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MIRVAC-FINI

LOT 1 THE WHARF, MINDARIE FORESHORE MANAGEMENT PLAN

VERSION 2

JUNE 2004

REPORT NO: 2004/58

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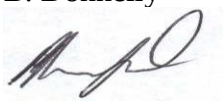
Approved by: Signed: 

Name: P. van der Moezel Date: 10 June 2004

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1. INTRODUCTION

1.1 Background

Mirvac Fini proposes to subdivide Lot 1 Anchorage Drive, Mindarie Keys for residential purposes in accordance with the adopted local structure plan. The lot, which abuts the Foreshore Reserve, has been filled to a level well above the natural surface level as a result of past earthworks associated with the development of Mindarie Keys. The filled area allows the future residential development of Lot 1 to effectively link in and interface with the existing Anchorage drive and Alexandria road. However, such earthworks have resulted in a difference in the levels between the residential zoned land and the adjoining foreshore reserve to the west and south.

To avoid the construction of a large retaining wall up to approximately 8m high between the subdivision and the foreshore, it is proposed to extend the existing batter further into the reserve. The areas of the reserve that will be affected by the proposed earthworks largely consist of degraded vegetation. The subdivision works therefore offer the opportunity to rehabilitate and improve this section of the Foreshore Reserve.

1.2 Purpose

This Foreshore Management Plan has been prepared to provide information regarding the treatment of the batter and surrounding area along the western and southern boundary of Lot 1 Anchorage Drive, Mindarie. The Plan is intended to provide management guidelines for the protection and rehabilitation of the portion of the reserve directly adjacent to the property boundary. It is intended that the Foreshore Management Plan will lead to an improvement in the native vegetation within the reserve as a result of the future development.

1.3 Location and Land Use

The proposed subdivision area is located to the south of the intersection of Anchorage Drive and Alexandria View in Mindarie Keys as shown in Figure 1. This Foreshore Management Plan relates to the coastal foreshore area located immediately to the west and south of Lot 1.

Lot 1 was cleared in 1988. Prior to clearing, the land was used for grazing and off-road vehicle driving. The majority of the land to the east and north of Lot 1 has been developed for residential purposes or is cleared for development. The foreshore area directly adjacent to the western boundary of Lot 1 was previously used for the purposes of a palm nursery. Several mature palms and palm seedlings remain within the reserve adjacent to a limestone track that parallels the boundary of Lot 1.

Following clearing, Lot 1 was filled with sand to a level of 17 – 21m AHD. The fill area batters down into the Foreshore Reserve at a slope of approximately 1 in 3. The current Foreshore Reserve boundary is located approximately half way up the western batter and towards the toe of the southern batter.

The foreshore area adjacent to the approved development site is currently reserved for "Parks & Recreation" under the Metropolitan Region Scheme and is managed by the City of Wanneroo. The foreshore area adjacent to the boundary of Lot 1 comprises part of Bush Forever Site 322 (Burns Beach Bushland) and has been identified as containing regionally significant vegetation (Government of Western Australia, 1998). The location of Lot 1 in relation to Bush Forever Site 322 is shown in Figure 2.

Beach access paths, a dual use path and car parking have been constructed at the beach end of Alexandria View improving the accessibility of the beach for recreational purposes. The area is a popular surfing spot, especially during periods of heavy swell activity between May and November. Fishing, swimming, boating and jet-skiing are also common activities at Mindarie Beach.

2. EXISTING ENVIRONMENT

2.1 Landform

The topography of the Foreshore Reserve is hilly and undulating. Adjacent to Lot 1, dunes reach heights of around 18-22m AHD, intersected by swales at 10m AHD. A hill reaching 30m AHD is situated immediately to the west of Lot 1.

At the coast the dunes drop steeply towards the beach at a gradient of 1:2. The frontal dune, eroded during a previous storm event or events, has revegetated naturally and is separated from the coast by a sandy beach that is up to 25m wide in summer.

