

Request for Secretary's Environmental Assessment Requirements

Oakdale West Estate – Stage 3 Warehouses 2A, 2C, 2D, 2E



Prepared for Goodman Property Services (Aust.) Pty Ltd Submitted to the Department of Planning Industry and Environment

October 2020



Contact



Suite 2, Level 1 1 Rialto Lane Manly NSW 2095 ABN 51 45 22 11 892 ACN 613 590 775

Dan Keary Director

E: dan@keylan.com.au

Michael Woodland Director

E: michael@keylan.com.au

Cover image: Oakdale West Estate under construction, including Warehouse 2B (Source: Goodman)

All Rights Reserved. No material may be reproduced without prior permission of KEYLAN Consulting Pty Ltd. While KEYLAN Consulting Pty Ltd working on this project has tried to ensure the accuracy of the information in this publication, it accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in the information in this report. This report has relied on information provided by Goodman Group in good faith and accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in the information in this report.

Revision	Prepared by	Reviewed by	Date	Revision Type
1	SH	KW/DK	25-09-2020	Draft
2	SH	KW/DK	2-10-2020	Final



Table of Contents

1	Introdu	ction	5
2	The site	e and locality	6
	2.1	Site description	6
	2.2	Surrounding locality	8
	2.3	Previous approvals	8
3	The Pro	pposal	
	3.2	Need for the development	12
	3.3	Consultation	12
4	Statuto	ory Planning Considerations	
	4.1	Environmental Planning and Assessment Act 1979	14
	4.2	Environmental Planning and Assessment Regulation 2000	14
	4.3	Environment Protection and Biodiversity Conservation Act 1999	14
	4.4	Biodiversity Conservation Act 2016	15
	4.5	Heritage Act 1977	15
	4.6	Rural Fires Act 1997	_
	4.7	Contaminated Land Management Act 1997	16
	4.8	State Environmental Planning Policies	
	4.9	Penrith Local Environmental Plan 2010	
5	Strateg	gic Planning Considerations	22
	5.1	State Infrastructure Strategy	
	5.2	Greater Sydney Region Plan	
	5.3	Western City District Plan	23
	5.4	Western Sydney Aerotropolis Structure Plan	23
6	Potenti	al Environmental Issues	
	6.1	Built form, visual character and landscaping	25
	6.2	Traffic and parking	
	6.3	Noise and Vibration	27
	6.4	Soil and Water	27
	6.5	Air Quality	28
	6.6	Waste Management	28
	6.7	Biodiversity	_
	6.8	Heritage	28
7	Conclus	sion	30



Figures

Figure 1: Oakdale We	est Estate Site Location (Source: SIXMaps)	6
	dustrial Precinct and surrounding Regional Road network (Source: G	
Figure 3: OWE and wa	arehouses subject to the proposed development (Source: Goodmar	າ)8
Figure 4: Proposed la	yout Warehouse 2A (Source: Goodman)	11
Figure 5: Proposed la	yout Warehouses 2C - 2E (Source: Goodman)	11
	Boundary (Source: legislation.nsw.gov.au)	
Figure 7: Oakdale We	est location in regard to the Aerotropolis SEPP Area (Source: Aeroti	ropolis SEPP)
	dney Aerotropolis Structure Plan (Source: Western Sydney Aerotropo	,
	ishes of Warehouse 2B for reference (Source: Goodman)	
	nd noise wall currently under construction on western boundary (So	
		27
Tables		
Tables		
Table 1: Warehouse	elements	10
	f the WSEA SEPP	
	inst the Greater Sydney Region Plan	
,	, , ;	
Appendices		
Appendices		
Appendix 1	Proposed layout plans (SBA Architects)	
Appendix 1 Appendix 2	Quantity Surveyor's Report (Rider Levett Bucknall)	
Appendix 2	Qualitity Julyeyor 3 Report (Rider Levett Buckhall)	



1 Introduction

The purpose of this report is to request the Department of Planning, Industry and Environment (DPIE) to issue Secretary's Environmental Assessment Requirements (SEARs) for the development of three warehouses (four tenancies) at the Oakdale West Industrial Estate (OWE) at 2-18 Adlington Road, Kemps Creek.

The OWE is situated within the 421 hectare (ha) 'Oakdale Estate' in the Western Sydney Employment Area (WSEA). The OWE accounts for 154 ha of the entire Oakdale Estate. The site is owned by BGMG 11 Pty Ltd, as part of a joint venture between Goodman and Brickworks. Goodman Property Services (Aust.) Pty Ltd (the Applicant) is the development manager for OWE.

On 13 September 2019, the delegate of the Minister for Planning and Public Spaces approved the OWE Concept Proposal and Stage 1 development application as State significant development (SSD) (SSD 7348). SSD 7348 approved the earthworks and infrastructure development for the broader OWE, plus development of warehouses in Precinct 1. A subsequent SSD application was approved on 9 April 2020 (SSD 10397) for development of a warehouse in Precinct 2. Construction under both SSD 7348 and SSD 10397 is underway.

The proposed development comprises the construction, operation, use and fit-out of three warehouse buildings (with four-tenancies), associated offices and hardstand/car parking areas in the remainder of Precinct 2 of the OWE (Appendix 1). Warehouse and distribution use approval is required for the tenancies including office and warehouse fit-out. This use is consistent with the site's IN1 General Industrial zoning under the State Environmental Planning Policy (Western Sydney Employment Area) 2009 (WSEA SEPP) and the provisions of SSD 7348, as modified.

The capital investment value (CIV) for the development is estimated at \$88,545,358 (excluding GST) A quantity surveyor's report is included at Appendix 2.

The development meets the criteria of State significant development (SSD) in accordance with State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). Under Schedule 1, clause 12(1) of the SRD SEPP, development with a CIV of more than \$50 million for the purpose of warehouses or distribution centres at one location and related to the same operation is classified as SSD.

It is proposed to lodge a development application for these works under section 4.38 of the *Environmental Planning and Assessment Act* 1979 (EP&A Act).

This report supports a request to DPIE to issue SEARs under section 4.12 of the EP&A Act and Clause 3 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) to enable the preparation of an Environmental Impact Statement (EIS) for the project.

This report, addresses the applicable statutory planning controls and relevant State and local strategic planning documents and provides a preliminary environmental assessment of the development



2 The site and locality

2.1 Site description

2.1.1 Oakdale West Estate

The site is located within the OWE at Kemps Creek, in the Penrith Local Government Area (LGA). The OWE site has an area of approximately 154 ha and is legally described as Lot 11 in DP 1178389. The location of the OWE site is shown at Figure 1.

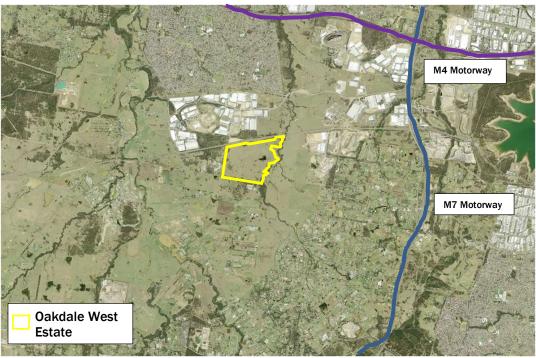


Figure 1: Oakdale West Estate Site Location (Source: SIXMaps)

OWE is located in the south-western extent of the WSEA which was established to provide land for industry and employment. The WSEA SEPP aims to protect and enhance the land to which WSEA applies for employment purposes.

OWE forms part of the broader industrial development of Oakdale Estate lands being developed by Goodman, covering an area of around 421 ha within the WSEA as shown in Figure 2.

Oakdale Central is completed and Oakdale South is nearing completion. Development has commenced over 10 ha of the larger Oakdale East Industrial Estate and will form part of the entire industrial precinct. The progressive development of Goodman's Oakdale Industrial Estate will continue to meet the WSEA objective of employment opportunities through development of warehousing and distribution facilities in an environmentally sensitive and cost effective manner.



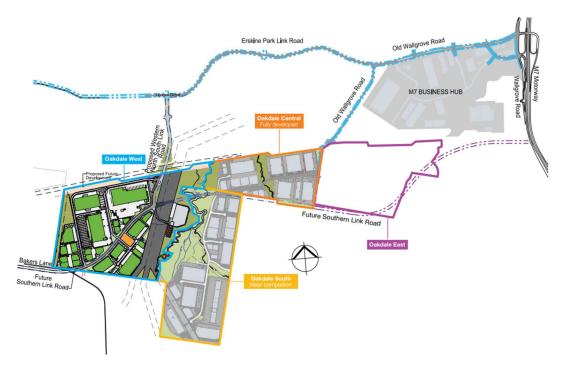


Figure 2: Oakdale Industrial Precinct and surrounding Regional Road network (Source: Goodman)

The OWE site is bound to the north by the Sydney Water Pipeline, to the east by Ropes Creek and to the south by adjoining rural landholdings. Education and aged care land uses, including Emmaus Catholic College, Trinity Primary School, Mamre Anglican School and Emmaus Retirement Village, adjoin the western boundary of the site. The site is roughly rectangular in shape with an irregular eastern boundary which follows the Ropes Creek corridor alignment.

The site is currently undergoing construction under the approvals of SSD 7348 and SSD 10397 (see Section 2.3). This includes vegetation clearing, earthworks, roads, service infrastructure, landscaping, stormwater drainage, subdivision and the construction of Warehouse 2B.

Vehicular access to the site is currently via an unsealed road off Bakers Lane at the southwest of the site. Construction of the Western North South Link Road (WNSLR) under SSD 7348 is underway and is due for completion in December 2020. The WNSLR will provide road access from Lenore Drive to OWE and the future Southern Link Road including Sydney's broader motorway network. The WNSLR will be used for both construction and operation access for the subject developments.

2.1.2 OWE Precinct 2

The site, which forms Stage 3 of the OWE development, is located in the western area of the OWE within the 26.69 ha Precinct 2 and is located directly to the north of the proposed Southern Link Road (Figure 3).

The site subject of this request for SEARs comprises the remaining 11.17 ha area of Precinct 2, following approval of Warehouse 2B in April 2020 under SSD 10397.



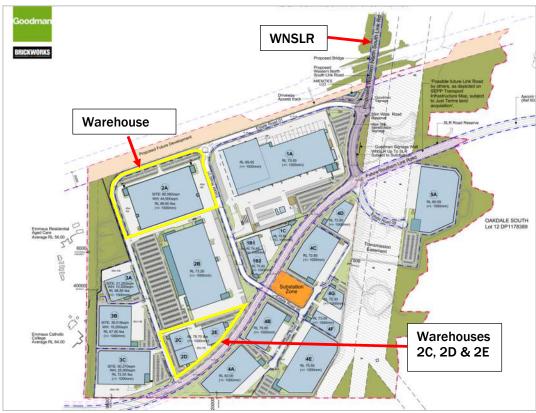


Figure 3: OWE and warehouses subject to the proposed development (Source: Goodman)

2.2 Surrounding locality

The locality is characterised by a variety of general industrial, education, aged care and rural land uses, including:

- Water NSW Sydney Warragamba Pipeline and other industrial land further north
- Ropes Creek corridor and Oakdale South Estate to the east
- Rural land to the south
- An aged care facility and three schools Trinity Primary School, Mamre Anglican School and Emmaus Catholic College – to the west. Other uses include rural residential and recreational facilities.

2.3 Previous approvals

The OWE is subject to two previous SSD approvals, under SSD 7348 and SSD 10397.

2.3.1 SSD 7348

SSD 7348 was approved on 13 September 2019 for the OWE concept layout and Stage 1 works. The approved works under SSD 7348 include:

- preparatory works including estate wide bulk earthworks, lead-in services, retention and detention basins for the estate
- service provisions for Precinct 1



- infrastructure provision including the proposed WNSLR
- construction of Estate Road 1
- Precinct 1 Building construction.

The concept approval requires future development applications to be consistent with the conditions in SSD 7348 (Schedule B) and outlines the matters to be addressed in future development applications within the OWE (Schedule C). The matters to be addressed in future DAs include visual amenity; transport, access and parking; noise and vibration; stormwater management; servicing; waste management; construction management and community consultation.

These matters will be addressed in the EIS for Stage 3, with key issues discussed further in Section 6.

SSD 7348 has been subject to five modifications:

- Modification 1: modification to the approved Concept Plan and Stage 1, including changes to sewer servicing, building pad level of Precinct 2, bioretention basins and biodiversity offset strategy. Approved 26 March 2020.
- Modification 2: modification to approved Concept Plan and Stage 1, including master plan layout, reconfiguration of Precinct 1 layout, change to height control (Building 1A), changes to internal roads, civil design and building pad levels. Approved 21 April 2020.
- Modification 3: modification to the approved Concept Plan including change in building and road layout at Precinct 2. Change in height control for Building 2B. Construction of Estate Road 3. Approved 2 April 2020.
- **Modification 4:** inclusion of Lot 9 DP1157476 to facilitate the construction of the WNSLR. Approved 24 March 2020.

A fifth modification application for the development is currently under assessment by DPIE. This application includes minor changes to the Building 1A car park, hardstand and landscape layout, and dangerous goods quantity for this building. Changes to the biodiversity offset location, noise wall completion timing and the WNSLR landscape setback are also included.

A sixth modification application is currently being prepared which is to be lodged shortly. The modification seeks minor changes to the approved Concept Plan. This includes minor changes to building layout in Precinct 3, associated civil amendments to facilitate the layout change within Precinct 3, an increase in building height control and detailed design development of Warehouses 2A, 2C, 2D and 2E resulting in minor changes to building form and layout. This modification application also seeks approval for construction of Estate Road 8.

2.3.2 SSD 10397

SSD 10397 was approved on 9 April 2020 for Warehouse 2B within Precinct 2. SSD 10397 includes the construction, subdivision, fit-out, operation and use of a four-level automated warehouse, associated office space, internal roads and parking.

A modification (MOD1) seeking minor updates to Building 2B, including revisions to the architectural plans and addition of fire stairs on the northern elevation, was approved on 23 September 2020.



3 The Proposal

The proposal includes the construction, fit-out and use of three warehouses (four tenancies) in the remaining undeveloped area within Precinct 2 of the OWE. The proposed development comprises warehouses and associated car and truck parking, office facilities and loading bays along with landscaping, signage and lighting.

The proposed development will facilitate warehouse and distribution uses consistent with the IN1 General Industrial zone under the WSEA SEPP.

The proposal does not require clearing, earthworks or supporting infrastructure as all necessary earthmoving, infrastructure installation and other investigations were approved and undertaken for SSD 7348.

The key elements of the warehouses are described in Table 1. Proposed layout plans for the development are provided in Figure 4 and Figure 5.

Element	Warehouse 2A	Warehouse 2C	Warehouse 2D	Warehouse 2E
Site Area	80,582 m ²		37,370 m ²	
GFA				
Warehouse	44,000 m ²	5,030 m ²	4,630 m ²	5,000 m ²
Office	2,400 m ²	300 m ²	300 m ²	300 m ²
Total	46,400 m ²	5,330 m ²	4,930 m ²	5,400 m ²
GLA	46,400 m ²	5,330 m ²	4,930 m ²	5,400 m ²
Height				
Max	18 m	15 m	15 m	15 m
Ridge	14.9 m	13.7m	13.7 m	13.7 m
Car Parking	209		158	
CIV	\$70,035,432		\$18,509,926	
Staff	300		150	

Table 1: Warehouse elements

The proposed height of Warehouse 2A and layout of the warehouses differ from the approved Concept Plan in SSD 7348. The proposed height increase of Warehouse 2A includes a 1.2 m increase to the ridge height and 3 m increase to the maximum height, compared with the current approved Concept Plan in SSD 7348. The Applicant intends to modify SSD 7348 to address these changes to ensure the proposed application subject of this report complies with the SSD 7348 Concept Approval, as modified.

Whilst the Applicant seeks to increase the maximum height control to 18 m(3 m above the current approval), this is only to accommodate plant and solar panels on top of the ridge of the warehouse. The main structure building height will be below the existing approved 15 m.

The warehouses will include 2.4 m high dado precast panels around warehouse walls, with a colour scheme utilising monument and shale grey dulux colours, similar to the approved Warehouse 2B within the Estate. The proposal also seeks approval for associated landscape works, construction of an internal road network, hardstand areas and light duty areas for each Warehouse.



