

# Application for Planning Permit

If you need help to complete this form, read [How to complete the Application for Planning Permit form](#).

**⚠** Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the *Planning and Environment Act 1987*. If you have any concerns, please contact Council's planning department.

**⚠** Questions marked with an asterisk (\*) are mandatory and must be completed.

**⚠** If the space provided on the form is insufficient, attach a separate sheet.

Planning Enquiries  
Phone: 03 9205 2200  
Web: <http://www.hume.vic.gov.au>

Clear Form

## The Land i ① Address of the land. Complete the Street Address and one of the Formal Land Descriptions.

### Street Address \*

Unit No.:	St. No.: 68-70	St. Name: KYABRAM
Suburb/Locality: COOLAROO		Postcode: 3048

### Formal Land Description \*

Complete either A or B.

**⚠** This information can be found on the certificate of title.

A  Lot No.:  Lodged Plan  Title Plan  Plan of Subdivision  No.:

OR

B  Crown Allotment No.:  Section No.:

Parish/Township Name:

If this application relates to more than one address, please click this button and enter relevant details. Add Address

## The Proposal i **⚠** You must give full details of your proposal and attach the information required to assess the application. Insufficient or unclear information will delay your application.

### ② For what use, development or other matter do you require a permit? \*

If you need help about the proposal, read: [How to Complete the Application for Planning Permit Form](#)

**📎** Provide additional information on the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a description of the likely effect of the proposal.

### ③ Estimated cost of development for which the permit is required \*

Cost \$  **⚠** You may be required to verify this estimate. Insert '0' if no development is proposed.

If the application is for land within metropolitan Melbourne (as defined in section 3 of the *Planning and Environment Act 1987*) and the estimated cost of the development exceeds \$1 million (adjusted annually by CPI) the Metropolitan Planning Levy **must** be paid to the State Revenue Office and a current levy certificate **must** be submitted with the application. Visit [www.sro.vic.gov.au](http://www.sro.vic.gov.au) for information.

## Existing Conditions i

### ④ Describe how the land is used and developed now \*

eg. vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.

**📎** Provide a plan of the existing conditions. Photos are also helpful.

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## Title Information i

### 5 Encumbrances on title \*

If you need help about the title, read:

[How to complete the Application for Planning Permit form](#)

Does the proposal breach, in any way, an encumbrance on title such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?

- Yes. (If 'yes' contact Council for advice on how to proceed before continuing with this application.)
- No
- Not applicable (no such encumbrance applies).

Provide a full, current copy of the title for each individual parcel of land forming the subject site. (The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', eg. restrictive covenants.)

## Applicant and Owner Details i

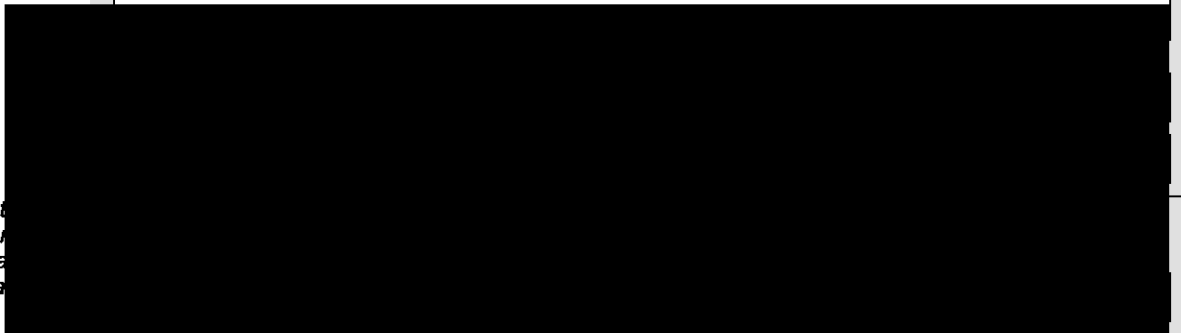
### 6 Provide details of the applicant and the owner of the land.

#### Applicant \*

The person who wants the permit.

Name:  
Title: First Name: MICHAEL Surname: RATHBONE

Where the preferred contact person for the application is different from the applicant, provide the details of that person.



Organisation (if applicable):

Postal Address: If it is a P.O. Box, enter the details here:  
Unit No.: St. No.: St. Name:  
Suburb/Locality: State: Postcode:

Please provide at least one contact phone number \*

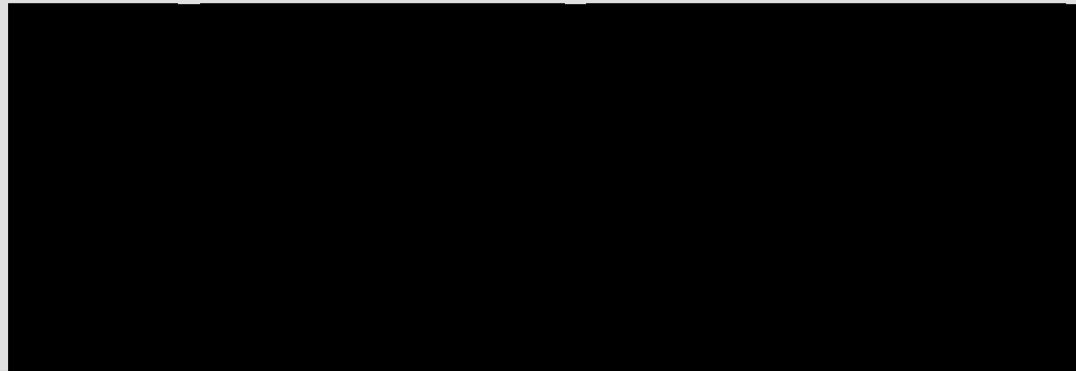
Contact information  
Business Phone: Email:  
Mobile Phone: Fax:

#### Owner \*

The person or organisation who owns the land

Where the owner is different from the applicant, provide the details of that person or organisation.

Name: Same as applicant



## Declaration i

### 7 This form must be signed by the applicant \*

**A** Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit.

I declare that I am the applicant; and that all the information in this application is true and correct; and the owner (if not myself) has been notified of the permit application.

Signature: *M Rathbone*

Date: 12/09/2024

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## Need help with the Application?

If you need help to complete this form, read [How to complete the Application for Planning Permit form](#)  
General information about the planning process is available at [www.delwp.vic.gov.au/planning](http://www.delwp.vic.gov.au/planning)

Contact Council's planning department to discuss the specific requirements for this application and obtain a planning permit checklist. Insufficient or unclear information may delay your application.

8 Has there been a pre-application meeting with a Council planning officer?


No  Yes

## Checklist

9 Have you:

Filled in the form completely?

Paid or included the application fee?

 Most applications require a fee to be paid. Contact Council to determine the appropriate fee.

 Provided all necessary supporting information and documents?

A full, current copy of title information for each individual parcel of land forming the subject site

A plan of existing conditions.

Plans showing the layout and details of the proposal

Any information required by the planning scheme, requested by council or outlined in a council planning permit checklist.

If required, a description of the likely effect of the proposal (eg traffic, noise, environmental impacts).

If applicable, a current Metropolitan Planning Levy certificate (a levy certificate expires 90 days after the day on which it is issued by the State Revenue Office and then cannot be used). Failure to comply means the application is void.

Completed the relevant Council planning permit checklist?

Signed the declaration (section 7)?

## Lodgement

Lodge the completed and signed form, the fee payment and all documents with:

Hume City Council  
PO Box 119 Dallas VIC 3047  
Pascoe Vale Road Broadmeadows VIC 3047

### Contact information:

Telephone: 61 03 9205 2200

Email: [email@hume.vic.gov.au](mailto:email@hume.vic.gov.au)

DX: 94718

Translation: 03 9205 2200 for connection to Hume Link's multilingual telephone information service

### Deliver application in person, by fax, or by post:

Print Form

Make sure you deliver any required supporting information and necessary payment when you deliver this form to the above mentioned address. This is usually your local council but can sometimes be the Minister for Planning or another body.

### Save Form:

Save Form To  
Your Computer

You can save this application form to your computer to complete or review later or email it to others to complete relevant sections.

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# DECLARATION FOR AMENDMENT TO A PLANNING PERMIT APPLICATION



PLANNING PERMIT NO:

Office Use Only

DATE RECEIVED:

FEE PAID: \$

Planning and Environment Act 1987 Sections 50 & 50A & 57A. Planning and Environment Regulations, Regulation 16. Council is collecting the information on this form so that it may consider your application in accordance with Part IV of the Planning and Environment Act 1987. Council must make a copy of this application available for any person to inspect free of charge in accordance with Section 51 of the Act.

Please print clearly. Please read the notes on the back before completing this form.

**THE APPLICANT:** Who is making this amendment

Name: Michael Rathbone  
 Tel: [REDACTED]  
 Address: 4/39 Dinah Parade, East Keilor

**THE LAND:** Give the address and title particulars of the land.

68-70 Kyabram St, Coolaroo

**PROPOSED AMENDMENTS:** what changes are being requested since lodging the original application for planning permit (attach letter if required)

Dispensation for car parking

**THE OWNER:** The owner must be notified of these proposed changes

Name: [REDACTED]  
 Address: [REDACTED]

**DECLARATION TO BE COMPLETED FOR ALL APPLICATIONS**

This form must be signed. Please complete A, B or C

<b>A</b>	I declare that I am the Application and Owner of this land that all information given is true and correct	Owner/Applicant Signature:  Date: 25/03/25
	<b>B</b>	I am the Owner of the land. I have seen this application  Owner Signature:  Date:
<b>C</b>	I/We the Applicant declare that all information given is true and correct	Applicant Signature:  Date:
	I/We the Applicant declare that I/We have notified the owner about this application and that all information given is true and correct	Applicant Signature: MRath Date: 25/03/25

**REGISTER SEARCH STATEMENT (Title Search) Transfer of  
Land Act 1958**

Page 1 of 1

VOLUME 08435 FOLIO 642

Security no : 124116566346D

Produced 12/07/2024 09:24 AM

**LAND DESCRIPTION**

Lot 47 on Plan of Subdivision 056989.  
PARENT TITLE Volume 08398 Folio 793  
Created by instrument B271912 11/09/1963

**REGISTERED PROPRIETOR**



**ENCUMBRANCES, CAVEATS AND NOTICES**

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

**DIAGRAM LOCATION**

SEE LP056989 FOR FURTHER DETAILS AND BOUNDARIES

**ACTIVITY IN THE LAST 125 DAYS**

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 68-70 KYABRAM STREET COOLAROO VIC 3048

DOCUMENT END

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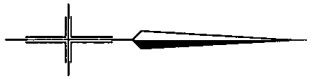
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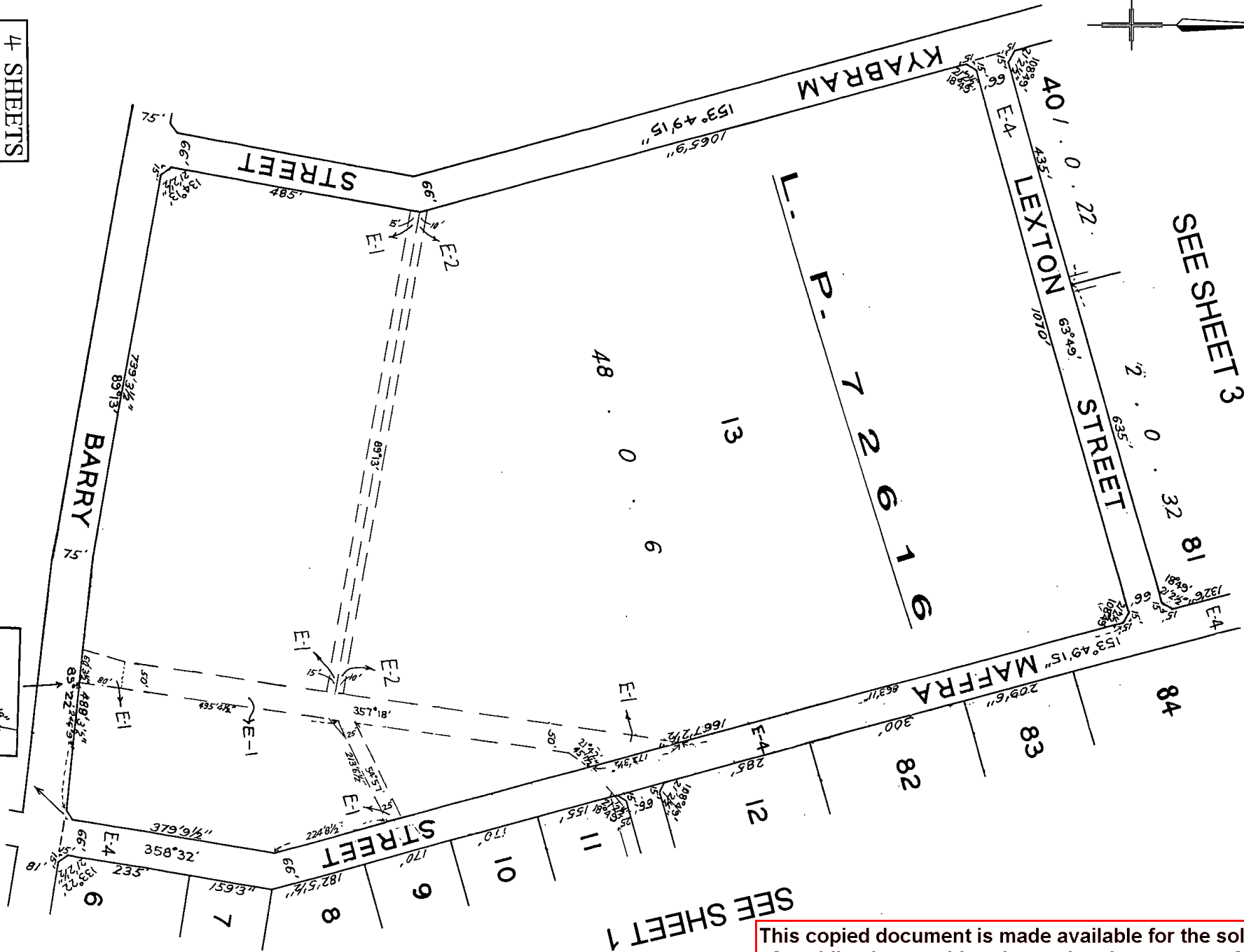
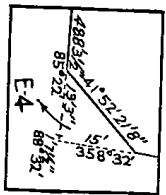
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4 SHEETS  
SHEET 2



SEE SHEET 3

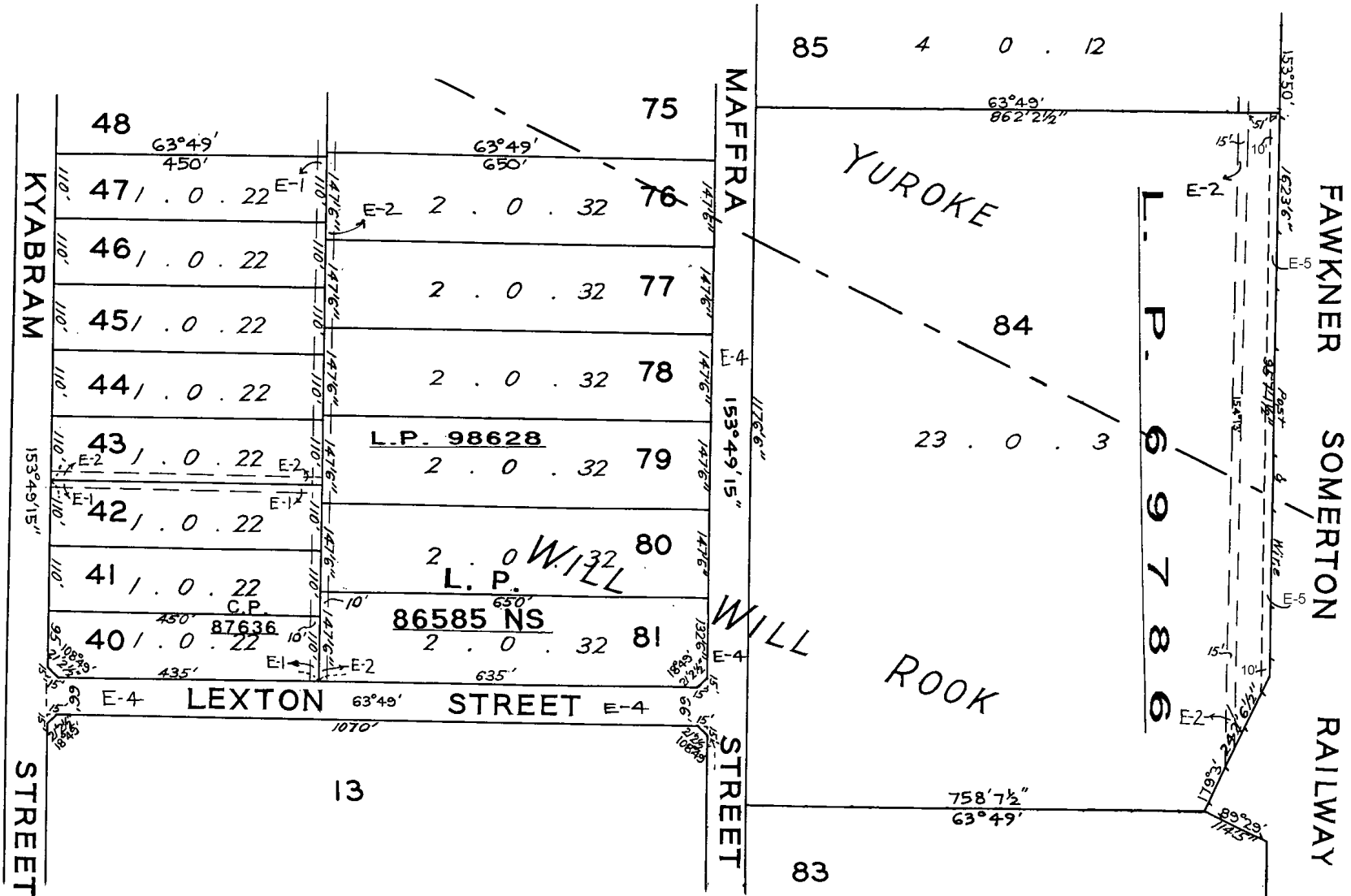
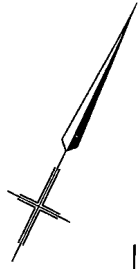
SEE SHEET 1

LP 56989

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SEE SHEET 4

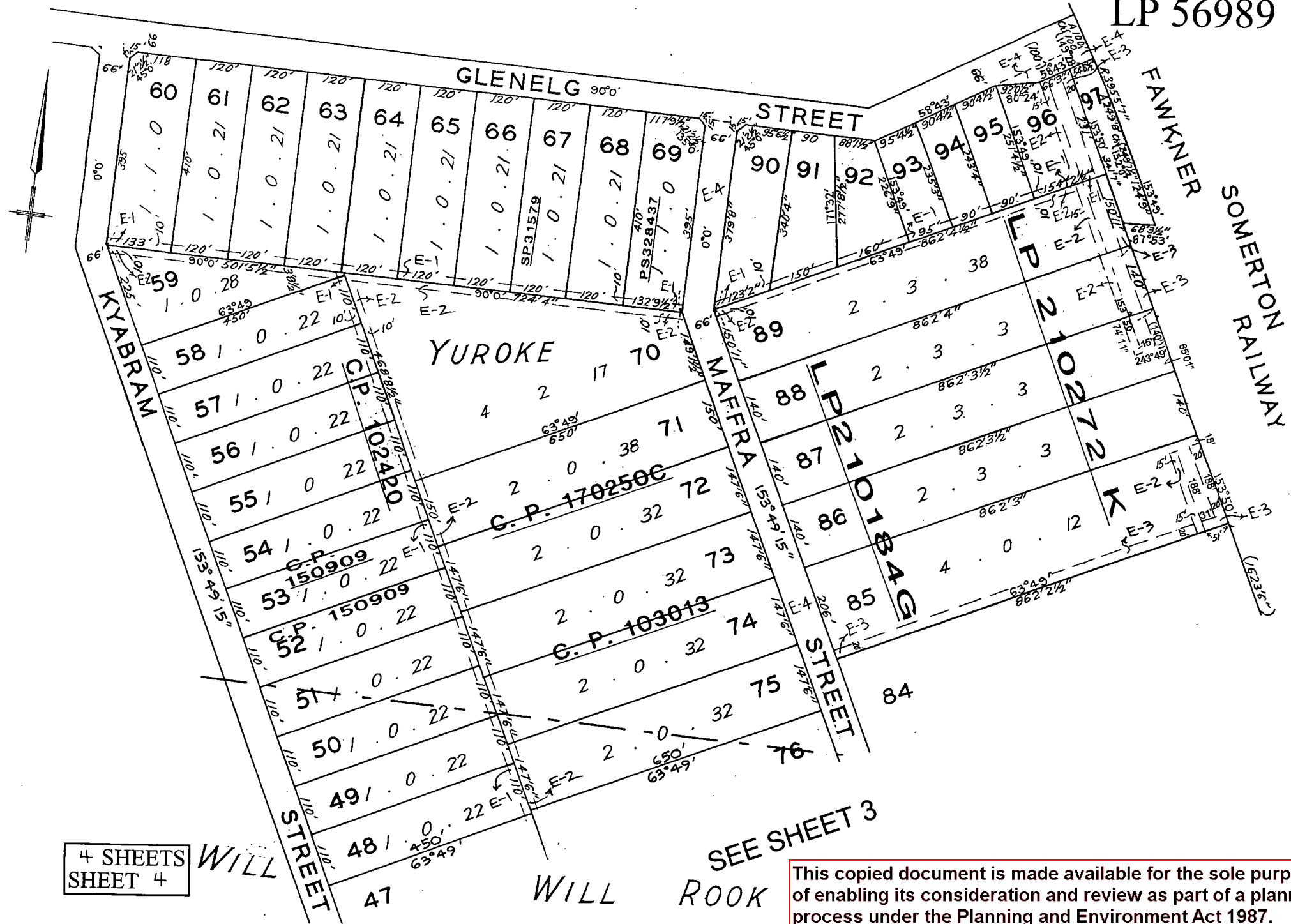


4 SHEETS  
SHEET 3

SEE SHEET 2

SEE SHEET 1

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4 SHEETS  
SHEET 4

WILL

WILL ROOK

SEE SHEET 3

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# MODIFICATION TABLE

RECORD OF ALL ADDITIONS OR CHANGES TO THE PLAN

WARNING: THE IMAGE OF THIS PLAN/DOCUMENT HAS BEEN DIGITALLY AMENDED.  
NO FURTHER AMENDMENTS ARE TO BE MADE TO THE ORIGINAL PLAN/DOCUMENT.

## PLAN NUMBER

# LP 56989

AFFECTED LAND/PARCEL	LAND/PARCEL IDENTIFIER CREATED	MODIFICATION	DEALING NUMBER	DATE	TIME	EDITION NUMBER	ASSISTANT REGISTRAR OF TITLES
	"A"	ROAD DISCONTINUED	LGD 8140			2	MLB
LOTS 12, 82, 83 & 84	E-5	CREATION OF EASEMENTS	C255956			2	MLB
LOTS 85, 86 & 87		REMOVAL OF EASEMENT	AJ238884E AJ238901H AJ238904B	6/10/2011		3	H.L.
LOT 1	E-6	CREATION OF EASEMENT	AT947023U	15/01/21		4	KN
LOT 1	E-7	CREATION OF EASEMENT	AT955939T	18/01/21		5	KN

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Document Assembled	<b>12/07/2024 09:24</b>

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# TRANSFER OF LAND

Section 45 Transfer of Land Act 1958

Lodged by:

Name: **Davis Lawyers**

Name: **03-9600-1800**

Phone: **15/200 Queen Street Melbourne**

Address: **Customer Code: 2700H**

Ref.: .....

Customer Code: .....



Privacy Collec  
The information  
statutory author  
maintaining pul  
indexes in the \

**AE921417X**

26/02/2007 \$1227 45

MADE AVAILABLE/CHANGE CONTROL

Office Use Only

The transferor at the direction of the directing party (if any) transfers to the transferee the estate and interest specified in the land described for the consideration expressed and subject to the encumbrances affecting the land including any created by dealings lodged for registration before the lodging of this transfer.

Land: *(volume and folio reference)*

VOLUME 8435 FOLIO 642

Estate and Interest: *(e.g. "all my estate in fee simple")*

ALL MY ESTATE IN FEE SIMPLE

Consideration:

\$460,000.00

Transferor: *(full name)*



Directing Party: *(full name)*

---

Dated: 16/2/07

Execution and attestation:

SEE ANNEXURE PAGE 2

26020-

Approval No. 18170511L

ORDER TO REGISTER

Please register and issue title to

# T1



Signed

Cust. Code:

STAMP DUTY USE ONLY

Original Land Transfer  
Stamped with \$26,020.00

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**THE BACK OF THIS FORM MUST NOT BE USED**

Land Registry, 570 Bourke Street, Melbourne 3000. Phone 03 8636 2010

# ANNEXURE PAGE

Transfer of Land Act 1958

**Privacy Collection Statement**  
The information from this form is collected under statutory authority and is used for the purpose of maintaining publicly searchable registers and indexes in the Victorian Land Registry.

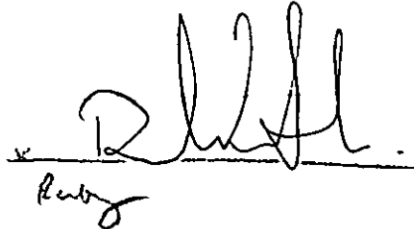
This is page 2 of *Approved Form* T1

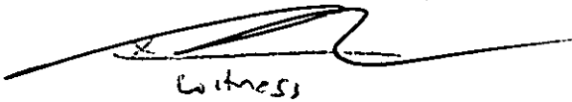
dated 16/2/07 between RUBY ISABEL WADSWORTH to VIC WIDE BIN HIRE & DEMOLITIONS

Signatures of the parties PTY LTD(A.C.N. 119 385 661)

## Panel Heading

SIGNED by the said Transferor )  
in the presence of : )

  
Ruby

  
Witness

Executed by Vic Wide Bin Hire &  
Demolitions Pty Ltd(ACN 119 385  
661)by being signed by the person  
who is authorised to sign for the



Approval No. 18170511L

# A1



1. If there is insufficient space to accommodate the required information in a panel of the *Approved Form* insert the words "See Annexure Page" after all the information on the Annexure Page under the appropriate heading.

## AE921417X

2. If multiple copies of a mortgage are lodged, original Annexure Pages must be lodged with each copy of the mortgage.
3. The Annexure Pages must be properly identified and attached to the *Approved Form* to which it is annexed.
4. All pages must be attached together by being stapled in the top margin.

**THIS COPIED DOCUMENT IS NOT TO BE USED FOR ENABLING ITS CONSIDERATION AND REVIEW AS PART OF A PLANNING PROCESS UNDER THE PLANNING AND ENVIRONMENT ACT 1987.**  
The copy must not be used for any other purpose.  
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PROJECT REFERENCE: 24-065

# TOWN PLANNING SUBMISSION

## PROPOSED:

Sixteen Warehouse Development

## ADDRESS:

68 – 70 Kyabram St, Coolaroo

---

**C.C.D Drafting Pty. Ltd**  
**Building Consultants**

Address: Shop 4/39 Dinah Pde, East Keilor

Phone: (03) 9331 4280

Email: [charles@ccddraft.com](mailto:charles@ccddraft.com)

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## PROPOSAL

This application seeks approval for a 16 warehouse development on the allotment of 4599m<sup>2</sup> at 68-70 Kyabram Street, Coolaroo.

The site is in an Industrial 3 Zone (IN3Z) adjoined by a vacant allotment on the south side, and an occupied allotment on the north side.

It is proposed to develop 16 warehouses on the subject site, with one existing driveway to service warehouse 1 & a proposed common driveway to service warehouses 2-16. The development have the driveways proposed on Kyabram Street. The driveways and car parking have been designed to allow for vehicle movement within the site.

Parking and landscaping are provided to the front and with a crossing and driveway wide enough to allow vehicle movement, including loading/unloading.

## INFORMATION RE USE

- (a) The warehouse is to be built for the rental industry which may involve the storage and distribution of such items as electrical goods, furniture, plumbing supplies, etc.
- (b) It is envisaged that an total of 2 employees and occasional visitors will occupy each of the 16 warehouses, which is based on the amount of amenities provided.
- (c) It is not intended to use or store any dangerous goods and at this stage we will not be obtaining a license under the Dangerous Goods Act.
- (d) A works approval or waste discharge license is not required from the Protection Authority.
- (e) The likely effects, if any, on the neighborhood include:
  - (i) Noise levels – like adjoining buildings
  - (ii) Airborne emissions – nil
  - (iii) Emissions to land or water – nil
  - (iv) Traffic, incl. hours of delivery/dispatch – standard times, i.e. 7.00 am – 6.00 pm with minimal vehicle movements.
  - (v) Light spill or glare – lighting would be normal security lighting which will have no detrimental effect on the existing roads.

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## PLAN REQUIREMENTS

- (a) The submitted drawings show all the requirements with respect to the dimensions of the site, location of adjoining roads and the layout of the building works, vehicle parking and loading areas, landscaping, etc. The site falls towards the street with minimal significance. No external storage is proposed as landscaping/car parking will occupy the whole site.
- (b) Elevation drawing to scale shows the colour/materials of all building works.
- (c) Longitudinal details – the building will be of concrete tilt panel with all external walls painted in appropriate colours as indicated.
- (d) Landscaping layout and description of species, surfaces to be constructed, including watering and maintenance are included on the drawings.
- (e) The front/side elevation has been developed with the intention of making a pleasant and attractive looking building, which should add to the streetscape of the area.
- (f) The layout of the building and car parking has been set out so that it will have separate facilities, accesses, and sense of address.

## GUIDELINES

(a) Development

Development of this land is in accordance with the Planning Scheme. There is a residential type zone located across the road, however due to the different zoning, our development has no affect on the residential element and as this development is like all the adjoining in both size and use.

(b) Services

All services are available to the site, including drainage discharge.

(c) Traffic

The size of the proposed development is unlikely to have any effect on the existing road network.

(d) Built form & Streetscape.

The development is suitable for the surrounds and will be compatible with nearby buildings.

(e) Car parking & Site access

As shown on the plan, parking and vehicles associated with the warehouses will access the site from the front.

The development proposes a total of 52 car parking spaces. Warehouse 1 proposes 4 car spaces & between warehouses 2-16, 48 car spaces have been provided. To be in accordance with the Planning Scheme car parking rate for a warehouse, a total of 66 car spaces are required. Approval for a car parking reduction is being sought and this report into detail regarding the justification for providing reduced car parking.

(f) Loading and service

Adequate area is provided, given the size of the proposed warehouse.

## CAR PARKING DISPENSATION

16 Warehouse proposal at 68-70 Kyabram Street, Coolaroo.

### **We would like to apply for a car parking dispensation for the above application.**

We have supplied a total of 52 car spaces across the 16 warehouses, however in accordance with the planning policy for a Warehouse, the 1.5 cars per 100 square metres plus 30 rates would require 66 car spaces total.

### **We ask that the council grant a dispensation of 14 car spaces based on the following considerations:**

The site currently has a warehouse present. The new warehouse is to be built for general use and many others are assumed to be in the new subdivision.

There will be no direct sales to the public.

It is envisaged that the occupier plus 1 other will use each warehouse, based on the size of the buildings, the amenities provided and the likely use of the building.

The occasional visitors will occupy the site (max 1-2 visitors/week).

52 car spaces combined total will be more than enough for the likely use of the warehouses. The above employee numbers and vehicle movements are obtained from the owner's estimation and the advice of real estate agents in the area for the perceived needs that maybe generated.

Having regard to the likely operation of the warehouse, the fact that the warehouse is likely to operate with no more than 52 staff members at any point in time and by conservatively assuming that each staff member will drive to and from the site, the overall proposed development is projected to generate total long-term (staff) parking demand for 52 car spaces; and assuming there will be no more than 1 visitors to the site at any point in time, the total car parking demand will not exceed 52 car spaces for the entirety of the 16 warehouses.

1. The car parking demand likely to be generated by the use:
  - Multi-purpose trips within the area, due to the location and size of building it is unlikely that many multi-purpose trips within the area will be required.
  - Variation of car parking demand over time, it is envisaged that most of the parking will be stable – to be used by the occupants of the warehouse, and occasional visitor, between the hours of 7am and 6pm
  - Short stay – long stay parking, most will be daily regular parking from 7am - 6pm.
  - The convenience of pedestrian and cyclist access – the site has unrestricted access for both bicycles and pedestrians and there is room on site for bicycle parking. Bicycle and end of trip facilities are provided.
  - Bicycle parking on site is available for any staff willing to use it.
  - Anticipated car ownership rates of likely employees, generally we anticipate that each employee may own their own car, but it would be safe to assume on the law of averages that some employees would be couples using one car.
2. Whether it is appropriate to allow fewer car spaces than the number likely to be generated by the use.
  - Any Relevant planning policy or incorporated plan

The availability of car parking including:

- Consolidation of shared parking - not relevant.
- Public car parking intended to serve the land – not relevant.
- On street parking – This is a non-residential zone and street car parking is available – a visual inspection of the site and discussions with the owner who is often around the site, gives the impression of easy car space availability.
- Adverse economic impact the shortfall may have on the activity center – this development and car park shortfall is too small to impact economic viability.
- The future growth and development of an activity center – not relevant.
- Any credit that should be allowed for car parking spaces on common land or by special charge scheme etc. – not relevant

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- Local traffic management - this development and car park shortfall is too small to impact local traffic.
- The impact of fewer car parking spaces on local amenities including pedestrians, and nearby residents. – The nearby residents and pedestrians will not be affected due to different zoning type, and distance from proposed development.
- The need to create safe, functional, and attractive parking areas – The car parking provided will be behind a landscaped area and the area will be fully paved and drained with direct access from the road.
- The equity of reducing car parking, having regard to any historic contributions by existing businesses - none to our knowledge exists, not relevant.
- The character of the area and whether reducing the parking rate would result in a quality/positive urban design outcome, - the character of the area would not be affected by this submission.
- Any other considerations – None

We submit that the number of car parking spaces that will be generated by the use will be adequate and that we will not exceed car spaces provided on site.

## SUMMARY

In reference to the above, the Council should consider favorably our development, given that:

- (i) The development continues the industrial trend in the area with an appropriate presentation.
- (ii) The appearance, which includes painted concrete walls, fits to the streetscape.
- (iii) The design layout, including setbacks, complies with the council's guidelines and is like the surrounding buildings.
- (iv) The type and colour of the building materials and proposed landscaping will be appropriate for this site.
- (v) The car parking provided, whilst in compliance with town planning guidelines.

Given the above, we look forward to the Council granting planning approval.



CHARLES CHIRICO

Office Manager

CCD DRAFTING

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PROJECT REFERENCE: 24-065

# SUSTAINABLE DESIGN ASSESSMENT

## PROPOSED:

Sixteen Warehouse development

## ADDRESS:

68 – 70 Kyabram St, Coolaroo

---

C.C.D Drafting Pty. Ltd

Building Consultants

Address: Shop 4/39 Dinah Pde, East Keilor 3033

Contact Number: (03) 9331 4280

Email: [michael@ccddraft.com](mailto:michael@ccddraft.com)

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PROJECT INFORMATION

Project Description	SIXTEEN WAREHOUSE DEVELOPMENT
Project Address	68-70 Kyabram Street, Coolaroo
Planning Application Number	TBA
Zoning	IN3Z
Applicant	CCD Drafting
Assessor	
Total Site Area	4599m <sup>2</sup>
Total Warehouse Area	2335m <sup>2</sup>
Total Office Area	72m <sup>2</sup> (only applicable to warehouse 1)
Gross Floor Area	2690m <sup>2</sup>

PROJECT SITE PLAN



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## BUILT ENVIRONMENT SUSTAINABILITY SCORECARD (BESS)

This development has been assessed by using BESS assessment tool ([www.bess.net.au](http://www.bess.net.au)) Relevant BESS reports for this project include:

**BESS project number: 7C6656BC**

**Applicable to all Warehouses**

A summary of the results are shown in the table below:

Weight	Category	Score (%)	Pass
5	Management	28	-
9	Water	66	✓
28	Energy	64	✓
14	Stormwater	100	✓
17	IEQ	51	✓
9	Transport	37	-
6	Waste	33	-
6	Urban Ecology	0	-
9	Innovation	0	-

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## ENVIRONMENTALLY SUSTAINABLE DESIGN INITIATIVES

This development proposes sustainable principles in conjunction with Hume City Council guidelines in order to achieve Environmentally Sustainable Development (ESD) as per clause 15.01-2L of the planning scheme.

The development aims to accomplish:

- Easier compliance with building requirements through passive design;
- Reduction of costs over the life of the building;
- Improved affordability over the longer term through reduced running costs;
- Improved amenity and liveability;
- More environmentally sustainable urban form; and
- Integrated water management.

The development will aim to accomplish the benchmarks above by applying the following methods:

### Water Resources

- To improve water efficiency.
- To reduce total operating potable water use.
- To encourage the collection and reuse of stormwater.
- To encourage the appropriate use of alternative water sources (e.g. greywater).

A STORM report has been completed as part of the BESS report and can be found in the appendices.

The selected plants in this development are drought tolerant and require minimal maintenance.

All planting within the development will be fitted with an irrigation system which will be connected to the rainwater tank.

All toilets in the development will be connected to the rainwater tank.

The development will use raingardens to treat other rain catchment areas on the subject site.

Cleaning procedures for the rainwater tank(s) and raingarden(s) will be provided in the Building Users Guide (BUG) which will be provided to building users prior to occupation.

As per the relevant BESS report, the following fixtures shall be installed in the building:

- Showerheads = 4 Star WELS rating minimum (>4.5 but <=6)
- Kitchen taps = 5 Star WELS rating minimum
- Bathroom taps = 5 Star WELS rating minimum
- WC = 4 Star WELS rating minimum

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## Energy Performance

- To improve the efficient use of energy, ensuring development demonstrates design potential for ESD initiatives at the planning stage.
- To reduce total operating greenhouse gas emissions.
- To reduce energy peak demand through particular design measures (e.g. appropriate building orientation, shading to glazed surfaces, optimize glazing to exposed surfaces, space allocation for solar panels and external heating and cooling systems).

