Structural Civil Flood

Conceptual Stormwater Management Plan

Stage 1 Eagle Farm Precinct

KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L

155, 161 Fison Avenue West and 364 Curtin Avenue West

Eagle Farm

Job Reference Number – 9914

Date: 23 November 2021

PLANS AND DOCUMENTS
referred to in the PDA
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1 Introduction

1.1. Purpose and Scope

Inertia Engineering has been commissioned by KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L to prepare a Conceptual Stormwater Management Plan (CSWMP) for Stage 1 of the Eagle Farm Precinct masterplan of development at 155, 161 Fison Avenue West and 364 Curtin Avenue West, Eagle Farm (the subject site).

This report details the conceptual planning, layout, and design of the stormwater management infrastructure for both the construction and operational phases of the development. The requirements for stormwater quantity and quality management for the proposed development have also been addressed in this report.

This report has been prepared in accordance with the *Northshore Hamilton PDA Development Scheme, State Planning Policy* (SPP, 2017), *Queensland Urban Drainage Manual Fourth Edition 2016 - Provisional* (QUDM, 2016), Brisbane City Council's City Plan (BCC, 2014) and Economic Development Queensland Engineering standards PDA guideline no.13 (EDQ, 2017)

Throughout this report the developable area is referred to as the 'subject site'.

1.2. Report Limitations

This report has been prepared by Inertia Engineering Pty Ltd for KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L and may only be used and relied on by KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L for the purpose agreed between Inertia Engineering and KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L as detailed within this report.

Inertia Engineering otherwise disclaims responsibility to any person other than KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L arising in connection with this report. Inertia Engineering also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by Inertia Engineering in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. Inertia Engineering has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by Inertia Engineering described in this report. Inertia Engineering disclaims liability arising from any of the assumptions being incorrect.

Inertia Engineering has prepared this report on the basis of information provided by KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L and others who provided information to Inertia Engineering (including Government authorities), which Inertia Engineering has not independently verified or checked beyond the agreed scope of work. Inertia Engineering does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2 Site Characteristics

The land contained within the site is described as follows:

Title Details:	Lot 94 on SP120026
Street Address:	155, 161 Fison Avenue West and 364 Curtin Avenue West, Eagle Farm
Site Area:	30,564 m^2

Refer to Appendix B for Survey Plan / DBYD information.

2.1. Location

The subject site is located in Eagle Farm, approximately 7km north-east of the Brisbane CBD. It occupies a total of 30,564m^2 and lies within the Northshore Hamilton Urban Development Area under PDA Development Scheme. The site is stage 1 of the Eagle Farm precinct masterplan of development and is bounded by Fison Avenue West to the north, Curtin Avenue West to the South and industrial properties to all other directions.

Figure 2-1 – Location Plan

2.2. Topography

The subject site is generally flat. It grades from high points in the eastern portion of approximately 3.5m AHD to low points of 2.7m AHD at north-east and south-east corners. The average grade across the site is less than 1%. For further details refer to Goodwin Midson's Survey (ref:14047-1) included in Appendix B.

3 Development Layout

Based on the information received from Rothelowman Architect, stage 1 of the Eagle Farm masterplan of development consists of new commercial and industrial buildings with private driveway works access via Fison Avenue West and Curtin Avenue West.

For further details refer to Rothlowman Eagle Farm Precinct, *Site Plan (Stage 1) (ref: 221044)* included as Appendix A.

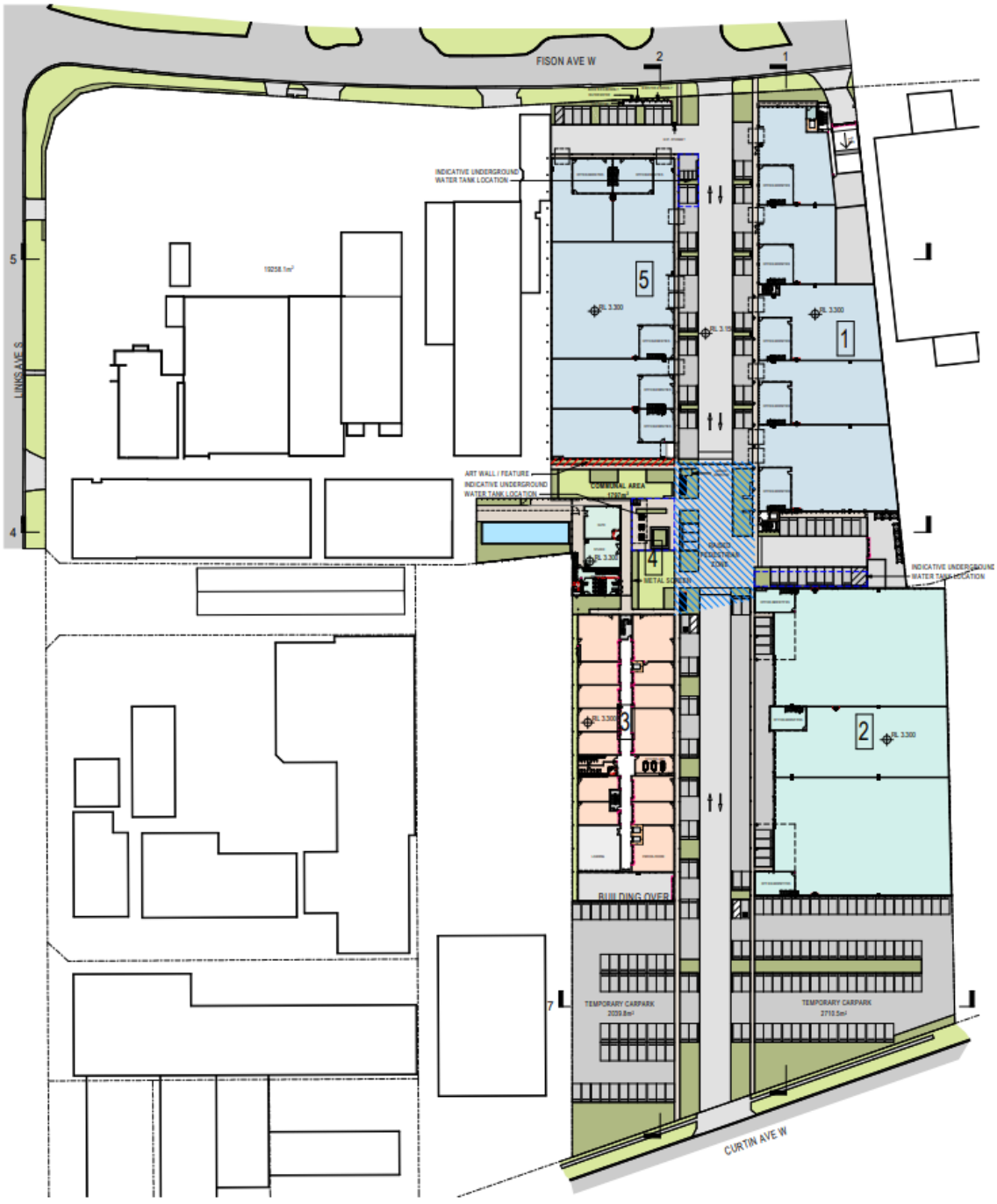

Figure 3-1 – Development Layout

4 Flooding

The site is triggered by BCC's Overlay Mapping as being susceptible to flooding from Brisbane River and Storm-Tide inundation refer to Figure 4-1 & 4-2. The governing flood source is the storm-tide inundation, which will set the design floor levels on site. According to EDQ's Protection from flood and storm inundation PDA guideline no.15 and BCC's City Plan Scheme, the minimum floor level of any new building is 3.1m AHD and minimum levels of access, car park and manoeuvring areas are 2.2m AHD.

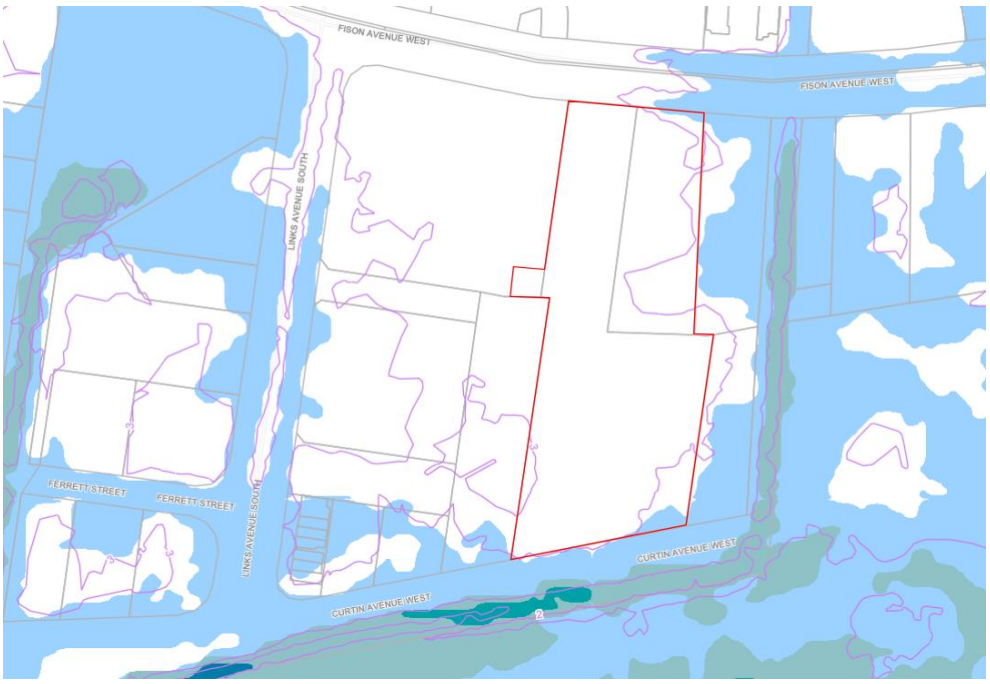

Figure 4-1 – Brisbane River Flooding BCC Plan Mapping (2014)

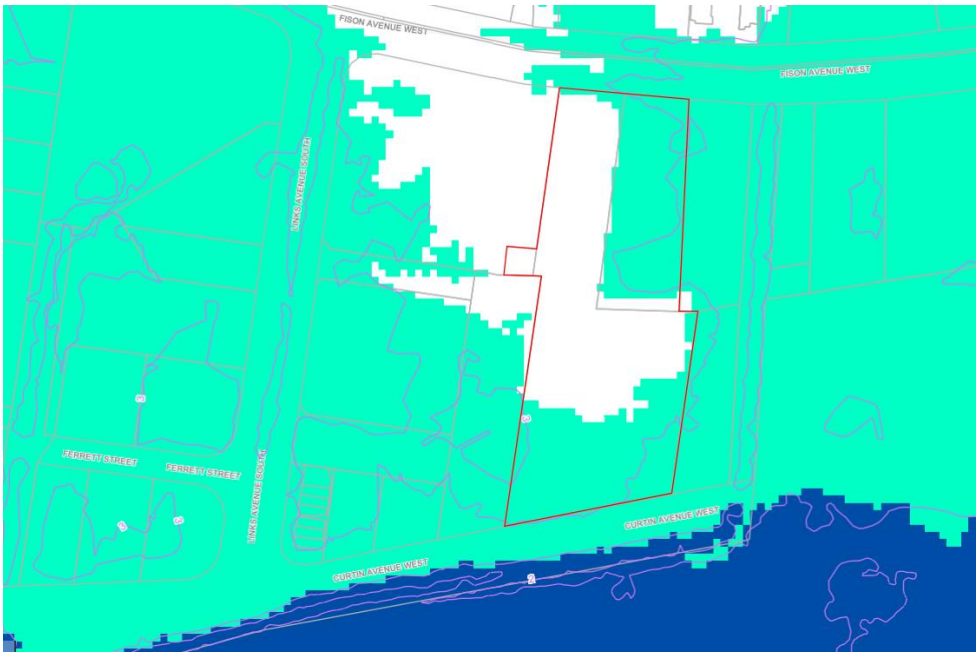

Figure 4-2 – Coastal Hazard – Medium storm-tide BCC Plan Mapping (2014)

5 Stormwater Management

5.1. Objectives

The hydrologic objectives have been set in accordance with PDA Development Scheme, WSUD (2021), QUDM (2018) and BCC City Plan (2014), including but not limited to:

- The proposed development shall ensure that all stormwater drainage is directed to a lawful point of discharge in accordance with QUDM Section 3.4 (2018);
- No adverse impact on adjoining or downstream properties; and
- MUSIC modelling to determine a treatment strategy to achieve the SPP water quality objectives.

5.2. Existing Conditions

The existing site runoff is being collected by a series of field inlets and discharges to both the existing stormwater infrastructure in Curtin and Fison Avenue.

There is a gully pit within the southern verge of Fison Ave that directs runoff into Council's stormwater network (675mm dia PC pipe) and then into an existing surface drain that runs parallel to the eastern boundary of the site.

There is also a manhole within Curtin Ave West and discharge into the same surface drain via a 450mm PC pipe.

An existing surface drain flows within the southern verge of Curtin Avenue West, which will ultimately discharges out to the Brisbane River.

5.3. Lawful Point of Discharge

The nominated lawful points of discharge for the site are listed below:

- Northern portion: discharge to the existing stormwater system that runs within Fison Ave road reserves.
- Southern portion: discharge to the drainage channel runs within the southern verge of Curtin Avenue West. A new headwall outlet is to be constructed within the drainage channel.

Refer to 9914-300-RevB for the Lawful Points of Discharge.

5.4. Stormwater Quantity Calculations

The Rational Method was used to estimate the site flow for both the existing and developed site conditions.

5.4.1. Existing Conditions

The subject site consists of one catchment, 30,564m^2, known as EX1

The total fraction impervious for the existing catchment is 85%. Note that the existing catchment includes the site only and does not include any external areas

Table 5-1 – Existing Site Flows

Parameters	Units	Design Storm Event (yr ARI)						
		1	2	5	10	20	50	100
Catchment Area	ha	3.0564						
Time of Concentration	min	7.0						
Runoff Coefficient (Cy)		0.68	0.72	0.81	0.85	0.89	0.98	1.00
Rainfall Intensity (Iy)	mm/hr	105.39	134.80	169.07	189.12	216.45	252.37	279.76
Peak Flow	L/s	608.4	826.8	1159.1	1364.8	1640.1	2094.4	2375.2

5.4.2. Developed Conditions

Underdeveloped conditions, the subject site continues to comprise of one catchment which is 30,564m^2

Given the landscape incorporated into the design the total fraction impervious of the developed catchment has decreased to 83%. Note that the developed catchment includes the site only and does not include any external areas.

Table 5-2 – Developed Site Flows

Parameters	Units	Design Storm Event (yr ARI)						
		1	2	5	10	20	50	100
Catchment Area	ha	3.0564						
Time of Concentration	min	7.0						
Runoff Coefficient (Cy)		0.68	0.72	0.81	0.85	0.89	0.98	1.00
Rainfall Intensity (Iy)	mm/hr	105.39	134.80	169.07	189.12	216.45	252.37	279.76
Peak Flow	L/s	608.4	826.8	1159.1	1364.8	1640.1	2094.4	2375.2

5.5. Stormwater Detention Requirements

Stormwater detention is deemed to be unnecessary for the following reasons;

- The increased landscaping features (pervious area) on site, this will decreased the developments runoff across all storm events, so will not cause adverse impacts or nuisance to surrounding properties.
- The site's runoff discharges directly into the lower catchments of Brisbane River via open drains. Generally it is undesirable to have detention where it may allow peak flows from the site to coincide with the wider upstream catchment flood peaks.

6 Operational Stormwater Quality Management

6.1. Introduction

The operational phase of the management plan focuses on appropriate consideration of Stormwater Quality Improvement Devices, Section 3.9 of the PDA Development Scheme and Water Sensitive Urban Design (WSUD) principles to be incorporated into the total water cycle management of the developed site.

The State Planning Policy (2017) states for a proposed material change of use that involves a site area greater than 2500m^2 and will result in an impervious area greater than 25% a Site Based Stormwater Quality Management Plan is required.

6.2. Pollutants

Pollutants typically generated during the operational phase of the development are shown below (BCC, 2015).

Table 6-1 – Pollutants typically generated during the operational phase

Pollutant	Sources
Litter	Construction, construction, food waste materials
Sediment	Exposed soils and stockpiles
Oxygen demanding substances	Organic or chemical matter
Nutrients (N & P)	Nitrogen, phosphorus
Pathogens / Faecal coliforms	Sewerage
Hydrocarbons	Fuel and oil spills
Heavy metals (with fine sediment)	Sediment runoff
Surfactants	Detergents from car washing, cleansing agents
Organochlorines & organophosphates	Pesticides, herbicides
Thermal pollution	Heat (ie runoff from impervious areas)
pH altering substances	Washwaters

6.3. Water Quality Objectives

The State Planning Policy (2017) sets out the following water quality objectives for South East Queensland in order to protect downstream receiving waters:

- Total Suspended Solids (TSS) 80% reduction
- Total Phosphorus (TP) 60% reduction
- Total Nitrogen (TN) 45% reduction
- Gross Pollutant (>5mm) 90% reduction

The percent reductions listed above are the target reductions for comparing mitigated site annual pollutant loads with unmitigated site annual pollutant loads. The proposed treatment strategy selected for the development will ensure these objectives are met for all pollutants.

6.4. Proposed Treatment Strategy

The following treatment strategies were incorporated as part of the stormwater system to achieve the abovementioned water quality objective. Streetscape Biopods, permeable pavement and green roof are implemented in addition to the Filterra system used in MUSIC model to further improve the stormwater quality to achieve the superior outcome.

- Ecosol Bio Tree Pits to be fitted within the kerb of the internal roads to treat the runoff prior discharge to Filterra system
- Permeable pavement and green roof to be implemented where applicable
- A minimum of 57m^2 of Filterra (or approved equivalent) to treat the runoff prior discharge to Curtin Ave
- A minimum of 35m^2 of Filterra (or approved equivalent) to treat the runoff prior discharge to Fison Ave

All stormwater quality treatment devices are to be installed offline with a diverted manhole to treat the Q3month runoff.

Please refer to Appendix C for the detailed design drawings.

6.4.1. Permeable Pavement

Unlike traditional pavements where water runoff is directed through falls in the pavement's impermeable surface towards a drainage outlet, a permeable pavement allows the movement of water through the surface into the substructure of the pavement. From here the water can be stored, harvested, re-used or discharged at a controlled rate.

The permeable membrane can be a range of different materials. The most common include interlocking permeable paving units, no fines concrete, and porous asphalt however other materials do exist. Whilst allowing infiltration of water through it, the surface still needs to remain durable and intact for the duration of the pavements intended design life.

There are many benefits in using a permeable pavement. It can dramatically reduce site run-off by storing water within the substructure of the pavement. By doing this it will attenuate flood peaks by acting as an intermediary between an intense storm event and the existing storm water infrastructure. Storing and holding water within this substructure and allowing it to slowly penetrate into the subgrade can assist an area in recharging groundwater and maintaining the natural water cycle.

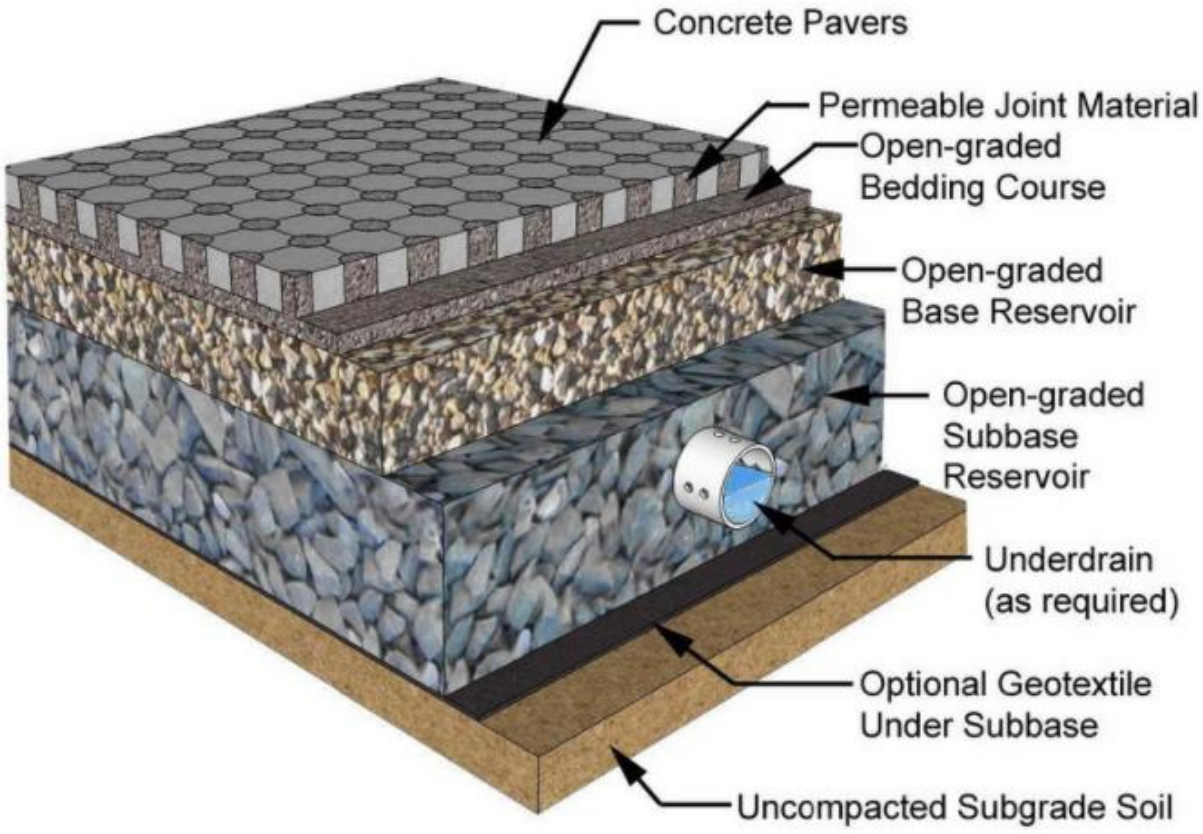

Figure 6-1 Profile of typical permeable pavement. (Source Smith, D., 2006.)

6.4.2. Off-Line Roadside Stormwater Treatment System

The Ecosol Bio Filter is a modern, modular fully self-contained, linear stormwater treatment system that provides effective primary, secondary and tertiary treatment of stormwater flows in one compact device.

The system has been designed to provide a robust and durable cost effective aesthetically attractive kerb-side treatment system. The system is filled with porous filter media and planted with vegetation to remove pollutants from stormwater runoff using natural and physical processes.

Figure 6-2 Typical Bio-pod landscape finishes (Source City of Melbourne & University of Melbourne)

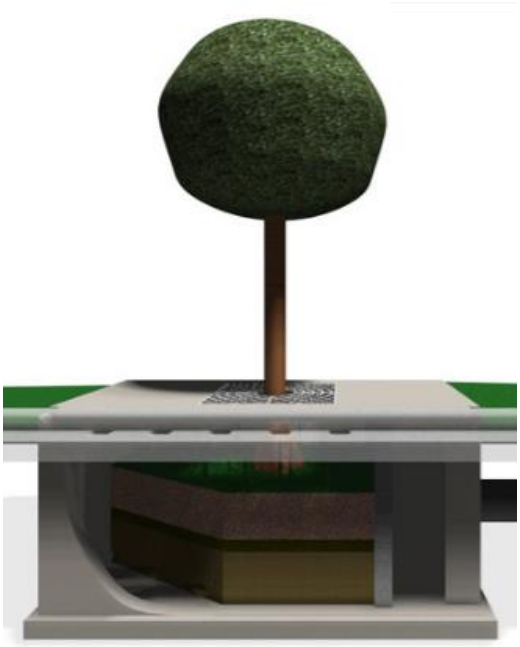

Figure 6-3 Off-Line Roadside Stormwater Treatment System (Source: Ecosol)

6.4.3. OceanProtect Filterra

Filterra is Ocean Protect's engineered high flow, high-performance biofiltration system. While it operates similarly to traditional bioretention, its high-flow media allows for a reduction in footprint (as low as 0.3% of catchment area). Filterra provides all the benefits of typical bioretention/filtration systems whilst being ideal for tight, highly developed sites, urban development projects, commercial parking lots, residential streets, and streetscapes.

Its small footprint reduces installation costs whilst still maintaining comparable life cycle costs compared with traditional bioretention. It can be configured in a variety of ways to integrate with other Water Sensitive Urban Design (WSUD) practices, whilst also enhancing site aesthetics.

During a storm, stormwater enters the Filterra system through a pipe, kerb inlet, or sheet flow and ponds over the pre-treatment mulch layer, capturing heavy sediment and debris. Organics and microorganisms within the mulch layer trap and degrade metals and hydrocarbons. The mulch also provides a water retention function for the system's vegetation.

Stormwater then flows through the engineered high flow media filtering fine pollutants and nutrients. Organic material in the media remove dissolved metals and act as a food source for root-zone microorganisms. Treated water exits through an underdrain pipe or infiltrates (if designed accordingly).

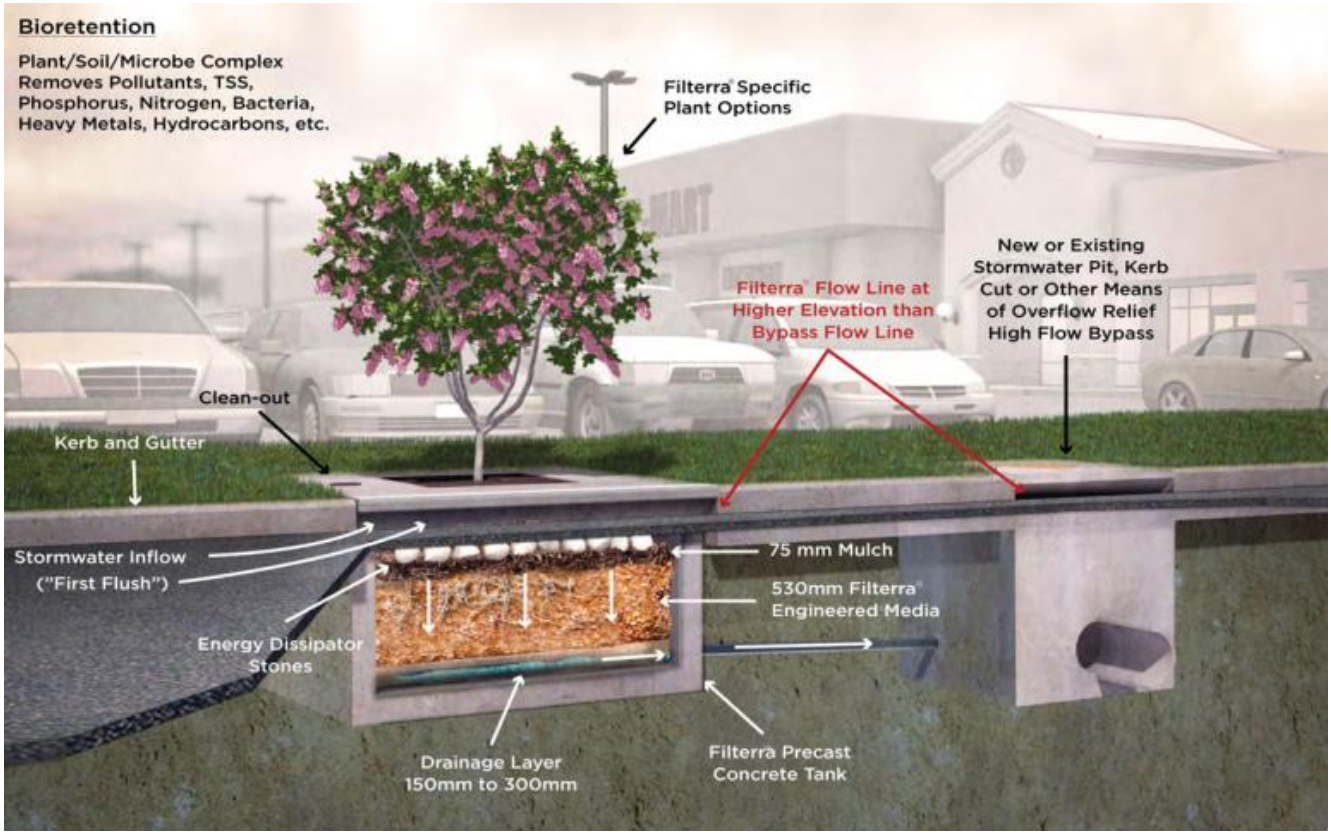

Figure 6-4 Typical Filterra System (Source: Ocean Protect)

6.4.4. Green Roof

A green roof is a roof that has media and vegetation planted above a roofing system. Living roofs have a wide variety of environmental and financial benefits. It has the potential to reduce energy demands in two ways: absorbing heat and acting as insulators for buildings. Adding a layer of soil and plants to a roof adds insulation to the building it covers. Since roofs are the site of the greatest heat loss in the winter and the hottest temperatures in the summer, the greater insulation offered by green roofs can decrease the amount of energy required to moderate the temperature of a building.

Furthermore, reducing the demand for energy consequently reduces air pollution. By lowering air conditioning demand, green roofs can decrease the production of associated air pollution and greenhouse gas emissions such as CO2, coming from power plants. Additionally, because plants through photosynthesis convert atmospheric CO2 into oxygen, the plants on green roofs can help filter harmful noxious gases in the air and reduce CO2 emissions in the atmosphere.

Green Roofs have been implemented in the proposed development as a part of the stormwater quality improvement system. It has been modelled as “Roof” with 20% impervious. The area of Green Roof utilized in stage 1 is 284.2m^2 which contributes 0.6% of total site area.

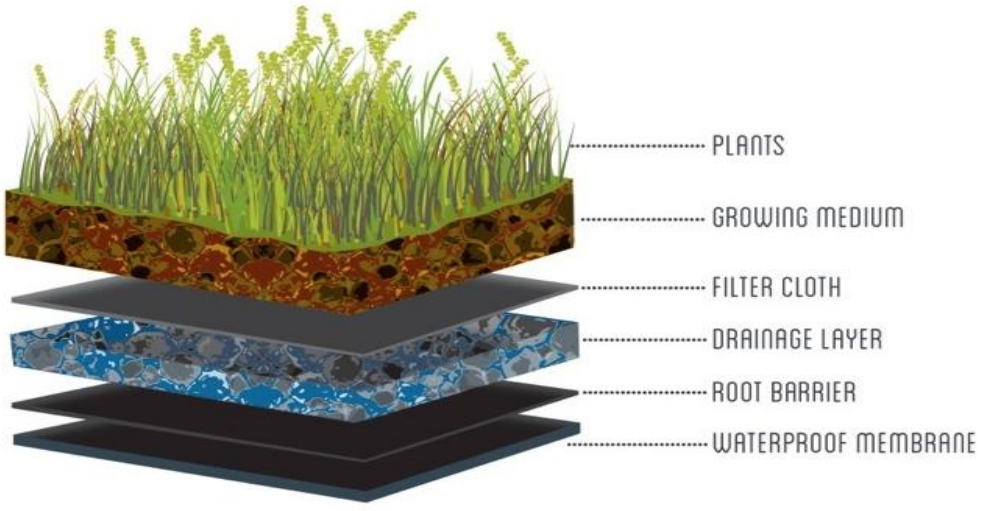

Figure 6-5 Green Roof System

6.5. Water Quality Modelling

The proposed treatment strategy has been modelled using MUSIC version 6.1. Rainfall, catchment properties and pollutant characteristics have been sourced from Water By Design's 'MUSIC Modelling Guidelines' (2010).

The rainfall data uses rainfall station 40842 (Brisbane Aero), 6-minute time step from 01/01/1980 to 31/12/1989 and all source and treatment nodes parameters have sourced from Water By Design's 'MUSIC Modelling Guidelines' (2010). The model source node parameter values and pollutant concentration parameters are shown in the tables below.

Table 6-2 - MUSIC Source Node Parameters (Industrial)

Rainfall Runoff Parameters	Values
Rainfall Threshold (mm/day)	1.00
Soil Storage Capacity (mm)	18
Initial Storage (% of capacity)	10
Field Capacity (mm)	80
Infiltration Capacity Coefficient – a	243
Infiltration Capacity Exponent – b	0.6
Initial Depth (mm)	50
Daily Recharge rate (%)	0
Daily Baseflow Rate (%)	31
Daily Deep Seepage (%)	0

Table 6-3 - MUSIC Pollutant Concentration Parameters (Industrial)

		TSS		TP		TN	
		Base Flow	Storm Flow	Base Flow	Storm Flow	Base Flow	Storm Flow
Roof	Mean (Log mg/L)	0	1.30	0	-0.89	0	0.25
	Std Dev (Log mg/L)	0	0.44	0	0.36	0	0.32
Road	Mean (Log mg/L)	0.78	2.43	-1.11	-0.30	0.14	0.25
	Std Dev (Log mg/L)	0.45	0.44	0.48	0.36	0.20	0.32
Ground	Mean (Log mg/L)	0.78	1.92	-1.11	-0.59	0.14	0.25
	Std Dev (Log mg/L)	0.45	0.44	0.48	0.36	0.20	0.32

The table below shown the internal catchments for the purposes of the MUSIC modelling:

Table 6-4 - MUSIC Catchment Split

Discharge Point	Catchments	Area (m^2)	Fraction Impervious (FI)
Curtin Avenue	Roof	7,610	100%
	Green Roof	284	20%
	Road	3,480	100%
	Landscape	2,115	0%
	Paved Ground	1,290	100%
	Carpark	4,115	100%
Fison Avenue	Roof	7,410	100%
	Road	2,820	100%
	Landscape	1,080	0%
	Paved Ground	360	100%
	Total	***30,564***	

The catchment breakdown is shown in Figure 6-6 and the configuration of the model and results are shown in Figure 6-7 below. This demonstrates that the water quality objectives can be achieved by incorporating the proposed treatment strategy into the development.

- roof runoff will be discharged into the internal stormwater system by a series of downpipes
- ground runoff will be collected by a series of field inlets and convey to the LPoD

Figure 6-6 MUSIC Catchment Breakup

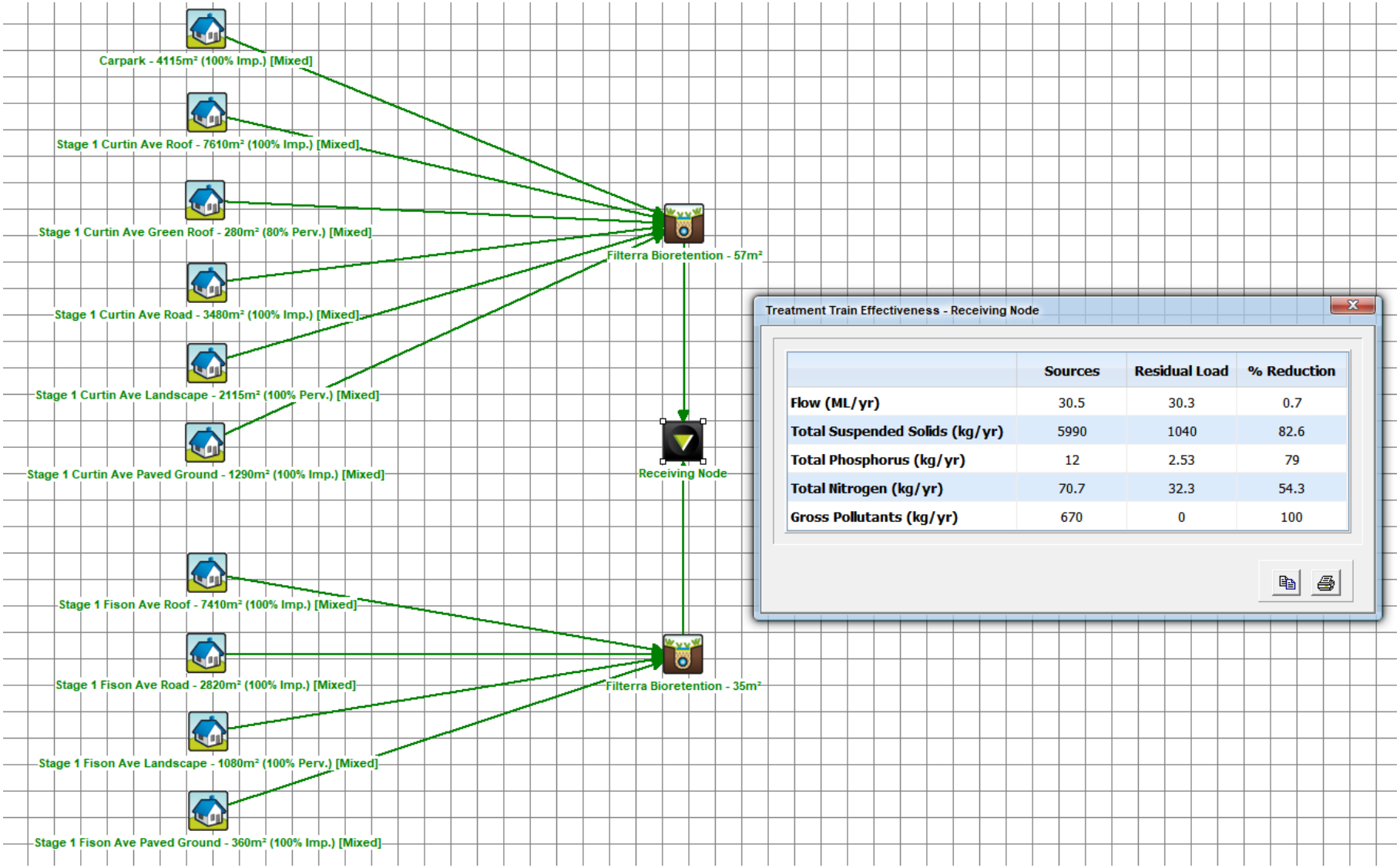

Figure 6-7 MUSIC Model Configuration

6.6. Water Quality Maintenance

6.6.1. Roadside Bio-Retention Street Tree Pods

It is necessary to perform regular inspections under a maintenance schedule to ensure the bio-retention Street Tree Pods operates at the desired efficiency.

The most intensive period of maintenance is during the plant establishment period (first two years) when weed removal and replanting may be required. It is also the time when large loads of sediments could impact on plant growth particularly in developing catchments with poor building controls.

Maintenance is primarily concerned with:

- Maintenance of flow to and through the bio-retention basin;
- Maintaining vegetation;
- Preventing undesired overgrowth vegetation from taking over the bio-retention basin;
- Removal of accumulated sediments; and
- Litter and debris removal.

Vegetation maintenance will include:

- Fertilising vegetation;
- Removal of noxious plants or weeds; and
- Re-establishment of vegetation that die.

Sediments accumulated at the inlets need to be monitored. Depending on the catchment activities the deposition of sediment can tend to smother plants and reduce the ponding volume available. Should excessive sediment build-up it will impact on the plant health and will require removal before it reduces the infiltration rate of the filter media. The proposed SQIDs will require regular maintenance and monitoring to ensure that they function as designed.

7 Construction Phase Water Quality Management

7.1. Pollutants

Pollutants typically generated during the construction phase are indicated in Table 7-1.

