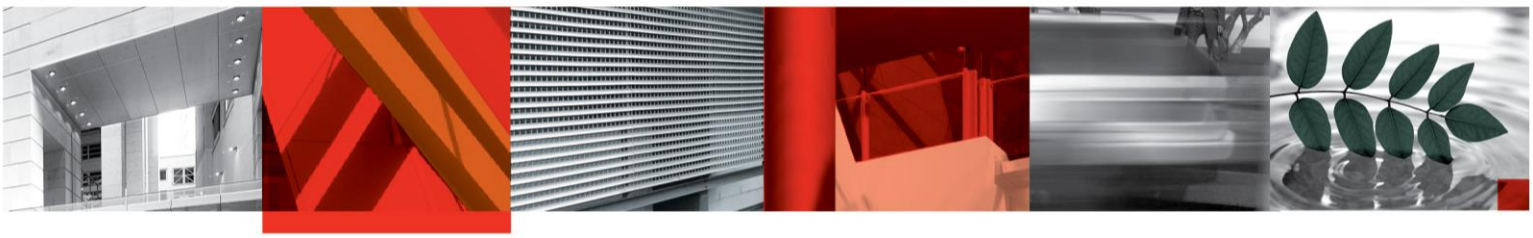
State Significant Development (SSD 6799)

Environmental Impact Statement



Lot 124, Sydney Business Park, Hollinsworth Road, Marsden Park

Construction and Operation of a Cold Storage Warehouse and Distribution Facility

Submitted to Department of Planning and Environment
On Behalf of Swire Cold Storage

July 2015 ■ 14126

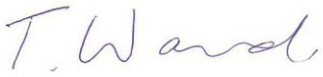
JBA Urban Planning Consultants Pty Ltd ABN 84 060 735 104 / North Sydney t +61 2 9956 6962 w jbaurban.com.au

JBA operates under a Quality Management System that has been certified as complying with ISO 9001:2008. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

This report has been prepared by:

Chris McGillick 30/07/2015

This report has been reviewed by:



Tim Ward 30/07/2015

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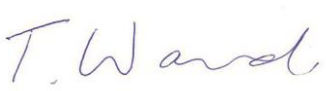
Statement of Validity

Development Application Details	
Applicant name	Swire Cold Storage Pty Ltd
Applicant address	100-130 Abbotts Road, Dandenong South Victoria 3175
Land to be developed	Lot 124 (proposed but unregistered), Hollinsworth Road, Sydney Business Park, Marsden Park
Proposed development	Staged construction and operation of a cold storage warehouse and distribution facility.
Prepared by	
Name	Chris McGillick / Tim Ward
Qualifications	BPlan (Hons) / BSc (Hons) MEnvMgt
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; ▪ 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	30/07/2015

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Executive Summary

Purpose of this Report

This submission to the Department of Planning and Environment (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 the proposed staged construction and operation of a cold storage warehouse and distribution facility.

The proposal is identified as State Significant Development under clause 12 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011*. Pursuant to that clause, development with a capital investment value of more than $50 million is State Significant Development (SSD) for the purposes of the EP&A Act. As the proposed development is expected to have a capital investment value of approximately $70 million it is SSD.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 5 November 2014. Accordingly, the SEARs were issued on 11 December 2014. 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 SEARs.

Overview of the Project

The Development Application (DA) seeks approval for the following development:

- Site preparation works, including earthworks and installation of site infrastructure;
- 24 hour operation of a Cold Storage Warehouse and Distribution Facility comprising the following components (to be built in two stages):
  - 34,135m² of warehouse, storage, and cold storage space;
  - 2,152 m^2 of ancillary office space;
  - 128 onsite parking spaces;
  - Building Identification Signage; and
- Site landscaping.

The Site

The Site is located in the central part of the Marsden Park Industrial Precinct in the North West Growth Centre, approximately 38 kilometres north-west of Sydney CBD. The Marsden Park Industrial Precinct is within the Blacktown City Local Government Area and is a relatively new land release area of which the majority still remains undeveloped, although it is developing rapidly.

The site is legally described as proposed Lot 124 in DP1194052 (currently unregistered), Sydney Business Park, Hollinsworth Road, Marsden Park. The land is owned by Swire.

Planning Context

Section 6.0 of the EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant SEPPs. The site is zoned IN2 – Light Industry under Appendix 5 of *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*. 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 SEARs and sets out the undertakings made by Swire Cold Storage to manage and minimise potential impacts arising from the development. Key environmental assessment considerations identified include:

- Traffic and Transport;
- Urban Design and Visual Impacts;
- Hazards and Risks;
- Noise;
- Soils and Water;
- Infrastructure Requirements;
- Air Quality and Odour; and
- Waste.

All identified impacts are addressed in this EIS and are capable of being ameliorated through the implementation of appropriate mitigation measures as outlined in Section 8.0.

Conclusion and Justification

The EIS addresses the SEARs, and the proposal provides staged construction and operation of a cold storage warehouse and distribution facility. The potential impacts of the development are acceptable and are able to be managed. Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning.

1.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning and Environment 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).

The development is for the purposes of a warehouse and distribution facility with a capital investment value of more than $50 million. As such it is identified in Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* and is therefore declared to be SSD in accordance with Section 89C of the EP&A Act.

The report has been prepared by JBA on behalf of Swire Cold Storage, and is based on the Architectural and Civil Drawings provided by Beca (see **Appendix A** and **Appendix J** respectively) 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 Secretary of the Department of Planning and Environment for the preparation of the EIS, which are included at **Appendix B**. 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 the following development:

- Site preparation works, including earthworks and installation of site infrastructure;
- 24 hour operation of a Cold Storage Warehouse and Distribution Facility comprising the following components (to be built in two stages):
  - 34,135m² of warehouse, storage, and cold storage space;
  - 2,152 m^2 of ancillary office space;
  - 128 onsite parking spaces;
  - Building Identification Signage; and
- Site landscaping.

1.2 Background to the Development

The site is located within Sydney Business Park which forms part of the Marsden Park Industrial Precinct. Several approvals have already been obtained including Development Application 11-2284 which was approved by Blacktown City Council on 18 March 2013 and allows for the following development:

> *Torrens Title Subdivision into 24 lots and 6 residue lots, tree removal, bulk earthworks, construction of roads, stormwater infrastructure, and street tree planting and associated subdivision works.*

The above consent was modified in February 2014 such that the approved subdivision and associated works could be carried out in a staged manner.

The consent was further modified in May 2014 and December 2014. The subsequent modifications amended the subdivision plans to create the site subject to this application and the road network surrounding the site. The subdivision plan

is shown in **Figure 1**. A copy of the approved subdivision plan and modified approval is provided at **Appendix C**.

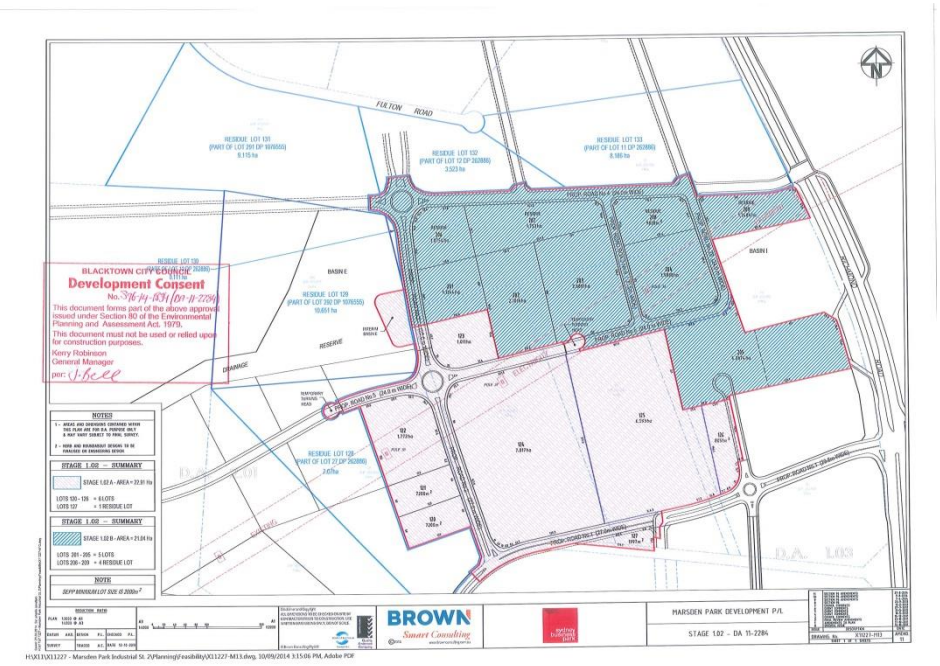

Figure 1 – Subdivision Plan Stage 1.02 DA 11-2284 (Modification No. 3)
Source: Sydney Business Park

In assessing the above subdivision application Blacktown Council has considered the following matters for the site:

- Heritage (Indigenous and Non-Indigenous)
- Contamination
- Bushfire Protection
- Stormwater Management
- Tree Removal
- Salinity
- Road design and construction

Copies of the technical reports which were submitted by the applicant to address these issues have been submitted to the Department electronically under separate cover.

The approved works subject of DA 11-2284 have been substantially commenced and are currently ongoing. In relation to the site subject of this application (SSD6799) the works have been substantially completed.

1.3 Objectives of the Development

The objectives are to develop a modern and efficient cold storage facility, including a component comprising an automatic storage and retrieval system, to enable Swire to continue to meet demand, and which supplements Swire's existing facilities.

1.4 Analysis of Alternatives

1.4.1 Strategic need for the proposal

Swire Cold Storage is a leading Australian provider of cold-chain logistics services and supply chain solutions, offering temperature-controlled warehousing, refrigerated transport and distribution services to a broad range of businesses.

Operating a network of temperature-controlled facilities across Australia, the company's facilities total in excess of 300,000 pallet spaces of refrigerated storage, ranging from fully automated high-rise stores to traditional manual facilities utilising advanced integrated warehouse and transport technologies. Swire Cold Storage supports these facilities with a modern fleet of refrigerated vehicles and trailers operating under the Frigmobile and Cold Chain Logistics brands.

Swire Cold Storage customers and partners include leading Australian and international food producers, distributors and retailers as well as export bulk commodity clients and beverage and pharmaceutical products. In order to accommodate the range of requirements and services to support varied supply chain needs, Swire Cold Storage can offer services ranging from automated blast freezing and sortation, chilled and frozen storage, cross-dock order picking, value added logistic services, consolidation and import/export management programmes and partner dedicated tailored facilities.

Swire Cold Storage is operating at capacity in NSW with limited ability to service changes to customer requirements, particularly new requirements. As a result, there is little scope to grow the business in NSW. Both the Lurnea site and Homebush site are constrained to further capacity-increasing development.

Following an extensive review of available suitable sites, a site in the north west of Sydney at Marsden Park was identified as the most appropriate site, addressing Swire Cold Storage key criteria. This site will provide Swire Cold Storage with the ability to expand in stages in line with customer demand.

This site is close to the major arterials which will ensure road freight is able to access the Swire Marden Park site with minimal delays, thereby minimising Carbon Dioxide emission levels. The site is also in good arterial proximity to retailers who are in the Eastern Creek region (e.g. Coles, Woolworths, IGA and Costco).

The proposed building includes a high-bay section (to be constructed in Stage 2) to accommodate an automatic storage and retrieval system as Swire has determined this is necessary for both their operational needs and for the economic viability of the site.

1.4.2 Alternative Options

In undertaking due diligence for the purchase of the subject site Swire reviewed several industrial sites within Sydney. This site was considered to be the most favourable due to:

- The site's location to regional road infrastructure;
- The size and zoning of the site, both of which are appropriate to the proposed use; and
- The staging of development already undertaken within Sydney Business Park which is suitable to the timing requirements of Swire.

1.4.3 Do Nothing Option

Doing nothing would mean that Swire could no longer meet projected future demand for temperature-controlled warehousing, refrigerated transport and distribution services in an efficient and effective way.

1.5 Secretary's Environmental Assessment Requirements

In accordance with section 89G of the EP&A Act, the Secretary of the Department of Planning and Environment issued the requirements for the preparation of the EIS on 11 December 2014. A copy of the Secretary's Environmental Assessment Requirements (SEAR's) is included at **Appendix B**.

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

Table 1 – Secretary's Requirements

Requirement	Location in Environmental Assessment	
General		
The Environmental Impact Statement (EIS) must address the E*nvironmental Planning and Assessment Act 1979* and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000.	Throughout	
Detailed description of the development, including: – need for the proposed development;	Section 1.4	
– justification for the proposed development;	Section 9.0	
– likely interactions between the development and existing, approved and proposed operations in the vicinity of the site; and	Section 2.4	
– plans of any proposed building works.	Appendix A	
Consideration of relevant Environmental Planning Instruments	Section 6.1	
A risk assessment of the potential environmental impacts of the development identifying the key issues for further assessment; – detailed likely staging of the development;	Section 3.0 and 7.0	
A detailed assessment of: - The existing environment - Potential impacts of all stages of the development - Measures that are to be implemented to avoid, minimise and mitigate potential impacts of the development	Section 2.3, 6.0 and 8.0	
Consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.	Section 7.0	
Detailed Cost Estimate	Provided under separate cover	
Estimated number of jobs created by the development	Section 3.3	
Certification that information is accurate	Page v	
Key Issues	Report / EIS	Technical Study
▪ **Strategic Context** - including: – detailed justification for the proposal and suitability of the site; and	Section 1.4 and 4.4	-
– demonstration that the proposal is generally consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), and justification for any inconsistencies.	Section 4.2 and Section 6.1	Appendix F
▪ **Contributions** - including consideration of the following: – Blacktown City Council - Section 94 Contributions Plan No. 21 - Marsden Park Industrial Precinct; and	Section 4.3.6 and Section 6.3	-

