

GROUND iNK

LANDSCAPE ARCHITECTS

MINTO INDUSTRIAL DEVELOPMENT

5-9 CULVERSTON ROAD, MINTO, NSW

OPERATIONAL LANDSCAPE MANAGEMENT PLAN

DOCUMENT STATUS

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This Operational Landscape Management Plan to manage the revegetation and landscaping for the proposed industrial development site at 5-9 Culverston Road, Minto has been prepared to meet the requirements of the DPIE Environmental Performance & Management Conditions

The DPIE conditions requires that the Client submit a revised LMP that addresses the following requirements as per Condition B44 Landscaping & Vegetation Management:

Prior to the commencement of construction, the Applicant must prepare a Landscape Management Plan (LMP) to manage the revegetation and landscaping works on-site, to the satisfaction of the Secretary. The plan shall form part of the CEMP required by Condition C2 and be prepared in accordance with Condition C7. The LMP shall:

- a) detail the species to be planted on-site;
- b) demonstrate the landscape plans have been revised to ensure the perimeter fence line of the Development is set back a minimum of 3 metres from the property boundary of the site and is consistent with plan Site Masterplan (Overall), issue 9, prepared by Reid Campbell, dated 24/02/2017;
- c) ensure any plantings in the vicinity of Endeavour Energy electricity easements do not exceed a mature height of 3 metres;
- d) describe the monitoring and maintenance measures to manage revegetation and landscaping works; and
- e) be consistent with the Applicant's Management and Mitigation Measures in this Development Consent.

Background

The project is located in Minto, NSW and involves the development of warehouse and distribution uses at 5-9 Culverston Road. This Operational Landscape Management Plan relates to the ongoing Operation and Management of the associated revegetation and landscaping for the industrial site following construction. The plan sets out to highlight the tasks required, who is responsible and what are the timeframes that the management service is working to. Furthermore, although the Landscape Management Plan & Landscape Documentation are consistent, they should be read in conjunction with the Charter Hall Landscape Specification.

As noted in Condition B44 Landscaping and Vegetation Management listed above, the approved landscape documentation is in accordance with the revised Architectural documentation pertaining to the location of the perimeter fenceline. As documented the location of the perimeter fencing is setback 3m from the property boundary shown on the Landscape Masterplan and Architectural Documentation.

The approved landscape documentation is listed below:

- LDA-001 - LANDSCAPE MASTERPLAN
- LDA-002 - TREE RETENTION PLAN
- LDA-003 - STAGE 4 LANDSCAPE PLAN
- LDA-004 - STAGE 1 & 2 LANDSCAPE PLAN
- LDA-005 - STAGE 3 LANDSCAPE PLAN
- LDA-006 - EXTERNAL STORAGE AREA LANDSCAPE PLAN
- LDA-007-01 - LANDSCAPE PLANTING DETAIL ENTRANCE
- LDA-007-02 - LANDSCAPE PLANTING DETAIL NORTHERN BUFFER
- LDA-007-03 - LANDSCAPE PLANTING DETAIL WESTERN BUFFER
- LDA-007-04 - LANDSCAPE PLANTING DETAIL SOUTHERN BUFFER
- LDA-008 - LANDSCAPE SECTIONS AA & FF
- LDA-009 - LANDSCAPE SECTION CC
- LDA-010 - LANDSCAPE SECTION DD
- LDA-011 - LANDSCAPE SECTION BB & EE
- LDA-012 - ENTRY STATEMENTS TYPICAL ELEVATION
- LDA-013 - LANDSCAPE DETAILS

Operation Landscape Management Plan

The relevant areas pertaining to this Operational Landscape Management Plan refer to the revegetation and planting areas for the Minto Industrial Development. Detailed below is the approved landscape planting schedule detailing the plant growth size, planting densities, installation size and quantities as detailed in the individual schedules for each planting area on site:

Overall Planting Schedule:

NATIVE	BOTANICAL NAME	COMMON NAME	NATIVE	MATURE HEIGHT	MATURE SPREAD	INSTALL SIZE	PLANTING DENSITY
Large Trees							
ALO LIT	<i>Allocasuarina littoralis</i>	Black She Oak	✓	12m	5m	400/ 45L	10m ctrs/ as shown
ANG COS	<i>Angophora costata</i>	Smooth Barked Apple	✓	25m	15m	400/ 45L	10m ctrs/ as shown
ANG FLO	<i>Angophora floribunda</i>	Rough Barked Apple	✓	25m	15m	400/ 45L	10m ctrs/ as shown
BRA ACE	<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	✓	30m	10m	400/ 45L	10m ctrs/ as shown
COR CIT	<i>Corymbia citriodora</i>	Lemon Scented Gum	✓	30m	15m	400/ 45L	10m ctrs/ as shown
COR GUM	<i>Corymbia gummiifera</i>	Red Bloodwood	✓	15m	10m	400/ 45L	10m ctrs/ as shown
COR MAC	<i>Corymbia maculata</i>	Spotted Gum	✓	22m	15m	400/ 45L	10m ctrs/ as shown
EUC AMP	<i>Eucalyptus amplifolia</i>	Cabbage Gum	✓	20m	10m	400/ 45L	10m ctrs/ as shown
EUC CRE	<i>Eucalyptus crebra</i>	Ironbark	✓	35m	15m	400/ 45L	10m ctrs/ as shown
EUC MOL	<i>Eucalyptus moluccana</i>	Grey Box	✓	20m	15m	400/ 45L	10m ctrs/ as shown
EUC SID	<i>Eucalyptus sideroxylon</i>	Mugga Ironbark	✓	25m	15m	400/ 45L	10m ctrs/ as shown
MAG LIT	<i>Magnolia 'Little Gem'</i>	Magnolia	✓	6m	3m	400/ 45L	10m ctrs/ as shown
MEL LIN	<i>Melaleuca viminialis</i>	Weeping Bottlebrush	✓	10m	6m	400/ 45L	10m ctrs/ as shown
SYN GLO	<i>Syncarpia glomulifera</i>	Turpentine	✓	40m	20m	400/ 45L	10m ctrs/ as shown
TRI LAU	<i>Tristaniopsis laurina</i>	Water Gum	✓	15m	6m	400/ 45L	10m ctrs/ as shown
Small Trees / Large Shrubs							
ACA dec	<i>Acacia decurrens</i>	Black Wattle	✓	10m	2m	200 / 75mm	1.5 / 2m ctrs
ACA imp	<i>Acacia implexa</i>	Hickory Wattle	✓	10m	2m	200 / 75mm	1.5 / 2m ctrs
ACA flo	<i>Acacia floribunda</i>	Sally Wattle	✓	4m	3m	200 / 75mm	2m ctrs
ACA par	<i>Acacia parramattensis</i>	Sydney GreenWattle	✓	8m	4m	200 / 75mm	3m ctrs
ACM smi	<i>Acmena smithii</i>	Lillypilly	✓	4m	3m	200 / 75mm	2m ctrs
BAC myr	<i>Backhousia myrtifolia</i>	Grey Myrtle	✓	4m	3m	200 / 75mm	2m ctrs
BAN eri	<i>Banksia ericifolia</i>	Heath Banksia	✓	5m	2m	200 / 75mm	1.5m ctrs
BAN ser	<i>Banksia serrata</i>	Old Man Banksia	✓	8m	2m	200 / 75mm	1.5m ctrs
BAN spi	<i>Banksia spinulosa</i>	Hairpin Banksia	✓	8m	3m	200 / 75mm	2.5m ctrs
CAL cit	<i>Callistemon citrinus</i>	Crimson Bottlebrush	✓	2m	3m	200 / 75mm	2.5m ctrs
CAL sal	<i>Callistemon salignus</i>	Willow Bottlebrush	✓	4m	2m	200 / 75mm	1.5m ctrs
CER gum	<i>Ceratopetalum gummiiferum</i>	Christmas Bush	✓	4m	3m	200 / 75mm	2.5m ctrs
DOD tri	<i>Dodonaea triquetra</i>	Common Hop Bush	✓	3m	1m	200 / 75mm	0.8m ctrs
MEL dec	<i>Melaleuca decora</i>	White Feather Honey Myrtle	✓	7m	2m	200 / 75mm	4m ctrs
MEL lin	<i>Melaleuca linariifolia</i>	Snow In Summer	✓	8m	3m	200 / 75mm	4m ctrs
MEL sty	<i>Melaleuca styphelioides</i>	Prickly Leaved Paper Bark	✓	15m	8m	200 / 75mm	6 / 8m ctrs
SYZ aus	<i>Syzygium australe</i>	Brush Cherry	✓	8m	3m	200 / 75mm	4m ctrs
XAN aus	<i>Xanthorrea australis</i>	Austral Grass Tree	✓	2m	2m	200 / 75mm	As Shown
Small & Medium Shrubs							
AGA att	<i>Agave attenuata</i>	Lion's Tail Agave	✓	1.5m	1m	200 / 75mm	0.5m ctrs
CAL vim	<i>Callistemon 'Green John'</i>	Bottlebrush	✓	1m	1m	200 / 75mm	1m ctrs
CRA arb	<i>Crassula arborescens</i>	Blue Bird	✓	1m	0.5m	200 / 75mm	0.5m ctrs
DIA rev	<i>Dianella revoluta</i>	Blue Flax-lily	✓	0.8m	0.8m	200 / 75mm	0.5m ctrs
DOR exc	<i>Doryanthes excelsa</i>	Gynea Lilly	✓	2m	1.5m	200 / 75mm	1.5 / 2m ctrs
ERI aus	<i>Eriostemon australasius</i>	Pink Wax Flower	✓	2m	1.5m	200 / 75mm	1m ctrs
IND aus	<i>Indigofera australis</i>	Native Indigo	✓	1.5m	1.5m	200 / 75mm	1m ctrs
KUN amb	<i>Kunzea ambigua</i>	Tick Bush	✓	2m	2m	200 / 75mm	1.5m ctrs
MEL thy	<i>Melaleuca thymifolia</i>	Thyme Honey Myrtle	✓	1m	1m	200 / 75mm	0.5m ctrs
Groundcovers & Grasses							
BAU spp	<i>Baumea SPP.</i>	Square Twig Rush Bare	✓	0.3m	0.5m	50mm Tube	5m2
CAR spp	<i>Carrex SPP.</i>	Strand Sedge Drooping	✓	0.5m	0.5m	50mm Tube	5m2
CLE ari	<i>Clematis aristata</i>	Old Mans Beard	✓	Creep	1.5m	50mm Tube	3m2
DIC rep	<i>Dichondra repens</i>	Kidney Weed	✓	Creep	1m	50mm Tube	3m2
DIA cae	<i>Dianella caerulea</i>	Blue Flax-lily	✓	0.5m	0.5m	50mm Tube	5m2
DIA lon	<i>Dianella longifolia</i>	Smooth Flax Lilly	✓	0.8m	0.8m	50mm Tube	5m2
HAR vio	<i>Hardenbergia violacea</i>	False Sarsaparilla	✓	Creep	2m	50mm Tube	3m2
LOM fil	<i>Lomandra filiformis</i>	Wattle Mat-rush	✓	0.3m	0.5m	50mm Tube	5m2
LOM lon	<i>Lomandra longifolia</i>	Spiny Head Mat-rush	✓	0.7m	0.7m	50mm Tube	5m2
LOM mul	<i>Lomandra multiflora</i>	Many Flowered Mat-rush	✓	0.7m	0.7m	50mm Tube	5m2
PAN pan	<i>Pandorea Pandorana</i>	Wonga Wonga Vine	✓	Creep	5m	50mm Tube	3m2
VIO hed	<i>Viola Hederacea</i>	Native Violet	✓	Creep	2m	50mm Tube	3m2
THE aus	<i>Themeda australis</i>	Kangaroo Grass	✓	1m	0.5m	50mm Tube	5m2

