

Environmental Assessment

Bungarribee Industrial Estate:
Stage 1 – Infrastructure
Project Application (MP 08_0225)
Eastern Creek, Blacktown



September 2010

Prepared by:



Goodman International Limited
Level 10, 60 Castlereagh Street
Sydney NSW 2000

Ref: Huntingwood West Infrastructure EA_Sep10.doc

CERTIFICATION BY AUTHOR

Part 3A Environmental Assessment

Prepared under the *Environmental
Planning and Assessment Act 1979*

Environmental Assessment prepared by

Name
Position
Qualifications
Address

Richard Seddon
Planning Manager
B Econ., M Urban Design, M App Fin
Goodman International Limited
Level 10, 60 Castlereagh Street
SYDNEY NSW 2000

Proposed Project to which Part 3A applies

Application number
Project

Proponent name
Proponent address

Land to be developed

MP 08_0225
Development of the Stage 1: Infrastructure for the
Bungaribee Estate
Goodman International Limited
Level 10, 60 Castlereagh Street
SYDNEY NSW 2000
Lots 1-6, DP 1127100
Brabham Drive, Eastern Creek

Certificate

I certify that I have prepared the contents of this document, and to the best of my knowledge the assessment:

- has been prepared in accordance with the requirements of Part 3A and the Regulations; and
- does not contain false or misleading information.

Signature

Name Richard Seddon
Date 20 September 2010

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1 INTRODUCTION

Goodman International Limited (Goodman) is proposing to develop the first stage of the Bungarribee Industrial Estate (formerly known as Department of Planning Site 5 - Huntingwood West in the Western Sydney Employment Hub) at Brabham Drive, Eastern Creek (See Figure 1).

This Environmental Assessment (EA) has been prepared by Goodman to assist the Department of Planning's determination of the proposal under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

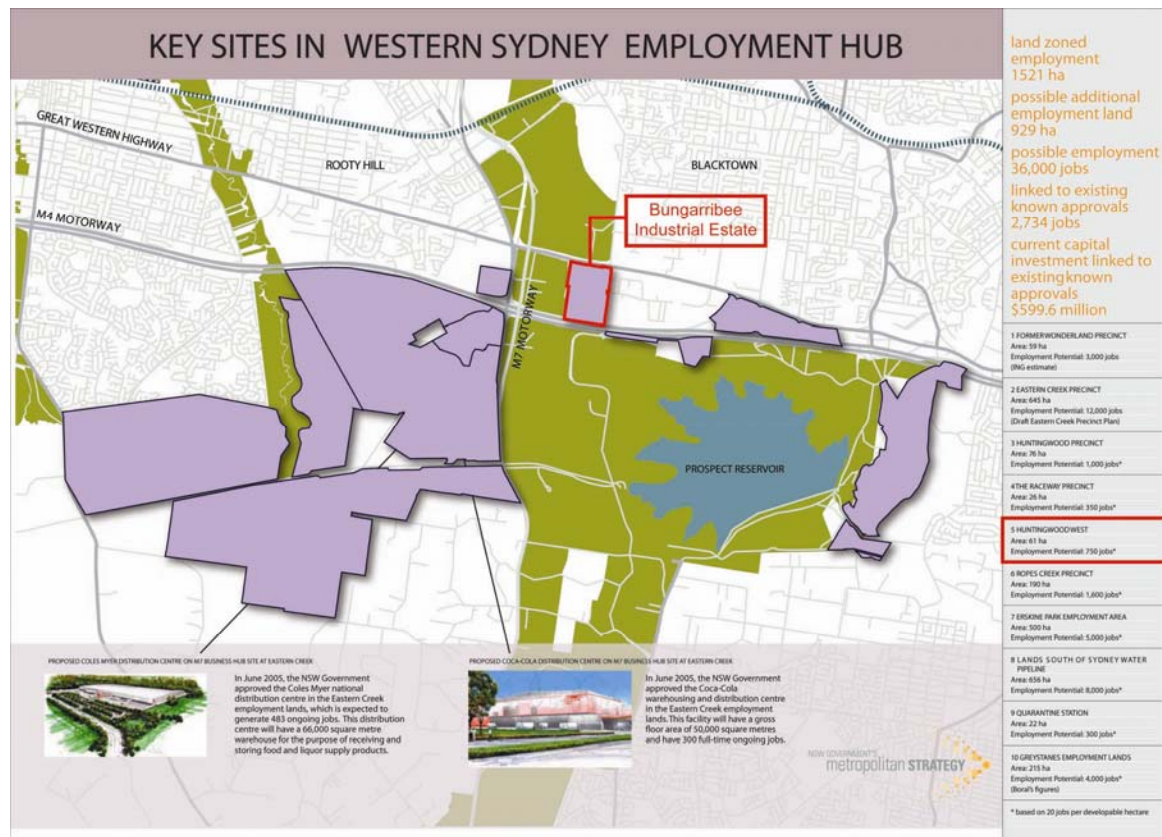


Figure 1: Regional Context Plan, showing Sydney's Employment Lands (Source: Metropolitan Strategy)

1.1 Background

The Bungarribee Industrial Estate is a 56 ha parcel of land located within Blacktown LGA. It is bounded by Eastern Creek, the Great Western Highway, Brabham Drive and the M4 Motorway. It is legally described as Lots 1-6 in DP 1127100.

On the 25 September 2006, Landcom, on behalf of the then owner, submitted a concept plan for a 47 lot subdivision for employment uses, associated roads and services and infrastructure on the site and public open space. On the 9 December 2006, the Minister for Planning granted approval, subject to modifications, to the Concept Plan (MP 06_0203).



Figure 2: Approved Concept Plan

On 11 May 2007, the site was gazetted as a State Significant site in Schedule 3 of State Environmental Planning Policy (Major Projects) 2005 (Major Projects SEPP) and rezoned as IN1 General Industrial to promote employment generating uses on the site.

In August 2008, the Minister for Planning approved subdivision of the subject site into 6 lots to facilitate the staged transfer of land to the purchaser (Goodman) (Refer Figure 3).

Goodman subsequently acquired Lot 3 and entered into a put and call contract with the vendor to acquire the remainder of the estate.

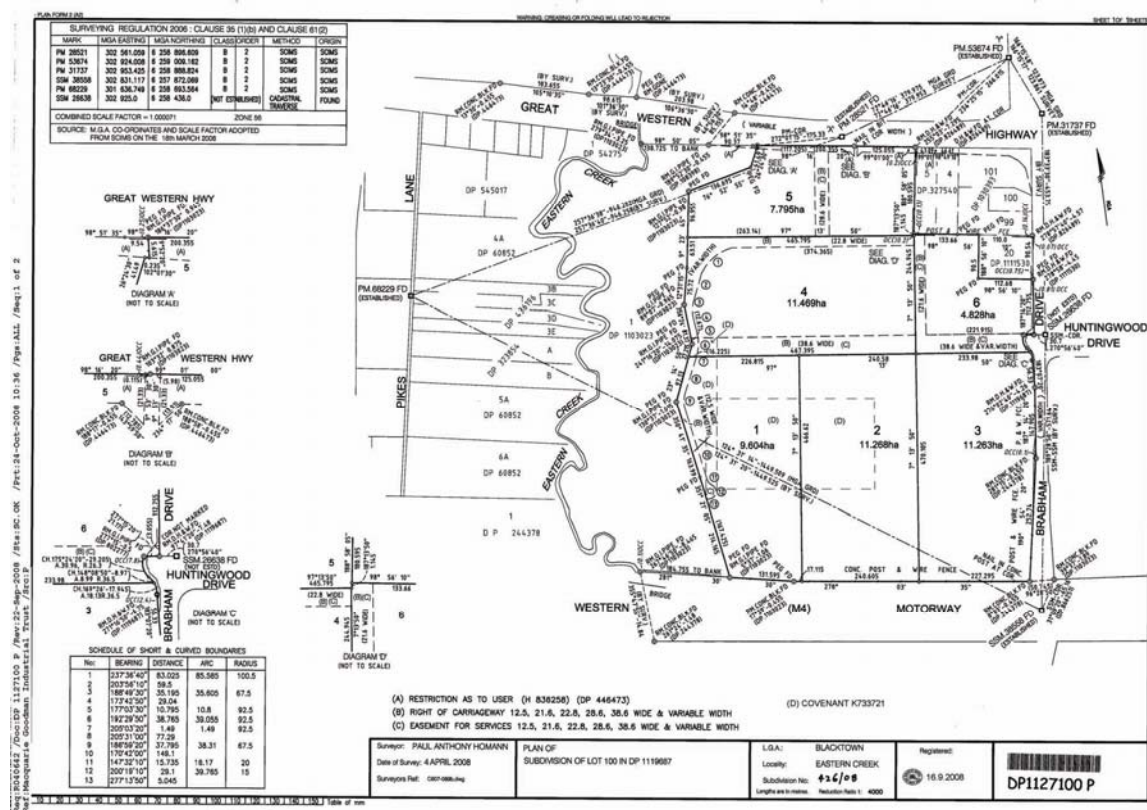


Figure 3: Subdivision Plan

1.2 Project Objectives

The objectives of this project are as follows:

- To facilitate development of the estate for employment generating warehousing and distribution uses;
- To construct the necessary infrastructure to provide serviced development allotments for future development;
- To implement best practise water sensitive design measures;
- To develop the estate in a manner consistent with the approved Concept Plan and Statement of Commitments.

1.3 Overview of Project

This project application is for the first package of infrastructure works for development of the Bungarribee Industrial Estate referred to as '**Stage 1 – Infrastructure**'. The scope of works is as follows:

- Subdivision to create development lots, estate road lots and drainage lots;
- Construction of a new intersection to Great Western Highway and internal estate roads in accordance with the approved Concept Plan and Statement of Commitments;
- Bulk earthworks and stormwater management;
- Estate landscaping and offsite stormwater detention works; and
- Modifications to the development design controls.

The project has a total capital investment value of \$42million.

1.4 Need for the Project

The Western Sydney Employment Hub (WSEH) has been identified as a vital area for the delivery of new jobs within the Sydney region. The area enjoys excellent proximity to regional road infrastructure notably the M4 and M7 Motorways as well as an existing residential population from which to provide a local workforce. This has been acknowledged as a key strategic goal in the Sydney Metropolitan Strategy. At 54.2ha, the site makes up some 2.6% of the WSEH and therefore would serve a vital role in participating in the production of new employment opportunities – estimated to be at least 800 jobs on completion of the estate.

1.5 Statutory Context

Major Project

The proposal is classified as a Major Project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It involves subdivision of land within the Huntingwood West Precinct and therefore triggers the criteria in Clause 3 of Schedule 3 of *State Environmental Planning Policy (Major Projects) 2005*.

Consequently, the Minister for Planning is the approval authority for the project.

