

SNOWY RIVER SHIRE COUNCIL

DEVELOPMENT CONTROL PLAN 1998

CIRCULAR T2

TYROLEAN VILLAGE
(STAGE 3)

ADOPTED BY COUNCIL ON 20 DECEMBER 2011

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SECTION 1

INTRODUCTION

The intent of Circular T2 is:

1. To provide controls for the subdivision, including the development of land to be dedicated as public open space; and
2. To facilitate development that will contribute to the overall character of Tyrolean Village; and
3. To provide controls for built form and housing within Tyrolean Village Stage 3.

Circular T2 is intended to be used by landowners, the community in general, architects, town planners, engineers, building designers, council officers and councillors. It applies the principles of the Australian Model Code for Residential Development (AMCORD) and the principles of Ecological Sustainable Development (ESD) to the specific needs of the Tyrolean Village (Stage 3) to ensure that the characteristics and environmental qualities of Tyrolean Village are protected or enhanced by future subdivision and housing development.

1.1 Vision

Tyrolean Village will provide a distinctive natural, built and safe living environment that reflects the alpine region and its mountain and lake setting. The subdivision should adopt a modern Australian architectural style and utilise a variety of well articulated building forms, energy efficient materials and a natural palette of colours that are set in suitably landscaped streets and gardens.

The landscape design for the subdivision should reflect the character of the region, providing predominantly natives species in reserves and open spaces, combined with limited use of exotic species in the streetscape providing colour throughout the autumn months.

The development will maintain strong vehicle and pedestrian links within the subdivision and with the existing village and surrounding area.

Open space has been provided to further contribute to the amenity of the site and provide passive recreational opportunities for the residents of the area. The existing vegetation and natural features on the land such as rock outcrops and areas of natural vegetation will be preserved where possible to preserve the visual amenity of the area.

1.2 Administration

Application of this circular

This Circular applies to land known as Lot 74 , DP 837036 and Lot 56 DP 818775 Parish of Jindabyne . This plan takes precedence over Circular R1 contained within Snowy River Development Control Plan 1998.

Objectives

The objectives for development are:

Sustainable Development

- To create a residential subdivision consistent with the principles for Ecological Sustainable Development.
- To maximize solar orientation of residential lots.

Streets and Public Space

- To provide attractive streetscapes which reinforce the function of the street and enhance the amenity of the natural and built environment.
- To provide an interconnecting street pattern for easy circulation with direct linkages with the surrounding street network.
- To provide pedestrian and cycle links through the site to the existing and proposed pedestrian and cycle networks.
- To provide a safe and efficient system of roads and pathways for vehicular, pedestrian and cycle movements.
- To provide strong pedestrian connections and view corridors to public open space within the development area.

Natural and Architectural Values

- To integrate the principles of water sensitive urban design in all water and soil management measures throughout the site.
- To provide for the protection and enhancement of the natural environment and Aboriginal heritage of the area.
- To preserve the natural features of the site.

Housing

- To allow for the orderly and economic use and development of the land consistent with the character of Tyrolean Village.
- To provide an opportunity for a variety of housing types.

Development Consent

The provisions of Snowy River Local Environmental Plan 1997 (as amended) and the Environmental Planning and Assessment Act (1979) require that development consent be obtained prior to the subdivision of the subject land and / or development for housing and other specific land uses that are permissible in the various zones within the subdivision. For full details of any approvals required prior to undertaking any development in the subdivision, it is strongly advised that you consult with Council.

“Development” means:

- a) The use of land; and
- b) The subdivision of land; and
- c) The erection of a building; and
- d) The carrying out of a work; and
- e) The demolition of a building or work; and
- f) Any other act, matter or thing referred to in Section 26 of the Environmental Planning and Assessment Act that is controlled by the Snowy River Local Environmental Plan 1997.

Your attention is also drawn to the requirements of NSW Exempt and Complying Provisions and Snowy River DCP Circulars C4 – Complying Development and E3 – Exempt Development.

1.3 Relationship with the LEP and other circulars

Clause 72 of the *Environmental Planning and Assessment Act, 1979* and Regulations require that this Circular be consistent with the Snowy River Local Environmental Plan 1997.

Accordingly, this Circular is generally consistent with the provisions of the LEP and Model Provisions contained in the EP&A Act. In the event of any inconsistency, the provisions of the LEP shall prevail.

To encourage good overall design it is important that this Circular be read in conjunction with the other Circulars continued in Snowy River DCP 1998. Where sections of other Circulars are relevant to the land, the subject of this circular, specific reference has been made.

1.4 How to use this Circular

Under Section 79C of the EP&A Act 1979, the Council when determining development applications must consider the contents of this Circular.

This Circular contains a number of sections that provide an introduction, a description of the site context to which this Circular relates, a description of the proposed development, key elements relating to the subdivision of the land and key design features relating to the future development of the land for residential housing.

Section 4 of the plan relates to the key design features of the subdivision. Section 5 of the plan, relates to key design features for a range of residential development. Both of these sections contain statements of intent, performance criteria, and acceptable solutions that make possible the development of an innovative design that addresses a particular site characteristic, whilst still satisfying the intent of the Plan.

Compliance with either the performance criteria or the acceptable solutions does not necessarily mean that development consent will be issued. The extent that the overall design of the proposal addresses the on site constraints and opportunities and how the design meets the intent of each design section will be considered.

The following steps should be followed when preparing a design for urban housing:

Step 1: Check the zoning of the site under the Snowy River Shire LEP to ensure the proposed development is permissible.

Step 2: Determine whether any other Circulars of the DCP that apply to the site.

Step 3: Carefully work through the relevant sections of the Circular, for subdivisions, the Design Elements Structure within Section 4 and for residential development the Key Design Features Built Form within Section 5 of this Circular. The design elements are arranged to work down from broad considerations affecting neighbourhood and streetscape to detailed considerations within the development site. Within each design element, designers should work through the following steps:

Step 4: Read the *intent* of the particular design element.

Step 5: Read the *performance criteria* of the particular design element. It is these components of the Circular that will be used by Council to assess the proposal.

Step 6: Consider the acceptable *solutions*, as these contain useful examples of how the *intent* and *performance criteria* may be satisfied.

1.5 Can the plan be varied?

The controls that are set out in this Circular are generally more detailed than the standards contained in the Snowy River Local Environmental Plan 1997.

Any variation to the acceptable solutions within this Circular can be made where council is satisfied that the design of the proposal is consistent with intent and performance criteria of each section of the Plan unless the provisions are also contained within the Snow River LEP.

An application to vary any acceptable solutions contained within the Circular must be supported by a written statement, and where necessary other supporting documentation, demonstrating how the performance criteria have been satisfied.

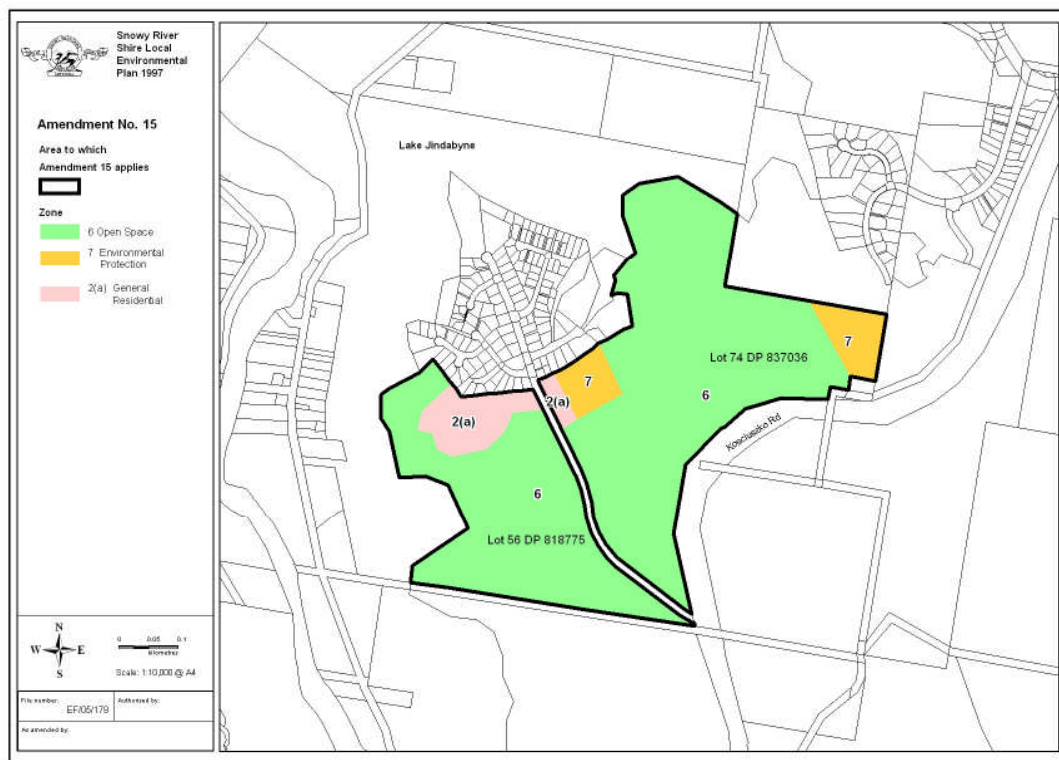
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SECTION 2

CONTEXT AND CHARACTER

The land is known as Lot 74 DP 837036 and Lot 56 DP 818775 and comprises approximately 66.48 hectares. The land is located to the east of Jindabyne, between the Kosciuszko Road and the shore of Lake Jindabyne in the Parish of Jinderboine.

The land is bounded to the east by the Kosciuszko Road and to the northeast by the Alpine Sands development. A cadastral boundary above the high water mark on the eastern shores of Lake Jindabyne forms the western boundary of the area. The southern boundary is formed by an unmade road reservation that runs east-west from the Lake to Kosciuszko Road.



The land is heavily degraded in parts with some areas of native vegetation with granite rock outcrops located across the site. A substantial gully runs in a west to east direction across the southern portion of the site and drains to Lake Jindabyne.

Due to the position of the subject land, views are gained of Lake Jindabyne to the west and Crackenback Range.

The location of the land allows good connections to existing vehicle and pedestrian links. Rainbow Drive, which runs through the land, provides road access to Kosciuszko Road.

SECTION 3

PROPOSED DEVELOPMENT

3.1 Background

The Local Environmental Study (LES) prepared for the land concludes that certain parts of the land are suitable for a mix of uses including some residential development and public open space.

Through Snowy River Local Environmental Plan 1997 (Amendment No 15) the land now comprises a mixture of zones that allow for a variety of uses including residential, open space and environmental protection. The zones include:

- zone 2(a) General Residential,
- zone 6 Open Space; and
- zone 7 Environmental Protection.

The site specific controls provided by Amendment No 15 allow for one dwelling on land zoned 7.

Future development will comprise of

- (a) subdivision in compliance with existing Zones with associated road construction and the provision of infrastructure and creation of areas of public open space, and
- (b) residential development within the developed lots once the subdivision work has been completed.

3.2 Masterplan

A draft master plan was produced as part of the LES. The recommended development areas in the master plan attempt to minimise the visual impact of the development when viewed from Jindabyne and seek to control the stormwater discharge into the existing gully from any future development. Other matters of significance are bushfire management and cultural heritage in the form of Aboriginal artefact scatters. The main features of the masterplan are;

A perimeter road pattern doubling as an asset protection zone for bushfire. The road meets the Council's subdivision standards.

Retention of the 20 metre buffer to the gully. The gullies are stable in their lower reaches but the heads of the gullies require stabilisation and control of runoff from Rainbow Drive;

Provision of residential lots similar to other village allotments;

Stormwater drainage to a detention basin at the lower part of the site, with controlled discharge to the existing gully (stable in this location). Detention basins are used in other areas of the village;

A sewer pump station located adjoining the detention basin, pumping to the sewer main in Rainbow Drive;

Filling of the rear of proposed lots 3-8 to provide drainage back to the new road. These lots back onto existing properties, who have experienced unresolved stormwater drainage issues from the adjoining land in the study area for some time;

A requirement to have a more detailed Archaeological investigation of the artefact scatter site TVE 13, which is located across the proposed roadway and two lots;

A requirement to conduct a more detailed ecological assessment of the masterplan area, particularly the area around proposed lots 15-18 where hollow bearing trees are located.

The lots within the subdivision consist of standard residential lots. They are to range in size from around 750m² to 1200m² within the areas zoned 2(a).

The Masterplan was amended prior to final rezoning and includes an area to the north of Rainbow drive (see below).

SECTION 4

KEY ELEMENTS - STRUCTURE

4.1 Stormwater Management

Submission Requirements

A 'Stormwater Management Plan' shall be submitted to Council for all major developments and where requested by Council. A 'Stormwater Management Plan' may not be required for small development within individual allotments or where drainage characteristics for allotments are largely known or prescribed.

The preparation of a 'Stormwater Management Plan' shall address the following issues:

- site conditions, catchment context and land capability,
- estimates of runoff where significant,
- objectives and strategies for complying with water quality, water quantity, conveyance, discharge and flood protection criteria,
- proposed layout and street design measures to minimise disturbance to natural landscape features and incorporate stormwater source controls in street reserves,
- provision of sufficient information to allow adequate assessment of the stormwater drainage system and its components.

The accompanying plan(s) shall:

- demonstrate methods of integrating the stormwater system with ecological and recreational opportunities,
- demonstrate that Water Quality Treatment and Quantity Control comply with the relevant 'Performance Criteria',
- demonstrate that the minor, major and allotment stormwater systems comply with the relevant 'Performance Criteria',
- demonstrate that the system can be installed, operated and maintained in a cost-effective manner,
- provide details of any necessary covenants for the installation, operation and maintenance of the stormwater system,
- Address any other relevant measures required for the efficient operation, construction or maintenance of the proposed stormwater system.

4.1.1 Water Sensitive Urban Design

The intent of Council's requirements is to ensure that:

- stormwater systems are carefully planned, designed and located to prevent the disturbance, redirection, reshaping or modification of watercourses and associated vegetation
- stormwater harvesting and other source controls are implemented to maximise stormwater reuse and to protect the quality of receiving waters and waterways
- 'Water Smart' practices are promoted within Tyrolean Village for the purpose of environmental sustainability and ease of management.

