KIAMA MUNICIPAL COUNCIL
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8 Landscaping

- Amendment No 1 was adopted by Council on 18 December 2018 – effective from 12 January 2019.

Landscaping

The purpose of this plan is to assist in the preparation of suitable landscape plans and documents for proposed commercial, industrial and residential developments within the Kiama Municipality. Basic information and design considerations are provided which will help applicants in meeting the requirements of the environmental legislation when preparing development applications.

Objectives

- To provide a high standard of landscape design which complements the design of the development and integrates within the streetscape or rural setting in size, scale, mass and bulk throughout the Kiama Municipality.
- To require landscaping to be considered in consultation with building and subdivision design as soon as possible in any development.
- To incorporate environmentally sustainable practices within the design.
- To reduce the impact of development activity on the landscape.
- To provide landscaping which requires low maintenance.
- To protect and enhance remnant native bushland areas by the retention and regeneration of indigenous flora.

Section 1 - Why Submit A Landscape Plan?

Most property development requires a landscape component which is assessed in order to improve the quality of the development by providing shade, privacy, streetscape, aesthetics, low maintenance and environmentally sustainable practices. To ensure a satisfactory standard of construction is achieved it is recommended that all landscape construction by carried out by a qualified landscape contractor. Membership to an accredited organisation encompassing both design and construction of landscapes is desirable.

Section 2 - Who Can Prepare Landscape Documentation?

To ensure that appropriate professional skills are being applied in the design as well as the presentation of landscape proposals, a suitably qualified Landscape Architect or Landscape Designer with relevant design experience is required to prepare landscape plans.

Section 3 - Design Guidelines for Industrial Developments

Landscape Plans are required to be submitted for Industrial Development Applications. This includes development of land for car parks, retail, institutional uses, light and heavy industry.

<u>Aims</u>

- Integrate the landscape with the architectural design of the buildings and enhance the overall existing streetscape.
- Screen and soften buildings and shade paved areas.
- Incorporate environmentally sustainable practices in the landscape design.
- Provide a landscape treatment which corresponds in scale and size relative to the bulk of the proposed development.

- Integrate planting into existing streetscape themes to provide unity and pattern to the precinct.
- Enhance safety and security in public spaces.

Controls

C1 The following design guidelines must be incorporated where practicable:

Design Guidelines

- Provide planting beds a minimum 3 metres wide across the front of the site and a minimum 3 metres wide across the rear and 1 metre wide side boundaries where it adjoins residential property or public spaces, to screen the development and reduce the bulk and scale of the building. Refer to Chapter 9 for car parking requirements for additional information.
- Incorporate indigenous tree and shrub planting in the buffer zone areas if possible. A mix of planting forms and habits is desirable.
- Provide security fencing on street frontages of low visual impact, open design and located within and screened by planting beds.
- Provide landscape treatment within or adjacent to the car parking area which includes shade and screening.
- Separate landscaped areas from car parking and driveway areas by devices that prevent vehicles from damaging the planting.
- Use raised planter areas to minimise the possibility of landscape areas being used for parking or storage areas.
- Provide mulch to garden beds and planted areas.
- Provide suitable edging materials to separate mulch and landscape from turf and hard surfaces.
- Screen waste and service areas with suitable plant and building materials.
- Use recessive colours if manufactured metal fencing is to be used.
- Maintain visibility of vehicular traffic moving in and out of the driveway. Refer to relevant Australian Standards.
- Consider the impact of the landscape on adjoining properties e.g. overshadowing, structural issues, views, by the careful selection and location of trees.
- Retaining walls over 600mm high require Engineer's documentation.

Section 4 - Design Guidelines for Commercial Developments

Landscape Plans are required to be submitted to Council for approval for commercial development applications.

Aims

- Integrate with the architectural design of the commercial buildings and enhance the overall existing streetscape.
- Provide a landscape which visually reduces the bulk and scale of the buildings yet integrates with the overall streetscape.
- Enhance safety and security in public spaces.

Controls

C2 The following design guidelines must be incorporated where practicable:

Design Guidelines

- Separate landscaped areas from car parking and driveway areas by devices that prevent vehicles from damaging the planting.
- Use raised planter areas to minimise the possibility of landscape areas being used for parking or storage areas.
- Integrate planting into existing streetscape themes to provide unity and pattern to commercial precincts.
- Provide mulch to garden beds and planted areas.
- Provide suitable edging materials to separate mulch and landscape from turf and hard surfaces.
- Screen waste and service areas with suitable plants and building materials.
- Provide a dedicated landscape treatment within or adjacent to the car parking area which includes shade and screening.
- Use recessive colours if manufactured metal fencing is to be used.
- Maintain visibility of vehicular traffic moving in and out of the driveway. Refer to relevant Australian Standard.
- Consider the impact of the landscape on adjoining properties e.g. overshadowing, structural issues and views by the careful selection and location of trees.
- Retaining walls over 600mm high require Engineer's documentation.

Section 5 - Design Guidelines for Residential Developments

Landscape plans are required for all Dual Occupancy Developments, Villa Homes, Courtyard Houses, Residential Flat Building and multi Housing Developments. A single residential dwelling on one lot does not require a landscape plan.

Aims

- Screen large-scale buildings and provide a sense of continuity within the development.
- Improve the visual amenity, aid in privacy, noise attenuation and temperature control.
- Enhance safety and security in public spaces.

Controls

C3 The following design guidelines must be incorporated where practicable:

Design Guidelines

- Provide planting at a scale in relation to the verticality of the buildings.
- Enhance boundary and driveway access with planting beds which are a minimum width of 1.0 metre (internal width). Include trees which reach a minimum mature height of 3.0 meters for screening where necessary.
- If possible, provide curved and splayed driveways to reduce a 'gun barrel' effect, particularly when placed against a side boundary.

