

Development Application Environmental Impact Statement



813-913 Wallgrove Road, Horsley Park

Gazcorp Industrial Estate Western Sydney Employment Area

Submitted to Department of Planning and Infrastructure
On Behalf of Gazcorp

February 2014 ■ 11730

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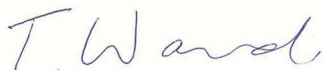
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A handwritten signature in black ink, appearing to read 'Ben Craig' or 'Tim Ward', with a stylized flourish at the end.

Ben Craig / Tim Ward

6/02/2014

This report as been reviewed by:

A handwritten signature in blue ink, appearing to read 'T. Ward', with a stylized flourish at the end.

Tim Ward

6/02/2014

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D	Survey Plan <i>A Allen Consulting Surveyors Pty Ltd</i>
E	Design Statement <i>MBMO</i>
F	Ecological Impact Assessment <i>Cumberland Ecology</i>
G	Geotechnical Assessment <i>Douglas Partners</i>
H	Infrastructure and Services <i>Brown Consulting Engineers</i>
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- R** Flood Modelling
BMT WBM
- S** Bushfire Protection Assessment
Australian Bushfire Protection Planners Pty Ltd

Statement of Validity

Development Application Details

Applicant name	Gazcorp Pty Ltd
Applicant address	PO Box 732 Gladesville NSW 2111
Land to be developed	Lot 5 of DP 24090 (813-913 Wallgrove Road, Horsley Park)
Proposed development	Staged Development Application (Masterplan) for an industrial estate and a concurrent Development Application for the Stage 1 Warehouse Building as described in Section 4 and Section 5 of this Environmental Impact Statement respectively

Prepared by

Name	Tim Ward
Qualifications	BSc, Masters of Environmental Management
Address	Level 7, 77 Berry Street, North Sydney
In respect of	State Significant Development - Development Application

Certification

I certify that I have prepared the content of this EIS and to the best of my knowledge:

- it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;
- it contains all available information that is relevant to the environmental assessment of the development to which the statement relates; and
- the information contained in the statement is neither false nor misleading.

Signature



Name

Tim Ward

Date

6 February 2014

Executive Summary

Purpose of this Report

This submission to the Department of Planning and Infrastructure (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to the Staged Development Application (DA) for an industrial estate and a concurrent Development Application for the Stage 1 Warehouse Building.

The Stage 1 Warehouse Building within the Gazcorp Industrial Estate is a type of development identified as State Significant Development (SSD) in clause 12 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011*. In particular, development with a capital investment value of more than \$50 million for the purpose of a warehouses or distribution centre is SSD for the purposes of the EP&A Act. As the Stage 1 Warehouse Building of the proposed Gazcorp Industrial Estate will have a capital investment value of over \$50 million it is SSD.

A request for the issue of Director General's Environmental Assessment Requirements (DGRs) was sought on 21 March 2012. Accordingly, the DGRs were issued on 14 May 2012. This submission is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the DGRs.

Overview of the Project

This Development Application seeks approval for a Staged DA for the Gazcorp Industrial Estate and a concurrent detailed DA for the Stage 1 Warehouse Building.

The Site

The Site is located in Horsley Park, is approximately 52ha in area, comprising Lot 5 DP 24090. The Site is located approximately 33km west of the Sydney Central Business District (CBD) and is approximately 11km to the north west of Fairfield City Centre. The Site falls within the Western Sydney Employment Area (WSEA) as defined by the *State Environmental Planning Policy (Western Sydney Employment Area) 2009* as it is within the bounds of the Industrial Release Area Map. It is in close proximity to the M4 Motorway and its intersection with the Westlink M7 Motorway, providing excellent access to both the state and regional road network, and surrounding key employment and industrial lands.

Planning Context

Section 3 of the EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant SEPPs. Under *State Environmental Planning Policy (Western Sydney Employment Area) 2009* the site is part zoned IN1 – General Industrial and part zoned E2 – Environmental Conservation. The proposal is permissible with consent and meets the objectives of the subject zone.

Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the DGRs and sets out the undertakings made by Gazcorp to manage and minimise potential impacts arising from the development. This assessment has determined that proposed development will not result in any significant environmental impacts and will provide a high quality industrial and warehouse development consistent with the intent for the area, and which will positively contribute to the realisation of the vision for the Western Sydney Employment Area.

Appropriate mitigation measures have been outlined in response to any potential impacts that were identified as part of the assessment.

Conclusion and Justification

The EIS addresses the DGRs, and provides the conceptual proposals for an industrial estate (the Staged DA) as well as the detailed proposal for a concurrent DA for the Stage 1 Warehouse Building.

The potential impacts of the development are acceptable and are able to be effectively managed. Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning and Infrastructure.

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning and Infrastructure pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in support of an application for State Significant Development (SSD).

Development for warehouses or distribution centres with a capital investment value of more than \$50 million is identified in clause 12 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* and is therefore declared to be SSD for the purposes of the EP&A Act.

The report has been prepared by JBA on behalf of Gazcorp Pty Ltd, and is based on the Masterplan and Architectural Drawings provided by MBMO Architects (see **Appendices A and B**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the Requirements of the Director General of the Department of Planning and Infrastructure for the preparation of the EIS (the DGRs), which are included at **Appendix C**.

This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

1.1 Overview of Proposed Development

This application seeks approval for development of an industrial estate comprising warehouse and distribution facilities. Specifically the application seeks the following:

- Staged development consent of the conceptual proposal for an overall Masterplan of an industrial estate containing warehouse and distribution related facilities over the whole Site. Each warehouse building will be the subject of a subsequent individual development application and are intended to be constructed in stages in response to market demands. It is expected that these additional facilities will range in size, depending on tenant needs.
- Detailed development consent for Stage 1 of the Masterplan involving the construction of a warehouse/ distribution facility, including ancillary offices and on-site services and amenities within the western portion of the Site as well as the associated essential infrastructure required for access and services, including:
 - The access road and new intersection on Wallgrove Road.
 - The provision of water, sewer and electricity infrastructure to the estate.

In seeking a combined staged and detailed consent, the proposal will comprise the following key components:

- New Proposed Southern Link Road (SLR) – dedication of land for a new regional road consistent with the preferred alignment of the Southern Link Road (SLR) along the northern boundary of the Site parallel to the existing Sydney Catchment Authority (SCA) Water Pipeline. The new road will connect to Wallgrove Road and will provide access to the land further to the west.
- Extension of existing electrical transmission easement – an allowance has been provided within the Site for proposed 30m extension of the existing Transgrid electrical easement and transmission lines running along part of the southern

Site boundary. Approximately 15m of the extended easement impacts on the Site.

- Stormwater and Drainage – the proposal includes a detailed whole of site stormwater and drainage plan, as well as temporary state on-site water detention (OSD) solution until the entire Site has been fully developed. As part of the initial stage of works it is proposed that interim OSD basins will be provided near the north-west and south east corners of the Site.
- Bulk Earthworks – A bulk earthworks strategy has been prepared for the first stage of development. The plan achieves a balanced approach to earthworks relative to the Site topography, and allows for flexibility in the future staged development of the Site in response to market requirements. Indicative building pad levels for each development site have been established to confirm that the bulk earthworks will be balanced over the full development of the Masterplan.
- Internal Road Network - Each of the warehouses will be serviced by an internal estate road capable of accommodating both heavy and light vehicles. The proposal seeks development approval for the entire proposed internal estate road to provide access to and service the warehouse development proposed as part of Stage 1.
- Ancillary Services and Development – It is intended that the future development of the Site may include smaller ancillary developments which will provide benefit to both on-site tenants and the greater public. These developments may be positioned near to the Wallgrove Road frontage for ease of access. Any such development will be in accordance with permissible zoning and will be the subject of future individual development applications.
- New warehouse building – Proposed Lot 10 will be developed to accommodate a new 45,225m² building to be used as a warehouse and/or distribution centre, and comprising some 3,000m² of associated office space.

The Staged DA seeks approval for the conceptual proposals across the whole Site (the Masterplan). The detailed DA seeks approval for the Stage 1 works, which include the Stage 1 Warehouse Building and the supporting infrastructure, including the internal access road. An Indicative Masterplan that identifies the land to be included within the Staged DA is provided as **Appendix A**, and the plans of the Stage 1 works for which detailed development consent is sought are provided in **Appendix B**.

1.2 Background to the Development

1.2.1 Western Sydney Employment Area (WSEA)

In December 2005, the NSW Government announced the creation of the Western Sydney Employment Area (WSEA) covering approximately 2,450 hectares (ha) near the intersection of the M4 and M7 Motorways. The WSEA incorporates 10 precincts covering current and future employment lands in Blacktown, Penrith, Holroyd and Fairfield Local Government Areas (LGAs) which were at the time subject to a variety of planning regimes and different zones.

In August 2009, the *State Environmental Planning Policy (Western Sydney Employment Area) 2009* (WSEA SEPP) was gazetted, which provides consistent zoning and development control provisions to facilitate development of the WSEA for the purposes of employment and industry. The WSEA and its associated Precincts are illustrated in **Figure 1**.

The land owned by Gazcorp, and the subject of this application (the Site), is located within Precinct 8 of the WSEA known as “South of the Sydney

Catchment Authority (SCA) Warragamba Pipelines". Precinct 8 has a total area of 656 ha and the potential to generate up to 8,000 jobs. The site comprises approximately 52 ha of this Precinct. The site is predominantly zoned IN1 General Industrial under the WSEA SEPP with the exception of a small natural drainage line on the western boundary which is zoned E2 Environmental Conservation.

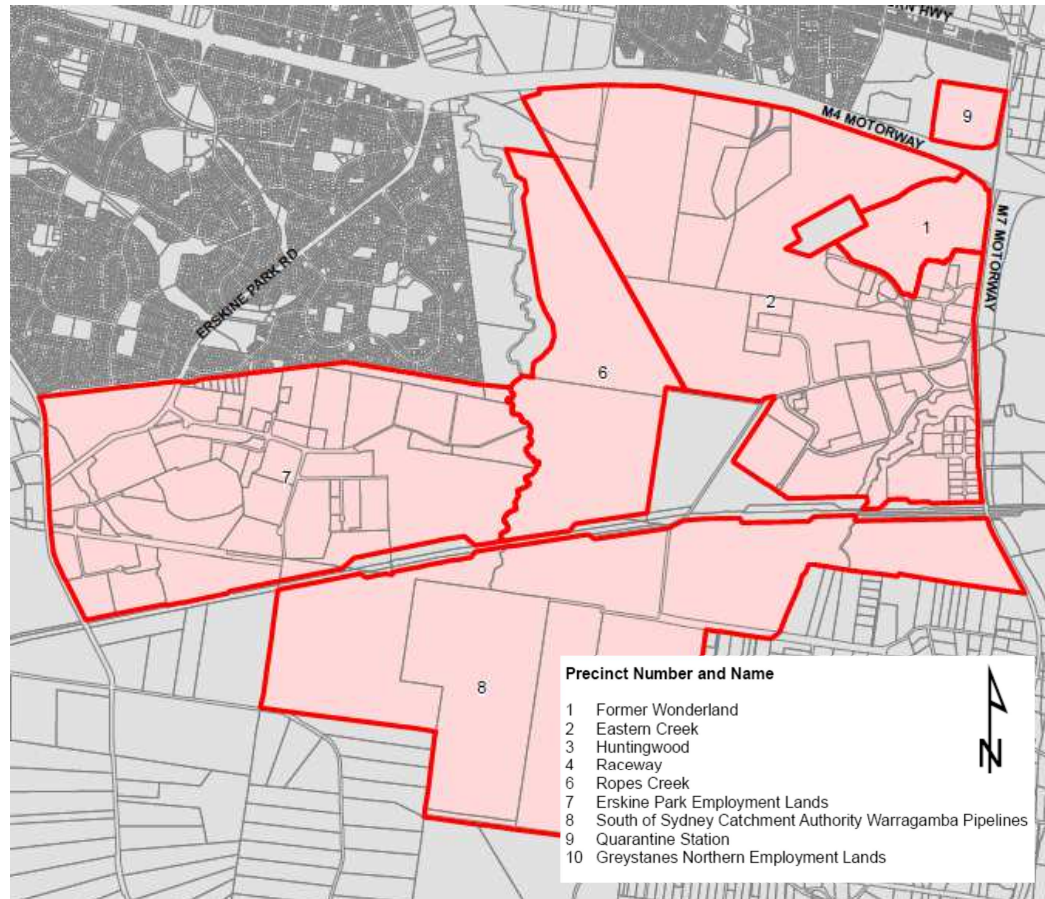


Figure 1 – Western Sydney Employment Area

Source: Department of Planning (WSEA SEPP)

1.3 Objectives of the Development

Taking into consideration the history and background of the area and the Government's desire to deliver new employment opportunities, the proposed development has undergone a thorough design process to ensure the achievement of a high quality development outcome which recognises and responds to the vision and strategic intent of the WSEA.

This process has included an analysis of the existing site conditions and the nature of the surrounding locality, and has involved the preparation and testing of a number of alternative options that are discussed below. There have been several key overarching objectives that have guided this process and the design of the proposed development, these being:

- Provide new high quality warehouse/distribution space in an appropriate location adjacent to key access/trade routes.
- Provide a layout that supports a range of building sizes and formats.

- Ensure that adequate vehicular and pedestrian access is provided in a safe and efficient manner and which does not significantly affect the function, efficiency and safety of the road network.
- Encourage buildings that are of architectural merit, diversity, scale and high quality built form, and which will contribute to the creation of a visually cohesive environment.
- Provide a site layout that supports a high quality landscaped environment and which minimises impacts on the environment.
- Ensure that new development has minimal impact on the amenity enjoyed by nearby rural residential properties.
- Balance the earthworks at the Site.

1.4 Analysis of Alternatives

1.4.1 Strategic need for the proposal

As is widely known, there is a significant and important need for the creation of additional job opportunities in Western Sydney to support the area's continued growth and to reinforce Sydney's position as the main economic driver of NSW and Australia.

The need for additional employment land was reaffirmed in December 2005 when the NSW Government announced the creation of WSEA covering approximately 2,450 ha, and again in 2009 when the WSEA was extended to include land south of the SCA Warragamba Pipelines.

Relevant strategic plans are considered in Section 3.3. Development of the Site for industrial development, including warehouse and distribution facilities, is clearly the long term strategic intent for the Site.

1.4.2 Alternative Options

Taking into consideration the above overarching objectives, a number of alternative options were considered and tested in seeking to identify the preferred development option for the Site.

Option A – Do Nothing

In considering the available alternatives, the option of no development was analysed.

The Site has been identified, through a State Environmental Planning Policy as being suitable for development for employment generating uses. If no development of the Site eventuated then it would not be possible to achieve any of the stated strategic planning intentions for the Site and would be inconsistent with the objectives of the WSEA SEPP, in particular, "economic development and the creation of employment in the Western Sydney Employment Area by providing for development including major warehousing, distribution, freight transport, industrial, high technology and research facilities."

As such a Do Nothing option was not considered to be an appropriate scenario for the Site.

Option B – Initial Design

The Site is subject of a number of constraints. Key Site constraints are:

- Reedy Creek and E2 Conservation Zone on the western boundary.
- Wallgrove Road on the eastern boundary.

- Proposed new Southern Link Road to form a new northern boundary of the Site.
- Transgrid transmission line and easement on the southern boundary of the Site.
- Challenging topography, including a large hill, with a total height of 35m from base to summit, located generally in the south-central part of the Site.

An over-riding objective of the proposed development is to maximise the development potential of the Site, through creating level development sites of an adequate size for modern warehousing and industrial buildings, whilst also balancing the earthworks at the Site. Generally, this means that material won from cutting of the hill would be used to fill the lower parts of the Site on the eastern, western and northern boundaries. This has led to the location of larger development lots at the western end of the Site, along the northern boundary and in the south-east corner of the Site. The Site would need to be terraced along the southern edge in order to manage the hill. An early iteration of the development concept is provided in **Figure 2**.

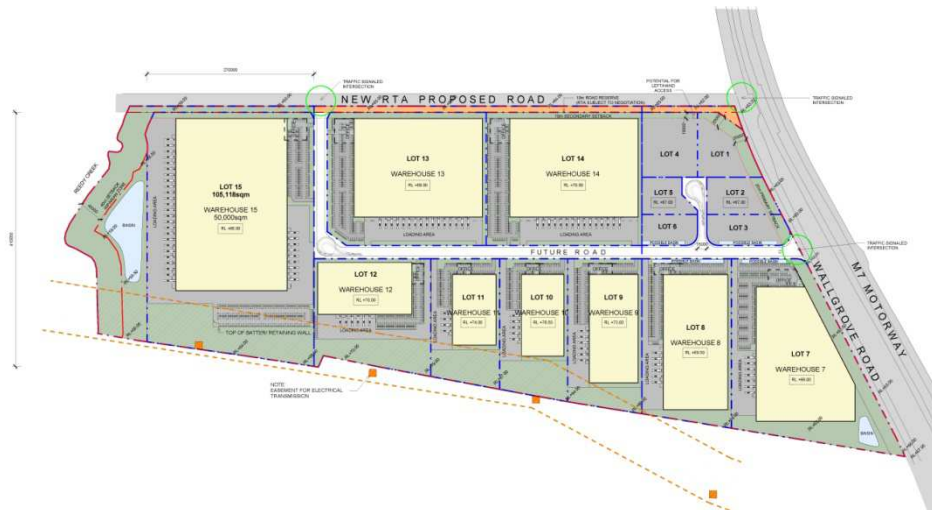


Figure 2 – Option B: Initial Design

Site Access Options

In consultation with the RMS three access scenarios for the Site were tested:

- The proposed estate road would connect to the road network via a signalised intersection on the northern edge of the property at the SLR and a signalised intersection on the eastern edge of the property at Wallgrove Road.
- The proposed estate road would connect to the road network via a signalised intersection on the northern edge of the property at the proposed SLR and a priority intersection on the eastern edge of the property at Wallgrove Road allowing left in and left out movements only.
- The proposed estate road would connect to the road network via a signalised intersection on the eastern edge of the property with Wallgrove Road.

A single signalised intersection on Wallgrove Road was modelled to be the best performing option as it reduces the number of signalised intersections and the modelled average delay at the proposed SLR and Wallgrove Road intersection is also reduced, as a proportion of traffic that would turn right into the SLR would now turn right further south.

After an analysis of the feasible design alternatives, it was identified that the development as proposed (and described in Section 4 of this EIS) would produce the best possible outcome for the Site. This development will meet the stated objectives of the development, contribute to satisfying the current and future business space needs, will deliver a significant number of new job opportunities in Western Sydney, and will result in a positive built form and environmental outcome for the Site.

1.5 Director General's Requirements

In accordance with section 89G of the EP&A Act, the Director-General of the DP&I issued the requirements for the preparation of the EIS on 14 May 2012. A copy of the Director General's Requirements (DGRs) is included at **Appendix C**.

The DGRs established that the proposal must meet the requirements of Schedule 2 of the EP&A Act, specifically the form specifications in Clause 6 and the content specifications in Clause 7. Several stakeholders were also identified with whom consultation must occur during the preparation of the EIS.

Table 1 provides a detailed summary of the individual matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1 – Director General's Requirements

Requirement	Location in Environmental Assessment
General	
– The Environmental Impact Statement (EIS) must address the <i>Environmental Planning and Assessment Act 1979</i> and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000.	Environmental Impact Statement
– Clause 6 - Form of environmental impact statement – (a) the name, address and professional qualifications of the person by whom the statement is prepared, – (b) the name and address of the responsible person, – (c) the address of the land: – (i) in respect of which the development application is to be made, or – (ii) on which the activity or infrastructure to which the statement relates is to be carried out, – (d) a description of the development, activity or infrastructure to which the statement relates, – (e) an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule, – (f) a declaration by the person by whom the statement is prepared to the effect that: – (i) the statement has been prepared in accordance with this Schedule, and – (ii) the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and – (iii) that the information contained in the statement is neither false nor misleading.	Statement of Validity (a), (b), (c), (d), (f) Section 7 (e)
– Clause 7 - Content of environmental impact statement – An environmental impact statement must also include each of the following: – (a) a summary of the environmental impact statement, – (b) a statement of the objectives of the development, activity or infrastructure, – (c) an analysis of any feasible alternatives to the carrying out of the	(a) Executive Summary provided in page ii (b) Section 1.3 (c) Section 1.4

Requirement	Location in Environmental Assessment	
development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure, – (d) an analysis of the development, activity or infrastructure, including: – (i) a full description of the development, activity or infrastructure, and – (ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and – (iii) the likely impact on the environment of the development, activity or infrastructure, and – (iv) a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and – (v) a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out, – (e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv), – (f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development.	(d)(i) Sections 4 and 5 (d)(ii) Section 2 (d)(iii) Section 7 (d)(iv) Section 7 (d)(v) Section 3.1.2 (e) Section 8 (f) Section 9	
Key Issues	Report / EIS	Technical Study
1) Environmental Planning Instruments (EPIs)	Sections 3 and 7.1	-
2) Policies, Guidelines and Planning Agreements	Section 3.3 and 7.1	-
3) Layout and Urban Design	Section 7.3	Appendix A, B & L
4) Economic Impact	Section 7.4	-
5) Ecologically Sustainable Development (ESD)	Section 5.7 and 9.3	-
6) Noise	Section 7.5	Appendix Q
7) Transport and Accessibility (Construction and Operation)	Section 7.6	Appendix J
8) Sediment, Erosion and Dust Control (Construction and Excavation)	Section 7.8	Appendix M
9) Infrastructure Requirements	Section 7.9	Appendix H
10) Flora and Fauna	Section 7.10	Appendix F
11) Bushfire	Section 7.11	Appendix S
12) Utilities	Section 7.9	Appendix H & K
13) Staging	Section 4.2.3	Appendix A
14) Contributions	Section 4.3 and 5.10	-
15) Flood and Stormwater Drainage Management	Section 7.12	Appendix K Appendix R
16) Waste	Section 7.13	-
17) Heritage	Section 7.14	Appendix N
18) Aboriginal Cultural Heritage	Section 7.14	Appendix N
19) Archaeological Impacts	Section 7.14	Appendix N
20) Amenity	Section 7.15	Appendix A Appendix Q

Requirement	Location in Environmental Assessment	
	Report	Technical Study
Plans and Documents		
Conceptual Site Plans (the Masterplan) and Detailed Stage 1 Warehouse Building and Infrastructure Drawings	Section 5.4	Appendix A & B
Survey Plan	-	Appendix D
Draft Plan of Subdivision	No subdivision is proposed as part of Stage 1 works. Indicative layout of development lots is provided in Appendix A	
Demolition Plan	Not provided. No demolition is proposed.	
Remediation Plan	Not provided. No remediation is proposed.	
Earthworks Plan	-	Appendix M
Stormwater Concept Plan	-	Appendix K
Landscape Plan	-	Appendix O
Construction Management Plan	Not provided. A Construction Management Plan will be provided prior to the commencement of construction.	
Geotechnical Report	-	Appendix G
Structural Report	Not provided. The Stage 1 building has no potential to impact on off-site structures.	
Noise Report	-	Appendix Q
Consultation		
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners, including: Fairfield City Council, Roads and Maritime Services, Transport for NSW, Office of Environment and Heritage, Environment Protection Authority, NSW Rural Fire Service, NSW Office of Water, Sydney Catchment Authority, and Sydney Water. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	Section 6.0	-

2.0 Site Analysis

2.1 Site Location and Context

The Site is located at Gazcorp Industrial Estate, Wallgrove Road within the Fairfield Local Government Area. It is approximately 33km west of the Sydney Central Business District (CBD) and 11km to the north west of Fairfield City Centre. The Site falls within the Western Sydney Employment Area (WSEA) under the *State Environmental Planning Policy (Western Sydney Employment Area) 2009* and is within the bounds of the Industrial Release Area Map. It is in close proximity to the M4 Motorway and its intersection with the Westlink M7 Motorway, providing excellent access to both the state and regional road network, as well as to surrounding employment and industrial lands.

