

City of Cockburn | Commercial Lot Development |

# Good Design Guide - Appendices



## Revisions

Revision	Revision Date	Nature of Revision.	Revised by
B	25/09/13	Appendices added	Andy Jarman
C	01/10/13	Drainage detailing added to appendix B	Andy Jarman
D	28/11/13	Shrub list updated, appendices separated from main guide.	Andy Jarman

# Contents

Appendix A - Guide to planting on commercial development lots .....	5
Appendix B Typical DA Submission Example.....	13



## **Appendix A - Guide to planting on commercial development lots.**



The following four sheets indicate species of plants that have proven suitable for planting in commercial developments in the City of Cockburn. Each page indicates where the plant is best used and why.

1. **Screening** shrubs (eyeheight or taller)
2. **Ground cover** shrubs (waist height or lower)
3. **Shade** trees for car parks and close to buildings
4. **Trees** that should only be used away from car parking bays, structures or material storage areas.

An internet search under the scientific name will provide a more detailed description of the species listed, including numerous photographs to indicate the ultimate size and character of the material.

The City's Landscape Architect (Parks) and the City's Environment Team have compiled this list. Please refer to the City's Landscape Architect (Parks Services) for further advice when reviewing DA submissions.

## Screening Shrubs (eye height or taller)

Scientific Name	Local Name/s	Character	Min. Container Size	Min. Stock Height	Ultimate height in metres	Recomended planting centres (m) to achive full cover.	Recommended plants per square metre	Cultivation notes & typical uses
Acacia saligna	Wattle	Large sprawling green bush	Tube	200mm	5	1	1	Native backdrop screen, low water, low fertilizer.
Adenanthos sericeus	Coastal or Albany Woolybush	Large sprawling upright green conifer-likebush	150mm	300mm	4	3	2	Fast growing, though short lived screening bush suited to coastal conditions. Foliage is soft to the touch, can be pruned but not hedged due to short lifespan. Instant shelter on a windy site.
Agonis flexuosa nana	Dwarf Peppermint	Compact tidy bush	150mm		3	0.75	1.5	Good for hedging, tidy, coastal.
Banksia burdettii	Burdett's Banksia	Large rounded banksia bush	150mm	200mm	6	1	1	Native backdrop screen, low water, native fertilizer only.
Banksia sceptrum	Sceptre Banksia	Large rounded banksia bush	150mm	200mm	6	1	1	Native backdrop screen, low water, native fertilizer only.
Callistemon 'Capt Cook'	Bottlebrush	Large straggly bush	150mm	200mm	6	1	1	Familiar garden plant, good for foreground locations.
Callistemon 'Kings Park Special'	Callistemon Kings Park	Large straggly bush	150mm	200mm	6	1	1	Small tree, spectacular flowers once a year.
Coleonema compactum	Diosma, Confetti bush	Compact, fine leaved, bright green bush	150mm	200mm	3	1	1	Native looking exotic, hedges well.
Coleonema pulcheum rubum	Diosma, Confetti bush	Compact, fine dull red leaved bush	150mm	200mm	3	1	1	Native looking exotic, hedges well.
Eucalyptus macrocarpa	Mottlecah	Dramatic native, large open sprawling grey bush.	150mm	200mm	3	1	1	Needs lots of room sprawls 3m in every direction, can be pruned hard to increase flowers.
Grevillia crithmifolia	Grevillea cultivar	Large green bush, fine needle leaves.	150mm	200mm	4	1	1	Large dense dark green native hedge or backdrop screen.
Grevillea jenkinsii	Grevillea cultivar	Open fine leafed bush.	150mm	200mm	4	1	1	Native hedge or backdrop screen.
Grevillea Olivacea	Olive Grevillea	Open fine leafed bush.	150mm	200mm	4	1	1	Native hedge or backdrop screen.
Grevillea Robyn Gordon	Grevillea cultivar	Open cut leafed bush	150mm	200mm	4	1	1	Native hedge or backdrop screen.
Grevillea superb	See Grevillea Robyn Gordon	Open cut leafed bush	150mm	200mm	4	1	1	Native hedge or backdrop screen.
Grevillea thelmaniana dark green form	Spider net grevillea	Conifer like open green bush	150mm	200mm	3	1	1	Native hedge or backdrop screen.
Hakea laurina	in cushion hakea, emu bush, Kodj	Large rounded sprawling bush	150mm	200mm	6	1	1	Native backdrop screen.
Isopogon cuneatus	Coneflower	Large upright green bush	150mm	200mm	4	1	1	Native backdrop screen.
Isopogon dubius	Pincushion coneflower	Medium cut leafed bush	150mm	200mm	4	1	1	Native backdrop screen.
Kunzea baxteri	Scarlet kunzea	Medium needle leafed bush	150mm	200mm	3	1	1	Native backdrop screen.
Metrosideros collina tahiti	Tahitian Pohutukawa/Christmas tree	Compact furry leaved grey bush.	150mm	200mm	6	1	1	Can mix with natives or exotics, foreground or backdrop screen, slow growing, coastal
Metrosideros Fiji	Red leaf form	Compact furry leaved purple grey bush.	150mm	200mm	6	1	1	Can mix with natives or exotics, foreground or backdrop screen, slow growing, coastal
Photinia glabra	Red tipped Photinia	Glossy leaved hedge	150mm	200mm	6	1	1	Smart glossy hedging plant.
Pittosporum tobira	Pittosporum	Glossy leaved hedge	Tube	200mm	6	1	1	Smart glossy hedging plant.
Rhaphiolepis indica alba	Indian Hawthorn	Shiney leaved compact bush	150mm	200mm	3	1	1	Smart glossy hedging plant.
Rhaphiolepis indica pink	Indian Hawthorn	Shiney leaved compact bush	150mm	200mm	3	1	1	Smart glossy hedging plant.
Ricinocarpus pinifolius	Wedding bush	Large dark green fine leaved upright shrub.	150mm	200mm	3	1	1	Native backdrop screen
Syzygium australe	Lilly Pilly	Shiney leaved large hedge/tree	150mm	200mm	10	1	1	Smart glossy hedging plant.

