



CIVIL ENGINEERING REPORT

Proposed Commercial Development
Corella Constructions Pty Ltd
L13 Yarrabilba Drive, Yarrabilba
Lot 13 on SP327419

Prepared for:

Corella Constructions Pty Ltd

Approved by:

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RPEQ: 15735

Date
June 2022

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2022/1316

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Lot 13 SP327419
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Table of Contents

1.0	INTRODUCTION.....	4
2.0	THE SITE	4
2.1	SITE LOCATION	4
2.2	SITE DESCRIPTION.....	5
2.3	DESCRIPTION OF DEVELOPMENT	5
3.0	EARTHWORKS.....	5
4.0	EROSION AND SEDIMENT CONTROL.....	6
5.0	FLOODING.....	6
6.0	ACCESS.....	6
7.0	SEWERAGE RETICULATION	6
8.0	WATER RETICULATION.....	7
9.0	OTHER SERVICES	7
10.0	CONCLUSION	7
	APPENDIX A.....	8
	APPENDIX B.....	9

1.0 INTRODUCTION

Cozens Regan Group Pty Ltd has been commissioned by Corella Constructions Pty Ltd to prepare a Civil Engineering Report for the Proposed Commercial Development at L13 Yarrabilba Drive, Yarrabilba.

This Civil Engineering Report is required to support a proposed Development Application to Economic Development Queensland.

This Civil Engineering Report summarises our various preliminary investigations and designs into the existing services.

The Report addresses the existing engineering constraints and proposes solutions which are tailored to enable practical and cost-effective development of the project.

2.0 THE SITE

2.1 SITE LOCATION

The subject site comprises of one lot described as Lot 13 on SP327419 at Yarrabilba Drive, Yarrabilba. The site is bound by Yarrabilba Drive to the West, Expedition Drive to the North, and existing, undeveloped land to the south and public reserve to the East. The site is burdened by a Powerlink Easement over the lower southern portion of the site. The subject site is shown in Figure 1 below.



Figure 1 – Aerial Photograph (QLD Globe)

2.2 SITE DESCRIPTION

The site is currently vacant with good grass cover.

A Powerlink easement exists located over the lower Southern portion of the property.

The site generally falls from the West to the East, a batter exists adjacent the western boundary and a retaining wall exists adjacent the eastern boundary. This results in an approximate grade of the land 3-5%. The levels at the extremities of the site range from RL 36.00m down to RL 25.60m.

The total area of Lot 13 is 8,855m².

Stormwater from the site currently flows as overland flow and is collected by a concrete dish drain positioned atop the existing retaining wall. Runoff from the dish drain is collected by 2 existing gully pits which discharge the runoff via headwalls on the lower side of the wall directly adjacent the eastern boundary.

Details of the existing site including services and site contours are provided by detail survey a copy of which is contained in Appendix A.

2.3 DESCRIPTION OF DEVELOPMENT

The proposed development involves the construction of a multi building commercial development, including associated carparking, landscaping and servicing works.

Refer to the Site Plan contained within Appendix A for more information in regards to the proposed development.

3.0 EARTHWORKS

Generally the site will require cut to fill earthworks to facilitate the construction of the Proposed building pads, and associated carparking driveway and parking boxing generally as shown on 210601/SK05- Concept Engineering Plan.

Cut and Fill Retaining walls up to a maximum height of 1.5m are proposed around the perimeter of the building/carparking areas to accommodate the level difference. It is noted that a large retaining currently exists along the Eastern Boundary which is to be maintained and thus retaining heights along this interface will be in addition to the existing wall.

Refer to sketch drawing 210601/SK05-Concept Engineering Plan and 210601/SK06-Concept Earthworks Sections for more information.

Earthworks quantities for the development works are estimated to be in the order of 1,000m³ cut and 2,400m³ fill. Resulting in a total import of 1,400m³ being required. Earthworks quantities are required to be confirmed during detailed design.

No Geotechnical information has been provided and thus we cannot comment on what the make up of the natural underlying soil material is and if there are any associated site constraints.

