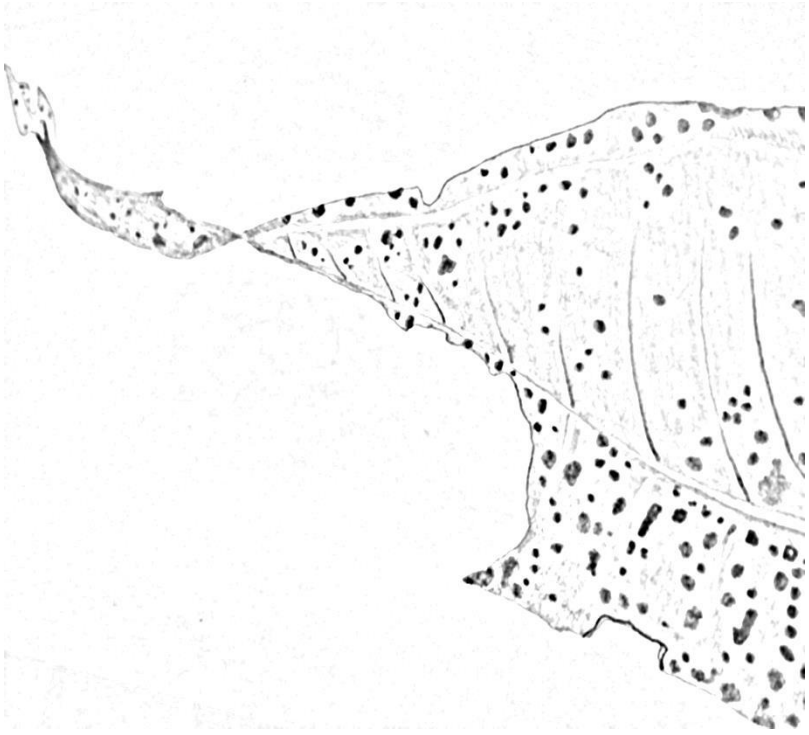
landscaping guidelines

A guide for preparing landscaping plans for lodgement with development applications in the Bega Valley.



bega valley shire council

www.begavalley.nsw.gov.au

Introduction

Landscaping plays an important role in the character and amenity of our towns. A good landscaping plan can often enhance the appearance of a project and help a development contribute towards the prevailing streetscape.

Application

This document is designed as general guidance about how to prepare a landscaping plan rather than a technical specification. This advice is subject to change and every site will present its own challenges and opportunities that should be identified within the context of the site, the type of development and surrounding uses.

Aims and objectives

- Create landscaped areas that contribute towards the prevailing streetscape.
- Enhance the appearance of green spaces within new residential, commercial and industrial development in the Shire.
- Ensure landscaping is responsive to the site and surrounding properties with respect to slope, solar access, bushfire management, views, existing vegetation and linkages to existing corridors.
- Assist with the selection of plant species suitable for the site in terms of climate, soil type, weed management, drought resistance, aspect and the surrounding environment.
- Improve the management and ongoing maintenance of landscaped areas.

Relationship to other plans

These guidelines have particular reference to Chapter 3 of Bega Valley Development Control Plan 2013 (BVDCP 2013) for Residential Development and the Bega Valley Local Environmental Plan 2013 (BVLEP 2013). These guidelines are a strategic action within the Bega Valley Shire Council - Delivery and Operational Plan 2013/14.

Lodgement Requirements

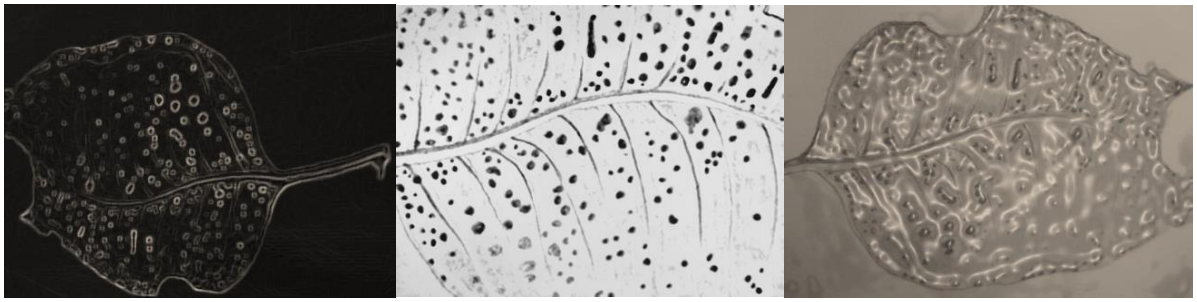
A landscaping plan is a mandatory requirement for residential, commercial and industrial development applications as detailed in the application matrix. The lodgement requirements can be downloaded from Council's website www.begavalley.nsw.gov.au.

Applicants are encouraged to lodge landscaping plans with the overall development application and to seek advice from a suitably qualified professional who is familiar with Council's requirements and the planning process.