- Landscape the front property boundary to include a range of tree canopy heights and differing plant forms and habits to provide linkage and amenity to the streetscape.
- Screen waste receptacles from street view.
- Provide mulch to garden beds and planted areas.
- Provide a suitable edging material to separate mulch and landscape from turf and hard surfaces.
- Maintain visibility of vehicular traffic moving in and out of the driveway. Refer to relevant Australian Standards.
- Consider the impact of the landscape on adjoining properties e.g. overshadowing, structural issues and views, by the careful selection and location of trees. Minimise shadow effects on residential courtyards, balconies and living areas.
- Use recessive colours if manufactured metal fencing is to be used.
- Provide private open space (POS) minimum 25m^2 and clear of any garden beds, clothes lines and any other encroachments. For low density housing POS minimum 25m^2 and minimum 4m by 6m. See Chapter 4 for more information on POS in low density housing.
- For medium density housing POS minimum 25m^2 and minimum 5m in one direction. See Chapter 5 for more information on POS in medium density housing.
- Provide communal open space for developments of more than 8 dwellings at 5m^2 of open space per dwelling. For more information on communal open space see Chapter 5 Section 8.
- Retaining walls over 600mm high require Engineer's documentation.
- A minimum of 33% of the area forward of the building line must be landscaped.
- A minimum of 25% of the site area will be deep soil landscaped area. Landscape area means a part of the site used for growing plants, grasses and trees but does not include any buildings, structures or hard paved areas. Driveways and parking areas made of any surface material are excluded from the landscaped area.

Section 6 - Design Guidelines for Rural Developments

This applies to development on rural land identified in Kiama Local Environment Plan 2011

Aims

- Minimise adverse visual and environmental impacts.
- Support the objectives of the zoning as set out in the Kiama Local Environment Plan 2011.

Controls

C4 The following design guidelines must be incorporated where practicable:

Design Guidelines

- Buildings should not be located on the top of prominent ridge lines or knolls.
- Provide vegetative screening to dwellings, sheds, water tanks and outbuildings in such a way so as to break the form of the building and yet maintain desirable view corridors.
- Protect all areas of landscaping, adjacent to land used by stock by permanent stock proof fencing. This shall be maintained for 5 years in order for the planting to reach maturity.

- Provide details of stock fencing in landscape plan; (electrical tape is not considered permanent stock fencing).
- Minimise earthworks and soil erosion.
- Minimise the visual impact of driveways by the use of suitable materials and siting in relation to contours
- Incorporate indigenous species when linking the landscape design proposal into remnant vegetation.
- Consider fire risk in landscaping - refer to NSW Rural Fire Service publications regarding bushfire prone land.
- Avoid plant species that are known to be weed problem – See Appendix 1.
- The clearing of vegetation and trees to improve views, provide access and provide Asset Protection Zones is not permitted. Any building envelope shall be chosen to avoid the need to remove vegetation for the purpose of bush fire risk management.

See Chapter 6 – Rural Development for more information (Note: Section 8 Environmental Considerations).

Section 7 - Information to be Submitted with Landscape Documents

This should be used as a checklist before submitting landscape plans.

Controls

C5 The following design guidelines must be incorporated where practicable:

Concept Landscape Plans

A concept landscape plan is suitable when Development Approval only is required. The following details are required to be shown:

- Property owners name, postal address and contact details.
- Applicant's name, address and contact details.
- Landscape consultants contact details.
- North point.
- Scale of the plan (Generally 1:100 or 1:200 but for specific developments others may be required).
- Location of all existing and proposed buildings and adjoining buildings.
- Details of all existing trees 3.0 metres or more in height showing location, species, canopy spread and height.
- Location, height and finished floor levels of all existing/proposed buildings and structures.
- Location of roads, driveways, parking areas and footpaths with details of materials and finishes.
- Existing ground levels and proposed design levels e.g. contours, spot levels.
- Location and height of proposed retaining walls.
- Location of private open space clear of any garden beds, clothes lines and other encroachments.
- Schematic planting showing location and mature heights of planting.
- Further details which may be required:

- Arborist report including the following details:

    - Reduced levels at tree base
    - Precise location
    - Height
    - Canopy spread and dripline
    - Name of species (Botanic and common)
    - Health and condition

Controls

C6 The following design guidelines must be incorporated where practicable:

Landscape Plans

A fully detailed landscape plan is required prior to release of the Construction Certificate. Therefore it requires more detail than a concept plan. The following details are required to be shown:

- Property owners name, postal address and contact details.
- Applicant's name, address and contact details.
- Landscape consultants contact details.
- North point.
- Scale of the plan (Generally 1:100 or 1:200 but for specific developments others may be required).
- Location of all existing and proposed buildings and adjoining buildings.
- Details of all existing trees 3.0 metres or more in height showing location, species, canopy spread and height.
- Existing or proposed stormwater drains and drainage pits.
- Location, height and finished floor levels of all existing/proposed buildings and structures.
- Location of roads, driveways, parking areas and footpaths with details of materials and finishes.
- Existing ground levels and proposed design levels e.g. contours, spot levels.
- Location of utility services and stormwater drainage lines.
- Location and height of proposed retaining walls.
- Location of private open space wall over 600mm high will require Engineer's documentation clear of any garden beds, clothes lines and other encroachments
- Maintenance program.
- Planting schedule and plan to show:

    - Plant symbol
    - Botanic name and common name
    - Quantity
    - Mature height
    - Pot sizes
    - Plant spacings
    - Staking/tying
    - A specification describing the method of preparation of planting beds, turning, trees in grass, planting methods, fertilising, mulching, edging and staking.