All earthworks will be required to be completed to Level 1 Geotechnical Supervision and in accordance with the Erosion and Sediment Control Plan requirements as set out within the Stormwater Management Plan prepared by Cozens Regan Group Pty Ltd.

Adherence to Local Authority approved working hours (approx. 7.00am - 7.00pm, Mon-Sat) and contractually required careful attention to muffler condition/repair for all plant and machinery will minimise noise impact during bulk earthworks and general civil works construction on the site. The plant numbers and duration of operation will be dependent on the particular stage sector and the modus-operandi of the particular selected Contractor.

4.0 EROSION AND SEDIMENT CONTROL

Erosion and Sediment Control is to be carried out on site in compliance with the requirements of the Logan City Council and generally as per the Erosion and Sediment control requirements as set out within 210601/SK01 - Erosion and Sediment Control Plan prepared by Cozens Regan Group Pty Ltd.

Detailed Erosion and Sediment Control Plans will need to be completed by others prior to construction.

The Local Authority By-Law and Statutory Authority provisions related to Workplace Health & Safety, Dust and Smoke Nuisance, Environment and Occupational Noise Suppression will need to be enforced as part of the general site works contractual arrangements.

5.0 FLOODING

The site has not been identified within Logan City Councils Flood mapping as affected by Flooding and thus no further consideration is required.

6.0 ACCESS

Site access shall be provided from both street frontages of Expedition way and Yarrabilba Drive with the construction of 2 new standard Left in Left Out vehicular crossovers.

Details and location of the proposed crossover can be found in the concept civil sketch drawing 210601/SK03-Concept Engineering Plan.

7.0 SEWERAGE RETICULATION

The site is currently serviced by a Logan City Council sewer reticulation network. A 150mm diameter council sewer manhole and house connection is located within the site in the north eastern corner.

The existing 150mm diameter house connection is likely to conflict with the proposed building and will require slight relocation in order to achieve the necessary clearances to the building footings.

The building has been located so as to achieve 1.5m clearance from the centre of the manhole.

Due to the proximity of the proposed building to the existing manhole and house connection a Build over/near sewer application will be required to be lodged with Logan City Council during detailed design stage for their approval.

Given the property is located within a newly developed precinct, it is expected that Logan City Council's sewer network has capacity to cater for the development and thus no augmentation to Logan City Council's sewer network is deemed necessary.

Civil Sketch Drawing 210601/SK03- Concept Engineering Plan provides more information in regard to the existing sewer reticulation network and proposed connection point.

Design and construction of the sewer connection shall be in accordance with the requirements of SEQ Water Supply and Sewer and Code and subject to approval by Logan City Council.

8.0 WATER RETICULATION

The site has access to Councils water supply infrastructure and it is understood an existing connection is not currently provided to the site.

A DN 500mm DI watermain exists within the verge on the developments side of Yarrabilba Drive and DN 200 DI watermain exists within the verge on the Developments side of Expedition Road.

It is proposed to provide a new water meter and service to connect to the existing Council watermain within Expedition Road to service the development.

The size of the required water meter shall be confirmed during detailed design.

Given the property is located within a newly developed precinct, it is expected that Logan City Council's water network has capacity to cater for the development and thus no augmentation to Logan City Council's water network is deemed necessary.

Civil Sketch Drawing 210601/SK03- Concept Engineering Plan provides more information in regard to the existing water reticulation network and proposed connection point.

Design and construction of the water connection shall be in accordance with the requirements of SEQ Water Supply and Sewer and Code and subject to approval by Logan City Council.

9.0 OTHER SERVICES

Electrical and Telecommunications overhead services are understood to be located within both road frontages. It is recommended the capacity and availability of these services be confirmed during detailed design.

10.0 CONCLUSION

This civil engineering report has shown that the proposed development for this site can be serviced and constructed using suitable engineering solutions to council's requirements. All preliminary comments and assumptions are subject to confirmation by detail design.