Table 7-1 - Pollutants Typically generated during the construction phase

Pollutant	Sources
Litter	Paper, construction packaging, food packaging, cement bags, off-cuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building works
Hydrocarbons	Fuel and oil spills, leaks from constructions equipment and temporary carpark areas
Toxic materials	Cement slurry, asphalt prime, solvents, cleaning agents, washwater (e.g. from tile works)
pH altering substances	Acid sulphate soils, cement slurry and wash waters

7.2. Potential Impacts

The construction phase of a development has the potential to release significant amounts of sediment and other pollutants into the receiving waterways. Potential impacts on the surrounding environment will be minimised during the construction phase with measures as outlined in this Conceptual Stormwater Management Plan and the Erosion and Sediment Control Plan, which will be provided at the Operational Works phase.

7.3. Erosion and Sediment Control Measures

7.3.1. Pre-Development

Prior to construction, the following sediment and erosion control measures will be implemented to minimise disturbance and ensure water quality is maintained;

- Set out transport routes to ensure minimal vegetation disturbance;
- Construct entry/exit areas that comprise of a designed gravel pad or placement of vibration grid in accordance with Best Practice;
- Install sediment fences around the proposed bulk earthworks site (along toe of batter alignment); and
- Install dust control fences adjacent to the proposed bulk earthworks site.

7.3.2. Bulk Earthworks

- Earthworks areas are to be protected against wind and water erosion;
- Silt fences are to be erected around the base of the earthworks and material stockpiles;
- Stockpiles and construction material are not permitted to be stored within the road reserve; and,
- Diversion drains to be provided at upstream catchments to reduce flows onto earthworks areas.

7.3.3. Construction

The following measures will be undertaken to mitigate water quality impacts during the construction phase:

- Sediment fences to be erected at the base of all batters and stockpiles to prevent sediment transportation off site;
- Grass filter strips to be placed along all road verges;

- Re-vegetation of all disturbed areas within two weeks of completion;
- All sediment control structures to be maintained in an effective manner and inspected after each storm event. No structure is to accumulate sediment above 40% of its capacity;
- Dust producing areas to be swept to remove silt/dust and wetting of roads is only permitted where sweeping has failed;
- At least one bin or littler trap is to be provided for waste material.

7.3.4. Post-Development – Maintenance Period

Silt fences are to remain in place during the maintenance period until the landscaping has been established and accepted "ON-Maintenance'.

7.4. Performance Objectives and Indicators

The BCC Guideline on Identifying and Applying Water Quality Objectives in Brisbane City (2000) states that stormwater runoff during the construction phase must be in accordance within the concentration ranges shown in Table 7.4 below.

Table 7-4 – Construction Phase Pollutant Objectives

Pollutant	Criteria
Total Suspended Solids	90th %tile < 100mg/L for wet weather periods 15mg/L for combined wet and dry periods
pH	6.5 – 8.5
Total Nitrogen (mg/L)	0.65
Total Phosphorous (mg/L)	0.07
Dissolved Oxygen	80 to 105 percent saturation
Oils and Grease	No visible films or odours
Litter	No anthropogenic material greater than 5mm

7.5. Monitoring and Maintenance

The following monitoring and maintenance procedures are to be undertaken by the site supervisor during all phases of the development:

- Restrict all work activities to designated construction areas;
- Earthworks and site cleaning are undertaken in accordance with the Erosion and Sediment Control plans;
- Inspections of Stormwater, Sediment and Erosion Controls are to be conducted at the end of each construction day and after each rainfall event (>25mm);
- Any failure to the stormwater system shall be immediately rectified to prevent uncontrolled discharge from the site

8 Conclusions and Recommendations

This Conceptual Stormwater Management Report has assessed the stormwater management, for the proposed subdivision at 155, 161 Fison Avenue West and 364 Curtin Avenue West, Eagle Farm.

The stormwater management strategy has the following components:

- Provision of underground piped stormwater infrastructure to collect and convey development flows to the onsite treatment.
- Nomination of a lawful points of discharge
    - existing stormwater system that runs within Fison Ave road reserves
    - drainage channel runs within the southern verge of Curtin Avenue West
- Stormwater quality treatment strategy consists of the following components to achieve pollutant reductions in line with SPP (2017) targets.:
    - Ecosol Bio Tree Pits
    - Permeable pavement
    - Green roof
    - A minimum of 57m^2 of Filterra to treat the runoff prior discharge to Curtion Ave
    - A minimum of 35m^2 of Filterra to treat the runoff prior discharge to Fison Ave
- Stormwater quantity assessment is deemed to be unnecessary as the proposed development does not increase the fraction of impervious

This report has demonstrated that the proposed development proposal provides an acceptable solution for all stormwater management and has been designed to comply with *State Planning Policy* (SPP, 2017), *Queensland Urban Drainage Manual Fourth Edition 2016 - Provisional* (QUDM, 2016), Brisbane City Council's City Plan (BCC, 2014) and Economic Development Queensland Engineering standards PDA guideline no.13 (EDQ, 2017).

9 References

BCC (2014) Brisbane City Council, Guidelines and Standards

- Stormwater Code

Department of State Development, Infrastructure and Planning (2017), State Planning Policy

Smith, D. 2006. Permeable Interlocking Concrete Pavement? Selection Design, Construction and Maintenance. Third Edition. Interlocking Concrete Pavement Institute. Herndon, Virginia.

Institute of Public Works Engineering Australasia, Queensland Division (2016), Queensland Urban Drainage Manual Fourth Edition 2016 – Provisional

Goodwin Midson (2010) Overall Plan and Detail Survey (14047-1)

Appendices

Appendix A – Architecture Plans

PRELIMINARY

Revisions				
P16	28.10.21	Draft DA	GT
P17	17.11.21	Final Coordination	JH

17/11/2021 9:26:48 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Ground Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.10 P17**

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Revisions				
P1 3	28.10.21	Draft DA		GT
P1 4	17.11.21	Final Coordination		JH

17/11/2021 9:26:52 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Ground Floor Mezzanine Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.11 P14**

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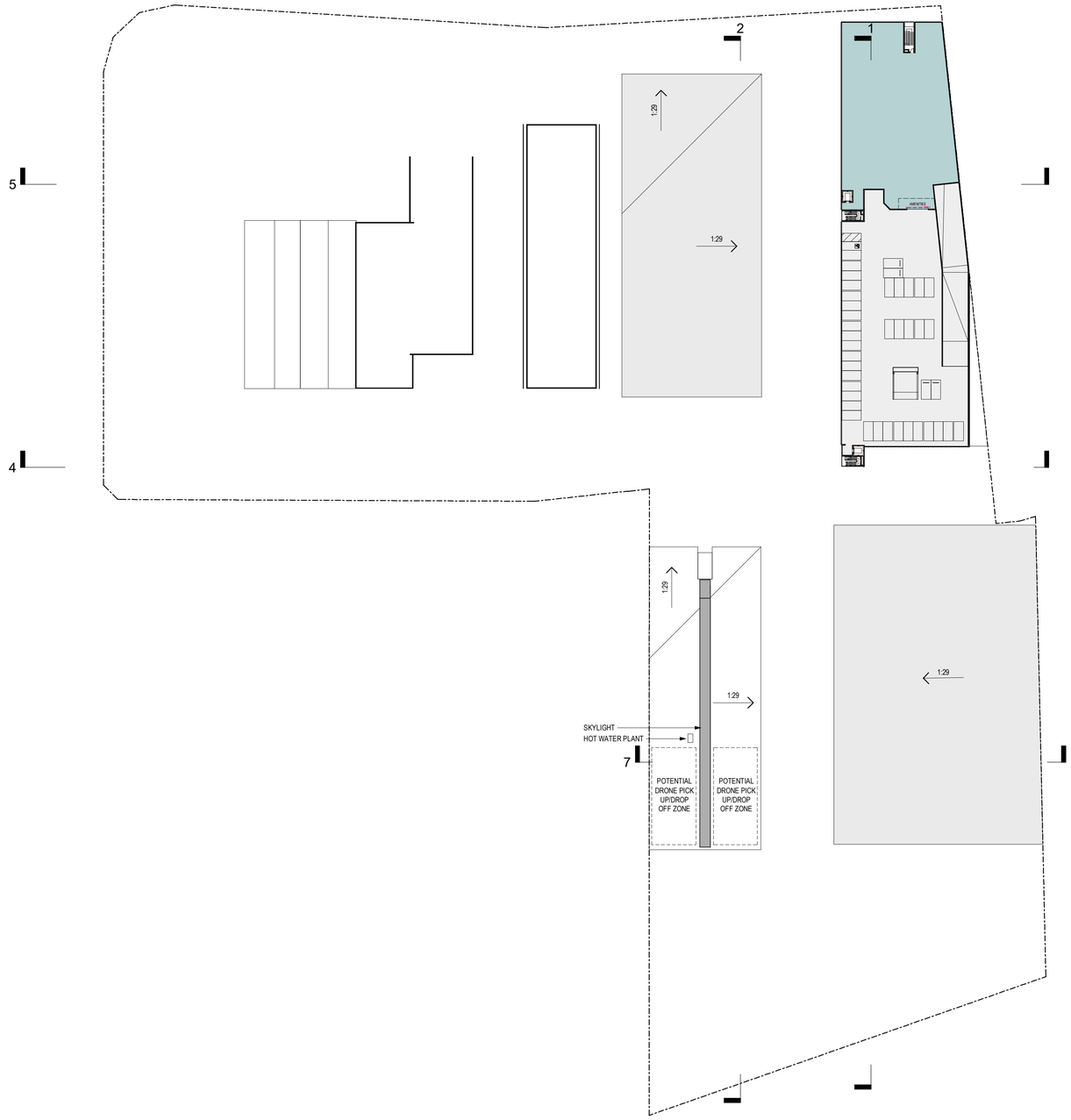

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Revisions

P13	28.10.21	Draft DA	GT
P14	17.11.21	Final Coordination	JH

17/11/2021 9:26:55 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Level 1 Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.12 P14**

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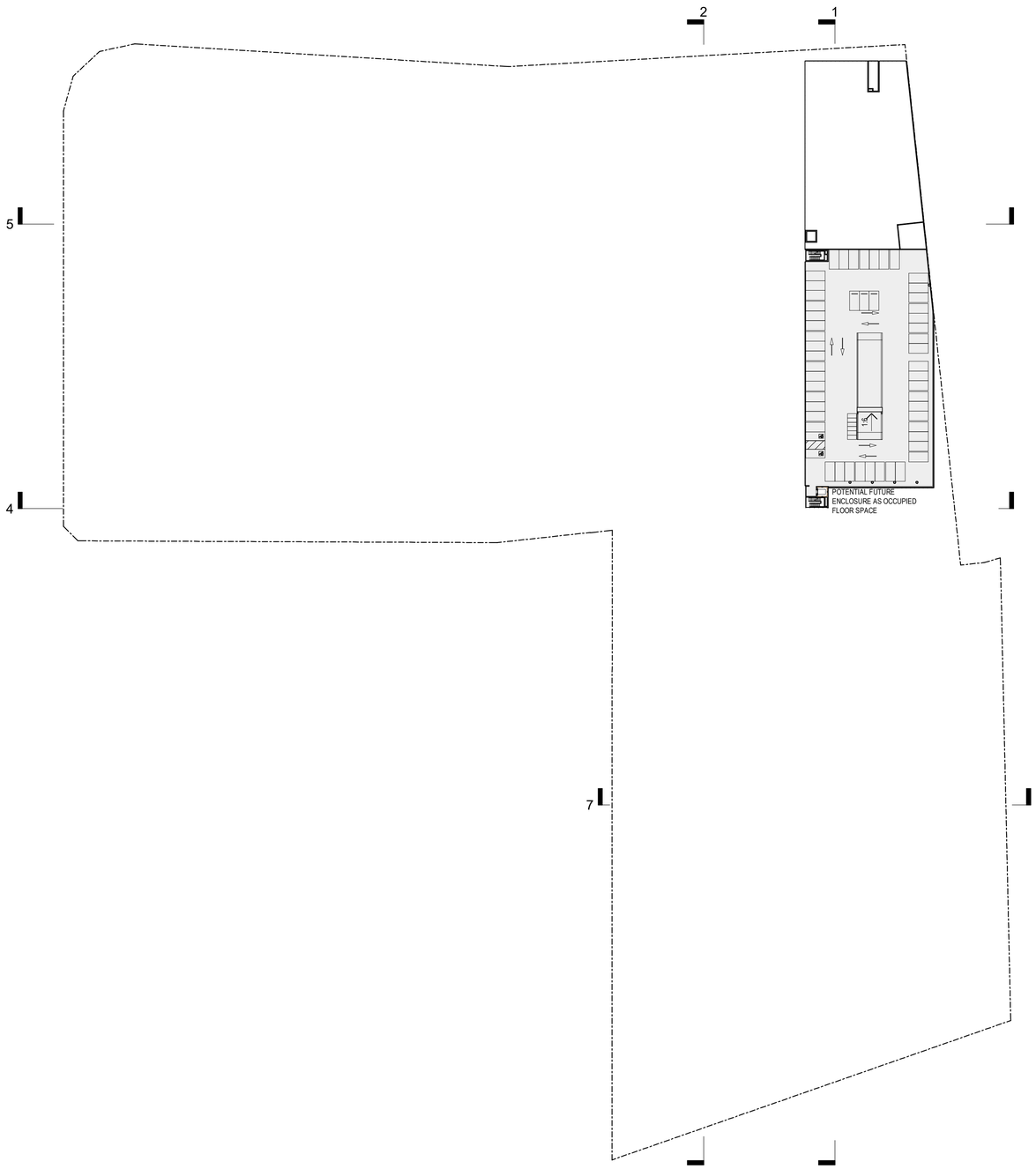

PRELIMINARY

Revisions

P13	28.10.21	Draft DA	GT
P14	17.11.21	Final Coordination	JH

17/11/2021 10:16:09 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1- Level 2 Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1: **1 : 750**

Drawing No.: **TP01.13 P14**

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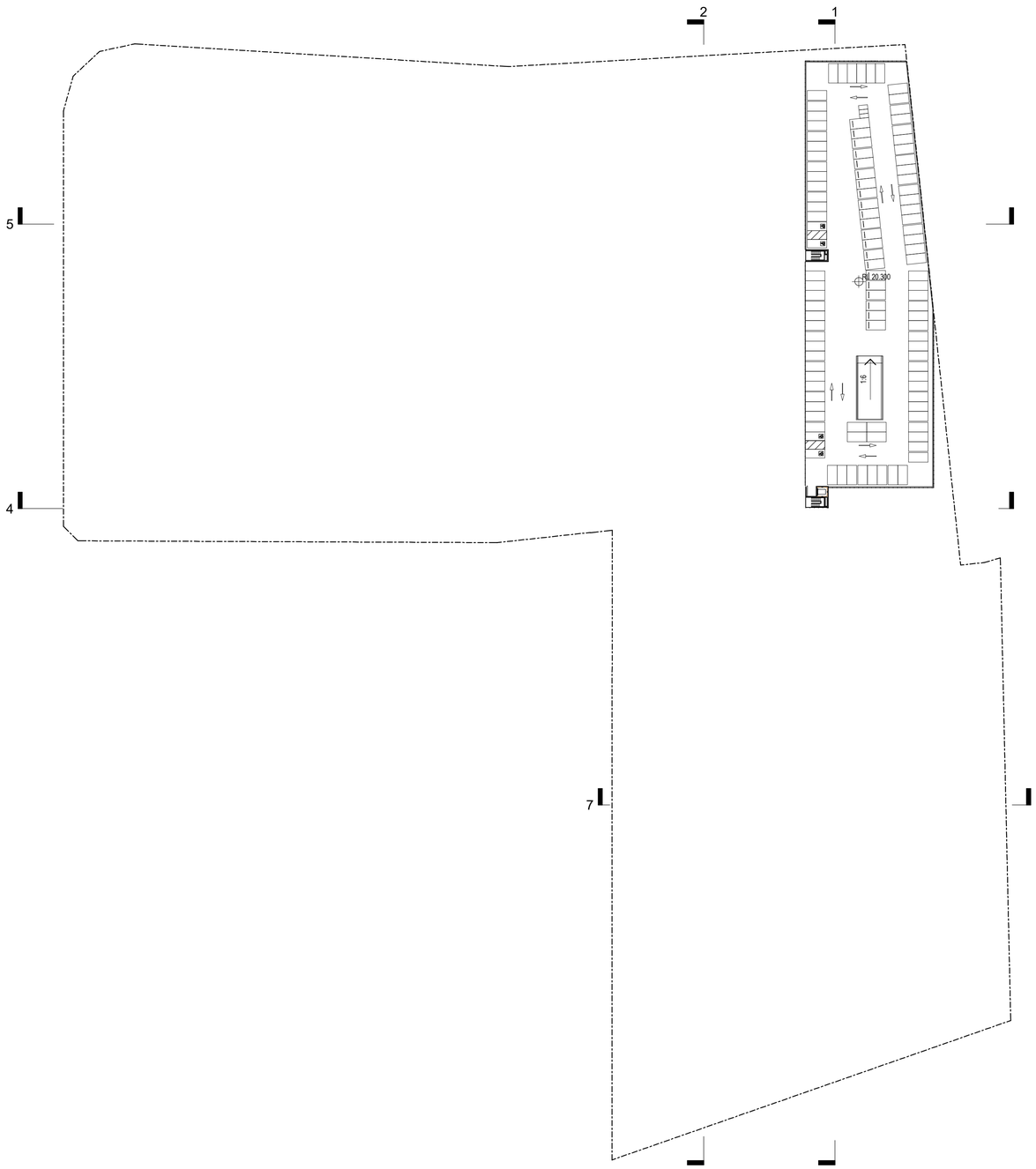

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P14	17.11.21	Final Coordination		JH

17/11/2021 10:04:30 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Level 3 Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.14 P14**

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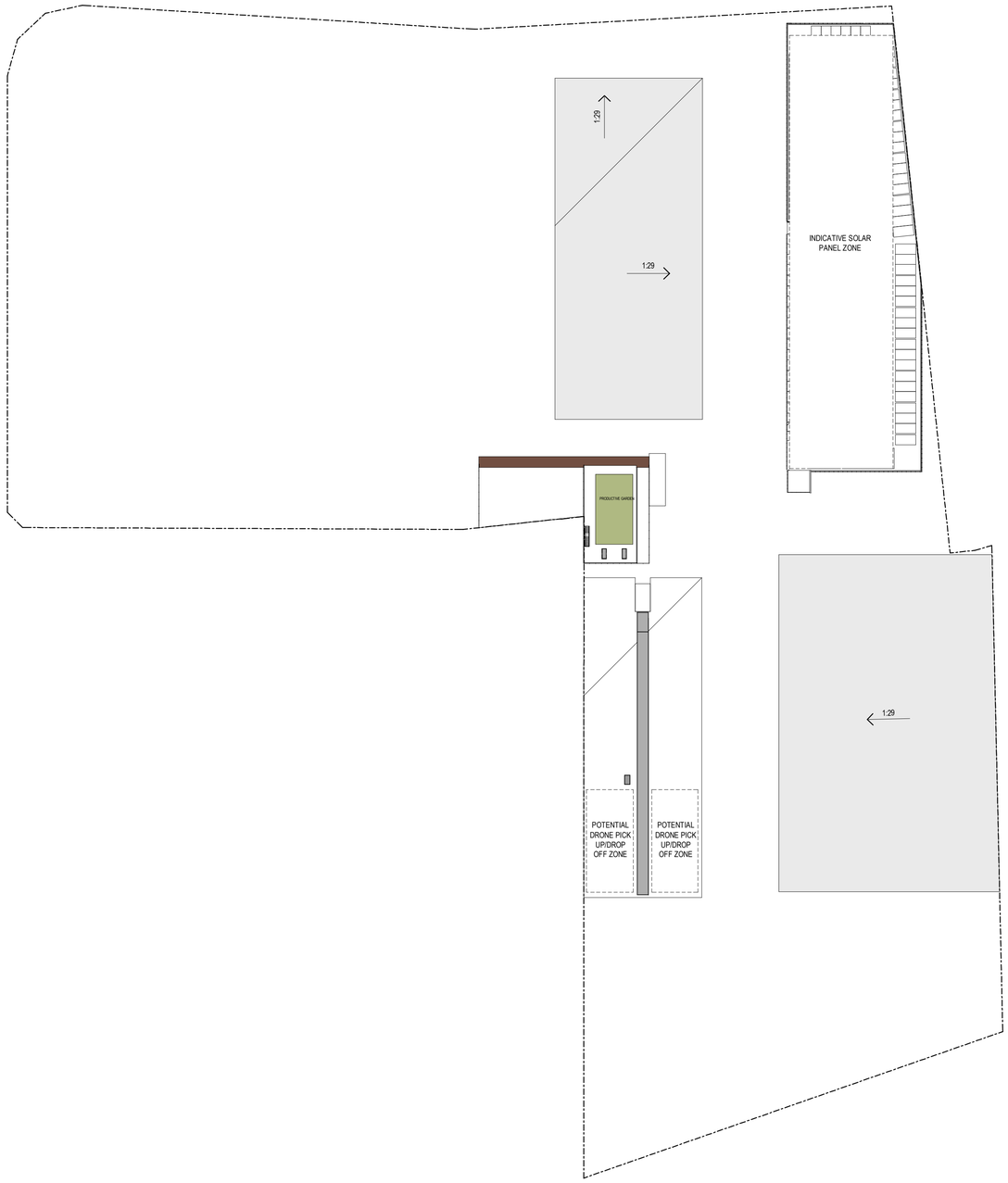

PRELIMINARY

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P1	15.10.21	For Coordination	JH
P2	20.10.21	For Coordination	JH
P3	25.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 9:18:41 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Roof Plan**

Project No: **221044**

Date: **17.11.21**

Author: **JH**

Scale: @ A1: **1 : 750**

Drawing No.: **TP01.15 P5**

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1 TP01.10 **EAST SECTION**
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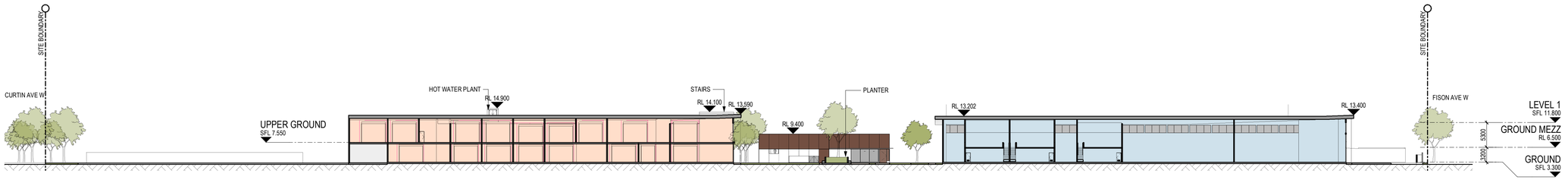

2 TP01.10 **CENTRAL N-S SECTION**
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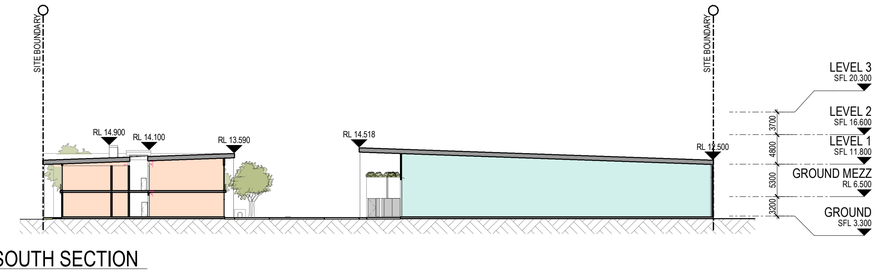

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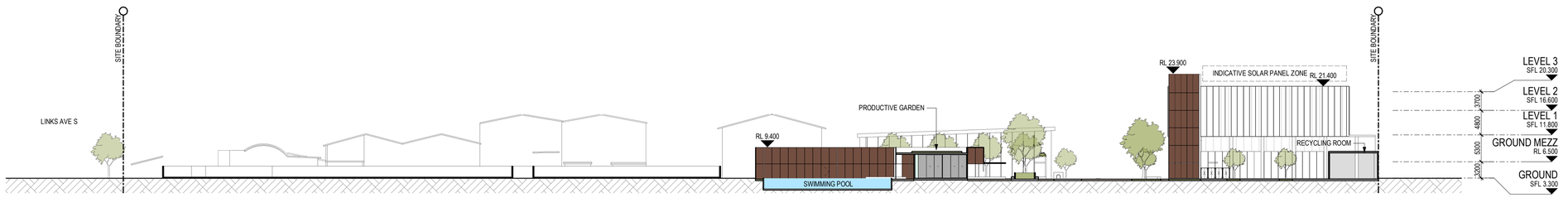

4 TP01.10 **CENTRAL E-W SECTION**
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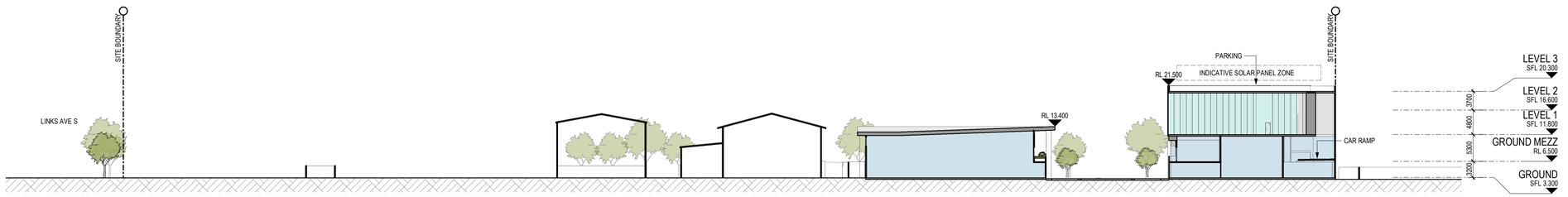

5 TP01.10 **NORTH SECTION**
SCALE 1 : 500

PRELIMINARY

Revisions				
P1	1	28.10.21	Draft DA	GT
P1	2	17.11.21	Final Coordination	JH

17/11/2021 10:44:06 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Site Sections**
Project No: **221044**
Date: **17.11.21**
Author: **NE**
Scale: @ A1 **1 : 500**
Drawing No.: **TP03.01 P12**

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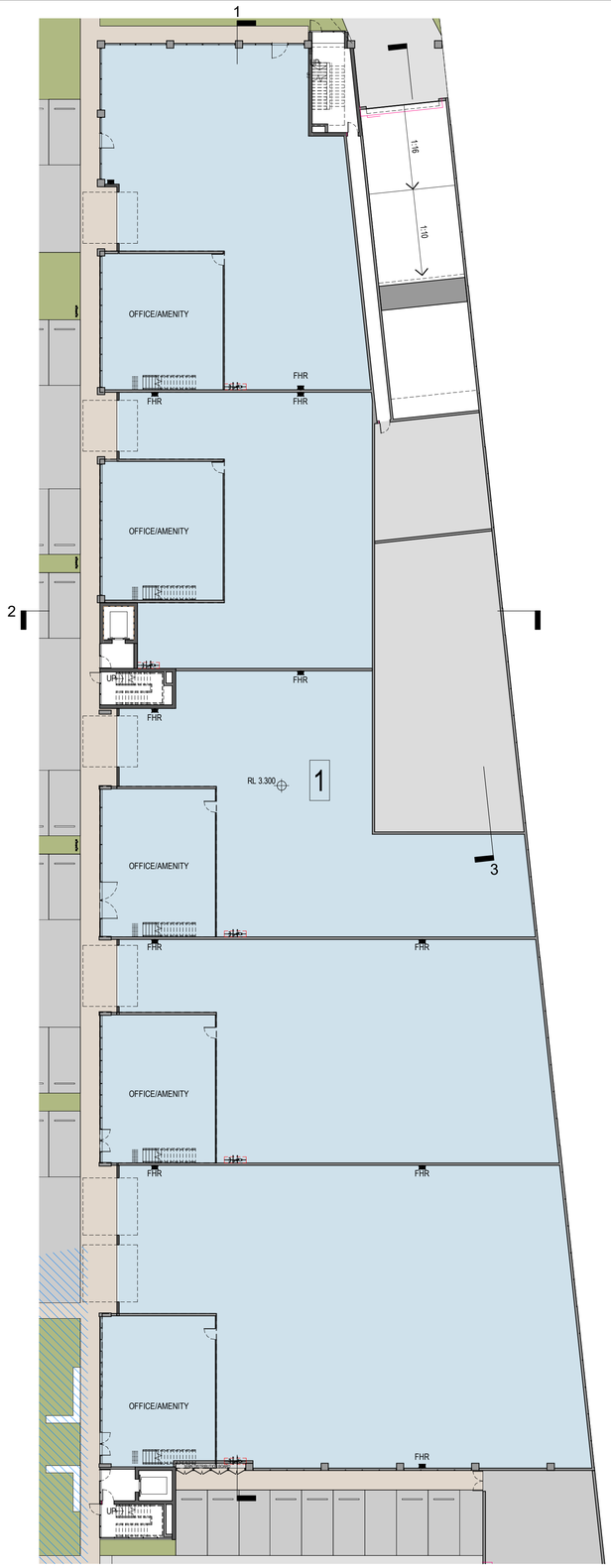
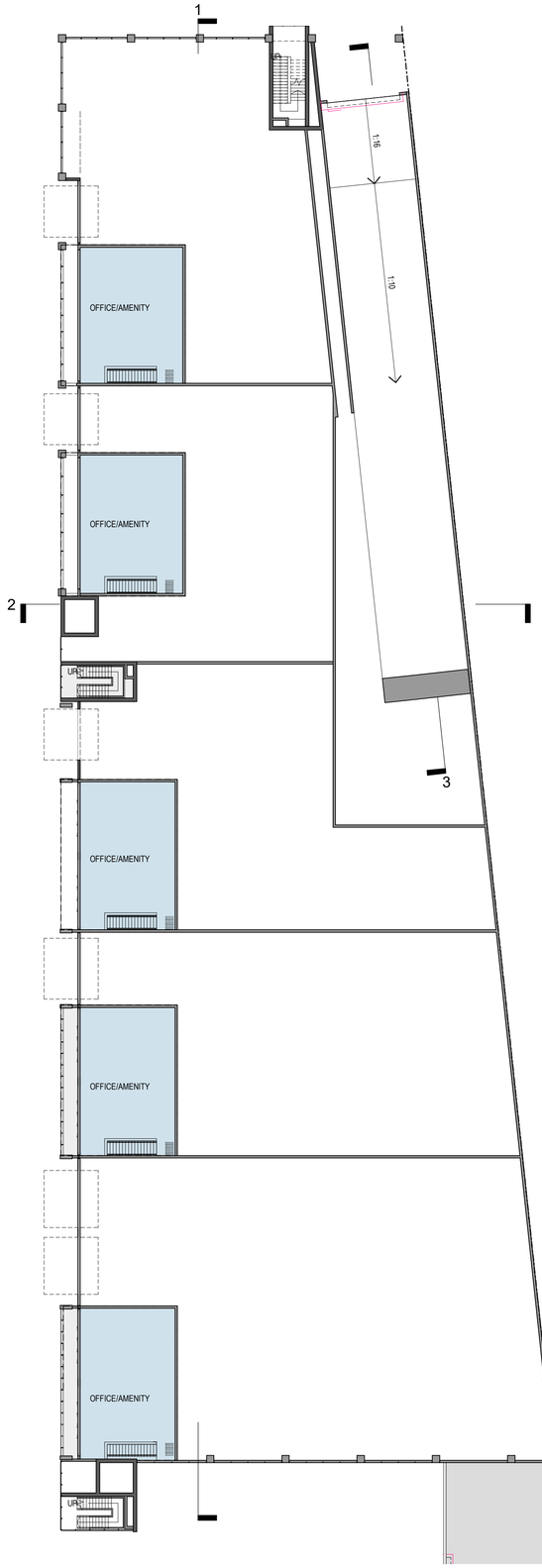
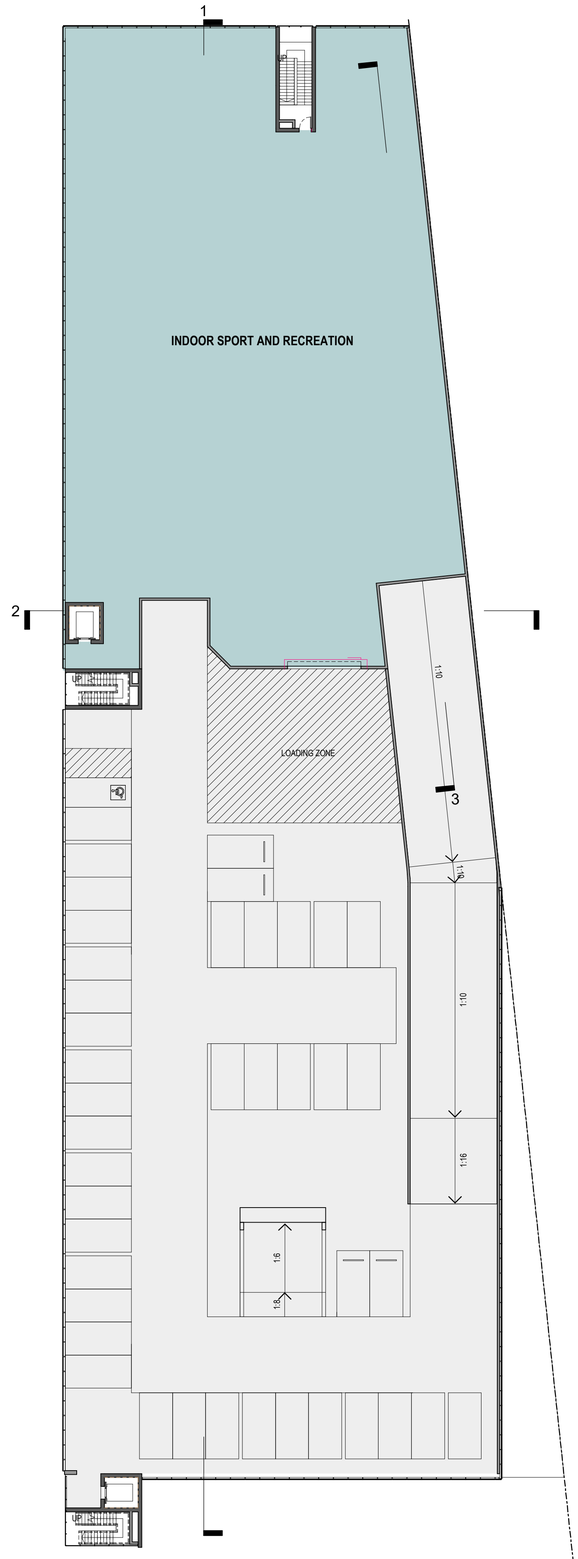


BUILDING 1 - Ground



BUILDING 1 - Ground Mezz



BUILDING 1 - Level 1

PRELIMINARY

PARKING - Building 1		
Level		**No. Cars**
LEVEL 1	Accessible	1
LEVEL 1	Stage 1	41
LEVEL 2	Accessible	2
LEVEL 2	Motorbike	6
LEVEL 2	Stage 1	52
LEVEL 3	Accessible	4
LEVEL 3	Motorbike	3
LEVEL 3	Stage 1	105
Grand total		214

AREA - BUILDING 1		
Level	Comments	Area
GROUND	BUILDING 1	3569.9 m²
GROUND MEZZ	BUILDING 1	483.4 m²
LEVEL 1	BUILDING 1	1504.2 m²
Grand total		5557.5 m²

Revisions

P1	25.10.21	For Coordination	JH
P2	28.10.21	Draft DA	GT
P3	08.11.21	Client Review	JH
P4	17.11.21	Final Coordination	JH

17/11/2021 10:16:15 AM

Project: **Eagle Farm Precinct**

Drawing: **Building 1**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Project No: **221044** Date: **17.11.21** Author: **JH** Scale: @ A1 **1 : 250** Drawing No.: **TP04.00 P4**

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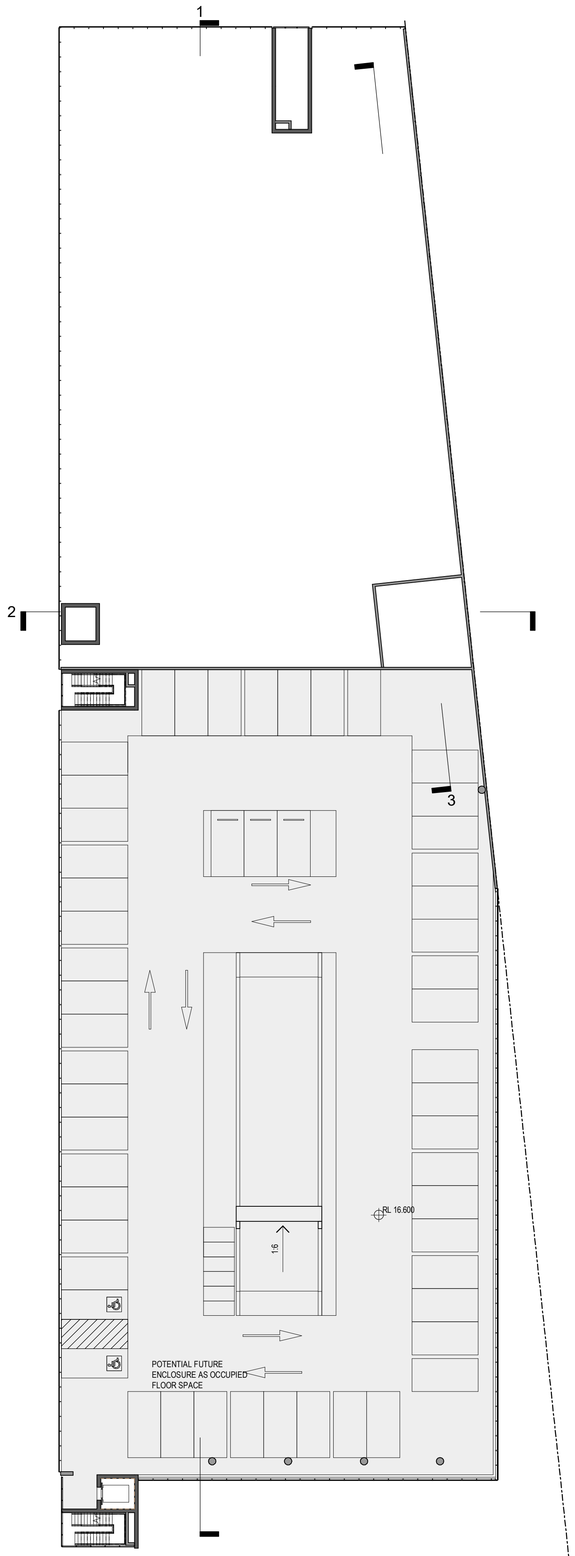
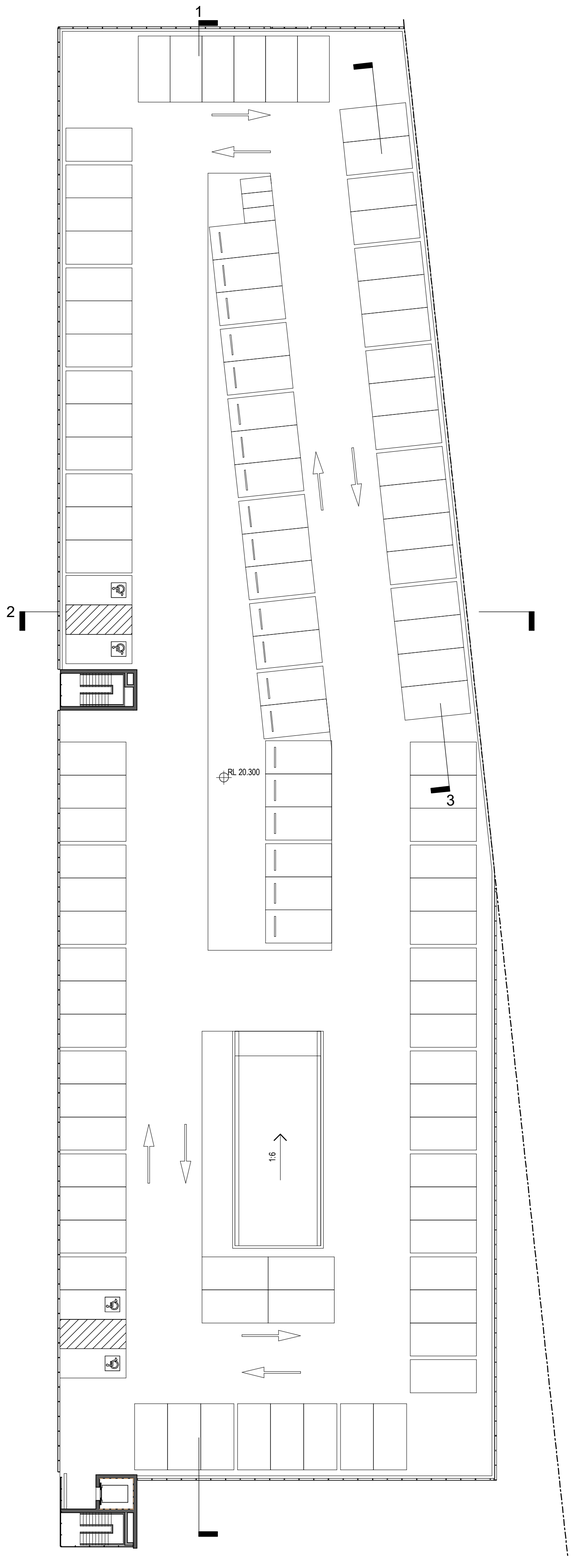