Requirement	Location in Environmental Assessment	
– Environmental Planning and Assessment Amendment (Western Sydney Growth Areas - Special Contributions Area) Order 2011.	Section 4.3.5 and Section 6.3	-
▪ **Transport and Transport** - including: – details of all traffic and transport movements likely to be generated during construction and operation, including a description of haul routes and the impacts on nearby intersections;	Section 6.4.1	Appendix I
– details on access to the site from the road network including intersection location, design and sight distance;	Section 6.4.3	
– an assessment of predicted impacts on road safety and the capacity of the road network to accommodate the project;	Section 6.4.1	
– plans of any road upgrades or new roads required for the development;	NA	
– detailed plans of the proposed layout of the internal road network and parking on site in accordance with the relevant Australian standards; and	-	
– details of the likely dangerous goods to be transported on arterial and local roads to/from the site and the preparation of an incident management strategy, if relevant.	Section 6.5.4	
▪ **Urban Design and Visual** - including: – layout of the development including staging, site coverage, setbacks, proposed open space and landscaped areas;	Section 3.0	Appendix A and E
– suitable landscaping incorporating endemic species;	Section 3.10	Appendix E
– the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks, if applicable;	Section 3.1 and 3.3	Appendix I
– a detailed description (including photomontages and perspectives) of the facility (buildings and storage areas) including height, colour, scale, building materials and finishes, signage and lighting, particularly from:	Section 3.0	Appendix A
– nearby public receivers;	Section 2.4	
– significant vantage points of the broader public domain;	Section 2.0	
– proposed cut and fill works associated with the development, and measures to minimise the extent of cut and fill.	Section 3.6	Appendix J
▪ **Hazards and Risks** including: – a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis (DoP, 2011), and Multi-Level Risk Assessment (DoP,2011). The PHA must:	Section 6.5	Appendix G
– provide details of all hazardous materials stored or handled on the premises;	Section 6.5.1	
– identify the hazards associated with materials that will be stored or handled at the proposed development. Any safety measures to be implemented should also be clearly identified;	Section 6.5.2	
– estimate the risks from the proposed development;	Section 6.5.3	
– demonstrate that the potential offsite risk from the proposed development comply with the criteria set out in Hazardous Industry Planning Advisory Paper No 4- Risk Criteria for Land Use Safety Planning; and	Section 6.5.3	
– an evaluation of the impacts of the transport of dangerous goods to and from the site in the surrounding area.	Section 6.5.4	
▪ **Noise**- including: – description of all potential noise sources such as construction, operational, on and off-site traffic noise;	Section 6.6	Appendix K
– a noise impact assessment including a cumulative noise impact assessment in accordance with relevant Environment Protection Authority guidelines; and	Section 6.6	
– details of noise mitigation, management and monitoring measures.	Section 8.0	
▪ **Soils and Water** - including: – description of the water demands and a breakdown of water supplies;	Section 3.14	

Requirement	Location in Environmental Assessment	
– description of the measures to minimise water use;	Section 3.15.3	Appendix J Appendix L
– a detailed water balance;	Section 3.14	
– description of the proposed erosion and sediment controls during construction and operation;	Section 6.7	
– a description of the surface and stormwater management system, including on site detention, and measures to treat or reuse water;	Section 6.7	
– an assessment of potential surface and groundwater impacts associated with the development; and	Section 6.7	
– details of impact mitigation, management and monitoring measures.	Section 8.0	
▪ **Infrastructure Requirements** – provide a detailed written and/or geographical description of the infrastructure required on the site;	Section 6.8	-
– identify any infrastructure upgrades required off-site to facilitate the development, and describe any arrangements to ensure that the upgrades will be implemented in a timely manner and maintained;		
– describe how infrastructure on and off site will be co-ordinated and funded to ensure it is in place prior to commencement of construction; and		
– provide detailed description of cooling/heating systems to be installed onsite.		
▪ **Air Quality and Odour**- including: – description of all potential odour sources and predicted odour emissions from the construction and operation of the facility; including.	Section 7.0	-
– details of air quality and odour impacts on private properties, in accordance with relevant Environment Protection Authority guidelines; and		
– details of mitigation, management and monitoring measures for preventing and/or minimising emissions.		
▪ **Waste-** including: – details of the quantities and classification of waste and wastewater to be generated on site;	-	Appendix L
– details on waste storage, handling and disposal; and	Section 6.9.1	
– details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste A voidance and Resource Recovery Strategy 2007.	Section 6.9.2	
Plans and Documents	Report	Technical Study
Architectural Plans	-	Appendix A
Landscape Plans	-	Appendix E
Erosion and Sediment Control Plans	-	Appendix J
Stormwater Management Plans	-	Appendix J
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. In particular you must consult with: ▪ Blacktown City Council; ▪ TransGrid; ▪ Roads and Maritime Services; ▪ Transport for NSW; and ▪ NSW Food Authority. 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 5.0	

2.0 Site Analysis

2.1 Site Location and Context

The Site is located in the central part of the Marsden Park Industrial Precinct in the North West Growth Centre, approximately 38 kilometres north-west of Sydney CBD. It is located west of Richmond Road and north of Hollinsworth Road as shown in **Figure 1**. The Marsden Park Industrial Precinct is within the Blacktown City Local Government Area and is a relatively new land release area of which the majority still remains undeveloped, although it is developing rapidly.

The site's locational context is shown at **Figure 2**.

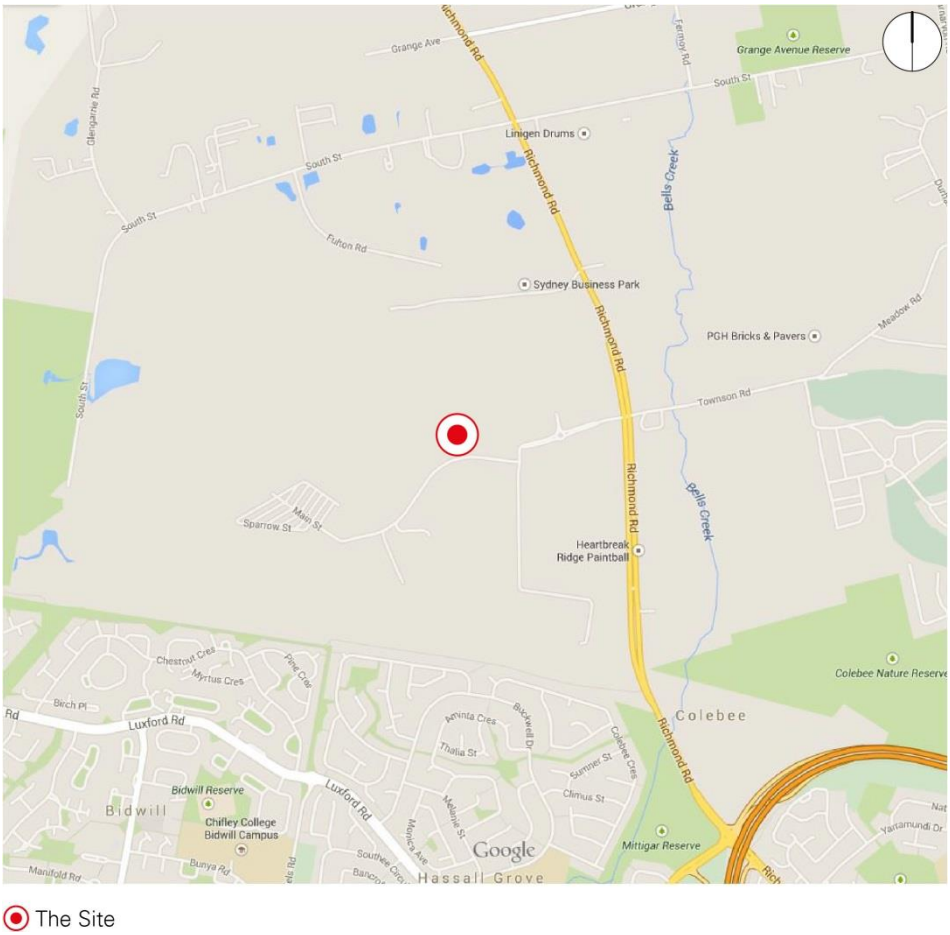

Figure 2 – Site Location
Source: Google map

2.2 Site Description

The site is legally described as proposed Lot 124 in DP1194052 (currently unregistered), Sydney Business Park, Hollinsworth Road, Marsden Park. The land is owned by Swire.

The site's area is 70,320m^2. It is regularly shaped. A survey plan is located at **Appendix D**. An aerial photo of the site is shown at **Figure 3**.

Figure 3 – Aerial photograph of the site
Source: Nearmap

2.3 Site Characteristics

The site is currently vacant and awaiting development for industrial purposes. As outlined previously, Sydney Business Park has undertaken preliminary works including tree removal and bulk earthworks under a separate approval as part of the wider estate development works. Prior to development of the business park, the site had been used predominantly for agricultural purposes.

A photograph of the site is shown in **Figure 4**.

The site has a slightly sloping topography, with the elevation ranging from approximately 39 m AHD at the western and southern boundary to approximately 35 m AHD at the north-east corner. There are no defined watercourses on the site.

It has been cleared and graded, with a raised development pad located on the central part of the site.

Transmission towers cross the wider Marsden Park Industrial precinct from the south-west to the north east. A Transgrid easement crosses the northern portion of the site which equates to 10,675m² of the site. A steel transmission tower is situated on the site near the northern boundary of the site. A photograph of the transmission towers is shown in **Figure 5**.

Figure 4 – Photograph of the site from the southwest
Source: JBA

Figure 5 – Transgrid easement transmission towers
Source: JBA

2.4 Surrounding Development

The site is surrounded on all sides by industrial and business zoned land associated with the Sydney Business Park and the wider Marsden Park Industrial Precinct. There remain some residential land users within the re-zoned areas of the estate at present, with the closest approximately 250 metres to the south of the site. A caravan park, zoned industrial, is located approximately 480 metres to the south-west of the site at the end of Hollinsworth Road. The closest residential area is Hassall Grove approximately 800m to the south.

To the north and west of the site is land associated with Sydney Business Park which is currently undergoing bulk earth works in preparation of future development (**Figure 6** and **7**)

Adjoining the site to the east is the Lindt Facility which is currently under construction (**Figure 8**). Once complete, the facility will consist of a 14 meter warehouse for the manufacture and storage of Lindt's chocolate range.

To the south of the site is uncleared pastoral land, and existing residential dwellings which are zoned for industrial purposes (**Figure 9**).

Some development at the Sydney Business Park has already been completed, with Ikea and Bunnings at the corner of Hollinsworth Road and Richmond Road open to the public (**Figure 10**).

Figure 6 – Land to the west
Source: JBA

Figure 7 – Land to the north
Source: JBA

Figure 8 – Lindt Facility to the east
Source: JBA

Figure 9 – Pastoral land to the south with existing shed
Source: JBA

Figure 10 – Ikea Marsden Park
Source: JBA

2.5 Access

Sydney Business Park has direct access to Richmond Road, which provides direct access to the M7 Motorway located approximately 1 kilometre to the south of the industrial estate.

Hollinsworth Road has been constructed to industrial standard (4-lane divided carriageway) the length of the southern boundary of the site (**Figure 11**) and connects with another north-south internal estate road, also of industrial standard at the western boundary. Other estate roads are currently under construction, which will ultimately provide an additional connection to Richmond Road northeast of the site.

Figure 11 – Hollinsworth Road
Source: JBA

3.0 Description of the Development

This chapter of the report provides a detailed description of the proposed development. Architectural drawings are included at **Appendix A** and Civil Drawings are provided as part of **Appendix J**.

3.1 Proposed Land Use

Development consent is sought for the staged construction and operation of a cold storage warehouse and distribution facility. Stage 1 construction will deliver the standard height freezer part of the building. Stage 2 will provide for a high bay containing an automated storage and retrieval system.

The facility will be used for warehousing. Frozen or chilled goods are received from customers for storage and are then ordered within the warehouse. Goods are received and transferred into storage within 2hrs. Goods are subsequently retrieved from storage and assembled ready for dispatch within the facility.

Operationally the automated storage and retrieval system will provide improved efficiencies in this high turnover section of the warehouse, along with improved stock control accuracy compared with traditional manual operations. At the same time, it will improve employee safety and working conditions by minimising employee time spent in the minus 20 degree Celsius freezer environment.

Being a bulk cold store application, the automated storage and retrieval system needs to be accommodated in a high-bay building to minimise the building footprint and optimise stacker crane utilisation and cycle times. Reducing the building footprint to approximately 40% of the equivalent low-bay alternative reduces the capital cost of the building and land components, which are necessary offsets to the high capital cost premium of automation. The significantly reduced surface area of a high-bay building 'cube' also results in a more thermally efficient cold storage building, reducing energy consumption.

The inclusion of the high-bay section increases the total storage that can be accommodated on this high value site, which is an important factor for the economic viability of the site.

The site will operate from Monday to Sunday, 24 hours a day, however inbound and outbound truck movements would mostly occur between 5am to 9pm.

3.2 Site Layout

The key features of the proposed development when fully built are shown in the general site layout provided in **Figure 12**.

3.3 Development Staging

The proposed development will be constructed in two stages.

3.3.1 Stage 1

Figure 13 shows the proposed general site arrangement and elevations for Stage 1. The northern portion of the warehouse facility is to be constructed first. During Stage 1 it is expected that approximately 72 staff will be employed at the site that will cover three different shifts:

- 0500-1400;
- 1400-2230; and

- 2230-0500.

All onsite roads will be constructed during Stage 1 of the development. Vehicles will arrive from Hollinsworth Road and will enter the site from Road 5A.

Stage 1 construction works are expected to take approximately 11 months, and will require an average of 70 construction workers on site, peaking at approximately 120 people. Stage 1 is expected to be completed by February 2017.

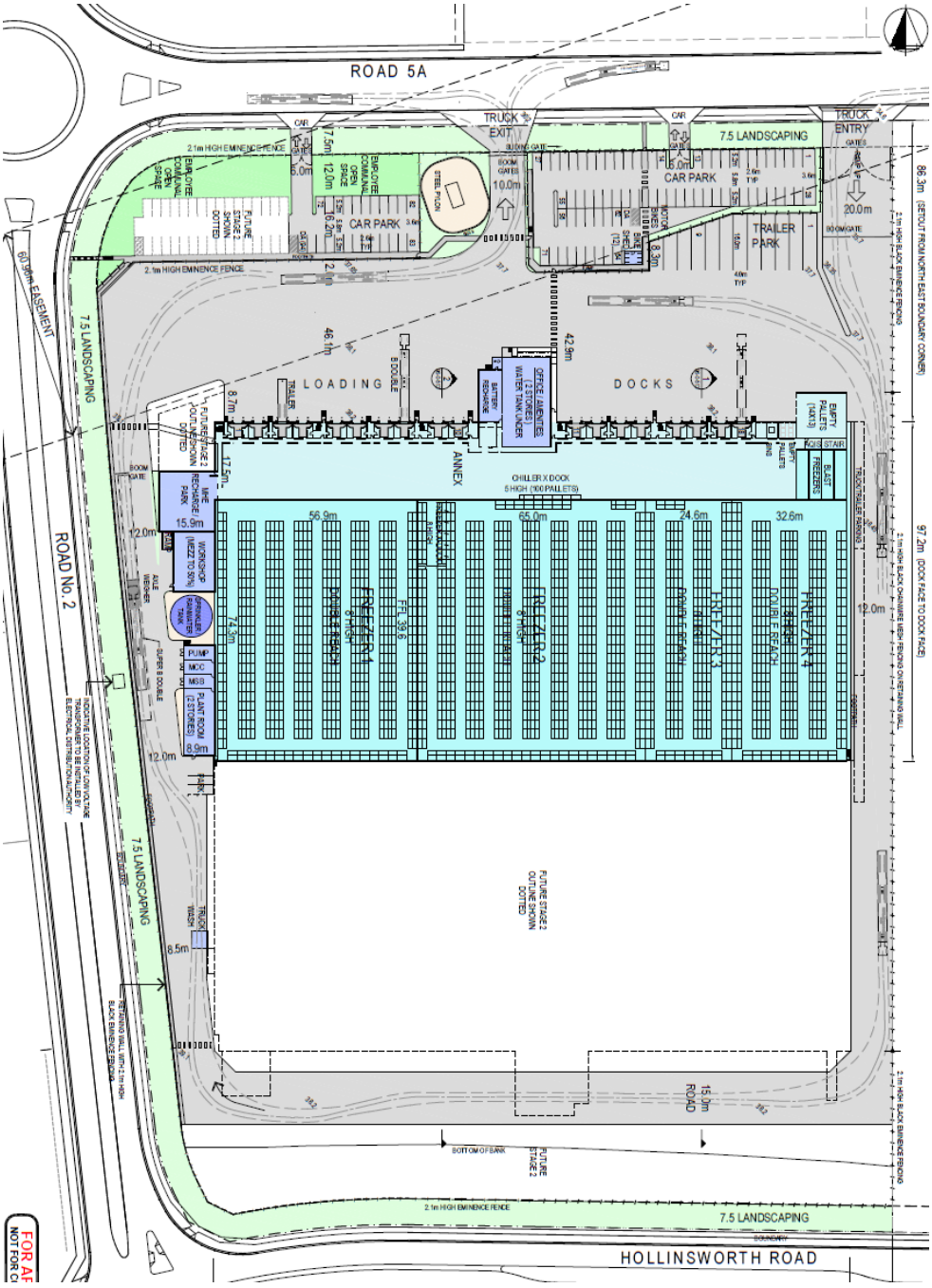

Figure 12 – Site arrangement and general layout (Stage 1 only)
Source: Beca

3.3.2 Stage 2

The southern portion of the facility will be constructed in Stage 2, ultimately accommodating 128 employees over the same three shifts as above. Stage 2 will be delivered in line with market demand. Swire anticipate this to occur within a relatively short time frame (i.e. within 5 years of the commencement of operations).