Performance Criteria	Acceptable Solutions
<p>Engineering Planning –</p> <p>P1.1 The stormwater drainage system is planned and designed to ensure that natural watercourses, associated vegetation and site topography are adequately considered and suitably maintained.</p> <p>P1.2 Stormwater planning, including site layout and building design is undertaken to ensure:</p> <ul style="list-style-type: none"> ▪ The design of the drainage system takes full account of the existing downstream systems. ▪ A variety of controls ('treatment trains') are incorporated into the design of the system that minimise the impacts on water quality and quantity (where required) of stormwater runoff from the site. ▪ The system is accessible and easily maintained, including ready access to system components located on private lands. ▪ The selection of materials, methodologies and mechanisms are based on their suitability, durability and cost-effectiveness, including ongoing maintenance costs. 	<p>A1.1 The design protects natural watercourses and riparian corridors by avoiding disturbance, redirection, reshaping or modification of natural systems.</p> <p>A1.2 A 'Stormwater Management Plan' (SMP) is prepared and lodged that demonstrates the development's ability to meet the principles of Water Cycle Management in the design of the system and incorporates a variety of suitable:</p> <ul style="list-style-type: none"> ▪ Source Controls, ▪ Conveyance Controls, ▪ Discharge Controls, ▪ Water Quality Improvement Controls, ▪ Water Quantity Controls <p>Refer to Section 4.1 for specific requirements of 'Stormwater Management Plans'. Note that not all proposed development requires the preparation of an SMP.</p> <p>A1.3 Proposed cut and fill for roads and allotments shall generally be minimised, but will be dictated by road grading and site access requirements. Driveway access shall be generally in accordance with AS2890.1.</p> <p>A1.4 The design and construction of all drainage systems components shall comply with the requirements of Council's Engineering Guidelines – 'Development Specification Series'; both 'Design' and 'Construction' Sections.</p>

Performance Criteria	Acceptable Solutions										
Water Quality –											
<p>P2.1 Stormwater discharge to surface and underground receiving waters during construction activities and post construction do not degrade the quality of receiving waters.</p> <p>P2.2 The stormwater management system optimises the interception, retention and removal of water borne pollutants before their discharge to receiving waters.</p> <p>P2.3 Point sources of pollution in the catchment are identified and their impacts minimised until they can be eliminated.</p> <p>P2.4 Water quality improvement devices are provided for the treatment of stormwater run-off before discharge from the site and are located to minimise negative impacts on both the natural and built (including traffic management) environments.</p>	<p>A2.1 The development shall incorporate water quality treatment mechanisms to ensure the following targets are met.</p> <table> <tr> <th>Pollutant</th><th>Removal Target</th></tr> <tr> <td>Total Suspended Solids (TSS)</td><td>80% Retention of the average annual load</td></tr> <tr> <td>Total Nitrogen (TN)</td><td>45% Retention of the average annual load</td></tr> <tr> <td>Total Phosphorous (TP)</td><td>45% Retention of the average annual load</td></tr> <tr> <td>Litter (> 50mm)</td><td>Provide mechanisms to retain litter from frequent flows.</td></tr> </table> <p>‘Average Annual Load’ is the yearly weight of pollutants (kg / yr) from the developed site with no pollution controls installed.</p> <p>A2.2 A range of treatment technologies can be used to meet the removal targets. A quantitative analysis demonstrating compliance with these targets is required to be submitted. A number of software packages are available for this task, such as: MUSIC, SWMM, XP Storm, AQUALM XP, EMSS, AQUACYCLE and Switch. Note that some packages are more appropriate for different conditions.</p> <p>A2.3 Development complies with the provisions outlined in Managing Urban Stormwater – Soils and Construction (Published by Landcom - latest revision).</p> <p>A2.4 The design and construction of water pollution minimisation systems complies with Council’s Engineering Guidelines – ‘Development Specification Series’, both ‘Design’ and ‘Construction’ Sections.</p>	Pollutant	Removal Target	Total Suspended Solids (TSS)	80% Retention of the average annual load	Total Nitrogen (TN)	45% Retention of the average annual load	Total Phosphorous (TP)	45% Retention of the average annual load	Litter (> 50mm)	Provide mechanisms to retain litter from frequent flows.
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Performance Criteria	Acceptable Solutions
<p>Water Quantity – P3.1 Natural water bodies, waterways and vegetation are retained and protected from degradation caused by increased stormwater flows where required.</p> <p>Major Drainage System – P4.1 There is the capacity to safely convey:</p> <ul style="list-style-type: none"> ▪ Stormwater flows resulting from the relevant design storm under normal operating conditions, including partial minor drainage system blockage. ▪ Stormwater flows, resulting from more extreme events than the design storm, without any property damage. The design ensures that flow paths would not significantly increase risk to public safety and property. <p>P4.2 Public open space incorporated into the stormwater management system does not hinder the hydraulic effectiveness of the system or public open space uses.</p> <p>P4.3 Ground floor levels of habitable rooms are designed to provide protection to property in accordance with an accepted level of risk.</p> <p>Minor Drainage System – P5.1 There is capacity to control Stormwater flows under normal operating conditions for the relevant Average Recurrence Interval (ARI) design storm, including provision for blockages.</p> <p>P5.2 Drainage works are well defined, ensuring no hidden flow paths and minimising undesirable ponding resulting from the design storm for a prolonged period.</p>	<p>A3.1 A variety of suitable source, conveyance and discharge controls are provided and utilised to minimise the increase and impact of stormwater flows, both for smaller (5yr ARI) through to larger (100yr ARI) rainfall events. The design shall demonstrate that Post-development peak flow does not exceed Pre-development peak flow.</p> <p>A4.1 The design demonstrates that the peak 100yr ARI flow is contained within roads, drainage swales, easements, public space or suitable areas. No concentrated flow derived from public areas shall be directed through private property without the provision of suitable controls and easements.</p> <p>A4.2 The Design demonstrates compliance with the following: $v \cdot d$ (velocity-depth product of peak overland flow) < 0.4 for areas trafficked by pedestrians and < 0.6 for all other areas.</p> <p>A5.1 The minor drainage system shall be design to safely control and convey the critical 5yr ARI event, including the design provision of a 50% blockage to all inlet structures.</p> <p>A5.2 The design shall demonstrate compliance with the following:</p> <ul style="list-style-type: none"> ▪ Ponding is limited to a maximum 200mm depth for above ground non-road surfaces, ▪ The maximum kerb flow width within roads shall be 2.4m,

Performance Criteria	Acceptable Solutions
<p>Allotment Drainage –</p> <p>P6.1 The system has the capacity to control allotment surface stormwater flow and excess flow from upstream properties to prevent stormwater from entering the building in the design event.</p> <p>P6.2 The system minimises undesirable ponding for a prolonged period.</p> <p>P6.3 A variety of source control measures are incorporated into the design of the system to control runoff quantity (where required) and quality from the site.</p> <p>P6.4 Development is located and designed to prevent water inundation as a result of incidental flooding.</p>	<ul style="list-style-type: none"> ▪ $v \cdot d$ (velocity-depth product of peak overland flow) < 0.4, ▪ Velocity < 2 ms⁻¹ in untreated landscaped surfaces (note that appropriate surface treatments may be required on steep surface (>5%) or where large flows are concentrated). <p>A5.3 Water Sensitive Design techniques shall be adequately considered and shall be designed to complement site soils, aspects, grades and traffic management.</p> <p>A6.1 Where the topography of the site makes it necessary to discharge stormwater run-off to the rear of the site, the run-off from all directly connected impervious areas is to an inter-allotment drainage system.</p> <p>A6.2 The design shall demonstrate that Post-development peak flow does not exceed Pre-development peak flow. The use of infiltration and dispersion techniques should be adequately considered. Refer to Appendix A for additional information and 'typical examples'.</p> <p>A6.3 If soil conditions are suitable, infiltration and dispersion techniques should be considered as a component of the minor drainage system. Setbacks from buildings and boundaries require consideration. In clayey soils, these devices should generally not be less than 4m from structural footings.</p> <p>A6.4 The design shall demonstrate compliance with the following:</p> <ul style="list-style-type: none"> ▪ Proposed cut and fill considers the implications of incidental flooding and does not impound or redirect runoff to affect other properties. ▪ Proposed cut and fill shall generally be minimised, but will be dictated by site access requirements. ▪ For residential development,

Performance Criteria	Acceptable Solutions
<p>Water Storage Tanks</p> <p>P7.1 Stormwater harvesting measures are implemented to maximise stormwater reuse and prevent an increase in the quantity of stormwater discharge from the development site which can impact on downstream environments.</p>	<p>finished floor level is at least 150mm above finished ground level (note that more may be required to ensure adequate drainage during all rainfall events).</p> <ul style="list-style-type: none"> ▪ For non-habitable development, finished floor level is at least 100mm above finished ground level (note that more may be required to ensure adequate drainage during all rainfall events). <p>A7.1 Where water tanks for the collection of roof water are provided, the following shall be adhered to:</p> <ul style="list-style-type: none"> ▪ Rainwater sourced only from roof surfaces, ▪ The collection system incorporates an effective 'first flush' device for the removal roof surface contamination. All first flush devices shall be designed and constructed in accordance with AS/NZS 2179 (latest version), ▪ Insect screens on overflow pipes and insect proof lids on inspection openings, ▪ The tank system is connected for use in toilet flushing, irrigation, laundry and/or other appropriate purposes as required by BASIX, ▪ Tank overflow is connected to an Infiltration or Dispersion device (where soil types, surface slopes and building layouts are suitable) or formalised stormwater drainage system (minor system – note the maximum discharge per outlet to street back-of-kerb shall be 25 l/s with minimum 10m between outlets), ▪ No direct connection with a reticulated system operated by the Snowy River Shire Council (top-up systems or approved switching devices with backflow prevention devices can be used), ▪ Australian Standards approval marks on materials that will come into contact with rainwater such as: <ul style="list-style-type: none"> ○ AS 2070, Plastic materials for

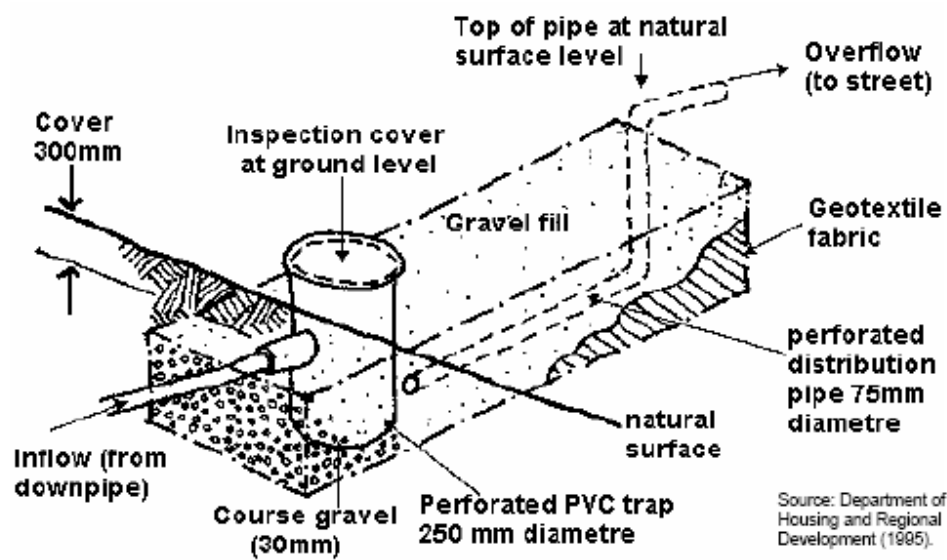
Performance Criteria	Acceptable Solutions
	<p>food contact use;</p> <ul style="list-style-type: none"> ○ AS/NZS 2179-1994 Specifications for rainwater goods, accessories and fasteners; ○ AS 2180 – 1986 Metal rainwater goods – selection and installation; ○ AS 3500.1 – 1992 National plumbing and drainage code. Part 1:Water supply; ○ AS 3855 – 1994 Suitability of plumbing and water distribution systems products for contact with potable water; ○ AS 4020 Products for use in contact with water intended for human consumption with regard to their effect on the quality of water. <p>A7.2Where water tanks for the collection of rain water (other than roof water) are provided:</p> <ul style="list-style-type: none"> ▪ Rainwater is sourced from driveways, paved surfaces or grassed areas, ▪ The system is connected for use in toilet flushing, irrigation and/or other appropriate purposes, ▪ Overflow is connected to an Infiltration or Dispersion device (where soil types, surface slopes and building layouts are suitable) or formalised stormwater drainage system (minor system), ▪ There is no direct connection with a reticulated system operated by the Snowy River Shire Council (top-up systems or approved switching devices with backflow prevention devices can be used), ▪ The collection system incorporates suitable treatment measures, such as a first flush pit or an oil/grit separator, ▪ All fixtures connected to the supply system are marked 'NOT SUITABLE FOR DRINKING'. <p>A7.3The minimum capacity of such tanks shall be determined as required under BASIX assessments for individual dwellings.</p>

Performance Criteria	Acceptable Solutions
<p>Permeable Pavements</p> <p>P8.1 Permeable paving is to be designed and installed where practical to minimise runoff from roads.</p> <p>P8.2 Paving units and placement geometries are suitable for the expected traffic loading,</p> <p>P8.3 Permeable Pavement is to be selected to satisfy appropriate standards for site suitability, installation, insitu soil characteristics, freeze-thaw processes, likely traffic loading, maintenance and protection from material likely to cause clogging or otherwise hinder performance.</p>	<p>A8.1 Pavements are not to receive runoff from areas likely to contribute significant sediment, debris or windblown material,</p> <p>A8.2 Paving units are manufactured and placed to comply with freeze-thaw durability processes and comply with ASTM C1262 –95,</p> <p>A8.3 Where runoff is derived from non-impervious surfaces, flow shall be pre-treated through the careful placement and design of sediment traps, vegetated filter strips or specially designed gutter systems, Commercially available segmental pavers are installed and maintained in accordance with the manufacturer's and Council's recommendations, Temporary protection methods and processes are to be implemented during construction operations to control sedimentation and clogging of permeable pavement and granular underlay materials.</p>
<p>Infiltration Systems</p> <p>P9.1 On-site infiltration systems are to be used where the suitability of insitu soils in relation to hydraulic conductivity can be demonstrated (typically by site testing using 'falling' and 'constant head' tests).</p> <p>P9.2 The design of infiltration systems must consider soil erodability, soil dispersivity, soil heave, potential impact on adjacent buildings and boundary offsets.</p>	<p>A9.1 The design of infiltration systems shall:</p> <ul style="list-style-type: none"> ▪ Consider acceptable minimum buffers from existing buildings and boundaries. The distance between an infiltration or dispersion device and nearby buildings and boundaries requires site specific consideration; however it shall not be less than 4m unless supported by geotechnical advice, ▪ Be designed to accept the critical 5yr ARI event without surcharge, ▪ A high level overflow provision to the formalised drainage system is required unless the system can be demonstrated to accept the critical 100yr ARI event, ▪ Aggregate filled trench systems are acceptable provided that clean washed aggregate, or granular materials, free of fines is used in

Performance Criteria	Acceptable Solutions
	<p>conjunction with a permeable geotextile surround. Inspection / flushing points are required to allow easy access to below ground pipe work for maintenance,</p> <ul style="list-style-type: none"> ▪ The inlet to the device is fitted with a readily accessible silt trap (with inspection and access cover), <p>A9.2 Design and construction is generally consistent with Section 9.4 of Managing Urban Stormwater – Soils and Construction Manual (Produced by Landcom – latest revision)</p>



Example of Rainwater Tank



Retention / Overflow Trench

4.2 Landscape

The intent of Council's requirements is to ensure that appropriate landscaping is provided within Council's streets and reserves, which is consistent with the character and vegetation that is typical in the area.

Performance Criteria	Acceptable Solutions
<p>P1.1 The landscaping is to reflect the sub-alpine character of the region with flatter open areas planted with deciduous trees and conifers to highlight nodal points and provide seasonal variation and climate control.</p> <p>P1.2 The palette of street trees to be used within Tyrolean Village is to be based on providing species that are suited to the local conditions and provide year round interest.</p> <p>P1.3 Feature tree planting to be provided at nodal points within open space areas to highlight their importance and locality.</p> <p>P1.4 Landscaping is to be provided to reduce the visual scale of the streets and further enhance in the pedestrian environment.</p> <p>P1.5 Street trees are provided so that:</p> <ul style="list-style-type: none">▪ A network of themed streets reflects the overall road hierarchy and creates identities for different areas▪ The use of flowering exotics and colorful deciduous trees to create a distinct character for the subdivision as well as greater Jindabyne▪ Feature trees mark site entry points, intersections, and other visually prominent areas▪ Trees and vegetation combinations will be a year round feature▪ Trees form a clean trunk to maintain vehicular site lines and allow surveillance of open space areas, and▪ Trees are hardy and long lived. <p>P2.1 Community reserves and parks are to be planted with predominantly native species to ensure a comfortable and safe recreational environment for Tyrolean Village residents.</p>	<p>A1 1 Landscaping is to be provided generally in accordance with the requirements of Circular L2 of Snowy River Shire Development Control Plan 1998, the Landscaping Concept Plan prepared by Millar and Merrigan and the Species list in Appendix B.</p>

Performance Criteria	Acceptable Solutions
<p>P2.2 Landscaping within the open space areas are to be planted with predominantly native species to enhance the biodiversity values and visual amenity of these areas.</p>	

4.3 Lot Layout

The intent of Council's requirements is to ensure that lot layout:

- provides for the efficient use of the land and is integrated into the established subdivision patterns of Jindabyne,
- provides a defined and positive streetscape character,
- enhances accessibility and safety and promotes the principles of ecological sustainability.