Operation Landscape Management Plan

Entry Planting Schedule:

NATIVE	BOTANICAL NAME	COMMON NAME	NATIVE	MATURE HEIGHT	MATURE SPREAD	INSTALL SIZE	PLANTING DENSITY	QTY*	ESTIMATED QTY*
Large Trees									
BRA ACE	<i>Brachychiton acerifolius</i>	<i>Illawarra Flame Tree</i>	✓	20m	10m	45L	AS SHOWN	7	22
COR MAC	<i>Corymbia maculata</i>	<i>Spotted Gum</i>	✓	22m	15m	45L	AS SHOWN	9	29
MAG LIT	<i>Magnolia 'Little Gem'</i>	<i>Magnolia</i>		6m	4m	45L	AS SHOWN	4	13
MEL VIM	<i>Melaleuca viminalis</i>	<i>Weeping Bottlebrush</i>	✓	10m	6m	45L	AS SHOWN	4	13
TRI LAU	<i>Tristaniopsis laurina</i>	<i>Water Gum</i>	✓	15m	6m	45L	AS SHOWN	4	13
Small Trees / Large Shrubs									
BAN eri	<i>Banksia ericifolia</i>	<i>Heath Banksia</i>	✓	5m	2m	200mm	AS SHOWN	9	29
Small & Medium Shrubs									
AGA att	<i>Agave attenuata</i>	<i>Lion's Tail Agave</i>		1.5m	1m	200mm	AS SHOWN	43	138
CAL vim	<i>Callistemon 'Green John'</i>	<i>Bottlebrush</i>	✓	1m	1m	200mm	AS SHOWN	11	36
COR alb	<i>Correa alba</i>	<i>White Correa</i>	✓	1.5m	1.5m	200mm	AS SHOWN	9	29
CRA arb	<i>Crassula arborescens</i>	<i>Blue Bird</i>		1m	0.5m	200mm	AS SHOWN	29	93
DOR exc	<i>Doryanthes excelsa</i>	<i>Gymea Lilly</i>	✓	2m	1.5m	200mm	AS SHOWN	48	154
MEL lin	<i>Melaleuca linifolia</i>	<i>Claret Tops</i>	✓	1.2m	1m	200mm	AS SHOWN	19	61
MEL thy	<i>Melaleuca thymifolia</i>	<i>Thyme Honey Myrtle</i>	✓	1m	1m	200mm	AS SHOWN	7	22
SYZ AUS	<i>Syzygium 'Baby Boomer'</i>	<i>Lilly Pilly</i>	✓	2m	1.2m	300mm	AS SHOWN	15	48
WES fru	<i>Westringia fruticosa</i>	<i>Coastal rosemary</i>	✓	2m	2m	200mm	AS SHOWN	115	368
Groundcovers & Grasses									
DIA cae	<i>Dianella caerulea</i>	<i>Blue Flax-lily</i>	✓	0.5m	0.5m	50mm Tube	5m2	3887	12438
DIA lon	<i>Dianella longifolia</i>	<i>Smooth Flax Lilly</i>	✓	0.8m	0.8m	50mm Tube	5m2	579	1874
LOM lon	<i>Lomandra longifolia</i>	<i>Spiny Head Mat-rush</i>	✓	0.7m	0.7m	50mm Tube	5m2	1850	5920
LOM mul	<i>Lomandra multiflora</i>	<i>Many Flowered Mat-rush</i>	✓	0.7m	0.7m	50mm Tube	5m2	450	1456

Northern Planting Schedule:

CODE	BOTANICAL NAME	COMMON NAME	NATIVE	MATURE HEIGHT	MATURE SPREAD	INSTALL SIZE	PLANTING DENSITY	QTY*	ESTIMATED QUANTITY**
Large Trees									
ANG COS	<i>Angophora costata</i>	<i>Smooth Barked Apple</i>	✓	25m	15m	400L	10m centres	2	5
ANG FLO	<i>Angophora floribunda</i>	<i>Rough Barked Apple</i>	✓	25m	15m	400L	10m centres	3	8
EUC AMP	<i>Eucalyptus amplifolia</i>	<i>Cabbage Gum</i>	✓	20m	10m	400L	10m centres	3	8
EUC MOL	<i>Eucalyptus moluccana</i>	<i>Grey Box</i>	✓	20m	15m	400L	10m centres	1	3
EUC SID	<i>Eucalyptus sideroxylon</i>	<i>Mugga Ironbark</i>	✓	25m	15m	400L	10m centres	3	8
Small Trees / Large Shrubs									
ACA dec	<i>Acacia decurrens</i>	<i>Black Wattle</i>	✓	10m	2m	75mm	AS SHOWN	2	5
ACA imp	<i>Acacia implexa</i>	<i>Hickory Wattle</i>	✓	10m	2m	75mm	AS SHOWN	2	5
ACA flo	<i>Acacia floribunda</i>	<i>Sally Wattle</i>	✓	4m	3m	75mm	AS SHOWN	3	8
ACA par	<i>Acacia parramattensis</i>	<i>Sydney Green Wattle</i>	✓	8m	4m	75mm	AS SHOWN	1	3
BAN eri	<i>Banksia ericifolia</i>	<i>Heath Banksia</i>	✓	5m	2m	75mm	AS SHOWN	3	8
BAN ser	<i>Banksia serrata</i>	<i>Old Man Banksia</i>	✓	8m	2m	75mm	AS SHOWN	1	3
CAL cit	<i>Callistemon citrinus</i>	<i>Crimson Bottlebrush</i>	✓	2m	3m	75mm	AS SHOWN	4	10
CAL sal	<i>Callistemon salignus</i>	<i>Willow Bottlebrush</i>	✓	4m	2m	75mm	AS SHOWN	5	13
CER gum	<i>Ceratopetalum gummiferum</i>	<i>Christmas Bush</i>	✓	4m	3m	75mm	AS SHOWN	6	15
MEL dec	<i>Melaleuca decora</i>	<i>Honey Myrtle</i>	✓	7m	2m	75mm	AS SHOWN	5	13
SYZ aus	<i>Syzygium australe</i>	<i>Brush Cherry</i>	✓	8m	3m	75mm	AS SHOWN	8	21
Small & Medium Shrubs									
ERI aus	<i>Eriostemon australis</i>	<i>Pink Wax Flower</i>	✓	2m	1.5m	75mm	AS SHOWN	16	41
IND aus	<i>Indigofera australis</i>	<i>Native Indigo</i>	✓	1.5m	1.5m	75mm	AS SHOWN	24	62
KUN amb	<i>Kunzea ambigua</i>	<i>Tick Bush</i>	✓	2m	2m	75mm	AS SHOWN	24	62
Groundcovers & Grasses									
BAU spp	<i>Baumea SPP</i>	<i>Square Twig Rush Bare</i>	✓	0.3m	0.5m	50mm Tube	5m2	212	543
CAR spp	<i>Carax SPP</i>	<i>Strand Sedge Drooping</i>	✓	0.5m	0.5m	50mm Tube	5m2	175	448
CLE ari	<i>Clematis aristata</i>	<i>Old Mans Beard</i>	✓	Creepers	1.5m	50mm Tube	3m2	70	179
DIC rep	<i>Dichondra repens</i>	<i>Kidney Weed</i>	✓	Creepers	1m	50mm Tube	3m2	82	210
DIA cae	<i>Dianella caerulea</i>	<i>Blue Flax-lily</i>	✓	0.5m	0.5m	50mm Tube	5m2	291	746
DIA lon	<i>Dianella longifolia</i>	<i>Smooth Flax Lilly</i>	✓	0.8m	0.8m	50mm Tube	5m2	333	853
HAR vio	<i>Hardenbergia violacea</i>	<i>False Sarsaparilla</i>	✓	Creepers	2m	50mm Tube	3m2	82	210
LOM fil	<i>Lomandra filiformis</i>	<i>Wattle Mat-rush</i>	✓	0.3m	0.5m	50mm Tube	5m2	291	746
LOM lon	<i>Lomandra longifolia</i>	<i>Spiny Head Mat-rush</i>	✓	0.7m	0.7m	50mm Tube	5m2	333	853
LOM mul	<i>Lomandra multiflora</i>	<i>Many Flowered Mat-rush</i>	✓	0.7m	0.7m	50mm Tube	5m2	228	584
PAN pan	<i>Pandorea Pandorana</i>	<i>Wonga Wonga Vine</i>	✓	Creepers	5m	50mm Tube	3m2	82	210
VIO hed	<i>Viola Hederacea</i>	<i>Native Violet</i>	✓	Creepers	2m	50mm Tube	3m2	70	179
THE aus	<i>Themeda australis</i>	<i>Kangaroo Grass</i>	✓	1m	0.5m	50mm Tube	5m2	137	351