The Site is approximately 52.2 hectares (ha) in size and rectangular in shape, with a 680m frontage to Wallgrove Road on the east border (see **Figure 1**) which offers both on and off ramps from the Westlink M7 Motorway approximately 1km to the north, and the M4 Motorway approximately 2.5km to the north. A Sydney Catchment Authority (SCA) pipeline lies on the northern border of the Site. It is along this northern boundary between the Site and the SCA pipeline that it is proposed to construct the RMS's Southern Link Road which will service the WSEA, ultimately connecting to Mamre Road in the west of the WSEA.

Reedy Creek riparian corridor forms the western border and to the south of the Site are fragmented rural-residential lots, which together with the Site contain a Transgrid transmission line. Transgrid proposes to expand the existing easement in this location to accommodate future network enhancements.

The Site is also positioned near a number of significant industrial areas including Eastern Creek and Minchinbury to the north, Erskine Park to the west, and Wetherill Park to the east.

The nearest suburban residential area to the Site is Bossley Park and surrounding suburbs which are located approximately 5.5km to the south east, and Minchinbury approximately 4.5km to the north-west.

The site's locational context is shown at **Figure 3**.

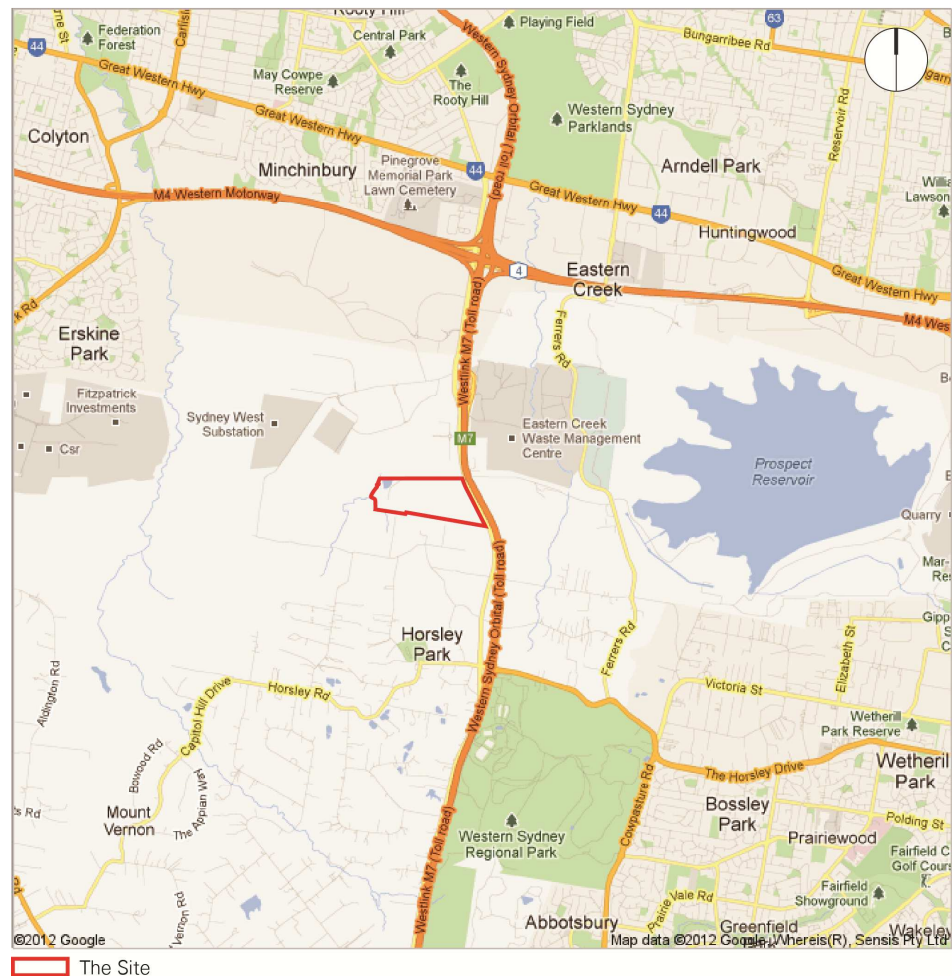


Figure 3 – Location plan

2.2 Site Description

The site is legally described as Lot 5 of DP 24090. The land is owned by Gazcorp Pty Ltd.

The Site is rectangular in shape with an area of approximately 52.2ha. The Site has a 680m frontage to Wallgrove Road to the east, a 980m northern boundary along the SCA Pipeline, a 530m western boundary which consists of a natural water course and Riparian Corridor and a southern boundary approximately 1300m which generally follows the Transgrid Transmission line.

The un-developed Site is currently accessible by a road off Wallgrove Road. The Site is characterised by undulating topography including one large hill situated within the middle of the Site, which slopes down towards the Wallgrove Road frontage to the east and towards Reedy Creek to the west. Reedy Creek flows from south to north along the western boundary of the Site. Fragmented bushland exists along the western boundary and contributes to a riparian corridor that follows Reedy Creek.

The Site is largely cleared of its natural vegetation and is currently used as a grazing pasture for cattle and horses. The only significant structures on the Site are a large metal shed and a large stock holding yard. A survey plan is located at Appendix D.

An aerial and photos of the site is shown at **Figures 4 to 7**.



 The Site

Figure 4 – Site Plan



Figure 5 – View northwest from crest of small hill. Small dam at the left, electricity transmission line and the Austral Bricks Quarry in the background



Figure 6 – View West. Typical ground level and cover throughout the Site



Figure 7 – View from crest of hill looking south east. Transmission lines shown to the right

2.2.1 Site Access

Existing access to the Site is via Wallgrove Road to the east which intersects with Old Wallgrove Road to the north and provides access to the M7 Motorway.

The M7 Motorway provides a key western link between the M2 (in the north) and the M5 (in the south). In the vicinity of the Gazcorp development site, the M7 Motorway has four traffic lanes with a divided carriageway. A major interchanges is located at the M4 Motorway, and access is available at Old Wallgrove Road (to the north of the site) and at The Horsley Drive (to the south). The speed limit on the M7 Motorway is 100km/h and it carries about 70,000 vehicles per day.

Wallgrove Road is a four lane, two-way, un-divided arterial road which connects Elizabeth Drive with the Great Western Highway. Wallgrove Road runs parallel to the M7 Motorway. The speed limit is 70 km/h and it carries about 30,000 vehicles per day.

2.2.2 Topography

The terrain within the Site is gently undulating with one large hill situated in the middle of the site sloping down towards the Wallgrove Road frontage to the east and towards Reedy Creek to the west.

As shown in the accompanying Survey Plan located at **Appendix D**, the highest point of the Site is along the site's southern boundary at the top of the existing hill and has a height of RL96m. The lowest point of the Site is located on the western boundary and the south-eastern corner and has a height of less than RL60m.

2.2.3 Vegetation

The Site has a long history of agricultural land use and has therefore been largely cleared in the past. As a result only patches of vegetation remain scattered throughout the site. An Ecological Impact Assessment has been undertaken for the site by Cumberland Ecology and has identified that the site is typical of pasture properties in Western Sydney and is largely dominated by a number of pasture grass species and pasture weeds.

Approximately half of the diversity of flora species recorded at the Site comprise introduced species, while the native species present comprise a number of regenerating patches spread across the Site that consist of open forest and woodland at various stages of canopy regeneration.

The Site is also occupied by a riparian woodland area located along its western boundary and which occurs as a narrow interrupted band of vegetation along Reedy Creek.

Further details of the Site's vegetation are included within **Section 7.10** and the accompanying Ecological Impact Assessment (**Appendix F**).

2.2.4 Ground and Groundwater Conditions

An analysis of the soil conditions has been carried out by Douglas Partners and is detailed in the Geotechnical Investigation Report provided at **Appendix G** and the Contamination Assessment Reports (Phase 1 and 2) provided at **Appendix P**.

The reports identify that no free groundwater was observed during augering. Notwithstanding this, it is expected that the majority of rainfall at the Site currently infiltrates the unsealed surfaces, and flows away from the peak of the hill in all directions, some of which would enter the on-site dams. The net flow of infiltrated rainwater is expected to be to the west and north towards Reedy Creek, which flows northwards along the western site boundary.

2.2.5 Utilities and Infrastructure

The Site is not currently serviced by key services and utilities. Such infrastructure will be provided as part of the development as set out in the accompanying Infrastructure and Services Report (**Appendix H**) and described in **Sections 4 and 5**.

2.3 Surrounding Development

2.3.1 South of the Site

Bordering the Site to the south is a Transgrid Transmission Line, which is included within an easement that runs for most of the length of the site's southern boundary.

Immediately adjacent to this (south of the easement) are a number of rural residential lots that are largely cleared and contain a mix of sheds and residential dwellings. It is noted that only a small number of lots share a common boundary with the Site.

Land uses to the south include a mix of intensive small-scale rural activities, such as wood-chipping (for landscape supplies), market gardens, and a piggery as well as dwellings.

2.3.2 North of the Site

The north of the site is bordered by a SCA pipeline. Land adjacent to this (between the pipeline and the Site) is proposed to be used to construct the new RMS Southern Link Road that will service the WSEA. Further north are a series of industrial and warehouse uses included within land known as the 'Oakdale Precinct / M7 Hub'. This area comprises a number of large industrial buildings and warehouses ranging in height from one to three storeys. Businesses operating out of these buildings include Coca Cola Amatil, Toll Express and Coles Myer Distribution.

Industrial and warehouse uses continue to be located further to the north and stretch up along the M7 Motorway up to the residential suburb of Minchinbury which lies to the north of the M4 Motorway.

2.3.3 East of the Site

To the immediate east of the Site is Wallgrove Road, and the M7 Motorway. On the opposite side of the M7 is the PGH brickworks facility owned by CSR Limited, while further east is the Prospect Reservoir and the Western Sydney Parklands, and further to industrial uses within Wetherill Park.

2.3.4 West of the Site

Bordering the Site to the west is the Reedy Creek riparian corridor and a select few rural residential lots and other large lots presently used as a quarry. Much of the land to the west is included as part of the area known as the "Oakdale Precinct", which is presently managed by Goodman. This land is intended to be redeveloped in the future for employment purposes as part of the WSEA.

3.0 Strategic and Statutory Planning Framework

3.1 Legislation

3.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

A detailed Ecological Impact Assessment was prepared by Cumberland Ecology, and is provided in **Appendix F**. The EIA concludes that the proposed development is not expected to have any significant impacts on matters of National Environmental Significance listed under the EPBC Act.

In particular, the native woodland on the Site that conforms to Cumberland Plain Woodland under the *Threatened Species Conservation Act 1995* (NSW) is too degraded to meet the EPBC Act listing for Cumberland Plain Woodland. No other vegetation communities on the Site conform to any EPBC Act listed threatened ecological community. Therefore, the Project is unlikely to have a significant impact on threatened ecological communities listed under the EPBC Act.

No other Matters of National Environmental Significance are expected to be impacted by the development.

3.1.2 Environmental Planning and Assessment Act 1979 (NSW)

The proposed development has been declared by the Minister as State Significant Development (SSD) under Division 4.1, Section 89C of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This application seeks approval for a Staged DA under Section 83B of the EP&A Act, including approval of conceptual proposals for the Site's overall development, as well as a detailed DA for the Stage 1 works, for the Stage 1 Warehouse Building and associated infrastructure.

In accordance with Section 83C(2) of the EP&A Act a staged DA can be submitted as an alternative to the preparation of a Development Control Plan (DCP) if a DCP is required by an environmental planning instrument. As described in Section 3.2.2 a DCP is required by the WSEA SEPP. As such, the Staged DA contains the information required to be included in the DCP.

The proposed development has been evaluated and assessed against the relevant heads of consideration under Section 79C of the EP&A Act, and is considered to be consistent with the objects of the EP&A Act for the following reasons:

- it promotes the orderly and economic use and development of land, and
- it has been designed to be responsive to the environment and does not result in an unacceptable impact on the environment, including native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
- it will provide an outcome that is consistent with the principles of ecologically sustainable development.

3.1.3 Environmental Planning and Assessment Regulation 2000 (NSW)

The EIS has addressed the specific criteria within clause 6 and clause 7 of Schedule 2 of the EP&A Regulation. Similarly, the EIS has addressed the principles of ecologically sustainable development in **Section 9**.

As required by Clause 7(1)(d)(v) of Schedule 2 of the EP&A Regulation, additional approvals will also be required in order to permit the proposed development to occur. **Table 2** provides an overview of legislation that does and does not apply to the proposed development.

Table 2 – Legislation that does not apply to State Significant Development

Act	Approval Required
Legislation that does not apply	
<i>Coastal Protection Act 1979</i>	No approvals required as the site is not within the coastal zone
<i>Fisheries Management Act 1994</i>	No approvals required as the development does not include dredging work, impact on marine vegetation or any proposal to block fish passage.
<i>Heritage Act 1977</i>	Not approvals required as there are no items listed as being of heritage significance that would be adversely impacted by the proposed development at the site.
<i>National Parks and Wildlife Act 1974</i>	But for Section 89J of the EP&A Act an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974 would be required for the proposed impacts to Aboriginal items.
<i>Native Vegetation Act 2003</i>	But for Section 89J of the EP&A Act an authorisation would be required under section 12 of the Native Vegetation Act 2003 to clear native vegetation.
<i>Rural Fires Act 1997</i>	The Assessment notes that the Fairfield Bushfire Prone Land Map shows that the Site contains areas of Category 1 Bushfire Prone Vegetation with the remainder being impacted by the buffer zone to the bushfire prone vegetation. Due to the low bushfire risk to the proposed Industrial Estate, the NSW Rural Fire Service has confirmed that there is no requirement for the preparation of a specific Bushfire Evacuation Plan or a Bushfire Management Plan. A bushfire safety authority is not required as the proposed development does not involve subdivision of the site for residential or rural residential purposes.
<i>Water Management Act 2000</i>	But for Section 89J of the EP&A Act a water management work approval under section 90 of the Water Management Act 2000 would be required for works on waterfront land (i.e. land within 40m of Reedy Creek).
Legislation that must be applied consistently	
<i>Fisheries Management Act 1994</i>	Not relevant – the proposal is not for aquaculture.
<i>Mine Subsidence Compensation Act 1961</i>	Not relevant – the Site is not in a Mine Subsidence District.
<i>Mining Act 1992</i>	Not relevant – the proposal is not mining.
<i>Petroleum (Onshore) Act 1991</i>	Not relevant – the proposal is not for production of petroleum.
<i>Protection of the Environment Operations Act 1997</i>	Not relevant – the proposal is not for development that requires an Environment Protection Licence.
<i>Roads Act 1993</i>	Approval from the RMS under Section 138 of the Roads Act 1993 will be required for construction of a new intersection at Wallgrove Road to provide access to the site.
<i>Pipelines Act 1967</i>	Not relevant – the proposal is not for a pipeline.

3.2 Environmental Planning Instruments

3.2.1 State Environmental Planning Policy (State & Regional Development) 2011

Under Schedule 1 Clause 12, Development for warehouse or distribution centres with a capital investment value of more than \$50 million is SSD. As the proposed development will have a capital investment value of approximately \$52 million (see **Appendix I**) it is defined as SSD.

3.2.2 State Environmental Planning Policy (Western Sydney Employment Area) 2009

Aims and Objectives

The site is included in the Western Sydney Employment Area as defined in the WSEA SEPP. The policy seeks to:

- a) promote economic development and the creation of employment in the Western Sydney Employment Area by providing for development including major warehousing, distribution, freight transport, industrial, high technology and research facilities,*
- b) provide for the co-ordinated planning and development of land in the Western Sydney Employment Area,*
- c) rezone land for employment or environmental conservation purposes,*
- d) improve certainty and regulatory efficiency by providing a consistent planning regime for future development and infrastructure provision in the Western Sydney Employment Area,*
- e) to ensure that development occurs in a logical, environmentally sensitive and cost-effective manner and only after a development control plan (including specific development controls) has been prepared for the land concerned,*
- f) conserve and rehabilitate areas that have a high biodiversity or heritage or cultural value, in particular areas of remnant vegetation.*

As set out in **Figure 10** the site is located in the General Industrial Zone under the SEPP. The objectives of this zone are:

- To facilitate a wide range of employment-generating development including industrial, manufacturing, warehousing, storage and research uses and ancillary office space.
- To encourage employment opportunities along motorway corridors, including the M7 and M4.
- To minimise any adverse effect of industry on other land uses.
- To facilitate road network links to the M7 and M4 Motorways.
- To encourage a high standard of development that does not prejudice the sustainability of other enterprises or the environment.
- To provide for small-scale local services such as commercial, retail and community facilities (including child care facilities) that service or support the needs of employment-generating uses in the zone.

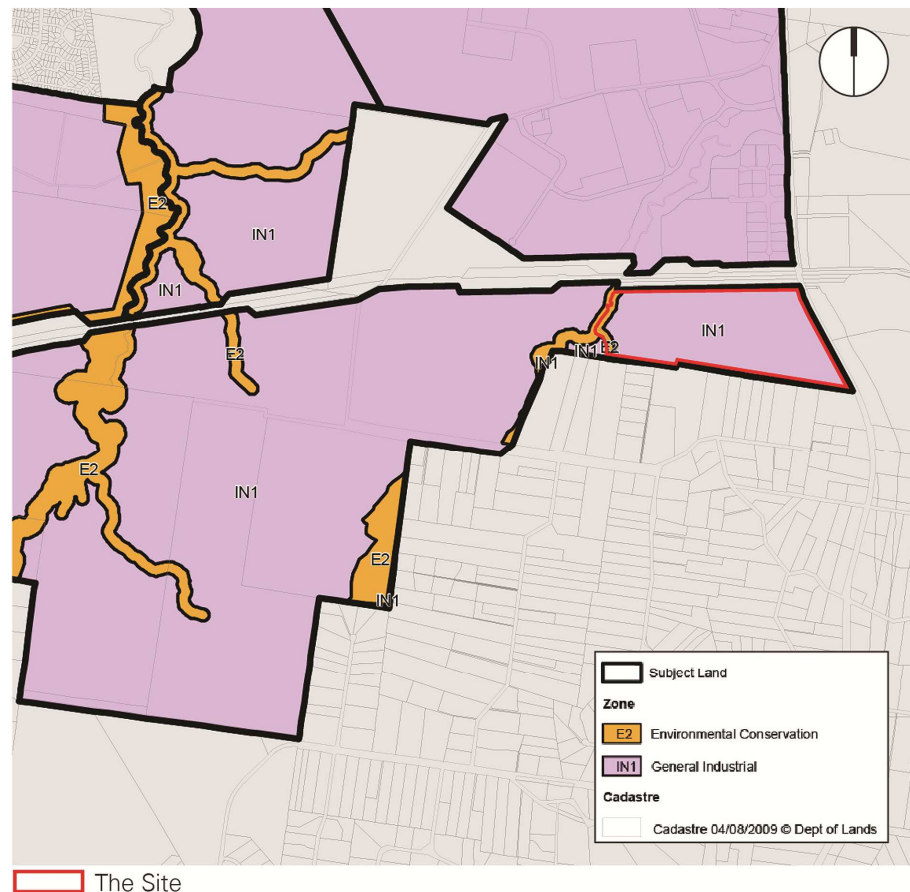


Figure 8 – WSEA Zoning

The proposed development is for a warehouse and industrial scheme that will facilitate the economic redevelopment of the site for a range of employment generating uses, and in doing so will provide an outcome that is consistent with the overarching policy and zone objectives of in the WSEA SEPP.

Development Control Plan

Clause 18(1) 'Requirement for development control plans' states:

"Except in such cases as the Director-General may determine by notice in writing to the consent authority or as provided by clause 19, the consent authority must not grant consent to development on any land to which this Policy applies unless a development control plan has been prepared for that land."

Under the SEPP a development control plan (DCP) is therefore required to be prepared for the Site prior to granting of consent for development at the Site. Schedule 4 of the SEPP sets out a number of matters to be addressed in the preparation of a DCP, these being:

- "traffic, parking and key access points,
- infrastructure services (including public transport),
- a detailed staging plan for any proposed development,
- biodiversity,
- flooding,
- urban design and landscaping,

- subdivision layout,
- heritage conservation (both indigenous and non-indigenous),
- extraction and rehabilitation,
- protection of the Sydney Catchment Authority Warragamba Pipelines,
- protection of electricity transmission facilities,
- management of the public domain,
- community and retail facilities.”