BUILDING 1 - Level 2



BUILDING 1 - Level 3

PARKING - Building 1		
Level		**No. Cars**
LEVEL 1	Accessible	1
LEVEL 1	Stage 1	41
LEVEL 2	Accessible	2
LEVEL 2	Motorbike	6
LEVEL 2	Stage 1	52
LEVEL 3	Accessible	4
LEVEL 3	Motorbike	3
LEVEL 3	Stage 1	105
Grand total		214

AREA - BUILDING 1		
Level	Comments	Area
GROUND	BUILDING 1	3569.9 m²
GROUND MEZZ	BUILDING 1	483.4 m²
LEVEL 1	BUILDING 1	1504.2 m²
Grand total		5557.5 m²

PRELIMINARY

Revisions

P4	20.10.21	For Coordination	JH
P5	25.10.21	For Coordination	JH
P6	28.10.21	Draft DA	GT
P7	08.11.21	Client Review	JH
P8	17.11.21	Final Coordination	JH

17/11/2021 10:16:21 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Building 1**

Project No: **221044**

Date: **17.11.21**

Author: **JH**

Scale: @ A1 **1 : 250**

Drawing No.: **TP04.01 P8**

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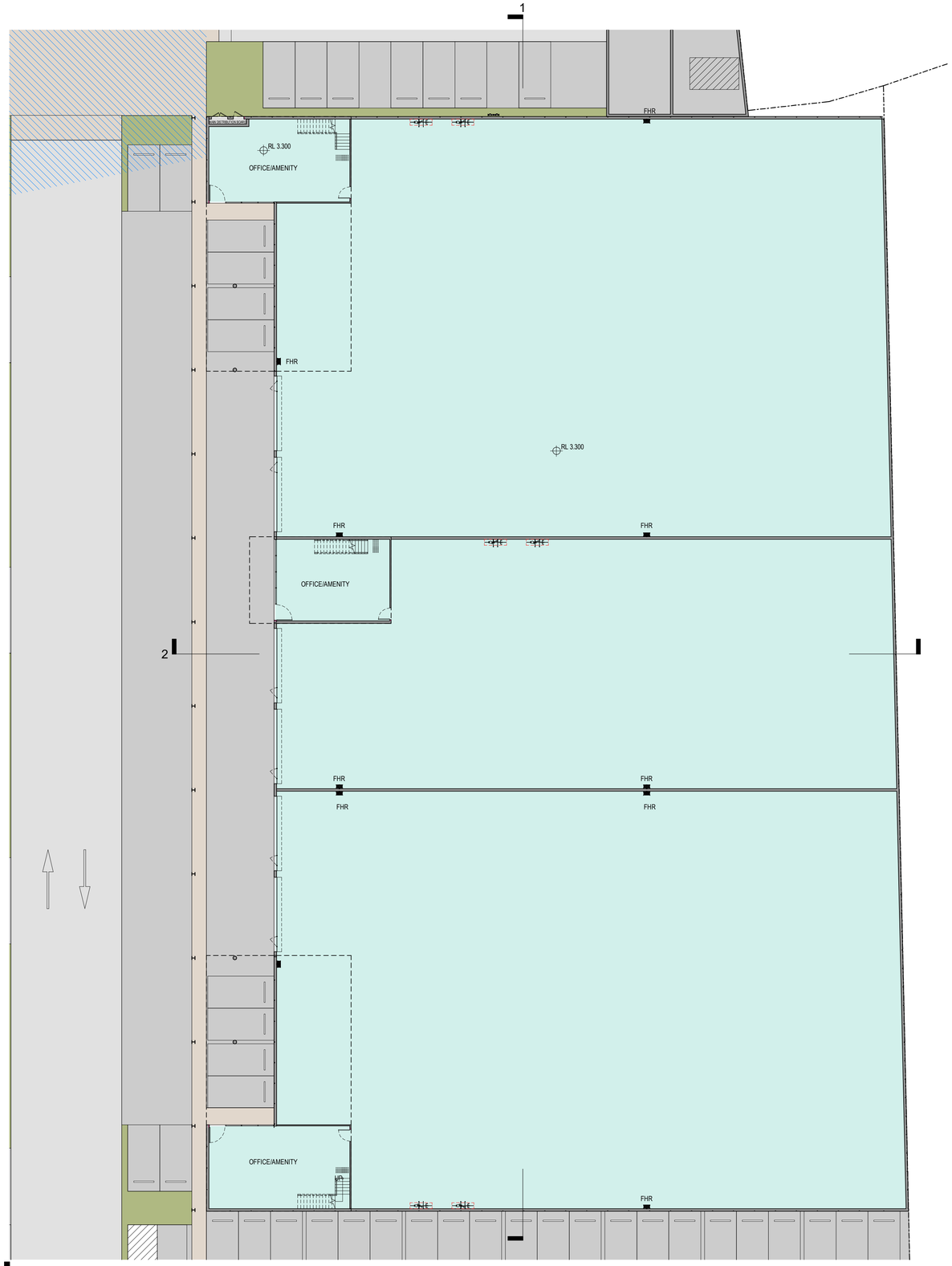

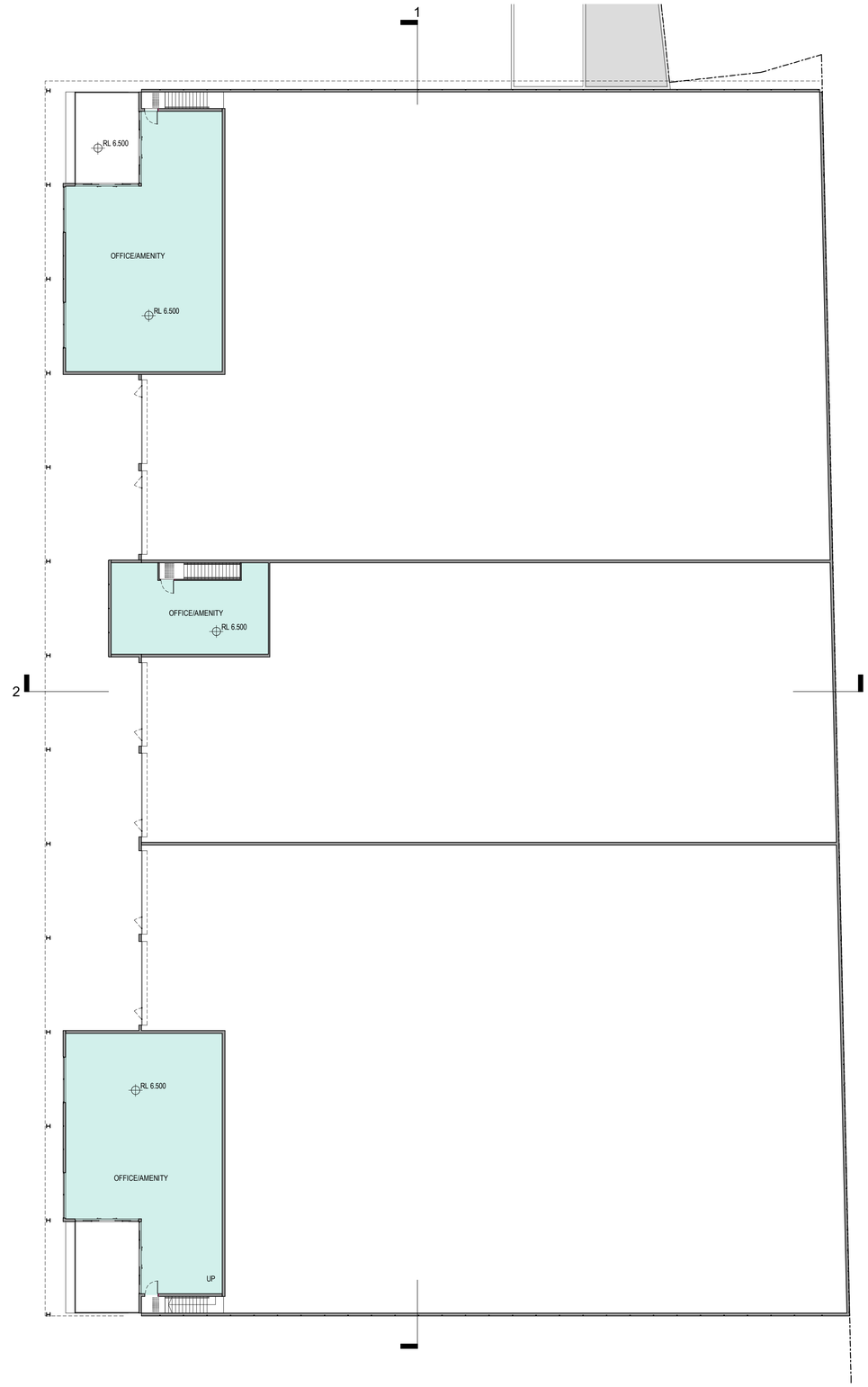

BUILDING 2 - Ground

BUILDING 2 - Ground Mezzanine

PRELIMINARY

Revisions			
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	25.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	17.11.21	Final Coordination	JH

17/11/2021 10:04:47 AM

AREA - BUILDING 2		
Level	Comments	Area
GROUND	BUILDING 2	4355.0 m²
GROUND MEZZ	BUILDING 2	451.6 m²
Grand total		4806.6 m²

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Building 2**

Project No: **221044**

Date: **17.11.21**

Author: **JH**

Scale: @ A1 **1 : 200**

Drawing No.: **TP04.02 P6**

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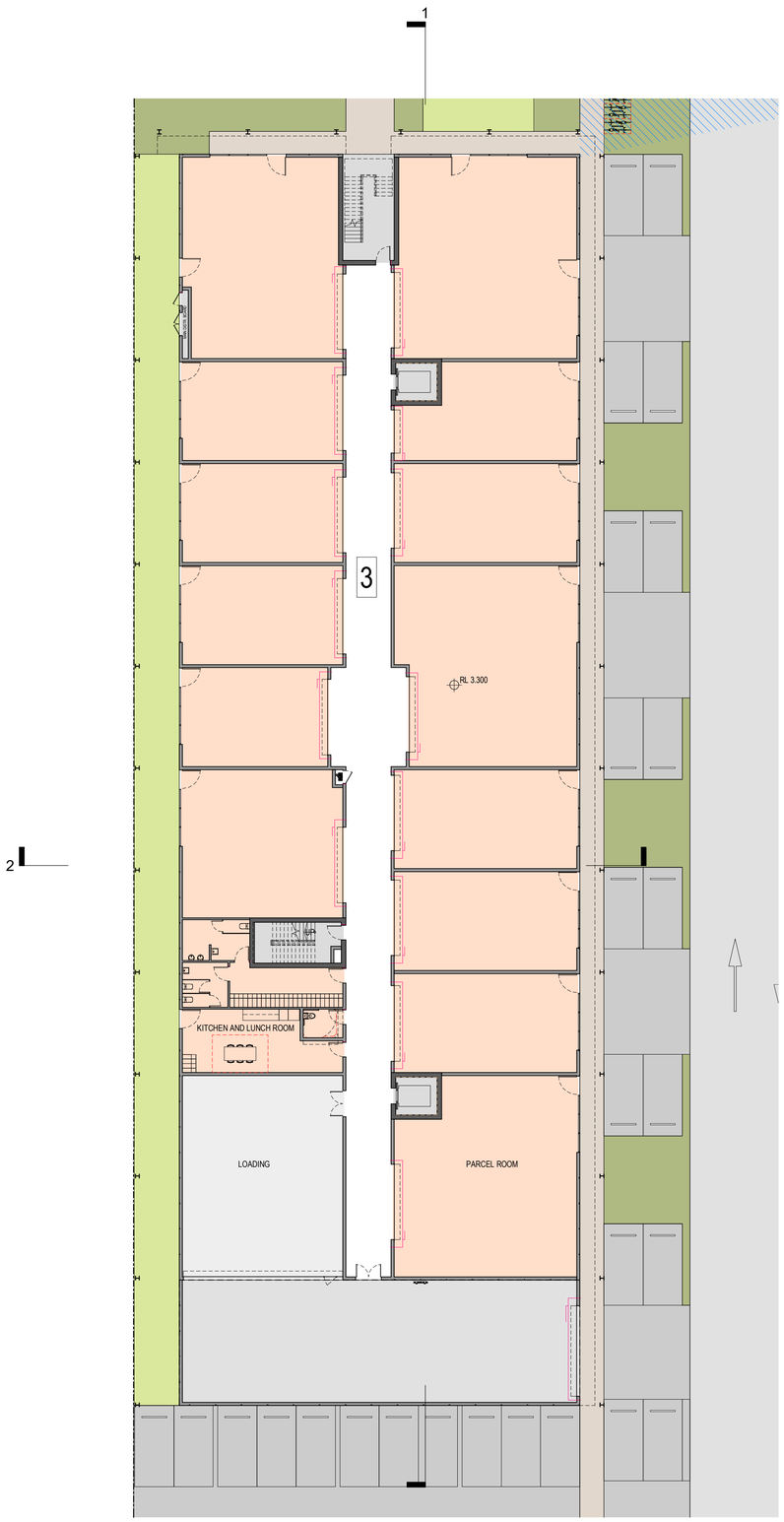
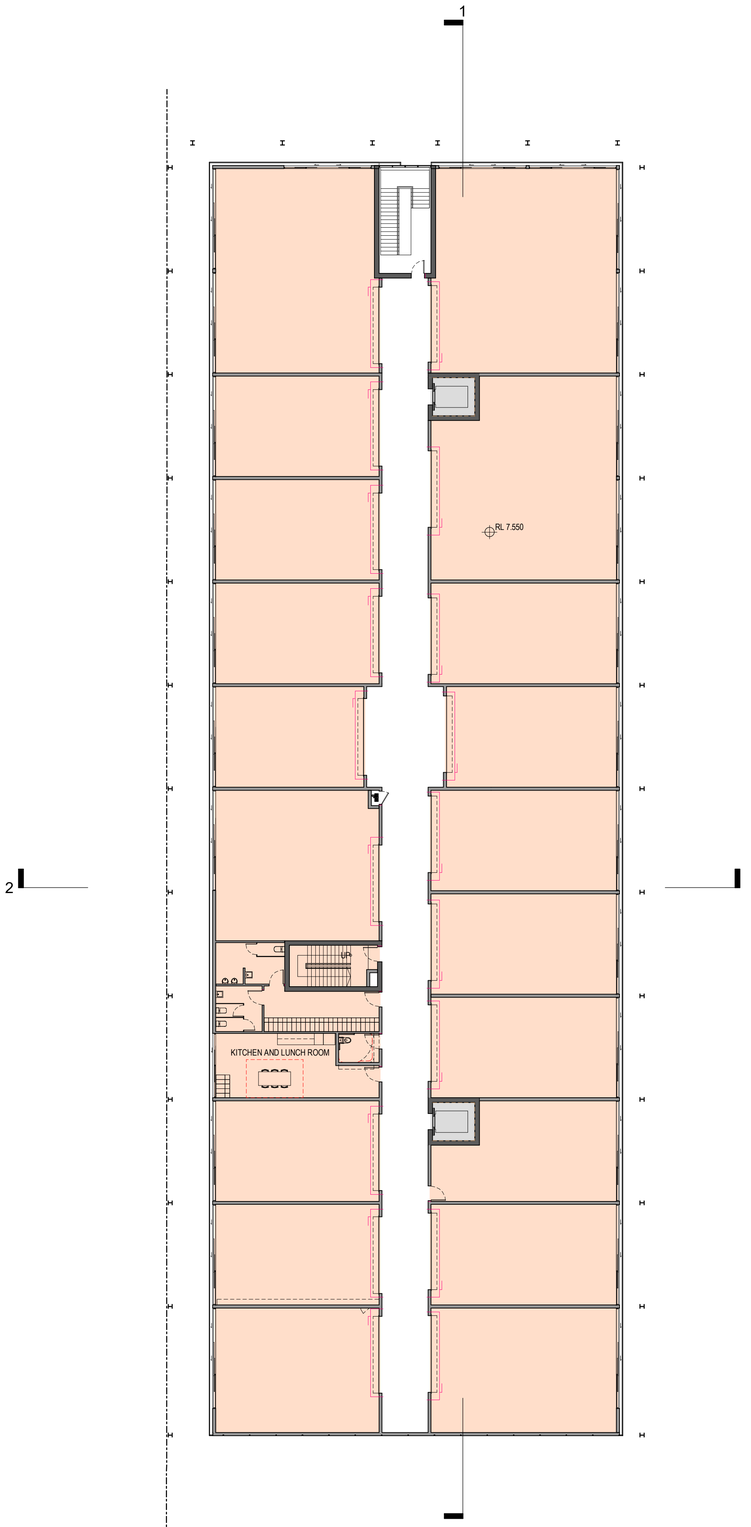


BUILDING 3 - Ground



BUILDING 3 - Level 1

AREA - BUILDING 3		
Level	Comments	Area
GROUND	BUILDING 3	2026.9 m²
GROUND MEZZ	BUILDING 3	2259.2 m²
Grand total		4286.0 m²

PRELIMINARY

Revisions

P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	25.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	17.11.21	Final Coordination	JH

17/11/2021 10:04:52 AM

Project: **Eagle Farm Precinct**
Drawing: **Building 3**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1 **1 : 200**
Drawing No.: **TP04.03 P6**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

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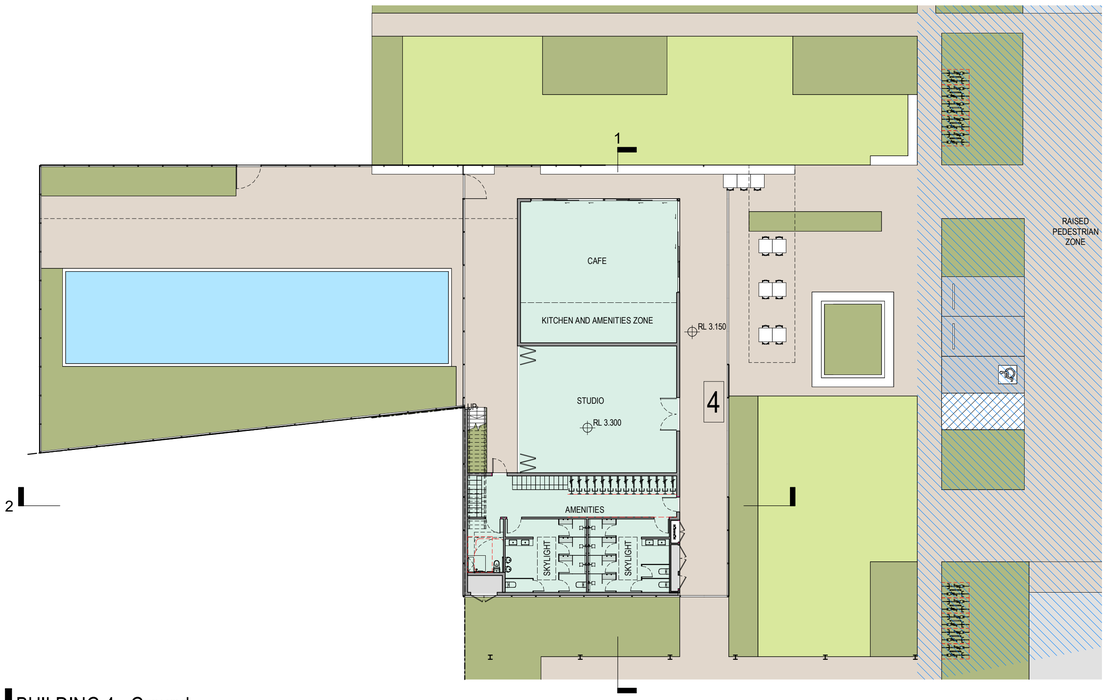
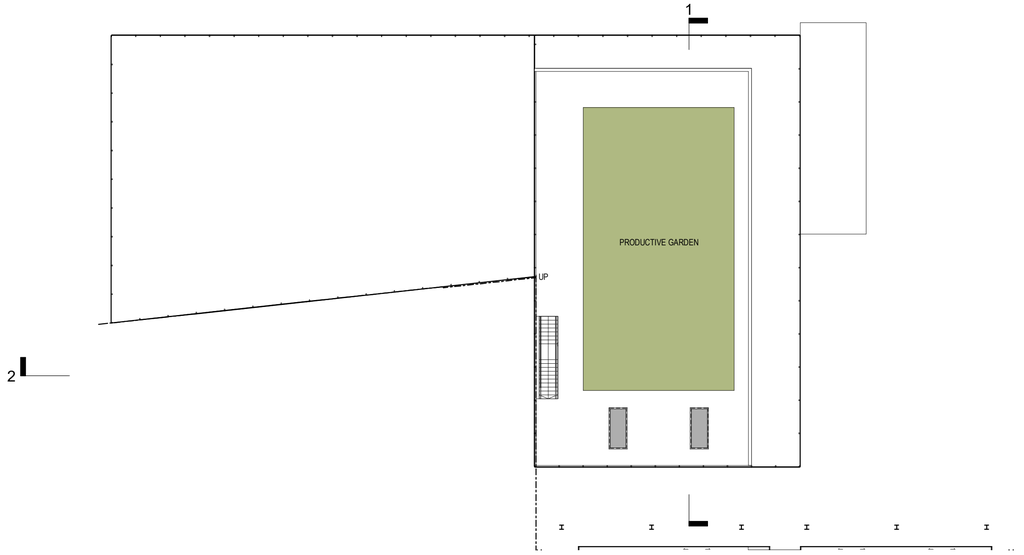


BUILDING 4 - Ground



BUILDING 4 - Roof

AREA - BUILDING 4		
Level	Comments	Area
GROUND	BUILDING 4	297.0 m²
Grand total		297.0 m²

PRELIMINARY

Revisions			
P1	15.10.21	For Coordination	JH
P2	20.10.21	For Coordination	JH
P3	25.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:04:57 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Building 4**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1 **1 : 200**
Drawing No: **TP04.04 P5**

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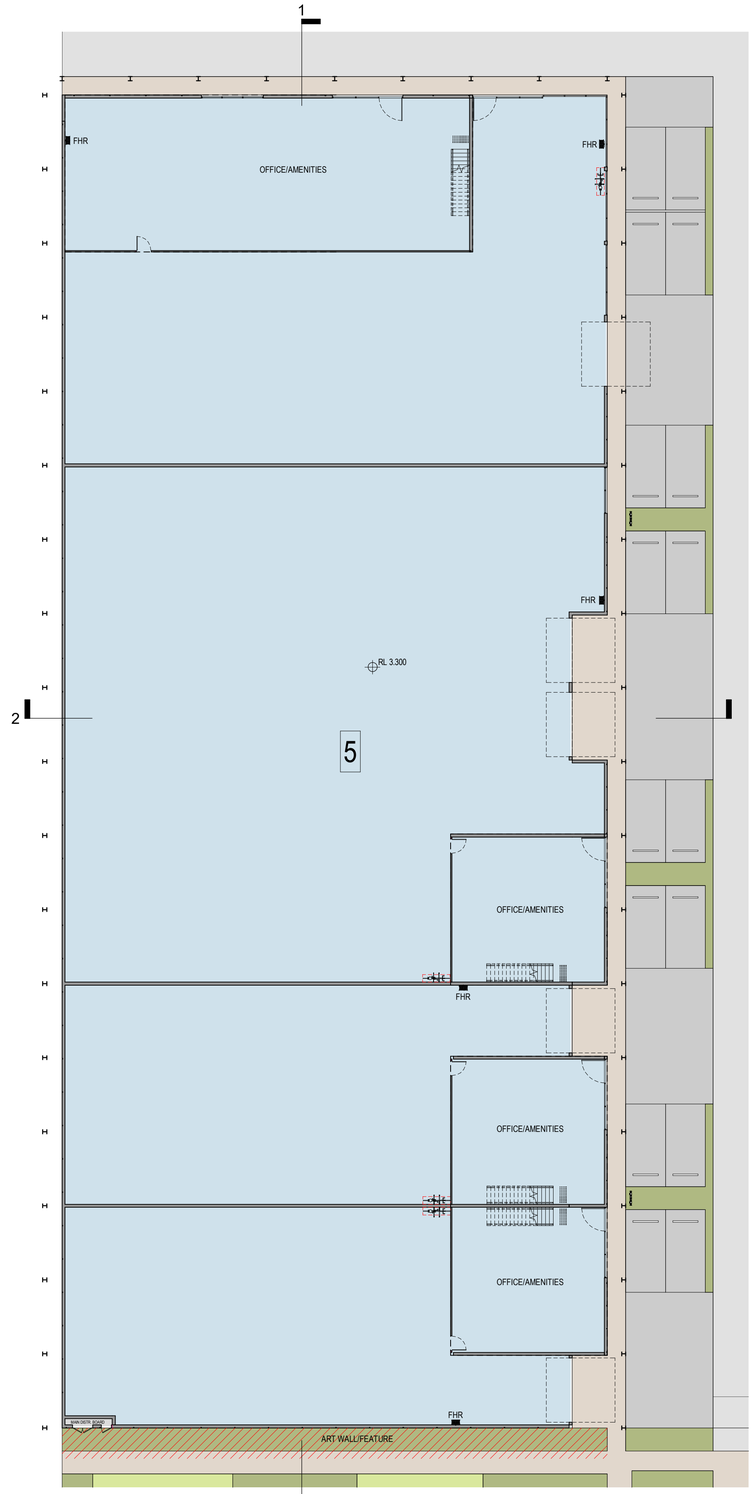
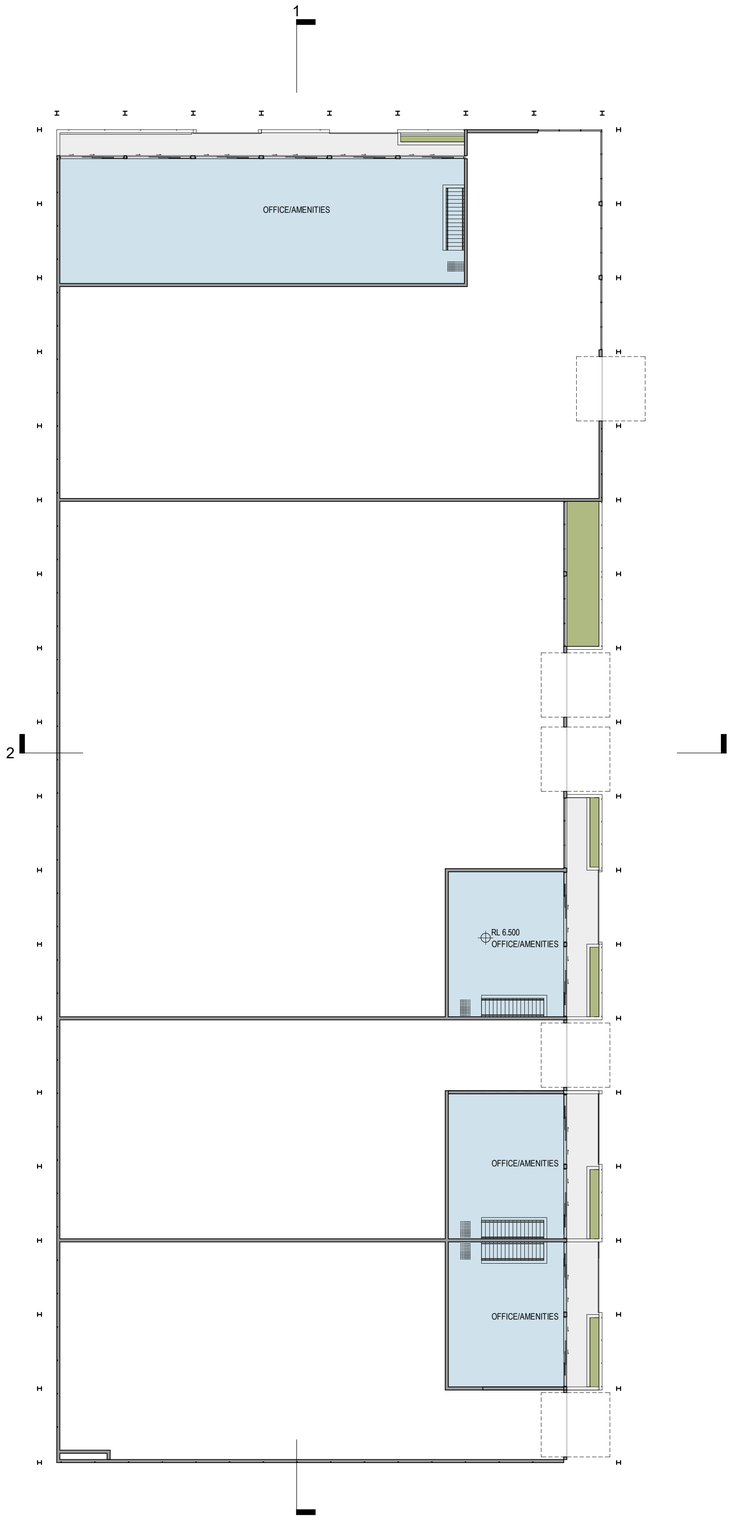


BUILDING 5 - Ground



BUILDING 5 - Ground Mezzanine

AREA - BUILDING 5		
Level	Comments	Area
GROUND	BUILDING 5	435.9 m²
MEZZ		
Grand total		435.9 m²

PRELIMINARY

Revisions

P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	25.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	17.11.21	Final Coordination	JH

17/11/2021 10:05:02 AM

Project **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing **Building 5**

Project No **221044**

Date **17.11.21**

Author **JH**

Scale: @ A1 **1 : 200**

Drawing No. **TP04.05 P6**

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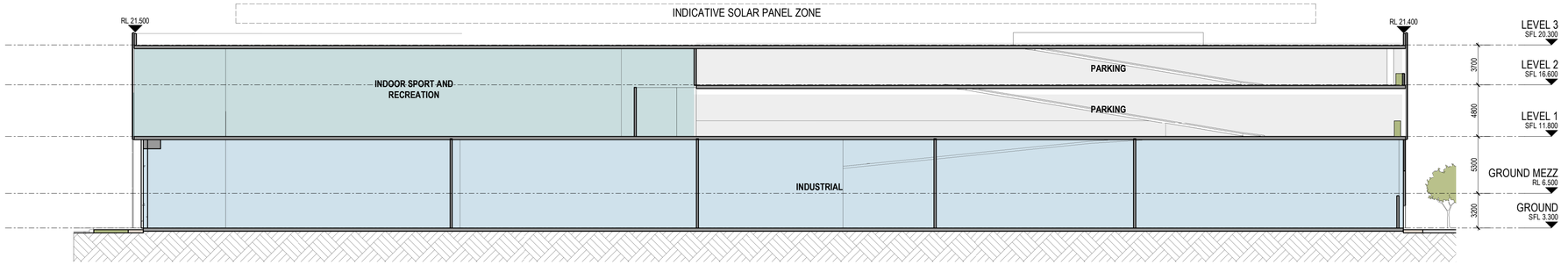

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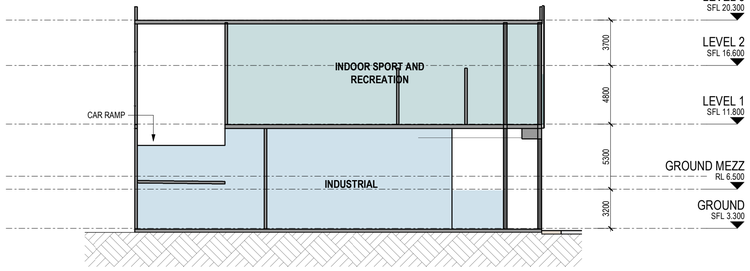

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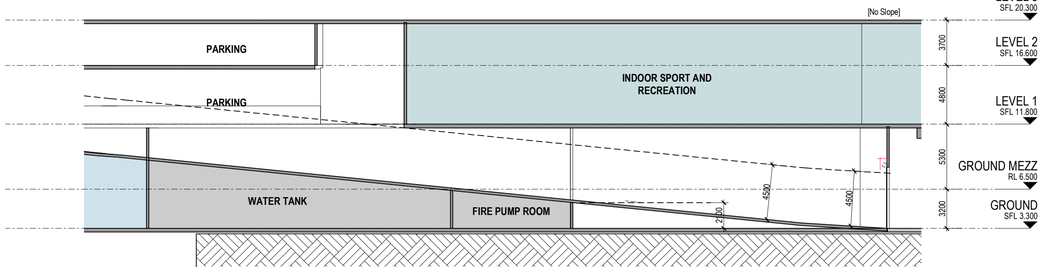

3 TP04.00 BUILDING 1 - RAMP SECTION
SCALE1 : 250

PRELIMINARY

Revisions

P3	15.10.21	For Coordination	JH
P4	20.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	08.11.21	Client Review	JH
P7	17.11.21	Final Coordination	JH

17/11/2021 10:05:07 AM

Project: Eagle Farm Precinct
Drawing: Sections - Building 1
Project No: 221044
Date: 17.11.21
Author: JH
Scale: @ A1: 1 : 250
Drawing No.: TP05.01 P7

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

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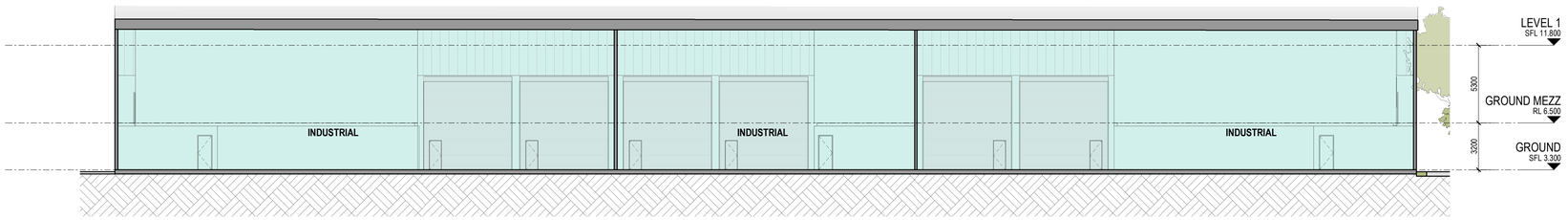

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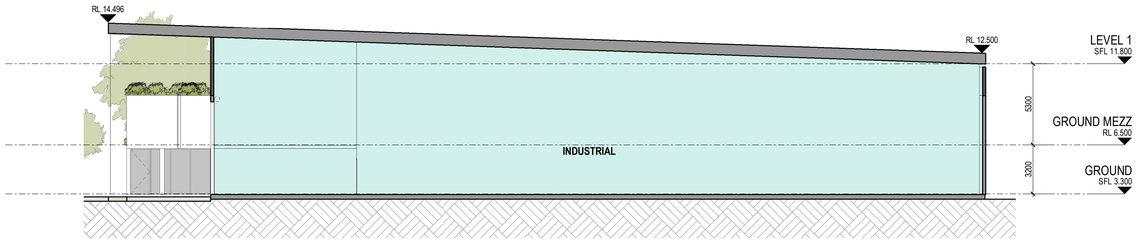

2 TP04.02 BUILDING 2 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions

P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:15 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 2**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.02 P5**

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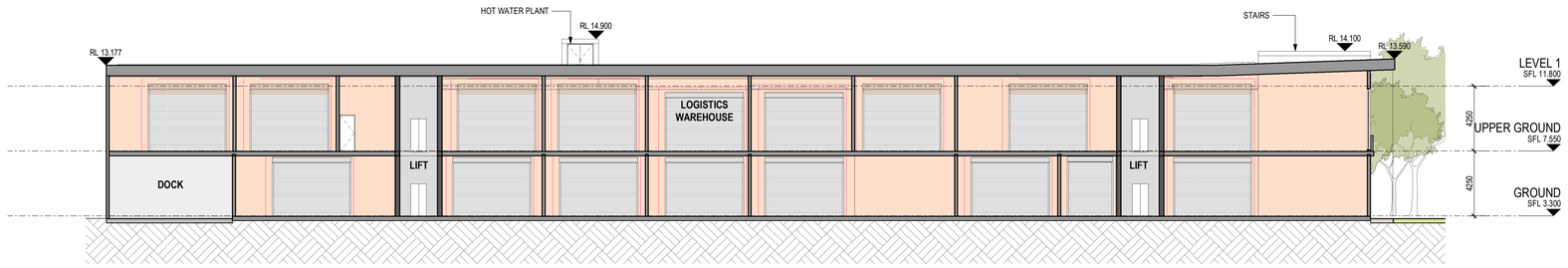

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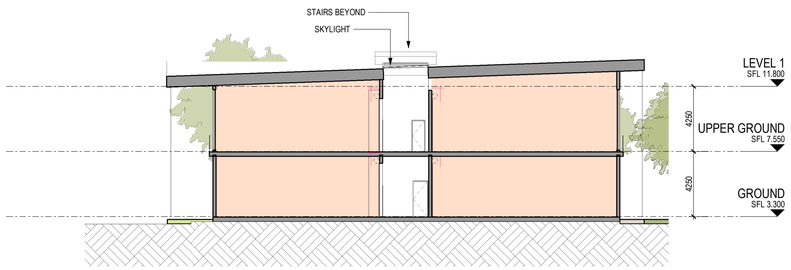

2 TP04.03 BUILDING 3 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions

P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:24 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 3**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.03 P5**