NCC2022 Façade Calculations have been prepared for the development (refer to appendices). All office walls & glazing achieve compliance with the Façade Calculator.

All nominated external glazing in the development will have a low emissivity coating with a VLT range of at least 40%.

All exposed floors and ceilings (forming part of the envelope) will demonstrate a minimum 10% improvement in required NCC2022 insulation levels.

Refer to 'Part J Energy Efficiency Compliance' in the appendices for proposed insulation requirements.

All heating and cooling systems that are installed in the development will be within one star of the most efficient equivalent capacity unit available. Or, this this cannot be achieved, then the heating and cooling systems that are installed in the development must have a Coefficient of Performance (CoP) and Energy Efficiency (EER) not less than 85% of the CoP and EER of the most efficient equivalent capacity unit available.

Water heating systems that are installed in the development will be within one star of the most efficient equivalent capacity unit available.

All heating / cooling system and hot water system for this development will be electric. It is encouraged to use a carbon neutral electricity provider.

Windows will be openable for the first floor office which will allow passive cooling and reduce the buildings reliance on mechanical ventilation.

The lighting within the development will achieve the following: maximum illumination power density ( $\text{w/m}^2$ ) in at least 90% of the relevant building class at least 20% lower than required by table J7D3a of the NCC2022 Vol 1.

Motion sensor lights are to be installed in toilets and tea rooms to minimize energy waste when the rooms are unoccupied. All external light to be fitted with a motion sensor.

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## Stormwater Management

- To reduce the impact of stormwater run-off.
- To improve the water quality of stormwater run-off.
- To achieve best practice stormwater quality outcomes.
- To incorporate the use of water sensitive urban design, including stormwater reuse.

A Water-sensitive urban design (WSUD) has been completed for this development. The development will use a combination of rainwater tanks and raingardens –

Roof area fed to rainwater tanks will be connected to all toilets for flushing. Other catchment areas will be fed to nominated raingarden that will be constructed in accordance with council guidelines.

Garden beds will be fitted with an irrigation system which is connected to the rainwater tanks

A maintenance manual for the WSUD items is to be included in the Building Users Guide (BUG).

Rainwater tanks are to be cleaned annually. Raingarden maintenance will be performed as per Melbourne Waters WSUD Maintenance guidelines. The BUG will be provided to building users prior to occupation.

Refer to appendices for STORM report for specific catchment sizes, and tank and raingarden sizes.

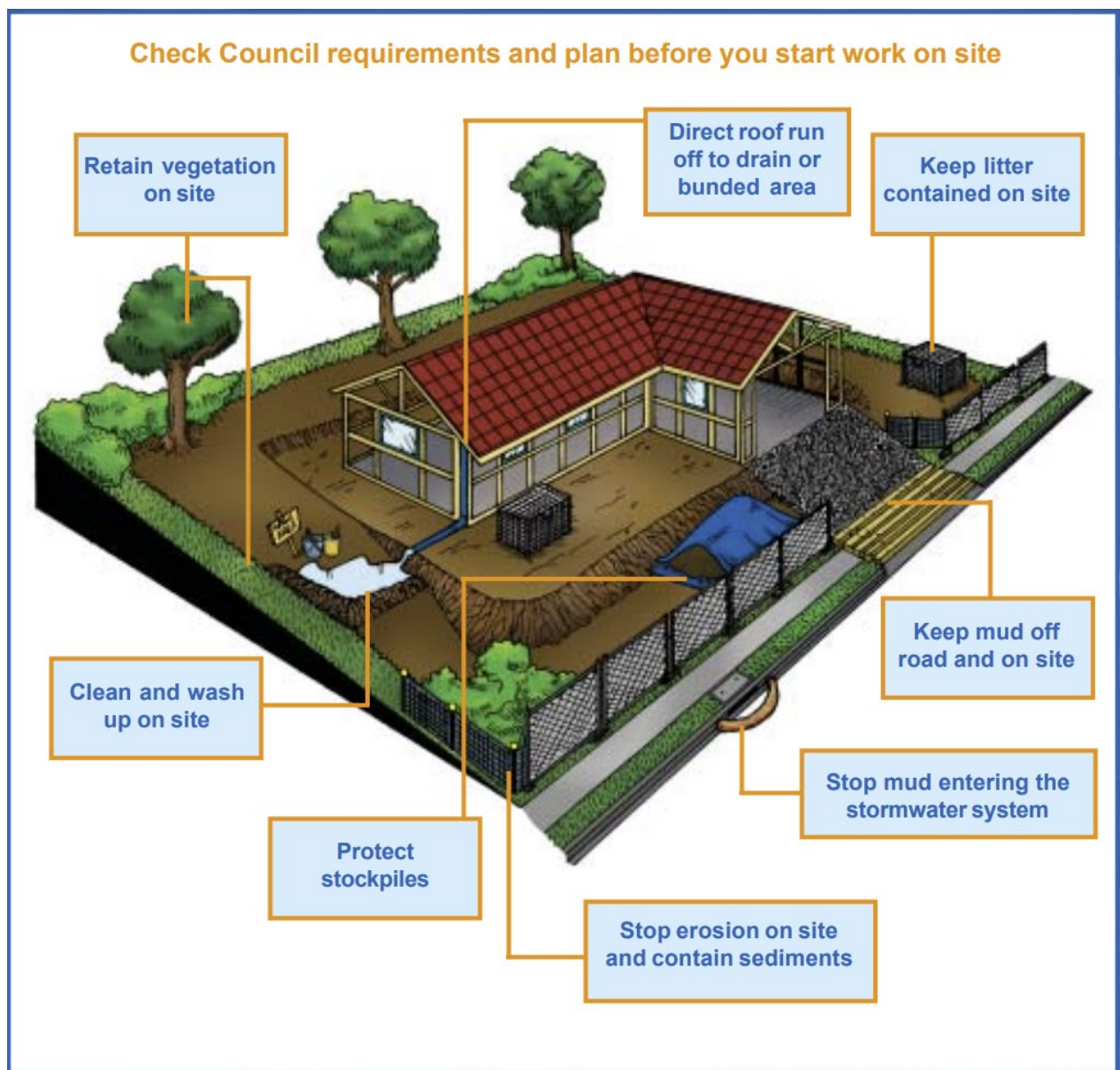
Refer to Town Planning Drawings for the Stormwater Management Plan.

In conjunction with the Melbourne Water Guidelines “Keeping our Stormwater Clean – A Builders Guide”, the builder must follow guidelines that are included in EPA publication 275 – “Construction Techniques for Sediment Pollution Control”. A link to EPA 275 is provided below:

<https://www.epa.vic.gov.au/about-epa/publications/275>

To manage the impact of stormwater run-off during construction, the builder will follow the procedures that are outlined in Melbourne Waters “Keeping our Stormwater Clean – A Builders Guide”. An excerpt of the guide is provided below, the full booklet can be found via the link:

<https://www.clearwatervic.com.au/resource-library/guidelines-and-strategy/keeping-our-stormwater-clean-a-builders-guide.php>



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## Indoor Environment Quality (IEQ)

- To achieve a healthy indoor environment quality for the wellbeing of building occupants, including the provision of fresh air intake, cross ventilation, and natural daylight.
- To achieve thermal comfort levels with minimized need for mechanical heating, ventilation and cooling.
- To reduce indoor air pollutants by encouraging use of materials with low toxicity chemicals.
- To reduce reliance on mechanical heating, ventilation, cooling and lighting systems.
- To minimize noise levels and noise transfer within and between buildings and associated external areas.

An IEQ Daylight Plan has been prepared for the development is provided in the appendices.

100% of the warehouse space can be considered naturally ventilated due the large roller door opening at the front of the building. The roller door is likely to remain open while the warehouse is occupied.

Approximately 50% of the Office Primary Space is naturally ventilated. The external windows of the first floor office are nominated to be operable (refer to elevations). These operable windows will allow for most of the first floor primary space to be naturally ventilated.

All heating and cooling systems that are installed in the development will be capable of monitoring and maintaining CO2 concentrations to 800ppm or lower.

Natural light into the warehouse will be supplied by multiple skylights as shown on the plans. This will reduce the buildings heating and lighting loads.

All paints, sealants and adhesives, carpet and engineered wood products that are to be used in this development will meet current GECA, Global GreenTag, GreenRate, Carpet Institute Australia Environmental Classification Scheme Level 2, Green Star or WELL standards for TVOC in paints, adhesives, and sealants (by volume) and carpets (by area) and for Formaldehyde in engineered wood (by area).

Table extracts from the Green Star Design Guidelines have been provided below detailing –

- **Maximum TVOC Limits for Paints, Adhesives & Sealants**
- **Carpet Test Standards and TVOC Emissions Limits**
- **Formaldehyde Emission Limit Values for Engineered Wood Products**

Maximum TVOC Limits for Paints, Adhesives & Sealants	
Product Category	Max TVOC content in grams per litre (g/l) of ready to use product
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, Varnishes and wood stains	75
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural Glazing adhesive, wood flooring and laminate adhesives and sealants	100

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## Carpet Test Standards and TVOC Emissions Limits

Test protocol	Limit
ASTM D5116 - Total VOC limit	0.5mg/m <sup>2</sup> per hour
ASTM D5116 - 4-PC (4-Phenylcyclohexene)	0.05mg/m <sup>2</sup> per hour
ISO 16000 / EN 13419 - TVOC at three days	0.5 mg/m <sup>2</sup> per hour
ISO 10580 / ISO/TC 219 (Document N238) - TVOC at 24 hours	0.5mg/m <sup>2</sup> per hour

Table 13.2: Formaldehyde Emission Limit Values for Engineered Wood Products

Test Protocol	Emission Limit/ Unit of Measurement
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	≤1mg/ L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1mg/ L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤1mg/ L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) - LVL	≤1mg/ L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤1mg/ L
JIS A1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤0.1 mg/m <sup>2</sup> hr*
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤0.1 mg/m <sup>2</sup> hr
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤0.1 mg/m <sup>2</sup> hr (at 3 days)
ASTM D6007	≤0.12mg/m <sup>3</sup> **
ASTM E1333	≤0.12mg/m <sup>3</sup> ***
EN 717-1 (also known as DIN EN 717-1)	≤0.12mg/m <sup>3</sup>
EN 717-2 (also known as DIN EN 717-2)	≤3.5mg/m <sup>2</sup> hr

\*mg/m<sup>2</sup>hr may also be represented as mg/m<sup>2</sup>/hr.

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## Transport

- To ensure that the built environment is designed to promote the use of walking, cycling and public transport, in that order.
- To minimize car dependency.
- To promote the use of low emissions vehicle technologies and supporting infrastructure.

The building proposes facilities to encourage employees to cycle to work – including bicycle parking for employees, and end-of-trip facilities such as showers and locker storage.

## Waste management

- To ensure waste avoidance, reuse and recycling during the design, construction and operation stages of development.
- To ensure durability and long term reusability of building materials.
- To ensure sufficient space is allocated for future change in waste management needs, including (where possible) composting and green waste facilities.

The development proposes a design that is low maintenance and will not require to additional work in the future to maintain. High quality paints and materials will be used as specified on the town planning drawings.

Recycling bins will be located directly next to the landfill bins to encourage as much recycling by the occupier as possible.

The development must re-use / recycle at least 70% of construction and demolition waste.

## Urban ecology

- To protect and enhance biodiversity within the municipality.
- To provide environmentally sustainable landscapes and natural habitats and minimize the urban heat island effect.
- To encourage the retention of significant trees.
- To encourage the planting of indigenous vegetation.
- To encourage the provision of space for productive gardens, particularly in larger residential developments.

There are no trees to retain on the site and a productive garden is not applicable to this development. The development proposes native vegetation on the site and will be well maintained and watered by using collected stormwater.

## Materials

The building is to make use of sustainable building practices wherever possible during construction. This development will commit to using green concrete.

All concrete must be made for minimum 20% of the cement to be replaced with Supplementary Cementitious material (at least in the non-structural elements). All concrete must use minimum 50% recycled water and recycled/alternative materials aggregate (minimum 40% for large aggregate and 25% for fine aggregate)

The builder of the development will source sustainable timber that has FSC or PEFC certification.

It is recommended to use roof materials that are light coloured with a Solar Reflective Index (SRI) greater than 65. Roof colour to have solar absorbance of less than 0.4.

## Miscellaneous

A Building Users Guide (B.U.G) is to be prepared and provided to building occupants prior to occupancy. The Building Users' Guide supplied will be a simple booklet and/or a combination of interpretative signage throughout the building that helps facilitate more sustainable behaviour by building occupants.

B.U.G. will identify the main sustainable design initiatives, systems & processes that building users interact with.  
B.U.G. will collate and present information that covers the function and use of the building.  
the B.U.G will use non-technical language targeted to building occupants, and where required, to building managers.

APPENDICES

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# BESS Report

Built Environment Sustainability Scorecard

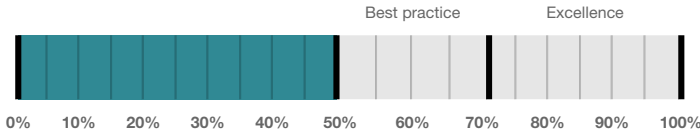


This BESS report outlines the sustainable design commitments of the proposed development at 68-70 Kyabram St Coolaroo Victoria 3048. The BESS report and accompanying documents and evidence are submitted in response to the requirement for a Sustainable Design Assessment or Sustainability Management Plan at Hume City Council.

Note that where a Sustainability Management Plan is required, the BESS report must be accompanied by a report that further demonstrates the development's potential to achieve the relevant environmental performance outcomes and documents the means by which the performance outcomes can be achieved.

**Note:** This is a DRAFT and not suitable for submission to council

## Your BESS Score



# 52%

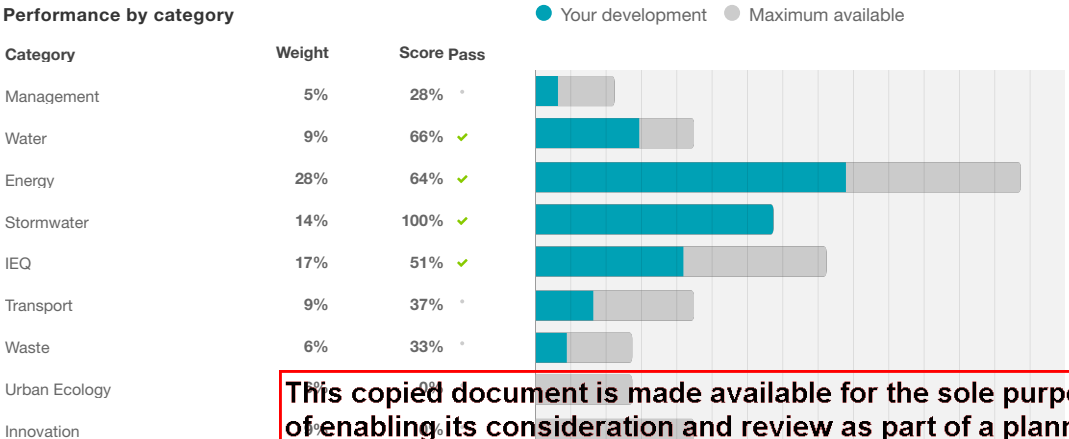
## Project details

**Address** 68-70 Kyabram St Coolaroo Victoria 3048  
**Project no** 7C6656BC  
**BESS Version** BESS-8

**Site type** Non-residential development  
**Account** charles@ccddraft.com  
**Application no.**  
**Site area** 4,599.00 m<sup>2</sup>  
**Building floor area** 3,039.00 m<sup>2</sup>  
**Date** 07 August 2024  
**Software version** 2.0.0-B.545



## Performance by category



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## Buildings

Name	Height	Footprint	% of total footprint
WH1	2	277 m <sup>2</sup>	9%
WH2	2	207 m <sup>2</sup>	6%
WH3	2	207 m <sup>2</sup>	6%
WH4	1	207 m <sup>2</sup>	6%
WH5	1	188 m <sup>2</sup>	6%
WH6	1	198 m <sup>2</sup>	6%
WH7	1	163 m <sup>2</sup>	5%
WH8	1	163 m <sup>2</sup>	5%
WH9	1	213 m <sup>2</sup>	7%
WH10	1	163 m <sup>2</sup>	5%
WH11	1	163 m <sup>2</sup>	5%
WH12	1	198 m <sup>2</sup>	6%
WH13	1	163 m <sup>2</sup>	5%
WH14	1	163 m <sup>2</sup>	5%
WH15	1	163 m <sup>2</sup>	5%
WH16	1	203 m <sup>2</sup>	6%

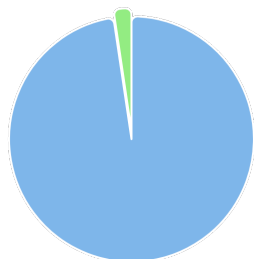
## Dwellings & Non Res Spaces

### Non-Res Spaces

Name	Quantity	Area	Building	% of total area
<b>Office</b>				
WH1 OFFICE	1	72.0 m <sup>2</sup>	WH1	2%
<b>Total</b>	<b>1</b>	<b>72 m<sup>2</sup></b>	<b>2%</b>	
<b>Unconditioned Warehouse/factory</b>				
WH9	1	213 m <sup>2</sup>	WH9	7%
WH16	1	203 m <sup>2</sup>	WH16	6%
WH12	1	198 m <sup>2</sup>	WH12	6%
WH6	1	198 m <sup>2</sup>	WH6	6%
WH5	1	188 m <sup>2</sup>	WH5	6%
WH4	1	207 m <sup>2</sup>	WH4	6%
WH3	1	207 m <sup>2</sup>	WH3	6%
WH2	1	207 m <sup>2</sup>	WH2	6%
WH1	1	205 m <sup>2</sup>	WH1	6%
WH15	1	163 m <sup>2</sup>	WH15	5%
WH14	1	163 m <sup>2</sup>	WH14	5%
WH13	1	163 m <sup>2</sup>	WH13	5%
WH11	1	163 m <sup>2</sup>	WH11	5%
WH10	1	163 m <sup>2</sup>	WH10	5%
WH8	1	163 m <sup>2</sup>	WH8	5%
WH7	1	163 m <sup>2</sup>	WH7	5%
<b>Total</b>	<b>16</b>	<b>2900 m<sup>2</sup></b>		

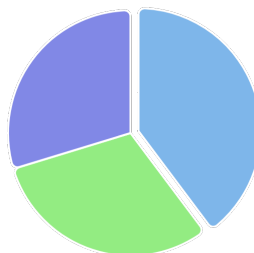
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### Project composition



● Unconditioned Warehouse/factory ● Office

### Building composition



● WH1 ● WH9 ● WH4

## Supporting information

### Floorplans & elevation notes

Credit	Requirement	Response	Status
Stormwater 1.1	Location of any stormwater management systems (rainwater tanks, raingardens, buffer strips)	To be printed Refer to stormwater management plan	✓
Transport 1.4	Location of non-residential bicycle parking spaces	To be printed Bike parking nominated on ground floor plan	✓
Transport 1.6	Location of showers, change rooms and lockers as nominated	To be printed Bin locations nominated on ground floor plan	✓
Waste 2.2	Location of recycling facilities	To be printed Refer to the landscape plan	✓

### Supporting evidence

Credit	Requirement	Response	Status
Management 2.3a	Section J glazing assessment	To be printed Facade Calculator Refer to SDA appendices	✓
Energy 1.1	Energy Report showing calculations of reference case and proposed buildings	To be printed PART J energy efficiency compliance table Refer to SDA appendices	✓
Energy 3.7	Average lighting power density and lighting type(s) to be used	To be printed Lighting calculator Refer to SDA appendices	✓
Stormwater 1.1	STORM report or MUSIC model	To be printed STORM report Refer to SDA appendices	✓
IEQ 1.4	A short report detailing assumptions used and results achieved.	To be printed IEQ Daylight Plan	✓

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## Credit summary

### Management Overall contribution 4.5%

		<b>28%</b>
1.1 Pre-Application Meeting		0%
2.3 Thermal Performance Modelling - Non-Residential		50%
3.2 Metering - Non-Residential		N/A <span>✦ Scoped Out</span>
		N/A
3.3 Metering - Common Areas		N/A <span>✦ Scoped Out</span>
		N/A
4.1 Building Users Guide		100%

### Water Overall contribution 9.0%

		<b>Minimum required 50%</b>	<b>66%</b> <span>✔ Pass</span>
1.1 Potable Water Use Reduction		79%	
3.1 Water Efficient Landscaping		0%	
4.1 Building Systems Water Use Reduction		N/A <span>✦ Scoped Out</span>	
		N/A	

### Energy Overall contribution 27.5%

		<b>Minimum required 50%</b>	<b>64%</b> <span>✔ Pass</span>
1.1 Thermal Performance Rating - Non-Residential		37%	
2.1 Greenhouse Gas Emissions		100%	
2.2 Peak Demand		100%	
2.6 Electrification		0%	
2.7 Energy consumption		100%	
3.1 Carpark Ventilation		N/A <span>✦ Scoped Out</span>	
		N/A	
3.2 Hot Water		100%	
3.7 Internal Lighting - Non-Residential		100%	
4.1 Combined Heat and Power (cogeneration / trigeneration)		N/A <span>✦ Scoped Out</span>	
		No cogeneration or trigeneration system in use.	
4.2 Renewable Energy Systems - Solar		0% <span>⊘ Disabled</span>	
		No solar PV renewable energy is in use.	
4.4 Renewable Energy Systems - Other		N/A <span>✦ Scoped Out</span>	
		No other (non-solar PV) renewable energy is in use.	




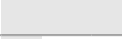


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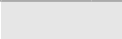




**Stormwater Overall contribution 13.5%**

	Minimum required 100%	100%	✓ Pass
1.1 Stormwater Treatment		100%	





**IEQ Overall contribution 16.5%**

	Minimum required 50%	51%	✓ Pass
1.4 Daylight Access - Non-Residential		79%	✓ Achieved
2.3 Ventilation - Non-Residential		49%	✓ Achieved
3.4 Thermal comfort - Shading - Non-Residential		0%	
3.5 Thermal Comfort - Ceiling Fans - Non-Residential		0%	
4.1 Air Quality - Non-Residential		100%	






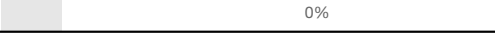
**Transport Overall contribution 9.0%**

		37%	
1.4 Bicycle Parking - Non-Residential		100%	
1.5 Bicycle Parking - Non-Residential Visitor		0%	
1.6 End of Trip Facilities - Non-Residential		97%	
2.1 Electric Vehicle Infrastructure		0%	
2.2 Car Share Scheme		0%	
2.3 Motorbikes / Mopeds		0%	

**Waste Overall contribution 5.5%**

		33%	
1.1 - Construction Waste - Building Re-Use		0%	
2.1 - Operational Waste - Food & Garden Waste		0%	
2.2 - Operational Waste - Convenience of Recycling		100%	

**Urban Ecology Overall contribution 5.5%**

		0%	
1.1 Communal Spaces		0%	
2.1 Vegetation		0%	
2.2 Green Roofs		0%	
2.3 Green Walls and Facades		0%	
3.2 Food Production - Non-Residential		0%	

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**Innovation Overall contribution 9.0%**

		0%
1.1 Innovation		0%

**Credit breakdown**

**Management** Overall contribution 1%

<b>1.1 Pre-Application Meeting</b>		0%
Score Contribution	This credit contributes 63.1% towards the category score.	
Criteria	Has an ESD professional been engaged to provide sustainability advice from schematic design to construction? AND Has the ESD professional been involved in a pre-application meeting with Council?	
Question	Criteria Achieved ?	
Project	No	
<b>2.3 Thermal Performance Modelling - Non-Residential</b>		50%
Score Contribution	This credit contributes 15.9% towards the category score.	
Annotation	Refer to preliminary part J and facade calculations in SDA appendices	
Criteria	Has a preliminary facade assessment been undertaken in accordance with NCC2022 Section J4D6?	
Question	Criteria Achieved ?	
Office	Yes	
Criteria	Has preliminary modelling been undertaken in accordance with either NCC2022 Section J (Energy Efficiency), NABERS or Green Star?	
Question	Criteria Achieved ?	
Office	No	
<b>3.2 Metering - Non-Residential</b>		N/A <span style="color: orange;">✦</span> Scoped Out
This credit was scoped out	N/A	
<b>3.3 Metering - Common Areas</b>		N/A <span style="color: orange;">✦</span> Scoped Out
This credit was scoped out	N/A	
<b>4.1 Building Users Guide</b>		100%
Score Contribution	This credit contributes 21% towards the category score.	
Criteria	Will a building users guide be produced and issued to occupants?	
Annotation	Building Users Guide (BUG) to be provided to occupants	
Question	Criteria Achieved ?	
Project		

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**Water** Overall contribution 6% Minimum required 50%

<b>Water Approach</b>	
What approach do you want to use for Water?:	Use the built in calculation tools
<b>Project Water Profile Question</b>	
Do you have a reticulated third pipe or an on-site water recycling system?:	No
Are you installing a swimming pool?:	No
Are you installing a rainwater tank?:	Yes
<b>Fixtures, fittings &amp; connections profile</b>	
Showerhead: All	4 Star WELS (>= 4.5 but <= 6.0)
Bath: All	Scope out
Kitchen Taps: All	>= 5 Star WELS rating
Bathroom Taps: All	>= 5 Star WELS rating
Dishwashers: All	Scope out
WC: All	>= 4 Star WELS rating
Urinals: All	Scope out
Washing Machine Water Efficiency: All	Scope out
Which non-potable water source is the dwelling/space connected to?:	
WH1 OFFICE	WH1 RWT
WH1	
WH2	WH2 RWT
WH3	WH3 RWT
WH4	WH4 RWT
WH5	WH5 RWT
WH6	WH6 RWT
WH7	WH7 RWT
WH8	WH8 RWT
WH9	WH9 RWT
WH10	WH10 RWT
WH11	WH11 RWT
WH12	WH12 RWT
WH13	WH13 RWT
WH14	WH14 RWT
WH15	WH15 RWT
WH16	WH16 RWT
Non-potable water source connected to Toilets: All	Yes
Non-potable water source connected to Laundry (washing machine): All	No
Non-potable water source connected to Hot Water System: All	No

**Rainwater tank profile**

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**What is the total roof area connected to the rainwater tank?:**

WH1 RWT	230 m <sup>2</sup>
WH2 RWT	80.0 m <sup>2</sup>
WH3 RWT	80.0 m <sup>2</sup>
WH4 RWT	80.0 m <sup>2</sup>
WH5 RWT	145 m <sup>2</sup>
WH6 RWT	155 m <sup>2</sup>
WH7 RWT	120 m <sup>2</sup>
WH8 RWT	120 m <sup>2</sup>
WH9 RWT	170 m <sup>2</sup>
WH10 RWT	120 m <sup>2</sup>
WH11 RWT	120 m <sup>2</sup>
WH12 RWT	155 m <sup>2</sup>
WH13 RWT	120 m <sup>2</sup>
WH14 RWT	120 m <sup>2</sup>
WH15 RWT	120 m <sup>2</sup>
WH16 RWT	160 m <sup>2</sup>

**Tank Size:**

WH1 RWT	2,000 Litres
WH2 RWT	2,000 Litres
WH3 RWT	2,000 Litres
WH4 RWT	2,000 Litres
WH5 RWT	2,000 Litres
WH6 RWT	2,000 Litres
WH7 RWT	2,000 Litres
WH8 RWT	2,000 Litres
WH9 RWT	2,000 Litres
WH10 RWT	2,000 Litres
WH11 RWT	2,000 Litres
WH12 RWT	2,000 Litres
WH13 RWT	2,000 Litres
WH14 RWT	2,000 Litres
WH15 RWT	2,000 Litres
WH16 RWT	2,000 Litres

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Irrigation area connected to tank:	
WH1 RWT	7.8 m <sup>2</sup>
WH2 RWT	7.8 m <sup>2</sup>
WH3 RWT	7.8 m <sup>2</sup>
WH4 RWT	7.8 m <sup>2</sup>
WH5 RWT	7.8 m <sup>2</sup>
WH6 RWT	7.8 m <sup>2</sup>
WH7 RWT	7.8 m <sup>2</sup>
WH8 RWT	7.8 m <sup>2</sup>
WH9 RWT	7.8 m <sup>2</sup>
WH10 RWT	7.8 m <sup>2</sup>
WH11 RWT	7.8 m <sup>2</sup>
WH12 RWT	7.8 m <sup>2</sup>
WH13 RWT	7.8 m <sup>2</sup>
WH14 RWT	7.8 m <sup>2</sup>
WH15 RWT	7.8 m <sup>2</sup>
WH16 RWT	7.8 m <sup>2</sup>
Is connected irrigation area a water efficient garden?:	
WH1 RWT	Yes
WH2 RWT	Yes
WH3 RWT	Yes
WH4 RWT	Yes
WH5 RWT	Yes
WH6 RWT	Yes
WH7 RWT	Yes
WH8 RWT	Yes
WH9 RWT	Yes
WH10 RWT	Yes
WH11 RWT	Yes
WH12 RWT	Yes
WH13 RWT	Yes
WH14 RWT	Yes
WH15 RWT	Yes
WH16 RWT	Yes

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Other external water demand connected to tank?:	
WH1 RWT	-
WH2 RWT	-
WH3 RWT	-
WH4 RWT	-
WH5 RWT	-
WH6 RWT	-
WH7 RWT	-
WH8 RWT	-
WH9 RWT	-
WH10 RWT	-
WH11 RWT	-
WH12 RWT	-
WH13 RWT	-
WH14 RWT	-
WH15 RWT	-
WH16 RWT	-

1.1 Potable Water Use Reduction		79%
Score Contribution	This credit contributes 83.3% towards the category score.	
Criteria	What is the reduction in total potable water use due to efficient fixtures, appliances, rainwater use and recycled water use? To achieve points in this credit there must be >25% potable water reduction.	
Output	Reference	
Project	1662 kL	
Output	Proposed (excluding rainwater and recycled water use)	
Project	1201 kL	
Output	Proposed (including rainwater and recycled water use)	
Project	754 kL	
Output	% Reduction in Potable Water Consumption	
Project	54 %	
Output	% of connected demand met by rainwater	
Project	100 %	
Output	How often does the tank overflow?	
Project	Very Often	
Output	Opportunity for additional rainwater connection	
Project	226 kL	

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<b>3.1 Water Efficient Landscaping</b>		0%
Score Contribution	This credit contributes 16.7% towards the category score.	
Criteria	Will water efficient landscaping be installed?	
Annotation	Drought tolerant plant species have been nominated on the Landscape Plan. Landscaping is to be fitted with irrigation system which is fed from the water tanks.	
Question	Criteria Achieved ?	
Project	No	
<b>4.1 Building Systems Water Use Reduction</b>	N/A	✦ Scoped Out
This credit was scoped out	N/A	

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**Energy** Overall contribution 18% Minimum required 50%

Use the BESS Deem to Satisfy (DtS) method for Non-residential spaces?:	Yes
Do all exposed floors and ceilings (forming part of the envelope) demonstrate meeting the required NCC2022 insulation levels (total R-value upwards and downwards)?:	Yes
Does all wall and glazing demonstrate meeting the required NCC2022 facade calculator (or better than the total allowance)?:	Yes
Are heating and cooling systems within one Star of the most efficient equivalent capacity unit available, or Coefficient of Performance (CoP) & Energy Efficiency Ratios (EER) not less than 85% of the CoP & EER of the most efficient equivalent capacity unit available?:	Yes
Are water heating systems within one star of the best available, or 85% or better than the most efficient equivalent capacity unit?:	Yes
Use the BESS Deem to Satisfy (DtS) method for Unconditioned - non-residential spaces?:	-
<b>Non-residential buildings profile</b>	
Heating, Cooling & Comfort Ventilation - Electricity Reference fabric & services:	-
Heating, Cooling & Comfort Ventilation - Electricity - proposed fabric and reference services:	-
Heating, Cooling & Comfort Ventilation - Electricity Proposed fabric & services:	-
Heating - Wood - reference fabric and services:	-
Heating - Wood - proposed fabric and reference services:	-
Heating - Wood - proposed fabric and services:	-
Hot Water - Electricity - Reference:	-
Hot Water - Electricity - Proposed:	-
Lighting - Reference:	-
Lighting - Proposed:	-
Peak Thermal Cooling Load - Reference:	-
Peak Thermal Cooling Load - Proposed:	-
<b>1.1 Thermal Performance Rating - Non-Residential</b>	37%
Score Contribution	This credit contributes 18.4% towards the category score.
Criteria	What is the % reduction in heating and cooling energy consumption against the reference case (NCC2022 Section J)?
<b>2.1 Greenhouse Gas Emissions</b>	100%
Score Contribution	This credit contributes 12.2% towards the category score.
Criteria	What is the % reduction in annual greenhouse gas emissions against the benchmark?

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<b>2.2 Peak Demand</b>		100%
Score Contribution	This credit contributes 2.3% towards the category score.	
Criteria	What is the % reduction in the instantaneous (peak-hour) demand against the benchmark?	
<b>2.6 Electrification</b>		0%
Score Contribution	This credit contributes 18.3% towards the category score.	
Criteria	Is the development all-electric?	
Question	Criteria Achieved?	
Project	Yes	
<b>2.7 Energy consumption</b>		100%
Score Contribution	This credit contributes 24.4% towards the category score.	
Criteria	What is the % reduction in annual energy consumption against the benchmark?	
<b>3.1 Carpark Ventilation</b>	N/A	✦ Scoped Out
This credit was scoped out	N/A	
<b>3.2 Hot Water</b>		100%
Score Contribution	This credit contributes 6.1% towards the category score.	
Criteria	What is the % reduction in annual energy consumption (gas and electricity) of the hot water system against the benchmark?	
<b>3.7 Internal Lighting - Non-Residential</b>		100%
Score Contribution	This credit contributes 12.2% towards the category score.	
Criteria	Does the maximum illumination power density (W/m2) in at least 90% of the area of the relevant building class meet the requirements in Table J7D3a of the NCC 2022 Vol 1?	
Annotation	Refer to lighting calculations in SDA appendices	
Question	Criteria Achieved ?	
Office	Yes	
Unconditioned Warehouse/factory	Yes	
<b>4.1 Combined Heat and Power (cogeneration / trigeneration)</b>	N/A	✦ Scoped Out
This credit was scoped out	No cogeneration or trigeneration system in use.	
<b>4.2 Renewable Energy Systems - Solar</b>	0%	⊘ Disabled
This credit is disabled	No solar PV renewable energy is in use.	
<b>4.4 Renewable Energy Systems - Other</b>	N/A	✦ Scoped Out
This credit was scoped out	No other (non-solar PV) renewable energy is in use.	

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**Stormwater** Overall contribution 14% Minimum required 100%

Which stormwater modelling software are you using?:		Melbourne Water STORM tool
<b>1.1 Stormwater Treatment</b>		100%
Score Contribution	This credit contributes 100% towards the category score.	
Criteria	Has best practice stormwater management been demonstrated?	
Question	STORM score achieved	
Project	106	
Output	Min STORM Score	
Project	100	

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**IEQ** Overall contribution 8% Minimum required 50%

<b>1.4 Daylight Access - Non-Residential</b>		79%	✓ Achieved
Score Contribution	This credit contributes 35.3% towards the category score.		
Criteria	What % of the nominated floor area has at least 2% daylight factor?		
Annotation	Refer to Daylight Plan in SDA appendices		
Question	Percentage Achieved?		
Office	35 %		
Unconditioned Warehouse/factory	80 %		
<b>2.3 Ventilation - Non-Residential</b>		49%	✓ Achieved
Score Contribution	This credit contributes 35.3% towards the category score.		
Criteria	What % of the regular use areas are effectively naturally ventilated?		
Question	Percentage Achieved?		
Office	50 %		
Unconditioned Warehouse/factory	100 %		
Criteria	What increase in outdoor air is available to regular use areas compared to the minimum required by AS 1668.2:2012?		
Question	Percentage Achieved?		
Office	0 %		
Unconditioned Warehouse/factory	0 %		
Criteria	What CO2 concentrations are the ventilation systems designed to achieve, to monitor and to maintain?		
Question	Value		
Office	800 ppm		
Unconditioned Warehouse/factory	0 ppm		
<b>3.4 Thermal comfort - Shading - Non-Residential</b>		0%	
Score Contribution	This credit contributes 17.6% towards the category score.		
Criteria	What percentage of east, north and west glazing to regular use areas is effectively shaded?		
Question	Percentage Achieved?		
Office	0 %		
Unconditioned Warehouse/factory	0 %		
<b>3.5 Thermal Comfort - Ceiling Fans - Non-Residential</b>		0%	
Score Contribution	This credit contributes 5.9% towards the category score.		
Criteria	What percentage of regular use areas in tenancies have ceiling fans?		
Question	Percentage Achieved?		
Office	0 %		
Unconditioned Warehouse/factory	0 %		
<b>4.1 Air Quality - Non-Residential</b>		60%	
Score Contribution	This credit contributes 3.5% towards the category score.		