Stage 2 construction works are expected to take up to 1 year, and will require a similar construction workforce as for Stage 1 construction works. Subject to market conditions, Stage 2 is expected to be constructed within 5 years of the commencement of operation of Stage 1.

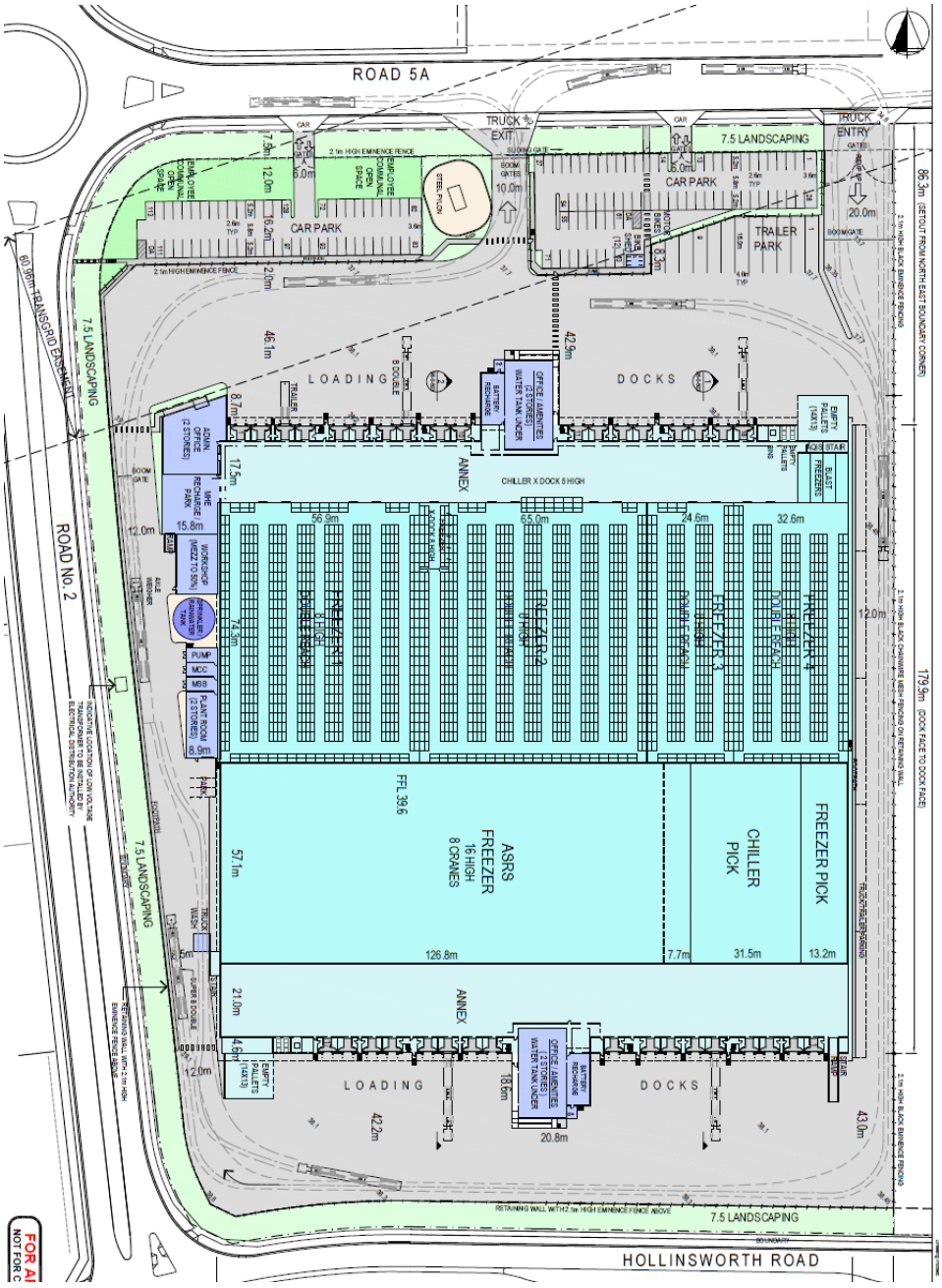

Figure 13 – Site arrangement and general layout (complete development)
Source: Beca

3.4 Numerical Overview

The key numeric development information is summarised in **Table 2**.

Table 2 – Key development information

Component	Stage 1	Stage 1 + Stage 2
Site area	70,320m²	70,320m²
Building Areas		
– Freezers	13,734 m²	24,189m²
– Annexes and Docks	3,612 m²	8,199m²
– Empty Pallets	189 m²	378m²
– Services Areas (Plant, Recharge etc)	1,267 m²	1,369m²
– Office & Amenities	734 m²	1,468m²
– Administration Offices	0 m²	684m²
– Total Building Area	19,536 m²	36,287m²
Employee Communal Area	1,085 m² (plus unbuilt car parking spaces)	1,085m²
Landscaped Area	5,612 m²	5,612m²
Easement Area	10,675 m²	10,675m²
FSR	27.8%	51.6%
Maximum Height	20.3m	34.8m
Car spaces	94 (Including 2 disabled spaces)	128 (including 2 disabled spaces)

3.5 Urban Design

3.5.1 Principles

The planning and design principles adopted for the proposed development of the site are as follows:

- Orientation of the site to ensure safe and efficient access for trucks and passenger vehicles alike.
- To create a functional storage facility that relies on recognisable forms and materials of the "shed" typology.
- Incorporation of articulated finishes to create an honest and low impact aesthetic approach to the design solution, whilst breaking down the scale of the development into smaller elements and visually de-emphasising the length and height of the building.
- Incorporation of coloured elements and signage that complement Swire's corporate branding.

3.5.2 Design Statement

The orientation of the building fronting Road 5A has been determined after consultation with Sydney Business Park and GTA. The prevailing factor in the selected option is to choose the safest truck entry and exit, whilst minimising B-double / semi-trailer congestion through the retail sector around the intersection of Richmond Road and Hollinsworth road.

Trucks must circulate in a clockwise manner onsite so that the truck rear can be sighted when reversing. The selected option therefore is access to and from the site from Road 5A. The building orientation is also necessary to best utilise the large section of high voltage easement land at the north end of the site in the overall site layout.

The overall form of the building is dictated by the building's function as a cold storage warehouse particularly to incorporate an automated storage and retrieval system which needs to be accommodated in a large insulated "box". As a storage facility, the recognisable forms and materials of the "shed" typology is seen as an honest and low impact aesthetic approach to the design solution. The modular design provides for the future development of Stage 2 whilst addressing the design of Stage 1 as a standalone building until such time as Stage 2 is constructed.

The building facades predominately utilise colorbond cladding and have been designed with a mix of colours to break down the scale of the development into smaller elements. Plant area walls are painted precast concrete. The colour palette responds to the Swire branding. To further activate the facades, a vibrant contrasting colour, again derived from the Swire branding, has been used to articulate the offices around the building.

The long faces of the lower portions of the building on the West and East are interspersed with panels of metal mesh screening. These panels sit off the face of the building and also project slightly above the eaves-line to break the horizontal edge and cast filtered shadows back onto the building. Along with tonal variations in the cladding, the collage of different materials and alignment of these components serve to de-emphasise the length of the building.

The higher portion of the building has geometric colour patterning incorporated, designed to break down the scale of the building into smaller elements without complicating the overall appearance of the building by introducing too much complexity.

Wrapping around the South East corner of the higher portion of the building addressing Hollinsworth Road is a red coloured Alucobond element that ties into Swire's signage for the building. This transitions into louvres on the North West elevations of the higher portion of the building, which serves to articulate the horizontal aspect and visually de-emphasise the height. The change in material and form further adds to visual interest.

A translucent stair tower protrudes from the South West corner of the higher portion of the warehouse building to serve as a visual focal point on the approaches along Hollinsworth Road. In contrast to the main cladding of the building, this tower is proposed to be clad in a high quality translucent multi-cell polycarbonate cladding (Dampalon or similar). This additional material will assist in adding visual interest to the building and will 'glow' at night with internal lighting.

Mesh screening features will be utilised to obscure views to water tanks and pallet storage areas. The metal mesh screening assists in visually tying these enclosures back to the building and provides further articulation of various elements along the length of the façade. These elements have a complementary colour scheme to the main building design.

The deep cut at the south end of the site and the 7.5m landscaping at all road frontages will help soften the impact of the building, as can be seen in the Landscape Plan.

3.6 Earthworks and Site Preparation

As described previously, the main bulk earthworks have been carried out at the site by Sydney Business Park in accordance with Development Application 11-2284 which was approved by Blacktown City Council on 18 March 2013. These works will deliver a cleared site ready for development of the Swire facility.

The proposal does involve additional earthworks required to prepare the site for the proposed building, for the construction of the building's foundations and site infrastructure, and the construction of retaining walls along the southern and western boundaries of the site. Earthworks will be staged in accordance with the building construction stages.

3.6.1 Stage 1

A majority of the site will be developed for the requirements of Stage 1 operation. This includes cut at the western boundary where a retaining wall will be constructed on the inside edge of the 7.5m landscaped area. It will start on the northern boundary, continuing around the northwest corner and varies in height from 0.2m on the northern boundary up to approximately 3m near the southeast corner of the site. The retaining wall will be below the landscaped zone, and the internal part of the site will be set down lower than the street level on the western and southern sides of the site.

A retaining wall is also required along the Lindt property (eastern) boundary. The retaining wall, which will be constructed during Stage 1, will be approximately 180 metres long and will vary in height up to 1.5 metres. The Swire site is generally above the level of Lindt site at the boundary, except in the southeast corner (of the Swire site), where the Lindt site is higher. Swire's additional cut in this location will necessitate additional support to Lindt's retaining wall on the boundary.

Retaining walls are required along the south side of the eastern carpark to suit the levels required for fire water containment in this car park and besides the truck entry driveway. These retaining walls vary in height up to approximately 1.8m. In this case the eastern car park is set down lower, tying in with the adjoining street level.

A 15 metre wide internal access road (driveway) will loop around the rear of the site providing vehicle access in a forward direction.

3.6.2 Stage 2

Cut along the southern wall is not required until Stage 2, in which time the rear of the site will be fully developed including an expanded pavement hardstand, to enable the internal access road (driveway) to be shifted outside of the Stage 2 building area. The retaining wall along the southern boundary will vary from approximately 1.3m in height near the southeast corner up to 2.8m near the southwest corner. As with the western retaining wall, the retaining wall will be set on the inside boundary of the landscaped area and the site will be set below the street level.

Table 3 below outlines the total required earthwork program across both Stage 1 and Stage 2. The majority of the earthworks will occur during Stage 1.

Table 3 – Required Bulk Earthworks

	Cut (m^3)	Fill (m^3)	Balance (cut/fill m^3)
Building platform	600	11,300	Fill 10,700
Main truck paving and gravity retaining wall	22,900	5,700	Cut 17,200
Car park pavement	1,350	500	Cut 850
Landscape and communal area	3,250	450	Cut 2,800
Total (rounded)	28,100	17,950	Cut 10,150

3.7 Built Form

The proposed Swire Cold Storage Facility will comprise a single building to be constructed in two stages as outlined in **Section 3.11**. Once stage 1 and 2 are complete the building will incorporate a warehouse and distribution facility, along with two 2 storey office and amenity buildings (one built in each stage) and a 2 storey administration office, which will be built as part of Stage 2.

A photomontage of the proposed development is shown at **Figure 14**. **Figure 15** shows the completed development elevation (i.e. after completion of Stage 1 and Stage 2), and **Figure 16** shows the elevations for Stage 1 only. The full set of architectural plans is provided in **Appendix A**.