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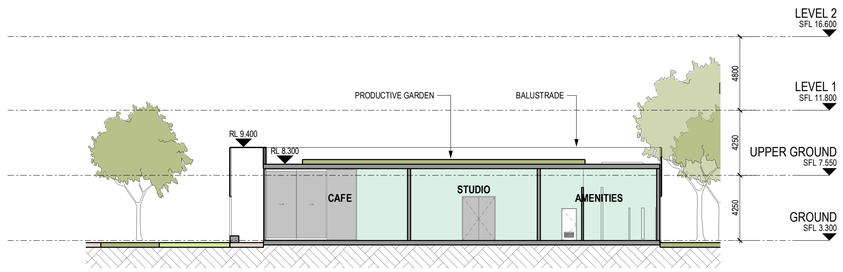

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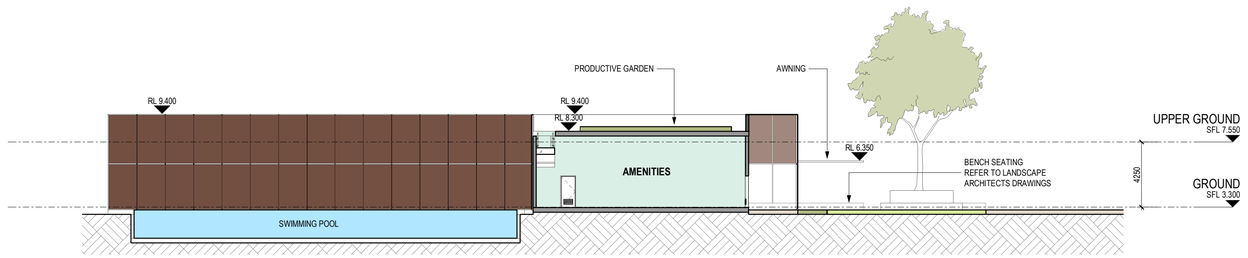

2 TP04.04 BUILDING 4 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions			
P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:32 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 4**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.04 P5**

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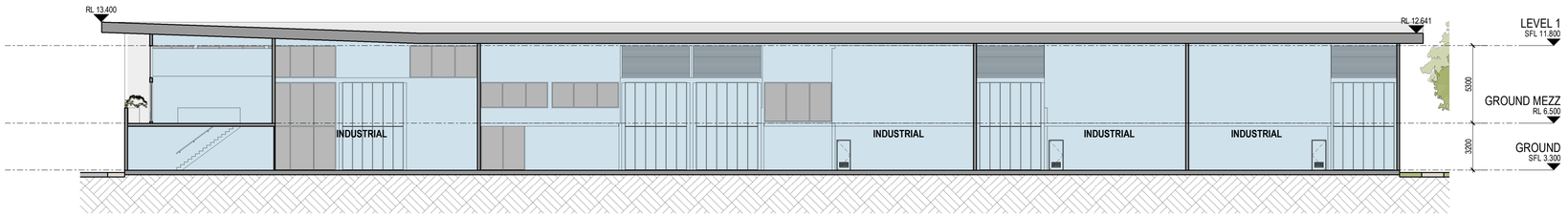

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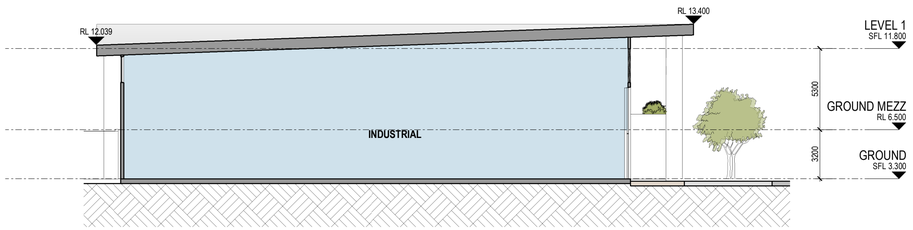
SCALE 1 : 200



2 TP04.05 BUILDING 5 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions

P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:40 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 5**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.05 P5**

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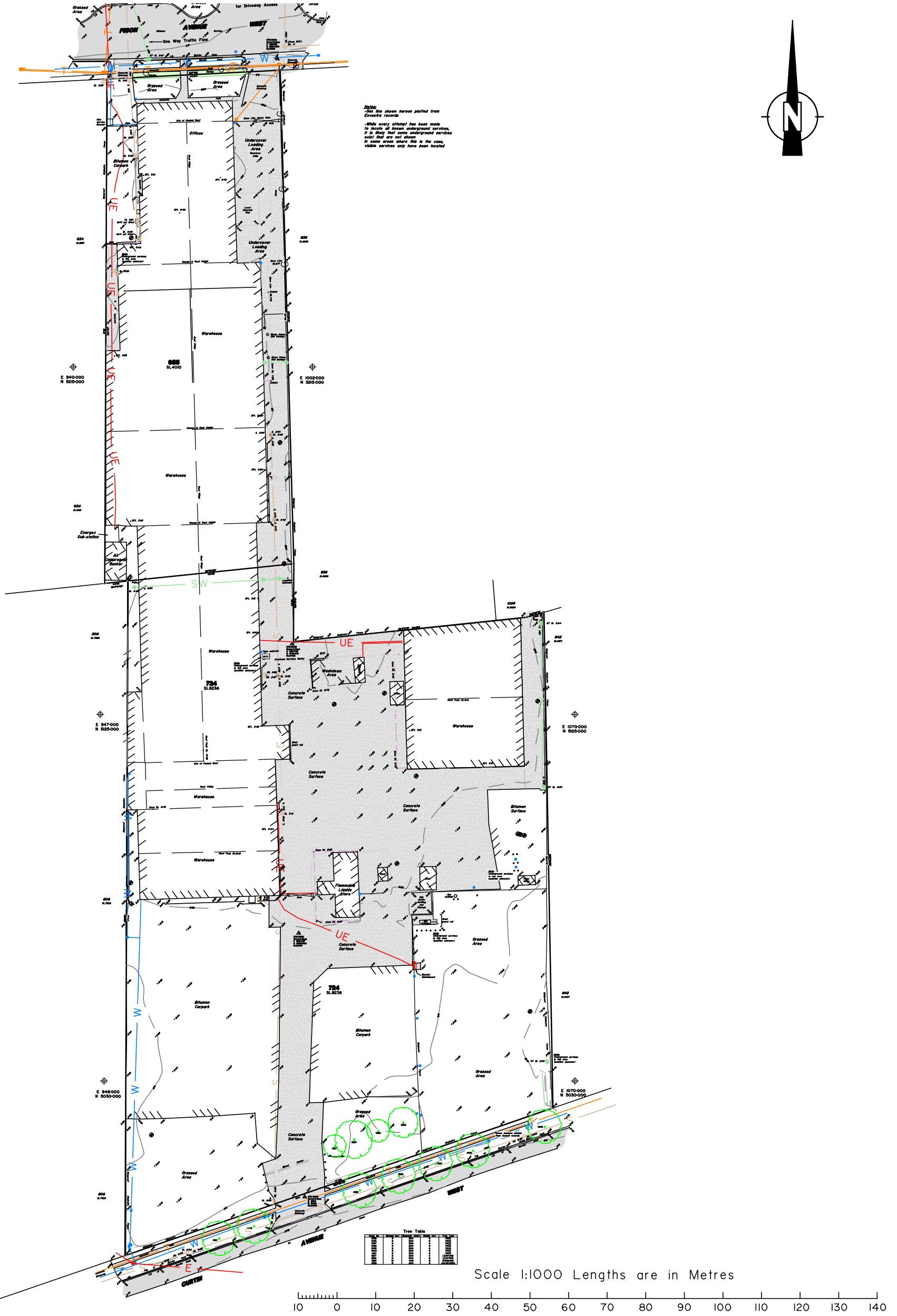
Appendix B – Survey Plan



Notes:
-Gas line shown hereon plotted from Envestra records

-While every attempt has been made to locate all known underground services, it is likely that some underground services exist that are not shown
In some areas where this is the case, visible services only have been located

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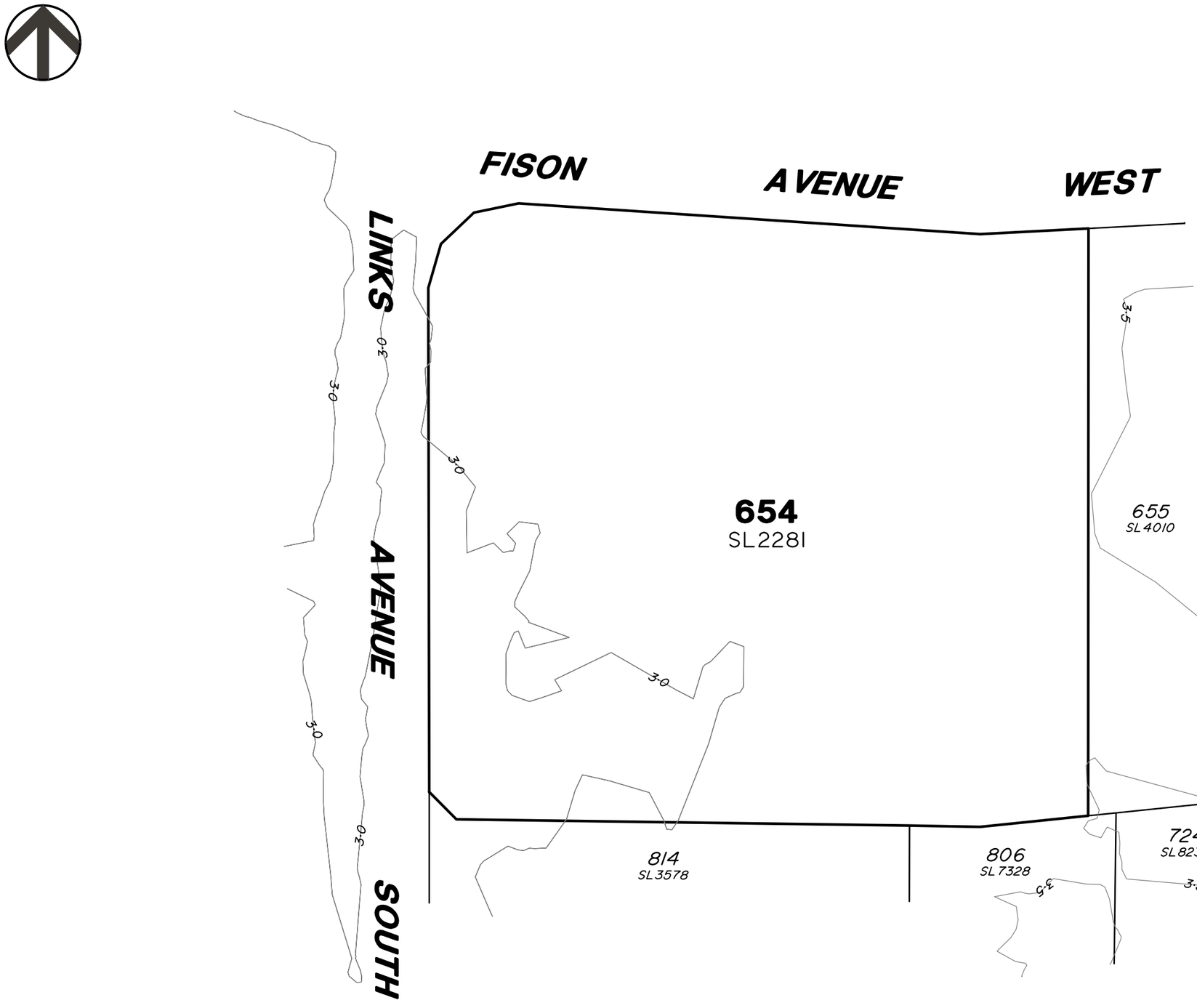
client: EPOCA Constructions Pty Ltd

project: 155 Fison Avenue West EAGLE FARM

drawing title: Overall Plan of Level and Detail Survey over Lot 655 on SL4010 and Lot 724 on SL8236

PARISH: *TOOMBUL* COUNTY: *Stanley*

horiz. datum: Cadastral
vert. datum: AHD PMI42475
drawn: GHJ 30/6/10
surveyed: GHJ 25/06/10
checked:
scale: 1:1000 A3
reference no: 14047-1 amdt



Scale 1:1000 Lengths are in Metres

10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

0 50m 50 mm 100m 100 mm 150m 150 mm SCALE BAR

110 Links Ave South Eagle Farm

For

Epoca Group Pty Ltd

IMPORTANT NOTES:
(These notes are an integral part of this plan)
This plan has been prepared for Epoca Group Pty Ltd for the purposes of Determining Natural Ground Level
It is not to be used by any other person or corporation or for any other purposes.

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Data Sources

Cadastral Boundaries	BCC City Plan 2000
Contours / Topographic	BCC City Plan 2000
Aerial Images	*
Flood Level	*
Engineering Design	*
Architectural Design	*
Landscape Design	*

Issue	Revisions	Date	Drawn
A	Original	16.10.2017	ELH

Locality:	Eagle Farm
Local Authority:	Brisbane City Council
Projection:	*
Horizontal Meridian:	BCC City Plan 2000
Vertical Level Datum:	AHD
Level Origin:	BCC City Plan 2000
Scale:	1:1000 @ A3
Surveyed:	*
Designed:	*
Drawn:	RCS 6/10/17
Checked:	ELH 16/10/17
Plot Date:	16 Oct, 2017
Computer File Ref:	32448-GP01-A Natural Ground Level.dwg

Plan of Natural Ground Level over Lot 654 on SL2281 110 Links Ave South Eagle Farm

BRISBANE (07) 3666 4700
WHITSUNDAYS (07) 4945 1722
MACKAY (07) 4951 2911
CAIRNS (07) 4051 6722

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Queensland Surveying Pty Ltd, a Veris Company

Drawing No	Issue
32448-GP01	A

N

E 940·000
N 5215·000

E 1002·000
N 5215·000

E 947·000
N 5125·000

E 1070·000
N 5125·000

655
SL4010

724
SL8236

724
SL8236

Full Height Windows
Door
BFL 3·51
Board Room
Reception
Office
Office
Sill Height 1·15m
Sill Height 1·15m
Office
Sill Height 1·15m
Office
Sill Height 1·3m
Computer
Office
BFL 3·49 Door
Dispatch
Sill Height 1·15m
Office
Sill Height 1·3m
Office
Stairs
Door BFL 3·51
Office
Sill Height 0·96m
Office
BFL 3·48
Roller Door
Sill Height 0·75m
Office
Note
Internal Office
• Partitions have a sill height of 0·96m unless otherwise noted
Sill Height 1·28m
Office
Note
Mezzanine Level above offices
See Diagram A
Women's Toilet
Door
Stairs
Stairs
Guard Rail
Men's Toilet
First Aid Room
Door
Cleaner
Safe
Fence
Roller Door
See Typical Section AA
Women's Toilet
Fence
End of Warehouse Roof
Fence
A
A
3·0
Roller Door
Stairs
Lunch Room Above
Line of Roof Peak
Men's Toilet
BFL 3·51
Roller Door
Kitchen?
Roller Door
3·0
Roller Door
See Typical Section BB
Boom Crane (Not Working)
B
B
Roller Door
Roller Door
BFL 3·53
Boom Crane (Not Working)
Line of Roof Peak
Roller Door
BFL 3·48
Spray Painting Area
Paint Room
Door
Roller Door
End of Warehouse Roof
End of Warehouse Roof
Roller Door
Line of Roof Peak
Roller Door
See Typical Section CC
C
C
BFL 3·49
Caged Store
BFL 3·51
BFL 3·52
End of Warehouse Roof
End of Warehouse Roof
Horizontal Beam RL 8·35
Roller Door
Door
Power Meter
Main Switchboard
Energex Sub-station
Roller Door
Air Compressor Bunker
See Typical Section DD
BFL 3·50
Roller Door
D
D
Roller Door
Line of Roof Peak
Roller Door
Lunch Room
Double Sliding Door
Block Wall
See Typical Section DD
Showers
Men's Toilet
Note:
Storage area above Amenities
D
D
Roller Door
Note
Mezzanine Level above
See Diagram B
Workshop
Stairs
Line of Roof Peak
Roller Door
BFL 3·49
Roller Door
Workshop
Roller Door
BFL 3·50
Office
BFL 3·49
End of Warehouse Roof
Underside of Horizontal Beam RL 7·67
Roller Door
E
E
Underside of I Beam RL 7·16
Underside of I Beam RL 6·95
Underside of I Beam RL 6·60
Underside of I Beam RL 6·60
Roller Door
Roller Door
Underside of I Beam RL 7·32
Fire Exit
Fire Exit
Roller Door Opening Height 5·7m
Roller Door Opening Height 3·5m
See Typical Section EE
BFL 3·40
Line of Roof Peak
Roller Door Opening Height 5·7m
Roller Door Opening Height 3·5m
BFL 3·40
Fire Exit
Ramp
Ramp
RL 3·3m
Fire Exit
3·65
Roller Door
E
E
Fa
Fb
2·56 Above Mezzanine Floor
Men's Toilet
Women's Toilet
Mezzanine Level 3·065 above Concrete Floor
Fire Exit
Clearance Under Mezzanine Level
2·45 to Underside of I-Beams
2·86 to Underside of Floor Joists
Stairs
Stairs
Office
See Section FF
Roller Door
BFL 3·51
Note
3·9m x 4·9m Lunchroom an Storage Above Offices
Fire Exit
Sill Height 0·9m
Door
Office
Sill Height 0·9m
Sill Height 1·1m
Sill Height 0·9m
Office
Office
Stairs
Door
BFL 3·51
Roller Door
Sill Height 0·9m
Door
Roller Door
Roller Door
Flammable Liquids Store
Shed
Shed
Shed

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vertical datum	horizontal datum	field book:
		level book:
origin	origin	drawn GJF 9/7/10
		surveyed GHJ
		checked

E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

revisions

drawing title

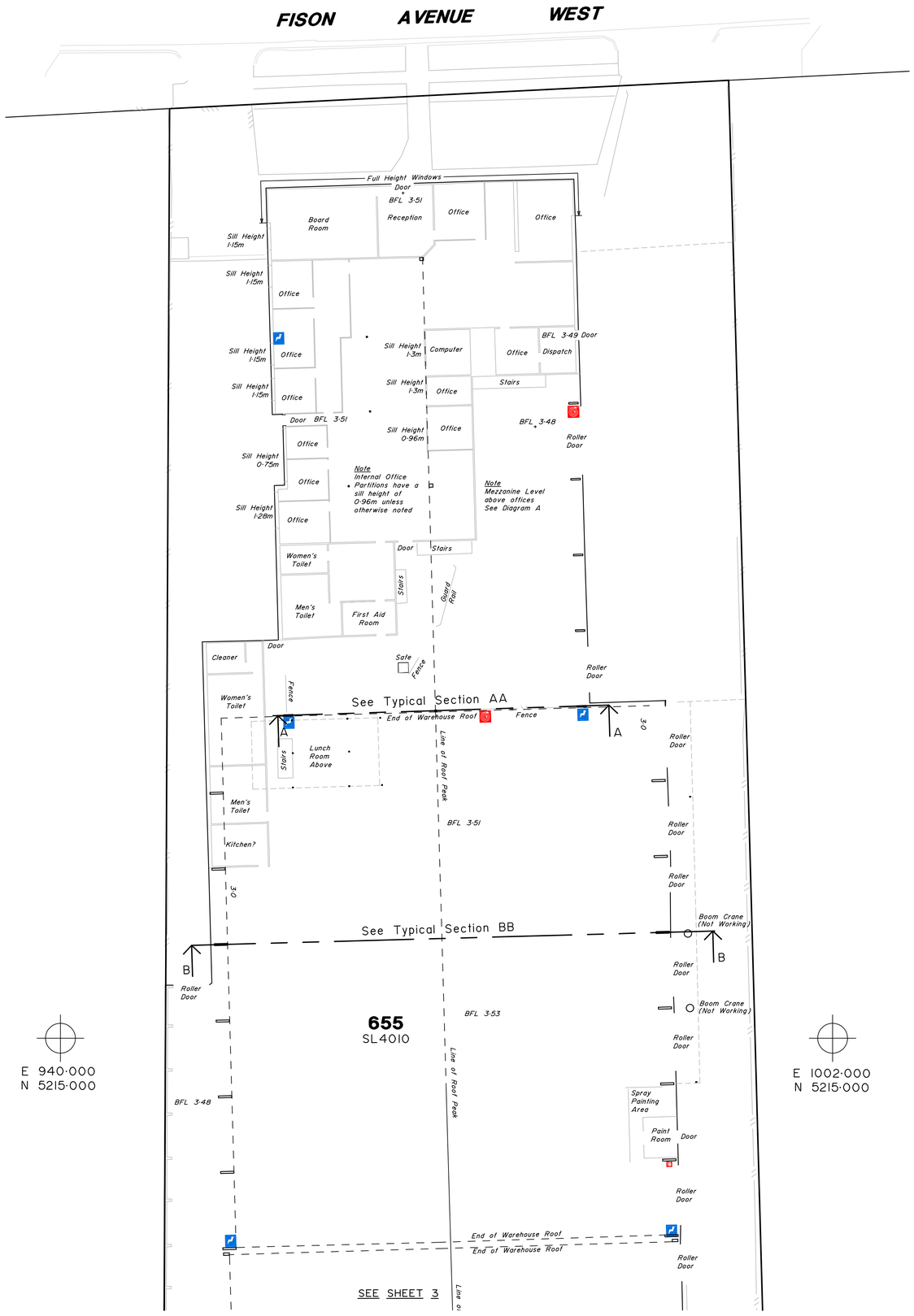
Plan of Internal Layout of Offices and Warehouse Areas

PARISH: COUNTY:

client
EPOCA Construction Pty Ltd

project
155 Fison Avenue West
EAGLE FARM

A1	scale 1:300	reference no 14047-2	amdt A



E 940·000
N 5215·000

E 1002·000
N 5215·000

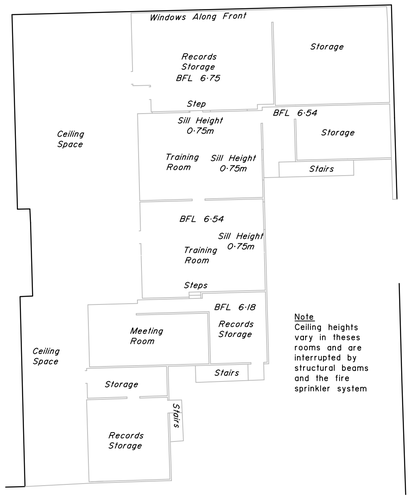
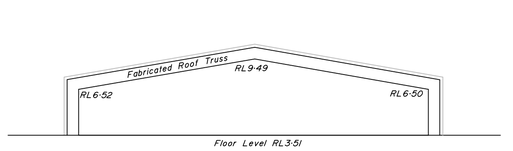
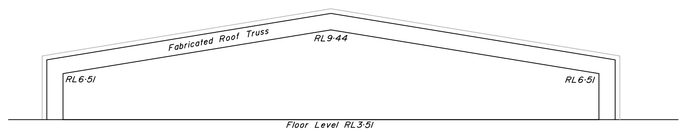


Diagram A
Mezzanine Level

TYPICAL WAREHOUSE SECTIONS



Typical Section AA



Typical Section BB

LEGEND

- Electrical Switchboard
- F — Fire Hydrant
- Fire Reel
- BFL 3·51 — Building Floor Level
- Switchboard Cabinet
- Internal Walls

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

Scale 1:200 Lengths are in Metres

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28

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client
EPOCA Construction Pty Ltd

project
155 Fison Avenue West
EAGLE FARM

drawing title
Plan of Internal Layout of Offices and Warehouse Areas

PARISH:
COUNTY:
Contour Interval:
field book: level book:
drawn GHJ
surveyed GHJ
checked

vertical datum	horizontal datum
AHD	
origin	origin
PM142475 RL3.267	

associated consultants

H			
G			
F			
E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

revisions

scale 1:200 — A1
reference no 14047-2 — amdt A

SEE SHEET 2

Roller Door

End of Warehouse Roof

End of Warehouse Roof

Roller Door

Line of Roof Peak

Roller Door

See Typical Section CC

C

C

BFL 3·49

Caged Store

BFL 3·52

BFL 3·51

End of Warehouse Roof

Horizontal Beam RL 8·35

End of Warehouse Roof

Door

Roller Door

Door

Power Meter

Energex Sub-station

Main Switchboard

Roller Door

Air Compressor Bunker

See Typical Section DD

BFL 3·52

Roller Door

D

D

Roller Door

Line of Roof Peak

Roller Door

Lunch Room

Double Sliding Door

Block Wall

See Typical Section DD

Showers

Note: Storage area above Amenities

D

D

Men's Toilet

Roller Door

724
SL8236

Note Mezzanine Level above See Diagram B

Workshop

Stairs

Roller Door

BFL 3·50

Office

BFL 3·49

End of Warehouse Roof
Underside of Horizontal Beam RL 7·67

BFL 3·49

Roller Door

Workshop

Roller Door

E 947·000
N 5125·000

Underside of I Beam RL 7·16

E

Underside of I Beam RL 6·95

Underside of I Beam RL 6·60

Underside of I Beam RL 6·60

Roller Door

Roller Door

Underside of I Beam RL 7·32

Fire Exit

Fire Exit

SEE SHEET 4

Store Room

Light Electric Crane

Floor Level RL 6·44

Stairs

Sill Height 0·9m

Lunch Room

Diagram B
Mezzanine Level

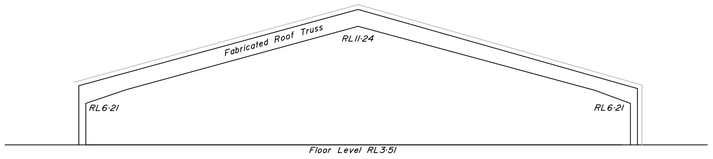
LEGEND

- Electrical Switchboard
- F — Fire Hydrant
- Fire Reel
- BFL 3·51 — Building Floor Level
- Switchboard Cabinet
- Internal Walls

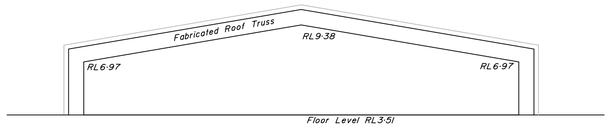
Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

724
SL8236

TYPICAL WAREHOUSE SECTIONS



Typical Section CC



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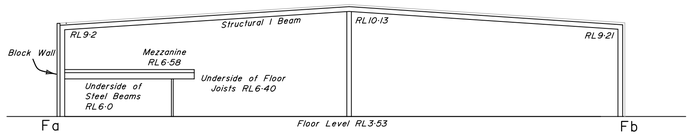

Section FaFb

Fa

2·56 Above Mezzanine Floor

Men's Toilet

Women's Toilet

Mezzanine Level 3·065 above Concrete Floor

Fire Exit

Clearance Under Mezzanine Level
2·45 to Underside of I-Beams
2·86 to Underside of Floor Joists

Stairs

Stairs

Office

See Section FF

Roller Door

BFL 3·51

Note 3·9m x 4·9m Lunchroom on Storage Above Offices

Sill Height 0·9m

Door

Office

Sill Height 0·9m

Sill Height 1·1m

Office

Sill Height 0·9m

Office

Stairs

Door

Sill Height 0·9m

Door

Roller Door

Fire Exit

BFL 3·51

Roller Door

Fb

E 1070·000
N 5125·000

Scale 1:200 Lengths are in Metres

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28

N

GOODWIN MIDSON

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Servicing Queensland with offices in:

BRISBANE	(07) 3870 2161
BOONAH	(07) 5463 1596
SUNSHINE COAST	(07) 5493 1707
HERVEY BAY	(07) 4125 1855

www.goodwinmidson.com.au

ISO 9001 FS 520784 Quality Assured Certification

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client

EPOCA Construction Pty Ltd

project

155 Fison Avenue West
EAGLE FARM

drawing title

Plan of Internal Layout of Offices and Warehouse Areas

PARISH:

COUNTY:

Contour Interval:

field book: level book:

drawn GHJ

surveyed GHJ

checked

vertical datum	horizontal datum
AHD	
origin PMI42472 RL3.267	origin

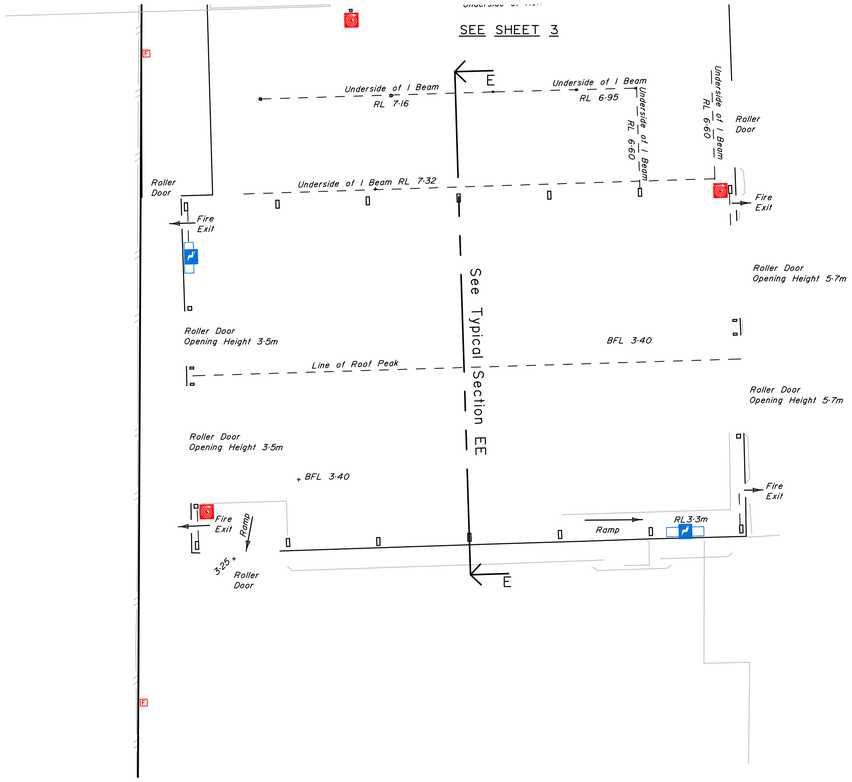
associated consultants

H			
G			
F			
E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

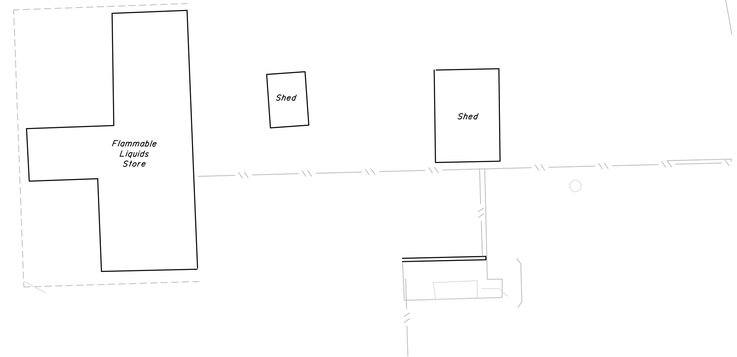
revisions

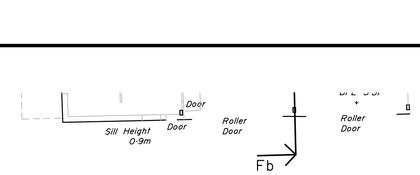
scale 1:200 A1

reference no 14047-2 amdt A



724
SL8236



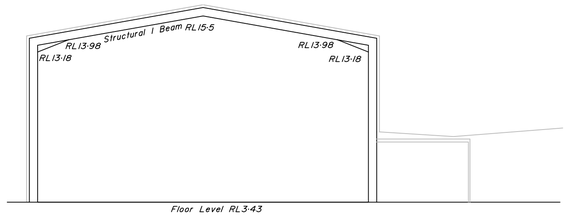


LEGEND

- Electrical Switchboard
- Fire Hydrant
- Fire Reel
- BFL 3·51 — Building Floor Level
- Switchboard Cabinet
- Internal Walls

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

TYPICAL WAREHOUSE SECTION



Typical Section EE

Scale 1:200 Lengths are in Metres

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28

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client
EPOCA Construction Pty Ltd

project
155 Fison Avenue West
EAGLE FARM

drawing title
Plan of Internal Layout of Offices and Warehouse Areas

PARISH:
COUNTY:
Contour Interval:
field book: level book:
drawn GHJ
surveyed GHJ
checked
vertical datum AHD
horizontal datum
origin PMI42475 RL3.267
origin
associated consultants

H			
G			
F			
E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

revisions

scale 1:200 A1
reference no 14047-2 amdt A

The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey. Services shown hereon have been located where possible by field survey. If not able to be located, services have been plotted from relevant authority records and have been noted accordingly on this plan.
Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

WARNING

This plan has been prepared from electronically generated data. The coordinates of well defined points will generally be within 20mm of their true position. The integrity of dimensions, scaled or deduced electronically for the design of structural elements should be verified in the field or with the authors.

LEGEND

- Bench Mark
- Station
- Electric Pole
- Electric Pole with Light
- Electrical Pit
- Telco Pillar
- Telco/Comms Pit
- Fire Hydrant
- Water Meter
- Water Tap
- Water Valve
- Sewer Manhole
- Sewer Inspection Opening
- Gully Trap
- Stormwater Manhole
- Gas Marker
- Gas Valve
- Sign
- Miscellaneous Manhole
- Post / Bollard
- Comms
- Electricity
- Fence
- Gas
- Sewerage
- Stormwater
- Telco
- Water

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

Contour Interval: 0.25M

FISON AVENUE

WEST AVENUE

SOUTH LINKS AVENUE

STN 3360 Nail E 762-339 N 5304-648 RL 2-786

SL 2-80 COULD NOT OPEN

SL 3-40 FULL COULD NOT GET DEPTH

STN 3359 Nail E 809-146 N 5301-575 RL 3-557

SL 3-31 RCP IL 0-81 SW 450ø

SL 3-03 IL 2-03 SW 450ø

SL 3-00 IL 0-00

Grassed Traffic Island

Kerb

Invert

STN 3380 Screw E 922-638 N 5303-599 RL 3-481

STN 3381 Screw E 865-408 N 5296-374 RL 3-285

Water lines plotted from council records

Bitumen Surface

Concrete Surface

Grassed

Area

Metal Warehouse

Workshops

Offices

Demountable

Garages

Transformer Sub Station

Ret Wall

Fence

Footpath

Kerb

Back of Kerb

Lip of Kerb

Concrete Path

Drain

Unable to Trace Line Further

Water line plotted from council records

Telstra Pillar

Grass

Footpath

Ramp

Floor RL4-06

Floor RL3-30

Floor RL3-25

Floor RL3-32

Floor RL3-34

STN 3372 Nail E 819-933 N 5269-013 RL 3-248

STN 3373 Nail E 858-085 N 5271-339 RL 3-191

STN 3374 Nail E 882-551 N 5283-097 RL 3-407

STN 3377 Nail E 821-728 N 5231-654 RL 3-048

STN 3362 Nail E 796-329 N 5227-544 RL 2-869

STN 3364 Nail E 837-726 N 5223-946 RL 3-686

STN 3378 Nail E 904-997 N 5271-416 RL 3-275

STN 3379 Nail E 936-150 N 5267-742 RL 3-172

STN 3375 Nail E 941-994 N 5228-686 RL 3-323

654 SL2281

Scale 1:250 Lengths are in Metres

12.5m 50mm | 25m 100mm | 37.5m 150mm SCALE BAR

110 Links Ave South
Eagle Farm
For
Epoca Group Pty Ltd

IMPORTANT NOTES:
(These notes are an integral part of this plan)
This plan has been prepared for Epoca Group Pty Ltd for the purposes of Level and Detail survey.
It is not to be used by any other person or corporation or for any other purposes.