- Details of imported soils and plant growing medium.
- Detail and location of all edge treatments
- When necessary, standard construction and detail drawings e.g. sections through mass planting beds, tree planting details, retaining walls.
- Location of service areas and screening details e.g. garbage receptacle area, drying area, letterboxes, play areas, common open space.

Further details which may be required:

- Construction details of permanent stock proof fencing.
- Location of all existing and proposed underground and overhead services and easements.
- Method used to protect individual trees or bushland areas during and after completion of the development.
- Irrigation layout/tap location if applicable.
- Details of special treatment e.g. erosion control, creek bank stabilisation, roof gardens etc.
- Arborist report of trees on the site and street trees including the following:
  - Reduced levels at tree base
  - Precise location
  - Height
  - Canopy spread and dripline.
  - Name of species (botanic and common name)
  - Health and condition
  - Tree protection Zones.

Controls

C7 The following design guidelines must be incorporated where practicable:

Site Analysis

Specific developments nominated by Council may require more detailed analysis. Good site analysis will aid in the resolution of the landscape design. This has a flow on effect of creating a pleasant living environment for both the occupants of the 'development' in question and the neighbourhood. The following details are required to be shown:

- Consultant's name, address and contact details.
- Applicant's name, address and contact details.
- Site address, location map.
- Scale of plan 1:100. or 1:200
- Date of drawing.
- North point.
- Plan reference number.
- Site boundaries and dimensions.
- Location, use and height of existing buildings within the site.
- Relationship of existing buildings to adjoining properties and key developments.
- Topography, slope and aspect.
- Views from the site.
- Potential constraints relating to overshadowing and overlooking.
- Street character.

- Prevailing winds.
- Surface run-off and potential impact of altered groundwater flows.
- Existing buildings.
- Spot levels and contours related to AHD where practical location of utility services and stormwater drainage lines.
- Location of existing historical or archaeological features.
- Location of existing contaminated soils or fill.
- Arborist report of trees on the site and or street trees including:
  - Levels at tree base (to AHD where possible).
  - Precise location.
  - Height.
  - Canopy spread and drip line.
  - Name of species (botanic and common name).
  - Health and condition.

Section 8 - Environmental Management Plans and Reports

C8 These documents shall be prepared by appropriately qualified consultants. Specific reports may be required for developments within environmentally sensitive areas. Council will set the scope of details required for the survey/report according to specific sites requirements. These may include the following:

- Heritage status and/or Conservation Report.
- Soil analysis.
- Survey of Endangered or Vulnerable Species or Endangered Ecological Communities Biodiversity Act 2016.
- Environmental Management Plan.
- Arborist Report.

Section 9 -Detailed Construction Plans

C9 Detailed construction plans of hard engineering works included in the landscaping such as retaining walls, raised gardens, roof gardens will be required to enable a comprehensive assessment of the landscape proposal.

Section 10 - Vegetation Surveys

C10 These will be required when there is remnant bushland vegetation on the site. The surveys must be carried out by a suitably qualified person approved by Council and in accordance with accepted standard scientific methodology. The minimum detail to be provided shall include the following:

- List of species present on site.
- Location of any Endangered or Vulnerable Species or Endangered Ecological Communities Biodiversity Act 2016.
- List of any weeds classified by Illawarra District Weeds Authority.
- Other detail which may be required include the following:
  - Condition of vegetation including degree of weed invasion.
  - Location and condition of significant trees.
  - Biodiversity assessment

Section 11 - Related Landscape Issues

Street Tree Planting

C11 It is the intention of street tree planting to establish a local identity. The tree selection must be in scale with the streetscape and offer sun and wind protection and improve the micro-climate of the area. Street tree planting is to be:

- Minimum 2.5m from either side of a driveway or vehicular crossing.
- Minimum 2.5m from either end of a car/bus parking bay.
- Minimum 20m from either side of an existing pedestrian crossing.
- Minimum 2.5m from electricity or telephone poles or pillars.
- Spaced so as not to block signage, access to services.
- Indigenous native species with preference over exotics where possible (See Appendix 2 for species list).
- Selected with consideration to overhead power lines and views.
- Minimum 1.0 metre tall when planted.

Protection of Existing Vegetation

C12 Reference should be made to Council's Development Control Plan 2012 Chapter 3 Preservation of Trees and Vegetation regarding the removal or pruning of trees and the treatment of Trees of Special Significance.

C13 Existing vegetation and the means of protecting that vegetation must be clearly shown on any landscape plans.

C14 Consider the following points when landscaping work is adjacent to remnant bushland or existing vegetation:

- Do not alter the topsoil from within the dripline of existing trees on site.
- Do not alter the topsoil from within the dripline of trees, which are outside of the site boundaries yet have a dripline and root mass, which extends into site.
- Do not divert or alter overland water flows to existing vegetation.
- Do not use the area below the dripline of vegetation for site storage or stockpiling of materials.
- Do not run heavy machinery within the dripline of existing trees.
- Provide protection during the construction phase to trees or vegetation to be retained.
- Provide protection to natural elements such as native animal habitats and endangered plant communities.
- If landscaping adjoining remnant bushland use indigenous native species to link the remnant bushland.

Bond/Bank Guarantee for Specific Vegetation

C15 For development occurring on sites containing remnant vegetation or significant trees, Council may levee a bond or guarantee on the applicant to ensure the protection of the trees or vegetation. The bond will be held by Council for the duration of the maintenance period or any period specified by Council.

C16 The sum of the bond will be determined by Council. The sum will be a reasonable estimate of the cost of rectifying any damage to trees or vegetation caused by the development works.

Use of Footpath for Landscaping - A Deed of Lease

C17 In certain circumstances where a developer or owner wishes to extend landscaping beyond the site boundary onto the footpath, application can be made to lease this land from Council.