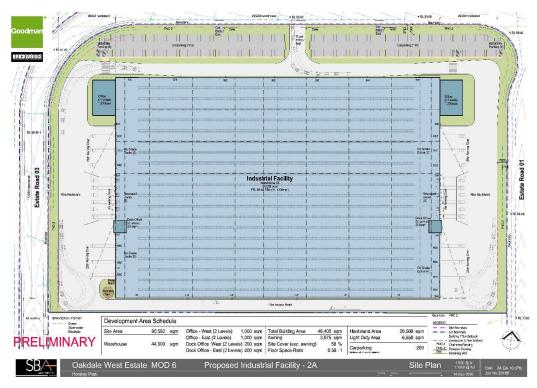


Figure 4: Proposed layout Warehouse 2A (Source: Goodman)

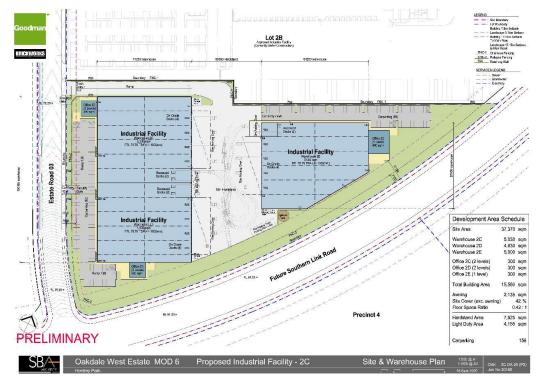


Figure 5: Proposed layout Warehouses 2C - 2E (Source: Goodman)



Warehouse 2A will comprise a highly specified design suitable for large-scale distribution users with specialised equipment and automated fit-out. The design has regard to Greenstar initiatives including a significant solar panel array spanning the roof, LED lighting within the warehouse and office areas, and ample landscaping will be provided.

Warehouses 2C-2E will provide for a typical industrial unit design with ample car parking and landscaping setbacks. Significant landscaping will be provided within the building and landscaping zones.

3.1.1 Parking

SSD 7348 outlines the following minimum parking rates to be implemented within the OWE:

- Warehousing and Distribution one space per 300 m²
- Ancillary office to be included as 'warehousing and distribution' or 'industry' for the purpose of car parking calculations one space per 40 m².

The design of the proposed development incorporates truck and car parking to service its needs with parking spaces in accordance with the rates specified in the Concept Approval.

3.2 Need for the development

The provision of warehousing and distribution facilities will generate ongoing employment on a site identified for employment purposes. The proposed development is consistent with the strategic objectives of the WSEA and the concept approval under SSD 7348.

The WSEA is recognised as pivotal in the long-term supply of Sydney's industrial and employment land.

It is therefore crucial that the development of land in the WSEA ensures a reliable pipeline of employment land to meet the expected demand over the next decade. The proposed development of Stage 3 in the OWE would contribute to the supply of serviced industrial land required to meet forecasted market demand. This supply is critical to ensuring that the Sydney industrial market does not suffer supply constraints that would inhibit the planned growth of the WSEA and broader Western Sydney region.

Development of Stage 3 of the OWE would provide additional employment opportunities for the Western Sydney region, support the delivery of critical infrastructure and services to the WSEA for the benefit of Sydney and ultimately support the strategic role and objectives of the WSEA.

3.3 Consultation

A Community Communication Strategy was prepared and approved under SSD 7348¹. Currently, Agency and Community meetings are held monthly to provide a project update and an opportunity for the community and stakeholders to discuss recent experiences and upcoming construction activities.

¹ Refer https://au.goodman.com/oakdale-industrial-estate/oakdale-west-planning for meeting minutes and CC Strategy



Goodman is committed to ensure stakeholder consultation is continued throughout the approval process for the application, including during the preparation of the EIS. Groups that have been engaged in relation to SSD 7348 and SSD 10397 will continue to be consulted, including;

- DPIE
- Office of Regional Development
- Transport for NSW (TfNSW)
- Environmental Protection Authority (EPA)
- Local Members of Parliament and Ministers Office
- WSEA Community
- Water NSW
- Endeavour Energy
- Fire & Rescue NSW
- Penrith City Council
- General public, neighbourhoods, schools and community

Stakeholder engagement will include a range of formal and informal stakeholder consultation tools according to the particular needs of individual stakeholders. These will include newsletters, briefing sessions, phone calls, meetings, community sessions and targeted stakeholder surveys.

The proposed application will be included on the agenda for the next CCC meeting which is currently scheduled for 7 October 2020.



4 Statutory Planning Considerations

4.1 Environmental Planning and Assessment Act 1979

The EP&A Act provides the statutory framework for planning in NSW. The Act aims to promote the orderly and economic use and development of land, facilitate ecologically sustainable development and integrate economic, environmental and social considerations as part of the decision-making processes for environmental planning and assessment matters. The EIS will demonstrate how the development addresses the objects of the EP&A Act.

Section 4.36 of the EP&A Act enables certain developments to be declared SSD by means of a State Environmental Planning Policy (SEPP) or by order of the Minister for Planning. The project meets the criteria of SSD under Schedule 1 of the SRD SEPP (discussed further at Section 4.8.2).

This report requests the issue of the SEARs for the project under section 4.12 of the EP&A Act.

The Minister (or the Minister's delegate) will be required to take into consideration the matters listed under section 4.15 of the EP&A Act when determining the development application. These matters will be addressed in the EIS for the development.

4.2 Environmental Planning and Assessment Regulation 2000

The EP&A Regulation contains key operational provisions for the NSW planning system. This includes procedures relating to development applications, requirements for environmental assessments, environmental impact assessments, building regulations and other miscellaneous matters.

Once SEARs for the project have been issued, an EIS will be prepared in accordance with Part 3, Schedule 2 of the EP&A Regulation. This section of the Regulation sets out the form and content required of an EIS.

4.3 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides the legal framework to protect and manage environmental values considered to be of national environmental significance.

The EPBC Act requires approval from the Commonwealth Minister for the Environment and Resources for actions that may have a significant impact on listed matters of national environmental significance (MNES).

The Oakdale West Concept Proposal is a "controlled action" that has undergone assessment by the Commonwealth Department of the Environment and Energy (DoEE) under the EPBC Act. Approval was granted from the delegate of the Commonwealth Minister for Environment on 25 November 2019.

The project was assessed and determined as part of the Oakdale West Concept Proposal. The proposed development will not have potential to impact upon any MNES in addition to those assessed for the OWE Concept Proposal.



4.4 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act* 2016 (BC Act) commenced on 25 August 2017 and establishes a framework to avoid, minimise and offset impacts on biodiversity.

In accordance with section 7.9(2) of the BC Act, SSD applications are required to be accompanied by a biodiversity development assessment report (BDAR). However, a BDAR waiver may be granted should it be determined by the Planning Agency Head (DPIE) and the Environment Agency Head (DPIE Biodiversity Conservation Division) provided that the proposed development is not likely to have any significant impact on biodiversity values.

The consent authority must consider if the proposed development is likely to have serious and irreversible biodiversity impacts when assessing SSD or SSI and determine any additional and appropriate measures that would minimise the impacts, if a consent or approval was to be granted.

The assessment of biodiversity impacts for the site has been undertaken for SSD 7348. Approval for the Concept Plan included a Biodiversity Assessment and Offset Strategy for the entire OWE. The EIS will include a memo discussing how biodiversity impacts have been addressed through the Oakdale West Estate Concept Plan or a waiver for the preparation of a Biodiversity Development Assessment Report under the *Biodiversity Conservation Act* 2016.

4.5 Heritage Act 1977

The *Heritage Act* 1977 (Heritage Act) makes provisions to conserve the State's environmental heritage. It provides for the identification, registration and protection of items of State heritage significance and constitutes the Heritage Council of New South Wales.

Notwithstanding that the development comprises SSD, approval under section 139 of the Heritage Act was required prior to activities likely to disturb a relic at the OWE.

A complete Heritage assessment was undertaken and provided in the Oakdale West Environmental Impact Statement for SSD 7348. The report provided a detailed analysis of Heritage items in proximity to the site as well as any necessary mitigation and management measures. Within the site boundaries, Aboriginal sites Oakdale Campsite 4 and OW IF 2 were identified to be impacted by the overall development.

As the sites have now been disturbed following Stage 1 and Stage 2 works, further heritage approval is not considered necessary.

4.6 Rural Fires Act 1997

The site is identified as bushfire prone land under PLEP 2010.

The Rural Fires Act requires that consideration be made to the potential bushfire impacts on development at the planning assessment stage to ensure protection of people and property in the event of a bushfire.

Under section 4.41 of the EP&A Act, SSD is exempt from the requirement for a bushfire safety authority under Section 100B of the Rural Fires Act.



4.7 Contaminated Land Management Act 1997

The Contaminated Land Management Act 1997 (CLM Act) establishes a process for investigating and (where appropriate) remediating land where contamination poses a significant risk of harm to human health or the environment.

Contamination for the entire site was addressed as part of the Stage 1 development and Concept Plan under SSD 7348. The site was assessed and approved to be generally suitable for commercial and industrial uses.

4.8 State Environmental Planning Policies

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

The WSEA SEPP establishes the WSEA and identifies eleven precincts within its boundary, as shown in Figure 6. The site is located within Precinct 8 – South of Sydney Catchment Authority Warragamba Pipelines. Consideration of the proposed development against the applicable detailed provisions of the WSEA SEPP is provided in Table 2.

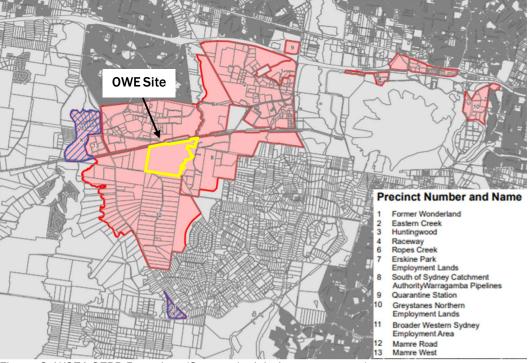


Figure 6: WSEA SEPP Boundary (Source: legislation.nsw.gov.au)



Olavia	Drovision	Decision
Clause 3. Aims of Policy	Provision To protect and enhance	Response The proposed development
3. Airis of Folicy	employment lands within the WSEA boundary.	satisfies the aims of the WSEA SEPP as it will provide for employment of up to 500 jobs during construction and 450 jobs during operation.
10. Zoning of land	The site is zoned IN1 General Industrial.	The proposed development is permissible with consent (warehouse or distribution centres) in the IN1 zone and consistent with the zone objectives.
20. Ecologically Sustainable Development (ESD)	Development must include measures to minimise the consumption of potable water and greenhouse gas emissions.	The EIS will address the principles of ESD and the proposed development will be designed to achieve a 5-star Green Star rating.
21. Height of Buildings	Building heights for proposed development to adequately respond to site topography and preserve the amenity of adjacent zones.	Details of proposed building heights will be included in the EIS and take into consideration the provisions of Clause 21 and SSD 7348. Warehouse 2A is proposed to have a maximum building height of 18m. Warehouses 2C, 2D, and 2E all have a maximum building height of 15m.
22. Rainwater Harvesting	Adequate arrangements must be made to connect the roof areas of buildings to any rainwater harvesting scheme.	Details of proposed rainwater harvesting of the development will be provided in the EIS.
23. Development adjoining residential land	To address potential amenity and parking impacts of development within 250 metres of land zoned primarily for residential purposes.	Detailed consideration of the potential impacts to adjoining rural residential receivers as required by Clause 23 will be provided in the EIS. A preliminary assessment has been undertaken in Section 6 of this report.
24. Development involving subdivision	The consent authority must consider the potential land use impacts of proposed subdivision.	No subdivision is proposed.
25. Public Utility Infrastructure	Requirement to demonstrate that adequate public utility infrastructure for the development is available or suitable arrangements are in places.	The EIS will detail all necessary public utility infrastructure and services to be provided.
26. Development on or in the vicinity of proposed transport infrastructure routes	Consider any comments of the Director-General as to the compatibility of the development with proposed transport infrastructure routes.	This clause has been considered as part of the development of the Concept Proposal for the OWE.



29. Industrial Release Areas	Development obtain formal certification that satisfactory arrangements have been made to contribute to the provision of regional transport infrastructure and services prior to consent being granted	A voluntary planning agreement for the provision of regional transport infrastructure and services has been entered into between the Applicant and the Minister for the site.
31. Design Principles	A requirement for the consent authority to consider building design and finishes, landscaping and the scale and character of the development.	Design details and landscaping will be addressed during the design of the proposal, with details provided in the EIS. This is discussed further in Section 6.1.

Table 2: Provisions of the WSEA SEPP

4.8.2 State Environmental Planning Policy (State and Regional Development) 2011

The SRD SEPP declares certain types of development and infrastructure to be of State and regional significance.

Clause 8 of SRD SEPP declares development to be SSD where a development is not permitted without consent and is listed in Schedule 1 or 2 of the SRD SEPP. The proposal is SSD in accordance with Clause 12 of Schedule 1 of the SRD SEPP, which states:

Development that has a capital investment value of more than \$50 million for the purpose of warehouses or distribution centres (including container storage facilities) at one location and related to the same operation.

The Stage 3 Development will have a capital investment value in excess of \$50 million and is therefore SSD pursuant to Schedule 1 of the SRD SEPP.

4.8.3 State Environmental Planning Policy (Infrastructure) 2007

The State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, providing greater flexibility in the location of infrastructure and service facilities, allowing development of surplus government owned land, identifying environmental assessment categories and matters to be considered in assessments, and providing for consultation with relevant public authorities.

Clause 104 requires that development applications for certain traffic generating development, as set out in Schedule 3 of the policy, be referred to Transport for NSW (TfNSW) and that any submission from TfNSW be considered prior to the determination of the application.

In accordance with the Infrastructure SEPP, warehouse and distribution development of 8,000 m² or greater in size require referral to TfNSW. The Applicant will consult with TfNSW during preparation of the EIS for the project, which will be referred to TfNSW for review and comment during the public exhibition period.

In accordance with Condition C16 of SSD 7348, the Applicant will consult with Water NSW regarding measures to ensure the protection of the water supply pipeline corridor to the north of Warehouse 2A.



4.8.4 State Environmental Planning Policy No.55 - Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) applies to the State and states that where a DA is made concerning land that is contaminated, the consent authority must not grant consent unless:

- (a) it has considered whether the land is contaminated, and
- (b) if the land is contaminated, it is satisfied that 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, and
- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Contamination for the entire site was addressed as part of the Stage 1 development and Concept Plan under SSD 7348. The site was assessed to be generally suitable for commercial and industrial uses.

4.8.5 State Environmental Planning Policy No. 33 – Hazardous and offensive development

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) aims to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.

The Stage 2 development is a warehouse and distribution facility and is not anticipated to be considered a potentially hazardous or offensive industry.

4.8.6 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

The Aerotropolis Plan including the State Environmental Planning Policy (Western Sydney Aerotropolis) (Aerotropolis SEPP) and a Phase 1 DCP for the precinct was finalised on 13 September 2020.

The Aerotropolis SEPP rezones 6,500 hectares of land to a range of employment, residential and environmental uses. The numerous rezoned precincts are the catalyst for the third city centred around the airport. The SEPP commences on 1 October 2020.

The Oakdale West Estate is located to the north-west of the boundary of the Western Sydney Aerotropolis as shown in Figure 7. Notwithstanding, the site is included in the Obstacle Limitation Surface (OLS) and the Wildlife Buffer Zone mapping under the SEPP.

The OLS mapping prescribes a height limitation of 223.2 m for the eastern portion of the site and a limitation of 230.5m for the western portion of the site.

The Wildlife Buffer Zone map includes the site between both the 13 km and 8 km buffer zones.

The EIS will address the provisions of the Western Sydney Aerotropolis SEPP in regards to OLS and Wildlife Buffers.



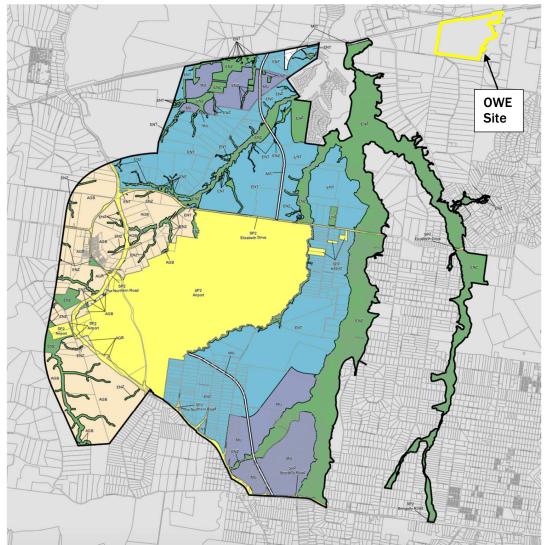


Figure 7: Oakdale West location in regard to the Aerotropolis SEPP Area (Source: Aerotropolis SEPP)

4.8.7 Draft Remediation of Land State Environmental Planning Policy

Draft Remediation of Land State Environmental Planning Policy (Remediation SEPP) aims for better management of remediation works by aligning the need for development consent with the scale, complexity and risks associated with the proposed works.