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Data Sources	
Cadastral Boundaries	-
Contours / Topographic	Survey
Aerial Images	-
Flood Level	-
Engineering Design	-
Architectural Design	-
Landscape Design	-

Issue	Revisions	Date	Drawn
A	Original	16.10.2017	ELH

Locality:	Eagle Farm
Local Authority:	Brisbane City Council
Projection:	-
Horizontal Meridian:	SP249195
Vertical Level Datum:	AHD
Level Origin:	PM142475 RL 3.267
Scale:	1:250 @ A1
Surveyed:	JM 25-08-2017
Designed:	-
Drawn:	RCS 30-09-2017
Checked:	ELH 16-10-2017
Plot Date:	17 Oct, 2017
Computer File Ref:	32448-DS01-A.dwg

Plan of Level and Detail survey over
Lot 654 on SL2281
110 Links Ave South
Eagle Farm

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WHITSUNDAYS (07) 4945 1722
MACKAY (07) 4951 2911
CAIRNS (07) 4051 6722
veris.com.au
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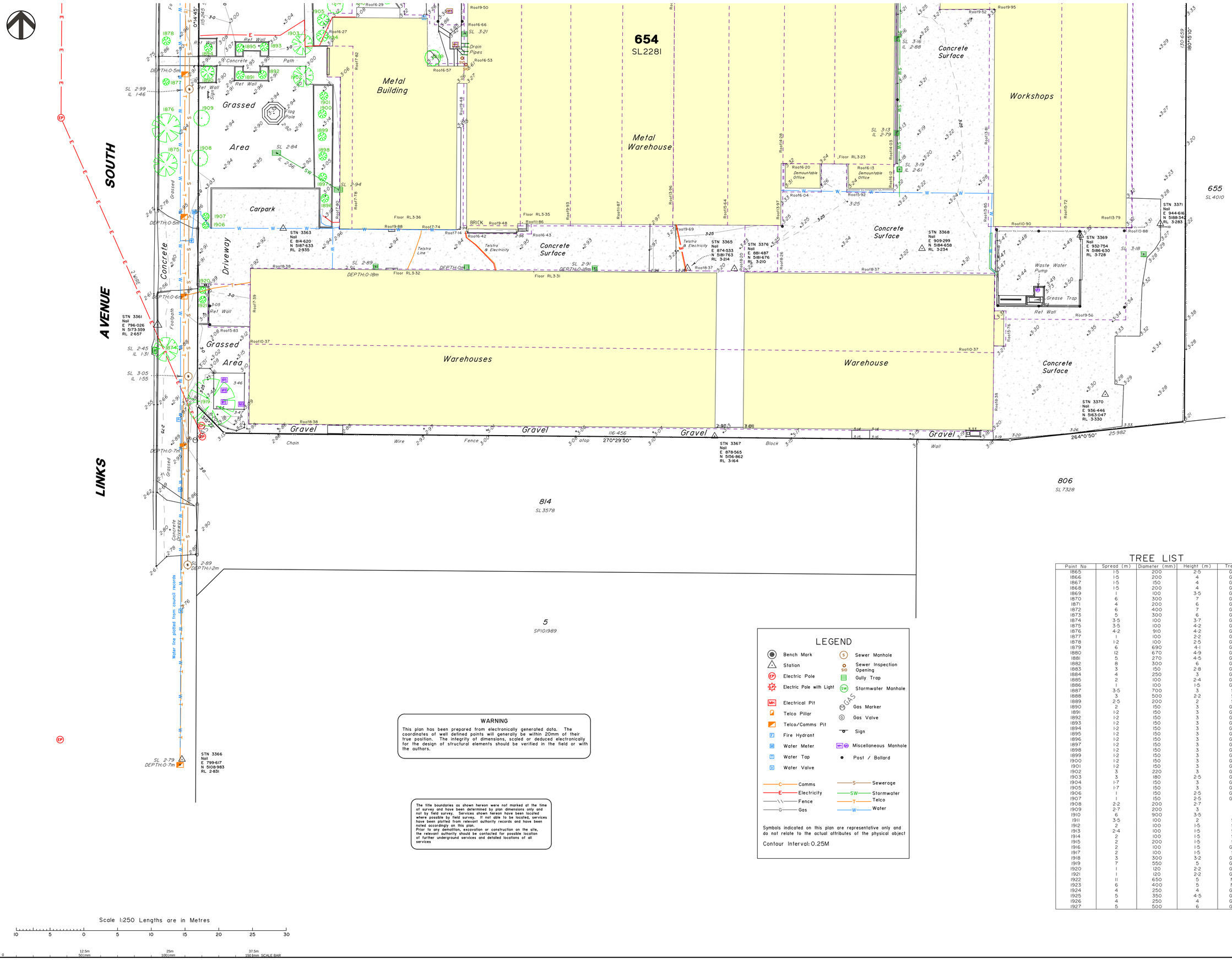
Queensland Surveying Pty Ltd, a Veris Company

Drawing No 32448-DS01 Sht 1 | Issue A



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LEGEND

- Bench Mark
- Station
- Electric Pole
- Electric Pole with Light
- Electrical Pit
- Telco Pillar
- Telco/Comms Pit
- Fire Hydrant
- Water Meter
- Water Tap
- Water Valve
- Sewer Manhole
- Sewer Inspection Opening
- Gully Trap
- Stormwater Manhole
- Gas Marker
- Gas Valve
- Sign
- Miscellaneous Manhole
- Post / Bollard

C Comms	S Sewerage
E Electricity	SW Stormwater
Fence	T Telco
G Gas	W Water

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

Contour Interval: 0.25M

Scale 1:250 Lengths are in Metres

10 5 0 5 10 15 20 25 30

0 12.5m 50 mm 25m 100 mm 37.5m 150 mm SCALE BAR

TREE LIST

Point No	Spread (m)	Diameter (mm)	Height (m)	Tree Type
1865	1-5	200	2-5	General
1866	1-5	200	4	General
1867	1-5	150	4	General
1868	1-5	200	4	General
1869	1	100	3-5	General
1870	6	300	7	General
1871	4	200	6	General
1872	6	400	7	General
1873	5	300	6	General
1874	3-5	100	3-7	General
1875	3-5	100	4-2	General
1876	4-2	910	4-2	General
1877	1	100	2-2	General
1878	1-2	100	2-5	General
1879	6	690	4-1	General
1880	12	670	4-9	General
1881	5	270	4-5	General
1882	8	300	6	General
1883	3	150	2-8	General
1884	4	250	3	General
1885	2	100	2-4	General
1886	1	100	1-5	General
1887	3-5	700	3	Shrub
1888	3	500	2-2	Shrub
1889	2-5	200	2	Shrub
1890	2	150	3	General
1891	1-2	150	3	General
1892	1-2	150	3	General
1893	1-2	150	3	General
1894	1-2	150	3	General
1895	1-2	150	3	General
1896	1-2	150	3	General
1897	1-2	150	3	General
1898	1-2	150	3	General
1899	1-2	150	3	General
1900	1-2	150	3	General
1901	1-2	150	3	General
1902	3	220	3	General
1903	3	180	2-5	General
1904	1-7	150	3	General
1905	1-7	150	3	General
1906	1	150	2-5	General
1907	1	150	2-5	General
1908	2-2	200	2-7	Pine
1909	2-7	200	3	Pine
1910	6	900	3-5	Pine
1911	3-5	100	2	Shrub
1912	2	100	1-5	Shrub
1913	2-4	100	1-5	Shrub
1914	2	100	1-5	Shrub
1915	2	200	1-5	Shrub
1916	2	100	1-5	General
1917	2	100	1-5	Shrub
1918	3	300	3-2	General
1919	7	550	5	General
1920	1	120	2-2	General
1921	1	120	2-2	General
1922	11	650	5	Native
1923	6	400	5	Native
1924	4	250	4	General
1925	5	350	4-5	General
1926	4	250	4	General
1927	5	500	6	General

110 Links Ave South
Eagle Farm
For
Epoca Group Pty Ltd

IMPORTANT NOTES:
(These notes are an integral part of this plan)
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Data Sources

Cadastral Boundaries	-
Contours / Topographic	Survey
Aerial Images	-
Flood Level	-
Engineering Design	-
Architectural Design	-
Landscape Design	-

Issue	Revisions	Date	Drawn
A	Original	16.10.2017	ELH

Locality:	Eagle Farm
Local Authority:	Brisbane City Council
Projection:	-
Horizontal Meridian:	SP249195
Vertical Level Datum:	AHD
Level Origin:	PM142475 RL 3.267
Scale:	1:250 @ A1
Surveyed:	JM 25-08-2017
Designed:	-
Drawn:	RCS 30-09-2017
Checked:	ELH 16-10-2017
Plot Date:	17 Oct, 2017
Computer File Ref:	32448-DS01-A.dwg

Plan of Level and Detail survey over
Lot 654 on SL2281
110 Links Ave South
Eagle Farm

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ACN 604 671 374
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Drawing No 32448-DS01 Sht 2
Issue A

Appendix C – Civil Design Drawings

LEGEND

- SITE BOUNDARY
- EXISTING PROPERTY BOUNDARY
- EASEMENT BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS)
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- ExSW — EXISTING STORMWATER
- ExS — EXISTING SEWERAGE
- ExW — EXISTING WATER
- ExT — EXISTING TELSTRA
- ExG — EXISTING GAS
- ExOH — EXISTING OVERHEAD ELECTRICITY
- ExE — EXISTING UNDERGROUND ELECTRICITY
- SWD — PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED DRAINAGE MH
- PROPOSED BIOPOD
- RL XXX — BIOPOD FILTER SURFACE LEVEL

DRAINAGE NOTES

1. ALL SURFACE DRAINAGE PIPES ARE uPVC SN8 UNLESS NOTED OTHERWISE.
2. ALL uPVC PIPE CONNECTIONS ARE BENDS AND ARE TO BE CONSTRUCTED USING PRODUCTS READILY AND CURRENTLY AVAILABLE ON THE MARKET.
3. REFER HYDRAULICS DESIGN DRAWINGS FOR DETAILS OF ROOFWATER PIPES.
4. ROOFWATER CONNECTIONS TO BE 1.2m FROM PROPERTY BOUNDARY UNLESS NOTED OTHERWISE.
5. ROOFWATER DRAINAGE LINES TO BE 0.6m OFFSET FROM REAR AND SIDE BOUNDARIES UNLESS SHOWN OTHERWISE
6. ALL ROOFWATER PIPES ARE Ø150mm uPVC UNLESS NOTED OTHERWISE.
7. ALL SETTING OUT IS THE RESPONSIBILITY OF THE CONTRACTOR. PRIOR TO WORKS COMMENCING ON SITE, THE SUPERINTENDENT'S SURVEYOR SHALL PEG ALL ALLOTMENT BOUNDARIES, PROVIDE COORDINATE INFORMATION TO THESE PEGS AND PLACE BENCH MARKS. THE CONTRACTOR SHALL SET OUT THE WORKS FROM AND MAINTAIN THESE PEGS.
8. THE CONTRACTOR IS TO CONFIRM THE LOCATION OF SERVICE CONDUITS WITH THE SUPERINTENDENT PRIOR TO LAYING STORMWATER DRAINAGE. ALL TRENCH EXCAVATION AND CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 2011.
9. REMOVE ANY REDUNDANT DRAINAGE OUTLETS FROM THE KERB AND CHANNEL INCLUDING ANY ASSOCIATED PIPE WORK ACROSS THE FOOTWAY AND REINSTATE THE KERB AND CHANNEL AND THE FOOTWAY AREA IN ACCORDANCE WITH THE COUNCIL GUIDELINES.

FOR APPROVAL

REV	DESCRIPTION	DATE	DRAWN	REVIEWED
B	REISSUED FOR APPROVAL	22.11.21	EG	NR
A	ISSUED FOR APPROVAL	15.01.21	EG	NR

NORTH POINT:

ARCHITECT: ROTHELOWEMAN

CLIENT: KING FISO & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L

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ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359
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SCALE BARS: 0 9 18 24 36m
SCALE 1:750 @ A1

PROJECT: PROPOSED DEVELOPMENT EAGLE FARM PRECINCT STAGE 1

DRAWING TITLE: STORMWATER LAYOUT PLAN

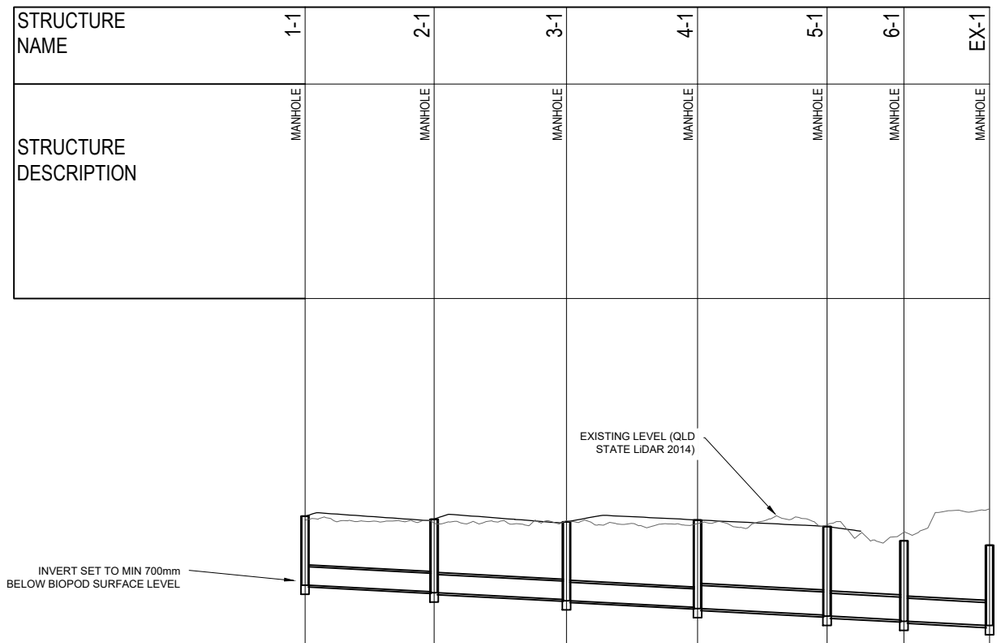
DESIGNED:

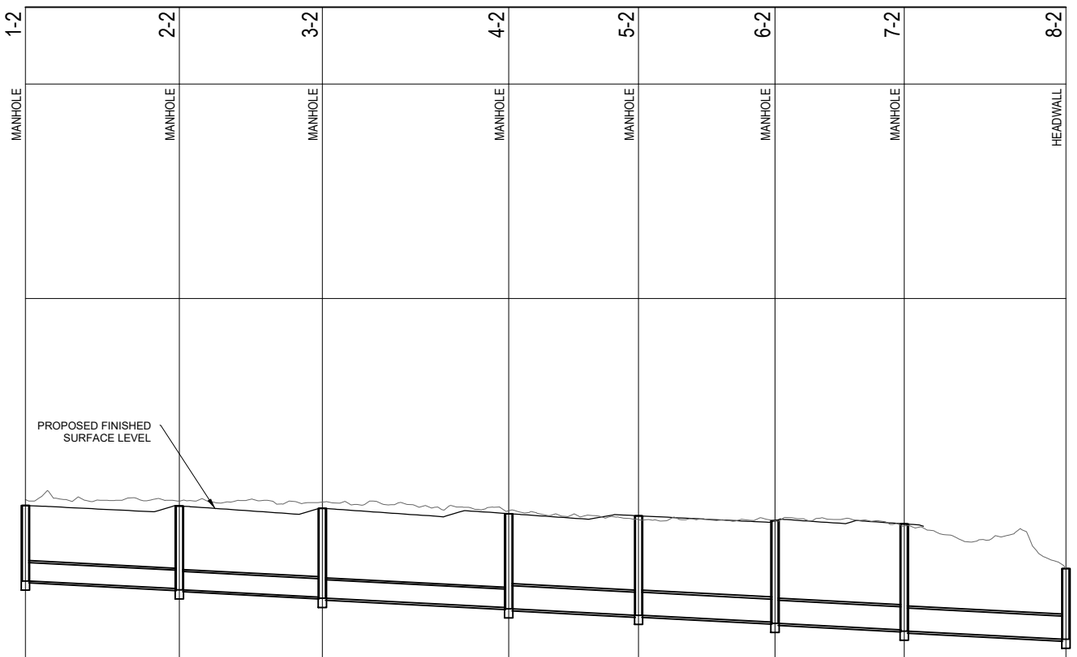
JOB No. 9914

DWG. No. 300

REVISION B

C:\Users\KYONG~1\~1\~1\AppData\Local\Temp\AcPublish_16756\[9914_300 - Stormwater Layout Plan.dwg]





STRUCTURE NAME	1-1	2-1	3-1	4-1	5-1	6-1	EX-1
STRUCTURE DESCRIPTION	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE
PIPE SIZE (mm)		300	300	300	375	375	375
PIPE CLASS		2	2	2	2	2	2
PIPE GRADE (%)		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
PIPE SLOPE (1 in X)		200.00	200.00	200.00	200.00	200.00	200.00
FULL PIPE VELOCITY (m/s)							
PART FULL VELOCITY (m/s)							
DATUM RL		-5.0					
DEPTH TO INVERT	1.124	1.181	1.201	1.267	1.287	1.423	1.443	1.443	1.463	1.290	1.310	1.309	1.309
INVERT LEVEL OF DRAIN	2.028	1.923	1.903	1.795	1.775	1.668	1.648	1.542	1.522	1.460	1.440	1.370	1.370
DESIGN SURFACE LEVEL	3.152	3.103	3.062	3.091	2.986	2.750	2.679
SETOUT COORDINATES	E 508849.249 N 6965102.376	E 508852.334 N 6965123.207	E 508855.498 N 6965144.576	E 508858.625 N 6965165.697	E 508861.719 N 6965186.595	E 508868.065 N 6965197.427	E 508876.573 N 6965208.500
RUNNING CHAINAGE	0.000	21.058	21.058	21.603	42.661	21.351	64.012	21.125	85.137	12.555	97.692	13.964	111.656
LINE	1												

STRUCTURE NAME	1-2	2-2	3-2	4-2	5-2	6-2	7-2	8-2
STRUCTURE DESCRIPTION	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	MANHOLE	HEADWALL
PIPE SIZE (mm)		300	300	300	375	375	375	375
PIPE CLASS		2	2	2	2	2	2	2
PIPE GRADE (%)		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
PIPE SLOPE (1 in X)		200.00	200.00	200.00	201.90	198.23	200.00	200.00
FULL PIPE VELOCITY (m/s)								
PART FULL VELOCITY (m/s)								
DATUM RL		-5.0						
DEPTH TO INVERT	1.232	1.349	1.369	1.447	1.467	1.531	1.551	1.621	1.621	1.654	1.674	1.727	1.747	1.152	1.152
INVERT LEVEL OF DRAIN	2.097	1.971	1.951	1.835	1.815	1.662	1.642	1.558	1.538	1.425	1.405	1.300	1.280	1.148	1.148
DESIGN SURFACE LEVEL	3.329	3.320	3.282	3.194	3.159	3.080	3.027	2.300
SETOUT COORDINATES	E 508840.812 N 6965046.026	E 508837.128 N 6965021.199	E 508833.714 N 6964998.140	E 508829.259 N 6964968.050	E 508826.216 N 6964947.054	E 508822.698 N 6964925.096	E 508819.811 N 6964904.247	E 508816.245 N 6964878.119
RUNNING CHAINAGE	0.000	25.099	25.099	23.311	48.410	30.418	78.828	21.172	100.000	22.250	122.250	21.076	143.326	26.370	169.696
LINE	2														

FOR APPROVAL

REV	DESCRIPTION	DATE	DRAWN	REVIEWED
B	REISSUED FOR APPROVAL	22.11.2021	EG	NR
A	ISSUED FOR APPROVAL	15.01.21	EG	NR

NORTH POINT:

ARCHITECT: ROTHELOWEMAN

CLIENT: KING FISO & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L

Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359
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SCALE BARS: 0 2 4 6m
SCALE 1:100 @ A1

PROJECT: PROPOSED DEVELOPMENT EAGLE FARM PRECINCT STAGE 1

DRAWING TITLE: STORMWATER LONG SECTIONS

DESIGNED:

9914 JOB No.

310 DWG. No.

B REVISION

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Appendix D – Brisbane City Council Codes

Project Location: 110 Links Avenue South, 155, 161 Fison Avenue West and 364 Curtin Avenue West Job Reference: 9914

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
Section B—If accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development other than for a dwelling house or reconfiguring a lot Note—If development that is accepted development subject to compliance with identified requirements complies with the acceptable outcomes of this part, no further assessment against this code is required.				
PO3 Development: a) is compatible with flood hazard in a defined flood event; b) minimises the risk to people from flood hazard; c) does not reduce the ability of evacuation resources including emergency services to access and evacuate the site in a flood emergency, with consideration to the scale of the development; d) minimises impacts on property from flooding; e) minimises disruption to residents, business or site operations and recovery time due to flooding; f) minimises the need to rebuild structures after a flood event greater than the defined flood event.	**AO3** Development for a material change of use is identified in Table 8.2.11.3.C as compatible with the flood hazard in the relevant flood planning area.	**AO**	The development is compatible with flood hazard in a defined flood event and minimises the risk to people from flood hazard. Emergency access and evacuation routs have been considered. The development does not cause impacts of flooding on surrounding properties.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
Note—Where Table 8.2.11.3.C identifies that a flood risk assessment is required, compliance with this performance outcome can be achieved by submitting a flood risk assessment, which may be included within a flood study, addressing the criteria within this performance solution. Preparing flood risk assessments and flood studies is required to be in accordance with the Flood planning scheme policy. Note—An emergency management plan prepared in accordance with the Flood planning scheme policy, which sets out procedures for evacuation due to flooding may be used to demonstrate compliance with this performance outcome.				
PO4 Development for a park ensures that the design of a park and location of structures and facilities responds to the flood hazard and	**AO4.1** Development involving a building or structure in a park complies with the flood planning levels specified in Table 8.2.11.3.D.	**N/A**	The development does not involve a park	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
balances the safety of intended users with: a) maintaining continuity of operations; b) impacts of flooding on asset life and ongoing maintenance costs; c) efficient recovery after flood events; d) recreational benefits to the city; e) availability of suitable land within the park.	**AO4.2** Development involving a building or structure in a park where Table 8.2.11.3.D does not apply: a) is not located within the 20% AEP flood extent of any creek/waterway or overland flow path; or b) is located above the 20% AEP flood level of any creek/waterway or overland flow path.	**N/A**	The development does not involve a park	
Section C—If for assessable development other than for a dwelling house				
PO5 Development is located and designed to: a) minimise the risk to people from flood hazard on the site; b) minimise flood damage to the development and contents of buildings up to the defined flood event; c) provide suitable amenity; d) minimise disruption to residents, recovery time and the need to rebuild structures after a flood event up to and including the defined flood event.	**AO5.1** Development complies with the flood planning levels specified in Table 8.2.11.3.D. Note—If located in an area with no Council-derived flood levels such as an overland flow path, a Registered Professional Engineer Queensland with expertise in undertaking flood studies is to derive the applicable flood level and certify that the development meets the required flood planning levels in Table 8.2.11.3.D. The study is to demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.	**AO**	The proposed development complies with the flood planning levels specified in Table 8.2.11.3.D. The building finished floor levels have been set from 3.25m AHD up to 3.5m AHD, therefore exceed the minimum panning levels.	
	AO5.2 Development is:	**AO**	The development will not be within any of the listed sub-categories.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
	a) not located in the: (i) Brisbane River flood planning area 1, 2a, or 2b sub-categories; (ii) Creek/waterway flood planning area 1 or 2 sub-categories; (iii) Overland flow flood planning area sub-category; or b) only located in these sub-categories if a Registered Professional Engineer Queensland with expertise in undertaking flood studies certifies that: (i) the development design, siting and any mitigation measures will ensure the development is structurally adequate to resist hydrostatic, hydrodynamic and debris impact loads associated with flooding up to the defined flood event; and (ii) the risk to people is managed to an acceptable level.		The development will adhere to these conditions.	
PO6 Development involving essential electrical services or a basement storage area is suitably located and designed to ensure public safety and minimise flood recovery and economic consequences of damage during a flood.	**AO6.1** Development ensures that: a) all areas containing essential electrical services comply with the flood planning levels in Table 8.2.11.3.D; or b) if a basement contains essential electrical services or a private basement storage area, the basement is a waterproof structure with walls and floors impermeable to the passage of water with all entry points and	**AO**	Any essential electrical services are to be complied with the flood planning areas specified in the flood overlay code.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
	services located at or above the relevant flood planning level in Table 8.2.11.3.D. Note—A basement storage area does not include a bike storage room, change room, building maintenance storage and non-critical electrical services.			
	AO6.2 Development involving a basement that relies on a pumping solution to manage floodwater ingress or for dewatering after a flood provides a secondary pump system with a backup power source for the pump.	**N/A**	The development does not involve a basement.	
PO7 Development does not directly or indirectly create a material adverse impact on flood behaviour or drainage on properties that are upstream, downstream or adjacent to the development.	**AO7.1** Development: a) does not block, or divert floodwaters for any area affected by creek/waterway or overland flow flooding, excluding storm-tide flooding and Brisbane River flooding sources; or b) does not result in a material increase in flood level or hydraulic hazard on upstream, downstream or adjacent properties. Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the	**AO**	The development does not directly or indirectly create a material adverse impact on flood behaviour or drainage on properties that are upstream, downstream or adjacent to the development.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
	principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.			
	AO7.2 Development retains existing overland flow paths and does not rely wholly on piped solutions to manage major flows.	**N/A**	The development does not contain any overland flow paths.	
	AO7.3 Development which creates a new overland flow path or significantly modifies an existing overland flow path via earthworks does not materially worsen hydraulic hazard on the site from existing conditions. Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.	**N/A**		
PO8 Development for filling or excavation in an area affected by creek/waterway flooding does not directly, indirectly or cumulatively cause any material increase in	**AO8** Development ensures that no filling or excavation greater than 100mm is located in the Creek/waterway flood planning area 1, 2 or 3 sub-categories if contained in the 5% AEP flood extent of any Creek/waterway	**N/A**	The site is not affected by creek/waterway flooding.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
flooding or hydraulic hazard or involve significant redistribution of flood storage from high to lower areas in the floodplain. Note—This can be demonstrated by undertaking earthworks in compliance with the Compensatory earthworks planning scheme policy. Note—This part of the code applies to all development other than a dwelling house and any secondary dwelling which involves filling or excavation, whether or not the development application comprises a separate development application for operational work involving filling or excavation.	flood planning area sub-category for which no waterway corridor has been mapped in the Waterway corridors overlay.			
PO9 Development ensures that the building and site design: a) maintains the conveyance capacity of existing overland flow paths and creek/waterways; b) ensures floodwaters and flood debris can pass predominantly unimpeded under a structure or building to minimise property or	**AO9.1** Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub-category: a) complies with the minimum building undercroft clearance requirements in Table 8.2.11.3.E; b) not located directly above any part of a waterway corridor as mapped in the Waterway corridors overlay.	**N/A**	The development will not involve a building undercroft.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
building damage, including for a flood larger than the defined flood event; c) mitigates flood impacts by ensuring that filling, excavation and location of services are designed to allow for the conveyance of floodwater across the site. Note—The Flood planning scheme policy provides guidance on relevant considerations in determining minimum undercroft clearances and treatment of ground level in undercroft areas where floodwater conveyance is required underneath development.	**AO9.2** Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub category: (a) has a ground level within the undercroft area that is free draining; (b) does not involve excavation below ground level of more than 300mm within the undercroft area.	**N/A**	The development will not involve a building undercroft.	
PO10 Development for vulnerable uses, difficult to evacuate uses or assembly uses optimises vehicular access and efficient evacuation from the development to parts of the road network unaffected by flood hazard, in order to: a) protect safety of users and emergency services personnel;	**AO10** Development for vulnerable uses, difficult to evacuate uses or assembly uses: a) is not isolated in any event up to the relevant flood planning level specified in Table 8.2.11.3.L; or b) has direct vehicle access to a critical route or interim critical route in the Critical infrastructure and movement network overlay for evacuation in a flood; or c) can achieve vehicular evacuation to a suitable flood-free location.	**N/A**	The development is not for vulnerable, difficult to evacuate or assembly uses.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
b) support efficient emergency services access and site evacuation with consideration to the scale of development. Note—A flood risk assessment may be required to address the performance outcomes or acceptable solutions which deal with evacuation and isolation arrangements, and the ability to take refuge. The Flood planning scheme policy provides information for undertaking flood risk assessments.	Note—A suitable flood-free location is of a size and nature sufficient to provide for the size and characteristics of the population likely to need evacuation to that area.			
PO11 Development has access which, having regard to hydraulic hazard, provides for safe vehicular and pedestrian movement and emergency services access to adjoining roads.	**AO11.1** Development provides an access or driveway into the site which is: a) trafficable during the defined flood event; b) not located in the Creek/waterway flood planning area 1 sub-category; c) not located in the Overland flow flood planning area sub-category if the hydraulic hazard is unsafe in the defined flood event; d) the access or driveway is not inundated by a 10% AEP flood.	**AO**	The existing access is trafficable during the defined flood event and complies with the acceptable outcomes listed.	
	AO11.2 Development located in the Creek/waterway flood planning area 1, 2, 3 or 4 sub-categories locates any disabled access in the highest part of the site.	**N/A**	The development is not located within these sub-categories.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
	Note—explanation of hydraulic hazard provided in the Flood planning scheme policy.			
PO12 Development involving a new road, a bridge or culvert is designed to minimise impacts to flood behaviour, minimise disruption to traffic during a flood and allow for emergency access.	**AO12** Development involving a new road complies with the flood planning levels in Table 8.2.11.3.F.	**N/A**	The development does not involve a new road.	
PO13 Development for pedestrian and cyclist paths: a) provides a suitable level of trafficability; b) manages the impacts of flooding on asset life and ongoing maintenance costs; c) balances route availability with recreational and transport connectivity benefits to the city.	**AO13.1** Development for cyclist and pedestrian facilities other than on public roads, including those traversing through a park and adjacent to a watercourse and overland flow path, are located above the 39% AEP (2 year ARI) flood immunity from all flooding sources. Note—If the site is subject to more than one type of flooding, the requirement that affords the greatest level of protection will apply.	**N/A**	The development does not involve cyclist and pedestrian facilities.	
	AO13.2 All new on-road cyclist and pedestrian facilities comply with the flood planning levels and trafficability standards for the applicable category of road in Table 8.2.11.3.F or Table 8.2.11.3.K.	**N/A**	The development does not involve cyclist and pedestrian facilities.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
PO14 Development which increases the residential population within the Brisbane River flood planning area sub-categories minimises the risk to people in all flood events with consideration to flood hazard, including warning time.	**AO14** Development in the Brisbane River flood planning area sub-categories in areas where the residential flood level is greater than 12.8m AHD involving: a) an increase in the number of residential dwellings; or b) additional residential lots is not subject to an unsafe hydraulic hazard in the 0.2% AEP flood event. Note—Explanation of a hydraulic hazard is provided in the Flood planning scheme policy.	**N/A**	The development is not located within this sub-category.	
Additional performance outcomes and acceptable outcomes for essential community infrastructure				
PO15 Development involving essential community infrastructure: a) remains functional to serve community need during and immediately after a flood event, or is part of a network that is able to maintain the function of the essential community infrastructure when parts of the development are unable to function during or after a flood; b) is designed, sited and operated to avoid adverse impacts on the	**AO15** Development involving essential community infrastructure: a) is ancillary to and not relied upon for the provision of the essential service during a flood; or b) is located above the flood planning levels in Table 8.2.11.3.G; c) has access to or provides the necessary back-up emergency electricity and communications supply in times of flood; d) is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by the flood event	**N/A**	The development does not involve essential community infrastructure.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
community or the environment due to the impacts of flooding on infrastructure, facilities or access and egress routes; c) is able to remain functional or is part of a network which is able to remain functional even when other infrastructure or services (such as electricity supply) may be compromised in a flood event; d) contains mitigation measures which are not entirely dependent on human activation to respond to a flood event. Note—Protection of function is required up to and including the flood event in Table 8.2.11.3.G.	listed for the development type in Table 8.2.11.3.G; e) that services a local area: (i) is able to be accessed in times of flood to service local community needs up to the event listed for that development type in Table 8.2.11.3.G; or (ii) has a service continuity plan that demonstrates the continued provision of service during the relevant flood event.			
Additional performance outcomes and acceptable outcomes if development involves the processes in Table 8.2.11.3.H				
PO16 Development involving the storage and handling of hazardous materials avoids or minimises risks to public health and safety and the environment, by: a) protecting underground tanks for hazardous materials against the forces of buoyancy, velocity flow and debris impacts;	**AO16** a) Development does not include the storage or handling of hazardous chemicals that exceed the hazardous chemicals flood hazard threshold quantities in Table 8.2.11.3.M. b) Development involving the processes listed in Table 8.2.11.3.H: (i) where located in the Flood overlay area, occurs only in the Creek/waterway flood planning area 5 sub-category or the	**N/A**	The development does not include the storage or handling of hazardous chemicals that are equivalent to or exceed the threshold quantities in Table 8.2.11.3.M. The development does not involve the processes in Table 8.2.11.3.H.	

Flood Overlay Code Performance outcomes	Acceptable outcomes	Outcome	Comments	Council Use
b) securing above-ground tanks for hazardous materials against flotation and lateral movement; c) preventing damage to hazardous materials pipework or entry of floodwater into hazardous materials pipework; d) preventing damage to or off-site release of packages, drums or containers storing hazardous materials. Note—A chemical hazards flood risk report prepared in accordance with the Management of hazardous chemicals in flood affected areas planning scheme policy can assist in demonstrating achievement of this performance outcome. Note—A pump drainage system is not an acceptable measure to meet the performance outcome.	Brisbane River flood planning area 5 sub-category; or (ii) is consistent with the standards contained in the Management of hazardous chemicals in flood affected areas planning scheme policy and can operate without risk of environmental harm during a flood event. Note—The Management of hazardous chemicals in flood prone areas planning scheme policy sets out further information and processes including risk assessment for the management of hazardous chemicals in flood planning areas.			

* **SOLUTIONS**: A – Acceptable Solution; A/S – Alternate Solution; N/A – Not Applicable

Coastal Hazard Overlay Code Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Section B— If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development other than for a dwelling house				
PO2 Development other than for a park is located and designed to: (a) minimise the risk to all persons from coastal hazards; (b) minimise flood damages to the development and contents of buildings; (c) provide suitable amenity; (d) minimise disruption to residents, recovery time, and rebuilding or restoration costs after coastal hazard events.	**AO2** Development achieves minimum flood planning levels consistent with Table 8.2.6.3.C. Editor's note—Information about flooding from storm tide is provided in Council's FloodWise Property Report.	AO	Development achieves minimum flood planning levels consistent with Table 8.2.6.3.C.	
PO3 Development for a park ensures that the design of the park and location of structures and facilities responds to coastal hazards and balances the safety of intended users with: (a) maintaining continuity of operations; (b) impacts of flooding on asset life and ongoing maintenance costs; (c) efficient recovery after flood events; (d) recreational benefits to the city; (e) availability of suitable land within the park. Note—The Infrastructure design planning scheme policy provides more detail on standards and specifications for public assets.	**AO3** Development involving a building or structure in a park: (a) complies with the minimum flood planning levels in Table 8.2.6.3.C; or (b) is not located below the 20% AEP storm-tide level if Table 8.2.6.3.C does not apply to the type of structure.	N/A	Not applicable to this development	

Coastal Hazard Overlay Code Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Section C—If assessable development other than for a dwelling house				
General				
PO4 Development has access which provides for safe vehicular and pedestrian movement in the development, including emergency services access during and after a coastal hazard event.	**AO4** Development locates access points and driveways in the flood free area (or the area of the lowest flood risk) of the site.	AO	The access point for the site is located in the area of lowest flood risk.	
PO5 Development for pedestrian and cyclist paths: (a) provides a suitable level of trafficability; (b) manages the impacts of flooding on asset life and ongoing maintenance costs; (c) balances route availability with recreational and transport connectivity benefits to the city.	**AO5.1** Development for off-road pedestrian and cyclist paths: (a) is not located in the Erosion prone area – coastal erosion subcategory; or (b) complies with the minimum flood planning levels in Table 8.2.6.3.H. Note—If the site is subject to more than 1 type of flooding, the requirement that affords the highest flood planning level will apply. **AO5.2** All new on-road cyclist and pedestrian facilities comply with the road flood immunity and trafficability standards for the applicable category of road in Table 8.2.6.3.H or Table 8.2.6.3.I	N/A	The development does not involve cyclist and pedestrian facilities.	
PO6 Development does not: (a) impact adversely on the safety or amenity of an adjoining site; (b) impact adversely on the ability of others to implement future coastal hazard adaptation actions.	**AO6** Development does not concentrate, intensify or divert floodwater, erosion impacts or cause nuisance ponding onto other premises.	AO	The proposed development does not concentrate, intensify or divert floodwater, erosion impacts or cause nuisance ponding onto other premises	

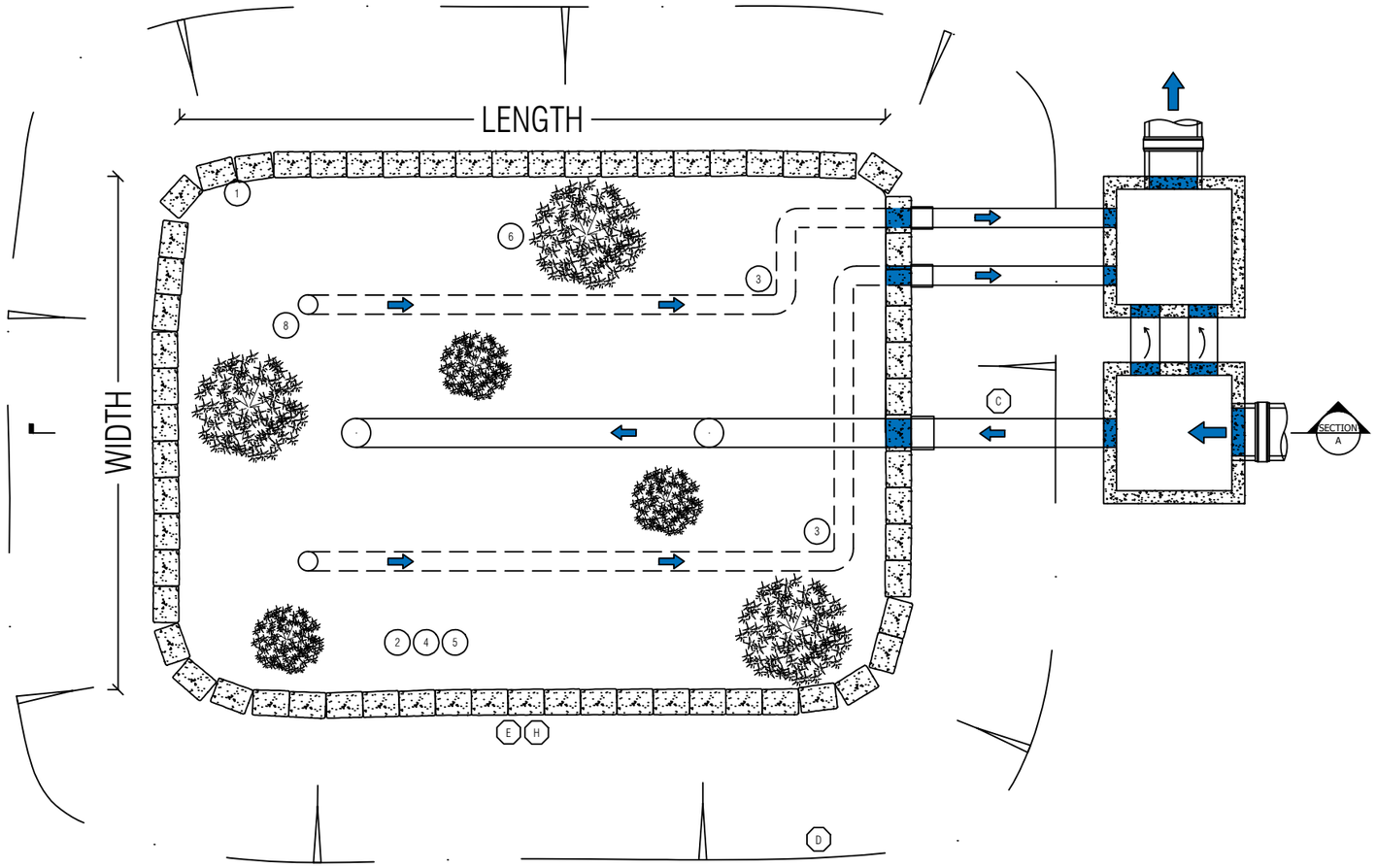
Coastal Hazard Overlay Code Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO7 Development involving essential electrical services or a basement storage area is suitably located and designed to ensure public safety and minimise the need for flood recovery and economic consequences of damage during a flood.	**AO7.1** Development ensures that: (a) all essential electrical services comply with the flood planning levels in Table 8.2.6.3.C; or (b) if a basement contains essential electrical services or a private basement storage area, the basement is a waterproof structure with walls and floors impermeable to the passage of water and all entry points and services are located at or above the relevant flood immunity level in Table 8.2.6.3.C. Note—A basement storage area is a basement-level area for private storage, other than a bike storage room, change room, building maintenance storage and non-critical electrical services.	N/A	No basements or essential electrical services are proposed as part of the development	
	AO7.2 Development involving a basement that relies on a pumping solution to manage floodwater ingress or for dewatering after a flood, provides an appropriately flood protected backup power source for those pumps.			

Coastal Hazard Overlay Code Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO8 Development involving the storage and handling of hazardous materials avoids or minimises risks to public health and safety and the environment, by: (a) protecting underground tanks for hazardous materials against the forces of buoyancy, velocity flow and debris impacts; (b) securing above-ground tanks against flotation and lateral movement; (c) preventing damage to pipework or entry of floodwater into pipework; (d) preventing damage to or off-site release of packages, drums or containers. Note—A chemical hazards flood risk report prepared in accordance with the Management of hazardous chemicals in flood affected areas planning scheme policy can assist in demonstrating achievement of this performance outcome. Note—A pump drainage system is not an acceptable measure to meet the performance outcome.	**AO8.1** Development does not include the storage or handling of hazardous chemicals that exceed the hazardous chemicals flood hazard threshold quantities in Table 8.2.6.3.J. **AO8.2** Development involving the processes listed in Table 8.2.6.3.F is consistent with the standards contained in the Management of hazardous chemicals in flood affected areas planning scheme policy and can operate without risk of environmental harm during a coastal hazard. Note—The Management of hazardous chemicals in flood affected areas planning scheme policy sets out further information and processes including risk assessment for the management of hazardous chemicals of hazardous chemicals in coastal hazard areas.	N/A	The development does not include the storage or handling of hazardous chemicals that are equivalent to or exceed the threshold quantities in Table 8.2.6.3.J. The development does not involve the processes in Table 8.2.6.3.F.	