Permissibility

The land is a State Significant Site under Schedule 3 of the Major Projects SEPP (Amendment No.14). It is zoned IN1 General Industrial. The objectives of this zone are as follows:

Clause 6 General Industrial:

- (1) *The objectives of this zone are as follows:*
 - (a) *to facilitate development for a wide range of employment-generating industrial, manufacturing, warehousing, storage or research purposes, including ancillary office space,*
 - (b) *to ensure development enhances the amenity of the Huntingwood West Precinct by including high quality landscaping, adequate building setbacks, high quality external finishes and the like,*
 - (c) *to encourage employment opportunities,*
 - (d) *to minimise any adverse effect of industry on other land uses.*

(2) *Development for the purpose of environmental protection works is permitted without development consent on land within Zone IN1 General Industrial*

(3) *Development for any of the following purposes is permitted only with development consent on land within Zone IN1 General Industrial:*

*Automotive and motor sport industry related uses; depots; freight transport facilities; light industries; neighbourhood shops; **roads**; transport depots; truck depots; warehouse or distribution centres.*

(4) *Except as otherwise provided by this Policy, development is prohibited on land within Zone IN1 General Industrial unless it is permitted by subclause (2) or (3).*

Clause 10 Subdivision – Consent requirements

- (1) *Land within the Huntingwood West Precinct may be subdivided but only with development consent.*

Accordingly, the proposal, being development for the purpose of subdivision, roads, and earthworks to facilitate future development for warehousing or distribution purposes, is permissible under the *Major Projects SEPP* as it permits development for this purpose with consent.

Other Environmental Planning Instruments

The following environmental planning instruments are of relevance to the proposed Major Project:

- *REP 31 – Regional Parklands;*
- *SEPP (Major Projects) 2005;*
- *SEPP (Infrastructure) 2007;*
- *Draft SEPP 66 – Integration of Land Use and Transport; and*
- *Huntingwood West Concept Plan and Statement of Commitments.*

A detailed consideration of these instruments is included in Section 6.0.

1.6 Objective of this Report

Under Part 3A of the EP&A Act an application is to be made to the Department of Planning (the Department) for approval of the project supported by this Environmental Assessment. This Environmental Assessment has been prepared by Goodman to identify the potential for environmental impact from the project including the anticipated positive impacts.

2 EXISTING SITE

2.1 Location and Context

Huntingwood West is a 56 Hectare parcel of land bounded by Eastern Creek, the Great Western Highway, Brabham, Drive and the M4 Motorway (See Figure 3). The site is located within the Local Government Area of Blacktown.

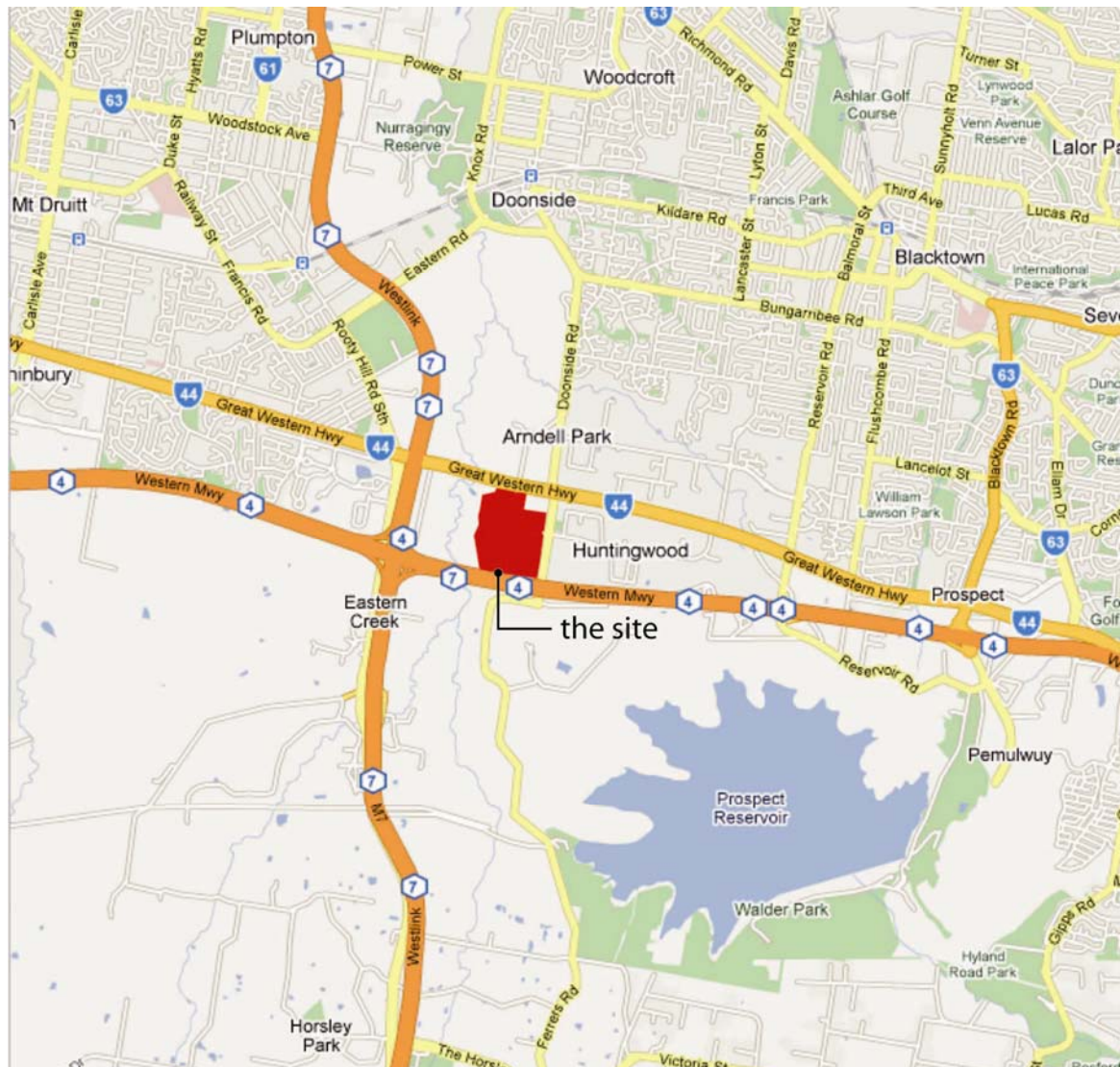


Figure 4: Location Plan

2.2 Surrounding Land Uses

To the south of the site is the M4 Motorway and beyond that the Eastern Creek Raceway precinct. To the east is the existing Huntingwood Industrial Estate. To the north is Great Western Highway and the Western Sydney Parklands. To the west is the Western Sydney Parklands, Eastern Creek and beyond that some scattered, low scale residences.



Figure 5: Aerial Photograph

2.3 Access

Access to the site is currently achieved via Brabham Drive. The site has proximity to a number of arterial roads – Great Western Highway to the north, the M7 Motorway to the west and the M4 Motorway to the south.

2.4 Existing Site Features

The site is a rectangular shaped parcel with an irregular edge on the western boundary. The northern frontage to Great Western Highway is 325 m. The southern boundary to the M4 Motorway is 616 m. The Brabham Drive frontage is 648 m and the western boundary to Eastern Creek measures 998 m.

2.5 Site History

The site has predominately been used for agricultural and low density residential purposes. Agricultural land use included market gardening and poultry farming, and also included horse-related activities such as agistment, stabling and training.

A search via the NSW EPA indicated that the site had not been subject to any regulatory notices.

2.6 Topography and Landform

The site has a shallow fall westwards of approximately 17.5m between Brabham Drive and Eastern Creek. The highest point of the site has a height of approximately RL 59 AHD in the

south-east corner. The lowest point of the site is in the north-west and has a height of approximately RL 41.5 AHD.

2.7 Geology and Hydrogeology

Preliminary subsurface investigations have been undertaken on site including geo-technical and environmental assessments. These investigations indicate that the site soil predominately consists of shale, carbonaceous claystone, laminate and some minor coral bands.

Groundwater at the site is reported at approximately 4.0 – 4.3m below ground level.

2.8 Existing Services

Existing services in close proximity to the site are as follows (Refer Figure 6):

- **Sewer:** existing 375mm main on the eastern side of Brabham Drive
- **Water:** existing mains varying from 150mm to 600mm in Great Western Highway and Brabham Drive
- **Electrical:** Existing overhead transmission lines in Great Western Highway
- **Communications:** Existing 100mm diameter conduits linking the estate with Blacktown exchange are located within Brabham Drive
- **Gas:** Existing 110mm main located along Brabham Drive and a secondary main at the corner of Brabham Drive and Great Western Highway



Figure 6: Existing Services

- Subdivision to create development lots, estate road lots and drainage lots;
- Construction of a new intersection to Great Western Highway and internal estate roads in accordance with the approved Concept Plan and Statement of Commitments;
- Bulk earthworks and stormwater management;
- Estate landscaping and offsite stormwater detention works; and
- Modifications to the development design controls.

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Huntingwood West Infrastructure EA_Sep10.doc

Table 3.1: Proposed Project Summary: Stage 1 – Infrastructure

Project Summary	Development of infrastructure and associated works to service the estate
<i>Subdivision:</i>	Subdivision to create an allotment for internal estate roads, 2 drainage lots and 7 development lots to fulfil employment generating objectives.
<i>Earthworks:</i>	Bulk Earthworks to create pad levels across the development lots and internal road corridors
<i>Indicative Staging:</i>	Development staging would most likely follow the ordered take up of individual lot parcels as they are individually serviced.
<i>Capital Investment Value:</i>	\$42 million
<i>Internal & External Roadworks:</i>	Construction of a new 4 way intersection treatment off Great Western Highway, a new access road at the intersection of Brabham Drive and Huntingwood Drive, a new park edge road adjacent to the Western Sydney Parklands and internal estate roads in accordance with the approved Statement of Commitments (MP 06_0203).
<i>Infrastructure (General):</i>	Development of all infrastructure required to service the development
<i>Potable Water:</i>	Augmentation and extension of existing water supply at the Prospect Hill elevated system to meet demand.
<i>Sewer:</i>	Servicing of the site by the Quakers Hill sewerage system via a gravity main linked to the downstream Bungarribee carrier.
<i>Stormwater Management:</i>	To be constructed in accordance with the Concept Plan water sensitive urban design strategy, including the provision of off site drainage reserve that is linked to the Western Sydney parklands and the street network
<i>Electricity, Gas and Telecommunications:</i>	Connection and augmentation of existing system onto the site as required.
<i>Other Estate Works</i>	Estate landscaping and vegetation
<i>Environmental Conservation / Biodiversity:</i>	Removal of approximately 5.6ha of existing vegetation on the site.
<i>Community:</i>	Provision of a regional pedestrian / cyclepath of approximately 3km in the Western Sydney Parklands adjacent to the site
<i>Design Controls:</i>	Minor modifications to the approved development design controls as approved by Landcom on behalf of the vendor to improve flexibility of the ultimate development of the site and provide consistency with adjacent industrial estates. A summary of the proposed changes and brief description of the rationale is included in Appendix A.

The elements of this application are discussed in more detail in Sections 4 and 5.