Performance Criteria	Acceptable Solutions
<p>P1.1 The lot layout responds to site characteristics, setting, landmarks, views, and land capability and traffic planning principles contained in 4.7.</p> <p>P1.2 The proposed lots are orientated to maximise solar access.</p> <p>P1.3 Lot design is to encourage dwellings to front major streets and public open space, to enhance amenity, safety and pedestrian comfort through increased passive surveillance.</p> <p>P1.4 Lot design is to facilitate safe and efficient vehicle access without street frontages being dominated by garages and parked cars.</p> <p>P1.5 Proposed lots enable the comfortable siting of housing and ancillary buildings, provision of outdoor space.</p> <p>P1.6 The perimeter roads bordering open space areas allow for a parkland outlook for lots adjacent to open space.</p> <p>P1.7 The subdivision pattern should present a clear urban structure with a legible road hierarchy to enhance pedestrian and traffic permeability, and provide significant open space corridors.</p> <p>P1.8 The layout of the streets is to follow the existing topography and prevent the formation of gun barrel roads. The layout is to allow, where appropriate, one way cross falls of the local streets which fall directly into the stormwater management swales.</p> <p>P1.9 Lot size and layout of the subdivision should provide opportunities for a variety of housing sizes and types.</p>	

4.4 Pedestrian and Cycleway Network

The intent of Council's requirements is to encourage walking and cycling by providing safe, convenient and legible movement networks to points of attraction within and beyond the development.

Performance Criteria	Acceptable Solutions
<p>Planning</p> <p>P1 The residential street and path network provides a network of pedestrian routes, and low speed and volume routes for cyclists, with connections to adjoining streets, open spaces and activity centres.</p> <p>P2 A network of pedestrian ways and cycle routes is provided in accordance with:</p> <ul style="list-style-type: none"> • the need to encourage walking and cycling; • likely users (e.g. school children, parents with prams, the aged and/or people with disabilities, commuter and recreational cyclists); • opportunities to link open space networks and community facilities, including public transport stations/ stops, local activity centres, and schools; • topography; • cyclist and pedestrian safety. <p>Location and design</p> <p>P3 The location of footpaths and cycleways in a street reservation is determined by:</p> <ul style="list-style-type: none"> • whether vehicle speeds and volumes are low • and the use of the street pavement by cyclists does not affect the comfort and safety of pedestrians; • whether pedestrians and cyclists are protected from parked vehicles and vehicles moving along the street and on driveways; • whether postal delivery will be significantly inconvenienced; • the location of physical services; 	<p>P3.1 The location of pathways is to be consistent with the requirements of the Snowy River Shire Council Jindabyne Shared Pathways Strategy Stage 1 (April 2002).</p>

- cross falls;
- landscaping;
- whether there is any development fronting that
- part or side of the street;
- cyclist and pedestrian personal safety;
- cost-effective construction.

P4 The alignment of paths allows safe and convenient use by pedestrians and cyclists and is varied to preserve trees and other significant features. A focus on vistas and landmarks add visual interest where they exist.

P5 Pedestrian paths and cycleways are well lit and located where there is casual surveillance.

P6 Footpaths or shared paths are designed and constructed of appropriate width, longitudinal gradient and sight distance to cater for the number of projected pedestrians and cyclists, and user types (eg the aged, the very young, people with prams and in wheelchairs, and people with disabilities).

P7 Design of the street and the pavement accommodates pedestrian and cyclist use of street pavements in access places, and cyclist use of street pavements in access streets and collector streets.

P8 Provision is made for the location of seats at appropriate points.

P9 There is adequate provision for passing with paths widened at potential conflict points or junctions on high use facilities to allow for passing of pedestrians/cyclists in opposite directions.

Safe crossings

P10 Safe street crossings are provided for all street users with safe sight distances and adequate pavement markings, warning signs and safety rails (where appropriate for cyclists).

A6.1 The design and construction of the footpaths and cycleways complies with Council's Engineering Guidelines – 'Development Specification Series', both 'Design' and 'Construction' Sections.

A6.2 The cycleways are to be provided in accordance with Guide to Traffic Engineering Practice – Part 14, Bicycles Guide to Traffic Engineering Practice – Part 14, Bicycles (Austroads 1999).

A10 Pram and wheelchair crossings are provided at all kerbs and are adequately designed for this purpose as well as assisting sight impaired people in accordance with AS1428.1— 1993.

4.5 Public Open Space

The intent of Council's requirements is to ensure the provision of well located and accessible public open spaces that meet user needs.

Performance Criteria

P1.2 Public open space is designed to provide:

- A range of recreational and environmental settings, corridors and focal points,
- Adequate facilities to meet community needs and expectations based on the population density and demographic structure of the subdivision and/or the local, district or regional area,
- Protection of existing endemic vegetation and encouragement of natural regeneration,
- A response to the opportunities and constraints presented by the physical characteristics and environmental values of the land in the proposed use, and facilities provided,
- For the integration of existing landscape assets e.g. rock outcrops, watercourses, native vegetation communities and sites of natural or cultural value,
- Links between public open spaces to form a legible network,
- Public safety and reasonable amenity of adjoining land users in the design of facilities and associated engineering works.

Acceptable Solutions

P1.1 Parks are to be bound by public streets and fronted by houses, increasing the passive surveillance of the park as well as the value and outlook from the surrounding properties.

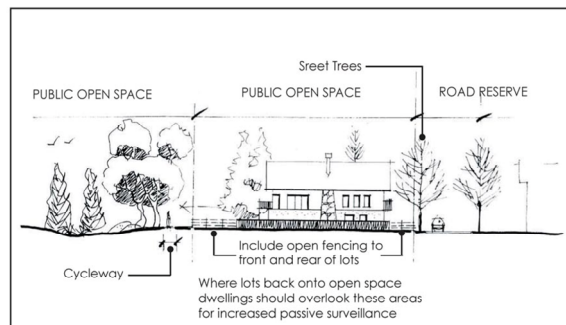


Figure 5.1 Example of dwelling backing onto open space

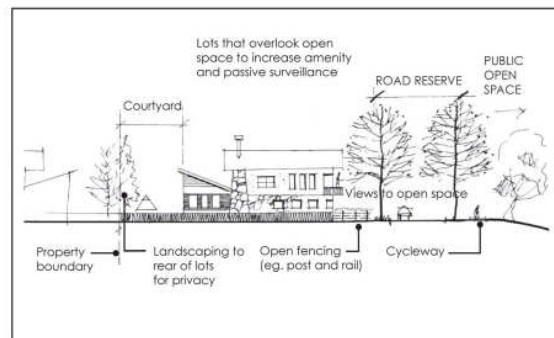


Figure 5.2 Example of dwelling fronting open space

4.6 Biodiversity and Natural Resource Management

The intent of Council's requirements is to conserve the biodiversity of the local area and the surrounding region and ensure that the natural features of the site are preserved and enhanced.

Performance Criteria	Acceptable Solutions
<p>P1.1 Endemic trees, shrubs and groundcovers are to be provided within the central open space area and conservation areas.</p> <p>P1.2 For rehabilitation works within the open space and conservation areas locally sourced seed is to be used where possible to assist in maintaining genetic integrity of local plant communities.</p> <p>P1.3 Where possible, existing native trees are to be retained within both open space and larger lot developments in order to provide habitat for bird and other native fauna and to provide a valuable source of seed for revegetation work.</p> <p>P1.3 Groupings of native trees are to be utilised in the open space areas to reduce the visual effects of urban development and retain the natural character of the region.</p> <p>P2 Existing flora and fauna habitat is preserved to minimise any impact on threatened species, protected and threatened populations and their habitat.</p>	<p>A1.1 Extensive tree planting of suitable native species that are endemic to the area is to be provided to the riparian areas.</p> <p>A1.2 All species are to be selected from the list of proposed planting contained in Annexure B.</p> <p>A1.3 Existing native trees as identified within the landscape plan which forms part of this circular which are located within the proposed open space area adjacent the eastern portion of the site, off Rainbow Drive are to be retained and supplemented with additional planting.</p> <p>P1.4 The central open space corridor the riparian area along Lake Jindabyne and conservation zones are to be planted with endemic native trees and shrubs and focus on reestablishing the natural vegetation within environmentally sensitive areas such as along the creek line and on the visually prominent ridges.</p> <p>A2 To reduce the potential impacts of the proposed development on protected and threatened populations of flora and fauna the following matters are to be considered in design of the subdivision of the subject site:</p> <ul style="list-style-type: none"> • Large mature hollow bearing eucalypts should be retained where possible. • Removal of boulders and disturbance of rocky outcrops should be avoided where possible. Where boulders are to be disturbed they should be redistributed and utilised for landscaping purposes on site. • Development is to be concentrated in

the disturbed areas of the site.

- Disturbance of snow gum woodland areas to the south of Kosciuszko Road and black sallee woodland along Lake Jindabyne should be avoided.
- Avoid disturbing the ROTAP species identified, Anchor Plant (*Discaria pubescens*) across the site.
- Implementation of a soil and water management plan, including storm water management plan in accordance with Section 4.1 of this Circular, to minimise the impact of the subdivision on habitat and downstream of the site.
- Site development should be managed to avoid indirect impacts by:
 - Sediment control measures, to avoid siltation of drainage lines and potentially Lake Jindabyne,
 - Pollution control measures, to reduce the risk of hydrocarbon spills during works and the discharge of increased nutrient loads into waterways during and following development,
- Rapid stabilisation and revegetation of disturbed sites is to be undertaken to reduce the ability of weed species to dominate disturbed sites.

4.7 Access/ Traffic and Road Design

The intent of Council's requirements is to ensure that a safe and efficient road network is provided and integrates with the existing road network.

The development of the Tyrolean Village will generate additional traffic movements internal and external to the subdivision site itself. The assessment of traffic impacts from this development must take account of the scale of development expected to occur on the subdivided lots including dual occupancies, medium density and where permissible, commercial development, as the subdivision provides the best opportunity for providing the standard of infrastructure necessary to service to expected pattern of occupation of this development.

A variation to the following acceptable solutions can be made where council is satisfied that the design of the proposal is consistent with the intent, principle and performance criteria contained in this section (4.7). An application to vary an acceptable solution must be supported by a written statement, and where necessary other supporting documentation, demonstrating how the performance criteria have been satisfied.

Performance Criteria	Acceptable Solutions
<p>P1.1 Adequate road widths and the creation of a road hierarchy to assist in the legibility and for ease of navigation through the subdivision and ensure appropriate connections and relationships with the existing road system.</p> <p>P1.2 The road system provides a simple and efficient flow of traffic through the residential area and allows traffic to quickly and evenly disperse along the local road network.</p> <p>P1.3 Internal and external connectivity is increased through using a modified grid pattern layout that minimises cul-de-sac and dead end streets.</p> <p>P2.1 Junctions along collector and local roads are spaced to create safe and convenient movement.</p> <p>P2.2 Collector and local roads provide opportunities for pedestrian and cycle path network links that encourage walking and cycling</p> <p>P2.3 Roads adjoining open space facilitated public access and surveillance of the open space areas.</p> <p>P3.1 Local roads do not operate as through traffic roads for externally generated traffic, and limit local drivers' need to speed in a low speed environment.</p> <p>P3.2 Road reserves provide for the cost effective provision of public utilities and planting opportunities.</p> <p>P4.1 Bus routes are direct and safely accessible by pedestrians from all houses and activity centres.</p> <p>P4.2 The alignment and geometry of roads that form identified bus routes allow for efficient unimpeded movement for buses without facilitating high traffic speeds.</p>	<p>A1.1 Road and intersection designs shall be in accordance with Council's design guidelines</p> <p>A1.2 All roads shall have a maximum design speed of 50 kph.</p> <p>A1.3 All road widths are to be in accordance with Table 2 below.</p> <p>A1.4 Traffic calming devices, landscaped islands and intersection design shall be considered on individual merits, but in all cases shall conform with Council's Engineering Guidelines – 'Development Specification Series'; both 'Design' and 'Construction' Sections.</p> <p>A1.5 Minimum and maximum road grades shall be used to define site levels, however cut / fill should generally be minimised.</p> <p>A1.6 All roads shall be designed and constructed in conformity with Council's Development Specification Series.</p> <p>A4.1 Roads that are to be used as bus routes are to be constructed in accordance with Council's Engineering Guidelines – 'Development Specification Series'; both 'Design' and 'Construction' Sections.</p> <p>A4.2 Bus stops are to be located so that they are within 400m walking distance from each dwelling.</p>

Table 2: Tyrolean Village Road Characteristics (Residential Development). .

Road Type	Maximum Speed (km/hr)	Carriageway Width (m)	Parking Provisions within Road Reserve	Kerbing (See Note 1)	Footpath Requirement (See Note 2)	<u>Minimum</u> Verge Width (m) (See Note 3)	<u>Minimum</u> Road Reserve Width (m)
Access Street	25	6.0 m	Permitted on both sides of Carriageway	Defined by drainage scheme	1.2m wide footpath to one side only	2.5 m	15 m
Local Street	40	8.0 m	Permitted on both sides of Carriageway	Defined by drainage scheme	1.2m wide footpath to one side only	2.5 m	15 m
Collector	50	9.0 m	Permitted on both sides of Carriageway	Upright kerb for bus route, otherwise defined by drainage scheme	1.2m wide footpath to one side only	3.5 m	18 m

Note 1 - The designer shall provide roadside kerbing that is amenable with the drainage design and appropriate for traffic management. (Examples of suitable kerbing are kerb only, kerb & gutter, mountable kerb, roll kerb, flush kerb, transitioning kerbs, and various combinations of these).

Note 2 - Footpath widths shall be 1.2m unless required as a cycle way as defined within Figure 3. Cycle ways shall have a minimum 2.5m wide pavement.

Note 3 - Different verge widths for each side of the road may be used to help facilitate drainage, however specified minimums remain.

4.8 Utilities

The intent of Council's requirements is to ensure adequate and non-intrusive infrastructure is provided within the Tyrolean Village to cater to the future residents of the subdivision.

Performance Criteria	Acceptable Solutions
P1 Infrastructure is to be provided throughout the subdivision in accordance with the requirements of the relevant infrastructure provider.	A1.1 Development within each stage of the subdivision shall not proceed until such time as the necessary services are available, to the satisfaction of Council A1.2 It is the developer's responsibility to negotiate with the various utility authorities in order to reticulate their services in common trenching, where relevant. A1.3 Electricity reticulation shall be underground

4.9 Public Safety

The intent of Council's requirements is to ensure that the subdivision pattern and future development of the Tyrolean Village will provide a built environment that will make the residents and visitors to the subdivision feel safe.

Performance Criteria	Acceptable Solutions
<p>P1.1 A high degree of surveillance of the street and open space areas and provide permeability to allow pedestrians, cyclists, and vehicles to move easily through the subdivision.</p>	<p>A1.1 Open fencing shall be provided at the rear of dwellings that adjoin public open space to encourage surveillance of these areas in accordance with Section 5.11 of this Circular.</p>
<p>P1.2 Surveillance of the street and public open space areas should be encouraged by:</p> <ul style="list-style-type: none">• providing opportunities for dwellings to overlook the street and open space.• limiting the use of high fences at the front of dwellings and by ensuring that living areas of dwellings address the street.	<p>A1.2 Public pathways are to be constructed in accordance with Council's Engineering Guidelines – 'Development Specification Series'; both 'Design' and 'Construction' Sections.</p>
<p>P1.3 The location of public pathways should be readily identifiable and be located on the regularly used pedestrian and cycle routes within and through the site.</p>	
<p>P1.4 The development shall generally be lit, primarily along pedestrian corridors, functioning open space, street intersections, and entry features.</p>	
<p>P1.5 A comprehensive network of pedestrian and cycleways should be provided throughout the subdivision to provide regular surveillance, provide a high level of safety and reduce the incidence of vandalism.</p>	

4.10 Archaeology

The intent of Council's requirements is to ensure that the archaeological relics are protected.