C18 Under the provision of the Roads Act 1993, if an encroachment occurs within a road reserve, an application must be made to Council to obtain a Lease Agreement over the encroaching structures e.g. landscaping, planter boxes etc.

C19 All costs associated with the agreement setting out the liability and maintenance details shall be borne by the developer/owner. An annual fee will apply for the lease of the area and maintenance of the area will be the responsibility of the property owner.

C20 Any works are to be approved as part of a landscape plan.

Promotion of Resident Safety

C21 Create an environment which enhances safety and security from property damage, theft and personal threat. Where possible, utilise 'Safer by Design' methodology recommended by NSW Police Service. This encourages crime prevention through environmental design by the application of design features, routine activities and space management which alter conditions that create opportunities for criminal behaviour. The following principles are central to this:

- *Surveillance* – includes natural, formal and technical surveillance. Natural focuses on the orientation of buildings, street layout, landscaping, fencing etc.
  - Formal or organised surveillance involves the tactical use of work areas, offices etc near high risk areas.
  - Technical surveillance is achieved through mechanical/electronic measures.
- *Access Control* – includes physical and psychological barriers to restrict, encourage and channel pedestrian and vehicle movement.
- *Territorial Reinforcement* relies upon design features, actual and symbolic boundary markers and other means to encourage a community's sense of responsibility for places and facilities.
- *Space management* involves the formal supervision, control and care of urban space.
- Generally the safety for pedestrians and vehicles should be provided for by the following:
- Illuminate pedestrian access and driveways in communal open space and integrated developments (using relevant Australian Standards).
- Ensure landscaping does not conflict with pedestrian and vehicular safety by blocking vision.

Section 12 - Undesirable Plants

C22 These are plants which are considered unsuitable for landscape purposes in the Kiama Municipality because of the potential of these plants to cause serious environmental problems in the landscape. Therefore they are to be discouraged from use in gardens throughout the Kiama Municipality (See Appendix 1).

Section 13 - Recommended Plants

C23 The use of native plant species in landscaping is encouraged. The use of local indigenous stock is particularly important in rural areas to preserve existing vegetation. Projects involving regeneration or enhancement of remnant bushland must use local indigenous stock grown from seed collected in the area. In order to assist in the selection of local indigenous native species a list of species suitable for use in landscaping is included in Appendix 2. This list is intended as a guide only and is not exhaustive, particularly for native bushland regeneration sites. The ultimate selection of suitable species is always dependent on specific site requirements.

Section 14 - Landscape Maintenance

Maintenance Period

C24 All property owners must be aware that they will be responsible for the maintenance of the landscaping for the maintenance period once the landscaping has been approved by a certifier as being complete and in accordance with the approved development consent.

The landscape maintenance period commences on the date of practical completion and extends for the duration of the specified maintenance period. A project is deemed to be at practical completion when all the hard and soft landscape features or any work depicted on the approved landscape plans have been installed and approved by a private certifying authority or Council.

C25 Maintenance Periods for Various Developments

Industrial	52 weeks
Commercial	26 weeks
Residential	26 weeks
Rural	52 weeks

These maintenance periods may be extended for specific developments.

Maintenance Program

C26 A landscape maintenance program or specification is required with the landscape plan. This is to describe the means of maintaining the landscaping during the maintenance period and shall include but not be limited to plant establishment, watering, mowing, fertilising, weeding, staking, pruning, mulching, pest and disease control, and generally maintaining the site in a neat and tidy condition.

C27 Missing, dead and unhealthy plants are to be replaced with plants of a similar size and quality and of identical species/variety, unless a substitution is approved by Council.

C28 Garden mulch must be to the relevant Australian Standards.

C29 Any pruning must be carried out to meet Australian Standards AS4373-2007 ‘Pruning of Amenity Trees’ and shall comply with Council’s Development Control Plan 2012 Chapter 3 Preservation of Trees and Vegetation.

Section 15 – Treatment of Trees of Special Significance

C30 Kiama Municipal Council is concerned about the conservation of an important part of the heritage of the area that is the trees of special significance in the Municipality. These may be single trees, stands or avenues of trees which may be significant for a number of reasons. Refer to Development Control Plan 2012 Chapter 3 Preservation of Trees and Vegetation for the criteria that should be used as a guide in determining if a tree or group of trees are of special significance and the treatments required for their protection.

Section 16 - Ecologically Sustainable Development (ESD)

Kiama Municipal Council is committed to the principles of Ecologically Sustainable Development. To satisfy the principles of ESD, the landscape proposal should provide for the following:

- Native Gardens to provide a habitat for native fauna.
- Retain bushland to prevent further loss of native plants and animals.
- Minimise large expanses of open lawn areas.
- Minimise impervious surfaces by using porous materials or increasing garden bed size.
- Plant trees to aid in wind and shade protection, noise abatement and a more pleasing environment.
- Use and integrate local materials into the landscape where possible.
- Minimise earthworks.
- Minimise potential for erosion and sedimentation.
- Minimise demolition and excavation material by reusing, recycling or disposing in an environmentally sustainable manner.
- Retain existing mature trees and shrubs.
- Use rainwater tanks to conserve water.
- Allocate an area for composting of green waste.

Section 17 - Tree Selection for Fire Prone Areas

C31 Select plants that match the conditions of the environment (soils, rainfall, temperatures, frost and wind) but do not overlook fire as a factor. All plants will burn but some are more tolerant of fire than others.

Features of plants that provide protection from fire include:

- High salt content of leaves
- High moisture content of leaves
- Low volatile oil content of leaves
- Thick bark protecting conductive tissues and dormant buds
- Seed enclosed in woody capsules
- Dense crown
- Lowest branches out of reach of ground fires

Refer to publications by the NSW Rural Fire Service for tree selection details.