4 CONCEPT PLAN MODIFICATIONS

4.1 Concept Plan Approval

On 9 December 2006, Concept Plan approval was issued by Department of Planning including the following:

- Concept Plan;
- Development Design Controls; and
- Approval Statement of Commitments

Concept Plan

The key elements of the Concept Plan are as follows:

- Great Western Highway Connection;
- A new east/west collector road access from the existing Brabham Drive Roundabout;
- Eco-median – a 14.5m wide central eco-median along the main road (east-west) that connects the site to the existing Brabham Drive Roundabout.
- Park edge road; and
- Wetland System.

4.2 Design Control Modifications

The approved Development Design Controls are to guide future development of the estate. In order to facilitate development which would maximise employment generation in a manner that adheres to the objectives of the Concept Plan and is consistent with respect to other 'best practise' industrial estates and those fronting the M4 and Great Western Highway, a number of modifications are proposed. The key modifications are discussed below:

Setbacks & Site Cover:

Modifications of the setback controls as identified in Table 4.2 are proposed to be generally consistent with setback controls in neighbouring industrial estates in the area fronting the M4 Motorway and Great Western Highway.

Table 4.2: Setback Modifications

Element	Concept Plan	Proposed Amendment
Great Western Highway	25m Building	20m Building
	20m Landscape	15m Landscape
M4 Motorway	40m Building	20m Building
	40m Landscape	20m Landscape
Brabham Drive	15m Building	15m Building
	10m Landscape	10m Landscape
Eco-median	15m Building	15m Building
	10m Landscape	10m Landscape
Local Roads	10m Building	7.5m Building
	10m Landscape	7.5m Landscape
Park Edge Road	15m Building	10m Building
	10m Landscape	7.5m Landscape

Frontage Development:

Modification to the frontage controls for future built form are proposed to relax the requirement of certain percentages of the buildings to 'activated' by certain uses to instead require that these frontages are well designed and present well to the street i.e. rather than dictating the nature of the use in the building.

Several other minor modifications are proposed. A complete list of the proposed modifications and an assessment of their appropriateness is included in Appendix B.

5 STAGE 1 – INFRASTRUCTURE WORKS

The proposed Stage 1 – Infrastructure works includes the provision of all infrastructure works required under the contract for sale with the NSW Department of Planning.

5.1 Subdivision

The proposed subdivision would create:

- 7 development lots
- 3 drainage / park lots
- 1 road corridor lot; and
- 1 services lot.

The proposed subdivision is shown in Figure 7. In accordance with the approved Concept Plan, the estate road lot/s and drainage lots would be dedicated to Blacktown Council once complete. The internal estate roads have been shown as comprising of a number of allotments so that they may be constructed and dedicated to Council in portions. A final subdivision plan would be prepared, in consultation with Council and the satisfaction of the Director-General, prior to obtaining a subdivision certificate for the subdivision.

Table 5.1: Site Area Schedule

Element	Proposed
Development Lots	
Lot 1	89,683 m ²
Lot 2	113,770 m ²
Lot 3	107,295 m ²
Lot 4	83,116 m ²
Lot 5	38,637 m ²
Lot 6	30,347 m ²
Lot 7	35,751 m ²
Estate Road Lot	
Lot 8	43,570 m ²
Drainage/ Park Lots	
Lot 9	4,597 m ²
Lot 10	2,079 m ²
Lot 11	2,867 m ²



Figure 8: Indicative Subdivision Plan

5.2 Earthworks and Construction

Bulk excavation and levelling required for the project would involve the creation of 19 bulk excavation pad levels for development lots and grading of the site for the construction of estate roads and detention basins.

Once bulk earthworks are complete, construction works associated with this project would involve:

- Detailed earthworks;
- Infrastructure and site servicing;
- Landscaping of stormwater basins / road reserves.

All construction works would be undertaken in accordance with a comprehensive Construction Environmental Management Plan and Soil and Water Management Plan/s, prepared to the satisfaction of the Director-General.

The proposed timing for the excavation and construction is presented in Table 3.4 below.

Table 5.2: Proposed Project Timeframe

Activity	Proposed Timing
Earthworks and infrastructure Development	November 2010 – May 2011

Staging

Notwithstanding the above, staging of the works would most likely follow the orderly take up of individual development parcels. Therefore Goodman request the flexibility to deliver the project in a staged manner generally in accordance with the indicative staging plan in Figure 9 below unless otherwise agreed with the Director-General.

Staged construction would require temporary infrastructure to the satisfaction of Council and the Director-General to enable subdivision of the completed / serviced allotments prior to completion of the remainder of the infrastructure works.

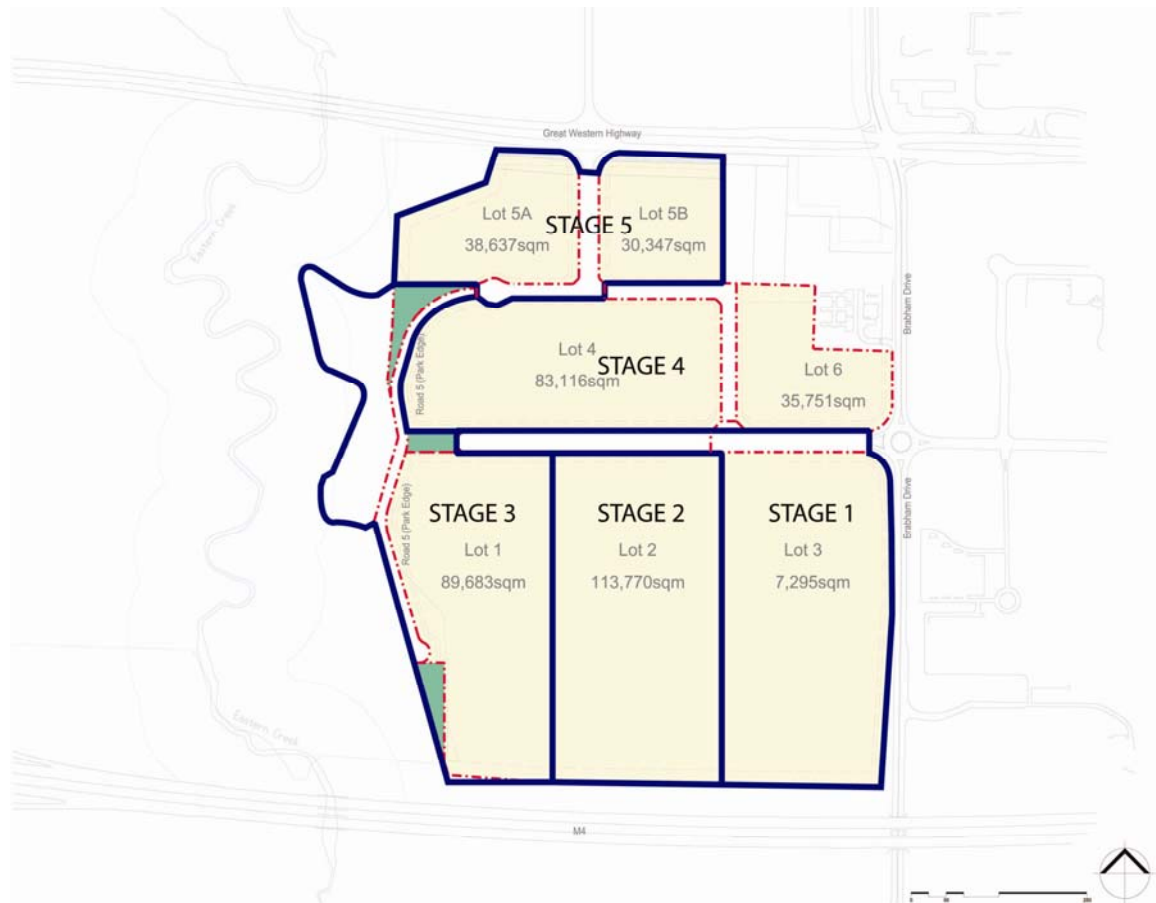


Figure 9: Indicative staging plan

5.3 Capital Investment

The capital expenditure of the Project will be approximately \$42million.

5.4 Employment

In order to conduct the infrastructure works proposed, approximately 100 full-time and part-time construction jobs would be required.

5.5 Access and Road works

External Road works

The approved Concept Plan requires the following intersection upgrades (in addition to the payment of a monetary contribution towards regional roads):

- Construction of a new intersection to Great Western Highway comprising a new 4 way intersection
- Construction of a new connection to the Brabham Drive intersection at the existing roundabout on Brabham Drive.

These works would be conducted to the satisfaction of Blacktown Council and the Roads and Traffic Authority (RTA) prior to the commencement of operation of the site, or as otherwise approved by the Director-General.

Internal Roads

The internal estate road layout and hierarchy is shown in Figure 10 and Table 5.3 below.



Figure 10: Internal Road Hierarchy

Table 5.3: Road Design Standards

Road Type	Carriageway width	Parking lane width	Verge	Road reserve (TOTAL)
Central Estate Road	10.5m (5.25m lane)	2.5m	6.55m	28m
Collector Roads	10.5m (5.25m lane)	2.5m	5.25m	26.0m
Local Roads	8.5m (4.25m lane)	2.5m	4.05m	21.6m
Park Edge Road	6.5m (3.25m lane)	2.5m (one side only)	3.5m +1.0m*	13.5m

*1m buffer for maintenance access

The road reserve widths are generally in accordance with the approved Concept Plan and Blacktown Council road design standards. The extent of minor inconsistencies and justification for these departures is included in Section 8.12.

Parking

The internal roads will provide for on-street car parking. Parking for each subsequent facility would be provided on individual allotments in accordance with the car parking controls in the Design Development controls (or otherwise as supported by a traffic impact assessment).

Pedestrian Access and Circulation

Provision of pedestrian access and circulation throughout the site will be made by means of the following:

- 1.5m wide pedestrian footpath on each side of internal estate roads;
- 3m wide shared pedestrian / cyclepath along the central estate road (Road 4) in accordance with RTA directions

In addition a 1km long pedestrian / cycleway will be provided from Great Western Highway to the M4 Motorway. It will have a width of 3m and will facilitate direct public access to the Western Sydney Parklands from the estate.

5.6 Water Cycle Management

Stormwater Management

The approved Concept Plan Water Sensitive Urban Design (WSUD) strategy was prepared by EDAW. EDAW has prepared an updated WSUD strategy to accompany this application in accordance with Blacktown Council's Integrated Water Cycle Management (IWCM) principles.

The key elements of the stormwater design are shown in Figure 11 and comprise of the following:

- A sediment basin and bio-retention basin to treat stormwater generated from the northern sub-catchment and the external Huntingwood catchment;
- A constructed wetland with associated inlet zone to treat stormwater generated from the central catchment and the southern catchment; and
- A sediment basin with connected swales to provide pre-treatment flows from the south catchment prior to discharge into the central wetland.