Once adopted, the Draft Remediation SEPP will:

- Provide a state-wide planning framework for the remediation of land
- Require consent authorities to consider the potential for land to be contaminated when determining DAs
- Clearly list the remediation works that require development consent
- Introduce certification and operational requirements for remediation works that can be undertaken without development consent



Contamination for the entire site was addressed as part of the Stage 1 development and Concept Plan under SSD 7348. The site was considered to be generally suitable for commercial and industrial uses.

4.9 Penrith Local Environmental Plan 2010

The site is within the Penrith LGA. The *Penrith Local Environmental Plan 2010* (PLEP) regulates development throughout the Penrith LGA.

However, the provisions of the PLEP do not apply given the site is within the boundaries of the WSEA SEPP. Notwithstanding, the Applicant will consult with Council during the preparation of the EIS.



5 Strategic Planning Considerations

5.1 State Infrastructure Strategy

The State Infrastructure Strategy sets out the NSW Government's Rebuilding NSW Plan, which involves the investment of \$20 billion in new infrastructure across the state. The Strategy identifies policies and strategies needed to provide infrastructure that meets the needs of a growing population and a growing economy.

Although the Strategy relates to investment in Government infrastructure, the proposal will contribute to the integration of land use and infrastructure planning as the site is strategically located near the future Western Sydney Aerotropolis.

5.2 Greater Sydney Region Plan

The *Greater Sydney Region Plan* (Region Plan) outlines how Greater Sydney will manage growth and change in the context of social, economic and environmental matters. It sets the vision and strategy for Greater Sydney, to be implemented at a local level through District Plans. The overriding vision for Greater Sydney in the Region Plan is to rebalance Sydney into a metropolis of 3 unique but connected cities:

- the established Eastern Harbour City
- the developing Central River City
- the emerging Western Parkland City

The Region Plan provides broad *Priorities and Actions* which focus on the following four key themes. A high-level analysis of the proposal against these themes is provided in Table 3.

Theme	Response
Infrastructure and Collaboration	The site is located close to both the M4 and M7 Motorways as well as the future Western Sydney Aerotropolis. Stage 1 of the development also includes the construction of the Western North South Link (WNSL) Road which connects the site to the regional road network.
Liveability	The provision of the WNSL Road ensures better connection of the site to surrounding areas, including residential areas to the north in Erskine Park. Given the site is to provide a large number of employment opportunities, this connection to residential areas ensures viability for future workers.
Productivity	The site is within an area identified as industrial and urban services land and the Region Plan sets the objective for planning authorities to adopt an approach of "review and manage" industrial land (Objective 23 – Industrial and urban services land is planned, retained and managed)
Sustainability	The Development will be planned and designed with initiatives to achieve a 5 Green Star 'as-built' rating, and include consideration of water sensitive urban design principles, energy efficiency, and biodiversity conservation.

Table 3: Analysis against the Greater Sydney Region Plan



5.3 Western City District Plan

The Western City District Plan (District Plan) was prepared by the Greater Sydney Commission (GSC) in March 2018. It provides the district level framework to implement the goals and directions outlined in the Region Plan for the Western City District.

The District Plan recognises the ideal location of the site within industrial land to support the growth of the Western City District, given the proximity to the future Western Sydney Aerotropolis and access to both the M7 and M4 Motorway.

In particular, the development will address Planning Priority W10 – Maximising Freight and Logistics Opportunities and Planning and Managing Industrial and Urban Services Land.

The proposed development is consistent with the Western City District Plan as it will:

- Protect employment land through the provision of employment uses;
- Continue the operation of industrial uses in the WSEA; and
- Attract investment from innovative industries.

5.4 Western Sydney Aerotropolis Structure Plan

The subject site is located adjoining the boundary of the Western Sydney Aerotropolis Structure Plan. The Structure Plan creates a spatial representation of land-uses, environmental assets and transport infrastructure within the Aerotropolis. As shown in Figure 8, the site adjoins land identified for enterprise uses, with an intermodal terminal nearby.



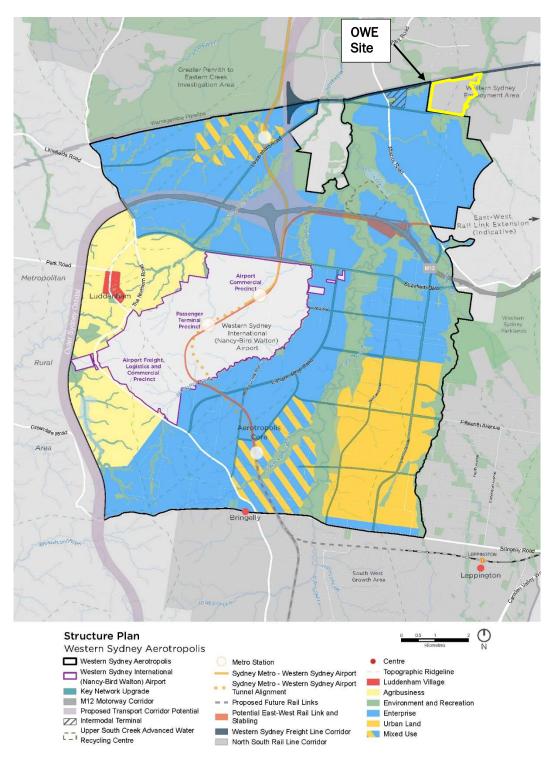


Figure 8: Western Sydney Aerotropolis Structure Plan (Source: Western Sydney Aerotropolis SEPP)



6 Potential Environmental Issues

Potential environmental issues associated with the development will be comprehensively addressed as part of an EIS. This report has identified the likely key issues, including:

- Built form, visual character and landscaping
- · Traffic and car parking
- Noise and vibration
- · Soil and water
- Air quality
- Waste management
- Biodiversity
- Heritage

Assessments for the EIS will consider the requirements of SSD 7348 and applicable policies, guidelines and plans included in the SEARs for the development. The EIS will consider the potential impacts of all stages of the development on the key issues and detail proposed measures to avoid, mitigate and, where necessary, offset these potential impacts.

6.1 Built form, visual character and landscaping

A detailed Visual Impact Assessment (VIA) was prepared as part of the Oakdale West EIS under SSD 7348. The assessment analysed the extent of the visual impact for all stages of development of the OWE. The Concept Approval assessed the visual impact of warehouse building forms across the OWE as being acceptable, within the boundaries of the assessed building height, layout and landscaping.

A sixth modification application is currently being prepared for SSD 7348 to alter the building height for Warehouse 2A and the built form and layout of Warehouses 2C, 2D and 2E, consistent with the detailed designs to be assessed in the EIS for Stage 3. Warehouse 2A has a maximum building height of 18 m, with the remainder of warehouses within Stage 3 of the development having a maximum height of 15 m. This proposal to amend building height is necessary to accommodate plant and solar on top of the 14.9m warehouse structure. These alterations in height, built form and layout are minor in nature compared with the current approved Concept Plan.

The Warehouses proposed within Stage 3 will incorporate a similar design and colour scheme as to that of Warehouse 2B (see Figure 9) and address the relevant requirements in Conditions C6-C8 of SSD 7348 relating to outdoor lighting, signage and reflectivity. This includes monument and shale grey dulux colours and block work with colourbond cladding and architectural blade features for associated offices. Detailed architectural designs and a description of the building design will be included in the EIS.

As required by Condition C5 of SSD 7348, a Landscape Assessment will be prepared by a qualified landscape design consultant in consultation with Council. The Landscape Assessment will describe the landscaping for the proposed warehouses including that required to minimise visual impacts on surrounding receivers (if any) consistent with the approved Staging Plan.







FOR APPROVAL

TO A

Figure 9: External finishes of Warehouse 2B for reference (Source: Goodman)

The EIS will describe how the detailed design of each warehouse addresses the relevant requirements of SSD 7348, including appropriate recommended mitigation measures to minimise visual impact.

The EIS will also include consideration of the requirements of Planning for Bushfire Protection 2019, the *Oakdale Industrial Estate - West Bushfire Protection Assessment*, prepared by Australian Bushfire Protection Planners Pty Ltd and the requirements of *AS2419.1 - 2005 Fire Hydrant Installations*.

6.2 Traffic and parking

A Traffic and Transport Impact Assessment has been provided in the OWE EIS which assessed the entirety of traffic generation anticipated from the OWE. Detail has been provided on the impact to the existing and proposed road networks as well as internal access and parking, based on assumed traffic generation rates from each Precinct, vehicle types and car parking provision. The impact assessment undertaken in the OWE EIS supported the development in respect to the level of access, transport and traffic.

A standalone traffic and transport impact assessment will be undertaken as part of the Stage 3 EIS, as required by the conditions of consent under SSD 7348, to understand the impact of the Stage 3 development during construction and operation. It will identify any mitigation measures required in order to ensure acceptable operation of the road network especially at peak operating times of the OWE.

Any changes to truck movements during the construction phase will be a result of earthworks completion and delivery of materials for warehouse construction. Changes to construction phase traffic will be addressed for the wider Estate, if necessary.

The assessment will address car parking requirements of the future operator, with regard to the car parking requirements of the Concept Approval and the RMS Guide to Traffic Generating Development.



6.3 Noise and Vibration

Existing background noise on land to the south and west of the site is typical of a rural environment. The elevated noise and vibration levels as a result of the approved staged development will be managed and mitigated in accordance with the conditions of SSD 7348.

An updated noise and vibration assessment will be submitted as required under Schedule C of the conditions of consent for SSD 7348. This will ensure impacts are limited on sensitive receivers in the area.

The Noise and Vibration Assessment prepared for the OWE EIS and subsequent modifications provides a detailed description of the anticipated acoustic impact of the development. The assessment, based on the approved building layout and site configuration, recommends specific mitigation measures to ensure that noise generation at nearby sensitive receivers remain within acceptable noise limits. This includes specified maximum operation phase noise limits at the nearby sensitive receivers, and the acoustic barrier, currently under construction, to mitigate noise transference to the education and aged care land uses adjoining the western boundary of the OWE development (Figure 10).



Figure 10: Bunding and noise wall currently under construction on western boundary (Source: Keylan)

Noise management during construction will be managed and mitigated by commitments governing the use of mechanical equipment on site. Subject to these measures, the acoustic impact was assessed as being within the acceptable range and the development approved on this basis.

6.4 Soil and Water

Ropes Creek is in proximity to OWE, however, does not share a border with Precinct 2. Stormwater and drainage are established across the OWE as part of the Stage 1 development.

Consideration of potential impacts associated with the Stage 3 works and interactions with the approved water management system will be outlined in the EIS. This will include demonstration that the design of the proposed warehouses and stormwater management



infrastructure is consistent with the *Civil, Stormwater and Infrastructure Services Report* (AT&L, 2018) and *Flood Impact Assessment: Oakdale West Estate* (Cardno, 2017).

A Phase 2 contamination assessment demonstrated low general potential for contamination as part of the Oakdale West EIS. Two areas were found with asbestos which has been removed prior to the start of construction of Stage 2. Control measures have been implemented throughout the site.

A review of existing documentation related to the Stage 3 development area will be undertaken as part of the EIS.

6.5 Air Quality

Potential emissions during the construction and operation of the project are anticipated to have minimal potential to impact upon the surrounding locality due to the distance to the nearest residential receivers. Any identified impacts are anticipated to be adequately managed through appropriate construction site management and environmental controls included in the Oakdale West EIS – Air Quality Impact Assessment.

The Oakdale West EIS – Air Quality Impact Assessment indicates a low risk of adverse air quality. However, this is subject to the standard modelling used for warehouses, as the future operation of Precinct 2 is unknown.

Consideration of potential air emissions during construction and operation of the facility will be undertaken as part of the EIS, including an updated Air Quality Impact Assessment relevant to the development undertaken in Stage 3.

6.6 Waste Management

In accordance with Condition C17 of SSD 7348, the EIS will include a Waste Management Plan (WMP) in accordance with the NSW Waste Classification Guidelines (DECCW, 2009).

The WMP will detail the quantities and classification of waste streams to generated during demolition, remediation, construction and operation of the development and includes measures to ensure the development is consistent with the aims and objectives of the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA, 2014).

6.7 Biodiversity

The proposed development site is located within the approved OWE site under SSD 7348. SSD 7348 incorporates estate wide earthworks and the supporting assessment considered the potential impacts of the OWE development on biodiversity values.

Consideration of any implications to biodiversity associated with alterations to the approved Concept Proposal will be addressed within the EIS and mitigated accordingly.

Consequently, an assessment of biodiversity impacts of the warehouse development subject to the application is not required.

6.8 Heritage

A full heritage Impact Assessment (HIA) was undertaken as part of the EIS for the OWE Concept Proposal. The HIA identified 3 sites between moderate significance to low significance that will be disturbed/destroyed during the works of OWE.



Mitigation measures have been outlined in response to sensitive heritage items identified within the OWE site. The approved Stage 1 works consisted of excavations and earth works and there is considered to be limited potential to impact upon any previously unidentified heritage items.

A due diligence assessment is proposed to be prepared in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (OEH 2010). The Code, will assist in documenting the history of disturbance and assess Aboriginal heritage risk for the project.



7 Conclusion

This report is a formal request to DPIE to issue SEARs for the Stage 3 development at Oakdale West Estate.

This request for SEARs describes the proposed construction works for warehouse and distribution uses, an overview of relevant legislative requirements and key strategic plans and documents and a preliminary assessment of potential environmental issues.

The proposed development in Stage 3 includes the construction of three warehouse (four tenancies) and distribution facilities and their future use. There are no proposed clearing, earthworks and infrastructure construction given this has been approved under the concept approval for OWE under SSD 7348.

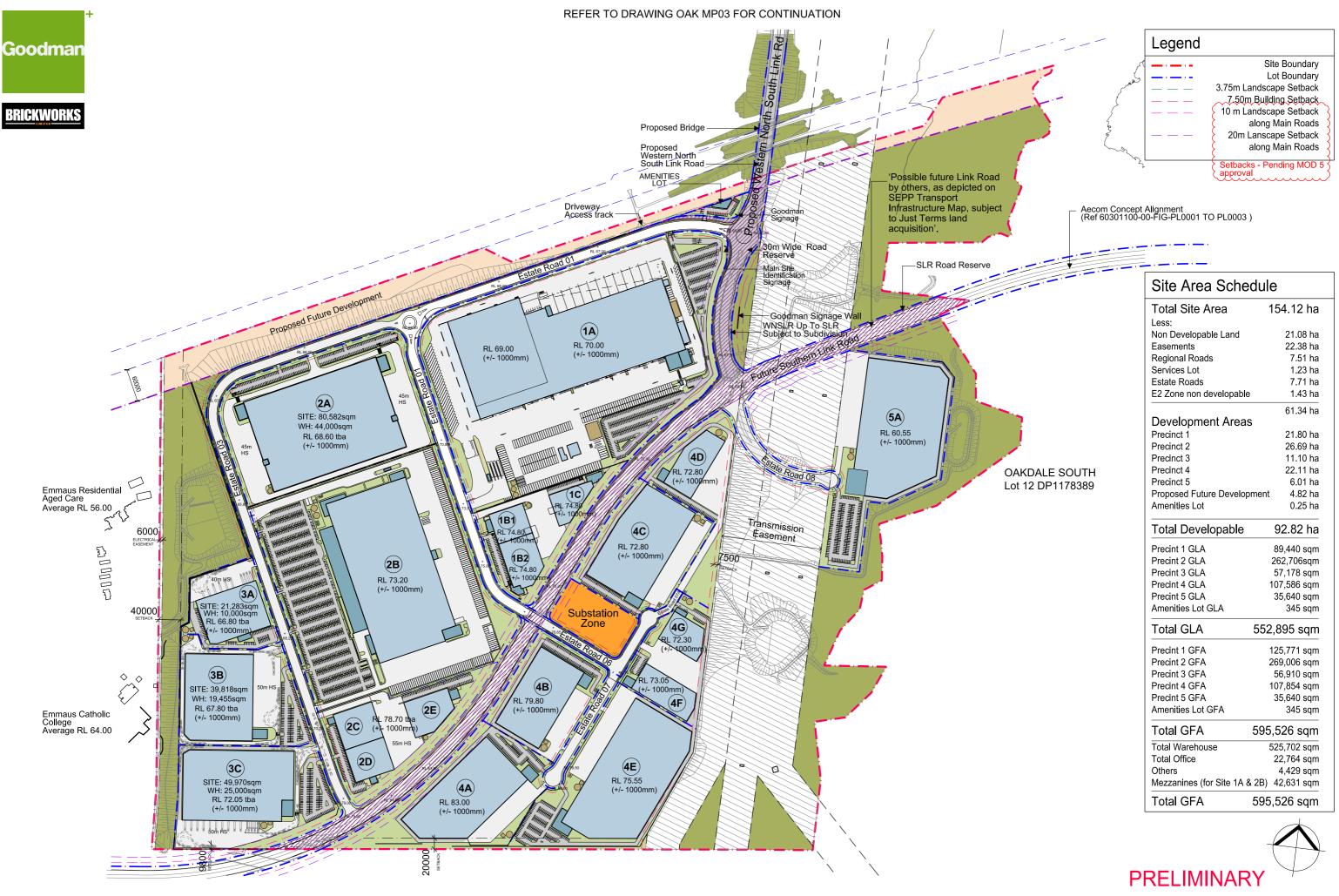
The development will significantly contribute to the provision of jobs within the Western Sydney Employment Area. It ensures the efficient use of employment land to satisfy the strategic objectives of the WSEA SEPP.