Document Status

Name of Amendment	Approved By	Date
Original plan	Council	20/5/2015

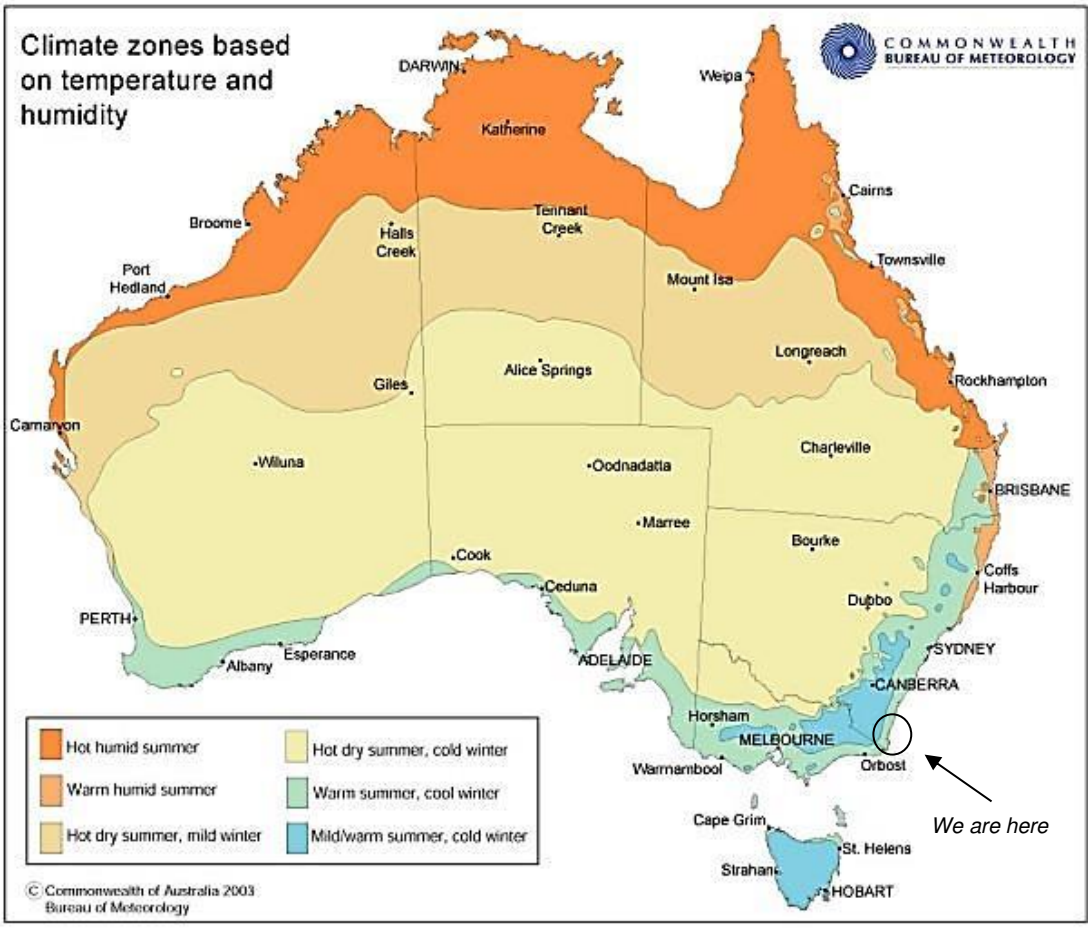
1. Background



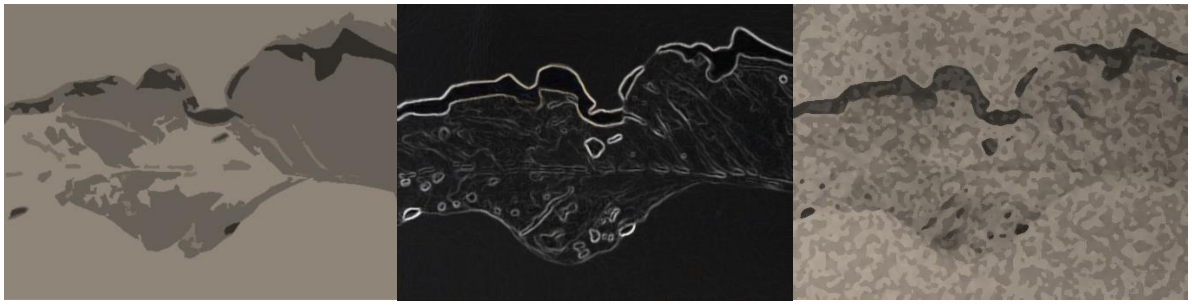
1.1 Climate

A landscaping plan should be considered within the context of the prevailing climate and the range of plant species that grow in the area. The Bega Valley has a 'temperate climate' as identified by the Bureau of Meteorology;

1.2 Temperature	Mean maximum	22.3 Degrees C
	Mean minimum	8.3 Degrees C
1.3 Rainfall	Mean annual	857.9mm
1.4 Geography	Temperate Climate Zone	



2. Survey



The first step in preparing a landscaping plan is to undertake an assessment about the characteristics of the site, including the constraints and limitations relevant to the proposed development and landscaping. This should involve a survey of the physical features of the site and surrounding uses.

Consideration of landscaping during the design phase is important to the success of any development to ensure an appropriate connection is provided between the built form and the landscaped area. This survey should take into consideration the physical features, infrastructure and surrounding uses.

2.1 Physical Features

The first element is a field survey to assess the physical features. This should include an identification of the opportunities and constraints of the site taking into consideration;

- Orientation, wind exposure and solar access
- Slope, soil and water
- Threatened species and Endangered Ecological Communities
- Bushfire risk
- Weed management

At this point, opportunities should be identified to integrate the features of the site into the overall design and make adjustments that protect and enhance these characteristics.

2.1A Orientation, wind exposure and solar access

Objective

- **Landscaping plans should be responsive to the site, structures and the proposed development. This should include careful plant selection to ensure access to sunlight, shade for summer and wind protection.**

The orientation of a site within the context of a development plays an important role in the success of a landscaping plan and its ongoing success. Open spaces should be located so they provide sunlight, shade and protection from prevailing winds.

Resource *Home Comforts – Smarter Building in South East New South Wales, Sustaining Our Towns*

2.1B Slope, soil and water

Objective

- **The landscaping plan should be resilient to changes in climate through surface treatments, the harvesting of water runoff and plant selection**

The climate plays an important role in the selection of plants for landscaping. Water is a valuable resource and the Bega Valley Shire like most areas within Australia is susceptible to periods of drought.