As described in **Section 3.1.1** above, Section 83C(2) of the EP&A Act provides that a Staged DA can be submitted as an alternative to the preparation of a DCP. This EIS supports a Staged DA for this purpose and therefore contains the information required to be included in the DCP.

Permissibility

The IN1 zone permits:

Depots; Food and drink premises; Freight transport facilities; Industrial retail outlets; Industrial training facilities; Industries (other than offensive or hazardous industries); Neighbourhood shops; Roads; Service stations; Transport depots; Truck depots; Warehouse or distribution centres.

This Staged DA seeks approval for a conceptual proposal that that would provide for an industrial estate to be used for permissible uses as listed above, generally being warehouse or other industrial buildings, depots or transport facilities. The Stage 1 detailed DA is for a warehouse and distribution centre, which is permissible with consent.

Development Controls

Section 7.1 sets out the development controls within the WSEA SEPP, and how these development controls have been addressed in relation to the Stage 1 warehouse building.

3.2.3 State Environmental Planning Policy No.33 – Hazardous and Offensive Development

SEPP 33 defines hazardous and offensive development (and ‘potentially hazardous’ and ‘potentially offensive’ development), and sets out an assessment regime for assessing potentially hazardous and potentially offensive development to ensure no unacceptable off-site impacts occur.

The proposed development is not potentially hazardous, because it does include proposals to store or handle dangerous goods above the screening thresholds specified in the Department of Urban Affairs and Planning’s guideline *Applying SEPP 33*.

The proposed development is not potentially offensive development because it does not include any activities that are likely to generate odour or to require an Environment Protection Licence from the Environment Protection Authority.

3.2.4 State Environmental Planning Policy No.55 – Remediation of Land

SEPP 55 sets out a State-wide planning approach to remediation of contaminated land which includes ensuring that remediation work is permissible throughout the State.

A comprehensive contamination assessment has been carried out (see **Section 7.2** and **Appendix P**), which concludes that the Site is suitable in its current state to be developed for industrial development without the need for any remediation.

3.2.5 State Environmental Planning Policy (Infrastructure) 2007

The proposed development is identified as traffic generating development under Schedule 3 of *State Environmental Planning Policy (Infrastructure) 2007*. Referral to the RMS is therefore required under Clause 104 of the SEPP.

3.3 Policies and Guidelines

3.3.1 NSW State Plan

The NSW State Plan sets out a 10 year plan to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability, and strengthen the local environment and communities. Improving the performance of the NSW economy is a key objective of the State Plan which seeks to grow business investment by an average of 4% per year to 2020 and Gross State Product per capita by 1.5% per year on average. To do this, amongst other things the State Plan commits to:

- Target and attract potential international investors into priority sectors, especially where we have overseas NSW trade and investment, tourism or education offices;
- Promote the capabilities of NSW industries in key overseas markets by delivering an annual program of international events and promotions to profile NSW, support exporters and attract investors, including national 'flagship' events such as G'day USA.
- Developing Industry Action Plans in partnership with the industries
- Target the creation of 100,000 more jobs through a Jobs Action Plan;
- Work more effectively with Local and Commonwealth Government agencies to overcome impediments to industry growth across NSW;
- Support small and medium sized businesses through the creation of the Office for Small Business and the Small Business Commissioner and by paying government bills within 30 days

3.3.2 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 sets out a broad strategic framework to facilitate and manage growth and development of Sydney over the next 25 years. The Plan states that by 2036 Sydney will be a more compact, networked city with improved accessibility, capable of supporting more jobs, homes and lifestyle opportunities within the existing footprint. It seeks to address the challenges facing Sydney by providing an integrated, long-term planning framework based around a series of key strategic directions and objectives, including:

- Planning for 760,000 new jobs, with half planned for Western Sydney focussing on cities and centres;
- Develop detailed land use, transport and infrastructure plans for Western Sydney employment areas;
- Target development around existing and planned transport capacity;
- Enhance capacity on Sydney's motorways at key locations;
- Identify long-term transport corridors for passengers and freight.

The Metropolitan Strategy sets a growth target of 230,000 new jobs for Western Sydney by 2031. A key part of this is the release of new employment lands, including land located immediately south of the Sydney water pipeline as a future employment land area (including the subject site). This area is now covered under the Western Sydney Employment Area SEPP2009.

West Central Subregion Draft Subregional Strategy

The West Central Subregion Draft Subregional Strategy identifies that the Subregion has an employment capacity target of 61,000 by 2031, and this includes the Western Sydney Employment Hub which is expected to deliver approximately 36,000 new jobs.

The subject site is identified in the Subregional Strategy for Industrial Use and falls within the area identified as Smithfield in the Subregional Strategy. Land within this area is identified as primarily comprising manufacturing businesses, light utilities services, freight and logistics.

These lands, including the subject site, are meant to be retained for employment generating uses.

3.3.3 Fairfield Employment Lands Strategy 2008

The Fairfield Employment Lands Strategy 2008 was prepared to provide a vision and an appropriate (through DCP and LEP amendments) to attract employment generating uses into the Fairfield LGA. It sets out a number of recommendations and guiding principles for industrial and employment lands, including:

- Encourage the clustering of industries. Businesses and industries with similar environmental impacts and business synergies can be clustered to reduce land use conflicts, improving business efficiency and identity. To a large extent clusters are market driven and Council's role should be to encourage and accommodate these clusters via LEPs and DCPs.
- General industrial land should ideally be separated from residential neighbourhoods and other sensitive land uses. Appropriate buffers should be put in place. The adequacy of buffer zones is an important issue for general industrial. Increasing awareness of environmental impact of noise and gas emissions is making the placement of general industry increasingly difficult.
- Establish a broad range of general industrial land uses (not hazardous or offensive) and permit general industrial land uses only within the IN1 – General Industrial Zone under the Standard Instrument LEP Template.
- Establish a broad range of light industrial land uses, prohibit heavy industrial uses (and all other industry not identified as light), prohibit retail uses including bulky goods retailing (permit neighbourhood shops only).

In addition to the above, the Employment Lands Strategy 2008 recommends that those parcels of industrial land that fall within the Fairfield LGA and which are part of the WSEA, be zoned to IN1 – General Industrial Zone. The proposed development is therefore considered to provide an outcome that is consistent with the Fairfield Employment Lands Strategy 2008.

3.3.4 Fairfield Retail and Commercial Centres Study 2005

The *Fairfield Retail and Commercial Centres Study 2005* presents the findings of a study the main focus of which has been an examination of the four major retail/commercial centres in Fairfield, being Fairfield CBD, Cabramatta, Bonnyrigg Town Centre and Prairiewood. The recommendations of this study include:

- Council should adopt a description of a “system of centres” rather than a retail hierarchy.
- Council should prepare and adopt a new retail policy that specifically describes the retail role of each of the centre types in Fairfield and outline the criteria by which Council will evaluate new retail development proposals in each type of centre.
- Council should review the definition of bulky goods and give consideration to restricting the number of small retail outlets which can establish in new bulky goods centres in Fairfield LGA.
- Council should redefine “convenience store” and include locational guidelines for convenience stores in Fairfield LGA.
- Council should review its approach to commercial development in industrial areas in Fairfield in the context of recent development trends and the potential for a change in the nature of activities and employment in industrial areas generally.
- Projects in industrial areas containing >2,500 square metres of commercial floor space be located within 400 metres of access to public transport.

The proposed development is for industrial development within a new industrial area, and does not include for any retail outlets of commercial development. As such, the proposed development will have no impact on Council’s ability to implement the recommendations of the *Fairfield Retail and Commercial Centres Study 2005*.

3.3.5 Direct (Section 94) Development Contributions Plan 2011

The *Environmental Planning and Assessment Act 1979* (EP&A Act) enables Fairfield City Council (Council) to levy contributions on development for the provision of community infrastructure, which is required as a consequence of that development. Accordingly, the general purpose of the *Direct (Section 94) Development Contributions Plan 2011* plan is:

- To assist in identifying the need for infrastructure to support future development in the Local Government Area; and
- To enable the application of relevant conditions and collection of development contributions through the development consent process; and
- To provide a basis for directing the funds collected toward the identified needs.

The *Direct (Section 94) Development Contributions Plan 2011* plan does not apply to Horsley Park, and so does not apply to the site or any development at the site.

3.3.6 Indirect (Section 94A) Development Contributions Plan 2011

The purposes of this plan are to:

- authorise the Council to impose as a condition of development or as a condition on complying development certificates, a requirement that the applicant pay to the Council a levy determined in accordance with this plan;
- assist the Council to provide the appropriate public facilities, infrastructure and services, which are required to maintain and enhance the amenity of those who live, work and recreate in Fairfield City;
- publicly identify the specific activities for which the levies are required; and
- govern the application of money to those activities.

This plan applies to all applications for development consent and complying development certificates required to be made by or under Part 4 of the Act in respect of development on land to which this plan applies, *except* development identified in relevant Ministerial Directions where Indirect Contributions cannot be imposed, or any development proposal relating to the land to which the *Direct (Section 94) Contributions Plan 2011* applies that results in an increase in:

- the number of residential dwellings or occupancies;
- the number of residential development lots; or
- the area of commercial or retail floor space where a developer cannot provide the required car spaces on site; or
- any combination of the above.

The proposed development is for industrial development which is not on land the subject of the *Direct (Section 94) Development Contributions Plan 2011*, and which is not the subject of a Ministerial Direction specifying that Indirect Contributions cannot be imposed. As such, the *Indirect (Section 94A) Development Contributions Plan 2011* (Indirect Contributions Plan) applies to the proposed development.

The Indirect Contributions Plan authorises a condition of development consent consistent with the Minister for Planning Direction under Section 94E of the EP&A Act, dated 10 November 2006, which specifies that the indirect development contribution levy is to be a maximum of 1% of the cost of the development. The consent authority is not obligated to impose such a condition or to impose the maximum percentage.

The Indirect Contributions Plan further specifies that the indirect development contributions levy will be directed towards expenditure for the following items:

- Traffic Management Projects.
- Major/Local/Neighbourhood Centre Improvement Project.
- Access Upgrades to Council Facilities.
- Open Space Acquisition and Embellishment across the City.
- Fairfield Library Extension.

The proposed development makes provision for all necessary local amenities for its employees and visitors at the site. Due to the nature of surrounding land uses (motorway corridor and Western Sydney Parklands to the east, industrial land to the north and west, and rural land to the south) limited services provided by Fairfield Council are available immediately surrounding the site. The development

is therefore not expected to require the provision of, or increase the demand for, public amenities and public services in the vicinity of the site.

It is highlighted that all traffic will utilise Wallgrove Road to access the site. Wallgrove Road is a State Categorised Main Road (MR515), which means that it is entirely managed and financed by the NSW Government (through the RMS). Further, the closest centres to the site are located at Greenway Plaza and Prairiewood, both over 6km away, and accessed almost entirely by the State managed and funded Main Roads (being Wallgrove Road, MR515 and The Horsley Drive, MR609). Further, much of the land to the east and south-east of the site is owned and operated by the NSW Government through the Western Sydney Parklands Trust. Any demand for public open space generated by the development of the site could be expected to be accommodated by the Western Sydney Parklands.

Given the significant separation of the site from the main centres in Fairfield, in terms of both physical distance and significant transport connections, there is no reason why the proposed development would contribute to demand for Council facilities elsewhere in Fairfield (including the library) or to demand for open space beyond the site. As such, it is not expected that the proposed development will impact significantly on the demand for public amenities and public services within Fairfield local government area.

In addition, no other approvals issued by the Minister for Planning and Infrastructure for industrial development within the South of the Warragamba Pipeline part of the WSEA require the payment of a local development contribution levy. In particular the Concept Plan Approval for the Oakdale Central Distribution Park (MP08_0065) and associated Project Approval for a DHL Logistics Hub (MP08_0066) do not require the payment of a local development contribution levy. As with the Gazcorp site, Oakdale is within the local government area of Fairfield and the Western Sydney Employment Area.

As such, contribution towards local infrastructure is not warranted and it is requested that the Minister for Planning and Infrastructure not impose a local infrastructure contribution levy on the development as part of the approval.

3.3.7 Development Near Rail Corridors and Busy Roads – Interim Guideline

The aim of the Guideline is to assist in reducing the health impacts of rail and road noise and adverse air quality on sensitive development adjacent to rail corridors and busy roads. Whilst the site is adjacent to the M7 / Wallgrove Road corridor (which is a busy road), the proposed development is for industrial development (which is not a sensitive development). As such, the guideline is not relevant to the proposal.

4.0 Staged DA (The Masterplan)

This section provides a description of the conceptual proposals for the site-wide development. Drawings of the conceptual proposal for the entire Site have been prepared by MBMO Architects and are included at **Appendix A**.

Staged development consent is sought under Section 83B of the EP&A Act for the following development, which is described in more detail in **Section 4.1** below:

- Indicative layout and configuration of development sites, structured around the central internal access road;
- Gross floor areas for warehousing and associated offices;
- Indicative building envelopes, including maximum heights and minimum setbacks.
- Indicative vehicular access and car parking arrangements.

In accordance with Section 83C(3) of the EP&A Act, the Staged DA is required to address the issues that would otherwise be required to be addressed in the DCP. These issues are addressed in **Section 4.2** below.

Detailed development consent is also being sought for the Stage 1 Warehouse Building located at Lot 10, and associated infrastructure (including extension and augmentation of services and utilities, construction of an internal road network with a new intersection on Wallgrove Road. The works included in the detailed DA are described in more detail in **Section 5**.

4.1 Conceptual Proposal

4.1.1 Summary

The proposed Masterplan is shown in **Figure 9** below and is located at **Appendix A**. Key attributes of the Masterplan include:

- An indicative layout of fifteen (15) new industrial development sites of varying size and dimensions.
- Indicative building envelopes tailored to accommodate future industrial/warehouse uses and sited to effectively integrate with the proposed layout.
- A central service road that will provide direct access to the development sites via a signalised connection with Wallgrove Road.
- Allocated space to account for the future parking and servicing needs of each proposed development site.
- Landscaped open space along the Wallgrove Road frontage, around the site periphery and along the proposed new central roadway.
- A 20-30 metre riparian setback zone along the site's western boundary to Reedy Creek.



Figure 9 – Proposed Masterplan

NOTES: 1. THIS PLAN IS A PROPOSED MASTERPLAN FOR THE DEVELOPMENT OF THE INDUSTRIAL ESTATE AT 813/913 WALLGROVE ROAD, EASTERN CREEK NSW. IT IS NOT A FINAL DESIGN AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES. 2. THE MASTERPLAN IS BASED ON THE INFORMATION PROVIDED BY THE CLIENT AND THE DESIGN TEAM. IT IS NOT A GUARANTEE OF THE ACCURACY OF THE INFORMATION. 3. THE MASTERPLAN IS SUBJECT TO APPROVAL BY THE RELEVANT AUTHORITIES. 4. THE MASTERPLAN IS SUBJECT TO CHANGES BASED ON THE REQUIREMENTS OF THE RELEVANT AUTHORITIES. 5. THE MASTERPLAN IS SUBJECT TO CHANGES BASED ON THE REQUIREMENTS OF THE CLIENT.	CLIENT: MBMO MORRIS BRAY MARTIN OILMANN 120000 813/913 WALLGROVE ROAD, EASTERN CREEK NSW	DESIGNER: GAZCORP PTY LTD 120000 813/913 WALLGROVE ROAD, EASTERN CREEK NSW	MASTER PLAN 813/913 WALLGROVE ROAD EASTERN CREEK NSW SCALE: 1:2000 DATE: 6/02/2014 DRAWN: DA-001 CHECKED: F

4.1.2 Numerical Overview

A numeric overview of the proposed Masterplan is detailed in **Table 3**. It is the intention of the Staged DA to provide sufficient details in order to assess the matters required to be addressed in the DCP on a site-wide basis. The numerical value set out in **Table 3** set out the envelope of development at the Site which forms the basis for which the DCP matters have been assessed.

Table 3 – Key Development Information

Component	Overall Site
Total Site Analysis (Percentages of total site area, excluding the SLR road reserve)	
Site area (total)	52.2 ha
Southern Link Road Reserve	2.5 ha (5%)
Area of Development Lots (Note: the lots include the Transgrid easement)	44.9 ha (86%)
Internal Access Road (including footpaths)	1.5 ha (3%)
Shared Landscaped Areas	2.3 ha (4%)
Riparian Corridor	0.85 ha (2%)
Built Area (Warehouses and Offices)	208,000 m ²
Gross Floor Area (GFA)	214,400 m ²
Floor Space Ratio (FSR) (across whole site, excluding the SLR road reserve))	0.43:1
Site coverage (across whole site, excluding the SLR road reserve)	0.42:1
Car Parking Spaces	2,089
Maximum building height	14m
Development Site Analysis (Percentages of development area only)	
Area of Development Lots	44.9 ha
Built Area (Warehouses and Offices)	20.8 ha (46%)
Unbuilt area (including roads, driveways and parking)	16.9 ha (38%)
Landscaped area	7.2 ha (16%)
GFA (warehouse)	202,000 m ²
GFA (offices)	12,400 m ²
GFA (total)	214,400 m ²
FSR (average, across development lots)	0.48:1
Site coverage (average across development lots)	0.46:1

Note: Office Area is to be split over two storeys.

The indicative area breakdown for the development lots only is provided in **Table 4**, including the indicative contribution towards GFA made by each development lot within the Site. The details in **Table 3 and 4** are indicative only, and are provided for the purposes of explaining the envelope of proposed development for which the site-wide Masterplan has been assessed in relation to the matters required to be addressed in a DCP.

Table 4 – Lot and Building Areas in the Masterplan

Future Development Site	Area (ha)	Indicative GFA (m ²)
1	1.2	5,800
2	1.5	7,260
3	5.0	17,010
4	3.5	15,160
5	2.8	10,878
6	2.7	9,999
7	2.3	10,080
8	1.8	9,099
9	1.5	5,582
10	8.9	45,225
11	2.4	12,792
12	2.8	17,536
13	2.8	17,536
14	3.1	17,536
15	2.6	12,600

Note: Office Area is to be split over two storeys.

4.2 Matters to be Addressed in DCP

Schedule 4 of the WSEA SEPP requires a number of matters to be addressed in the preparation of a DCP. In accordance with Section 83C(3) of the EP&A Act, the Staged DA is required to address the issues that would otherwise be required to be addressed in the DCP. **Table 5** below lists these matters and identifies where and/or how these matters have been addressed in the Masterplan.

Table 5 – Matters to be addressed in DCP

Matter to be Addressed in DCP	Where/How Addressed in the Masterplan
a) traffic, parking and key access points,	See Section 4.2.1
b) infrastructure services (including public transport),	See Section 4.2.2
c) a detailed staging plan for any proposed development,	See Section 4.2.3
d) biodiversity,	See Section 4.2.4
e) flooding,	See Section 4.2.5
f) urban design and landscaping,	See Section 4.2.6
g) subdivision layout,	See Section 4.2.7
h) heritage conservation (both indigenous and non-indigenous),	See Section 4.2.8
i) extraction and rehabilitation,	Not applicable – the development is not for extraction, and the Site has not been used previously for quarrying.
j) protection of the Sydney Catchment Authority Warragamba Pipelines,	Not applicable – the development does not involve any works that could impact on the SCA pipelines. Land dedicated for the SLR will be retained between the Site and the SCA pipelines.
k) protection of electricity transmission facilities,	Works will generally be carried out outside of the Transgrid Transmission Line easement. The Masterplan has been designed to avoid impacts to the Transgrid easement.
l) management of the public domain,	Not applicable – there will be no public domain within the Site.

Matter to be Addressed in DCP	Where/How Addressed in the Masterplan
m) community and retail facilities.	Not applicable – no community or retail facilities are proposed.

4.2.1 Traffic, parking and key access points

In making provision for or with respect to traffic, parking and key access points, a DCP must be consistent with the Transport and Arterial Road Infrastructure Plan and address (or include) the following:

- roads, transit ways and provision for walking and cycling, both within the precinct to which the plan applies as well as off site linkages,
- freight transport provisions, including initiatives for integrating freight handling within the precinct to which the plan applies, and maximising opportunities for synergies between industries with regard to materials handling,
- the volume of traffic likely to be generated during construction and operation and an assessment of the predicted impact of that traffic volume on the safety and efficiency of the surrounding road network.

A number of alternative access and road network solutions were considered when designing the scheme, including a through-site link connecting Wallgrove Road to the future SLR, as well as the single access point design solution that is illustrated in the proposed Masterplan.

The current design solution was identified as the preferred access solution following the results of intersection modelling which confirmed that a through site link would likely result in rat running and unnecessary interruptions to traffic along the SLR. In comparison the proposed access solution will provide for efficient and effective vehicular movements in and out of the site with minimal disruption to traffic flows along Wallgrove Road and the SLR.

It is noted that the proposed solution is inconsistent with the current *Transport and Arterial Road Infrastructure Plan*, which comprises part of the WSEA SEPP. Detailed consultation has been undertaken with the DP&I, RMS and the SCA in relation to the alignment of the SLR. The alignment of the SLR on the northern Boundary of the Site has been exhibited as the Preferred Alignment within the *Western Sydney Employment Area Southern Link Road Network Strategic Transport Assessment*, prepared by the DP&I, in August 2011, and the details confirmed in the *Draft WSEA SLRN – Refinement of Eastern Options* (dated 18 January 2013). This has been reconfirmed within the *Broader WSEA Draft Structure Plan*, exhibited in July and August 2013.

Further, consultation with the RMS has confirmed that the Site is to be designed with a single access signalised point, and the RMS is supportive of the access being taken from Wallgrove Road. Accordingly, the Masterplan provides for a single east-west access road which connects directly to a new signalised intersection on Wallgrove Road and provides access to all development sites.

With regard to freight transport provisions, the proposed development will contain a number of independent and unrelated facilities, operators and uses. As such, there will be limited opportunity for integrating freight handling within the precinct.

The volume of traffic likely to be generated during construction and operation, and an assessment of the predicted impact of that traffic volume on the safety and efficiency of the surrounding road network, has been provided by GHD. This assessment has confirmed that the proposed development is able to be suitably accommodated within the existing road network. The GHD assessment includes analysis of the requirements for car parking, and concludes that the development

will more than comply with the RMS *Guide to Traffic Generating Developments*. See **Appendix J** and **Section 7.6** for further details of the traffic impact assessment.