Lot 1 has been earthworked in the past to facilitate the construction of Alexandria View and Anchorage Drive. The area immediately adjacent to the western and southern boundaries of Lot 1 comprises a steep batter slope.

2.2 Geology, Geomorphology and Soils

The Foreshore Reserve is located entirely on the Quindalup Dune System, which is very suceptible to erosion and sand drift.

The Quindalup System consists of largely westerly facing, gently to moderately inclined dunes with occasional steep areas that have been shaped by primarily aeolian processes and wave action in the coastal zone.

The Foreshore Reserve is characterised by highly permeable, unconsolidated, sandy calcareous soils. These soils are highly susceptible to becoming unstable and subsequent erosion, particularly if vegetation is removed.

2.3 Vegetation and Flora

The area adjacent to the foreshore area comprises vegetation of the Quindalup Vegetation Complex.

From the frontal dune crest to Anchorage Drive, the vegetation is generally a Low Closed Heath to Open Heath of *Acacia* species (*A. saligna, A. xanthina* and *A. cyclops*), *Spyridium globulosum, Rhagodia baccata, Templetonia retusa* and *Scaevola crassifolia* over *Lepidosperma gladiatum, Lomandra maritima, Acanthocarpus preissii* and *Hemiandra pungens.*

The area adjacent to Lot 1 Anchorage Drive comprises a Low Closed Heath to Open heath of *Acacia* species as described above with some variation in understorey species. Near Alexandria View vegetation is dominated by a mix of *Acacia xanthina* and *Acacia saligna* with *Olearia axillaris*, *Spyridium globulosum* and *Myoporum insulare*. Understorey species include *Pelargonium capitatum*, *Lepidosperma gladiatum* (Sword Sedge), *Avena fatua* and *Stenotaphrum secundatum* (Buffalo Grass) (Plates 1 and 2). Near the south-western corner of Lot 1 the species mix changes to include *Hardenbergia*

comptoniana and *Cassytha racemosa* in the understorey. Individuals of *Carpobrotus edulis* are also present in this area.

Along the southern boundary of Lot 1 towards Anchorage Drive vegetation comprises a Low Closed Heath to Open Heath of *Acacia* species (*A. saligna, A. xanthina* and *A. cyclops*), with an understorey comprising *Lepidosperma gladiatum* (Sword Sedge), *Acanthocarpus presissii, Scaveola crassifolia and Rhagodia baccata* (Plate 3).

The existing Lot 1 batter is sparsely vegetated with *Acacia saligna* and evidence of recent fire is apparent along the western boundary of Lot 1 (Plates 4 and 5). Colonisation of introduced grass species including *Ehrharta calycina* (Veldt grass) and *Cynodon dactylon* (Couch) has occurred on the southern existing batter of Lot 1 (Plate 6).

A number of *Washingtonia filifera* (Cotton Palm) individuals varying from 0.5m to 8m high are present within the Foreshore Reserve adjacent to the south-western corner of Lot 1 (Plates 7 and 8). These are present as a result of the past use of portions of the Foreshore Reserve for a palm nursery. The younger plants indicate colonisation within the Foreshore Reserve from the mature trees.

A total of 31 species were recorded from the foreshore area immediately adjacent to Lot 1 during a site visit by ATA Environmental in April 2003. Of the 31 plant species recorded, 14 (45%) were native and 17 (55%) were introduced. The family with the greatest representation of taxa was the Poaceae (Grass family, 6 taxa), which is consistent with the disturbed nature of the area immediately surrounding Lot 1. A flora species list is included as Appendix 1.

No Priority species, Declared Rare Flora or Commonwealth Listed species were recorded from the subject area or are expected to occur in the area.

2.4 Site Condition

The condition of the Foreshore Reserve adjacent to Lot 1 Anchorage Drive varies from Very Good to Completely Degraded.

