form of occupancy rights, but not being a building or work specified in subclause 4)b).

6) However, subclause 5) does not apply to a building or work if the council is satisfied that requiring removal of the building or work:
   a) would be inconsistent with any of the objectives of this clause;
   b) is not necessary to achieve the objectives of this clause;
   c) is unreasonable or unnecessary in the circumstances of the case, having regard to the provisions of any relevant development control plan.

7) This clause does not apply to buildings or works on reclaimed land, or on land adjacent to reclaimed land, in Sylvania Waters.

8) To avoid doubt, State Environmental Planning Policy No. 1 - Development Standards applies to a foreshore building line in the same way as it applies to a development standard.
16. **Landscaping**

**Objectives:**

1. The visual impact of the new development is minimised and integrated into natural surrounds and the streetscape.

2. Existing mature trees and bushland vegetation retained within, and adjacent to, development sites.

3. Landscape design to include large trees for visual amenity.

4. The new dwellings in foreshore areas are sited so that there is minimal disturbance to the natural landscape, with significant vegetation retained and enhanced.

5. An indigenous ‘leafy’ character is maintained, particularly as viewed from the waterfront.

6. To provide screening and filtering to ensure privacy and reduce overlooking.

7. Vegetative linkages to habitat areas preserved, reinstated or provided, for wildlife movement.

8. Private open space provided for dwellings that is clearly defined, useable and meets the requirements of privacy, access, outdoor activity and planting.

**SSLEP 2000 Standards:**

The following minimum landscaped areas apply:

a) For 2(e1) sites – 50%
b) For 2(e2) sites – 55%

For allotments bordered by a right-of-carriageway, 25% of the area of the right-of-carriageway may be included as landscaped area.

**Landscaped area** means any part of the site of a building or a proposed building that contributes to achieving the objectives of the landscaped area development standards of this plan. The site is taken to be only that part of the site zoned to permit the development for which the building is or is proposed to be used.

Landscaped area includes any areas used for gardens, lawns, shrubs or trees, but does not include any part of the site occupied by buildings, driveways, service accessways, parking areas, communal drying yards, garbage storage areas, swimming pools, balconies or decks.
Controls:

Note: Special landscaping requirements apply to the bushfire setback area. Refer to Landscape DCP for details.

a. Existing trees, bushlands and other natural features are to be retained and incorporated into the development proposal. This is particularly important on ridge lines and in foreshore areas. Structures must be designed to retain natural features.

b. Landscape planting should be principally comprised of native species, however, Council will consider the use of deciduous trees in courtyard areas.

c. The planting scheme must display a full range of general planting forms, e.g. large trees, medium trees, shrubs and ground covers.

d. Landscaping in publicly visible areas is to comprise not more than 30% turfing and not less than 70% mass planting.

e. Landscaping is to be provided within the front setback to assist in achieving the streetscape objectives, particularly with regard to issues of scale and character. (See diagram below).

f. Driveways are to be curved or splayed where possible, to avoid a “gun barrel” effect.

g. Landscaping in the vicinity of driveway(s) entrance should not obstruct visibility for the safe ingress and egress of vehicles and pedestrians.

h. Tree and shrub planting along side and rear should assist in providing effective screening to adjoining properties. The minimum height of screening to be provided is 1.8 metres at maturity.

i. All grassed areas adjacent to garden beds are to be bounded by a mowing strip, preferably concrete or brick.
Edges are to be provided to prevent lawn encroaching into the garden areas. The mowing edges are to be flush within the adjoining lawn.

j. Communal open space landscape areas are to be provided with a water efficient irrigation system.

k. Specimen trees (i.e. trees which are to be used for key elements within the landscape) shall be of a minimum 75 litre stock size.

l. Surface stormwater storage detention basins are able to be landscaped provided that the area is densely planted and mulched. The organic mulch is to be stabilised with biodegradable netting material or alternatively gravels may be used. Landscaped detention basins are to be designed in conjunction with the drainage engineer and landscape architect.

m. An external energy efficient lighting system is recommended for pedestrian access and driveways located within communal open space.

n. On level sites adjacent to major roadways, the provision of low earth mounds will enhance the development considerably at ground level and provide visual and noise buffering (Mounding must consider any impacts on storm water flow.)

o. Street trees are required along street frontages within the footpath area in accordance with Council’s Urban Tree Policy (1992), or any applicable Development Control Plan.

p. On foreshore slopes, sufficient area must be provided between dwellings to allow trees to be planted.

q. All noxious and environmental weed species should be removed. A list of these weed species is provided in the Landscape DCP.

Note:
Seagrasses and mangroves are protected species and any proposal which may impact upon these will require approval from NSW Fisheries.

In addition to satisfying the above controls you should refer to the Landscape Development Control Plan.
17. Open Space

17.1 Common Open Space

Objectives:

1. Open space provided within the development for the informal recreation of the residents and an opportunity for recreation facilities;

2. Prominent site features retained, for example, rock outcrops, stands of trees, steep land, etc.

Controls:

1. The area of common open space is to be easily accessible;

2. The area is to be designed and landscaped to provide for sitting out, children's play area or similar outdoor activities;

3. Conserve large areas of open space including:
   ♦ Any remnant bushland vegetation
   ♦ Any portion of the site identified as portion of the greenweb
   ♦ Any area suited to the outdoor recreation of occupants
   ♦ Any area containing natural vegetation or rock ledges
   ♦ Any area between the foreshore building line and the water.