The soil is the foundation upon which a garden is built. The pH, stability, potential for contamination and erosion are all relevant considerations in the preparation of a landscaping plan. Rainwater harvesting from the built environment should be considered, taking into account existing drainage lines and riparian areas (rivers, creeks and streams). The predominant slope of the land should be taken into account and any potential for flooding identified as part of this initial survey. This is particular relevant in the selection of plants and the placement of more permanent structures such as retaining walls.

The type of landscaping will need to be considered as part of a BASIX Certificate (Building Sustainability Index). BASIX is a NSW Government web-based planning tool that assesses the water and energy efficiency of new residential buildings.

Resource *Landcom – Water Sensitive Urban Design*

2.1C Threatened Species and Endangered Ecological Communities

Objective

- **The landscaping plan should consider existing vegetation on the site and surrounding land in terms of threatened species, endangered ecological communities, habitat and wildlife corridors.**

A development site can contain existing vegetation that not only has an aesthetic value but could be rare or provide a habitat for threatened species. Our Shire contains a number of valuable flora species, some of which are quite rare with limited distribution, such as the Merimbula Star-Hair.

It is important to undertake an assessment of the vegetation on the site and surrounding area, taking into account seasonal changes. The retention of remnant vegetation is an important element of a landscaping plan, being mindful about the structural integrity of larger trees and the potential risk they may pose to human safety. Some larger gum trees can be critical for the Yellow Bellied Glider in terms of habitat and continuity within the canopy for gliding.

Merimbula Star-Hair

2.1D Bushfire risk

Objective

- **The landscaping plan should be responsive to the inherent bushfire risk of the site and surrounding land. This is particularly relevant to the built form, slope and existing vegetation.**

The majority of land within the Bega Valley Shire is bushfire prone including National Parks and State Forests and private land. The landscaping plan should take into consideration the location of buildings, choice of materials, asset protection zones (APZs) and maintenance (location of gardens beds and the continuity of fuel). Care should be taken with the clearing of APZs to ensure that vegetation is only removed where necessary and valuable vegetation is retained.

These considerations can help reduce the bushfire risk to properties such as radiant heat, direct flame contact, wind speed, ember attack and defendable space.

Architect Julie Firkin's "Horizon House

This house was designed in response to the *Black Saturday* fires in Victoria

Resource:

- *Landscaping for Bushfire – Garden Design and Plant Selection (CFA)*
- *Planning for Bushfire Protection 2006 (NSW Rural Fire Service)*
- *Australian Standard (AS3959)*
- *www.architeam.net.au/profile/firkinjulie/*

2.1E Weed Management

Objective

- **The landscaping plan should avoid any plant species known to be invasive. It should consider the need to manage existing weed species and any issues relating to their dispersal.**

Weeds can be dispersed through wind, water, animals and humans into public and private spaces around the Bega Valley Shire. It should be noted that both exotic and native species can become invasive and that some plants may not be suitable depending on their location.

More detailed information can be downloaded from Council's website or consultation undertaken with Council's Weed Management Team at Council.

A list of established environmental weeds and potential weeds is provided under Chapter 5 of this document. This list is designed for use in landscaping and is not an exhaustive list of weed species within the Shire. It includes plants that are likely to be found in existing gardens or sold in local nurseries rather than weeds associated with agriculture or those that are unlikely to be planted.

Some are well established as environmental weeds and should never be planted, while others have the potential to become invasive and care should be taken when planting any of these species, particularly those that are prone to escape or adjacent to native vegetation.

Resource:

- *Protecting Our Bushland "Grow Me Instead" A Guide for Gardeners on the New South Wales South Coast*
- *Weeds of the NSW South Coast booklet*
- *Noxious and Environmental Weeds booklet*
- *www.begavalley.nsw.gov.au/Environment/weeds/*

2.2 Infrastructure and services

The second element is fieldwork to determine the location of existing and proposed infrastructure on the site.

- Infrastructure and services

Objective

- **The landscaping plan should consider and respond to the existing and proposed constraints of the site in terms of infrastructure and services.**

This provides a chance to rationalize the use of impervious surfaces and soften the appearance of these surfaces to improve the overall appearance of the development. The movement of vehicles and pedestrian traffic should be considered as part of this process.

A landscaping plan should take into account the location of existing services. This Infrastructure can be located above or below ground and can consist of water and sewer pipes, stormwater, electricity and communication cables. Plant and other machinery may also impact on the landscaping plan, particularly where commercial or industrial development is concerned.

It is critical to have an awareness of where these services are located and the plant species selected. Failure to undertake a proper survey of the site could result in branches across power lines and roots causing damage to pipes or even the foundations of a building.

2.3 Surrounding uses

The third element is considering the relationship between the site and surrounding area, including matters such as;

- Privacy, views and security
- Streetscape and landscape

2.3A Privacy, views and security

Objective

- **The landscaping plan should protect privacy without compromising the views, amenity or security of neighbouring properties.**

Landscaping can play an important role in preserving privacy and views. The landscaping plan should be considered within the context of the overall development and the street.

The placement of trees and lighting can often play an important role in providing security and peace of mind. In this respect, entrances should be clearly visible from street level and not obscured by vegetation. Further details are contained within a document produced by the Department of Planning called Crime Prevention through Environmental Design (CPTED). This promotes landscaped areas that are safer by design and is of particular relevance to larger commercial development.

2.3B Streetscape and landscape

Objective

- **The landscaping plan should consider the existing streetscape and broader landscape characteristics. It should protect and contribute towards existing vegetation and proposed development.**

The landscaping of private property can make a significant contribution to the streetscape and the overall amenity of an area when viewed from a broader landscape perspective. Landscaping can often be used as a means to soften hard surfaces and buildings.