The development meets the criteria of State significant development (SSD) in accordance with Schedule 1, clause 12(1) of the State Environmental Planning Policy (State and Regional Development) 2011.

The key environmental issues associated with the development relate to built form, visual character and landscaping, traffic and parking, noise and vibration, soil and water, air quality and waste management. These issues will be comprehensively addressed as part of an EIS for the project. Other issues have been addressed under the Stage 1 Concept Approval (SSD 7348) including biodiversity and heritage impacts.

The EIS will be prepared in accordance with the SEARs and the legislative requirements defined under the EP&A Regulation. The EIS will outline recommendations to address any environmental impacts of the project to inform DPIE in its assessment and recommendation on the project.

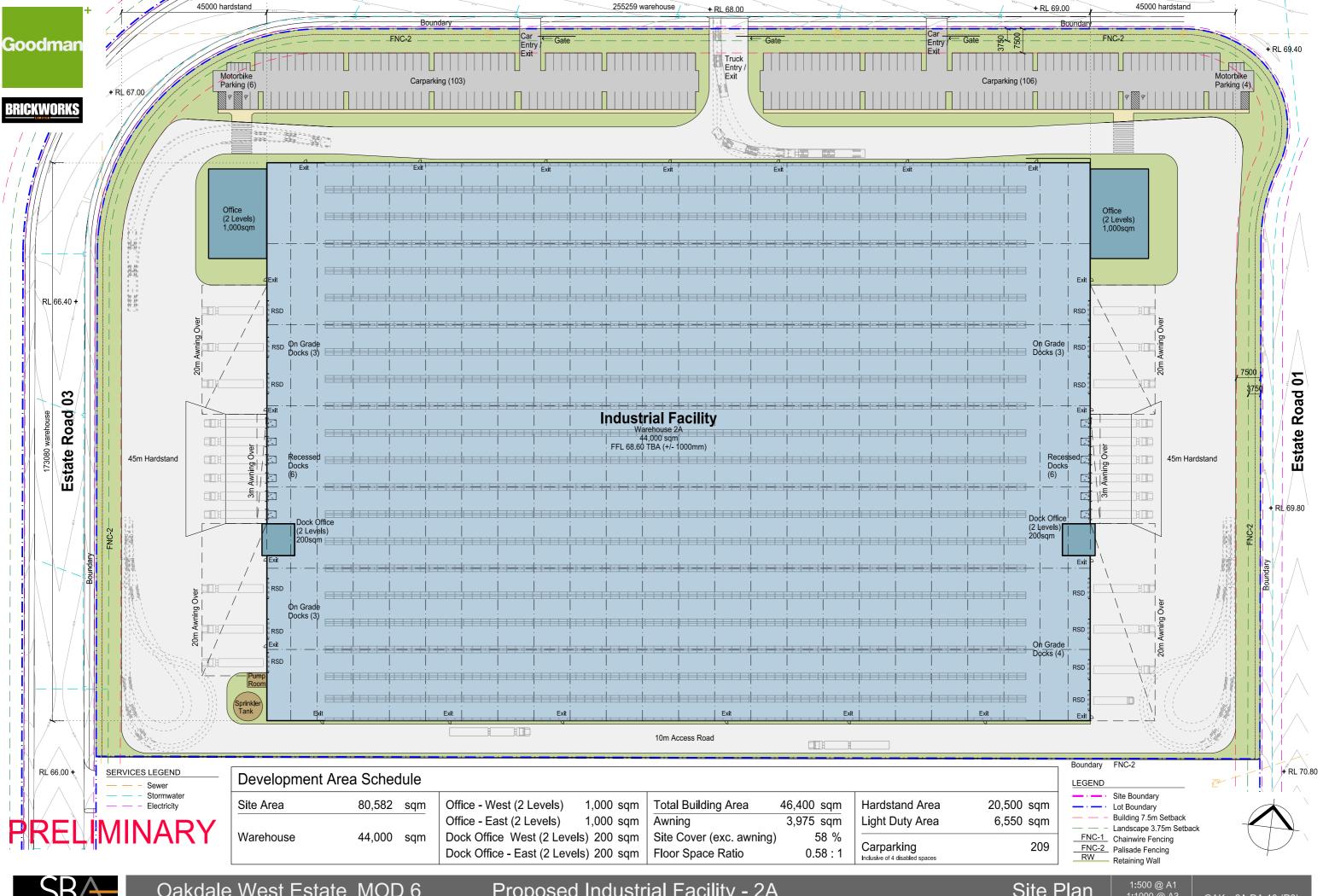
APPENDIX 1 – Proposed layout plans (SBA Architects)





Estate Masterplan

1:3000 @ A1 1:6000 @ A3

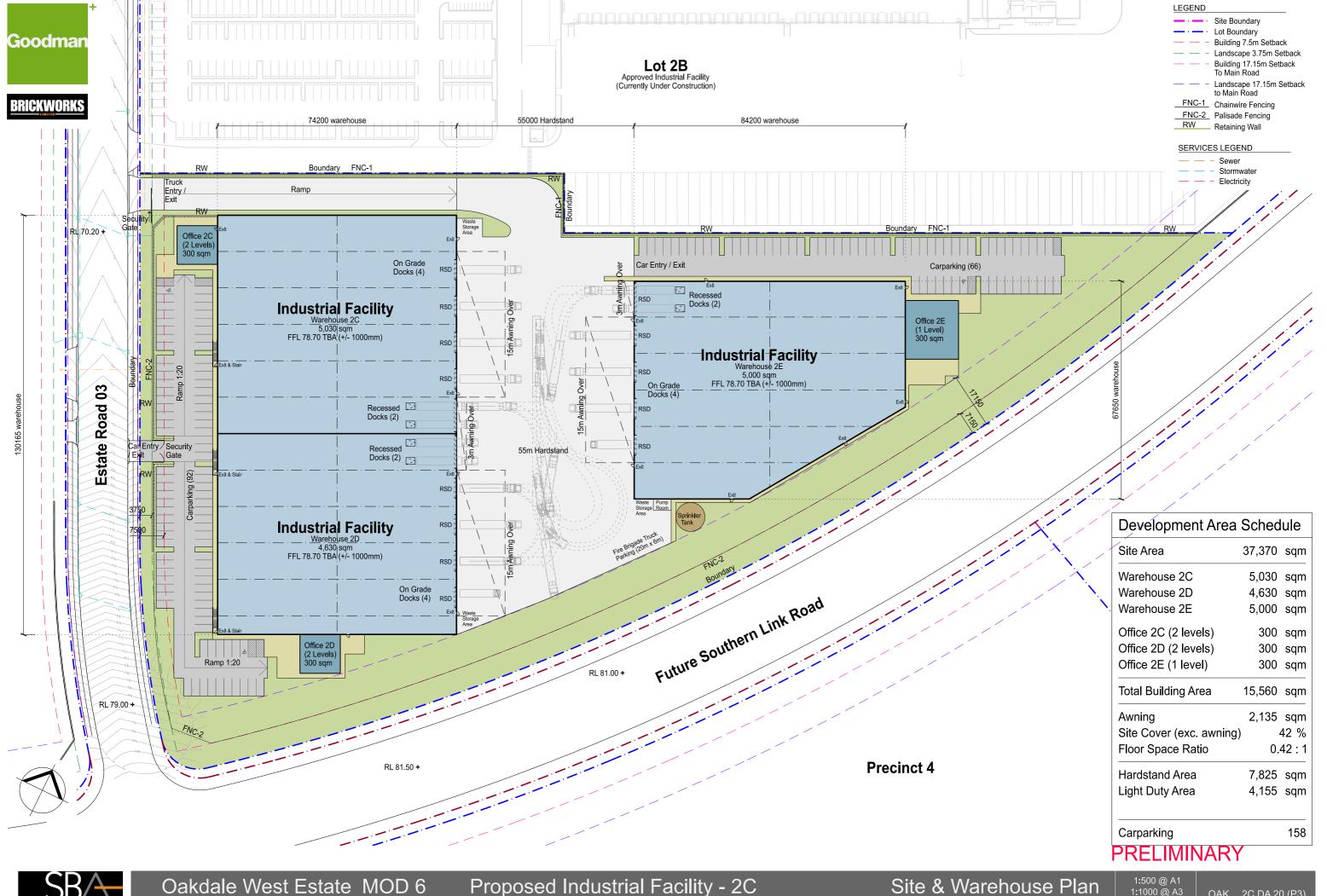




Site Plan

1:500 @ A1 1:1000 @ A3 16 Sep 2020

OAK 2A DA 10 (P6) Job No 20188





APPENDIX 2 - Cost Estimate Summary (Rider Levett Bucknall)



Rider Levett Bucknall NSW Pty Ltd ABN 94 003 234 026

Level 19, 141 Walker Street PO Box 531 North Sydney NSW 2059 Australia

T: +61 2 9922 2277 E: sydney@au.rlb.com

jf:17271.6.1. DA Estimate Report r3. rs.rd

5 October 2020

Goodman Group Level 17, 60 Castlereagh St SYDNEY NSW 2000

Attention: Ms Stephanie Partridge

Email: Stephanie.Partridge@goodman.com

Dear Stephanie,

DEVELOPMENT APPLICATION TO DPIE ESTIMATE – OCTOBER 2020 OAKDALE WEST ESTATE WAREHOUSE 2A, 2C, 2D and 2E

Please find attached our Estimate for your Development Application to the Department of Planning Industry and Environment (DPIE) for the proposed project located at Oakdale West Estate, Horsley Park, NSW 2175.

Rider Levett Bucknall accepts no responsibility, or liability, to any other party who might use or rely upon this report without our prior knowledge and written consent. Further, no portion of this report (including without limitation any conclusions which may affect value, the identity of Rider Levett Bucknall or its Sub-Contractors, or any individuals signing or associated with this report, or the Professional Associations or Organisations with which they are affiliated) shall be copied or disseminated to third parties, by any means, without the prior written consent and approval of Rider Levett Bucknall.

Should you have any queries or require any further information or comment, please do not hesitate to contact us.

Yours faithfully,

Robbie Stewart Senior Consultant Rider Levett Bucknall

DEFlux

Robbie.stewart@au.rlb.com



DA ESTIMATE OCTOBER 2020

DEVELOPMENT APPLICATION ESTIMATE FOR DPIE, OAKDALE WEST ESTATE

OAKDALE WEST ESTATE, HORSLEY PARK

Prepared For

Goodman Group Level 17, 60 Castlereagh St SYDNEY NSW 2000

Issued on

5 October 2020

Prepared By

Rider Levett Bucknall NSW Pty Ltd Level 19 141 Walker Street North Sydney NSW 2060 T: +61 2 9922 2277

RLB.com

Our Ref

17271-ES-2

Project number

17271





REPORTS ISSUED

Report	Date	Title Description	Released By
0	1 October 2020	Estimate Report	
1	2 October 2020	Estimate Report	Robbie Stewart
2	2 October 2020	Estimate Report	Robbie Stewart
3	5 October 2020	Estimate Report	Robbie Stewart

RIDER LEVETT BUCKNALL QA

	Prepared by:	Reviewed by:	Released by:
Name:	Konstantin Mukarev	Robbie Stewart	Robbie Stewart
Signature:		RESPONS	BESTUNE



TABLE OF CONTENTS

1.0 Executive Summary 1.1 Introduction 1.2 Cost Summary 1.3 Major Assumptions 1.4 Statement of Reliance 2.0 Project Information 2.1 Project Team 2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition 4.2 Schedule	
1.2 Cost Summary 1.3 Major Assumptions 1.4 Statement of Reliance 2.0 Project Information 2.1 Project Team 2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	1
1.3 Major Assumptions 1.4 Statement of Reliance 2.0 Project Information 2.1 Project Team 2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	1
 1.4 Statement of Reliance 2.0 Project Information 2.1 Project Team 2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition 	1
2.0 Project Information 2.1 Project Team 2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	1
2.1 Project Team 2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	1
2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	2
2.2 Project Description 3.0 Basis of Report 3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	2
3.1 Purpose and Status of Cost Report 3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	2
3.2 Basis of Procurement 3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	3
3.3 Programme 3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	3
3.4 Forecast Escalation 3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	3
3.5 Information Used 3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	3
3.6 Key Assumptions 3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	3
3.7 Inclusions 3.8 Exclusions 4.0 Schedule of Areas 4.1 Definition	3
3.8 Exclusions4.0 Schedule of Areas4.1 Definition	3
4.0 Schedule of Areas 4.1 Definition	4
4.1 Definition	4
	5
4.2 Schedule	5
	5

APPENDICES

Appendix A: Estimate Details

Appendix B: Drawing Register



1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This report provides DA costs for the proposed site infrastructure and warehouse 2A, 2C, 2D & 2E works located at Oakdale West Estate, Horsley Park. The project is for a Stage 3 Application to the DPIE.

1.2 COST SUMMARY

The costs can be summarised as follows:

Element	2A	2C, 2D & 2E	TOTAL
Construction Cost	\$57,749,274	\$15,262,771	\$73,012,045
Design Contingency	\$5,774,927	\$1,526,277	\$7,301,205
Construction Contingency	Excl.	Excl.	Excl.
Professional Fees - Planning Phase	\$3,176,210	\$839,452	\$4,015,662
Professional Fees - Delivery Phase	\$3,335,021	\$881,425	\$4,216,446
Authority Fees & Charges	Excl.	Excl.	Excl.
Escalation to Construction	Excl.	Excl.	Excl.
Escalation During Construction	Excl.	Excl.	Excl.
TOTAL PROJECT COSTS (Excluding GST)	\$70,035,432	\$18,509,926	\$88,545,358
Goods & Services Tax (GST)	\$7,003,543	\$1,850,993	\$8,854,536
TOTAL PROJECT COSTS (Including GST)	\$77,038,975	\$20,360,919	\$97,399,893

1.3 MAJOR ASSUMPTIONS

This estimate report is based on a number of assumptions, as per Section 3.6 further within this report.

The following assumptions are of particular note:

- Estimate based off architectural site plans and benchmarking
- Tenant specific FF&E is excluded

1.4 STATEMENT OF RELIANCE

This report is prepared for the reliance for the party/parties for whom it is prepared. Rider Levett Bucknall accepts no responsibility, or liability, to any other party who might use or rely upon this report without our prior knowledge and written consent. Further, no portion of this report (including without limitation any conclusions which may affect value, the identity of Rider Levett Bucknall or its Sub-Contractors, or any individuals signing or associated with this report, or the Professional Associations or Organisations with which they are affiliated) shall be copied or disseminated to third parties, by any means, without the prior written consent and approval of Rider Levett Bucknall.



2.0 PROJECT INFORMATION

2.1 PROJECT TEAM

Client: Goodman Limited

Quantity Surveyor: Rider Levett Bucknall

Architect: SBA Architects

Engineering Services: AT&L

2.2 PROJECT DESCRIPTION

The project involves site prparation works and the construction of 2A, 2C, 2D & 2E Warehouses located at Oakdale West Estate and comprises the following scope of works:

Warehouse Buildings 2A, 2C, 2D & 2E

- Construction of new warehouse and office facilities.
- External works including site preparation, retaining walls, carpark, hardstand areas, landscaping and site services.