Performance Criteria	Acceptable Solutions
P1 Archaeological relics that are contained on site are preserved where possible and where they cannot be preserved, appropriate approvals are obtained for them to be destroyed.	<p>A1 Any works on the subject land should be in accordance with the National Parks and Wildlife Service Act. In particular the following requirements–</p> <ul style="list-style-type: none">• Anyone who discovers an aboriginal relic must report it to the Director General of NSW DEC,• A person must not knowingly destroy, damage or deface or knowingly cause or permit the destruction, damage or defacement of any aboriginal object or aboriginal place without first obtaining the consent of the Director General of NSW DEC.• A person must not excavate or disturb land for the purpose of discovering an aboriginal object without first obtaining the consent of the Director General of NSW DEC. <p>A2 The subject land contains archaeological relics therefore the consent of the Director General of NSW DEC must be obtained to destroy the artefacts identified in the Aboriginal Archaeological Assessment prepared by Julie Dibden of New South Wales Archaeology Pty Ltd (May 2005).</p>

SECTION 5

KEY DESIGN FEATURES BUILT FORM DWELLINGS AND DUAL OCCUPANCIES.

DESIGN ELEMENTS

5.1 Site Analysis

A Site Analysis shall be prepared and lodged with the Development Application. Completing the Site Analysis is not only necessary to support a Development Application, but will also assist in design decisions based on site conditions and surrounding context. It can assist in ensuring:

- Privacy for occupants and the maintenance of neighbours' privacy and amenity,
- Sufficient solar access and natural ventilation to provide a comfortable and energy efficient living environment,
- Suitably located and useable private outdoor areas,
- The existing character of the street is maintained through setbacks, separation and height, driveway and car parking location,
- Views from the site are optimised for both the development and neighbours.
- Circulation and access is suitably located for the development and the locality,
- The construction of the development is suitable to the slope of the land and minimises the need for cut and fill,
- Cost effective development in relation to connection to services and existing land uses,
- The need for the removal of trees and site features such as rock outcrops is minimised by locating the development to retain existing vegetation and natural features,
- Safety and surveillance of the development and the locality is maximised,
- The Site Analysis should work to collate and present a range of information. This information includes, but is not limited to, that detailed in the following checklist for Site Analysis Plans.

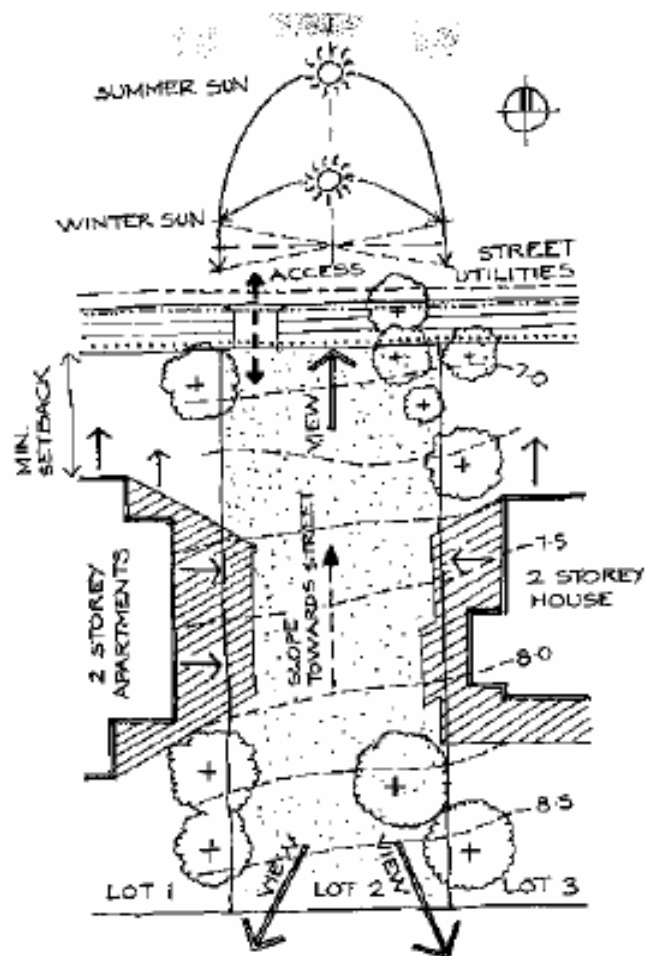


Figure 1.1 Example of a Site Analysis Plan

Checklist for Residential Site Analysis

A site analysis identifies the following:-

- Scale and north point;
- site dimensions and site area;
- spot levels and contours;
- views to and from the site;
- prevailing winds;
- pedestrian and vehicular access to/from the site;
- location, height and use of neighbouring building or structures;
- abutting private open spaces and any windows or doors facing the subject site;
- views and solar access enjoyed by adjacent residents;
- easements for drainage, services and rights of carriageway burdening or benefiting the subject property;
- location of existing vegetation, including species, height, spread of established trees and spot levels at their base;
- calculation of maximum built-upon areas, landscaped area and floor space ratio;
- natural features such as rock outcrops, ledges or watercourse;
- fences and boundaries;
- street frontage features such as street trees;
- existing means of stormwater drainage and any existing stormwater detention systems;
- surrounding bushland;
- any difference in levels between adjacent property boundaries.

5.2 Site Planning and Layout

The intent of Council's requirements is to ensure that the site layout provides a pleasant, attractive, manageable and resource efficient living environment.

Performance Criteria	Acceptable Solutions
<p>P1 The site layout and planning is to integrate with the surrounding environment through:</p> <ul style="list-style-type: none">• Adequate pedestrian, cycle and vehicle links to the street and any open space networks.• Buildings facing streets and open space areas.• Buildings, streetscape and landscape design taking into account on-site features identified in the site analysis.• Maintaining streetscape and amenity.• Ensuring solar access to living areas and private open space area.• Designing open space areas that optimise solar access, which are cost-effective to maintain and where possible contribute to stormwater management.	<p>A1 A Statement of Environmental Effects and a detailed site analysis plan are submitted with the Development application demonstrating how the development addresses the issues outlined within the Performance Criteria.</p>
<p>P2 Development on visually prominent sites should recognise the unique responsibility to ensure that the visual, scenic, and environmental qualities of the locality are maintained.</p>	
<p>P3 The development allows for the provision of landscaping that provides suitable areas for tree plantings to grow to maturity.</p>	

5.3 Streetscape and Building Siting

The intent of Council's requirements is to ensure that the siting and form of housing provides attractive streetscapes, residential amenity and does not adversely impact on the existing residential character.

5.3.1 Front Setbacks	
Performance Criteria	Acceptable Solutions
<p>P1.1 The front setback compliments existing setbacks in the street and responds to the context of the locality.</p> <p>P1.2 The development scale and appearance is compatible and sympathetic to existing development in the locality.</p> <p>P1.3 Setbacks provide space for residents to feel an adequate sense of visual and acoustic privacy when using rooms fronting the street.</p> <p>P1.5 The front setback should be sufficient to provide gardens in order to screen and separate buildings from neighbours, adjacent streets, and reserves.</p> <p>P1.6 Development should minimize disturbance to existing natural features and should not significantly impact on the streetscape.</p>	<p>A 1.1 The front setback is to comply with the following: Single storey dwellings, dual occupancy, medium density and integrated development (see note 1) 6</p> <p>A1.2 The upper floor of 2 storey development can be setback 6m if it occupies less than 30% of the width of the building and the front elevation is articulated or stepped or provided with a projecting balcony or awning at upper floor level. (<i>figure 3.1</i>)</p> <p>A1.3 Garages are to be setback an additional 1 metre from the front boundary unless they occupy less than 30% of the street frontage or are contained within the lower floor level of a two storey part of the building. (<i>figure 3.2</i>)</p>

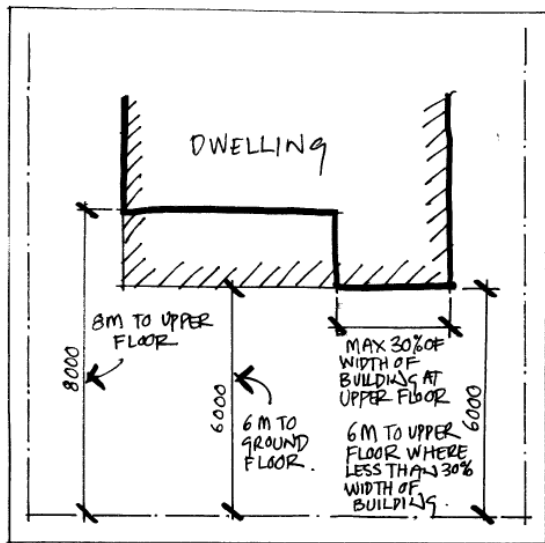


Figure 3.1 Setback requirements for 2 storey development.

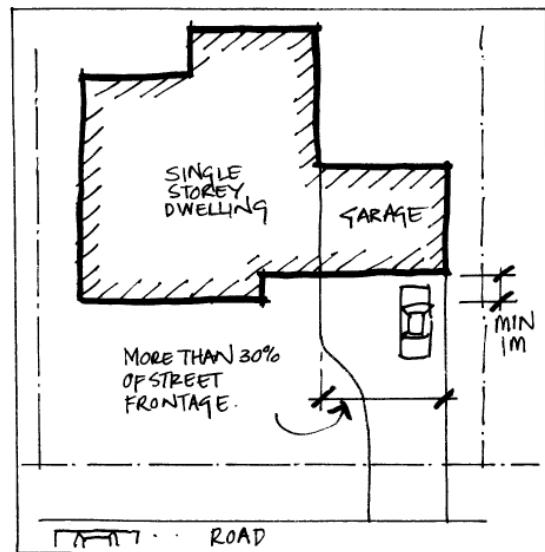


Figure 3.2 Setbacks for garages for single storey dwellings.



Example of garage at lower floor level

Performance Criteria

P2 Development on corner lots does not impact on the streetscape of the secondary street.

Acceptable Solutions

A2.1 On corner allotments a setback of 3m for single storey and 4m for two storey developments will be applied to the secondary frontage provided that, the unbroken length of wall does not exceed 8m and the building has been designed to provide an attractive appearance to the secondary street frontage.

Notes

1. Decks at or near ground level, eaves up to 600mm wide, entry patios up to 3m wide and stairs less than 1m above ground level are permitted to encroach on the building setback
2. The front setback is to be measured perpendicular to the front boundary to the front wall of the building or deck/ balcony see figure 3.3

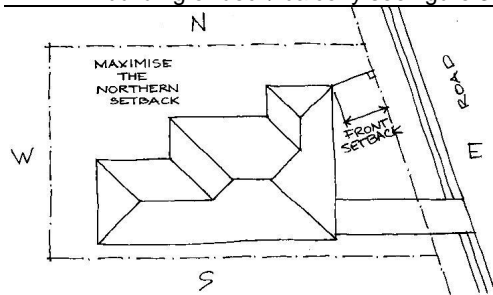


Figure 3.3 Front setback measured perpendicular to front boundary

5.3.2 Side and rear setbacks

Performance Criteria

P1 Side and rear setbacks maximize outdoor living areas, privacy and solar access.

P2.1 Setbacks progressively increase as wall heights increase to reduce visual bulk and overbearing.

P2.2 Adequate separation is provided between buildings for privacy and sunlight.

Acceptable Solutions

A1 The side and rear setbacks shall be:

single dwellings, dual occupancy,	1m
medium density and integrated development	
residential flat buildings	3m

A2 As the height of the building increases, the side boundary setback is to be increased to comply with the building envelope requirements contained in Section 5.4.

Notes

1. The following structures are permitted within the side setback : unroofed terraces, landings, steps or ramps not more than 1m in height above natural ground level, fascias, gutters, downpipes, eaves up to 600mm, pergolas, awnings, light fittings, electricity or gas meters and aerials, masonry chimneys, flue pipes for cooking or heating appliances, domestic fuel tanks, or other services.(air conditioners are not be located in the site boundary setback)
2. The Building Code of Australia requires eaves to be sited a minimum of 500mm from the side boundary.

5.4 Building Heights

The intent of Council's requirements is to ensure that building height is compatible with surrounding development and the locality and does not impact significantly on the scenic quality of the area.

Performance Criteria

P1.1 Development responds to its context and adopts the predominant scale, height and bulk of adjoining buildings.

P1.2 New buildings do not dominate their landscape setting or surrounding streetscape and are in proportion to the slope and frontage of each allotment and shaped to disguise their size, scale and bulk.

Acceptable Solutions

A1.1 No point in any structure shall be higher than 9m above natural ground level immediately below that point. (SRLEP 1997)

A1.2 For development that is proposed to be higher than existing development, a transition of building heights should be shown between the existing and proposed development.

A1.3 Any structure (excluding eaves up to 600mm wide) within the built upon area of the site shall not exceed a high plain projected at an angle of 45° over the actual land to be built upon from a vertical distance of 3.5m above natural ground level at a point on the boundary of the site.

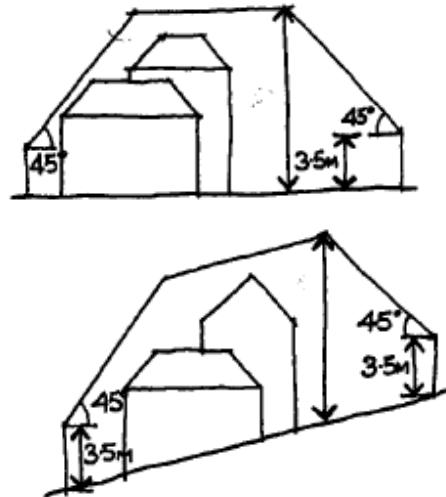



Figure 4.1 Building Envelope

A1.4 Single dwellings and dual occupancy buildings, should not exceed two habitable storeys at any point,

A1.5 Only on sloping sites sub floor areas may be used for basement car parking or for an entrance hallway not wider than 2.5m (measured parallel to the street

Performance Criteria	Acceptable Solutions
<p>P2.1 Development provides reasonable levels of amenity for neighbouring dwellings.</p>	<p>frontage).</p> <p>A1.6 Consideration will be given to the provision of habitable rooms within the roof space of single dwellings containing two habitable storeys if the provision of the rooms within the roof space does not add to the overall bulk and scale of the building and the height of the building are generally consistent with the existing buildings in the locality.</p>  <p>Figure 4.2 Example of rooms within the roof space</p> <p>A2 A shadow diagram is required to identify the shadow impact on adjoining properties at 9am 12 noon and 3pm on 21 June and 21 May/September where the proposed building is two or more storeys and is likely to overshadow the adjoining dwelling or private open space area.</p>

5.5 Site Coverage and Unbuilt Upon Areas

The intent of Council's requirements is to achieve a quality living environment by providing suitable areas for outdoor recreation and landscaping and promote onsite stormwater infiltration by restricting site coverage of buildings and hard surfaces.

Performance Criteria	Acceptable Solutions
<p>P1.1 Development maximizes permeable surfaces and maintains a balance between the built and unbuilt upon areas.</p> <p>P1.2 Development provides for unbuilt areas that are of a suitable size, dimension and slope that will:-</p> <ul style="list-style-type: none">▪ Provide suitable solar access▪ Assist in retaining existing vegetation▪ Enhance the existing streetscape▪ maintain privacy and provide for reasonable sharing of views between housing, other buildings and the street▪ Accommodate private outdoor area requirements that suit the anticipated needs of the occupants▪ Actively facilitate onsite stormwater infiltration▪ Provide space for service functions including clothes drying and waste storage.	<p>A1 Site coverage satisfies the requirements detailed in Table 5.1 Site Coverage and Unbuilt upon areas.</p>

Table 5.1 Site Coverage and Unbuilt upon areas.

