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30 August 2010

David White  
Benedict Industries P/L  
Email: davidw@benedict.com.au

**Re: Projection estimates of plant heights of potential native vegetation reconstruction plantings at Benedict Industries Georges Cove Marina site.**

Dear David,

As requested, please find enclosed a preliminary planting list. We have estimated likely plant heights over the following 3-periods after installation: 12 months; 3 years; 8 years; and at maturity.

I understand that information will be used to create computer generated photo montages of the installed native vegetation at these time intervals. I have also included information on the shrub layer (in Table 1) and groundcover heights (in Table 2) although these may not be of any relevance at this stage. As discussed I have not provided any heights for any of the wetland plants that may be required at site as they will be of little relevance to the visual impact assessment.

Do not hesitate to call me if additional information is required.

Yours sincerely,

Edgar Freimanis (B.App.Sci. HORT)  
Director, Ecohort Pty Ltd.

**Table 1 –Tree and shrub height estimates at 12 months, 3 years, 8 years and at maturity. All heights are in metres**

<b>Canopy &amp; Mid-Stratum Layer Trees</b>	<b>Plant Features</b>	<b>Height @ 12 months</b>	<b>Height @ 3 years</b>	<b>Height @ 8 years</b>	<b>Height @ maturity</b>
<i>Acacia binervia</i>	Medium bushy mid-stratum tree	2	6	8	8
<i>Acacia parramattensis</i>	Medium mid-stratum tree	2	6	10	10
<i>Alphitonia excelsa</i>	Medium-tall rainforest canopy tree	1	4	10	15-20
<i>Angophora floribunda</i>	Tall canopy tree	1.5	6	12	30
<i>Callistemon salignus</i>	Medium mid-stratum tree, cream flowers, papery bark	1.5	4	10	10
<i>Casuarina glauca</i>	Medium to tall canopy tree.	1.5	4	10	15-20
<i>Eucalyptus amplifolia</i>	Tall canopy tree	1.5	6	12	30
<i>Eucalyptus baueriana</i>	Tall canopy tree			12	30
<i>Eucalyptus deanei</i>	Tall canopy tree	1.5	6	12	30
<i>Eucalyptus robusta</i>	Tall canopy tree	1.5	6	12	30
<i>Eucalyptus saligna x botryoides</i>	Tall canopy tree	1.5	6	12	30
<i>Eucalyptus tereticornis</i>	Tall canopy tree	1.5	6	12	30
<i>Ficus coronata</i>	Medium mid-stratum rainforest sub-canopy tree,	1	4	10	10
<i>Ficus rubiginosa</i>	Tall and spreading rainforest canopy tree	1	4	12	10-15
<i>Glochidion ferdnandii</i>	Medium-tall rainforest mid stratum tree	1	4	10	10
<i>Melaleuca linariifolia</i>	Medium mid-stratum tree, cream flowers, papery bark	1	4	10	10
<i>Melaleuca styphelioides</i>	Medium mid-stratum tree, prickly leaves, papery bark	1.5	4	10	10
<i>Melia azedarach</i>	Semi deciduous medium-tall rainforest canopy tree.	1	4	10	10
<b>Shrub-Layer Understorey</b>					
<i>Acacia floribunda</i>	Medium shrub, flowers early Spring.	2	3	3-4	3-4
<i>Acacia implexa</i>	Medium -tall shrub.	2	4	6	6
<i>Backhousia myrtifolia</i>	Medium -tall shrub, rainforesty shrub.	1	4	8	8-15
<i>Bursaria spinosa</i>	Medium shrub, , spiky stems	1	3	3	3
<i>Clerodendrum tomentosum</i>	Low-medium rainforesty shrub.	1	3	3	3
<i>Duboisia myoporoides</i>	Medium –tall rainforest shrub	1	3	4	4
<i>Goodenia ovata</i>	Low shrub, with yellow flowers	0.5	1	1	1
<i>Hakea sericea</i>	Medium shrub, spiky stems, plant >3m from cabin walking trail edges & in areas where access needs to be deterred	1	2	2	2
<i>Hibiscus heterophyllus</i>	Medium shrub, quick growing native Hibiscus	1.5	3	3-5	3-5
<i>Hymenanthera dentata</i>	Medium shrub, spiky stems.	1	3	3	3
<i>Indigophora australis</i>	Low shrub, with purple pea flowers.	0.5	1	1	1