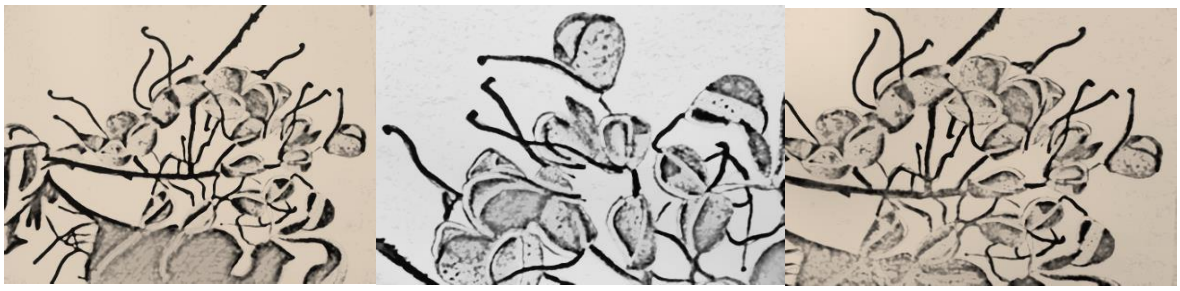
An effective landscaping plan may involve a limited range of plant species and rely on colour, texture and foliage. Mass plantings can be particularly effective for both private and public landscaped areas.

The mature height of plant species, particularly large trees should also be considered with reference to airspace operations in the Tura Beach, Merimbula and Pambula Beach catchment (*Refer to Clause 6.8 of the BVLEP 2013*).

Mass planting with a mixture of colour and foliage can contribute to the streetscape.

Plants can often be used to defined open space areas and provide proportion to a garden with the layering of groundcovers and grasses at the front with shrubs and trees towards the rear of a garden.