Section 18 - The Preservation of Trees and Vegetation

C32 Certain trees in the Municipality are protected and may not be removed or pruned without a permit or development consent. Some trees are considered environmental weeds and may be removed or pruned without a Permit or Development Consent. These trees species are exempt and listed in Development Control Plan 2012Chapter 3 – Preservation of Trees and Vegetation.

Appendix 1 PLANTS CONSIDERED UNSUITABLE

PLANTS CONSIDERED UNSUITABLE FOR LANDSCAPE PURPOSES IN THE KIAMA MUNICIPALITY

The following plants listed should not be used in any gardens in the Municipality of Kiama. Some of these plants listed have been in common use for generations but are now acknowledged to be serious weeds of native bushland. Their replacement with non-invasive species is encouraged.

Trees	
Botanical Name	**Common Name**
Acacia baileyana	Cootamundra Wattle
Acacia saligna	Golden Wreath Wattle
Ailanthus altissima	Tree of Heaven
Cinnamomum camphora	Camphor Laurel
Erythrina x sykesii	Coral Tree
Ficus elastic	Rubber Tree
Grevillea robusta	Silky Oak Tree
Lagunaria patersonii	Norfolk Island Hibiscus
Ligustrum sinense	Small Leaf Privet
Ligustrum lucidum	Large Leaf Privet
Olea africana	Wild Olive
Olea europaea subspp africana	African Olive
Pinus radiata	Radiata Pine
Populus species	Poplar Tree
Pittosporum undulatum	Native Daphne
Robinia pseudoacacia	False Acacia
Salix species	Willow Tree
Schefflera actinophylla	Umbrella Tree
Toxicodendron succedaneum	Rhus Tree
XCupressocyparis leylandii	Leylandii Pines
Shrubs	
Ageratina adenophora	Crofton Weed
Agave americana	Yucca Plant
Baccharis halimifolia	Groundsel Bush
Canna indica	Canna Lily
Cestrum parqui	Green Cestrum
Chrysanthemoides monilifera	Bitou Bush
Cortaderia spp	Pampas Grass
Coreopsis lanceolata	Coreopsis
Cotoneaster spp	Cotoneaster
Coprosma repens	Mirror Plant
Cytisus scoparius	English Broom
Genista spp	Broom
Hypericum perforatum var angustifolium	St John’s wort
Lantana all species	Lantana
Lilium formosanum	Formosa Lily
Nerium oleander	Oleander

Botanical Name	Common Name
Ochna serrulata	Mickey Mouse Plant
Phyllostachys spp	Bamboo
Polygala myrtifolia	Myrtle-leaf Milkwort
Polygala virgata	Purple Broom
Pyracantha angustifolia	Firethorn
Ricinus communis	Castor Oil Plant
Senna pendula var glabrata	Cassia
Senna pendula	Cassia
Ulex europaeus	Gorse
Opuntia spp	Prickly Pear
Zantedeschia aethiopica	Arum Lily
Groundcovers/Climbers	
Acetosa sagittata	Turkey Rhubarb
Colocasia spp.	Elephant Ears
Anredera cordifolia	Madiera Vine
Araujia hortorum	Moth Vine
Bryophyllum delagoense	Mother of Millions
Cardiospermum grandiflorum	Balloon Vine
Crocosmia x crocosmiiflora	Montbretia
Delairea odorata	Cape Ivy
Gazania rigens	Gazania
Gloriosa superba	Glory Lily
Hedera helix	English Ivy
Hedychium gardneranum	Wild Ginger/Ginger Lily
Hieracium spp	Hawkweed
Hydocotyle ranunculoides	Pennywort
Ipomoea indica	Morning Glory
Jasminum polyanthum	White Jasmin
Lonicera japonica	Honeysuckle
Macfadyena unguis-cati	Cat's Claw Creeper
Myrsiphyllum asparagoides	Bridal Veil Creeper
Nephrolepis cordifolia	Fishbone Fern
Parietaria judaica	Pellitory/Sticky or Asthma Weed
Passiflora edulis	Passionfruit
Pennisetum alopecuroides	Oxtail Grass
Persicaria capitata	Japanese Knotweed
Protasparagus plumosus	Climbing Asparagus
Protasparagus aethiopicus	Asparagus Fern
Pyrostegia venusta	Golden Shower
Ranunculus repens	Creeping Buttercup
Tecomaria capensis	Cape Honeysuckle
Thunbergia alata	Black-eyed Susan
Tradescantia fluminensis	Wandering Jew
Tropaeolum majus	Nasturtium
Vinca major	Blue Periwinkle
Watsonia bulbifera	Bugle Lily

Palms	
Botanical Name	**Common Name**
Phoenix canariensis	Canary Island Date Palm
Syagrus romanzoffianum	Cocos Palm
Aquatics	
Alternanthera philoxeroides	Alligator Weed
Cabomba caroliniana	Cabomba
Elodea Canadensis	Canadian Pondweed
Eichornia crassipes	Water Hyacinth
Equisetum spp	Horsetail
Ludwigia peruviana	Ludwigia
Myriophyllum aquaticum	Parrots Feather
Pistia stratiodes	Water Lettuce
Salvinia molesta	Salvinia

Planting of these species will have significant impacts on our environment. Avoid the use of these species in the landscape. Reference should also be made to Illawarra District Weed Association current weed list.