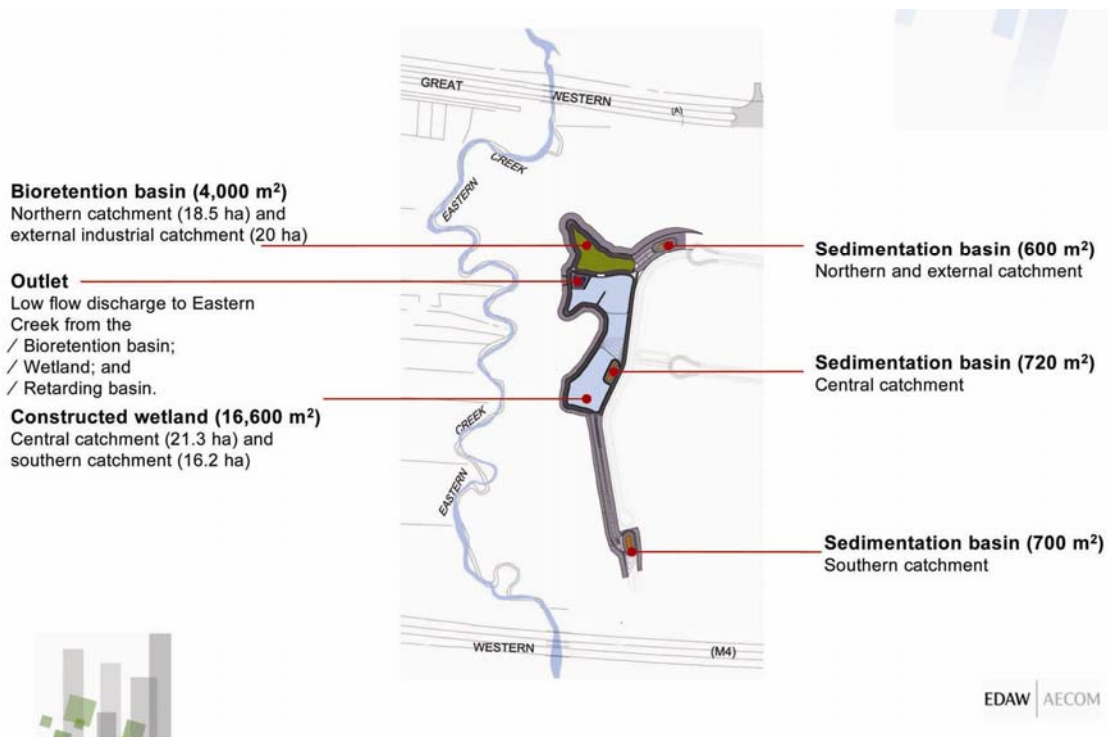


Figure 11: WSUD Elements

The stormwater infrastructure has been designed to meet the following water quality criteria in accordance with the approved Concept Plan:

- 80% reduction in total suspended solids
- 45% reduction in total phosphorus and nitrogen
- Removal of litter and gross pollutants;
- 90% reduction in hydrocarbons, oil and grease/

MUSIC and DRAINS modelling indicates that the development of Stage 1 would ensure these criteria are met. Further details of the WSUD detailed strategy are included in Section 8.5 and Appendix G.

5.7 Services

Potable Water

The development is to be serviced via a mains extension to the existing infrastructure located in Huntingwood Drive. A Feasibility application has been made with Sydney Water.

Sewer

A new gravity fed system and new pump station would be provided as part of the development to connect to the Bungaribee Creek carrier. This would be designed and constructed in consultation with Sydney Water.

Electrical

Long term permanent power supply will be provided via a new zone substation located within the estate. Discussions are ongoing with Integral Energy regarding interim permanent power which

will be supplied via new 11kV feeders from either the Eastern Creek zone substation, Arndell Park zone substation or Doonside Zone substation depending on timing and capacity.

Gas

Connection to existing gas mains would be provided on a lot by lot basis as required.

Communications

Connection to existing fibre and copper services in Huntingwood Drive will occur via universal servicing obligations.

5.8 Landscaping and Public Domain

The proposed landscaping and public domain is shown in Figure 5 and has been developed in accordance with the approved Concept Plan and Statement of Commitments. The overriding objective is to provide a robust landscape and effectively meet the working requirements of the employment estate whilst showcasing the parklands as an integral part of the site and surrounding neighbourhood.

Landscape Principles

The key design principles are:

- Development of an urban place of employment adjacent to a significant open space corridor / network;
- Provision of environmentally effective vegetation that will survive and flourish in the large scale industrial public domain setting;
- Provision of adequate space, soils and water to enable a large scale landscape to survive and thrive, particularly provision of enhanced verge growing conditions for large scale trees;
- Integration of WSUD in every street enabling a consistent streetscape identity;
- Provide a seamless transition from the Western Sydney Parklands into the new employment lands through planting design and contribution to the biodiversity of the area; and
- Adherence to Blacktown City Council requirements and maintenance capabilities.

Public Domain / Streetscapes

The road network will incorporate a pedestrian and cycle network, providing legible circulation paths, with good visual and physical connections. The streetscape landscape will be composed of simple and appropriate materials that will provide a strong consistent landscape framework, supported by a WSUD based 'working landscape'.

The new entries on the Great Western highway and Brabham Drive will provide an identifiable address and arrival to the estate. The internal street tree planting will reinforce the street hierarchy and pattern, assisting in establishing an estate identity and site orientation, as well as extending the ecologies of Eastern creek into the site.

Wetland basin

The wetland basin is a significant landscape feature which marks the transition from the industrial precinct to the parklands. The wetland has been designed to achieve the following objectives:

- Achieve WSUD objectives for water quantity and quality;
- Act as a recreational resource for the working population;
- Comprise of native sedge and water plant species which are robust and efficient at removal of pollutants.

The Landscape design report is included in Appendix K.

5.9 Estate Signage

There is no signage as part of this application. Estate signage is subject to an estate wide signage and marketing strategy which will be prepared in consultation with Blacktown Council and submitted to the Department of Planning for approval.

6 STATUTORY CONTEXT

6.1 Environmental Planning and Assessment Act 1979

The project constitutes 'development' and therefore is to be considered under the EP&A Act and the *Environmental Planning and Assessment Regulation 2000* (the Regulation). The EP&A Act and the Regulation set out the framework for which development must be assessed.

6.2 SEPP (Major Projects) 2005

The Huntingwood West site is listed as a scheduled site under SEPP (Major Projects) 2005, Schedule 3 Part 9.

Concept Plan / Development Design Control Modifications

Section 75W of the EP&A Act allows the Minister to modify the Minister's approval for a project. Relevant subsections provide:

- (2) *The proponent may request the Minister to modify the Minister's approval for a project. The Minister's approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part.*
- (3) *The request for the Minister's approval is to be lodged with the Director-General. The Director-General may notify the proponent of environmental assessment requirements with respect to the proposed modification that the proponent must comply with before the matter will be considered by the Minister.*
- (4) *The Minister may modify the approval (with or without conditions) or disapprove of the modification.'*

Goodman seeks various design control changes to the approved Development Design Controls. The Department of Planning has requested an assessment of the proposed changes and to achieve consistency with the approved Concept Plan (MP 06_0203) and Project Application (MP 08_0055).

Accordingly, this Environmental Assessment has been prepared with sufficient detail to allow the Department and the Minister to assess the proposed modifications under Section 75W of the EP&A Act. A detailed assessment of this is included in Section 9.0.

Following environmental assessment, it is considered that the project as modified is consistent with the existing approval for the project, as:

- the project as modified remains consistent with the applicable development standards;
- the proposed modifications would involve minimal environmental impact; and
- the proposed modifications do not alter the purpose or general layout of the project.

Stage 1- Infrastructure Project Application

Projects assessed under Part 3A of the EP&A Act require development consent from the Director-General. Part 3A applies if a project meets any of the types of project set out in *State Environmental Planning Policy (Major Projects) 2005*. The proposal is classified as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It involves subdivision of land within the Huntingwood West Precinct and therefore triggers the criteria in Clause 3 of Schedule 3 of *State Environmental Planning Policy (Major Projects) 2005*.

Consequently, the Minister for Planning is the approval authority for the project.

On 24 November 2008, the NSW Department of Planning confirmed that the Director General, as a delegate of the Minister, had formed the opinion that the project constitutes a project that Part 3A of the EP&A Act applies because it triggers Clause 3 of Schedule 3 of the *Major Projects SEPP*.

6.3 Permissibility

Permissibility

The land is a State Significant Site under Schedule 3, Part 9 of the Major Projects SEPP (Amendment No.14). It is zoned IN1 General Industrial. The objectives of this zone are as follows:

Clause 6 General Industrial:

- (1) *The objectives of this zone are as follows:*
 - (e) *to facilitate development for a wide range of employment-generating industrial, manufacturing, warehousing, storage or research purposes, including ancillary office space,*
 - (f) *to ensure development enhances the amenity of the Huntingwood West Precinct by including high quality landscaping, adequate building setbacks, high quality external finishes and the like,*
 - (g) *to encourage employment opportunities,*
 - (h) *to minimise any adverse effect of industry on other land uses.*

(2) *Development for the purpose of environmental protection works is permitted without development consent on land within Zone IN1 General Industrial*

(3) *Development for any of the following purposes is permitted only with development consent on land within Zone IN1 General Industrial:*

Automotive and motor sport industry related uses; depots; freight transport facilities; light industries; neighbourhood shops; roads; transport depots; truck depots; warehouse or distribution centres.

(4) *Except as otherwise provided by this Policy, development is prohibited on land within Zone IN1 General Industrial unless it is permitted by subclause (2) or (3).*

Clause 10 Subdivision – Consent requirements

- (1) *Land within the Huntingwood West Precinct may be subdivided but only with development consent.*

Accordingly, the proposal, being development for the purpose of subdivision, roads, and earthworks to facilitate future development for warehousing or distribution purposes, is permissible under the *Major Projects SEPP* as it permits development for this purpose with consent.

6.4 Other Environmental Planning Instruments

Section 75I(2) of the EP&A Act requires that the Director-General's Assessment Report consider the provisions of State Environmental Planning Policies (SEPPs) and other Environmental Planning Instruments (EPIs) that are relevant to the project.

The following EPIs have been considered during the preparation of this Environmental Assessment:

- *SEPP (Major Projects) 2005;*
- *State Environmental Planning Policy (SEPP) – Infrastructure;*
- *SEPP (Western Sydney Parklands) 2009*
- *SEPP 55 – Remediation of Land;*
- *Draft SEPP 66 – Integration of Land Use and Transport; and*
- *Huntingwood West Concept Plan and Statement of Commitments.*

A consideration of these EPIs is provided below.

6.5 SEPP (Infrastructure) 2007

SEPP (Infrastructure) 2007 aims to facilitate the effective delivery of infrastructure across the State. Clause 100 applies to development on a proposed classified road and ensures that consent for development on a classified road may only be granted following concurrence from the RTA.

The project would result in the construction of a new 4 way intersection on the Great Western Highway of a total capital investment value in excess of \$150,000 and therefore in accordance with Clause 100(1)(b) would require concurrence from the RTA.