17.2 Private Open Space

Objectives:

1. A private outdoor living space as an extension of the dwelling for the recreation and enjoyment of the residents;

2. Private outdoor living spaces that receive a reasonable quantity of sunlight during all months of the year;

3. A service space for clothes drying or work area is provided.

Controls:

1. Each dwelling is to be provided with one continuous area of private open space of at least 50% of the floor area of the dwelling;

2. At least 60% of each courtyard is to receive direct sunlight for the four hours between 10am and 2pm during mid winter;

3. The outdoor living space within the courtyard is to have a minimum dimension of 6 m;

4. The service space within the courtyard is to have a minimum width of 3 m;

5. Any paving used in courtyards should be chosen to comply with the principles and design guidelines in Appendix 1 Paving and Driveways.
18. Waterfront Structures

Water orientated recreation facilities, such as a boatshed, a jetty ramp/pontoon, sliprails or multiple berthing areas, which are to be shared by the owners of a cluster development, will be assessed in accordance with the Development Control Plan for Waterfront Development.

19. Driveways

Objectives:

1. Safe conditions provided for the movement of vehicles and pedestrians within the site;
2. Minimum intrusion of vehicles onto the site;
3. Vehicles able to exit from the site in a forward direction;
4. Landscaped areas maximised by good driveway design;
5. Driveway materials used that blend with landscaped areas;
6. Driveways with a minimum impact on the site, with a minimum cut and fill, and preservation of existing vegetation and site features (e.g. cliffs, watercourses, etc.).

Controls:

1. For accessways which are to be dedicated as public roads, the standards outlined in the Residential Subdivision Development Control Plan apply;
2. For private accessways, the following standards apply:
   i) a minimum driveway width adjacent to garages to be 6.7 m to allow adequate manoeuvring;
   ii) a combined entry/exit driveway is to be 6 m in width at the footpath crossing for a distance of 6m onto the site;
   iii) internal driveway widths of 3 m;
   iv) passing bays are to be provided on longer lengths of driveways when necessary;
   v) adequate visibility is to be provided at corners;
   vi) driveway materials should be chosen to comply with the principles and guidelines in Appendix 1 Paving and Driveways;
   vii) the maximum driveway grades for ramps shall be 1:20 for the first 3 m from the property boundary and then 1:6.7.
20. Car Parking

Objectives:

1. Sufficient off-street parking for residents and for visitors’ cars;
2. The free flow of traffic in the street protected.

Controls:

20.1 Number of spaces required

Each dwelling is to be provided with two car parking spaces, which may be provided in tandem;

One visitor space is to be provided for each five dwelling units (or part thereof).

20.2 Location and dimensions of parking spaces and driveways

New development should comply with AS 2890.1 Car Parking;

At least one of the parking spaces is to be roofed and where it is not enclosed by walls (such as a garage), a separate storage room is to be provided;

Detached or grouped parking facilities should be considered to minimise the total site area developed, enabling sensitive areas to be preserved;

A parking space will be a minimum of 5.5 x 2.6 m; where spaces are covered or adjacent to a wall, the dimensions are 5.5 x 3 m;

The width of a garage is to be 3 m with 2.75 m unobstructed clearance at doorway measured between door jambs, clear of any necessary hinges required for the operation of the doors;

The design of the carports are to be integrated with the dwellings;

Any open parking areas (uncovered) must comply with the principles and guidelines in Appendix 1 Paving and Driveways.
21. Setbacks to Adjoining Boundaries

Objectives:

1. Development which is private for the residents and the adjoining neighbours;
2. Areas provided that are available for screen planting;
3. Minimum overshadowing of adjoining properties;
4. Views maintained between dwellings to the water, where available.

Controls:

The side boundary setbacks will vary according to the relationship of the development to adjoining development, as follows:

1. Where dwellings are oriented in a similar direction as the existing adjoining dwellings, as indicated in A, a minimum side boundary setback of 1.5 m to dwellings and garages is required. The setback is measured at right angles to the boundary;
C - Enlargement

2. Where dwellings are oriented so that overlooking occurs, such as in B or C, then the following additional setbacks may apply:

i) for a two storey dwelling, where the windows of a habitable room or a useable roof area (including a balcony) overlook a neighbouring dwelling, a minimum setback of 6 m is to be provided to that roof area or window. A variation to 4 m will be considered for highlight windows;

ii) for a single storey dwelling, where the windows of a habitable room overlook a neighbouring dwelling, a minimum setback of 4 m is to be provided;

iii) a variation to these requirements will be considered where there is no overlooking or overshadowing of adjoining properties.

3. Avoid overshadowing of neighbouring properties, particularly north facing windows and garden areas adjacent to houses.

New development must not eliminate more than one third of the existing sunlight, to windows of living areas and usable private open space, of an adjoining property measured at 10am and 2pm on 21 June.

Provide for the potential use of solar energy collectors by incorporating pitched roofs facing north.

No overshadowing of solar collectors will be permitted.

4. Bush fire setbacks

If a site is located in a bushfire interface area (ie within or immediately adjacent to a bushfire hazard) bushfire setbacks will apply. (Refer to Bush fire DCP).
22. Energy Efficiency and Environmentally Sound Building Materials

Energy efficient dwellings are designed and constructed using appropriate materials and appliances to maximise the use of sustainable energy sources (such as sunshine) and use energy more efficiently.

They are “smart” because they simultaneously help preserve scarce resources, reduce the level of greenhouse gas emissions, and provide significant savings.

Applicants must demonstrate the energy efficiency of the proposal by submitting an energy rating from an accredited assessor with the application.

NatHERS is currently the only rating tool accepted for use. Other rating tools may be accepted in the future, once they have passed accreditation protocol.

In NSW the House Energy Rating Management Body (HMB) is the accreditation body for Home Energy Assessors. Assessors provide a summary report which reflects the annual heating and cooling load for a dwelling. The results of the report are expressed as a “star rating” of 0-5 stars (with ‘0’ being least to 5 stars being most efficient).