Vegetation in Very Good condition can be found in the area to the south east of Lot 1 near Anchorage Drive. The vegetation in Very Good condition is delineated at its northern extent by a limestone track that runs along the bottom of the existing Lot 1 batter. Along the southern boundary of Lot 1 the limestone track generally separates the degraded areas directly adjacent to Lot 1 from areas of better quality vegetation within the Foreshore Reserve. The area on the Lot 1 side of the track is Degraded to Completely Degraded and comprises largely introduced weed and herb species, particularly *Pelargonium capitatum* (Geranium) and Couch grass.

An area of vegetation in Completely Degraded condition extends past the limestone track near the south-western corner of Lot 1 This area is dominated by Buffalo Grass and the introduced Cotton Palm. A strip of Completely Degraded vegetation on the western side of the limestone track extends north to Alexandria View along the western boundary of Lot 1. The degraded area extends up to 30m wide in some parts of the northern portion of

the foreshore reserve. Towards the northern portion of the foreshore reserve degraded areas are infested with *Pelargonium capitatum* (Geranium) (Plate 9).

3. PROPOSED FORESHORE RESERVE INTERFACE

3.1 Introduction

The Local Structure Plan allows for development up to the cadastral boundary of Lot 1 Anchorage Drive, Mindarie. The proposed subdivision consists of 26 residential lots, a grouped housing site and a small area of Public Open Space (POS) in the south-eastern corner. The proposed finished levels of the subdivision are between 16.6m and 20.3m AHD. The lots are separated from the southern part of the Foreshore Reserve by a road interface. The western side contains nine lots directly abutting the reserve.

To facilitate development to the western extent of the lot without impacting further on the Foreshore Reserve, the construction of a retaining wall up to 8m high would be required. Aesthetics and safety issues resulting from this type of development has necessitated the investigation of alternative development scenarios.

The current design proposes a combination of batter and retaining wall for the western and southern boundary of Lot 1. The location of the development area (including batter, retaining wall, current and proposed levels and dual use path) in relation to the Foreshore Reserve is shown in Figure 2.

Proposed management and rehabilitation of the batter, retaining wall and adjacent disturbed areas is discussed in the sections below.

3.2 Retaining Wall

A retaining wall is proposed for the western and southern boundaries of the Lot 1 interface with the Foreshore Reserve in order to reduce the amount of native vegetation required to be cleared if a full batter slope were to be constructed. The wall would be a maximum of 2.5m in height with a 1 in 2.5 to 1 in 5 batter slope at the base of the wall as shown in Figure 2. A retaining wall by itself without any batter would be up to 8m high at the western end.

The use of a retaining wall and batter combination in this area will avoid the aesthetic impact of a larger wall while still minimising the clearance of vegetation within the road reserve. The batter and dual use path extend approximately 10m into the native vegetation in the reserve. The batter without any retaining wall would extend up to 15m into the vegetation in the reserve.

3.3 Batter

A batter is proposed for the western and southern boundaries of Lot 1 within the Foreshore Reserve. The batter slope will range in slope from 1:2.5 mostly along the southern portion down to 1:5 along the western boundary. The extent of the batter is from Alexandria View to the western extent of the proposed retaining wall as shown in Figure 3. The batter will extend from the boundary of Lot 1 generally to the existing limestone track within the Foreshore Reserve.

In the south-eastern corner of Lot 1 the batter will extend a maximum of 12m past the existing track to enable a 1:2.5 slope average to be achieved. The footprint of the batter extends a maximum of 25m into the Foreshore Reserve from the boundary of Lot 1 near Alexandria View although the batter width is generally less than 20m. The batter footprint is almost entirely located in the portion of the Foreshore Reserve that is in Completely Degraded condition. A portion encroaches into native vegetation in the Foreshore Reserve along the mid-southern boundary. The use of a retaining wall will minimise the batter footprint in this area.

Fill material for the construction of the batter will be obtained from excess fill on Lot 1 and coastal sands in other parts of the Mindarie Keys residential development.

Removal of good quality native vegetation and topsoil as a result of batter construction has been minimised through the use of a retaining wall/batter combination in the southern area. However a small area of approximately 895m^2 of good quality vegetation will be required to be cleared for batter construction along the southern boundary of Lot 1 as shown in Figure 3.