Appendix 2 Suitable Indigenous Plants

Kiama Indigenous Plants Suitable for use Particularly in Regeneration or Enhancement of Remnant Bushland

Smallish Trees - Suitable For Habitat									
Species	**Common Name**	**Form/Features/Suitable For:**	***Dry Rainforest***	***Moist Rainforest***	**Open Forest**	**Coastal**	**Riparian**	**Open grassy**	**Aquatic**
Acacia binervata	Two-Veined Hickory	small, regen	•		•				
Acacia maideni	Maidens Wattle	small-medium, regen	•		•				
Acacia melanoxylon	Blackwood	small-medium, regen	•		•				
Acmena smithii	Lilly Pilly	stays small in harsh/ coastal sites	•				•		
Alectryon subcinereus	Native Quince	small, general use			•	•			
Allocasuarina littoralis	Black She-Oak	tall shrub-small tree, dry sandy				•			
Allocasuarina verticillata	Drooping She-Oak	small, hardy, coastal		•					
Archontophoenix cunninghamiana	Bangalow Palm	slender palm to 15m	•						
Austromyrtus acmenoides	Scrub Ironwood	small, general landscaping				•			
Backhousia myrtifolia	Grey Myrtle	small, hardy, attractive				•		•	
Banksia integrifolia	Coast Banksia	tall shrub-small tree, coastal, dry sites				•		•	
Banksia serrata	Old Man Banksia	tall shrub-small tree, dry sites	•		•				
Callistemon salignus	Pink Tips	small paperbark, poorly drained sites	•			•			
Canthium coprosmoides	Coast Canthium	small, coastal	•			•			
Cassine australis	Red-Fruited Olive-Plum	small, most sites coastal	•			•			
Clerodendrum tomentosum	Native Clerodendrum	small, hardy, all soils,	•						
Croton verreauxii	Green Carscarilla	shrub-small tree, coloured leaves	•	•					
Diospyros australis	Black Plum	small, sheltered sites	•			•			
Duboisia myoporoides	Corkwood	small-medium, coast on sand, littoral rainforest	•						

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Ehretia acuminata	Koda	small-medium, deciduous	•			•			
Eupomatia laurina	Bolwarra	tall shrub-small tree, moist sites			•				
Exocarpos cupressiformis	Brush Cherry	small, drier, poorer sites					•		
Ficus coronata	Sandpaper Fig	small, riparian, edible fruit	•						
Geijera salicifolia	Brush Wilga	small, dry rainforest regeneration		•					
Hedycarya angustifolia	Native Mulberry	shrub-small tree, rainforest, trial general use	•	•	•				
Livistona australis	Cabbage Palm	palm, slow growing, widespread use						•	
Melaleuca armillaris	Bracelet Honey Myrtle	tall shrub-small tree, shallow latite, dry					•		
Melaleuca styphelioides	Prickly Melaleuca	tall shrub-small tree, widely used	•						
Melicope micrococca	White Euodia	tall shrub-small tree, rainforest regeneration	•			•			
Myoporum acuminatum	Boobialla	hardy, breaks in high wind	•	•	•	•			
Notolaea venosa	Native Olive	hardy, dry, coast, rainforest	•						
Omalanthus populifolius	Bleeding Heart	small, common, coloured leaves	•			•			
Pararchicodendrum pruinosum	Snow Wood	small-medium., foliage, flowers, pods	•						
Planchonella australis	Black Apple	small rainforest, edible ‘apple’		•					
Polyosma cunninghamii	Featherwood	small, rainforest	•			•			
Polyscias elegans	Celery-Wood	palm-like, height in confined space	•		•				
Polyscias murrayi	Pencil Cedar	palm-like, height in confined space		•		•			
Rapanea howittiana	Muttonwood	small rainforest, fruit, gardens	•			•			
Rapanea variabilis	Muttonwood	small rainforest, gardens	•						

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Rhodamnia rubescens	Brown Malletwood	small rainforest gardens	•						
Stenocarpus salignus	Scrub Beefwood	small, rainforest regeneration, farm forestry	•			•			
Streblus brunonianus	Whalebone	shapely, hardy, wind-prunes		•					
Synoum glandulosum	Bastard Rosewood	better soils, rainforest regeneration		•					
Medium Trees - Suitable for Habitat									
Acmena smithii	Lilly Pilly	medium-tall, edible berries	•	•	•	•			
Acronychia oblongifolia	White Lilly Pilly	medium , edible fruit	•			•			
Alphitonia excelsa	Red Ash	medium, rainforest regeneration, street	•						
Angophora floribunda	Rough-Barked Angophora	tall, dry sites			•	•			
Brachychiton acerifolius	Illawarra Flame	medium, most sites, colour	•	•					
Casuarina cunninghamiana	River Oak	tall, riparian					•		
Casuarina glauca	Swamp Oak	medium, regen,, coast, not near building				•			
Ceratopetalum apetalum	Coachwood	tall, sandy soils higher areas		•					
Cinnamomum oliveri	Camphorwood	tall, relative of Camphor Laurel		•					
Cryptocarya glaucescens	Native Laurel	tall, rainforest regeneration	•	•					
Cryptocarya microneura	Murrogun	tall, rainforest regeneration	•	•					
Doryphora sassafras	Sassafras	medium-tall, moist, shady sites	•	•					
Elaeocarpus kirtonii	Pigeonberry Ash	tall, rainforest regeneration, esp. riparian		•			•		
Eucalyptus botryoides	Bangalay	tall, coastal, sandy				•			
Eucalyptus eugenioides	Stringybark	tall, drier regen			•				