4.2.2 Infrastructure services

In making provision for or with respect to infrastructure services, a DCP must address the following:

- a) services such as water, sewerage, drainage and stormwater,*
- b) opportunities for rainwater harvesting from roofs,*
- c) corridors for telephone, electricity and gas supply.*

Stormwater management systems should be in accordance with relevant council and State government stormwater management plans and policies.

The development control plan must also:

- a) consider options for shared infrastructure corridors, and*
- b) contain appropriate on-site design and control measures to be implemented to ensure that the water quality of the receiving environment is not adversely affected by the proposed development, and*
- c) address the timing, funding and provision of the services.*

Water and Sewer

Details of water and sewer infrastructure proposals are provided at **Appendix H**. In summary, all of the connections will be extended from existing services north of the Site on Wallgrove Road, and through a services corridor which forms part of the internal east-west access road within the Site.

Sydney Water has advised that it intends to provide connection to water supply from Cecil Hills Reservoir. However, analysis by Brown's has identified that the current road pattern does not allow for a reasonable link to the existing Burley Road main. Given the proximity of the Site to the Minchinbury Water Supply System Brown's has determined that it is more reasonable to service the Site from the Minchinbury Elevated Reservoir, with connection to the main on Roussell Road.

The Site drains to the Eastern Creek Submain Section 5 which has capacity for this development. Sydney Water's preferred option to sewer the Site is to connect the 375mm sewer located approximately 800m north of the Site, with a 225mm sewer extension along Wallgrove Road.

Water and sewer infrastructure sufficient to accommodate development of the entire Site would be installed as part of the Stage 1 works.

Drainage and Stormwater

A stormwater management strategy has been prepared for the Site by Brown Consulting and is located at **Appendix K**. As set out in this report each of the proposed development sites within the Masterplan will ultimately be responsible for managing its own stormwater. This will be through the installation of individual underground on-site detention (OSD) systems.

Stormwater from each development site will be conveyed through a below ground stormwater network contained within the internal access road reserve to one of three outlets. Two outlets convey water into stormwater infrastructure on Wallgrove Road, and the third would discharge into Reedy Creek.

When the Masterplan is fully developed, the internal access road will not incorporate any specific stormwater detention for flows collected on the surface of the road. As such, Brown Consulting has determined the additional volume of on-site detention that would need to be provided for each development site (on a proportional basis) in order for the entire Site to meet the peak flow reduction targets.

Modelling undertaken by Brown Consulting has determined that 315m³ per ha of OSD is required for each development site in order to ensure that the post development peak stormwater flows would represent an improvement on the existing situation. Brown Consulting has demonstrated that the combination of the OSD systems at all the development sites together with the piped drainage system will ensure that the Masterplan as a whole is able to be developed in a way that would contain major flows for the 5 year ARI and the 100 year ARI events.

With regards to stormwater quality, the stormwater treatment strategy for the overall Site is to provide the majority of treatment as on-site treatment measures within individual development sites through adopting Waters Sensitive Urban Design (WSUD) principles. The access road is to provide primary treatment with Gross Pollutant Traps (GPTs). The stormwater treatment strategy for each individual lot is subject to the future design development. However, to compensate for the access road and bypass areas, individual lots will need to achieve higher than usual minimum pollutant reduction targets through WSUD as set out in **Appendix K**.

There is opportunity for rainwater harvesting to be implemented as part of the individual on-lot stormwater systems. The stormwater concept plan for the Masterplan has been designed such that each development site does not rely upon rainwater harvesting in order to achieve the required Site-wide stormwater objectives. However, rainwater harvesting is one of the measures which can contribute to removal of stormwater pollutant loads and can be adopted as part of treatment train. The incorporation of rainwater tanks would not inhibit each individual development site's ability to achieve the stormwater objectives.

Electricity and Telecommunications

Discussions have commenced with Endeavour Energy, and do not indicate any complications associated with connecting the site to the existing 11kV electricity distribution network which passes directly by the Site on the western edge of Wallgrove Road. The Supply Offer from Endeavour Energy is provided in **Appendix H**. The Endeavour Energy Assessed Load provides for the full development of the Masterplan. A strategy for delivery of electrical infrastructure to the Site will be developed in consultation with the energy provider.

4.2.3 Development Staging

The proposed development is to be constructed in at least two stages. This application seeks staged development consent for a conceptual proposal over the entire Site, as well as detailed development consent for Stage 1 works. The staging of the development is set out below.

Stage 1

- Construction of a single warehouse development of 45,220 m² on Lot 10 located at the western portion of the Site.
- Construction and installation of necessary utility services and infrastructure to the Site to accommodate the project requirements of the Stage 1 Warehouse Building, including the construction of a new internal access road which

connects with a new intersection on Wallgrove Road on the eastern boundary of the Site.

- Dedication of land along the site's northern boundary for the proposed new Southern Link Road – to be constructed in the future by the RMS.
- Clearing of vegetation and bulk earthworks across the Site to enable development of the works proposed as part of the Stage 1 works.
- Landscape works associated with the Stage 1 works, including vegetation and enhancement works to riparian corridor (in the E2 Zone), and landscape treatments along the internal site access road and estate entry.
- Construction of an interim stormwater management regime to collect, detain and treat stormwater from the internal access road.

Subsequent Stages

Development of the subsequent stages will be in accordance with market demand, and the particular needs and requirements of potential tenants. In general, it is expected that development will occur from west to east, with development on the northern side of the access road likely to occur first.

This staging program responds to the earthworks cut-and-fill profile required for the various development sites, and will enable Gazcorp to release the larger development sites earlier.

Each future stage will be subject of a DA for a single building or a group of buildings. Each future DA will include:

- Details of the construction and operation of the proposed building, which will be for a use nominated as permissible in the zone.
- Details of construction and provision of utilities, services, infrastructure (including stormwater), internal road system and connection, and bulk earthworks to accommodate the development in its interim state until the subsequent stage is developed.
- Demonstration of the consistency of the proposed development with the Staged DA (Masterplan) for the whole site.

4.2.4 Biodiversity

In making provision for or with respect to biodiversity, a DCP must address the following:

- a) the existing natural environment, including any remnant vegetation, threatened species, endangered ecological communities, critical habitat, wildlife corridors and riparian areas,*
- b) opportunities to offset the impact of any clearing of native vegetation,*
- c) species or kinds of trees or other vegetation to which clause 32 applies.*

Where appropriate, the development control plan must provide for the preparation of management plans for the rehabilitation of any communities of flora and fauna so that ecosystem diversity is maintained.

An Ecological Impact Assessment (EIA) has been prepared by Cumberland Ecology and is included at **Appendix F**. The EIA describes the flora and fauna values of the Site and assesses the potential impacts of the proposed development on threatened species, populations or ecological communities. A combination of desktop surveys and field investigations were undertaken to inform the assessment.

A detailed assessment of the ecological and biodiversity impacts of the proposed development is set out in **Section 7.10** and contained in the EIA at **Appendix F**.

In addition to the above, a significant amount of new landscaping will be provided with the proposed development, including rehabilitation of vegetation within the E2-zoned Reedy Creek riparian corridor, and a biodiversity offset strategy will be implemented as part of the development.

4.2.5 Flooding

In making provision for or with respect to flooding, a development control plan must provide a comprehensive flood analysis that (without limitation) addresses or includes the following:

- a) the impact of flooding on proposed development, including an estimation of the extent of flood prone land, high hazard areas and floodways, the implications of the full range of floods and the safety of people using or within the site,*
- b) the impact of proposed development on flood behaviour on and off the site (including existing and planned development in the wider area),*
- c) the flood hazard in the area (including hydraulic hazard, flood warning time, rate of rise of floodwater and duration of floods) and access and evacuation issues,*
- d) viable strategies to manage any adverse impact of proposed development on flood behaviour.*

In relation to flooding, the development control plan should be consistent with the provisions of the NSW Government's Floodplain Development Manual: the management of flood liable land (April 2005) and any relevant local and regional policies.

Flood Impacts have been assessed in **Section 7.12** and **Appendix R**, and the assessment has been based on the Rural Area Flood Study Report prepared by BMT WBM for Fairfield City Council. The Rural Area Flood Study considered three catchments, being Reedy Creek, Ropes Creek and Eastern Creek.

The Site straddles a ridge whereby a portion of the proposed development is within the Reedy Creek catchment, whilst the remainder of the site is located within a localised catchment to the east. It was therefore necessary to extend the catchment to the east up to and including the area entire local catchment. The flood impact assessment of the Site has therefore been carried out with an extended version of the Reedy Creek model developed as part of the Rural Area Flood Study.

The conceptual proposal for development of the Site has been designed to result in minimal change in the flood regime surrounding the Site for the 100 year ARI design flood event. Minor variations in flood depth and velocity are modelled to occur on Reedy Creek immediately adjacent to the Site due to the development, which may require erosion control measures to be implemented depending on the nature of the underlying soil and its susceptibility to scour.

The flood model currently indicates a flood impact as a result of the flow within conceptual swale drain along the south-eastern boundary of the Site. The operation of the swale drain results in a slight reduction in depth of flooding in the neighbouring property and an increase in depth along Wallgrove Road of 10-25cm for the 100 year ARI design flood event. It also results in an increase in flood velocity at this location, and an increase in inundation on Wallgrove Road.

These predicted impacts are a result of the increased efficiency at which the proposed swale would convey flood waters from the neighbouring property to the

south, across the corner of the Site and into the Wallgrove Road. The efficiency of this swale can be reduced as part of its detailed design so that it operates at a similar efficiency to the existing situation, if considered appropriate by FCC, OEH and DP&I. This would reduce the flood height impact downstream of the development and additionally have the potential to reduce the increases in flood velocity observed upstream of the Site.

4.2.6 Urban design and landscaping

In making provision for or with respect to urban design and landscaping, a development control plan must:

- a) include urban design principles drawn from an analysis of the site and its context, and*
- b) develop urban design parameters to guide subsequent development with measures, including setbacks, building materials and colours, to minimise the visual impact of development, particularly if it is highly visible from major roads and the M7 and M4 Motorways,*
- c) identify areas of high visibility and consider options such as vegetation screens or landmark buildings of outstanding design.*

Urban Design Guidelines have been prepared for the Masterplan Site by MBMO Architects and are located at **Appendix L**. A Landscape Plan prepared by Site Image is provided in **Appendix O**. Together with the Design Statement in **Appendix E**, the Urban Design Guidelines and landscape Plan illustrate and describe the planning and design principles that have been adopted in the design of the proposed development, and which have been drawn from an analysis of the site and its context. These principles are listed below:

- Building form with appropriate scale and massing that responds to the topography of the site and surrounding area.
- Building designs that are of architectural merit, diversity, scale and high quality built form, and which contribute to the visual amenity of the site.
- Meaningful landscaping that will be effective at softening the built form and enhancing the development's appearance when viewed from the street and surrounds. (Limited landscaping is able to be provided within the Transgrid electricity easement.)
- Development that is appropriately treated to minimise visual and amenity impacts on the nearby rural residential properties.
- Development that recognises and responds to the natural environment, including environmental sustainable design.
- Safe and efficient movement of vehicles and pedestrians capable of accommodating anticipated traffic volumes and vehicle types.
- Safe and sufficient car parking and service/loading dock facilitate to accommodate the needs of the development.

With consideration of these urban design principles, a suite of urban design parameters have been developed. These urban design parameters are set out in the Urban Design Guidelines prepared for the site by MBMO Architects and located at **Appendix L**. The guidelines include the following controls that relate to urban design:

Building Form and Design

- Applicants are to give consideration to optimising building orientation and siting to natural elements such as topography, wind and sunlight, energy efficiency and to maximise weather conditions for loading and unloading.
- Applicants are to consider a range of fascia treatments, façade treatments, rooflines and building materials to reduce the impact of walls facing the street.
- The maximum building height is 14m, and can only be varied where the additional height does not result in adverse impacts and the where the height is in keeping with the character of the locality.
- Development which can be viewed from adjoining residential properties will require special landscaped treatment and attention regarding the form and external finishes of buildings, to reduce their visual impact.
- Prominent elevations, such as those with a frontage to the street or public reserves, must present a building form of significant architectural and design merit and include, where possible, office areas.
- Large elevations should be articulated by structural variations and/or a blend of external finishes. Additionally, the landscape design should consider the scale of the building and where appropriate, the location of and careful selection of plants may aid in reducing the bulk and scale of the building form.

Setbacks

- Buildings are to be setback by:
 - 20m primary from Wallgrove Road;
 - 10m from the proposed new RMS Road Reserve; and
 - 10m for a secondary setback to a Local Road.
- Setbacks are to be landscaped to articulate and soften the built form.

Building Materials and Colours

- Highly reflective materials should be minimised. In this regard, the roof material(s) to be used shall not be reflective.
- Courtyard and screen walls should generally be in the same material as the building facades.
- The development is to incorporate a variety of external finishes in terms of both colour and type of material used.

Implementation of these guidelines and site specific controls will ensure that a high quality built form and design outcome is achieved for the site that is compatible with the proposed industrial use and which minimises any potential impacts on the surrounding area.

4.2.7 Subdivision layout

In making provision for or with respect to subdivision layout, a DCP must:

- a) demonstrate that the subdivision layout is appropriate by achieving high degrees of access for all forms of transport (including access for pedestrians), and*
- b) detail the subdivision layout, including lot size and mix and the location of open space and the road network, and*
- c) provide for a detailed contour plan that identifies the finished contour levels of the site with details provided on the earthworks required to achieve the finished contours.*

An indicative lot layout is presented to define the proposed development sites and to establish building footprints, gross floor areas, access arrangements, hardstand and parking requirements.

The Masterplan provides pad levels for each development site, with subdivision of the Site to occur at a later stage (if required), subject to separate DAs.

Earthworks and Road Design Plans have been prepared by Brown Consulting and are provided in **Appendix M**. One of the overarching design objectives for the estate is to balance the cut and fill over the entire development. This has been achieved through cutting from the large hill in the southern part of the site (creating a series of terraced development sites), to fill the western, eastern and northern parts of the Site.

The total amount for cut and fill for site is:

- Cut – 1,025,000cum
- Fill – 992,000cum

The excess of 33,000cum will be used to fill the dams currently located on site. For Stage 1 approximately 400,000m³ of material will be cut to fill to create the building pad level of RL 64. Much of the fill required for Lot 10 (i.e. the Stage 1 building site) will be sourced from cutting required for the road as can be seen in the Stage 1 Earthworks and Road Design Report (see **Appendix M**).

Stage 1 therefore accounts for approximately 40% of the entire earthworks required for the site. This is because of the large amount of cut required for the road, and the large amount of fill required for the Lot 10 building pad level, taking into account that Lot 10 is the largest development site within the Masterplan.

The areas of each development site (or lot) and the footprint area of each building shown in the Masterplan are shown in **Table 6**.

The access road is at RL63 where it ties in with Wallgrove Road. It rises steeply (at 1:20) to RL68 and then slowly up to a highpoint in the middle of the site at RL73, before grading slowly back to RL68 at the western end. In the middle of the site cut for the road is as much as 11m below the existing ground level. The earthworks required for the road are provided in the Stage 1 Earthworks and Road Design Report and will be completed as part of the Stage 1 project.

Table 6 – Finished Building Pad Levels

Future Development Site	Finished RL	Cut / Fill
1	RL 67	Fill
2	RL 67	Cut and Fill
3	RL 67	Fill
4	RL 71	Cut and Fill
5	RL 74	Cut
6	RL 75	Cut
7	RL 73	Cut
8	RL 72	Cut and Fill (mostly Fill)
9	RL 71	Fill
10	RL 64	Cut and Fill (mostly Fill)
11	RL 70	Fill
12	RL 71	Fill
13	RL 71	Cut and Fill
14	RL 71	Cut and Fill

Future Development Site	Finished RL	Cut / Fill
15	RL 68	Cut and Fill
Internal Access Road	RL63 - RL73	Cut and Fill (mostly Cut)

4.2.8 Heritage conservation

In making provision for or with respect to heritage conservation, a development control plan must address:

- the impact of proposed development on indigenous and non-indigenous heritage values, and
- opportunities to offset impacts on areas of heritage significance.

A Heritage Impact Assessment (HIA) has been prepared by Australian Museum Business Services (AMBS) and is included at **Appendix N**. The HIA examines the impact of proposed development on indigenous and non-indigenous heritage values and identifies any potential mitigation measures that might be adopted to mitigate any impacts.

The HIA confirms that the Site has elements of indigenous heritage and confirms that the artefacts found on the site are representative of similar Aboriginal stone artefact scatters across the Sydney region and the rest of NSW.

Based on current scientific evidence, the HIA concludes that the Site does not have potential for substantial, intact subsurface archaeological deposits, and as such, is considered to have low historic, scientific and aesthetic value from a heritage point of view.

The HIA notes however that Reedy Creek is considered to have archaeological potential for substantial, potentially intact Aboriginal stone artefact deposits, and therefore may have moderate-high historic and scientific value, particularly if intact alluvial deposits are present.

With regard to non-Indigenous heritage, the HIA provides an overview of the broad history of the area but notes that there is no non-indigenous heritage of significance present at the Site.

It is noted that the proposed Masterplan has been designed to incorporate a buffer zone to Reedy Creek, thus ensuring minimal physical disturbance and impact on the part of the site which was identified as having the greatest potential for intact Indigenous heritage artefacts.

Further analysis and commentary of the site's heritage qualities is located at **Appendix N** and **Section 7.14**.

4.3 Contributions

4.3.1 Local Infrastructure and Contributions

The Site is not subject to a Section 94 or 94A contributions plan. Accordingly, a contribution towards local infrastructure is not warranted and there is no offer made to enter into a voluntary planning agreement in respect of local infrastructure contributions. The proposed approach to local contributions is consistent with approved development elsewhere in the WSEA.

As requested by Council, the Site will be treated as a stand-alone Site, which will not incorporate public infrastructure within the Site. All access, road, and

stormwater infrastructure will remain in the ownership of Gazcorp and will be managed and maintained by Gazcorp, whilst the Site remains in a single allotment.

Ownership and maintenance of utility installations (sewer, water and electricity) will be agreed with the relevant utility service provider.

4.3.2 State Infrastructure and Contributions

The proposed development will generate approximately 47.45 ha of net developable area (NDA). NDA includes all parts of the site except for the Southern Link Road corridor (2.5ha), the E2-Zoned Reedy Creek riparian corridor (0.85ha) and the Transgrid electricity transmission easement (1.4ha).

Clause 29 of WSEA SEPP requires that a consent authority not consent to development on land within the WSEA unless "satisfactory arrangements have been made to contribute to the provision of regional transport infrastructure and services".

On 12 August 2009, the Premier of NSW announced that the NSW Government would impose a \$180,000 state infrastructure charge per developable hectare in the WSEA. This announcement further stated that the state infrastructure charge levy across the whole of the WSEA SEPP area provides proponents with upfront certainty on the infrastructure costs they are asked to bear for development. However, no special infrastructure contributions (within the meaning of subdivision 4 of Division 6 of Part 4 of the EP&A Act) plan currently exists that incorporates the state infrastructure charge.

In the absence of a special infrastructure contributions plan, under section 93I of the EP&A Act, Gazcorp offers to enter into a voluntary planning agreement (VPA) with the Minister for Planning and Infrastructure, prior to the commencement of construction of any part of the Staged DA (Masterplan).

With a developable area of 47.45 hectares, the development of the entire precinct will potentially generate a total state infrastructure contribution value of \$8,541,000 – including monetary contributions, works-in-kind and the dedication of land.

5.0 Stage 1 Development

This section provides a detailed description of the proposed development works for the Stage 1 warehouse building and associated infrastructure. Architectural drawings have been prepared by MBMO Architects and are included at **Appendix B**. Infrastructure design drawings have been prepared by Brown Consulting and are included at **Appendix H, Appendix K and Appendix M**.

Detailed development consent is sought for:

- Vegetation clearing and bulk earthworks associated with Stage 1 Warehouse Building and associated infrastructure.
- Construction of the building pad for lot 10.
- Construction of a 45,000m² warehouse building on Lot 10, which includes 3,000m² of office.
- Vehicular access from Wallgrove Road and construction of internal road/driveway network and a new signalised intersection on Wallgrove Road.
- On grade parking (223 spaces) for Lot 10.
- Landscape works associated with the Stage 1 Warehouse Building and the internal access road.
- Extension and augmentation of services, utilities and infrastructure, including the water, sewer and electricity services infrastructure and interim stormwater infrastructure arrangements to be in place until the subsequent stage is developed.

5.1 Numerical Overview

The key numeric development information for the Stage 1 warehouse building is summarised in **Table 7**.

Table 7 – Key development information

Component	Proposal
Site area	89,155m ²
Built Area	43,505m ² (49%)
Gross Floor Area (GFA)	45,225m ² – 42,220m ² warehouse – 3,005m ² office (over two levels)
Floor Space Ratio (FSR)	0.51:1
Maximum Height	14m
Car spaces	223
Unbuilt area (including roads, driveways and parking)	28,945m ² (32%)
Landscaped area	16,705m ² (19%)
Site coverage	0.48:1

5.2 Site Preparation and Bulk Earthworks

Site preparation and demolition works for Stage 1 will include:

- Clearing of existing vegetation where required.
- Bulk earthworks across the Site to enable development of the works proposed as part of Stage 1 (as shown in **Appendix M**), including construction of a new access road and building pad for Lot 10.

Proposed site preparation and bulk earthworks are detailed on the Earthworks and Road Design Drawings prepared by Brown Consulting located at **Appendix M**. As discussed in **Section 4.2.6**, soil from the proposed cutting will be redistributed to other parts of the site where fill is required, thus minimising the need to import new fill or remove existing earth from the site.

The Stage 1 earthworks requires cut for the internal access road and filling for the Stage 1 Warehouse Building pad on Lot 10. The cut and fill is balanced.

Appropriate erosion and sediment control management measures will be put in place during the site preparation and bulk earthworks stages to ensure minimal disruption and impact on the surrounding area.

5.3 Vehicular Access, Parking and Servicing

5.3.1 Access

A new main access road into the site will be constructed as part of the Stage 1 detailed works, and will include a new signalised intersection which will regulate access to the site to and from Wallgrove Road.