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Criteria	Do all paints, sealants and adhesives meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Office	Yes
Unconditioned Warehouse/factory	Yes
Criteria	Does all carpet meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Office	Yes
Unconditioned Warehouse/factory	Yes
Criteria	Does all engineered wood meet the maximum total indoor pollutant emission limits?
Question	Criteria Achieved ?
Office	Yes
Unconditioned Warehouse/factory	Yes

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**Transport** Overall contribution 3%

<b>1.4 Bicycle Parking - Non-Residential</b>		100%
Score Contribution	This credit contributes 25% towards the category score.	
Criteria	Have the planning scheme requirements for employee bicycle parking been exceeded by at least 50% (or a minimum of 2 where there is no planning scheme requirement)?	
Question	Criteria Achieved ?	
Office	Yes	
Unconditioned Warehouse/factory	Yes	
Question	Bicycle Spaces Provided ?	
Office	1	
Unconditioned Warehouse/factory	1	
<b>1.5 Bicycle Parking - Non-Residential Visitor</b>		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Have the planning scheme requirements for visitor bicycle parking been exceeded by at least 50% (or a minimum of 1 where there is no planning scheme requirement)?	
Question	Criteria Achieved ?	
Office	No	
Unconditioned Warehouse/factory	No	
Question	Bicycle Spaces Provided ?	
Office	-	
Unconditioned Warehouse/factory	-	
<b>1.6 End of Trip Facilities - Non-Residential</b>		97%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Where adequate bicycle parking has been provided. Is there also: * 1 shower for the first 5 employee bicycle spaces plus 1 to each 10 employee bicycles spaces thereafter, * changing facilities adjacent to showers, and * one secure locker per employee bicycle space in the vicinity of the changing / shower facilities?	
Question	Number of showers provided ?	
Office	0	
Unconditioned Warehouse/factory	1	
Question	Number of lockers provided ?	
Office	1	
Unconditioned Warehouse/factory	1	
Output	Min Showers Required	
Office	1	
Unconditioned Warehouse/factory	1	
Output	Min Lockers Required	
Office	1	
Unconditioned Warehouse/factory	1	

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<b>2.1 Electric Vehicle Infrastructure</b>	0%
Score Contribution	This credit contributes 25% towards the category score.
Criteria	Are facilities provided for the charging of electric vehicles?
Question	Criteria Achieved ?
Project	No
<b>2.2 Car Share Scheme</b>	0%
Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Has a formal car sharing scheme been integrated into the development?
Question	Criteria Achieved ?
Project	No
<b>2.3 Motorbikes / Mopeds</b>	0%
Score Contribution	This credit contributes 12.5% towards the category score.
Criteria	Are a minimum of 5% of vehicle parking spaces designed and labelled for motorbikes (must be at least 5 motorbike spaces)?
Question	Criteria Achieved ?
Project	No

## Waste Overall contribution 2%

<b>1.1 - Construction Waste - Building Re-Use</b>	0%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	If the development is on a site that has been previously developed, has at least 30% of the existing building been re-used?
Annotation	N/A
Question	Criteria Achieved ?
Project	-
<b>2.1 - Operational Waste - Food &amp; Garden Waste</b>	0%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	Are facilities provided for on-site management of food and garden waste?
Question	Criteria Achieved ?
Project	No
<b>2.2 - Operational Waste - Convenience of Recycling</b>	100%
Score Contribution	This credit contributes 33.3% towards the category score.
Criteria	Are the recycling facilities at least as convenient for occupants as facilities for general waste?
Annotation	Recycling bin location near landfill bin
Question	Criteria Achieved ?
Project	Yes.

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**Urban Ecology** Overall contribution 0%

<b>1.1 Communal Spaces</b>		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Is there at least the following amount of common space measured in square meters : * 1m <sup>2</sup> for each of the first 50 occupants * Additional 0.5m <sup>2</sup> for each occupant between 51 and 250 * Additional 0.25m <sup>2</sup> for each occupant above 251?	
Question	Common space provided	
Office	-	
Unconditioned Warehouse/factory	-	
Output	Minimum Common Space Required	
Office	5 m <sup>2</sup>	
Unconditioned Warehouse/factory	54 m <sup>2</sup>	
<b>2.1 Vegetation</b>		0%
Score Contribution	This credit contributes 50% towards the category score.	
Criteria	How much of the site is covered with vegetation, expressed as a percentage of the total site area?	
Annotation	124m <sup>2</sup> vegetated area / 4599 site area	
Question	Percentage Achieved ?	
Project	2 %	
<b>2.2 Green Roofs</b>		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Does the development incorporate a green roof?	
Question	Criteria Achieved ?	
Project	No	
<b>2.3 Green Walls and Facades</b>		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	Does the development incorporate a green wall or green façade?	
Question	Criteria Achieved ?	
Project	No	
<b>3.2 Food Production - Non-Residential</b>		0%
Score Contribution	This credit contributes 12.5% towards the category score.	
Criteria	What area of space per occupant is dedicated to food production?	
Question	Food Production Area	
Office	-	
Unconditioned Warehouse/factory	-	
Output	Min Food Production Area	
Office	2 m <sup>2</sup>	
Unconditioned Warehouse/factory	-	

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**Innovation** Overall contribution 0%

<b>1.1 Innovation</b>	0%
Score Contribution	This credit contributes 100% towards the category score.
Criteria	What percentage of the Innovation points have been claimed (10 points maximum)?

**Note**

This is a DRAFT and not suitable for submission to council.

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## Project Summary

**Date**  
7/08/2024

**Name**  
M.R.

**Company**  
CCD Drafting Pty Ltd

**Position**  
0

**Building Name / Address**  
WH1 - 68-70 KYABRAM STREET, COOLAROO  
0

**Building State**  
VIC

**Climate Zone**  
Climate Zone 6 - Mild temperate

**Building Classification**  
Class 5 - office building

**Storeys Above Ground**  
2

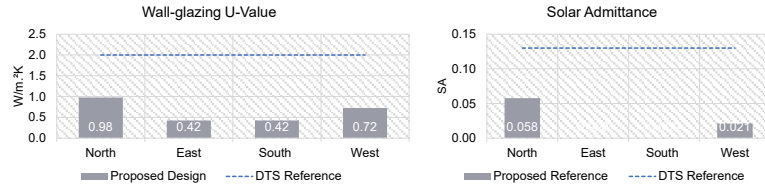
**Tool Version**  
1.2 (June 2020)

The summary below provides an overview of where compliance has been achieved for Specification J1.5a - Calculation of U-Value and solar admittance - Method 1 (Single Aspect) and Method 2 (Multiple Aspects).

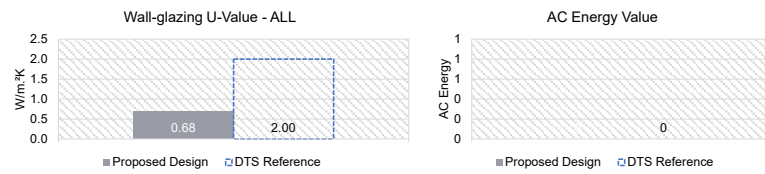
Compliant Solution =    
Non-Compliant Solution =  

	North	East	Method 1 South	West	Method 2 All
Wall-glazing U-Value (W/m <sup>2</sup> .K)	0.98	0.42	0.42	0.72	0.68
Solar Admittance	0.06			0.02	
AC Energy	0				0

### Method 1



### Method 2



## Project Details

	North	East	South	West
Glazing Area (m <sup>2</sup> )	9.8	0	0	12.6
Glazing to Façade Ratio	11%	0%	0%	6%
Glazing References	Single Glazed Low E			Single Glazed Low E
Glazing System Types	Awning			Awning
Glass Types	Single Glazing - low-E coating			Single Glazing - low-E coating
Frame Types	Aluminium			
Average Glazing U-Value (W/m <sup>2</sup> .K)	5.60			5.60
Average Glazing SHGC	0.54	0.00	0.00	0.54
Shading Systems	Horizontal Device	Horizontal Device	Horizontal Device	Horizontal Device
Wall Area (m <sup>2</sup> )	82	33	105	208
Wall Types	Wall	Wall	Wall	Wall
Methodology	Wall			
Wall Construction	150 Conc Panel R2.0 Insulation Stud wall r2.0 insulation	Stud wall r2.0 insulation	Stud wall r2.0 insulation	Stud wall r2.0 insulation
Wall Thickness	150 90	90	90	150
Average Wall R-value (m <sup>2</sup> .K/W)	2.35	2.36	2.36	2.33
Solar Absorptance	0.5	0.5	0.5	0.5

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# Non-residential Lighting

Class 3 and 5-9 buildings



Main Menu

Help

Multiple Lighting Systems Calculator

Calculator

Building name/description

WH1 - 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	152.0 m <sup>2</sup>	59 m	7.0 m	780 W	Wholesale storage area with a vertical illuminance target of 180 lx											981 W	91% of 66%
2	RECEPTION	13.0 m <sup>2</sup>	14 m	2.6 m	21 W	Office - artificially lit to an ambient level of 200 lx or more											95 W	2% of 66%
3	GF TEA ROOM	9.5 m <sup>2</sup>	12 m	2.6 m	21 W	Kitchen and food preparation area											63 W	2% of 66%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	2.6 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	1% of 66%
5																	ROW SKIPPED (OK if intentional)	
6																	ROW SKIPPED (OK if intentional)	
7	FF OFFICE / TEA	16.0 m <sup>2</sup>	16 m	2.7 m	21 W	Office - artificially lit to an ambient level of 200 lx or more											116 W	2% of 66%
8	FF AMB WC	3.8 m <sup>2</sup>	8 m	2.7 m	11 W	Toilet, locker room, staff room, rest room and the like												
9																		

Total 854 W

Total 1288 W

if inputs are valid



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# Non-residential Lighting

Class 3 and 5-9 buildings



Main Menu

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Multiple Lighting Systems Calculator

Calculator

Building name/description

WH2-4 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

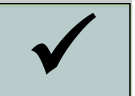
(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	128.0 m <sup>2</sup>	50 m	7.0 m	520 W	Wholesale storage area with a vertical illuminance target of 160 lx											826 W	96% of 61%
2																		
3	GF TEA ROOM	4.5 m <sup>2</sup>	9 m	3.0 m	11 W	Kitchen and food preparation area											32 W	2% of 61%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	3.0 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	2% of 61%
5																		
6																		
7																		
8																		
9																		

Total 542 W

Total 891 W

if inputs are valid



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# Non-residential Lighting

Class 3 and 5-9 buildings



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Calculator

Building name/description

WH5 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	126.0 m <sup>2</sup>	47 m	7.0 m	780 W	Wholesale storage area with a vertical illuminance target of 160 lx											800 W	97% of 93%
2																		ROW SKIPPED (OK if intentional)
3	GF TEA ROOM	4.0 m <sup>2</sup>	8 m	3.0 m	11 W	Kitchen and food preparation area											29 W	1% of 93%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	3.0 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	1% of 93%
5																		
6																		
7																		
8																		
9																		

Total 802 W

Total 862 W

if inputs are valid



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# Non-residential Lighting

Class 3 and 5-9 buildings



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Calculator

Building name/description

WH6 & 12 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	136.0 m <sup>2</sup>	53 m	7.0 m	780 W	Wholesale storage area with a vertical illuminance target of 160 lx											877 W	97% of 85%
2																		ROW SKIPPED (OK if intentional)
3	GF TEA ROOM	4.0 m <sup>2</sup>	8 m	3.0 m	11 W	Kitchen and food preparation area											29 W	1% of 85%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	3.0 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	1% of 85%
5																		
6																		
7																		
8																		
9																		

Total 802 W

Total 939 W

if inputs are valid



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# Non-residential Lighting

Class 3 and 5-9 buildings



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Calculator

Building name/description

WH6 & 12 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	103.0 m <sup>2</sup>	43 m	7.0 m	520 W	Wholesale storage area with a vertical illuminance target of 160 lx											675 W	96% of 74%
2																		ROW SKIPPED (OK if intentional)
3	GF TEA ROOM	4.0 m <sup>2</sup>	8 m	3.0 m	11 W	Kitchen and food preparation area											29 W	2% of 74%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	3.0 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	2% of 74%
5																		
6																		
7																		
8																		
9																		

Total 542 W

Total 737 W

if inputs are valid



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# Non-residential Lighting

Class 3 and 5-9 buildings



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Calculator

Building name/description

WH9 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	151.0 m <sup>2</sup>	57 m	7.0 m	780 W	Wholesale storage area with a vertical illuminance target of 160 lx											959 W	97% of 79%
2																		ROW SKIPPED (OK if intentional)
3	GF TEA ROOM	4.0 m <sup>2</sup>	8 m	3.0 m	11 W	Kitchen and food preparation area											29 W	1% of 79%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	3.0 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	1% of 79%
5																		
6																		
7																		
8																		
9																		

Total 802 W

Total 1021 W

if inputs are valid



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# Non-residential Lighting

Class 3 and 5-9 buildings



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Multiple Lighting Systems Calculator

Calculator

Building name/description

WH16 68 - 70 KYABRAM ST, COOLAROO

Classification

Class 7b

Number of rows preferred in table below

9

(as currently displayed)

ID	Description	Floor area of the space	Perimeter of the space	Floor to ceiling height	Design Illumination Power Load	Space	Illuminance		Adjustment Factor One			Adjustment Factor Two			Light Colour Adjustment Factors		SATISFIES PART J6.2	
							Designed Lux Level	Recommended Lux Level	Adjustment Factor One	Dimming % Area	Illuminance Turndown	Adjustment Factor Two	Dimming % Area	Illuminance Turndown	Light Colour Adjustment Factor One	Light Colour Adjustment Factor Two	System Illumination Power Load Allowance	Lighting System Share of % of Aggregate Allowance Used
1	WAREHOUSE	141.0 m <sup>2</sup>	51 m	7.0 m	780 W	Wholesale storage area with a vertical illuminance target of 160 lx											895 W	97% of 84%
2																		ROW SKIPPED (OK if intentional)
3	GF TEA ROOM	4.0 m <sup>2</sup>	8 m	3.0 m	11 W	Kitchen and food preparation area											29 W	1% of 84%
4	DISABLED TOILET	6.2 m <sup>2</sup>	10 m	3.0 m	11 W	Toilet, locker room, staff room, rest room and the like											33 W	1% of 84%
5																		
6																		
7																		
8																		
9																		

Total 802 W

Total 957 W

if inputs are valid



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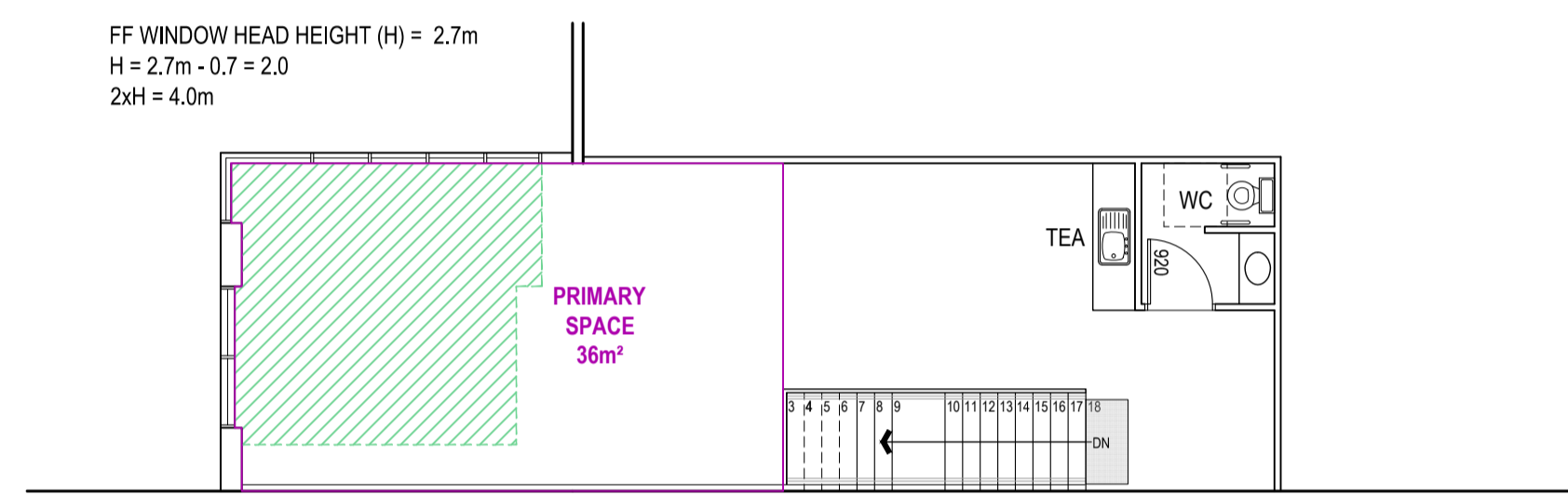


WAREHOUSE IEQ DAYLIGHT CALCULATIONS (APPLICABLE TO ALL WAREHOUSES)			
NOMINATED PRIMARY SPACE	NOMINATED FLOOR AREA (m <sup>2</sup> )	DAYLIGHT (m <sup>2</sup> )	DAYLIGHT TO PRIMARY SPACE (%)
WAREHOUSE 1 FLOOR	152 m <sup>2</sup>	101 m <sup>2</sup>	66.4%
GROUND FLOOR RECEPTION	13 m <sup>2</sup>	0 m <sup>2</sup>	0%
FIRST FLOOR OFFICE	36 m <sup>2</sup>	17.5 m <sup>2</sup>	48%
WAREHOUSE TOTAL	152 m <sup>2</sup>	99 m <sup>2</sup>	65.1%
OFFICE TOTAL	49 m <sup>2</sup>	17.5 m <sup>2</sup>	35%

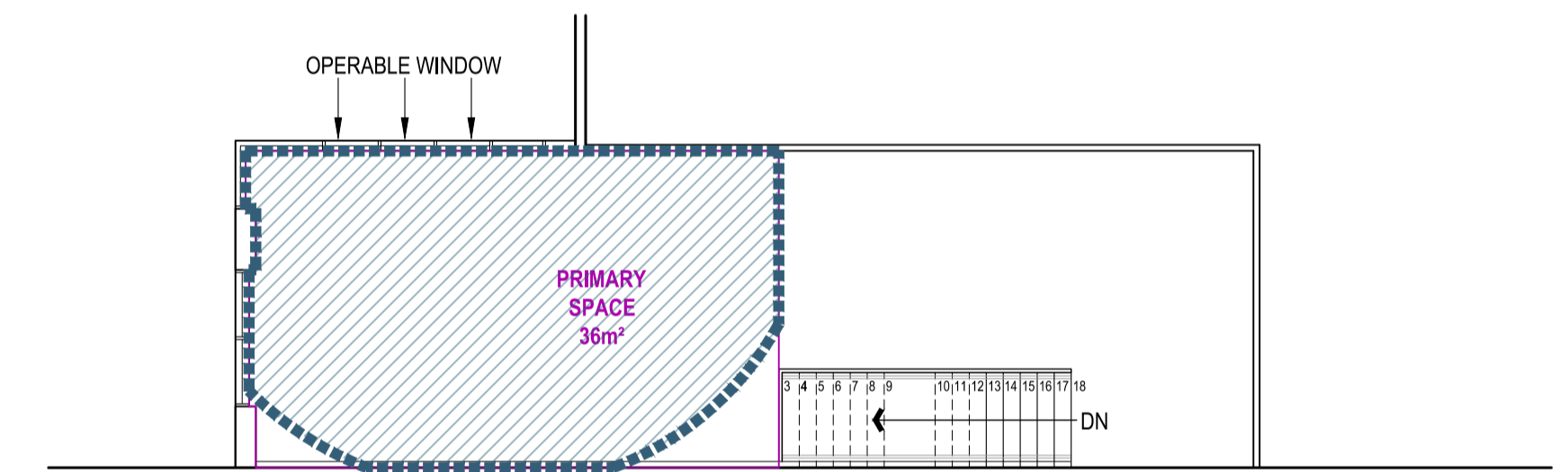
VENTILATION SCHEDULE			
ROOM	AREA	REQ'D	PROV'D
WAREHOUSE 1	152	7.6	19.2
RECEPTION	13	0.65	2.4
FIRST FLOOR OFFICE	36	1.8	5.1
WC'S AND TEA ROOMS		PROVIDE A 2500 EXHAUST FAN IN CEILING AND DISCHARGE THROUGH ROOF TO OPEN AIR VIA 1500 FLUE LIGHT AND FAN TO OPERATE SIMULTANEOUSLY VIA SWITCH.	

LIGHTING SCHEDULE			
ROOM	TYPE	TOTAL LIGHTS	WATTAGE
WAREHOUSE	PROVIDE 130W HIBAY LED LIGHTS =	6	780W
RECEPTION	PROVIDE 10.5W LED LIGHTS =	2	21W
GF TEA ROOM	PROVIDE 10.5W LED LIGHTS =	2	21W
DISABLED TOILET	PROVIDE 10.5W LED LIGHTS =	1	11W
FF TEA ROOM	PROVIDE 10.5W LED LIGHTS =	2	21W
FF DISABLED TOILET	PROVIDE 10.5W LED LIGHTS =	1	11W

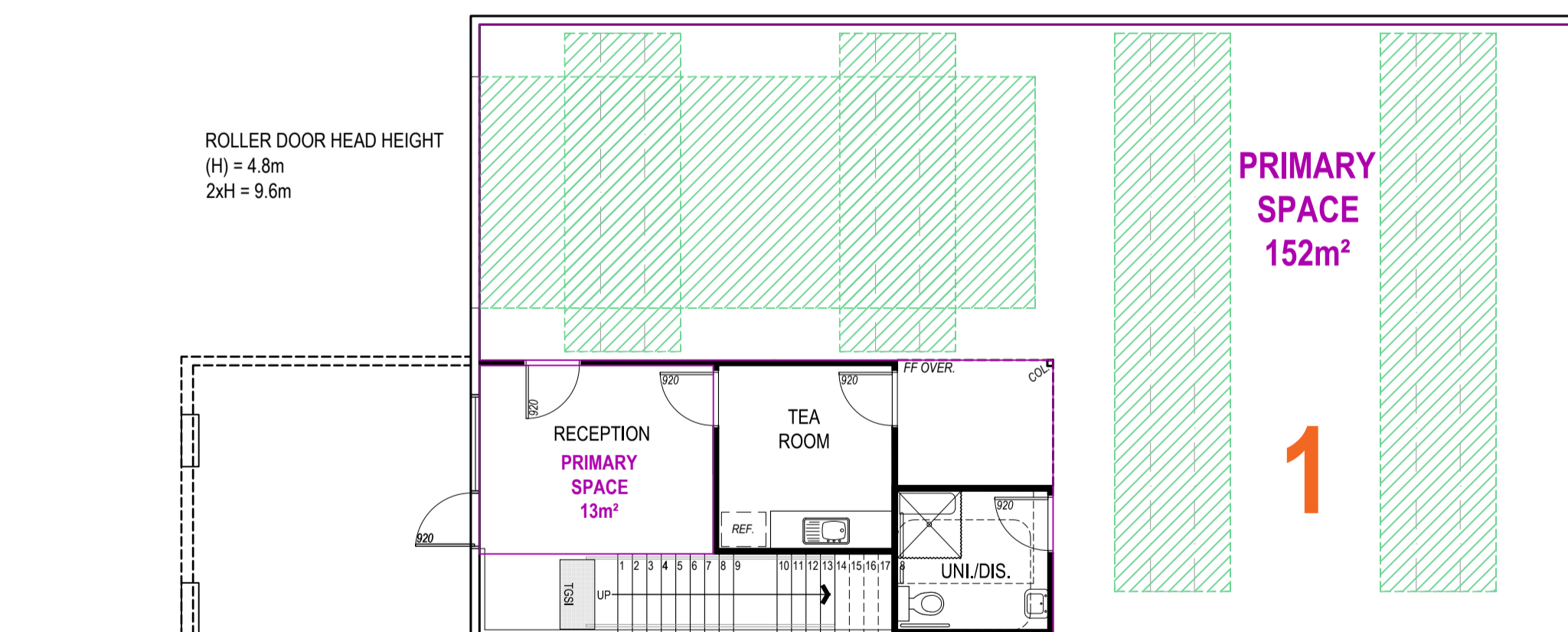
PART J ENERGY EFFICIENCY COMPLIANCE		
ROOF AND CEILING - J1.3(a)	Min. R Value = R2.72 (10% IMPROVEMENT REQ = R2.5) - Total R Value = <b>R2.9</b>	Skillion roof with suspended ceiling (R0.46) & alum. foil (R1.3) - Provide (R1.8) bulk insulation & Roof Blanket R0.2
EXTERNAL WALLS - J1.5(a)	Min. R Value = R1.98 (10% IMPROVEMENT REQ = R2.18)	150mm conc. wall with battens & plaster (0.32) - Provide (R2.0) Foamboard insulation - Total R Value = <b>R2.32</b>
INTERNAL WALLS - J1.5b	Min. R Value = R1.8 (10% IMPROVEMENT REQ = R1.98)	90mm stud wall with plaster both sides (0.36) - Provide (R2.0) insulation - Total R Value = <b>R2.36</b>
FIRST FLOOR - J1.6(a)	Min. R Value = R2.0 (10% IMPROVEMENT REQ = R2.20) Floor without an in-slab heating and cooling system	Timber floor joists, (0.75) - Provide (R1.5) insulation - Total R Value = <b>R1.75</b> <i>gr</i> Steel floor joists, (0.2) - Provide (R2.0) insulation - Total R Value = <b>R2.20</b>
EXTERNAL GLAZING - J2	As per facade calculations	
BUILDING SEALING - J3	1. All external doors and windows to be weather sealed. 2. All general building gaps and cracks to be filled. 3. All insulation to be tape sealed and tears patched. 4. Only non-vented downlights, and skylights to be used. 5. Exhausts fans to be self-sealed at outlet duct.	
AIR MOVEMENT - J4	Air-conditioned office A/C systems RBS to be supplied with compliance certificate.	
AIR-CONDITIONING - J5	A/C to comply with BCA Part J5 RBS to be supplied with compliance cert. for Mechanical ventilation system prior to commencement of work.	
ARTIFICIAL LIGHT & POWER - J6	Refer attached Artificial Lighting and power printout Refer Lighting Schedule	
HOT WATER SUPPLY - J7	N/A	
MAINTENANCE ACCESS - J8	Access must be provided to all plant & equipment & components that require maintenance in accordance with Part 12 of the BCA	



**WAREHOUSE 1 FIRST FLOOR**



**WAREHOUSE 1 - FIRST FLOOR**



**WAREHOUSE 1 GROUND FLOOR**

IEQ NATURAL VENTILATION AS PER BESS PARAMETERS & AS1668:2012			
NOMINATED PRIMARY SPACE	NOMINATED FLOOR AREA (m <sup>2</sup> )	NATURAL VENTILATION (m <sup>2</sup> )	NAT. VENT. TO PRIMARY SPACE (%)
WAREHOUSE FLOOR	152 m <sup>2</sup>	152 m <sup>2</sup>	100%
WAREHOUSE FLOOR ACHIEVES 100% NATURAL VENTILATION DUE TO LARGE ROLLER DOOR OPENING			
GROUND FLOOR RECEPTION	13 m <sup>2</sup>	13 m <sup>2</sup>	0%
NO CROSS VENTILATION IN GF RECEPTION			
FIRST FLOOR OFFICE	36 m <sup>2</sup>	34 m <sup>2</sup>	94%
REFER TO FIRST FLOOR VENT. PLAN BELOW			
OFFICE TOTAL	49 m <sup>2</sup>	34 m <sup>2</sup>	69%

**IEQ DAYLIGHT PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES  
ADDRESS: 68-70 KYABRAM ST, COOLAROO

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**COOLAROO PLANNING PTY. LTD.**  
100/439 DUNDAS ST W, EAST KEILOR 3033  
PH: 9331 4280 BUS.  
DRAWN: F.A  
SH. NO: 8 of 10

NORTH

SCALE: AS SHOWN @ A1  
DATE: JUN 2024

JOB No. 24 - 065

D.P.A.D. 2323

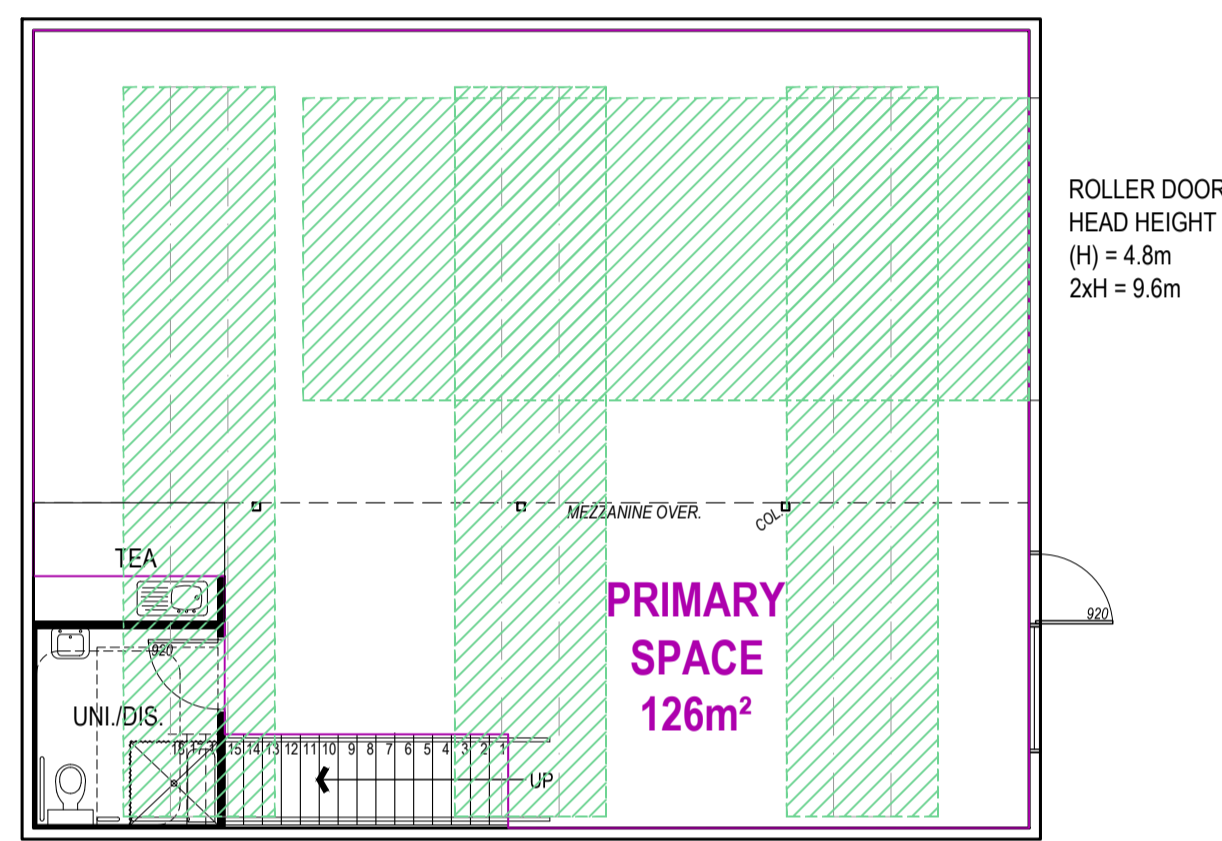
WAREHOUSE IEQ DAYLIGHT CALCULATIONS (APPLICABLE TO ALL WAREHOUSES)			
NOMINATED PRIMARY SPACE	NOMINATED FLOOR AREA (m <sup>2</sup> )	DAYLIGHT (m <sup>2</sup> )	DAYLIGHT TO PRIMARY SPACE (%)
WAREHOUSE 2, 3 & 4 FLOOR	128 m <sup>2</sup>	95 m <sup>2</sup>	74%
WAREHOUSE 5 FLOOR	126 m <sup>2</sup>	96 m <sup>2</sup>	76%
WAREHOUSE 6 & 12 FLOOR	136 m <sup>2</sup>	96 m <sup>2</sup>	70%
WAREHOUSE 7,8,10,11,13,14 & 15 FLOOR	103 m <sup>2</sup>	90 m <sup>2</sup>	87%
WAREHOUSE 9 FLOOR	151 m <sup>2</sup>	99 m <sup>2</sup>	65%
WAREHOUSE 16 FLOOR	141 m <sup>2</sup>	99 m <sup>2</sup>	70%
<b>TOTAL WAREHOUSE AREA:</b>	<b>1947 m<sup>2</sup></b>	<b>1570 m<sup>2</sup></b>	<b>80%</b>

VENTILATION SCHEDULE			
ROOM	AREA	REQ'D	PROV'D
WAREHOUSE 1	152	7.8	19.2
WAREHOUSE 2 - 4	128	6.4	19.2
WAREHOUSE 5	126	6.3	19.2
WAREHOUSE 6 & 12	136	6.8	19.2
WAREHOUSE 7,8,10,11,13,14 & 15	103	5.15	19.2
WAREHOUSE 9	151	7.55	19.2
WAREHOUSE 16	151	7.55	19.2
WC'S AND TEA ROOMS		PROVIDE A 2500 EXHAUST FAN IN CEILING AND DISCHARGE THROUGH ROOF TO OPEN AIR VIA 1500 FLUE LIGHT AND FAN TO OPERATE SIMULTANEOUSLY VIA SWITCH.	

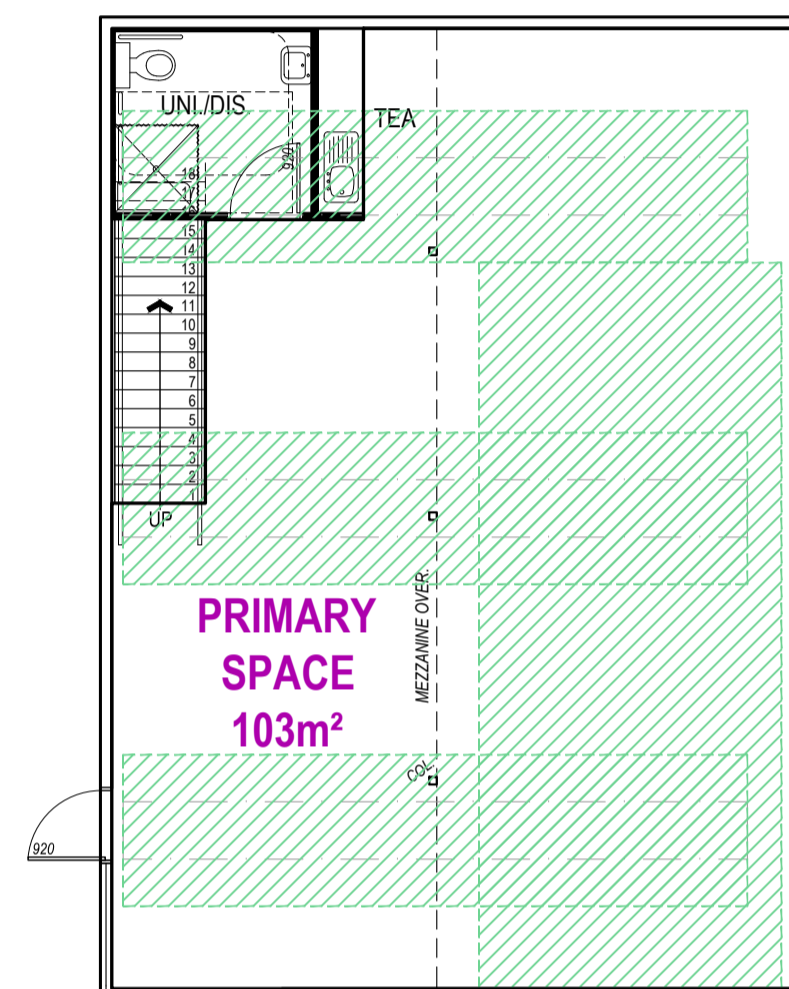
LIGHTING SCHEDULE APPLICABLE TO WAREHOUSES 2-4			
ROOM	TYPE	TOTAL LIGHTS	WATTAGE
WAREHOUSE 2-4	PROVIDE 130W HIBAY LED LIGHTS =	4 (EACH)	520W
TEA ROOM	PROVIDE 10.5W LED LIGHTS =	1 (EACH)	11W
DISABLED TOILET	PROVIDE 10.5W LED LIGHTS =	1 (EACH)	11W

LIGHTING SCHEDULE APPLICABLE TO WAREHOUSES 5,6, & 16			
ROOM	TYPE	TOTAL LIGHTS	WATTAGE
WAREHOUSE 5-16	PROVIDE 130W HIBAY LED LIGHTS =	6 (EACH)	780W
TEA ROOM	PROVIDE 10.5W LED LIGHTS =	1 (EACH)	11W
DISABLED TOILET	PROVIDE 10.5W LED LIGHTS =	1 (EACH)	11W

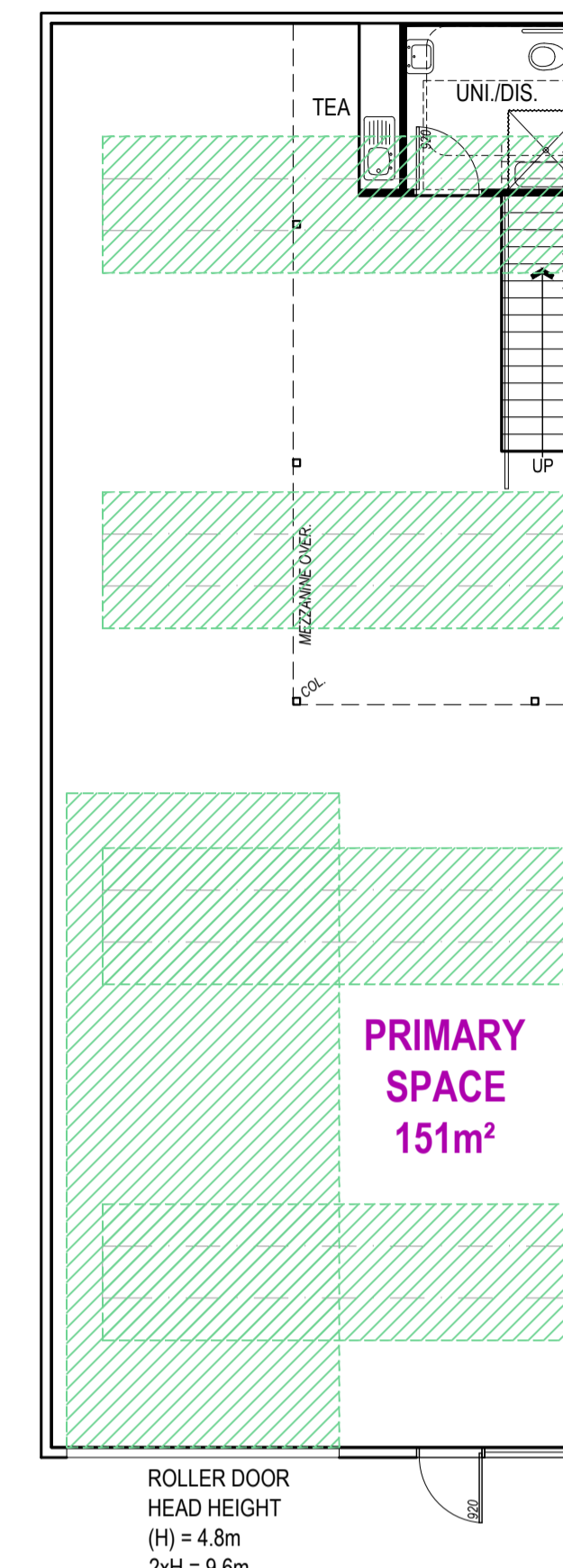
LIGHTING SCHEDULE APPLICABLE TO WAREHOUSES 7,8,10,11,13,14 & 15			
ROOM	TYPE	TOTAL LIGHTS	WATTAGE
WAREHOUSE 7-15	PROVIDE 130W HIBAY LED LIGHTS =	4 (EACH)	520W
TEA ROOM	PROVIDE 10.5W LED LIGHTS =	1 (EACH)	11W
DISABLED TOILET	PROVIDE 10.5W LED LIGHTS =	1 (EACH)	11W