Proposed Commercial Development
Corella Constructions Pty Ltd
L13 Yarrabilba Drive, Yarrabilba
Lot 13 on SP327419



APPENDIX A

CONCEPT ENGINEERING PLANS

The diagram illustrates a cross-section of a multi-layer printed circuit board (PCB). From top to bottom, the layers are labeled: W (white prepreg), SW (solder mask), S (copper), and T (titanium). Above the W layer, a dashed line indicates a thickness of 16.0, and a note specifies a tolerance of ± 15.76 . Below the T layer, there is a blue dashed line with a blue circle and a blue triangle, and a pink line with a pink circle. At the bottom, there are two rectangular areas with a stippled pattern, representing solder paste or solder.

EXISTING CONTOUR
EXISTING SURFACE LEVEL
EXISTING WATER
EXISTING STORMWATER
EXISTING SEWER
EXISTING TELSTRA
EXISTING ELECTRICAL
PROPOSED WATER CONNECTION
PROPOSED SEWERAGE
PROPOSED DRIVEWAY/CAR PARKING BAYS
PROPOSED CONCRETE FOOTPATH
AS PER IPWEA STD DRG. RS-065



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ALL UNDERGROUND SERVICES
SHOULD BE LOCATED ONSITE
BY RELEVANT AUTHORITIES
BEFORE ANY WORK IS COMMENCED

P1	06/22	ORIGINAL ISSUE	B.A.R.	T.W.N.
No.	DATE	ISSUE	REVISED	CHECKED

IN ASSOCIATION WITH

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SCALE A

SCALE B



DATUM AHD (U.N.O.) SCALES SHOWN ARE AT A1 SIZE



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CLIENT	CORELLA CONSTRUCTION
PROJECT	PROPOSED COMMERCIAL DEVELOPMENT LOT 13 YARRABILBA DRIVE, YARRABILBA CONCEPT ENGINEERING SERVICES PLAN

OBJ. NO. 210601
DRAWING NO. Sk.3
ISSUE 01

Diagram illustrating the cross-section of a retaining wall and its associated levels and dimensions:

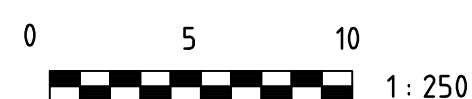
- EXISTING CONTOUR**: Indicated by a dashed line at the top.
- EXISTING SURFACE LEVEL**: Indicated by a solid line below the contour.
- EXISTING WATER**: Indicated by a solid line labeled 'W'.
- EXISTING STORMWATER**: Indicated by a solid line labeled 'S'.
- EXISTING SEWER**: Indicated by a solid line labeled 'T'.
- EXISTING TELSTRA**: Indicated by a solid line with two dots.
- EXISTING ELECTRICAL**: Indicated by a solid line with two dots.
- PROPOSED FINISHED SURFACE LEVEL**: Indicated by a solid line with a vertical offset of $+ 15.76$ from the existing surface level.
- PROPOSED FINISHED SURFACE GRADIENT**: Indicated by a slope of 4.0% and a horizontal distance of $RL 40.00$.
- AREA OF CUT**: The area above the proposed finished surface level, shown in light blue.
- AREA OF FILL**: The area below the proposed finished surface level, shown in light red.
- TW**: Top of Wall Level.
- BW**: Bottom of Wall Level.
- PROPOSED RETAINING WALL TO FUTURE DETAILED DESIGN**: Indicated by a dashed line at the bottom.



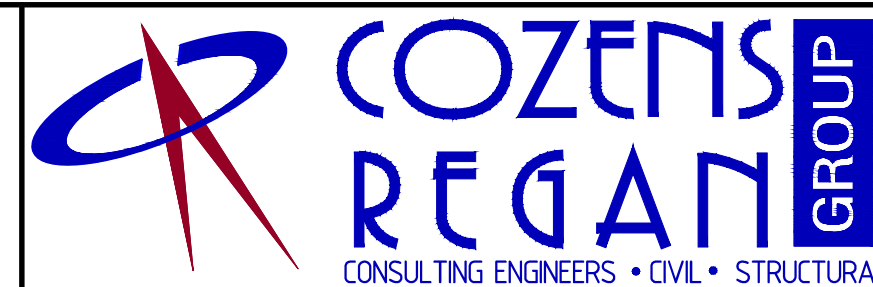
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SCALE A