Housing Type	Maximum site coverage ground floor (%)	Minimum Open Space Area (%)	Floor space ratio
Single dwelling	50	40	0.5:1
Dual Occupancy- attached or detached	50	30	0.4:1

“Unbuilt upon area” means that part of a site not occupied by any building and which is predominantly landscaped by way of the planting of gardens, lawns, shrubs or trees and is available for use and enjoyment by the occupants of the building erected on that site and includes any open space roof-top pedestrian terraces available for use by those occupants but does not include so much of the site area as is used for driveways, parking areas or drying yards. Open space areas are to be landscaped in accordance with the provisions of Section 5.10. Paved areas can be included when determining the area of the open space areas if permeable paving is utilised.

5.6 Private Outdoor Areas

The intent of Council's requirements is to ensure occupants are provided with practical, usable and well located outdoor living environments to meet their needs for safety, privacy, access, outdoor activities and landscaping.

Performance Criteria	Acceptable Solutions						
<p>P1.1 Private outdoor areas are:-</p> <ul style="list-style-type: none"> Clearly defined for private use of occupants A usable size and dimension A suitable slope Directly accessible from a living area Capable of receiving sufficient sunlight Accessible from the main living area and of a suitable size and area while protecting the privacy of adjoining and nearby properties where above ground level. <p>P1.2 The location, design, and screening of identified private outdoor areas ensures privacy from adjoining housing.</p> <p>P1.3 Where appropriate, and where privacy can be maintained, above ground private outdoor areas address the street to provide informal surveillance of the street.</p> <p>P2 The location of private outdoor areas are not impact on the streetscape</p>	<p>A1.1 The provision of private outdoor areas for residential development on or near ground floor level complies with the following</p> <table> <tr> <td>One to two bedrooms</td><td>35m² minimum identified area 4m x 4m *</td></tr> <tr> <td>Three or more bedrooms</td><td>50m² minimum identified area of 5m x 5m (<i>figure 6.1</i>) *</td></tr> <tr> <td>Above ground</td><td>10m² minimum dimension 2m (<i>figure 6.2</i>)</td></tr> </table> <p>A1.2 The finish level of the identified area is not steeper than 1 in 14.</p> <p>A1.3 The minimum identified area receives at least 3 hours of sunlight between 9.00 am and 3.00 p.m. on 21 June over 50% of the area.</p> <p>A 2 Fully enclosed and fenced private outdoor area in the front setback will only be permitted where they:</p> <ul style="list-style-type: none"> are directly accessible from the living area and the front of the site is orientated within 20° of either side of north, and are setback a minimum of 2m from the front boundary of the site, and do not occupy more than 30% of the street frontage, and do not contain clothes drying areas, and are suitably screened from the street by the provision of fencing, and the area between the front boundary and the courtyard wall is screened by suitable landscaping. (<i>Figure 6.3</i>). 	One to two bedrooms	35m ² minimum identified area 4m x 4m *	Three or more bedrooms	50m ² minimum identified area of 5m x 5m (<i>figure 6.1</i>) *	Above ground	10m ² minimum dimension 2m (<i>figure 6.2</i>)
One to two bedrooms	35m ² minimum identified area 4m x 4m *						
Three or more bedrooms	50m ² minimum identified area of 5m x 5m (<i>figure 6.1</i>) *						
Above ground	10m ² minimum dimension 2m (<i>figure 6.2</i>)						

*Notes

- Private open outdoor area may consist of more than one component
- Narrow elongated areas less than 2m wide shall not be included when determining the minimum area for private outdoor areas

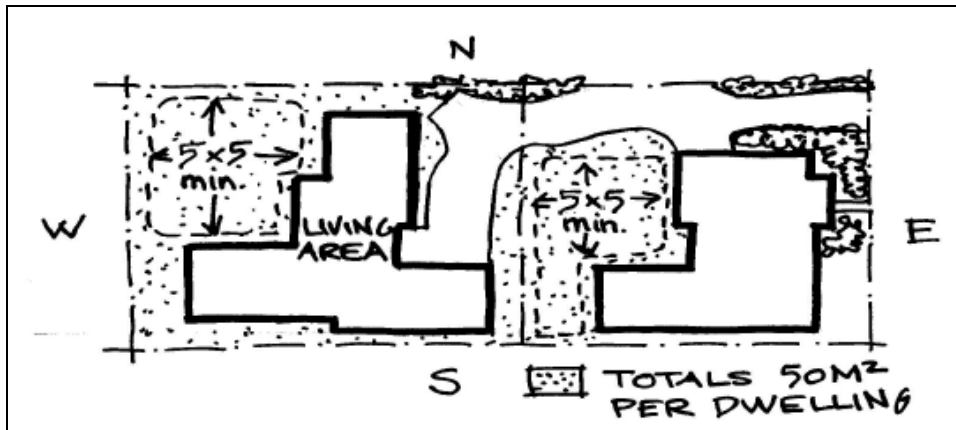


Figure 6.1 Minimum private outdoor areas

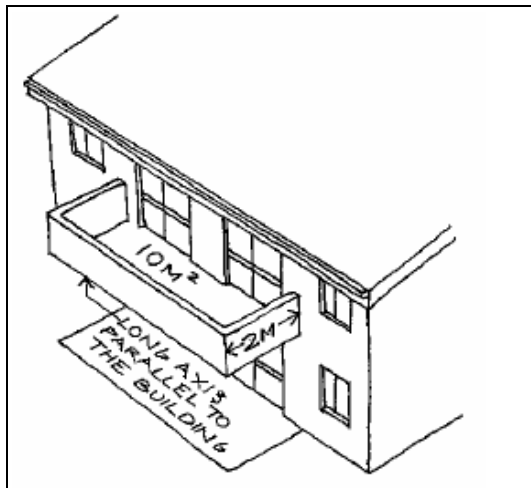


Figure 6.2 Private outdoor areas above ground

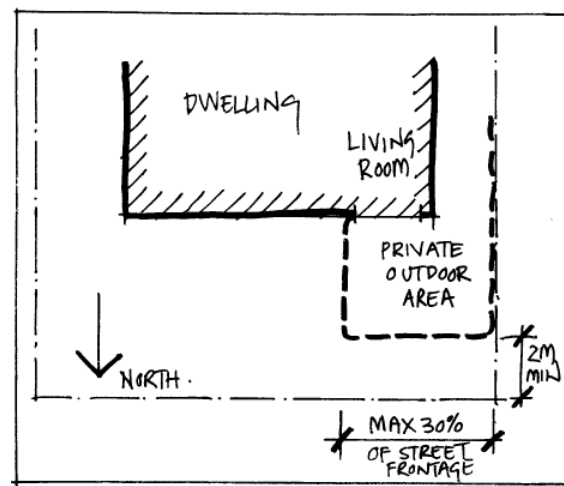
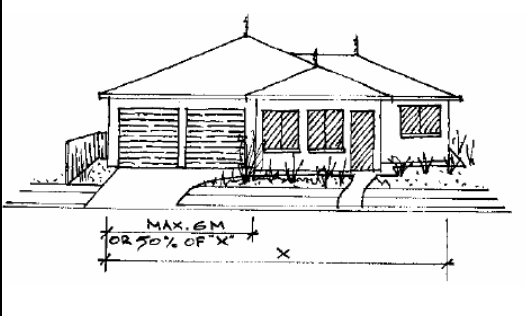


Figure 6.3 Private Outdoor Area forward of building line

5.7 Building Form and Character

The intent of Council's requirements is to achieve best practice urban design in the form of buildings and their facades.

Performance Criteria	Acceptable Solutions
<p>P1.1 Buildings are designed to:</p> <ul style="list-style-type: none"> • Distribute building bulk to reduce impacts on neighbours and the street • Be integrated with the existing streetscape and setting. • Contribute to the architectural identity and vision for the Tyrolean Village. • Minimize bulk and scale. <p>P1.2 Monotonous and unbroken lengths of wall facing either an adjoining boundary or other walls on the same site are to be avoided.</p> <p>P1.3 Simple cubic forms accentuated by repetitive architectural features such as continuous horizontal balconies should be avoided</p> <p>P1.4 Floor space should be distributed within well articulated forms that are stepped down hillsides and around landscaped court yards.</p> <p>P1.5 Facades facing streets or reserves should incorporate a variety of one and two storey walls or should be screened by framed balconies and verandah and should incorporate a varied composition</p> <p>P1.6 Roofs should be broken into a variety of planes.</p> <p>P1.7 Wall and roof surfaces should be broken into a series of smaller panels that are separated by stepped forms casting strong shadows, or by panels that are finished with contrasting materials or tones.</p>	<p>A1.1 Where the external walls exceed 10m in length on a side or rear boundary, suitable design elements shall be incorporated to provide architectural interest and relief to the elevation. This may included such devices as massing of different materials and colours, stepping of walls, pergolas, awnings, verandah roofs and breaking of the roof line etc.</p> <p>A1.2 Solid walls should be broken by corner windows and should incorporate contrasting materials and finishes for example, upper storeys that are clad in sheeting or boards and that are painted in lighter tones than the lower storey.</p> <p>A1.3 The use of stone cladding to foundation walls and feature walls is encouraged provided that it does not occupy more than 25% of any elevation of the building.</p> <p>A1.4 Where masonry walls are used, they are to be painted and are to be balanced by contrasting frame structures such as a verandah and panels of cladding.</p>
<p>P2 Garages should not dominate any facade that faces the street.</p>	<p>A2.1 Garages for single storey dwellings are not to exceed a width of 6m or occupy more than 50% of the width of the dwelling where they face the street. (<i>figure 7.1</i>)</p>

Performance Criteria	Acceptable Solutions
	 <p data-bbox="813 645 1340 705">Figure 7.1 Maximum width of garages single storey dwellings</p>
<p data-bbox="231 801 614 835">The following are encouraged</p> <ul data-bbox="231 835 786 1332" style="list-style-type: none"> • A mix of building materials, including lightweight cladding and fibre cement panels, Colorbond™ sheet roofing • Sections of bagged, face or rendered masonry are acceptable where used as subfloor perimeter walls, as a feature or if it is not the dominant material. • Simple roof form • Use of lightweight decks • The use of framed wire balustrades or solid balustrade to match the external material to provide privacy • Awnings and shade structures to protect windows, doors from climatic conditions such as sun wind and rain. 	



The use of a range of building material with metal roofs is encouraged



conventional brick and tile construction project style is discouraged



The use of different material and colours and stepping of external walls is encouraged



The use of blank walls and not eaves is discouraged



The use of different materials is encouraged



Solid expanses of masonry walls is discouraged



The use of balconies and different roof forms is encouraged



Fussy roof lines and applied decoration is not encouraged



The use of rooms within the roof space will be considered, where the height of the buildings is consistent with the height of adjoining buildings and where the requirements of the BCA are met.



Large masonry structures are not encouraged

5.8 Views Visual and Acoustic Privacy

The intent of Council requirements is:

- To ensure that development does not unreasonably impact or intentionally obstruct views of local features such as Lake Jindabyne, Jindabyne Dam Wall and Crackenback Range whilst not restricting the reasonable development potential of a site.
- To site and design buildings to meet projected user requirements for visual and acoustic privacy.
- To protect the visual and acoustic privacy of nearby residents in their dwellings and private open space.

Performance Criteria	Acceptable Solutions
5.8.1 Views P 1.1 Development permits and maintains views from public streets and opens spaces P 1.2 Development considers the Planning Principles issued by the Land and Environment Court which include assessment of: <ul style="list-style-type: none"> ▪ the views to be affected ▪ the part of the property that the view is being obtained ▪ the extent of the impact ▪ the reasonableness of the proposal that is causing the impact. P 1.3 Development allows for the reasonable sharing of views through the siting, height and design of buildings. P 1.4 Development of buildings and structures are of an appropriate height, setback, design, and setting to preserve significant public view corridors. P 1.5 Development maintains vistas along streets to building and / or places or scenic significance	A 1 Where a proposed development is likely to have significant impact on existing views a view analysis shall be provided to show the position and elevation of the development on its site, the location, size and elevation of adjoining buildings, and the degree of view loss resulting from the development. The relative levels and elevations are to be shown at Australian Height Datum. A 1.2 The Statement of Environmental Effects submitted with the application is to address the Land Environment Court Planning Principles relating to view sharing.
5.8.2 Acoustic Privacy P1 Site layout and building design protect internal living and sleeping areas from uncontrollable high levels of external noise and minimise transmission of sound through the	A1.1 Site layouts should ensure visitor parking areas and streets have a line of site separation of at least 1.5m from bedroom windows of adjoining properties.

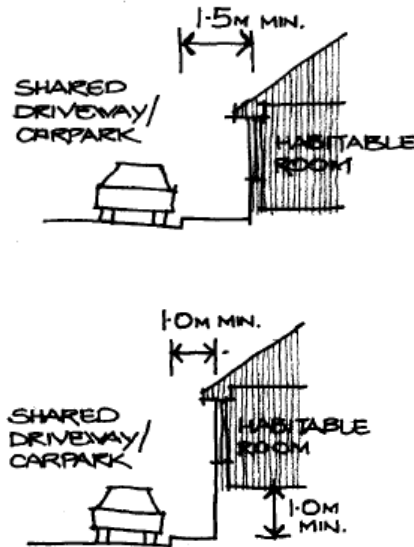


Figure 8.2 visual buffer between windows and driveways/ carparking spaces

5.8.3 Visual Privacy

P1 Direct overlooking of main internal living areas and private open spaces of other dwellings is minimised by building layout, location and design of windows and balconies, screening devices and landscape or by remoteness

A1.1. Direct views between living area windows of adjoining dwellings should be screened or obscured where:

- Ground and first floor windows are within an area described by taking a 12m radius from any part of the window of the adjoining dwelling. An area so defined is described as a 'privacy sensitive zone'.

A1.2 Direct views from living rooms of dwellings into the principal area of the private outdoor area of other adjoining dwellings should be screened or obscured within a 'privacy sensitive zone' described by a 12m radius (*Figure 8.2.*)

A4. Direct views described by A1.1 and A1.2

may be obscured by one of the following measures:

- 1.8m high solid side fences or walls between ground-floor level windows or between a dwelling and open space where the slope is below 10%;

- screening that has a maximum area of 25% openings, is permanently fixed and is made of durable materials; or landscape screening either by existing dense vegetation or new planting to achieve a 75% screening effectiveness within three years;

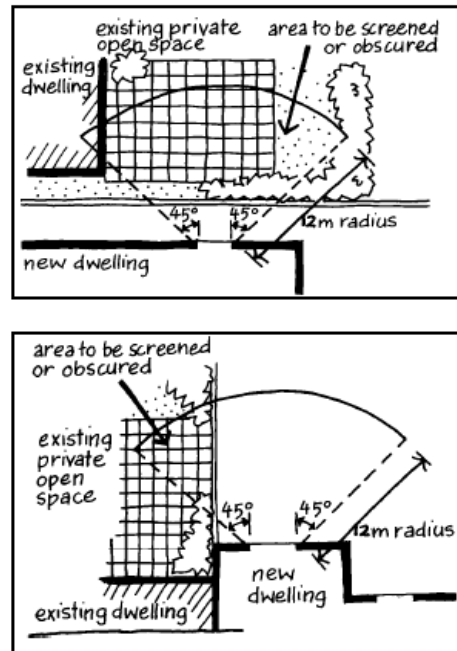


Figure 8.3 privacy sensitive zone

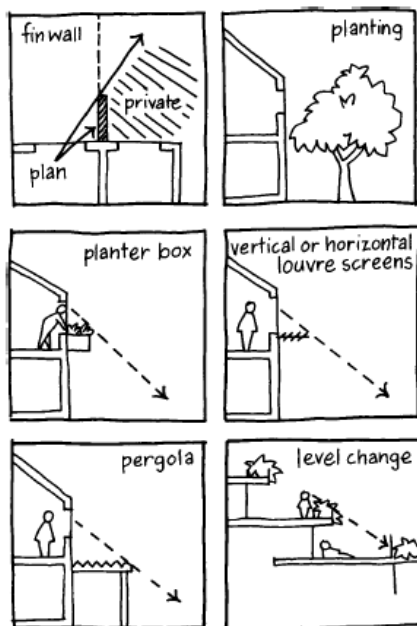


Figure 8.4 Techniques for providing privacy to a lower dwelling's private open space.