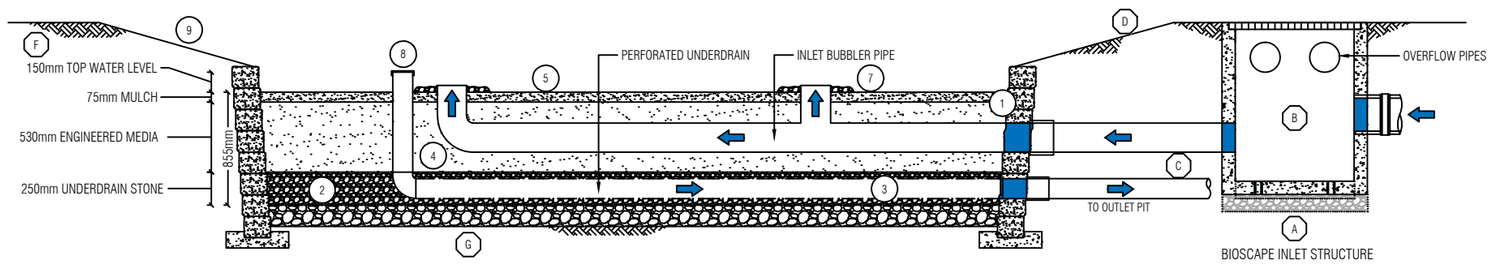
* **SOLUTIONS**: A – Acceptable Solution; A/S – Alternate Solution; N/A – Not Applicable

Appendix E – OCEAN PROTECT MAINTENANCE MANUAL

NOT FOR CONSTRUCTION



PLAN



SECTION A-A

(PLANTING NOT SHOWN FOR CLARITY)

SITE SPECIFIC REQUIREMENTS		
COUNT	DESCRIPTION	INSTALLED BY
	FILTERRA SURFACE AREA (m^2)	OCEAN PROTECT
	MULCH VOLUME (m^3)	OCEAN PROTECT
	FILTERRA MEDIA DEPTH (mm)	OCEAN PROTECT
	VOLUME OF UNDERDRAIN STONE (m^3)	OCEAN PROTECT
	FILTERRA LINER (m)	OCEAN PROTECT

PLANTING SCHEDULE	
COUNT	FILTERRA BIOSCAPE SYSTEM PLANT PALETTE

GENERAL NOTES

- CONTRACTOR SHALL CONTACT OCEAN PROTECT TO COORDINATE DELIVERY AND INSTALLATION OF FILTERRA BIOSCAPE SYSTEM. OCEAN PROTECT ACTIVIATION CAN ONLY OCCUR ONCE CONTRACTOR RESPONSIBILTIES ARE COMPLETE.
- PERFORM FILTERRA BIOSCAPE SYSTEM EXCAVATION ONLY AFTER ALL THE CONTRIBUTING DRAINAGE AREAS ARE PERMANENTLY STABILISED. DO NOT CONSTRUCT FILTERRA BIOSCAPE SYSTEM IN AN AREA PREVIOUSLY USED AS EROSION AND SEDIMENT CONTROL FACILITIES. DO NOT STOCKPILE MATERIALS OR STORE EQUIPMENT IN THIS AREA. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT CONSTRUCTION-RELATED EROSION RUNOFF FROM ENTERING THE FILTERRA MEDIA BAY.
- FILTERRA SHALL BE INSTALLED OFFLINE AS EARLY AS POSSIBLE AFTER SITE STABILISATION TO ALLOW FOR SOIL MATURITY AND SYSTEM ESTABLISHMENT.
- CONTRACTOR SHALL COORDINATE WITH OCEAN PROTECT BEFORE THE FILTERRA BIOSCAPE SYSTEM IS EXCAVATED TO MINIMISE THE TIME BETWEEN EXCAVATION AND COMPLETION OF THE FILTERRA BIOSCAPE SYSTEM. ONCE EXCAVATED, ANY STANDING WATER THAT ACCUMULATES IN THE EXCAVATED AREA MUST BE REMOVED BY THE CONTRACTOR BEFORE OCEAN PROTECT CAN COMMENCE THE FILTERRA BIOSCAPE SYSTEM. ANY ADDITIONAL EXCAVATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE ACCESS TO THE EXCAVATED AREA(S) FOR OCEAN PROTECT TO USE DURING THE CONSTRUCTION OF THE FILTERRA BIOSCAPE SYSTEM(S). ACCESS SHALL NOT PROHIBIT LIGHT DUTY EQUIPMENT THAT MAY BE USED TO INSTALL THE COMPONENTS (STONE, MEDIA, ETC). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RE-STABILIZATION THAT MAY BE REQUIRED AFTER THE FILTERRA BIOSCAPE SYSTEM INSTALLATION/ACTIVATION.
- OCEAN PROTECT AND/OR ITS REPRESENTATIVES SHALL BE RESPONSIBLE FOR THE LIST ENTITLED 'OCEAN PROTECT INSTALLATION RESPONSIBILITIES'.
- NO FLOW SHALL ENTER THE FILTERRA SYSTEM UNLESS OCEAN PROTECT HAS ACTIVATED THE SYSTEM AND CONFIRMED ESTABLISHMENT

CONTRACTOR WORKS AND INSTALLATION RESPONSIBILITIES

A. CONTRACTOR TO PLACE FILTERRA INLET STRUCTURE ON BEDDING AS SPECIFIED BY THE ENGINEER. OCEAN PROTECT SUGGESTS AS A MINIMUM TO USE 150MM BEDDING STONE ON COMPACTED SUB-GRADE TO 90% DENSITY. UNSUTIABLE MATERIAL SHALL BE REPLACED AS ADVISED BY THE ENGINEER.
B. CONTRACTOR SHALL PROVIDE AND INSTALL DRAINAGE ITEMS TO, FROM AND INCLUDING THE INLET AND OUTLET STUCTURES AS PER THE APPROVED SITE PLANS.
C. OCEAN PROTECT CAN PROVIDE COUPLERS AT THE FILTERRA INTERFACE FOR CONNECTION TO THE INLET DIVERSION PIPES. ALL DRAINAGE TO AND FROM THE FILTERRA MUST ALLOW FOR POSITIVE FLOW.
D. CONTRACTOR TO PROVIDE BATTER ACCORDING TO DIMENSION AND SLOPE SHOWN ON PLANS. SLOPE FROM SHOULDER TO FILTERRA BIOSCAPE SYSTEM SURFACE PERIMETER SHALL NOT EXCEED 3:1. TURF IS REQUIRED TO STABILISE SIDE SLOPES SHOWN ON DETAIL AND ON PLAN SHEETS.
E. CONTRACTOR TO EXCAVATE MEDIA AREA CORRESPONDING TO THE SIZE OF THE FILTERRA BIOSCAPE SYSTEM SURFACE AREA AS SHOWN ON DETAIL AND ON PLAN SHEETS.
F. CONTRACTOR SHALL EXCAVATE VERTICALLY FROM BOTTOM OF UNDERDRAIN STONE OR DRAINAGE STONE IF REQUIRED, TO ELEVATION OF MULCH AS SHOWN ON THIS DETAIL.
G. CONTRACTOR TO CONFIRM DEPTH OF EXCAVATION. IF THE EXCAVATION HAS BEEN MADE TOO DEEP AND ADDTITIONAL UNDERDRAIN STONE NEEDS TO BE USED TO RAISE THE BASE OF THE FILTERRA, THIS COST SHALL BE TAKEN ON BY THE CONTRACTOR.
H. RETAINING WALLS AND ADDITIONAL EROSION CONTROL AROUND THE FILTERRA BIOSCAPE SYSTEM. RETAINED OFFLINE FROM FILTERRA

OCEAN PROTECT SUPPLY AND INSTALLATION RESPONSIBILITIES

1. GEOTEXTILE FABRIC ALONG THE PERIMETER OF THE FILTERRA BIOSCAPE SYSTEM EXCAVATION.
2. UNDERDRAIN STONE. TYPICALLY 250mm THICK (50mm UNDER THE PIPING 150mm AROUND THE PIPING AND 50mm ABOVE THE PIPING)
3. 150mm UNDERDRAIN PIPING UNLESS OTHERWISE APPROVED BY OCEAN PROTECT, ASSOCIATED PIPING AND FITTINGS/ELBOWS TO CONNECT TO THE PIPING/FITTING(S) THAT IS PROVIDED BY CONTRACTOR (SEE CONTRACTOR INSTALLATION RESPONSIBILITIES THIS DETAIL).
4. 530mm FILTERRA MEDIA.
5. 75mm DOUBLE SHREDDED HARDWOOD MULCH OVER ENTIRE FILTERRA BIOSCAPE SYSTEM SURFACE AREA.
6. PLANTINGS OF PLANTS SELECTED BY ENGINEER THAT MATCH OCEAN PROTECTS APPROVED PLANTING LIST.
7. RIPRAP APRON AROUND ALL FLOW ENTRY POINTS AS DESIGNED AND INDICATED ON THIS DETAIL
8. CLEAN-OUT ADAPTER,PLUG AND PIPING.
9. COMMISIONING THE SYSTEM

OCEAN PROTECT

PHONE: 1300 354 722 www.oceanprotect.com.au

OCEAN PROTECT

FILTERRA BIOSCAPE SYSTEM WITH BIOSCAPE INLET STRUCTURE

SPECIFICATION DRAWING

LAST MODIFIED: 24-05-19

Appendix F – FLOODWISE PROPERTY REPORT

Brisbane City Council

FloodWise Property Report

Report Reference
1637635801868
23/11/2021 12:50:01

Dedicated to a better Brisbane

THIS REPORT IS FOR BUILDING AND DEVELOPMENT PURPOSES ONLY

The FloodWise Property Report provides property or lot-based flood information for building and development requirements. This report provides information on estimated flood levels, habitable floor level requirements and more technical information on the four sources of flooding: river, creek / waterway, storm tide and overland flow. Refer to the Useful Definitions section for a glossary of terms.

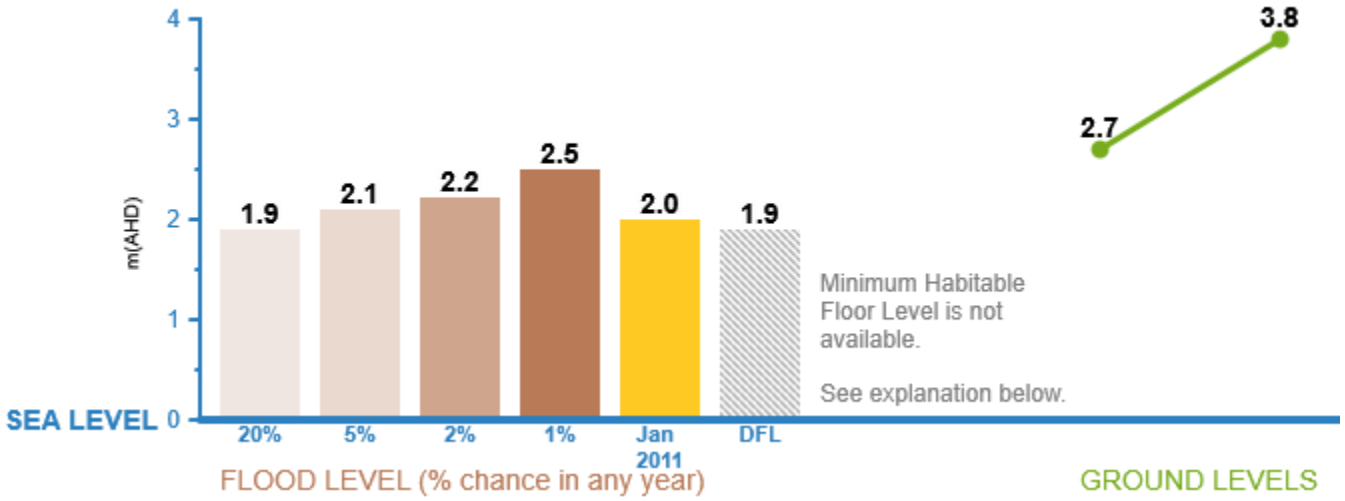
To find out more about how the contents of this report may affect building or development on this property, please visit www.brisbane.qld.gov.au/planning-building.For more general information about understanding your flood risk and how to prepare your property, family or business for potential flooding visit www.brisbane.qld.gov.au/beprepared

THIS IS A REPORT FOR:

Rateable Address: 161 FISON AVE, EAGLE FARM QLD 4009

Lot Details: L.836 SL.8236

FLOOD LEVEL INFORMATION



EXPLANATION

m(AHD) - Metres Australia Height Datum. The level of 0.0m AHD is approximately mean sea level.

Flood Levels - The Flood level bar chart above shows the possible flooding level and percentage chance of that level being reached or exceeded in any year. If an orange bar shows, it is the calculated January 2011 flood level at this address or lot. Refer to 'Useful Definitions' for further information.

Minimum Habitable Floor Level - Applies to residential development only. Please refer to Council's planning scheme to learn how this may affect you. If a property is in an overland flow path, or a large allotment, a minimum habitable floor level cannot be provided. Refer flood and planning development flags below.

Ground Levels- The green line above shows this property's approximate lowest and highest ground levels based on latest available information (2019 airborne laser survey) to Council. If you are building, please confirm with a surveyor.

For further information and definitions please refer to the Useful Definitions page

FLOOD AND PLANNING DEVELOPMENT FLAGS

DEVELOPMENT FLAG(S)

This property may also be affected by one or more flood or property development overlays or flags. These include: LARGE ALLOTMENT

Please review the technical summary over page and refer to Council's planning scheme for further information.

Brisbane City Council

FloodWise Property Report

Report Reference
1637635801868
23/11/2021 12:50:01

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TECHNICAL SUMMARY

This section of the FloodWise Property Report contains more detailed flood information for this property so surveyors, builders, certifiers, architects and engineers can plan and build in accordance with Council's planning scheme. For more information about building and development in Brisbane please visit www.brisbane.qld.gov.au/planning-building or talk to a Development Assessment Planning Information Officer via Council's Contact Centre on (07) 3403 8888.

THIS IS A REPORT FOR:

Rateable Address: 161 FISON AVE, EAGLE FARM QLD 4009
Lot Details: L.836 SL.8236

PROPERTY INFORMATION (Summary)

The following table provides a summary of flood information for this property. More detailed flood level information is provided in the following sections of this report.

PROPERTY SUMMARY	LEVEL (mAHD)
Minimum Ground Level	2.7
Maximum Ground Level	3.8
Min Habitable Floor Level	Contact Council
Defined Flood Event Level	2.5
Defined Flood Event Level Source	STORMTIDE
Source of Highest Flooding	STORMTIDE
Flooding may also occur from	STORMTIDE,RIVER

ESTIMATED PEAK FLOODING LEVELS

The table below displays the peak estimated flood levels by probability for this property. Estimated flood level data should be used in conjunction with applicable planning scheme requirements - Refer to Flood Planning Development Information.

Note that the overland flow flooding level maybe higher than the levels below from other sources.

DESCRIPTION	LEVEL (mAHD)	SOURCE
20% AEP	1.9	STORMTIDE
5% AEP	2.1	STORMTIDE
2% AEP	2.2	STORMTIDE
1% AEP	2.5	STORMTIDE
1% AEP	2.2	RIVER
January 2011	2.0	RIVER
DFL	1.9	RIVER
RFL	2.2	RIVER

FLOOD PLANNING DEVELOPMENT INFORMATION

This section of the FloodWise Property Report contains information about Council's planning scheme overlays. Overlays identify areas within the planning scheme that reflect distinct themes that may include constrained land and/or areas sensitive to the effects of development.

FLOOD OVERLAY CODE

The Flood overlay code of Council's planning scheme uses the following information to provide guidelines when developing properties. The table below summarises the Flood Planning Areas (FPAs) that apply to this property. Development guidelines for the FPAs are explained in Council's planning scheme, which is available from www.brisbane.qld.gov.au/planning-building.

FLOOD PLANNING AREAS (FPA)		
RIVER	CREEK/WATERWAY	OVERLAND FLOW
FPA5		Not Applicable

COASTAL HAZARD OVERLAY CODE

The coastal hazard overlay code of Council's planning scheme uses the following information to provide guidelines when conducting new development. The table below summarises the coastal hazard categories that apply to this property. Development guidelines for the following coastal hazard overlay sub-categories are explained in the planning scheme, which is available from www.brisbane.qld.gov.au/planning-building.

COASTAL HAZARD OVERLAY SUB-CATEGORIES
Medium Storm Tide Inundation Area

NOTE: Where land is identified within one or more flood planning area on the Flood Overlay, or is identified within a Storm Tide Inundation area on the Coastal Hazard Overlay, the assessment criteria that provide the highest level of protection from any source of flooding applies.

PROPERTY DEVELOPMENT FLAGS

Large Allotment - This property is either a Large Allotment of over 1000 square metres or is located within a Large Allotment. Flood levels may vary significantly across allotments of this size. Further investigations may be warranted in determining the variation in flood levels and the minimum habitable floor level across the site. For more information or advice, it is recommended you engage a Registered Professional Engineer of Queensland.

Brisbane City Council

FloodWise Property Report

Report Reference
1637635801868

23/11/2021 12:50:01

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Useful Definitions

Australian Height Datum (AHD) - The reference level for defining ground levels in Australia. The level of 0.0m AHD is approximately mean sea level.

Annual Exceedance Probability (AEP) – The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

Defined Flood Level (DFL) - The DFL for Brisbane River flooding is a level of 3.7m AHD at the Brisbane City Gauge based on a flow of 6,800 m^3/s.

Maximum and Minimum Ground Level – Highest and lowest ground levels on the property based on available ground level information. A Registered Surveyor can confirm exact ground levels.

Minimum Habitable Floor Level – The minimum level in metres AHD at which habitable areas of development (generally including bedrooms, living rooms, kitchen, study, family and rumpus rooms) must be constructed.

Council's Planning Scheme - The City Plan (planning scheme) has been prepared in accordance with the Sustainable Planning Act as a framework for managing development in a way that advances the purpose of the Act. In seeking to achieve this purpose, the planning scheme sets out the Council's intention for future development in the planning scheme area, over the next 20 years.

Residential Flood Level (RFL) – Residential flood level (RFL) for the Brisbane River flooding equates to the 1% Annual Exceedance Probability flood level.

Rateable Address - A Lot or Property may have more than one street address. The address shown on this report is the address used by Council for the Lot or property selected.

Property - A property will contain 1 or more lots. The *Multiple Lot Warning* is shown if you have selected a property that contains multiple lots.

Brisbane City Council's Online Flood Tools

Council provides a number of online flood tools:

- to guide planning and development
- to help residents and businesses understand their flood risk and prepare for flooding.

Planning and Development Online Flood Tools

Council's online flood tools for planning and development purposes include:

- FloodWise Property Report
- Flood Overlay Code

For more information on Council's planning scheme and online flood tools for planning and development:

- phone 07 3403 8888 to talk to a Development Assessment Customer Liaison Officer
- visit www.brisbane.qld.gov.au/planning-building
- visit a Regional Business Centre.

Helping residents and businesses be prepared for flooding

Council has a range of free tools and information to help residents and businesses understand potential flood risks and how to be prepared. This includes:

- Flood Awareness Map
- Flooding in Brisbane – A Guide for Residents
- Flooding in Brisbane – A Guide for Businesses
- Early Warning Alert Service. Visit www.brisbane.qld.gov.au/earlywarning to register for email, home phone or SMS severe weather alert updates.

Note: The Flood Awareness Map shows four levels of flood likelihood from high likelihood (flooding is very likely to occur) through to very low likelihood (very rare and extreme flood events).

For more information on Council's online flood tools for residents and business:

- Visit www.brisbane.qld.gov.au/beprepared
- Phone (07) 3403 8888.

Brisbane City Council

FloodWise Property Report

Report Reference
1637635801868

23/11/2021 12:50:01

Dedicated to a better Brisbane

Disclaimer

1. Defined Flood Levels and Residential Flood Levels, and the Minimum Habitable Floor Levels are determined from the best available information to Council at the date of issue. These flood levels, for a particular property, may change if more detailed information becomes available or changes are made in the method of calculating flood levels.
2. Council makes no warranty or representation regarding the accuracy or completeness of a FloodWise Property report. Council disclaims any responsibility or liability in relation to the use or reliance by any person on a FloodWise Property Report.

Planning to build or renovate?

For information, guidelines, tools and resources to help you track, plan or apply for your development visit **www.brisbane.qld.gov.au/planning-building**

You can also find the Brisbane City Plan 2014 and Neighbourhood Plans as well as other information and training videos to help with your building and development plans.

INERTIA ENGINEERING PTY LTD

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Structural Civil Flood

Engineering Services Report

Stage 1 Eagle Farm Precinct

KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L

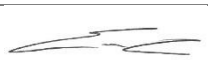
155, 161 Fison Avenue West, 364 Curtin Avenue West and part of 110 Links Avenue South

Eagle Farm

Job Reference Number – 9914

Date: 23 November 2021

Document Status

Rev No	Author	Reviewer	Approved for Issue			
			Name	Signature	Date	RPEQ #
0	J. Zhang	N.Green	E. Clements		14.10.21	8614
1	J. Zhang	N.Green	E. Clements		23.11.21	8614

Distribution

Rev No	Date	Issue	Issued To	Format
0	14.10.21	Draft	Mewing Planning Kingsmede Rothelowman RPS	PDF
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APPENDICES

APPENDIX A – ARCHITECTURAL PLANS

APPENDIX B – SURVEY PLAN

APPENDIX C – CIVIL DESIGN DRAWINGS

APPENDIX D – EROSION HAZARD ASSESSMENT

APPENDIX E – BRISBANE CITY COUNCIL CODES

APPENDIX F—FLOODWISE PROPERTY REPORT

1 Introduction

1.1. Purpose and Scope

Inertia Engineering has been commissioned by KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L to prepare an Engineering Services Report for the Stage 1 of the Eagle Farm Precinct masterplan of development at 155, 161 Fison Avenue West, 364 Curtin Avenue West and part of 110 Links Avenue South, Eagle Farm (the subject site).

This report will support the development application submitted for the proposed development stage 1. The site layout and elevations are shown on the architectural plans in Appendix A.

This report demonstrates conceptually how the development can be serviced by water, sewer, and other infrastructure such as gas, electricity, and telecommunications. Responses to relevant Brisbane City Council (BCC) codes have also been prepared.

The required detailed design for the service infrastructure will be subject to the conditions (if any) attached to the Development Approval to be provided by Council and any nominated referral agencies.

This report has been prepared in accordance with the *Northshore Hamilton PDA Development Scheme*, *State Planning Policy* (SPP, 2017), *Queensland Urban Drainage Manual Fourth Edition 2016 - Provisional* (QUDM, 2016), Brisbane City Council's City Plan (BCC, 2014) and Economic Development Queensland Engineering standards PDA guideline no.13 (EDQ, 2017)

Throughout this report the developable area is referred to as the ‘site’ which is Lot 655 SL4010 Lot 836 SL8236, Lot 724 SL8236 and part of 654 SL2281.

1.2. Report Limitations

This report has been prepared by Inertia Engineering Pty Ltd for KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L and may only be used and relied on by KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L for the purpose agreed between Inertia Engineering and KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L as detailed within this report.

Inertia Engineering otherwise disclaims responsibility to any person other than KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L arising in connection with this report. Inertia Engineering also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by Inertia Engineering in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. Inertia Engineering has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by Inertia Engineering described in this report. Inertia Engineering disclaims liability arising from any of the assumptions being incorrect.

Inertia Engineering has prepared this report based on information provided by KING FISO 155 P/L & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L and others who provided information to Inertia Engineering (including Government authorities), which Inertia Engineering has not independently verified or checked beyond the agreed scope of work. Inertia Engineering does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2 Site Characteristics

The land contained within the site is described as follows:

Title Details:	Lot 655 SL4010 Lot 836 SL8236, Lot 724 SL8236 and part of 654 SL2281.
Street Address:	155, 161 Fison Avenue West, 364 Curtin Avenue West and part of 110 Links Avenue South, Eagle Farm
Site Area:	30,564 m^2

Refer to Appendix B for Survey Plan / DBYD information.

2.1. Location

The subject site is located in Eagle Farm, approximately 7km north-east of the Brisbane CBD. It occupies a total of 30,564m^2 and lies within the Northshore Hamilton Urban Development Area under PDA Development Scheme. The site is the stage 1 of the Eagle Farm precinct masterplan of development and is bounded by Fison Avenue West to the north, Curtin Avenue West to the South and industrial properties to all other directions.

Figure 2-1 – Location Plan

2.2. Topography

The subject site is generally flat. It grades from high points in the eastern portion of approximately 3.5m AHD to low points of 2.7m AHD at north-east and south-east corners. The average grade across the site is less than 1%. For further details refer to Goodwin Midson's Survey (ref:14047-1) included in Appendix B.

3 Development Layout

Based on the information received from Rothelowman Architect, stage 1 of the Eagle Farm masterplan of development consists of new commercial and industrial buildings with private driveway works access via Fison Avenue West and Curtin Avenue West.

For further details refer to Rothlowman Eagle Farm Precinct, *Site Plan (Stage 1) (ref: 221044)* included as Appendix A.

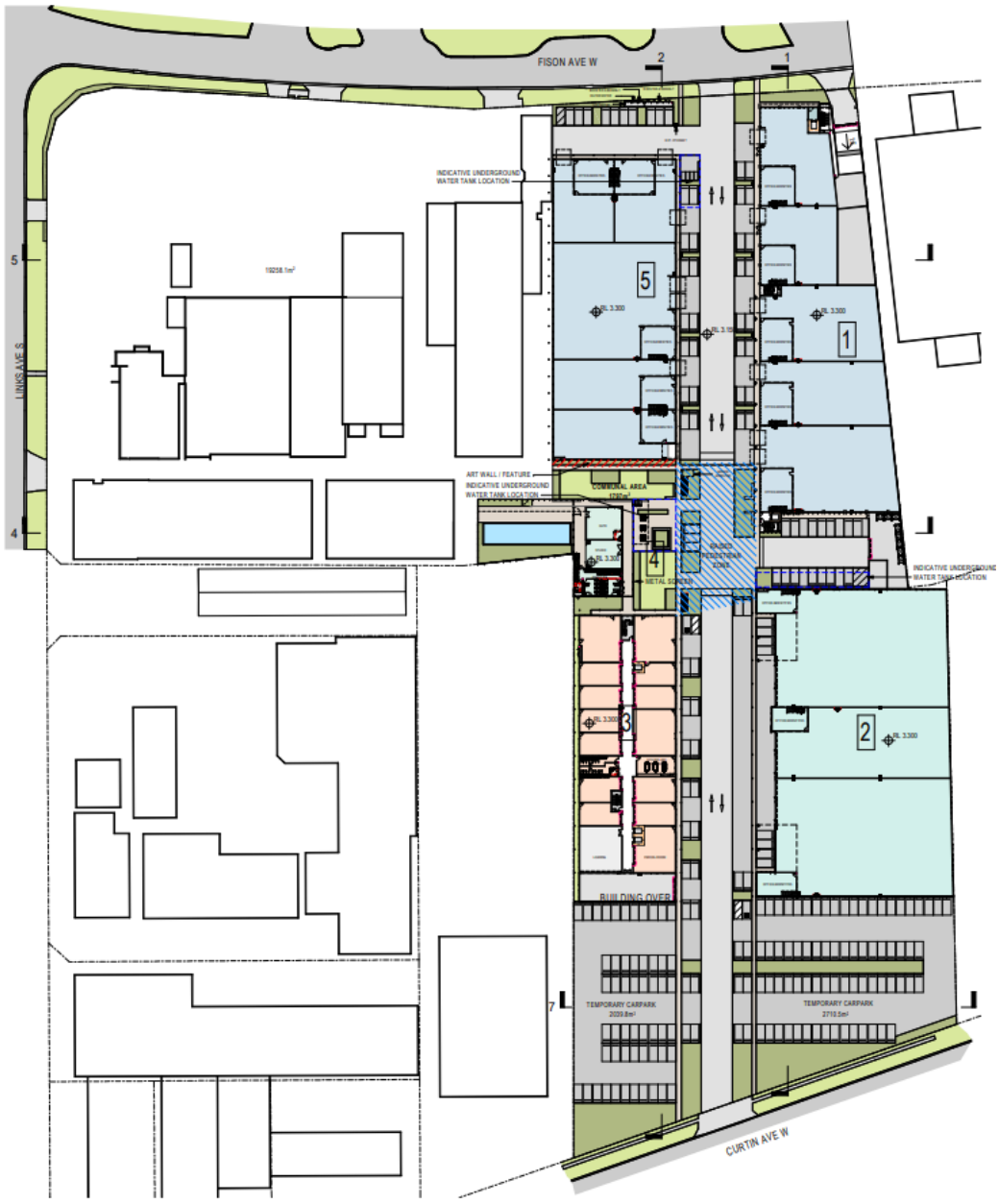

Figure 3-1 – Development Layout

4 Flooding

The site is triggered by BCC's Overlay Mapping as being susceptible to flooding from Brisbane River and Storm-Tide inundation refer to Figure 4-1 & 4-2. The governing flood source is the storm-tide inundation, which will set the design floor levels on site. According to EDQ's Protection from flood and storm inundation PDA guideline no.15 and BCC's City Plan Scheme, the minimum floor level of any new building is 3.1m AHD and minimum levels of access, car park and manoeuvring areas are 2.2m AHD.

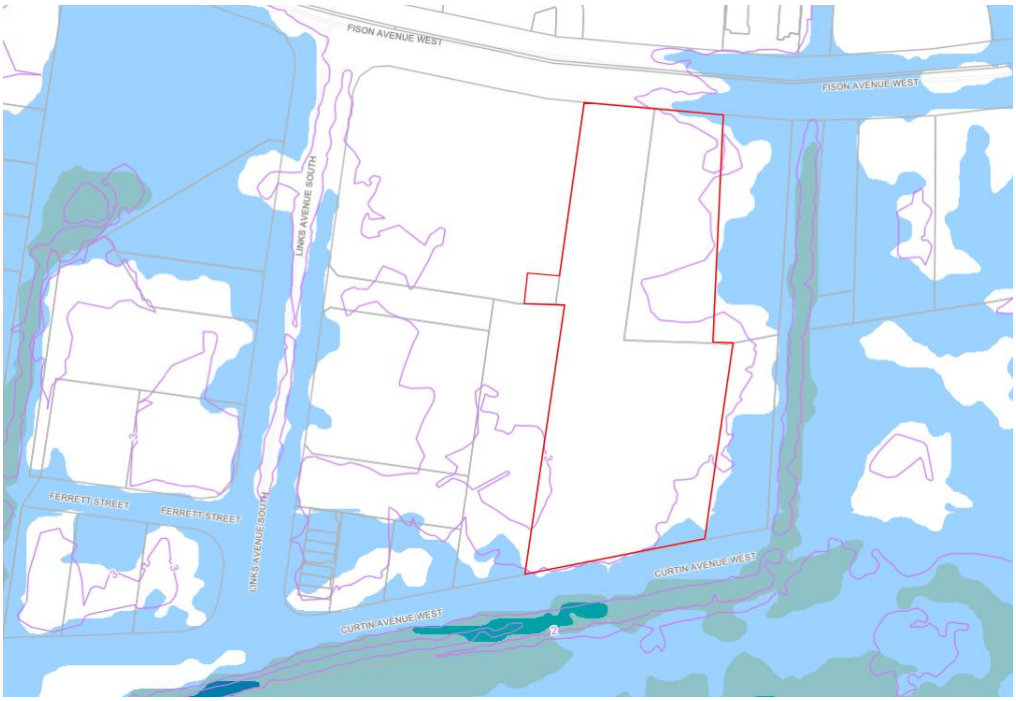

Figure 4-1 – Brisbane River Flooding BCC Plan Mapping (2014)

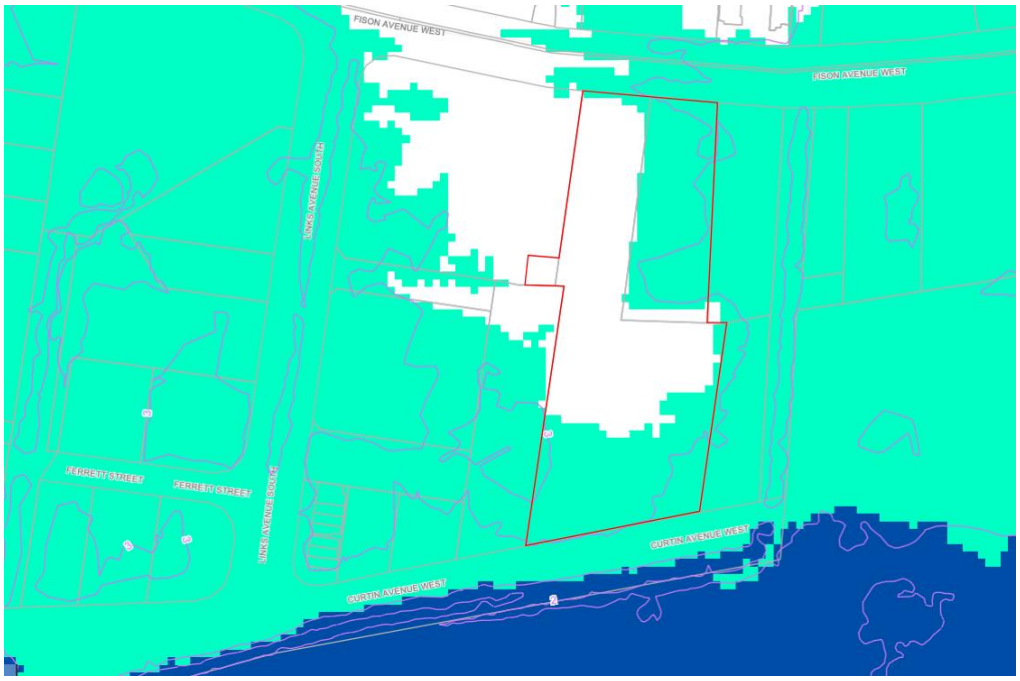

Figure 4-2 – Coastal Hazard – Medium storm-tide BCC Plan Mapping (2014)

5 Filling and Excavation

5.1. Earthworks

Minimal earthworks have been proposed for Stage 1. The proposed finished floor levels for the buildings range from RL 3.325m AHD to RL 3.500mAHD and will require a maximum of approximately 5,000m^3 of fill to achieve the design levels.

Earthworks will also be required for the internal driveway to achieve gravity drain to the nominated lawful point of discharge.

Earthworks cutting and filling will be performed to ensure the proposed ground floor levels, open space, landscaping and pavement areas will be shaped to achieve necessary levels whilst achieving compliant disable access and driveway access in accordance with the following standards:

- AS 1428: Design for Access and mobility;
- As 2890: Parking Facilities: Off-street car parking.

Where earthworks are proposed and any ground is disturbed by construction works, sediment and erosion control measures will be implemented in accordance with the following documents:

- Relevant BCC sediment and erosion control guidelines;
- International Erosion Control Association (IECA) Sediment and Erosion Control Guidelines; and
- Australian Standards AS 3798-2007.

Given the site is below RL 20m AHD, the proposed development is may potentially expose acid sulfate soils (ASS). The soil shall be tested for ASS by a qualified geotechnical engineer with NATA accreditation and shall ASS be present, an ASS management plan shall be implemented if required. In the event an ASS management plan is required, it will be completed post planning process as per section 3.9 of the PDA Development Scheme.

Refer to the earthwork's plans found in *Appendix C* which shows preliminary earthworks proposed for Stage 1 of the industrial precinct and *Appendix E* for the Responses to BCC's Filling and Excavation Code.

5.2. Erosion and Sediment Control Measures

5.2.1. Pre-Development

Prior to construction, the following sediment and erosion control measures will be implemented to minimise disturbance and ensure water quality is maintained;

- Set out transport routes to ensure minimal vegetation disturbance;
- Construct entry/exit areas that comprise a designed gravel pad or hardwood logs in accordance with the IECA (2001);
- Install sediment fences around the proposed bulk earthworks site (along toe of batter alignment); and
- Install dust control fences adjacent to the proposed bulk earthworks site.

5.2.2. Bulk Earthworks

- Earthworks areas are to be protected against wind and water erosion;
- Silt fences are to be erected around the base of the earthworks and material stockpiles;
- Stockpiles and construction material are not permitted to be stored within the road reserve; and,
- Diversion drains to be provided at upstream catchments to reduce flows onto earthworks areas.

5.2.3. Construction

The following measures will be undertaken to mitigate water quality impacts during the construction phase:

- Sediment fences to be erected at the base of all batters and stockpiles to prevent sediment transportation off site;
- Grass filter strips to be placed along all road verges;
- Re-vegetation of all disturbed areas within two weeks of completion;
- All sediment control structures to be maintained in an effective manner and inspected after each storm event. No structure is to accumulate sediment above 40% of its capacity;
- Dust producing areas to be swept to remove silt/dust and wetting of roads is only permitted where sweeping has failed;
- At least one bin or litter trap is to be provided for waste material.

5.2.4. Post-Development-Maintenance Period

Silt fences are to remain in place during the maintenance period until the landscaping has established and accepted “On-Maintenance”.

5.2.5. Performance Objectives and Indicators

The BCC Guideline on Identifying and Applying Water Quality Objectives in Brisbane City (2000) states that stormwater runoff during the construction phase must be in accordance within the concentration ranges shown in Table 5.1 below.

Table 5-1 – Construction Phase Pollutant Objectives

Pollutant	Criteria
Total Suspended Solids	90th %tile < 100mg/L for wet weather periods 15mg/L for combined wet and dry periods
pH	6.5 – 8.5
Total Nitrogen (mg/L)	0.65
Total Phosphorous (mg/L)	0.07
Dissolved Oxygen	80 to 105 percent saturation
Oils and Grease	No visible films or odours
Litter	No anthropogenic material greater than 5mm

5.3. Monitoring and Maintenance

The following monitoring and maintenance procedures are to be undertaken by the site supervisor during all phases of the development:

- Restrict all work activities to designated construction areas;
- Earthworks and site cleaning are undertaken in accordance with the Erosion and Sediment Control plans;
- Inspections of Stormwater and Sediment and Erosion Controls are to be conducted at the end of each construction day and after each rainfall event (>25mm); and
- Any failure to the stormwater system shall be immediately rectified to prevent uncontrolled discharge from the site.

6 Services, Works, and Infrastructure

6.1. Policies

The internal sewerage and water reticulation works proposed within the development will comply with the following documents:

- AS 3500.2 Plumbing and Drainage – Sanitary plumbing and drainage
- AS 3500.1 Plumbing and Drainage – Water Services.

All privately owned water supply infrastructure will be designed in accordance with the relevant plumbing and drainage standards to ensure adequate connection to the QUU owned water reticulation main. Any live works will comply with the following documents:

- Relevant QUU development guidelines & standard drawings
- SEQ WS&S D&C Code – Amendment to Sewerage Code of Australia
- Water Association of Australia (WSAA) Sewerage Code of Australia guidelines and standard drawings

6.2. Sewerage Reticulation

6.2.1. Existing Sewer

There is an existing 225mm dia VC sewer main that runs within the northern verge of Curtin Avenue West. There is also an existing 150mm dia VC sewer main that runs within the eastern verge of Links Avenue South. Both mains drain to a pump station and discharge to a sewer pressure main that runs within Fison Avenue road reserve. There is also an existing 150mm dia VC sewer main that runs within the southern verge of Fison Avenue West.

The subject site is currently serviced by a 100mm dia sewer property connections and three (3) 150mm dia sewer property connections.