Objectives:

1. An improved quality and energy efficiency of dwellings.

2. Dwellings that:
   - use less energy
   - are comfortable to live in
   - are economical to run
   - contribute positively to an overall reduction in greenhouse gas emissions

3. To encourage the use of building materials that are energy efficient, non-harmful and environmentally sustainable.

Controls:

A. Minimum requirements for new dwellings:

1. A certificate from an accredited assessor showing a minimum 3.5 star energy rating for building envelope using an approved HER tool (eg NatHERS). Ratings are to be provided for each dwelling.

2. A hot water system with a minimum score of 3.5 using SEDA greenhouse score for hot water heaters. Refer to table below.

<table>
<thead>
<tr>
<th>Water Heater Type</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar-Gas Boost</td>
<td>Storage</td>
</tr>
<tr>
<td>Gas</td>
<td>Instantaneous</td>
</tr>
<tr>
<td>Gas-Storage</td>
<td>High Efficiency</td>
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<tr>
<td>Electric-Storage</td>
<td>Heat Pump</td>
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<tr>
<td>Solar- Electric Boost*</td>
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<tr>
<td>Solar-Electric Boost*</td>
<td>OP2</td>
</tr>
<tr>
<td>Electric</td>
<td>Instantaneous</td>
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<tr>
<td>Electric</td>
<td>Continuous</td>
</tr>
<tr>
<td>Electric-Storage</td>
<td>Storage (OP1, OP2)</td>
</tr>
</tbody>
</table>

* greater than 50% solar contribution.

The use of solar water heaters is strongly recommended. Refer to Appendix 2 for principles and design guidelines for the installation of a solar water heating system.

3. AAA rated showers, wash basins, kitchen sinks and toilet cistern sets must be installed.

4. Clothes dryers, where they are being installed, with a minimum score of 3.5. (Refer to Greenhouse score table below)

5. Building materials should include the use of recycled materials, plantation timber and non-polluting substances. Appendix 3 provides a guide in selecting sustainable materials. Refer to lists for recommended plantation and regrowth timbers and timbers not appropriate for use in Sutherland Shire.

Council only accepts HMB accredited energy ratings (which must be submitted as part of a Development Application).
B. Exemption from Minimum Controls for New Dwellings

Only under exceptional circumstances will Council consider varying the minimum controls listed above. The circumstances are:

Steeply sloping sites (especially on the foreshore) which may preclude slab floor type construction.

Unusual construction – where the prescribed assessment techniques do not address, or reliably assess, the performance of the construction being adopted and there are prima facie grounds for believing the prescribed techniques significantly underestimate the construction’s performance.

Conflicting guidelines – for example, existing development conditions, other development control plans or any other policy or guidelines that Council determines will have priority over this plan, e.g., heritage requirements, which preclude the attainment of the minimum rating requirements.

The applicant must satisfactorily demonstrate the reason for non-compliance and provide a statement from an accredited assessor that the alternative requirements listed below have been complied with.

Minimum controls for alterations and additions and new or existing dwellings where building envelope requirements cannot be met.

1) Insulation installed in ceiling, walls and floors as follows:

   Roof/ceiling: insulation installed with a minimum R3.0 rating (roof/ceiling combined)
   External walls: insulation installed with a minimum R1.5 rating. (Cavity brick construction is exempt from this requirement.)
   Floors: insulation installed with a minimum R2.0 rating. NB. Buildings with slab on ground construction are exempt from floor insulation requirement.

2) A hot water system with a minimum score of 3.5 using SEDA greenhouse score for hot water heaters. Refer to table above. The use of solar water heater is strongly recommended. Refer to Appendix 2 for principles and design guidelines for the installation of a solar water heating system.

3) AAA rated showers, wash basins, kitchen sinks and toilet cistern sets must be installed.

4) Clothes dryers, where they are being installed, with a minimum score of 3.5. Refer to table below.

<table>
<thead>
<tr>
<th>Energy Rating Label</th>
<th>Greenhouse Score</th>
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<tbody>
<tr>
<td>5.0</td>
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<tr>
<td>4.5</td>
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<td>4.0</td>
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<td>2.0</td>
</tr>
<tr>
<td>1.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Clothes Dryers 4.0kg and over. These conversions are for electric systems only. The Greenhouse Score for gas-powered clothes dryers will generally pass the minimum requirements.

To determine the Greenhouse Score of a clothes dryer, check the star rating on its Energy Rating Label (typically found on the front of the clothes dryer) and match it with the Greenhouse Score in the Conversion table above. If it achieves a Greenhouse Score of 3.5 or greater, the clothes dryer has passed.
23. Drainage

**Objectives:**

1. Proper drainage of the site and the protection of adjoining sites from increased runoff from development.
2. Potential reduction in site drainage by reuse of rainwater.

**Controls:**

1. All roof and surface waters to be drained to Council's nearest piped stormwater system;
2. If the natural fall of the land is towards the rear of the site then an easement to drain water over adjoining properties shall be created under s.88B of the Conveyancing Act to allow discharge of stormwater through adjoining properties to a drainage system within the natural catchment under council’s control. The easement shall be created prior to the issue of a construction certificate;
3. A rainwater tank is to be installed for irrigation purposes. The principles and design guidelines for the installation of rainwater tanks are outlined in Appendix 4.

24. Garbage Facilities

**Objectives:**

1. On-site waste management facilities that encourage source separation, reuse and recycling by residents.
2. Collection services providers able to efficiently collect waste and recyclables with minimum disruption and impact on residents.

**Controls:**

An area is to be provided for the temporary storage of waste and recyclables. It must be able to accommodate the required number and size of bins/containers as per the Garbage Service Matrix in Appendix 5 Waste Management Specification.

A bin room/area for developments with 22 dwellings or less must be conveniently located on the site for ease of access by residents to deposit waste and for placing the bins at the collection point. The bin room/area for developments with 23 dwellings or more must be located as close as possible to the site street boundary and orientated and designed for ease of access by residents and Council’s Waste Collection Service.