Figure 14 – Photomontage of the proposed development (from north-west site corner)
Source: Beca

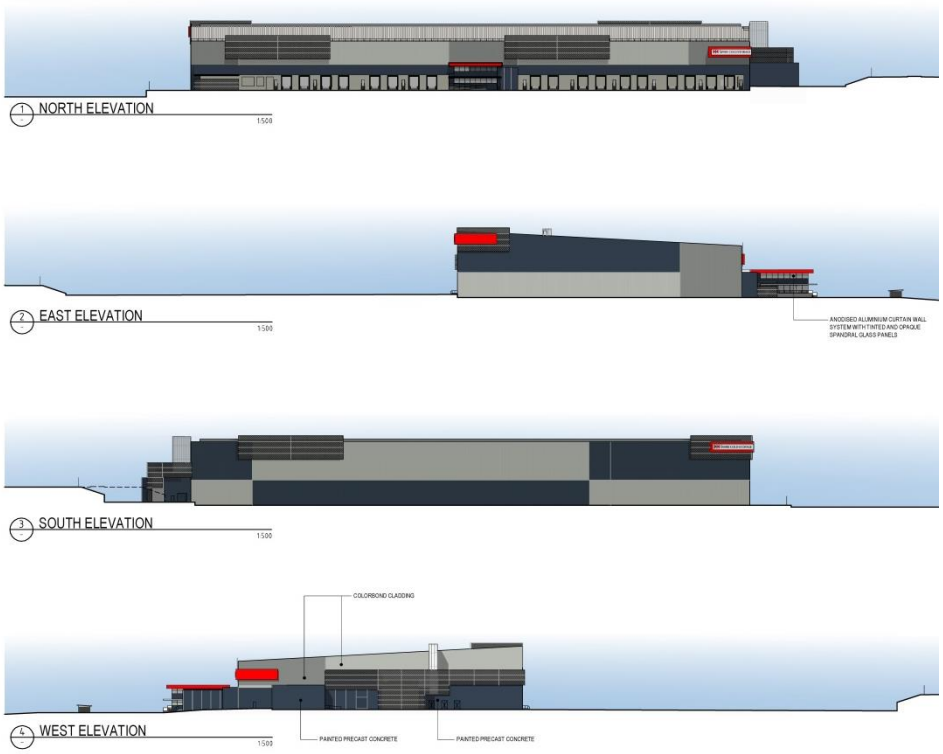

Figure 15 – Stage 1 Elevation Plan
Source: Beca

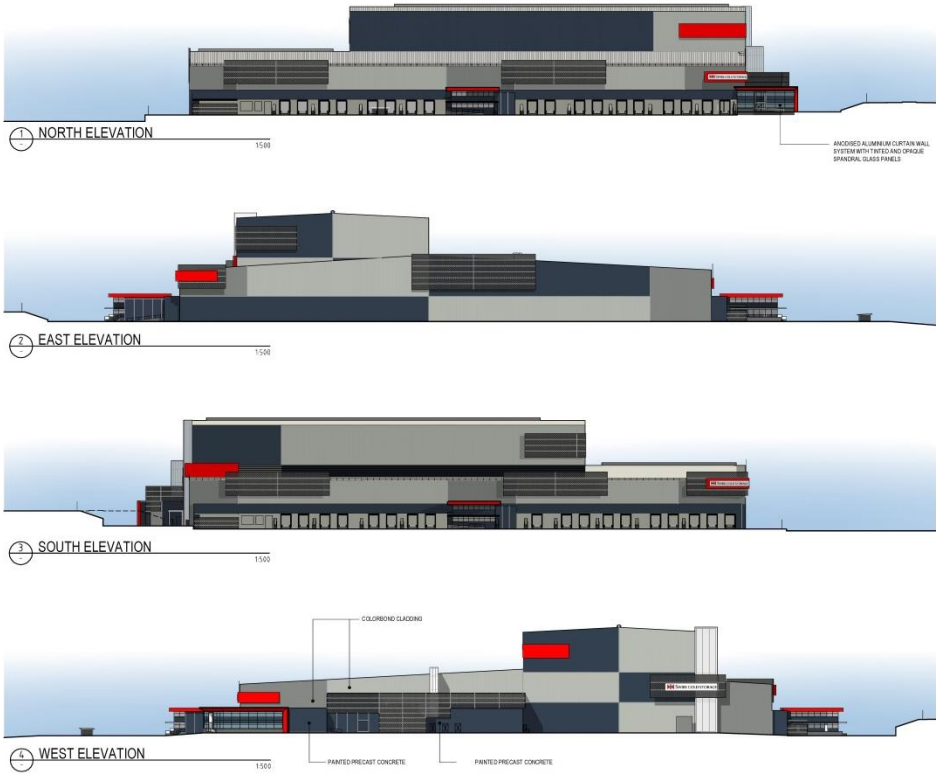

Figure 16 – Stage 1 and 2 elevations
Source: Beca (see Appendix A)

The proposed development will exceed the 16m height limit by approximately 4.3m in Stage 1 and 18.8m in Stage 2. A clause 4.6 variation to the building height development standard has been prepared and is attached at **Appendix H**.

In response to the height limit exceedance, the proposed development has been subject to a detailed design process which has sought to reduce the visual impact of the development. A high quality architectural treatment has been established for the development, and is described in **Section 3.5.2** above.

3.8 Pavement and Hardstand

Circulation roads, truck parking areas and car parks will have a continuously reinforced concrete pavement that minimises joints.

3.9 Lighting

The facility will operate 24 hours a day. Car parks and truck access areas will have low luminance level lighting designed to Australian/New Zealand Standard AS/NZS 1158.3.1:2005 (Lighting for roads and public spaces, Pedestrian area lighting). The design lighting subcategory under Table 2.5 will be P11c with a minimum average horizontal luminance level of 3.5 lux in accordance with Table 2.9.

The car parks will be lit with LED luminaires mounted on poles at a height of 4.3m being the maximum height permitted by Transgrid for development within their transmission line easement. The truck yard areas on the north and south sides of the building plus the internal roads on the east and west sides will all be lit with LED luminaires mounted on the walls of the building.

The 'Swire Cold Storage' signs located on the building walls (at the corners of the building) will be internally illuminated (where readily accessible for maintenance) or externally illuminated using beam controlled spotlights.

The external lighting will also be designed and installed to comply with AS 4282-1997, Control of the obtrusive effects of outdoor lighting. The lighting will be controlled with photoelectric cells to the Building Code of Australia Part J6 requirements.

The detailed design of the external lighting will be carried out during the detailed design phase of the project and details will be included in the Construction Certificate Application.

3.10 Landscaping

Landscaping would be undertaken in accordance with the Landscape Plan prepared by Habit8 (**Appendix E**).

Key aspects of the landscape plan include:

- provision of a 7.5 metres landscaped setback which will feature a mix of native and exotic vegetation;
- A 2.1m high eminence fence enclosing the site located on the inside edge of the landscaped area; and
- A turfed employee communal open space area of approximately 1,085m² located near of the NW corner of the site.

An assessment of the Landscape Plan against the DCP is provided at **Appendix F**.

3.11 Stormwater Drainage

Stormwater management for the development has been designed in a manner that is consistent with Council's standards. Stormwater infrastructure would include:

- An underground pit and pipe system;
- Stormwater capture pits; and
- Two (2) rainwater tanks

It is noted that no on-site detention (OSD) is required for the development, as precinct-based OSD has been provided by Sydney Business Park as part of the wider estate works.

Stormwater Management is discussed further in **Section 6.7**.

3.12 Pedestrian Access

The site will be accessible from the public domain via a footpath entrance at Hollinsworth Road to the west and Road 5 to the north. Internally, the footpath extends along the western boundary and provides access to the main building at two points and connects with the two car parks at the northern boundary.

The internal footpath will provide safe circulation for pedestrians from outside the site or from the car park to the office building on the northern building front or the main warehouse building via entry points at the western building front.

Painted zebra crossings will be provided where the path crosses pavement shared with a vehicle.

3.13 Vehicular Access and Parking

3.13.1 Vehicle Access

There will be four vehicle access points to the site via Road 5 at the northern boundary as follows:

- Two car park access points
- One truck entry
- One truck exit

3.13.2 Truck Entry

The vehicle crossover at the entrance is approximately 28m wide with flares continuing to Road 5a. The truck driveway is 20m wide and allows a second truck to pull up to the boom gate prior to the first truck proceeding. The distance between the vehicle crossover and the boom gates is 34m which allows sufficient space for super B-double trucks to be able to stop within the site in front of the boom gate without overhanging into Road 5A.

3.13.3 Truck Exit

The vehicle crossover at the exit is approximately 21m wide at the boundary with the flares continuing to Road 5A. This provides sufficient space for right out or left out manoeuvres. The exit driveway is approximately 10m wide.

3.13.4 Truck Movements

There will be approximately 48 outbound truck movements and 27 inbound truck movements each day during Stage 1. There will be approximately 122 outbound truck movements and 92 inbound truck movements each day once Stage 2 is completed.

3.13.5 Parking

The proposal will provide for a total of 128 car park spaces, including 94 spaces as part of Stage 1 and 34 spaces as part of Stage 2. Two accessible spaces will be provided.

3.13.6 Loading Areas

The proposal includes provision for 35 loading docks, including 18 docks as part of Stage 1 and 17 docks as part of Stage 2. All loading docks can accommodate 32m Super B-Doubles.

3.13.7 Bicycle facilities

Secure and covered facilities will be provided for 12 bicycles.

3.14 Water Balance

Swire has calculated their total water usage as 16,800kL/year, broken down as follows:

- Condenser water usage (non-potable) 12,500 kL/year.
- Toilet water usage (non-potable) 900 kL/year.
- Landscaping irrigation (non-potable) 2,000 kL/year.
- Amenities potable water usage (potable) 1,000 kL/year.
- Truck wash (potable for hygiene cleaning) 400 kL/year.

MUSIC modeling as required by Blacktown City Council and detailed in **Appendix J** has confirmed that the proposed 1,500 kL of storage will achieve the Blacktown City Council requirement of 80% non-potable water reuse. MUSIC modeling inputs include the catchment area, the Blacktown City Council rainfall data file, the rainwater storage volume and the non-potable water usage figures.

Based on the predicted water demands and the outcomes of the MUSIC modelled site water balance water supply requirements are estimated as follows:

- 12,300 kL/year from rainwater harvesting.
- 4,500 kL/year from towns mains.

3.15 Environmentally Sustainable Development

The development has been designed to incorporate a number of environmentally sustainable measures as escribed in **Appendix L**, and summarised below.

3.15.1 Energy Efficiency

The site features modern LED lighting throughout the development including all internal and external areas saving 90% on energy consumption compared to traditional warehouse lighting.

The Refrigeration plant will use ammonia which is a natural refrigerant with zero GWP (global warming potential). The refrigeration controls will be state-of-the-art, with sophisticated EMS (energy management system), VSD's (variable speed drives) on all major Compressors, Condensers and Evaporator fans, to deliver a high energy efficiency refrigeration operation. The high-bay component results in a more thermally efficient cold storage building, also reducing energy consumption.

The building envelope (walls, floor, freezer, doors) will be designed in accordance with industry best practice power consumption.

All the energy efficiency initiatives above will contribute to lower energy use, which in turn also reduces water consumed for cooling refrigerant.

3.15.2 Carbon Emissions

Subject to approvals from electricity utilities, the proposal will include installation of a 500 kW (minimum) Solar Photovoltaic roof top mounted array, to produce energy mainly for internal site usage, with some of the zero carbon energy exported to the grid. Parked refrigerated semi-trailers will have access to electricity from the solar system in daytime hours.

The energy efficiency initiatives above, as well as the Solar PV system, will contribute to a reduced carbon footprint.

3.15.3 Water Conservation

Rainwater harvesting from the main roof area – 1,500 kL of storage will be provided, and has been calculated as being sufficient to meet Blacktown City Councils requirement for supplying 80% of non-potable water demand. This storage will be provided in three 500kL tanks located underneath the two Office/Amenities buildings and as part of the combined sprinkler/rain water tank.

Other proposed measures to minimise potable water use are energy efficient building and refrigeration system designed to minimise condenser water usage, and the use of water efficient plumbing fixtures.

4.0 Legislation

4.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The site has been cleared and graded as part of approved subdivision works. There is no natural vegetation at the site so the proposed development is unlikely to have a significant impact on protected species or threatened ecological communities listed under the EPBC Act. A search of protected matters has identified that no other Matters of National Environmental Significance are expected to be impacted by the development.

4.1.2 Environmental Planning and Assessment Act 1979 (NSW)

The EP&A Act provides, amongst other things, the legislative framework for the assessment and approval of development in NSW. The proposed development has been declared by the Minister as SSD under Section 89C of the EP&A Act. In accordance with Division 4.1 of Part 4 of the EP&A Act, this EIS has been prepared in to address:

- The SEARs issued under Schedule 2 of the EP&A Regulations for SSD 14_6799.
- The general provisions of Schedule 2 of the EP&A Regulations.

The Department of Planning and Environment will assess the DA in accordance with Section 89H and 79C of the EP&A Act. Pursuant to Sections 89D and 89E of the EP&A Act the Minister for Planning will be the consent authority and will determine the DA.

4.1.3 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. The other approvals required under other legislation for the facility is set out below.

4.1.4 Roads Act 1993

The proposal includes carrying out of works that affect public roads, being the construction of two driveways to Road No. 5.

Consent from Blacktown City Council under Section 138 of the *Road Act 1993* will be required for these works. However, in accordance with Section 89K of the EP&A Act, the Section 138 Roads Act approval must be consistent with the development consent that is issued.

4.1.5 Food Act 2003

The Food Act aims to ensure food for sale is both safe and suitable for human consumption and provides for the application in NSW of the Food Standards Code. The NSW Food Authority enforces the Food Act and regulates food related industries. Part 8 of the Food Act empowers the creation of food safety schemes, and under Part 4 of the Food Regulation 2010 all food businesses are required to

hold a NSW Food Authority licence. Whilst Swire is not a manufacturer of food products, it does handle, store and transport a wide range of chilled and frozen food products. Swire already holds a NSW Food Licence for its facilities at Lurnea and Homebush. The existing licence will need to be amended prior to the commencement of operations of the Marsden Park facility.

4.2 Environmental Planning Instruments

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

Under Schedule 1 Clause 12 of the State & Regional Development SEPP development for warehouse or distribution centres with a capital investment value of more than $50 million is SSD. As the proposed development is expected to have a capital investment value of approximately $70 million it is declared as SSD.

4.2.2 State Environmental Planning Policy (Sydney Region Growth Centres) 2006

The Growth Centres SEPP is the dominant environmental planning instrument applying to the site. The SEPP contains, at Appendix 5, the Marsden Park Industrial Precinct Plan, which provides the key development controls applicable to the site.

Part 4 of the precinct plan provides a number of development standards for development in the Marsden Park Industrial Precinct, and Parts 5 and 6 provide a number of additional applicable provisions. An assessment of the development against these standards and provisions is provided in **Section 6.1**. As indicated in the table, it is considered that the development is able to be carried out in a manner that is consistent with all of the applicable standards and provisions of the SEPP.

4.2.3 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 potentially hazardous, because it includes for the reticulation of anhydrous ammonia (a Class 2.3 Toxic Gas) throughout the refrigeration cooling system in excess of the specified screening threshold specified in the Department of Planning's guideline *Applying SEPP 33*. In accordance with SEPP 33 a Preliminary Hazard Analysis has been prepared and is provided in **Appendix G**. The assessment of risks associated with on-site handling and storage of ammonia is provided in **Section 6.5** of this EIS, which concludes that the facility will have negligible impact on the cumulative risk results for the local area as the significant radiant heat levels are retained on the site and the risk of ammonia releases is within the guidelines.

The proposed development is not potentially offensive development because it does not include any activities that are likely to generate odour or that would otherwise cause significance offense, nor would the facility require an Environment Protection Licence from the Environment Protection Authority.

4.2.4 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 promoting the remediation of contaminated land and ensuring that remediation work is permissible throughout the State.

Clause 7 of SEPP 55 requires the consent authority, in its assessment of a development application, to consider whether the land is contaminated, and if so, then to consider whether the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out.

The site has been cleared and heavily graded as a result of approved subdivision works. As part of these subdivision works the potential for site contamination was assessed, and it was found that the land will be suitable for the intended industrial use after the completion of the subdivision works. As such, the development is able to be conducted in a manner that is consistent with the aims, objectives and provisions of SEPP 55.