SCALE B



DATUM AHD (U.N.O.) SCALES SHOWN ARE AT A1 SIZE



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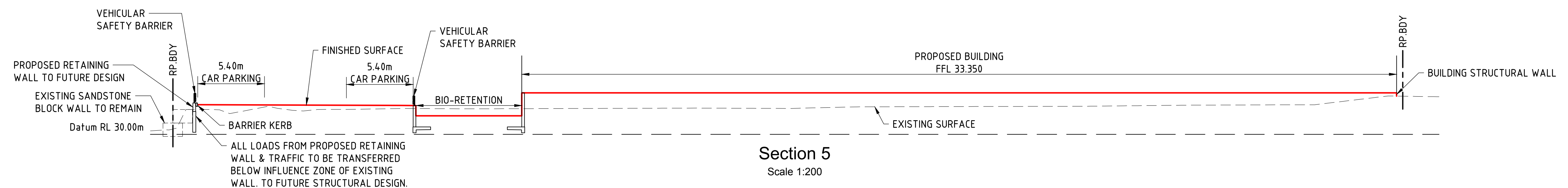
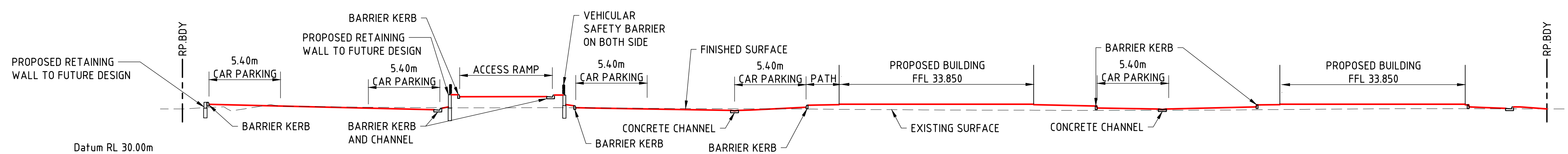
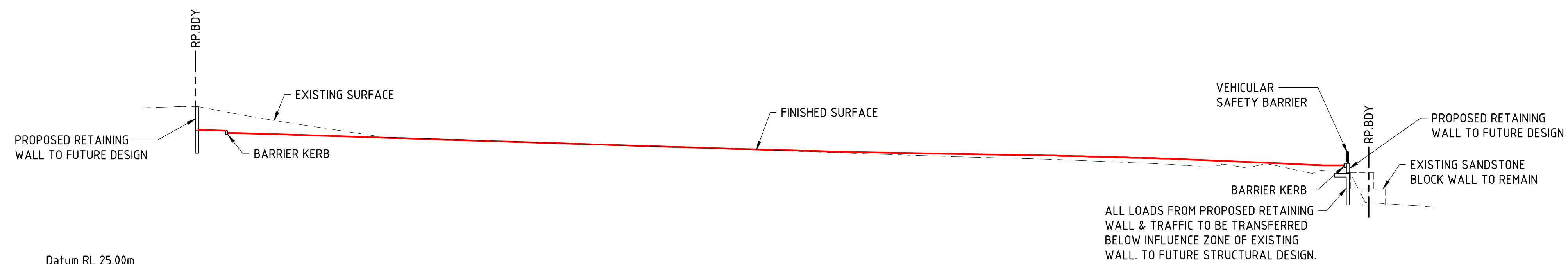
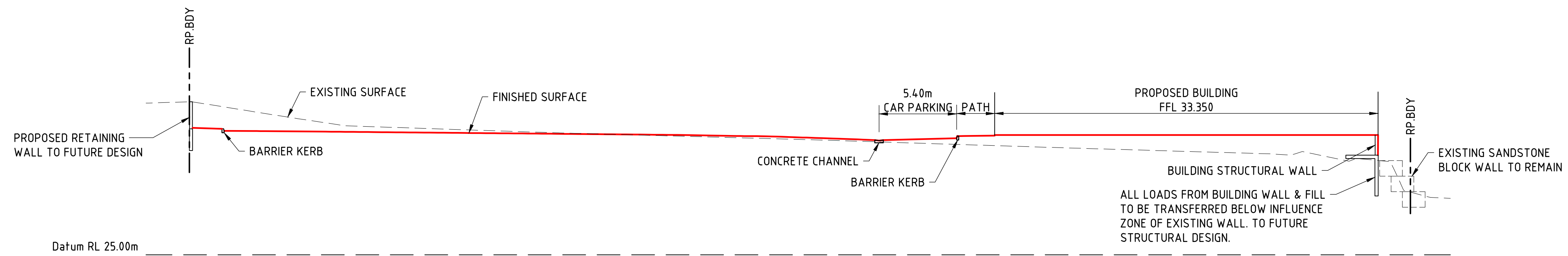
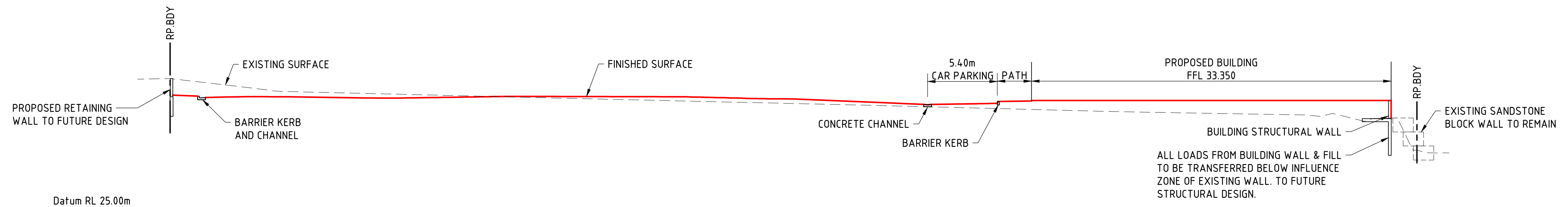
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CLIENT	CORELLA CONSTRUCTION
PROJECT	PROPOSED COMMERCIAL DEVELOPMENT LOT 13 YARRABILBA DRIVE, YARRABILBA CONCEPT EARTHWORKS PLAN