3.0 BASIS OF REPORT

3.1 PURPOSE AND STATUS OF COST REPORT

This report has been prepared to forecast the total cost of the project as currently detailed. It is based on preliminary documentation only.

As the project progresses, the developing design should be reviewed against the allowances made within this report. The costs should be considered in the context of the current stage of the design.

3.2 BASIS OF PROCUREMENT

The estimate is based on the assumption that a competitive tender form of procurement process will be conducted with pre-qualified contractors (no less than 3 no.) with the proven capability and relevant experience to successfully deliver a project of this nature.

3.3 PROGRAMME

RLB has not been advised of a planning or delivery programme for this project.

3.4 FORECAST ESCALATION

Forecast escalation is excluded from this estimate.

3.5 INFORMATION USED

The costs in this report are based upon rates applied to measured elemental quantities and are current as at October 2020.

Drawings used – refer Appendix B

3.6 KEY ASSUMPTIONS

Due to the stage of the project, some of the report is based on assumptions rather than outline design. These assumptions should be tested as the project progresses.

We have employed the following assumptions in preparing this report:

- Elemental cost estimating. The estimate includes, but not limited to, \$/m2 allowance for elements including
 walls, floors, ceilings, finishes and services, based on assumed specifications and preliminary design
 information.
- Engineering services allowances are based on \$/m2 allowances, based on assumed design, capacities, etc. and system installations.
- Earthwork allowances are based on excavation in material other than rock and have assumed depths from cut/fill based on the MOD 2 DA estimate earthworks.
- No allowance for any works related to hazardous or contaminated material
- Allowance has been made for lifts to all 2 storey offices
- Assume external wall for Warehouses 2C,D&E comprising a combination of precast concrete and Cliplock sheeting insulated at the roof
- Assume external wall and roof sheeting being composite roof and wall panels
- FF&E, loose fittings and equipment are excluded from the estimate.
- The estimate does not include an allowance for staging and/or to complete the works out of sequence.
- It is assumed that the works will be undertaken during normal working hours.



Allowance for additional structural steel tonnage in order to support solar system

3.7 INCLUSIONS

The estimate includes the following allowances:

- Design Contingency (10%)
- Professional Fees Planning Phase (5%)
- Professional Fees Delivery Phase (5%)
- Goods and Services Tax (10%)

3.8 EXCLUSIONS

In compiling this DA Estimate, no allowance has been made for the following cost items. Allowances for these items should be added as appropriate to establish the total project cost. If requested, we can provide assistance to assess these allowances:

- Any costs and fees as a result of any development approval resubmissions
- Any special or additional contributions sought by authorities for public or other facilities as a condition of development approval
- Computer installations including wiring
- Cost increases beyond October 2020
- Construction Contingency
- Escalation to/during construction
- Environmental impact study costs
- Finance costs and interest charges
- Land and legal costs
- Loose furniture, fittings and equipment (other than allowances expressly included in the estimate)
- Public utilities' charges, contributions and levies
- All costs associated with hazardous and contaminated materials
- Corporate Signage
- Telephone services
- Works outside site boundaries
- Augmentation and extensions to existing Authority mains
- Out of sequence work / staging & working outside normal working hours
- Any upgrade to existing building to comply with current construction code that may be required, but not documented
- Air-conditioning of warehouse
- Tenant specialist equipment, etc. for the purposes of ultimate occupant business operations
- Excavation in rock
- Treatment of soft spots
- All costs associated with heritage, cultural, archaeological artefacts, etc.
- Truck queueing digital display board
- Battery charging stations



4.0 SCHEDULE OF AREAS

4.1 **DEFINITION**

The terminology "GFA" as utilised in this report relates to Gross Floor Area. The definition of GFA as measured in this report is as follows:

GROSS FLOOR AREA (G.F.A.)

The sum of the "Fully Enclosed Covered Area" and "Unenclosed Covered Area" as defined.

FULLY ENCLOSED COVERED AREA (F.E.C.A.)

The sum of all such areas at all building floor levels, including basements (except unexcavated portions), floored roof spaces and attics, garages, penthouses, enclosed porches and attached enclosed covered ways alongside buildings, equipment rooms, lift shafts, vertical ducts, staircases and any other fully enclosed spaces and usable areas of the building, computed by measuring from the normal inside face of exterior walls but ignoring any projections such as plinths, columns, piers and the like which project from the normal inside face of exterior walls. It shall not include open courts, lightwells, connecting or isolated covered ways and net open areas or upper portions of rooms, lobbies, halls, interstitial spaces and the like which extend through the storey being computed.

UNENCLOSED COVERED AREA (U.C.A.)

The sum of all such areas at all building floor levels, including roofed balconies, open verandahs, porches and porticos, attached open covered ways alongside buildings, undercrofts and usable space under buildings, unenclosed access galleries (including ground floor) and any other trafficable covered areas of the building which are not totally enclosed by full height walls, computed by measuring the area between the enclosing walls or balustrade (i.e. from the inside face of the U.C.A. excluding the wall or balustrade thickness). When the covering element (i.e. roof or upper floor) is supported by columns, is cantilevered or is suspended, or any combination of these, the measurements shall be taken to the edge of the paving or to the edge of the cover, whichever is the lesser. U.C.A. shall not include eaves overhangs, sun shading, awnings and the like where these do not relate to the clearly defined trafficable areas, nor shall it include connecting or isolated covered ways.

4.2 SCHEDULE

Location	GFA
Warehouse 2A	47,870 m ²
Mezzanine 2A	21,951 m ²
Offices & Amenities 2A	1,998 m²
Dock Offices 2A	384 m²
Warehouse 2C	5,696 m ²
Mezzanine 2C	2,495 m ²
Offices & Amenities 2C	299 m²
Warehouse 2D	5,338 m ²
Mezzanine 2D	2,294 m ²
Offices & Amenities 2D	300 m ²
Warehouse 2E	5,657 m ²
Mezzanine 2E	2,476 m ²
Offices & Amenities 2E	299 m²
TOTAL	97,057 m ²

	APPENDIX A: ESTIMATE DETAILS



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Summary GFA: Gross Floor Area

Location			GFA m²	Cost/m²	WH 2A	WH 2C, 2D & 2E	Total Cost
A SITE PR	REPARATION						
	molition (Precinct 2)				2,495	876	3,371
	e Preparation (Precinct	t 2)			5,150,255	1,809,549	6,959,804
	vil Works (Road No. 3)	,			918,001	322,541	1,240,542
	A	- SITE PREPARATION			\$6,070,751	\$2,132,966	\$8,203,717
B BUILDIN	NG WORKS						
B1 Wa	arehouse (2A)		47,870	864	41,349,946		41,349,946
	fices & Amenities (2A)		1,998	1,913	3,821,299		3,821,299
B4 Do	ck Offices (2A)		384	1,631	626,337		626,337
B5 Wa	arehouse (2C)		5,696	531	,	3,026,497	3,026,497
B7 Off	fices & Amenities (2C)		299	2,151		643,118	643,118
B8 Wa	arehouse (2D)		5,338	526		2,806,276	2,806,276
B10 Off	fices & Amenities (2D)		300	2,148		644,544	644,544
B11 Wa	arehouse (2E)		5,657	535		3,025,828	3,025,828
B13 Off	fices & Amenities (2E)		299	1,800		538,261	538,261
		B - BUILDING WORKS	97,057	\$582	\$45,797,582	\$10,684,524	\$56,482,106
C EXTERN	NAL WORKS						
C1 Ca	rpark 2C,D,E					496,331	496,331
C2 Ha	rdstand 2A				2,969,352		2,969,352
C3 Lar	ndscaping & External V	Vorks			1,643,174	577,332	2,220,506
C4 Sei	rvices Infrastructure				670,820	235,693	906,513
C5 Ca	rpark Warehouse 2A				597,595		597,595
C6 Ha	rdstand 2C,D,E					1,135,925	1,135,925
	C	- EXTERNAL WORKS			\$5,880,941	\$2,445,281	\$8,326,222
	E	ESTIMATED NET COST	97,057	\$752	\$57,749,274	\$15,262,771	\$73,012,045
MARGINS 8	& ADJUSTMENTS						
Design Con	itingency	10.0%			\$5,774,927	\$1,526,277	\$7,301,205
-	n Contingency				Excl.		Excl.
Professiona	al Fees - Planning Phas	se 5.0%			\$3,176,210	\$839,452	\$4,015,662
Professional Fees - Delivery Phase 5.0%				\$3,335,021	\$881,425	\$4,216,446	
Authority Fe	ees & Charges				Excl.	Excl.	Excl.
ESTIMATE	D TOTAL COST (EXC	L. GST)	97,057	\$912	\$70,035,432	\$18,509,926	\$88,545,358
Goods & Se	ervices Tax (GST)	10.0%			\$7,003,543	\$1,850,993	\$8,854,536
	ESTIMATE	D TOTAL COST	97,057	\$1,004	\$77,038,975	\$20,360,919	\$97,399,893



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
Α	SITE PREPARATION				
A1	Demolition (Precinct 2)				
ΧP	SITE PREPARATION				
172	Demolish and dispose section of existing road	Item			3,000
	SITE PREPARATION				\$3,000
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			241
	PRELIMINARIES				\$241
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			130
	BUILDERS MARGIN & OVERHEAD				\$130
	DEMOLITION (PRECINCT 2)				\$3,371
Α	SITE PREPARATION				
A2	Site Preparation (Precinct 2)				
ΧP	SITE PREPARATION				
174	Allowance to remove existing trees	Item			5,000
	Allowance for de-watering	Item			50,000
176	Removal of hazardous materials	Note			Excl.
177	Excavation in rock	Note			Excl.
178	Contaminated material	Note			Excl.
179	Allowance for tree protection	Item			5,000
180	Allowance for sediment and erosion control	Item			100,000
181	Allowance for treatment of soft spots	Note			Excl.
182	Dealing with heritage, cultural and archeological artifacts / findings	Note			Excl.
183	Strip 200mm topsoil and stockpile on site incl. clearing site	m²	121,724	2	243,448
	of vegetation				
	Ground compaction		121,724	2	243,448
440	Cut and fill across the site in OTR. Allowance of 3m depth	m³	365,172	9	3,286,548
	as per 2019 DA estimate SITE PREPARATION				\$3,933,444
ΧN	BOUNDARY WALLS, FENCING AND GATES				
438	Allowance for retaining walls to Warehouse Facility 2C,	m²	924	1,000	924,000
	including footings and all associated works				
	BOUNDARY WALLS, FENCING AND GATES				\$924,000
XK	EXTERNAL STORMWATER DRAINAGE				
439	Allowance for site stormwater drainage and reticulation,	m²	121,724	11	1,338,964
	and all associated works EXTERNAL STORMWATER DRAINAGE				\$1,338,964
PR	PRELIMINARIES				ψ1,000,004
	Builder's Preliminaries @ 8%	Item			495,712
	PRELIMINARIES				\$495,712
MA	BUILDERS MARGIN & OVERHEAD				7
	Builder's Margin & Overheads @ 4%	Item			267,684
-	BUILDERS MARGIN & OVERHEAD				\$267,684
					, ,



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
	SITE PREPARATION (PRECINCT 2)				\$6,959,804
Α	SITE PREPARATION				
А3	Civil Works (Road No. 3)				
XR	ROADS, FOOTPATHS AND PAVED AREAS				
209	Allowance for linemarking to road	Item			10,000
212	Proposed kerb and gutter (K&G)	m	419	120	50,280
300	Proposed flexible road pavement	m²	3,564	100	356,400
	ROADS, FOOTPATHS AND PAVED AREAS				\$416,680
XL	LANDSCAPING AND IMPROVEMENTS				
234	Allowance for soft landscaping to road nature verge	m²	2,014	10	20,140
276	Allowance for tree planting to nature verge	Item			15,000
	LANDSCAPING AND IMPROVEMENTS				\$35,140
XK	EXTERNAL STORMWATER DRAINAGE				
298	Allowance for drainage pits	No	9	4,000	36,000
442	Allowance to connect into existing drainage system	Item			50,000
443	Allowance for drainage line	m	829	450	373,050
	EXTERNAL STORMWATER DRAINAGE				\$459,050
XD	EXTERNAL SEWER DRAINAGE				
289	Allowance for sewer line	m	618	200	123,600
290	Allowance to connect into existing	Item			50,000
444	Allowance for sewer junction pits 1500 x 1500mm	No	4	5,000	20,000
	EXTERNAL SEWER DRAINAGE				\$193,600
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			88,358
	PRELIMINARIES				\$88,358
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			47,714
	BUILDERS MARGIN & OVERHEAD				\$47,714
	CIVIL WORKS (ROAD NO. 3)				\$1,240,542
В	BUILDING WORKS				
B1	Warehouse (2A)				
SB	SUBSTRUCTURE				
197	Allowance for footings to warehouses	m²	43,902	20	878,040
198	Reinforced concrete slab on ground incl. basecourse, reinforcement, barrier membrane and foundation beams	m²	43,902	100	4,390,200
	SUBSTRUCTURE			\$110/m²	\$5,268,240
CL	COLUMNS				
292	Allowance for columns to high bay warehouse (assume	t	526.82	5,400	2,844,828
	12kg/m2) COLUMNS			\$59/m²	\$2,844,828
UF	UPPER FLOORS			7 00/III	<i>+=,,</i> 020
271	Step platform to warehouse	m²	43,902	1	43,902
·	UPPER FLOORS		,	\$1/m²	\$43,902
				•	,



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Rates Current At October 2020

Des	cription	Unit	Qty	Rate	Total
sc	STAIRCASES				
265	Dock access stairs 1200mm wide incl. steel balustrade	M/R	6	2,500	15,000
	STAIRCASES			\$3/m²	\$15,000
RF	ROOF				
165	Prefinished metal deck roofing including sarking to awnings	m²	3,969	40	158,760
362	Extra over allowance for translucent sheet strips to	m²	4,391	10	43,910
188	warehouse . Notional allowance Roof framing and structure to warehouse (assume 8kg/m2)	t	351.21	5,400	1,896,534
	Structural steel to awning including support columns (allow	t	47.63	5,400	257,202
200	12kg/m2)	2	2.000	00	70.000
	Allowance for purlins to roof	m²	3,969	20	79,380
318	Birdmesh lining to awning soffit	m²	3,969	5	19,845
	Ridge capping	m	255	75 -	19,125
216	Additional allowance for rainwater goods to warehouse & awnings	m²	3,969	5	19,845
167	Allowance for roof safety system	m²	3,969	2	7,938
432	Allowance for roof drainage; gutters	m²	47,870	2	95,740
448	Allowance for composite roof sheeting to warehouse 2A	m²	44,069	130	5,728,970
	ROOF			\$174/m²	\$8,327,249
EW	EXTERNAL WALLS				
434	External wall for Warehouses precast concrete, 2.4m high wall to outside, including paint to the outside	m²	2,055	185	380,175
446	Allowance for wall sheeting to Warehouse (2A) insulated composite wall panels	m²	9,672	120	1,160,640
	EXTERNAL WALLS			\$32/m²	\$1,540,815
ED	EXTERNAL DOORS				
249	Allowance for 920 x 2040mm single leaf solid core door incl. frame, paint and hardware	No	21	1,500	31,500
391	Allowance for roller shutter doors; assume 2200 x 3100mm roller shutter door including dock sealer	No	13	5,000	65,000
	EXTERNAL DOORS			\$2/m²	\$96,500
FT	FITMENTS				
378	Allowance for misc. metalwork to warehouse	Item			Included
	Corporate Signage	Item			Excl.
382	Truck queueing digital display board	Item			Excl.
	FITMENTS				\$0
HS	HYDRAULIC SERVICES				
331	Allowance for general hydraulic services to warehouse including the provision of hydrants and hose reels	m²	43,902	12	526,824
05	HYDRAULIC SERVICES			\$11/m²	\$526,824
SF	SANITARY FIXTURES Allowages for conitary fixtures to warehouses	Item			E 000
430	Allowance for sanitary fixtures to warehouses	петп		# 4/2	5,000
MO	SANITARY FIXTURES			\$1/m²	\$5,000
MS 335	MECHANICAL SERVICES Allowance for Airconditioning to Warehouse	m²	43,902	180	7,902,360
555	•	***	10,002		
	MECHANICAL SERVICES			\$180/m2	\$7,902,360