Waste and recycling collection is provided by separate services. Each bin and bin type must be accessible and manoeuvrable in and out of the bin room/area with minimum or no handling of other bin types.

All bin rooms/areas must have nibs to prevent bins from making contact with the walls, for the purposes of noise reduction.

There must be no lip or step between the bin room/area and collection point

Recycling and waste bins must be located together, but separated and clearly sign posted. Signage must encourage and explain Council requirements for the separation of recyclable material and waste.

Entry and exit widths, after doors and lintels, must be a minimum of 1m for 240 litre bins and 2 metres for 1500 litre containers.

The bin room/area is to be free of all obstructions so as not to restrict movement and servicing of the bins or containers.
The ground surface of the bin room/area which has 1500 litre containers and driveway is to be of a smooth finish to enable easy movement of the container and minimise noise impact on residents.

Design of the bin room/area must be aesthetically pleasing. Materials, design and landscaping must complement the building.

A standpipe must be provided in close proximity to the bin room/area.

25. Section 94 Contributions

Section 94 is a section of the Environmental Planning and Assessment Act that enables Council to collect monies, require dedication of land or provision of facilities (material public benefit) when approving development if it can be shown that the development will, or is likely to, increase the demand for services and facilities which Council provides.

Objective:

Development that contributes towards the provision of services and facilities (e.g. open space, community facilities, infrastructure works) in the area because the proposed development increases the demand for these facilities/services.

Controls:

The cash contribution rate applicable to a development is outlined in the relevant Contribution Plan and is subject to indexation on 1 July every year.

Further information on the Contributions Plans applicable to a development and the associated rates can be obtained by contacting the Section 94 Planner in the Environmental Planning Unit.

26. Frontage Works and Damage to Council Property

Objective:

A satisfactory standard of road construction for the increased intensity of development.

Controls:

1. A 1.2 m strip of concrete footpath to final levels along the total road frontage of the site;
2. Kerbing and guttering along the total road frontage of the site;
3. One heavy-duty vehicular gutter crossing 5 m wide, except where the physical limitations of the site make implementation impractical, with suitable approaches on both sides, or in the case of wide frontages and where merited, such additional crossings as approved by Council;
4. Construct and seal the road shoulder for the full frontage of the property;
5. The above works shall be constructed at the conclusion of construction within the development site;
6. On battleaxe type allotments the frontage shall include that of the blocks where development is proposed at the rear.

Damage to Council Property

Before any demolition or construction work is carried out on the site Council requires security for the payment of the cost of making good any damage caused to any Council property as a consequence of the implementation of the consent.
27. Origin

**Reference:** DC 000/1/18/1.
Amended on 5 December 1983.

**Edition 1:** Adopted by Council on 26 August 1985.
(Environmental Planning Committee Minute No.275).

**Edition 2:** Reprint to include the changes made by the
Sutherland Local Environmental Plan 1993
(Government Gazette 124, 12 November 1993).

**Edition 3:**

<table>
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<td>Council Endorse Plan</td>
<td>5th May 1997</td>
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<td>(EHC 278-97)</td>
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<td>Public Notice (draft)</td>
<td>27th May 1997</td>
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<tr>
<td>Exhibition –Start</td>
<td>27th May 1997</td>
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<td>Exhibition Finish</td>
<td>30th June 1997</td>
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<td>Council Decision</td>
<td>3rd November 1997 (EHC 136-98)</td>
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<td>Public Notice (final)</td>
<td>13th November 1997</td>
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<td>18th November 1997</td>
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</tbody>
</table>

a) Amended to upgrade standard of presentation.
b) Minor alterations which make the document consistent with the Sutherland Shire Local Environmental Plan 1993 as amended and other Development Control Plans.
c) Status of code amended to a Development Control Plan.

**Edition 4:**

<table>
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<td>Council endorse plan</td>
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<td>(EHC 122-01)</td>
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<td>Council decision</td>
<td>19 March 2001</td>
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<td>Public notice (final)</td>
<td>27 March 2001</td>
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<td>27 March 2001</td>
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</table>

a) Amended to be consistent with Sutherland Shire Local Environmental Plan 2000.
b) New section on Energy Efficiency
c) New Waste Management requirements
d) Revised section on “Making an Application”
e) Landscaping requirements incorporated from Landscape DCP

**Edition 5:**

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<td>Council decision</td>
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<td>(EHC 138-02)</td>
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<td>20 December, 2001</td>
</tr>
<tr>
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</tbody>
</table>

a) Inclusion of supplementary information for:
   - Paving and Driveways
   - Solar Water Heating Systems
   - Sustainable Building Materials
   - Rainwater Tanks.
APPENDIX 1

PAVING AND DRIVEWAYS

Principles

These principles are consistent with stormwater management objectives and water sensitive urban design.

1. Reduce the volume and peak discharge of rainfall run-off to the stormwater system, thereby minimising the scale of the stormwater drainage infrastructure.

2. Minimise downstream flooding and the impact on the existing drainage system.

3. Improve water quality by reducing the volume of run off leaving the site, and improving water balance through recharge of groundwater.

4. Structural measures to prevent litter and flood debris entering the drainage system and subsequently causing a blockage.

5. Prevent excessive erosion of waterways, slopes and banks.

6. Minimise contaminant transport from stormwater to surface or ground waters.

Guidelines

In order to achieve these principles paving and driveways need to meet these guidelines:

1. Where the geology and topography are appropriate, ie permeable soil and limited slope; porous paving may be used.

2. Other types of paving must meet the principles above by means such as:
   - Directing run-off to landscape areas before entering the stormwater drainage system.
   - Flow detention to facilitate sedimentation of coarse and medium sized particles.
   - Utilising purpose-built water quality control devices that are appropriate and adequate for the site; such as gross pollutant traps, oil/grit separators installed and maintained in accordance with the manufacturer’s recommendations.