4.2.5 State Environmental Planning Policy No. 64 – Advertising and Signage

SEPP 64 regulates signage, and includes assessment criteria against which all signage mist be assessed, including.

- Character of the area
- Special areas
- Views and vistas
- Streetscape, setting or landscape
- Site and building
- Associated devices and logos with advertisements and advertising structures
- Illumination
- Safety

4.2.6 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 Infrastructure SEPP.

4.3 Other Plans

4.3.1 Growth Centres Development Control Plan 2010

The *Blacktown City Council Growth Centre Precincts Development Control Plan 2010* (the Growth Centres DCP) provides detailed guidance for development within the parts of the North West Growth Centre that are within the Blacktown LGA.

An assessment of the development against the applicable development controls is provided at **Appendix F**. As indicated in the table, the development is considered to be generally consistent with the development controls in the DCP. Inconsistencies with the DCP are addressed in **Section 6.2**.

4.3.2 Development Contributions

There are two separate development contributions that are applicable to the site, being:

- A State Infrastructure Contribution (SIC) for regional infrastructure.
- A local infrastructure contribution under Section 94 of the EP&A Act.

Both of these contributions have been addressed by Sydney Business Park as part of the estate subdivision and infrastructure development, and as such further contributions are not required as part of the proposed development.

State Infrastructure Contribution

The State Infrastructure Contribution (SIC) is payable under the *Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Growth Areas) Determination 2011* (the Determination). Clause 5(3) of the Determination provides that a further SIC is not required to be made for development on land if a SIC has already been made for development on the land.

4.3.3 Section 94 Contributions Plan No.21 – Marsden Park Industrial Precinct

Blacktown City Council's *Section 94 Contributions Plan No.21 – Marsden Park Industrial Precinct*, requires contributions towards provision of local infrastructure and baseline facilities within the Marsden Park Industrial Precinct.

4.4 Strategic Framework

4.4.1 A Plan for Growing Sydney

In December 2014 the Department of Planning and Environment released A Plan for Growing Sydney (the Plan). The Plan supersedes the current Metropolitan Plan for Sydney 2036 and Draft Metropolitan Strategy for Sydney to 2031, and presents a strategy to guide land use planning decisions across Sydney for the next 20 years.

In order to achieve the vision for Sydney to become 'a strong global city and a great place to live', the Plan establishes four goals for Sydney. The goals of the Plan are that Sydney will be:

- a competitive economy with world-class services and transport;
- a city of housing choice, with homes that meet our needs and lifestyles;
- a great place to live with communities that are strong, healthy and well connected; and
- a sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.

To support these goals, the Plan sets out planning principles that will guide Sydney's growth. These include:

- a competitive economy with world class services and transport;
- transforming the productivity of Western Sydney through growth and investment; and
- a stronger economic development in strategic centres and transport gateways.

The proposal is consistent with the Plan, particularly to transform the productivity of Western Sydney through growth and investment. The proposal will invest approximately $70 million in Western Sydney and will provide for 128 jobs.

The Plan identifies Marsden Park as one of Sydney's 28 Strategic Centres. Strategic Centres are locations that currently have, or are planned to have, at least 10,000 jobs. The Plan identifies these centres as priority locations for employment, retail, housing, services and mixed-uses. The Proposed development is consistent with the planning principles outlined in the Plan, and the aims for Strategic Centres as it provides for:

- future growth within a strategic centre;
- locates jobs close to a large centre; and
- provides significant investment in proximity to major transport.

4.4.2 West Central Subregional Strategy

To further support A Plan for Growing Sydney, a number of subregional plans which contain local targets and objectives will be developed by the Department of Planning And Environment in the near future. The proposal is located in the West Central Subregion.

As outlined in A Plan for Growing Sydney, the West Central Subregion will be a focus for intensive growth over the next 20 years as Western Sydney is the focus of greater investment in infrastructure and job creation. Priorities for the West Central Subregion include leveraging economic development opportunities from the investment of infrastructure in the region, such as road infrastructure. The subregional plan also specifically identifies priority actions for Marsden Park which includes planning for a concentration of high value economic activity in Marsden Park industrial zoned areas.

The proposed cold storage warehouse is consistent with the sub regional strategy by providing significant investment in a facility that is well located close to high capacity transport routes such as Richmond Road and the M7, within an industrial zone at Marsden Park.

5.0 Consultation

In accordance with the SEARs 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.

Table 4 – Summary of Issues Raised and Response

Key Issue	Response
Blacktown City Council	
A pre-DA consultation meeting was held with Blacktown City Council. Key issues raised by Council through this consultation meeting are listed below.	Responses to Council's key issues are provided below.
- Height of the building. Council did not object to the proposed height of the building or the proposed variation to the height limit, subject to a high quality architectural treatment being established for the development.	Swire has invested in a suitable level of building articulation and design elements to break down the scale of the development into smaller elements and visually de-emphasise the length and height of the building, whilst retaining a functional facility with an honest shed typology. See also **Section 3.5, 6.8** and **Appendix H**.
- Traffic and Access. Council requested that swept paths be provided for Super B-Doubles and to ensure that access points were located at least 30m away from intersections.	The closest car park entry is located 50m from the intersection of Road No. 2 and Road No. 5A. Swept paths for Super B-Doubles are provide in **Appendix I**.
- Traffic and Access: Trucks are not to queue or park on public roads, as such there needs to be sufficient distance for trucks to queue on-site.	The distance between the vehicle crossover and the boom gates is 34m which allows sufficient space for super B-double trucks to be able to stop within the site in front of the boom gate without overhanging into Road 5A.
- Stormwater: Council advised that 80% of the water use on the site should come from rainwater, and that water quality should meet the targets specified in the Blacktown Development Control Plan, demonstrated by MUSIC modelling. Council also noted that no on-site water detention is required as the estate has provided an estate-wide stormwater detention solution.	Swire intends to achieve the target of 80% of total water use being derived from collected rainwater. Swire will exceed this target for the ancillary office and amenities components of the building. However, it is highlighted that Swire has a higher water demand for refrigeration related activities compared to more standard warehouse types, meaning that achieving the 80% target in relation to the refrigeration component is a more onerous requirement and may not be achieved at all times. Water quality will meet or exceed the established targets, as shown in Section 6.7 and **Appendix J**. MUSIC modelling has been carried out, and will be provided separately to Council in a suitable electronic format.
- Noise report will be required, and will need to consider the noise impacts (including night time noise) at the caravan park.	The Noise Impact Assessment (see **Appendix K**) has considered the noise impact at the closest existing receiver, which would demonstrate compliance with the caravan park.
- Fire water tanks must not be located in the landscape setbacks and should be suitably screened.	Fire water tanks are shown in the plans, they are not located in landscaped setback areas, and will be screened with metal mesh which visually ties these enclosures back to the building and complements colour scheme to the main building design.
- Car Parking: Should comply with the parking rates in the Growth Centres DCP.	Car parking rates have been generated from first principles, based on the actual intended employment levels for each stage of the development, and the observed car occupation rate established by the RMS.

Key Issue	Response
Transgrid	
Transgrid identified a number of specific requirements in relation to development within or adjacent to the easement including the following:	Detailed plans of all civil works and infrastructure within the Transgrid easement are provide in **Appendix A**, including detailed survey of the transmission lines, details of existing and finished ground levels within the easement, and details of all structures and civil works within the easement. These have been developed iteratively with Transgrid during the development of the design for the proposal, and have been previously provided to Transgrid for early consideration, as requested by Transgrid.
- No development is to occur within 20m of the tower, and access by Transgrid to the tower is not to be compromised by the development.	The design of the access driveways and car park have ensured no encroachment into the tower setback required by Transgrid, and no landscape elements other than crushed gravel and grass is proposed for the areas immediately around the tower.
- The higher elements of the building should be set back as far as possible from the edge of the easement.	The building has been oriented so that all elements over 14m are set well back away from the easement. The only built element in close proximity to the easement is the bike storage shed and the north-west corner office.
- No fixed buildings heavy vehicle parking areas are to be located within the easement.	All fixed buildings and heavy vehicle parking areas are located outside of the easement.
- Structures and landscaping in the easement must be limited 4.3m in height.	No structures or landscape elements in excess of the 4.3m height limit are proposed.
NSW Food Authority	
The NSW Food Authority has advised that a variation to the existing NSW Food Authority Licence will be required to incorporate the new Marsden Park facility. No requirements were specified in relation to the Development Application.	NA

Transport for NSW and RMS provided detailed inputs into the SEARs and the issues identified in the SEARs have been addressed in this EIS (see Table 1). It was not necessary further consult with TfNSW or RMS.

The proposed development will be placed on public exhibition for 30 days in accordance with clause 83 of the EP&A Regulation. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project.

6.0 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 SEARs (see Section 4.0).

The Mitigation Measures at Section 6.0 complement the findings of this section.

6.1 Relevant EPIs, Policies and Guidelines

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the SEARs are addressed in **Table 5**.

Table 5 – Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

<table>
<tr><th>Instrument/Strategy</th><th>Comments</th></tr>
<tr><td colspan="2">Strategic Plans</td></tr>
<tr><td>A Plan for Growing Sydney</td><td>The proposal is consistent with the Strategy in that it will contribute to increased productivity in Western Sydney through investment of some $70 million and the provision of 128 jobs. Further, the proposal will also grow jobs and strengthen the role of the Marsden Park strategic centre.</td></tr>
<tr><td>West Central Subregional Strategy</td><td>The proposal is consistent with the subregional strategy as it will provide high value economic activity in an industrial zone at Marsden Park.</td></tr>
<tr><td colspan="2">State Legislation</td></tr>
<tr><td>EP&A Act</td><td>▪ The proposal is consistent with the objects of the EP&A Act as it helps to promote the orderly and economic use of land by building a distribution warehouse in line with the Marsden Park Industrial Precincts purpose.

The proposed development is consistent with Division 4.1 of the EP&A Act, particularly for the following reasons:
▪ the development has been declared to have state significance;
▪ the development is not prohibited by an environmental planning instrument; and
▪ the development has been evaluated and assessed against the relevant heads of consideration under section 79C.</td></tr>
<tr><td>EP&A Regulations</td><td>The EIS has addressed the specification criteria within clause 6 and clause 7 of Schedule 2. Similarly, the EIS has addressed the principles of ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage (see Section 9).

As required by Clause 7(1)(d)(v) of Schedule 2, the following additional approvals will be required in order to permit the proposed development to occur.
<table>
<tr><th>Act</th><th>Approval Required</th></tr>
<tr><td colspan="2">Legislation that does not apply to State Significant Development</td></tr>
<tr><td>Coastal Protection Act 1979</td><td>N/A</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>N/A</td></tr>
<tr><td>Heritage Act 1977</td><td>N/A</td></tr>
<tr><td>National Parks and Wildlife Act 1974</td><td>N/A</td></tr>
<tr><td>Native Vegetation Act 2003</td><td>N/A</td></tr>
<tr><td>Rural Fires Act 1997</td><td>N/A</td></tr>
<tr><td>Water Management Act 2000</td><td>N/A</td></tr>
<tr><td colspan="2">Legislation that must be applied consistently</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>No</td></tr>
<tr><td>Mine Subsidence Compensation Act 1961</td><td>No</td></tr>
<tr><td>Mining Act 1992</td><td>No</td></tr>
<tr><td>Petroleum (Onshore) Act 1991</td><td>No</td></tr>
<tr><td>Protection of the Environment Operations Act 1997</td><td>No</td></tr>
</table></td></tr>
</table>

Instrument/Strategy	Comments	
	Roads Act 1993	Yes
	Pipelines Act 1967	No
SEPP 33 – Hazardous and Offensive Development	The proposed development is not potentially offensive industry. The proposed development is potentially hazardous. A Preliminary Hazard Analysis has been prepared and is provided in **Appendix G**, which concludes that the facility will have negligible impact on the cumulative risk results for the local area as the significant radiant heat levels are retained on the site and the risk of ammonia releases is within the guidelines.	
SEPP 55 – Remediation of Land	The issue of land contamination was addressed as part of the subdivision DA for the Sydney Business Park and as such has not been replicated as part of this proposal. As part of the subdivision works Sydney Business Park are required to provide a Site Audit Statement confirming that the site is suitable for future industrial uses.	
SEPP 64 – Advertising and Signage	The proposed signage complies with the assessment criteria in SEPP 64 as follows: ▪ Character of the area: the signage is commensurate with the nature of the proposed facility, and is suitable given its location within an industrial estate. ▪ Special areas: The signage is located on a facility within an industrial area. It will not detract from the amenity or visual quality of any sensitive areas. ▪ Views and vistas: The signage does not block views or vistas or penetrate the skyline. ▪ Streetscape, setting or landscape: The proposed signage is commensurate with the nature of the proposed facility, and is suitable given its location within an industrial estate. ▪ Site and building: The proposed signage is commensurate with the nature of the proposed facility, which has been designed in terms of the colour scheme to be complimentary to the theme of the branding associated with the signage. ▪ Associated devices and logos with advertisements and advertising structures: The signage may contain internal illumination. ▪ Illumination: Illumination or lighting could be managed to ensure no adverse impacts. ▪ Safety: The signage would not impede safety sightlines.	
SEPP (Infrastructure) 2007	Clause 45 of the SEPP applies to development in the vicinity of electricity easements and ensures that the relevant electricity service provider is given the opportunity to make representations on the development application before a consent authority makes a determination on the proposal. A Transgrid electricity easement is located immediately to the north of the site, encroaching into the north-west corner of the site in a small area. Consequently, the application will need to be referred to Transgrid for comment. The proposal has been designed to avoid any building works in this area of the site, with the building set back from the electricity. Accordingly, the development is not expected to result in any conflict with the electricity easement. Clause 104 of the SEPP applies to traffic generating development and ensures that the Roads and Maritime Services (RMS) is given the opportunity to make representations on certain traffic generating development applications before a consent authority makes a determination on the proposal. The development meets the thresholds in schedule 3 of the SEPP (as industry with an area of over 20,000m^2, and providing ancillary parking for over 200 vehicles), and is therefore considered to be traffic generating development for the purposes of the SEPP. Consequently, the application will need to be referred to the RMS for concurrence. A traffic assessment has been undertaken for the proposal, which indicates that the development is unlikely to result in any significant traffic impacts (see Section 6.7).	
SEPP (State and Regional Development) 2011	Under Schedule 1 clause 12, Development for the purposes of Warehouses or distributions centres with a capital investment value of more than $50 million is SSD. As the proposed development is expected to have a capital investment value of approximately $70 million it is defined as SSD.	