6.6 SEPP (Western Sydney Parklands) 2009

SEPP (Western Sydney Parklands) 2009 aims to put in place planning controls that will enable the Western Sydney Parklands Trust to develop the Western Parklands into multi-use urban parkland for the region of Western Sydney. The proposal is consistent with the aims of this SEPP because it would:

- result in a greater number of employees located in close proximity to the parkland and encourage the recreational use of the parkland;
- ensure the sustainable use of the parklands via best practise urban design
- delivering a key recreation resources within the parkland such as a new cyclepath 1km in length
- result in increased passive surveillance of the parklands
- Protect and enhance the natural systems of the Western Parklands;
- Protect and enhance the cultural and historic heritage of the Western Parklands, and
- Maintain the rural character and historical heritage of the Western Parklands, and
- Facilitate public access to, and use and enjoyment of, the Western Parklands, and
- Facilitating use of the Western Parklands;
- Encourage the use of the Western Sydney Parklands, and
- Ensure that development of the Western Sydney Parklands is undertaken in an ecologically sustainable way.

6.7 SEPP 55 – Contaminated Land

SEPP 55 aims to provide for a state-wide planning approach to the remediation of contaminated land, and in particular, to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Clause 7 of SEPP 55 requires a consent authority to consider whether the land for which a project/development application relates is contaminated, and if the land is contaminated, to be satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) prior to granting consent.

The potential for site contamination on the subject land has been addressed in Section 8.4.

6.8 SEPP 66 – Integrated Transport & Development

Draft SEPP 66 is designed to apply to any development having a gross floor space of more than 1,000 square metres. The aims of the policy are to ensure that urban structure, building forms, land use locations, development designs, subdivision and street layouts help achieve the following planning objectives:

- a) Improving accessibility to housing, employment and services by walking, cycling and public transport;
- b) Improving the choice of transport and reducing dependency solely on cars for travel purposes;
- c) Moderating growth in demand for travel and distances travelled especially by car;
- d) Supporting the efficient and viable operation of public transport services;
- e) Providing for the efficient movement of freight.

The site is considered ideal for the proposed project because of local considerations (proximity to existing industrial areas and existing arterial road system) and regional factors (proximity to local residential areas and the Sydney Motorway network). In addition, the project would provision strong local pedestrian and cyclepath connections between employment areas and residential areas.

It is considered that the project would assist in achieving the above objectives, particularly (a) because of its proximity to the existing industrial areas and local public transport facilities and (b) will provide employment opportunities for the local residential area.

6.9 Blacktown LEP 1998

Clause 14(2) of Schedule 3 Part 9 states that the provisions of Blacktown LEP do not apply to the site.

6.10 Developer Contributions

There are no Section 94 Contribution plans applicable to the site.

Condition B2 of the Concept Plan approval issued to Landcom (MP 06_0203) states that the proponent is to enter into an agreement with the RTA with respect to regional road contributions. This agreement has been negotiated and we expect the agreement will be executed shortly.

In addition, and as required by the approved Concept Plan, Goodman has committed to providing a number of other contribution items. This application therefore includes an offer to enter into a Planning Agreement with the Minister with respect to these items in order to provide planning certainty with respect to the developer contributions arising from development of the estate. This offer is on the basis that this agreement will be negotiated within 12 months of approval unless otherwise agreed by the Director-General.

We note that there was a draft planning agreement prepared by Landcom but this was never executed.

7 CONSULTATION

The following agencies and other key stakeholders have been consulted during the application process:

- Design Review Panel;
- Blacktown Council;
- Roads and Traffic Authority (RTA);
- Sydney Water;
- Integral Energy;
- Western Sydney Parklands Trust; and
- Ministry of Transport.

A consultation record is included in Table 6.1. It is not anticipated that any other agency approvals will be required. The key issues were as follows:

Table 6.1: Consultation and Identified Issues

Stakeholder	Key Issues
Government Authorities	
Department of Planning	General planning and environmental issues
Roads and Traffic Authority	Road design; infrastructure agreement
Blacktown Council	Traffic and transport; soil and water; stormwater management; flooding; and landscape
Design Review Panel (Landcom & Western Sydney Parklands Trust)	General planning and environmental issues (including consistency with the Concept Plan); traffic and transport; infrastructure and servicing; soil and water; stormwater management and visual amenity (design and landscaping)
Ministry of Transport	Public transport
Infrastructure & Service Providers	
Sydney Water	Water & sewer servicing
Integral Energy	Electricity servicing
Alinta Gas	Gas servicing
Telstra	Communications servicing

The Director-General of the Department of Planning has provided his Environmental Assessment requirements for the **Bungarribee: Stage 1 infrastructure project**. These requirements are reproduced in Appendix A. The table includes references to where each requirement has been addressed in this Environmental Assessment.

The key issues identified for assessment in the Director-General's environmental assessment requirements and/or Goodman's consultation and assessment of the project, include:

- Subdivision;
- Utilities infrastructure; and
- Infrastructure agreement (regional roads)

A condition of the sale contract with the NSW Department of Planning is that the Design review panel must review and approve all development applications prior to lodgement. A copy of the

conditional approval from the Design Panel and a response to the issues raised is included in Appendix C.

8 ENVIRONMENTAL EFFECTS

This section provides an assessment of the environmental impacts associated with the development of the project. The environmental assessment is based on a number of specialist studies undertaken for the approved Concept Plan as well as additional project-specific studies where required.

8.1 Geology and Soils

A Geo-technical Assessment has been conducted by GHD and is included in Appendix D. The site is underlain by Bringelly Shale of the Triassic-age Wianamatta Group, comprising shale, carbonaceous claystone, laminate and some minor coral bands. The shale bedrock is mantled locally by Quaternary alluvium within valley floors of the Eastern Creek system. The soil stratigraphy is shown in table 8.1 below.

Table 8.1: Soil Stratigraphy

Depth below ground level (m)	Description
0.15-0.5	Topsoil – brown silty clay, and/or
0.2 – 1.6	Fill – (in several test pits) – including anthropogenic material
0.5-0.8	Clay – stiff and very stiff to extremely weathered shale
0.8 – 3.3 (max. investigation depth)	Shale – low to medium strength

Generally, the soils are found to be highly reactive and dispersive and therefore appropriate erosion and sediment controls will be implemented as discussed in Section 8.3.

8.2 Salinity

A Salinity Assessment and Management plan has been prepared by GHD (Appendix E). This report indicates that the soils of the majority of the site are moderate to very saline. Accordingly, salinity management measures are required to:

- Limit adverse impacts of the development on saline processes within the site; and
- Limit adverse impacts of the saline processes within the site on the development.

This report provides management measures to mitigate the salinity risk associated with the proposed development. With the implementation of these strategies, it is considered that salinity risk is able to be effectively minimised and / or managed.

The Statement of Commitments includes a commitment to adopting the recommendations of this Salinity Management Plan prior to construction to the satisfaction of the Director – General.

8.3 Erosion & Sediment Control

Erosion and sediment control risks associated with the project are able to be effectively managed using standard best practice control measures, including:

- Minimising disturbance areas;
- Diverting 'clean' run-on water around disturbance areas;
- Controlling 'dirty' run-off water from within the disturbance area via various controls such as sediment fencing and sediment basins; and
- Rehabilitating disturbed areas as quickly as possible following disturbance.

Preliminary Erosion and Sediment control plans have been prepared by GHD (DA 109 – 111). To effectively manage erosion and sedimentation risks associated with the project, Goodman has committed to preparing a Erosion and Sediment Control plan / Soil and Water Management plan in accordance with these plans and to the satisfaction of the Director – General prior to construction.

8.4 Site Contamination

Background

A Phase I & II Environmental Site Assessment of the site was conducted by Douglas Partners.

Based on the results of the Phase I assessment, the overall contamination risk at the site was deemed to be low, but the investigation identified several potential sources and forms of contamination.

The Phase II investigation undertook detailed assessment of the identified risk areas utilising intrusive testing. The results of the Phase II investigation showed that no Health Based Investigation Levels (HIL Column 4) guidelines were exceeded in the samples analysed for any of the contaminants of concern thus indicating that the site is suitable for the proposed land-use with respect to organic and inorganic contaminants.

However, localised asbestos contamination was identified during the assessment requiring the formulation of a Remediation Action Plan (RAP) addressing the remediation methodology and validation procedures as well as an Asbestos Management Plan to address the possibility of uncovering hidden or undetected asbestos during future site earthworks.

Site Audit

The remediation works were subsequently conducted and on 20 February 2008 a Site Audit Statement was issued by CM Jewell and Associates Pty Ltd (Appendix F) concluding the following:

"With regard to both asbestos and chemical contamination, on any site, absolute statements that contamination is not present cannot be supported by a rational interpretation of any sampling data, recognising the inherent limitations of all such data.

On this site in particular, given its very large size and the relatively low sampling density employed (and agreed to as appropriate by the auditor), no such definitive statement is possible. It is however, reasonable to conclude on the basis of the sampling program carried out, and professional judgement, that overall contamination risks are likely to be low in relation to the size and value of the site.

Thus, it is appropriate to state that following a careful review, the auditor is satisfied that the criteria he established for the site have been met, and contamination risks are acceptable.

The site is therefore considered suitable for the uses identified above subject to compliance with the management plan identified above. Any soil removed from the site should be appropriately classified in accordance with the Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid wastes. Any soil imported to the site should be validated as being suitable for use on the site. Due to regional contamination and natural salinity issues and because groundwater quality may change with time, groundwater should not be extracted for any purpose without appropriate assessment.

Accordingly, the project is capable of being undertaken without any further assessment or remediation. In accordance with the recommendations in the Site Audit report, any soil which is removed from the site will be appropriately classified in accordance with the *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid wastes*. In addition, any soil imported to the site should be validated as being suitable for use on the site.

8.5 Stormwater Management

Background

A Water Sensitive Urban Design (WSUD) strategy was prepared by Ecological Engineering for the approved Concept Plan. The key outcomes of the WSUD Strategy were as follows:

- Potable mains water needs are to be reduced through demand management including the installation of water efficient fixtures and using alternative sources of water based on matching water quality to uses on a 'fit-for-purpose' basis;
- Stormwater runoff from the development as well as the 20Ha catchment to the east of the development which flows through the site, is to be treated to current best practice water quality standards;
- Post-development storm discharges to equal pre-development storm discharges for the one and a half yr ARI event, so as to minimise the impact of frequent events on the natural waterways and to minimise bed and bank erosion; and
- Post-development storm discharges up to the 100yr ARI event to be contained so as to minimise the impact of flood events on Eastern Creek. These targets can be met in conjunction with the downstream wetland adjacent to the site.

The key elements of the Concept Plan WSUD strategy were:

- GPTs located within the site for initial pollution reduction;
- A constructed wetland within the parklands as an interface with the Huntingwood West employment lands. The wetland improves the water quality and provides flood detention storage. The microphyte zone is a shallow body of water, heavily vegetated with water plants. The ephemeral zones are planted with species capable of withstanding short term inundation and long term drying;
- Attenuation of storm and flood events is integrated into the storage areas associated with the precinct ponds (within the site), and the microphyte zone and ephemeral zones of the wetland (within the parklands). This provides geomorphic protection to the waterways downstream, by limiting discharge to pre-development flows for in-frequent storm events with high erosion potential;
- Bio-retention system within the central median of the main entry road to treat stormwater discharged from the upstream catchment;

- The option to include street-tree bio-retention cells within the streetscape will further increase the capacity of the strategy to achieve stretch targets for stormwater quality treatment;
- Development of building design guidelines to ensure that pollution sourced from work areas does not enter into stormwater drains; and
- Guiding principles for potable water conservation initiatives within the precinct.