FP FIRE PROTECTION



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
341	Allowance for fire protection to awnings - allowed for	m²	3,969	50	198,450
	sprinkler installation				
	Allowance for fire protection to warehouse	m²	43,902	50	2,195,100
348	Allowance for in rack sprinklers - provisional sum	m²	47,870	100	4,787,000
	FIRE PROTECTION			\$150/m²	\$7,180,550
LP	ELECTRIC LIGHT AND POWER	2	40.000	=0	0.400.044
353	Allowance for power and lighting to warehouse	m²	43,902	72	3,160,944
427	Allowance for power and lighting to awnings	m²	3,969	70	277,830
DW	ELECTRIC LIGHT AND POWER			\$72/m²	\$3,438,774
BW	BUILDERS WORK IN CONNECTION WITH SERVICES	14			000 000
363	BWIC	Item		40/ 3	266,822
20	BUILDERS WORK IN CONNECTION WITH SERVICES			\$6/m²	\$266,822
PR	PRELIMINARIES Duilded Decline in a circa © 00/	14			0.507.077
142	Builder's Preliminaries @ 8% PRELIMINARIES	Item		\$53/m²	2,527,977
MA	BUILDERS MARGIN & OVERHEAD			φυ3/111-	\$2,527,977
		Item			1,365,105
143	Builder's Margin & Overheads @ 4% BUILDERS MARGIN & OVERHEAD	пеш		\$29/m²	
	WAREHOUSE (2A)			\$29/III ⁻ \$747/m²	\$1,365,105 \$41,349,946
	WAREHOUSE (2A)			φ/4////	φ41,349,940
В	BUILDING WORKS				
B3	Offices & Amenities (2A)				
SB	SUBSTRUCTURE				
153	Allowance for foundations to offices	m²	999	50	49,950
155	Reinforced concrete slab on ground incl. basecourse,	m²	999	100	99,900
	reinforcement, barrier membrane and foundation beams to				
	offices SUBSTRUCTURE			\$75/m²	\$149,850
CL	COLUMNS			φ/ 3/111	φ149,030
	Allowance for columns to office	m²	1,998	40	79,920
100	COLUMNS	111	1,990	\$40/m²	\$ 79,920
UF	UPPER FLOORS			φ 4 0/111	Ψ10,020
157	Reinforced concrete suspended slab to office	m²	999	245	244,755
	UPPER FLOORS	•••	000	\$122/m²	\$244,755
sc	STAIRCASES			4.122	<i>4211,100</i>
305	1500mm wide stairs to office incl. glazed balustrade	M/R	8	3,500	28,000
	STAIRCASES			\$14/m²	\$28,000
RF	ROOF			r	, ,,,,,,,
161	Prefinished metal deck roofing including sarking and	m²	999	50	49,950
	insulation to offices				
362	Extra over allowance for translucent sheet strips to	m²	200	10	2,000
163	warehouse . Notional allowance Roof framing and structure to office (assume 8kg/m2)	t	7.99	5,400	43,146
	Allowance for purlins to roof	m²	999	20	19,980
	Additional allowance for rain water goods to office	m²	999	5	4,995
	Allowance for roof safety system	m²	999	2	1,998
101	, memanos for root saloty system	111	555	_	1,000



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
432	Allowance for roof drainage; gutters	m²	999	2	1,998
702	ROOF	•••	555	\$62/m²	\$124,067
EW	EXTERNAL WALLS				
435	External wall for offices comprising a combination of precast concrete, insulated wall panel and prefinished	m²	500	400	200,000
	metal wall sheeting EXTERNAL WALLS			\$100/m²	\$200,000
ww	WINDOWS				
404	Allowance for windows to Office and amenities	m²	1,998	128	255,744
	WINDOWS			\$128/m²	\$255,744
ED	EXTERNAL DOORS				
405	Allowance for external doors to Office and amenities	m²	1,998	4	7,992
	EXTERNAL DOORS			\$4/m²	\$7,992
NW	INTERNAL WALLS	2	4 000	100	000 700
406	Provisional allowance for internal walls including	m²	1,998	120	239,760
	INTERNAL WALLS			\$120/m²	\$239,760
NS	INTERNAL SCREENS AND BORROWED LIGHTS	2	4.000	0.4	47.050
408	Allowance for interal screens such as toilet and shower partitions, including door and hardware	m²	1,998	24	47,952
	INTERNAL SCREENS AND BORROWED LIGHTS			\$24/m²	\$47,952
ND	INTERNAL DOORS				
433	Provisional allowance for internal doors	m²	1,998	12	23,976
	INTERNAL DOORS			\$12/m²	\$23,976
WF	WALL FINISHES				
409	Allowance for wall finishes to office and amenities	m²	1,998	56	111,888
	WALL FINISHES			\$56/m²	\$111,888
FF	FLOOR FINISHES				
410	Allowance for floor finishes to office and amenities	m²	1,998	87	173,826
	FLOOR FINISHES			\$87/m²	\$173,826
CF	CEILING FINISHES	2	4.000	00	450.040
411	Allowance for ceiling finishes to office and amenities	m²	1,998	80	159,840
	CEILING FINISHES			\$80/m²	\$159,840
FT	FITMENTS Provisional allowance for fitments to office and amenities.	m²	1,998	74	147,852
412	Loose FF&E excluded	III	1,990	74	147,032
	FITMENTS			\$74/m²	\$147,852
SE	SPECIAL EQUIPMENT				
413	Provisional allowance for special equipment to office and	m²	1,998	36	71,928
	amenities- i.e kitchen SPECIAL EQUIPMENT			\$36/m²	\$71,928
нѕ	HYDRAULIC SERVICES			φ30/111	Ψ11,320
_	Allowance for hydraulic services i.e to washrooms and	m²	1,998	100	199,800
	toilets . Including floor wastes and associated pipework HYDRAULIC SERVICES		.,000	\$100/m²	\$199,800
SF	SANITARY FIXTURES				
415	Allowance for sanitary fixtures to office and amenities	m²	1,998	33	65,934



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
	SANITARY FIXTURES			\$33/m²	\$65,934
MS	MECHANICAL SERVICES				
416	Allowance for mechanical services to Offices (HVAC)	m²	1,998	180	359,640
	MECHANICAL SERVICES			\$180/m²	\$359,640
FP	FIRE PROTECTION				
417	Allowance for fire protection to office - allowed for sprinkler installation	m²	1,998	60	119,880
	FIRE PROTECTION			\$60/m²	\$119,880
LP	ELECTRIC LIGHT AND POWER				
418	Allowance for lighting and power to office	m²	1,998	100	199,800
419	Allowance for security / CCTV / access control to office	m²	1,998	25	49,950
437	Allowance for MHE charging unit. Provisional allowance	m²	1,998	100	199,800
	ELECTRIC LIGHT AND POWER			\$225/m²	\$449,550
TS	TRANSPORTATION SYSTEMS				
430	Allowance for passenger lifts	No	2	70,000	140,000
	TRANSPORTATION SYSTEMS			\$70/m²	\$140,000
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			272,172
	PRELIMINARIES			\$136/m²	\$272,172
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			146,973
	BUILDERS MARGIN & OVERHEAD			\$74/m²	\$146,973
	OFFICES & AMENITIES (2A)			\$1,913/m²	\$3,821,299
В	BUILDING WORKS				
B4	Dock Offices (2A)				
SB	SUBSTRUCTURE				
153	Allowance for foundations to offices	m²	192	50	9,600
	SUBSTRUCTURE			\$25/m²	\$9,600
CL	COLUMNS				
159	Allowance for columns to office	m²	384	40	15,360
	COLUMNS			\$40/m²	\$15,360
sc	STAIRCASES				
305	1500mm wide stairs to office incl. glazed balustrade	M/R	4	3,500	14,000
	STAIRCASES			\$36/m²	\$14,000
RF	ROOF				
161	Prefinished metal deck roofing including sarking and insulation to offices	m²	192	50	9,600
163	Roof framing and structure to office (assume 8kg/m2)	t	1.54	5,400	8,316
329	Allowance for purlins to roof	m²	192	20	3,840
167	Allowance for roof safety system	m²	192	2	384
	ROOF			\$58/m²	\$22,140
EW	EXTERNAL WALLS				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Desc	cription	Unit	Qty	Rate	Total
435	External wall for offices comprising a combination of precast concrete, insulated wall panel and prefinished	m²	96	400	38,400
	metal wall sheeting EXTERNAL WALLS			\$100/m²	\$38,400
ww	WINDOWS			,	700,100
404	Allowance for windows to Office and amenities	m²	384	128	49,152
	WINDOWS			\$128/m²	\$49,152
ED	EXTERNAL DOORS				
405	Allowance for external doors to Office and amenities	m²	384	4	1,536
	EXTERNAL DOORS			\$4/m²	<i>\$1,536</i>
NW	INTERNAL WALLS				
406	Provisional allowance for internal walls including	m²	384	120	46,080
	INTERNAL WALLS			\$120/m²	\$46,080
NS	INTERNAL SCREENS AND BORROWED LIGHTS				
408	Allowance for interal screens such as toilet and shower partitions, including door and hardware	m²	384	24	9,216
ND	INTERNAL SCREENS AND BORROWED LIGHTS			\$24/m²	\$9,216
ND 433	INTERNAL DOORS Provisional allowance for internal doors	m²	384	12	4,608
433		111	304	\$12/m²	
WF	WALL FINISHES			φ12/III ⁻	\$4,608
409	Allowance for wall finishes to office and amenities	m²	384	56	21,504
409	WALL FINISHES	111	304	\$56/m²	\$21,504
FF	FLOOR FINISHES			φουπι	Ψ21,304
410	Allowance for floor finishes to office and amenities	m²	384	87	33,408
	FLOOR FINISHES		• • • • • • • • • • • • • • • • • • • •	\$87/m²	\$33,408
CF	CEILING FINISHES			*	400,100
411	Allowance for ceiling finishes to office and amenities	m²	384	80	30,720
	CEILING FINISHES			\$80/m²	\$30,720
FT	FITMENTS				
412	Provisional allowance for fitments to office and amenities. Loose FF&E excluded	m²	384	74	28,416
	FITMENTS			\$74/m²	\$28,416
HS	HYDRAULIC SERVICES				
414	Allowance for hydraulic services i.e to washrooms and toilets . Including floor wastes and associated pipework HYDRAULIC SERVICES	m²	384	100	38,400
CE.	SANITARY FIXTURES			\$100/m²	\$38,400
SF	Allowance for sanitary fixtures to office and amenities	m²	384	33	12,672
415	SANITARY FIXTURES	111	304	აა \$33/m²	\$12,672
MS	MECHANICAL SERVICES			φυσ/ΙΙΙ	Ψ12,012
	Allowance for mechanical services to Offices (HVAC)	m²	384	180	69,120
410	MECHANICAL SERVICES	""	304	\$180/m²	\$ 69,120
FP	FIRE PROTECTION			φ ι ΟΟ/ΠΙ	φυσ, Ι Ζ Ο
417	Allowance for fire protection to office - allowed for sprinkler installation	m²	384	60	23,040



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
	FIRE PROTECTION			\$60/m²	\$23,040
LP	ELECTRIC LIGHT AND POWER				
418	Allowance for lighting and power to office	m²	384	100	38,400
419	Allowance for security / CCTV / access control to office	m²	384	25	9,600
437	Allowance for MHE charging unit. Provisional allowance	m²	384	100	38,400
	ELECTRIC LIGHT AND POWER			\$225/m²	\$86,400
BW	BUILDERS WORK IN CONNECTION WITH SERVICES				
363	BWIC	Item			4,340
	BUILDERS WORK IN CONNECTION WITH SERVICES			\$11/m²	<i>\$4,340</i>
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			44,302
	PRELIMINARIES			\$115/m²	\$44,302
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item		4	23,923
	BUILDERS MARGIN & OVERHEAD			\$62/m²	\$23,923
	DOCK OFFICES (2A)			\$1,631/m²	\$626,337
В	BUILDING WORKS				
B5	Warehouse (2C)				
SB	SUBSTRUCTURE				
197	Allowance for footings to warehouses	m²	4,989	20	99,780
198	Reinforced concrete slab on ground incl. basecourse,	m²	4,989	100	498,900
	reinforcement, barrier membrane and foundation beams SUBSTRUCTURE			\$105/m²	\$598,680
CL	COLUMNS			φ105/111-	<i>\$390,000</i>
	Allowance for columns to high bay warehouse (assume	t	59.87	5,400	323,298
202	12kg/m2)		00.07	0,400	020,200
	COLUMNS			\$57/m²	\$323,298
UF	UPPER FLOORS				
271	Step platform to warehouse	m²	4,989	1	4,989
	UPPER FLOORS			\$1/m²	<i>\$4,</i> 989
SC	STAIRCASES				
206	1200mm wide external stairs incl. steel balustrade	M/R	4	2,000	8,000
265	Dock access stairs 1200mm wide incl. steel balustrade	M/R	2	2,500	5,000
	STAIRCASES			\$6/m²	\$13,000
RF	ROOF	_			
	Prefinished metal deck roofing including sarking and insulation to warehouses	m²	4,989	50	249,450
	Prefinished metal deck roofing including sarking to awnings	m²	707	40	28,280
362	Extra over allowance for translucent sheet strips to warehouse . Notional allowance	m²	499	10	4,990
188	Roof framing and structure to warehouse (assume 8kg/m2)	t	39.91	5,400	215,514
192	Structural steel to awning including support columns (allow	t	8.48	5,400	45,792
320	12kg/m2) Allowance for purlins to roof	m²	5,696	20	113,920
	Birdmesh lining to awning soffit	m²	5,696 707	20 5	3,535
510	Diramestrining to awriting some	111	101	J	3,333



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
103	Ridge capping	m	68	75	5,100
	Additional allowance for rainwater goods to warehouse & awnings	m²	5,696	5	28,480
167	Allowance for roof safety system	m²	5,696	2	11,392
432	Allowance for roof drainage; gutters	m²	5,696	2	11,392
	ROOF			\$126/m²	\$717,845
EW	EXTERNAL WALLS				
	External wall for Warehouses precast concrete, 2.4m high wall to outside, including paint to the outside	m²	503	185	93,055
447	Allowance for wall sheeting to Warehouses 2C,D and E	m²	2,434	40	97,360
-	EXTERNAL BOORS			\$33/m²	\$190,415
ED	Allowance for 020 v 2040mm single loof solid core door	No	1	1 500	6 000
249	Allowance for 920 x 2040mm single leaf solid core door incl. frame, paint and hardware	No	4	1,500	6,000
391	Allowance for roller shutter doors; assume 2200 x 3100mm roller shutter door including dock sealer	No	4	5,000	20,000
	EXTERNAL DOORS			\$5/m²	\$26,000
NW	INTERNAL WALLS				
445	Allowance for intertenancy wall precast concrete 2.4m high, not painted	m²	178	175	31,150
	INTERNAL WALLS			\$5/m²	\$31,150
FT	Allowance for mice, metalwark to warehouse	lta na			المماريمام ما
378 380	Allowance for misc. metalwork to warehouse Corporate Signage	Item Item			Included Excl.
	Truck queueing digital display board	Item			Excl.
302	FITMENTS	псп			\$0
HS	HYDRAULIC SERVICES				Ψ
	Allowance for general hydraulic services to energy complex	m²	4,989	15	74,835
	including the provision of hydrants and hose reels HYDRAULIC SERVICES			\$13/m²	\$74,835
SF	SANITARY FIXTURES				
436	Allowance for sanitary fixtures to warehouses	Item			5,000
	SANITARY FIXTURES			\$1/m²	\$5,000
FP	FIRE PROTECTION				
	Allowance for fire protection to awnings - allowed for sprinkler installation	m²	707	50	35,350
345	Allowance for fire protection to warehouse	m²	4,989	50	249,450
	FIRE PROTECTION			\$50/m²	\$284,800
LP	ELECTRIC LIGHT AND POWER	•	4.000	70	050.000
	Allowance for power and lighting to warehouse	m²	4,989	72	359,208
427	Allowance for power and lighting to awnings	m²	707	70	49,490
DW	ELECTRIC LIGHT AND POWER			\$72/m²	\$408,698
363	BUILDERS WORK IN CONNECTION WITH SERVICES BWIC	Item			15,367
303	BUILDERS WORK IN CONNECTION WITH SERVICES	ILCIII		\$3/m²	\$15,367
PR	PRELIMINARIES			ΨΟ/ΙΙΙ	ψ10,307
142		Item			215,857