Instrument/Strategy	Comments	
SEPP (Sydney Region Growth Centres) 2006 Appendix 5 Marsden Park Industrial Precinct Plan	Clause 2.1 – Zone	The proposed warehouse and distribution centre uses are permissible with development consent in the IN2 Light Industrial zone.
	Clause 4.3 – Height of Buildings	Buildings up to 16m are permissible on the Site. The proposal will exceed the height limit by approximately 18.8m. A clause 4.6 variation to this development standard has been prepared and is attached at **Appendix H.** An assessment of the visual impacts of the building (including the height issues) is provided in **Section 6.8**.
	Clause 4.4 – Floor Space Ratio	A maximum floor space ratio of 0.7:1 is permissible on the Site. The proposal has a floor space ration of 0.52:1.
	Clause 6.1 – Public Utility Infrastructure	All required infrastructure is or will be available for the development
	Clause 6.4 – Development Controls – Native Vegetation Retention Areas and Riparian Protection Areas	There are no mapped NVRAs or RPAs on or in the vicinity of the site, with the closest areas being about 500 metres to the east across Richmond Road, associated with Bells Creek.
	Clause 6.5 – Development Controls – Existing Native Vegetation Areas	There are no mapped NVRAs or RPAs on or in the vicinity of the site, with the closest areas being about 500 metres to the east across Richmond Road, associated with Bells Creek.

6.2 Blacktown City Council Growth Centre Precincts DCP 2010

The *Blacktown City Council Growth Centre Precincts Development Control Plan 2010* (the Growth Centres DCP) provides detailed guidance for development within the parts of the North West Growth Centre that are within the Blacktown LGA.

The Growth Centre DCP does not apply to SSD. However, Swire has sought to meet the controls in the Growth Centres DCP where possible. A detailed assessment of the development against the applicable development controls is provided in **Appendix F**. The assessment shows the proposed development is considered to be generally consistent with the development controls in the DCP.

The main inconsistencies with the DCP are:

- The amount of communal space (1,085m^2) is less than the amount specified within the DCP. Given the operational requirements of the facility, the area of communal space is constrained by the number of car parking spaces required. If the western part of the car park (i.e. the Stage 2 car park) is not actually required (which could be determined prior to the construction of Stage 2), then the communal area would be substantially increased.
- Provision of shade trees in the car park. Shade tree bays within the car park have been removed in order to maximise the amount of communal space, which is located immediately adjacent to the car park. It is also highlighted that the car park is located within the Transgrid easement, and so trees higher than 4.3m would not be allowed in any case.
- Provision of car parking. The number of car parking spaces does not comply with the rates set out in the DCP. However, a first principles approach to car parking has been undertaken, using occupancy rates in the RMS Guide to

Traffic Generating Development. The number of car parking spaces is considered to be more than sufficient. See **Section 6.4.2** below.

6.3 VPAs & Contributions

6.3.1 Voluntary Planning Agreements

The Site is subject to two separate Voluntary Planning Agreements (VPAs) as outlined below. Electronic copies of these agreements have been provided to the Department under separate cover.

Marsden Park Developments Pty Ltd and Ganian Pty Ltd dated 10 November 2010

This VPA contains two separate VPAs within the one document. The `first' VPA requires that the developer fund the planning process for the Precinct at an estimated cost of $1,930,000.

The second planning agreement provides that the Developer will fund or provide the road works infrastructure and servicing infrastructure. The road works include the upgrade of a 1.7km section of Richmond Road between Townson Road and Grange Avenue to a four lane principal arterial road including intersections. The delivery of the services infrastructure is to be timed to support the orderly development of the Precinct in that adequate services capacity is to be provided for use by other developers within the Precinct.

Marsden Park Industrial Precinct Planning Agreement – Blacktown Council and Marsden Park Developments Pty Ltd dated 6 October 2011

This VPA outlines the delivery of development contributions to meet the increased demand for local public infrastructure that will be or are likely to arise from the carrying out of the broader Sydney Business Park development.

Items to be delivered before the issue of the release subdivision certificate are:

- Dedication of the land and construction of detention basin 1
- Registration of an easement for the stormwater channel and culvert in the favour of Council

The following items are also to be delivered prior to the release of the first subdivision certificate, unless agreed otherwise agreed between the parties in writing:

- Dedication of the land for (part) Hollinsworth Road (Townson Road Extension)
- Construction of part of Hollinsworth Road (sub arterial road)
- Construction of the bio-retention area
- Construction of the landscaped open channel
- Construction of the Gross Pollutant Trap at the inlet to the channel
- Construction of the trunk drainage stormwater system

6.3.2 State Infrastructure Contributions

Certain land within the Sydney Growths Centres, including the land the subject of this application, is subject to a State Infrastructure Contribution (SIC). The contribution payable on the site is, as at 1 July 2014 is $86,446 per hectare of net developable area. The contribution rate is indexed annually on or around 1 July

in response to movements in the Sydney CPI in the 12 months up until the previous March quarter.

With an area of 7ha the contribution for development of the Site would be $605,122. However, clause 5(3) of the Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Growth Areas) Determination 2011 states:

> *If a special infrastructure contribution has been required to be made for development on land (whether in accordance with this Determination or an earlier determination under section 94EE), a further special infrastructure contribution is not required to be made for other development on that land.*

Condition 8.2.1 of Sydney Business Park's development consent (DA 11-2284) for the Stage 1.02 subdivision and infrastructure works requires payment of the SIC. As the SIC payable for the site has already been no further SIC payment is required for the proposed development.

6.3.3 Section 94 Contributions

The Site is subject to the provisions of Section 94 Contributions Plan No. 21 – Marsden Park Industrial Precinct. Under this plan S.94 contributions are levied for the following amenities and services:

- Water Cycle Management Facilities;
- Traffic & Transport Management Facilities;
- Open Space and Recreation Facilities;
- Community Facilities (Land only) ; and
- Combined Precinct Facility.

Industrial development is only liable to pay contributions towards the Water Cycle Management Facilities and Traffic and Transport Management Facilities.

As with the SIC, Sydney Business Park has met these developer contribution obligations as part of the development of the estate subdivision and infrastructure works under DA 11-2284, in this case through a VPA (see Section 6.3.1) which sets a legal framework for provision of the contributions via land dedications and works-in-kind.

Given that section 94 contributions for the land have been (or will be) addressed under DA 11-2284, no further section 94 contributions are required for the proposed development.

6.4 Traffic & Transport

A traffic impact assessment has been prepared by GTA Consultants and is included at **Appendix I**. A summary of the assessment is provided below.

6.4.1 Traffic Generation

The traffic assessment indicates that the proposed Swire facility would generate approximately 300 heavy vehicle movements per day, with 21 truck movements during morning peak hour. **Table 6** provides a summary of forecast truck movements for the proposal.

Table 6 – Forecast Truck Movements (Following Stage 2)

Time Period	Truck Movements		Total Movements (two way)	Average Truck Movements (per hour)
	Inbound	Outbound		
1:00 to 5:00am	6	24	60	15 trucks per hour
5:0 to 9:00am	12	30	84	21 trucks per hour
9:00 to 1:00pm	18	22	40	10 trucks per hour
1:00 to 5:00pm	8	16	24	6 trucks per hour
5:00 to 9:00pm	10	4	14	3.5 trucks per hour
9:00pm to 1:00am	0	0	0	-
Total	54	96	300	-

Private vehicle movements would peak between 1:30pm and 2:30pm with the staff shift change from day to afternoon, being 125 movements.

The traffic assessment concludes that the site overall would generate between 20 and 30 movements during the road network peak hours. It is noted that the Sydney Business Park has been designed to accommodate traffic generation from a typical industrial park. As the site is proposed to be fully automated, traffic generated by the site is expected to be less than a typical industrial use, and so would be more than accounted for in the design of the local road network.

6.4.2 Parking

Car Park Requirements

Based on the typical warehouse and office requirements under the Growth Centre's DCP the proposal would generate a requirement of 287 car spaces. The proposed warehouse has low employee densities compared to other typical bulky goods warehouses. Accordingly, the assessment undertook a first principles assessment for the proposal.

The assessment indicates the peak forecast at staff changeover between day and afternoon shifts to be 123 staff and visitors on-site at any one time with average mode share being 84 percent by car (as driver), resulting in a peak demand of 103 spaces.

Accordingly, the on-site car parking provision of 128 car spaces is capable of accommodating the anticipated peak car park demand of 103 spaces.

Accessible Parking

The proposed 2 accessible parking space provision does not meet the Blacktown City Council requirements, being a requirement of 2% or 3 spaces. The development will be providing 25 car park spaces in excess of the anticipated demand (103 spaces). Should the accessible parking demand exceed two spaces a standard space could be converted to an accessible space.

6.4.3 Traffic Impacts

The road network within the Marsden Park Industrial and Bulky Goods Precinct has been designed to cater for traditional industrial and factory uses which generate more traffic than the proposed Swire development.

As outlined in **Section 6.4.1** traffic generated by the proposal is anticipated to occur outside of traditional road network peak periods further mitigating any impact from traffic generated by the development. Accordingly, the proposal is not expected to compromise safety or function of the surrounding road network.

Vehicle Routes

Vehicle access is provided at the rear of the site to Road No. 5 which is expected to generate primary access demand via Quarry Street, rather than Hollinsworth Road to access Richmond Road.

The road network to the north of the site has not yet been delivered, but will be by the time the site is operational. Accordingly, vehicles accessing the site will generally use the primary access route for commencement of operations. **Figure 17** below outlines the main vehicle access routes between the site and Richmond Road.

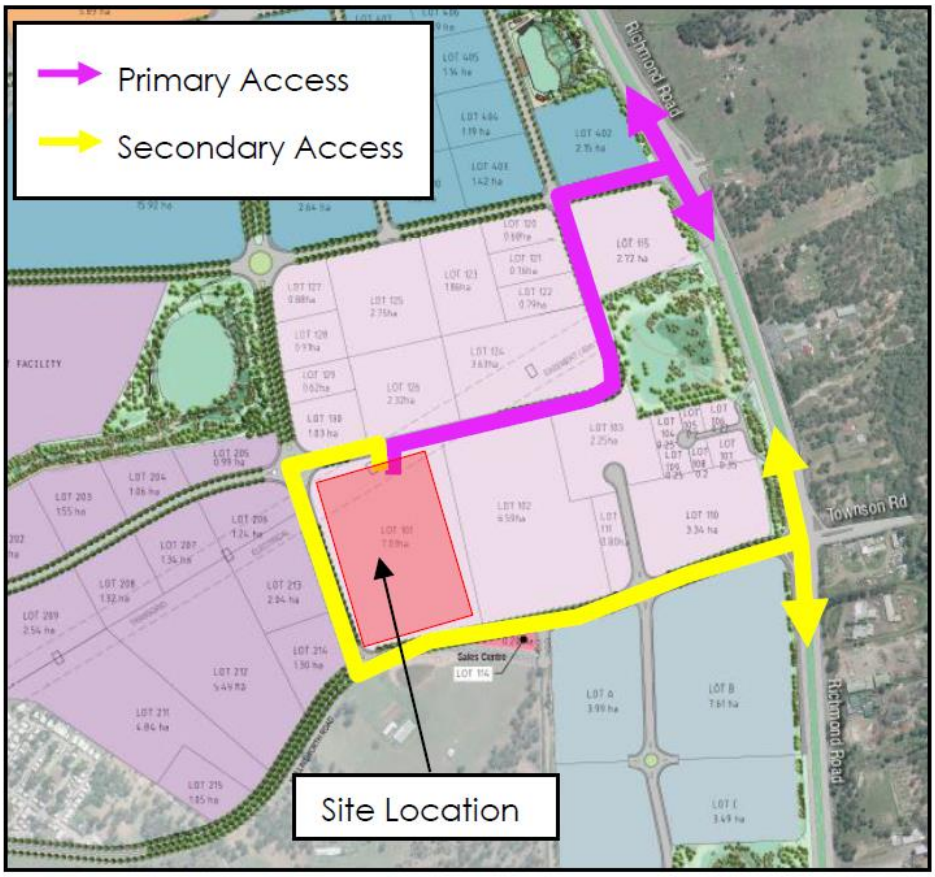

Figure 17 – Vehicle Access Routes
Source: GTA Consultants

Site Access

Parking space dimensions are in accordance with the Growth Centres DCP, providing 2.6m wide x 5.2m long parking spaces and an aisle width of 5.8m.. Vehicle access and internal circulation arrangements are in accordance with requirements of the Australian Standards.

Heavy Vehicle Access

A variety of truck sizes are proposed to service the facility including potentially using Super B-double vehicles. The Super B-Double is larger than a standard B-double vehicle and is classified as a restricted access vehicle.

Sydney Business Park has been designed to accommodate B-triple vehicles which have similar turning movement/sweep path requirements to Super B-doubles. While the surrounding road network cannot currently accommodate such vehicles,

the proposed development is future proofed should such vehicles be permitted for use in the future.

6.4.4 Construction Traffic Impact

It is expected that during the construction phase of the development, the site would not generate more than 40 construction vehicles a day. It is anticipated that there would be approximately 70 workers on-site that would predominantly drive to and from the site.

Construction traffic estimates are less than the traffic generation anticipated during normal operation of the site. It is noted that the Marsden Park Industrial Precinct road network has been designed to cater for full development of the Precinct. Accordingly, the volume of construction traffic is not expected to compromise the safety or function of the surrounding road network.

During construction of Stage 2 construction and operational vehicles will use the same access points and will be segregated on site.

6.4.5 Mitigation Measures

A detailed construction management plan for the development will be prepared prior to the issue of a construction certificate.

6.5 Hazards and Risks

A Preliminary Hazards Analysis (PHA) has been prepared by Pinnacle Risk Management (**Appendix G**) in accordance with the requirements of the guidelines published by the Department's *Hazardous Industry Planning Advisory Paper No 6 – Guidelines for Hazard Analysis*.

6.5.1 Hazardous Materials

The only dangerous good to be used on the site will be anhydrous ammonia which is required for the refrigeration of the warehouse. The plant room contains compressors and condensers, and the ammonia is reticulated through the roof, with connections to evaporators in the upper sections of the walls. A plan showing the ammonia reticulation network is provided in **Appendix A**.

There will be minimal other quantities of hazardous materials stored and used at the facility, such as paint and cleaning products. However, these would not be in quantities above the screening threshold in "Applying SEPP 33" and do not require risk evaluation.

Anhydrous ammonia is a gas at normal temperature and pressure but may be liquefied under moderate pressure (630 kPag at 15°C) or at temperatures below 33°C at atmospheric pressure.

Hazards from ammonia systems arise from:

- The toxicity of ammonia gas;
- Ammonia/air fire and explosion; and
- Release of the energy stored in a pressurised system.

The main credible hazard capable of having off site effects is from the toxicity of ammonia gas. This is due to the low likelihood of igniting ammonia.

Ammonia is flammable in air in a concentration range of 16 – 25% by volume but it does not readily ignite. The auto-ignition temperature of ammonia is 651°C, which is relatively high. Ignition of ammonia is therefore difficult and due to the

concentrations required for ignition, the possibility of an explosion in the open air is unlikely. Accordingly, ammonia storage and handling at the proposal is not regarded as a significant fire or explosion risk.

