specifications

Bush regeneration

Bushland Regeneration is the activities carried out to provide conditions that facilitate the natural recruitment or germination of endemic flora species. It primarily involves the progressive control of weed species in a systematic manner of primary weed control, follow-up weed control (often several follow –up sessions) and maintenance over an identified works area. Typically work areas progress from areas of little weeds and expand to adjacent works areas. It is recommended that these activities are undertaken by specialised and experienced bush regeneration contractors.

Bush regeneration contractors

Bush regeneration contractors are companies or individuals who have experience and qualifications in bush regeneration activities. Contractors must provide an experienced site supervisor with minimum qualifications of a TAFE Certificate II in Bush Regeneration or Conservation & Land Management.

Erosion control matting

Erosion control matting will be biodegradable organic fibre matting such as jute fibre (Jutemaster ® FM) and must be specifically designed for erosion control and allow cover crop seed to generate, emerge and develop through it. Erosion control matting must be installed and pinned down in accordance with the manufacturer's instructions.

Crushed sandstone mulch

Crushed sandstone mulch is to be comprised of clean crushed sandstone, free of clay, weed propagules, road base and other foreign matter and should comprise <5%fines and rocks with a maximum diameter of 100mm. Crushed sandstone mulch shall be laid to a depth of 50-75mm.

Erosion & sediment controls

All erosion and sediment controls such as berms, sediment fences, rumble zones sediment basins and site drainage flow paths must be designed and constructed in accordance with Managing Urban Stormwater: Soils and Construction. 4th Edition (Landcom, 2004), New South Wales Government.

Herbicide usage

Glyphosate based herbicides can be used in conjunction with weed control techniques and is to be used in accordance with the product label and registration. Herbicide usage must be undertaken in a manner or method that does not cause harm to endemic species or new plantings and there is no contamination of surface or ground waters.

Organic mulch

Organic mulch material shall consist of a 75mm (unless otherwise specified) deep layer of chipped wood material of similar standard to Forest Blend ® and is to be free of non-organic material, contaminated chemicals such as hydrocarbons and weed seed.

Plant maintenance & replacement

All plantings shall be maintained, (watered, weeded) so as to display good health and vigour. Apart from typical seasonal variations, plantings showing poor vigour, stress or disease will be replaced.

Plant stock

All plant material will be tubestock or maxi-cell with the exception of native grasses where viro-cells can be used.

Plants used must be grown from seed or cuttings taken from provenance stock. Greening Australia or local commercial nurseries specialising in native species can be contacted as they have a range of seed from the local provenance. Provided that orders are placed in advance, consignment propagation can be carried out from local stock.

Planting

Planting is to be carried out using standard horticultural practices. Because of the nature of the site and environmentally sensitive lands downstream, no fertiliser is to be used in conjunction with planting, however if considered necessary, water retaining crystals can be used. All tree plantings are to be planted with staked translucent or cardboard grow tubes.

Planting preparation

Areas identified as being planted will be marked out on the ground and weed control carried out to remove/eradicate exotic species (unless noted otherwise). Where the soil is compacted as a result of operating machinery, the area is to be deep ripped to a depth of 0.3m, except beneath the canopy of existing trees to be retained. The planting area is to be mulched (unless noted otherwise) and planted in accordance with the species and densities identified within this report.

Planting species options & diversity

It is recognised that some species listed on this plan may be difficult to propagate or may not be readily available. To overcome this, a range of species options are listed.

In order to introduce diversity and avoid a mass monoculture of plantings, there must be a minimum of:

- 6 canopy species in roughly equal numbers;
- 10 understorey species in roughly equal numbers, and
- 15 ground covers species in roughly equal numbers

Temporary Barrier Fencing

The purpose of the barrier fencing is to identify and isolate areas of vegetation or habitats from excavation, demolition or construction activities. Temporary barrier fencing shall be constructed using star pickets or similar with parra-webbing, barrier mesh or hazard tape clearly delineating the areas that are easily visible to machine operators, vehicles, workmen and site visitors.

Topsoil Stockpiles

Where areas are not immediately available for rehabilitation and the reuse of topsoil, topsoil can be stored in stockpiles. Stockpiles shall be stored in mounds not more than 2m in height to conserve the soil structure and aerobic nature of the soil and shall be located away from drainage lines. Sediment control fencing shall be installed around stockpiles to contain the topsoil and prevent soil dispersement.