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
	PRELIMINARIES			\$38/m²	\$215,857
MA	BUILDERS MARGIN & OVERHEAD			·	, ,
143	Builder's Margin & Overheads @ 4%	Item			116,563
	BUILDERS MARGIN & OVERHEAD			\$20/m²	\$116,563
	WAREHOUSE (2C)			\$535/m²	\$3,026,497
В	BUILDING WORKS				
B7	Offices & Amenities (2C)				
SB	SUBSTRUCTURE				
153	Allowance for foundations to offices	m²	150	50	7,500
155	Reinforced concrete slab on ground incl. basecourse, reinforcement, barrier membrane and foundation beams to	m²	150	100	15,000
	offices SUBSTRUCTURE			\$75/m²	\$22,500
CL	COLUMNS				,
159	Allowance for columns to office	m²	299	40	11,960
	COLUMNS			\$40/m²	\$11,960
UF	UPPER FLOORS				
157	Reinforced concrete suspended slab to office	m²	150	245	36,750
	UPPER FLOORS			\$123/m²	\$36,750
sc	STAIRCASES				
305	1500mm wide stairs to office incl. glazed balustrade	M/R	4	3,500	14,000
D E	STAIRCASES			\$47/m²	\$14,000
RF	ROOF Drafinished metal dealy reafing including parking and	m²	150	50	7 500
101	Prefinished metal deck roofing including sarking and insulation to offices	m²	150	50	7,500
362	Extra over allowance for translucent sheet strips to warehouse . Notional allowance	m²	30	10	300
163	Roof framing and structure to office (assume 8kg/m2)	t	1.20	5,400	6,480
	Allowance for purlins to roof	m²	150	20	3,000
	Additional allowance for rain water goods to office	m²	150	5	750
	Allowance for roof safety system	m²	150	2	300
432	Allowance for roof drainage; gutters	m²	150	2	300
	ROOF			\$62/m²	\$18,630
EW	EXTERNAL WALLS	2		400	
435	External wall for offices comprising a combination of precast concrete, insulated wall panel and prefinished metal wall sheeting	m²	75	400	30,000
	EXTERNAL WALLS			\$100/m²	\$30,000
ww	WINDOWS				
404	Allowance for windows to Office and amenities	m²	299	128	38,272
	WINDOWS			\$128/m²	\$38,272
ED	EXTERNAL DOORS				
405	Allowance for external doors to Office and amenities	m²	299	4	1,196
	EXTERNAL DOORS			\$4/m²	\$1,196
NW	INTERNAL WALLS				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
406	Provisional allowance for internal walls including INTERNAL WALLS	m²	299	120 \$120/m²	35,880 \$35,880
NS	INTERNAL SCREENS AND BORROWED LIGHTS				,
408	Allowance for interal screens such as toilet and shower partitions, including door and hardware	m²	299	24	7,176
	INTERNAL SCREENS AND BORROWED LIGHTS			\$24/m²	\$7,176
ND	INTERNAL DOORS				
433		m²	299	12	3,588
147	INTERNAL DOORS			\$12/m²	\$3,588
WF 409	WALL FINISHES Allowance for wall finishes to office and amenities	m²	299	56	16 744
409	WALL FINISHES	111-	299	\$56/m²	16,744 \$16,744
FF	FLOOR FINISHES			ψ30/111	Ψ10,144
410	Allowance for floor finishes to office and amenities	m²	299	87	26,013
	FLOOR FINISHES			\$87/m²	\$26,013
CF	CEILING FINISHES				
411	Allowance for ceiling finishes to office and amenities	m²	299	80	23,920
	CEILING FINISHES			\$80/m²	\$23,920
FT	FITMENTS				
412	Provisional allowance for fitments to office and amenities. Loose FF&E excluded	m²	299	74	22,126
	FITMENTS			\$74/m²	\$22,126
SE	SPECIAL EQUIPMENT				
413	Provisional allowance for special equipment to office and amenities- i.e kitchen	m²	299	36	10,764
	SPECIAL EQUIPMENT			\$36/m²	\$10,764
HS	HYDRAULIC SERVICES				
414	,	m²	299	100	29,900
	toilets . Including floor wastes and associated pipework HYDRAULIC SERVICES			\$100/m²	\$29,900
SF	SANITARY FIXTURES				,
415	Allowance for sanitary fixtures to office and amenities	m²	299	33	9,867
	SANITARY FIXTURES			\$33/m²	\$9,867
MS	MECHANICAL SERVICES				
416	Allowance for mechanical services to Offices (HVAC)	m²	299	180	53,820
ED	MECHANICAL SERVICES			\$180/m²	\$53,820
FP	FIRE PROTECTION Allowance for fire protection to office allowed for enripkler	m²	299	60	17,940
417	Allowance for fire protection to office - allowed for sprinkler installation	Ш	299	00	17,940
	FIRE PROTECTION			\$60/m²	\$17,940
LP	ELECTRIC LIGHT AND POWER				
418		m²	299	100	29,900
	Allowance for security / CCTV / access control to office	m²	299	25	7,475
43/	Allowance for MHE charging unit. Provisional allowance ELECTRIC LIGHT AND POWER	m²	299	100 \$225/m²	29,900 \$67,375
TS	TRANSPORTATION SYSTEMS			\$225/m²	\$67,275
13	INANGPURTATION STSTEMS				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
430	Allowance for passenger lifts **TRANSPORTATION SYSTEMS**	No	1	70,000 \$234/m ²	70,000 \$70,000
BW	BUILDERS WORK IN CONNECTION WITH SERVICES BWIC	Item		,_,,,,,	4,779
	BUILDERS WORK IN CONNECTION WITH SERVICES	пеш		\$16/m²	\$4,779
PR 142	PRELIMINARIES Builder's Preliminaries @ 8%	Item			45,466
MA	PRELIMINARIES BUILDERS MARGIN & OVERHEAD			\$152/m²	\$45,466
143	Builder's Margin & Overheads @ 4% BUILDERS MARGIN & OVERHEAD	Item		\$82/m²	24,552 \$24,552
	OFFICES & AMENITIES (2C)			\$2,151/m²	\$643,118
В	BUILDING WORKS				
B8	Warehouse (2D)				
SB	SUBSTRUCTURE				
197	Allowance for footings to warehouses	m²	4,588	20	91,760
198	Reinforced concrete slab on ground incl. basecourse, reinforcement, barrier membrane and foundation beams	m²	4,588	100	458,800
	SUBSTRUCTURE			\$103/m²	\$550,560
CL	COLUMNS		FF 06	E 400	207 224
292	Allowance for columns to high bay warehouse (assume 12kg/m2) COLUMNS	t	55.06	5,400	297,324
UF	UPPER FLOORS			\$56/m²	\$297,324
271	Step platform to warehouse	m²	4,588	1	4,588
211	UPPER FLOORS		4,000	\$1/m²	\$ 4,588
sc	STAIRCASES			Ψ1/111	Ψ-1,000
	1200mm wide external stairs incl. steel balustrade	M/R	8	2,000	16,000
265	Dock access stairs 1200mm wide incl. steel balustrade	M/R	2	2,500	5,000
	STAIRCASES			\$8/m²	\$21,000
RF	ROOF				
186	Prefinished metal deck roofing including sarking and insulation to warehouses	m²	4,588	50	229,400
165	Prefinished metal deck roofing including sarking to awnings	m²	750	40	30,000
362	Extra over allowance for translucent sheet strips to warehouse . Notional allowance	m²	459	10	4,590
	Roof framing and structure to warehouse (assume 8kg/m2)	t	36.71	5,400	198,234
	Structural steel to awning including support columns (allow 12kg/m2)	t	9.00	5,400	48,600
	Allowance for purlins to roof	m²	5,338	20	106,760
	Birdmesh lining to awning soffit	m²	750	5	3,750
	Ridge capping	m 2	62	75	4,650
216	Additional allowance for rainwater goods to warehouse & awnings	m²	5,338	5	26,690
167	Allowance for roof safety system	m²	5,338	2	10,676



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
432	Allowance for roof drainage; gutters	m²	5,338	2	10,676
	ROOF			\$126/m²	\$674,026
EW	EXTERNAL WALLS				
434	External wall for Warehouses precast concrete, 2.4m high	m²	477	185	88,245
447	wall to outside, including paint to the outside Allowance for wall sheeting to Warehouses 2C,D and E	m²	1,706	40	68,240
	EXTERNAL WALLS			\$29/m²	\$156,485
ED	EXTERNAL DOORS				
249	Allowance for 920 x 2040mm single leaf solid core door	No	4	1,500	6,000
391	incl. frame, paint and hardware Allowance for roller shutter doors; assume 2200 x 3100mm roller shutter door including dock sealer	No	4	5,000	20,000
	EXTERNAL DOORS			\$5/m²	\$26,000
FT	FITMENTS				
378	Allowance for misc. metalwork to warehouse	Item			Included
380	Corporate Signage	Item			Excl.
382	Truck queueing digital display board	Item			Excl.
	FITMENTS				\$0
SE	SPECIAL EQUIPMENT				
239	Allowance for dock levellers	No	4	11,000	44,000
	SPECIAL EQUIPMENT			\$8/m²	\$44,000
HS	HYDRAULIC SERVICES	2	4.500	40	55.050
331	Allowance for general hydraulic services to warehouse including the provision of hydrants and hose reels HYDRAULIC SERVICES	m²	4,588	12 \$10/m²	55,056 \$55,056
SF	SANITARY FIXTURES			,	, , , , , , ,
436	Allowance for sanitary fixtures to warehouses	Item			5,000
	SANITARY FIXTURES			\$1/m²	\$5,000
FP	FIRE PROTECTION				
341	Allowance for fire protection to awnings - allowed for sprinkler installation	m²	750	50	37,500
345	Allowance for fire protection to warehouse	m²	4,588	50	229,400
	FIRE PROTECTION			\$50/m²	\$266,900
LP	ELECTRIC LIGHT AND POWER				
353	Allowance for power and lighting to warehouse	m²	4,588	72	330,336
427	Allowance for power and lighting to awnings	m²	750	70	52,500
	ELECTRIC LIGHT AND POWER			\$72/m²	\$382,836
BW	BUILDERS WORK IN CONNECTION WITH SERVICES				
363	BWIC	Item			14,096
PR	BUILDERS WORK IN CONNECTION WITH SERVICES PRELIMINARIES			\$3/m²	\$14,096
142	Builder's Preliminaries @ 8%	Item			200,263
	PRELIMINARIES			\$38/m²	\$200,263
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			108,142
	BUILDERS MARGIN & OVERHEAD			\$20/m²	\$108,142



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
	WAREHOUSE (2D)			\$529/m²	\$2,806,276
В	BUILDING WORKS				
B10	Offices & Amenities (2D)				
SB	SUBSTRUCTURE				
153	Allowance for foundations to offices	m²	150	50	7,500
155	Reinforced concrete slab on ground incl. basecourse, reinforcement, barrier membrane and foundation beams to	m²	150	100	15,000
	offices SUBSTRUCTURE			\$75/m²	\$22,500
CL	COLUMNS			*******	, ,
159	Allowance for columns to office	m²	300	40	12,000
	COLUMNS			\$40/m²	\$12,000
UF	UPPER FLOORS				
157	Reinforced concrete suspended slab to office	m²	150	245	36,750
	UPPER FLOORS			\$122/m²	\$36,750
sc	STAIRCASES				
305	1500mm wide stairs to office incl. glazed balustrade	M/R	4	3,500	14,000
	STAIRCASES			\$47/m²	\$14,000
RF	ROOF				
161	Prefinished metal deck roofing including sarking and insulation to offices	m²	150	50	7,500
	Extra over allowance for translucent sheet strips to warehouse . Notional allowance	m²	30	10	300
	Roof framing and structure to office (assume 8kg/m2)	t	1.20	5,400	6,480
	Allowance for purlins to roof	m²	150	20	3,000
	Additional allowance for rain water goods to office	m²	150	5	750
	Allowance for roof safety system	m²	150	2	300
432	Allowance for roof drainage; gutters	m²	150	2	300
	ROOF			\$62/m²	\$18,630
EW	EXTERNAL WALLS	_			
435	External wall for offices comprising a combination of precast concrete, insulated wall panel and prefinished metal wall sheeting	m²	75	400	30,000
	EXTERNAL WALLS			\$100/m²	\$30,000
ww	WINDOWS				
404	Allowance for windows to Office and amenities	m²	300	128	38,400
	WINDOWS			\$128/m²	\$38,400
ED	EXTERNAL DOORS				
405	Allowance for external doors to Office and amenities	m²	300	4	1,200
	EXTERNAL DOORS			\$4/m²	\$1,200
NW	INTERNAL WALLS				
406	Provisional allowance for internal walls including	m²	300	120	36,000
	INTERNAL WALLS			\$120/m²	\$36,000
NS	INTERNAL SCREENS AND BORROWED LIGHTS				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
408	Allowance for interal screens such as toilet and shower partitions, including door and hardware INTERNAL SCREENS AND BORROWED LIGHTS	m²	300	24 \$24/m ²	7,200 \$7,200
ND	INTERNAL DOORS			r	, ,
433	Provisional allowance for internal doors INTERNAL DOORS	m²	300	12 \$12/m²	3,600 \$3,600
WF	WALL FINISHES				
409	Allowance for wall finishes to office and amenities WALL FINISHES	m²	300	56 \$56/m²	16,800 \$16,800
FF	FLOOR FINISHES				
410	Allowance for floor finishes to office and amenities FLOOR FINISHES	m²	300	87 \$87/m²	26,100 \$26,100
CF	CEILING FINISHES				
411	Allowance for ceiling finishes to office and amenities CEILING FINISHES	m²	300	80 \$80/m²	24,000 \$24,000
FT	FITMENTS				
412	Provisional allowance for fitments to office and amenities. Loose FF&E excluded	m²	300	74	22,200
	FITMENTS			\$74/m²	\$22,200
SE 413	SPECIAL EQUIPMENT Provisional allowance for special equipment to office and amenities- i.e kitchen	m²	300	36	10,800
	SPECIAL EQUIPMENT			\$36/m²	\$10,800
HS	HYDRAULIC SERVICES				
414	Allowance for hydraulic services i.e to washrooms and toilets . Including floor wastes and associated pipework HYDRAULIC SERVICES	m²	300	100 \$100/m²	30,000 \$30,000
SF	SANITARY FIXTURES			Ψ100/111	ψου,σου
415	Allowance for sanitary fixtures to office and amenities SANITARY FIXTURES	m²	300	33 \$33/m²	9,900 \$9,900
MS	MECHANICAL SERVICES				
416	Allowance for mechanical services to Offices (HVAC)	m²	300	180	54,000
	MECHANICAL SERVICES			\$180/m²	\$54,000
FP	FIRE PROTECTION				
417	Allowance for fire protection to office - allowed for sprinkler installation	m²	300	60	18,000
LP	FIRE PROTECTION ELECTRIC LIGHT AND POWER			\$60/m²	\$18,000
	Allowance for lighting and power to office	m²	300	100	30,000
419		m²	300	25	7,500
	Allowance for MHE charging unit. Provisional allowance	m²	300	100	30,000
	ELECTRIC LIGHT AND POWER			\$225/m²	\$67,500
TS	TRANSPORTATION SYSTEMS				
430	Allowance for passenger lifts	No	1	70,000	70,000
	TRANSPORTATION SYSTEMS			\$233/m²	\$70,000
BW	BUILDERS WORK IN CONNECTION WITH SERVICES				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Rates Current At October 2020

Des	cription	Unit	Qty	Rate	Total
363	BWIC	Item			4,791
	BUILDERS WORK IN CONNECTION WITH SERVICES			\$16/m²	\$4,791
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			45,567
	PRELIMINARIES			\$152/m²	\$45,567
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			24,606
	BUILDERS MARGIN & OVERHEAD			\$82/m²	\$24,606
	OFFICES & AMENITIES (2D)			\$2,148/m²	\$644,544
В	BUILDING WORKS				
B11	Warehouse (2E)				
SB	SUBSTRUCTURE				
197	Allowance for footings to warehouses	m²	4,951	20	99,020
198	Reinforced concrete slab on ground incl. basecourse, reinforcement, barrier membrane and foundation beams	m²	4,951	100	495,100
	SUBSTRUCTURE			\$105/m²	\$594,120
CL	COLUMNS				
292	Allowance for columns to high bay warehouse (assume 12kg/m2)	t	59.41	5,400	320,814
450		t	220.51		
	COLUMNS			\$57/m²	\$320,814
UF	UPPER FLOORS				
271	Step platform to warehouse	m²	4,951	1	4,951
	UPPER FLOORS			\$1/m²	\$4,951
SC	STAIRCASES				
265	Dock access stairs 1200mm wide incl. steel balustrade	M/R	2	2,500	5,000
	STAIRCASES			\$4/m²	\$5,000
RF	ROOF				
186	Prefinished metal deck roofing including sarking and insulation to warehouses	m²	4,951	50	247,550
165	Prefinished metal deck roofing including sarking to awnings	m²	706	40	28,240
	Extra over allowance for translucent sheet strips to warehouse . Notional allowance	m²	496	10	4,960
188	Roof framing and structure to warehouse (assume 8kg/m2)	t	39.61	5,400	213,894
	Structural steel to awning including support columns (allow	t	8.47	5,400	45,738
	12kg/m2) Allowance for purlins to roof	m²	5,657	20	113,140
	Birdmesh lining to awning soffit	m²	706	5	3,530
193	Ridge capping	m	64	75	4,800
	Additional allowance for rainwater goods to warehouse &	m²	5,657	5	28,285
40-	awnings	2		_	44.04.
	Allowance for roof drainage, gutters	m²	5,657	2	11,314
432	Allowance for roof drainage; gutters	m²	5,657	2 ¢136 /m²	11,314
	ROOF			\$126/m²	\$712,765