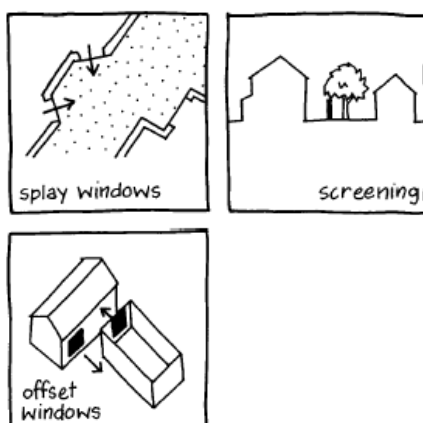
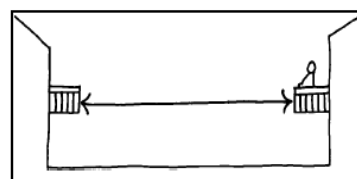
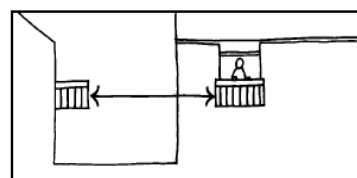


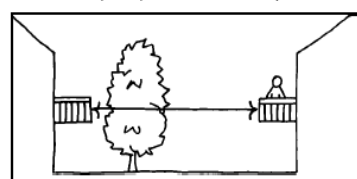
Figure 8.4 methods of preserving privacy



Unscreened balcony separation



Careful location and screening of balconies can increase privacy and reduce their separation



Existing vegetation may offer screening so separation can be reduced

Figure 8.5 Privacy between balconies at first floor level should be screened or located to preserve privacy

5.9 Solar Access

The intent of Council's requirements is to provide reasonable solar access to living areas within dwellings and to open spaces around dwellings.

Performance Criteria	Acceptable Solutions
P1.1 Rooms generally used during the daytime should be capable of receiving adequate sunlight.	A1.1 Unless site conditions dictate, dwelling houses should be designed to allow at least 3 hours of sunshine upon the living areas of adjacent dwellings and private outdoor areas between 9am and 3pm on 22 June.
P1.2 Dwellings should be sited so that the long axis or length of the building faces to the north to maximise the amount of sunshine the dwelling house receives in winter.	A1.2 Dwellings should be designed to enable living areas and private outdoor areas to receive 3 hours of direct sunlight between 9am and 3pm on 22 June.
P2.1 Buildings should not unreasonably obscure sunlight to habitable rooms, solar collectors or private outdoor areas of adjoining development during the winter months.	A1.3 A shadow diagram is required to identify the shadow impact on adjoining properties at 9am 12 noon and 3pm on 21 June and 21 May/September where the proposed building is two or more storeys and is likely to overshadow the adjoining dwelling or private open space area.
P2.2 The orientation, layout, and shape of dwellings should take into account any overshadowing by adjacent buildings, structures or trees during the winter months.	

5.10 Landscape Design

The intent of Council's requirements is to ensure the provision of site landscaping, using suitable species that are consistent with the natural alpine theme contained within the DCP that are appropriate to the nature and scale of the development proposal.

General Requirements

Landscape plans are to be prepared for proposed development in accordance with the following categories.

Category 1

Includes small scale developments that will have little impact on the existing environment including single dwellings.

Landscaping is to be provided in accordance with the tree species selection and planting guidelines provided in appendix D.

Category 2

Small to medium scale developments that have the potential for impact on the surrounding environment.

Landscape Design is to be by a suitably qualified landscape design or horticulturalist and contain the minimum requirements outlined below.

The landscape designer is to provide certification that the landscape works have been completed in accordance with the landscape design upon completion of the landscape work.

Requirements for Category 2 Landscape Design

- Existing site information (boundaries, contours, underground/overhead services, easements, drainage lines, etc),
- The movement pattern of the sun in summer and winter and the prevailing seasonal wind conditions,
- The location of adjoining development and any windows or private outdoor areas that are visible to or from the site,
- Existing pedestrian or cycling pathways adjacent to, or near, the site,
- The height of adjoining development and any shadows cast by the development over the site,
- Any views enjoyed to, and from, the land, including consideration of views into the site and the scenic values associated with the site.
- All trees and vegetation on the site, on adjoining lots and within the street including trees to be removed due to the proposed development. This information should identify the actual canopy width of any trees and their heights.
- Any natural drainage lines located within the site,
- The slope of the site, identified by 1 metre contours
- Any existing built improvements on the site.
- Landscape Consultant details
- Proposed location of buildings/structures including finished floor levels,
- Roadways, car parks, footpaths, driveways with description of materials and finishes.
- Proposed tree planting
- All landscaped areas and their proposed treatment (mass planting beds, paving, lawn, gravel etc.), planting arrangement, planting schedule (including botanical names and mature heights), quantities, pot size, staking and planting details,
- Sub-surface and surface drainage,
- Fences and screens (materials and heights),
- Location of site furniture, fixtures and lighting,
- Indicative cross-sections of important features or areas of the site (entrances, watercourses, retaining walls),
- Site protection works,
- Proposed water quality control devices,

Performance Criteria	Acceptable Solutions
<p>P1.1 Site disturbance to be minimized and existing landscape elements such as exposed rock formations and existing trees are to be preserved where possible.</p> <p>P1.2 Landscaping is to be tolerant of site conditions and adequately mulched in order to reduce demand for water, herbicides and fertilizer.</p> <p>P1.3 Development is to be designed to maximize the number of trees on site. Landscaping is to enhance the appearance of the development and assist with streetscape integration.</p> <p>P2 Landscape is to contribute to the energy efficiency and amenity by providing substantial shade in summer especially to west facing windows and admitting winter sunlight to outdoor and indoor living areas.</p> <p>P3 Landscaping is to improve privacy and minimizes overlooking between dwellings.</p> <p>P4 The plant species selected are in scale with the proposed and existing development to reduce the impact of the bulk of built elements on the street, adjoining properties and within the development. <i>(Figure 10.1)</i></p> <p>P5 The landscape design ensures visibility along paths and adequate pedestrian and motorist sight lines at critical locations, particularly for pathways, corner lots, entries and parking areas, maximises casual surveillance of public areas, the street or parkland, facilitates privacy to and from adjoining property, and provides separation between hard surface areas, built form and structures.</p>	<p>A1.1 Tree planting is to be consistent with the tree species selection and planting guidelines provided in appendix C.</p> <p>A1.2 Landscaping shall be completed and certified on the ground by the landscape designer or landscape architect prior to the issue of an occupation certificate.</p> <div data-bbox="821 907 1308 1332"> <p>landscape doesn't relate to building scale nor offer microclimate protection</p> <p>landscape relates to building scale and assists integration into street</p> </div>


Figure 10.1

5.11 Fencing and Retaining Walls

The intent of Council's requirements is to ensure that the front and side fences and walls protect privacy, security and noise attenuation without having a detrimental impact upon the streetscape and adjacent buildings.

Performance Criteria	Acceptable Solutions
Front Fences P1 Front fences and walls: <ul style="list-style-type: none"> • Enable some outlook from buildings to the street for safety and surveillance; • Are designed and detailed to provide visual interest to the streetscape; • Are constructed of materials compatible with proposed housing; • Are compatible with facilities in the street frontage area, such as mail boxes and garbage collection areas; • should assist in highlighting entrances and in creating a sense of communal identity within the streetscape. P2 Front fences and walls enable, where necessary and appropriate, the creation of private open space between the building and the street.	A 1.1 Fences having a maximum height of 1m will be permitted between the building line and the street. A 1.2 Fences should be constructed of materials that are compatible with the dwelling and generally be constructed of stone, masonry, decorative timber or the like or a combination of these materials. Sheet metal fencing will not be permitted forward of the building line.
Fences on corner Lots P1 The construction of fencing on the secondary street frontage is to be minimised and limited to providing adequacy to the private outdoor area. P1.2 Fencing on the secondary street frontage should be designed and located to : <ul style="list-style-type: none"> ▪ Maintain the streetscape character of the area ▪ Be consistent with the established pattern of fences and ▪ Ensure an adequate amount of private outdoor area. 	A1 On lots having two street frontages fencing having a maximum height of 1.8m will be permitted to the secondary street frontage between the rear of the proposed dwelling and the rear boundary.

Performance Criteria	Acceptable Solutions
<p>P2 The height design and materials of fencing on the secondary street frontage are compatible with the building on the land and the streetscape</p> <p>Retaining Structures</p> <p>P1 Retaining structures maintain the streetscape character and be consistent with the pattern of retaining structures in the street.</p>	<p>A2 Fencing to secondary street frontages is to be constructed of stone, masonry, decorative timber or the like or a combination of these materials. Sheet metal fencing will not be permitted</p> <p>A1.1 Where fencing is provided to the minor street frontage and incorporates a retaining structure the retaining structure is not to exceed a height of 1m and the proposed fence is to be setback a minimum of 1m from the retaining structure to ensure adequate provision of landscaping to screen the proposed fence</p> <p>A1.2 Retaining structures between the front boundary and the front of the dwelling shall be constructed of stone obtained from the local area or masonry.</p> <p>A1.3 Retaining structures are not to exceed a height of 1m. Where higher retaining structures are required individual retaining structures are not to exceed 1m but can be stepped a minimum of 2m apart to provide terraces and allow for suitable screen landscaping to be provided.</p> <div data-bbox="794 1205 1362 1487">  </div> <p>Example of stepped retaining walls and landscaping to screen fencing on corner lots</p> <div data-bbox="794 1572 1362 1863">  </div> <p>Example of retaining walls and fencing that is not permitted on corner lots.</p>

Performance Criteria	Acceptable Solutions
<p>Rear fences adjoining public reserves</p> <p>P1 Rear fencing is provided and allows surveillance of public reserves</p>	 <p>Example of stepped retaining wall and landscaping on corner lots</p> <p>A1.1 Lots that directly front onto a public reserve a post and rail fence must be provided to delineate the rear boundary.</p> <p>A1.2 Solid fencing will not be permitted to be provided on the rear boundary of these lots.</p> <p>A1.3 Where for security purposes fencing is required 1.5m high picket fencing, being 50% open or pool type fencing may be permitted.</p>

5.12 Car Parking and Vehicle Access

The intent of Council's requirements is to ensure the adequate provision of car parking that is well located and designed and minimizes the visual impact of garages and driveways on the streetscape.

5.12.1 Vehicle Access

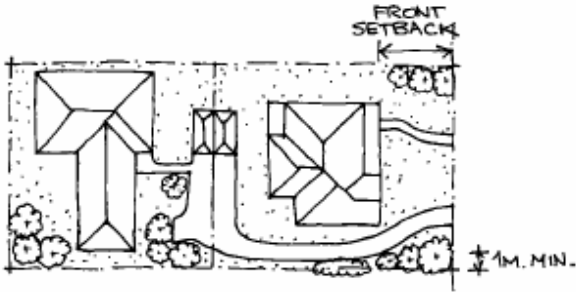
Performance Criteria	Acceptable Solutions
<p>P1 Vehicle Access and Driveways</p> <ul style="list-style-type: none"> Do not impede the traffic flow on local road system. Are provided with an entry/exit point for individual developments. Are safe from hazards and do not affect scenic or ecological values. Location and length are low impact and continue the existing pattern in the street. Are designed, surfaced and sloped to facilitate ease of access, stormwater infiltration and are separated from pedestrian entry/access routes through design, finish or location. 	<p>A1.1 Driveways for dual occupancy developments are offset a minimum of 1m from any side boundary for the full length of the required front setback and are provided with landscaping (<i>figure 12.1</i>).</p>  <p>A1.2 Driveways are not continuous straight lines and are offset by landscaping sections and/or strips. Straight "Gun Barrel" driveway arrangement without landscaping is not supported.</p> <p>A1.3 Driveways are partially surfaced with materials that provide for stormwater infiltration or design to drain to adjacent landscaped areas.</p> <p>A1.4 Where a driveway will service more than one dwelling an adequate manoeuvring area is to be provided so that vehicles can enter and leave the site in a forward direction.</p> <p>A1.5 Where such manoeuvring areas are required to be provided adequate landscaping is incorporated to minimize the expanse of hard surface and negative visual impacts on the streetscape.</p>

Figure 12.1 Setback for landscaping

5.12.2 Vehicle Parking Provision

Performance Criteria	Acceptable Solutions
<p>P1 The number, location and access to vehicle parking spaces available on site, and along the street frontage, is sufficient to cater for residents and visitor parking needs.</p>	<p>A1.1 Provisions of the number of car parking spaces are required by Snowy River Development Control Plan 1998 Circular No. C1 Off Street Car Parking.</p> <p>A1.2 Driveway access is to be constructed in accordance with Council's minimum standard for driveway gradients.</p> <p>A1.3 manoeuvring areas are to be constructed in accordance with the requirements of Australian Standard 2890.1.</p>
<p>P2 Vehicle parking structures are:</p> <ul style="list-style-type: none"> ▪ screened to minimize reflection of car headlights into dwelling windows, ▪ lit at night, ▪ ventilated if enclosed, ▪ separated from windows of habitable areas and private outdoor areas to minimize noise and fume nuisance. 	
<p>P 3 Visitor carparking is located so it does not impact on the streetscape.</p>	<p>A 3 Visitor parking for dual occupancy and medium density development may be provided within the building line provided that it is setback a minimum of 2m from the street alignment and suitably screened by landscaping and is constructed of crushed stone, permeable paving, "grasscrete", timber sleepers or the like.</p>

5.12.3 Garages and Carports

Performance Criteria	Acceptable Solutions
<p>P1.1 Facilities (including garages and carports) are sited and designed so as not to dominate the streetscape/street frontage or other public spaces.</p>	<p>A1.1 Garages and carports are not located between the building line and the front boundary of the lot.</p>
<p>P1.2 Facilities are designed and located to minimize impacts on neighbouring housing.</p>	<p>A1.2 Parking maybe located in the front setback upon an elevated deck with carport on sites falling from the street or upon a paved area that is excavated into hillsides rising from the street where steep slopes prevent construction of driveway access directly to a dwelling.</p>
<p>P1.3 Parking structures within the front setback should be designed to blend with</p>	

Performance Criteria	Acceptable Solutions
<p>natural surroundings and streetscape, permitting views from the street towards gardens and surrounding scenic backdrops, and reflecting the architectural quality of the main house.</p> <p>P2 Car accommodation is compatible with its associated dwelling design in terms of height, roof form, detail, materials and colour.</p>	<p>A1.3 Carports within the front setback where permitted should have a “light weight” appearance.</p> <p>.</p> <p>A2.1 Where garages face the street the garage opening does not exceed 6m or 50% of the width of the building which ever is the lesser.</p> <p>A2.2 Detached garages or sheds are to be located within the rear yard area and are to have maximum dimensions of 7.2mx7.2m and have a maximum external wall height of 2.7m.</p>

5.12.4 Car Washing Facilities

Performance Criteria	Acceptable Solutions
<p>P1 Suitable area is provided within the development to allow for the washing of vehicles.</p>	<p>A1.1 The car washing area is to be located and designed to drain to a grassed or landscaped area sufficient in size to absorb waste water from car washing (figure 12.3).</p> <p>A1.2 In the case of development with basement car parking, a visitor car parking space shall be bunded and connected with Council's sewerage system. This will necessitate locating a tap, bunding and drain in a position that will not interfere with traffic movement.</p>

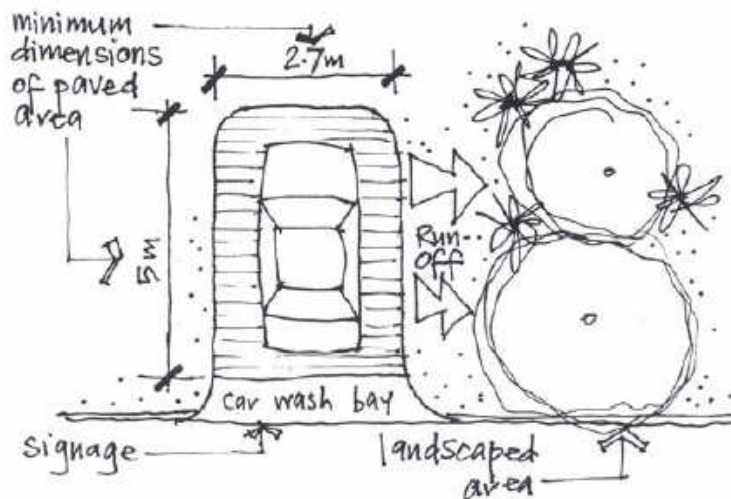


Figure 12.3 Example of car wash bay at ground level

5.13 Erosion and Sediment Control

Erosion and sediment control is to be provided on all development sites in accordance with the requirements of Snowy River Council DCP 1998 - Circular E2

5.14 Cut and Fill

The intent of this requirement is to preserve as much as practicable the existing topography and amenity of the neighbourhood in the vicinity of the proposed development by minimizing changes to the existing ground levels.