All native vegetative material from this area will be used for brush in areas to be rehabilitated in accordance with the recommendations in section 4.2.

3.4 Dual Use Path

The proposed site works allow for the continuation of the existing dual use path located to the west of the development area. The dual use path will generally follow the existing limestone track along the western boundary of Lot 1. Along the south and south-western boundaries of Lot 1 the path will be moved approximately ten metres south of its current location to accommodate the batter. The path will be 3.1m wide and will be resurfaced with crushed limestone where necessary. The path will have a slope of approximately 1:14.

The dual use path will also act as a firebreak between Bush Forever Site 322 and the future residential development on Lot 1. The continuation of the path will ensure informal access paths to the beach and development area are not created through the dune systems.

The proposed alignment of the dual use path is shown in Figure 3.

3.5 Access

Pedestrian access to the beach from Lot 1 Anchorage Drive will be either via Alexandria View to the north of Lot 1. Fencing will be installed along the dual use path to discourage indiscriminate pedestrian access through the Foreshore Reserve and protect any rehabilitation works in this area. Having lots directly abutting the Foreshore Reserve in the western part of Lot 1 will mean pedestrian access down the western batter will not be possible. There will be no gate access from the nine lots fronting the reserve. The lots will be delineated by a 2.5m high wall and a pool style fence on top of the wall. Fencing the

top of the batter along the Foreshore side of the road reserve along the southern part of Lot 1 will discourage pedestrian access through the batter and protect rehabilitation works in this area.

4. FORESHORE REHABILITATION WORKS

4.1 Areas Requiring Rehabilitation

The proposed batter slope construction offers the opportunity to rehabilitate the degraded portions of the Foreshore Reserve in this area, both on the existing fill batter and in the swale areas adjacent to the limestone track.

Rehabilitation measures will include re-contouring of batter areas, brush placement, redistribution of topsoil and planting of local flora species. Fencing will be provided where necessary to limit disturbance of rehabilitated areas. In addition a landscape contractor experienced in coastal rehabilitation will be present during batter and path earthworks to ensure that there is no unnecessary disturbance of the foreshore reserve.

Areas requiring rehabilitation are illustrated in Figure 3. Methods of rehabilitation are described below for each of the major areas requiring rehabilitation.

The areas requiring revegetation are estimated as follows:

- Batters 4,600m^2
- Swale 1,882m^2

4.2 General Rehabilitation Methods

Revegetation works will incorporate the following aspects:

- Weed removal.
- Planting of tubestock and seed.
- Application of brush and mulch.

4.2.1 Weed Removal

Some weeds in the Foreshore Reserve area close to Lot 1 can be treated by spot spraying at the time of planting and seeding. However a few areas predominantly adjacent to the toe of the proposed western batter of Lot 1 comprise entirely of weed species and may benefit from mechanical removal. These areas include the portion of the reserve containing a large number of Cotton Palms and the areas near the northern portion of the batter, which are dominated by Geranium. The scraping of heavily weeded areas is proposed. This will allow complete removal of large number of plants in areas that have previously been disturbed as a result of past nursery activities on site. Following removal of the plants, the area will then be rehabilitated. This will help stabilise the batter and prevent sand drift.

4.2.2 Planting & Seeding

The species considered suitable for the revegetation program are listed in Appendix 1. Tubestock and seedlings required for this rehabilitation have been ordered by ATA Environmental. The species have been selected on the basis of site inspections of the

foreshore, together with several additional commonly occurring coastal species, particularly colonising species, that will improve stability of the batter and exposed areas. The actual species used for the proposed revegetation works within the foreshore however, has been determined by tubestock and seed available from nurseries. The actual species used in a particular location will be selected on site to replicate the species occurring in adjacent areas within similar conditions. The number of tubestock and weight of seed to be used in the rehabilitation process is included as Appendix 2.