Proposed Lot 10 is located at the western terminus of the proposed internal access road. Access to this new Lot 10 will be available via separate driveway entrances that will provide connections to three internal car parks and two loading docks.

5.3.2 Parking

Parking for the building is provided via three separate car parks that are located around the site's periphery and which provide a combined total of 223 spaces to service Lot 10. All parking areas have been designed in accordance with relevant Australian Standards.

5.3.3 Servicing

The building incorporates two dedicated loading dock with each loading capable of accommodating eight large articulated vehicles and six large rigid vehicles.

A hardstand area is also proposed around the building and will enable service vehicles to drive around the building and park at the rear while waiting for pick-ups and deliveries.

5.4 Lot 10 Building

The proposed Lot 10 building comprises a single 42,220m² warehouse that is largely rectangular in shape and which measures approximately 284m in length by 145m in width. In addition, 3,000m² of office space would be provided for adjoining the eastern side of the warehouse, fronting the internal access road and on-site car parking area.

The building has a front of house office area centrally located along its eastern façade and which sits between two separate loading docks positioned at either end of the same façade.

Internally the warehouse building will be one large contiguous open space, which if necessary will be capable of being internally separated to create different partitions.

The external finishes and materials of the warehouse would be traditional warehouse materials including Colourbond steel for the wall façade and roof,

powder coated steel and aluminium products for window and door frames, and rendered concrete block walls where necessary. The colour scheme for the building would be dependent on the future tenant, and it is proposed to submit details of finishes for the approval of the Director-General prior to the commencement of construction.

5.5 Landscaping and Public Domain

Extensive landscaping will be provided around the periphery as part of the Stage 1 development. As illustrated in the accompanying Landscape Plans prepared by Site Image Landscape Architects (**Appendix O**), landscaping for the overall site will comprise a number of different landscape zones, including

- Street Frontage Planting – a structured planting design that will comprise copse planting of varying group sizes with native grasses at the lower level.
- Formal Entry Road Planting – structured planting within the site that will comprise large canopy trees and mown grass.
- Secondary Road Streetscape Planting - structured that will comprise large canopy trees as well as a series of smaller trees and a mixture of native grasses.
- The Cumberland Plain Woodland Buffer – a less structured more informal landscape design that will comprise dense levels of Cumberland Plains Woodland species to produce a strong visual buffer.
- Native Grasses – a mixture of native grasses proposed to go within the area beneath the existing power lines.
- Riparian - planting along the sites western boundary will comprise an informal dense planting mix of native species that are considered appropriate for the riparian context.

A number of these landscaped zones will be provided as part of the Stage 1 works, including:

- Formal Street frontage Planting;
- Formal Entry Road planting;
- Secondary Roads Streetscape planting along the frontage of Lot 10.
- Native grasses and Cumberland Plain buffer planting along parts of the northern and southern boundaries; and
- Planting of the Riparian Zone along the site's western boundary.

5.6 Pedestrian Access

Pedestrian access will be provided from the respective car parks into the building via the front of house office area. Footpaths will also be provided as part of the proposed works and will ensure safe pedestrian access to the Site from Wallgrove Road. Refer to the Architectural Plans and Landscape Plans located at **Appendices B** and **O** for further details.

5.7 Environmentally Sustainable Development

The Stage 1 development includes a stormwater treatment strategy which is capable of reducing pollutant loads to the reduction targets outlined in the *Interim Reference Guidelines for South East Queensland Concept Design Guidelines for WSUD*.

The target removal rate for Lot 10 is proposed to be achieved through a combination of bio-retention in car park areas, Enviropods located within gully pits for hardstand areas and finally whole site routing through in line GPTs with Stormfilter treatment system fitted to the OSD tanks.

Opportunities to incorporate sustainable design features into the Stage 1 building will be investigated further at detailed design stage, and will include consideration of the following:

- Use of clear roof sheeting to provide natural light into the warehouse.
- Use of natural ventilation in storage areas to allow cross air flow and reduce demands on mechanical ventilation systems.
- Incorporation of thermal insulation.
- Energy efficient air conditioning equipment and fan selection for the office areas.
- Energy efficient lighting with control systems to dim or turn off when not in use.
- The proposed office will face east, so no glass finishes will face west.
- Rainwater harvesting (a minimum of one 120,000L rainwater collection tank will be installed as part of the Stage 1 warehouse building).
- Installation of water efficient fixtures to reduce overall potable water consumption.

5.8 Infrastructure and Services

Servicing of the site will be provided via the provision of new mains water and sewerage connections as set out in the accompanying Infrastructure and Services Statement prepared by Brown Consulting and located at **Appendix H**.

New mains water connection will be obtained from the existing 250mm main located on the corner of Wallgrove Road and Roussell Road, which is located approximately 560m to the north of the site. While a sewage connection will be obtained via a new 225mm sewer that will be extended from the Eastern Creek sub-main located approximately 800m to the north of the site.

Electricity will be obtained from the existing 11kV distribution network which passes the Site on Wallgrove Road. Endeavour Energy has not indicated any concerns with the predicted future electrical loads at the Site.

5.9 Stage 1 Interim Stormwater Solution

OSD is to be provided for Lot 10 under the requirements to be applied to all lots and temporary detention is to be provided for the access road until the future development of the overall site proceeds such that peak flows at each discharge point do not exceed existing hydrological conditions.

The drainage strategy for Stage 1 incorporates temporary catch drains to separate runoff from undeveloped catchments from the stage 1 development footprint. It is proposed to provide a temporary 600 mm diameter pipe culvert under the access road which will drain the undeveloped catchments under the access road and around stormwater treatment basins.

Two detention basins will be provided in the Stage 1 interim stormwater management scenario for the access road. The Stage 1 interim stormwater management scenario has been modelled to determine the size of the stormwater

basins. The storage requirement for temporary Basin Number 1 (western basin) and Number 2 (eastern basin) is 536m³ and 817m³ respectively.

At each stage of development an revised interim stormwater management system will need to be installed, until all the remaining lots have been developed when the OSD systems provided on all the lots will compensate for the impervious area of the access road, as provided for under the ultimate strategy, and the temporary basins can be decommissioned.

5.10 Contributions

5.10.1 Local Infrastructure and Contributions

The Site is not subject to a Section 94 or 94A contributions plan. Accordingly, a contribution towards local infrastructure is not warranted and there is no offer made to enter into a voluntary planning agreement in respect of local infrastructure contributions. The proposed approach to local contributions is consistent with approved development elsewhere in the WSEA.

The Site will not incorporate public infrastructure within the Site. All access, road, and stormwater infrastructure will remain in the ownership of Gazcorp and will be managed and maintained by Gazcorp, whilst the Site remains in a single allotment. Ownership and maintenance of utility installations (sewer, water and electricity) will be agreed with the relevant utility service provider.

5.10.2 State Infrastructure and Contributions

As described in Section 4.3.2 clause 29 of WSEA SEPP requires that satisfactory arrangements are made to contribute to the provision of regional transport infrastructure and services, and that this is addressed through provision of state infrastructure charge levy of \$180,000 per developable hectare in the WSEA. The proposed development of Lot 10 will generate approximately 8.35 ha of NDA when the riparian corridor and Transgrid easement is taken into account.

Gazcorp offers to enter into a VPA with the Minister for Planning and Infrastructure, prior to the commencement of construction for the Stage 1 works. The VPA will provide for a regional infrastructure contribution of \$180,000 per developable hectare, subject to offsets for dedication of land for the regional road and any works in kind that might be agreed.

With a developable area of 8.35 ha this would result in a total state infrastructure contribution value of \$1,503,000 – including monetary contributions, works-in-kind and the dedication of land (to be determined).

6.0 Consultation

6.1 The Southern Link Road Consultation

Gazcorp commenced consultation with relevant Government agencies shortly after the WSEA SEPP rezoned the land south of the SCA pipeline in 2009. This consultation particularly involved discussions with the (then) Roads and Traffic Authority (now RMS), Fairfield City Council (FCC) and the (then) Department of Planning (now DP&I).

Initial consultations with these agencies identified that the location of the Southern Link Road (SLR), whilst gazetted as part of the WSEA SEPP, was not on an alignment that had been subject of any detailed investigations. As such, it was considered at that time that the location of the SLR might move from the gazette alignment, and this might involve locating part of the SLR on the Gazcorp site.

Gazcorp has actively engaged with RMS, DP&I and FCC in relation to the preferred alignment for the SLR since that time. The DP&I subsequently exhibited, in April 2011 the Western Sydney Employment Area Southern Link Road Network Strategic Transport Assessment, which carried out a strategic assessment on a number of possible alignments for the SLR, and nominated a preferred option, and an alternative preferred option. Both of the preferred options were located on the Gazcorp site.

Gazcorp commented on the WSEA SLR Strategic Transport Assessment generally supporting the location of the northern alignment (the preferred option), on the basis that the alternative preferred option would result in substantially greater impacts to the ability to develop the Gazcorp site for employment uses. Gazcorp engaged at that time with the DP&I in further defining the road alignment for the preferred option.

The DP&I has prepared a Draft WSEA SLRN – Refinement of Eastern Options (dated 18 January 2013) which responded to the issues raised during stakeholder consultation. Gazcorp supports the refined details of the SLR eastern alignment and the Gazcorp Masterplan has been designed entirely consistent with it.

6.2 Consultation Since 2012

In accordance with the DGRs issued for this project, consultation was undertaken with relevant public authorities, the community and Council.

A summary of the consultation undertaken to-date with Council, the community and relevant agencies is provided below. Several consultants have undertaken additional consultation with relevant parties during the preparation of their reports.

- Meeting with Fairfield City Council – 6 September 2012
- Meeting with Sydney Catchment Authority – 6 September 2012.
- Meeting with DP&I – 6 August 2012 and 11 April 2013.
- Letter box drop to surrounding residents in April 2013. Including discussions with neighbours (where notice was responded to).
- Feasibility Letter issued by Sydney Water in May 2012.
- Supply Offer from Endeavour Energy in April 2013.

Table 8 sets out the issues raised by stakeholders and how these issues have been addressed through the design and/or in the EIS. The table includes details of

matters raised by agencies in detailed responses to the DGRs, as well as any matters raised during consultations since then.

Extensive consultation has also been carried out with Transgrid. This was in relation to Transgrid's requirement for an increased easement (necessary to facilitate the infrastructure upgrades needed in order to increase power supply along existing transmission lines) affecting the land on the southern boundary of the Site. The Staged DA fully accommodates Transgrid's requirements for a wider transmission easement.

Table 8 – Summary of Issues Raised and Response

Key Issue	Response
Fairfield City Council	
FCC requested that the EIS clearly describe the development for which approval is being sought, and the relevant statutory considerations.	Section 3 sets out the statutory framework. Section 4 and Section 5 clearly set out the scope of the development for which Staged Development Consent is sought (Section 4) and for which detailed Development Consent (Section 5) is sought.
FCC identified that if the proposal included trade outlets or any kind of retail then the EIS should be supported by an economic assessment to determine if there are any impacts on existing retail centres.	The proposal does not seek approval for any retail outlets.
FCC identified that it did not want to take any site infrastructure as local infrastructure – but rather the site be entirely self-contained. In particular: – Whilst in a single allotment FCC did not want the local access road to be dedicated to Council as a local public road. – FCC suggested that site specific on-site detention infrastructure should be provided, with the ownership, management and maintenance clearly the responsibility of each building owner/operator rather than the provision of estate-wide stormwater detention infrastructure where the responsibilities might be unclear.	The local access road will be designed to FCC standards, contemplating future subdivision of the Site, however no subdivision is proposed as part of the initial stage of development. Gazcorp are willing to manage the internal access road as an internal private estate access road. See also Section 4.2.1 and Section 7.6. The Masterplan has been designed to provide for OSD on each individual development site (or lot). There will be no communal stormwater detention infrastructure. See also Section 4.2.2 and Section 7.12.
Stormwater infrastructure should achieve quality and flow targets set out in the Interim reference Guideline for SEQ Concept Design.	As set out in Appendix K, the drainage system has been designed to achieve the targets in the nominated guideline.
Undertake On-Site Retention to reduce in-stream flows and maximise rainwater and stormwater reuse.	The development has been designed to provide for rainwater capture and reuse as well as on-site detention to reduce in-stream flows.
Noise should be assessed throughout all of Horsley Park.	The noise assessment has been carried out in accordance with Industrial Noise Policy, which requires analysis of noise impacts at the closest and most affected receivers.
The alignment of the SLR should be finalised.	The preferred alignment of the SLR has been exhibited and a detailed alignment documented by DP&I.
The SLR should be provided in full, rather than 50% partial construction of the road.	The SLR is no longer part of the access arrangements for the site. As such, the proposal does not include the construction of any part of the SLR.
The site contains EEC vegetation which should be assessed in the EIS.	Section 7.10 and Appendix F provide an assessment on EECs.
Reedy Creek contains fish habitat and consultation with Fisheries NSW should be carried out in relation to works within or adjacent to the creek.	No works are proposed which would alter the watercourse or create an in-stream obstruction. As such, no permit is required under the <i>Fisheries Management Act 1994</i> , and no consultation with Fisheries NSW is required.
Flooding assessment should be based on The Rural Area Flood Study – Ropes, Reedy and Eastern Creek.	Appendix R is based on the same model used for Council's nominated study.
General amenity impacts on neighbouring residents	Noise and visual amenity are addressed in Section 7.5

Key Issue	Response
should be considered.	and Section 7.15 respectively.
Roads and Maritime Service (including Transport for NSW)	
RMS requested that there be only one signalised intersection servicing the estate.	Intersections on both the SLR and Wallgrove Road were tested. Wallgrove Road, being the better performing intersection was selected.
Sydney Catchment Authority	
SCA identified concerns in relation to the location of the SLR on part of the SCA land.	This issue was dealt with by DP&I in the refinement of the alignment for the SLR, and is documented in Draft WSEA SLRN – Refinement of Eastern Options (dated 18 January 2013).
Sydney Water	
Sydney Water has provided a Feasibility Letter.	The Feasibility letter forms the basis of water and sewer design. See Appendix H.
Endeavour Energy	
Endeavour Energy has provided a Supply Offer.	See Appendix H.
NSW Office of Water	
Provide an assessment of the development on watercourses and riparian areas, groundwater resources and groundwater dependent ecosystems. Provide mitigating and monitoring measures is required.	Riparian vegetation is not proposed to be cleared. Impacts on waterways and riparian vegetation are assessed in Section 7.7.10 and 7.12 and Appendix F. No groundwater was identified at the site during investigations.
Rural Fire Service	
Access, utilities, landscaping should comply with <i>Planning for Bush Fire Protection 2006</i> . An Emergency / Evacuation Plan should be prepared in accordance with Guidelines for the <i>Preparation of an Emergency / Evacuation Plan</i> .	See Section 7.11 and Appendix S.
Heritage Council	
The EIS should include an assessment places of Aboriginal, historic or archaeological significance.	See Section 7.14 and Appendix N.
Office of Environment and Heritage	
The OEH provided detailed requirements in relation to flooding and stormwater drainage management, including: – Assessment of flooding impacts up to the Probably Maximum Flood in accordance with the NSW Floodplain Development Manual. – Details of drainage. – Emergency Response Plan to manage floods above the flood planning level.	See Section 4.2, Section 7.12, Appendix K, and Appendix R. The development has minimal impact to upstream and downstream flooding.
Local Residents	
In response to Gazcorp's letterbox drop a discussions were held between Gazcorp and local residents. Three were interested in the proposal and raised no immediate concerns. The fourth resident, located near the south-western corner of the Site raised late-night noise as a concern (and identified night-time noise from the public address systems further afield in the WSEA as being an issue currently).	Noise has been assessed in Section 7.5 and Appendix Q of the EIS.

6.3 Public Exhibition of the EIS

The proposed development will be placed on public exhibition for 30 days in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the proposed development.

7.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposed DA. It addresses the matters for consideration set out in the DGRs (see **Section 1.5**).

The Mitigation Measures at **Section 8** summarise the recommendations arising from the findings of this section.

7.1 Relevant EPIs, Policies and Guidelines

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the DGRs are addressed in **Table 9**. The comments in relation to the strategic plans set out in **Table 9** relate to both the Staged DA (the Masterplan) as well as the detailed DA for the Stage 1 Warehouse Building and associated infrastructure works.

Table 9 – Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument/Strategy	Comments
Strategic Plans	
NSW State Plan	The NSW State Plan was released in March 2010. It sets key strategic priorities for the NSW Government and is to be used to guide decision making and resource allocation. Of relevance to this application is the priority relating to employment growth.
Sydney Metropolitan Strategy	The Draft Sydney Metropolitan Strategy 2031 was recently exhibited by the NSW State Government in March 2013. It seeks to provide a broad strategic framework to manage the future growth of Sydney until 2031. One of its key aims is to create more jobs in Western Sydney. This DA is consistent with the Strategy in that it will provide for economic and employment growth within the subregion.
Draft West Central Subregional Strategy	The Draft West Central Subregional Strategy was prepared by the NSW State Government to translate the Metropolitan Strategy actions to a local and subregional level. The strategy set an employment target of an additional 61,000 jobs for the subregion by 2031. This DA is consistent with the Strategy in that it will provide for economic and employment growth within the subregion.
Employment Lands for Sydney Action Plan 2007	The Employment Lands for Sydney Action Plan was released in 2007 and builds upon the findings of the high level Employment Lands Task Force. Key Action No. 2 of the Action Plan is "Release more employment lands". The Site is identified within the Action Plan as "proposed employment lands". The proposal will provide between 700 and 1,500 new jobs from the developable land generated by the Staged DA Masterplan (assuming a job generation rate of 20 – 40 jobs per developable hectare) and will therefore make a significant contribution to employment targets.
Fairfield Employment Lands Strategy 2008	The proposed development will deliver a significant amount of new land available for a range of warehouse, distribution and industrial type uses. In doing so it will contribute to the creation of large number of future jobs in a diversity of different fields and expertise, and positively contribute to a robust and diverse employment offering to the local community. It is therefore consistent with the intent and objectives of the Fairfield Employment Lands Strategy 2008.
Planning Instruments and Controls	
WSEA SEPP	
Clause 11 – Zone	The Site is included in the IN1 General Industrial Zone under the WSEA SEPP. The proposed development is consistent with the zone objectives and permissible with development consent.
Clause 14 – Subdivision	The detailed DA for the Stage 1 Warehouse Building and associated infrastructure does not include subdivision.
Clause 18 – Requirement for development control plans	A DCP is required to accompany the development application. This application seeks a Staged Consent under Section 83B of the EP&A Act 1979 in lieu of a DCP. The Staged DA sets out the staging, site configuration and building form for the future development of the Site.
Clause 20 – Ecologically	Measures to minimise potable water use and greenhouse gas emissions will be

Instrument/Strategy	Comments
Sustainable Development	defined during detailed design when the future tenant has been determined. Section 5.7 sets out the measures that will be investigated.
Clause 21 – Height of buildings.	The proposed development and building envelopes have been designed in such a way as to minimise any adverse impacts on the amenity of the nearby rural residential areas. Further details are contained in Section 7.15 and Appendix A & B.
Clause 22 – Rainwater Harvesting	NA. No rainwater harvesting scheme has been approved by the Director-General.
Clause 23 – Development adjoining residential land	The proposed development has been designed to minimise visual and amenity impacts on nearby residential properties. a) Due to the topography of the Site there is only a limited interface between the industrial area and the adjoining rural residential properties. As such industrial buildings are compatible with the height, scale, siting and character of existing residential buildings in the vicinity, without needing to replicate that height, scale, siting and character. b) There are no external storage areas proposed that would be visible from adjoining residential land. c) The southern face of the Stage 1 building will be screened with Cumberland Plain buffer planting. d) Noise has been assessed as complying with the <i>Industrial Noise Policy</i>. e) Activities at the Stage 1 building will be located behind an acoustic barrier and so will not impact by way of lighting or glare on adjoining residences. f) All vehicles to the Site can be accommodated without any on-street parking on Wallgrove Road. g) A detailed Landscape Design has been prepared and is provided in Appendix O.
Clause 24 – Development involving subdivision	The detailed DA for the Stage 1 Warehouse Building and associated infrastructure does not include subdivision.
Clause 25 – Public utility infrastructure	Public utility infrastructure will be provided to the development and will be of a sufficient capacity to service the development's needs. Further details are contained in Section 7.9 and Appendices H and K.
Clause 26 – Development on or in the vicinity of proposed transport infrastructure routes	The proposed development is within the vicinity of the M7 Motorway and also adjoins the proposed Southern Link Road that will provide connection to the WSEA. Discussions have been held with the DP&I and the RMS regarding this matter. This has led to the agreement that Gazcorp will dedicate land on the northern boundary of the Site to the future development of the Southern Link Road and this has been allowed for. Further details are contained in Section 7.6 and Appendix J.
Clause 29 – Industrial Release Area – satisfactory arrangement for the provision of regional transport infrastructure and services	Gazcorp will provide development contributions at the rate of \$180,000 per net developable area, less any agreed reductions associated with land dedications or other in-kind works. In particular, Gazcorp will dedicate land toward the future development of the Southern Link Road. Further details are contained in Section 7.6 and Appendix J.
Clause 31 – Design principles	The proposed development has been designed to provide an outcome that is consistent with the design principles set out in this clause. Specifically: – The development is and will be designed to a high quality; – Buildings will include a variety of materials to vary and enhance their appearance; – An extensive amount of space is provided for future high quality landscaping; – The scale and height of the proposed building envelopes and the proposed building for Stage 1 will be compatible with other employment generating development within the employment precinct.
32 – Preservation of trees and vegetation	Trees and vegetation would be preserved wherever possible. Notably the riparian area located along Reedy Creek to the west is proposed to be rehabilitated as part of the development. The removal of trees is required elsewhere on the site to accommodate the development, whilst this is the case the removal of this vegetation is considered to be acceptable. A detailed Landscape Design has been prepared and is provided in Appendix O.

7.2 Contamination

Phase 1 and Phase 2 Contamination Assessments have been undertaken by Douglas Partners Pty Ltd and are included at **Appendix P**.

The aim of these assessments was to determine if past and/or present activities undertaken on, or adjacent to, the site have caused contamination, and if so, whether this contamination needs to be remediated in order to make the Site suitable for the proposed industrial uses.

The objectives of the Phase 1 and Phase 2 assessments were to identify and assess areas of environmental concern and to provide advice on the need for further investigation and/or management (if required).