Operation Landscape Management Plan

Southern Planting Schedule:

NATIVE	BOTANICAL NAME	COMMON NAME	NATIVE	MATURE HEIGHT	MATURE SPREAD	INSTALL SIZE	PLANTING DENSITY	QTY*	ESTIMATED QUANTITY**
Large Trees									
ANG FLO	<i>Angophora floribunda</i>	Rough Barked Apple	✓	25m	15m	400 / 45L	10m centres	3	5
COR CIT	<i>Corymbia citriodora</i>	Lemon Scented Gum	✓	30m	15m	400 / 45L	10m centres	1	2
COR MAC	<i>Corymbia maculata</i>	Spotted Gum	✓	30m	15m	400 / 45L	10m centres	4	7
EUC AMP	<i>Eucalyptus amplifolia</i>	Cabbage Gum	✓	20m	10m	400 / 45L	10m centres	2	4
EUC CRE	<i>Eucalyptus crebra</i>	Ironbark	✓	35m	15m	400 / 45L	10m centres	4	7
EUC MOL	<i>Eucalyptus moluccana</i>	Grey Box	✓	20m	15m	400 / 45L	10m centres	1	2
EUC SID	<i>Eucalyptus sideroxylon</i>	Mugga Ironbark	✓	25m	15m	400 / 45L	10m centres	2	4
Small Trees / Large Shrubs									
ACA dec	<i>Acacia decurrens</i>	Black Wattle	✓	10m	2m	75mm	AS SHOWN	5	9
ACA flo	<i>Acacia floribunda</i>	Sally Wattle	✓	4m	3m	75mm	AS SHOWN	4	7
ACA par	<i>Acacia parramattensis</i>	Sydney Green Wattle	✓	8m	4m	75mm	AS SHOWN	9	16
ACM smi	<i>Acmena smithii</i>	Lillypilly	✓	4m	3m	75mm	AS SHOWN	9	16
BAC myr	<i>Backhousia myrtifolia</i>	Grey Myrtle	✓	4m	3m	75mm	AS SHOWN	8	14
BAN eri	<i>Banksia ericifolia</i>	Heath Banksia	✓	5m	2m	75mm	AS SHOWN	14	25
CAL sal	<i>Callistemon salignus</i>	Willow Bottlebrush	✓	4m	2m	75mm	AS SHOWN	5	9
CER gum	<i>Ceratopetalum gummiferum</i>	Christmas Bush	✓	4m	3m	75mm	AS SHOWN	11	19
MEL dec	<i>Melaleuca decora</i>	Honey Myrtle	✓	7m	2m	75mm	AS SHOWN	5	9
SYZ aus	<i>Syzygium australe</i>	Brush Cherry	✓	8m	3m	75mm	AS SHOWN	12	21
Small & Medium Shrubs									
ERI aus	<i>Eriostemon australasius</i>	Pink Wax Flower	✓	2m	1.5m	75mm	AS SHOWN	53	94
IND aus	<i>Indigofera australis</i>	Native Indigo	✓	1.5m	1.5m	75mm	AS SHOWN	39	69
KUN amb	<i>Kunzea ambigua</i>	Tick Bush	✓	2m	2m	75mm	AS SHOWN	18	32
Groundcovers & Grasses									
BAU spp	<i>Baumea SPP.</i>	Square Twig Rush	✓	0.3m	0.5m	50mm Tube	5m2	288	510
CAR spp	<i>Carrex SPP.</i>	Strand Sedge	✓	0.5m	0.5m	50mm Tube	5m2	235	416
CLE ari	<i>Clematis aristata</i>	Old Mans Beard	✓	Creepers	1.5m	50mm Tube	3m2	93	165
DIC rep	<i>Dichondra repens</i>	Kidney Weed	✓	Creepers	1m	50mm Tube	3m2	112	198
DIA cae	<i>Dianella caerulea</i>	Blue Flax-lily	✓	0.5m	0.5m	50mm Tube	5m2	389	689
DIA lon	<i>Dianella longifolia</i>	Smooth Flax Lilly	✓	0.8m	0.8m	50mm Tube	5m2	454	804
HAR vio	<i>Hardenbergia violacea</i>	False Sarsaparilla	✓	Creepers	2m	50mm Tube	3m2	112	198
LOM fil	<i>Lomandra filiformis</i>	Wattle Mat-rush	✓	0.3m	0.5m	50mm Tube	5m2	389	689
LOM lon	<i>Lomandra longifolia</i>	Spiny Head Mat-rush	✓	0.7m	0.7m	50mm Tube	5m2	377	667
LOM mul	<i>Lomandra multiflora</i>	Mat-rush	✓	0.7m	0.7m	50mm Tube	5m2	310	549
PAN pan	<i>Pandorea Pandorana</i>	Wonga Wonga Vine	✓	Creepers	5m	50mm Tube	3m2	112	198
VIO hed	<i>Viola Hederacea</i>	Native Violet	✓	Creepers	2m	50mm Tube	3m2	93	165
THE aus	<i>Themeda australis</i>	Kangaroo Grass	✓	1m	0.5m	50mm Tube	5m2	235	416