## Ground Cover Shrubs (below waist height)

Scientific Name	Local Name/s	Character	Min. Container Size	Min. Stock Height	Ultimate height in metres	Recommended planting centres (m) to achieve full cover.	Recommended plants per square metre	Cultivation notes & typical uses
<i>Adenanthus cuneatus</i>	Coastal jugflower	Tough grey broadleaf with subtle tough pink tips.	150mm	200mm	0.2	0.5	4	Very hardy native, mass plant with similar sized natives to form tough long lasting carpet of vegetation.
<i>Anigozanthus flavidus</i> , dark red	Tall Kangaroo Paw, Evergreen Kangaroo Paw	Strapped leafed, tough evergreen.	150mm	200mm	0.75	0.5	4	Suffers fungal infections from overhead irrigation (use drippers). Flower stalks require removing annually. Short lived.
<i>Anigozanthus manglesii</i>	Red & Green Kangaroo Paw	Strapped leafed, tough evergreen.	150mm	200mm	0.75	0.5	4	Suffers fungal infections from overhead irrigation (use drippers). Flower stalks require removing annually. Short lived.
<i>Anigozanthus</i> 'Big Red'	Kangaroo Paw	Strapped leafed, tough evergreen.	150mm	200mm	0.75	0.5	4	Suffers fungal infections from overhead irrigation (use drippers). Flower stalks require removing annually. Short lived.
<i>Anigozanthus</i> 'Yellow Gem'	Kangaroo Paw	Strapped leafed, tough evergreen.	150mm	200mm	0.75	0.5	4	Suffers fungal infections from overhead irrigation (use drippers). Flower stalks require removing annually. Short lived.
<i>Callistemon</i> Little John	Dwarf Bottlebrush	Compact needle leafed shrub, red bottle brush flowers.	150mm	200mm	0.5	0.5	4	Long lived but slow growing native. Plant at close centres to counter losses over time.
<i>Calothamnus quadrifidus</i>	One-sided bottlebrush	Weeping, open needle leafed, grey green.	150mm	200mm	0.5	0.5	4	Hardy native, usually mass planted.
<i>Carex petriei</i>	Sedge, rusty sedge, rusty carex	Rusty strap leafed grassy.	150mm	200mm	0.5	0.5	4	NZ native, usually mass planted.
<i>Conostylus candicans</i>	Grey cotton head	Short tufted grey grass, yellow button flowers spring.	Tube	100mm	300mm	0.3	5	Hardy native, usually mass planted, good when mixed with other native ground covers in groups of 5 or 7 of each species..
<i>Dianella Revoluta</i> Little Rev	Dianella	Strap leafed dense carpet.	150mm	200mm	0.5	0.5	4	Requires sheltered well irrigated conditions in full sun to thrive.
<i>Eremophila glabra</i> prostate	Common Emu Bush, Tar bush	Carpet of small grey furry leaves.	150mm	200mm	0.3	0.5	4	Very hardy native, mass plant with similar sized natives to form tough long lasting carpet of vegetation.
<i>Grevillea crithmifolia</i> 'Nana'	<i>Grevillea</i> cultivar	Dense dark green small leafed.	150mm	200mm	0.5	0.5	4	Low maintenance native ground cover. Often used for formal borders or mixed with similar sized natives in mass plantings.
<i>Grevillea</i> Gilt Dragon	<i>Grevillea</i> cultivar	Open, grey leafed, weeping shrub.	150mm	200mm	0.5	0.5	4	Low maintenance native ground cover. Often mixed with similar sized natives in mass plantings.
<i>Grevillea</i> Sea Spray	<i>Grevillea</i> cultivar	Open, grey leafed, weeping shrub.	150mm	200mm	0.5	0.5	4	Low maintenance native ground cover. Often mixed with similar sized natives in mass plantings.
<i>Grevillea thelmaniana</i> Obtusifolia	Dwarf spider net grevillea	Open, bright green, upright shrub.	150mm	200mm	0.5	0.5	4	Low maintenance native ground cover. Often mixed with similar sized natives in mass plantings.
<i>Hakea laurina</i> 'Mini Pini'	Dwarf Pin cushion hakea	Dark green mid leafed rounded bush.	150mm	200mm	0.3	0.5	4	Low maintenance native ground cover. Often mixed with similar sized natives in mass plantings.
<i>Hemiantra pungens</i>	Snakebush	Dense fine carpet of prickly leaves, profusion of white or pale pink flowers.	150mm	200mm	0.1	0.5	4	Thrives in hot dry conditions. Useful for covering walls, boulders and for creating large uniform areas of vegetation. Prickly under barefeet.
<i>Juniperus conferta</i>	Silver mist shore juniper	Dense formal carpet of tiny pine needles.	150mm	200mm	0.3	0.5	4	Thrives in hot dry conditions. Useful for covering walls, boulders and for creating large uniform areas of vegetation. Long lived hardy conifer.
<i>Lavender angustifolia</i>	Lavender	Lavender	150mm	200mm	0.5-1.2	0.5	4	Thrives in hot conditions. Short life span extended by regular watering.
<i>Leucophyta brownii</i>	Cushion bush	Rounded green bush, mid sized leaves, showy pink flowers on stalks.	150mm	200mm	1.5	0.5	4	
<i>Metrosideros excelsa</i> dwarf	Dwarf pohutukawa	Furry grey green small rounded leaves on a small compact bush.	150mm	200mm	1	0.5	4	Slow growing long lived formal looking shrub from coastal New Zealand.
<i>Phormium tenax</i> 'Purpurea'	Purple NZ flax	Striking broad strap leafed large rush.	150mm	200mm	1.2	0.5	4	Varieties may be bronze through to purple in colour. Tough coastal dune plant from New Zealand.
<i>Photinia x fraseri</i> 'Nana Select'	Dwarf Photinia	Glossy large leafed low bush.	150mm	200mm	0.75	0.5	4	Showy hedging plant, large glossy leaves used in formal areas.
<i>Scaevola</i> Fan Fare	Fan flower	Open carpet of small green fleshy leaves, showy small purple flowers.	150mm	200mm	0.1	0.5	4	Short lived plant. Useful for interplanting between other coastal natives whilst they grow to fill gaps. Very showy bright purple or blue flowers.
<i>Syzygium</i> Tiny Trev	Dwarf Lilly Pilly	Compact small shiney leafed bush.	150mm	200mm	0.5	0.5	4	Showy hedging plant, small glossy leaves used in formal areas.
<i>Trachelosperum jasminoides</i>	Star Jasmine	Carpet of bright green glossy leaves on long tendral stalks.	150mm	200mm	0.2	0.5	4	Fragrant Jasmine flowers will tolerate heat if provided with adequate water. Tends to ramble across open ground.
<i>Westringea fruticosa</i>	Coastal rosemary	Needle leafed small compact rounded shrub.	150mm	200mm	0.5	0.5	4	Low maintenance native ground cover. Often mixed with similar sized natives in mass plantings.
<i>Westringea</i> White Rambler	Prostrate native rosemary	Needle leafed small compact rounded shrub.	150mm	200mm	0.5	0.5	4	Low maintenance native ground cover. Often mixed with similar sized natives in mass plantings.
<i>Xanthorrhoea preissii</i>	Balga, Blackboy, Grass Tree	Black thick prickly trunk up to 3m. Terminal head of long needle like leaves growing from single point at top of trunk.	45L	NA	5	1	1	Instant mature appearance on new sites can enhance the marketability of developments. Eye catching and higher quality presentation. Long lived low maintenance.

C **Trees for all areas. (Refer to City of Cockburn Good Design Guide for Commercial Developments).**

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Scientific Name	Local Name/s	Character	Min. Container Size	Min. Stock Height	Ultimate height in metres	Recommended planting centres (m) to achieve full cover.	Recommended plants per square metre	Cultivation notes & typical uses
<i>Agonis flexuosa</i>	Peppermint tree.	Native weeping willow like tree.	45L	1.5	8	8	not applicable	Coastal native tree that can tolerate sea breezes.
<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	Small compact tree with large glossy leaves and green bark.	45L	1.5	6	5	not applicable	Rainforest tree that is stunted in hot exposed hard paved areas.
<i>Callitris preisii</i>	Rottnest Pine	Upright, compact, native conifer.	300mm	1	6	4	not applicable	Not a shade tree, the branches come from the trunk down to ground level. Mixed with large rounded shrubs, these tall narrow bright green trees add interest to a backdrop or a screening belt.
<i>Catalpa bignonioides</i>	Indian bean tree	Small rounded tree. Spectacularly large bright green leaves and candelabras of showy white flowers.	45L	1	8	8	not applicable	Cool temperate tree, leaves are damaged and scalded by sea breezes. Excellent in sheltered corners or courtyards. Casts uniform but light shade
<i>Delonix regia</i>	Royal poinciana	Short tree, but very wide canopy of dark emerald fern like leaves. Spectacular trusses of large crimson orchid like flowers. Deciduous. Good in coastal conditions.	45L	1.5	8	10	not applicable	Tropical deciduous tree, branches prone to drooping down to ground level. Requires pruning to achieve good shape. Short lived (30years) but spectacular. Tolerates sea breezes well, frost tender.
<i>Eucalyptus platypus</i>	Moort, Round-leaved moort	Small umbrella shaped Eucalyptus tree.	45L	1	6	6	not applicable	Native coastal tree, too small for providing effective shade canopy in industrial or commercial environments. Sculptural umbrella shaped coastal native.
<i>Eucalyptus torquata</i>	Coral gum	Small umbrella shaped gum tree. From the Kalgoorlie goldfields, this is a small decorative tree with attractive pink flowers.	45L	1	6	6	not applicable	This tree's attractive appearance makes it useful for planting in high profile areas, near entrances or outdoor seating areas where it will attract wildlife. Too small for all but the most modest of car parks, Eucalyptus trees do not cast a very dense shade.
<i>Fraxinus raywoodii</i>	Claret ash, Raywood ash	Medium sized deciduous tree with small leaves. Turn dark burgundy red in Autumn.	45L	1.5	10	7	not applicable	Reliable regular shaped tree, suitable for car parks.
<i>Gleditsia triacanthus 'Inermis'</i>	Honey locust	Umbrella shaped small deciduous tree.	45L	1.5	15	7	not applicable	Tough deciduous shade tree, the variety <i>Inermis</i> is a thornless variety - thorns may be a problem for pedestrians and maintenance crew.
<i>Jacaranda mimosaeifolia</i>	Jacaranda	Medium sized deciduous trees with fern like yellow green leaves.	45L	1.5	8	8	not applicable	Reliable regular shaped tree, suitable for car parks. Slow growing.
<i>Liquidamber styraciflua</i>	Liquidamber, sweet gum	Large deciduous tree, like a plane tree with smaller leaves. Spectacular orange to burgundy red autumn foliage.	45L	1.5	10	8	not applicable	Reliable regular shaped tree, suitable for car parks. Slow growing. Leaves can scorch in summer, minor drawback.
<i>Lophostemon confertus</i>	Brush Box, Qld box tree	Familiar large lolly pop shaped evergreen with large glossy green leaves and small woody gumnuts which carpet the ground.	45L	1	8	8	not applicable	From the rain forests of the east coast of Australia this rainforest tree is usually heavily stunted in Perth. Ball bearing like gum nuts can be a slip hazard over paved areas.
<i>Paulownia tomentosa</i>	Paulownia, Empress tree	Deciduous tree with dark green enormous round leaves. Dense cool shade. Spectacular spring display of massed purple candelabras.	45L	1	10	7	not applicable	Very rapid growing. Useful for shading both permanent and temporary/interim car parks.
<i>Plantanus acerifolia</i>	London Plane Tree	Familiar deciduous tree.	45L	1.5	12	10	not applicable	Often stunted by extreme heat but can reach massive proportions in sheltered cooler positions. Roots can damage paving in cramped sites.
<i>Platanus digitata</i>	Cut leafed Plane	Smaller decorative version of the familiar London Plane	45L	1.5	10	8	not applicable	Autumn leaf fall does not form the deep drifts of dry leaves that the London Plane does. Tree less vigorous more suited to smaller areas than London Plane.
<i>Prunus nigra</i>	Red flowering plum	Small erect purple leafed deciduous plum tree. Fruit are small and few, not a problem in car parks, very limited shade provided though.	45L	0.75	5	2	not applicable	Does not cast useful shade. Can be planted very close to buildings.
<i>Pyrus calleryana red spire</i>	Pear	Small very erect pear tree. Fruit very small not a problem in car parks. Leaves turn spectacular oranges and reds in autumn, white spring blossom.	45L	0.75	5	2	not applicable	Does not cast useful shade. Can be planted very close to buildings.
<i>Pyrus usserensis</i>	Pear	Medium sized rounded pear tree. Fruit very small not a problem in car parks. Leaves turn spectacular oranges and reds in autumn, white spring blossom.	45L	0.75	5	6	not applicable	Seek advice from nursery, varieties may be prone to dropping branches. Not a safety issue but can produce insightly canopy.
<i>Sapium sebiferum</i>	Chinese tallow tree	Small glossy leaved deciduous tree with heart shaped leaves. Autumn colour.	45L	0.75	6	5	not applicable	Slow growing tree that requires shelter from high winds.
<i>Tipuana tipu</i>	Pride of Bolivia	Short tree, but very wide weeping canopy of small grey green leaves. Trusses of yellow pea like flowers.	45L	0.75	7	10	not applicable	Shallow roots have been a problem in paved areas/lawns.
<i>Ulmas parvifolium</i>	Chinese elm	Large deciduous tree, weeping habit, small leaves. Yellow autumn foliage.	45L	1.5	7	10	not applicable	Aphid infestation can drip sticky sap onto parked cars below.