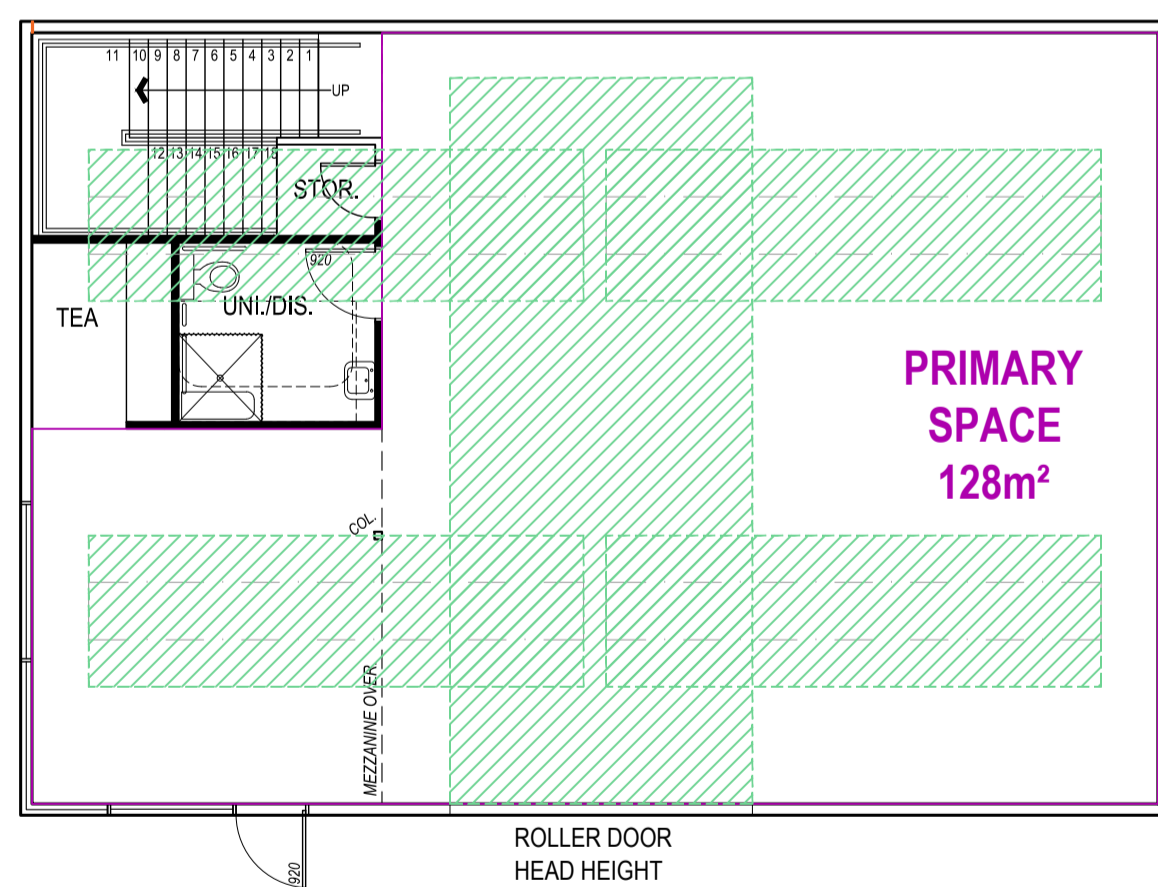
**WAREHOUSE 5 GROUND FLOOR**



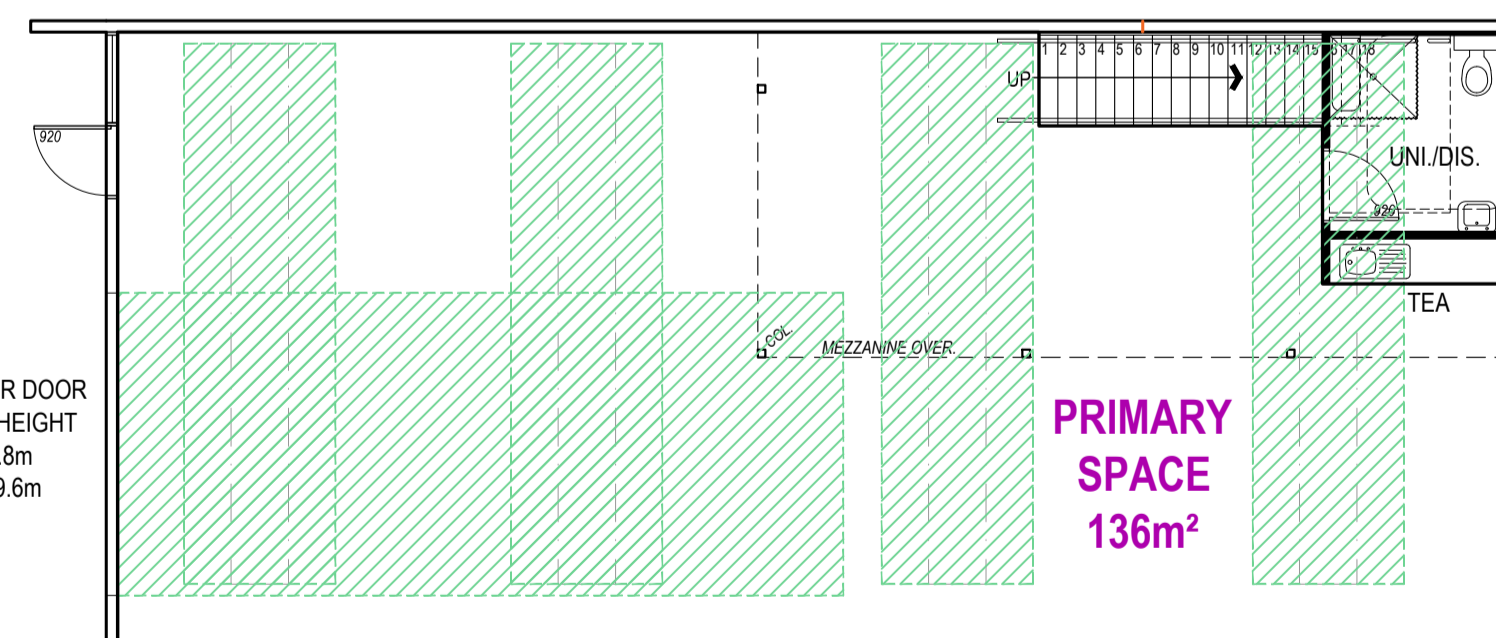
**WAREHOUSE 7,8,10,11,13,14 & 15 GROUND FLOOR**



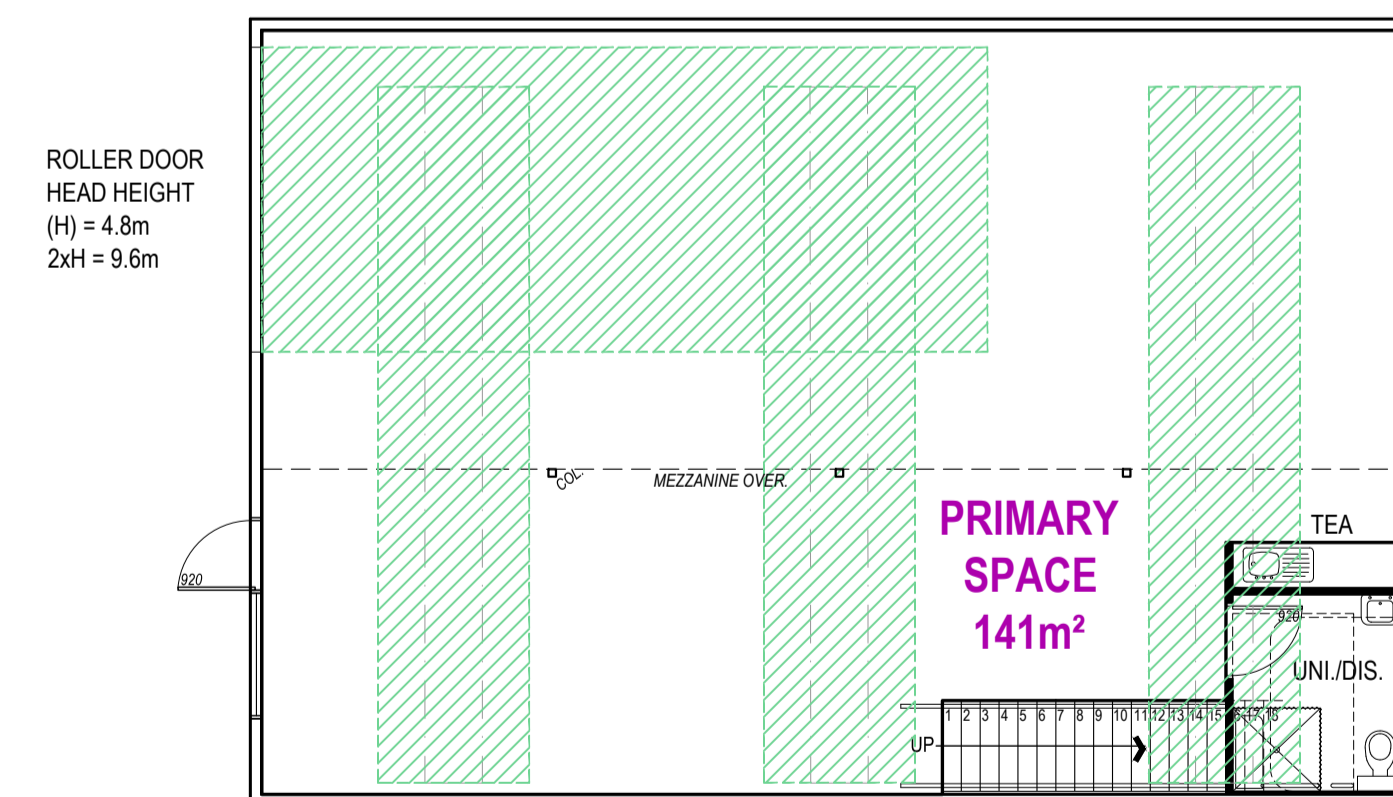
**WAREHOUSE 9 GROUND FLOOR**



**WAREHOUSE 2-4 GROUND FLOOR**



**WAREHOUSE 6 & 12 GROUND FLOOR**



**WAREHOUSE 16 GROUND FLOOR**

**IEQ DAYLIGHT PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES	This copied document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The copy must not be used for any other purpose. Please note that the plan may not be to scale.	PROPOSED WAREHOUSES PTY. LTD.
ADDRESS: 68-70 KYABRAM ST, COOLAROO		1000 4739 0149 NAH PDE, EAST KEILOR 3033
	NORTH	PH: 9331 4280 BUS.
		SCALE: AS SHOWN @ A1
		DATE: JUN 2024
		JOB No. 24 - 065

Melbourne Water **STORM Rating Report**

TransactionID: 0  
 Municipality: HUME  
 Rainfall Station: HUME  
 Address: 68-70 KYABRAM STREET

Assessor:  
 Development Type: Industrial  
 Allotment Site (m2): 4,599.00  
 STORM Rating %: 106

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
WH1	230.00	Rainwater Tank	2,000.00	5	89.80	84.30
WH2	80.00	Rainwater Tank	2,000.00	4	166.80	82.00
WH2 UNTREATED	80.00	None	0.00	0	0.00	0.00
WH3	80.00	Rainwater Tank	2,000.00	4	166.80	82.00
WH3 UNTREATED	80.00	None	0.00	0	0.00	0.00
WH4	80.00	Rainwater Tank	2,000.00	4	166.80	82.00
WH4 UNTREATED	80.00	None	0.00	0	0.00	0.00
WH5	145.00	Rainwater Tank	2,000.00	4	113.30	85.00
WH6	155.00	Rainwater Tank	2,000.00	5	121.60	79.00
WH7	120.00	Rainwater Tank	2,000.00	4	130.00	83.90
WH8	120.00	Rainwater Tank	2,000.00	4	130.00	83.90
WH9	170.00	Rainwater Tank	2,000.00	5	112.20	80.50
WH10	120.00	Rainwater Tank	2,000.00	3	115.00	91.10
WH11	120.00	Rainwater Tank	2,000.00	4	130.00	83.90
WH12	155.00	Rainwater Tank	2,000.00	5	121.60	79.00

Melbourne Water **STORM Rating Report**

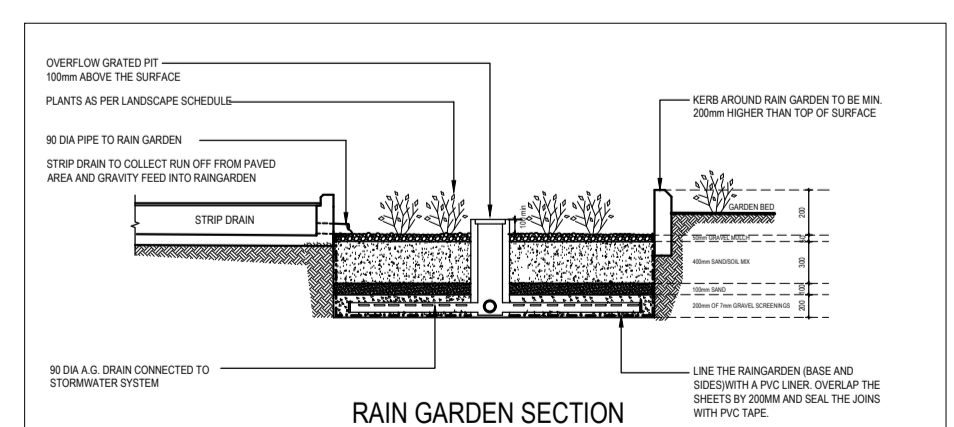
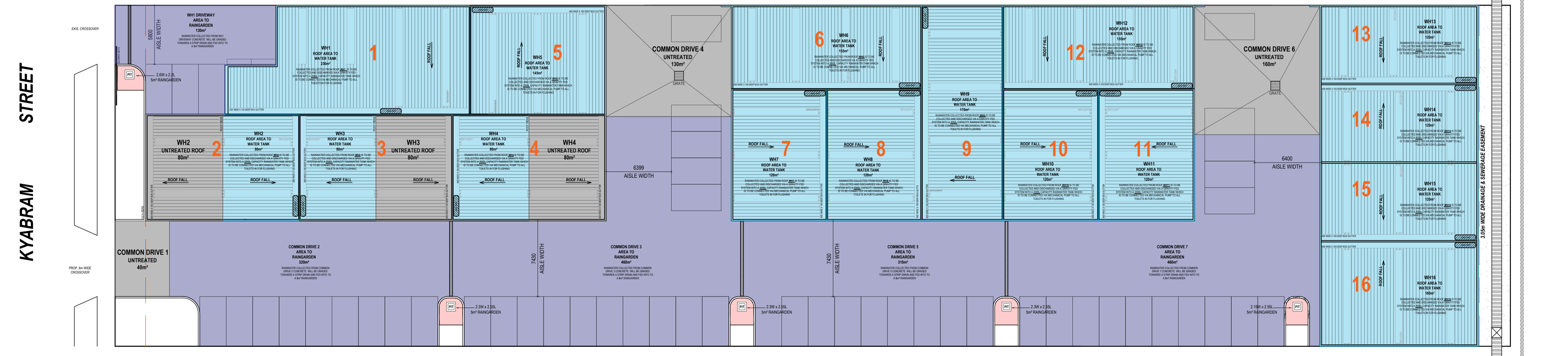
TransactionID: 0  
 Municipality: HUME  
 Rainfall Station: HUME  
 Address: 68-70 KYABRAM STREET

Assessor:  
 Development Type: Industrial  
 Allotment Site (m2): 4,599.00  
 STORM Rating %: 106

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
WH13	120.00	Rainwater Tank	2,000.00	4	130.00	83.90
WH14	120.00	Rainwater Tank	2,000.00	4	130.00	83.90
WH15	120.00	Rainwater Tank	2,000.00	4	130.00	83.90
WH16	160.00	Rainwater Tank	2,000.00	5	117.80	81.00
WH1 DRIVEWAY	130.00	Raingarden 100mm	5.00	0	132.50	0.00
COMMON DRIVE 1	40.00	None	0.00	0	0.00	0.00
COMMON DRIVE 2	320.00	Raingarden 100mm	5.00	0	123.30	0.00
COMMON DRIVE 3	460.00	Raingarden 100mm	5.00	0	114.70	0.00
COMMON DRIVE 4	130.00	None	0.00	0	0.00	0.00
COMMON DRIVE 5	310.00	Raingarden 100mm	5.00	0	124.05	0.00
COMMON DRIVE 6	160.00	None	0.00	0	0.00	0.00
COMMON DRIVE 7	460.00	Raingarden 100mm	5.00	0	114.70	0.00

**INSPECTION AND MAINTENANCE ACTIVITIES FOR RAINGARDENS**

Component	Key activities	Typical frequency
Filter Media	- Remove leaf litter and gross pollutants	3 months & following storm events
	- Check for biofilms (algal biofilms may develop on the surface of the filter media leading to clogging issues)	
	- Monitor ponding of water following rainfall events	
	- Check for permanently boggy/pooled areas	
Erosion	- Remove sediment (or scarify filter media surface if required)	Annually
	- Check for erosion/scouring	3 months
Mulch	- Check for evidence of preferential flow paths	3 months
	- Replace filter media in eroded areas	
	- Add rock protection around inlets (if required)	
	- Retain mulch using jute mats or nets (if required)	
Vegetation	- Check depth and even distribution of mulch	3 months
	- Check mulch is not touching plant stems	
	- Check for sediment/silt accumulation in mulch layer	
	- Replace mulch (if required)	
Civil components	- Inspect plant health and cover	3 months & following storm events
	- Replace dead plants (maintain a consistent vegetation density of 6-10 plants per square metre across the raingarden filter media)	
	- Remove weeds (avoid use of herbicides)	
	- Prune plants (where applicable)	
Civil components	- Water plants (if required during establishment phase)	3 months & following storm events
	- Check infrastructure for damage and repair as required	
	- Ensure inlet and outlet points are clear of sediment, litter and debris	
	- Inspection opening for underdrain (slotted drainage pipe):	
Civil components	- Check water level	Annually
	- Check for sediment accumulation	
	- Flush the underdrain system (if required)	



**STORMWATER MANAGEMENT PLAN** | SCALE 1:200

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO

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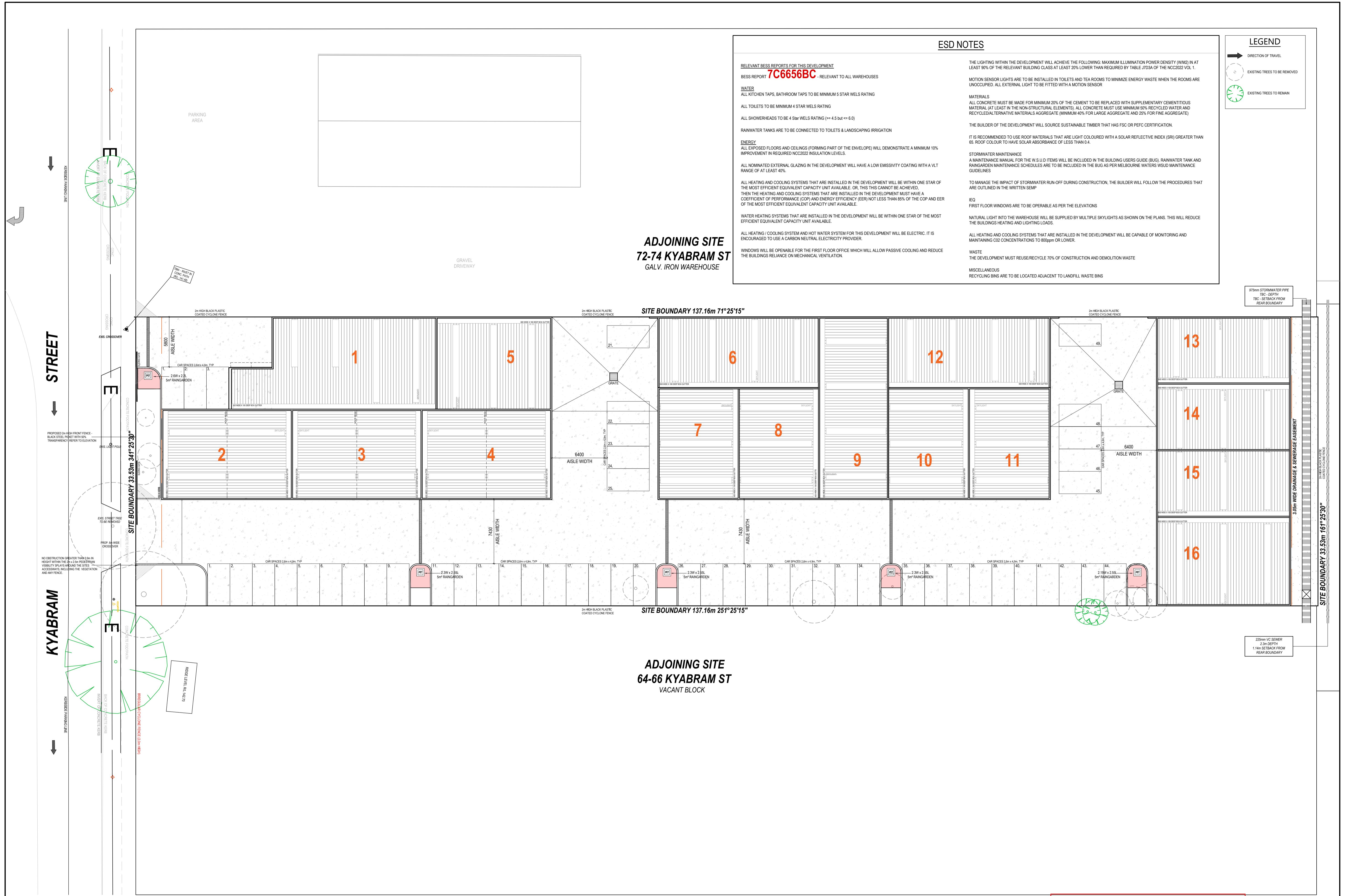
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 4/39 DUNDAS ST. EAST KEILOR 3033

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 DRAWN: F.A  
 SH. NO: 10 of 10

SCALE: 1:200 @ A1  
 DATE: JUN 2024

JOB No. 24 - 065

D.P.A.D. 2323



### ESD NOTES

**RELEVANT BESS REPORTS FOR THIS DEVELOPMENT**  
 BESS REPORT **7C6656BC** - RELEVANT TO ALL WAREHOUSES

**WATER**  
 ALL KITCHEN TAPS, BATHROOM TAPS TO BE MINIMUM 5 STAR WELS RATING  
 ALL TOILETS TO BE MINIMUM 4 STAR WELS RATING  
 ALL SHOWERHEADS TO BE 4 Star WELS RATING (>= 4.5 but <= 6.0)  
 RAINWATER TANKS ARE TO BE CONNECTED TO TOILETS & LANDSCAPING IRRIGATION

**ENERGY**  
 ALL EXPOSED FLOORS AND CEILINGS (FORMING PART OF THE ENVELOPE) WILL DEMONSTRATE A MINIMUM 10% IMPROVEMENT IN REQUIRED NCC2022 INSULATION LEVELS.  
 ALL NOMINATED EXTERNAL GLAZING IN THE DEVELOPMENT WILL HAVE A LOW EMISSIVITY COATING WITH A VLT RANGE OF AT LEAST 40%.  
 ALL HEATING AND COOLING SYSTEMS THAT ARE INSTALLED IN THE DEVELOPMENT WILL BE WITHIN ONE STAR OF THE MOST EFFICIENT EQUIVALENT CAPACITY UNIT AVAILABLE. OR, THIS THIS CANNOT BE ACHIEVED, THEN THE HEATING AND COOLING SYSTEMS THAT ARE INSTALLED IN THE DEVELOPMENT MUST HAVE A COEFFICIENT OF PERFORMANCE (COP) AND ENERGY EFFICIENCY (EER) NOT LESS THAN 85% OF THE COP AND EER OF THE MOST EFFICIENT EQUIVALENT CAPACITY UNIT AVAILABLE.  
 WATER HEATING SYSTEMS THAT ARE INSTALLED IN THE DEVELOPMENT WILL BE WITHIN ONE STAR OF THE MOST EFFICIENT EQUIVALENT CAPACITY UNIT AVAILABLE.  
 ALL HEATING / COOLING SYSTEM AND HOT WATER SYSTEM FOR THIS DEVELOPMENT WILL BE ELECTRIC. IT IS ENCOURAGED TO USE A CARBON NEUTRAL ELECTRICITY PROVIDER.  
 WINDOWS WILL BE OPENABLE FOR THE FIRST FLOOR OFFICE WHICH WILL ALLOW PASSIVE COOLING AND REDUCE THE BUILDINGS RELIANCE ON MECHANICAL VENTILATION.

**THE LIGHTING WITHIN THE DEVELOPMENT WILL ACHIEVE THE FOLLOWING: MAXIMUM ILLUMINATION POWER DENSITY (W/M2) IN AT LEAST 90% OF THE RELEVANT BUILDING CLASS AT LEAST 20% LOWER THAN REQUIRED BY TABLE J7D3A OF THE NCC2022 VOL. 1.**  
 MOTION SENSOR LIGHTS ARE TO BE INSTALLED IN TOILETS AND TEA ROOMS TO MINIMIZE ENERGY WASTE WHEN THE ROOMS ARE UNOCCUPIED. ALL EXTERNAL LIGHT TO BE FITTED WITH A MOTION SENSOR

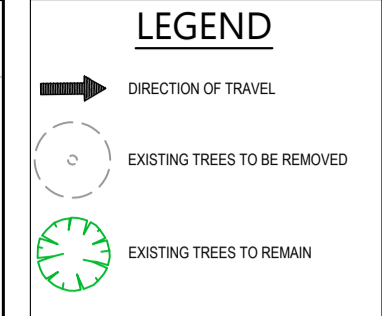
**MATERIALS**  
 ALL CONCRETE MUST BE MADE FOR MINIMUM 20% OF THE CEMENT TO BE REPLACED WITH SUPPLEMENTARY CEMENTITIOUS MATERIAL (AT LEAST IN THE NON-STRUCTURAL ELEMENTS). ALL CONCRETE MUST USE MINIMUM 50% RECYCLED WATER AND RECYCLED/ALTERNATIVE MATERIALS AGGREGATE (MINIMUM 40% FOR LARGE AGGREGATE AND 25% FOR FINE AGGREGATE)  
 THE BUILDER OF THE DEVELOPMENT WILL SOURCE SUSTAINABLE TIMBER THAT HAS FSC OR PEFC CERTIFICATION.  
 IT IS RECOMMENDED TO USE ROOF MATERIALS THAT ARE LIGHT COLOURED WITH A SOLAR REFLECTIVE INDEX (SRI) GREATER THAN 65. ROOF COLOUR TO HAVE SOLAR ABSORBANCE OF LESS THAN 0.4.

**STORMWATER MAINTENANCE**  
 A MAINTENANCE MANUAL FOR THE W.S.U.D ITEMS WILL BE INCLUDED IN THE BUILDING USERS GUIDE (BUG). RAINWATER TANK AND RAINGARDEN MAINTENANCE SCHEDULES ARE TO BE INCLUDED IN THE BUG AS PER MELBOURNE WATERS WSUD MAINTENANCE GUIDELINES  
 TO MANAGE THE IMPACT OF STORMWATER RUN-OFF DURING CONSTRUCTION, THE BUILDER WILL FOLLOW THE PROCEDURES THAT ARE OUTLINED IN THE WRITTEN SEMP

**IEQ**  
 FIRST FLOOR WINDOWS ARE TO BE OPERABLE AS PER THE ELEVATIONS  
 NATURAL LIGHT INTO THE WAREHOUSE WILL BE SUPPLIED BY MULTIPLE SKYLIGHTS AS SHOWN ON THE PLANS. THIS WILL REDUCE THE BUILDINGS HEATING AND LIGHTING LOADS.

**ALL HEATING AND COOLING SYSTEMS THAT ARE INSTALLED IN THE DEVELOPMENT WILL BE CAPABLE OF MONITORING AND MAINTAINING CO2 CONCENTRATIONS TO 800ppm OR LOWER.**

**WASTE**  
 THE DEVELOPMENT MUST REUSE/RECYCLE 70% OF CONSTRUCTION AND DEMOLITION WASTE  
 MISCELLANEOUS  
 RECYCLING BINS ARE TO BE LOCATED ADJACENT TO LANDFILL WASTE BINS



**ADJOINING SITE**  
**72-74 KYABRAM ST**  
 GALV. IRON WAREHOUSE

**ADJOINING SITE**  
**64-66 KYABRAM ST**  
 VACANT BLOCK

# SITE PLAN | SCALE 1:100

PROJECT:  
**PROPOSED WAREHOUSES**  
 ADDRESS:  
**68-70 KYABRAM ST, COOLAROO**

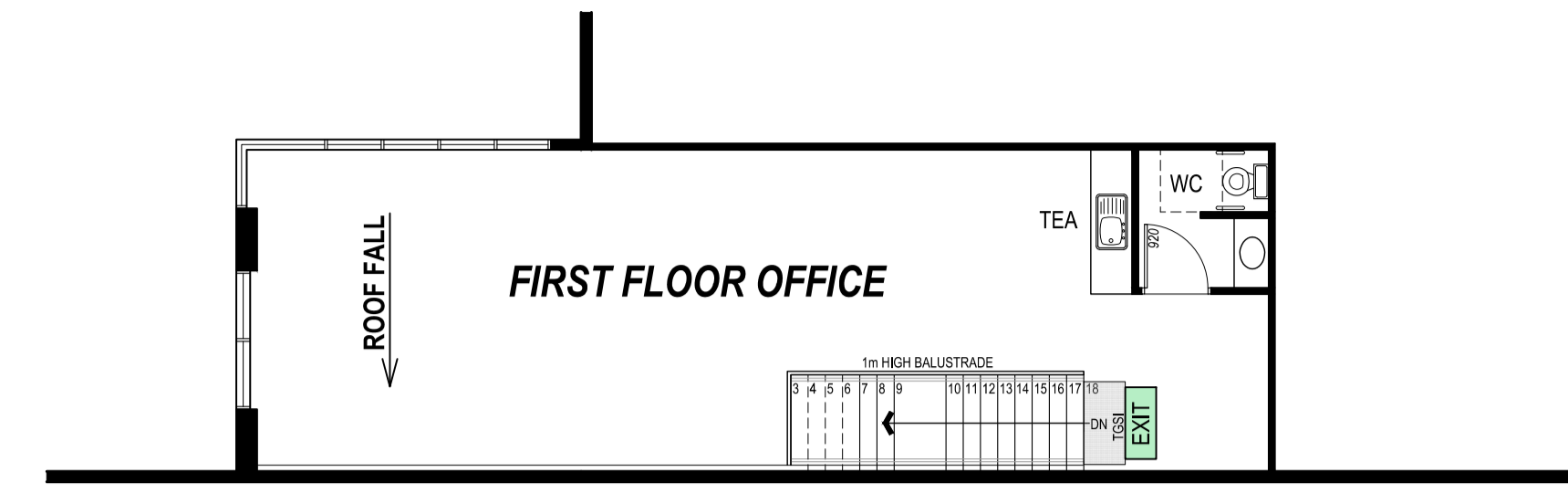
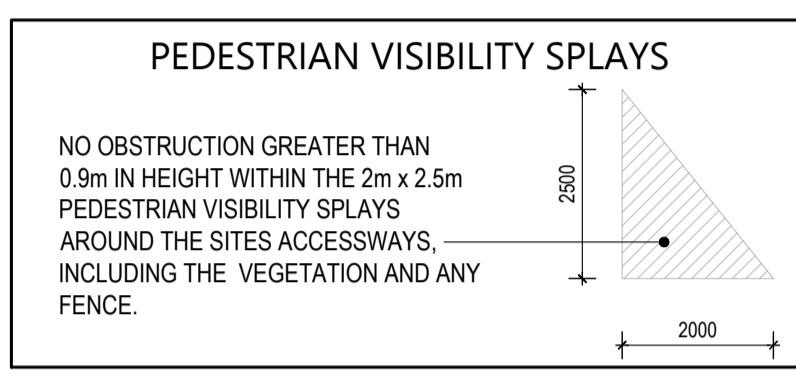
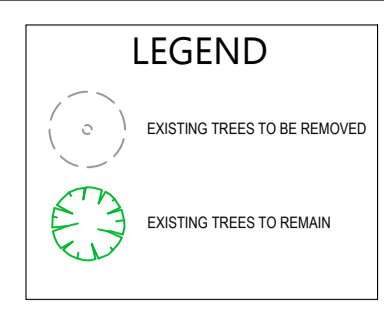
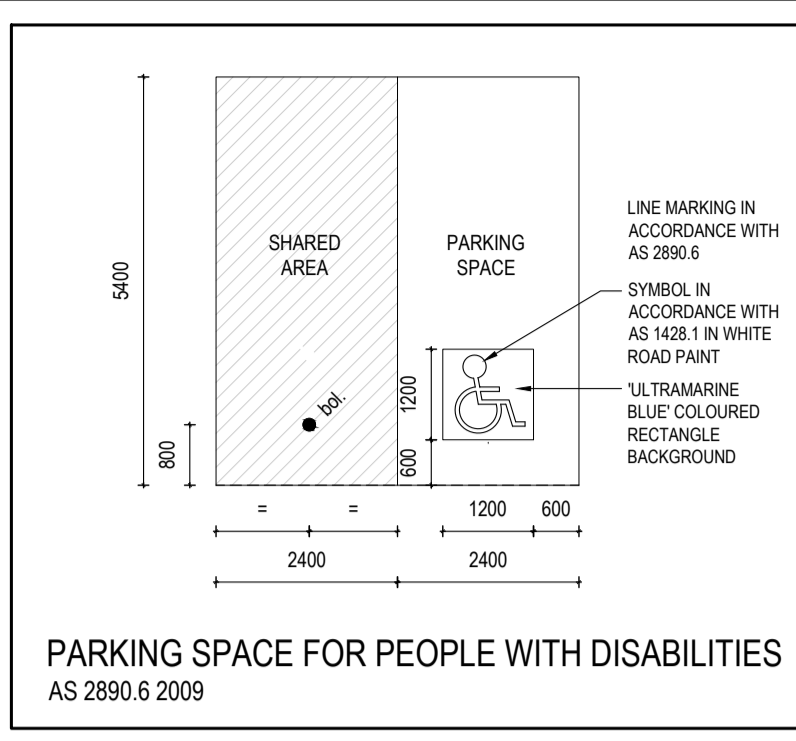
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 SCALE: AS SHOWN @ A1  
 DATE: JUN 2024  
 JOB No. **24 - 065**

**68-70 KYABRAM ST, COOLAROO**

SITE AREA ANALYSIS	
TOTAL SITE AREA	4599 m <sup>2</sup>
TOTAL SITE COVERAGE AREA	2335 m <sup>2</sup>
SITE COVERAGE	50.8 %
BUILDING AREA	
WAREHOUSE 1	
GROUND FLOOR OFFICE AND AMENITIES	205 m <sup>2</sup>
FIRST FLOOR OFFICE	72 m <sup>2</sup>
TOTAL AREA	277 m <sup>2</sup>
CAR PARKING	
TOTAL AREA MINUS LOADING BAY AND STAIRS (52m <sup>2</sup> )	=225m <sup>2</sup>
NET FLOOR AREA x 1.5 / 100 + 2 =	= 5 CAR SPACES REQUIRED
	= 4 CAR SPACES PROVIDED
<b>DISPENSATION REQUIRED FOR 1 CAR PARKING SPACE</b>	
WAREHOUSE 2	
GROUND FLOOR OFFICE AND AMENITIES	160 m <sup>2</sup>
FIRST FLOOR MEZZANINE	47 m <sup>2</sup>
TOTAL AREA	207 m <sup>2</sup>

WAREHOUSE 3	
GROUND FLOOR OFFICE AND AMENITIES	160 m <sup>2</sup>
FIRST FLOOR MEZZANINE	47 m <sup>2</sup>
TOTAL AREA	207 m <sup>2</sup>
WAREHOUSE 4	
GROUND FLOOR OFFICE AND AMENITIES	160 m <sup>2</sup>
FIRST FLOOR MEZZANINE	47 m <sup>2</sup>
TOTAL AREA	207 m <sup>2</sup>
WAREHOUSE 5	
GROUND FLOOR OFFICE AND AMENITIES	145 m <sup>2</sup>
FIRST FLOOR MEZZANINE	57 m <sup>2</sup>
TOTAL AREA	202 m <sup>2</sup>
WAREHOUSE 6	
GROUND FLOOR OFFICE AND AMENITIES	155 m <sup>2</sup>
FIRST FLOOR MEZZANINE	43 m <sup>2</sup>
TOTAL AREA	198 m <sup>2</sup>