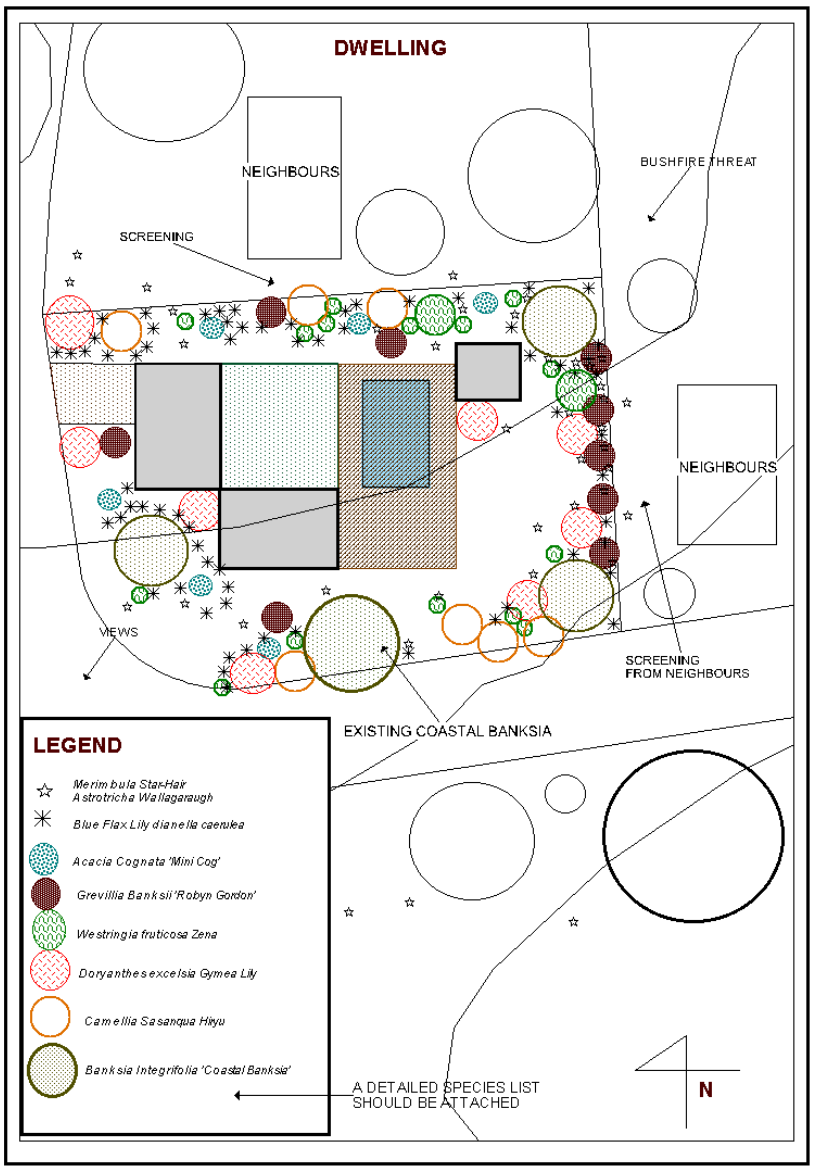
3. Preparation of the plan



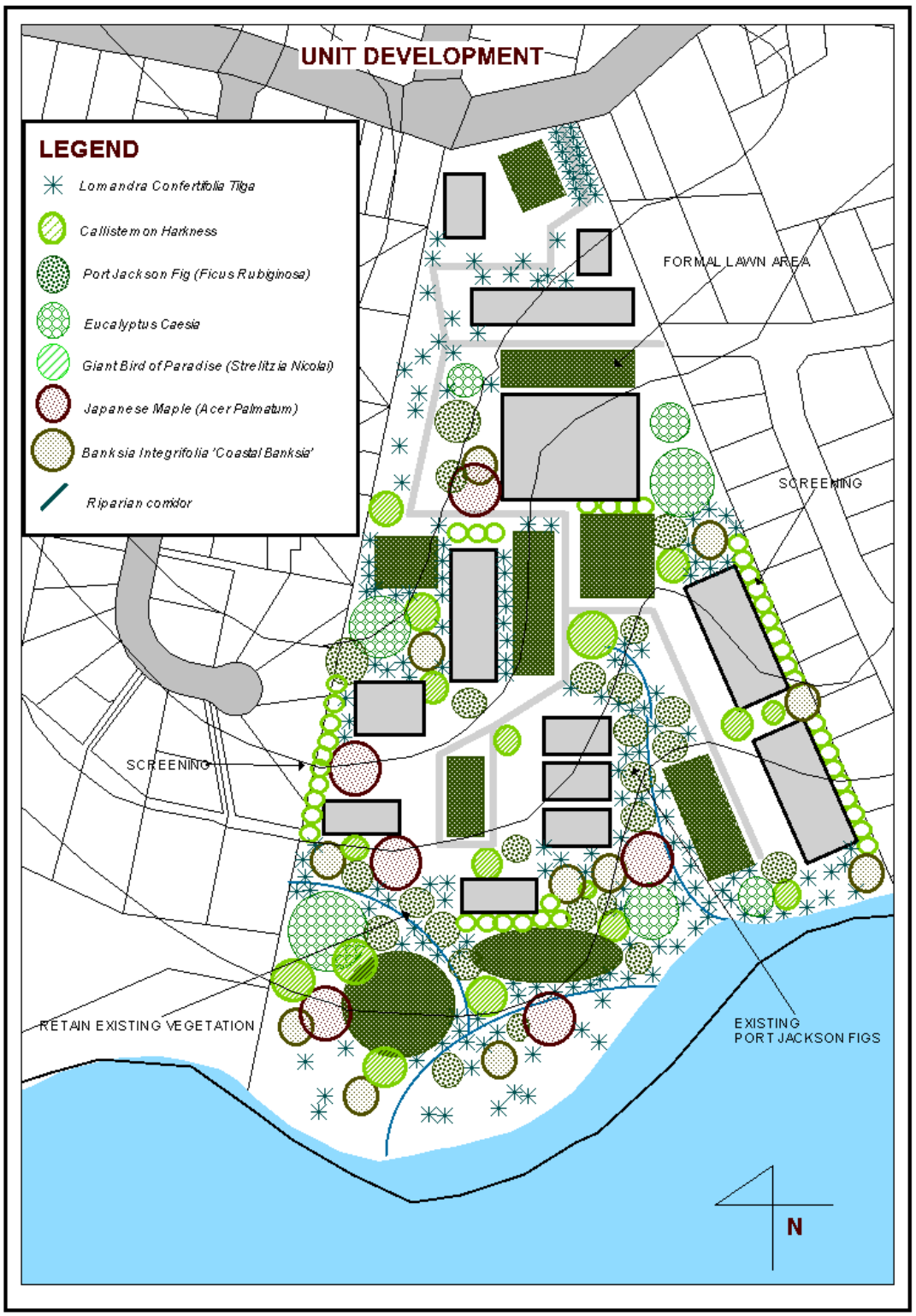
3.1 Type of Development

The development will inform and influence the landscaping plan taking into account the scale, level of use, complexity of the built form and size of the landscaped area and location.