6.5.2 Operational Hazards

The PHA assessment has identified the potential hazardous events associated with the operation of the cold storage facility. The assessment focused on credible, significant incidents with the potential for off-site impacts in accordance with the requirements of the *Guidelines for Hazard Analysis*. Potential Hazards include:

- Fire within the warehouse associated with products (ignition source)
- Fire within warehouse (due to malicious act)
- Vehicle fire
- Battery explosion in the recharging area
- Motor Control Centre fire
- Transformer fire/ explosion
- Administration building fire
- Major mechanical failure of pallet racking
- Wooden pallet stack fire
- Release of ammonia

6.5.3 Risk Assessment

A detailed risk assessment has been undertaken for the proposed cold storage warehouse. The results are provided in **Table 7** which demonstrates compliance with all risk criteria.

Table 7 – Risk Assessment Matrix

Description	Risk Criteria	Acceptability
Fatality risk to sensitive uses, including hospitals, schools, aged care	0.5 x 10-6 per year	Yes
Fatality risk to residential and hotels	1 x 10-6 per year	Yes
Fatality risk to commercial areas, including offices, retail centres, warehouses	5 x 10-6 per year	Yes
Fatality risk to sporting complexes and active open spaces	10 x 10-6 per year	Yes
Fatality risk to be contained within the boundary of an industrial site	50 x 10-6 per year	Yes
Injury risk – incident heat flux radiation at residential areas should not exceed 4.7 kW/m2 at frequencies of more than 50 chances in a million per year or incident explosion overpressure at residential areas should not exceed 7 kPa at frequencies of more than 50 chances in a million per year	50 x 10-6 per year	Yes
Toxic exposure - Toxic concentrations in residential areas which would be seriously injurious to sensitive members of the community following a relatively short period of exposure	10 x 10-6 per year	Yes
Toxic exposure - Toxic concentrations in residential areas which should cause irritation to eyes or throat, coughing or other acute physiological responses in sensitive members of the community	50 x 10-6 per year	Yes
Propagation due to Fire and Explosion – exceed radiant heat levels of 23 kW/m2 or explosion overpressures of 14 kPa in adjacent industrial facilities	50 x 10-6 per year	Yes

Societal risk, area cumulative risk, transport of ammonia risk and environmental risk is also concluded to be acceptable.

6.5.4 Dangerous Goods Transport

The only Dangerous Good of significance associated with this facility is the ammonia for the refrigeration system. The system will be a sealed system containing up to 7 tonnes of ammonia for Stage 2. The ammonia is anticipated to require a 'top up' approximately every 1.5 to 2 years with a 250 kg gas cylinder of anhydrous ammonia. The ammonia delivery will be from a suitably licenced industrial gas supplier.

The risk assessment found that the probability of a release from the transportation of ammonia to be less than $2x10^{-6}$ per year. Therefore the risk from potential releases from road transportation of ammonia is considered to be acceptable.

6.5.5 Mitigation Measures

The PHA found that the proposal can appropriately manage any potential risks. The assessment included design prevention and risk mitigation control measures for the project as outlined in **Appendix G** and summarised below:

- Control of ignition sources procedures.
- Flameproof fork lift trucks.
- Fixed fire protection sprinkler systems in pallet racking (designed to Australian Standards). Systems to be regularly tested.
- Emergency plans.
- Emergency warning system.
- Spill kits.
- Racks are to be equipped with impact barriers and are to be inspected regularly.
- Fire resistant walls and doors.
- Smoke detection.
- Lights to be located over aisles and guards installed.
- Security Risk Assessment and Security Plan in place.
- 24 / 7 security presence at the site and routine security patrols.
- Fully fenced Site.
- CCTV cameras.
- Fire protection includes hydrants, hand-held hoses and extinguishers.
- Emergency response plans.
- Battery inspections.
- Electrical maintenance.
- Transformer to be designed and maintained by Endeavour Energy to Australian Standards.
- Only accredited personnel will be permitted to work on the transformer.
- Containment around the transformer for oil leaks.
- Racking designed to AS4084 steel storage racking.
- In-rack fire protection facilities.
- No ignition sources at the storage areas.

In addition to these design measures, the PHA made three recommendations:

- Include in the preventative maintenance system the need for routine exercising of the actuated stormwater valves that prevent contaminated water from leaving site.
- Include in the emergency response plan specific guidance on handling ammonia releases.
- Given the location of the firewater tank, firewater pumps, motor control centre, main switch board, and ammonia plant room, where high levels of radiant heat may occur and potentially warehouse wall collapse, ensure these areas have adequate construction for these potential consequences.

These recommendations will be incorporated into the detailed design for the project.

6.6 Noise

As detailed in Section 2, there remain some residential land users within the industrial-zoned areas of the estate, with the closest approximately 250 metres south-west of the site (i.e. 99 Hollinsworth Road). A caravan park (Town & Country Estate), also zoned industrial, is located about 480 metres to the south-west of the site, at the end of Hollinsworth Road.

To assess the potential noise impacts on these receivers, a Noise Assessment has been undertaken for the development by Acoustic Logic, and is attached as **Appendix K**. The assessment has been based on the assumption that the building insulation consists of:

- Walls constructed of 0.42mm BMT sheet metal; and
- The roof consists of 0.42mm BMT sheet metal with 50mm reflective foil insulation blanket beneath.

For the proposal, the warehouse walls and roof will be constructed from metal sheet cladding with a refrigeration panel to maintain internal cold storage requirements. For the purposes of the assessment, only cladding has been assumed to ensure a conservative assessment.

Consideration of construction, operational and traffic related noise has been undertaken in accordance with the requirements of Blacktown City Council and noise guidelines including the EPA's:

- Industrial Noise Policy (INP); and
- Road Noise Policy.

A summary of the assessment findings is provided below.

6.6.1 Operational Noise

Operational noise emissions have been modelled using SoundPlan software. Operational noise sources include:

- Internal warehouse noise from logistics activities of 75dB(A) Leq.
- Movement of heavy vehicles and cars accessing the site, including B-Doubles and semi-trailers which have an assumed sound power level of 105 dB(A).
- Loading dock operations, including movement and idling of heavy vehicles and forklift operation.

- Mechanical plant.

Predicted operational noise levels at the modelled residential receiver is provided in **Table 8** below, along with the applicable criteria. The assessment has modelled predicted noise levels against the 'night' time period criteria between 4:00am and 7:00am. Compliance with this time period is representative of compliance with all other periods of the day, evening and night.

The modelling indicates that the operation of the development would comfortably comply with the applicable noise criteria during all time periods.

Table 8 – Predicted Noise Levels

Time of Day	Receiver	Predicted Noise Level dB(A) $L_{eq\ 15min}$	Noise Criteria dB(A) $L_{eq\ 15min}$	Compliance
Night	Caravan Park	30	37	Yes
	99 Hollinsworth Road	36	37	Yes

6.6.2 Sleep Disturbance

In addition to the above operational noise emissions, a sleep disturbance assessment was undertaken. Sleep disturbance to the Caravan Park and residences to the south were assessed against a semi-trailer travelling along the internal access road circulating the site. A worst case scenario was modelled involving an air brake discharge at the closest location to the receiver.

The noise assessment indicates that worst case noise levels to the external façade at the closest residential receiver (99 Hollinsworth Road) would be 44 $dB_{LA1(1min)}$, which complies with the applicable sleep arousal criteria of 47 $dB_{LA1(1min)}$. It is noted that the closest receiver is located within the zoned industrial area and is unlikely to remain as a residential receiver in the longer term.

6.6.3 Traffic Noise

Typically, vehicles will exit the site to the east via Hollinsworth Road and will not bypass any residential dwellings in the vicinity of the site. Accordingly, the potential for noise impact associated with additional road traffic generated by the development is considered to be negligible and therefore compliant with the requirements of the Road Noise Policy.

Richmond Road carries approximately 33,000 vehicles per day, so the volume of traffic associated with the proposed development (up to 300 heavy vehicles per day) will have a negligible impact on road traffic noise.

6.6.4 Construction Noise and Vibration

The Noise Assessment in Appendix K includes a construction noise and vibration assessment. The analysis indicates that proposed construction work activities will not adversely impact the surrounding receivers. In relation to vibration, based on the proposed works and the proximity to surrounding receiver locations, vibration as a result of works undertaken as part of the facility construction will be negligible.

6.6.5 Mitigation Measures

The assessment indicates the proposed development will comply with noise requirements without the need for additional acoustic treatments. However, it is recommended that noise from mechanical plant be confirmed at a later stage once mechanical selections are made available to ensure compliance with the noise emission objectives.

6.7 Surface and Groundwater

6.7.1 Stormwater Management

Drainage management of the wider industrial estate has been addressed by Sydney Business Park as part of the design and development of the estate.

The drainage design consists of 9 detention basins which restrict post-development peak discharge from the site to pre-development levels for storm event discharge to local water bodies. The estate stormwater management system is connected to each lot via a local point of discharge. Each lot is required to meet the estate stormwater infrastructure requirements as part of the development of the same.

As described in Concept Civil Design at **Appendix J**, the proposed Cold Storage Warehouse has been designed to meet the requirements of the estate. The drainage network has been designed to capture and convey the 10 year ARI design storm event to the local point of discharge at the north-west corner of the site.

6.7.2 Stormwater Quality

An assessment of stormwater quality has been prepared by Beca (**Appendix J**). The proposal has been designed to comply with Blacktown City Council's water quality targets with runoff from the site to be treated prior to discharge to the local point of discharge.

To achieve water quality targets the proposal will include a Humegard GPT and three jellyfish filters. The main function of the jellyfish is to reduce nitrogen and phosphorus whilst the Humegard GPT reduces gross pollutants, sediment and hydrocarbons.

The proposed stormwater scheme for the development has been modelled in the SMP using MUSIC software. **Table 9** provides a summary of the MUSIC model results for the proposal water quality objectives. The results indicate that the proposal has been designed to exceed Blacktown City Council water quality objectives.

Table 9 – MUSIC Model Water Quality Results

	Blacktown City Council Treatment Reduction Target (%)	Achieved Treatment Reduction (%)
Total Suspended Solids (TSS)	85%	85.4%
Total Phosphorus (TP)	65%	66.7%
Total Nitrogen (TN)	45%	64.5%
Gross Pollutants (GP)	90%	96.7%

6.7.3 Fire Water Containment

In the event of a fire, fire water will be contained on the north and south side of the site in two separate areas, by the use of automatic shut-off valves that will prevent potentially contaminated fire water leaving the site through the drainage network.

- The northern side utilises the east and west car parks and communal area for surface storage, and relies on the underground drainage network to transfer the flows to these areas. The containment volume capacity in this northern system is 1.2ML.

- The south side of the site utilises the truck pavement area as storage, and has a containment volume capacity of 2.3ML.

6.7.4 Construction Stormwater Management

During construction surface water will be managed through the implementation of an Erosion and Sediment Control Plan, which is provided in **Appendix J**. It is highlighted that the site is currently a cleared and graded site. The existing off-site drainage arrangements (approved under the subdivision consent 11-2284) have been designed to accommodate the site in its vacant and exposed state (i.e. existing) as well as its future developed state. As such, no adverse surface water impacts during the earthworks and construction phase are expected.

6.7.5 Groundwater

Earthworks will be limited to minor regrading of the site, reforming the existing building pad so that it reflects the shape of the building and removing batters to create the retaining walls. No deep excavations are required and no interactions with groundwater are expected.

6.8 Visual Impact

The proposed development will feature state of the art automated storage and retrieval system, which needs to be accommodated in a high-bay building to minimise the building footprint and optimise stacker crane utilisation and cycle times. Reducing the building footprint to approximately 40% of the equivalent low-bay alternative reduces the capital cost of the building and land components, which are necessary offsets to the high capital cost premium of automation. The inclusion of the high-bay section increases the total storage that can be accommodated on this high value site, which is an important factor for the economic viability of the site. The inclusion of the high-bay section therefore increases the total storage that can be accommodated on this high value site, which is necessary for the development to achieve an efficient scale, and to ensure the orderly and economic use of the site.

The high bay is located in the southern part of the site, with the top of the high bay at 34.8m. The proposal will therefore exceed the 16m height limit by approximately 18.8m. A clause 4.6 variation to the building height development standard has been prepared and is attached at **Appendix H**.

The proposed development has been subject to detailed design process which has sought to reduce the visual impact of the development in response to the height limit exceedance. The design of the building features a high quality facade which is articulated to minimise bulk and scale by providing a stepped built frontage at Hollinsworth Road with a colour scheme that further reduces bulk and scale. The high quality architectural treatment established for the development is described in **Section 3**.

Notwithstanding this, there are few locations where the building will be visible to the general public, other than personnel accessing the inner areas of the industrial estate. A photomontage has been prepared, and provided in **Appendix A**, which is shown below.

The photomontage illustrates the building as it would be seen from the intersection of Hollinsworth Road and Richmond Road. This location was considered to be relevant because it is the vantage point from which the vast majority of the general public would view the building. It is also provides an indication of the bulk and scale of the building as seen from passing traffic on Richmond Road.

As can be seen from the photomontage, due to its location within the central part of the estate, the building does not dominate the skyline, and its appearance is not out of character in terms of the existing industrial buildings.

Figure 18 – Photomontage
Source: Beca (see Appendix A)

There are considered to be sufficient environmental planning grounds to justify contravention of the building height development standard, being:

- The development promotes the orderly and economic use of newly created industrial land within the Marsden Park Industrial area.
- The building represents a high quality outcome that does not adversely impact the amenity of neighbouring properties or the aesthetics of the streetscape or heritage items in the locality.
- The development provides an appropriate response to its site-specific context and is suitable for the size and dimension of the site and its industrial setting.
- The development is not substantially out of character with the area given the precinct is purpose built for large scale industrial development.
- The development is consistent with the objectives of the SEPP height control due to its location and context within the middle of the industrial estate.

With consideration of the above matters, compliance with the development standard is unreasonable or unnecessary as the proposed cold storage warehouse could not be fully accommodated on the Site if this standard is enforced.

6.9 Infrastructure Requirements

Services will be delivered to the site by Sydney Business Park under a separate approval prior to construction of the cold storage facility. The demand expected to be generated by the proposal will be adequately met via the provision of services delivered by Sydney Business Park.

6.9.1 External Roadworks

No external roadworks are required for the development. These are being undertaken by Sydney Business Park under a separate approval.

6.9.2 Potable Water

The site will be connected to Sydney Water potable water supplies in Hollinsworth Road. The supply is adequate to accommodate the anticipated demand from the development.

6.9.3 Sewer

The site will be connected to Sydney Water reticulated sewer mains in Hollinsworth Road. The supply is adequate to accommodate the anticipated demand from the development.

6.9.4 Electricity

The site will be connected to electricity network in Hollinsworth Road. The supply is adequate to accommodate the anticipated demand from the development.

6.9.5 Telecommunications

Telecommunications for the development are available from the existing network in Hollinsworth Road.

6.9.6 On Site Refrigeration

The Refrigeration plant will use ammonia which is a natural refrigerant with zero GWP (global warming potential). The refrigeration controls will be state-of-the-art, with sophisticated EMS (energy management system), VSD's (variable speed drives) on all major compressors, condensers and evaporator fans, to deliver a high energy efficiency refrigeration operation.