The seed mix will contain a greater proportion of those species that are known to readily germinate and for which there is limited or no tubestock available. Seed will only be applied to areas where no mulch is used.

Planting of tubestock will be undertaken randomly within a grid pattern to generally reflect the natural environment. Tubestock and young plants will be protected from possible rabbit grazing by the use of dense brush material on the batter slopes. Tree guards may be used on mulched areas if rabbit grazing is perceived to be a problem.

4.2.3 Brush and Mulch Application

Brush will be applied to rehabilitate batter areas where sand may be exposed to higher levels of wind. Brush material from pine plantations will be used on the higher batter slopes. The brush from pine plantations is longer and heavier than brush created from the coastal vegetation and therefore is less susceptible to lifting by strong winds. If necessary, brush will be held in place on steep exposed slopes using wire mesh. The need for wire mesh will be determined during the on-site revegetation works. If wire mesh is required, this will be removed following stabilisation of the batter slopes.

On the toe of the batter, brush material resulting from the clearance of vegetation for batter construction on the southern boundary of Lot 1 will be used where possible to maximise regeneration from seed stocks. Brush material from pine plantation will be used if insufficient native brush is available.

Mulch will be applied to the flatter areas, including the scraped area and areas adjacent to the dual use path. Material mulched when Lot 1 was cleared in January 2003 has been stockpiled. It is intended that this material be used in rehabilitation works associated with Lot 1.

It is not proposed that hydromulch or other stabilising agents be used as part of the revegetation program. Stabilising agents used in the Mindarie/Quinns Rocks area in the past have been largely ineffective due to disturbance factors perforating the material and winds lifting and removing the material from the area. The use of brush over the rehabilitation areas would necessitate disturbance of the stabilisation material causing it to break up and be blown away, and therefore its application would be of little benefit.

4.3 Revegetation of Individual Areas

4.3.1 Batter Slopes

- Native vegetation to be cleared for batter construction will be slashed to a manageable size by hand and the material stockpiled for later use.

- Topsoil in the area of native vegetation to be cleared will be stripped to a depth of 10cm and briefly stockpiled or immediately redistributed over prepared batter slopes or other disturbed areas where feasible.

- Application rates for direct seeding will be approximately 5kg of seed per hectare.

- The seed will be mixed and bulked with an inert material, for example, horticultural vermiculite, before broadcasting by hand.

- Batter slopes will be planted with tubestock at a rate of 1 plant per $1m^2$.

- It should not be necessary to water the plants on planting provided they are well watered before planting and the planting precedes good rainfall. However, in the event that there is little rainfall this year, the proponent will prepare a contingency plan to water the plants if required.

- Brush will be spread to reduce exposure to winds.

- The weedy material will be placed underneath clean fill during construction of the batter to avoid germination of weed species from the soil seed bank during batter construction.

4.3.2 Foreshore Reserve

- Areas to be rehabilitated will be mechanically scraped using a front-end loader to remove weeds and weed seeds present in topsoil where necessary. All material removed will be placed under clean fill imported for batter construction.

- Cotton Palm plants will be mechanically removed, chipped and disposed off site.

- Tubestock will generally be planted at an average density of about 1 plant per $1m^2$ for understorey species and 1 plant per $5m^2$ for larger species.

- It should not be necessary to water the plants on planting provided they are well watered before planting and the planting precedes good rainfall.

- Mulched material from the clearing of Lot 1 in January 2003 will be applied to those areas of Foreshore Reserve requiring rehabilitation.

- If grazing by rabbits is perceived to be a problem tree guards will be used.