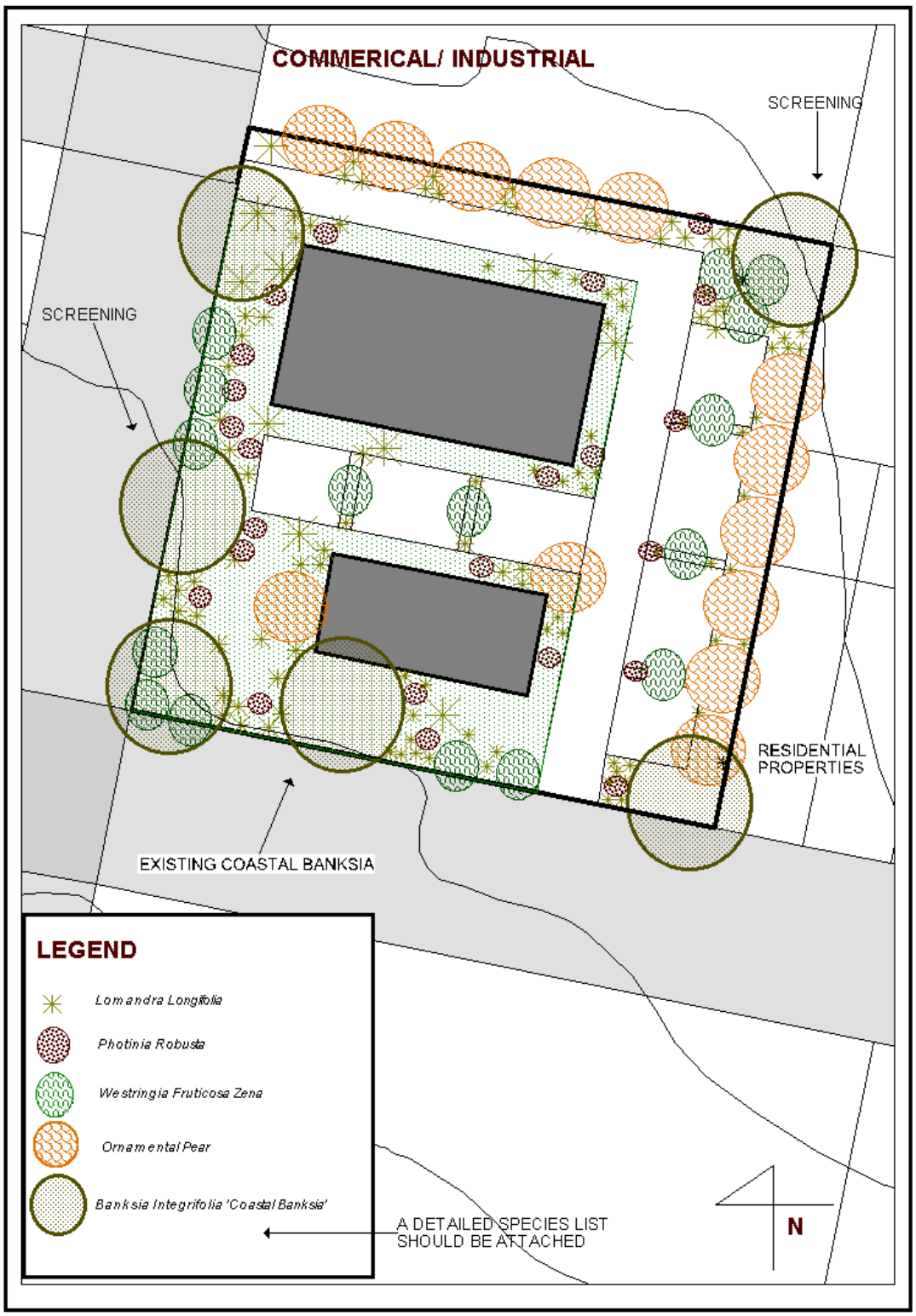
3.1A Residential



3.1B Unit Development



3.1C Commercial/ Industrial



3.2 Plant Selection

Plant selection is an important aspect of any landscaping plan. The suitability of a plant species depends on a range of site specific factors such as;

- Soil
- Aspect
- Topography
- Climate
- Drainage
- Scale
- Maintenance
- Safety

There are a range of plants available from smaller grasses and groundcovers to trees that have characteristics that could benefit any landscaping plan. When selecting native plants, there is a preference for the use of local species that have been grown from local seed to reduce the risk of cross pollination.

3.2A Grasses and grass-like plants

Grasses include everything from traditional lawns to larger plants such as the Gymea Lily. Lawn can provide a place for recreation and play but can be high maintenance. Grasses come in a range of native species that a generally quite hardy, drought tolerant and easy to maintain. They can be mass planted and used to fill tight spaces within a garden.

Some popular species on the south coast include *Kangaroo Grass (Themeda Australia), Blue Flax-lily (Dianella species), Lomandra Confertifolia Tilga, Kangaroo Paw (Anigozanthos)* and the *Gymea Lily (Doryanthes Excelsia)*

3.2B Groundcovers

Groundcovers can be an important part of any garden. They provide interest in terms of shape and growth forms. They are also an effective way of protecting the soil, preventing erosion and suppressing weeds. There is a huge variety of exotic and native species that are fast growing and well adapted to our climate on the south coast. Care should however be taken with the type of groundcover being grown as they can become invasive and dominate a garden bed.

Some popular species on the south coast include a variety of *Westringia species* and *Acacia Mini Cog*

3.2C Shrubs

Shrubs are a popular choice in landscaping plans. They can be mass planted, trained into a hedge and can form an effective screen to preserve privacy and enclose spaces within a garden. They have a limited size that make them perfectly suited to a domestic garden. They cover a large range of native and exotic species.

Some popular species on the south coast include the Pincushion Bush (*Leucospermum*), Callistemon *Harkness*, Grevillia *Honey Gem* and Waratah *Telopea*

3.2D Trees

Trees can provide structure to a garden but can take some time to get established. The retention of existing trees is encouraged so they can be integrated into the design where possible. They often provide a habitat for wildlife, shade from the sun and a structure to climb on. The mature height and size should be considered within the context of the site, development and surrounding land uses.

Some popular species on the south coast include Eucalyptus *Corymbia Ficifolia,* Coastal Banksia *Integrifolia*, Magnolia (*Little Gem*), and Maples (*Acer Species*)

3.2E Planting options

Other planting options might include vegetables, herbs, fruit trees, climbers and succulents.

Vegetables and herbs can provide seasonal interests to a garden and can consist of formal garden beds or they can be mixed in with other plants informally. Climbers are generally fast growing, providing interest to a wall or fence and can assist with privacy. They can however be quite vigorous and invasive if not managed properly. A large number of climbers are not suitable for sites that are adjacent to bushland or riparian areas.

Succulents are particularly drought tolerant and well suited to our climate, although some can become invasive and may not be suitable.

3.3 Materials

The landscaping plan should incorporate a variety of materials that are easy to maintain and relate to the built form to make the best use of outside space. A successful landscape design incorporates a variety of materials and surface treatments. This can be effective way of breaking up areas of lawn and can also be more responsive to the climate and reduce ongoing maintenance.

A successful landscaping plan can contain a variety of materials such as stones, pebbles, sand, mulch, bricks and sculpture. The elements within a building can also be referenced in the landscaped areas to provide continuity between the inside and outside spaces. Materials can often be an effective way of defining spaces within a garden and can provide structure and depth to a garden bed.

The sustainability, lifecycle, safety and maintenance should be considered in the choice of materials.




A mixture of materials can often contribute towards a successful landscaping plan. Retaining walls, rocks and seats can become a feature.

4. Checklist

This checklist is designed to be used to guide the lodgement and assessment of landscaping plans as part of the development application process.