3. Where porous paving is used the following guidelines on construction and maintenance should be met:
   - Slope of the pavement should not generally exceed 5 percent.
   - Regular maintenance is required to remove any potential clogging.
   - To prevent premature clogging, the porous paving should not be put in position until the surrounding areas have been stabilised.
   - Overland flow could be pre-treated by grass filter strips or swales.
   - Consult with suitably trained person who is familiar with the methods of construction and maintenance associated with porous paving.
APPENDIX 2

SOLAR WATER HEATING SYSTEMS

Principles

Council’s solar water heater policy is based upon achieving:
- a reduction of carbon dioxide (CO₂) emissions into the atmosphere
- reduced energy consumption, and
- a reduced reliance upon fossil fuels.

A solar hot water system can offer many advantages over conventional electric and gas water heaters such as:
- savings in greenhouse gas emissions (up to 60-75%)
- savings in hot water heating costs (up to 50% compared to an off peak hot water system)
- a reliable system, that can last longer than conventional systems
- an asset that can improve the value of a building.

Types of Solar Water Heater

A solar hot water system comprises one or more solar collectors which are connected to a hot water storage tank. The storage tank is fitted with a ‘booster’, (gas or electric) to maintain the desired water temperature during extended cloudy periods.

The solar collectors are typically mounted on the roof to absorb the energy from sunlight. The resulting heat warms the water circulating through the collector, and the heated water is passed to the storage tank for use as required.

The types of solar water heaters are:

- **Close Coupled Thermosiphon System**

  The collectors and storage tank are in one unit with the storage tank at a higher level than the collector plate.

- **Remote Thermosiphon System**

  The storage tank is located away from the collector, usually in the roof space.
• Forced Circulation System

Water is circulated between the collector plate and the storage tank by means of a pump. The storage tank is usually at ground level.

• Heat Pump

This is basically a system in which a refrigerator works in reverse. Evaporator plates extract heat from the air during the day and night. The system is electrically powered but uses only 30% of the electricity used by a conventional hot water heater.

Design Guidelines

Location and Orientation

Solar water heaters should be located on a northerly facing roof, or other north facing location to maximise solar access.

The specific requirements for a solar water heating system in regard to its location and orientation include:
- The orientation of solar panels should be within 45° either side of true North.
- Solar collectors should be angled at 34° (optimum) to horizontal, but variations between 12° and 54° are acceptable.
- Solar collectors should not to be located so as to be shaded for most of the day from buildings or trees (existing and proposed new tree planting) where tree is considered to be significant or desirable.
- Solar panels should be located as close as possible to the kitchen and bathrooms they are serving subject to other locational requirements.

(Refer to Australian Standards for Solar Water Heaters)
Visual Impact and Aesthetics

Solar water heaters are to be located so as not to be visually obtrusive and are to be designed as part of the building.

The following controls apply to the installation of a solar water heating system to minimise the visual impact:
- When located on a roof it must be in the same plane as the roof slope and as close as possible to the roof material.
- It must be positioned below the ridgeline of the building.
- The colour of all metallic parts of the collector should compliment the colour of roofing materials.
- It should be located to avoid overlooking from the habitable room windows of adjoining properties.
- Tanks must not be located on the roof if visible from street or other public areas including waterways.

Position solar water heater below the ridgeline of the roof
Australian Standards

All solar hot water heaters installed shall comply with relevant Australian Standards for solar electric plumbing and structural requirements as follows:

- AS 2712 – 1993 ‘Solar water heaters; Design and construction’
- AS/NZS ISO 9001 1994 ‘Quality Assurance standard’
- AS 3500.4.1 – 1997 ‘ National Plumbing and Drainage; Part 4, Hot water supply systems – Performance requirements’
- AS/NZS 3662 – 1996 ‘Water supply; Water efficient mains pressure shower spray heads’

Information Requirements

It is required to show the size and location of the solar water heater on Development Application submission.
APPENDIX 3

SUSTAINABLE BUILDING MATERIALS

Principles

Building materials should be selected on the basis that they

- increase the energy efficiency of the building; and
- minimise damage to the environment in their extraction, manufacture, use and disposal.

Building material selection should be subject to systematic consideration of “whole of life” environmental impacts. The “precautionary principle” should be adopted, by avoiding the use of hazardous or suspected materials or only using them with adequate safety devices and precautions. Impacts that should be considered are:

- impact on natural ecosystems from which the material was extracted/grown
- amount of energy required in production/transportation
- environmental impacts generated by construction activities
- amount of toxin/waste generated in production
- potential of the material to be recycled
- amount of recycled material used in production
- life span and durability of product
- effectiveness of product
- any threat to human health from deterioration of the product
- nature of waste generated by disposal of the product.

The use of low impact, environmentally sustainable building materials can help:

- avoid or reduce dependence on non-renewable resources
- increase resource efficiency
- minimise impacts on biodiversity
- to recover, reuse and recycle materials.

Design Guidelines

As a guide in selecting energy efficient materials which contain low embodied energy, the following should be taken into consideration:

- use materials manufactured from abundant or renewable resources
- utilise recycled and recyclable materials, where practical, in walls, roofs and floors
- use durable materials which require minimal maintenance
- use benign materials, i.e. non-polluting and non-toxic in their production, use and disposal
- use materials which employ environmentally acceptable production methods.
- Use materials that will not adversely affect the viability of the soil for plant life, in areas to be landscaped eg. avoid use of recycled concrete products as they increase alkalinity.
Standards

Specific controls applied for using timbers in construction include:

- Use plantation, regrowth or recycled timbers in framework.
- Avoid use of rainforest timbers and timbers from Australian high conservation forests, in other timber works wherever possible.