4.4 Management

4.4.1 Weed Control

Weed species can cause disruption to areas of natural vegetation through competition and displacement of original species and changes in species composition. It can be expected that weed species will opportunistically colonise the cleared area and weed control will be required as part of the rehabilitation process. Weed management will be implemented as part of the management of rehabilitated areas. Rehabilitated areas will be monitored and weed species removed if necessary. Measures will include:

- Rehabilitation of degraded areas in close proximity to Lot 1 with native grasses and shrub species to prevent weed infestation of cleared areas.
- Hand removal of *Carpobrotus edulis* (Pigface).
- Hand removal of *Pelargonium capitatum* (Geranium).
- Spot spraying of introduced grasses including *Avena fatua* (Oat), *Cynodon dactylon* (Couch), *Ehrhata calycina* (Veldt grass) and *Stenotaphrum secundatum* (Buffalo Grass).

4.4.2 Fencing

The southern side of the road reserve adjacent to the foreshore boundary will be fenced to limit disturbance of the batter area. Fencing will consist of three-strand wire and ringlock along the foreshore side of the road reserve.

Temporary fencing of the earthworks area will also be required to ensue that no necessary disturbance to the Foreshore Reserve occurs.

4.4.3 Signage

The installation of signs directing pedestrians to formal access paths to the beach will assist in preventing informal beach access paths being established and will assist in preventing dunes degradation. Additional signs indicating the rehabilitation of degraded areas and batter slopes will also prevent access into these areas.

5. IMPLEMENTATION

5.1 Construction Schedule

It is intended that the DUP be constructed at the same time as the batter and retaining wall for Lot 1. This will ensure that disturbance from construction activities is minimised. Scraping of weed dominated areas will be undertaken prior to import of fill for batter construction to allow scraped topsoil to be placed under clean fill.

5.2 Rehabilitation

Rehabilitation will occur in winter to maximise the time available for regeneration of vegetation prior to hot summer conditions. Appropriate rehabilitation works (such as fencing and signage) will be undertaken to ensure that control measures are in place prior to construction of houses in Lot 1.

Temporary fencing of foreshore vegetation will occur prior to the commencement of construction works.

It is proposed that a contractor experienced in coastal management and rehabilitation will be engaged to undertake the works outlined in this document. The contractor will be instructed to apply brush at 90° to slope direction and with interlocking branches and planting will be carried out with native species.

Rehabilitation of the batter slopes and some adjoining areas identified as requiring rehabilitation will commence during the winter of 2004. Tubestock and seedlings required for this rehabilitation have been ordered by ATA Environmental. Monitoring and follow-up work of these areas will be undertaken as necessary during 2005 and 2006.

5.3 Performance Standards

The rehabilitation program will need to be monitored to determine its performance and whether any remedial action will be required. Rehabilitation 'success' is a difficult attribute to define and measure, however various methods to assess revegetation performance can be implemented as part of the monitoring requirements of the Management Plan. The following criteria will be used to assess the performance of the rehabilitation plan:

- Germination of native species (seedling emergence rate of between 1-5%);
- Survival of seedlings (75% survival of tubestock);
- Foliage cover (40-50% cover, excluding weeds, 2 years after implementation of rehabilitation);
- Species representation (one third of the species sown or planted evident in any area of $100m^2$ except areas planted with less than three species);

- An average density of about 1 plant per $1m^2$ for understorey species and 1 plant per $5m^2$ for larger species

- Presence of weeds (no declared weeds within the rehabilitated area 2 years after implementation); and

- Overall success of plant establishment (a subjective measure based on visual assessment of species composition, plant density and plant health. For example, an area might not meet the above criteria but has the ability to attain it. For instance an area might not contain 40-50% foliage cover but is growing well and will attain that in a few years without the need for remedial action).

If these performance criteria are not met then remedial action will be undertaken as required so that the criteria can be satisfied.

5.4 Management Responsibilities

Earthworks and construction of the path and batter will be monitored by the appointed engineers and a landscape contractor experienced in coastal rehabilitation to ensure earthworks are within the areas of disturbance for the path retaining wall and batter construction. In addition the landscape contractor will be responsible for ensuring that soil removed from weed infested areas is placed underneath clean fill within the batter. The landscape contractor will also be responsible for the removal and disposal of the Cotton Palms.