Soil analytical data undertaken as part of the assessment indicated that there is unlikely to be any significant wide-spread soil contamination issues that would impact on the suitability of the Site for the proposed development.

In particular:

- Concentrations of chemical contaminants in analysed soil samples were within the site assessment criteria.
- Asbestos was not detected in any analysed soil sample, including the gravel road surface samples.
- Concentrations of arsenic, cadmium, chromium, lead, mercury, nickel and zinc in analysed dam water samples were within the respective water assessment criteria.
- Detectable levels of arsenic were identified in the water and sediments at Dam 4. Overall, concentrations of arsenic in soil across the site are considered to be low and would not be expected to result in arsenic water contamination in any of the dams.
- Concentrations of PAH, PCB, OCP and OPP were below detection limits in all water samples and within the respective assessment criteria.
- Concentrations of total recoverable hydrocarbons (TRH) C6-C9, TRH C10-C14 and BTEX were below detection limits in all analysed dam water samples. Concentrations of TRH C15-C28 and TRH C29-C36 were detected in two of the four analysed samples, however these are likely to be associated with organic matter in the dam water rather than a petroleum product.
- TRH in soil samples from test pits were at concentrations below detection limits and thus, the soil at the site is not a likely source of the detectable TRH in the dam water.
- Concentrations of total phenols (ranging from 60 µg/L to 100 µg/L) in all analysed dam water samples were above the detection limit (50 µg/L) which was used as a screening criterion. The source of the phenols has not been identified. Phenols were not detected in the analysed soil samples and, thus, the soil is considered an unlikely source of the detectable phenols in water. Phenols are not present at excessively high concentrations.

Following detailed analysis the reports conclude that the Site has a low overall potential for contamination, with the most likely potential sources for contamination being:

- Localised contaminated filling including possible asbestos associated with demolition rubble used to surface the existing unsealed road;
- The use of pesticides for agricultural purposes (this is however considered to be a very low risk and probably unlikely to have occurred);

- Stockpiles and fill mounds containing contaminated soils.

In light of the outcome of these investigations, Douglas Partners conclude that the Site is suitable for the proposed development subject to recommended mitigation measures set out below.

Notwithstanding this, given that anthropogenic materials were encountered in some of the sample locations, Douglas Partners recommends that an Unexpected Finds Protocol (UFP) be established for Site. The UFP would include procedures for if asbestos or chemical contaminated soil is encountered during excavations.

Further assessment of the dam water will also need to be undertaken prior to its discharge or removal.

7.3 Layout and Urban Design

A Design Statement and Urban Design Guidelines have been prepared for the proposed development by MBMO Architects and are included at **Appendices E and L** respectively.

The Site has been designed in consultation with the Roads and Maritime Services, who advised that direct access from the Site to the future Southern Link Road was undesirable. The layout and design of the proposed Masterplan has therefore been largely determined by the need for the Site to have a sole point of access from Wallgrove Road. An internal estate road runs from Wallgrove Road through the centre of the Site with the proposed lots located on either side of this central spine.

The Site is proposed to be divided into fifteen new warehouse/industrial lots of varying sizes to accommodate the market demand for medium to large sized buildings between 10,000m² and 45,000m². Larger lots have been located to the north and on the flatter parts of the site, while smaller lots have been positioned around the hill where terracing is required to deal with the topography.

Several different types of landscape treatments are proposed as these will assist in defining different parts. Maintaining a green element to the site and softening the appearance of the built form.

Urban Design Guidelines have been prepared to guide future development and ensure the achievement of a high quality design outcome consistent with that proposed. The guidelines provide guidance for future development proponents in relation to the design and assessment of future buildings within the Gazcorp Momentum M7 industrial estate, and seek to encourage high quality innovative development. Key objectives set out within the Urban Design Guidelines include:

- To encourage buildings that responds positively to the street.
- To provide an open streetscape with substantial areas for the integration of landscaping within the site's and along the internal street.
- To encourage buildings that are of architectural merit, diversity, scale and high quality building form.
- To encourage a built form that contributes to the site's visual amenity.
- To ensure that new development contributes to the creation of a visually cohesive urban environment.
- To ensure the creation of an identifiable entrance point to the property and building.
- To promote an integrated design approach to all signage in character with the locality, and its architectural and landscape features.

- To prevent proliferation of advertising signs.
- To encourage a well-designed, legible and cohesive landscape framework for the site.

7.4 Economic Impact

This EIS has considered the supply and demand of employment land in Western Sydney.

7.4.1 Employment Land Supply and Demand

Since 2008, the NSW Government has run an Employment Lands Development Program (ELDP) to monitor supply and demand for employment lands and plan for new employment lands. In February 2011, the NSW Government established a Task Force to inform the work of the ELDP. It comprises of senior representatives of Government agencies, local government, industry stakeholders and independent experts.

In 2012, the NSW Government released the second of a series of ELDP Reports - the 'ELDP 2011 Update Report'. This report provides data on stocks of employment land for Sydney and the Central Coast at January 2011. Key outcomes from the ELDP 2011 Update Report include:

- Take-up of employment land was dominated by large pre-committed warehouse developments and concentrated in the precincts of Hoxton Park (38 ha), Greystanes (17 ha), Wyong Employment Zone (19 ha), Somersby (16 ha), Eastern Creek (11 ha) and Smeaton Grange (9 ha). This reflects the increasing demand for A-grade warehouse stock in areas with good access to key infrastructure.
- Demand for industrial space in Sydney is expected to continue to grow in the short to medium term, driven by: forecast economic growth; ongoing efficiency drives in the logistic sectors; growth in imports; and dwelling construction.
- Based on moderate projected take-up rates, there is currently just 4½ years of supply of undeveloped zoned and serviced land (892 hectares) which may be ready for development. This falls just under the supply standards adopted interstate for industrial land planning which require a minimum of 5-7 years supply.
- This suggests that action should focus around servicing and encouraging take-up of existing zoned land where this meets the current needs of industry, noticeably in the warehouse and logistic sectors which is predominantly looking for large sites, with A-grade warehouses and good freight infrastructure connections.

The proposed Staged DA will provide for the infrastructure and servicing required to allow the future take-up of the IN1-zoned Site for employment generating uses. This is consistent with the recommendations of the Employment Lands Task Force that existing zoned land should be developed, particularly to meet the needs of the warehouse and logistic sectors which require large sites, with A-grade warehouses and good freight infrastructure connections.

7.4.2 Investment and Employment

As described above, the proposed development of the Gazcorp Site is consistent with the recommendations of the NSW Government's Employment Lands Task Force.

Notwithstanding the metropolitan wide- demand and supply analysis in relation to employment lands, it is also highlighted that there is critical demand for

employment generating development in Western Sydney. In particular, the *Draft Metropolitan Strategy for Sydney to 2031* identifies an overall current (2011) jobs imbalance of some 197,000 in Western Sydney, as shown in **Table 10**.

This analysis shows that there is currently a severe jobs imbalance in Western Sydney (i.e. a jobs shortfall), which is projected worsen in coming years.

Given the existing (and predicted) shortfall in jobs in Western Sydney, the zoning of the land, and the suitability of the Site for development to meet the specific needs of the industry, there is no adverse impacts foreseeable on existing surrounding industrial areas.

Table 10 – Western Sydney Employment Shortfall (2011)

Sub-Region	Population	Workforce *	Jobs	Shortfall
West	327,000	184,608 (56%)	119,000	65,608
West Central and North West	846,000	421,621 (50%)	389,000	32,621
South West	829,000	395,945 (48%)	298,000	97,945
Total Western Sydney	2,002,000	1,002,174	806,000	196,974

*Note: *The brackets show the implied labour force participation rate based on the sub-regional population and the labour workforce figures presented in the Draft Metropolitan Strategy for Sydney.*

The development of the full Masterplan will include a capital expenditure of approximately \$174 million (see **Appendix I**), and provide between 700 and 1,500 new jobs from the developable land generated by the Staged DA Masterplan (assuming a job generation rate of 20 – 40 jobs per developable hectare, which is consistent with the existing job densities in north-west and south-west Sydney).

The Stage 1 Warehouse Building, with a capital expenditure of over \$52 million, has a developable area of almost 9ha, and so is expected to provide for between 180 and 360 jobs.

The proposal will therefore make a significant contribution towards the employment targets within the *Draft Metropolitan Strategy for Sydney to 2031*. This is consistent with the objective of the WSEA SEPP to promote economic development and the creation of employment in the WSEA by providing for development including major warehousing, distribution, freight transport, industrial, high technology and research facilities.

7.5 Noise

A Cumulative Noise Study (for the Masterplan) and Noise Emission Assessment for Stage 1 have been prepared for the proposed development by Acoustic Logic and are included at **Appendix Q**.

These assessments take into consideration the requirements of Council, the NSW *Industrial Noise Policy* and the NSW *Road Noise Policy*, and identify the main noise generating sources and activities at all stages of construction as well as during operation of the development.

Acoustic Logic identify that the noise and vibration sources that may affect the surrounding area as a result of the proposed development include:

- traffic noise generated by the proposed development, such as semi-trailers and medium-rigid delivery trucks;
- loading docks and internal warehouse operation (e.g. forklift operation); and
- mechanical plant and services from buildings.

The nearest residential receivers to the proposed development are located on Flavex Lane approximately 100m-200m to the south-west of the site. Existing background noise levels at these locations are between 48 and 52 dBA. Using these background noise levels Acoustic Logic has established the amenity and intrusiveness project specific noise criteria for the development, as provided in **Table 11**:

Table 11 – Amenity and intrusiveness Noise Criteria

Time Period	Assessment Background Noise Level dB(A) L_{90}	Amenity Criteria dB(A) L_{Aeq}	Intrusiveness Criteria Background + 5dB(A) $L_{Aeq}(15min)$	EPA Criteria for Sleep Disturbance dB(A) $L_{1(1 minute)}$
Day	48	60	53	N/A
Evening	52	50	53	N/A
Night	48	45	53	63

Taking into consideration the established noise criteria, Acoustic Logic undertook a detailed assessment of the potential noise impacts associated with the proposed development. Table 12

7.5.1 Stage 1 Noise Assessment

The Stage 1 noise assessment considered the following noise sources:

- 12 semi-trailer truck movements per hour, 13 medium-rigid vehicles and 135 cars, during day time hours.
- Internal noise source of 79dBA based on 30 forklifts working simultaneously within 10m internally of the warehouse roller doors, during day time hours.
- Three semi-trailer truck movements per hour, four medium-rigid vehicles and 34 cars, during night-time hours.
- Internal noise source of 73dBA based on 8 forklifts working simultaneously within 10m internally of the warehouse roller doors, during night-time hours.

The noise emissions from a worst case 1-hour period from all activities combined has been undertaken, the outcome of which is shown in **Table 12** below. The outcome of the noise modelling concludes that noise emissions associated with vehicle movements and other operational aspects of the proposed development comply with the relevant project specific noise criteria established for the project.

Table 12 – Stage 1 Noise Modelling Results

Noise Receiver	Period	Predicted Noise Level dB(A) $L_{Aeq 15min}$	Noise Criteria dB(A) $L_{Aeq}(15min)$	Compliance
Residential receiver to the south-west	Day	50	53	Yes
	Evening	50	50	Yes
	Night	45	45	Yes
Industrial Development to the south	When in use	45	70	Yes

Sleep Disturbance

- A sleep disturbance assessment has been undertaken based on the loudest typical peak noise events from an on-site truck being the air breaks, with an approximate noise level of 114 dB(A) $L_{1(1min)}$, and reverse alarm, with an approximate noise level of 108 dB(A) $L_{1(1min)}$ (including 5 dB(A) for tonality). This results in a $L_{1(1min)}$ Of 62 dBA, which is below the noise level predicted to cause sleep disturbance – which is 63dBA (being background noise plus 15 dBA).

Road Traffic Noise

Noise from cars and trucks moving along Wallgrove Road to and from the development have been assessed against the RNP over the day/evening period as a worst case. The modelling demonstrates that the predicted noise level will be well below the road traffic noise criteria.

Construction Noise and Vibration

A Construction Noise and Vibration Management Plan has been prepared for the Stage 1 works, and is provided in **Appendix Q**. The Plan identifies that the loudest activity during Stage 1 works would be the excavation of rock, which would be undertaken primarily by ripping.

It is expected that noise levels produced by the excavation equipment may exceed the *Interim Construction Noise Guideline* noise goals at adjacent residential premises when works are undertaken near the boundary of the site, even when quieter excavation methods are used.

Noise levels generated during the construction phase will be significantly lower than during excavation. Significant vibration is not anticipated to be produced during this phase.

The main noise producing activities will be that attributed to the forming and pouring of the concrete floor slabs, and crane operation. These would be managed by placing the plant as far as practicable from the sensitive receivers. It is expected that the adopted noise guidelines will generally be achieved during this phase except during louder activities such as stripping out of formwork which will occur from time to time.

The Plan provides:

- A process for minimising the impact associated with excavation and construction activities.
- An outline of available noise mitigation methods.
- Community interaction procedure.
- Contingency plans.

The Plan also sets out vibration velocity guideline levels for use in evaluating the effects of vibration on structures, which will be used to regulate vibration at the excavation/construction site.

7.5.2 Cumulative (Masterplan) Noise Assessment

The cumulative site-wide noise assessment considered the following noise sources:

- 45 semi-trailer truck movements per hour, 50 medium-rigid vehicles and 516 cars, during day time hours.
- 11 semi-trailer truck movements per hour, 12 medium-rigid vehicles and 129 cars, during night-time hours.
- Forklift working at 25% of the levels assumed for the Stage 1 building, during day time and night-time hours respectively.

The noise emissions from a worst case 1-hour period from all activities combined has been undertaken, the outcome of which is shown in **Table 13** below. The outcome of the noise modelling concludes that noise emissions associated with vehicle movements and other operational aspects of the proposed development comply with the relevant project specific noise criteria established for the project.

Table 13 – Site-Wide Noise Modelling results

Noise Receiver	Period	Predicted Noise Level dB(A) _{L_{Aeq}15min}	Noise Criteria dB(A) _{L_{Aeq}(15min)}	Compliance
Residential receiver to the south-west	Day	50	53	Yes
	Evening	50	50	Yes
	Night	45	45	Yes
Industrial Development to the south	When in use	51	70	Yes

Sleep Disturbance

- A sleep disturbance assessment has been undertaken based on the loudest typical peak noise events from an on-site truck being the air breaks, with an approximate noise level of 114 dB(A)_{L_{1(1min)}}, and reverse alarm, with an approximate noise level of 108 dB(A)_{L_{1(1min)}} (including 5 dB(A) for tonality). This results in a _{L_{1(1min)}} of 63 dBA, which does not exceed the noise level predicted to cause sleep disturbance – which is 63dBA (being background noise plus 15 dBA).

Road Traffic Noise

Noise from cars and trucks moving along Wallgrove Road to and from the development have been assessed against the RNP over the day/evening period as a worst case. The modelling demonstrates that the predicted noise level will remain below the road traffic noise criteria for Wallgrove Road.

7.5.3 Conclusion

The noise assessment reports for the Stage 1 building and for the entire Masterplan make the following recommendations for all buildings, including the Stage 1 warehouse building:

- The southern wall of the Stage 1 building (made of Colourbond steel) will require 50mm of glasswool insulation to adequately attenuate noise inside the building.
- The roof to be constructed from minimum 0.42mm sheet metal with 50mm glasswool insulation underneath.

The following operational noise management measures would be implemented include:

- Truck delivery drivers should limit the use of exhaust brakes on internal roads and Wallgrove Road.
- Where practical, trucks are to be switched off whilst in the loading dock and not to be left idling. This would apply to airbrake compressors to limit discharge within the loading dock area.

In addition to the building treatments and operational management measures, Gazcorp has decided to install an acoustic barrier along the southern boundary of the Lot 10 to further reduce potential for noise impacts on neighbouring residential properties. The height for the screen will be at least 3m and it will be constructed out of Colourbond, CFC sheet, Perspex or similar. The noise barrier would be constructed as part of the Stage 1 works.

Overall the Cumulative Noise Study and Noise Assessment for Stage 1 conclude that noise impacts from the general operation of the proposed development will

not have a significant detrimental impact on the residents and existing residential properties to the south provided that the treatments and management measures are implemented in accordance with the recommendations of the report.

7.6 Transport and Accessibility (Construction and Operation)

A Traffic Impact Assessment has been prepared for the proposed development by GHD and is included at **Appendix J**. This assessment has identified the existing transport context, including the current traffic generation and capacity of the surrounding road network, as well as the expected traffic generation and access arrangements for the proposed development. The report also details the expected traffic impacts during construction and the required traffic management measures. A summary of the assessment is provided below.

7.6.1 Current Situation

An analysis of the vehicle movements on the surrounding streets during the morning and afternoon peak periods and the performance of key intersections around the Site was undertaken.

On Wallgrove Road to the north of Old Wallgrove Road, approximately 2,305 to 2,388 vehicles were recorded per hour two way during the morning and afternoon peaks. To the south of Old Wallgrove Road on Wallgrove Road the traffic flow was approximately 1,769 to 2,016 vehicles per hour two way during the peak periods. The existing traffic generation at the M7 access point on Old Wallgrove Road was approximately 4,877 to 4,988 vehicles per hour two way during the peak periods.

The study found that the existing intersection of Wallgrove Road and the Austral Bricks Access Road currently operates with average delays of 81 to 122 seconds during the morning and afternoon peak periods. This represents over capacity situation and is a reflection of the high delays of traffic existing from the access point. The study notes that while this intersection is performing with excessive delays, these delays are only for heavy vehicles turning right out of the Austral Bricks Access. This movement is of a low frequency and does not indicate any safety issues with the intersection.

7.6.2 Access

Three alternative access options were considered during the design phase of the proposed development. Based on the results of intersection modelling the preferred access solution was to create a single signalised access point to Wallgrove Road. Under this preferred design solution the signalised intersection would be provided with a 100m right turn bay on the northern leg, with provision for pedestrian crossing on all legs. Based on analysis undertaken by GHD the proposed access solution will provide for efficient and effective vehicular movements in and out of the site with minimal disruption to traffic flows along Wallgrove Road and the future Southern Link Road.

7.6.3 Traffic Impact

Additional traffic will be generated as a result of the proposed development. The most significant traffic generation will be during the weekday morning and afternoon peak periods. Using trip generation rates provided by Blacktown Council (i.e. 15 trips per hectare) it is expected that the proposed Stage 1 warehouse will result in 157 trips per hour two way during peak times, with the overall site ultimately resulting in 600 trips per hour two way during peak times.

SIDRA intersection modelling has been undertaken for the proposed development using the proposed 2031 traffic generation and background traffic assumptions.

The SIDRA analysis confirms that the proposed new intersection would operate satisfactorily under the forecast 2031 traffic flows in both the AM and PM peaks and 95th percentile queues can be comfortably accommodated within the proposed bay lengths. The report also notes that the provision of a single access point will eliminate the possibility of traffic using the internal road network as an alternative route to the Southern Link Road.

7.6.4 Parking

The *RMS Guide to Traffic Generating Developments* (2002) has been used as the appropriate guideline for the provision of car parking associated with industrial type warehouse developments. The Guide specifies that for industrial warehouse development car parking should be provided at the rate of 1 space per 300m² of Gross Floor Area (GFA) and 1 space per 4,0m² of GFA for the commercial office component of the development.

Based on the *RMS Guide to Traffic Generating Developments*, a total of 985 parking spaces would be required for the overall development. In addition a further 233 delivery and service vehicle spaces would also be required to be provided.

A total of circa 2,089 spaces (not including truck loading bays and docks) are proposed to be provided for the overall site which will be sufficient to cater for the development and exceed the minimum parking requirements set out in the relevant guides and standards.

With regard to the detailed application for Stage 1, 223 parking spaces will be provided to service the development, which more than complies with the 216 parking spaces required to comply with the *RMS Guide to Traffic Generating Developments*. The Stage 1 building includes provision of 28 truck loading docks, which will be separated from the car parking areas and will be sufficient to accommodate warehouse related service and delivery vehicles. A hardstand area is also proposed around the building and will enable service vehicles to drive around the building and park at the rear while waiting for pick-ups and deliveries.

Sufficient parking will therefore be provided to service the proposed development.

All parking spaces are to be designed in accordance with Australian Standards *AS2890.1:2004 Parking Facilities, Part 1: Off-street Car Parking*.

7.6.5 Construction Traffic Management

Allowing for some vehicle sharing, it is expected that 27 daily two-way trips would be generated by light vehicles during the peak periods. Light vehicle construction trips are expected to arrive in the morning and depart in the evening; based on this traffic generation, construction is likely to result in increases of up to 27 vehicles per hour during peak periods, which is well within the daily variation of traffic on the road network around the development. Parking for these construction vehicles will be provided on-site.

It is anticipated that under a worst case scenario no more than 5 trucks per day would be required for the delivery of construction materials to site, except during the period of concrete pouring, where the daily delivery may peak at 30 trucks per day. These deliveries are likely to occur outside of the peak traffic periods and will have negligible impact on traffic on Wallgrove Road or the M7 Motorway which currently both have high proportions of heavy vehicle.

While the impacts of construction of the development are likely to be negligible, the following measures are proposed to be undertaken to minimise the impacts of the construction activities of the development:

- Traffic control would be required to manage and regulate traffic movements into and out of the site during construction.
- Disruption to road users would be kept to a minimum by scheduling intensive delivery activities outside of peak hours.
- Construction of the new intersection at Wallgrove Road would be undertaken in concert with the upgrade of Wallgrove Road to minimise disruptions to traffic.
- Construction and delivery vehicles would be limited to use of Wallgrove Road and the M7 Motorway and restricted to non-peak periods.

■

A detailed Construction Traffic Management Plan will be prepared and implemented for the Stage 1 construction works.

7.7 Geotechnical

Douglas Partners Pty has undertaken an assessment of the existing geotechnical conditions of the site (refer to **Appendix G**). The report outlines the results of these investigations, which included the drilling of one borehole and laboratory testing of the sampled material.