**WH1 FIRST FLOOR PLAN | SCALE 1:100**



**GROUND FLOOR PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES  
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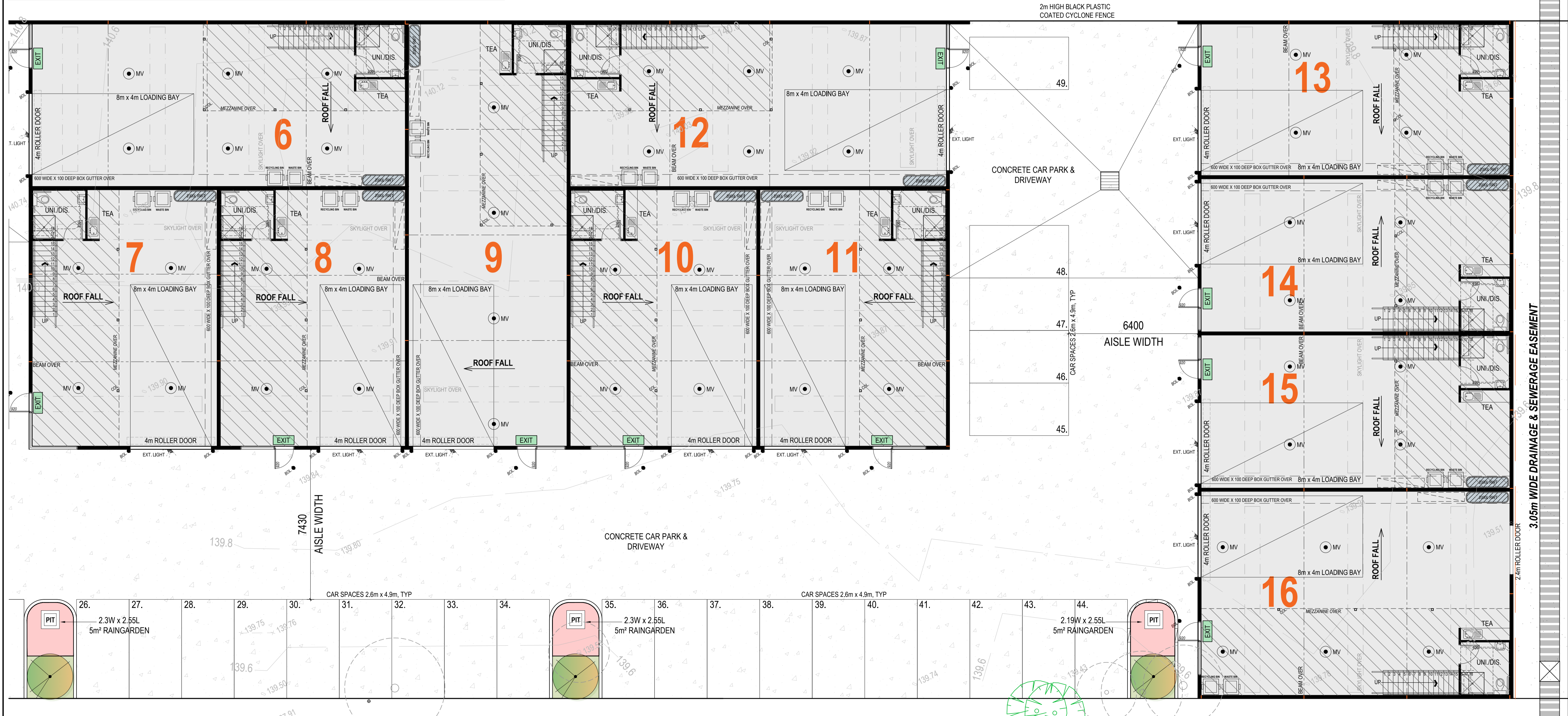
NORTH

SCALE: AS SHOWN @ A1  
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WAREHOUSE 7		WAREHOUSE 12	
GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>	GROUND FLOOR OFFICE AND AMENITIES	155 m <sup>2</sup>
FIRST FLOOR MEZZANINE	55 m <sup>2</sup>	FIRST FLOOR MEZZANINE	43 m <sup>2</sup>
<b>TOTAL AREA</b>	<b>175 m<sup>2</sup></b>	<b>TOTAL AREA</b>	<b>198 m<sup>2</sup></b>
WAREHOUSE 8		WAREHOUSE 13	
GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>	GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>
FIRST FLOOR MEZZANINE	55 m <sup>2</sup>	FIRST FLOOR MEZZANINE	43 m <sup>2</sup>
<b>TOTAL AREA</b>	<b>175 m<sup>2</sup></b>	<b>TOTAL AREA</b>	<b>163 m<sup>2</sup></b>
WAREHOUSE 9		WAREHOUSE 14	
GROUND FLOOR OFFICE AND AMENITIES	170 m <sup>2</sup>	GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>
FIRST FLOOR MEZZANINE	43 m <sup>2</sup>	FIRST FLOOR MEZZANINE	43 m <sup>2</sup>
<b>TOTAL AREA</b>	<b>213 m<sup>2</sup></b>	<b>TOTAL AREA</b>	<b>163 m<sup>2</sup></b>
WAREHOUSE 10		WAREHOUSE 15	
GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>	GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>
FIRST FLOOR MEZZANINE	55 m <sup>2</sup>	FIRST FLOOR MEZZANINE	43 m <sup>2</sup>
<b>TOTAL AREA</b>	<b>175 m<sup>2</sup></b>	<b>TOTAL AREA</b>	<b>163 m<sup>2</sup></b>
WAREHOUSE 11		WAREHOUSE 16	
GROUND FLOOR OFFICE AND AMENITIES	120 m <sup>2</sup>	GROUND FLOOR OFFICE AND AMENITIES	160 m <sup>2</sup>
FIRST FLOOR MEZZANINE	55 m <sup>2</sup>	FIRST FLOOR MEZZANINE	66 m <sup>2</sup>
<b>TOTAL AREA</b>	<b>175 m<sup>2</sup></b>	<b>TOTAL AREA</b>	<b>226 m<sup>2</sup></b>

**CAR PARKING**  
 TOTAL AREA (2847m<sup>2</sup>) MINUS LOADING BAY AND STAIRS (780m<sup>2</sup>) = 2067m<sup>2</sup>  
 = 61 CAR SPACES REQUIRED  
 NET FLOOR AREA x 1.5 / 100 + 30 =  
 = 48 CAR SPACES PROVIDED  
**DISPENSATION REQUIRED FOR 13 CAR PARKING SPACES**



# GROUND FLOOR PLAN | SCALE 1:100

**PROPOSED WAREHOUSES**  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO

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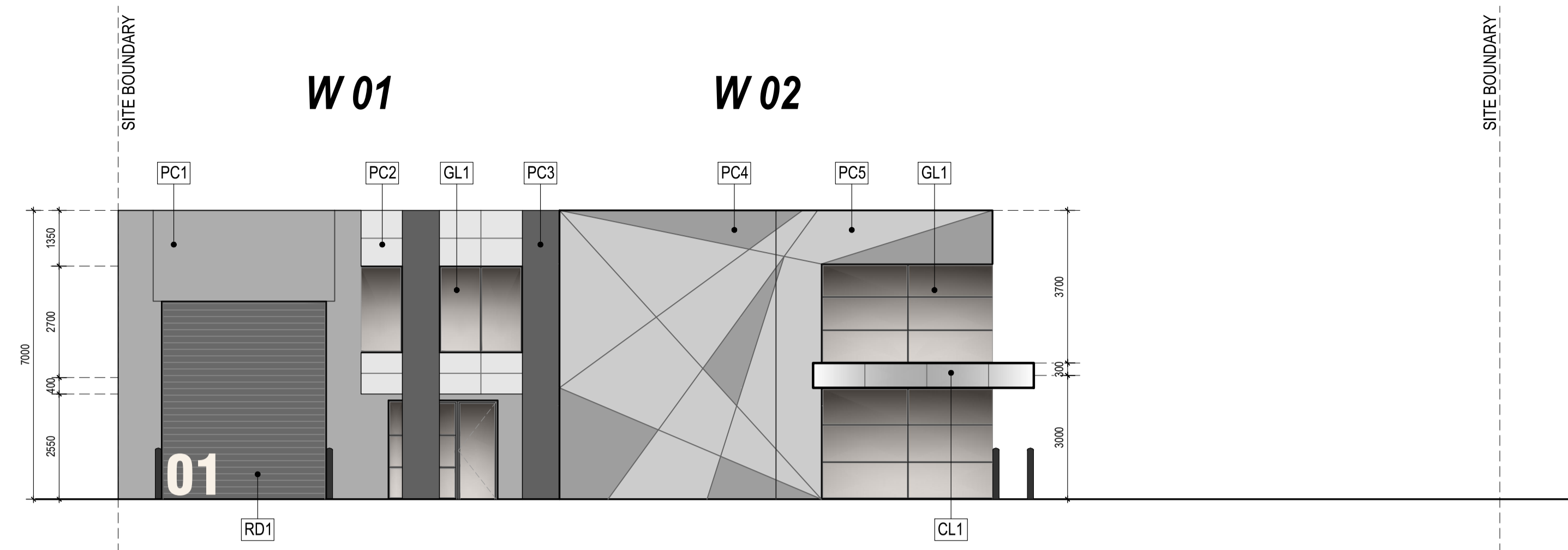
**ING PTY. LTD.**  
 PH: 9331 4280 BUS.  
 DRAWN: F.A  
 SH. NO: 3 of 10

**NORTH**

SCALE: AS SHOWN @ A1  
 DATE: JUN 2024

JOB No. 24 - 065

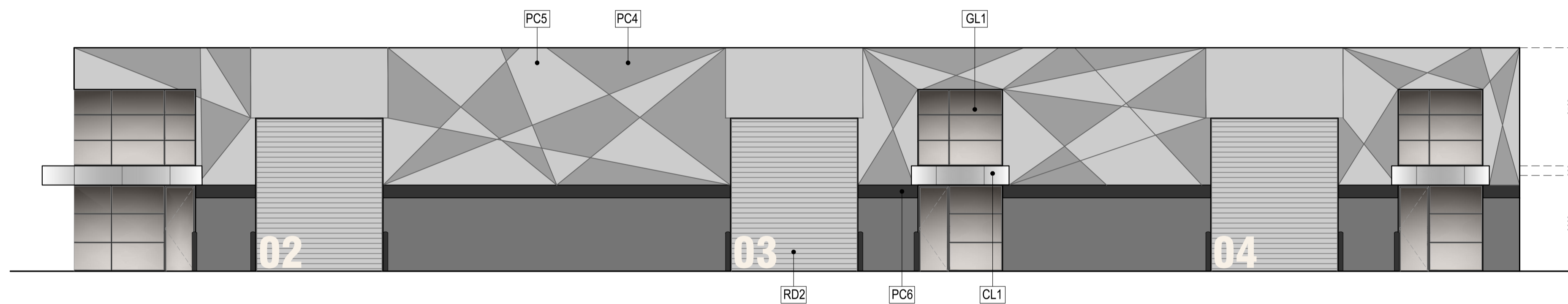
D.P.A.D. 2323



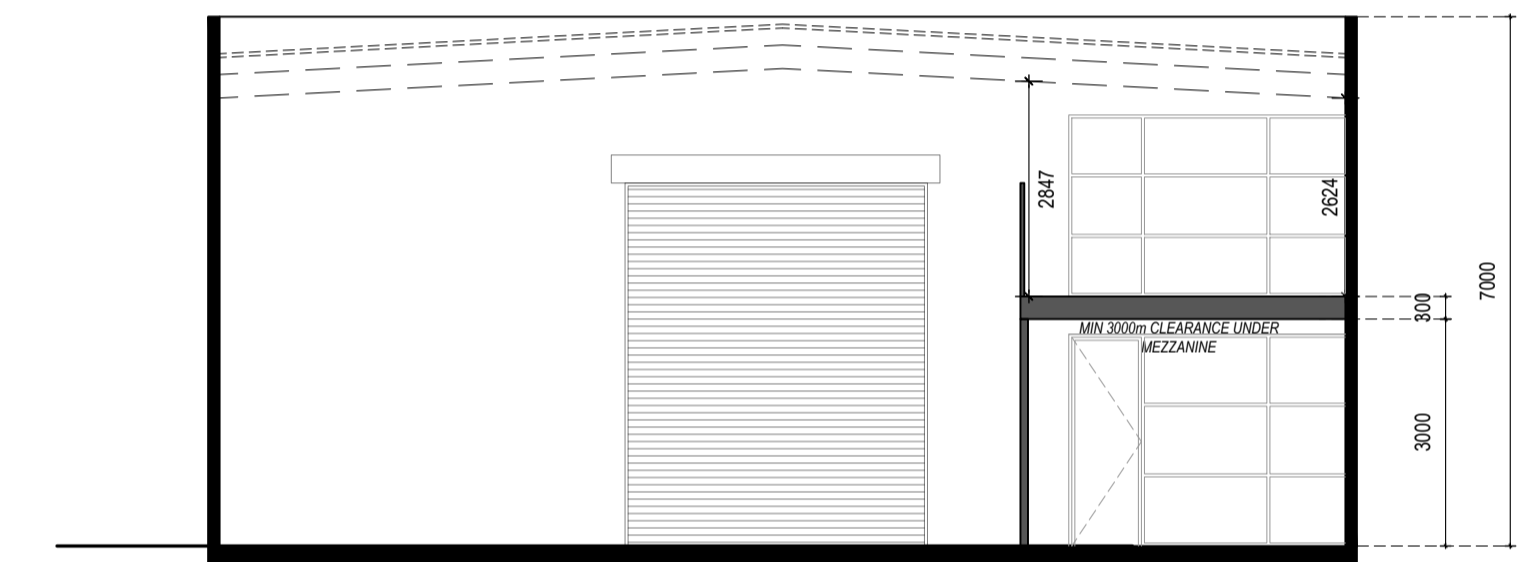
WEST ELEVATION | SCALE 1:100

COLOURS & MATERIALS			
NO	ITEM	MATERIAL	COLOUR
NC1	MAIN / BOUNDARY WALL	CONCRETE PANEL	NATURAL CONCRETE COLOUR
PC1	MAIN WALL	PAINTED CONCRETE PANEL	LIGHT GREY
PC2	MAIN WALL	PAINTED CONCRETE PANEL	WHITE
PC3	MAIN WALL	PAINTED CONCRETE PANEL	DARK GREY
PC4	MAIN WALL	PAINTED CONCRETE PANEL	MEDIUM GREY
PC5	MAIN WALL	PAINTED CONCRETE PANEL	LIGHT GREY
PC6	MAIN WALL	PAINTED CONCRETE PANEL	VERY DARK GREY
CL1	ENTRY SURROUNDS	SELECTED CLADDING	SILVER
RD1	ROLLER DOOR	ZINCULUME	WINDSPRAY
RD2	ROLLER DOOR	ZINCULUME	SOUTHERLY
GL1	WINDOW	GLAZING & FRAMES	DARK GREY

W 02 - 04



SOUTH ELEVATION | SCALE 1:100

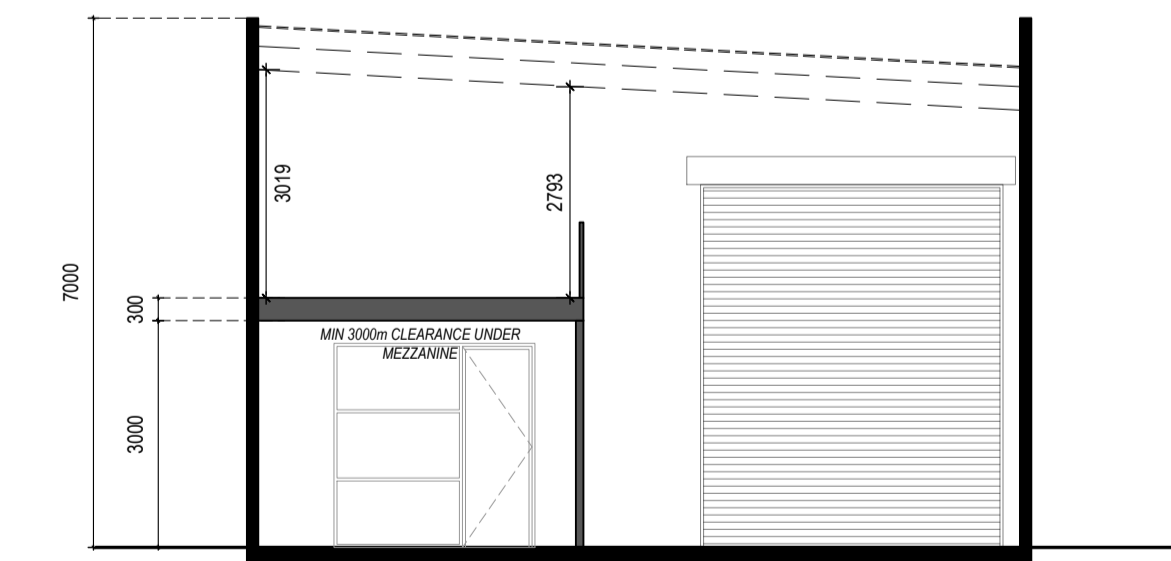


TYPICAL SECTION A | SCALE 1:100

W 07 - 11



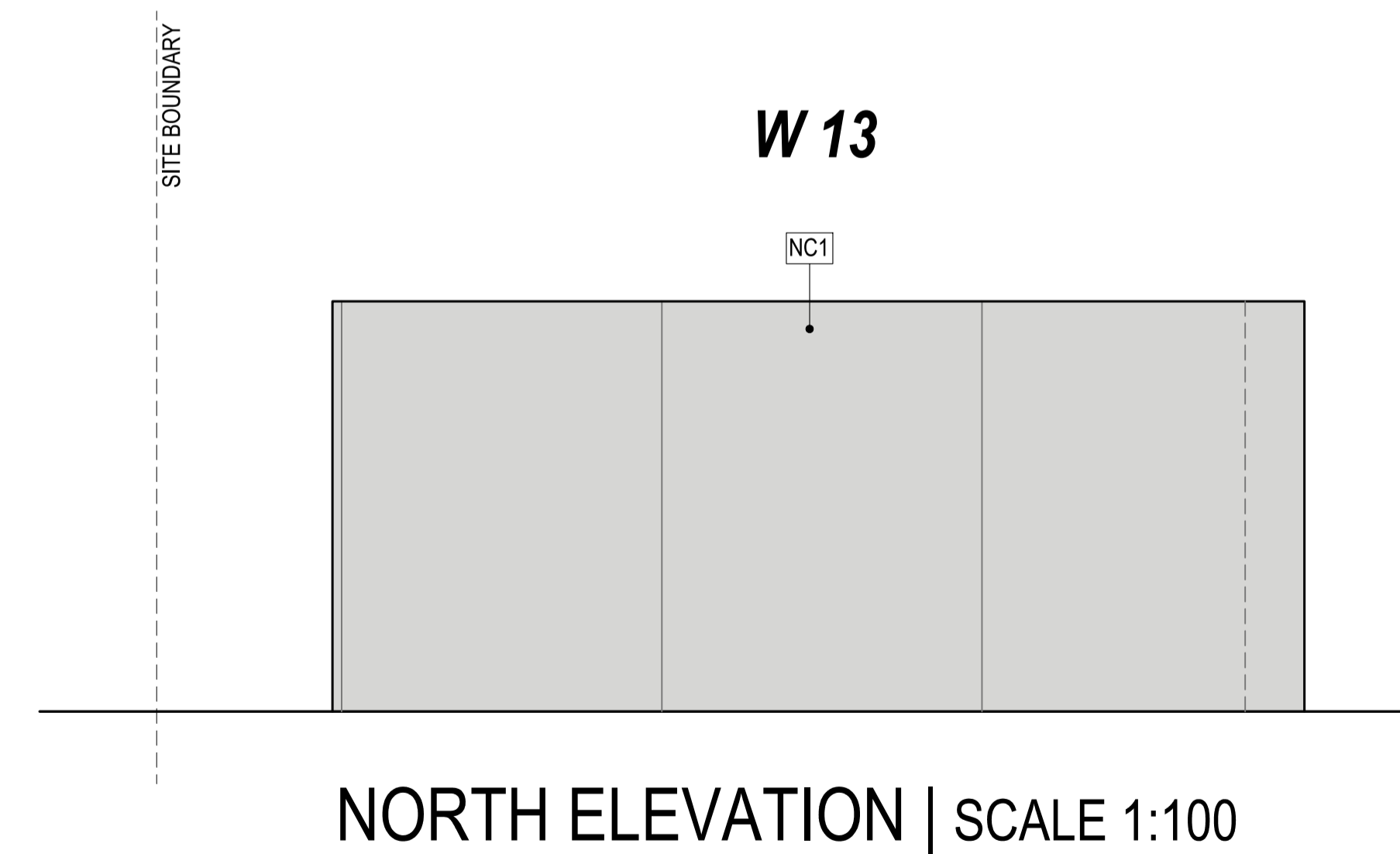
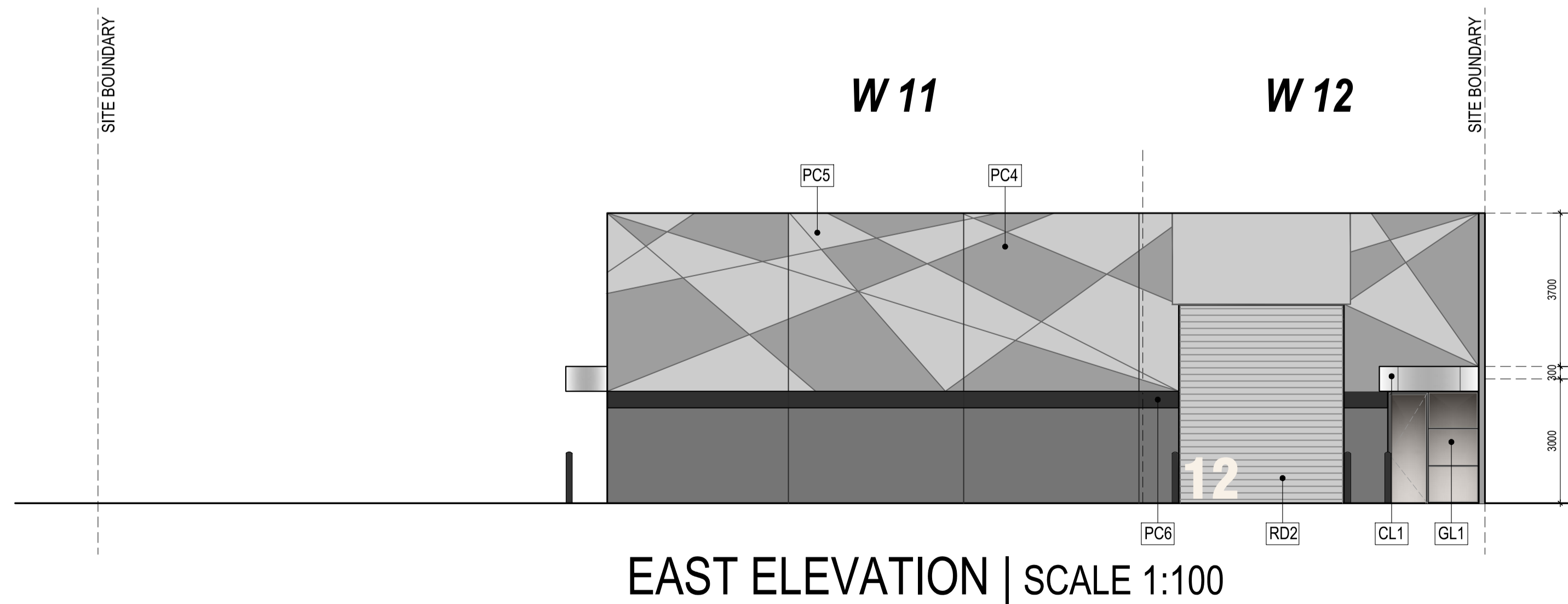
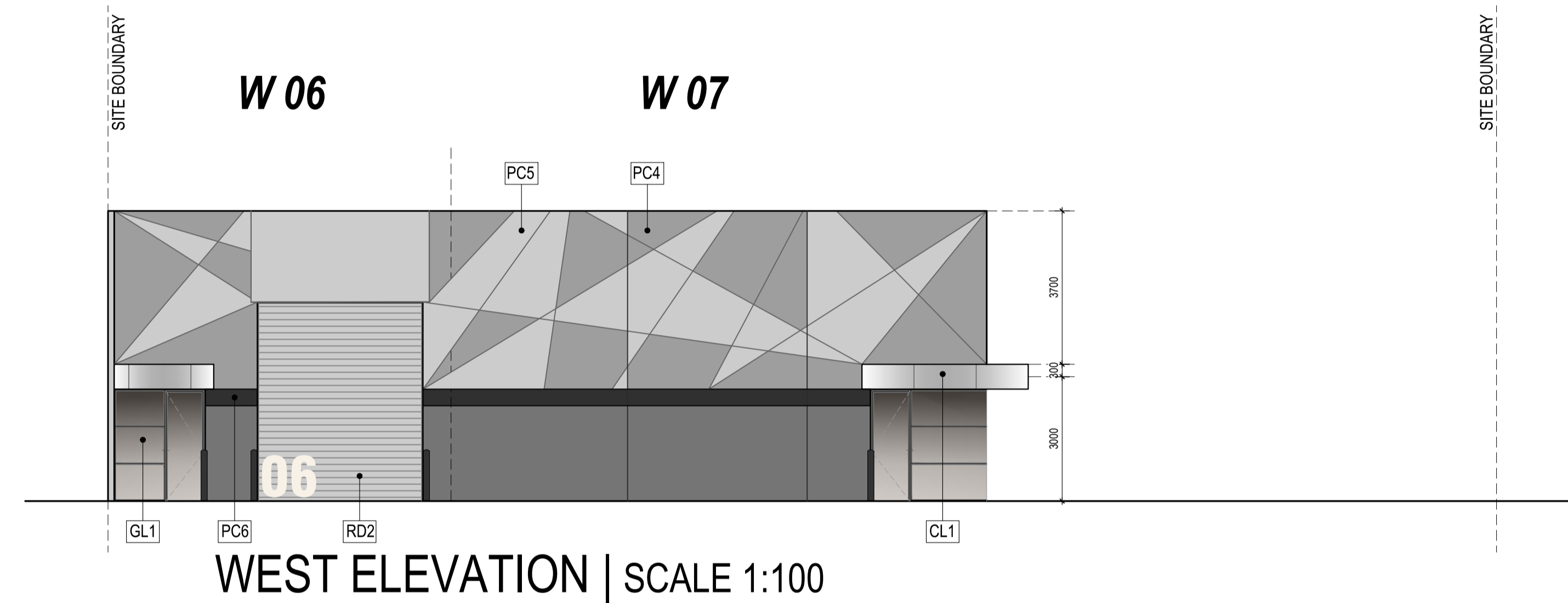
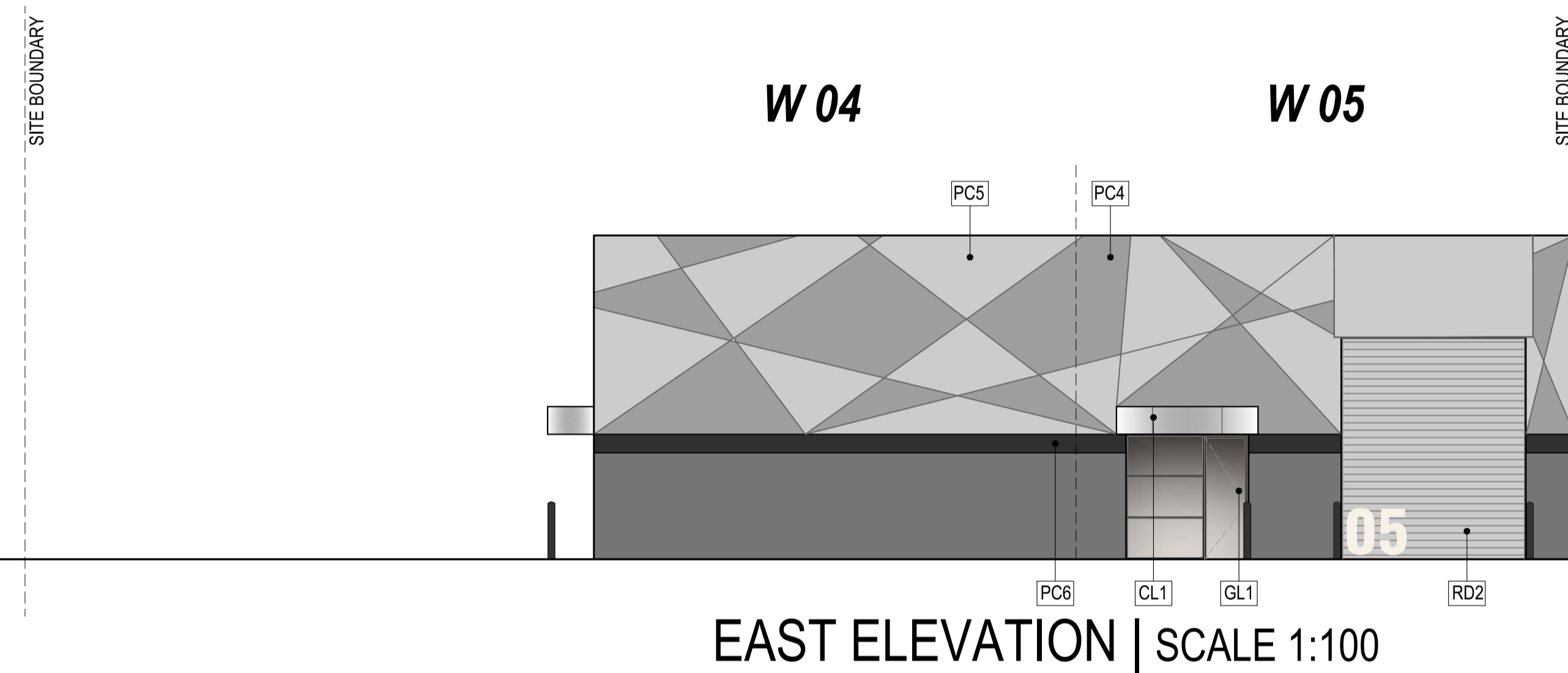
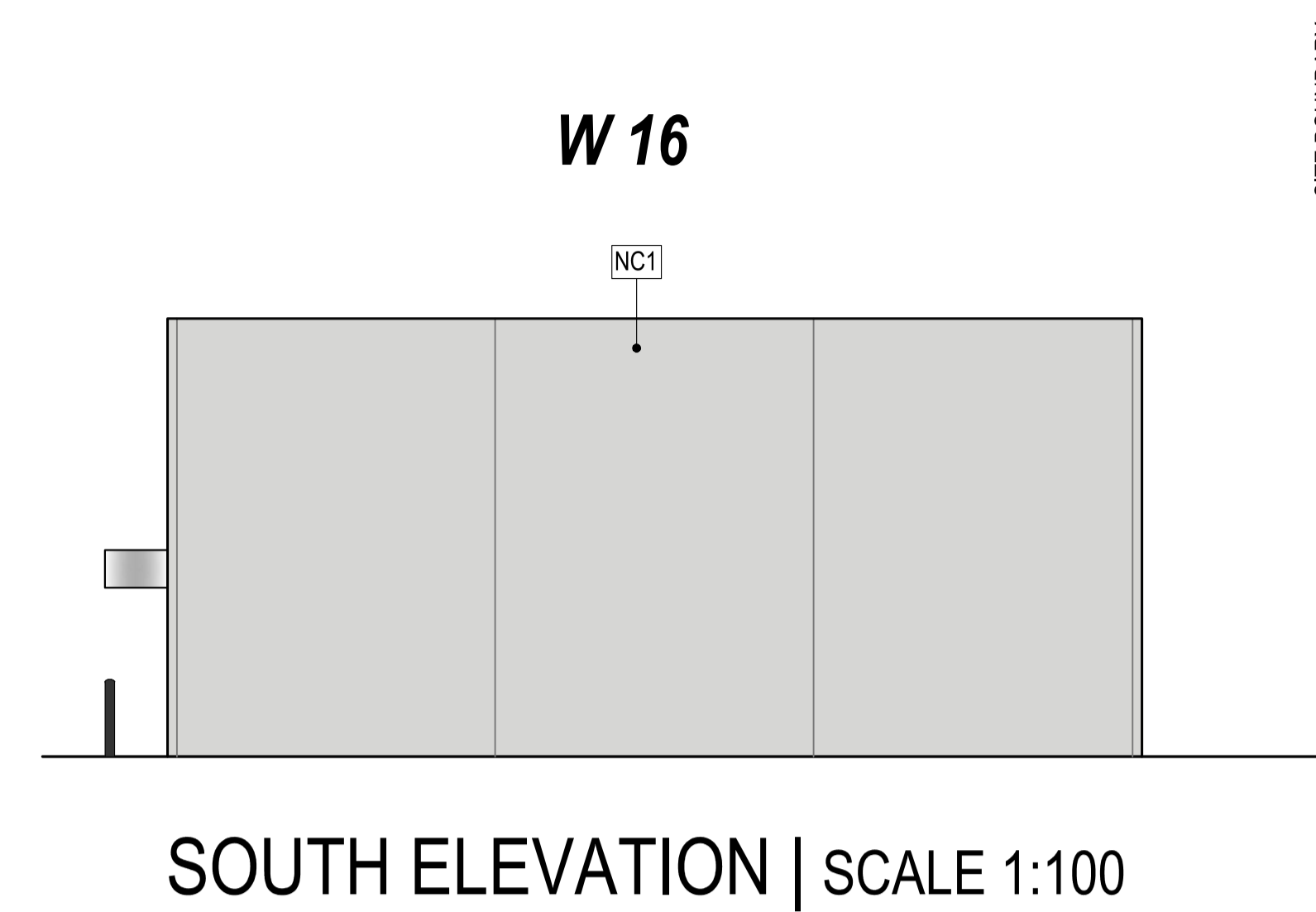
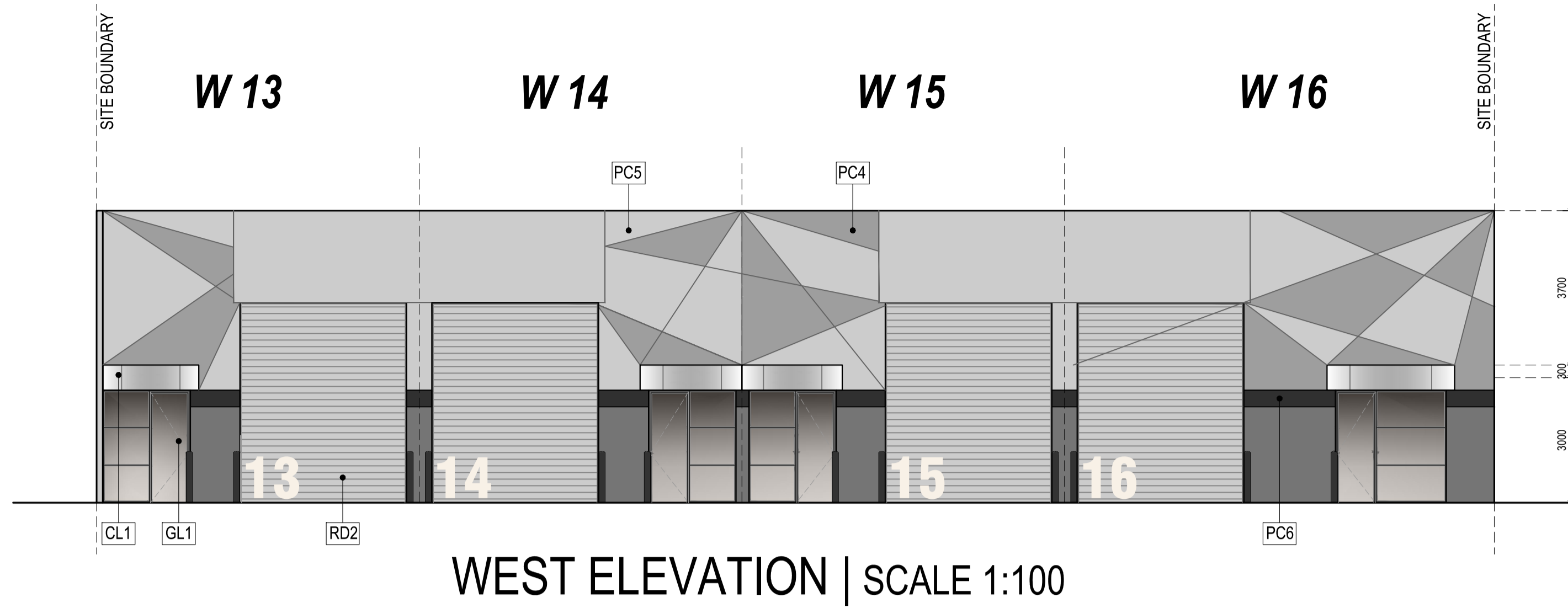
SOUTH ELEVATION | SCALE 1:100



TYPICAL SECTION B | SCALE 1:100

ELEVATIONS | SCALE 1:100

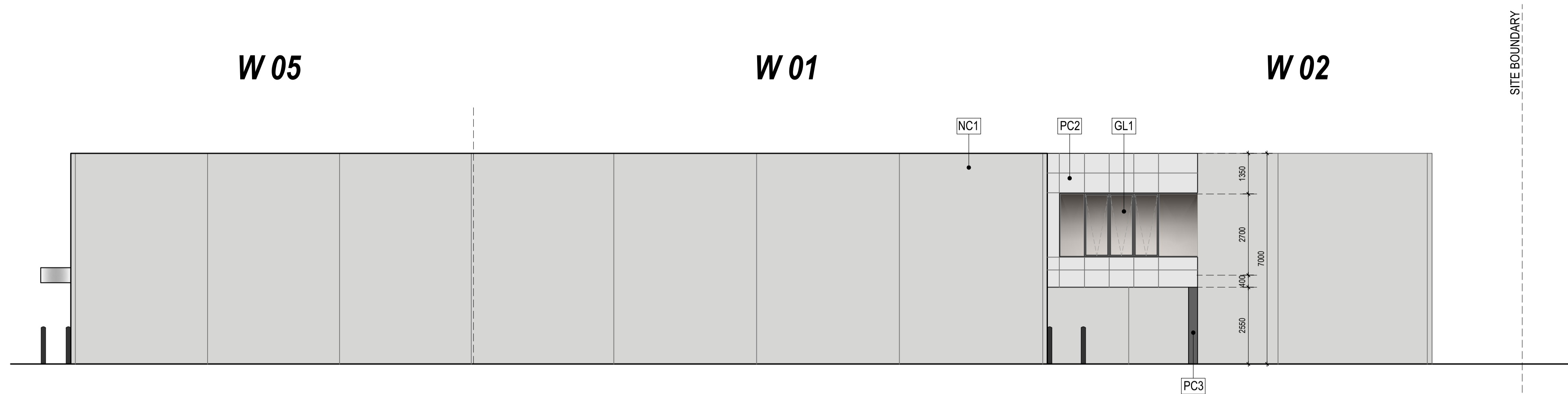
PROJECT: PROPOSED WAREHOUSES	This copied document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The copy must not be used for any other purpose. Please note that the plan may not be to scale.		
ADDRESS: 68-70 KYABRAM ST, COOLAROO	PROPOSED WAREHOUSES PTY. LTD. 1000 4739 9111   1111 NAH PDE, EAST KEILOR 3033 D.P.A.D. 2323		
NORTH	PH: 9331 4280 BUS. DRAWN: F.A SH. NO: 4 of 10	SCALE: AS SHOWN @ A1 DATE: JUN 2024	JOB No. 24 - 065