Detailed WSUD Strategy

A Detailed WSUD Strategy has been prepared by Aecom to accompany this project application (Appendix G). The detailed WSUD strategy has made several amendments to the Concept strategy as a result of design development. These are:

- Configuring a bio-retention system within the northern part of the detention basin
- Treating the external catchment in the northern bio-retention basin rather than in a central median; and
- Locating the central inlet zone within the wetland footprint.

The reasons for the changes are discussed below:

Eco-median

The concept strategy proposed treating stormwater generated from the external catchment through an 'eco-median'; a bio-retention system located in the central median of the main road entering the site. However, difficulties in meeting the required pipe levels for delivering the stormwater to site, as well as 'day lighting' the stormwater to the treatment system made a bio-retention basin in the central median unfeasible. Furthermore, decentralised, streetscape treatment systems were considered vulnerable to damage from activities typical of industrial estates.

The strategy was also modified to manage stormwater in terms of the three catchments (northern, central and southern). The detailed WSUD strategy proposes stormwater treatment through a bio-retention system for the northern and external catchment. The original strategy proposed a single constructed wetland.

The location of the central inlet zone has also been modified for a simpler configuration, integrated with the wetland footprint.

The treatment elements comprise:

- A sedimentation basin and subsequent bio-retention basin (4,000m²) will treat stormwater generated from the northern sub-catchment (18.5 hectares) and stormwater from the external catchment (20 hectares);
- A constructed wetland (16,600m²) with associated inlet zone will treat stormwater generated from the central catchment (21.3 hectares) and the southern catchment (16.2 hectares)
- A sediment basin with connected swales will provide pre-treatment of the flows from the south catchment prior to discharge into the central wetland.

The stormwater quantity management has been accommodated in the design of the above treatment devices. The bio-retention basin and wetland have been designed within the footprint of the proposed detention basin at the interface of the site and neighbouring Western Sydney Parklands. The treatment system has been designed to provide water quality and quantity treatment up to the 1.5 year event without compromising the attenuation of up to 1 in 100 year flood events.

Potable water conservation targets are retained for subsequent development, namely:

- Dual reticulation will be provided to facilitate the supply of alternative water sources to meet non-potable demands;
- Access to suitable non-potable water sources will be investigated when details of water demand within the site are identified;
- All industrial users of the site will agree to implement a water demand management strategy that requires the installation of water efficient features (for example, toilets and fittings) and ensures equipment such as hoses are maintained to prevent leaks; and
- The landscape strategy will include native plants that require little to no irrigation.

8.6 Flooding

A assessment of the flood impacts of the development was conducted for the Concept Plan. The 1 in 100 yr flood line is shown in DA 1002. The proposed development footprint would be entirely outside of the 1 in 100 yr line with the exception of a minor encroachment near the southern end of the main basin, the impact of which is deemed to be negligible.

An assessment of the affects of the proposed development with respect to the PMF has been requested in consultation with Blacktown Council. Bewsher Consulting Pty Ltd have assessed the impact of the proposed development on the PMF event (Appendix H). The study concludes that the post works PMF flood levels would have no significant impacts on site and that there would be no significant off-site impacts as a result of the proposed works.

8.7 Noise

Construction Noise

Construction activities associated with the proposed development would include:

- Bulk earthworks
- Construction of the internal estate road and external intersection upgrades, stormwater drainage systems, sewerage and water works, utilities and services, landscaping and detail earthworks; and
- Landscaping and detention basin works

Given the nature of the project and the distance of sensitive users from the site, it is not expected to generate significant noise impact to surrounding land users. However a Construction Noise Management Plan will be included in the Construction Environmental Management Plan for the site.

8.8 Air Quality

Construction related dust emissions

There is likely to be some potential air quality issues as a result of two main causes:

- Excavation works to expose soil; and
- Periods of disturbed earth being left uncovered.

The Construction Environmental Management Plan will include measures to ensure that the potential for dust emissions resulting from the proposed development will be appropriately mitigated. These would include:

- Minimising the area of disturbance as far as practicable during works;
- Minimising drop heights for materials being worked on site;
- Keeping exposed surfaces moist at all times;
- Rehabilitating / revegetating disturbed surfaces as soon as practicable; and
- Ensuring that trucks are covered and do not track sediment onto public roads.

8.9 Flora & Fauna

Background

A Strategic Offset Directions Report was prepared by Ecological Pty Ltd for the approved Concept Plan. The findings of the study were as follows:

The Huntingwood West site is 56 hectares of Area, most of which is exotic grassland. Approximately 5.6 hectares of Shale Plains Woodland of Moderate Ecological Constraint occur on the site. Shale Plains woodland which is an endangered Ecological Community listed under the NSW Threatened Species Conservation Act 1995. Proposed development necessitates the loss of this woodland.

To counterbalance (offset) the loss of 5.6 hectares of Shale Plains Woodland within the site the developer will contribute to the ecological management within the adjoining parklands precinct in accordance with the Western Sydney regional Parklands Management Vision (Department of Infrastructure, Planning and Natural Resources 2004). This vision includes establishment of an Ecological Network that achieve by protection, management and restoration of vegetation and habitats along Eastern Creek. Conservation measures within the Parklands Precinct would be managed by the Parklands trust.

The contribution by the developer will take the form of a monetary sum that will go towards the protection, restoration and management of 5.6 ha of Shale Plains Woodland in high priority areas within the Parklands Precinct.

It is understood this monetary contribution was been paid by Landcom to satisfy the proposed offset regime.

Further Assessment

In addition to the monetary contribution for offsetting the vegetation, the approved Statement of Commitments required that an assessment be made at the project application level of the potential to retain existing vegetation. Accordingly, an Arborist Assessment has been conducted by Earthscape Pty Ltd (See Appendix I). This study identifies the trees which are significant and worthy of retention where practical.

8.10 Aboriginal Heritage

Background

An Archaeological study was conducted for the Concept Plan by Jo Macdonald. The study found that there were two surface archaeological sites (WSP/13 and WSP/15) and one area of potential archaeological deposit (PAD WSP5) within the Huntingwood West parcel. These locations are shown in Figure 12 below.



Figure 12: Potential Archaeological Deposits

With respect to these sites, the following recommendations were made:

- Site WSP/15 has been assessed as having a low archaeological potential. Site WSP/13 and PAD WSP/5 have been assessed as having high archaeological potential; and
- Further archaeological investigation is not required within the Huntingwood West Parcel. The statement of commitments will ensure that the proposed Conservation Zone will not be impacted by development and that appropriate management of indigenous heritage will be guaranteed by the archaeological salvage work to be undertaken in the Parkland and Doonside parcel.

Impacts and Mitigation Measures

In accordance with the above recommendations, a plan of management will not be required as there is no conservation area within the development lands. The proposed development however

would impact the identified sites due to road works and bulk excavation to create the proposed development pad levels. To appropriately manage the impact of the proposed development on these aboriginal sites and cultural heritage values, the Statement of Commitments includes a commitment from Goodman to obtain a s87 'consent to destroy' permit from DECC if any items of potential significance are discovered.

8.11 European Heritage

Background

A European Heritage Impact Statement (HIS) was conducted to support the approved Concept Plan by Godden Mackay Logan (GML) in August 2006. The HIS identified the likely heritage impact of the Concept Plan and Development Design Controls on the non-Aboriginal heritage resources of the Huntingwood West employment Lands.

There were two sites of heritage significance identified as part of this investigation. These are discussed below:

The Old Inn

The HIS found that the site may contain an archaeological site of significance known as 'The Old Inn'. The exact location of the Inn is unknown although it is understood to be sited next to the Great Western Highway adjacent to Eastern Creek. The HIS advised that more specific research should be undertaken to more closely locate the area and its likely remains. It was further recommended that this specific research should be undertaken prior to any physical development taking place within the Employment Lands site.

Rudders Lane

Rudders Lane is an existing narrow carriageway running north/south through the site and connecting to the Great Western Highway to the north.

The HIS found that the lane has heritage significance as it was named after an early landowner in the area and its form relates to the original subdivision of the land from the 1890s. Accordingly, the HIS recommended that 'consideration be given to a road alignment that retains the Rudders Lane alignment for the purposes of interpreting this historic laneway.'

The approved Concept Plan involved closing the existing Rudders Lane and to create a new Rudders Lane located 80m to the west of its current alignment.

Subsequent to approval the following Statement of Commitment with respect to Rudders Lane was approved:

- Provide interpretative features to reinforce the original scenic qualities of the former Rudders Lane

Impacts and Mitigation Measures

In accordance with the recommendations of the HIS, Goodman has included a Statement of Commitment to undertake further investigations on site to locate the 'Old Inn' prior to conducting any works on site.

Regarding Rudders Lane, the proposed landscape plan seeks to reinterpret and reinforce the original scenic qualities of the former Rudders Lane. Goodman has included a statement of commitment to consider this further in subsequent development applications.

8.12 Traffic, Access and Parking

Background

A Traffic and Accessibility Management Plan (TMAP) was prepared by Maunsell to assess the traffic and parking impacts associated with the approved Concept Plan. The TMAP also outlined a package of measures to moderate traffic growth and to help achieve a 10% increase in the public transport use to/from the development site.

The TMAP measures include:

- Access to the site via the existing roundabout at Brabham Drive and a new access intersection at the Great Western Highway;
- Intersection improvement at the key intersections (Great Western Highway / Brabham Drive);
- Infrastructure improvements to provide easy pedestrian and cyclist access to Doonside via a shared path and connection to the existing share paths along the M7 cycleway;
- Public transport infrastructure with a minimum provision of a bus stop on Brabham Drive;
- Transport service improvements including the potential to divert the existing 724 bus route past/through the site; and
- Workplace Transport Plans including measures such as car pooling, marketing of public transport options or discounts to cyclists.

Statement of Commitments

Consistent with the TMAP, the approved Statement of Commitments for the Concept Plan requires the following traffic and transport measures:

- The construction of a Park Edge Road;
- The construction of a new road into the site from the existing roundabout at Brabham Drive;
- The construction of a new intersection of the Great Western Highway that provides access to Huntingwood West and the Parklands;
- The construction of an internal road network in accordance with the DDC and current Blacktown Council standards; and
- Payment of a monetary contribution for local and regional roads as agreed with the RTA.

Traffic Impact Assessment

A Traffic Impact Assessment has been prepared by GHD Pty Ltd (Appendix J) to assess the traffic impacts of this project application. The results of this study are discussed below.