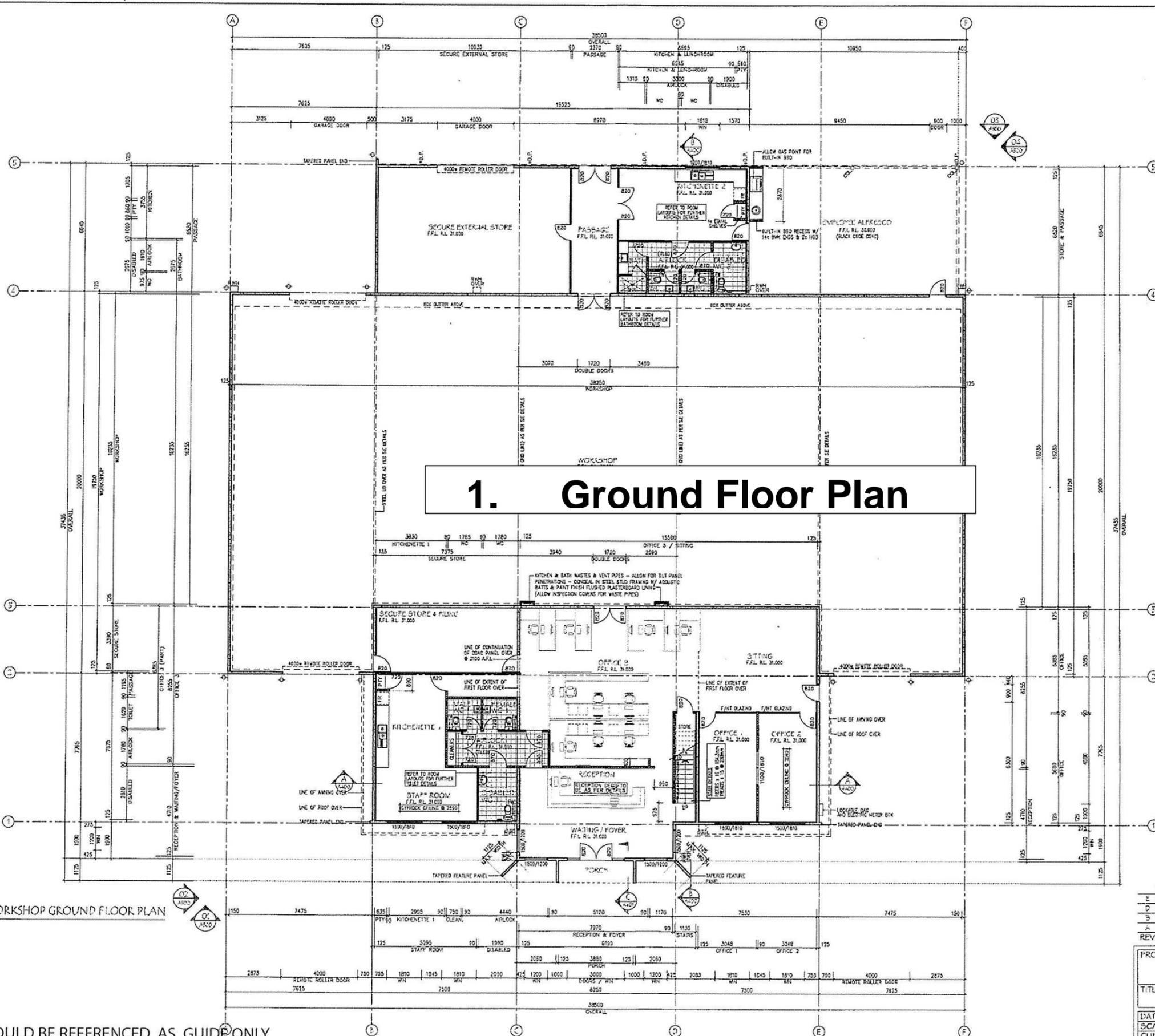
## Trees for commercial road verges (not suitable for planting over car parking, material storage areas, or close to buildings).

Scientific Name	Local Name/s	Character	Min. Container Size	Min. Stock Height	Ultimate height in metres	Recommended planting centres (m) to achieve full cover.	Recommended plants per square metre	Cultivation notes & typical uses
Corymbia calophylla	Marri	Large stately gum tree, most easily recognised by its large 'Honky Nut' gum nuts that can carpet the ground beneath it..	45L	1	12	15	not applicable	Not suitable for locations where honky nuts could be thrown by lawn mower blades. Consider using either shrub planting or mulch beneath tree. Parking vehicles or the storage of materials beneath this tree is not recommended due to risk of branch failure.
Eucalyptus rudis	Flooded gum	Medium sized gum tree	45L	1	8	10	not applicable	This tree has evolved in damp river bank locations, usefull for drainage swales and around bubble-ups in low points or damp areas of commercial development sites. Parking vehicles or the storage of materials beneath this tree is not recommended due to risk of branch failure.
Eucalyptus gomphocephala	Tuart	Large, fast growing stately gum tree.	45L	1	12	15	not applicable	This tree has evolved in coastal sand dunes and heathland. It can tolerate sea breezes and salt laden winds (eg Rockingham foreshore reserve). Parking vehicles or the storage of materials beneath this tree is not recommended due to risk of branch failure.
Eucalyptus tottiana	Coastal Blackbutt, Pricklybark	Medium sized, open branched gum tree, sometimes with branches arising the from the base (Malee form).	45L	1	8	10	not applicable	Parking vehicles or the storage of materials beneath this tree is not recommended due to risk of branch failure.