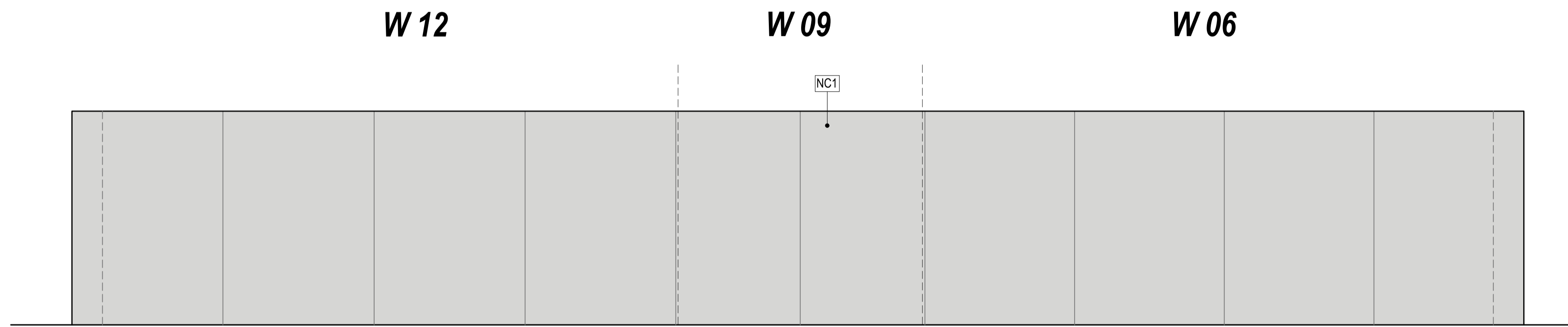
**ELEVATIONS | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES	<p>This copied document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The copy must not be used for any other purpose. Please note that the plan may not be to scale.</p>	<p>COOLAROO PLANNING PTY. LTD.  <small>3000 4733 BUNAH PDE, EAST KEILOR 3033</small></p>
ADDRESS: 68-70 KYABRAM ST, COOLAROO		<p>PH: 9331 4280 BUS.  <small>D.P.A.D. 2323</small></p>
		<p>DRAWN: F.A. SCALE: AS SHOWN @ A1          SH. NO: 5 of 10 DATE: JUN 2024 JOB No. 24 - 065</p>

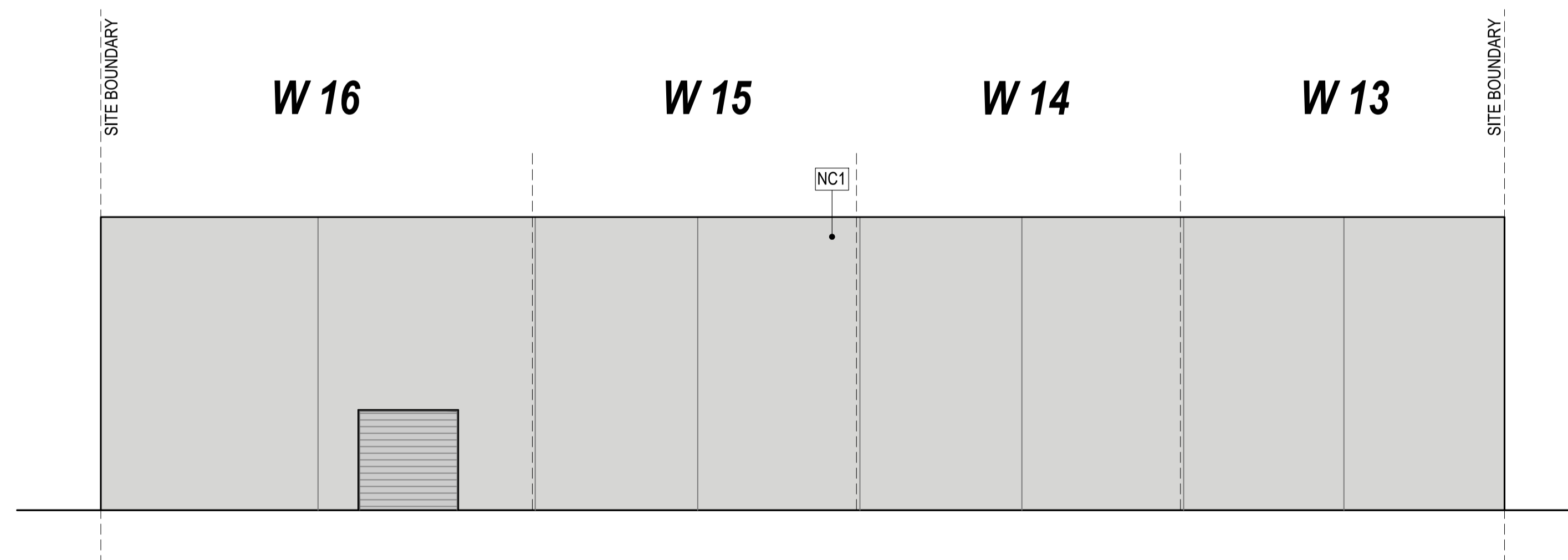




NORTH ELEVATION | SCALE 1:100



NORTH ELEVATION | SCALE 1:100



EAST ELEVATION | SCALE 1:100

ELEVATIONS | SCALE 1:100

PROJECT: PROPOSED WAREHOUSES		This copied document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The copy must not be used for any other purpose. Please note that the plan may not be to scale.		COPD PLANNING PTY. LTD. 3000 4739 BUNAH PDE, EAST KEILOR 3033	
ADDRESS: 68-70 KYABRAM ST, COOLAROO		PH: 9331 4280 BUS.	SCALE: AS SHOWN @ A1	DATE: JUN 2024	JOB No. 24 - 065
DRAWN: F.A. SH. NO: 6 of 10		NORTH		D.P.A.D. 2323	

**LANDSCAPING NOTES:**

**GROUND PREPARATION:**  
 ALL RUBBISH, BUILDING MATERIAL & WEEDS ARE TO BE REMOVED PRIOR TO PLANTING  
 EXISTING SUBGRADE TO BE DUG OUT 275mm  
 PROVIDE 200mm OF 3 WAY TOPSOIL  
 PROVIDE 75mm OF PINE PARK MULCH (10-20mm PARTICLE SIZE)

**PLANTING:**  
 ALL PLANTS USED IN THE DEVELOPMENT ARE TO BE NATIVE AND DROUGHT TOLERANT PLANTS ARE TO BE SOURCED FROM AN APPROPRIATE NURSERY WITH A SPECIALTY IN NATIVE PLANTS  
 POT SIZE AT PLANTING AS PER SCHEDULE  
 ALL PLANTS TO RECEIVE 10 LITRES OF WATER IMMEDIATELY AFTER PLANTING  
 ALL PLANTS TO BE PLANTED IN ACCORDANCE WITH 'SHRUB/TREE IN MULCHED GARDEN BED' DETAIL.

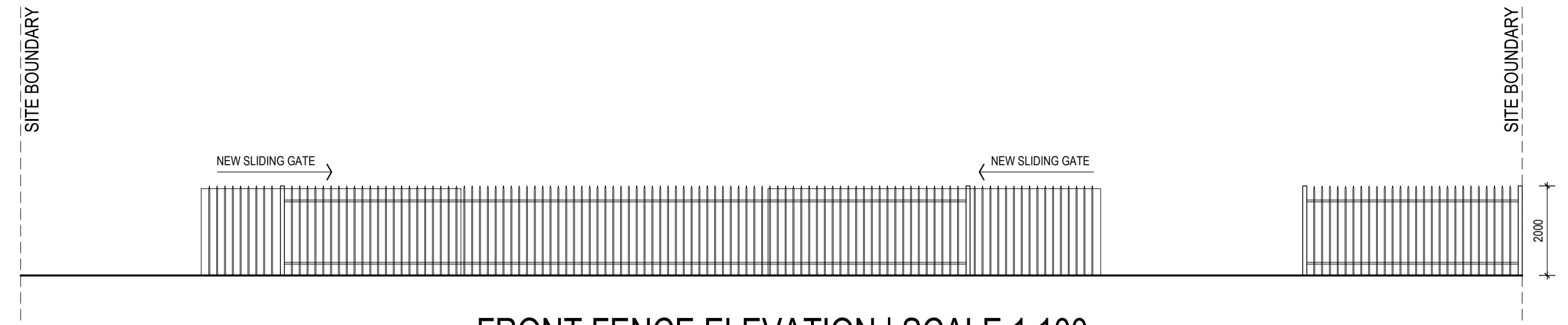
**MULCHING:**  
 MULCH ALL GARDEN BEDS WITH 75mm AVERAGE DEPTH OF CHIP MULCH.  
 PLANTS TO BE SPACED AND POSITIONED EVENLY ACROSS GARDEN BEDS  
 GENEROUS PORTION OF GARDEN BED MULCH TO BE ADDED AROUND ALL THE PLANTS AND PUSHED COMPACT WITH SOIL.  
 GENEROUSLY WATER GARDEN BEDS, MAKING SURE TO SOAK THE MULCH

**IRRIGATION:**  
 ALL LANDSCAPED AREAS TO HAVE AN APPROPRIATE DRIP IRRIGATION SYSTEM INSTALLED THROUGHOUT, WITH AN AUTOMATIC CONTROLLER. IRRIGATION IS TO BE CONNECTED TO THE NOMINATED RAIN WATER TANK.

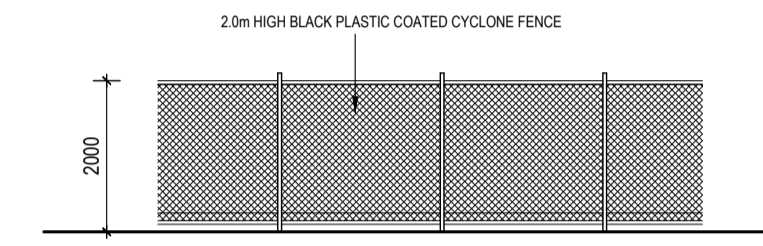
**ADDITIONAL WATERING MAY BE REQUIRED IN SUMMER MONTHS. PLANTS ARE TO BE MONITORED AND WATERED ACCORDINGLY**

**MAINTENANCE:**  
 FOLLOW UP WEED CONTROL TO BE CARRIED OUT AT 6 MONTHLY INTERVALS FOR TWO YEARS FOLLOWING PLANTING.

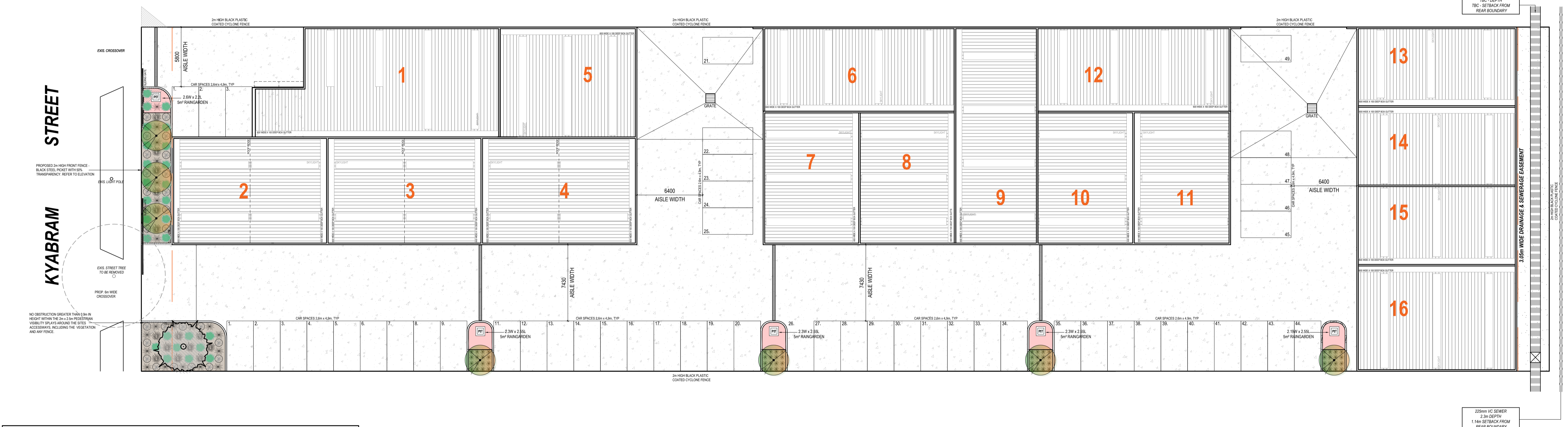
ALL WEEDS AND DEAD LIMBS ARE TO BE REMOVED  
 ANY DEAD PLANTS ARE TO BE REPLACED WITH EQUAL SIZE PLANT  
 REMOVE STAKES AFTER PLANTS ARE ESTABLISHED



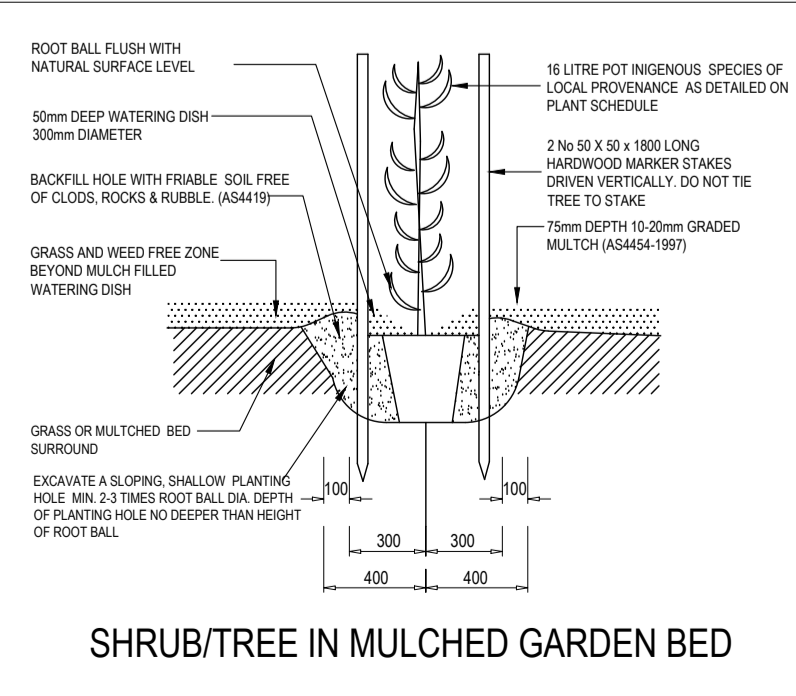
**FRONT FENCE ELEVATION | SCALE 1:100**  
 NEW SECURITY BLACK STEEL PICKET FENCE WITH MATCHING SLIDING GATE (50% TRANSPARENCY)



**SIDE BOUNDARY FENCE ELEVATION | SCALE 1:100**



LANDSCAPE SCHEDULE					
	LABEL	NO.	SCIENTIFIC NAME	COMMON NAME	POT SIZE
RAINGARDEN / GROUND COVER					
Dj		20	DIANELLA 'LITTLE JESS'	LITTLE JESS FLAX LILLY	150mm
Ka		20	DIANELLA 'KING ALFRED'	KING ALFRED	150mm
Lk		15	LOMANDRA 'KATRINUS'	KATRINUS MATT-RUSH	150mm
Pt		26	PITTOSPOTUM TENUIFOLIUM	PITTOSPOTUM GOLF BALL	120mm
Dj		26	CAREX APRESSA	TALL SLEDGE	150mm
CANOPY TREES					
Co		7	CORYMBIA 'BABY ORANGE'	GRAFTED FLOWERING GUM	150mm
Al		1	ACACIA IMPLEXA	LIGHTWOOD	200mm
Mulch					N/A
Topping					N/A



**LANDSCAPE PLAN | SCALE 1:200**

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO

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PH: 9331 4280 BUS.  
 DRAWN: F.A  
 SH. NO: 7 of 10

SCALE: AS SHOWN @ A1  
 DATE: JUN 2024

NORTH

JOB No. 24 - 065

D.P.A.D. 2323

# GHTrees

Arboricultural Consultants  
A.B.N. 30 192 114 534



Graeme Hughes  
Arborist  
Diploma Arboriculture AQF Level 5  
Adv. Cert. Arboriculture

0401 745 170  
[ghtrees@gmail.com](mailto:ghtrees@gmail.com)

26 November 2024

CCD Drafting P/L  
4/39 Dinah Pde.  
Keilor East, Vic. 3033

68-70 Kyabram Street, Coolaroo

## Tree Survey & Development Impact Report

Planning Application No: P26244



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# Tree Survey & Development Impact Assessment

68-70 Kyabram Street, Coolaroo

## Overview

The commercial site located within an industrial estate is currently occupied with a warehouse and outdoor storage. The site is generally flat and there is no woody vegetation located on site. This report is in response to the Hume City Council, Planning Department, Request for Further Information that states, in part:

*Item h)*

*Arboriculture report , written by a suitable qualified Arborist must be submitted for the tree on site.*

Note: There are no trees located on site.

There are two trees located in the road reserve in the vicinity of the front boundary that have been assessed for their retention value and their tolerance of the proposed development.

The trees are identified on the site plan.

Tree Protection Zones have been applied to these trees as per:

**AS4970-2009 The protection of trees on development sites.**

## Legal Interpretation

The site is not subject to any Hume City Council, Planning Overlays that may afford protection to trees.

## Method

The trees were inspected from the ground on 15 November, by myself.

The trees were assessed for the following;

- **Species identification**
- approximate **age** of the trees
- **stem diameter** at 1.4 metres above ground level
- **origin** of the species
- an estimation of the **height** and **width** of the trees canopy
- the **structure** of the trees
- the **health** of the trees
- the **retention value** of the trees to the site
- the **Tree Protection Zones, TPZ**, for the retained trees (AS 4970 – 2009)

**Note:** Tree descriptors are provided for tree age, health, structure, retention value and tree protection.

### Observations

The site plan identified two trees located in the road reserve in the vicinity of the front boundary to be assessed.

See; Site Plan, for tree locations.

### Retention Value

Retention value should be considered in the context of whether the tree is worthy of being a material constraint on development on this site.

A tree assessed as low retention value should not be a material constraint.

The two trees are identified as *Eucalyptus leucoxylon*, Yellow Gum.

A species common in cultivation as a street tree throughout metropolitan Melbourne.

The species has a demonstrated tolerance to many of the limitations of the environment and can present with variable and inconsistent form and these trees are part of a sporadic streetscape.

The survey identified Trees 1 & 2 to be of medium retention value.

The trees present with fair health and fair/poor structure from the inconsistent form which can be typical for the species. The trees have a minor contribution to the streetscape.

### Tree Data

No	Botanical Name	Common Name	Height x Width (m)	Health	Structure	DBH (cm)	TPZ (mR)	SRZ (mR)
1	<i>Eucalyptus leucoxylon</i>	Yellow Gum	9x9	Fair	Fair	35	4.2	2.1
2	<i>Eucalyptus leucoxylon</i>	Yellow Gum	8x9	Fair	Fair/Poor	35	4.2	2.1

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Site Plan, existing conditions



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## **Tree Protection**

Tree protection information is provided in accordance with: **AS 4970-2009, Protection of trees on development sites.**

Tree Protection Zones, TPZ, provide for a zone of protection for the root zone and the canopy of the tree to maintain tree health. The TPZ often extends to near canopy dripline of a typical tree. **AS 4970-2009, Protection of trees on development sites** allows for a 10% encroachment into the TPZ area provided the area lost to the encroachment is compensated for elsewhere. If the encroachment is to be greater than 10% there must be a demonstration that the tree will remain viable.

The Structural Root Zone, SRZ, is the area occupied by roots that are associated with tree stability.

## **Development Proposal**

The proposal is to demolish the existing building and to establish multiple warehouses on the site along with associated vehicle parking. The existing vehicle crossover will be retained and an additional vehicle crossover will be installed in the vicinity of the south side common boundary.

See; **Site Plan, proposed.**

## **Development Impact & Recommendations**

### **Road reserve trees.**

**Tree 1.** This tree is in a location where it will not be retained. The installation of the additional vehicle crossover requires that this tree be removed.

**Tree 2.** This tree, located approximately 10 metres from the additional vehicle crossover, is in a location where it will not be subject to any impact.

No specific tree protection measures are required for this tree.

### **On site trees and off site trees.**

There are no trees on site or off site in the vicinity of the boundaries that will be impacted by the development.

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# Site Plan, proposed



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## Site Pictures



Above. Tree No.1.

This tree will be removed to facilitate the installation of the additional vehicle crossover.



Above. Tree No.2.

This tree will be retained and is in a location where it will not be impacted by the development.

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## Tree Descriptors

- **DBH** Trunk diameter measured 1.4m above ground.
- **AGE**
- Young** Juvenile or recently planted approximately 1-7 years.
- Semi Mature** Tree actively growing.
- Mature** Tree has reached expected size in situation.
- Over Mature** Tree is over mature and has started to decline. (Senescent)
- **HEALTH**
- Good** Foliage of tree is entire, with good colour, very little sign of pathogens and of good density. Growth indicators are good i.e. Extension growth of twigs and wound wood development. Minimal or no canopy die back (deadwood).
- Fair** Tree is showing one or more of the following symptoms;  
< 25% dead wood, minor canopy die back, foliage generally with good colour though some imperfections may be present. Minor pathogen damage present, with growth indicators such as leaf size, canopy density and twig extension growth typical for the species in this location.
- Poor** Tree is showing one or more of the following symptoms of tree decline; > 25% deadwood, canopy die back is observable, discoloured or distorted leaves. Pathogens present, stress symptoms are observable as reduced leaf size, extension growth and canopy density.
- Dead or dying**  
Tree is in severe decline; > 55% deadwood, very little foliage, epicormic shoots, minimal extension growth.
- **STRUCTURE**
- Good** Trunk and scaffold branches show good taper and attachment with minor or no structural defects. Tree is a good example of the species with a well-developed form showing no obvious root problems or pests and diseases.
- Fair** Tree shows some minor structural defects or minor damage to trunk e.g. bark missing, there could be cavities present. Minimal damage to structural roots. Tree could be seen as typical for this species.
- Poor** There are major structural defects, damage to trunk or bark missing. Co-dominant stems could be present or poor structure with likely points of failure. Girdling or damaged roots obvious. Tree is structurally problematic.
- Hazardous** Tree is an immediate hazard with potential to fail, this should be rectified as soon as possible.
- **HAZARD** Hazard is rated into three levels; **LOW**, **MEDIUM**, and **HIGH**.
- LOW;** Tree appears to be structurally sound, healthy with no signs of pests or disease, good vigour and is clear of any hazards.
- MEDIUM;** Tree displays signs of structural problems, evidence of pests or disease, signs of low vigour, deadwood, decay, may be growing into an area that could create a hazard.
- HIGH;** Tree is an immediate hazard with the potential to fail, this should be rectified as soon as possible.
- **RETENTION VALUE** Retention Value is rated into three levels; **LOW**, **MEDIUM** and **HIGH**.
- LOW;** Trees that offer little in terms of contributing to the future landscape. Should not be a constraint on development proposals and may be considered for removal.
- MEDIUM;** Trees with some beneficial attributes that may benefit the site. Could be considered for retention if possible.
- HIGH;** Trees with the potential to positively contribute to the site. Should be considered for retention if possible.
- **TREE PROTECTION ZONES**  
The T.P.Z. applied is AS 4970-2009 'Protection of trees on development site'. AS 4970-2009 uses a multiplication method to determine the T.P.Z. based on T.P.Z. radius being 12 times stem diameter measured 1.4 metres above ground.  
i.e.T.P.Z. radius = DBH x 12
- **STRUCTURAL ROOT ZONE**  
The S.R.Z. applied is AS 4970-2009 'Protection of trees on development site'.  
The SRZ is the area required for tree stability. A larger area is required to maintain a viable tree.  
SRZ radius = ( D x 50 )<sup>0.42</sup> x 0.64

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## USEFUL LIFE EXPECTANCY – ULE.

- LONG ULE;** Trees that appears to be retainable with an acceptable level of risk for more than 40 years.
1. Structurally sound trees located in positions that can accommodate future growth.
  2. Storm damaged or defective trees that could be made suitable for retention in the long term by remedial tree surgery.
  3. Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.

- MEDIUM ULE;** Trees that appear to be retainable with an acceptable level of risk for 15 to 40 years.
1. Trees that may only live between 15 and 40 years.
  2. Trees that may live for more than 40 years but would be removed to allow the safe development of more suitable individuals.
  3. Trees that may live for more than 40 years but would be removed during the course of normal management for safety and nuisance reasons.
  4. Storm damage or defective trees that can be made suitable for retention in the medium term by remedial work.

- SHORT ULE;** Trees that appear to be retainable with an acceptable level of risk for 5 to 15 years.
1. Trees that may live for 5 to 15 years.
  2. Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals.
  3. Trees that may live for more than 15 years but would be removed during the course of normal management for safety and nuisance reasons.
  4. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.

- REMOVE;** Trees with a high level of risk that would need removal now or within the next 5 years.
1. Dead trees.
  2. Dying or suppressed and declining trees through disease or inhospitable conditions.
  3. Dangerous trees through instability or recent loss of adjacent trees.
  4. Dangerous trees through structural defects including cavities, decay, included bark, wounds or poor form.
  5. Damaged trees that are considered unsafe to retain.
  6. Trees that will become dangerous after removal of other trees for the above reasons.

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RedSquare  
Traffic

*Creativity in Transport Engineering*

# 68-70 Kyabram Street, Coolaroo Traffic Engineering Assessment



Prepared for Vic Wide Bin Hire & Demolitions Pty Ltd

24 March 2025

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Reference: 722R199-1024

Page 03

## REVISION HISTORY

REVISION NO.	DATE	PREPARED BY	REVIEWED BY	APPROVED FOR ISSUE BY
1.0	30/11/2024	Sachini H.	Dane W.	Dane W.
2.0	04/02/2025	Sachini H.	Dane W.	Dane W.
3.0	24/03/2025	Sachini H.	Dane W.	Dane W.

## REDSQUARE TRAFFIC

PLATFORM	CONTACT DETAILS
Website	<a href="http://www.redsquaretraffic.com.au">http://www.redsquaretraffic.com.au</a>
Telephone	03 7036 6734   0415 698 880
Email	<a href="mailto:mail@redsquaretraffic.com.au">mail@redsquaretraffic.com.au</a>
LinkedIn	<a href="https://www.linkedin.com/company/redsquare-traffic">https://www.linkedin.com/company/redsquare-traffic</a>
Facebook	<a href="http://www.facebook.com/RedSquareTraffic">http://www.facebook.com/RedSquareTraffic</a>
Instagram	<a href="http://www.instagram.com/redsquaretraffic">http://www.instagram.com/redsquaretraffic</a>
Twitter	<a href="http://www.twitter.com/redsquare">http://www.twitter.com/redsquare</a>
Blog	<a href="https://www.redsquaretraffic.com.au/blog">https://www.redsquaretraffic.com.au/blog</a>
ABN	70 656 924 757
ACN	656 924 757

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CLIENT	DATE ISSUED
Vic Wide Bin Hire & Demolitions Pty Ltd	24 March 2025

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[mail@redsquaretraffic.com.au](mailto:mail@redsquaretraffic.com.au)

03 7036 6734 | Suite 36/11, Wilson Street, South Yarra

[www.redsquaretraffic.com.au](http://www.redsquaretraffic.com.au)

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mail@redsquaretraffic.com.au

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# 1 INTRODUCTION

## 1.1 BACKGROUND

RedSquare Traffic has been engaged by [Vic Wide Bin Hire & Demolitions Pty Ltd](#) ('Client') to prepare a Traffic Engineering Assessment (TIA) to accompany the Planning Application of the Proposed Warehouse Development at 68-70 Kyabram Street, Coolaroo ('Subject Site', 'Site').

In response to the Planning Application (P26244), City of Hume has issued a Request for Further Information (RFI). In the RFI, the following relevant items were requested:

- Traffic report by a qualified traffic engineer providing a car parking demand assessment in accordance with clause 52.06 – of Hume Planning Scheme. Empirical evidence must be provided as part of the report with similar setting to justify the shortfall in parking for this development. The report is to indicate the relevance of each facility to the proposed warehouse, including each warehouses' floor area and use/business operation. Parking survey results must be provided in full for Council to review.
- Swept paths are to be provided showing the largest service vehicle required for the site, entering, and exiting in a forward motion, and must incorporate the standard configurations and practices specified below.
- Provide a car parking management plan to explain how the shared carpark is intended to operate and be managed. ie Will spaces be allocated to each warehouse?

This package of work addresses the above stated requirements and includes the preparation of a Traffic Engineering Assessment report to investigate traffic, parking, and road safety related implications, to consider parking layouts, access, loading and waste collection arrangements, to analyse car/bicycle parking demands together with the adequacy of proposed provisions and to provide transport engineering solutions to mitigate any adverse outcomes on the surrounding road network.

This document has been prepared in accordance with the requirements specified in Austroads Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments and applicable Department of Transport & Planning Guidelines.

## 1.2 REFERENCES

The following documents have been reviewed and referred to in this report:

- Austroads Guide to Traffic Management (AGTM) Part 3: Transport Studies and Analysis Methods.
- Austroads Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments.
- NSW Roads and Traffic Authority Guide to Traffic Generating Developments.
- VicRoads Traffic Volumes – Open Data Hub.
- VicRoads Map of Declared Road – Open Data Hub.
- City of Hume Planning Scheme – Clause 52.06.
- City of Hume Planning Scheme – Clause 52.34.
- Traffic Engineering and Management, K W Ogden and S Y Taylor, 2017, Section 34.6.
- Australian Standard Parking Facilities Part 1: Off-Street Parking Facilities AS2890.1-2004.
- Australian Standard Parking Facilities Part 3: Bicycle Parking AS2890.3-2015.
- Australian Standard Parking Facilities Part 5: On-Street Parking AS2890.5-2020.
- Australian Standard Parking Facilities Part 6: Off-street Parking for People with Disabilities AS2890.6-2009.

## 2 EXISTING CONDITIONS

### 2.1 SUBJECT SITE

Subject Site is located at 68-70 Kyabram Street, Coolaroo on the east side of Kyabram Street between Almurta Avenue and Crossley Crescent, as demonstrated in Figure 1.



FIGURE 1: AERIAL VIEW OF SUBJECT SITE (SOURCE: METROMAP)

With an overall site area of approximately 4599sqm, the site contains a frontage of 33.53m to Kyabram Street through which the solitary access is currently obtained. The land in consideration currently contains a single warehouse and a large vacant area to the rear of it.

### 2.2 LAND USE

The land falls part of the Industrial 3 Zone (IN3Z) and is surrounded by other properties in the same planning zone to the north and south, except the west which comprises of properties belonging to a General Residential Zone (GRZ1).

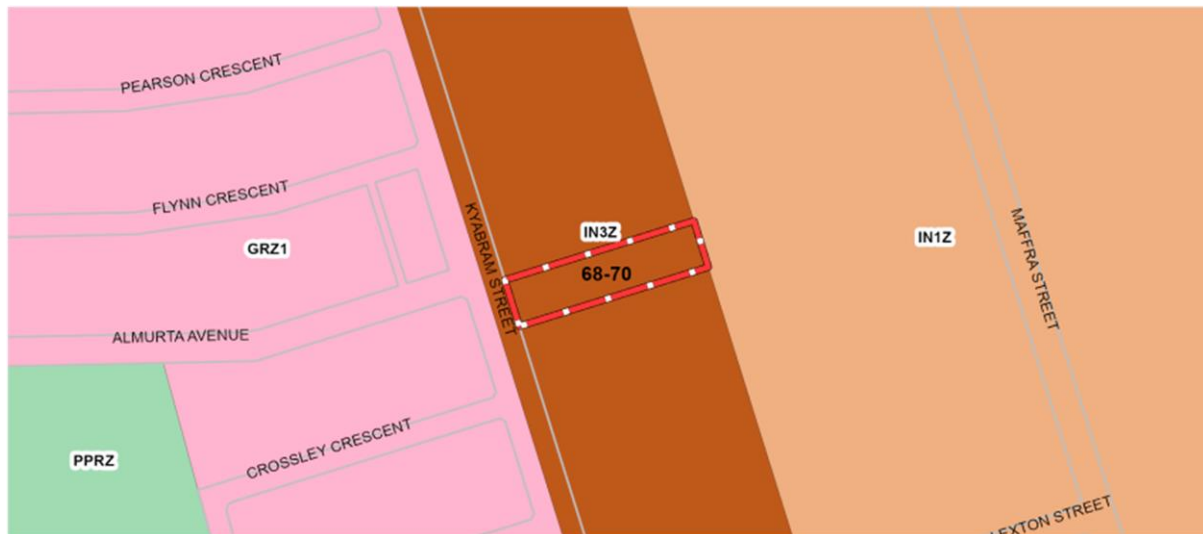


FIGURE 2: PLANNING ZONES (SOURCE: VICPLAN)

## 2.3 ROAD NETWORK

Kyabram Street is a Collector Road (City of Hume) oriented north-south accommodating bi-directional vehicular movements in a dual carriageway configuration. The road connects with Barry Road in the south, a secondary state arterial road which offers direct connections to two primary state arterial roads Pascoe Vale Road and Sydney Road (Hume Highway). A posted speed limit of 50km/h applies to this road which offers a single lane of traffic in addition to the kerbside lane that is dedicated for bicycles and street parking.



FIGURE 3: KYABRAM STREET (SOURCE: GOOGLE STREET VIEW)

## 2.4 INTERSECTIONS

Considering the connections on offer with the wider road network, it is highly likely that vehicles pertaining to the future warehouses at the Subject Site will access via Barry Road. The intersection between Kyabram Street and Barry Road is signalised and offers a dedicated right turn lane and a left turn lane in the southbound direction. Vehicles on Barry Road are offered with two lanes of traffic in each direction in addition to signalised pedestrian crossings on all three legs.

Figure 4 provides an excerpt from Melway Online demonstrating the nearby road network including the intersections.



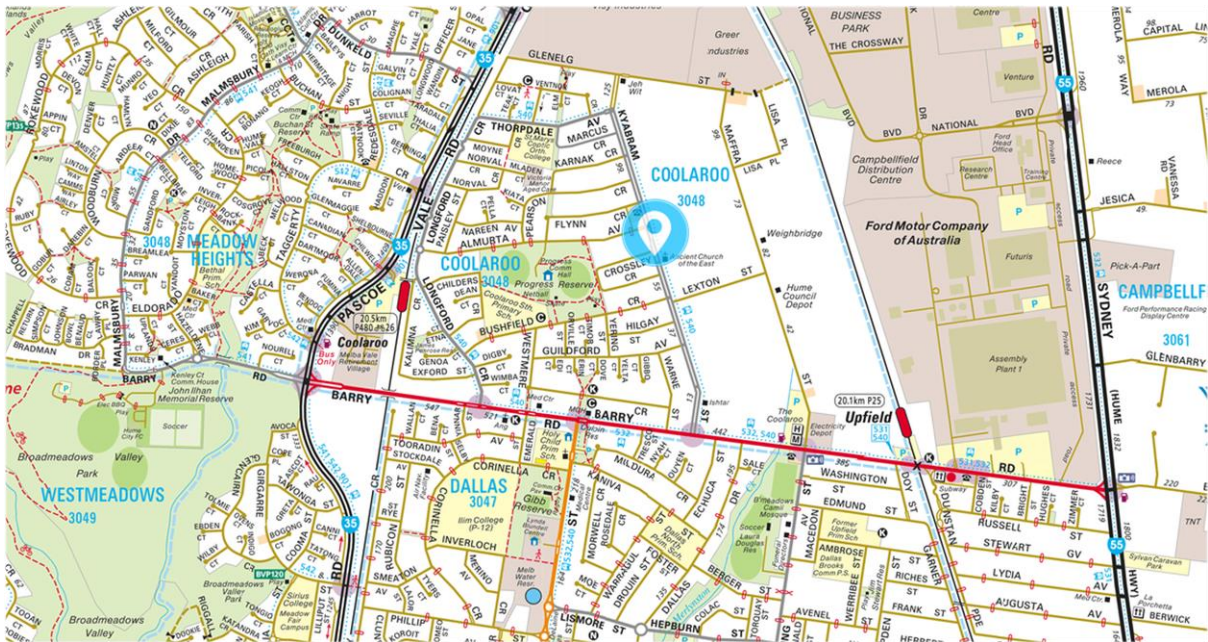


FIGURE 4: NEARBY ROAD NETWORK (SOURCE: MELWAY ONLINE)

## 2.5 PUBLIC TRANSPORT

The bus service Route 540 operates along Kyabram Street originating from Upfield Railway Station and terminating at Broadmeadows Railway Station. Additionally, Route 532 operates between Upfield Railway Station and Broadmeadows Railway Station and is accessible via bus stops located on Barry Road. Upfield Railway Station is located 1.6km away and is accessible via a 22-min walk from Subject Site.