Following the effective completion of the rehabilitation, a two-year proving period, to be mutually agreed by the developer and the City of Wanneroo, will be adopted. On completion of the works the proponent will contact the City of Wanneroo to organise a Practical Completion (PC) inspection. The two year proving period will begin when the City of Wanneroo awards PC to all works. Site works will be inspected by officers from Bush Forever and the City of Wanneroo six months prior to the completion of the two year proving period. If the Bush Forever and City of Wanneroo officers and the developer's consultants agree that further rehabilitation works are required, then these will be negotiated with the developer, and an additional proving period not exceeding two years may be adopted for the component of work requiring remediation with a further review six months prior to the completion of the extended proving period.

The City of Wanneroo will accept management responsibility for the rehabilitated areas of the Foreshore Reserve at the completion of the initial two year proving period or any extended proving period.

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FIGURES

PLATES

APPENDIX 1

FLORA SPECIES LIST

APPENDIX 1
LOT 1 THE WHARF, MINDARIE & ADJACENT FORESHORE RESERVE
FLORA SPECIES LIST (APRIL 2003)

FAMILY	SPECIES
MONOCOTYLEDONS	
ARECACEAE	**Washingtonia filifera*
ASPHODELACEAE	**Trachyandra divaricata*
CYPERACEAE	*Lepidosperma gladiatum*
DASYPOGONACEAE	*Acanthocarpus preissii*
IRIDACEAE	**Romulea rosea*
POACEAE	**Avena fatua* **Cynodon dactylon* **Erharhta calycina* **Lagurus ovatus* **Lolium perenne* **Stenotaphrum secundatum*
DICOTYLEDONS	
AIZOACEAE	**Carpobrotus edulis*
ASTERACEAE	*Olearia axillaris* **Sonchus asper* **Sonchus oleraceus* **Taraxacum officinale*
CHENOPODIACEAE	*Rhagodia baccata*
EUPHORBIACEAE	**Euphorbia peplus* **Euphorbia terracina*
GERANIACEAE	**Pelargonium capitatum*
GOODENIACEAE	*Scaevola crassifolia*
LAURACEAE	*Cassytha racemosa*
MIMOSACEAE	*Acacia cyclops* *Acacia saligna* *Acacia xanthina*
MYOPORACEAE	*Myoporum insulare*

FAMILY	SPECIES
MYRTACEAE	*Melaleuca cardiophylla*
PAPILIONACEAE	*Hardenbergia comptoniana*
RHAMNACEAE	*Spyridium globulosum*
SANTALACEAE	*Santalum acuminatum*
SOLANACEAE	**Solanum nigrum*

* Introduced Species

APPENDIX 2

TUBESTOCK AND SEED QUANTITY

APPENDIX 2
TUBESTOCK AND SEED QUANTITY

SCIENTIFIC NAME	COMMON NAME	TUBESTOCK QUANTITY	SEED QUANTITY (KG)
Acacia cyclops	Coastal Wattle	275	0.30
Acacia cochlearis	Ridgid wattle	275	0.20
Acacia rostellifera		460	0.15
Acacia xanthina		275	0.12
Acanthocarpus preissii	Prickle Daisy	50	0.20
Calocephalus brownii	Cushion Bush	250	0.05
Carpobrotus virescens	Pigface	250	0.06
Conostylis candicans	Grey Cottonheads	250	0.03
Hardenbergia comptoniana	Native Wisteria	410	0.25
Hemiandra pungens	Snake Bush	460	0.01
Lepidosperma gladiatum	Coastal Sword Sedge	80	0.05
Melaleuca systena		435	0.08
Melaleuca cardiophylla		250	0.08
Myoporum insulare	Blueberry Tree	N/A	0.20
Olearia axillaris	Coastal Daisy Bush	460	0.10
Ozothamnus cordatus		245	0.15
Rhagodia baccata	Seaberry Saltbush	275	0.18
Scaevola crassifolia	Thick Leaved Fan Flower	300	0.15
Senecio lautus		245	0.25
Spyridium globulosum	Basket Bush	305	0.08