## **Appendix B Typical DA Submission Example**

- 1. Ground Floor Plan**
- 2. Elevations**
- 3. Sections**
- 4. Site Set Out Plan**
- 5. Planting Plan**
- 6. Drainage Layout**
- 7. Drainage Detail**

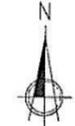


# 1. Ground Floor Plan

- LEGEND**
- NEW PRECAST CONCRETE TILT PANELS AS PER S.E. DWGS. A.S. 3000 AND BCA REQS.
  - NEW 75mm (MIN) STEEL STUD FRAMING AS PER S.E. DWGS. A.S. 4500 AND BCA REQS. W/ 90mm ROCKWOL ACUSTIC INSULATION BATT, AND FLUSHED & PAINTED 10mm PLASTERBOARD LINING UNLTD.
  - NEW 30mm SINGLE LEAF BRIDGEMARK AS PER S.E. DWGS. A.S. 3700 AND BCA REQS.
  - NEW OBSCURE GLAZED WINDOWS
  - NEW CLEAR GLAZED WINDOWS / DOORS
  - EXISTING OPENING - NO PROPOSED WORKS
  - 2ND FIRE RATED SOLID CORE DOOR & FRAME WITH DOOR CLOSER
  - HARD WOOD SMOKE DETECTOR TO A.S. 3783
  - PAINT FINISH HARDWALL PLASTER TO U/SIDE OF CEILING. HARDWALL PLASTER TO CONTINUE, WHERE POSSIBLE, MIN. 100mm PAST CEILING LEVEL. SEE HEIGHTS IN NET AREAS T.B.C.
  - PAINT FINISH TO 100mm PLASTERBAND TO U/SIDE OF CEILING PLASTERBOARD TO CONTINUE, WHERE POSSIBLE, MIN. 100mm PAST CEILING LEVEL. ("HOLLOW" OR "EDDY") TO NET AREAS.
  - PAINT FINISH TO ALL VISIBLE SURFACES OF CONCRETE TILT PANEL.
  - TRIMMEL ON ACRYLIC PENETRATED FINISH TO CONCRETE TILT PANELS / BRIDGEMARK.
  - T.B.R. = TO BE REMOVED
  - T.M.E. = TO MATCH EXISTING
  - G.F. = GROUND FLOOR
  - F.F. = FIRST FLOOR
  - S.F. = SECOND FLOOR
  - T.O.G. = TOP OF CRATE LEVEL
  - F.F.L. = FINISHED FLOOR LEVEL
  - N.E.L. = NATURAL GROUND LEVEL
  - A.F.L. = ABOVE FLOOR LEVEL
  - C.O.S. = DECK/CONCRETE ON SITE
  - N.W.P. = WALK IN PANTRY - AS SPECIFIED
  - W.P. = WALK IN PANTRY - AS SPECIFIED
  - B.I.R. = BUILT IN ROBE - AS SPECIFIED
  - S/D = SLIDING DOOR
  - C.S.D. = CANTY SLIDING DOOR
  - W. = WINDOW
  - D. = DOOR
  - C.A. = CARPET
  - B.F. = BUILT IN DOOR
  - P.J. = PANEL JOINT
  - A. = AWNING WINDOW
  - S.W. = SLIDING WINDOW
  - C. = CASSETT WINDOW
  - H.L. = HIGHLIGHT WINDOW
  - D.G. = DOUBLE GLAZED
  - F. = FIXED GLAZING
  - O.P. = 1500 PVC DOWN PIPE UNLTD.

- GENERAL NOTES:**
- ONLY DRAWINGS ISSUED FOR CONSTRUCTION ARE PERMITTED TO BE USED FOR ANY CONSTRUCTION OR FABRICATION UNLESS OTHERWISE PERMITTED BY SANITARIAN DESIGN WRITTEN CONDITIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS
  - BUILDER IS TO VERIFY DRAWING IS TO SCALE BEFORE BEING USED TO SCALE OFF.
  - THE BUILDER IS TO CHECK & VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING CONSTRUCTION.
  - ALL BUILDING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARD BUILDING CODE OF AUSTRALIA, LOCAL & REGULATORY AUTHORITIES.
  - NON-TYPICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONSULTANTS DRAWINGS.
  - DOWNPIPE LOCATIONS SHOWN ARE PREFERRED IF THEY MUST VARY CONSULT WITH BUILDER & OWNER FIRST. QUANTS ARE INDICATIVE ONLY AND MAY VARY TO SUIT THE ROOF PLUMBER'S REQUIREMENTS.
  - UNLESS A BUILDING ELEMENT, MATERIAL, FITTING OR FIXTURE IS NOTED AS BEING EXISTING, IT IS TO BE ASSUMED AS BEING NEW.

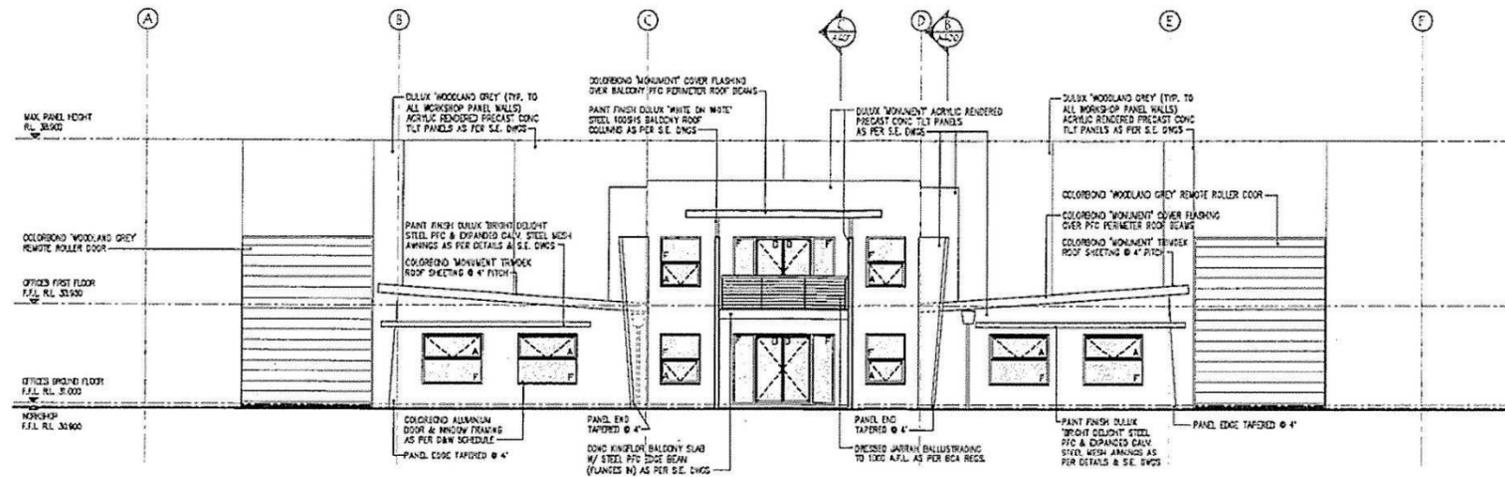
PRELIMINARY ONLY



OFFICE / WORKSHOP GROUND FLOOR PLAN  
SCALE 1:100

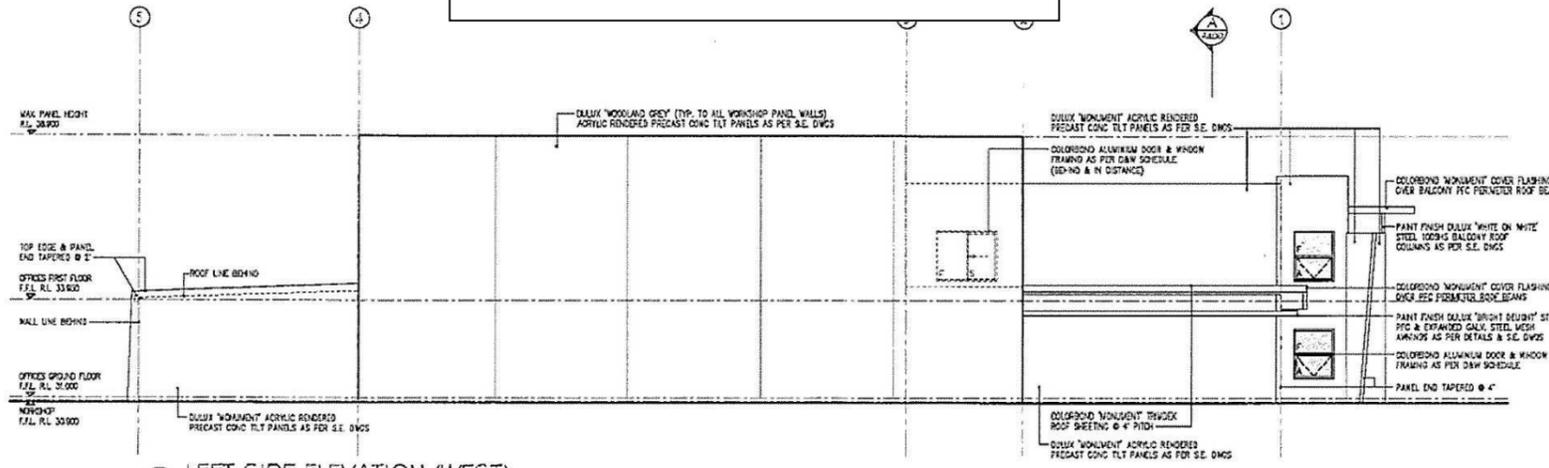
**NOTE:** THIS PLAN SHOULD BE REFERENCED AS GUIDE ONLY TO CONVEY THE LEVEL OF GRAPHICS REQUIRED BY COUNCIL