<i>Leptospermum polygalifolium</i>	Medium shrub, lemon scented tea –tree	1	2	2	2
<i>Ozothamnus diosmifolium</i>	Low-medium shrub plant	1	1.5	2	2
<i>Pittosporum revolutum</i>	Low rainforest shrub with large yellow fruits	0.5	1	1	1
<i>Trema aspera</i>	Low-medium rainforestry shrub.	0.5	2	3	3

**Table 2 – Terrestrial & Aquatic Groundlayer Herbs, Ferns, Grasses**

<b>Terrestrial Groundlayer Herbs, Ferns, Grasses</b>	<b>Plant Features</b>	<b>Height @ 12 months</b>	<b>Height @ 3 years</b>	<b>Height @ 8 years</b>
<i>Adiantum aethiopicatum</i>	Fern, propagate by division from local area	0.3	0.3	0.3
<i>Capillipedium spicegirium</i>	Warm season active perennial clumping grass,	0.4	0.4	0.4
<i>Carex appressa</i>	Sedge plant	0.4	0.5	0.5
<i>Centella asiatica</i>	Broadleaf perennial groundcover	0.1	0.1	0.1
<i>Commelina cyanea</i>	Annual groundcover, propagate by cuttings	0.2	0.2	0.2
<i>Dichelachne micrantha</i>	Year long green perennial grass	0.4	0.4	0.4
<i>Echinopogon spp.</i>	Year long green perennial grass	0.3	0.3	0.3
<i>Entolasia marginata</i>	Year long green perennial grass	0.4	0.4	0.4
<i>Hemarthria uncinata</i>	Year long green perennial grass	0.3	0.3	0.3
<i>Hypolepsis muelleri</i>	Fern, propagate by division from local area	0.3	0.5	0.5
<i>Imperata cylindrica</i>	Warm season active perennial stoloniferous grass	0.3	0.4	0.4
<i>Lomandra longifolia</i>	Mat rush clumping	0.3	0.8	0.8
<i>Micolaena stipoides</i>	Year long green perennial grass.	0.3	0.3	0.3
<i>Opercularia aspera</i>	Broadleaf perennial groundcover	0.4	1	1
<i>Oplismenus aemulus</i>	Warm season active perennial stoloniferous grass	0.2	0.3	0.3
<i>Poa labillardieri</i>	Winter active clumping perennial grass	0.3	0.4	0.4
<i>Paspalum distichum</i>	Warm season active perennial stoloniferous grass	0.2	0.2	0.2
<i>Phragmites australis</i>	Warm season active aquatic & semi-aquatic reed	1	2	2
<i>Pteridium esculentum</i>	Fern, Fern, propagate by division from local area	0.3	0.6	0.6
<i>Stipa ramosissima</i>	Tall warm season perennial clumping grass	0.3	0.8	0.8
<i>Stipa verticillata</i>	Tall warm season perennial clumping grass	0.3	0.8	0.8
<i>Themeda triandra</i>	Warm season perennial clumping grass	0.4	0.4	0.4
<i>Viola hederacea</i>	Broadleaf perennial groundcover, propagate by division	0.1	0.1	0.1
<b>Terrestrial Groundlayer climbers</b>				
<i>Clematis aristata</i>	Climbing plant	1	4	4
<i>Convolvulus erubescens</i>	Low climbing & scrambling plant	1	3	3
<i>Pandorea pandorana</i>	Aggressive climber	1	5	5
<i>Parsonsia straminea</i>	Aggressive climber	1	8	8