(Refer to lists for recommended plantation and regrowth timbers and timbers not appropriate for use in Sutherland Shire.)

Information Requirements

Separate specification is to be provided detailing the quantity, species and origin of all timbers to be used in the construction (when applying for a Construction Certificate).
Timbers Recommended for Building Use

Recommended Plantation Timbers

Sutherland Shire Council recommends the use of the following plantation timbers in Australia. These are mainly pine species, often referred to as softwoods including:

- **Caribbean Pine** (*Pinus caribaea*) grown in Queensland & NSW
- **Hoop Pine** (*Araucaria cunninghamii*) grown in Queensland & NSW
- **Oregon** (*Pseudotsuga menziesii*) grown in New Zealand
- **Radiata Pine** (*Pinus radiata*) grown in Australia & New Zealand
- **Slash Pine** (*Pinus elliottii*) grown in Queensland, NSW & New Zealand

NB: Some of these timbers are grown in other countries but for energy efficiency it is preferable to source them locally.

Recommended Australian Regrowth Timbers

Sutherland Shire Council recommends the use of regrowth native timbers, often referred to as ‘hardwoods’ including:

- **Blackbutt** (*Eucalyptus pilularis*)
- **Spotted Gum** (*Eucalyptus maculata*)
- **Cypress Pine** (*Callistris sp*)
- **Sydney Blue Gum** (*Eucalyptus saligna*)
- **Flooded Gum** (*Eucalyptus grandis*)
- **Manna Gum** (*Eucalyptus viminalis*)
- **Jarrah** (*Eucalyptus marginata*)
- **Silvertop Stringybark** (*Eucalyptus laevispinia*)
- **Red Ironbark** (*Eucalyptus sideroxylon*)

Recycled Timbers

Sutherland Shire Council recommends the use of recycled timbers.

Uses For Recommended Timbers

Sutherland Shire Council recommends the use of the following sustainable timbers as alternatives to rainforest and old growth forests.

Framing and General Construction

- Radiata Pine (F5 & F7 Internal) (F11-F17 Structural)
- Laminated Veneer Lumber (LVL)
- Plantation Grown Oregon
- Cypress Pine
- Australian regrowth timbers eg. Blackbutt
- Composite timber products eg. glue laminated beams
- Recycled timber of suitable species
Concrete Formwork

A large percentage of formply used in Australia is made from tropical timber. Use only formply made from plantation pine – Radiata, Slash and Hoop Pine. Reuse formply whenever possible and do not specify a higher grade than what is required.

Inground Uses

✓ Recycled Australian timbers of suitable species
✓ Australian regrowth timbers (Jarrah, Red Ironbark, Spotted Gum, Cypress Pine)
✓ CCA treated Radiata Pine (pressure impregnated)

Cladding

✓ Treated plantation pine
✓ Australian regrowth timber (Jarrah, Red Ironbark, Spotted Gum, Cypress Pine)
✓ Durable recycled timber
✓ Treated exterior grade plywood

Window and Door Frames

✓ Treated plantation pines
✓ Cypress Pine
✓ Poplar
✓ Recycled timber of suitable species
✓ Australian regrowth timbers

Flooring

✓ Plantation Pines
✓ Cypress Pine
✓ Particle board
✓ Australian regrowth timbers

Fencing, Exposed Decking and Stairs

✓ Durable recycled timber
✓ Australian regrowth timber (Jarrah, Red Ironbark, Spotted Gum, Cypress Pine)

Furniture, Joinery, Shelving & Benchtops

✓ Plantation Pines (Radiata, Hoop)
✓ Poplar
✓ Plantation Oregon
✓ Camphor Laurel
✓ Particleboard
✓ Recycled Timber
✓ Medium Density Fibreboard
✓ Australian regrowth timbers (Blackbutt, Jarrah, Spotted Gum, Sydney Blue Gum, Rose Gum, Silvertop Stringybark, Turpentine)
✓ Jacaranda, Silky Oak
Panelling and Lining

✓ Hoop Pine
✓ Spotted Gum
✓ Hardboard (Masonite)
✓ Pine veneer plywood

Internal Stairs

✓ Recycled timber
✓ Plantation Pines (not for treads)
✓ Australian regrowth timber

Doors and Frames

✓ Plantation Oregon
✓ Hoop or clear Radiata Pine
✓ Recycled doors or timber

Decorative Veneer

✓ Plantation Pines
✓ Camphor Laurel
✓ Australian regrowth timber

- Hoop Pine is a rainforest timber grown in plantations – check its source.
- Oregon or Douglas fir is often cut from old growth forests in North America. The majority of Oregon in Australia is from New Zealand plantations.
### Timbers Not Recommended for Building Use

### Australian Native Rainforest Timbers to be Avoided

Sutherland Shire Council does not recommend the use of Australian Native Rainforest timbers which are not grown on plantations.

**The use of the following Australian Native Rainforest Timbers is not recommended:**

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<tr>
<th>Alder</th>
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<th>Maple</th>
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<td>Bean, Black</td>
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<td>Cheesewood, White</td>
<td>Pigeonberry Ash</td>
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<td>Candlenut</td>
<td>King William Pine</td>
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**Note:** This list is a guide only, and is not intended to be comprehensive.

### Imported Rainforest Timbers to be Avoided

Most rainforest timber imported into Australia comes from Indonesia, Malaysia, Burma, Papua New Guinea and the Philippines. All timber cut in these countries is cut from virgin rainforests. There are no plantations yet old enough to provide timber logs.