OB NO.
210601
DRAWING NO.
Sk.5



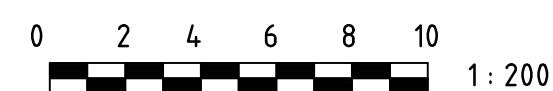
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SCALE A

SCALE B



DATUM	AHD (U.N.O.)
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SCALES SHOWN ARE AT A1 SIZE



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PROJECT	
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PROPOSED COMMERCIAL DEVELOPMENT

LOT 13 YARRABILBA DRIVE, YARRABILBA

CONCEPT SITE SECTIONS

3 NO.

210601

AWING NO.

Sk.6

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1			
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Proposed Commercial Development
Corella Constructions Pty Ltd
L13 Yarrabilba Drive, Yarrabilba
Lot 13 on SP327419



APPENDIX B

ARCHITECTURAL SITE PLANS

SITE INFORMATION

Real Property Description: Lot 13

Local Authority: Logan City Council

DEVELOPMENT INFO

GFA	
Food & Drink Outlet	180.2 m ²
Restaurant	200.0 m ²
Shop	311.9 m ²
Recreation	1,927.9 m ²
Amenities	66.7 m ²
TOTAL	2,686.7 m²
Bin 1	26.6 m ²
Bin 2	19.0 m ²
Bin 3	7.2 m ²
Site Cover	3,183.6 m²
Carpark (Including 3 PWD spaces)	140
LANDSCAPED OPEN SPACE	
Landscaping	951.0 m ²
Bio-retention basin	100.1 m ²
Impervious	8,077.9 m ²