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FIGURE 5: NEARBY PUBLIC TRANSPORT SERVICES (SOURCE: PTV)

## 2.6 ACTIVE TRANSPORT

Kyabram Street offers a footpath in either side of the road and offers connections via a mix of median refuge islands, kerb ramps, kerb extension and signalised pedestrian crossings. A dedicated on-road bicycle lane is available in both directions adjacent to the kerbside car parking lane.

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## 3 PROPOSAL

### 3.1 OVERVIEW

RedSquare Traffic recognises the proposal includes developing a collection of warehouses at 68-70 Kyabram Street, Coolaroo. More specifically this includes the development of 16 warehouses with similar floor areas ranging between 163-267m<sup>2</sup> each, spread across a ground floor and a mezzanine floor.

Refer to the Planning Application for a complete town planning drawings package.

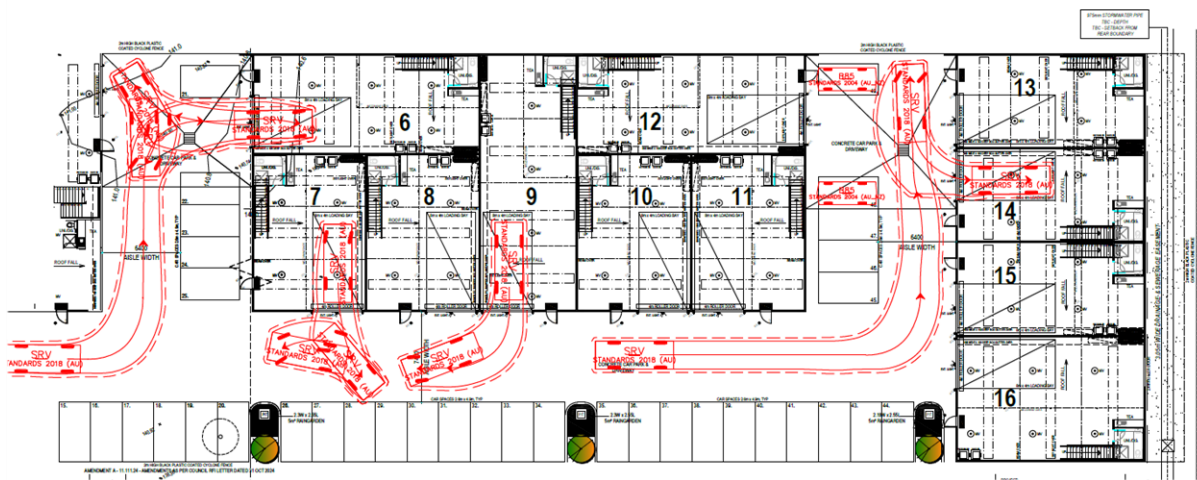


FIGURE 6: FLOOR PLANS (WAREHOUSES 6 TO 15)

### 3.2 ACCESS

Primary access is proposed to be sourced via a 6m wide industrial standard crossover connecting with Kyabram Street. This access point will provide access to all warehouses except Warehouse 1 which intends to gain access via a dedicated crossover (existing) located to the north of the site. It is expected that the new crossover will be constructed in accordance with SD250 – New Industrial Vehicle Cross Detail specified in the Local Government Infrastructure Design Manual Standard Drawings.

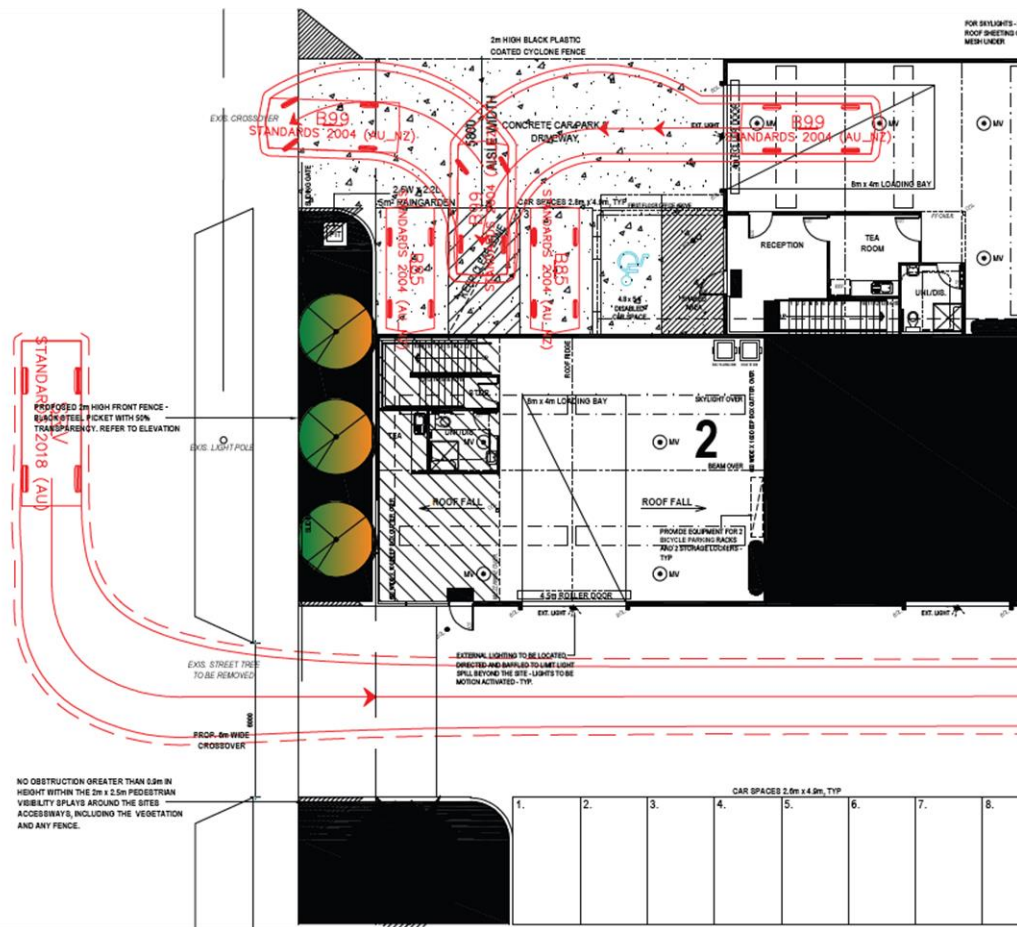


FIGURE 7: ACCESS POINTS

### 3.3 CAR PARKING

A total of 39 car parking spaces are located along the 7.43m-wide accessway while a further 10 spaces are located adjacent to the 6.4m-wide north-south accessways. An additional three (3) car spaces are in the area in front of Warehouse 1 inclusive of 1 x DDA car space. Each car parking space is dimensioned 2.6m x 4.9m in compliance with the minimum aisle width of 6.4m with the exception of the car spaces near Warehouse 1, which are dimensioned 2.8m x 4.9m to suit the 5.8m aisle width.

### 3.4 DELIVERIES

Being a warehouse facility, deliveries and loading activities are considered essential. As specified above, appropriate loading bays (8m x 4m) are provided within the warehouse facilities. Swept

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Path Analysis confirms the ability for an 6.4m Service Vehicle (SRV) to safely enter and exit the internal access road in a forward direction (except for Warehouse 1).

**The largest vehicle size that can enter and exit Warehouse 1 in a forward direction would be B99 Passenger Vans/Cans.**

## 4 PARKING ASSESSMENT

### 4.1 STATUTORY REQUIREMENTS

#### 4.1.1 Car Parking Requirements

Statutory Car Parking Requirements for this proposed development are outlined under Clause 52.06 of the Hume City Council Planning Scheme. RedSquare Traffic holds the view that all warehouse facilities of this development are appropriate to be classified under the land use category of Warehouse other than listed in this table. Accordingly, the following Statutory Car Parking Requirements are calculated for the proposed development at a rate of 2 to each premises plus 1.5 to each 100sqm of net floor area.

TABLE 1: STATUTORY CAR PARKING REQUIREMENTS

Land Use	Net Floor Area <sup>1</sup>	Car Parking Requirement
Warehouse 1	212m <sup>2</sup>	5 (3 Supply, 2 Shortfall)
<b>Total (Warehouse 1)</b>		<b>5 Car Spaces (3 Supply, 2 Shortfall)</b>
Warehouse 2-4	152m <sup>2</sup>	4 (each) x 3 = 12
Warehouse 5	147m <sup>2</sup>	4
Warehouse 6 & 12	143m <sup>2</sup>	4 (each) x 2 = 8
Warehouse 7-8, 10-11	120m <sup>2</sup>	3 (each) x 4 = 12
Warehouse 9	158m <sup>2</sup>	4
Warehouse 13-15	108m <sup>2</sup>	3 (each) x 3 = 9
Warehouse 16	171m <sup>2</sup>	4
<b>Total (WH 2 to 16)</b>		<b>53 Car Spaces (49 Supply, 4 Shortfall)</b>

<sup>1</sup> Net Floor Area has been calculated by subtracting the area of the loading bay and stairs from the overall floor area.

### 4.1.2 Car Space Allocation

Warehouse 1 is accessible via a dedicated crossover and has access to 3 car parking spaces inclusive of a DDA car parking space. Therefore, the 3 car parking spaces will be for the sole purpose of Warehouse 1 operations.

A further supply of 49 car parking spaces are available to be distributed amongst the remaining 15 Warehouses. Allocating 3 car parking spaces for each of the 15 warehouses would result in an excess supply of 4 spaces. It is recommended that **Warehouse 9 and 16** are provided with an additional car parking space considering these two warehouses contain the largest net floor areas (excluding Warehouse 1). One of the remaining two car spaces can be to **Warehouse 5** considering its placement at a dead-end aisle. The remaining car spaces can be distributed to **Warehouse 2** located towards the entry of the site. Resultant distribution as recommended by RedSquare Traffic is provided below.

TABLE 2: PROPOSED CAR PARKING ALLOCATION

Land Use	Net Floor Area <sup>2</sup>	Car Parking Requirement	Car Parking Supply
<b>Warehouse 1</b>	225m <sup>2</sup>	5	3
<b>Warehouse 2</b>	152m <sup>2</sup>	4	4
<b>Warehouse 3-4</b>	152m <sup>2</sup>	4 Each	3 Each
<b>Warehouse 5</b>	147m <sup>2</sup>	4	4
<b>Warehouse 6 &amp; 12</b>	143m <sup>2</sup>	4 Each	3 Each
<b>Warehouse 7-8, 10-11</b>	120m <sup>2</sup>	3 Each	3 Each
<b>Warehouse 9</b>	158m <sup>2</sup>	4	4
<b>Warehouse 13-15</b>	108m <sup>2</sup>	3 Each	3 Each
<b>Warehouse 16</b>	171m <sup>2</sup>	4	4

<sup>2</sup> Net Floor Area has been calculated by subtracting the area of the loading bay and stairs from the overall floor area.

Therefore, only the following Warehouses 3, 4, 6 & 12 are expected to operate with parking deficits.

- Warehouse 1 – 2 x Shortfall;
- Warehouses 3 & 4 – 1 x Shortfall (Each); and
- Warehouses 6 & 12 – 1 x Shortfall (Each).

#### 4.1.3 Practical Car Parking Demand

49 car parking spaces are proposed to be located within the Subject Site's internal car park (Warehouse 2 to 16). Thus, a shortfall of 4 car parking spaces is found with respect to the Statutory Car Parking Requirements. Whilst 53 car spaces are specified as the Statutory Car Parking Requirement for this development, RedSquare Traffic considers a supply of 3-4 car parking spaces per warehouse (& minimum 3 spaces) is more than sufficient.

Information provided by the client suggests that the future warehouses will operate between 7am to 6pm on weekdays with 1 to 3 occupants per warehouse. Therefore, it is likely that the maximum car parking demand will be between 1 to 3 spaces at any given time.

It is strongly believed that a portion of parking demands associated with warehouses of this nature are derived from activities of dropping off/picking up goods. For this purpose, an internal loading bay is provided within each facility.

#### 4.1.4 Car Parking Demand Assessment

According to the requirements specified above, a total of 53 car parking spaces are required to satisfy the Statutory Requirements of the proposed development. However, with the provision of a large amount of kerbside street car parking spaces in the form of a designated parking lane, provision of dedicated loading bays, variation in parking demands, good access to public transport modes and several other factors, the car parking demand associated with the Subject Site is further reduced.

A Car Parking Demand Assessment requires the assessment of car parking demand likely to be generated by the proposed expansion and must address the following to the satisfaction of the responsible authority:

- The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.
- The variation of car parking demand likely to be generated by the proposed use over time.
- The short-stay and long-stay car parking demand likely to be generated by the proposed use.



- The availability of public transport in the locality of the land.
- The convenience of pedestrian and cyclist access to the land.
- The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.
- The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.
- Any empirical assessment or case study.

A discussion of the relevant items from above lists are provided as follows.

TABLE 3: CAR PARKING DEMAND ASSESSMENT

No.	Factor	Response
1	The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.	Given the proposed warehouses will eventually be utilised by various industrial-like businesses, it is unlikely that there will be an opportunity for multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.
2	The variation of car parking demand likely to be generated by the proposed use over time.	<p>The future land uses of the warehouses will typically operate during business hours between Monday to Friday, similar to other businesses in the area. While there is no variation expected during standard business hours, the car parking demand is expected to be close to zero outside these hours.</p> <p>Long term variation is not typically expected from an industrial area of this nature.</p>
3	The short-stay and long-stay car parking demand likely to be generated by the proposed use.	As the warehouses are expected be occupied by industrial-like businesses, the parking demand is expected to be a mix of short stay and long stay on most occasions. Staff members are expected to occupy long-stay car parking during their work shifts.
4	The availability of public transport in the locality of the land.	The bus service Route 540 operates along Kyabram Street originating from Upfield Railway Station and terminating at Broadmeadows Railway Station. Additionally, Route 532 operates between Upfield Railway Station and Broadmeadows Railway Station and is accessible via bus stops located on Barry Road. Upfield Railway Station is located 1.6km away and is accessible via a 22-min walk from Subject Site.
5	The convenience of pedestrian and cyclist access to the land.	Kyabram Street offers a footpath in either side of the road and offers connections via a mix of median refuge islands, kerb ramps, kerb extension and signalised pedestrian crossings. A

		dedicated on-road bicycle lane is available in both directions adjacent to the kerbside car parking lane.
6	The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.	No bicycle parking provisions nor end of trip facilities were found in the locality of the land under existing conditions.
7	The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.	<p>Analysis of the car ownership of the households in Gladstone Park in 2021 compared to Hume City shows that 91.2% of the households owned at least one car, while 4.9% did not, compared with 89.9% and 4.3% respectively in Hume City.</p> <p>Of those that owned at least one vehicle, there was a larger proportion who owned just one car; a similar proportion who owned two cars; and a smaller proportion who owned three cars or more.</p> <p>Overall, 32.9% of the households owned one car; 39.3% owned two cars; and 19.0% owned three cars or more, compared with 29.3%; 38.9% and 21.8% respectively for Hume City.</p>
8	Any empirical assessment or case study.	Refer to the below.

#### 4.1.5 Comparable Properties

26 Kyabram Street, Coolaroo offers a collection of 4 warehouses comparison of a floor area of approximately 450sqm (Source: Real Commercial). A shared car park comprising of 30 linemarked car spaces is available in this land, where the statutory parking requirement is calculated as 36 car parking spaces. Aerial images captured across multiple dates (Wednesday, 02 October 2024, Thursday 01 August 2024 and Friday, 29 March 2024) suggest that the 30-space car park is only occupied in minor numbers with a significant number of vacant car parking spaces.

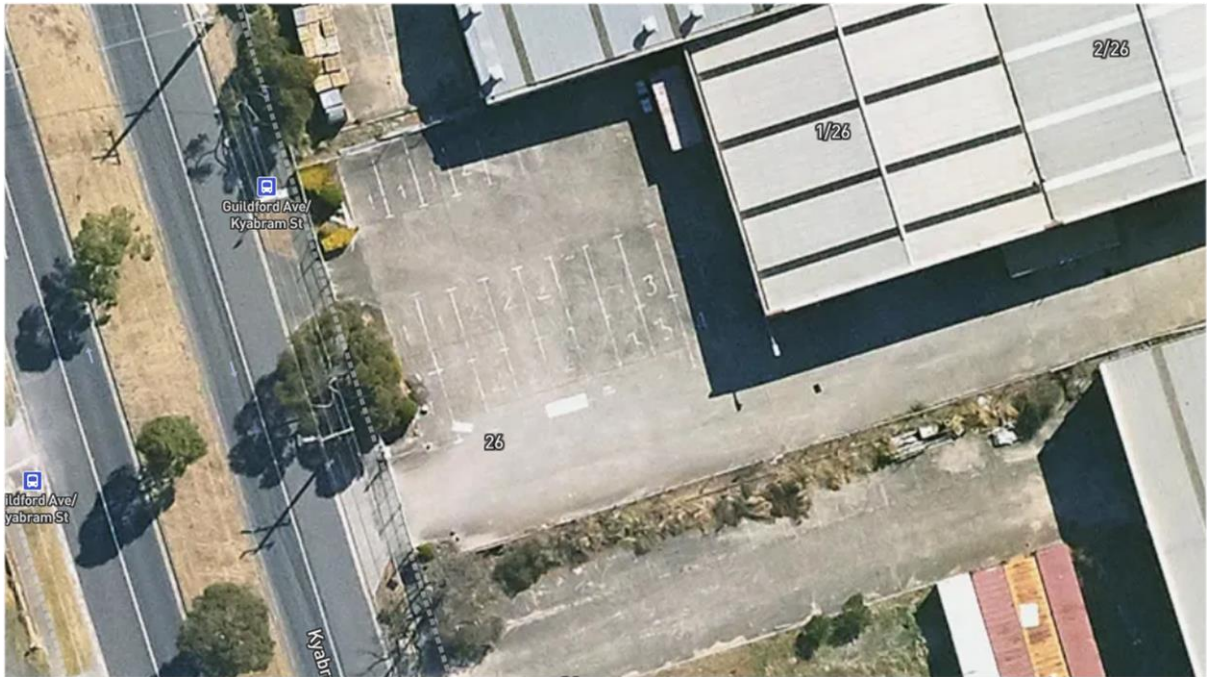


FIGURE 8: 29 MARCH 2024 - 1 CAR SPACE OCCUPIED

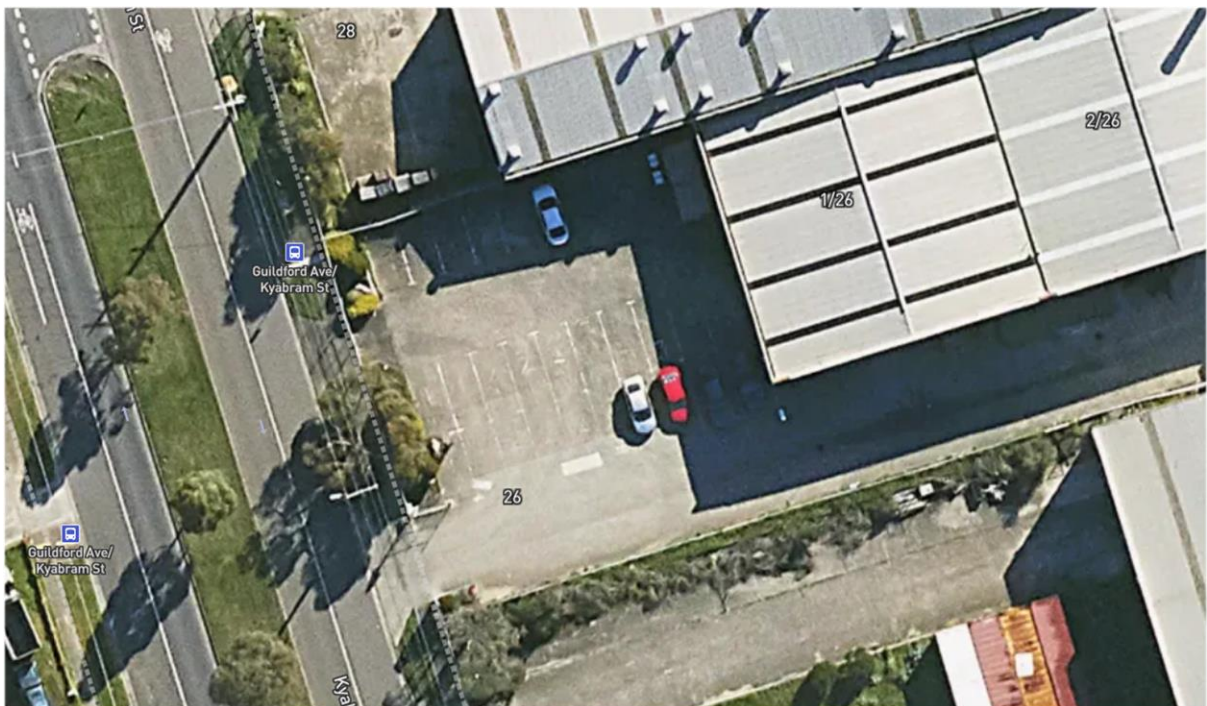


FIGURE 9: 01 AUGUST 2024, 6 CAR SPACES OCCUPIED

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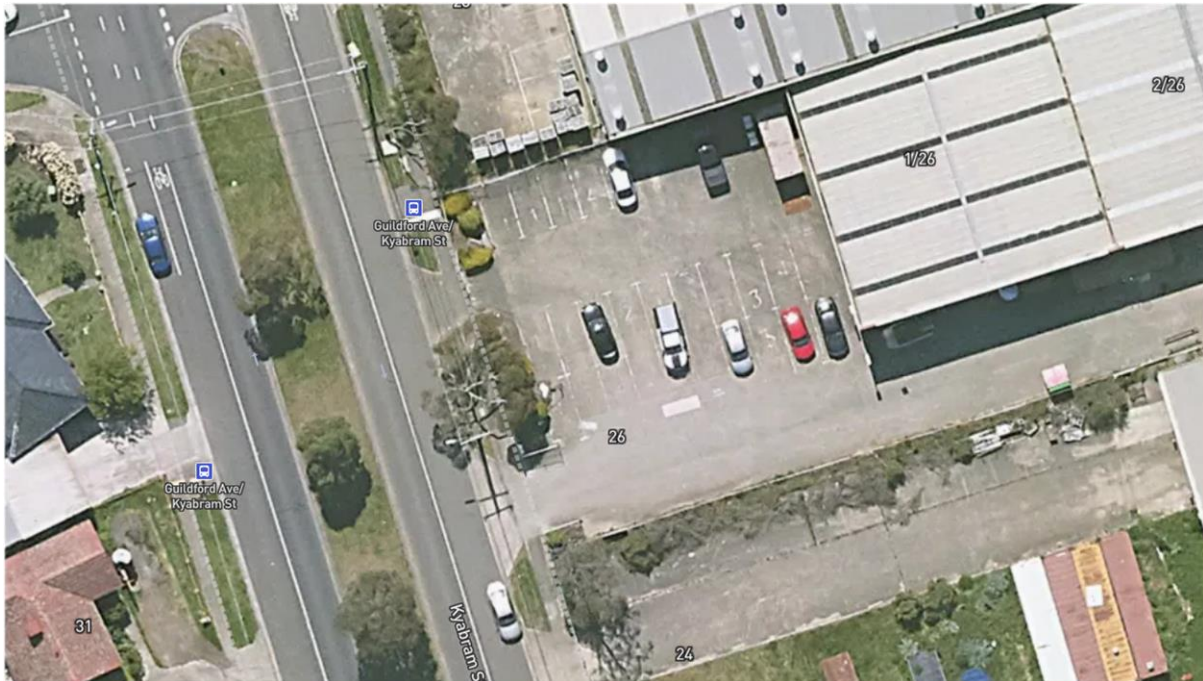


FIGURE 10: 02 OCTOBER 2024 - 8 CAR SPACES OCCUPIED

Considering this site is located approximately 450m away on the same street, we believe there are significant similarities to draw upon. Drawing upon evidence from this comparable site, we can conclude that provision of a minimum of 3 car spaces per warehouse should be more than sufficient.

## 5 CAR PARKING

Clause 52.06 of the Hume Planning Scheme specifies design guidelines with respect to accessways, access points and car parking spaces which are relevant to this development.

### 5.1 DESIGN STANDARD 1 – ACCESSWAYS

Accessways must:

TABLE 4: DESIGN STANDARD 1 REVIEW

Requirement	Design Response
Be at least 3m wide.	Complies. All accessways are at least 3m wide.
Have an internal radius of at least 4m at changes of direction or intersection or be at least 4.2 meters wide.	Complies. At least 4.2m wide at all changes of direction.
Allow vehicles parked in the last space of a dead end accessway in public car parks to exit in a forward direction with one manoeuvre.	Not applicable. The car park is a private car park.
Provide at least 2.1m headroom beneath overhead obstructions, calculated for a vehicle with a wheelbase of 2.8m.	Complies. No overhead obstructions are present.
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or a Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction.	Complies. Accessway are designed such that all vehicles are able to exit the site in a forward direction.
Provide a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more carparking spaces and is either more than	Complies.

<p>50 metres long or connects to a road in a Transport Zone 2 or a Transport Zone 3.</p>	<p>Appropriate passing areas are provided at all entrances to the Subject Site.</p>
<p>Have a corner splay or area at least 50 percent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road. The area clear of visual obstructions may include an adjacent entry or exit lane where more than one lane is provided, or adjacent landscaped areas, provided the landscaping in those areas is less than 900mm in height.</p>	<p>Complies. Corner splay area is clear of visual obstructions.</p>

## 5.2 DESIGN STANDARD 2 – CAR PARKING SPACES

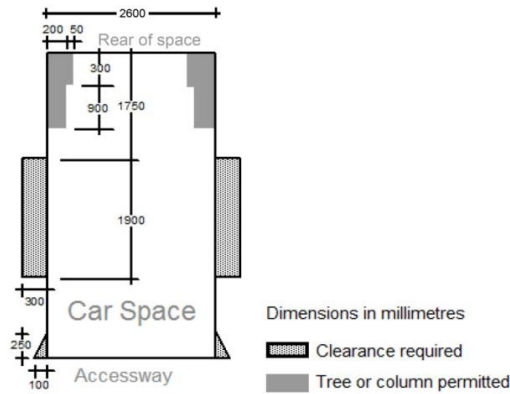
TABLE 5: DESIGN STANDARD 2 REVIEW

Requirement	Design Response
<p>Car parking spaces and accessways must have minimum dimensions as per Table 2 of Design Standard 2 – Clause 52.20.</p>	<p>Complies. All car parking spaces and accessways have the minimum dimensions specified under Design Standard 2.</p>
<p>A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked ‘clearance required’ on Diagram 1 – Clearance to car parking spaces (Clause 52.06-9), other than:  - A column, tree, or tree guard, which may project into a space if it is within the area marked ‘tree or column permitted’ on Diagram 1.</p>	<p>Complies. No structures are abutting car spaces nor encroaching on to the areas marked as ‘clearance required’.</p>

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- A structure, which may project into the space if it is at least 2.1 metres above the space.

Diagram 1 Clearance to car parking spaces



Car spaces in garages or carports must be at least 6 metres long and 3.5 metres wide for a single space and 5.5 metres wide for a double space measured inside the garage or carport.

Not applicable.

No car spaces are provided in garages nor carports.

Where parking spaces are provided in tandem (one space behind the other) an additional 500mm in length must be provided between each space.

Not applicable.

No car parking spaces are provided in tandem.

Disabled car parking spaces must be designed in accordance with Australian Standard AS2890.6-2009 (disabled) and the Building Code of Australia. Disabled carparking spaces may encroach into an accessway width specified in Table 2 by 500mm.

Complies.

DDA car space dimensions are in compliance with AS2890.6.

### 5.3 DESIGN STANDARD 3 – GRADIENTS

This Design Standard is not applicable, as the proposed car park does not contain any noteworthy gradients.

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## 5.4 DESIGN STANDARD 4 – MECHANICAL PARKING

This Design Standard is not applicable, as the proposed car park does not contain any mechanical car parking spaces.

## 5.5 POSTAMBLE – CAR PARK DESIGN

Subject to a few recommendations provided above, RedSquare Traffic is satisfied with the proposed car parking design of 68-70 Kyabram Street, Coolaroo.

## 6 TRAFFIC IMPACT ASSESSMENT

RedSquare Traffic have utilised the NSW Roads and Traffic Authority's Guide to Traffic Generating Developments ('RTA Guide') for Traffic Generation rates relating to the Subject Site. Traffic generation rates are sourced from this guide as there is no Victorian reference document available currently.

### 6.1 TRAFFIC GENERATION

Under the RTA Guide, the most appropriate traffic generation rates applicable to the proposed development are shown in Table 6.

TABLE 6: TRAFFIC GENERATION

Land Use	Traffic Generation Rate	Trip Generation
Warehouses (Approximately 2067m <sup>2</sup> )	Daily – 4/100m <sup>2</sup> GFA	83 Trips/Day
	AM Peak – 0.5/100m <sup>2</sup> GFA	11 Trips/Hour

Based on above, a total of approximately 11 vehicular trips are expected in any peak hour by this warehouse development, whilst 83 trips are expected to be generated throughout the day.

### 6.2 TRAFFIC IMPACTS

Based on the location of the Subject Site, most vehicles entering the subject will travel northbound along Kyabram Street and all vehicles exiting the site are likely to travel southbound to connect with Barry Road. It is likely that a majority of vehicles exiting the site will travel towards Hume Highway or Pascoe Vale Road depending on their intended final destination.

The level of traffic expected to be generated by this warehouse facility is a maximum of 11 trips/hour. This level of traffic is not expected to create noticeable impacts to Kyabram Street nor Barry Road. The intersection of Kyabram Street and Barry Road is a well-established signalised intersection providing two dedicated traffic lanes in the southbound direction able to handle a further 11 trips across an hour.

Subsequently, exiting traffic will mix with at least two lanes of traffic provided on Barry Road before distributing to the broader road network of major arterial roads. No further analysis is considered necessary in relation to traffic flow and congestion related impacts.

## 7 SWEPT PATH ANALYSIS

Refer to Appendix A providing the drawings from the Swept Path Analysis. The following are summarised.

- All typical passenger vehicles are able to enter and exit the site in a forward direction.
- Swept Path Analysis confirms the ability for a 6.4m Service Vehicle (SRV) to safely enter and exit the internal access road in a forward direction (except Warehouse 1).
- The largest vehicle size that can enter and exit Warehouse 1 in a forward direction would be B99 Passenger Vans/Cans.

## 8 CAR PARKING MANAGEMENT PLAN

### 8.1 CAR PARKING ALLOCATION

Warehouse 1 is accessible via a dedicated crossover and has access to 3 car parking spaces. Therefore, the 3 car parking spaces will be for the sole purpose of Warehouse 1 operations.

A further supply of 49 car parking spaces are available to be distributed amongst the remaining 15 Warehouses. Allocating 3 car parking spaces for each of the 15 warehouses would result in an excess supply of 4 spaces. It is recommended that Warehouse 9 and 16 are provided with an additional car parking space considering these two warehouses contain the largest net floor areas. One of the remaining two car spaces can be to Warehouse 5 considering its placement at a dead-end aisle. The remaining car spaces can be distributed to Warehouse 2 located towards the entry of the site.

### 8.2 ACCESS CONTROL

Access to the subject site is controlled via a gate and a fence at the front of the property. As the premises is open to outside customers, the gate will be kept open at all operating times.

### 8.3 PARKING SUPPLY

As specified in Section 4, each warehouse is anticipated to operate with a maximum of 1 to 3 occupants at any given time. A supply of 3-4 car spaces per warehouse is highly likely to be sufficient to cater for future car parking demands. Thus, no additional parking is sought from other lands or street parking areas. The current car parking provisions are more than adequate to satisfy the demand generated by the property.

### 8.4 SECURITY

The business does not engage the services of a security contractor, but the building is under the management of an owners corporation. The corporation operates the security services and manages the security throughout the day including the avoidance of any intruders at night. The building also contains a gate and a fence, approximately 2 meters in height that can be closed when the site is not in operation.

## 8.5 TRAFFIC FLOW

Traffic flow through the shared accessways (Warehouses 2-16) is straightforward with navigational issues. A suitable width is available to offer passing of two vehicles at any given time, with generous turn-around areas near T-intersections. Refer to the Swept Path Analysis which confirms some of the features of the traffic flow system.

## 8.6 PEDESTRIAN FLOW

Dedicated pedestrian pathways are considered unnecessary for a small development of this nature. However, provision of 5km/h or 10km/h Shared Zone signs are recommended to be placed along with physical speed limiting devices such as rubber speed humps.

## 8.7 SIGNAGE & LINEMARKING

As above, the provision of 5km/h or 10km/h Shared Zone signs are recommended to be placed along with physical speed limiting devices such as rubber speed humps. It is recommended that car spaces are allocated to warehouses via a mix of pavement stencils and/or signage.

## 8.8 LOADING & WASTE

Being a warehouse facility, deliveries and loading activities are considered essential. As specified above, appropriate loading bays (8m x 4m) are provided within the warehouse facilities. Swept Path Analysis confirms the ability for an 6.4m Service Vehicle (SRV) to safely enter and exit the internal access road in a forward direction.

## 8.9 SERVICE & MAINTENANCE

The following actions will be implemented as servicing and maintenance measures for the car parks and other areas.

- Regular cleaning and debris removal: Sweeping the car park to remove dirt, leaves, and litter not only to improve its appearance but also to prevent drainage issues and to preserve the pavement's integrity.
- Inspection and repair of cracks, potholes, and drainage issues: To identifying and promptly repair any damages to the pavement to prevent further deterioration and to extend the life of the car park.

- Re-striping and signage updates: Faded or unclear markings and signs can lead to confusion and accidents. Regularly re-striping the car park and updating signs will be done to maintain a safe and organised traffic flow.

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mail@redsquaretraffic.com.au

03 7036 6734 | Suite 36/11, Wilson Street, South Yarra

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## 9 CONCLUSION & RECOMMENDATIONS

RedSquare Traffic has been engaged by Vic Wide Bin Hire & Demolitions Pty Ltd ('Client') to prepare a Traffic Engineering Assessment (TIA) to accompany the Planning Application of the Proposed Warehouse Development at 68-70 Kyabram Street, Coolaroo ('Subject Site', 'Site').

Provided below is a summary of the findings of this Traffic Impact Assessment.

- Statutory Car Parking Requirements as specified under Clause 52.06 have not been fully satisfied via the proposed car parking provisions. Nonetheless, RedSquare Traffic holds the view that 3 to 4 car spaces per warehouse is a generous allocation and will not trigger car parking deficits in the future.
- Design of the car parking spaces, accessways and access points are generally in compliance with the Design Standards specified under Clause 52.06.
- Swept Path Analysis has demonstrated the ability for all relevant vehicles to enter and exit the site in a forward direction, including waste collection vehicles & emergency vehicles.
- RedSquare Traffic is satisfied that the traffic generated from the development can be accommodated by the surrounding road network without causing a discernible change to traffic conditions.

Nonetheless, RedSquare Traffic have made several recommendations as per below.

- RedSquare Traffic further recommends that each warehouse is provided with a wall-mounted bicycle rack to encourage the use of bicycles as an alternative mode of transportation, whilst reducing motor vehicle usage.
- Shared area associated with the accessible car parking space must be constructed in accordance with AS2890.6 including the provision of linemarking, stencils and the bollard treatments.
- Proposed crossover should be constructed in accordance with SD250 – New Industrial Vehicle Cross Detail specified in the Local Government Infrastructure Design Manual Standard Drawings.

Subject to any recommendations provided via this assessment report, RedSquare Traffic considers the proposed development at 68-70 Kyabram Street, Coolaroo to be satisfactory under traffic and engineering considerations.