EW EXTERNAL WALLS



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Rates Current At October 2020

Des	cription	Unit	Qty	Rate	Total
434	External wall for Warehouses precast concrete, 2.4m high wall to outside, including paint to the outside	m²	678	185	125,430
447	Allowance for wall sheeting to Warehouses 2C,D and E	m²	2,431	40	97,240
	EXTERNAL WALLS			\$39/m²	\$222,670
ED	EXTERNAL DOORS				
249	Allowance for 920 x 2040mm single leaf solid core door incl. frame, paint and hardware	No	7	1,500	10,500
391	Allowance for roller shutter doors; assume 2200 x 3100mm roller shutter door including dock sealer	No	5	5,000	25,000
	EXTERNAL DOORS			\$6/m²	\$35,500
FT	FITMENTS				
378	Allowance for misc. metalwork to warehouse	Item			7,500
380	Corporate Signage	Item			Excl.
382	Truck queueing digital display board	Item			Excl.
	FITMENTS			\$1/m²	\$7,500
SE	SPECIAL EQUIPMENT				
239	Allowance for dock levellers	No	2	11,000	22,000
	SPECIAL EQUIPMENT			\$4/m²	\$22,000
HS	HYDRAULIC SERVICES				
331	Allowance for general hydraulic services to warehouse including the provision of hydrants and hose reels	m²	4,951	12	59,412
	HYDRAULIC SERVICES			\$11/m²	\$59,412
SF	SANITARY FIXTURES				
436	Allowance for sanitary fixtures to warehouses	Item			5,000
	SANITARY FIXTURES			\$1/m²	\$5,000
FP	FIRE PROTECTION				
341	Allowance for fire protection to awnings - allowed for sprinkler installation	m²	706	50	35,300
345	Allowance for fire protection to warehouse	m²	4,951	50	247,550
	FIRE PROTECTION			\$50/m²	\$282,850
LP	ELECTRIC LIGHT AND POWER				
353	Allowance for power and lighting to warehouse	m²	4,951	72	356,472
427	Allowance for power and lighting to awnings	m²	706	70	49,420
	ELECTRIC LIGHT AND POWER			\$72/m²	\$405,892
BW	BUILDERS WORK IN CONNECTION WITH SERVICES				
363	BWIC	Item			14,964
	BUILDERS WORK IN CONNECTION WITH SERVICES			\$3/m²	\$14,964
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			215,837
	PRELIMINARIES			\$38/m²	\$215,837
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			116,553
	BUILDERS MARGIN & OVERHEAD			\$21/m²	\$116,553
	WAREHOUSE (2E)			\$538/m²	\$3,025,828

B BUILDING WORKS



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
B13	Offices & Amenities (2E)				
SB	SUBSTRUCTURE				
	Allowance for foundations to offices	m²	299	50	14,950
155	Reinforced concrete slab on ground incl. basecourse, reinforcement, barrier membrane and foundation beams to offices	m²	299	100	29,900
DE	SUBSTRUCTURE			\$150/m²	\$44,850
RF	ROOF Drofinished metal deak reafing including earling and	m²	299	50	14.050
101	Prefinished metal deck roofing including sarking and insulation to offices	111	299	50	14,950
362	Extra over allowance for translucent sheet strips to warehouse . Notional allowance	m²	30	10	300
163	Roof framing and structure to office (assume 8kg/m2)	t	2.40	5,400	12,960
329	Allowance for purlins to roof	m²	299	20	5,980
170	Additional allowance for rain water goods to office	m²	299	5	1,495
	Allowance for roof safety system	m²	299	2	598
432	Allowance for roof drainage; gutters	m²	299	2	598
	ROOF			\$123/m²	\$36,881
EW	EXTERNAL WALLS				
435	External wall for offices comprising a combination of precast concrete, insulated wall panel and prefinished	m²	75	400	30,000
	metal wall sheeting EXTERNAL WALLS			\$100/m²	\$30,000
ww	WINDOWS			·	, ,
404	Allowance for windows to Office and amenities	m²	299	128	38,272
	WINDOWS			\$128/m²	\$38,272
ED	EXTERNAL DOORS				
405	Allowance for external doors to Office and amenities	m²	299	4	1,196
	EXTERNAL DOORS			\$4/m²	\$1,196
NW	INTERNAL WALLS				
406	Provisional allowance for internal walls including	m²	299	120	35,880
	INTERNAL WALLS			\$120/m²	\$35,880
NS	INTERNAL SCREENS AND BORROWED LIGHTS	2			7.170
408	Allowance for interal screens such as toilet and shower partitions, including door and hardware	m²	299	24	7,176
	INTERNAL SCREENS AND BORROWED LIGHTS			\$24/m²	\$7,176
ND	INTERNAL DOORS				
433	Provisional allowance for internal doors	m²	299	12	3,588
	INTERNAL DOORS			\$12/m²	\$3,588
WF	WALL FINISHES				
409	Allowance for wall finishes to office and amenities	m²	299	56	16,744
	WALL FINISHES			\$56/m²	\$16,744
FF	FLOOR FINISHES				
410	Allowance for floor finishes to office and amenities	m²	299	87	26,013
	FLOOR FINISHES			\$87/m²	\$26,013
CF	CEILING FINISHES	•	255		00 555
411	Allowance for ceiling finishes to office and amenities	m²	299	80	23,920
	Dogo 10 of 24				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
	CEILING FINISHES			\$80/m²	\$23,920
FT	FITMENTS				
412	Provisional allowance for fitments to office and amenities. Loose FF&E excluded	m²	299	74	22,126
	FITMENTS			\$74/m²	\$22,126
SE	SPECIAL EQUIPMENT				
413	Provisional allowance for special equipment to office and amenities- i.e kitchen	m²	299	36	10,764
	SPECIAL EQUIPMENT			\$36/m²	\$10,764
HS	HYDRAULIC SERVICES				
414	Allowance for hydraulic services i.e to washrooms and toilets . Including floor wastes and associated pipework HYDRAULIC SERVICES	m²	299	100 \$100/m²	29,900 \$29,900
SF	SANITARY FIXTURES			Ψ100/111	Ψ23,300
	Allowance for sanitary fixtures to office and amenities	m²	299	33	9,867
413	SANITARY FIXTURES	111	233	\$33/m²	\$ 9,867
MS	MECHANICAL SERVICES			φ33/111	φ9,007
	Allowance for mechanical services to Offices (HVAC)	m²	299	180	53,820
410	` ,	111	299		
					\$53,820
FP	FIRE PROTECTION	2	000	00	47.040
417	Allowance for fire protection to office - allowed for sprinkler installation FIRE PROTECTION	m²	299	60	17,940
				\$60/m²	\$17,940
LP	ELECTRIC LIGHT AND POWER	2	000	400	00.000
	Allowance for lighting and power to office	m²	299	100	29,900
	Allowance for security / CCTV / access control to office	m²	299	25	7,475
437	Allowance for MHE charging unit. Provisional allowance	m²	299	100	29,900
	ELECTRIC LIGHT AND POWER			\$225/m²	\$67,275
BW	BUILDERS WORK IN CONNECTION WITH SERVICES				
363	BWIC	Item			3,379
	BUILDERS WORK IN CONNECTION WITH SERVICES			\$11/m²	\$3,379
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			38,097
	PRELIMINARIES			\$127/m²	\$38,097
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			20,573
	BUILDERS MARGIN & OVERHEAD			\$69/m²	\$20,573
	OFFICES & AMENITIES (2E)			\$1,800/m²	\$538,261
С	EXTERNAL WORKS				
C1	Carpark 2C,D,E				
XR	ROADS, FOOTPATHS AND PAVED AREAS				
1	Light duty carpark paving	m²	4,154	70	290,780
3	Allowance for line marking	m	824	4	3,296
4	Concrete wheel stop to carpark	No	263	120	31,560
6	Concrete kerb to car park	m	797	65	51,805



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
11	Disabled emblem line marking	No	7	300	2,100
12	Crossover to council specification	No	5	2,500	12,500
	ROADS, FOOTPATHS AND PAVED AREAS			,	\$392,041
ΧE	EXTERNAL ELECTRIC LIGHT AND POWER				,
367	Allowance for external lighting to carpark	m²	4,154	12	49,848
	EXTERNAL ELECTRIC LIGHT AND POWER				\$49,848
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			35,352
	PRELIMINARIES				\$35,352
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			19,090
	BUILDERS MARGIN & OVERHEAD				\$19,090
	CARPARK 2C,D,E				\$496,331
С	EXTERNAL WORKS				
C2	Hardstand 2A				
FT	FITMENTS				
377	Allowance for misc. metalwork to hardstand	m²	20,476	3	61,428
	FITMENTS				\$61,428
XR	ROADS, FOOTPATHS AND PAVED AREAS				
2	Concrete hardstand to truck parking, driveway and loading areas	m²	20,476	110	2,252,360
17	Extra over allowance for hardstand up ramps to loading	m²	909	25	22,725
	ROADS, FOOTPATHS AND PAVED AREAS				\$2,275,085
ΧE	EXTERNAL ELECTRIC LIGHT AND POWER				
366	Allowance for external lighting and power to hardstand	m²	20,476	15	307,140
	EXTERNAL ELECTRIC LIGHT AND POWER				\$307,140
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			211,493
	PRELIMINARIES				\$211,493
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			114,206
	BUILDERS MARGIN & OVERHEAD				<i>\$114,206</i>
	HARDSTAND 2A				\$2,969,352
С	EXTERNAL WORKS				
C3	Landscaping & External Works				
XR	ROADS, FOOTPATHS AND PAVED AREAS				
26	Concrete footpath	m²	1,308	70	91,560
27	Extra over allowance for access ramp to footpath	No	6	600	3,600
	ROADS, FOOTPATHS AND PAVED AREAS				\$95,160
XN	BOUNDARY WALLS, FENCING AND GATES				
30	Palisade fencing to street frontage	m	1,653	140	231,420
31	Chain wire link fence including 3 strands of top mounted barbed wire	m	347	65	22,555
	2 24 524				



Rates Current At October 2020

Sears DA Estimate

Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
322	12.7m wide automatic sliding palisade gate to warehouse vehicle entry	No	2	15,000	30,000
323	7m wide automatic sliding palisade gate to carpark entry	No	4	10,000	40,000
34	1m wide single swing gate to palisade fencing	No	1	3,000	3,000
449	Alowance for retaining wall to Warehouse Facility 2A, including footings and all associated works BOUNDARY WALLS, FENCING AND GATES	m²	992	1,000	992,000 \$1,318,975
XL	LANDSCAPING AND IMPROVEMENTS				
23	Allowance for soft landscaping	m²	18,010	30	540,300
28	Extra over for medium trees and shrubs	m²	18,010	1	18,010
37	Allowance for single ring bike rack	No	10	450	4,500
	LANDSCAPING AND IMPROVEMENTS				\$562,810
PR	PRELIMINARIES				•
142	Builder's Preliminaries @ 8%	Item			158,156
	PRELIMINARIES				\$158,156
MA	BUILDERS MARGIN & OVERHEAD				-
143	Builder's Margin & Overheads @ 4%	Item			85,405
	BUILDERS MARGIN & OVERHEAD				\$85,405
	LANDSCAPING & EXTERNAL WORKS				\$2,220,506
С	EXTERNAL WORKS				
C4	Services Infrastructure				
XD	EXTERNAL SEWER DRAINAGE				
135		Item			120,000
xw	EXTERNAL SEWER DRAINAGE EXTERNAL WATER SUPPLY				\$120,000
136	Water connection works allowance	Item			175,000
364	Allowance for external water tank including concrete foundations (Volume TBC)	No	2	25,000	50,000
	EXTERNAL WATER SUPPLY				\$225,000
XG	EXTERNAL GAS				
137	Gas connection works allowance	Item			Excl.
	EXTERNAL GAS				Excl.
XF	EXTERNAL FIRE PROTECTION				
365	Allowance for external hydrant installation EXTERNAL FIRE PROTECTION	Item			100,000 \$100,000
ΧE	EXTERNAL ELECTRIC LIGHT AND POWER				
138	Allowance for kiosk substations with associated HV cabling	Item			Excl.
139	Electrical connection works allowance	Item			150,000
368	Allowance for external lighting and power to landscaped	m²	18,010	8	144,080
	EXTERNAL ELECTRIC LIGHT AND POWER				\$294,080
XC	EXTERNAL COMMUNICATIONS				
140	Communication connection works allowance	Item			68,000
	EXTERNAL COMMUNICATIONS				\$68,000
PR	PRELIMINARIES				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Des	cription	Unit	Qty	Rate	Total
142	Builder's Preliminaries @ 8%	Item			64,567
	PRELIMINARIES				\$64,567
MA	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			34,866
	BUILDERS MARGIN & OVERHEAD				<i>\$34,866</i>
	SERVICES INFRASTRUCTURE				\$906,513
С	EXTERNAL WORKS				
C5	Carpark Warehouse 2A				
FT	FITMENTS				
13	Allowance for misc. metalwork to carpark	m²	5,101	2	10,202
	FITMENTS				\$10,202
XR	ROADS, FOOTPATHS AND PAVED AREAS				
1	Light duty carpark paving	m²	5,101	70	357,070
3	Allowance for line marking	m	1,038	4	4,152
4	Concrete wheel stop to carpark	No	209	120	25,080
6	Concrete kerb to car park	m	937	65	60,905
8	Cross hatched line marking	m²	55	75	4,125
9	Pedestrian crossing line marking	m²	124	75	9,300
	ROADS, FOOTPATHS AND PAVED AREAS				\$460,632
ΧE	EXTERNAL ELECTRIC LIGHT AND POWER				
367	Allowance for external lighting to carpark	m²	5,101	12	61,212
	EXTERNAL ELECTRIC LIGHT AND POWER				\$61,212
PR	PRELIMINARIES				
142	Builder's Preliminaries @ 8%	Item			42,564
	PRELIMINARIES				\$42,564
	BUILDERS MARGIN & OVERHEAD				
143	Builder's Margin & Overheads @ 4%	Item			22,985
	BUILDERS MARGIN & OVERHEAD				\$22,985
	CARPARK WAREHOUSE 2A				\$597,595
С	EXTERNAL WORKS				
C6	Hardstand 2C,D,E				
FT	FITMENTS				
377	Allowance for misc. metalwork to hardstand FITMENTS	m²	7,901	3	23,703 \$23,703
XR	ROADS, FOOTPATHS AND PAVED AREAS				Ψ23,703
2	Concrete hardstand to truck parking, driveway and loading	m²	7,901	110	869,110
	areas ROADS, FOOTPATHS AND PAVED AREAS				\$869,110
ΧE	EXTERNAL ELECTRIC LIGHT AND POWER				
366	Allowance for external lighting and power to hardstand	m²	7,901	15	118,515
	EXTERNAL ELECTRIC LIGHT AND POWER				\$118,515
PR	PRELIMINARIES				



Warehouse 2A, 2C, 2D & 2E Estimate- October 2020

Location Element Item

Description	Unit	Qty	Rate	Total
142 Builder's Preliminaries @ 8%	Item			80,907
PRELIMINARIES				\$80,907
MA BUILDERS MARGIN & OVERHEAD				
143 Builder's Margin & Overheads @ 4%	Item			43,690
BUILDERS MARGIN & OVERHEAD				\$43,690
HARDSTAND 2C,D,E				\$1,135,925

APPENDIX B: DRAWING REGISTER

DA ESTIMATE REPORT | PREPARED BY RIDER LEVETT BUCKNALL



DRAWING REGISTER

Architectural documentation provided by SBA:

- OAK-2A-DA-10 (P6) SITE PLAN
- OAK-2C-DA-20 (P2) SITE PLAN
- OAK-MP-02-(P8) MASTERPLAN