- *The traffic and transport impact of the proposed industrial development has been assessed in accordance with the RTA's Guide to Traffic Generating Developments*
- *The assessment indicates that the cumulative traffic impact of the proposed development along with other committed developments in the local area would require road widening of the four-lane section of the Great Western Highway between Minchinbury and Huntingwood*
- *The RTA has previously identified this impact and is imposing conditions for developer contributions to be made for the road widening*
- *Goodman will be making the agreed contribution of \$75,000 per developable hectare, to minimise the traffic impact of the proposed development or works in kind.*
- *The RTA has approved in-principle a signalised intersection off the GWH to provide vehicular access to the development site. An appropriate intersection configuration has been modelled and discussed with the RTA*

- *Blacktown City Council and the RTA support a second access off Brabham Drive / Huntingwood Drive roundabout*
- *Options for the implementation of the package of measures identified in the Huntingwood West TMAP have been recommended.*

Therefore the traffic generation from the proposed development can be accommodated on the surrounding road network and is not expected to have adverse impacts on the traffic conditions in the local area.

Infrastructure Provision Agreement

With respect to the external intersection works, an Infrastructure Deed is required to be entered into to formalise the payment of a monetary contribution for the upgrade of regional roads.

Condition B2 of Subdivision Approval MP 08_0055 requires the following:

- ***Condition B2 (MP 08_0055): the proponent acting on the project application is to enter into a legally binding agreement (Deed, Planning Agreement or other suitable mechanism) with the RTA for regional road contributions at a rate of \$75,500.00 (excl. GST) per developable hectare, and intersection improvement works at the Great Western Highway and Brabham Drive. Evidence of the legally binding agreement shall be submitted to the Director of Strategic Assessments, Department of Planning, prior to the lodgement of any future project applications or development applications further subdivision or development of the super lots. All works associated with the proposed development shall be at no cost to the RTA.***

Goodman has been negotiating an Infrastructure Agreement with the RTA since January 2009. A final resolution regarding the terms of this agreement is imminent.

New Intersection to Great Western Highway

The design of the new intersection to Great Western Highway is subject to ongoing consultation with the RTA in order to obtain final approval including acknowledgement of any works in kind, following which Goodman would enter into a Works Authorisation Deed (WAD) with the RTA prior to the construction of these works. A preliminary design of the intersection treatment works has been prepared by GHD (SK001 RB).

Internal Road Network

The internal road network has been designed to comply with the DDC and Blacktown Council standards as per the Statement of Commitments. The DDC and the Blacktown Council standards differ in two respects: 1) carriageway widths; and 2) verge widths. Given these competing standards, in order to ensure the objectives of both these requirements are met as best as possible, the following principle has been adopted:

- The verge widths have been provided as per the DDC and the carriageway widths are as per BCC standards.

In doing so, the Blacktown Council requirements for vehicular circulation have been adopted while still adhering to the DDC objectives for the public domain. A summary of the comparison of the road reserves is shown in Table 8.2 below:

Table 8.2 Road reservation comparisons

Road Type	Carriageway width		Traffic lane width		Parking lane width		Verge width		Median width		Footway Width		Services Zone	
	DDC	PA	DDC	PA	DDC	PA	DDC	PA	DDC	PA	DDC	PA	DDC	PA
Eco-median Collector Road 4	7.8 indiv	15.5	5.5	5.25	2.3	2.5	1.5		14.5	Nil	1.5 & 2	1.5 & 3.0	1	N/A
Collector Road 1	15.6	15.5	5.5		2.3	2.5	4		Nil	Nil	1.5	1.5	1	N/A
Local Road 2,3	13.6	13.5	4.5	4.25	2.3	2.5	1.5		Nil	Nil	1.5	1.5	1	N/A
Park Edge Road 5	9.3	9.0	3.5	3.25	2.3	2.5	1.7		Nil	Nil	1.5	1.5	1	N/A

Cross sections of each road type have been provided by Tract Pty Ltd (DA 1100 – 1108).

Eco-median

As discussed in Section 8.5, in order to achieve Water Sensitive Urban Design objectives, the central 'eco-median' has been removed and replaced with 'Eco verge' bio-retention basins within the verges. This will result in improved traffic circulation through the estate and greater flexibility with respect to future driveways to individual allotments. In addition, a new connection has been provided from Road 4 through to the park edge road to create a direct connection for cars and light vehicles. This will improve traffic circulation on the park edge road.

Pedestrian & Cycleway

The proposed cycleway network, consisting of an east west link through the site along the central road, as well as a north-south link adjacent to the Western Sydney Parklands will ensure a high level of accessibility through the site for cyclists. The pedestrian network generally follows the road corridors and will also ensure a high level of permeability through the site and a safe high quality public domain for pedestrians.

8.13 Visual Amenity & Landscaping

A Visual Assessment was prepared by Richard Lamb and Associates for the Concept Plan. Key recommendations in relation to the proposed development were:

- All vegetated remnants, especially that within the eastern part of the site and within the Eastern Creek corridor, are to be considered for retention and enhancement with enrichment planning and regeneration techniques;
- Existing stands of vegetation located should remain amongst future development area parcels. This vegetation would provide a visual separation between buildings and structures as well as softening the appearance of larger industrial development

As discussed in Section 8.9, an Arborist report has been prepared to assess the potential for salvage of existing significant vegetation. (Appendix I). This study identifies the fact that due to the regrading of site levels associated with the bulk earthworks much of the existing vegetation will not be able to be retained however design of subsequent development will involve consideration of retention of significant vegetation where practical.

The landscape design report prepared by Tract is included in Appendix K. The landscape design has been developed in accordance with the approved Concept Plan to ensure a high quality, robust landscape which effectively meets the working requirements of the employment estate whilst showcasing the parklands as an integral part of the site and surrounding neighbourhood.

8.14 Wastes & Hazards

Wastes

The proposed development is not expected to generate significant quantities of waste other than general construction waste.

Bushfire Hazards

A Bushfire Hazard assessment was undertaken with the original Concept Plan. The key controls are as follows (Section 4.1.3):

- Development within 100m of the Western Sydney Parklands boundary is required to comply with the bushfire planning provisions within Planning for Bushfire Protection (NSW RFS 2001)
- A minimum 20m APZ is required between the external building line and the edge of unmanaged bushland of the Western Sydney Parklands.
- All APZs must accommodate fire truck access. The fire truck access may be provided on either a public road or a privately owned access road located between the hazard side of the land (i.e. unmanaged vegetation) and development

The modifications to the Concept Plan do not result in any change to this specific bushfire protection measure which would remain in the Development Design Controls for future development. A plan indicating the minimum 20m APZ is shown in Figure 13.

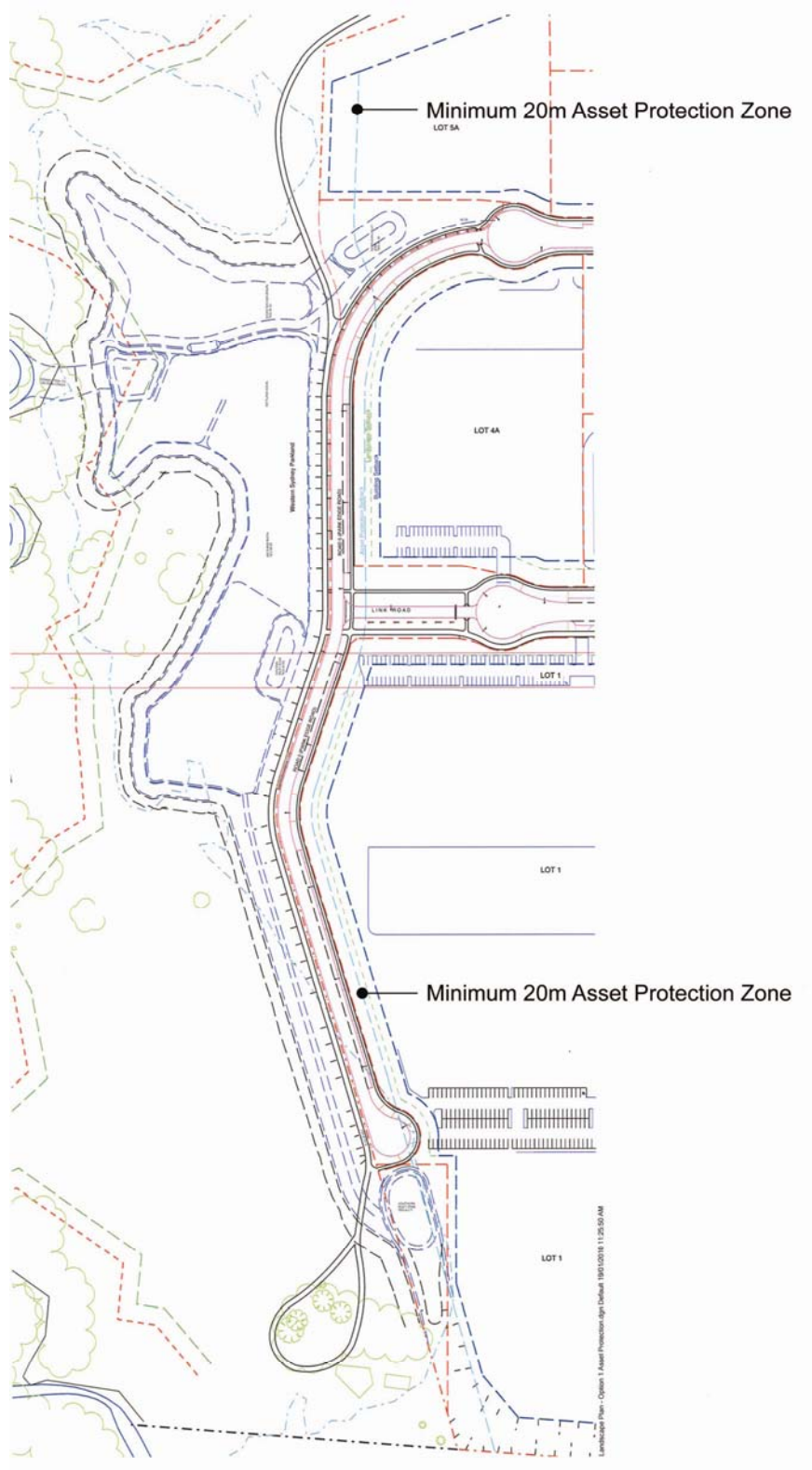


Figure 13: Asset Protection Zone

8.15 Construction

A Construction Environmental Management Plan will be prepared to the satisfaction of the Director-General prior to the commencement of any works on site. It will address the following issues associated with construction of the proposed facility:

- Estimated construction program and duration;
- Hours of works;
- Traffic and pedestrian management;
- Construction vehicle parking and management;
- Security;
- Safety;
- Construction noise and air quality management;
- Construction waste management;
- Erosion and sediment control;
- Management of trees – methods of removal and protection of those trees to be retained; and
- Any additional requirements of the Department of Planning or Blacktown City Council.

9 DRAFT STATEMENT OF COMMITMENTS

Goodman will carry out the **Bungarrabee Stage 1: Infrastructure** project in accordance with the following commitments in Table 8.1.