**The use of the following imported rainforest timbers is not recommended.**

Timber merchants often group all rainforest timbers using two names – **Maple or Meranti**. More specifically these timbers are:

<table>
<thead>
<tr>
<th>Agathis</th>
<th>Gaharu Buaja</th>
<th>Mahogany</th>
<th>New Guinea Walnut</th>
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<tr>
<td>Alan</td>
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<td>Mangasinoro</td>
<td>Nyatoah</td>
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<td>Almon</td>
<td>Ipi</td>
<td>Marfim</td>
<td>QBA Saluk</td>
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<td>Amboyna Wood</td>
<td>Iroko</td>
<td>Mayapis</td>
<td>Pacific Maple</td>
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<td>Jelutong</td>
<td>Mavota</td>
<td>Padauk</td>
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<td>Kalantas</td>
<td>Melawis</td>
<td>Palaquim</td>
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<td>Balsa</td>
<td>Kapur</td>
<td>Mengkulang</td>
<td>Pink Satinwood</td>
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<td>Bangtikan</td>
<td>Keladin</td>
<td>Meranti</td>
<td>Ramin Red Lauan</td>
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<td>Batu</td>
<td>KemPas</td>
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<td>Rosewood</td>
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<td>Baygo</td>
<td>Kering</td>
<td>Merbau</td>
<td>Selangan Kacha</td>
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<td>Betis</td>
<td>Ketiau</td>
<td>Mersawa</td>
<td>Seraya</td>
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<td>Borneo Camperwood</td>
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<td>Camphorwood</td>
<td>Lanutan</td>
<td>New Guinea Beech</td>
<td>Vesi</td>
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APPENDIX 4

RAINWATER TANKS

Principles

1. To improve environmental sustainability by collecting and re-using stormwater.
2. To support responsible management of stormwater.
3. To minimise water consumption from mains water supply.

Rainwater Collection System

The selection of a rainwater tank should be based on the following:
- appropriate size, shape and capacity
- materials
- colour and appearance
- a suitable location for the tank on the property
- impacts on properties adjacent to the tank, in regard to visual aesthetics and noise.
Design Guidelines

The design and installation of a domestic rainwater collection system needs to consider the following:

**Sizing**
- Rainwater tanks providing storage capacity at the minimum rate of 2.4 kL per dwelling.
- Individual rainwater tanks shall not exceed 20 kL capacity.

**Installation**
- The tank and support structure must be placed on a suitable foundation in accordance with the manufacturer’s or engineer’s details.
- The tank may also be incorporated into the eaves of the building or fixed to the wall.
- Tank Installation and all plumbing works must be carried out by a person licensed with the NSW Department of Fair Trading.
- All rainwater storage shall be above ground construction.

**Plumbing Connections**
- Water collected in rainwater tanks should be kept entirely separate from the existing mains water supply system and allow no direct cross connection with water mains plumbing.
- All drainage connections are to be in accordance with the Drainage and Plumbing Code AS 3500.
- All rainwater storage shall be directly connected to a permanent irrigation system. Town water shall only be introduced to the rainwater tank not to the irrigation system directly.
- Stormwater flows from all roofed areas shall be directed to rainwater storage in a controlled manner.

**Taps**
- Tank taps are to be marked “Rainwater – not for human consumption”.

**Overflow**
- Intense or prolonged rainfall will exceed the capacity of the tank so it is essential to have an overflow system connected to the stormwater drainage system via the on-site detention.
- Overflow must not be directed into the sewer and must be covered with an insect-proof mesh.

**Visual Appearance**
- The rainwater tank, its associated drainage, plumbing and supporting structure should be designed and located in such a manner that it maintains the visual amenity of the immediate surrounds.
  - Tanks are to be located in the rear yard of a property and at least 900mm from any side boundaries.
  - A maximum height of 2.4m from ground level applies to tanks located at or above ground level.
  - Materials, colours and shapes of the tanks should be compatible with the proposed building, adjoining buildings and streetscape.

**Health & Safety**
- Tanks should be covered or fully enclosed and any lid shall be designed to prevent children from wilfully or accidentally entering, climbing or falling into the tank.
- Tanks should have suitable contaminant screens and contain a first flush system to prevent the entry of any animals or pollutants into the water.

**Mosquito Proofing**
- Tanks must be mosquito proof by installing a strainer with mosquito net in all inlet and outlet pipes.
**Pump Installation**
- Council doesn't encourage the installation of a system that requires pumping. Irrigation systems should be gravity fed.

**Maintenance**
- Gutter and roofs should be cleaned and maintained regularly.
- Clean inlet strainers whenever necessary, or use self cleaning strainers.
- Check for sludge every few years to remove accumulated mud, which comes from dust settling on the tank floor.
- Make sure the inlet strainers, mosquito proofing and lids are in good repair. Lids should be tight fitting.

**Australian Standards**
Rainwater tanks and their associated fittings & fixtures must comply with the relevant Australia Standards:
- AS 2180 – 1986 ‘Metal Rainwater Goods – Selection and Installation’
- A certificate of Compliance showing that the tank meets these standards shall be submitted.

**Application and Notification to Council**
If the installation of rainwater tanks is not part of an application to erect dwellings to which this DCP applies you should refer to SSLEP 2000 Schedule 4 - Exempt Development, Water tanks to determine whether a development application is necessary.

In circumstances where a separate Development Application is not required, consideration must be given to adjoining properties, in regard to placement. It is required to show the tank, support structure and its location on the Development Application submission.
APPENDIX 5

WASTE MANAGEMENT SPECIFICATION

Sutherland Shire Council Waste Management Services offers the following collections;

- 240 Litre Bin Service Putrescible Waste (provided for town house and villa developments with 22 dwelling units or less); 1500 Litre Container Service Putrescible (provided for town house and villa developments with 23 dwelling units or more)
- Recycling Service, includes glass, aluminium and paper (provided for all residential developments)
- Garden Green Waste Service

The Garbage Service Matrix;

A matrix for waste and recycling bin sizes and numbers has been developed and calculated via waste audits. The matrix enumerates the number of and type of waste and recycling bins required based on the size and type of dwelling complex.