Performance Criteria	Acceptable Solutions
P1.1 The building design should be appropriate for site conditions with consideration given to the stability of the site and adjoining site and the privacy of the adjoining dwellings.	A1.1 For residential dwellings dual occupancy development (i.e. especially those incorporating slab on ground construction) shall not exceed 1m of cut or fill.
P1.2 Development is to be designed to minimise the effect of disturbance on any land and ensure that dangerous excavations are avoided, or where necessary, are properly retained and secured.	A1.2 Development within two (2) metres of the allotment boundaries is to employ construction methods that will retain the fill within the confines of the building, e.g. "drop- edge" raft slabs etc. A1.3 Development exceeding two (2) metres from the boundary will be permitted to batter any fill external to the building in accordance with the provisions relating to cut and fill batters. A1.4 Excavations in excess of one (1) metre within the confines of the building may be permitted, to allow for basements, garages, etc. providing the excavations do not exceed 3m and are adequately retained and drained. A1.5 Cut and fill batters should not exceed a slope of 1:2 to the natural ground level unless the foundation strata of the area permits otherwise and Council is satisfied with the site stability. All batters are to be provided with both short term and long term stabilisation to prevent soil erosion. A1.6 Stormwater or surface water runoff shall not be redirected or concentrated onto adjoining properties so as to cause a nuisance and adequate drainage is to be provided to divert water away from batters.

5.15 Security, Site Facilities and Services

The intent of this requirement is to ensure that the development provides a safe living environment and facilities are provided to meet the needs of the occupants of the development and service areas are suitably screened from view.

Performance Criteria	Acceptable Solutions
P1.1 Buildings adjacent to public or communal streets or public space are to be designed to allow casual surveillance.	A1 To permit casual surveillance at least 1 habitable window should face public or communal streets or public space.
P1.2 Adequate lighting is to be made available to all public areas.	
P2 Garbage bin areas, mail boxes and external storage facilities are to be sited and designed for visual appearance.	
P3 Dwellings are to be provided with adequate storage areas and clothes drying facilities These drying areas are to be screened from the street.	
P4 The design and provision of sewerage, water, electricity, street lighting, telephone and gas services are to conform with the cost-effective performance measures of the relevant servicing authority.	A4.1 Individual water meters are required to assist with the billing of individual dwellings. A4.3 Air conditioning plant is to be located within the roof space or other non-visible location and not on the roof itself.
P5 Developments serviced by reticulated water supply are to comply with the relevant domestic and fire fighting standards.	
P6 Individual mail boxes shall be located close to each ground floor dwelling entry, or a mail box structure located close to the major pedestrian entry to the site and compatible with the requirements of Australia Post.	

LEGISLATIVE REQUIREMENTS

The development must comply with the requirements of any relevant state or Commonwealth legislation or planning policy.

Appendix A - Design Examples Water Sensitive Urban Design

A.1 Water Sensitive Urban Design Conveyance Controls

Modified 'Natural' Channels

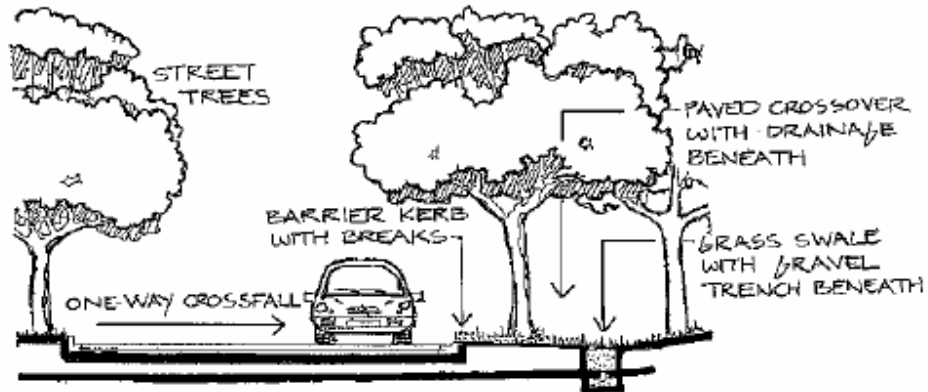


Source: A. Smithson (2002).

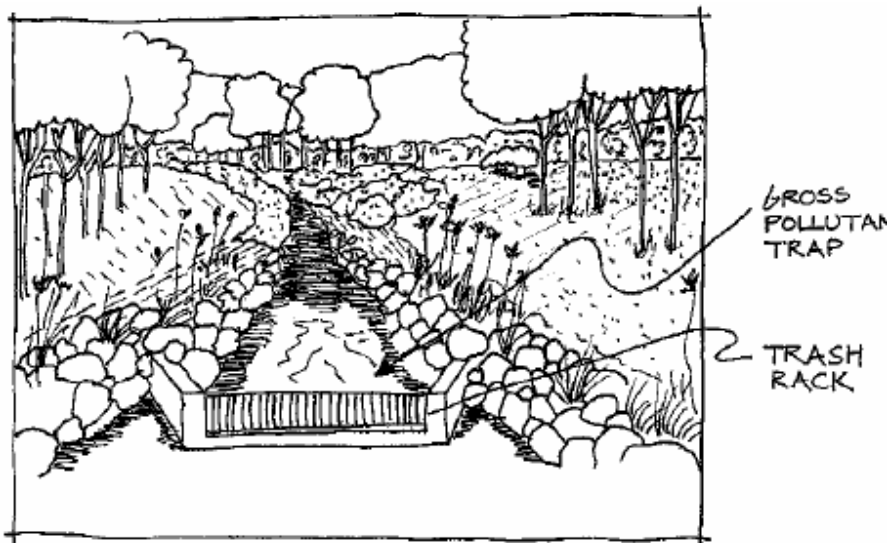


Road network and grass swales.

A.2 Examples of Water Sensitive Road Drainage Schemes

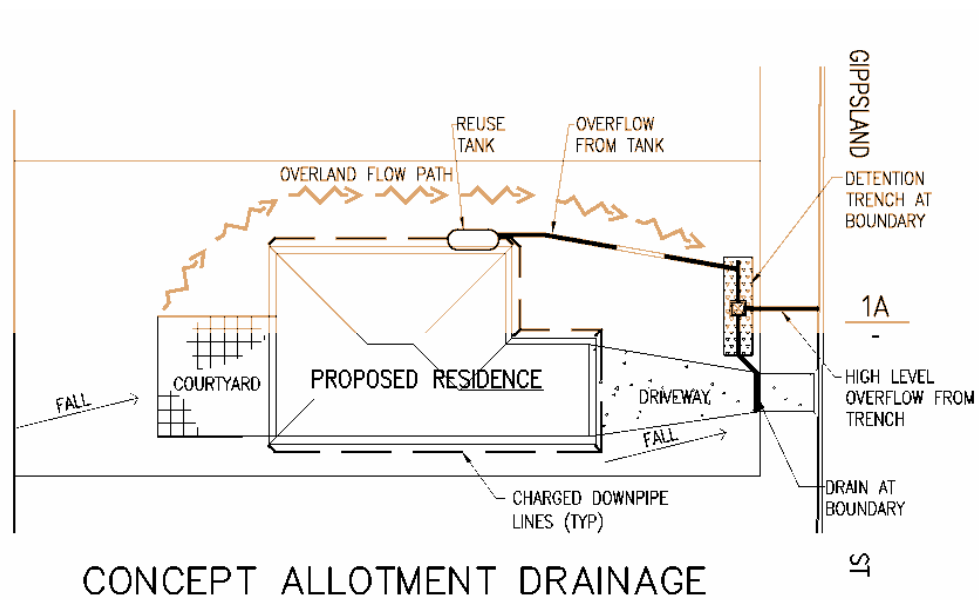


A.3 Example of Discharge Control Mechanisms

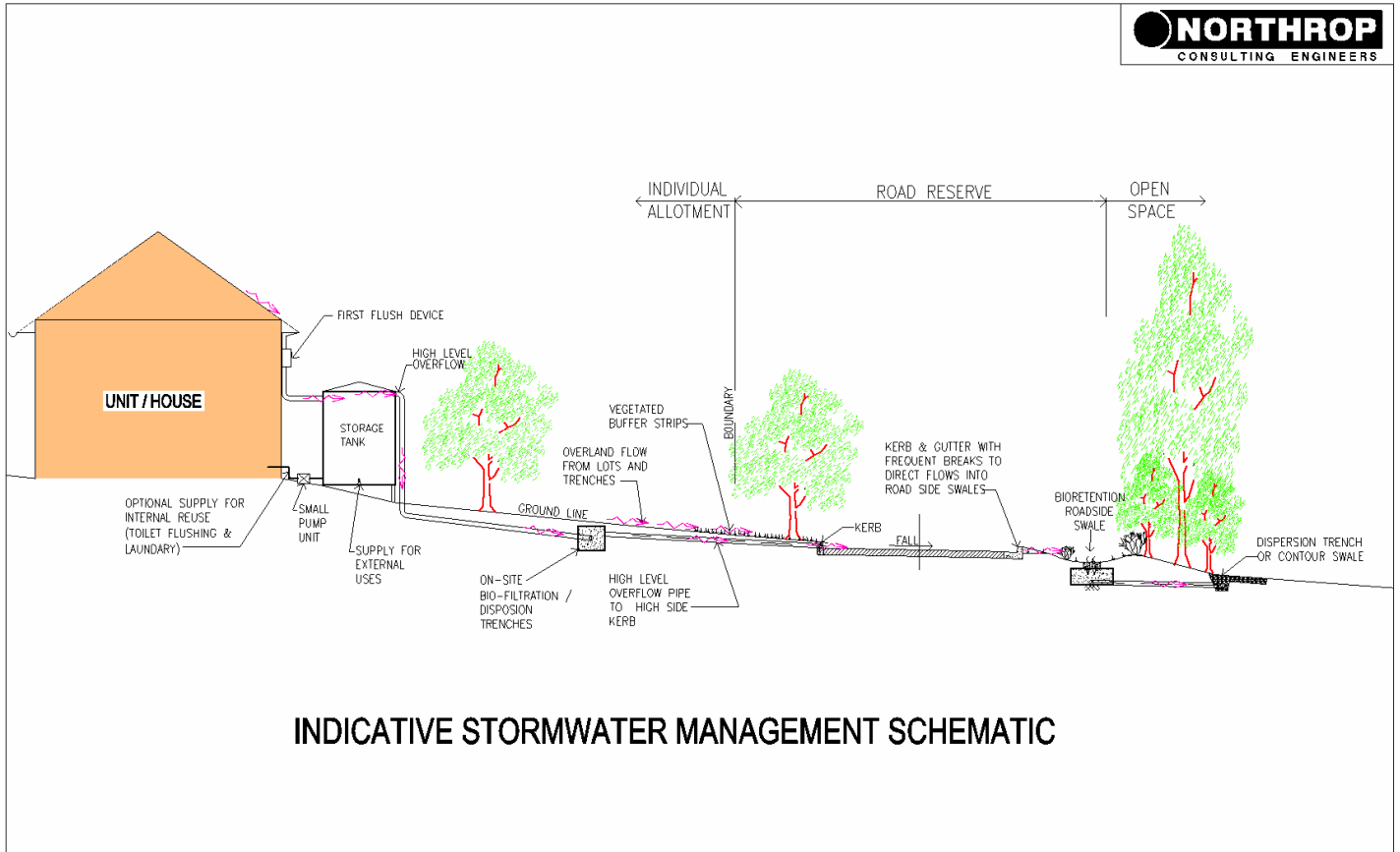


A Gross Pollutant Trap catches any large objects between its bars stopping pollutants from entering natural waterways.

A.4 Examples of Allotment Drainage Schemes



A.5 Examples of a 'Treatment Train'



Appendix B – Landscaping Species List

BOTANICAL NAME

COMMON NAME

1. STREET TREES

<i>Acer buergeranum</i>	Trident Maple
<i>Acer rubrum</i> + Cvs.	Canadian Maple
<i>Betula dalecarlica</i>	Cut-leaf European White Birch
<i>Betula pendula</i> + Cvs.	Silver Birch
<i>Celtis australis</i>	Nettle Tree
<i>Cercis siliquastrum</i>	Judas Tree
<i>Fraxinus oxycarpa</i> 'Aurea'	Golden Ash
<i>Fraxinus Raywoodii</i>	Claret Ash
<i>Laburnum anagyroides</i>	Golden Chain Tree
<i>Malus</i> Cvs.	Flowering Crabapples
<i>Platanus orientalis</i>	Oriental Plane
<i>Platanus X acerifolia</i>	London Plane
<i>Prunus</i> sp.	Flowering Plums / Cherries
<i>Pyrus ussuriensis</i>	Manchurian Pear
<i>Quercus coccinea</i>	Scarlet Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus rubra</i>	Red Oak
<i>Sorbus aucuparia</i>	Rowan Tree
<i>Ulmus procea</i>	English Elm

TREES (REVEGETATION)

<i>Acacia dealbata</i>	Silver Wattle
<i>Callitris endlicheri</i>	Black Cypress Pine
<i>Eucalyptus gregsoniana</i>	Wolgan Snow Gum
<i>Eucalyptus macarthurii</i>	Paddys River Gum
<i>Eucalyptus moorei</i>	Narrow leaved Sallee
<i>Eucalyptus parvula</i>	Small Leaf Gum
<i>Eucalyptus pauciflora</i>	White Sally
<i>Eucalyptus pulverulenta</i>	Silver leaved Mountain Gum
<i>Eucalyptus rubida</i>	Candlebark
<i>Eucalyptus stellulata</i>	Black Sally
<i>Eucalyptus viminalis</i>	Ribbon Gum

SHRUBS (REVEGETATION)

<i>Acacia boormanii</i>	Snowy River Wattle
<i>Acacia kattlewelliae</i>	Buffalo Wattle
<i>Acacia rubida</i>	Red Stemmed Wattle
<i>Acacia sicutiformis</i>	Dagger Wattle
<i>Acacia verniciflua</i>	Varnish Wattle
<i>Bulbine bulbosa</i>	
<i>Callistemon ptyoides</i>	Alpine Bottlebrush
<i>Chrysocephalum apiculatum</i>	
<i>Kunzea ericoides</i>	Burgan Tea Tree
<i>Leptospermum lanigerum</i>	Wooly Tea Tree
<i>Mirbelia oxylloboides</i>	Mountain Mirbelia

<i>Olearia phlogopappa</i>	Daisy Bush
<i>Prostranthera phyllicifolia</i>	Jindabyne Mint

SHRUBS & GROUNDCOVER (LANDSCAPE - NATIVES & EXOTICS)

<i>Berberis</i> Cvs.	Barberry
<i>Buxus sempervirens</i>	English Box
<i>Calluna</i> Cvs.	Heaths
<i>Camellia japonica</i>	Camellia
<i>Camellia sasanqua</i>	Sasanqua Camellia
<i>Carex albula</i>	Frosted Curls
<i>Cerastium tomentosum</i>	Snow in Summer
<i>Choisya ternata</i>	Mexican Orange Blossom
<i>Deutzia</i> sp.	Wedding Bell Plant
<i>Erica</i> Cvs.	Heaths
<i>Festuca ovina glauca</i>	Kentucky Blue Grass
<i>Hakonechloa macra 'Aureola'</i>	An ornamental grass
<i>Helictotrichon sempervirens</i>	Blue Oat Grass
<i>Juniperus squamata 'Blue Carpet'</i>	Groundcover juniper
<i>Libertia</i> Cvs.	
<i>Nandina 'Gulf Stream'</i>	Sacred Bamboo Cultivar
<i>Scaevola albida</i>	Fairy Fan Flower
<i>Yucca</i> Cvs.	Spanish Sword

Appendix C – Garbage and recycling facilities

GARBAGE AND RECYCLING FACILITIES

Objectives:-

- To specify the number and type of garbage receptacles for a proposed development.
- To specify the requirements for the placement and construction of garbage enclosures.
- To ensure design and construction of garbage enclosures that permits easy access and safe handling for residents and garbage collection workers.