RedSquare Traffic Pty Ltd



Dinith (Dane) Wanninayake

Principal Traffic Engineer

DoT (VIC) & TMR (QLD) Accredited Road Safety Auditor

DoT (VIC) Recommended Safe System Assessor

24 March 2025

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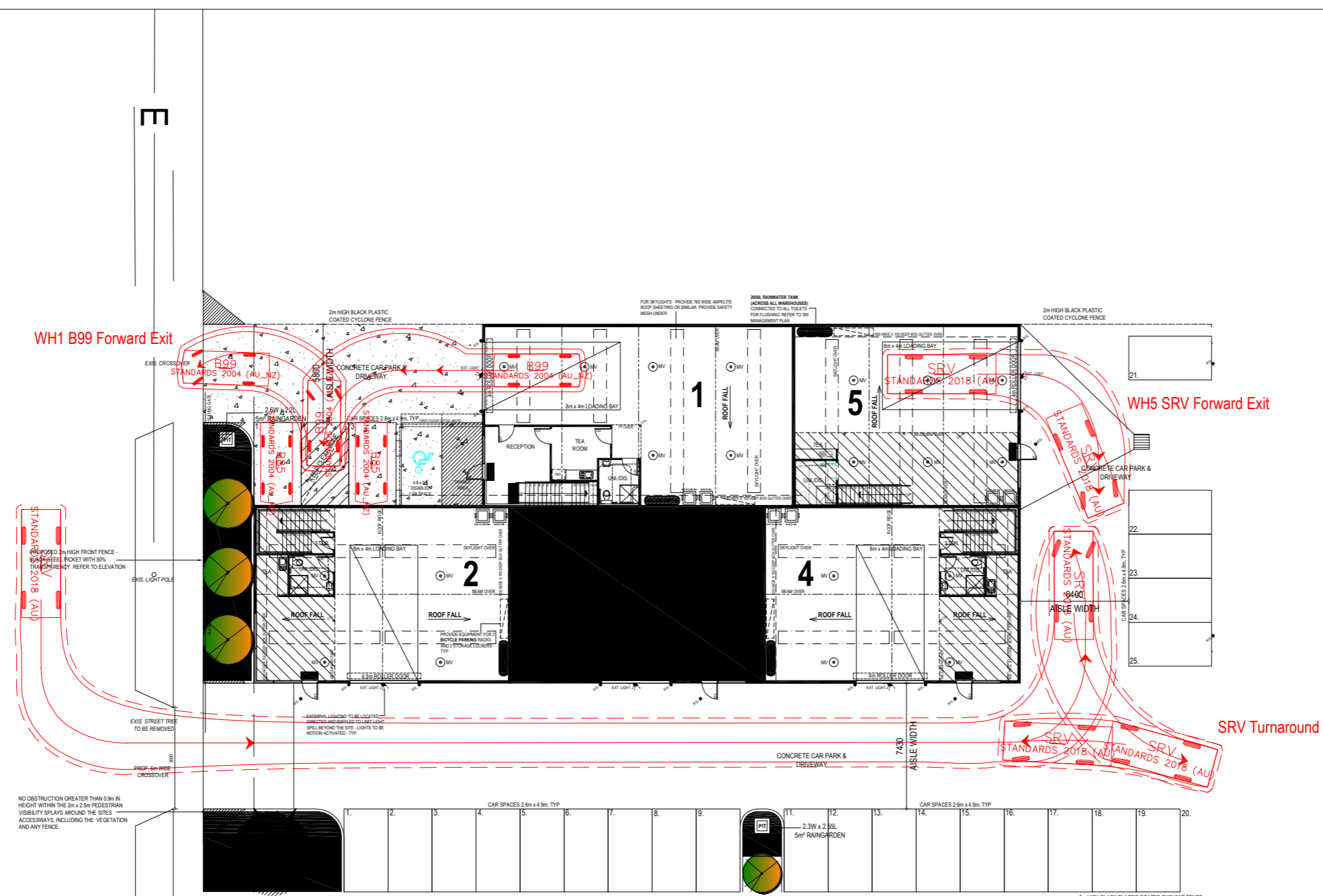
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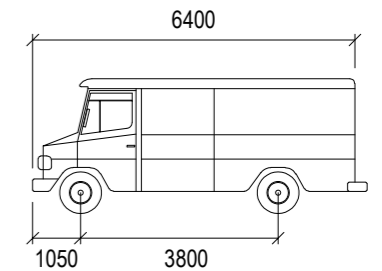
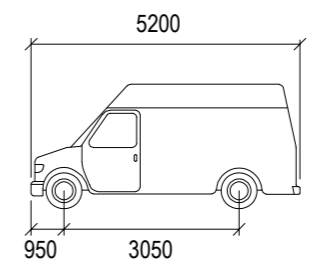


## 10 APPENDICES

### 10.1 APPENDIX A – SWEPT PATH ANALYSIS



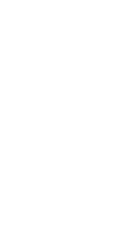
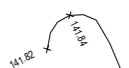
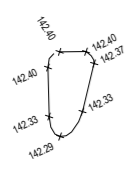
NO OBSTRUCTION GREATER THAN 0.9m IN HEIGHT WITHIN THE 2m x 2.5m PEDESTRIAN VISIBILITY SPILLS AROUND THE SITE ACCESSWAYS, INCLUDING THE VEGETATION AND ANY FENCE.



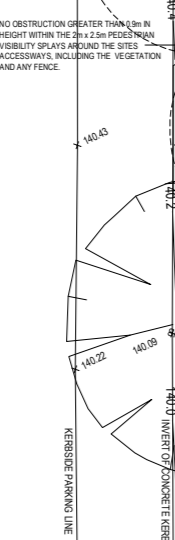
B99 Van

SRV

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Width	: 1940	Width	: 2300
Track	: 1840	Track	: 2300
Lock to Lock Time	: 6.0	Lock to Lock Time	: 6.0
Steering Angle	: 33.9	Steering Angle	: 38.1



**STREET**  
**KYABRAM**



PARKING AREA

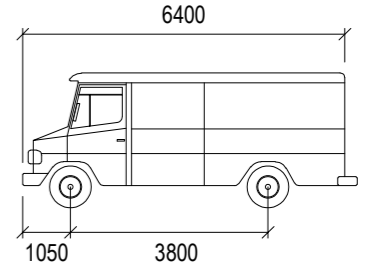
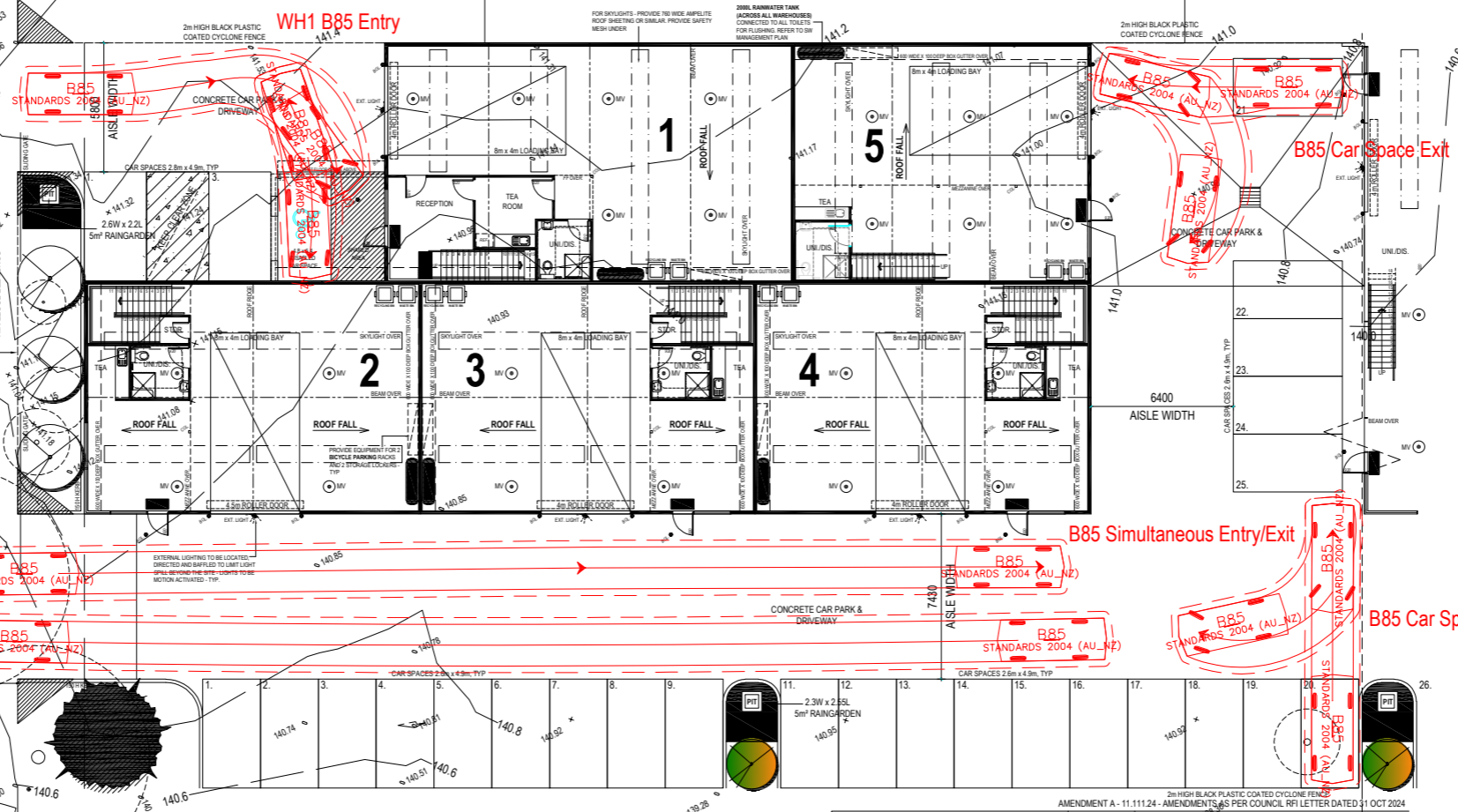
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RIDGE LEVEL RL:150.4

TOP OF GUTTER LEVEL RL:149.1

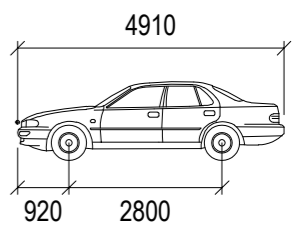
GRAVEL DRIVEWAY

GRAVEL AREA



**SRV**

Width : 2300 mm  
Track : 2300 mm  
Lock to Lock Time : 6.0  
Steering Angle : 38.1



**B85**

Width : 1870 mm  
Track : 1770 mm  
Lock to Lock Time : 6.0  
Steering Angle : 34.1

**GROUND FLOOR PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES  
ADDRESS: 68-70 KYABRAM ST, COOLAROO

AMENDMENT A - 11.11.24 - AMENDMENTS AS PER COUNCIL RFI LETTER DATED 31 OCT 2024

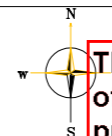
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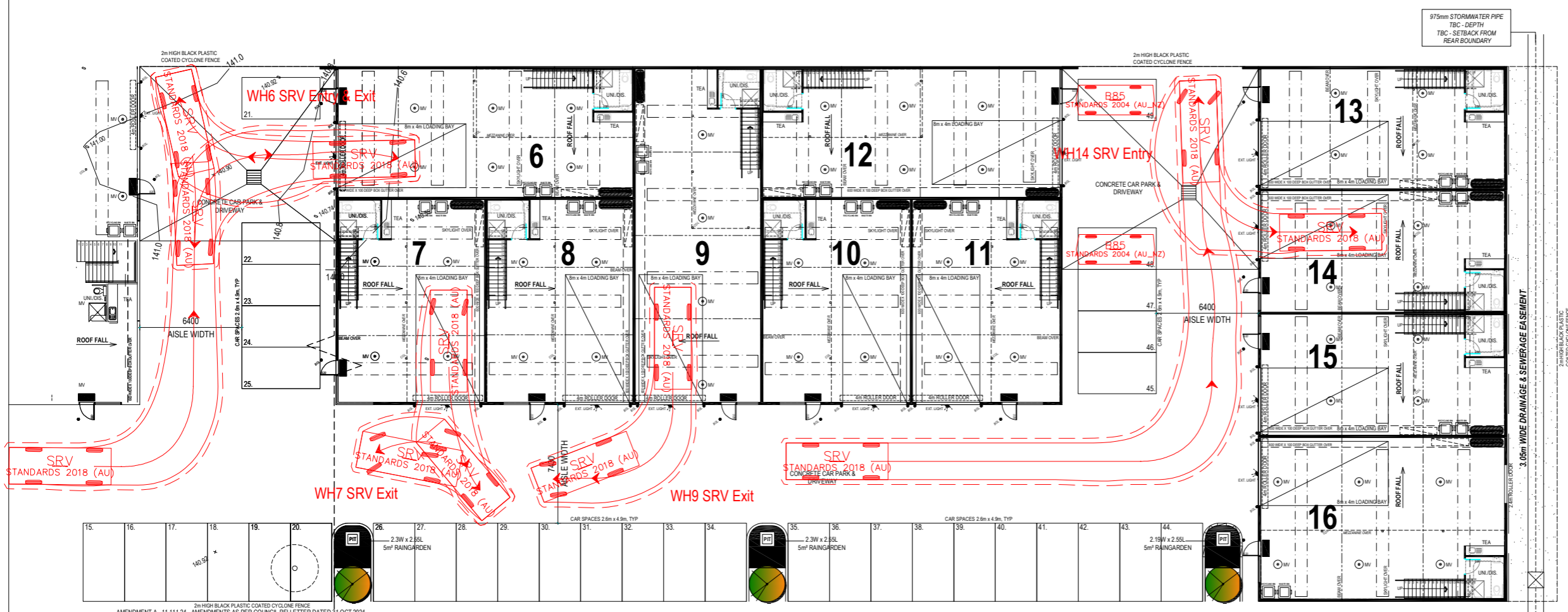
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DRAWING TITLE: Swept Path Analysis - B85 Checks

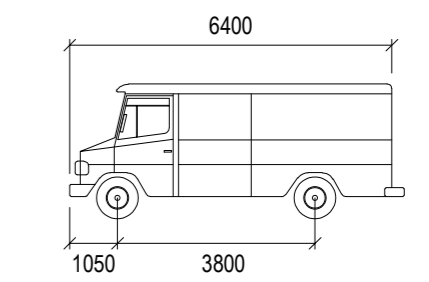
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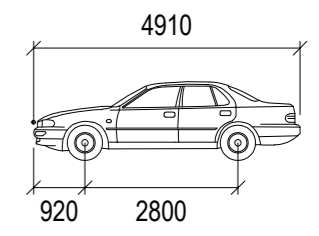


GROUND FLOOR PLAN | SCALE 1:100

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO  
 DATE: JUN 2024



SRV  
 Width : 2300 mm  
 Track : 2300 mm  
 Lock to Lock Time : 6.0  
 Steering Angle : 38.1



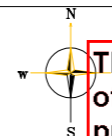
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 Width : 1870 mm  
 Track : 1770 mm  
 Lock to Lock Time : 6.0  
 Steering Angle : 34.1



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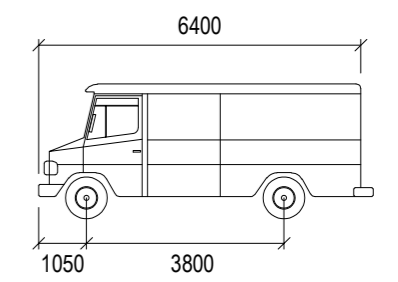
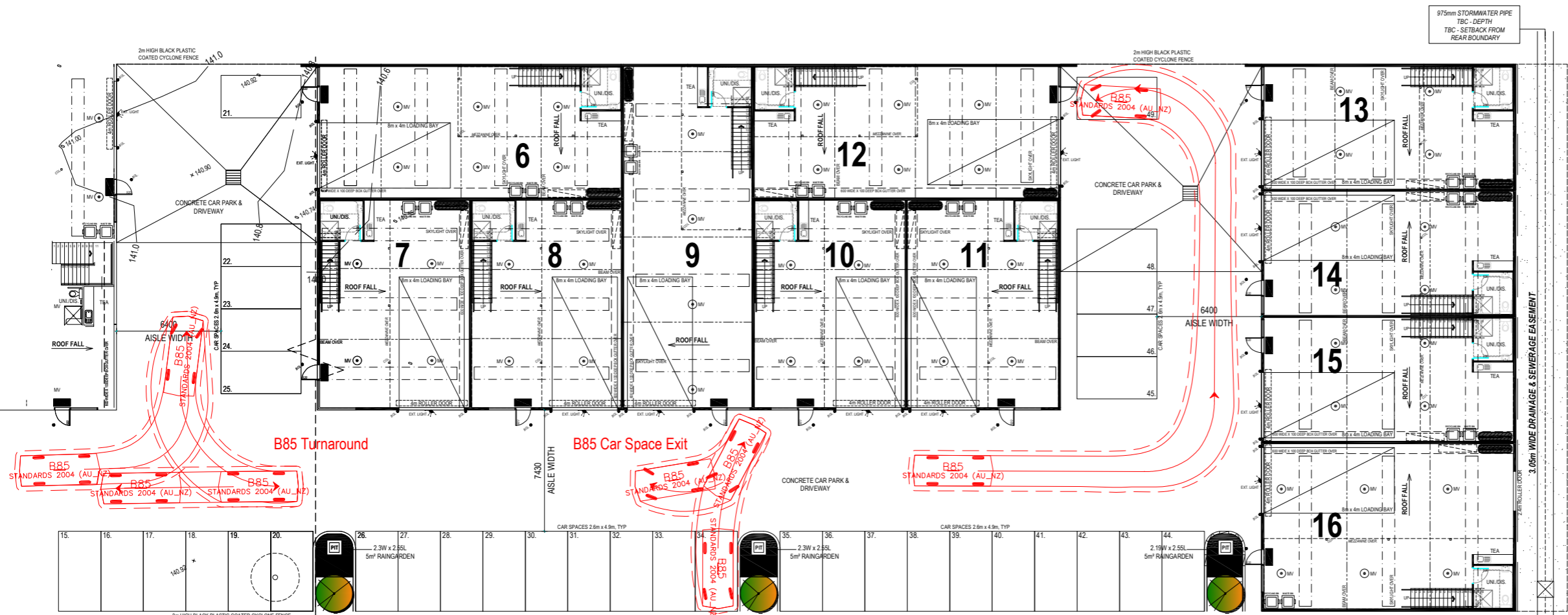


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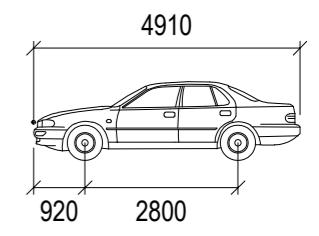
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Steering Angle	: 38.1



**B85**

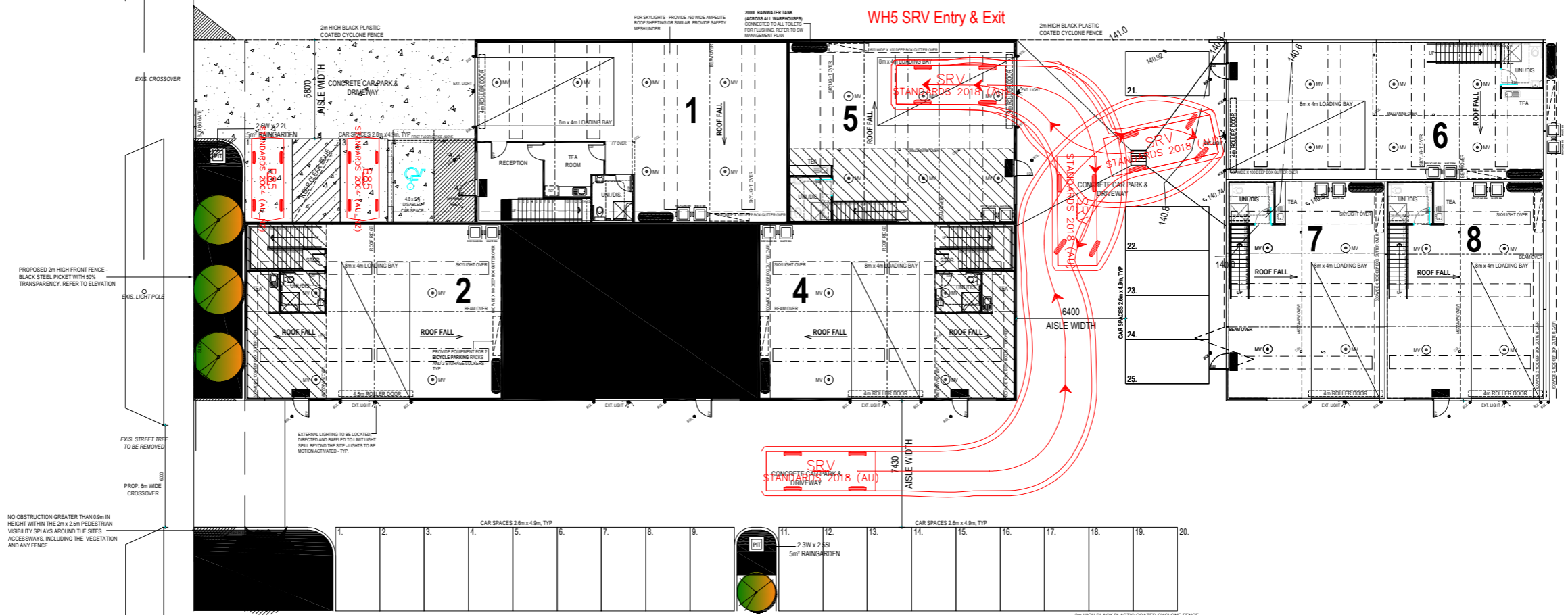
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Track	: 1770 mm
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

**GROUND FLOOR PLAN | SCALE 1:100**

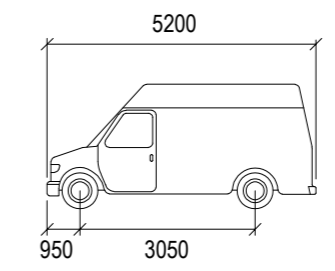
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 ADDRESS: 68-70 KYABRAM ST, COOLAROO  
 225mm VC SEWER  
 2.3m DEPTH  
 1.14m SETBACK FROM REAR BOUNDARY

AMENDMENT A - 11.111.24 - AMENDMENTS AS PER COUNCIL RFI LETTER DATED 11 OCT 2024  
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 SCALE: AS SHOWN @ A1  
 DATE: JUN 2024  
 JOB No. 24-065

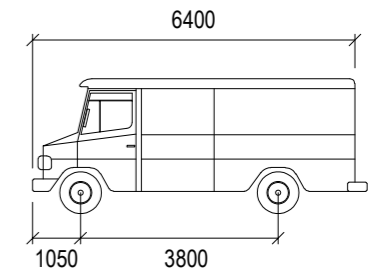
E



WH5 SRV Entry & Exit



B99 Van



SRV

	mm		mm
Width	: 1940	Width	: 2300
Track	: 1840	Track	: 2300
Lock to Lock Time	: 6.0	Lock to Lock Time	: 6.0
Steering Angle	: 33.9	Steering Angle	: 38.1



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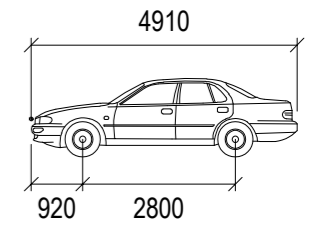
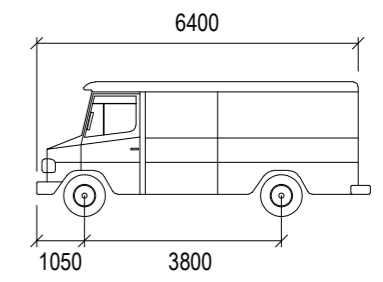
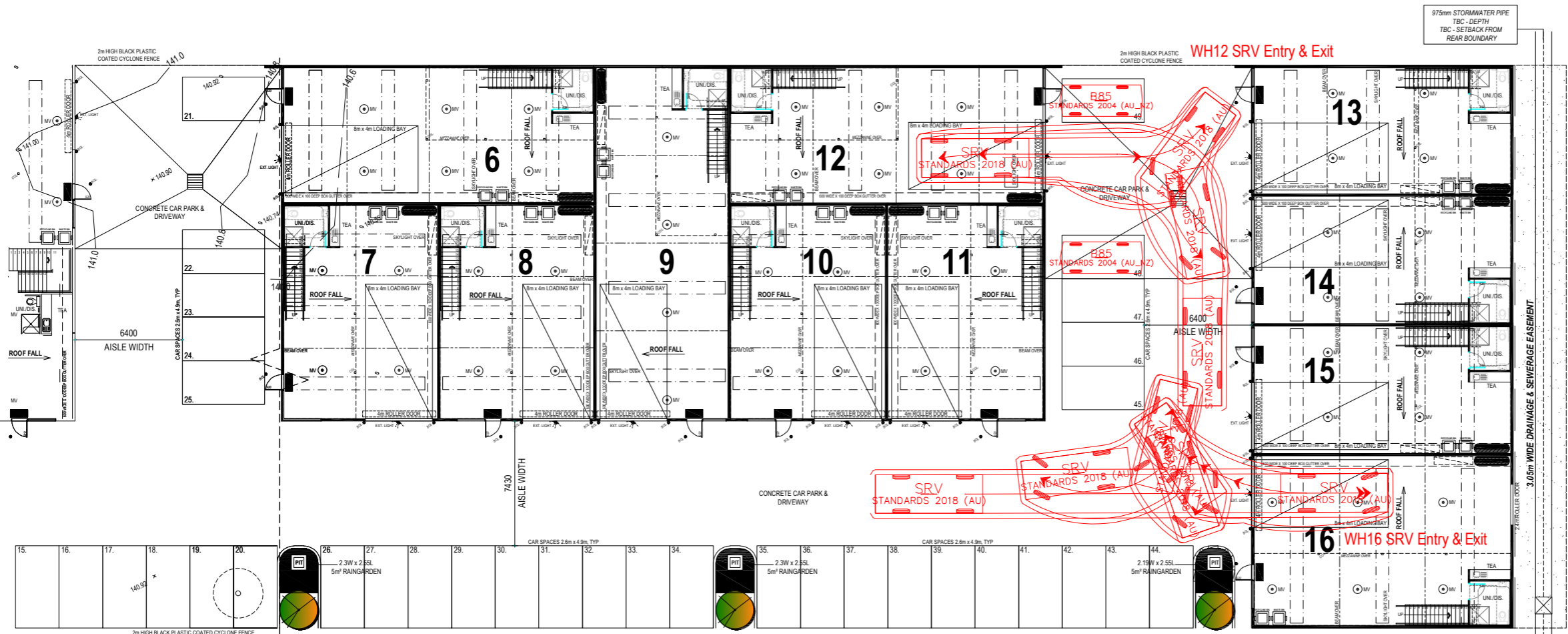


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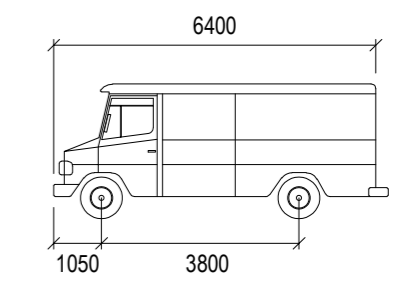
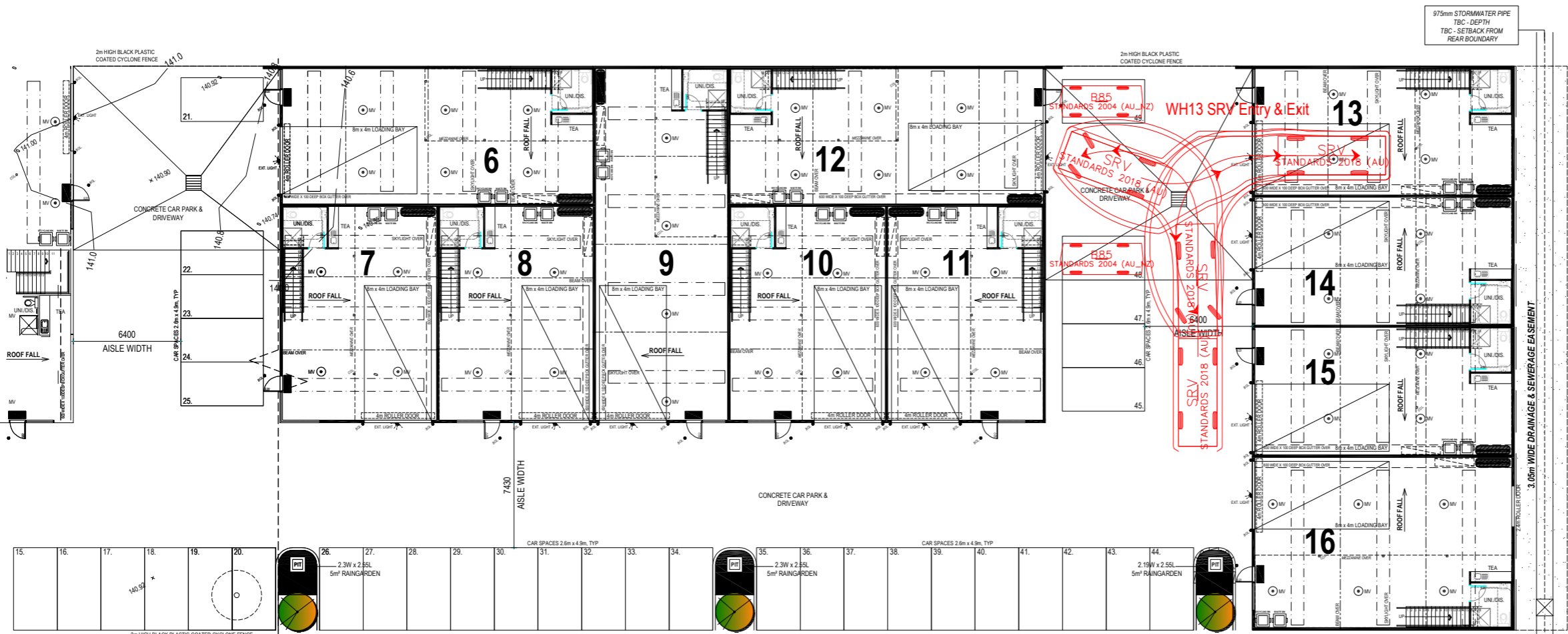
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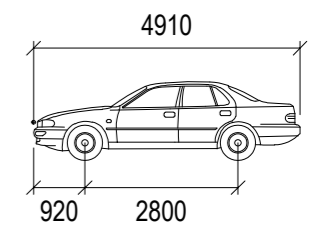
GROUND FLOOR PLAN | SCALE 1:100

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO  
 DATE: JUN 2024



**SRV**

Width	: 2300
Track	: 2300
Lock to Lock Time	: 6.0
Steering Angle	: 38.1



**B85**

Width	: 1870
Track	: 1770
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

**GROUND FLOOR PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO  
 DATE: JUN 2024

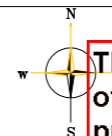
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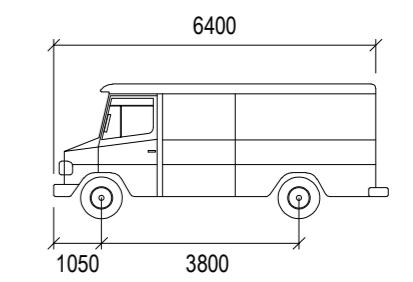
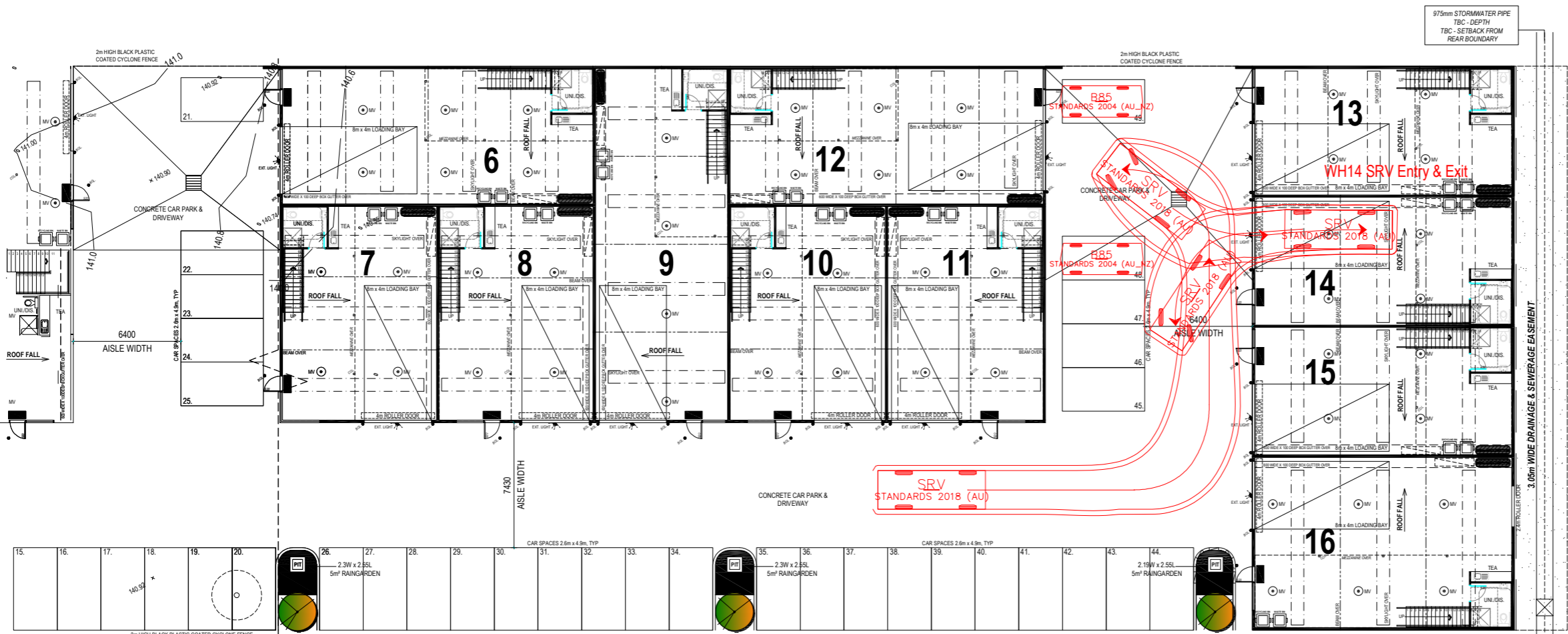
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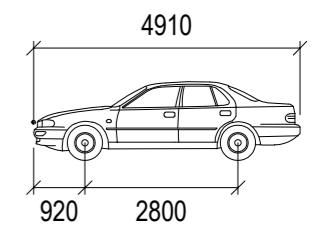
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**SRV**

Width	: 2300 mm
Track	: 2300 mm
Lock to Lock Time	: 6.0
Steering Angle	: 38.1



**B85**

Width	: 1870 mm
Track	: 1770 mm
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

**GROUND FLOOR PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO  
 DATE: JUN 2024

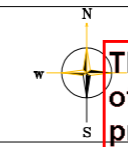
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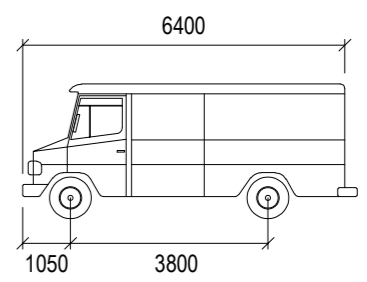
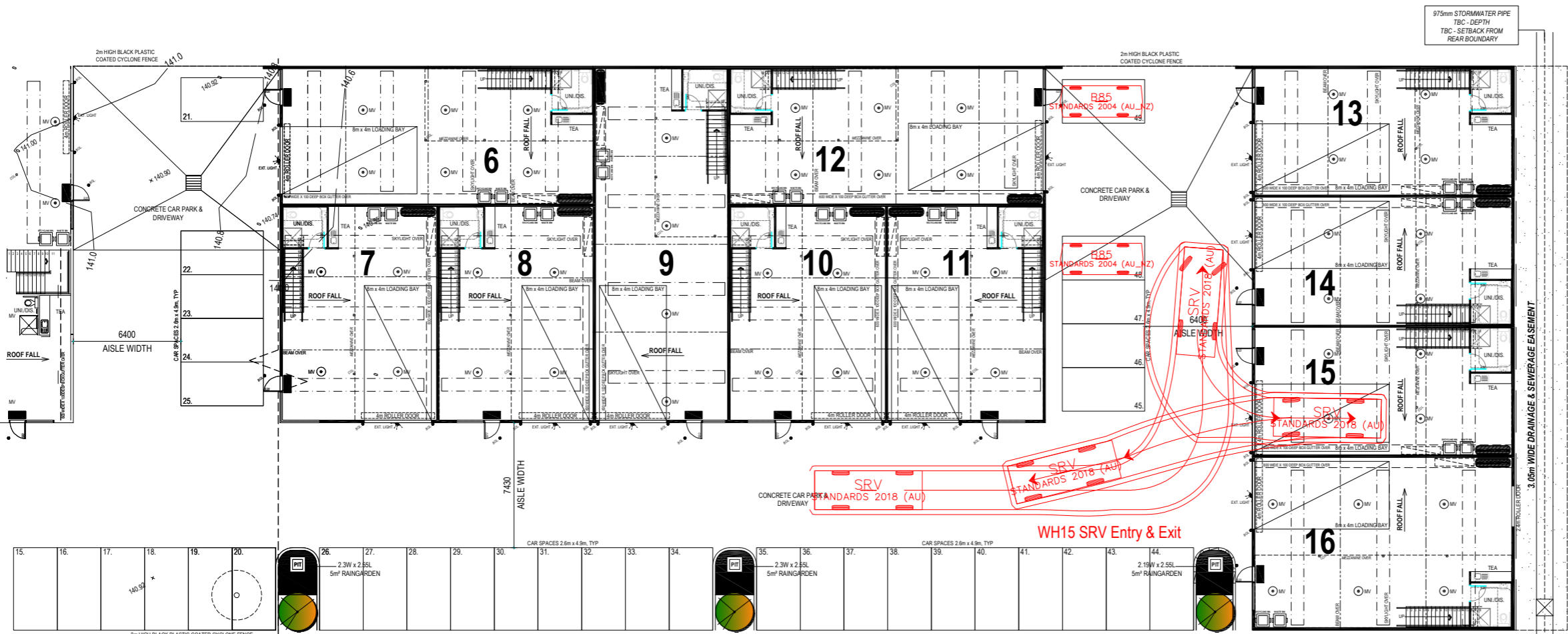


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PROJECT: 68-70 Kyabram Street, Coolaroo  
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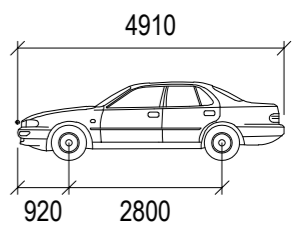
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**SRV**

Width	: 2300 mm
Track	: 2300 mm
Lock to Lock Time	: 6.0
Steering Angle	: 38.1



**B85**

Width	: 1870 mm
Track	: 1770 mm
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

**GROUND FLOOR PLAN | SCALE 1:100**

PROJECT: PROPOSED WAREHOUSES  
 ADDRESS: 68-70 KYABRAM ST, COOLAROO

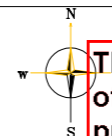
AMENDMENT A - 11.111.24 - AMENDMENTS AS PER COUNCIL RFI LETTER DATED 11 OCT 2024  
 NORTH  
 DRAWN: FA  
 SH: NO. 2 of 10  
 SCALE: AS SHOWN @ A1  
 DATE: JUN 2024  
 JOB No. 24-065



ABN 70 656 924 757  
 www.redsquaretraffic.com.au  
 03 7036 6734  
 mail@redsquaretraffic.com.au  
 Suite 11/36 Wilson Street, South Yarra

CLIENT: CCD Drafting Pty Ltd

DRAWN BY: SH  
 CHECKED BY: DW



SHEET NO: 01  
 SHEET & SCALE: 1:100 @ A1

PROJECT: 68-70 Kyabram Street, Coolaroo  
 DRAWING TITLE: Swept-Pickup Analysis - SRV Checks  
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