Western Planting Schedule:

NATIVE	BOTANICAL NAME	COMMON NAME	NATIVE	MATURE HEIGHT	MATURE SPREAD	INSTALL SIZE	PLANTING DENSITY	QTY*	ESTIMATED QUANTITY**
Large Trees									
ANG FLO	<i>Angophora floribunda</i>	Rough Barked Apple	✓	25m	15m	45L	10m centres	2	2
COR GUM	<i>Corymbia gummifera</i>	Red Bloodwood	✓	15m	10m	45L	10m centres	1	1
COR MAC	<i>Corymbia maculata</i>	Spotted Gum	✓	22m	15m	45L	10m centres	2	2
EUC AMP	<i>Eucalyptus amplifolia</i>	Cabbage Gum	✓	20m	10m	45L	10m centres	2	2
EUC SID	<i>Eucalyptus sideroxylon</i>	Mugga Ironbark	✓	25m	15m	45L	10m centres	2	2
Small Trees / Large Shrubs									
ACA dec	<i>Acacia decurrens</i>	Black Wattle	✓	10m	2m	200mm	AS SHOWN	7	52
ACA flo	<i>Acacia floribunda</i>	Sally Wattle	✓	4m	3m	200mm	AS SHOWN	9	66
ACM smi	<i>Acmena smithii</i>	Lillypilly	✓	4m	3m	200mm	AS SHOWN	6	44
BAN ser	<i>Banksia serrata</i>	Old Man Banksia	✓	8m	2m	200mm	AS SHOWN	5	37
CER gum	<i>Ceratopetalum gummiferum</i>	Christmas Bush	✓	4m	3m	200mm	AS SHOWN	3	22
DOD tri	<i>Dodonaea triquetra</i>	Common Hop Bush	✓	3m	1m	200mm	AS SHOWN	5	37
MEL lin	<i>Melaleuca linariifolia</i>	Snow In Summer	✓	8m	3m	200mm	AS SHOWN	4	30
MEL sty	<i>Melaleuca styphelloides</i>	Prickly Leaved Paper Bark	✓	15m	8m	200mm	AS SHOWN	3	22
SYZ aus	<i>Syzygium australe</i>	Brush Cherry	✓	8m	3m	200mm	AS SHOWN	4	30
Small & Medium Shrubs									
DIA rev	<i>Dianella revoluta</i>	Blue Flax-lily	✓	0.8m	0.8m	200mm	AS SHOWN	15	111
ERI aus	<i>Eriostemon australasius</i>	Pink Wax Flower	✓	2m	1.5m	200mm	AS SHOWN	14	103
IND aus	<i>Indigofera australis</i>	Native Indigo	✓	1.5m	1.5m	200mm	AS SHOWN	8	59
KUN amb	<i>Kunzea ambigua</i>	Tick Bush	✓	2m	2m	200mm	AS SHOWN	17	125
MEL thy	<i>Melaleuca thymifolia</i>	Thyme Honey Myrtle	✓	1m	1m	200mm	AS SHOWN	17	125
Groundcovers & Grasses									
BAU spp	<i>Baumea SPP.</i>	Square Twig Rush Bare	✓	0.3m	0.5m	50mm Tube	5m2	49	362
CAR spp	<i>Carrex SPP.</i>	Strand Sedge Drooping	✓	0.5m	0.5m	50mm Tube	5m2	56	413
CLE ari	<i>Clematis aristata</i>	Old Mans Beard	✓	Creepers	1.5m	50mm Tube	3m2	22	162
DIC rep	<i>Dichondra repens</i>	Kidney Weed	✓	Creepers	1m	50mm Tube	3m2	19	140
DIA cae	<i>Dianella caerulea</i>	Blue Flax-lily	✓	0.5m	0.5m	50mm Tube	5m2	90	664
DIA lon	<i>Dianella longifolia</i>	Smooth Flax Lilly	✓	0.8m	0.8m	50mm Tube	5m2	81	598
HAR vio	<i>Hardenbergia violacea</i>	False Sarsaparilla	✓	Creepers	2m	50mm Tube	3m2	19	140
LOM fil	<i>Lomandra filiformis</i>	Wattle Mat-rush	✓	0.3m	0.5m	50mm Tube	5m2	90	664
LOM lon	<i>Lomandra longifolia</i>	Spiny Head Mat-rush	✓	0.7m	0.7m	50mm Tube	5m2	80	590
LOM mul	<i>Lomandra multiflora</i>	Many Flowered Mat-rush	✓	0.7m	0.7m	50mm Tube	5m2	53	391
PAN pan	<i>Pandorea Pandorana</i>	Wonga Wonga Vine	✓	Creepers	5m	50mm Tube	3m2	19	140
VIO hed	<i>Viola Hederacea</i>	Native Violet	✓	Creepers	2m	50mm Tube	3m2	22	162
THE aus	<i>Themeda australis</i>	Kangaroo Grass	✓	1m	0.5m	50mm Tube	5m2	56	413

Softscapes Methodology

The following methodology highlights the measures and management schedules for the revegetation and planting areas for the Minto Industrial Development to be undertaken by the engaged Landscape Contractor. Ongoing maintenance and management of the specified planting will be undertaken by a Landscape Contractor generally in accordance with the items detailed below, as well as additional works as required where identified during routine inspections. The Contractor is to keep a log book recording when and what maintenance work has been undertaken and what materials, including toxic materials have been used. The log book should be made available for inspection upon request.