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Eucalyptus fastigata	Brown Barrel	tall, upper scarp, farm forestry			•				
Eucalyptus paniculata	Grey Ironbark	tall, sandy, volcanic soils			•				
Eucalyptus pilularis	Blackbutt	tall, farm forestry			•	•			
Eucalyptus quadrangulata	Coast White Box	tall, lower escarpment			•				
Eucalyptus smithii	Gully Peppermint	tall, escarpment, farm forestry			•				
Eucalyptus tereticornis	Forest Red Gum	tall, drier latite, farm forestry			•				
Euroschinus falcata	Blush Cudgerie	medium-tall, coastal rainforest	•			•			
Ficus macrophylla	Moreton Bay Fig	extra tall, for Flying Fox		•			•		
Ficus obliqua	Small-Leaved Fig	extra tall, for Flying Fox		•			•		
Ficus superba var. henneana "	Deciduous Fig	extra tall, for Flying Fox	•			•			
Glochidion ferdinandi	Cheese Tree	medium, streetscape, general	•		•	•			
Guioa semiglauca		medium rainforest regeneration, coast on sand	•			•			
Litsea reticulata	Bolly Gum	medium-tall, rainforest regeneration		•			•		
Melia azedarach	White Cedar	tall, grub prone, but attracts birds	•	•			•		
Podocarpus elatus	Plum Pine	tall, edible fruit		•		•	•		
Sarcomelicope simplicifolia	Yellow Wood	to 10m, lemon scented leaves	•	•		•			
Scolopia braunii	Flintwood	to medium tree , hardy, coastal extremes,	•			•			
Schizomeria ovata	Crab Apple	tall rainforest, edible fruit, shade		•					
Syncarpia glomerulifera	Turpentine Tree	tall, moist sites, farm forestry			•				
Symplocos thwaitesii	Buff Hazelwood	medium rainforest tree, floors, shade	•	•					

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Syzygium australe	Brush Cherry	tall, edible fruit, riparian					•		
Toona ciliata	Red Cedar	tall, deciduous, heritage, rainforest moist		•			•		
Shrubs - Suitable for Habitat									
Species	**Common Name**	**Form/Features/Suitable For:**	***Dry Rainforest***	***Moist Rainforest***	**Open Forest**	**Coastal**	**Riparian**	**Open grassy**	**Aquatic**
Acacia sophorae	Coast Wattle	semi-prostrate shrub, coastal				•			
Alchornea ilicifolia	Native Holly	tall shrub, general use, foliage	•			•			
Allocasuarina littoralis	Black She-Oak	tall shrub-small tree, dry sandy			•	•			
Allocasuarina verticillata	Drooping She-Oak	tall shrub-small tree							
Commersonia fraseri	Brown Kurrajong	ugly shrub, regeneration only						•	
Coprosma quadrifida	Prickly Coprosma	prickly low bush, regen		•					
Correa lawrenciana ssp. macrocalyx		shrub, flowers			•				
Dodonaea viscosa Viscid	Hop Bush	shrub 1-3m, drier sites			•				
Duboisia myoporoides	Corkwood	coast on sand, littoral rainforest	•			•			
Elaeocarpus reticulatus	Blueberry Ash	shrub, sandy soils			•	•			
Eucalyptus apiculata	Mallee Gum	tall shrub, multi-stemmed, small gardens			•				
Eupomatia laurina	Bolwarra	tall shrub-small tree, moist sites	•			•			
Exocarpos cupressiformis	Brush Cherry	shrub-small tree, drier, poorer sites	•		•				
Goodia lotifolia		to 3m, flowers, regen, gardens	•		•				

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Hakea dactyloides		tall shrub, general purpose, poor sites			•				
Hedycarya angustifolia	Native Mulberry	shrub-small tree, rainforest, trial general use		•					
Hibiscus heterophyllus	Native Hibiscus	short-lived, rainforest regen., flowers	•		•	•			
Hymenanthera dentata	Tree Violet	tall shrub, trial general use	•	•	•				
Indigofera australis	Indigo Peabush	<1m, pink flowers, gardens			•	•			
Leptospermum laevigatum	Coast Tea Tree	tall shrub, widely used, hedges well				•			
Leptospermum morrisonii	Common Tea Tree	tall shrub, trial as street tree, gardens			•				
Melaleuca armillaris	Bracelet Honey Myrtle	shrub-small tree, shallow latite, dry						•	
Myoporum boninense	Boobialla	low shrub, headlands, coastal				•			
Olearia argophylla	Silver Bush	tall, rainforest margins, trial in gardens		•	•				
Olearia viscidula	Wallaby Weed	shrub to 2m	•		•				
Omalanthus stillingifolius	Bleeding Heart	shrub, gardens public and private				•			
Prostanthera incisa	Cutleaf Mintbush	shrub, fragrance, flowers, shady gardens			•				
Prostanthera lasianthos	WhiteFlowered Mintbush	tall shrub, shade, flowers		•					
Prostanthera linearis	Linearleaf Mintbush	shrub, sunny latite							•
Rubus rosifolius	Native Raspberry	suckering shrub, edible fruit, regeneration	•	•	•	•	•	•	
Solanum aviculare	Kangaroo Apple	shrub, edible fruit, shade	•	•		•			
Tasmannia insipida	Pepper Bush	1-2m, peppery seeds, cooler, better soils		•					
Telopea speciosissima	Waratah	native Budderoo on good soils			•				
Trema aspera	Poison Peach Bush	Non-descript, regeneration only	•		•				

