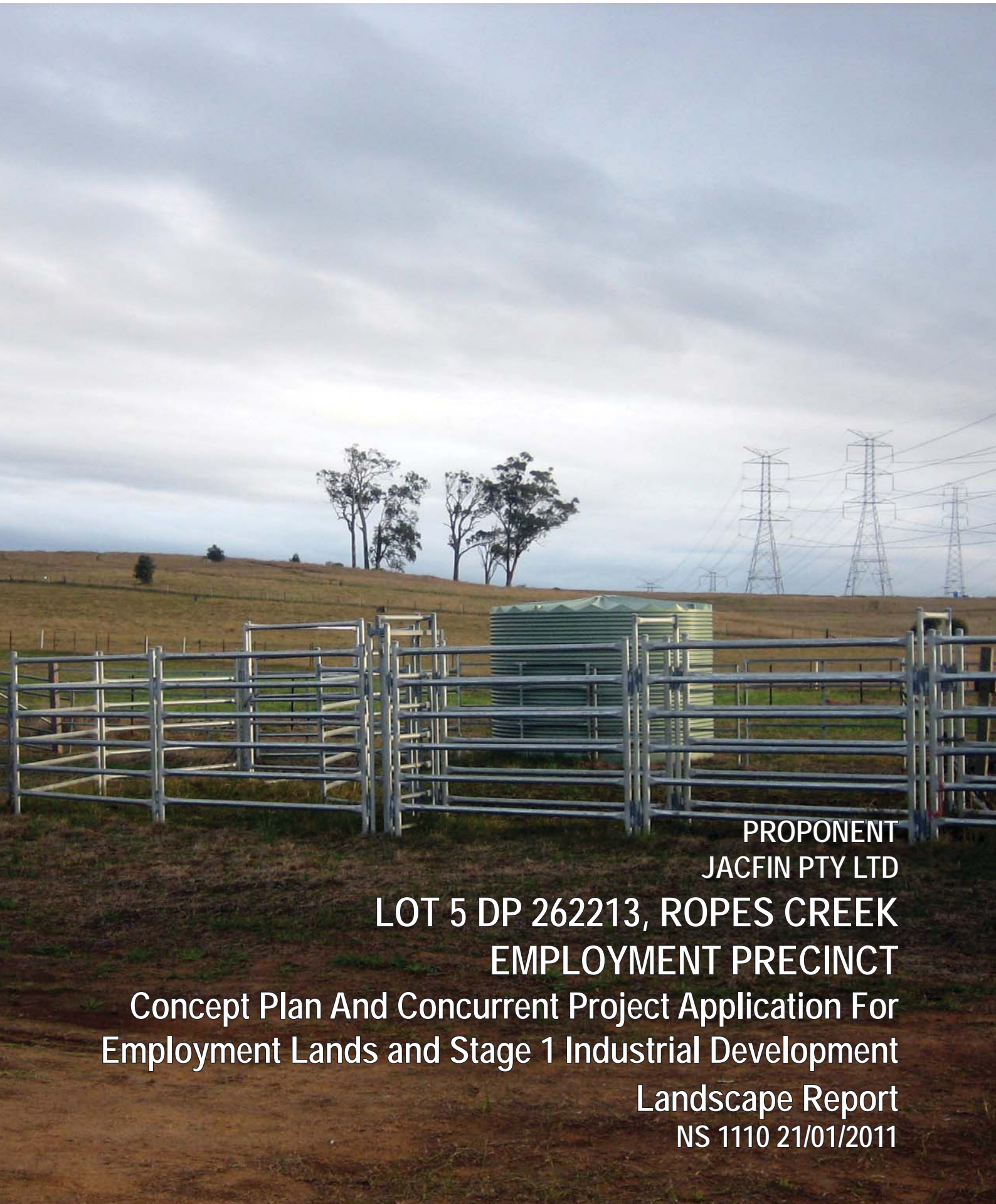




CLOUSTON associates



**PROPONENT
JACFIN PTY LTD**

**LOT 5 DP 262213, ROPES CREEK
EMPLOYMENT PRECINCT**

**Concept Plan And Concurrent Project Application For
Employment Lands and Stage 1 Industrial Development**

**Landscape Report
NS 1110 21/01/2011**

CONCEPT PLAN AND CONCURRENT PROJECT APPLICATION FOR EMPLOYMENT LANDS AND STAGE 1 INDUSTRIAL DEVELOPMENT LANDSCAPE REPORT



Proponent

Jacfin Pty Ltd

CLOUSTON Associates

Landscape Architects • Urban Designers • Landscape Planners

6A Wetherill Street • Leichhardt • NSW 2040
PO Box 44 • Leichhardt • NSW 2040
Telephone (02) 9569 3388 • Facsimile (02) 9569 3523
Contact • Leonard Lynch - Managing Director
Email • sydney@clouston.com.au

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INTRODUCTION

The following landscape principles and stage 1 project application have been prepared for the Lot 5 DP 262213, Ropes Creek Employment Precinct, for Jacfin Pty Ltd. The landscape principles and stage 1 are in accordance with the Blacktown City Council DCP 2006.

The landscape design is based on the following base information:

JBA Planning (Concept Plan)

- Lot 5 DP 262213, Ropes Creek Employment Precinct - Concept Plan
(06 August 2010)

MNIA Architects (Architectural Layout)

- Ropes Creek Building 1 Master Site Plan: # DA01 (Rev A)

Brown Engineering (Road and Bulk Earthworks)

- Engineering Plan (1 of 3): # 101 (Rev B)
- Engineering Plan (2 of 3): # 102 (Rev B)
- Engineering Plan (3 of 3): # 103 (Rev B)

The landscape design is fully coordinated with the other consultants information such as Environmental, Bushfire and Stormwater.



FIGURE 1: Location Map, (Source- Google Maps).

LANDSCAPE DESIGN PRINCIPLES

- The landscaping should ensure a high standard of environmental quality for the development, whilst enhancing the general amenity of the industrial areas.
- The landscaping should be in harmony with buildings and the presentation of a building facade to the street should be complemented with appropriate vegetation.
- Existing trees should be retained and protected where possible, in accordance with tree preservation provisions.
- All landscaped areas are to be separated from vehicular areas by means of a kerb, wall or other effective physical barrier.
- Undeveloped areas are to be stabilised to prevent soil erosion.
- The proposed landscape should reflect the former, rural character of the site and surrounds. That is, large swaths of grasses should be used, rolling topography maintained or enhanced and trees only placed as feature elements, screen elements or to delineate specific areas, such as car parks.
- District views should be maintained where possible.
- Copse of trees should be planted within the dedicated landscape areas in front of the building where large areas of the building facade are exposed to the street. This will assist in dissipating the exposed facade without compromising the rolling, rural hillside character.
- Outdoor spaces should be provided for staff. The spaces should be easily accessible from the buildings and should maximise site opportunities such as views and solar access. The outdoor spaces should be screened from public areas such as entries from car parks and adjacent residences.
- The landscape must conform to the bushfire requirements, specifically when planting within Defendable Spaces. Refer to Australian Bushfire Protection Planners Pty. Ltd. (ABPP) Protection Assessment for details on the bushfire requirements.
- The landscape within the electricity easements must conform to the owners requirements. Typically, trees and shrubs should be avoided within the easements and adjacent to the easements where the mature canopy of the trees or shrubs would extend into the easement.

PLANTING PRINCIPLES

- Trees are to be of a minimum height of 1m at the time of planting
- Trees endemic to the area should be used due to their low maintenance requirements, aesthetic appeal and suitability to the natural habitat. If this is not possible it is preferred that plants native to Australia are used.
- Large feature trees should be placed near the entry of each individual plot within the development, to provide identity and character for the site. Ideally, these trees will be unique for each site, thus creating an individual identity for each plot.
- Trees are to have a single leading shoot and conform to Natspec Guide (Clark. 1996) Purchasing Landscape Trees - a guide to assessing tree quality.
- Plant species should be carefully selected to meet service authority requirements in easement locations.
- All plants to be obtained from a nursery located in an area having a similar climate to the site or hardened off for a minimum six week period. All plant material is to be true to species and sizes - refer to Plans and Plant Schedule; healthy, of good form, not soft or forced; with large robust root systems that are not root bound; and free from disease and insect pests.
- The landscaping directly adjacent to any Riparian Corridor (E2 Corridor) should be noninvasive, low and not include any species nominated for that E2 Corridor and should clearly demarcate the boundary of the corridor; low native grasses are recommended. This will allow clear identification of the E2 Corridor and will assist in preserving a distinct corridor.

SUSTAINABILITY PRINCIPLES

- For the majority of the areas being landscaped, planting native plants that have lower water requirements and have evolved to cope best with the existing conditions should be used, hence reducing maintenance, fertilising and water requirements.
- The use of exotics or plants that require irrigation should be very limited and used only in areas where feature and identity are essential.
- Where irrigation is required, the system should utilise drip irrigation systems.
- The landscape design should use recycled and biodegradable products. Such elements could include recycled soils and other hard paving features.
- The landscape design should use quality, long lasting materials, particularly for hardscape elements such as paving and edge treatments.
- Site topsoil should be re-used where the topsoil can be ameliorated to conform to specification. Stock pile stripped topsoil in a manner that facilitates such reuse.
- Turf should be avoided and only used where it is accessible and will it provides amenity.

FENCING

- Fencing or landscape screens should be used to define areas/boundaries, provide safety and security, provide privacy, restrict access, control people and/or animals, reduce impact of wind, noise, sunlight and other environmental factors and provide an aesthetic treatment to enhance the existing character of the site.
- Fencing should be between 1.2m and 1.8m high and be of an open nature. It should be positioned on the property boundary to create a clear line of demarcation between public and private land.
- A consistent, formal row of native shrubs should be planted directly behind the fence to help screen the fence and to reinforce the delineation between public and private land, as shown in Figure 2 below.

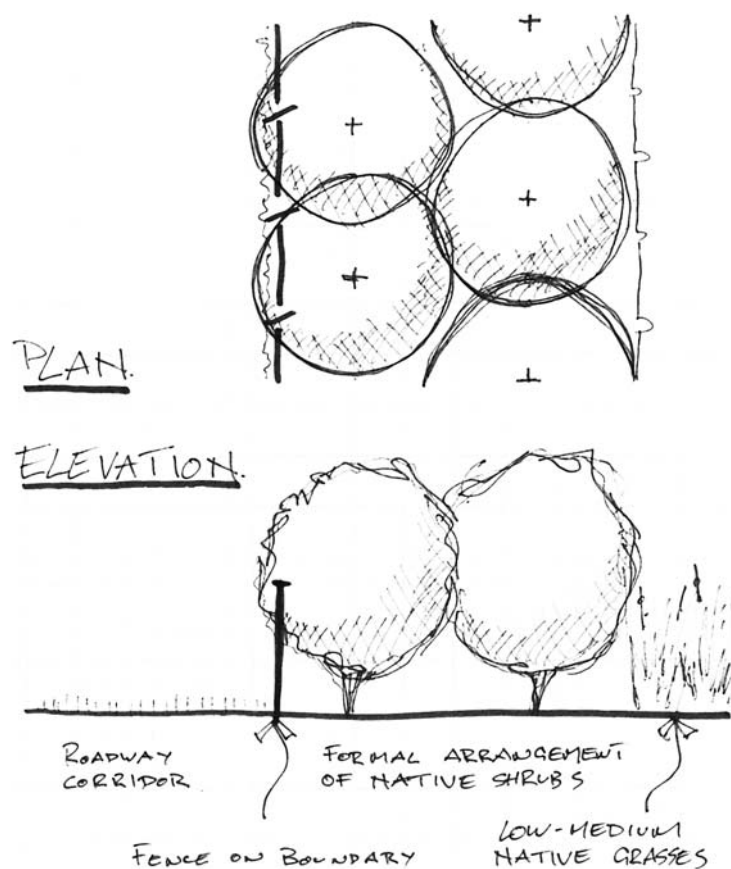


FIGURE 2: Fence/Screen Planting Detail.

STREETSCAPE PRINCIPLES

- The streetscape should maintain the rural, open field landscape character created throughout the development.
- The fields of grass used within the lots should be carried through to the street verges and medians and turf should be avoided. This will provide continuity within the development, avoid maintenance and reduce water consumption. The sites are well defined by the fences and shrubs and so private and public domain should be clearly discernible.

LANDSCAPE MAINTENANCE

- 12 months after the Principle certifying Authority has issued an Occupation Certificate the designer of the landscape works is required to submit a maintenance report to council. This will provide written certification that the approved landscaping has been completed in accordance with the approved landscape plan and consent conditions. The Maintenance report should also state that all the work has been completed in accordance with all relevant Australian Standards and that all plants are healthy with no evidence of die-back, stress, disease or loss.
- All setbacks are to landscaped and maintained.
- Landscape works should be maintained throughout the duration of construction works and in perpetuity for the life of the development. The onus for satisfactory maintenance is on the applicant until the development is completed, and on the owner thereafter.

LANDSCAPE DOCUMENTATION REQUIREMENTS

PROJECT APPLICATION

- Landscape Concept Plan is to be submitted as part of the Project Application and must be prepared by a qualified designer.
- The qualified designer should be member of, or be eligible for corporate membership of the Australian Landscape Architects or be a registered Landscape Architect.
- The Landscape Concept Plan should express the developer's intent and ideas and show how the proposed landscaping relates to the characteristics of the site and its setting. The following information should be provided in the landscape concept plan:
 - All proposed areas to be landscaped including balconies, roof gardens, courtyards show general landscape treatments (e.g. mass planting beds, specimen trees, paving, gravel, turf, water element).
 - Basic design of hard and soft landscaped areas.
 - Broad descriptions of proposed land modelling. The plan must show that any proposed changes of level will not have an adverse effect on the plants and natural features to be retained.
 - Description of landscape values being promoted (e.g. bushland habitat, temperature moderation, reduce runoff and increase infiltration, heritage, streetscape compatibility, etc.).
 - Indicative planting scheme that includes examples of tree, shrub and groundcover species to be used (include botanical and common name, mature height and spread of foliage).
 - If the following information is not shown on the engineers plans, then it should be shown on the Landscape Concept Plan:
 - Contours, spot heights and finished levels.
 - Areas of cut and fill.
 - Erosion and sediment control details.

CONSTRUCTION CERTIFICATE

- Landscape Detail Plan to be submitted as part of the Construction Certificate and must be prepared by a qualified designer.
- The qualified designer should be member of, or be eligible for corporate membership of the Australian Landscape Architects or be a registered Landscape Architect.
- Plant substitutions only with written consent of those preparing/designing the Landscape Plans.
- The following information should be provided in the Landscape Detail Plan:
 - Details for special treatments (e.g. weed eradication, creek banks, roof gardens, podium areas).
 - Location of utility areas and screening details (e.g. garbage receptacle area, storage of recyclable waste, clothes drying area, letter boxes, play areas, common open space, staff recreation areas).
 - Location and details of lighting and other outdoor fixtures (e.g. signs, furniture)
 - Existing and proposed buildings and other structures (including finished levels and floor heights).
 - Roadways, driveways, carparks, podiums and footpaths (including materials finished levels).
 - Existing and proposed walls, fences and retaining walls (including materials, heights and finished levels).
 - Planting layout showing location of species and size at maturity, including street trees, trees on site, shrubs, groundcovers, grasses, turf, etc.
 - Planting schedule with botanical and common names, whether evergreen or deciduous and local/native/exotic species, container size, quantities and staking and tying requirements for all species nominated.
 - Standard construction and detail drawings (e.g. sections through mass planting beds, tree planting and mulching details, paths, steps, retaining walls).
 - Detailing and location of all edge treatments (e.g. concrete, brick, timber).
- Maintenance schedule for watering, weeding and fertilising, if required, of plants for successful establishment.
- Replacement strategy for failures in plant materials and built works.

POST CONSTRUCTION

- The qualified landscape designer who completed the design of the landscape must complete the following, post construction.
 - Implementation Report, to be completed at Practical Completion. It should provide a written consent from the landscape designer that:
 - The individual or company that completed the construction of the landscape component of the development is able to construct that category of work.
 - The landscape works have been implemented substantially in accordance with the approved plans. Minor variations to the approved plans, such as small changes in plant quantities, are acceptable.
 - The landscape works have been implemented in accordance with this section.
 - The landscape works have been implemented in accordance with best practice industry standards.
 - A landscape maintenance program has been set.
 - Maintenance Report, to be completed twelve months after Practical Completion. Refer to Landscape Maintenance, earlier in this document for further detail.

PROJECT APPLICATION FOR STAGE 1 INDUSTRIAL DEVELOPMENT LANDSCAPE DESIGN

INTRODUCTION

The Stage 1 application is for Buildings 1 and 2, which are located in the South Eastern corner of the site. For further detail, refer to Appendix A: Project Application for Stage 1 Industrial Development - Landscape Drawings.

DESIGN PRINCIPLES (BUILDING 1)

The design consists of five (5) landscaped areas. These are:

- Site Entry, located at the north of the site. Waves of native grass (*Pennisetum alopercuriodes* 'Nafray') and shrubs (*Banksia erifolia*) provide interest while maintaining the rural, rolling hillside character of the area.

A large native feature tree, *Ficus rubiginosa*, creates a strong entry marker and provides identity to the site.

- Site Perimeter. Large areas fields of *Pennisetum alopercuriodes* 'Nafray' will maintain the rolling hillside character of the site, while the consistent rows of *Grevillea rosmarinifolia* 'Nana' behind the permeable fence will create a distinct landscape edge to the site.

Three copse of *Syzygium paniculatum* have been placed to dissipate the building facade while not altering the rural character of the site.

- Truck Circulation Road. The truck circulation road is bordered with *Lomandra longifolia* to create a hardy, soft edge to the roadway.
- Car Park. The car park is defined by canopy trees (*Cupaniopsis anacardioides*). The trees are wholly located within the perimeter planting beds to contain the tree litter. A mixture of native grasses (*Dianella Revoluta* 'Little Rev') and groundcovers (*Grevillea* 'Bronze Rambler') provide interest in the island and perimeter planting beds.
- Staff Outdoor Space. An area of paving and turf has been provided on the north western corner of the office for staff. The location provides district views, while shrubs have been provided to screen the area from the building entry.

DESIGN PRINCIPLES (BUILDING 2)

The design consists of five (5) landscaped areas. These are:

- Site Entry, located at the north of the site. Bands of native grass (*Pennisetum alopercuriodes* 'Nafray') and shrubs (*Banksia erifolia*) provide interest while maintaining the rural, rolling hillside character of the area. The bands have been designed to maintain views into the Riparian Corridor for people entering the car park.

A large feature tree, *Quercus ilex*, creates a strong entry marker and provides identity to the site.

- Site Perimeter. Large areas fields of *Pennisetum alopecuroides* 'Nafray' will maintain the rolling hillside character of the site, while the consistent rows of *Grevillea rosmarinifolia* 'Nana' behind the permeable fence will create a distinct landscape edge to the site.
- Truck Circulation Road. The truck circulation road is bordered with *Lomandra longifolia* to create a hardy, soft edge to the roadway.
- Car Park. The car park is defined by canopy trees (*Cupaniopsis anacardioides*). The trees are wholly located within the perimeter planting beds to contain the tree litter. A mixture of native grasses (*Dianella Revoluta* 'Little Rev') and groundcovers (*Grevillea* 'Bronze Rambler') provide interest in the island and perimeter planting beds.
- Staff Outdoor Space. An area of paving and turf has been provided on the south eastern corner of the office for staff. The location provides district views, while shrubs have been provided to screen the area from the building entry.

PLANTING AND SUSTAINABILITY PRINCIPLES

The planting palette is almost exclusively native, with the only exceptions being the use of *Murraya Paniculatum* at the entry of each site and *Quercus ilex* at the entry to Building 2. In no instance should irrigation be required after establishment.

FENCING

A perimeter palisade fence is provided on the boundary, with a 3m row of *Grevillea rosmarinifolia* directly behind the fence. When the *Grevillea* matures, it will help screen the fence and will provide a definitive border for the site.

FUTURE ACTIONS

Following approval of the Stage 1 Application, landscape detail plans will be created that incorporates any comments from the stage 1 application stage and conforms to the requirements stipulated in the Landscape Principles- Landscape Documentation Requirements section of this report. The drawings contained within the Landscape Detail Plans will form the basis of the Landscape Tender/Construction Documentation which will be used to construct the landscape. Following construction an Implementation Report and Maintenance Report will be produced, conforming to the requirements stipulated in the Landscape Principles- Landscape Documentation Requirements section of this report.

DIRECTOR GENERALS REQUIREMENTS

The Director General Requirements stipulates that a detailed landscaping strategy and a landscape site layout plan are required. This report provides a detailed landscaping strategy while the landscape design for Buildings 1 and 2 as outlined in this report and the Appendix provide landscape site layout plans.

As noted earlier in this report, the landscape design is based on the JBA Planning concept drawing Lot 5 DP 262213, Ropes Creek Employment Precinct - Concept Plan (06 August 2010) and is in accordance with the Blacktown City Council DCP 2006.

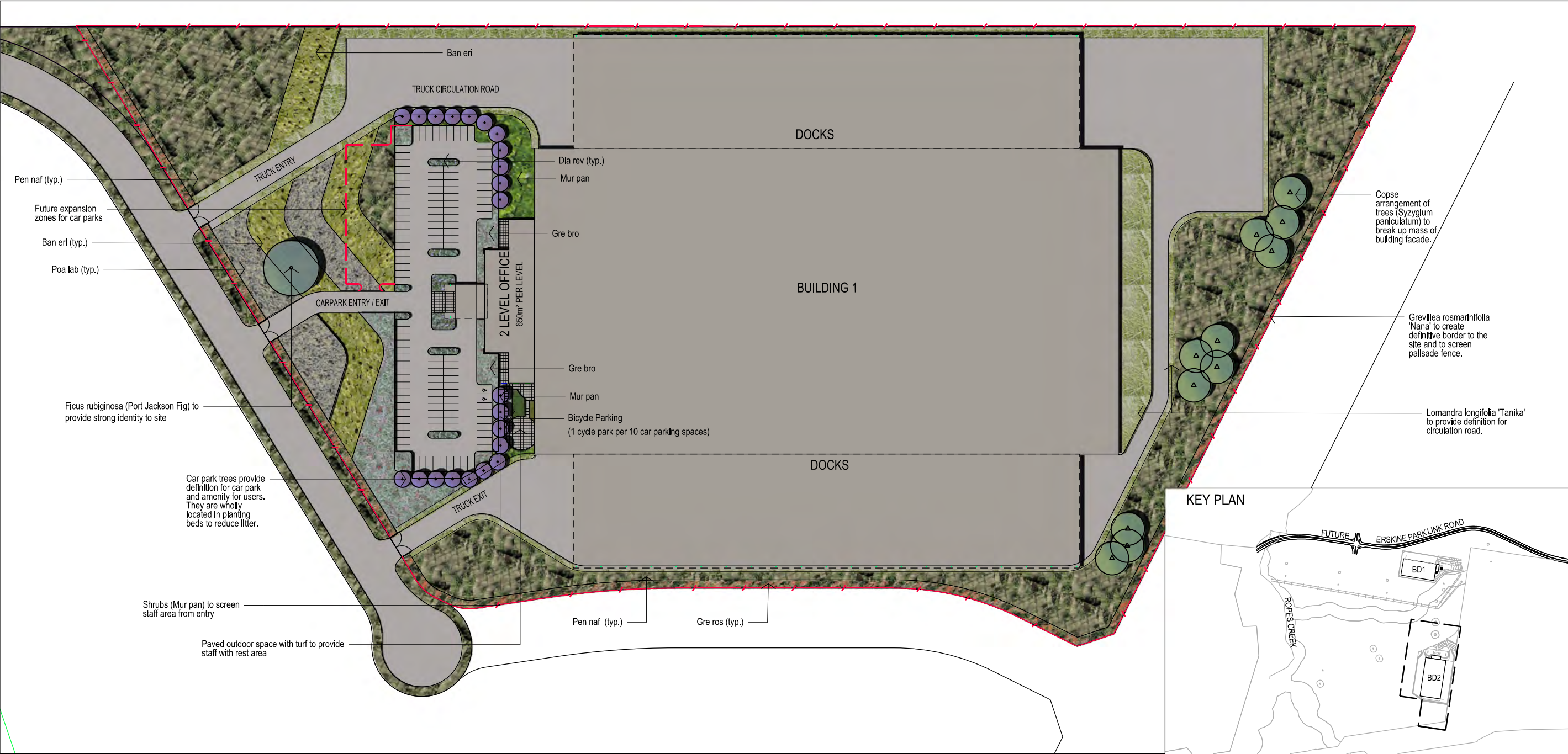
The landscape principles have been developed with the architecture and urban design to manage the bulk and scale of the buildings and to minimise the visual impact of the project. The primary design element to achieve this is the use of screen trees, typically in copse arrangements, within the private allotments.

A formal avenue of street trees (*Plantanus x hybrida*) have been provided in the verges of the Regional Road, while copses of trees have been placed within the private lots for the local roads. The street trees have been designed in accordance with the Blacktown City Council Street Tree Planting Guidelines 2008 (report number ER280081) and the RTA Landscape Guidelines, April 2008 (RTA/Pub. 08.109). Specifically, the tree species have been selected from the Blacktown Tree Planting List and all setbacks are consistent with the RTA guidelines.

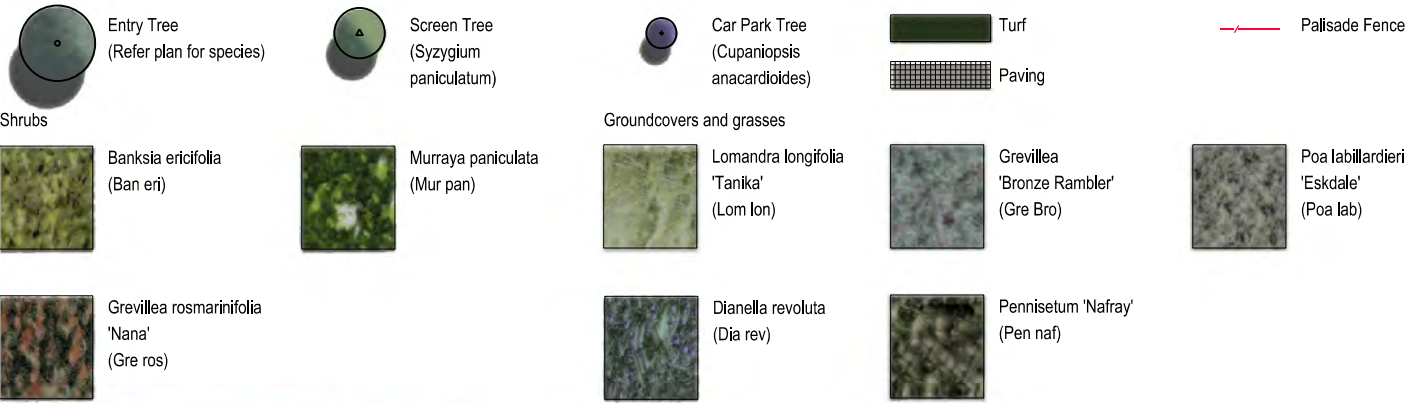
APPENDIX A: PROJECT APPLICATION FOR STAGE 1 INDUSTRIAL DEVELOPMENT LANDSCAPE DRAWINGS

Ropes Creek Building 01- Landscape Concept (rev C)

Ropes Creek Building 02- Landscape Concept (rev C)



LEGEND



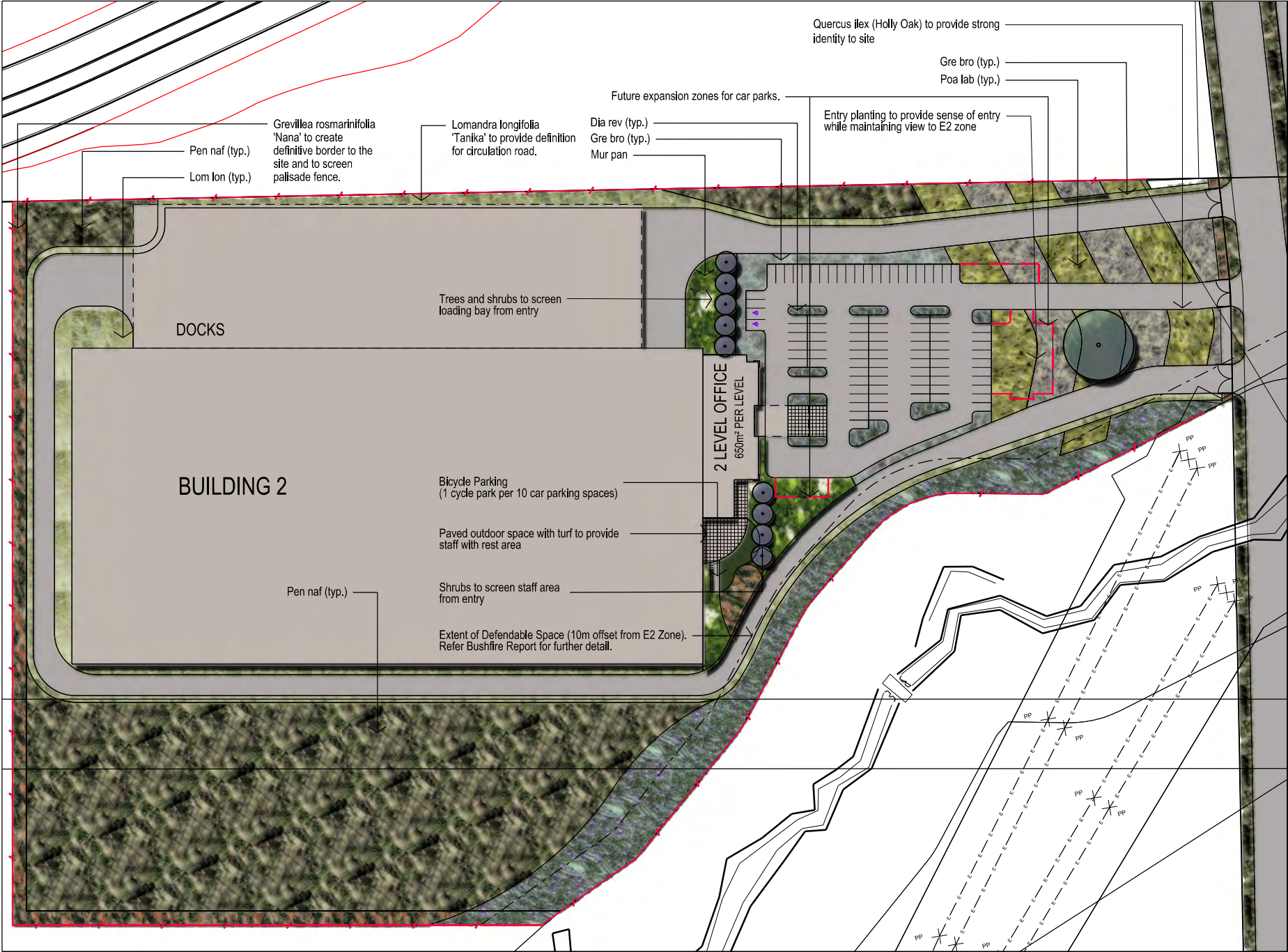
PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	Mature Height	Mature Spread
Trees				
Fic rub	<i>Ficus rubiginosa</i>	Port Jackson Fig	25m	25
Cup ana	<i>Cupaniopsis anacardioides</i>	Tuckeroo	12m	6
Syz pan	<i>Syzygium paniculatum</i>	Magenta Cherry	15m	10
Shrubs				
Ban eri	<i>Banksia ericifolia</i>	Heath Banksia	4m	3m
Gre ros	<i>Grevillea rosmarinifolia 'Nana'</i>	Rosemary Grevillea	1m	1m
Mur pan	<i>Murraya paniculata</i>	Orange Jessamine	3m	3m
Ground Covers and Grasses				
Dia rev	<i>Dianella revoluta 'Little Rev'</i>	Blue Flax Lily	0.6m	0.8m
Gre Bro	<i>Grevillea 'Bronze Rambler'</i>	Grevillea 'Bronze Rambler'	0.3m	1m
Lom lon	<i>Lomandra longifolia 'Tanika'</i>	Spiny head Mat-rush	1m	1m
Pen naf	<i>Pennisetum alopecuroides 'Nafay'</i>	Pennisetum Nafay	0.5m	0.5m
Poa lab	<i>Poa labillardieri 'Esk dale'</i>	Tussock Grass	0.4m	0.5m

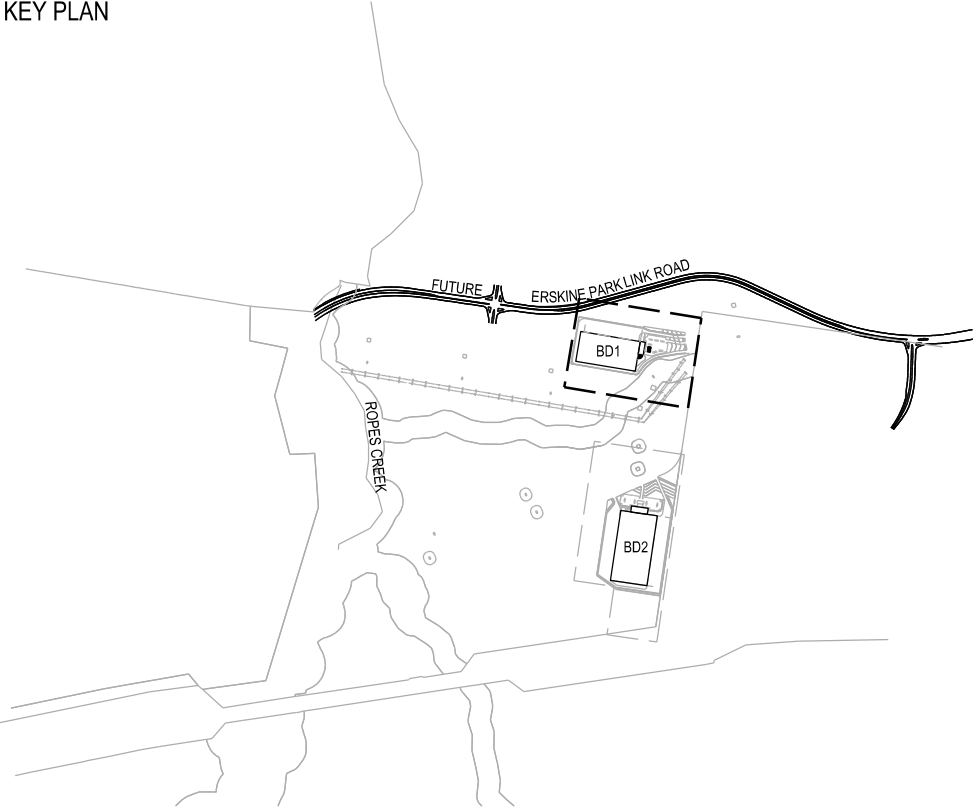
NOTES

- Refer Architects for further details on building.
- Refer Engineers for further details on levels and sediment control.

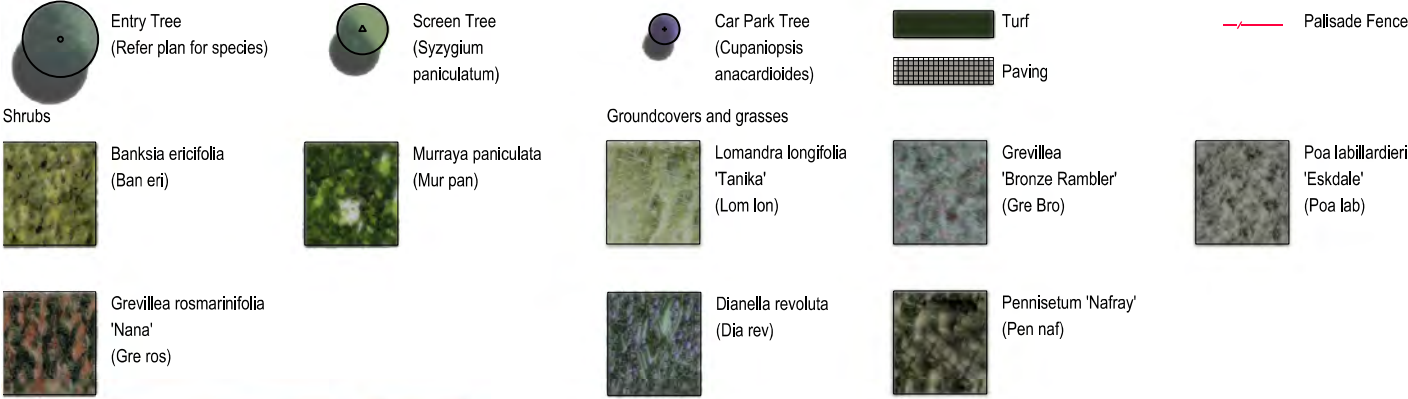




KEY PLAN



LEGEND



PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	Mature Height	Mature Spread
Trees				
Que ile	<i>Quercus ilex</i>	Holly Oak	28m	25
Cup ana	<i>Cupaniopsis anacardioides</i>	Tuckeroo	12m	6
Syz pan	<i>Syzygium paniculatum</i>	Magenta Cherry	15m	10
Shrubs				
Ban eri	<i>Banksia ericifolia</i>	Heath Banksia	4m	3m
Gre ros	<i>Grevillea rosmarinifolia 'Nana'</i>	Rosemary Grevillea	1m	1m
Mur pan	<i>Muraya paniculata</i>	Orange Jessamine	3m	3m
Ground Covers and Grasses				
Dia rev	<i>Dianella revoluta 'Little Rev'</i>	Blue Flax Lily	0.6m	0.8m
Gre Bro	<i>Grevillea 'Bronze Rambler'</i>	Grevillea 'Bronze Rambler'	0.3m	1m
Lom lon	<i>Lomandra longifolia 'Tanika'</i>	Spiny head Mat-rush	1m	1m
Pen naf	<i>Pennisetum alopecuroides 'Nafray'</i>	Pennisetum Nafray	0.5m	0.5m
Poa lab	<i>Poa labillardieri 'Eskdale'</i>	Tussock Grass	0.4m	0.5m

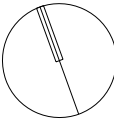
NOTES

- Refer Architects for further details on building.
- Refer Engineers for further details on levels and sediment control.



Client: JACFIN

Scale: 1:750 @ A1



ropes creek • building 2

LANDSCAPE CONCEPT

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