Fertilising:

The intent is to replenish the soil with fertiliser appropriate for all the native species and garden beds across site to ensure plants have the required amount of nutrients to flourish. Fertiliser is to be applied as per the manufacturers specification during August (end of winter) and in March (beginning of Autumn), 6 months apart to ensure plants have time to replenish and flourish between applications. This will be completed as part of the maintenance program by the Landscape Contractor.

Herbicide & Pesticide Application:

The landscape management requires herbicide and pesticide to be applied to all plants to ensure no unwanted weeds or pests develop within the garden beds and on the plants themselves. The purpose of this process is monitor the continued health of plants and to prevent the on set of weeds that may impact the ability for the plant to establish and survive long term. Weeding is to occur around the base of the trees and planted areas at intervals outlined by the Landscape Contractor. All weeds, debris, clippings, etc. shall be removed off site as soon as possible by the Landscape Contractor. Herbicide, similar to the fertilising application is to be applied only as per the manufacturer's specification during both August and March, 6 Months apart to allow the plant material to flourish where possible. As per the Charter Hall Specifications, a biological control test is recommended as a first trial approach. If this control is unsuccessful, herbicides that are NATSPEC approved may be used.

In relation to Pesticide this aims to respond to all occurrences of insect attack, pests or disease amongst the plant material to ensure the plant is not hindered in growth or visual impact. Pesticide application is to be applied only as per the manufacturer's specification during Spring however plants are to be continually monitored during other inspections and work time frames to ensure no diseases are become present.

Horticultural Work & Inspection

The purpose for Horticultural work is to undertake inspections of all plants within garden beds and tree planting. These inspections aim to monitor plant health, tree stakes, hedging, weed control, litter collection, pruning and damage due to vandalism to all plant stock. In relation to pruning work shall be implemented to maintain dense foliage and encourage suitable growth habits. Any branches overhanging or obstructing pathways and roads shall be removed as directed by the Construction manager. Furthermore, underpruning of trees is to be undertaken in areas that require maximised sight lines for CPTED and traffic management requirements. Underpruning promotes an elevated crown and clear stem to allow for a clear line of sight through/under the tree. This is applicable for all trees located in close proximity to site entrances, roads and carparks. Shrub planting has been proposed to not exceed 3m within close proximity of the substation however should be monitored and pruned where necessary if they exceed this expectation. Furthermore, pruning in accordance with Endeavour Energy requirements should be undertaken for any branches/tree canopies that are within 3m of powerlines or electrical easements.

Monitoring of plants is required to ensure all plants are showing signs of good health and vigour. In regards to vandalism and replacements, all plants that have failed, been damaged or stolen and mulch that has been removed or eroded during the Defects Liability Period due to inadequate or incorrect maintenance and supervision by the Landscape Contractor, are to be replaced at the Landscape Contractors own expense. Plants lost due to vandalism or theft during the Maintenance Period, beyond the control of the Landscape Contractor, are to be replaced at the Client's expense. The Landscape Contractor shall be responsible for theft, vandalism and wilful damage up to the date of the Defect's Warranty Period as per the maintenance contract

The general horticultural work and inspection is to be undertaken twice a month throughout the year to ensure that each of the tasks highlighted above are ongoing in order for plants to flourish and the design intent of the documentation to be maintained

Mulching

The intent is to ensure that garden beds are installed with 75mm depth of mulch as specified in the landscape documentation to retain moisture in soil, maintain soil temperature and suppress weeds where required. The landscape management for mulching also includes reinstating mulch to the depths as specified where subsided or reduced in the garden bed and irrigation pipes are exposed. As per the Charter Hall specification, the garden beds should be inspected fortnightly and topped up by the Landscape Contractor where required.

Tree Inspection

Tree inspection forms are to be completed once a month to review the health and vigour of all tree species located across the site. These ensure that trees are constantly monitored for any diseases and other elements that may hinder the overall growth habit and health. In addition to this, allow the Contractor to review if any tree replacements are required in accordance with the maintenance schedule. In addition to this, tree audits should be undertaken by a qualified Arborist longer term to review tree health and ensure all specimens are free from dead limbs that may become susceptible to limb drop and other risks.

Typical Tree Inspection Form:

General

Date	Reference
Purchaser	
Supplier	Inspected by (supplier/purchaser/agent)
Species	Batch identification

Labelling	Yes/No
Health and vigour	Yes/No
Freedom from pests/disease	Yes/No
Freedom from injury	Yes/No
Self-supporting	Yes/No
Stem taper	Yes/No
Pruning	Yes/No
Apical dominance	Yes/No
Crown symmetry	Yes/No
Included bank	Yes/No
Trunk position	Yes/No
Compatibility of graft unions	Yes/No
Indication of north	Yes/No

Conformance with specification

Conforming	Yes/No
Comments	

Balance

Balance	Yes/No
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Maintenance of Environmental Factors

In response to the Environment Management Guidelines for Construction, measures have been put in place to mitigate any greater impacts to the surrounding environment, flora and fauna. All plant stock has been selected carefully to respond to the requirements for the industrial development and that respond to the existing ecological community. Both native planting and planting indigenous to the local area have been selected to minimise the effects of invasive species, exotics and pests on the local ecological community.