Standard	Yes	No	Comment
Information on the plan			
Scale (ie 1:100, 1:200) North point (Direction arrow to be provided) Contours (2m, 10m) Key (Including all features on the plan) Symbols on the plan (They should be clear and legible. Identify the different types of vegetation (such as groundcovers, shrubs and trees), number of plants and their location Planting schedule (ie botanical name, common name, existing or proposed plants, quantity and size) Identify boundaries, fences, neighbouring development and vegetation Nominate existing vegetation to be retained The location of constructed items, infrastructure or easements			
Key Considerations			
Physical features Aspect (orientation of the block (North/South) Wind (Prevailing direction etc) Sunlight and overshadowing ▪ Winter sun/ Summer shade Slope ▪ Location of retaining walls ▪ Surface coverage (Grass, pavement etc) Soil ▪ Provision for erosion and sediment control ▪ pH (Acid or alkaline) ▪ Potential for contamination Water ▪ Harvesting/ stormwater (Provision for water tanks) Vegetation			

▪ Retention and protection of existing vegetation/ mature trees ▪ Identification and integration with any existing riparian areas ▪ Endangered Ecological Communities (EECs) ▪ Threatened Species (Existing flora and fauna) ▪ Wildlife, habitat and corridors Risk assessment ▪ Human safety ▪ Bushfire risk (APZs and clearing requirements) ▪ Potential for flooding ▪ Removal of weeds and invasive plants Infrastructure ▪ Location of services and easements ▪ Electricity lines and communications			
Surrounding uses Privacy View corridors Security ▪ Entrances and pathways ▪ Lighting plan Streetscape ▪ Built form ▪ Street trees (Proposed and existing) Landscape ▪ Topography			
Development Type of use ▪ Residential, Commercial and Industrial Proposed design and materials Location of structures (retaining walls, letterboxes, garbage bin receptacles, clotheslines) Access and parking Rationalisation of hard stand areas			
Plant selection Type of species ▪ Grasses, groundcovers, shrubs and trees ▪ Evergreen, deciduous, native and exotic ▪ Local provenance planting near bushland and riparian land ▪ Drought tolerance Mature height ▪ Sunlight and shade considerations			
Maintenance Sustainability, lifestyle and safety			

5. Weeds List

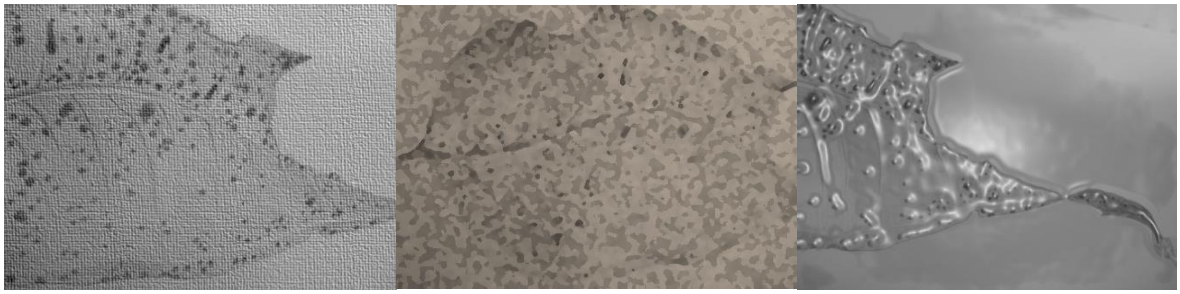
Common name	Scientific name	Type
Trees		
Acacia baileyana	Cootamundra Wattle	
Acacia podalyriifolia	Queensland Silver Wattle	
Acacia saligna	WA Golden Wattle	
Acer negundo	Box Elder	
Ailanthus altissima	Tree Of Heaven	
Alnus Species	Alders	
Arecastrum romazoffianum	Cocos or Queen Palm	
Brachychiton acerifolius	Illawarra Flame Tree	
Chamaecytisus palmensis	Tagasaste Or Tree Lucerne	
Cinnamomum camphora	Camphor Laurel	
Cordyline australis	NZ Cabbage Palm	
Crataegus monogyna	Hawthorn	
Erythrina X sykesii	Coral Tree	
Erythrina crus-galli	Cocksmob Coral Tree	
Fraxinus angustifolia	Desert Ash	
Lagunaria patersonia	Norfolk Island Hibiscus	
Ligustrum lucidum	Large-Leafed Privet	
Olea europaea subsp. cuspidata	African Olive	
Phoenix canariensis	Canary Island Date Palm	
Pinus radiata	Radiata Or Monterey Pine	
Populus alba	White Poplar	
Populus nigra var italica	Lombardy Poplar	
Robinia pseudoacacia	Black Locust	
Salix Species	Willows (N)	N (Most) and WNS
Schinus areira (syn. *S. molle*)	Pepper Tree	
Toxicodendron succedaneum	Rhus	N
Ulmus procera	English Elm	
Shrubs		
Cestrum Species	Cestrum	N (C Parqui)
Chrysanthemoides monilifera subsp. monilifera	Boneseed	N and WNS
Coprosma repens	Mirror Bush	
Cotoneaster glaucophyllus	Cotoneaster	
Crotalaria lunata		
Cytisus scoparius	English Broom	WNS
Erica lusitanica	Portugese Heath	
Fatsia japonica	Aralia	
Genista linifolia	Flaxleaf Broom	WNS
Genista monspessulana	Montpelier Broom	N and WNS
Hakea salicifolia	Willow Hakea	
Lantana camara	Lantana	N and WNS
Lantana montevidensis	Creeping Lantana	N
Leonotis leonurus	Lion's Tail	
Leptospermum laevigatum	Coastal Tea Tree	
Leycesteria formosa	Himalayan Honeysuckle	