E	07/04/11 DRAFT B. ISSUED TO ENGINEERING CONSULTANTS
D	03/02/11 ISSUED FOR COUNCIL PLANNING APPROVAL
B	13/11/10 ISSUED FOR LANDSCAPE PLANNING APPROVAL
A	06/12/10 ISSUED FOR CLIENT COMMENTS
REV	DATE DESCRIPTION
<b>PROJECT :</b>	
<b>EXAMPLE PROJECT</b>	
<b>TITLE :</b> OFFICE / WORKSHOP GROUND FLOOR PLAN	
<b>DATE :</b> 07/04/11	
<b>SCALE :</b> 1:100	
<b>CLIENT :</b>	
<b>DRAWN :</b>	<b>DRAWING No. :</b>
<b>JOB No. :</b>	<b>A201</b>
	<b>REV. :</b>
	<b>E</b>



01 BUSHLAND RIDGE ELEVATION (SOUTH)  
SCALE: 1:100

## 2. Elevations



02 LEFT SIDE ELEVATION (WEST)  
SCALE: 1:100

- LEGEND**
- NEW PRECAST CONCRETE TILT PANELS AS PER S.E. DIMS. A.S. 3600 AND BCA REQS.
  - NEW 75mm (3 1/8") STEEL STUD FRAMING AS PER S.E. DIMS. A.S. 4500 AND BCA REQS. W/ R2.0 ROCKWOL ACUSTIC INSULATION BATTIS AND FLUSHED & PAINTED 15mm PLASTERBOARD LINING UNLS.
  - NEW 80mm SINGLE LEAF BRICKWORK AS PER S.E. DIMS. A.S. 3700 AND BCA REQS.
  - NEW OBSCURE GLAZED WINDOWS
  - NEW CLEAR GLAZED WINDOWS / DOORS
  - EXISTING OPENING - NO PROPOSED WORKS
  - 2HR FIRE RATED SOLID CORE DOOR & FRAME WITH DOOR CLOSER
  - HARD WIRED SMOKE DETECTOR TO A.S. 3785
  - PAINT FINISH MARGINAL PLASTER TO U/SIDE OF CEILING MARGINAL PLASTER TO CONTINUE, WHERE POSSIBLE, MIN 100mm PAST CEILING LEVEL. TILE HEIGHTS IN NET AREAS T.B.C.
  - PAINT FINISH TO 15mm PLASTERBOARD TO U/SIDE OF CEILING PLASTERBOARD TO CONTINUE, WHERE POSSIBLE, MIN 100mm PAST CEILING LEVEL. (CALCULATED ON ELEV.) TO NET AREAS.
  - PAINT FINISH TO ALL VISIBLE SURFACES OF CONCRETE TILT PANEL.
  - TRENCH OF ACRYLIC RENDERED FINISH TO CONCRETE TILT PANELS / BRICKWORK.
- ABBREVIATIONS:**
- T.B.R. = TO BE RE-GRAD TO MATCH EXISTING GROUND FLOOR
  - T.M.E. = TO MATCH EXISTING GROUND FLOOR
  - C.F. = CEILING FINISH
  - F.F. = FIRST FLOOR
  - S.F. = SECOND FLOOR
  - T.O.G. = TOP OF GRADE LEVEL
  - F.F.L. = FINISHED FINING LEVEL
  - N.G.L. = NATURAL GROUND LEVEL
  - A.F.L. = ABOVE FLOOR LEVEL
  - C.O.S. = CHECK/CONFIRM ON SITE
  - W.U. = WALK IN WHEELS - AS SPECIFIED
  - W.P. = WALK IN PANTRY - AS SPECIFIED
  - B.I.R. = BUILT IN ROBE - AS SPECIFIED
  - S/D = SLIDING DOOR
  - C.S.D. = CANTY SLIDING DOOR
  - W. = WINDOW
  - D. = DOOR
  - C.A. = CARRIAGE
  - B.F. = B-FOLD DOOR
  - P.I. = PANEL JOIN
  - A. = AWNING WINDOW
  - S.L. = SLIDING WINDOW
  - C. = CASSETTE WINDOW
  - H.L. = HORIZONTAL WINDOW
  - D.G. = DOUBLE GLAZED
  - F. = FIXED GLAZING
  - D.P. = 1500 PFC DOWN PFC LINLS.

- GENERAL NOTES:**
- ONLY DRAWINGS ISSUED FOR CONSTRUCTION ARE PERMITTED TO BE USED FOR ANY CONSTRUCTION OR FABRICATION UNLESS OTHERWISE PERMITTED BY SANDTRACKS DESIGN.
  - WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
  - BUILDER IS TO VERIFY DRAWING IS TO SCALE BEFORE BEING USED TO SCALE OFF.
  - THE BUILDER IS TO CHECK & VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING CONSTRUCTION.
  - ALL BUILDING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARDS, BUILDING CODE OF AUSTRALIA, LOCAL & REGULATORY AUTHORITIES.
  - ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONSULTANTS DRAWINGS.
  - DOWNPIPE LOCATIONS SHOWN ARE PRELIMINARY, IF THEY MUST VARY CONSULT WITH BUILDER & OWNER FIRST. QUANTS ARE INDICATIVE ONLY AND MAY VARY TO SUIT THE ROOF PLUMBERS REQUIREMENTS.
  - UNLESS A BUILDING ELEMENT, MATERIAL, FITTING OR FINISH IS NOTED AS EXISTING, IT IS TO BE ASSUMED AS BEING NEW.

PRELIMINARY ONLY

REV	DATE	DESCRIPTION
1	07/04/11	ISSUED FOR LANDSCAPE PLANNING APPROVAL
2	03/02/11	ISSUED FOR COUNCIL PLANNING APPROVAL
3	13/12/10	ISSUED FOR LANDSCAPE PLANNING APPROVAL
4	07/04/11	ISSUED TO ENGINEERING CONSULTANTS

PROJECT: EXAMPLE PROJECT

TITLE: OFFICE / WORKSHOP ELEVATIONS

DATE: 07/04/11

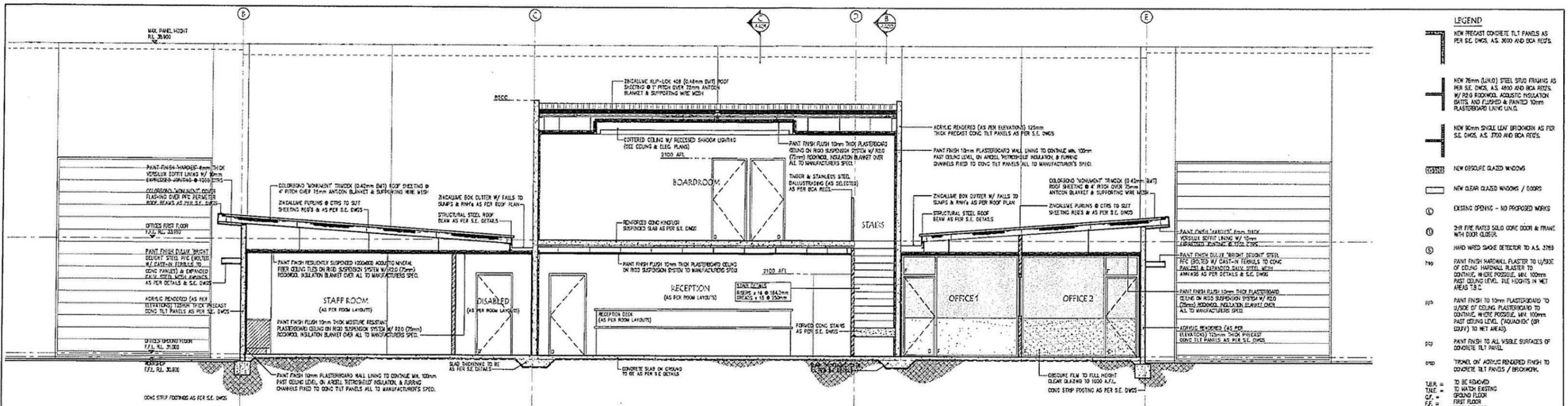
SCALE: 1:100

CLIENT:

DRAWN: [ ] DRAWING No.: A300 REV: E

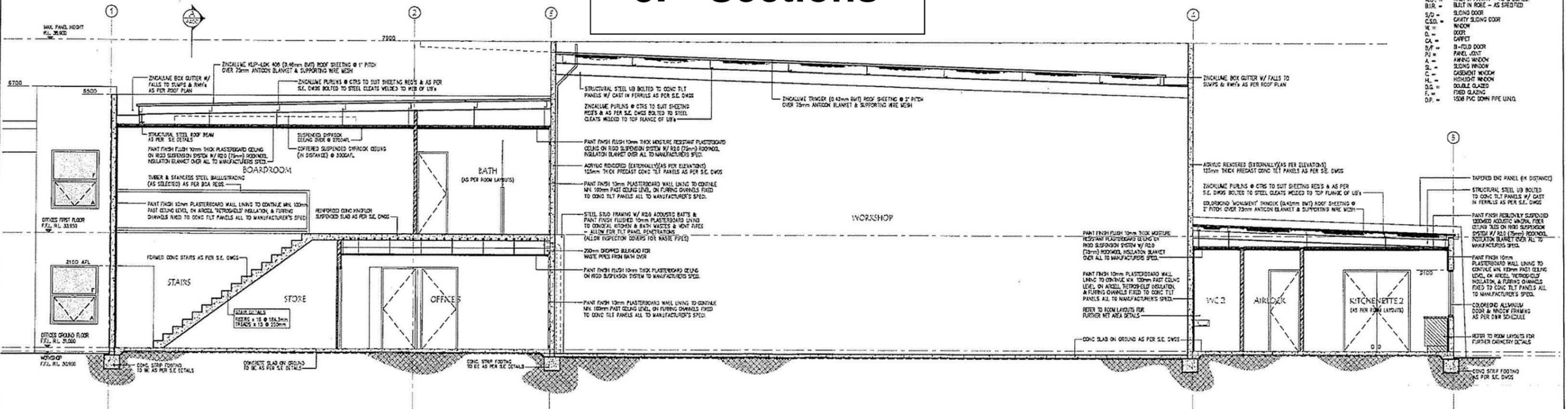
JOB No.:

**NOTE:** THIS PLAN SHOULD BE REFERENCED AS GUIDE ONLY TO CONVEY THE LEVEL OF GRAPHICS REQUIRED BY COUNCIL



SECTION A-A SCALE: 1:50

# 3. Sections



SECTION B-B SCALE: 1:50

- LEGEND**
- NEW PRECAST CONCRETE TILT PANELS AS PER S.E. DWGS. AS. 300 AND DCA REFS.
  - NEW 75mm (LxL) STEEL STUD FRAMING AS PER S.E. DWGS. AS. 400 AND DCA REFS. W/ R20 ROCKWOL ACUSTIC INSULATION BATT & PAINTED 10mm PLASTERBOARD LINING.
  - NEW 90mm SINGLE LEAF BRICKWORK AS PER S.E. DWGS. AS. 300 AND DCA REFS.
  - NEW OBSCURE GLAZED WINDOWS
  - NEW CLEAR GLAZED WINDOWS / DOORS
  - EXISTING OPENING - NO PROPOSED WORKS
  - 2HR FIRE RATED SOLID CORE DOOR & FRAME WITH DOOR CLOSER.
  - HAND WIRED SMOKE DETECTOR TO A.S. 2763
  - PAINT FINISH: HIGHEST QUALITY PFC (SOLID W/ CAST-IN FIBRES) TO CONC. PANELS & EXPANDED POLY. STEEL W/ 15mm ANTI-CORR. ANTIMAGNETIC AS PER DETAILS & S.E. DWGS.
  - PAINT FINISH: 10mm THICK MOISTURE RESISTANT PLASTERBOARD CEILING ON R20 SUSPENSION SYSTEM W/ R20 (75mm) ROCKWOL INSULATION BLANKET OVER ALL TO MANUFACTURER'S SPEC.
  - PAINT FINISH: 10mm PLASTERBOARD TO INSIDE OF CEILING PLASTERBOARD TO CONTINUE WHERE POSSIBLE. MIN. 100mm PAST CEILING LEVEL. (ACQUARED OR EQUIV.) TO NET AREA.
  - PAINT FINISH: TO ALL VISIBLE SURFACES OF CONCRETE TILT PANELS.
  - TRIMMED ON ACRYLIC RENDERED FINISH TO CONCRETE TILT PANELS / BRICKWORK.

- T&R = TO BE REMOVED
- TIME = TO MATCH EXISTING
- GF = GROUND FLOOR
- F1 = FIRST FLOOR
- F2 = SECOND FLOOR
- SF = SECOND FLOOR
- T.O.G. = TOP OF GRADE LEVEL
- F.F.L. = FINISHED FLOOR LEVEL
- N.G.L. = NATURAL GROUND LEVEL
- A.F.L. = ABOVE FLOOR LEVEL
- C.G.L. = O.D.E./G.P.P. ON SITE
- W&P = WALK IN ROBE - AS SPECIFIED
- W&P = WALK IN PANTRY - AS SPECIFIED
- B.I.R. = BUILT IN ROBE - AS SPECIFIED
- S/D = SLIDING DOOR
- C.S.D. = CASH SLIDING DOOR
- W = WINDOW
- D = DOOR
- CA = CARPET
- B.F. = BUILT IN DOOR
- P.V. = PANEL JOINT
- A = AWNING WINDOW
- Z = ZENITH WINDOW
- C = CASSEMENT WINDOW
- H = HORIZONTAL WINDOW
- D.G. = DOUBLE GLAZED
- F = FIXED GLAZING
- D.P. = 1500 PVC DOWN PIPE LINING

**NOTE:** THIS PLAN SHOULD BE REFERENCED AS GUIDE ONLY TO CONVEY THE LEVEL OF GRAPHICS REQUIRED BY COUNCIL

**GENERAL NOTES:**

- ONLY DRAWINGS ISSUED FOR CONSTRUCTION ARE PERMITTED TO BE USED FOR ANY CONSTRUCTION OR FABRICATION UNLESS OTHERWISE PERMITTED BY SANDRACON DESIGN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- BUILDER IS TO VERIFY DRAWING IS TO SCALE BEFORE BEING USED TO SCALE OFF.
- THE BUILDER IS TO CHECK & VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- ALL BUILDING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARDS, BUILDING CODE OF AUSTRALIA, LOCAL & REGULATORY AUTHORITIES.
- ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONSULTANTS DRAWINGS.
- DOWN-PIPE LOCATIONS SHOWN ARE PREFERRED, IF THEY MUST VARY CONSULT WITH BUILDER & OWNER FIRST. QUANTS ARE INDICATIVE ONLY AND MAY VARY TO SUIT THE ROOF PLUMBERS REQUIREMENTS.
- UNLESS A BUILDING ELEMENT, MATERIAL, FITTING OR FINISH IS NOTED AS BEING EXISTING, IT IS TO BE ASSUMED AS BEING NEW.

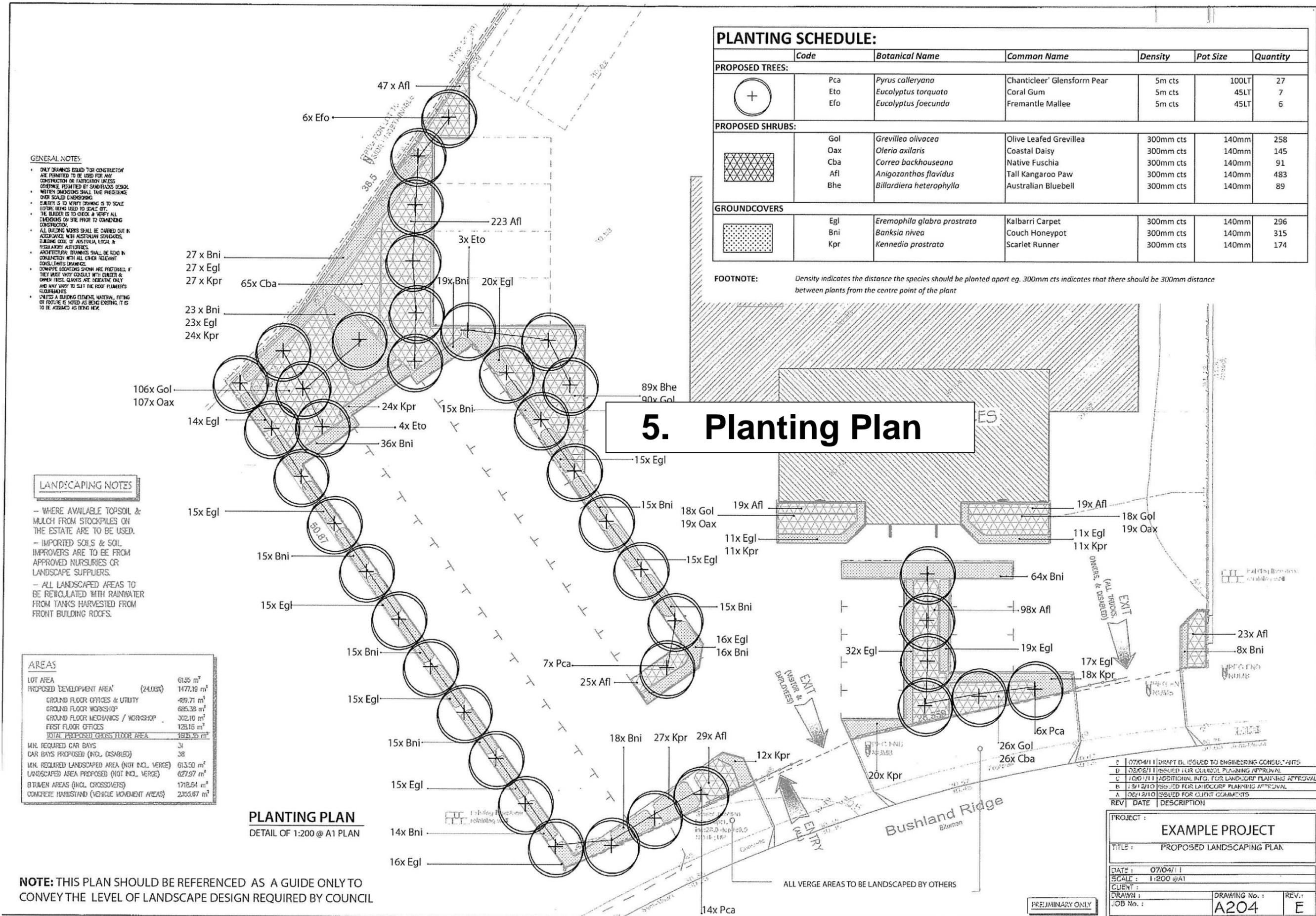
REV	DATE	DESCRIPTION
1	07/04/11	DRAFT B.L. ISSUED TO ENGINEERING CONSULTANTS
2	03/02/11	ISSUED FOR COUNCIL PLANNING APPROVAL
3	13/12/10	ISSUED FOR LANDSCAPE PLANNING APPROVAL