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Westringia fruticosa	Coastal Rosemary	dense, salt hardy shrub1-2m				•			
Wilkiea huegeliana	Veiny Wilkiea	Prickly shrub, rainforest including Littoral, regeneration	•						
Westringia fruticosa	Coastal rosemary	dense, salt hardy shrub 1-2m				•			
Zieria granulata	Kiama Zieria	tall shrub, shallow latite, eg headlands						•	
Zieria smithii	Sandfly Zieria	shrub, flowers, stinky aromatic, gardens	•		•				
***Groundcovers/Grassy Sward* - Suitable for Habitat**									
Aneilema acuminatum		herb, spreading, moist		•			•		
Canavalia rosea	Coastal Jack Bean	vine, hardy, coastal				•			
Centella asiatica	Arthritis Weed	grassy sward, grassed areas, coastal						•	
Cissus antarctica	Native Grape Vine	vine, groundcover	•		•	•			
Dichondra repens	Kidney Weed	grassy sward, shady grass areas						•	
Doodia aspera	Rasp Fern	fern, hardy groundcover	•	•			•		
Hardenbergia violacea	False Sarsparilla	vine, hardy groundcover eg headlands						•	
Hibbertia dentata		vine, groundcover						•	
Hibbertia scandens	Golden Guinea Flower	vine, groundcover						•	
Hydrocotyle spp.	Pennywort	grassy sward, shaded grass areas						•	
Kennedia rubicunda	Running Postman	hardy vine, groundcover, exposed sites						•	
Oplismenus aemulus	Mat Grass	grassy sward						•	
Oplismenus imbecilis	Mat Grass	grassy sward						•	
Pollia crispata	Pollia	groundcover, moist sites					•		

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Scaevola calendulacea	Dune Fan Flower	groundcover, blue flowers				•			
Smilax glyciphylla	Sarsparilla	vine, bush 'cure', dry exposed	•		•	•			
Sporobolus virginicus var. *minor*	Marine Couch	grass, ground cover, salty, coastal				•			
Stellaria flaccida	Swamp Starwort	groundcover, very moist only					•		
Suaeda australis	Seablite	groundcover, salt tolerant sandy				•			
Tetragona tetragonoides	New Zealand Spinach	groundcover, edible, coastal				•			
Themeda australis	Kangaroo Grass	groundcover grass, hardy, coastal, regen,						•	
Viola hederacea	Native Violet	groundcover, flowers, shaded sward					•		
Water Plants – Suitable for Habitat									
Alisma plantago-aquatica	Water Plantain	<1m perennial, rooted in mud dams							
Cyperus exaltatus		Perennial to 2m, rooted in mud, dams							
Elatostema eticulatum	Waterfall Spinach	Herb, on streambanks, water gardens							•
Eleocharis sphacelata	Tall Spikerush	Tall rush, spreads in still water							•
Isachne globosa	Swamp Millet	Groundcover grass, seed, boggy areas							•
Juncus usitatus		Sedge to 1m, water's edge, damp places							•
Ludwigia peploides	Water Primrose	Floating, flowers, still pools							•
Ottelia ovalifolia	Swamp Lily	Floating, flowers, still pools							•
Paspalum distichum	Water Paspalum	low grass, spreads, edge of still water							•
Persicaria decipiens	Slender Knotweed	Herb, spreading, shallow water, dams							•
Persicaria strigosa	Spotted Knotweed	Herb, spreading, shallow water, dams							•

Species	Common Name	Form/Features/Suitable For:	*Dry Rainforest*	*Moist Rainforest*	Open Forest	Coastal	Riparian	Open grassy	Aquatic
Phragmites australis	Common Reed	1-2m, spreading, waterbird habitat							•
Plants which form Clumps - Suitable for Habitat									
Bracteantha bracteata	Golden Everlasting	annual herb, gardens, 6						•	
Alocasia brisbanensis	Cunjevoi Lily	lily, riparian, shady					•		
Crinum pedunculatum	Native Crinum Lily	lily, form, flowers-used at Olympic site, 4a				•			
Cymbopogon refractus	Barbed Wire Grass	grass, coastal, shallow soils, 6						•	
Dianella spp.	Flax Lily	groundcover/coastal, general, 1,3,4	•		•	•			
Eustrephus latifolius	Wombat Berry	vine, bush tucker, decorative, 1,3,4	•		•	•			
Gahnia aspera	Small Saw Sedge	sedge, open forest regen, 3			•				
Gymnostachys anceps	Settlers' Flax	sedge, trial landscape use, shape, 1,2	•	•					
Helichrysum elatum	White Everlasting	perennial herb, flower gardens, 3			•				
Lepidosperma laterale		small sedge <1m, 3			•				
Lepyrodia gracilis		weeping sedge, trial water gardens, 3			•				
Lomandra longifolia	Mat Rush	Sedge, widely used, very hardy, 3,4			•	•			
Plectranthus graveolens	Cockspur Flower	herb on latite, 6						•	
Plectranthus parviflorus	Cockspur Flower	widespread herb, 1,3	•		•				
Poa labillardieri a	Snowgrass	clumps to 1m height , 3			•				
Pteris tremula	Tender Brake	fern, clumps ,shady sites, 2,5		•			•		
Ferns – Suitable for Habitat									
Adiantum aethiopicum	Maidenhair Fern	groundcover, seepage areas					•		
Adiantum formosum	Giant Maidenhair	groundcover, moist shade					•		

Species	**Common Name**	**Form/Features/Suitable For:**	***Dry Rainforest***	***Moist Rainforest***	**Open Forest**	**Coastal**	**Riparian**	**Open grassy**	**Aquatic**
Adiantum hispidulum	Rough Maidenhair	groundcover, moist shade					•		
Asplenium australasicum	Bird's Nest Fern	groundcover, grow from spore		•					
Cyathea cooperi	Tree Fern	slender upright to 3m, semi shade	•	•					
Dicksonia antarctica	Soft Tree Fern	stout trunk to 2m, full shade	•	•					
Doodia aspera	Rasp Fern	ground fern, groundcover	•	•			•		
Pellaea falcata	Sickle Fern	substitute for Fishbone Fern	•	•		•	•		
Platycerum bifurcatum	Elkhorn Fern	grow from spore		•					
Pteris tremula	Tender Brake	fern, clumps, shady sites		•			•		