6.2.2. Proposed Infrastructure

The existing property connections are to be capped at the main and removed. Two new property connections will be provided to service the development. The connection size and location will be subject to building hydraulics input at the detailed design stage.

Note that the suitability of the proposed connection points is subject to Urban Utilities Service Advice Notice however there are not expected to be any issues with this connection point.

Refer to Appendix C which illustrates the schematic services layout.

6.3. Water Reticulation

6.3.1. Existing Water

There is an existing 150mm dia Asbestos Cement (AC) reticulation main runs within the northern verge of Curtin Avenue West. There is also an 150mm dia Cast Iron (CI) reticulation main runs along Links Avenue South. There is also an 150mm PVC water reticulation main runs within the southern verge of Fison Avenue West

The site is currently being serviced by three (3) 100mm dia water connections and a 150mm water connections via the existing reticulation mains.

6.3.2. Proposed Infrastructure

The existing water connections are to be capped at the main and removed.

Two new property connections will be provided to service the development. The connection size and location will be subject to building hydraulics input at the detailed design stage.

Note that the suitability of the proposed connection points is subject to Urban Utilities Service Advice Notice however there are not expected to be any issues with this connection point

Refer to Appendix C which illustrates the proposed services layout.

6.4. Electricity, Telecommunications and Gas

Electricity and telecommunication infrastructure is available in the near vicinity of the subject site, although the capacity of these existing services has not been determined.

Appropriate consultants should be commissioned to confirm the adequacy of the existing services which can be confirmed during the Operational Works phase of the development.

Refer to Appendix C for an illustration of the proposed services layout.

7 Conclusions and Recommendations

This Engineering Services Report has assessed the stormwater management, earthworks, and service infrastructure for stage 1 of the Eagle Farm precinct masterplan of development at 155, 161 Fison Avenue West, 364 Curtin Avenue West and part of 110 Links Avenue South, Eagle Farm.

Earthworks, erosion, and sediment control solutions required on site can be performed using common and accepted methods. It is noted that the proposed earthworks will trigger retaining works which will have to be constructed according to BCC codes.

Service supply points for water and sewer reticulation, electricity and telecommunications are located within close proximity to the proposed development and should not present any major connection issues.

Vehicle access and manoeuvring, as well as pedestrian needs have been considered during architectural design and have been reflected within the development layout safely.

This report has demonstrated that the proposed development proposal provides an acceptable solution for all engineering services and has been designed to comply with PDA Development Scheme, *State Planning Policy* (SPP, 2017), *Queensland Urban Drainage Manual Fourth Edition 2016 - Provisional* (QUDM, 2016), Brisbane City Council's City Plan (BCC, 2014) and Economic Development Queensland Engineering standards PDA guideline no.13 (EDQ, 2017)

8 References

AS/NZS (2003) Australian Standards/New Zealand Standards, 'Plumbing and Drainage – Part 1: Water Services', 2003

AS/NZS (2003) Australian Standards/New Zealand Standards, 'Plumbing and Drainage – Part 2: Sanitary Plumbing and Drainage', 2003

BCC (2014) Brisbane City Council, Guidelines and Standards

- Filling and Excavation Code
- Infrastructure Design Code
- Stormwater Code

Department of State Development, Infrastructure and Planning (2017), State Planning Policy

EDQ Northshore Hamilton Urban Development Area PDA Development Scheme (2009)

Institute of Public Works Engineering Australasia, Queensland Division (2016), Queensland Urban Drainage Manual Fourth Edition 2016 – Provisional

SEQ WS&S D&C Code (2013), 'South East Queensland Water Supply & Sewer Design & Construction Codes – Amendments to Water & Sewerage Codes of Australia, 2013

WSAA (2002) Water Services Association of Australia, 'Water Supply Code of Australia – Part 1: Planning and Design', 2002

WSAA (2002) Water Services Association of Australia, 'Sewerage Code of Australia – Part 1: Planning and Design', 2002

Appendices

Appendix A – Architectural Plans

PRELIMINARY

Revisions				
P16	28.10.21	Draft DA	GT
P17	17.11.21	Final Coordination	JH

17/11/2021 9:26:48 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Ground Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.10 P17**

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PRELIMINARY

Revisions				
P1 3	28.10.21	Draft DA		GT
P1 4	17.11.21	Final Coordination		JH

17/11/2021 9:26:52 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Ground Floor Mezzanine Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.11 P14**

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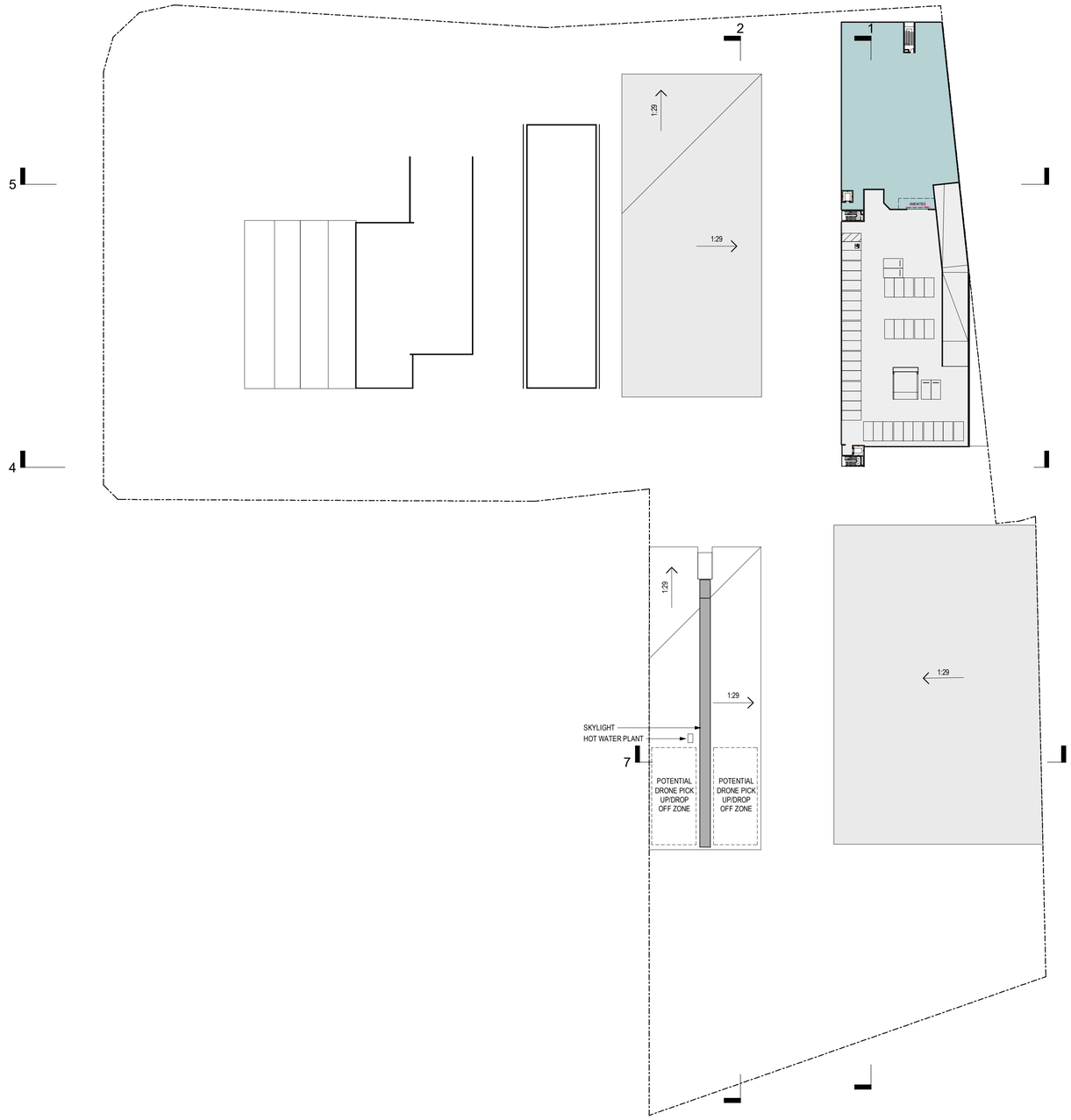

PRELIMINARY

Revisions

P13	28.10.21	Draft DA	GT
P14	17.11.21	Final Coordination	JH

17/11/2021 9:26:55 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Level 1 Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.12 P14**

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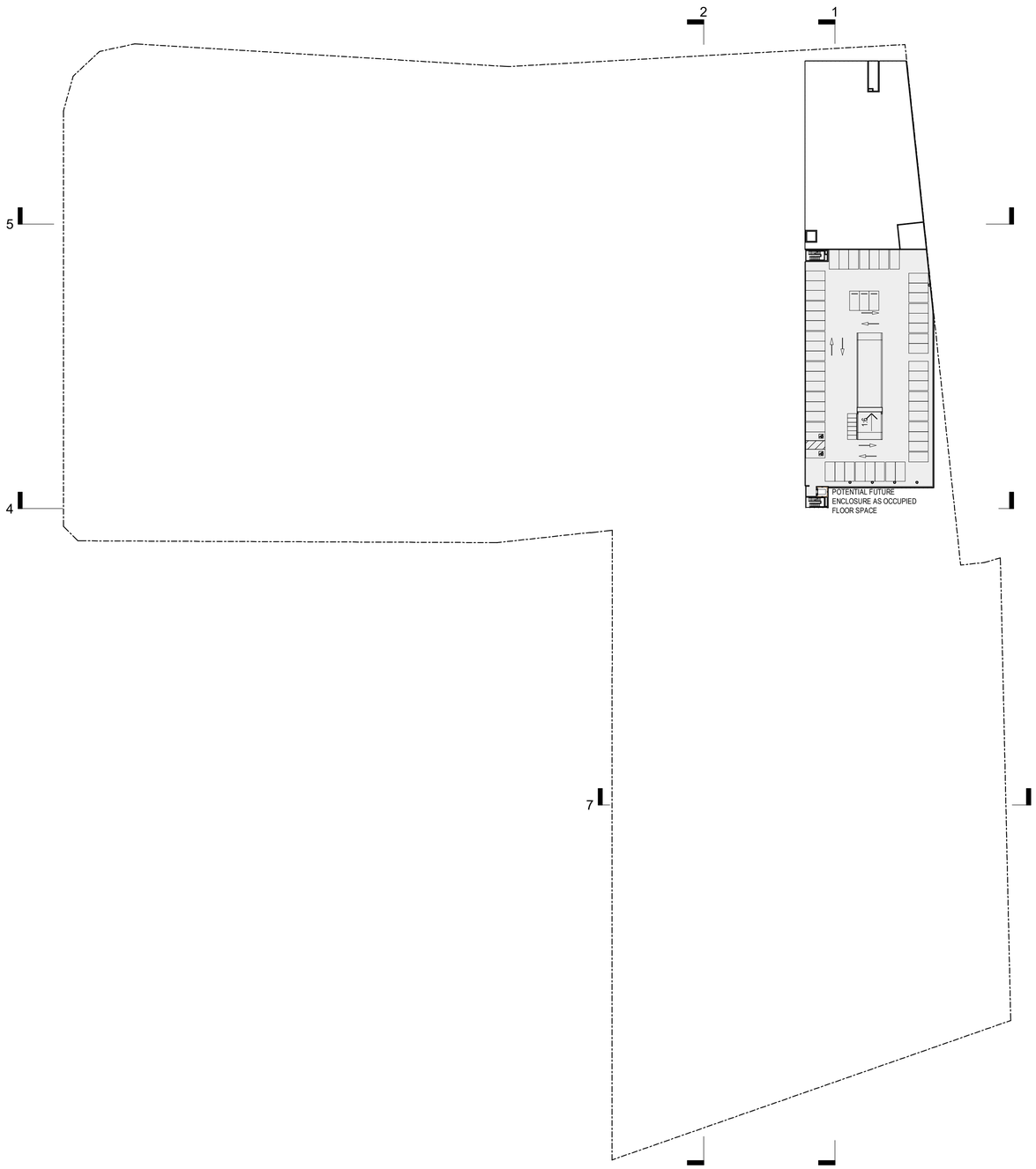

PRELIMINARY

Revisions

P13	28.10.21	Draft DA	GT
P14	17.11.21	Final Coordination	JH

17/11/2021 10:16:09 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1- Level 2 Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1: **1 : 750**

Drawing No.: **TP01.13 P14**

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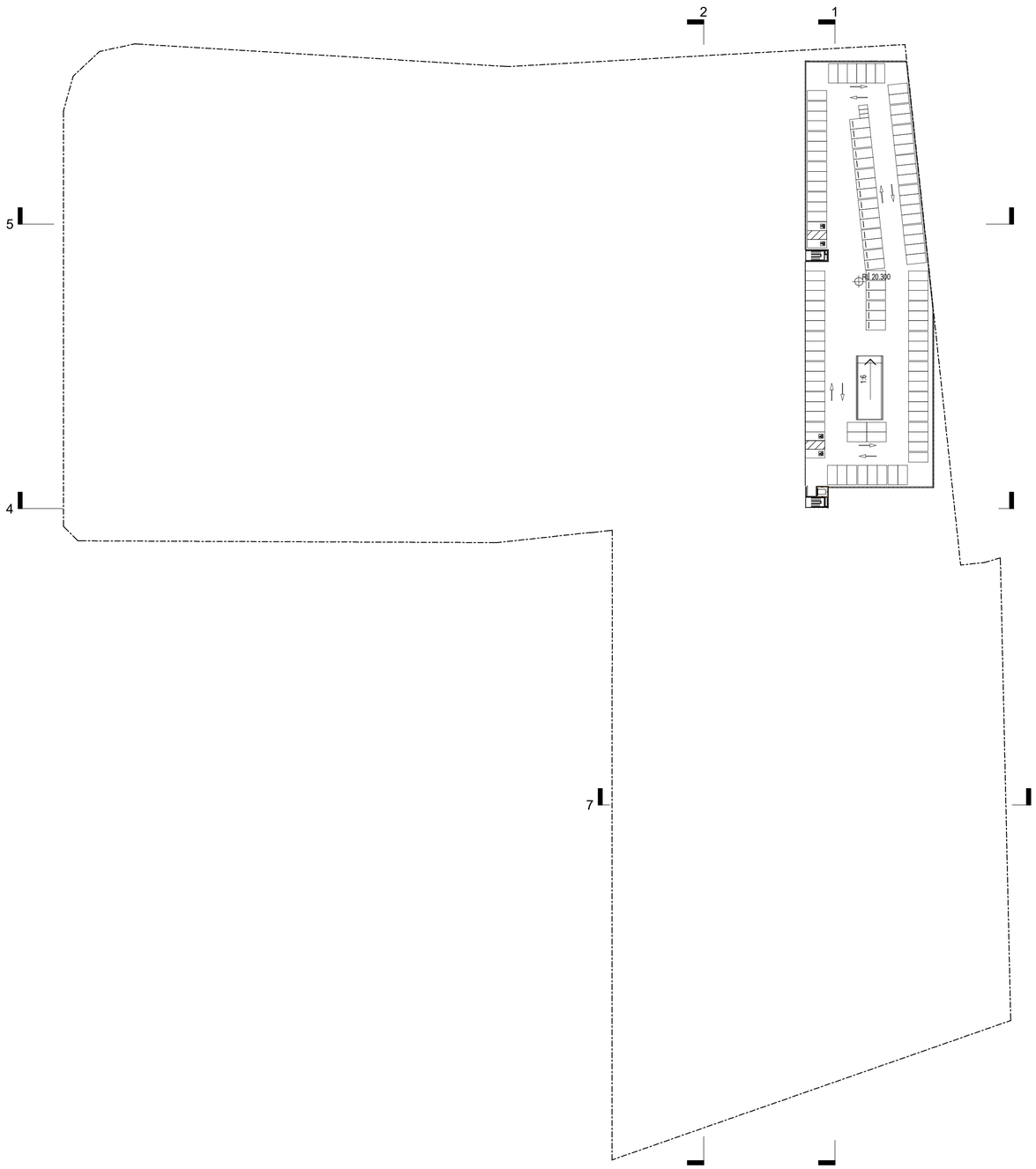

PRELIMINARY

Revisions				
P13	28.10.21	Draft DA		GT
P14	17.11.21	Final Coordination		JH

17/11/2021 10:04:30 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Stage 1 - Level 3 Floor Plan**

Project No: **221044**

Date: **17.11.21**

Author: **NE**

Scale: @ A1 **1 : 750**

Drawing No.: **TP01.14 P14**

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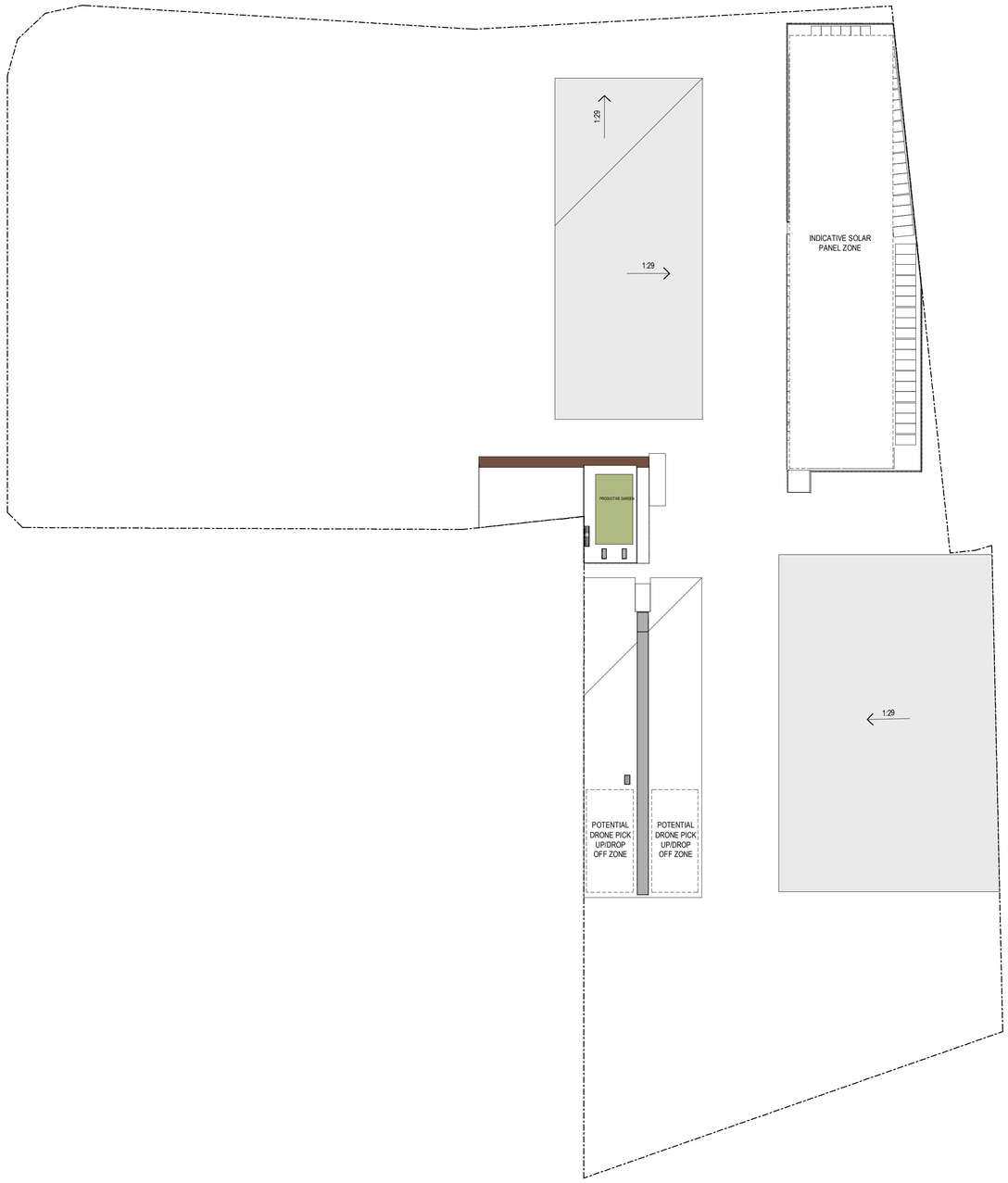

PRELIMINARY

Revisions

P1	15.10.21	For Coordination	JH
P2	20.10.21	For Coordination	JH
P3	25.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 9:18:41 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Roof Plan**

Project No: **221044**

Date: **17.11.21**

Author: **JH**

Scale: @ A1: **1 : 750**

Drawing No.: **TP01.15 P5**

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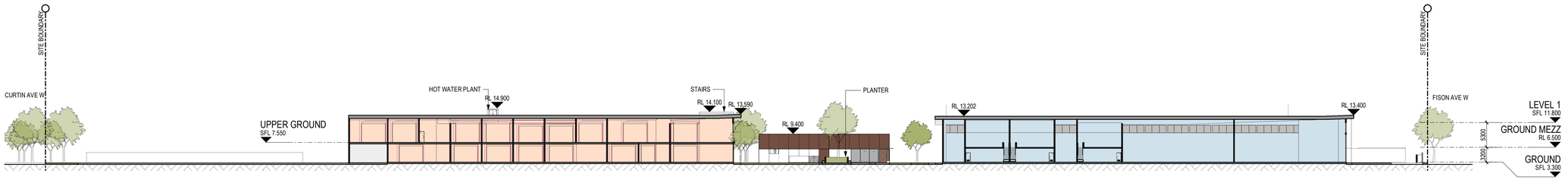
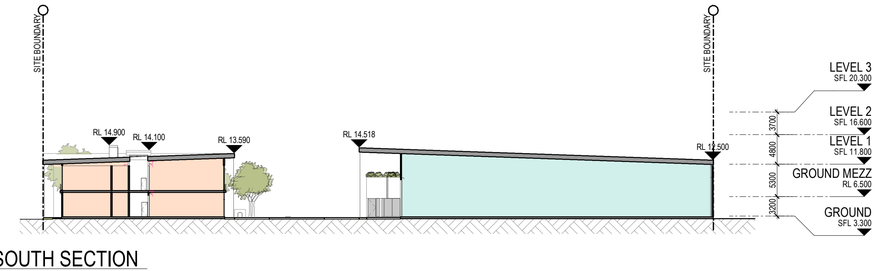
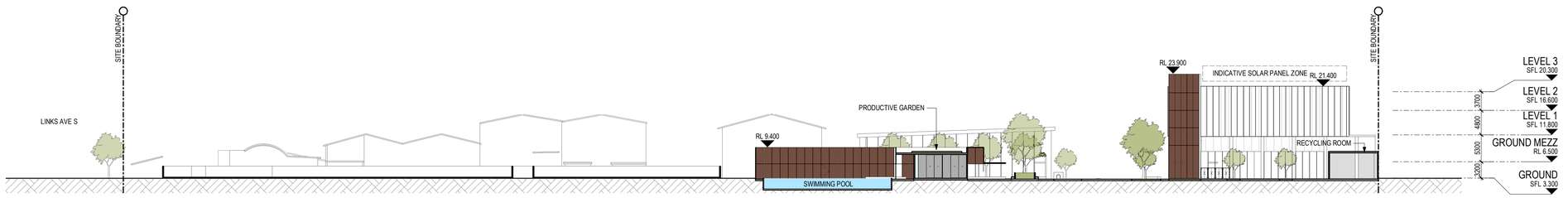
1 TP01.10 **EAST SECTION**
SCALE 1 : 500



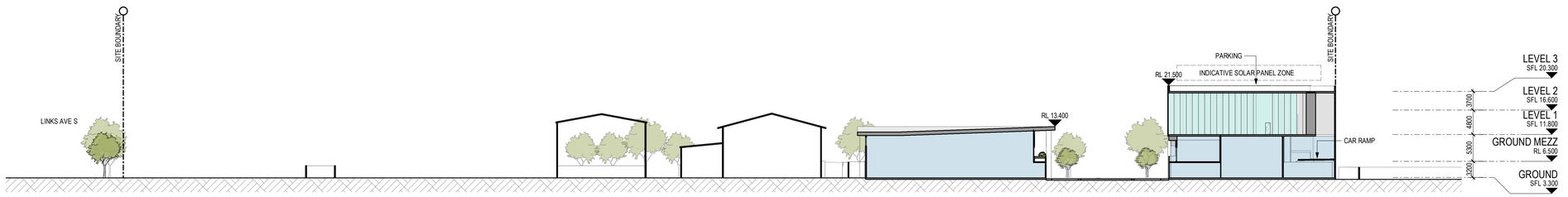
2 TP01.10 **CENTRAL N-S SECTION**
SCALE 1 : 500



7 TP01.10 **SOUTH SECTION**
SCALE 1 : 500



4 TP01.10 **CENTRAL E-W SECTION**
SCALE 1 : 500



5 TP01.10 **NORTH SECTION**
SCALE 1 : 500

PRELIMINARY

Revisions				
P1	1	28.10.21	Draft DA	GT
P1	2	17.11.21	Final Coordination	JH

17/11/2021 10:44:06 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Site Sections**
Project No: **221044**
Date: **17.11.21**
Author: **NE**
Scale: @ A1 **1 : 500**
Drawing No.: **TP03.01 P12**

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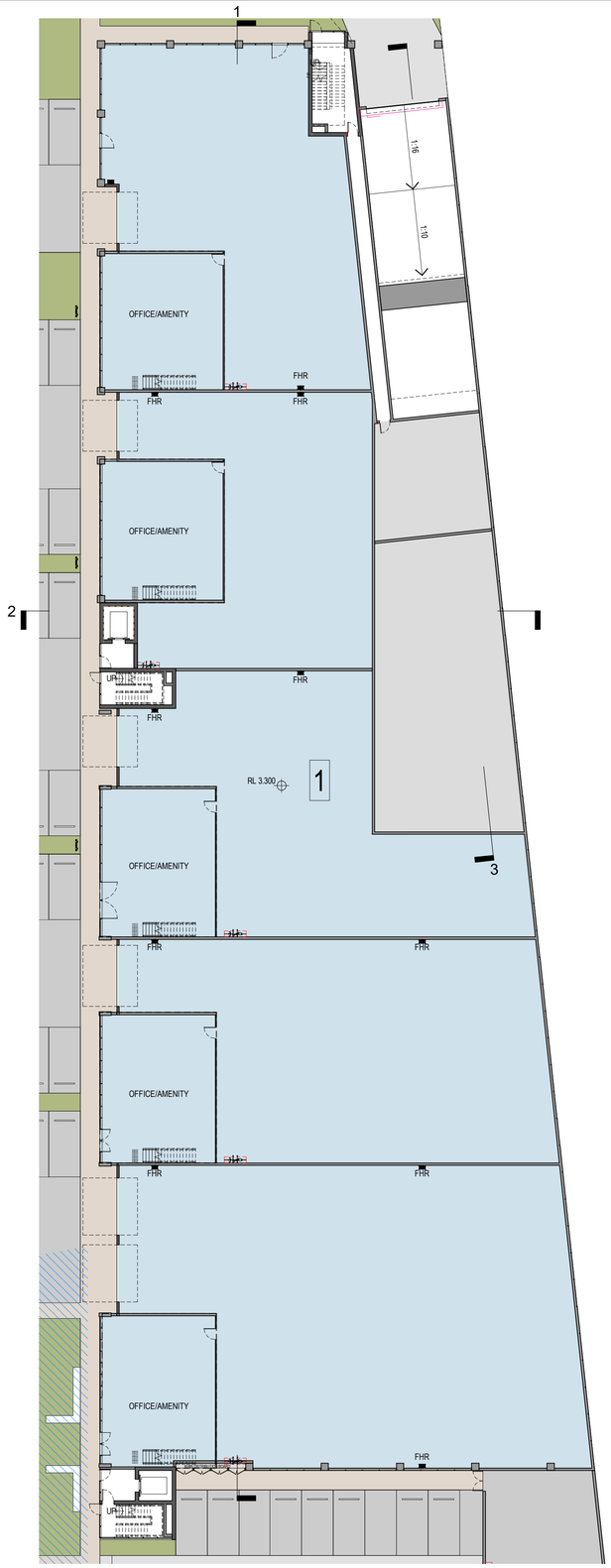
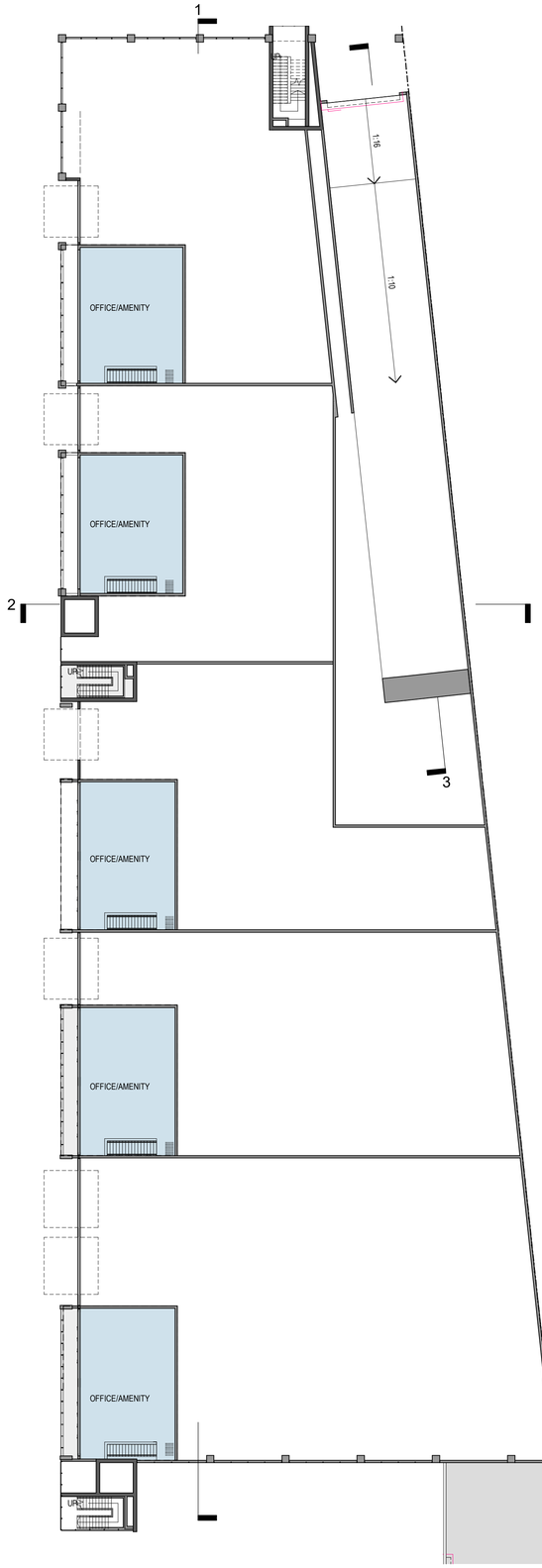
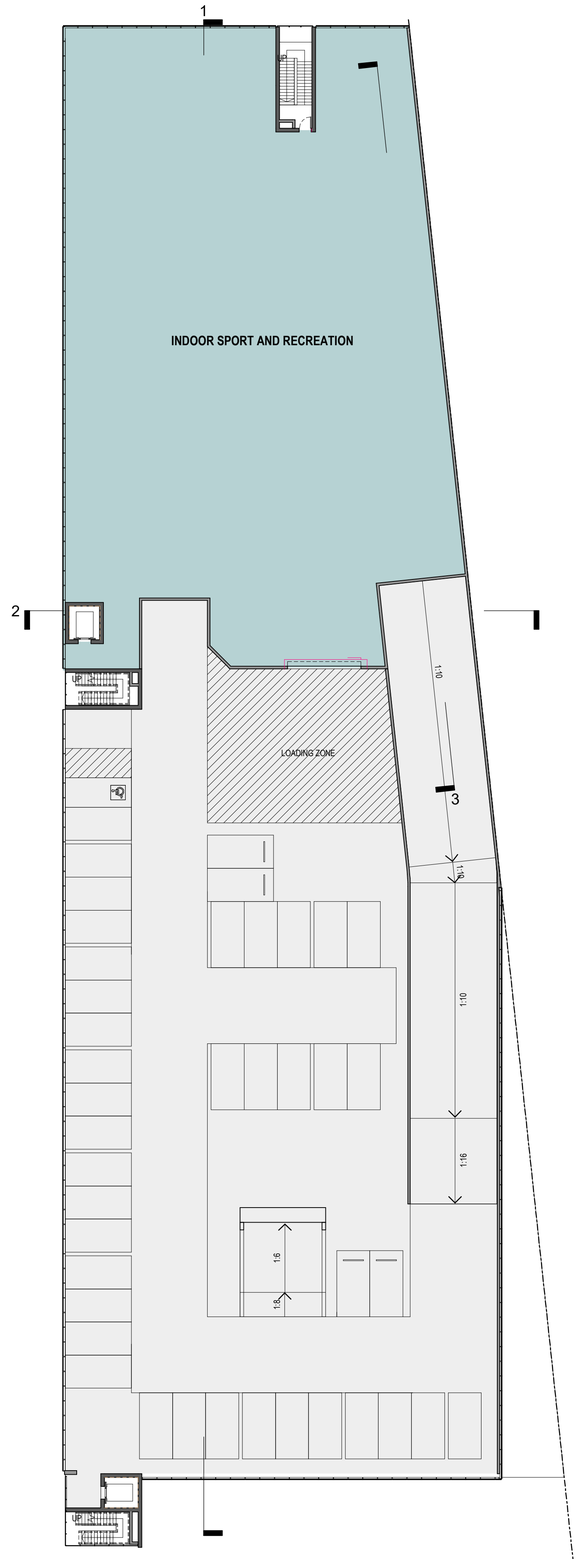


BUILDING 1 - Ground



BUILDING 1 - Ground Mezz



BUILDING 1 - Level 1

PRELIMINARY

PARKING - Building 1		
Level		**No. Cars**
LEVEL 1	Accessible	1
LEVEL 1	Stage 1	41
LEVEL 2	Accessible	2
LEVEL 2	Motorbike	6
LEVEL 2	Stage 1	52
LEVEL 3	Accessible	4
LEVEL 3	Motorbike	3
LEVEL 3	Stage 1	105
Grand total		214

AREA - BUILDING 1		
Level	Comments	Area
GROUND	BUILDING 1	3569.9 m²
GROUND MEZZ	BUILDING 1	483.4 m²
LEVEL 1	BUILDING 1	1504.2 m²
Grand total		5557.5 m²

Revisions

P1	25.10.21	For Coordination	JH
P2	28.10.21	Draft DA	GT
P3	08.11.21	Client Review	JH
P4	17.11.21	Final Coordination	JH

17/11/2021 10:16:15 AM

Project: **Eagle Farm Precinct**

Drawing: **Building 1**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Project No: **221044** Date: **17.11.21** Author: **JH** Scale: @ A1 **1 : 250** Drawing No.: **TP04.00 P4**

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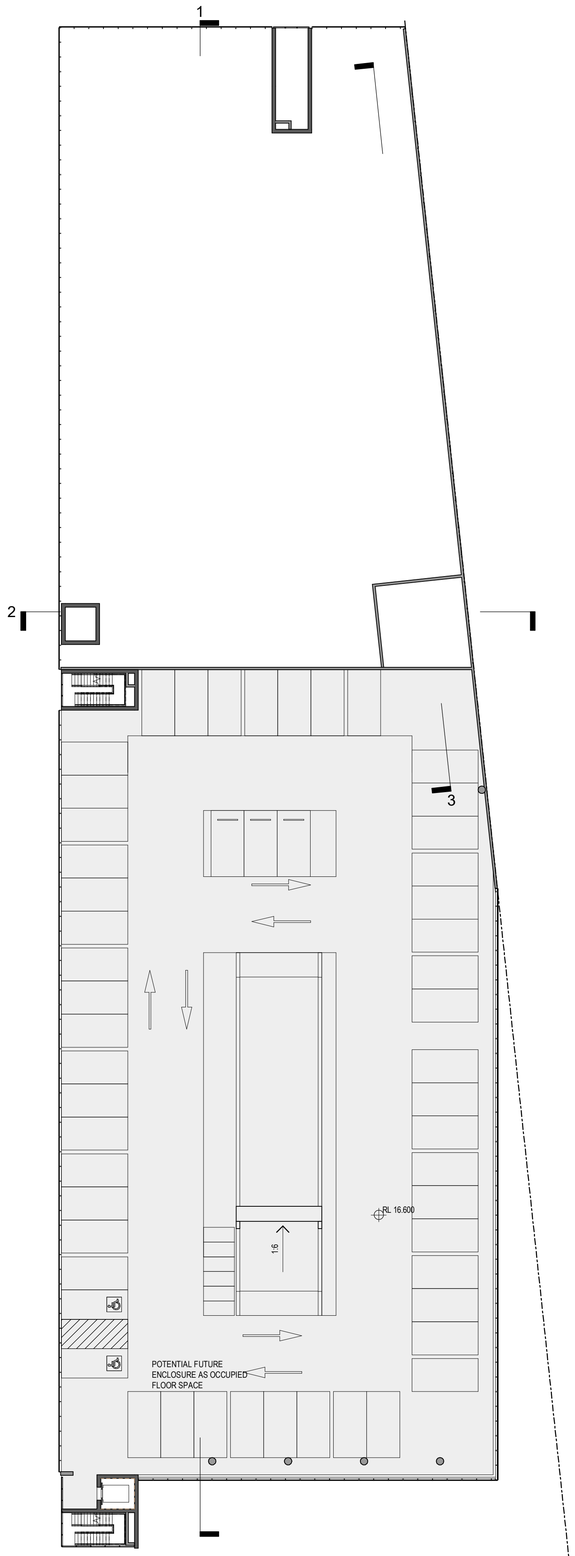
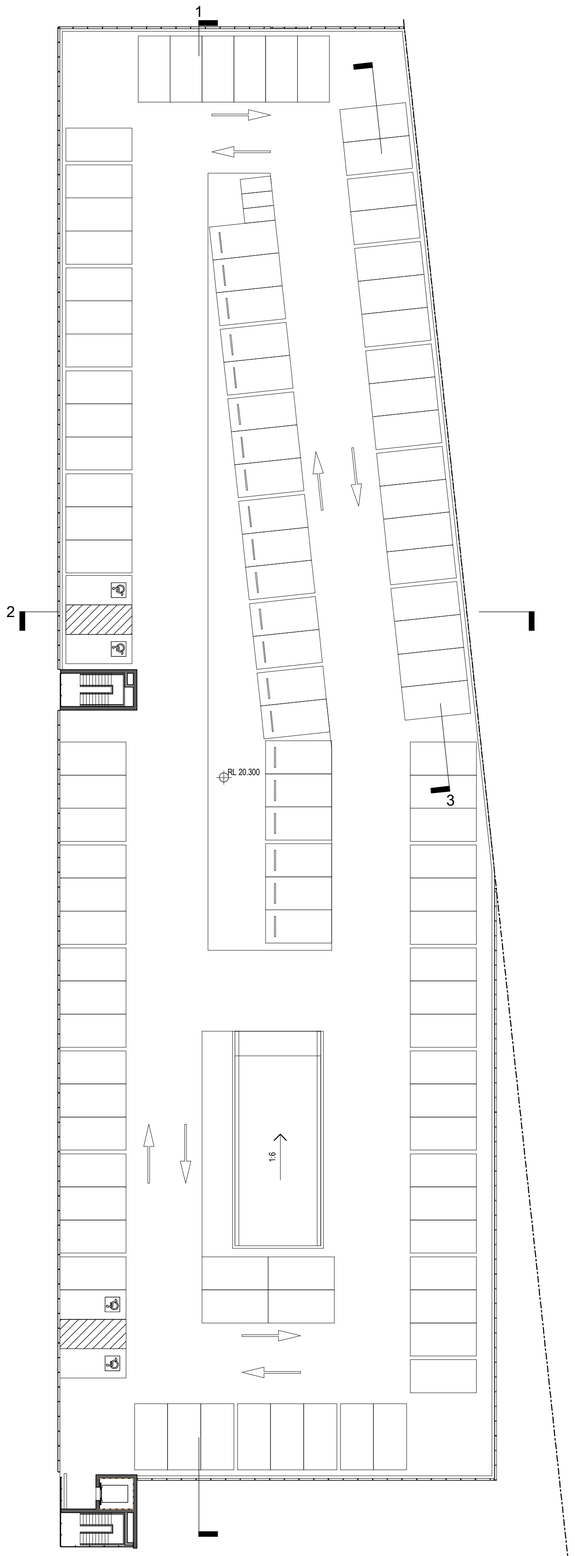