The investigations identified that the top soil comprised approximately 100mm of brown, fine grained sandy clay that was generally firm and moist. Residual clay was situated below the topsoil and extended to a depth of 1.1m. Interbedded sandstone, siltstone and shale was encountered below a depth of 1.1m, with this material being highly weathered to 4.8m deep, slightly weathered below 4.8m deep and fresh from 10.5m deep. No groundwater was encountered during the auger drilling.

The report notes that proposed cut to fill bulk earthworks will likely result in excavation of the upper 15 m of the hill within the site and thus will remove all overburden soils, underlying highly to slightly weathered, extremely low to medium strength sandstone and siltstone, as well as approximately 4.5 m depth of fresh, low to medium strength shale. The report subsequently concludes that it is probable that a considerable portion of Class II siltstone and shale will be exposed on this site within excavation depths exceeding 8m. Accordingly, large excavation machinery is probably required to undertake the work.

Following the outcome of their analysis results, Douglas and Partners Pty Ltd set out a number of recommendations and measures to manage the bulk earthworks. These are mitigation measures are detailed in **Section 8**.

7.8 Sediment, Erosion and Dust Controls (Construction and Excavation)

7.8.1 Sediment and Erosion

A Sediment and Erosion Control Plan has been prepared by Brown Consulting and is included at **Appendix M**.

The plan sets out a series of management measures and initiatives that are to be implemented and maintained on site for the full duration of the works. Together these key measures and initiatives will ensure the effective management and

mitigation of sediment and erosion impacts from the Site during construction. Management measures include:

- Earth banks (High and Low Flows);
- Sediment Fences;
- Geotextile Inlet Filters;
- Kerbside turf strips;
- Mitigation Measures;
- Stabilised Site Access; and
- Stockpiles.

7.8.2 Dust

Measures to minimise dust during construction will include minimising the extent of open excavations at any one time, covering or stabilising stockpiles wherever possible and wetting down exposed surfaces.

7.9 Infrastructure, Utilities and Services

A Water and Sewerage Servicing Statement has been prepared by Brown Consulting and is included at **Appendix H**.

7.9.1 Water

The subject site is proposed to be serviced from the Minchinbury Water Supply System (Elevated Reservoir) which is located to the north of the site. Mains connection will be obtained from the existing 250mm main located on the corner of Wallgrove Road and Roussell Road, which is located approximately 560m to the north of the site.

Sydney Water's previous planning was for the site to be serviced by the Cecil Hills Reservoir off the proposed 450mm main in Burley Road. The current road pattern however restricts the ability to get a reasonable link to this main, which would need to be laid through private land within easements of approximately 2.5km from the south along Wallgrove Road.

The proposed connection from the Minchinbury Water Supply System is therefore considered to be more appropriate for servicing the site.

7.9.2 Sewer

The site drains to the Eastern Creek Submain Section 5 which has sufficient capacity to cater for the proposed development. Sydney Water's preferred option for servicing the site is therefore to connect to the 375mm sewer located approximately 800m to the north. A new 225mm sewer would be extended generally along Wallgrove Road to connect and service the site.

For further details on the servicing arrangements for the site refer to **Appendix H**.

7.10 Flora and Fauna

An Ecological Impact Assessment (EIA) has been prepared by Cumberland Ecology and is included at **Appendix F**. The EIA describes the flora and fauna values of the application site and assesses the potential impacts of the proposed development on threatened species, populations or ecological communities. A combination of desktop surveys and field investigations were undertaken to inform the assessment. A summary of the assessment and proposed mitigation measures is provided below.

7.10.1 Flora and Vegetation Communities

The EIA identified that the subject site is largely cleared of native vegetation and is dominated by pasture grasses. Native vegetation that is present on the site is represented by a mosaic of regenerating patches of open forest and woodland at various stages of canopy regeneration, with much of the understorey dominated by exotic shrubs and groundcovers. A narrow riparian corridor is present along the site's western boundary and follows Reedy Creek and its tributary arm.

The vegetation communities present on the subject site conform to two threatened ecological communities that are protected under the *Threatened Species Conservation Act 1995* (TSC Act), these being the Cumberland Plain Woodland (Shale Hills Woodland and Shale Plains Woodland) and the River-flat Eucalypt Forest (Alluvial Woodland). In total 11.1 ha of Shale Hills is located on the Site, 3.9 ha of Shale Plains Woodland, and 3.1 ha of Alluvial Woodland. The remainder of the site is dominated by exotic grasslands.

The proposed development would result in the removal of the following amount of native vegetation (note that vegetation located within the SLR corridor has not been considered to be part of the Site):

- 9.85 ha of the Shale Hills Woodland (100% of the community on the Site).
- 3.27 ha of Shale Plain Woodland (93% of the community on the Site).
- 1.43 ha of Alluvial Woodland (58% of the community on the Site).

The EIA notes that the site has a long history of agricultural land use and has been the subject of heavy clearing and use in the past to provide pasture for livestock. Specifically slashing, grazing and pasture improvement activities have maintained large open areas of grassland dominated by pasture grasses. The current woodlands on the site therefore exist in a highly stressed state and now provide habitat of limited value for native flora and fauna. Due to these reasons, the threatened ecological communities occurring on the subject site have poor capabilities and little opportunity for long term recovery. These occurrences are therefore unlikely to have high conservation significance in the long term.

During the field assessment no threatened species listed under the TSC Act and *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth)(EPBC Act) were recorded at the Site. The results of ecological studies conducted for other nearby projects also demonstrated that degraded sites with long agricultural histories similar to that of the subject site are no longer likely to support threatened plant species previously recorded in the locality, such as *Grevillea juniperina* (Juniper-leaved Grevillea), *Acacia pubescens* (Downy Wattle), *Dillwynia tenuifolia*, *Persoonia nutans* (Nodding Geebung) *Pultenaea parvifolia* and *Pimelea spicata* (Spiked Riceflower).

In light of the above, the EIA concludes that the proposed development is not expected to have any significant impacts on matters of National Environmental Significance listed under the EPBC Act. The native woodland that conforms to Cumberland Plain Woodland under the TSC Act is too degraded to meet the EPBC Act listing for Cumberland Plain Woodland. No other vegetation communities on the subject site conform to any EPBC Act listed threatened ecological community. Therefore, the Project is unlikely to have a significant impact on threatened ecological communities listed under the EPBC Act.

7.10.2 Fauna

The faunal assemblage recorded on the subject site is dominated by common urban bird species that typically thrive in the urban-rural residential landscapes, such as the Noisy Miner (*Manorina melanocephala*), Australian Raven (*Corvus coronoides*), Australian Magpie (*Cracticus tibicen*), Pied Currawong (*Strepera*

graculina) and Red Wattlebird (*Anthochaera carunculata*). The site also provides habitat for a number of microchiropteran bat species, common frog species, the common Brushtail Possum and the Common Garden Skink.

Field surveys identified that there is very little good quality habitat available on the subject site for small arboreal mammals, ground mammals and reptiles. A small number of threatened and migratory fauna species were recorded on the subject site. One individual Square-tailed Kit (*Lophoictinia isura*) was recorded flying over the subject site and was observed perching on a stag. It is possible that this individual was foraging over the subject site and adjacent properties; the subject site would form a part of a much larger foraging range for the species.

Echolocation calls were recorded for a few microchiropteran bat species. One of these calls was identified to belong to the Southern Myotis (*Myotis macropus*), which is listed as a Vulnerable species under the TSC Act. The calls were collected around the western dam during a warm night with high insect activity. The report notes that the Southern Myotis (*Myotis macropus*) was likely to have been foraging for insects around the dam, but is unlikely to roost on the subject site because of the relative lack of roosting hollows.

The value of the subject site as foraging habitat is also limited and as such fauna species are likely to forage occasionally over the subject site as part of a much larger foraging range.

The occurrences of Cumberland Plain Woodland and River-flat Eucalypt Forest on the subject site represent highly degraded examples of these communities, and are also very isolated from other areas of bushland by the M7 and M4 motorways and surrounding rural residential and industrial development.

The report also notes that since the subject site is located in the WSEA, which is an area targeted specifically for industrial development, it is reasonable to expect that future development of WSEA lands will further isolate the on-site occurrences from surrounding bushland in the long term. Due to these reasons, the threatened ecological communities occurring on the subject site have poor capabilities and little opportunity for long term recovery. These occurrences are therefore unlikely to have high conservation significance in the long term.

In summary the Ecological Impact Assessment notes that the proposed development, whilst having an impact on Cumberland Plain Woodland and River-flat Eucalypt Forest on the site, is unlikely to have a significant impact on the overall persistence of these communities in the locality in the long term.

7.10.3 Mitigation Measures

The proposed development has few opportunities to avoid impacts to threatened species habitat and threatened ecological communities. The proposed Masterplan will retain vegetation within several areas of the Site, including within the riparian corridor along Reedy Creek and its tributary, and in the southeast corner of the Site. The landscape design also incorporates elements of Cumberland Plain Woodland to ameliorate as far as possible the loss of endemic plant species and habitat for native fauna.

Under a “do nothing” scenario that assumes that the current land uses continue, the biodiversity values of the remnant vegetation on the Site are likely to continue to decline. The proposed development, although likely to remove EEC vegetation, presents opportunities to improve the condition and value of the vegetation that will be retained along Reedy Creek and its tributary. A Riparian Management Plan will be prepared and implemented, which sets out the ongoing management and improvement activities for the riparian corridor within the Site. The management and improvement of the riparian corridor will ensure that the objectives of the E2

Zone “to protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values” are achieved.

Construction protocols and controls have been recommended by Cumberland Ecology. These protocols and controls are set out in detail in **Appendix F** and **Section 8**, and include:

- Measures to ensure construction impacts are limited to the development footprint and do not have secondary impacts on the riparian vegetation.
- Pre-clearing and dam decommissioning protocols to limit inadvertent impacts to native flora and fauna that may currently be residing on the Site.
- Implementation of erosion and sediment control plans to mitigate the impact of soil disturbance and to prevent secondary or off-site impacts, particularly impacts on adjacent native vegetation along Reedy Creek.

7.10.4 Biodiversity Offsets

There is very little opportunity to avoid the clearance of an estimated 13.1 ha of Cumberland Plain Woodland and 1.4 ha of River-flat Eucalypt Forest, both of which are both protected under the TSC Act, albeit in a highly modified and degraded form of the original vegetation communities. To compensate for the predicted loss of these vegetation communities, Gazcorp propose to provide a biodiversity offset which is consistent with the OEH NSW Offsetting Principles.

Consistent with the OEH NSW Offsetting Principles the BioBanking Assessment Methodology can be used to provide an indication of the size and adequacy of offsets for SSD development proposals. Principle 7 further provides that offsets can be discounted where significant social and economic benefits accrue to NSW as a consequence of the proposal. It is therefore identified that the OEH NSW Offsetting Principles provide for the use of BioBanking Assessment Methodology to quantify biodiversity values and impacts as a basis for determining a mitigated net loss outcome which could involve the purchase and retirement of biodiversity credits to offset project impacts.

Gazcorp intends to seek a biodiversity offset for the project through the purchase and retirement of BioBanking biodiversity credits. The number and type of credits to be purchased and retired will be guided by using the BioBanking Assessment Methodology and the NSW Offsetting Principles.

A BioBanking Assessment was completed to provide an indication of the types and quantities of biodiversity credits that would likely be required. The BioBanking Assessment indicated that the following types of credits would be required (the indicative number of credits is provided in parenthesis):

- Shale Hills Woodland [HN529] Grey Box - Forest Red Gum grassy woodland on shale of the southern Cumberland Plain, Sydney Basin (173 credits);
- Shale Plains Woodland [HN528] Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin (56 credits);
- Alluvial Woodland [HN526] Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin (30 credits); and
- Southern Myotis (potential breeding habitat) – (36 credits).

Biodiversity credits for all three vegetation communities are available at the time of preparation of this EIA report; however, credits for Southern Myotis (potential breeding habitat) is not yet available.

The BioBanking Assessment assumes that *Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin* represents potential breeding habitat for the species. This is because Southern Myotis (*Myotis macropus*) is considered to have a particular association with riparian vegetation in proximity of dams and waterways such as the vegetation along Reedy Creek. Although not factored into the BioBanking Assessment, the proposed restoration of vegetation along Reedy Creek will also address impacts on potential Southern Myotis (*Myotis macropus*) breeding habitat.

The *Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Region* will also be a key focus of the aforementioned riparian management plan and will be substantially restored within the site. The restoration of the riparian habitat along Reedy Creek cannot be factored into the BioBanking Assessment as it is not proposed to register it as a Biobank site. However, the restoration work will address impacts on *Forest Red Gum – Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Region*.

Further, except for the riparian corridor, the vegetation to be impacted exists in a highly degraded state and has poor capabilities and little opportunity for long term recovery, particularly as ongoing development of WSEA combined with existing infrastructure corridors (i.e. the SCA pipeline and the M7) will ensure that vegetation at the Site will remain isolated from surrounding bushland.

With consideration of the above matters, and the OEH NSW Offsetting Principles, which provide for a mitigated net loss offset that varies from the “maintain and improve” standard required under the BioBanking scheme for SSD, Gazcorp proposes an offset comprising 50% of the ecosystem credits indicated in the BioBanking Assessment (i.e. approximately 130 ecosystem credits). These ecosystem credits will largely comprise Cumberland Plain Woodland credit types (i.e. HN528 and HN529), which are currently available on the market. No BioBanking credits are proposed to be purchased and retired in relation to the Southern Myotis (potential breeding habitat), which will be addressed through the restoration of Reedy Creek.

7.11 Bushfire

A Bushfire Protection Assessment has been prepared by Australian Bushfire Protection Planners Pty Ltd (ABBP) in response to the DGRs and is included at **Appendix S**. The assessment responds to the aims and objectives of *Planning for Bushfire Protection 2006* and in this regard undertakes a detailed analysis of the proposed development with regard to bushfire risk and management.

7.11.1 Bushfire Assessment

The bushfire assessment notes that the Fairfield Bushfire Prone Land Map shows that the Site contains areas of Category 1 Bushfire Prone Vegetation with the remainder being impacted by the buffer zone to the bushfire prone vegetation. An inspection of the Site confirmed that it does contain remnant woodland trees, however that much of the land is grazed and therefore incorrectly identified as Bushfire Prone Land.

Due to the low bushfire risk to the proposed industrial estate the NSW Rural Fire Service have confirmed that there is no requirement for the preparation of a specific Bushfire Evacuation Plan or a Bushfire Management Plan.

The bushfire assessment reviews the proposed development against the deemed-to-satisfy provisions of *Planning for Bushfire Protection 2006* and has found that the location of the proposed buildings provide a defensible space between the

building and the bushfire prone vegetation, particularly within the Reedy Creek riparian corridor to the west.

The width of the defendable space setback exceeds the 10m 'flame zone' width required to address the NSW Rural Fire Service's requirements for Class 5 – 10 buildings [as defined by the Building Code of Australia]. Public and internal road access and the provision of water, electricity and gas services has also been examined and found to satisfy the relevant provisions of *Planning for Bushfire Protection 2006*.

Vehicular access to the proposed industrial estate will be constructed to provide heavy rigid and articulated vehicle access to the proposed buildings, providing suitable access for fire-fighting appliances similar to NSW Rural Fire Service Category 1 Tankers and NSW FB Composite and Aerial Appliances.

7.11.2 Mitigation Measures

ABPP recommends a number of management and mitigation measures, including:

- Management of the Site generally, except for the vegetation within the Reedy Creek riparian corridor, to comply with the recommendations of *Planning for Bushfire Protection 2006* and Standards for Asset Protection Zones, including
 - Maintain a clear area of low cut lawn or pavement adjacent to the buildings; utilise non-flammable materials such as scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to the buildings.
 - Keep areas under shrubs and trees raked and clear of combustible fuels.
 - Maintain trees and shrubs in such a manner that tree canopies are separated by 2 metres and understorey vegetation is not continuous (i.e. it is retained as clumps).
- The northern, western and southern walls of the Stage 1 Warehouse Building should be constructed to comply with BAL 40, pursuant to A.S. 3959 – 2009 – 'Construction of Buildings in Bushfire Prone Areas'. In addition, any louvres or vents located within these walls should be fitted to ember protection mesh comprising corrosion resistant steel or bronze mesh with a maximum aperture of 2mm.
- Roller doors should be fitted with ember protection to the head. Ventilation openings [slats] in roller doors are not permitted.
- External seals to precast panels shall be non-combustible.
- The fire-fighting water supply to the proposed building shall comply with the BCA and Australian Standard A.S. 2419.1 – 2005.
- A site specific evacuation plan shall be prepared for each buildings. The Evacuation Plan shall address the requirements of A.S. 3745-2002 – 'Emergency Control Organisation and Procedures for Buildings, Structures and Workplaces'.

7.12 Flood and Stormwater Drainage Management

A Stormwater Concept Plan has been prepared by Brown Consulting and is included at **Appendix K**. Brown Consulting has also prepared earthworks and civil works plans (provided at **Appendix M**). The earthworks and stormwater works have subsequently been modelled by BMT WBM to determine the impact of the development on flood behaviour. The Flood Modelling Report is provided in **Appendix R**.

A summary of the assessment and proposed mitigation measures are provided below.

7.12.1 Assessment of Stormwater Concept (Masterplan)

A stormwater management strategy has been prepared for the Site by Brown Consulting and is located at **Appendix K**. Each of the proposed development sites within the Masterplan will ultimately be responsible for managing its own stormwater. This will be through the installation of individual underground on-site detention (OSD) systems.

Stormwater Concept Pan

Stormwater from each development site will be conveyed through a below ground stormwater network contained within the internal access road reserve to one of three outlets. Two outlets convey water into stormwater infrastructure on Wallgrove Road, and the third would discharge into Reedy Creek.

Peak Flows

When the Masterplan is fully developed, the internal access road will not incorporate any specific stormwater detention for flows collected on the surface of the road. As such, Brown Consulting has determined the additional volume of on-site detention that would need to be provided for each development site (on a proportional basis) in order for the entire Site to meet the peak flow reduction targets.

Modelling undertaken by Brown Consulting has determined that 315m³ per ha of OSD is required for each development site in order to ensure that the post development peak stormwater flows would represent an improvement on the existing situation. Brown Consulting has demonstrated that the combination of the OSD systems at all the development sites together with the piped drainage system will ensure that the Masterplan as a whole is able to be developed in a way that would contain major flows for the 5 year ARI and the 100 year ARI events.

Stormwater Quality targets

The treatment strategy for the overall Site is to provide the majority of treatment as on-site treatment measures within individual development sites through adopting Waters Sensitive Urban Design (WSUD) principles.

The access road is to provide primary treatment with Gross Pollutant Traps (GPTs). The stormwater treatment strategy for each individual development site is subject to the future design development. However, to compensate for the access road and bypass areas, individual development sites will need to achieve higher than usual minimum pollutant reduction targets through WSUD.

The performance of the proposed water quality treatment strategy has been modelled using the *MUSIC V5* water quality model. The proposed removal rates for the future development sites, as set out in **Appendix K**, are capable of removing the pollutant loads below the required target removal rates for total suspended solids (TSS), total phosphorus (TP), total nitrogen (TN) and Gross Pollutants in the *Interim Reference Guideline for the South East Queensland Concept Design Guidelines for WSUD*.

7.12.2 Assessment of Stormwater Concept (Stage 1 Building and Infrastructure)

OSD is to be provided for Lot 10 in accordance with the requirements to be applied to all development sites. In addition, temporary detention is to be provided for the access road until the future development of the overall site proceeds such

that peak flows at each discharge point do not exceed existing hydrological conditions.

The drainage strategy for Stage 1 incorporates temporary catch drains to separate runoff from undeveloped catchments from the stage 1 development footprint. It is proposed to provide a temporary 600 mm diameter pipe culvert under the access road which will drain the undeveloped catchments under the access road and around stormwater treatment basins.

Two detention basins will be provided in the Stage 1 interim stormwater management scenario for the access road. The Stage 1 interim stormwater management scenario has been modelled to determine the size of the stormwater basins. The storage requirement for temporary Basin Number 1 (western basin) and Number 2 (eastern basin) is 536m³ and 817m³ respectively.

The target removal rate for Lot 10 proposed to be achieved through a combination of bioretention in car park areas, Enviropods located within gully pits for Hardstand areas and finally whole site routing through in line GPTs with Stormfilter treatment system fitted to the OSD tanks.

The internal drainage of Lot 10 is subject to detailed design however MUSIC modelling has been used to size the treatment systems to achieve the target removal rates for Stage 1. The proposed removal rates for the future development sites, as set out in **Appendix K**, are capable of removing the pollutant loads below the required target removal rates for TSS, TP, TN and Gross Pollutants in the *Interim Reference Guideline for the South East Queensland Concept Design Guidelines for WSUD*.

7.12.3 Assessment of Flooding

The flooding assessment has been based on the Rural Area Flood Study Report prepared by BMT WBM for Fairfield City Council. The Rural Area Flood Study considered three catchments, being Reedy Creek, Ropes Creek and Eastern Creek.

The Site straddles a ridge whereby a portion of the proposed development is within the Reedy Creek catchment, whilst the remainder of the site is located within a localised catchment to the east. It was therefore necessary to extend the catchment to the east up to and including the area entire local catchment. The flood impact assessment of the Site has therefore been carried out with an extended version of the Reedy Creek model developed as part of the Rural Area Flood Study.

The conceptual proposal for development of the Site has been designed to result in minimal impacts to the flood regime surrounding the Site.

Rainfall inputs were determined for the 20, 50, 100, 500 and 2000 year Average Recurrence Interval (ARI) flood events as modelled for the Rural Area Flood Study. The 20, 50 and 100 year ARI design storm events were modelled in TUFLOW for a number of storm durations: 2 hour, 3 hour, 6 hour, 9 hour, 12 hour and 18 hour. The 500 and 2000 year ARI design storm events modelled for the 2 hour, 3 hour, 6 hour and 9 hour durations.

Collected survey information was used to include various structures (bridges and culverts) in the hydraulic model.

Flood Depth, Velocity and Duration of Inundation

A peak flood height envelope was developed from the durations modelled and the peak envelope of flood levels mapped. The developed case flood depth modelling shows minimal change in flooding patterns.

Beyond the immediate boundary of the Site there is minimal, if any, change to the flood depths. A slight increase in depth is noted along the leading edge of Reedy Creek due to the development's proposed earthworks. The flow within conceptual swale drain along the south-eastern boundary of the site results in a slight reduction in depth of flooding in the neighbouring property, however there is an increase in depth along Wallgrove Road of 10-25cm for the 100 year ARI design flood event.