In addition to this, the continued management of environmental factors is critical through the operational and maintenance periods to ensure there is no disturbance to the local ecological community. The contractor under the operational and maintenance contract is to be across all statutory obligations relating to activities, products and services that may pose risks to the environment. These risks include any form of pollution or impact to the air, water and land environments of the site or any adjoining sites, as well as any adverse effects of waste management.



Landscape Maintenance Schedule

TASK DESCRIPTION	FREQUENCY: 0-6 MONTHS	FREQUENCY: 6-12 MONTHS
TREES		
VISUAL INSPECTION OF ALL TREES	FORTNIGHTLY IN SUMMER/ MONTHLY IN WINTER	MONTHLY IN SUMMER/ ONCE IN WINTER
MANUALLY INSPECT WATER LEVELS TO TREES	FORTNIGHTLY IN SUMMER/ MONTHLY IN WINTER	MONTHLY IN SUMMER/ ONCE IN WINTER
INSPECT DAMAGE TO TREES	FORTNIGHTLY IN SUMMER/ MONTHLY IN WINTER	MONTHLY IN SUMMER/ ONCE IN WINTER
REPLACE ANY TAPING TO TREES	FORTNIGHTLY IN SUMMER/ MONTHLY IN WINTER	MONTHLY IN SUMMER/ ONCE IN WINTER
PRUNE DEAD OR DAMAGED BRANCHES	FORTNIGHTLY IN SUMMER/ MONTHLY IN WINTER	MONTHLY IN SUMMER/ ONCE IN WINTER
CHECK FOR AND REPORT PESTS & DISEASES	FORTNIGHTLY	MONTHLY
REPLACE FAILED OR DAMAGED TREES	FORTNIGHTLY AS REQUIRED	MONTHLY AS REQUIRED
PRUNE BRANCHES IN PROXIMITY TO POWERLINES AND ELECTRICAL EASEMENTS	AS REQUIRED	AS REQUIRED
SPRAY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS	AS REQUIRED	AS REQUIRED
ADJUST & OR REPLACE STAKES & TIES WHERE NECESSARY	AS REQUIRED	AS REQUIRED
TURF		
MOW ALL TURF AREAS TO MAINTAIN HEIGHT BETWEEN 25-35MM	WEEKLY IN SUMMER/ MONTHLY IN WINTER	FORTNIGHTLY IN SUMMER/ EVERY 2 MONTHS IN WINTER
TRIM EDGES OF ALL TURF AREAS	WEEKLY IN SUMMER/ MONTHLY IN WINTER	FORTNIGHTLY IN SUMMER/ EVERY 2 MONTHS IN WINTER
REMOVE CLIPPINGS FROM SITE	WEEKLY IN SUMMER/ MONTHLY IN WINTER	FORTNIGHTLY IN SUMMER/ EVERY 2 MONTHS IN WINTER
REMOVE LITTER & DEBRIS FROM TURF AREAS	WEEKLY IN SUMMER/ MONTHLY IN WINTER	FORTNIGHTLY IN SUMMER/ EVERY 2 MONTHS IN WINTER
CHECK FOR AND REPORT PESTS & DISEASES	FORTNIGHTLY	MONTHLY
SPRAY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS	AS REQUIRED	AS REQUIRED
MONITOR AND APPLY FERTILISER TO TURF AREAS	6 MONTH INTERVALS - AUTUMN/SPRING	YEARLY - SPRING
MULCH		
REMOVE LITTER & DEBRIS FROM MULCH AREAS	FORTNIGHTLY	MONTHLY
REMOVE WEED GROWTH IN MULCH AREAS	FORTNIGHTLY	MONTHLY
TOP UP MULCH LEVELS	ANNUALLY	ANNUALLY
PLANTS		
CHECK FOR AND REPORT PESTS & DISEASES	FORTNIGHTLY	MONTHLY
SPRAY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS	FORTNIGHTLY	MONTHLY
PRUNE DAMAGED OR DEAD BRANCHES	FORTNIGHTLY	MONTHLY
REMOVE WEED GROWTH IN PLANT AREAS	FORTNIGHTLY	MONTHLY
REPLACE FAILED OR DAMAGED PLANTS	FORTNIGHTLY AS REQUIRED	MONTHLY AS REQUIRED
ADJUST OR REPLACE STAKES AND TIES WHERE NECESSARY	FORTNIGHTLY AS REQUIRED	MONTHLY AS REQUIRED
GENERAL WATERING TO ALL STREET TREES		
IRRIGATION BY WATER CART OR HOSECOCK AS REQUIRED TO MAINTAIN PLANT VIGOR	WEEKLY FIRST 6 MONTHS, FORTNIGHTLY THEREAFTER DEPENDENT ON RAINFALL	MONTHLY DEPENDENT ON RAINFALL CONDITIONS
URGENT WORKS		
REPORT ANY THEFT, DAMAGE OR VANDALISM	WEEKLY	AS REQUIRED

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