PROJECT :	EXAMPLE PROJECT
TITLE :	OFFICE / WORKSHOP SECTIONS
DATE :	07/04/11
SCALE :	1:50
CLIENT :	
DRAWN :	
JOB No. :	A400
DRAWING No. :	
REV. :	E

PRELIMINARY ONLY





**PLANTING SCHEDULE:**

	Code	Botanical Name	Common Name	Density	Pot Size	Quantity
<b>PROPOSED TREES:</b>						
⊕	Pca	<i>Pyrus calleryana</i>	Chanticleer' Glensform Pear	5m cts	100LT	27
	Eto	<i>Eucalyptus torquata</i>	Coral Gum	5m cts	45LT	7
	Efo	<i>Eucalyptus foecunda</i>	Fremantle Mallee	5m cts	45LT	6
<b>PROPOSED SHRUBS:</b>						
⊗	Gol	<i>Grevillea olivacea</i>	Olive Leafed Grevillea	300mm cts	140mm	258
	Oax	<i>Oleria axilaris</i>	Coastal Daisy	300mm cts	140mm	145
	Cba	<i>Correa backhouseana</i>	Native Fuschia	300mm cts	140mm	91
	Afl	<i>Anigozanthos flavidus</i>	Tall Kangaroo Paw	300mm cts	140mm	483
Bhe	<i>Billardiera heterophylla</i>	Australian Bluebell	300mm cts	140mm	89	
<b>GROUNDCOVERS:</b>						
⊙	Egl	<i>Eremophila glabra prostrata</i>	Kalbarri Carpet	300mm cts	140mm	296
	Bni	<i>Banksia nivea</i>	Couch Honeypot	300mm cts	140mm	315
	Kpr	<i>Kennedia prostrata</i>	Scarlet Runner	300mm cts	140mm	174

**FOOTNOTE:** Density indicates the distance the species should be planted apart eg. 300mm cts indicates that there should be 300mm distance between plants from the centre point of the plant

**GENERAL NOTES:**

- ONLY DRAWINGS ISSUED FOR CONSTRUCTION ARE PERMITTED TO BE USED FOR ANY CONSTRUCTION OR FABRICATION UNLESS OTHERWISE PROVIDED BY SIGNATURES OF THE ARCHITECT.
- ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- BUILDERS TO VERIFY DRAWING IS TO SCALE BEFORE BEING USED TO START WORK.
- THE BUILDER IS TO CHECK & VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- ALL BUILDING WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARDS, BUILDING CODE OF AUSTRALIA, LOCAL & REGULATORY AUTHORITIES.
- ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONSULTANTS DRAWINGS.
- COMPLETE LOCATIONS SHOWN ARE PROVIDED IF THEY MUST BE CONSULTED WITH CLIENT & OTHER PROFESSIONALS ARE THE ONLY AND MAY VARY TO SUIT THE FOOT PLANTERS REQUIREMENTS.
- UNLESS A BUILDING ELEMENT, MATERIAL, FINISH OR FEATURE IS NOTED AS BEING EXISTING, IT IS TO BE ASSUMED AS BEING NEW.

**LANDSCAPING NOTES:**

- WHERE AVAILABLE TOPSOIL & MULCH FROM STOCKPILES ON THE ESTATE ARE TO BE USED.
- IMPORTED SOILS & SOIL IMPROVERS ARE TO BE FROM APPROVED NURSURIES OR LANDSCAPE SUPPLIERS.
- ALL LANDSCAPED AREAS TO BE RETICULATED WITH RAINWATER FROM TANKS HARVESTED FROM FRONT BUILDING ROOFS.

**AREAS:**

LOT AREA	6135 m <sup>2</sup>
PROPOSED 'DEVELOPMENT AREA' (24.00%)	1477.19 m <sup>2</sup>
GROUND FLOOR OFFICES & UTILITY	499.71 m <sup>2</sup>
GROUND FLOOR WORKSHOP	625.38 m <sup>2</sup>
GROUND FLOOR MECHANICS / WORKSHOP	302.10 m <sup>2</sup>
FIRST FLOOR OFFICES	128.15 m <sup>2</sup>
TOTAL PROPOSED GROSS FLOOR AREA	1615.35 m <sup>2</sup>
MIN. REQUIRED CAR BAYS	34
CAR BAYS PROPOSED (INCL. DISABLED)	38
MIN. REQUIRED LANDSCAPED AREA (NOT INCL. VERGE)	613.50 m <sup>2</sup>
LANDSCAPED AREA PROPOSED (NOT INCL. VERGE)	627.97 m <sup>2</sup>
BITUMEN AREAS (INCL. CROSSOVERS)	1718.64 m <sup>2</sup>
CONCRETE HARDSTAND (VEHICLE MOVEMENT AREAS)	2305.87 m <sup>2</sup>

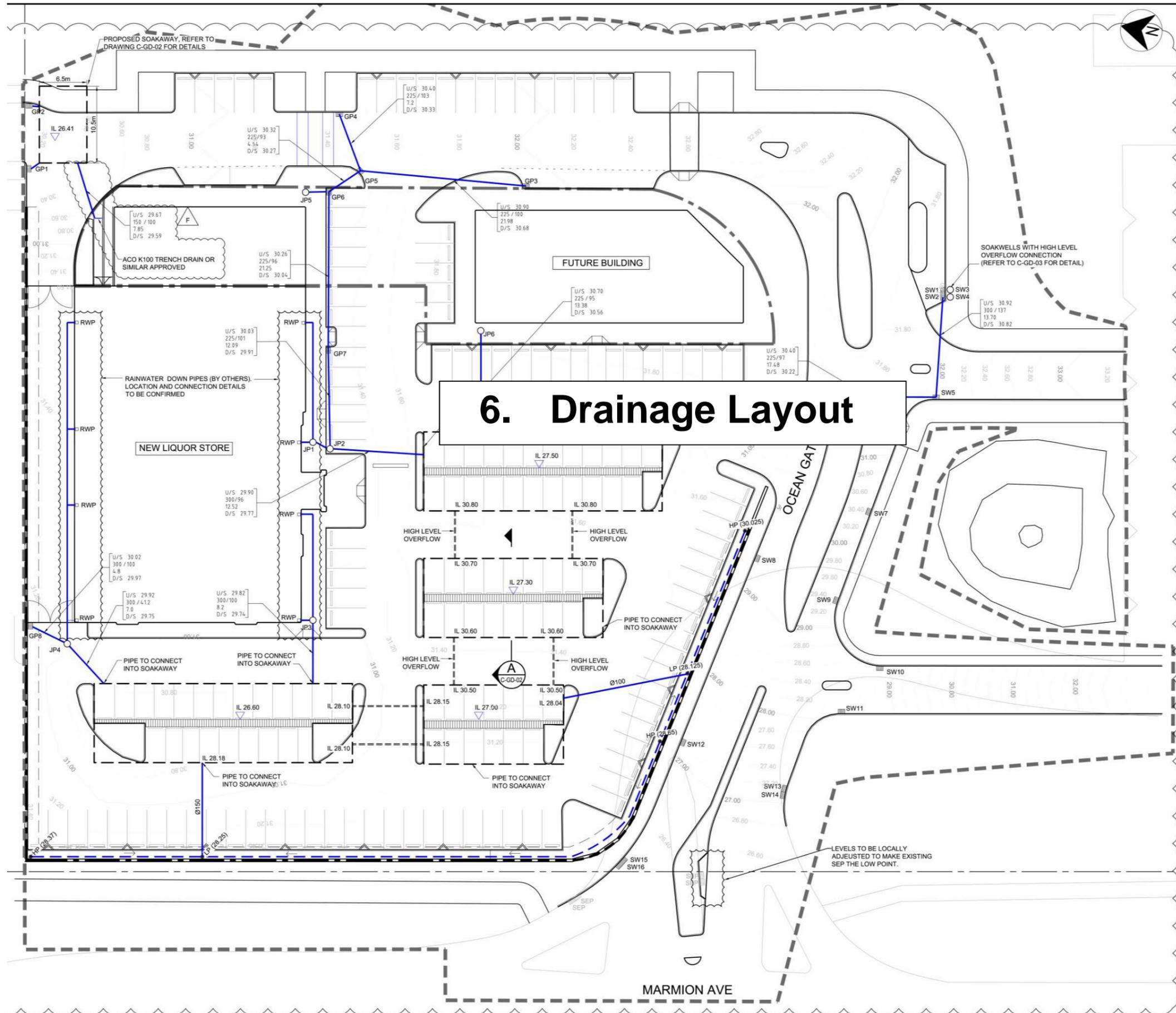
**PLANTING PLAN**

DETAIL OF 1:200 @ A1 PLAN

**NOTE:** THIS PLAN SHOULD BE REFERENCED AS A GUIDE ONLY TO CONVEY THE LEVEL OF LANDSCAPE DESIGN REQUIRED BY COUNCIL

REV	DATE	DESCRIPTION
D	07/04/11	DRAFT B. ISSUED TO ENGINEERING CONSULTANTS
C	03/02/11	ISSUED FOR COUNCIL PLANNING APPROVAL
B	10/01/11	ADDITIONAL INFO. FOR LANDSCAPE PLANNING APPROVAL
A	19/12/10	ISSUED FOR LANDSCAPE PLANNING APPROVAL
A	06/12/10	ISSUED FOR CLIENT COMMENTS

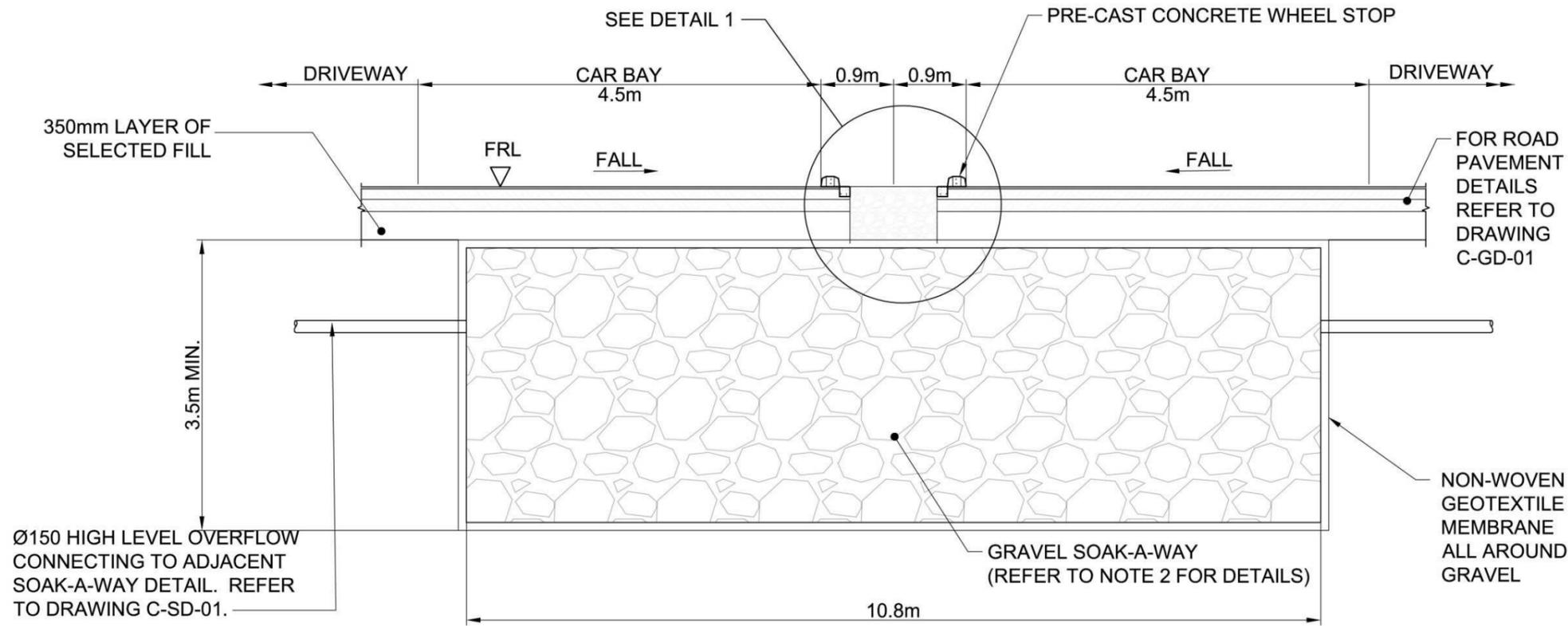
PROJECT:	EXAMPLE PROJECT		
TITLE:	PROPOSED LANDSCAPING PLAN		
DATE:	07/04/11	DRAWING No.:	A204
SCALE:	1:200 @A1	REV.:	E
CLIENT:			
DRAWN:			
JOB No.:			



# 6. Drainage Layout

LEGEND	
	PRECINCT 1A SITE BOUNDARY
	PRECINCT 1B & 1C SITE BOUNDARY
	CADASTRAL BOUNDARY
	FINISHED CAR PARK LEVELS @ 0.2m INTERVALS
	RETAINING WALL 01
	RETAINING WALL 02
	RETAINING WALL 03
	PROPOSED JUNCTION PIT, REFER TO DRAWING C-GD-02 FOR TYPICAL DETAIL
	PROPOSED GULLY PIT
	EXISTING SIDE ENTRY PIT
	PROPOSED SOAKWELL
	RAINWATER DOWN PIPE (BY OTHERS)
	PROPOSED DRAINAGE PIPE
	UPSTREAM INVERT LEVEL PIPE DIAMETER / PIPE GRADE PIPE LENGTH DOWNSTREAM INVERT LEVEL
	SUBSOIL DRAINAGE AT BACK OF RETAINING WALLS. REFER TO NOTE 2
	INVERT LEVEL OF SOAK-A-WAY UNIT
	HIGH POINT (INVERT LEVEL)
	LOW POINT (INVERT LEVEL)
	OPEN GRAVEL FILTER DRAIN
	EXTENT OF INFILTRATION ZONE

- NOTES**
- FOR DETAILS OF PROPOSED DRAINAGE REFER TO DRAWING C-GD-02.
  - SUBSOIL DRAINAGE TO BE A MINIMUM GRADE OF 0.5%.
  - THE CONTRACTOR SHALL SAW-CUT EXISTING PAVEMENT IN A STRAIGHT LINE AND MAKE SMOOTH CONNECTION.
  - DRAINAGE PIPE SHALL BE CLASS 2 REINFORCED CONCRETE UNLESS OTHERWISE NOTED.
  - ALL TRENCHING, PIPE BEDDING AND BACKFILLING SHALL BE IN ACCORDANCE WITH AS3725.
  - ENTRY PIT LIDS SHALL BE SET TO SUIT THE VERGE SLOPE, NOMINALLY 2% UPWARDS FROM THE TOP OF BACK OF KERB.
  - WHERE A SEWER LINE INTERSECTS WITH STORMWATER DRAINAGE LINE AND THE SEWER PASSES OVER THE DRAIN THEN THE SEWER SHALL HAVE A TIMBER PILE AND KEEL PROVIDED FOR THE FULL EXTENT NECESSARY TO SUPPORT THE SEWER DURING EXCAVATION FOR THE DRAIN.
  - ALL DRAINAGE PITS TO BE SEALED DURING CONSTRUCTION TO PREVENT INGRESS OF SAND INTO DRAINAGE NETWORK.
  - STORMWATER DRAINAGE HAS BEEN DESIGNED WITH CAPACITY TO RETAIN A 100 YEAR ARI STORM WITHIN THE SITE BOUNDARY.
  - DRAINAGE SYSTEM DESIGNED IN CONJUNCTION WITH ARUP'S GEOTECHNICAL INTERPRETIVE REPORT FOR CURRAMBINE SHOPPING CENTRE DATED AUGUST 2010.



SECTION A  
SCALE 1:50  
C-SD-01

TYPICAL SOAK-A-WAY DETAIL WITHIN CAR PARK

# 7. Drainage Detail