The results from the flood model indicate that the proposed development will result in some higher velocities alongside the right bank of Reedy Creek and upstream of the development (at the south east corner of the site). In these locations, velocity increases of greater than 0.5 metres per seconds are noted. Such increases may require erosion control measures to be implemented depending on the nature of the underlying soil and its susceptibility to scour.

The duration of flood inundation is likely to increase in regions where the flood levels have increased and decrease to regions where the flood levels have decreased. Flood level increases are most pronounced along Wallgrove Road. The duration of flood inundation along Wallgrove Road is modelled to increase by 3-5 hours. Under existing conditions, Wallgrove Road is likely to be inundated in the vicinity of the site for approximately 9 hours.

The flooding impacts on Wallgrove Road and in the vicinity of the south-east corner of the Site are a result of the increased efficiency at which the proposed swale would convey flood waters from the neighbouring property to the south, across the corner of the Site and into the Wallgrove Road. The efficiency of this swale can be reduced as part of its detailed design so that it operates at a similar efficiency to the existing situation, if considered appropriate by FCC, OEH and DP&I. This would reduce the flood height impact downstream of the development and additionally have the potential to reduce the increases in flood velocity observed upstream of the Site.

Mitigation Measures

Measures to ensure that the stormwater management system is designed to ensure that there are no significant adverse impacts include:

- The stormwater management system for the Masterplan will need to be designed to ensure that each development site provides peak flow reduction through OSD in accordance with the parameters set out in **Appendix K** in order to compensate for the lack of OSD associated with the internal access road.
- The Stage 1 interim stormwater management scenario will need to be designed to provide OSD for the internal access road in accordance with the parameters set out in **Appendix K**.
- At each stage of development a revised interim stormwater management system will need to be provided, until all the remaining lots have been developed at which time the OSD systems provided on all the development sites will compensate for the impervious area of the access road, as provided for under the ultimate strategy, and the temporary basins can be decommissioned.
- The stormwater treatment installed will need to remove the pollutant loads for total suspended solids (TSS), total phosphorus (TP), total nitrogen (TN) and Gross Pollutants in accordance with **Appendix K**.

The modelling has demonstrated that the proposed development can be constructed without significant flood impact on the neighbouring properties. In order to minimise flood impacts, the efficiency of the swale located in the south-east corner of the Site is to be designed so that it operates at a similar efficiency to the existing situation.

7.13 Waste

Waste will be collected from the site by a private contractor on an as needs basis. A Waste Management Plan will be prepared by future end users prior to the occupation of each warehouse.

7.14 Heritage

A Heritage Impact Assessment (HIA) has been prepared by Australian Museum Business Services (AMBS) and is included at **Appendix N**. A summary of the assessment and proposed mitigation measures are provided below.

7.14.1 Indigenous Heritage

Prior to European settlement the Aboriginal people of the Sydney region lived in local clans, with Aboriginal occupation likely to have spanned 20,000 years or more. Groups local to the area are likely to have belonged to the Darug (Dharug) language groups.

Their use of the land was dependent on the natural resources and materials available based on the topography, geology and vegetation. The Cumberland Plain landscape has significantly changed since European settlement through reclamation and pastoral development.

The spread of urban development across the Cumberland Plain has meant that this area has become the most intensively investigated archaeological landscape in Australia. A search of the AHIMS database was undertaken which confirmed that 109 aboriginal sites are identified within approximately 2km of the study area, with one Aboriginal site being located within the boundary of the application site. The Aboriginal site was recorded during the original assessment of the study area in 2008 and comprised four stone artefacts exposed on the wall of a dam, in the north western part of the application site.

On the basis of registered archaeological sites in the region, and review of previous archaeological studies, including site surveys, the HIA concludes that stone artefact sites, such as the ones identified within the application site (WR1 and WR2), are the most common site type occurring across the Cumberland Plain landscape.

With regard to the integrity of the archaeological site, the HIA notes that the north western part of the application Site has since been substantially disturbed by the construction of a dam, while a nearby cattle pen will have also resulted in continual trampling of this area by cattle. Accordingly these disturbances indicate that in situ archaeological deposits in the area are unlikely. Based on the outcome of desktop and field surveys, the HIA subsequently concludes that the following are unlikely to be present within the application site:

- stone quarry sites, axe grinding grooves, stone engravings/art and shelter sites are highly unlikely to be found in the study area because of the lack of suitable stone outcrops;
- scarred or carved trees are unlikely to be present in the study area as the majority of the study area has been extensively cleared of vegetation, although there are some mature trees adjacent to the creek; and
- burials and ceremonial sites (including stone arrangements) are highly unlikely to be present in the area given the disturbance caused by early pastoralism, agriculture, roads and more recent development.

With the above in mind the HIA concludes the following with regard to the significance of the Aboriginal heritage on the site:

“Aboriginal sites WR1 and WR2, and potentially the area of archaeological sensitivity adjacent to Reedy Creek, are representative of similar Aboriginal stone artefact scatters across the Sydney region and the rest of NSW. Although all Aboriginal heritage sites contain intrinsic cultural significance, the stakeholder Aboriginal communities did not identify any further specific cultural significance attached to these sites or the area of archaeological sensitivity. Based on current scientific evidence, sites WR1 and WR2 do not have potential for substantial, intact subsurface archaeological deposits, and as such, are considered to have low historic, scientific and aesthetic value. However, the area of archaeological sensitivity adjacent to Reedy Creek is considered to have archaeological potential for substantial, potentially intact Aboriginal stone artefact deposits, and therefore may have moderate-high historic and scientific value, particularly if intact alluvial deposits are present. However, as a potential subsurface archaeological deposit with no surface exposure, it has no aesthetic value.”

In light of the outcomes of the HIA, AMBS conclude that while the proposed development will impact AHIMS Site 45-5-3684 and WR2, given the low level of research potential no further archaeological investigation of these sites are required prior to or during the proposed development works.

However, AMBS recommend that a program of test and salvage excavation should be undertaken on the slightly elevated land adjacent to the creek and its confluence, within the area of archaeological sensitivity that is proposed to be impacted.

7.14.2 Non-Indigenous Heritage

- With regard to Non-indigenous heritage, the HIA provides an overview of the broad history of the area but notes that there is no non-indigenous heritage of significance present on the application Site.

7.15 Visual Impact

The subject site is situated to the north of a small number of rural residential properties located along Reedy Road, Burley Road and Flavex Lane.

The proposed development will be visible in parts from these residential properties, whilst this is the case the visual impacts will be mitigated by a number of factors, including:

- Residential buildings are located some 300m from the site, which helps to minimise the size and extent of the building mass when viewed in the context of the wider views available to the north.
- The topography of the site ensures that many views to the development are screened by the natural lay of the land and existing vegetation, this is demonstrated in the accompanying Sectional Drawings included at **Appendix A**.
- Landscaping provided along the site's southern boundary will help to soften and provide additional screening to the proposed built form, thus ensuring that views from the residential dwellings are not dominated by built form.
- A number of views to the development from the residential buildings are already obstructed by existing structures on the rural residential lots, such as the existing ancillary sheds associated with the big farm and other rural residential operations.

- Residential properties adjacent to Reedy Creek, south of the Site, are oriented towards the creek, and do not have significant beneficial views in the direction of the Site.
- The proposed earthworks ensure that sheds located along the sites southern boundary are cut into the site thus minimising their visual presence when viewed from the south.

In addition to the above we note that predominant views from the nearby residential dwellings are to the south, east and west, principally as views to the north from these residencies are already compromised by the existing mains power lines that run along the common boundary with the subject site.

A detailed Landscape Design has been prepared and is provided in **Appendix O**. The Landscape Design includes woodland buffer planting and avenue Entry Road plantings forming the structural framework of the site planting design. More open copse planting is proposed to Wallgrove Road embankments. Cumberland Plain Woodland Buffer would be planted on the southern boundary, providing an informal woodland planting mix to produce a strong visual buffer to the proposed developments. Species for this buffer planting will be selected from existing Cumberland Plains Woodland species identified on site.

In light of the above the it is considered that the proposed development will not result in any unacceptable adverse visual amenity impacts on the nearby residential properties.

8.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 14** below. These measures have been derived from the previous assessment in **Section 7** and those detailed in the appended consultants' reports.

Table 14 – Mitigation Measures

Mitigation Measures
Construction Management – A Construction Management Plan (CMP) will be prepared and submitted to the Principal Certifying Authority for approval prior to the release of the Construction Certificate. – A Works Agreement Deed is to be negotiated with the RMS and executed prior to the issue of a Construction Certificate. – A Traffic Construction Management Plan is to be prepared and recommendations are to be implemented for the Stage 1 construction works.
Heritage – Prior to the Stage 1 works a program of test and salvage excavation will be undertaken on the slightly elevated land adjacent to the creek and its confluence, within the area of archaeological sensitivity that is proposed to be impacted.
Noise – The following design elements will be included as part of the Stage 1 warehouse building: – The southern wall of the Stage 1 building (made of Colourbond steel) will require 50mm of glasswool insulation to attenuate noise. – The roof to be constructed from minimum 0.42mm sheet metal with 50mm glasswool insulation underneath. – A noise barrier along the southern boundary will be provided. The minimum height for the screen will be 3m (above the elevation of the land), the barrier can be constructed with Colourbond, CFC sheet, Perspex or similar. – Operational noise management measures that would be implemented include: – Truck delivery drivers should limit the use of exhaust brakes on internal roads and Wallgrove Road. – Where practical, trucks are to be switched off whilst in the loading dock and not to be left idling. This would apply to airbrake compressors to limit discharge within the loading dock area.
Waste – An Operational Waste Management Plan will be prepared for the Stage 1 building prior to the occupation of the warehouse.
Visual – Details of the Stage 1 building colour scheme, external cladding and finishes will be provided for the approval of the Director-General prior to the commencement of construction. – Future applications will be lodged providing detail on signage and lighting for the Stage 1 building.
Geotechnical – Prior to filling commencement, remove all vegetation and root affected soil from the proposed filling area. – Rip the exposed surface to a depth of not less than 300mm and re-compact to a minimum dry density ratio of 98%, relative to Standard compaction, adjusting the moisture content of the ripped and re-compacted surface to within 2% of Standard optimum moisture content. Proof roll the treated surface using a minimum 10 tonne smooth drum roller in non-vibration mode. The surface should be rolled with a minimum of six passes with the last two passes observed by an experienced geotechnical engineer to detect any 'soft spots'. – Any heaving materials identified during proof rolling should be treated as directed by the geotechnical engineer, which is likely to require the localised removal and replacement of unsuitable soil. – Place all new filling in layers of 300 mm maximum compacted thickness. The filling should be free of oversize particles (>150 mm) and deleterious material. – Compact all filling to a minimum dry density ratio of 98%, relative to Standard compaction, whilst maintaining a moisture content within 2% of Standard optimum moisture content. The minimum dry density ratio should be increased to 100% relative to Standard compaction within the upper 300 mm of pavement subgrades and building footprints. A maximum dry density ratio of 102% is recommended for all filling to reduce the potential for swelling post-compaction. – Maintain the moisture within the clay until the area is covered by buildings or pavements. Recent monitoring of foundation/floor slab movement measured heave of up to 60 mm for a warehouse floor slab cast on dry clay filling. – Density testing of the filling should be carried out in accordance with AS3798 "Guidelines for Earthworks for Commercial and Residential Developments". Filling placed beneath building platforms and pavements should be carried out to a Level 1 inspection and testing programme.

Mitigation Measures

- Prior to placement of filling it will be necessary to pump out all existing water from the dam, remove all soft and wet sediments from the sides and base, remove all existing filling within dam embankments and strip the base of each dam to a suitable natural ground surface. Once stripped and prepared, all dams should be inspected by an experienced geotechnical engineer.

Bushfire Protection

- Management of the Site generally, except for the vegetation within the riparian corridor to Reedy Creek, shall comply with the recommendations of Appendix A5.4 & Appendix A5.5 of *Planning for Bushfire Protection 2006* and Standards for Asset Protection Zones, including:
 - Maintain a clear area of low cut lawn or pavement adjacent to the buildings; utilise non-flammable materials such as scoria, pebbles and recycled crushed bricks as ground cover to landscaped gardens in close proximity to the buildings;
 - Keep areas under shrubs and trees raked and clear of combustible fuels
 - Maintain trees and shrubs in such a manner that tree canopies are separated by 2m and understorey vegetation is not continuous.
- The northern, western and southern walls of the Stage 1 Warehouse Building will be constructed to comply with BAL 40, pursuant to A.S. 3959 – 2009 – ‘Construction of Buildings in Bushfire Prone Areas’. Louvres or vents located within these walls will be fitted to ember protection mesh comprising corrosion resistant steel or bronze mesh with a maximum aperture of 2mm.
- Roller doors will be fitted with ember protection to the head. Ventilation openings [slats] in roller doors will not be permitted.
- External seals to precast panels will be non-combustible.
- The fire-fighting water supply to the proposed building will comply with the BCA and Australian Standard A.S. 2419.1 – 2005.
- A site specific evacuation plan will be prepared for each building. The Evacuation Plan shall address the requirements of A.S. 3745-2002 – ‘Emergency Control Organisation and Procedures for Buildings, Structures and Workplaces’.

Flora and Fauna

- Construction Measures
- Mark clearing limits to further reduce clearing extents and to retain potential habitat and other ecologically significant features at the edges of the clearing limits wherever practicable;
- Limit vehicular and plant equipment access to this area during construction;
- Install temporary fencing to mark the limits of clearing and “no-go” areas; and
- Construction staff informed with regards to the status and location of protected areas during site induction and/or tool box talks.
- Where clearing of vegetation and fauna habitats will take place, pre-clearing and clearing protocols are recommended that include:
 - Preparation of an inventory of trees and hollows to be removed, prior to clearing;
 - Pre-clearance checks of hollow-bearing trees for the presence of bird nests and arboreal mammals, such as possums, gliders and bats, prior to felling;
 - Safe removal of animals found to be occupying trees prior to the clearing of trees and their appropriate relocation into nearby woodlands; and
 - Relocation of transportable features such as salvaged tree hollows, felled timber and large logs in the woodland areas to be retained to allow their continued use as fauna habitat.
- A dam drainage protocol which involves the safe removal of animals to suitable alternate locations by a suitably qualified ecologist or wildlife carer, timing of decommissioning works to non-breeding seasons for appropriate target species and implementation of chytrid protocols for ecologists and machinery entering the water to limit the transmission of disease.
- Erosion and sediment control plans will be implemented to mitigate the impact of soil disturbance and to prevent secondary or off-site impacts, particularly impacts on adjacent native vegetation along Reedy Creek.
- Stockpiles of overburden will be managed to limit unintended soil movement away from designated compound areas into adjacent woodland.
- All work sites will be constructed and managed in accordance with ‘Managing Urban Stormwater: Soils and Construction’ (Landcom, 2004, “Blue Book”).
- Topsoils being stored for reapplication should be stabilised using a blanket type Method.
- Any topsoil that is reapplied will be stabilised by seeding using a grass species native to the Cumberland Plain.
- A Riparian Management Plan will be prepared and implemented to provide for the biodiversity improvement of the Reedy Creek riparian corridor through restoration and ongoing management. The Riparian Management Plan will include:
 - Protection of the riparian corridor during construction;
 - Restoration and ongoing management of riparian vegetation;
 - Management of riparian vegetation as habitat for native wildlife;
 - Feral animal management;

Mitigation Measures

- Instructions for planting endemic species of local provenance
- Weed management;
- Reduction of sediment and nutrient delivery to waterways;
- In-stream erosion control;
- Fire management; and
- Monitoring and reporting protocols.
- Biodiversity credits for HN528 and HN529 vegetation communities will be purchased and offset to compensate for the clearing of relevant vegetation. The number of credits to purchased and retired will be 50% of the ecosystem credits established under the BioBanking Assessment Methodology.

Contamination

- An Unexpected Finds Protocol (UFP) will be established for site development, including set procedures in the event that asbestos or chemical contaminated soil is encountered during excavations.
- Further assessment of the dam water will be undertaken to determine an appropriate method of discharge or removal.

Stormwater and Flooding

- The stormwater management system for the Masterplan will need to be designed to ensure that each development site provides peak flow reduction through OSD in accordance with the parameters set out in **Appendix K** in order to compensate for the lack of OSD associated with the internal access road.
- The Stage 1 interim stormwater management scenario will need to be designed to provide OSD for the internal access road in accordance with the parameters set out in **Appendix K**.
- At each stage of development a revised interim stormwater management system will need to be provided, until all the remaining lots have been developed at which time the OSD systems provided on all the development sites will compensate for the impervious area of the access road, as provided for under the ultimate strategy, and the temporary basins can be decommissioned.
- The stormwater treatment installed will need to remove the pollutant loads for total suspended solids (TSS), total phosphorus (TP), total nitrogen (TN) and Gross Pollutants in accordance with **Appendix K**.
- In order to minimise flood impacts, the efficiency of the swale located in the south-east corner of the Site is to be designed so that it operates at a similar efficiency to the existing situation.
- Erosion control measures will be implemented on the banks of Reedy Creek with consideration of the nature of the underlying soil and its susceptibility to scour.

9.0 Justification of the Proposal

In general, investment in major projects can only be justified if the benefits of doing so exceed the costs. Such an assessment must consider all costs and benefits, and not simply those that can be easily quantified. As a result, the EP&A Act specifies that such a justification must be made having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.

This means that the decision on whether a project can proceed or not needs to be made in the full knowledge of its effects, both positive and negative, whether those impacts can be quantified or not.

The proposed development involves the development of greenfield land for the purposes of new warehouse and industrial uses, and forms part of a larger employment precinct identified for Western Sydney. The assessment must therefore focus on the identification and appraisal of the effects of the proposed change over the site's existing condition.

Various components of the biophysical, social and economic environments have been examined in this EIS and are summarised below.

9.1 Social and Economic

The NSW Government's number one priority is to restore economic growth and establish NSW as the first place in Australia to do business. The WSEA forms a central part of achieving this ambition of "making NSW number one again" and reinforcing Sydney's status as Australia's global city.

The proposed development represents the development of a large strategic Site for the purposes of a new high quality warehouse and industrial development. The site's proximity to the National Motorway network (the M7) and adjacent to the future Southern Link Road means that it is in a highly strategic location. Development of the Site will therefore not only generate direct new employment opportunities but will also promote future economic and business development in the WSEA.

It is anticipated that once complete, the proposed development will result in capital expenditure of \$120 million and the creation of over 700 additional jobs in a variety of sectors including but not limited to warehousing, distribution, freight transport and other industrial sectors. These jobs will be in relative close proximity to existing Western Sydney communities and therefore improve access and jobs equality throughout greater Sydney.

Overall it is evident that the proposed development will positively stimulate jobs and business investment, and in doing so deliver a number of social and economic benefits to the local area and Greater Sydney.

9.2 Biophysical

The proposed development is to be carried out on greenfield land. Whilst this is the case the site has been largely cleared of its natural vegetation and historically used as a grazing pasture for cattle and horses. In light of this the environmental impact assessment has demonstrated that the ecological values of the Site are highly degraded, and that the proposed development is not expected to have any significant ecological impacts.

The proposal is therefore considered unlikely to have a significant impact on the natural biophysical elements of the site and surrounding locality in the long term.

9.3 Ecologically Sustainable Development

The EP&A Regulation lists 4 principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle;
- Intergenerational equity;
- Conservation of biological diversity and ecological integrity; and
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal. Ecological rehabilitation and offsets have been proposed to ensure there is a mitigated net loss in biodiversity values associated with the development.

Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The proposal has been designed to benefit both the existing and future generations by:

- maintaining heritage listed items for future generations to appreciate and enjoy;
- implementing safeguards and management measures to protect environmental values.
- facilitating job creation in manufacturing and industrial sectors; and
- delivering on a key vision for the Western Sydney Employment Area.

The proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications can be avoided and/or minimised through appropriate construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

As set out in the accompanying Ecological Impact Assessment report prepared by Cumberland Ecology (**Appendix F**) the proposal will not have any significant effect on the biological diversity and ecological integrity of the study area.

Improved valuation, pricing and incentive mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a proposal, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

10.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed Industrial Development. The EIS has addressed the issues outlined in the Director-General's Requirements (**Appendix C**) and accords with Schedule 2 of the EP&A Regulation with regards to the consideration of the relevant environmental planning instruments, the proposed built form and environmental impacts including heritage, ecological, visual, traffic, noise, construction and infrastructure impacts.

The application Site falls within Precinct 8 of the Western Sydney Employment Area known as "South of the Sydney Catchment Authority Warragamba Pipelines" (the Site). Precinct 8 has a total area of 656 hectares and the potential to generate up to 8,000 jobs.

The site comprises approximately 52 hectares of this Precinct and is predominantly zoned IN1 General Industrial under the WSEA SEPP with the exception of a small natural drainage line on the western boundary which is zoned E2 Environmental Conservation.

The proposed development will result in the future use of the Site for the purposes of a new high quality warehousing, distribution and industrial development, which once complete will see the creation of over 700 new jobs in Western Sydney.

Having regard to the biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The proposal is permissible with consent and meets the requirements of the relevant statutory planning controls;
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2 Clause 7(4) of the EP&A Regulation;
- The proposal contributes to the vision and objectives of the Western Sydney Employment Area, and will not result in any unacceptable adverse impacts on existing and future surrounding buildings and uses.
- The redevelopment establishes a building form with appropriate scale and massing that responds to the site's setting and topography.
- The proposed development will not result in any significant adverse impacts on local flora and fauna.
- The existing traffic network has sufficient capacity to cater for the proposed development.
- The proposed development will not result in any unacceptable adverse amenity impacts on nearby rural residential properties.
- The proposal is capable of being adequately serviced with potable water and stormwater infrastructure and electrical and communication services.
- An assessment of the site's heritage values has been undertaken and determined that the impacts of the proposed development from a heritage perspective are acceptable.
- The proposed development will form part of a major new employment area in Western Sydney and will deliver significant economic benefits to the local area.

In light of the environmental, social and economic benefits of the proposal and the planning merit and significant public benefits associated with the proposal, it is recommended that this application be approved.