Recycling collection service

Recycling will require provision of a Council issued 360lt-litre mobile garbage bin and will need to provide an additional 800mm within the enclosure or room.

Greenwaste/Organics collection service

Council will be considering the introduction of a greenwaste/organics collection service in the future. This service will be provided through a 240litre KSB mobile garbage bin and will need to provide an additional 650mm within the enclosure or room

Standards for location of all garbage enclosures

- ⇒ Garbage rooms or enclosures are to be located close to the front or serviceable boundary of the property without affecting the amenity of adjoining properties.
- ⇒ Enclosures are to be located having regard for existing vegetation and slope

Application of this circular

This circular applies to areas where a garbage collection service is provided or will be provided in the future. Dwelling houses and dual occupancies do not require a garbage enclosure only if a suitable storage area is provided away from public view and the path from the storage area to the kerbside is clear and has a maximum grade of 1V: 8H.

Standards for construction of garbage enclosures or rooms

The following standards are for the construction of all garbage enclosures or rooms-

- ⇒ The enclosure or room is to be designed to minimise visual impact
- ⇒ The enclosure is to incorporate a smooth concrete floor
- ⇒ A hose cock is to be provided for cleaning
- ⇒ A room must have a minimum height of 2

- ⇒ Landscaping around garbage enclosures will assist in minimising visual impact
- ⇒ Enclosures adjacent to buildings are to be located on walls without windows

Servicing arrangements

There are 2 service provisions for the collection of garbage from multi unit urban premises – Councils standard Domestic waste collection service or via the trade waste collection service for larger commercial skip bins

Council must, under the section 496 and 501 of the Local Government Act 1993, make annual charge for and provision of a domestic waste collection service to a residential development within the Shire. Residential development is defined as a development approved for residential accommodation (including rural residential, residential and farmland development) to which Council provides a domestic waste and recycling

metres and a smooth concrete graded floor (1V: 100H) to an arrester pit that is connected to the sewer.

- ⇒ The wall height for a garbage enclosure must screen receptacles from public view but be limited to 1.8 metres
- ⇒ The enclosure is to be designed in a style and is to be constructed using materials that are consistent with the main development on the land

Domestic waste collection service

Domestic waste will require provision of a Council issued 240 litre KSB mobile garbage bin and will need to provide an additional 650mm within the enclosure or room.

- ⇒ Enclosures are to be located to permit the collection vehicle to enter and exit the site in a forward direction unless a service alley not accessible to the public is provided
- ⇒ A concrete apron is to be provided for skips to permit easy loading

Type and number of garbage receptacles

The following table specifies the type and the way to calculate the number of garbage receptacles required for different types of development.

The number of receptacles must be kept to a minimum by choosing the largest size receptacles available. Design of receptacles must be of a type that can be serviced by Council's waste and recycling collection vehicles.

management collection service.

Residential development does not include hotels, motels, and the like or any other property by determination that is rated as business under the Local Government act..

Non-residential development

For non-residential development the following apply:-

- ⇒ Financial arrangements for the collection of trade waste must be made prior to occupation
- ⇒ Financial arrangements may be either a Trade Waste Agreement with Council or with an approved contractor
- ⇒ Liaise with Council's Manager of Waste and Resources where skips are proposed

Garbage receptacles - minimum requirements

Type of Development	Required capacity of garbage receptacles
RESIDENTIAL	
Dwelling houses or Dual Occupancies	<p>1 x 240lt KSB mobile garbage bin for waste 1 x 360lt Roto mobile garbage bin for recycling 1 x 240lt KSB mobile garbage bin For greenwaste/organics (Upon implementation of this service by Council)</p> <p>This will apply to each dwelling on the block. All bins will be supplied by Council</p>

Appendix D – Species List



SNOWY RIVER SHIRE COUNCIL SPECIES LIST

The Snowy River Shire Council Species List has been created to help developers and landowners with the landscaping of new or existing developments.

The list is by no means conclusive and has been created with the input of local nurseries, Council staff and observations. The list does not take into account the variation in elevation within the Snowy River Shire and therefore many of the species contained within it may not perform at high elevation. Generally the species within the list grow in the Jindabyne, Berridale and Adaminaby region.

It is important to consult with local nurseries when designing a landscape. Although this list contains both Native and Exotic plant species Snowy River Shire Council recommends the planting of Native plants due to their beauty and habitat they provide. Generally the Native species also perform better, particularly the species endemic (local to) this region.

Scientific Name	Common Name	Native Y/N	Endemic I	Height approx (m)	Evergreen Deciduous E/D	Comments
Trees						
<i>Acacia dealbata</i>	Silver Wattle	y	i	6-30	e	
<i>Acer buergerianum</i>	Trident Maple	n		6-10	d	
<i>Acer palmatum</i>	Japanese Maple	n		6-10	d	Sheltered sites only
<i>Acer rubrum</i>	Canadian Maple	n		10-30	d	
<i>Betula dalecarlica</i>	cut leaf birch	n		12-15	d	
<i>Betula fastigata</i>		n		8-10	d	
<i>Betula pendula</i>	Silver Birch	n		12-15	d	
<i>Callitris enlicheri</i>	Black Cypress Pine	y	i	5-10	e	
<i>Cedrus atlantica</i>	Atlas Cedar	n		10-20	e	
<i>Cedrus deodara</i>	Deodar Cedar	n		6-10	e	

<i>Celtis australis</i>	Nettle tree	n		12-15	d	
<i>Cercis siliquestrum</i>	Judas Tree	n		6-8	d	
<i>Crataegus oxycanthus</i> var	Hawthorn	n		6-10	d	
<i>Cupressus arizonica</i>	Arizona Cypress	n		6-15	e	Good for difficult sites
<i>Cupressus sempervirens</i> Stricta	Pencil Pine	n		5-10	e	
<i>Cupressus torulosa</i>	Bhutan Cypress	n		6-20	e	
<i>Eucalyptus gregsoniana</i>	Wolgan Snow Gum	y	i	2-4	e	
<i>Eucalyptus macarthurii</i>	Paddys river gum	y	i	15-25	e	
<i>Eucalyptus moorei</i>	Narrow leaved Sallee	y	i	3-6	e	
<i>Eucalyptus neglecta</i>	Omeo Gum	y		6-10	e	
<i>Eucalyptus nicholii</i>	Willow Peppermint	y		12-16	e	
<i>Eucalyptus parvula</i>	Small leaf Gum	y	i	6-10	e	
<i>Eucalyptus pauciflora</i>	White Sally	y	i	8-10	e	withstands dry conditions
<i>Eucalyptus pulverulenta</i>	Silver leaved Mountain Gum	y	i	6-10	e	
<i>Eucalyptus rubida</i>	Candlebark	y	i	15-30	e	
<i>Eucalyptus stellulata</i>	Black Sally	y	i	6-15	e	withstands dry conditions
<i>Eucalyptus viminalis</i>	Ribbon Gum	y	i	10-50	e	withstands dry conditions
<i>Fraxinus oxycarpa</i>	Desert Ash	n		12-15	d	
<i>Fraxinus pennsylvanica</i>	Red Ash	n		12-15	d	
<i>Fraxinus raywoodii</i>	Claret Ash	n		12-15	d	
<i>Laburnum vossii</i>	Golden Chain Tree	n		5-6	d	
<i>Malus</i> sp	Flowering Crabapples	n		6-8	d	
<i>Platanus orientalis</i>		n		20-30	d	
<i>Platanus x acerifolia</i>	London Plane Tree	n		15-30	d	
<i>Prunus</i> Sp	Flowering Plums/Cherries	n		4-15	d	
<i>Pyrus ussuriensis</i>	Manchurian Pear	n		10-20	d	
<i>Quercus coccinea</i>	Scarlet Oak	n		18-25	d	
<i>Quercus palustris</i>	Pin Oak	n		20-25	d	
<i>Quercus rubra</i>	Red Oak	n		20-25	d	
<i>Sorbus aucuparia</i>	Rowan Tree	n		8-10	d	
<i>Thuja plicata</i>	Western Red Cedar	n		10-20	e	Good hedging plant.
<i>Ulmus Procea</i>	English Elm	n		35-45	d	
SHRUBS						
<i>Abelia grandiflora</i>		n		1-2	e	
<i>Acacia boormanii</i>	Snowy River Wattle	y		3-5	e	

Acacia cultriformis	Knife Leaf Wattle	y		2-4	e	
Acacia dealbata	Silver Wattle	y		10	e	
Acacia kettlwelliae	Buffalo Wattle	y	i	4-7	e	
Acacia melanoxylon	Blackwood Wattle	y		2-6	e	
Acacia rubida	Red stemmed wattle	y	i	3-5	e	
Acacia siculiformis	Dagger Wattle	y	i	1-3	e	
Acacia verniciflua	Varnish Wattle	y	i	1-3	e	
Acacia vestita	Hairy Wattle	y		3	e	
Arbutus unedo	Strawberry Tree	n		3-9	e	
Banksia ericifolia	Heath Banksia	y		1.5-3	e	
Banksia marginata	Silver Banksia	y		1-7	e	
Berberis Atropurpureum	Purple leaf Barberry	n		1-1.5	e	
Berberis darwinii	Darwin Barberry	n		1-1.5	e	
Berberis Little Favourite	Dwarf Barberry	n		.5	e	
Buddleia davidii	Butterfly Bush	n		2-3.5	d	
Buxus sempervirens	English Box	n		to 9m	e	Ideal for hedging
Callistemon pallidus	Lemon Bottlebrush	y		1-2	e	
Callistemon ptyoides	Alpine Bottlebrush	y	i	1-2	e	
Callistemon subulatus	Dwarf Bottlebrush	y		2	e	
Camellia japonica		n		various	e	hundreds of cultivars
Camellia sasanqua		n		.6-6	e	hundreds of cultivars
Ceanothus Pacific Blue	California lilac	n		1-1.8	e	
Chamaemelum japonica	Japanese Quince	n		1-2	d	
Choysia ternata	Mexican Orange Blossom	n		1-1.5	e	
Coleonema compacta	Dwarf Diosma	n		.5-1	e	
Coleonema pulchrum	Diosma	n		1-1.5	e	
Coleonema pulchrum Aurea	Golden Diosma	n		1-1.5	e	
Correa lawrenciana	Mountain Correa	y		1-3	e	
Deutzia sp	Wedding bell plant	n		1-1.5	d	
Erica darleyensis	Heath	n		.5 .6	e	
Escallonia Sp		n		to 2m	e	
Euonymus alatus	Winged spindle	n		1-2	d	
Euonymus japonicus	Japanese spindle tree	n		1-3	e	
Forsythia suspensa		n		2-3	d	
Grevillea australis	Mountain Grevillea	y		1-1.5	e	
Grevillea Canberra Gem		y		2	e	
Grevillea Canterbury Gold		y		.5-2	e	

Grevillea lanigera	Woolly Grevillea	y		2	e	
Grevillea Poorinda Constance		y		2-3	e	
Grevillea rosmarinifolia	Rosemary Grevillea	y		1-2	e	
Grevillea victoriae	Royal Grevillea	y		2-4	e	
Hakea microcarpa	Small Fruit Hakea	y		1-2	e	
Hebe sp	Veronica	n		to 1.5	e	check with nursery as to frost tolerance
Hibiscus syriacus	Blue hibiscus	n		1.2-2	d	
Ilex crenata	Japenese Holly	n		1.2-4	e	
Kunzea ericoides	Burgan Tea Tree	y	i	2-4	e	
Lavendula angustifolia	English Lavender	n		.5-1.5	e	
Lavendula dentata	French Lavender	n		.5-1.2	e	
Lavendula stoechas	Spanish Lavender	n		.5-1	e	
Leptospermum lanigerum	Woolly Tea Tree	y	i	2-6	e	
Mirbelia oxylloboides	Mountain Mirbelia	y	i	1-3	e	
Nandina domestica	Sacred Bamboo	n		1.5-2	e	
Nandina domestica Nana		n		1	e	
Olearia phlogopappa	Daisy Bush	y	i	1.5-2	e	
Philadelphus mexicanus	Mock Orange Bush	n		2-3	d	
Photinia glabra rubens		n		to 3m	e	
Prostranthera cuneata	Alpine Mint	y		1	e	
Prostranthera lasianthos	Victorian Xmas Bush	y		1-4	e	
Prostranthera phyllifolia	Jindabyne Mint	y	i	.5-1	e	
Rosa sp	Rose	n		1-3	d	hundreds of cultivars
Rosmarinus officinalis	Common Rosemary	n		1.5-1.8	e	
Spirea thunbergii	Spirea	n		1-1.5	d	
Viburnum burkwoodii		n		2-2.5	d	
Viburnum opulus Sterile	Snowball Tree	n		to 4m	d	
Viburnum tinus	Laurustinus	n		2-4	e	
Weigela japonica		n		1-1.5	d	
GROUND COVERS/PERENNIALS						
Agapanthus Sp		n		to 1m	e	
Brachyscome aculeata	Hill Daisy	y		.3	e	
Brachyscome multifida	Native Daisy	y		.3	e	Short lived
Bulbine bulbosa		y	i	.3	p	
Carex sp	Sedge	n		various	e	check with local nursery for best species.
Cerastium tomentosum	Snow in Summer	n		.2	e	

Chrysocephalum apiculatum		y	i	.3	e	
Dianella sp	Flax Lily	y		1	e	check with local nursery for best species.
Dianthus sp	carnation	n		.6	e	
Dicentra sp	Bleeding Heart	n		.2	p	
Erigeron karvinskianus	Seaside daisy	n		.3	e	
Festuca glauca	Bluegrass	n		.2	e	ornamental grass
Grevillea Bronze Rambler		y		.4	e	
Grevillea Gaudi Chaudi		y		.3	e	
Grevillea Junipera		y		1	e	
Grevillea junipera Molonglo Hybrid		y		.8	e	
Grevillea Junipera Pink Lady		y		.8	e	
Heliochrysalis	Winter Rose	n		.5	p	
Kunzea Badja Carpet		y		.3	e	
Lomandra lonifolia	Honey Reed	y		1	e	
Ophiopogon japonica	Dwarf Mondo Grass	n		.1	e	ornamental grass
Phlox subulata	Alpine Phlox	n		0	e	
Ranunculus sp	Native buttercups	y	i	.3	p	
Thymus sp	Creeping Thyme	n		.1	e	
Vinca minor		n		.3	e	



Snowy River
Local
Environmental
Plan 1997

Amendment No. 15

Area to which

Amendment 15 applies



Zone

-  6 Open Space
-  7 Environmental Protection
-  2(a) General Residential



0 0.05 0.1
kilometres

Scale: 1:10,000 @ A4

File number:
EF/05/179

Authorized by:

As amended by:



