



Landscape Architects

Proposed Development

Toll IPEC Freight Transport Warehouse and Distribution Facility **BUNGARRIBEE INDUSTRIAL ESTATE**

Landscape Report

Prepared For: Goodman

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1.0 EXISTING VEGETATION

The site currently comprises of various trees and grasslands.

2.0 REFERENCE DOCUMENTATION / COMPLIANCE

This report is to be read in conjunction with the **Landscape Concept Package Rev E** prepared by Site Image Landscape Architects (NSW) Pty Ltd for the Toll IPEC Freight Transport Warehouse and Distribution Facility.

The Landscape Concept Package was compiled with reference to the following documents and correspondence:

- **Huntingwood West – Master plan** prepared by EDAW|AECOM
- **Bungarribee Industrial Estate Infrastructure Works – Landscape Plans** prepared by TRACT Consultants Pty Ltd

The Landscape Concept Package includes the following documentation;

- Colour Landscape Master Plan
- Detailed Landscape Plan
- Landscape Sections
- Descriptive imagery
- Suggested Plant Species List

3.0 LANDSCAPE DESIGN

Generally the landscape design aims to:

- Provide visual amenity generally against the built form
- Provide screen amenity for the proposed industrial development
- Provide shade amenity
- Soften the ground plane
- Provide vertical articulation via feature trees
- Provide low water demanding plant species
- Provide areas of respite / BBQ facilities for truck loading areas
- Avenue tree planting to entries / formalised planting typologies
- Create/ maintain passive surveillance of the site; avoiding anti-social behaviour
- Observe and maintain necessary safety and aesthetic sightlines

Park Edge Road – Presentation Entry Landscape Zones

This is the primary frontage for the development so the landscape statement aims to provide a strong identity and robust branding through the planting design. In this area the planting palette consists of structured plantings of low shrubs, native grasses and groundcovers which are complimented by larger tree plantings. A combination of industrial 'Rail Road Ballast Rock' massing and groupings of native tree plantings have been used to highlight the industrial nature and scale of the development and further tie in with the nature of theming seen across the greater estate.

Species in this zone have been selected for their attractive foliage and flowers as well as their resilience.

Complementing the sloping embankment, hedge plantings of *Rhaphiolepis indica* (Indian Hawthorn) and *Viburnum odoratissimum* (Sweet Viburnum) create defined edges to each planting zone whilst retaining clear sightlines into the development. Geometric bands of *Lomandra 'Tanika'* (Dwarf Mat Rush) and *Trachelospermum jasminoides* (Star Jasmine) will grow on mass and create a grand sense of arrival.

Secondary Planting Zones

This planting zone comprises of a significant blanket of trees placed in a grid arrangement. The grid arrangement maintains the formality of arrival to the estate whilst providing an intermediary buffer zone between the road and the on-site car park. The ground plane is proposed to be turfed and will be well manicured complimenting the general aesthetic of the estate. Embankment planting, and roadside planting to streetscapes has been designed to provide a structured layering and arrangement of planting to respond to the built form behind. Mass planting of single species will create larger shapes and areas of foliage character that is consistent with the large scale of the facades, and dimension of the boundaries. Street trees have been indicatively located, and will be subject to coordination with final services locations.

Internal Landscaping Areas

The landscaping within the site will consist of similar plant species to that of the entry statement. A majority of neat, well maintained species will help soften building forms and the ground plane. A mixture of varying height canopies (deciduous trees) will ensure an effective visual buffer and will reduce the heat island effects of such large hardstand surfaces. Native shrubs and groundcovers will be selected for low maintenance and water attributes. The proposed landscape will be particularly efficient in screening and visually softening the proposed water tanks and multi storey office facilities. Canopy trees in planters at regular spacing's are distributed through the car park and along the building façade to provide a 'greening' effect and break up the visual character of the building. These trees will also provide shade to adjacent parking. Native shrub and groundcover planting will be used in car park areas to create formal visual character, utilizing largely endemic plant species, as indicated in the Indicative Plant Schedule on the drawings.

A small BBQ break out area has been proposed adjacent the Drivers Rest Area to include amenities for outdoor recreation and respite. With BBQ facilities and seating opportunities, an area of turf and surrounding shade trees will provide staff with the necessary provisions to rest.

Boundary Treatments / Buffer Screen Planting Zone

Significant areas of dense planting proposed along the boundaries seek to achieve visual screening and a green outlook for the entire development site. The buffer landscape itself is to comprise of substantially endemic under-storey, shrubs and trees selected to have foliage that will combine to create a continuous visual buffer. A mixture of native shrubs (*Acacia sp*, *Callistemon sp*, *Kunzea sp* etc.) and groundcovers (*Poa labillardieri*, *Themeda australis*, *Lomandra longifolia*) will complement the tree plantings (*Eucalyptus sp*). Much of this 'buffer' area will be battered; appropriate erosion controls, particularly during plant establishment shall ensure effective growth of planted species.

This vegetative batter will help ameliorate views into the site from the Great Western Highway and the surrounding developments. This boundary treatment aims to be of low maintenance requirements, particularly after establishment and aims to remain consistent with the plantings present in the Western Sydney Parklands.

A natural material (timber) structure has been proposed adjacent the Truck Workshop area to further ameliorate views into the site and provide a more aesthetically pleasing arrival experience to the development.

The southern boundary landscape works will be retained as per TRACT's documentation.

4.0 PLANTING STRATEGY

The proposed plant material will be substantially selected from Council and relevant authorities approved plant species lists, and for hardiness, ease of maintenance and proven ability to tolerate site conditions. Of importance are the foliage characteristics to create native garden character. Regular planting of similar species allows for ease of maintenance with regard to fertilising, pruning and pest treatment. Defined edges to all planting beds will allow for ease of trimming of groundcovers. Indigenous planting will be selected for its ability to attract native bird life. Exotic plants will be incorporated to civic spaces and staff courtyard areas where suitable to provide variety and consistency with the character of the locality.

5.0 DRAINAGE

Due to the large extent of hard surfaces, drainage is to rely on correct falls etc documented by engineers. All new paving is to fall away from buildings.

6.0 IRRIGATION

The irrigation system shall be an automatic fixed drip system, with an irrigation controller self-operated via a soil moisture sensor. The system shall be compatible to the type of plant material and rates of water required. The layout of the entire irrigation system is to ensure that each individual plant receives the required amount of water to maintain healthy and vigorous growth.

The extent of the irrigation is to be limited to the presentational landscape on Huntingwood Drive, with the irrigation regime programmed to suit the particular micro-climatic requirements of each precinct, including current soil moisture levels.

Maintain the system for the duration of the establishment maintenance period.

7.0 MAINTENANCE

Generally

The Contractor shall rectify defects during installation and that become apparent in the works under normal use for the duration of the contract Defects Liability Period.

The Contractor shall maintain the contract areas by the implementation of industry accepted horticultural practices for 52 weeks. The landscape maintenance works shall include, but not be limited to, the following:

- Replacing failed plants,
- Pruning,
- Insect and pest control,
- Fertilising,
- Maintaining mulch,
- Watering,
- Maintaining paved areas, decomposed granite and river rock areas,
- Rubbish removal, and
- Cleaning of the surrounding areas.

Logbook

Keep a Maintenance Logbook recording when and what maintenance work has been done and what materials, including chemical materials, have been used. The records shall show when and where identified chemicals were used and why. Submit the initial logbook for inspection prior to Practical Completion and again at the end of the Defects Liability Period as a prerequisite for granting Practical and Final Completion Certificates.

Plants

Trees, shrubs and groundcovers shall at all times show signs of healthy vigorous growth. Spent flower heads or stalks shall be removed immediately following flowering.

Replace failed plants. A "failed" plant may not mean complete death of soft tissue but failure due to poor growth, appearance, or unacceptable time for plant to re-establish new growth following damage or vandalism. Replacement plants shall be in a similar size and quality and identical species or variety to the plant that has failed. Replacement of plants shall be at the cost of the Landscape Contractor unless advised otherwise. Failure of the plant shall be at the sole discretion of the Landscape Architect.

Pruning

Whatever pruning work is requested by the Landscape Architect shall be performed, including any pruning of damaged growth or miscellaneous pruning considered as beneficial to the condition of the plants. All pruning works shall be undertaken in a manner equal to acceptable horticultural practice.

Spraying

Avoid spraying if ever possible.

Immediately report to the Project Manager any evidence of intensive weed infestation, insect attack or disease amongst plant material. Submit all proposals to apply chemicals and obtain approval before starting this work.

When approved, spray with herbicide, insecticide, fungicide as appropriate in accordance with the manufacturers' recommendations. Record in the logbook all relevant details of spraying activities including:

- Product brand / manufacturer's name,
- Chemical / product name,
- Chemical contents,
- Application quantity and rate,
- Date of application and location,
- Results of application, and
- Use approval authority.

Fertilising

Fertilise gardens with a proprietary slow release fertiliser applied in accordance with the manufacturer's directions and recommendations. Record in the logbook all relevant details of fertilising including:

- Product brand / manufacturer's name,
- Fertiliser / product name,
- Application quantity and rate, and
- Date of application and location.

Stakes and Ties

Adjust and replace as required to ensure plants remain correctly staked. Remove those not required at the end of the planting establishment period (Defects Liability Period).

Mulched Surfaces

Maintain the surface in a clean, tidy and weed free condition and reinstate the mulch as necessary to ensure correct depth as before specified.

Mowing and Top Dressing (Nature Strip)

Mow the turf to maintain a grass height of between 30-50mm. Do not remove more than one third of the grass height at any one time. Remove grass clippings from the site after each mowing.

Top dress to a maximum of 10mm as necessary to fill depressions and hollows in the surface.

Irrigation and Watering

Maintain the irrigation system to sure that each individual plant receives the required amount of water to maintain healthy and vigorous growth, adjust and rectify as required.

Provide additional watering, if necessary.

Erosion Control Measures

Where necessary, maintain the erosion control devices in a tidy and weed free condition and reinstate as necessary to ensure control measures are effective where deemed necessary.

Weeding and Rubbish Removal

During the plant establishment period remove by hand, rubbish and weed growth that may occur or re-occur throughout all planted, mulched and paved areas.

Urgent Works

Notwithstanding anything to the contrary in the Contract, the Project Manager may instruct the Landscape Contractor to perform urgent maintenance works that place the completed contract works at risk. If the Landscape Contractor fails to carry out the work within seven (7) days of such notice, the Project Manager (or representative) reserves the right without further notice to employ others to carry out such urgent and specified work and charge it to the Landscape Contractor. Such work shall include but not limited to the inspection and clearing of drains in the pavement and gardens.

8.0 COMPLETION

A final inspection shall be made by the Project Manager, Landscape Contractor and Landscape Architect before the completion of the Plant Establishment Maintenance Period (Defects Liability Period). Any items requiring rectification shall be repaired before completion of the relevant works and finally approved prior to certification.

9.0 CONCLUSION

Generally, it is believed that the landscape treatments to the different areas of the site as described above will create a high quality visual environment that is high sympathetic to the site and development proposals, providing a highly functional and maintainable landscape environment consistent with the greater Bungarribee Industrial Estate Master plan.