Table 8.1: DRAFT Statement of Commitments

	Subject	Commitment	Timing
A	General	The project will be constructed generally in accordance with the EA prepared by Goodman (and accompanying consultant reports) and the architectural, Landscape and Civil Drawings listed in the table of contents.	
B	Subdivision	A final subdivision plan will be prepared to the satisfaction of the Director-General	Prior to dedication of road and open space allotments
C	Land dedication	The area of the proposed internal road works and drainage allotments / open space is to be dedicated to Blacktown Council on completion of these works.	Post completion
D	Geo-tech	The recommendations of the Geotechnical report by GHD Pty Ltd will be implemented	Prior to and during construction
E	Salinity	The recommendations of the Salinity Report by GHD Pty Ltd will be implemented	Prior to and during construction
F	Erosion & Sediment Control	An Erosion and Sediment control / Soil & Water Management Plan will be prepared to the satisfaction of the Director General	Prior to construction
G	Flooding	A Hazard Analysis will be implemented to the satisfaction of the Director-General	Prior to construction
H	Existing Vegetation	The recommendations of the Arborist report by Earthscape Pty Ltd will be implemented	Prior to construction & further development
I	Stormwater Management	The recommendations of the WSUD Strategy will be implemented	Prior to and during construction
J	European Heritage	Further investigations to locate the Old Inn will be carried out in accordance with the HIS by GML Pty Ltd An interpretive strategy for Rudders lane will be implemented with future development fronting the new access road	Prior to construction Prior to further development
K	Aboriginal Heritage	A Section 87 permit will be obtained from DECC if any archaeological deposits are discovered on site	During works

L	External Roadworks	The external intersection upgrades are to be designed in accordance with the in-principle approval unless otherwise agreed by the Director-General and RTA	Prior to construction
		Goodman to finalise the detailed design and enter into a WAD with the RTA for the works	Prior to construction
M	Internal Roadworks	The internal road works will be constructed and dedicated to Blacktown City Council	during after construction
N	Noise	A Construction Noise Management plan will be prepared to the satisfaction of the Director-General	Prior to construction
O	Air Quality	A Construction Air Quality Management Plan will be prepared to the satisfaction of the Director-General	Prior to construction
P	Environmental Management	A Construction Environmental Management Plan will be prepared to the satisfaction of the Director-General.	Prior to commencement of construction
Q	Utility works	Relevant approvals from service providers will be obtained.	Prior to commencement of utility works
R	Western Sydney Parklands	Requisite access approvals and licences will be obtained from the Western Sydney Parklands Trust for wetland or other works	Prior to the construction of any works in the parklands
S	Planning Agreement	Goodman will enter into a Planning Agreement with respect to the Developer Contributions for the estate.	Within 12 months of Project Approval

10 CONCLUSION & PROJECT JUSTIFICATION

10.1 Consistency with Approvals

The proposed project is generally consistent with the approved Concept Plan (MP 06_0203), Statement of Commitments and Subdivision Project Application (MP 08_0055). This is discussed below:

Consistency with Concept Plan (MP 06_0203)

Details	Consistency / Comment
Great Western Highway Connection	√ - Provided
<ul style="list-style-type: none"> A new 4 way intersection on the Great Western Highway to provide access to the Employment land and western Sydney parklands located to the north and south of the Great Western Highway 	√ - a new 4 way intersection will be provided
<ul style="list-style-type: none"> Improve performance of the existing Great Western Highway / Brabham Drive intersection; and 	√ - the performance of the existing Great Western Highway / Brabham Drive intersection will be improved by provision of a cash contribution (regional roads contribution) towards the upgrade of this intersection
<ul style="list-style-type: none"> Provide a safe and convenient pedestrian and cycle crossing connection to the Parklands areas located north and south of the highway. 	√ - pedestrian crossings are to be included in the new intersection design.
A new east/west collector road access from the existing Brabham Drive Roundabout	√ - Provided
<ul style="list-style-type: none"> Provide site accessibility and connectivity to and from the existing industrial zone (east of the site); 	√ - Provided
<ul style="list-style-type: none"> In conjunction with the new intersection on the Great Western Highway, reduce the traffic impacts on the existing intersection: Great Western Highway / Brabham Drive; 	√ - the project will reduce traffic impacts on the existing Great Western Highway / Brabham Drive
<ul style="list-style-type: none"> Feature an eco-median that incorporates stormwater management within a landscape setting – i.e. an eco-median road; 	√ - partial an eco-median has not been provided since it is not practical (Refer Section 8.5) however 'eco-verges' have been provided to ensure stormwater management is incorporated within a landscape setting
<ul style="list-style-type: none"> Create green streetscapes with strong visual identity, retaining existing trees and supporting an integrated network of access links catering for pedestrian and cycle links; and 	√ - streetscapes will contain generous landscape verges with an integrated network of access links
<ul style="list-style-type: none"> Create a visual corridor to the Parklands. 	√ - the new east / west estate road will create a strong visual link to the parklands as will the new

	park edge road
Eco-median – a 14.5m wide central eco-median along the main road (east-west) that connects the site to the existing Brabham Drive Roundabout. The eco-median will:	X - an 'eco-median'; is not practical due to the site constraints as discussed in Section 8.5, however it is replaced with 'eco verges' throughout the internal road network.
<ul style="list-style-type: none"> Provide an opportunity to retain existing vegetation within the public domain to preserve biodiversity and maximise site amenity; 	√ - partial existing vegetation within the road corridors will be substantially removed due to regrading of site to required levels for drainage and access
<ul style="list-style-type: none"> Reinforce the 'green' character of the proposed employment estate; 	√ - 'eco verges' will ensure the 'green' character of the estate is clearly evident
<ul style="list-style-type: none"> Forms part of the integrated landscape and WSUD strategy – bio-retention system treating stormwater discharge from the site and the industrial upstream catchment; 	√ - 'eco verges' will form part of the integrated WSUD and landscape strategy for the estate and the upstream catchment
<ul style="list-style-type: none"> Brings the Parklands into the employment estate, providing a seamless transition between the landscaping and the Parklands vegetation. 	√ - the landscape character of the central estate road will ensure a seamless transition between the landscaping and parklands vegetation.
Park edge road;	√ - Provided
<ul style="list-style-type: none"> A sinuous layout to represent a transition between an active employment environment and more natural and contemplative surroundings 	√ - Provided
<ul style="list-style-type: none"> Access limited to cars and light vehicles only, thus creating an appropriate interface with the Western Sydney Parklands 	√ - Provided
<ul style="list-style-type: none"> Development Design Controls are designed to avoid the 'back of house' facing the internal roads and to encourage high quality facades presented to the Parklands. 	N/A
Wetland System:	√ - Provided
<ul style="list-style-type: none"> The principle consideration in the design of the drainage network is the integration and relationship with the Western Sydney Parklands 	√ - a seamless integration and relationship with the Western Sydney Parklands is maintained
<ul style="list-style-type: none"> The stormwater management strategy consists of gross pollutant traps (GPTs) and a downstream, off-site constructed wetland. The stormwater strategy is fully integrated with the landscape strategy. 	√ - the stormwater strategy is fully integrated with the landscape strategy
<ul style="list-style-type: none"> GPT's will take the form of 'precinct parks' (three) located within the development. These will retain gross pollutants, reduce the 	√ - one GPT has been relocated to within the wetland to make provision for a local open space to provide on-site recreational opportunities for future

suspended solids load, and balance flood detention requirements.	workers
• Protect water quality and provide flood storage;	√ - water quality and flood storage will be provided
• Overcome the higher risk of damage to on-site measures such as street scale bio-retention systems in an industrial precinct;	√ - overcome by a precinct based solution appropriately integrated in the landscape
• Provide a cost effective way to meet flood storage requirements to minimise post development stormwater discharge impacting Eastern Creek;	√ - Provided
• Provide the potential to treat stormwater runoff from the site and adjoining industrial upstream catchments that drain through the site; and Provide passive recreation opportunities.	√ - Provided

Development Design Control Modifications

The proposed modifications to the approved Development Design Controls are discussed in Section 4.2. The extent of the inconsistency and the justification for these minor inconsistencies is discussed in Appendix B. Having regard for this justification it is considered that the proposed modifications do not alter the objectives of the Development Design Controls, are consistent with the intent of the DDCs and are worthy of support.

Subdivision Project Application (MP 08_0055)

The proposed development would result in a subdivision substantially the same as the approved and registered subdivision plan with the exception of the creation of new allotments for the estate roads and drainage inlet pits once constructed to facilitate dedication of these allotments to Blacktown Council in accordance with the approved Statement of Commitments.

Accordingly, it is considered that the project represents reasonable and orderly development of the land.

10.2 Project Justification

The project will have the following key outcomes:

- It would provide a serviced industrial estate to facilitate future development for employment generating warehousing and industrial purposes;
- It would result in the provision of increased employment opportunities for a growing residential population in Western Sydney;
- It would result in a high quality public domain;
- It would result in best practice water sensitive urban design as well as the treatment of a 20 hectare upstream industrial catchment;
- It would result in a high quality presentation to the Western Sydney parklands;
- It would provide increased recreational opportunities in the Western Sydney parklands;
- It would provide increase pedestrian and cycleway connections;
- It would result in an improvement in local traffic conditions;

- It would facilitate a new vehicular access point to the Western Sydney Parklands to the north of the estate.

Not undertaking the project is not considered to be a reasonable alternative, as:

- The site has been identified as a key component of the state governments employment lands strategy for Sydney
- The project would result in the provision of key infrastructure for the local area;
- The project is not predicted to have any significant impacts on the environment or surrounding land users; and
- Not undertaking the project would negate the project's significant socio-economic benefits, including employment for 100 full-time and part-time jobs and a capital investment of \$42 million in the Blacktown local government area.

10.3 Suitability of Site

The site is entirely suitable for the proposed project. It is zoned for development for industrial purposes, has been identified as a key component of the State Government's employment lands strategy and enjoys excellent proximity to the regional motorway network as well as local recreation opportunities and local workforce.

10.4 Conclusion

With respect to all of the salient environmental, social and economic issues, it is considered that the **Bungaribee Stage 1: Infrastructure** project represents orderly development of the land. Accordingly, it is respectfully requested that the Minister for Planning, having due regard for the information in this document, grant approval to the application for the Project.

ARCHITECTURAL PLANS

CIVIL PLANS

LANDSCAPE PLANS

APPENDIX A: DIRECTOR-GENERAL'S REQUIREMENTS AND REFERENCE TABLE

APPENDIX B: DEVELOPMENT DESIGN CONTROL MODIFICATIONS & JUSTIFICATION

APPENDIX C: DESIGN REVIEW PANEL

APPENDIX D: GEO-TECHNICAL INVESTIGATIONS

APPENDIX E: SALINITY ASSESSMENT & MANAGEMENT PLAN

APPENDIX F: SITE AUDIT REPORT

APPENDIX G: WSUD STRATEGY

APPENDIX H: FLOODING ASSESSMENT

APPENDIX I: ARBORIST ASSESSMENT

APPENDIX J: TRAFFIC ASSESSMENT

APPENDIX K: LANDSCAPE DESIGN REPORT