Sandstone riprap material

Non engineered sandstone riprap material is to be laid using rocks that are a minimum 50kg. Typical sandstone dimensions of 50kg rocks are 250mm x 300mm x 300mm.

Temporary cover crop

Temporary cover crop is to be used as a soil stabilising technique to minimise erosion. Depending upon the season, temporary cover crops are to be sown with either:

- Autumn/Winter seed mix – Oats @ 30kg/ha and Japanese millet @ 10kg/ha; or
- Spring/Summer seed mix – Japanese millet @ 30kg/ha plus oats @ 20kg/ha.

Weed control

Weed control is to be undertaken using standard bush regeneration techniques such as hand weeding or with the use of Glyphosate based herbicides when necessary (eg. cut & paint, stem scrape, spot spraying).

Weed material disposal and temporary storage on site.

Weed material containing seed or weed material capable of spreading vegetatively shall be removed from site and disposed of at an appropriate location where it will not cause further environmental damage.

Temporary storage of weed material prior to disposal can occur on site where it is stored, outside drainage lines, on an impervious surface and it is covered with a material that adequately contains the weed debris.

species options for revegetation

ground covers

Genus species	Common Name
Adiantum aethiopicum	Common Maidenhair Fern
Asplenium flabellifolium	Necklace Fern
Billardiera scandens	Appleberry
Calochlaena dubia	Common Ground Fern
Christella dentata	Binung
Cissus antarctica	Water Vine
Commelina cyanea	Scurvy Weed
Cymbopogon refractus	Barbed Wire Grass
Dianella caerulea	Blue Flax Lily
Entolasia marginata	Bordered Panic
Entolasia stricta	Wiry Panic
Eustrephus latifolius	Wombat Berry
Geitonoplesium cymosum	Scrambling Lilly
Geranium homeanum	-
Hibbertia dentata	Twining Guinea Flower
Lomandra longifolia	Spiny-headed Mat-rush
Microsorum scandens	Fragrant Fern
Morinda jasminoides	Morinda
Oplismenus imbecillis	Basket Grass
Pseuderanthemum variabile	Pastel Flower
Smilax australis	Sarsaparilla
Stephania japonica	Snake Vine
Sticherus flabellatus	Umbrella Fern
Themeda australis	Kangaroo Grass

shrubs & small trees

Genus species	Common Name
Acacia linifolia	Flax-Leaved Wattle
Acacia longifolia	Sydney Golden Wattle
Acacia ulicifolia	Prickly Moses Wattle
Austromyrtus tenuifolia	-
Baeckea imbricata	-
Banksia serrata	Old Man Banksia
Breynia oblongifolia	Coffee Bush Shrub
Callicoma serratifolia	Black Wattle
Clerodendrum tomentosum	Hairy Clerodendrum
Cyathea australis	Rough Treefern
Dillwynia retorta	Eggs and Bacon
Dodonaea triquetra	Hop Bush
Grevillea linearifolia	White Spider Flower
Gymnostachys anceps	Settler's Flax
Kennedia rubicunda	Red Kennedy Pea
Lepidosperma laterale	Variable Sword-sedge
Notelaea longifolia	Large Mock-olive
Omalanthus populifolius	Bleeding Heart / Native Poplar
Ozothamnus diosmifolius	White Dogwood
Pittosporum revolutum	Yellow / Rough Fruit Pittosporum
Pittosporum undulatum	Native Daphne
Polyscias elegans	Celery Wood/Silver Basswood
Polyscias sambucifolia	Elderberry Panax
Rapanea variabilis	Muttonwood
Synoum glandulosum	Scentless Rosewood

canopy trees

Genus species	Common Name
Acacia parramattensis	Parramatta Wattle
Allocasuarina littoralis	Black She-oak
Angophora costata	Sydney Red/Rusty Gum
Angophora floribunda	Rough-barked Apple
Ceratopetalum apetalum	Coachwood Tree
Eucalyptus piperita	Sydney Peppermint
Ficus rubiginosa	Port Jackson Fig / Rusty Fig
Glochidion ferdinandi	Cheese Tree
Livistona australis	Cabbage Palm / Fan Palm
Syncarpia glomulifera	Turpentine
Syzygium australe	Brush Cherry

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project
vegetation management plan - proposed rezoning & subdivision 8 forest rd, warriewood

drawing title
specifications & revegetation species options