Ligustrum sinense	Small-leaved Privet	
Ligustrum vulgare	European Privet	
Lycium barbarum	Chinese Boxthorn	
Lycium ferocissimum	African Boxthorn	WNS
Ochna serrulata	Ochna	
Opuntia aurantiaca	Tiger Pear	N and WNS
Opuntia monacantha	Tree Pear	N and WNS
Opuntia stricta var stricta	Common Prickly Pear	N and WNS
Paraserianthes lopantha	Cape or Crested Wattle	
Polygala myrtifolia	Milkwort	
Polygala virgata	Twiggy Milkwort	
Psoralea pinnata	Africa Scurf Pea	
Pyracantha Species	Pyracantha/ Firethorn	
Raphiolepis Species	Indian Hawthorn	
Senna Species	Cassia	
Solanum mauritianum	Wild Tobacco Bush	
Spartium junceum	Spanish Broom	WNS
Tecoma capensis	Trumpet Bush	
Vines		
Anredera cordifolia	Madeira Vine	WNS
Araujia sericifera	Moth Plant	
Asarina barclaiana (Maurandya barclaiana)	Twining Snapdragon	
Asparagus asparagoides	Bridal Veil Creeper	N and WNS
Asparagus scandens	Climbing Asparagus	WNS
Billardiera (Sollya) heterophylla	Bluebell Creeper	
Delairea odorata	Cape Ivy	
Dipogon lignosus	Dolichos Pea	
Hedera helix	English Ivy	
Ipomoea indica/ cairica	Morning Glory	
Lonicera japonica	Japanese Honeysuckle	
Macfadyena unguis-cati	Cat's Claw Creeper	WNS
Passiflora tarmiana (mollissima)	Banana Passionfruit	
Seneco angulatus/ tamoides/ macroglossus	Climbing Groundsel	
Solanum seaforthianum	Brazilian Nightshade	
Thunbergia alata	Black-Eyed Susan	
Water plants		
Egeria densa	Leafy Elodea	N
Eichhornia crassipes	Water Hyacinth	N and WNS
Elodea Canadensis	Canadian Pondweed	
Myriophyllum aquaticum	Parrot's Feather	
Sagittaria graminea	Sagittaria	WNS
Salvinia molesta	Salvinia (N)	WNS
Sparganium subglobosum	Branched Burr-Reed	
Herbaceous plants		
Agapanthus praecox	Agapanthus	
Aristea Ecklonii	Blue Stars	

Asparagus densiflorus, plumosus	Asparagus Fern	WNS
Canna Species and Hybrids	Cannas	
Chlorophytum comosum	Spider Plant/Ribbon Grass	
Coreopsis lanceolata	Coreopsis	
Crocosmia crocosmiiflora	Montbretia	
Erigeron karvinskianus	Seaside Daisy	
Euryops chrysanthemoides	Euryops	
Eschscolzia Californica	Californian Poppy	
Freesia X Leichtlinii	Freesia	
Gazania Species and Hybrids	Gazania/Treasure Flower	
Hedychium gardnerianum	Ginger Lily	
Leucanthemum maximum	Shasta Daisy	
Leucanthemum vulgare	Ox-eye Daisy	
Lilium formosanum	Formosan Lily	
Nephrolepsis cordifolia	Fishbone Fern	
Osteospermum Species	South African Daisy	
Oxalis Species	Wood-Sorrel	
Ranunculus repens	Creeping Buttercup	
Rorippa nasturtium-aquaticum	Watercress	
Senecio pterophorus	African Daisy	
Tephrosia grandiflora	Pink Pea Bush	
Tradescantia albiflora	Wandering Jew	
Tristonia lineata	Lined Tritonia	
Vinca major	Periwinkle	
Viola odorata	Sweet Violet	
Watsonia borbonica, meriana	Watsonia	
Zantedeschia aethiopica	Arum	
Succulents		
Agave americana, Agave attenuata	Century Plant	
Aloe Species	Aloes	
Aptenia cordifolia	Heart-leaf Ice Plant	
Bryophyllum Species and Hybrids	Mother-of-Millions	
Crassula multicava/ sarmentosa	Stonecrop	
Yucca Species	Spanish Bayonet	
Grasses		
Arundo donax	Giant Reed	
Cortederia jubata/ selloana	Pampus Grass	N
Cynodon dactylon	Couch	
Pennisetum clandestinum	Kikuyu	
Pennisetum macrourum	African Feather Grass	N
Pennisetum setaceum	Fountain Grass	N
Pennisetum villosum	Feathertop/ Foxtail Grass	
Phyllostachys Aurea/ Nigra	Golden, Black Bamboo	
Stenotaphrum secundatum	Buffalo Grass	

N – Noxious in the Bega Valley Shire, WNS – Weeds of National Significance.

6. References



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- Weeds of the NSW South Coast booklet
- Landscaping for Bushfire – Garden Design and Plant Selection (CFA), www.cfa.vic.gov.au
- Planning for Bushfire Protection (PBP) 2006 – NSW Rural Fire Service, www.rfs.nsw.gov.au
- Home Comforts – Smarter Building in South East New South Wales, Sustaining Our Towns, www.begavalley.nsw.gov.au
- Landcom – Water Sensitive Urban Design, www.landcom.com.au
- Yates Garden Design, 43rd Edition
- Crime Prevention through Environmental Design (CPTED) – Department of Planning, www.planning.nsw.gov.au
- Building Sustainability Index – NSW Government Planning and Infrastructure www.basix.nsw.gov.au
- Landscape Architect: Australian Institute of Landscape Architects www.aila.org.au
- Landscape Designer: Australian Institute of Landscape Designers and Managers www.aildm.com.au
- Horticulturist: Australian Institute of Horticulture Inc. www.aih.org.au