6.10 Waste

Waste Management Plans for the construction and operational phases of the proposed development have been prepared by Swire, and are attached in **Appendix LM**.

6.10.1 Construction Waste

A construction contract has yet to be awarded for this project so a detailed Construction & Demolition Waste Management Plan has not been finalised.

However, contractors will be required to have their Construction & Demolition waste removed by a licensed environmental services company and taken to an approved EPA licensed Resource Recovery Facility for recycling. A summary of typical management of waste material is as follows:

- Timber – Shredded and re-used in the timber product manufacturing industry or wood chip mulch
- Envirosoil – Processed to DECC approved specifications and re-used as a landscape/construction material
- Oversize Rubble – Processed to DECC approved specifications, crushed to produce recycled roadbases and aggregates
- Mixed Aggregate – Processed to DECC approved specifications, screened to produce recycled aggregates
- Glass – Processed into a fully Sydney Water approved glass sand for pipe embedment and as a fine aggregate for asphalt production
- Paper Cardboard – Baled and exported for reuse replacing virgin product
- Mixed Plastics – Baled and exported for reuse replacing virgin product

- Ferrous and non-Ferrous Metals – Sent to Metal recyclers for reuse
- Non-Recyclable Material – Sorted from the mixed waste stream and then disposed at a DECC licensed landfill.

6.10.2 Operational Waste

The development is not expected to generate a significant amount of waste, with waste streams typical of standard warehousing and food production developments. The main waste types and anticipated disposal methods include:

- Cardboard packaging / office paper – separated for off-site recycling;
- Plastic packaging – separated for off-site recycling (where possible);
- Pallets – Pallets continuously re-used and repaired;
- General waste – disposal at licenced waste disposal facility;
- Truck wash – Sewage System;
- Forklift batteries – forklift batteries constitute hazardous waste. Dead batteries are not stored on-site. They are collected by the forklift supplier at an anticipated rate up to 20 per year, and taken for resource recovery at a suitably licenced facility.
- Battery recharge area – Emptied by licenced contractor in event of spill; and
- Ablutions waste – to sewer system.

6.11 Cumulative Impacts

Cumulative assessment has been considered in relation to noise and traffic impacts for the facility.

6.11.1 Cumulative Noise Assessment

Under the Industrial Noise Policy, the amenity criteria is based on recommended maximum noise levels which are determined to ensure that the cumulative noise level in the area is appropriate for the character of the area. In this case, the closest receiver would be conservatively characterised as 'urban', whereas the caravan park would be characterised as 'suburban'.

Table 10 – Amenity Criteria (dBA Leq-period)

Receiver	Area Character	Day	Evening	Night
99 Hollinsworth Road	Urban	60	50	45
Caravan Park	Suburban	55	45	40

Assessment against the amenity criteria provides protection against the creep of background noise associated with increasing industrial development over time. In relation to the closest residential receiver, the worst-case predicted noise level is 9dB(A) below the night-time amenity criterion which is the limiting period. The worst-case predicted noise level is 10dB(A) below the night-time amenity criterion at the Caravan Park.

Given the above, it is concluded by Acoustic Logic that there is sufficient acoustic allowance to ensure that the cumulative noise emissions from future industrial premises in the vicinity of the site can maintain a suitable level of acoustic amenity for existing sensitive receiver locations.

It is highlighted that the amenity criterion relates to noise over the entire period (e.g. day, evening or night time). The worst case predicted noise level is

scheduled to occur only for a short period of time between 5am and 7am. Lower noise levels would be expected during the rest of the night-time period, resulting in even lower noise levels when averaged over the whole period.

6.11.2 Cumulative Traffic Assessment

The road network within the Marsden Park Industrial and Bulky Goods Precinct has been designed to cater for traditional industrial and factory uses. As the Swire traffic generation estimates are significantly lower than those on which the design of the road network would have been based, there is expected to be adequate capacity in the road network to accommodate future traffic growth generated by the ongoing development of the Sydney Business Park.

6.12 Issues Previously Addressed in Subdivision Application

6.12.1 Aboriginal Heritage

The DCP identifies the site as containing Aboriginal Heritage. As part of the DA process for the subdivision and site preparation of the Sydney Business Park an Aboriginal Heritage Impact Permit (1131873) was issued by NSW Office of Environment and Heritage (25 March 2013) which allows for the 'harm' (removal) of the objects from the Site. In light of this the site is not constrained by Aboriginal Heritage.

6.12.2 Ecological Impacts

Ecology Statement prepared by Eco Logical Australia and dated 16 October 2011 confirms no further assessment required under the EPBC or TSC Acts for the site.

6.12.3 Bushfire Prone Land

A Bushfire Protection Assessment Report prepared by Ecological Australia Pty Ltd on 20 October 2011 for the subdivision application. The site is not located within an identified Asset Protection Zone. The report does however contain the following recommendations which are applicable to the development:

- Recommendation 3 - Landscaping across the subdivision is to comply with the principles listed in Appendix 5 of PBP.
- Recommendation 4 - A hydrant water supply should be installed in accordance with Australian Standard AS 2419.1.
- Recommendation 7 Gas services are to be installed and maintained in accordance with AS/NZS 1596:2008 (Standards Australia 2008).
- Recommendation 8 - Adequate bushfire emergency procedures will be the responsibility of future occupants.

6.12.4 Site Contamination

Condition 3.5.1 of the Development Consent for DA 11-2284 (issued by Blacktown Council) requires the preparation of a Phase 2 Site Contamination Report and Remedial Action Plan prior to the issue of a Construction Certificate. Validation of the site is required prior to the release of the Subdivision Certificate. Condition 6.5.2 of the consent specifies that if any unexpected contaminated material is identified during site works then an amended RAP is to be prepared and submitted to Council for further consideration, and all potentially contaminated material is to be tested, removed or remediated.

Swire relies on the application of the conditions in Development Consent for DA 11-2284 to ensure the site is suitable for the proposed use as an industrial facility.

7.0 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for the project has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools.

In accordance with the SEARs, the ERA addresses the following significant risk issues:

- the adequacy of baseline data;
- the potential cumulative impacts arising from other developments in the vicinity of the Site; and
- measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Figure 19 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

- the receiving environment;
- the level of understanding of the type and extent of impacts; and
- the likely community response to the environmental consequence of the project;

The manageability of environmental impact is assigned a value between 1 and 5 based on:

- the complexity of mitigation measures;
- the known level of performance of the safeguards proposed; and
- the opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 19 – Risk Assessment Matrix

				Risk Assessment		
Item	**Phase**	**Potential Environmental Impact**	**Proposed Mitigation Measures and / or Comment**	**Significance of Impact**	**Manageability of Impact**	**Residual Impact**
Key: C – Construction, O - Operation						
Traffic and Transport	C	▪ Increased traffic	▪ A detailed construction management plan for the development will be prepared prior to the issue of a construction certificate.	3	2	5
Hazard and Risks	O	▪ Fire / explosions ▪ Major mechanical failure of pallet racking ▪ Release of ammonia	▪ Include in the preventative maintenance system the need for routine exercising of the actuated stormwater valves that prevent contaminated water from leaving site. ▪ Include in the emergency response plan specific guidance on handling ammonia releases. ▪ Ensure the firewater tank, firewater pumps, motor control centre, main switch board, and ammonia plant room, are constructed to account for potential warehouse wall collapse during fire. ▪ Control of ignition sources procedures. ▪ Flameproof fork lift trucks. ▪ Fixed fire protection sprinkler systems in pallet racking (designed to Australian Standards). Systems to be regularly tested. ▪ Emergency plans. ▪ Emergency warning system. ▪ Spill kits. ▪ Racks are to be equipped with impact barriers and are to be inspected regularly. ▪ Fire resistant walls and doors. ▪ Smoke detection. ▪ Lights to be located over aisles and guards installed. ▪ Security Risk Assessment and Security Plan in place. ▪ 24 / 7 security presence at the site and routine security patrols. ▪ Fully fenced Site. ▪ CCTV cameras. ▪ Fire protection includes hydrants, hand-held hoses and extinguishers. ▪ Emergency response plans. ▪ Battery inspections. ▪ Electrical maintenance. ▪ Transformer to be designed and maintained to Australian Standards. Transformer	3	2	5

				Risk Assessment		
Item	Phase	Potential Environmental Impact	Proposed Mitigation Measures and / or Comment	Significance of Impact	Manageability of Impact	Residual Impact
			serviced by Endeavour Energy. ▪ Only accredited personnel will be permitted to work on the transformer. ▪ Containment around the transformer for oil leaks. ▪ Racking designed to AS4084 steel storage racking. ▪ In-rack fire protection facilities. ▪ No ignition sources at the storage areas.			
Water	C / O	▪ Discharge of contaminates into stormwater system	▪ A construction phase erosion and sediment control plan has been provided in Appendix J. ▪ MUSIC modelling confirms that water quality objectives can be met during operations. ▪ Fire water would be contained on-site ion the event of a fire	2	2	4
Noise	O	▪ Adverse noise impacts on residential receivers	▪ Noise from mechanical plant should be confirmed at a later stage once mechanical selections are made available to ensure compliance with the noise emission objectives	1	2	3
Air Quality	O	▪ Emission or air pollutants during operations (including odour)	▪ By the nature of the facility there will not be any air quality or odour emissions during operation, other than emissions associated with the operation of heavy vehicles.	1	1	2
	C	▪ Decrease in Air Quality from dust emissions during construction	▪ Standard air quality mitigations will apply during construction including: ▪ Control dust emissions, such as the use of water carts, sprinklers, sprays and dust screens. ▪ Disturbed areas would be stabilised as soon as practicable to prevent or minimise windblown dust. ▪ Loaded haulage trucks would be covered at all times on public roads and on-site where there is a risk of release of dust or other materials ▪ Construction plant, vehicles and machinery would be maintained in good working order and in accordance with manufacturers' specifications.	2	1	3
Waste	C / O	▪ Generation of Waste	▪ Construction and Operational Waste is to be managed as per the Waste Management Plan	1	1	2

8.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 11** below. These measures have been derived from the previous assessment in Section 5.0 and those detailed in appended consultants' reports.

Table 11 – Mitigation Measures

Mitigation Measures
TRAFFIC
▪ A detailed construction management plan for the development will be prepared prior to the issue of a construction certificate.
HAZARDS AND RISKS
▪ Include in the preventative maintenance system the need for routine exercising of the actuated stormwater valves that prevent contaminated water from leaving site. ▪ Include in the emergency response plan specific guidance on handling ammonia releases. ▪ Due to high levels of radiant heat that may occur, ensure the firewater tank, firewater pumps, motor control centre, main switch board, and ammonia plant room, are constructed to account for potential warehouse wall collapse. ▪ Control of ignition sources procedures. ▪ Flameproof fork lift trucks. ▪ Fixed fire protection sprinkler systems in pallet racking (designed to Australian Standards). Systems to be regularly tested. ▪ Emergency plans. ▪ Emergency warning system. ▪ Spill kits. ▪ Racks are to be equipped with impact barriers and are to be inspected regularly. ▪ Fire resistant walls and doors. ▪ Smoke detection. ▪ Lights to be located over aisles and guards installed. ▪ Security Risk Assessment and Security Plan in place. ▪ 24 / 7 security presence at the site and routine security patrols. ▪ Fully fenced Site. ▪ CCTV cameras. ▪ Fire protection includes hydrants, hand-held hoses and extinguishers. ▪ Emergency response plans. ▪ Battery inspections. ▪ Electrical maintenance. ▪ Transformer to be designed and maintained to Australian Standards. Transformer serviced by Endeavour Energy. ▪ Only accredited personnel will be permitted to work on the transformer. ▪ Containment around the transformer for oil leaks. ▪ Racking designed to AS4084 steel storage racking. ▪ In-rack fire protection facilities. ▪ No ignition sources at the storage areas.
NOISE
▪ noise from mechanical plant should be assessed at a later stage once mechanical selections are made available to ensure compliance with the noise emission objectives
AIR QUALITY
▪ Control dust emissions, such as the use of water carts, sprinklers, sprays and dust screens. ▪ Disturbed areas would be stabilised as soon as practicable to prevent or minimise windblown dust. ▪ Loaded haulage trucks would be covered at all times on public roads and on-site where there is a risk of release of dust or other materials ▪ Construction plant, vehicles and machinery would be maintained in good working order and in accordance with manufacturers' specifications.
WASTE
▪ Construction and Operational Waste is to be managed as per the Waste Management Plan

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 construction and operation of a cold storage warehouse. 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

If approved, the facility would provide construction employment opportunities and ongoing employment for up to 128 employees. In addition to this, the facility would provide an efficient operation for the transport and distribution of cold storage products across Sydney from a purpose built facility in an appropriate location for its intended use.

9.2 Biophysical

The environmental impact assessment of the proposed development has demonstrated that the operation of the Site will have no additional impact on the biophysical environment that cannot be appropriately managed.

Due to the nature of the facility, the impact on the environment would be minimal and would represent the best available environmental outcome for a facility of this nature.

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.

9.3.1 Precautionary Principle

The precautionary principle means if there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The environmental impacts associated with the proposed development are detailed in **Section 7** and have been identified and quantified to an adequate degree of certainty. To ensure that the development is carried out in ways that factors in precautionary approaches

mitigating measures have been proposed where considered necessary to prevent detrimental impacts from occurring.

9.3.2 Intergenerational Equity

Intergenerational Equity requires that the *"present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for benefit of future generations."* The requirement for equity between generations binds or integrates the other principles of ecologically sustainable development.

Intergenerational equity implies that the present generation should ensure that its local environment is maintained or enhanced for the benefit of future generations.

As described above, the proposed development will not result in significant impacts on the receiving environment.

9.3.3 Conservation of biological diversity and ecological integrity

Biological diversity refers to the diversity of genes, species, populations, communities and ecosystems and the linkages between them. Biological resources provide food, many medicines, fibres and industrial products.

Maintenance of biological diversity will ensure life support functions and can be considered a 'minimal' requirement for intergenerational equity.

The proposed development does not impact on biological diversity or ecological integrity, as the site is already fully cleared.

9.3.4 Improved valuation, pricing and incentive mechanisms

This principle is a component of "intergenerational equity" and establishes the need to determine economic values for services provided by the natural environment, such as the atmosphere's ability to receive emissions, cultural values and visual amenity.

The value of the environmental resources affected by the proposal has been acknowledged and provided for through the examination of environmental consequences of the proposal and identification of mitigation measures to address potential impacts, including any short term construction impacts.

10.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed construction and operation of a cold storage facility. The EIS has addressed the issues outlined in the SEARs (**Appendix B**) and accords with Schedule 2 of the EP&A Regulation with regards to consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, hazards and risks, noise, stormwater management and waste.

Having regard to 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 generally meets the requirements of the relevant planning controls on the site;
- The facility will provide construction employment and ongoing employment for up to 128 people;
- The development promotes the orderly and economic use of newly created industrial land within the Marsden Park Industrial area; and
- The facility will have no additional impact to the biophysical environment.

Given the merits described above it is requested that the application be approved.