Bins Only Collection Service
FOR DEVELOPMENTS WITH 22 DWELLINGS OR LESS

All bin collection services for putrescible waste are collected from the property boundary by Council’s Waste Collection Service. All recyclables, whether paper, glass, cans or garden green waste are also collected from the property boundary. It is the responsibility of residents to ensure the bins are placed at the collection point, usually between the property boundary and the road reserve, prior to collection.

Design of facility for temporary storage of waste and recyclables

Location
The bin room/area must be conveniently located on site for ease of access by residents both for the depositing of waste and recyclables and for the placing of bins, by residents, at the collection point.

Dimensions
The bin room/area must accommodate the appropriate number and size of bins/containers as per the Garbage Service Matrix.

Figure 2 above illustrates the dimensions of the Garden Waste and Bin used by Sutherland Shire Council.
Design
Each bin and bin type must be accessible and manoeuvrable in and out of the bin room/area with minimum or no handling of other bin types.

Waste and recycling collection is provided by separate services. Each bin and bin type must be accessible and manoeuvrable in and out of the bin room/area with minimum or no handling of other bin types, for the convenience of residents.

All bin rooms/areas must have nibs to prevent bins from making contact with the walls, for the purposes of noise reduction.

There must be no lip or step between the bin room/area and collection point.

Recycling and waste bins must be located together, but separated and clearly sign posted. Signage must encourage and explain Council requirements for the separation of recyclable material and waste.

Entry and exit widths, after doors and lintels, must be a minimum of 1m for 240 litre bins.

The bin room/area is to be free of all obstructions so as not to restrict movement and servicing of the bins or containers.

The ground surface of the bin room/area and driveway is to be of a smooth finish to enable easy movement of the container and minimise noise impact on residents.

Design of the bin room/area must be aesthetically pleasing. Materials, design and landscaping must complement the building.

A standpipe (tap) must be provided in close proximity to the bin room/area.

Figure 2 above illustrates the dimensions of the Garden Waste and Bin used by Sutherland Shire Council.
Container (1500 L) Collection Service  
FOR DEVELOPMENTS WITH 23 DWELLINGS OR MORE

Waste Collection staff manoeuvre the 1500 Litre container of putrescible waste from the bin room/area to the truck at the time of collection. The development, driveway, and bin room/area are required to be designed to maximise collection staff safety and minimise impact on residents.

Container Specifications
- Prior to occupation of the building, the applicant must provide a 1500L container.
- The container must, for health reasons, possess a fitted plastic lid
- In order to minimise noise and provide easy manoeuvrability, the container must be fitted with nylon wheels.
- The container must meet all other specifications as illustrated in Figure 3 below.

![Diagram of 1500L container dimensions](image)

*Figure 3* above illustrates the dimensions of the 1500L Containers used by Sutherland Shire Council

An area is to be provided for the temporary storage of waste and recyclables. It must be able to accommodate the required number and size of bins/containers as per the Garbage Service Matrix.

Council’s Waste Collection Service collects all recyclables, whether paper, glass, cans or garden green waste from the property boundary. It is the responsibility of residents to ensure the recycling/garden waste bins are placed at the collection point, usually between the property boundary and the road reserve, prior to collection.
Design
A bin room/area must be conveniently located on the site for ease of access by residents to deposit waste and for placing the bins at the collection point.

Waste and recycling collection is provided by separate services. Each bin and bin type must be accessible and manoeuvrable in and out of the bin room/area with minimum or no handling of other bin types, for the convenience of residents.

All bin rooms/areas must have nibs to prevent bins from making contact with the walls, for the purposes of noise reduction.

There must be no lip or step between the bin room/area and collection point.

Recycling and waste bins must be located together, but separated and clearly sign posted. Signage must encourage and explain Council requirements for the separation of recyclable material and waste.

Entry and exit widths, after doors and lintels, must be a minimum of 2 metres for 1500 litre containers.

The bin room/area is to be free of all obstructions so as not to restrict movement and servicing of the bins or containers.

The ground surface of the bin room/area which has 1500 litre containers and driveway is to be of a smooth finish to enable easy movement of the container and minimise noise impact on residents.

Design of the bin room/area must be aesthetically pleasing. Materials, design and landscaping must complement the building.

A standpipe (tap) must be provided in close proximity to the bin room/area.
Truck Dimensions: 1500L container collections
To enable 1500L container trucks to access the site for waste collection, the site and driveway must accommodate the following dimensions;

- 9.36 m Overall length of truck
- 12.5m Length required for container hook up and staff access
- 2.43 m Overall width
- 3.224 m Overall height, lifting clearance not required.
- 4.8 m Wheel Base
- 17.5 m Minimum Turning Circle Diameter
- 22.5 tonnes Loaded Weight
- 5% gradient maximum of driveway to allow container hook up

Truck Access
- It is most desirable that a truck enters and exits a site in a forward direction.
- It is usually acceptable for a truck to reverse into a site, and exit in a forward direction.
- Where this is not possible due to demonstrated site constraints, Council’s Waste Collection Service must be consulted, and may approve some other manner of ingress and egress.
- It is never acceptable for a truck to reverse out of a site.
- At the collection point, a 100mm reinforced concrete pad is to be provided, capable for bearing the loaded truck weight.
- Where bedroom or living area windows, either from that or neighbouring developments, overlook the collection point, a fixed and embedded rubber pad is required to overlay the concrete in order to minimise noise impacts.
## Garbage Service Matrix

<table>
<thead>
<tr>
<th>Number of villas/townhouses</th>
<th>No. 240L bins</th>
<th>No. of Containers</th>
<th>No. Collections Per week</th>
<th>Co-Mingled Garden waste</th>
<th>Total number of bins</th>
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