BUILDING 1 - Level 2



BUILDING 1 - Level 3

PARKING - Building 1		
Level		**No. Cars**
LEVEL 1	Accessible	1
LEVEL 1	Stage 1	41
LEVEL 2	Accessible	2
LEVEL 2	Motorbike	6
LEVEL 2	Stage 1	52
LEVEL 3	Accessible	4
LEVEL 3	Motorbike	3
LEVEL 3	Stage 1	105
Grand total		214

AREA - BUILDING 1		
Level	Comments	Area
GROUND	BUILDING 1	3569.9 m²
GROUND MEZZ	BUILDING 1	483.4 m²
LEVEL 1	BUILDING 1	1504.2 m²
Grand total		5557.5 m²

PRELIMINARY

Revisions

P4	20.10.21	For Coordination	JH
P5	25.10.21	For Coordination	JH
P6	28.10.21	Draft DA	GT
P7	08.11.21	Client Review	JH
P8	17.11.21	Final Coordination	JH

17/11/2021 10:16:21 AM

Project: **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Building 1**

Project No: **221044**

Date: **17.11.21**

Author: **JH**

Scale: @ A1 **1 : 250**

Drawing No.: **TP04.01 P8**

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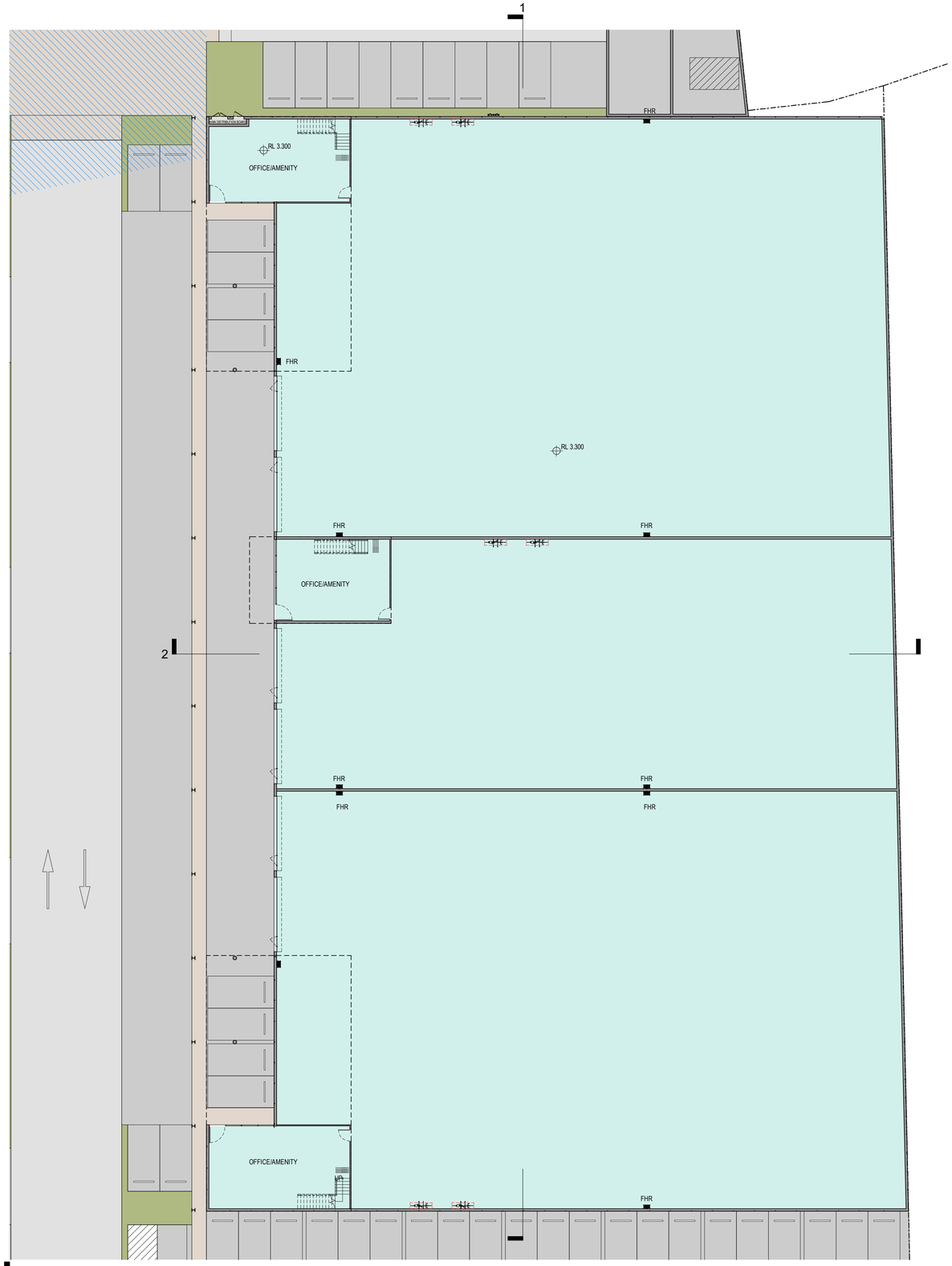
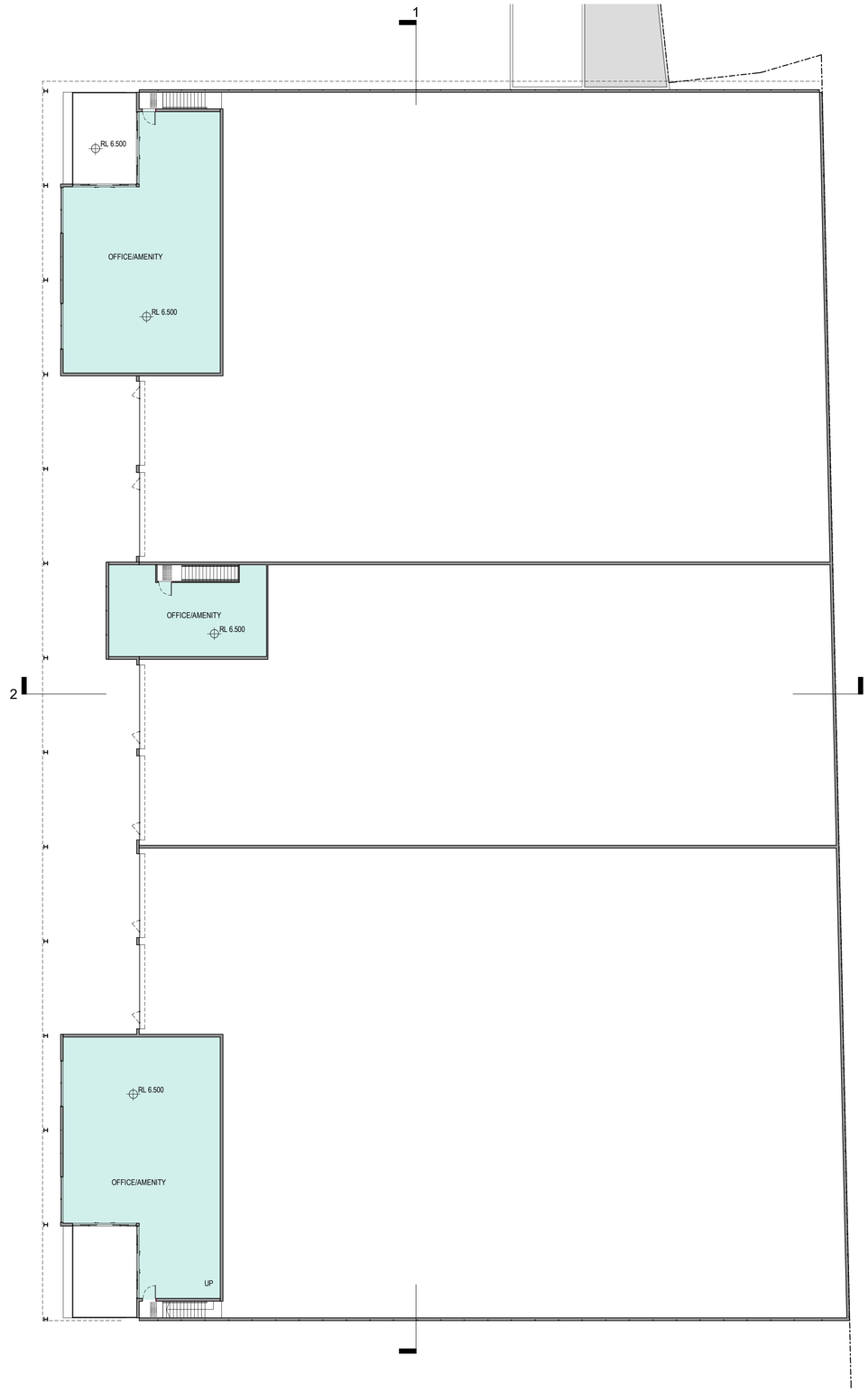


BUILDING 2 - Ground



BUILDING 2 - Ground Mezzanine

AREA - BUILDING 2		
Level	Comments	Area
GROUND	BUILDING 2	4355.0 m²
GROUND MEZZ	BUILDING 2	451.6 m²
Grand total		4806.6 m²

Revisions

P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	25.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	17.11.21	Final Coordination	JH

17/11/2021 10:04:47 AM

Project ~ ! "

Drawing #$ % !˜

Project No

Date

Author

Scale: @ A1

Drawing No.

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

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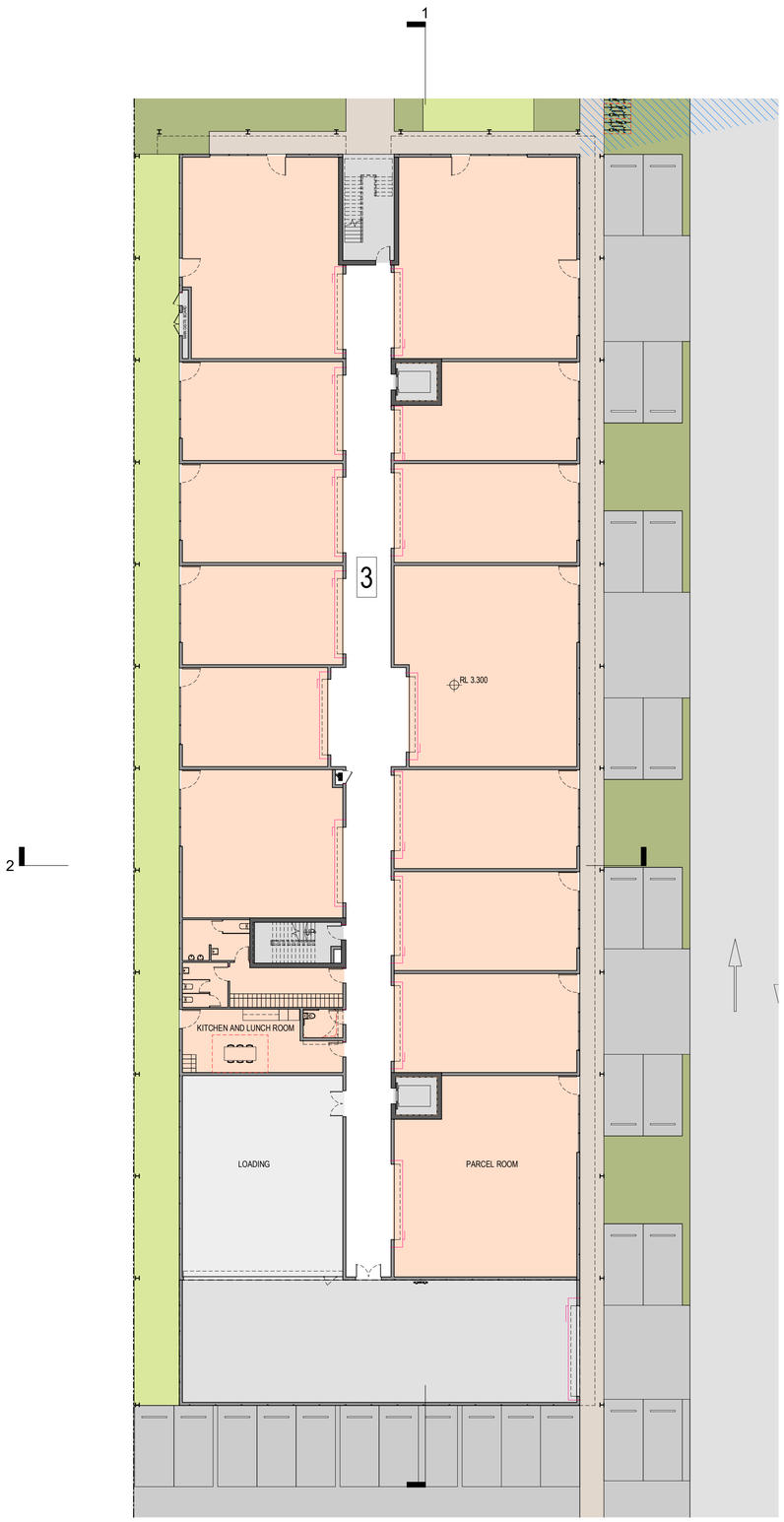
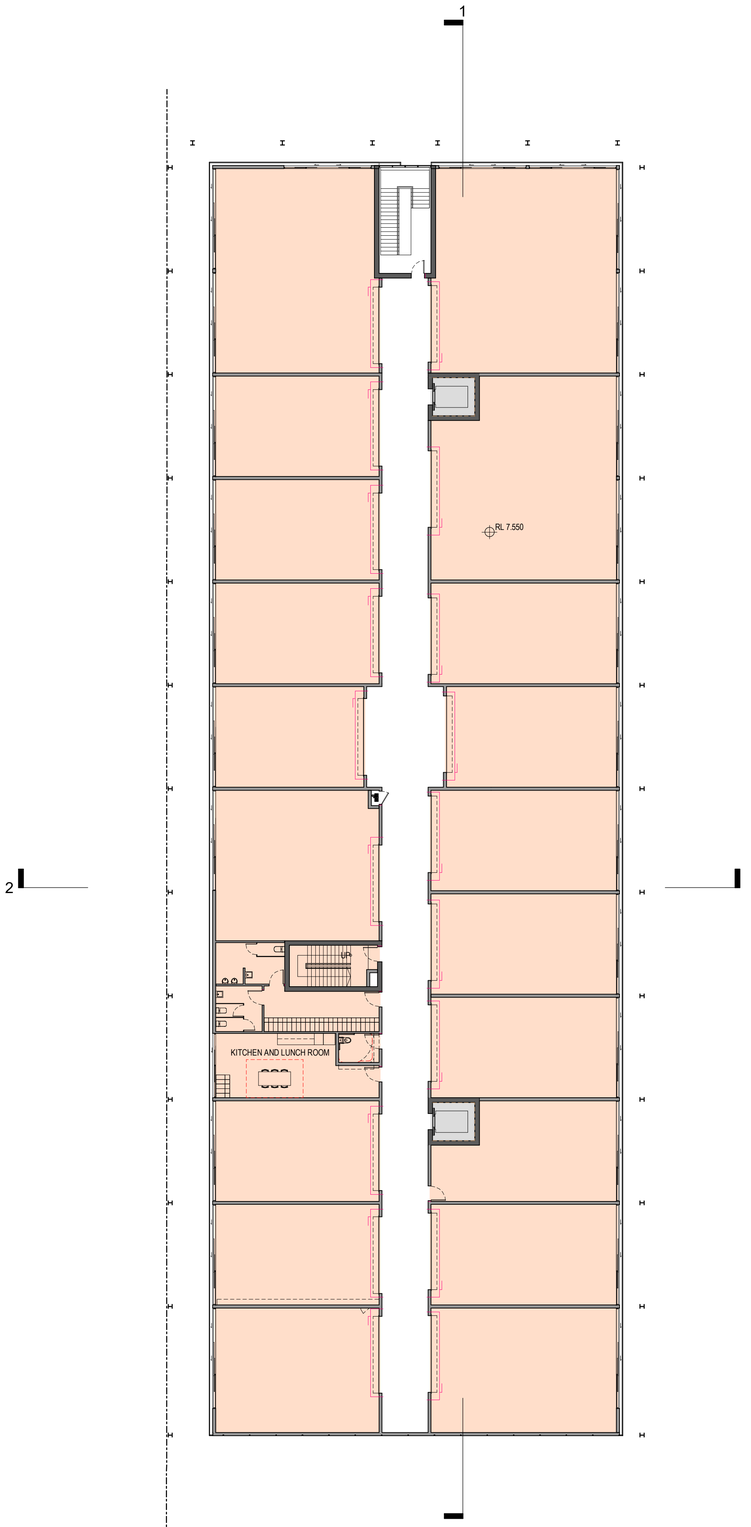


BUILDING 3 - Ground



BUILDING 3 - Level 1

AREA - BUILDING 3		
Level	Comments	Area
GROUND	BUILDING 3	2026.9 m²
GROUND MEZZ	BUILDING 3	2259.2 m²
Grand total		4286.0 m²

PRELIMINARY

Revisions

P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	25.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	17.11.21	Final Coordination	JH

17/11/2021 10:04:52 AM

Project: **Eagle Farm Precinct**
Drawing: **Building 3**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1 **1 : 200**
Drawing No.: **TP04.03 P6**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

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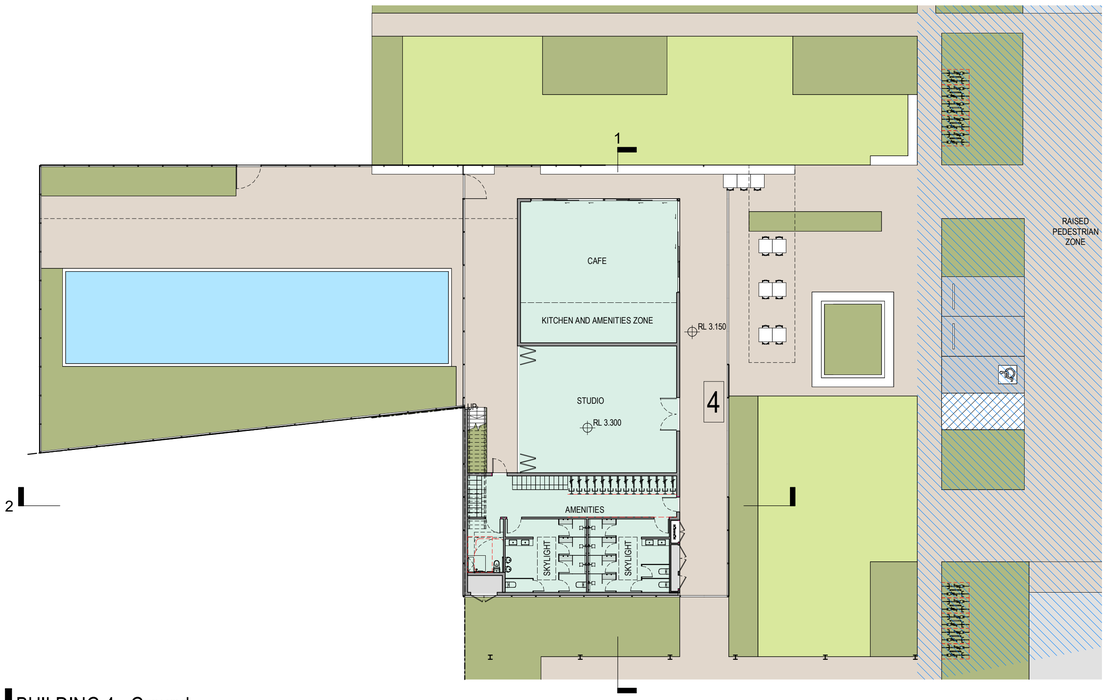
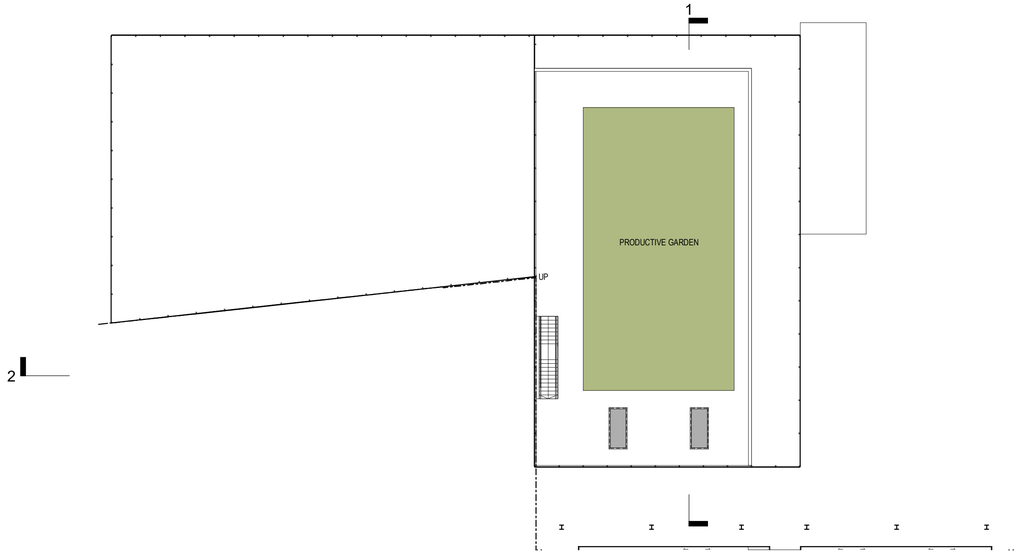


BUILDING 4 - Ground



BUILDING 4 - Roof

AREA - BUILDING 4		
Level	Comments	Area
GROUND	BUILDING 4	297.0 m²
Grand total		297.0 m²

PRELIMINARY

Revisions			
P1	15.10.21	For Coordination	JH
P2	20.10.21	For Coordination	JH
P3	25.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:04:57 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Building 4**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1 **1 : 200**
Drawing No: **TP04.04 P5**

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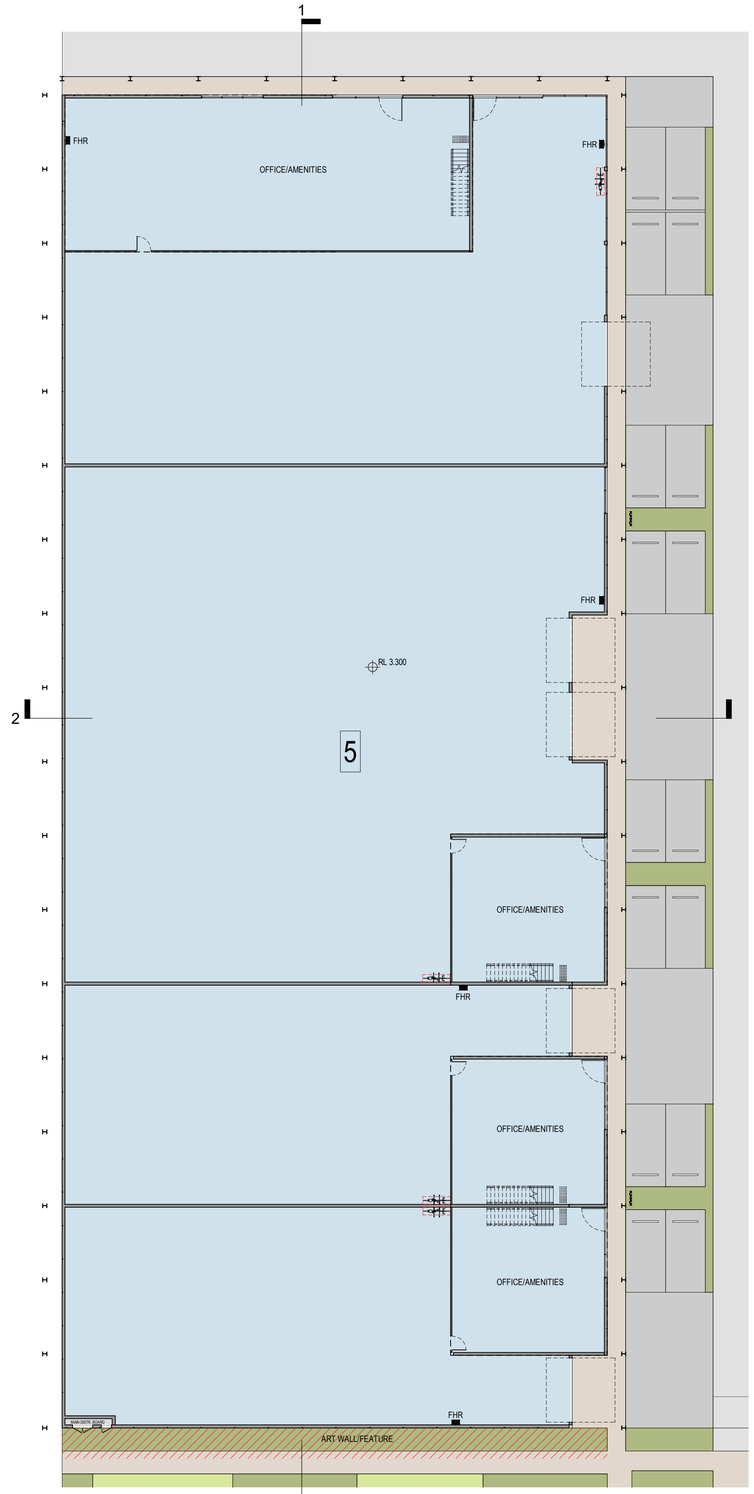
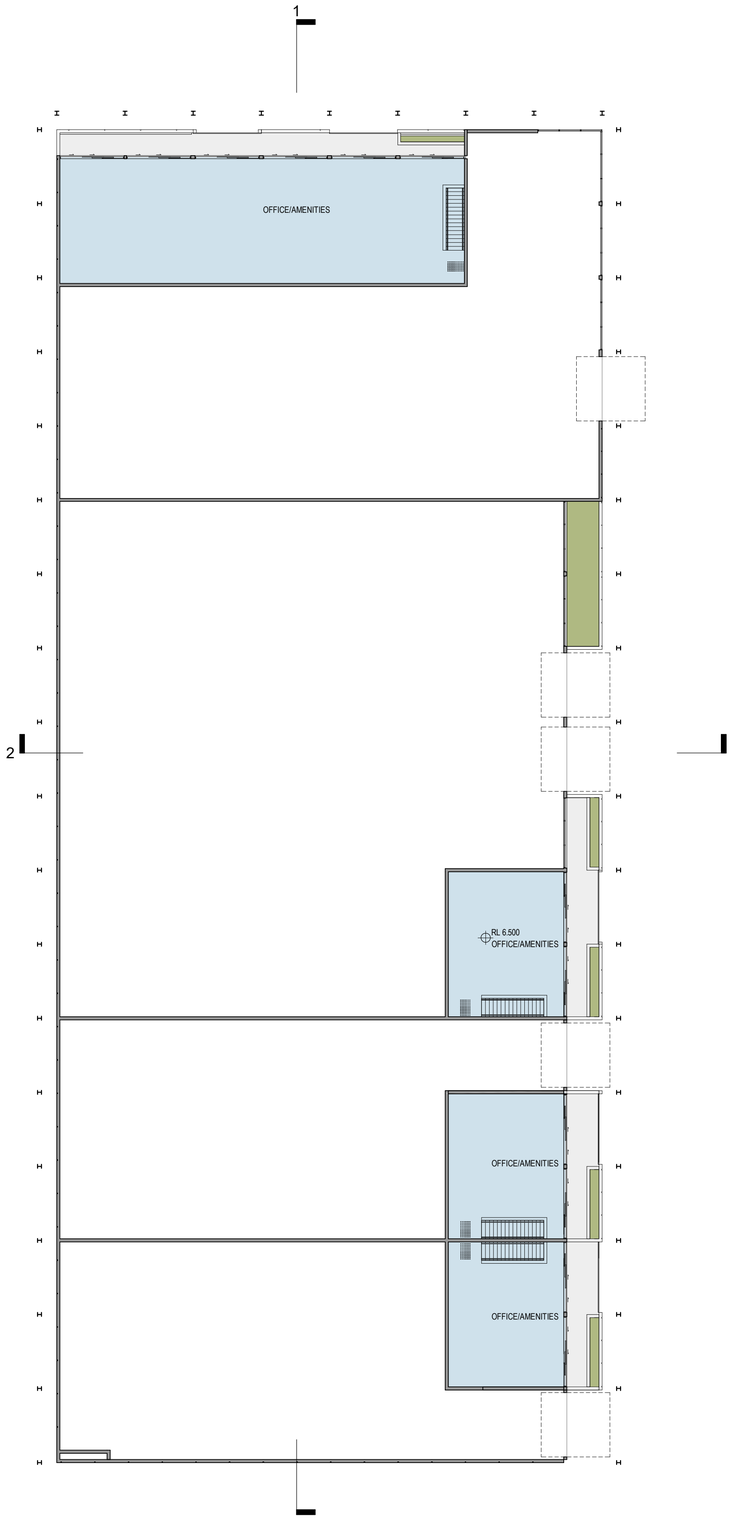


BUILDING 5 - Ground



BUILDING 5 - Ground Mezzanine

AREA - BUILDING 5		
Level	Comments	Area
GROUND	BUILDING 5	435.9 m²
MEZZ		
Grand total		435.9 m²

PRELIMINARY

Revisions

P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	25.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	17.11.21	Final Coordination	JH

17/11/2021 10:05:02 AM

Project **Eagle Farm Precinct**

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing **Building 5**

Project No **221044**

Date **17.11.21**

Author **JH**

Scale: @ A1 **1 : 200**

Drawing No. **TP04.05 P6**

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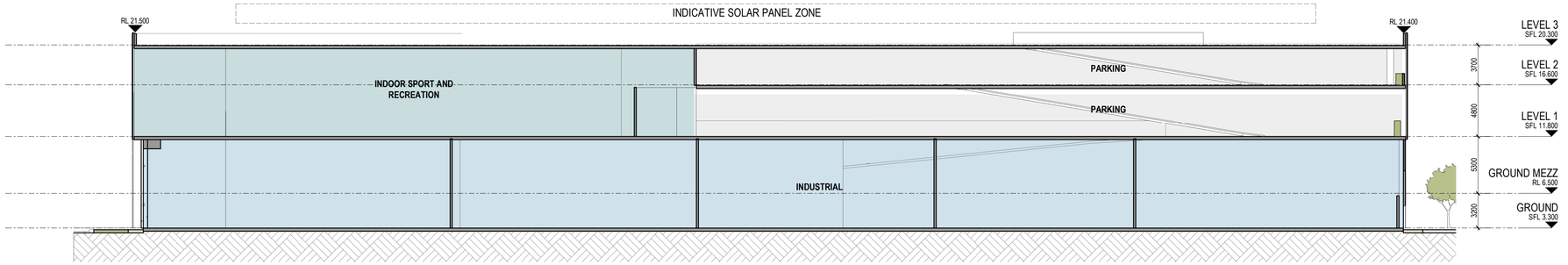

1 TP04.00 BUILDING 1 - SECTION 1
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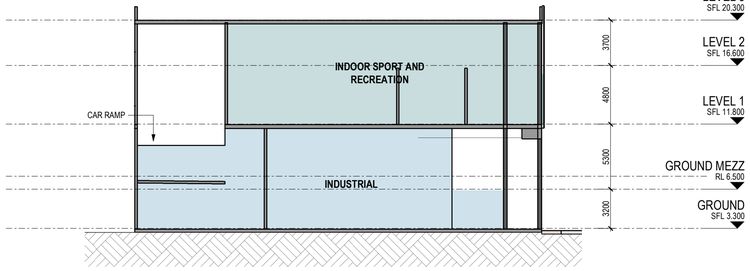
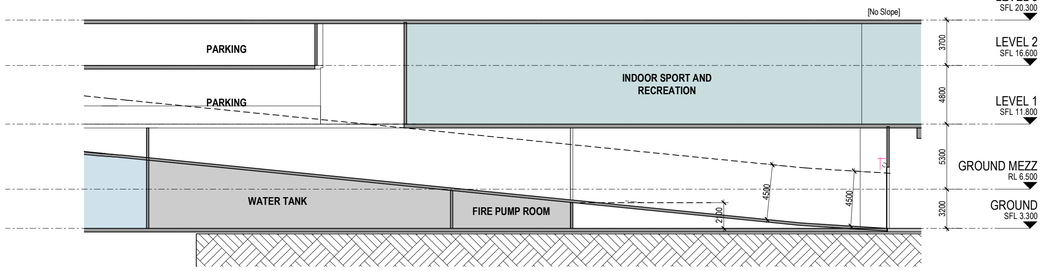


2 TP04.00 BUILDING 1 - SECTION 2
SCALE1 : 250



3 TP04.00 BUILDING 1 - RAMP SECTION
SCALE1 : 250

PRELIMINARY

Revisions

P3	15.10.21	For Coordination	JH
P4	20.10.21	For Coordination	JH
P5	28.10.21	Draft DA	GT
P6	08.11.21	Client Review	JH
P7	17.11.21	Final Coordination	JH

17/11/2021 10:05:07 AM

Project: Eagle Farm Precinct
Drawing: Sections - Building 1
Project No: 221044
Date: 17.11.21
Author: JH
Scale: @ A1: 1 : 250
Drawing No.: TP05.01 P7

110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

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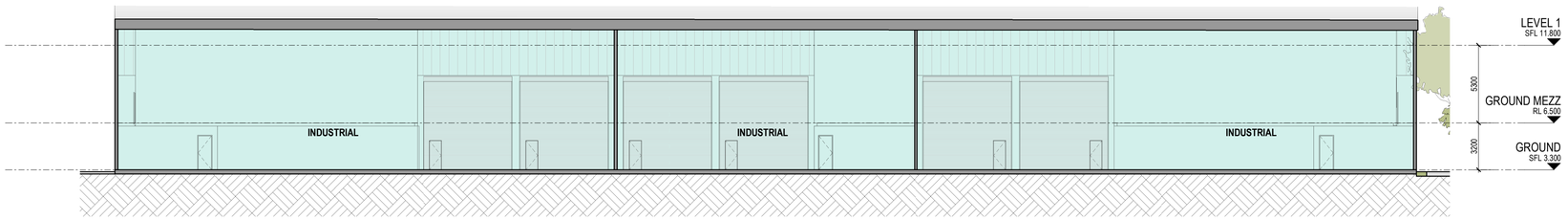

1 TP04.02 BUILDING 2 - SECTION 1
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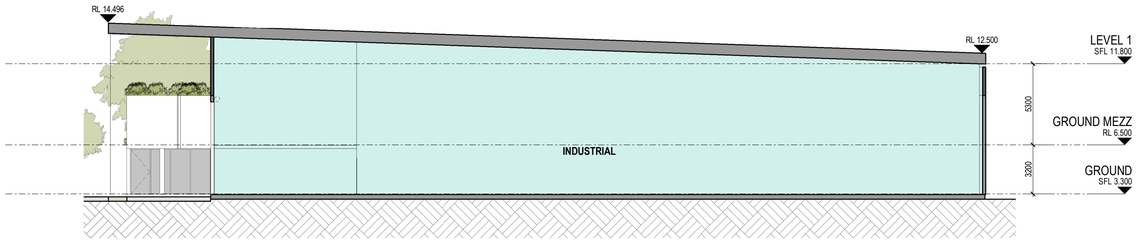

2 TP04.02 BUILDING 2 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions

P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:15 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 2**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.02 P5**

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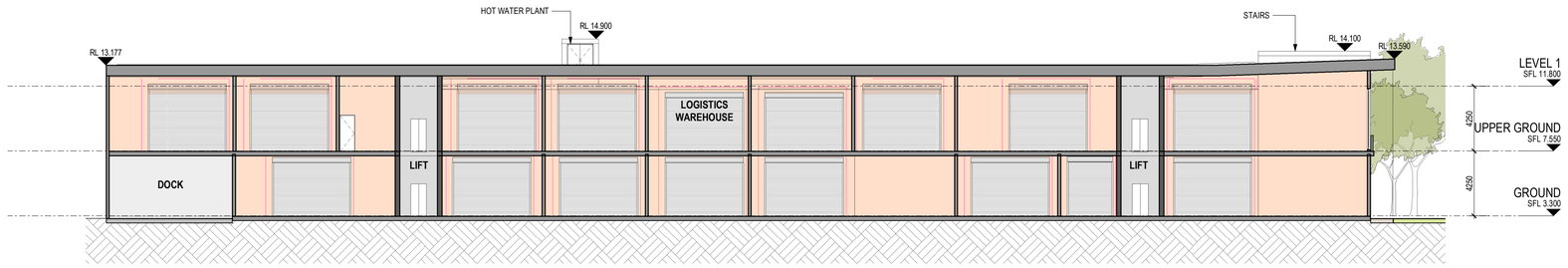

1 TP04.03 BUILDING 3 - SECTION 1
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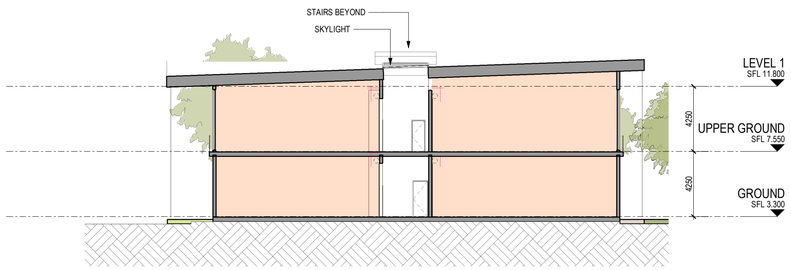

2 TP04.03 BUILDING 3 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions

P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:24 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 3**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.03 P5**

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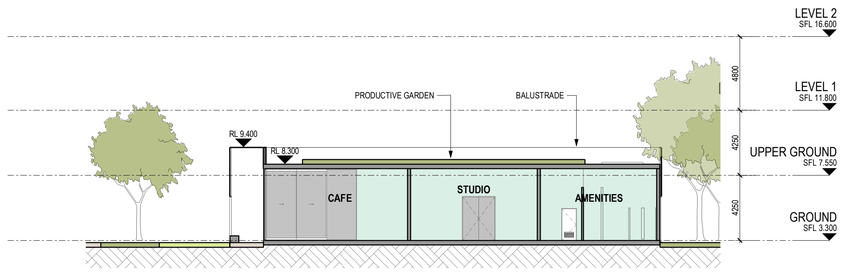

1 SK10.01 BUILDING 4 - SECTION 1
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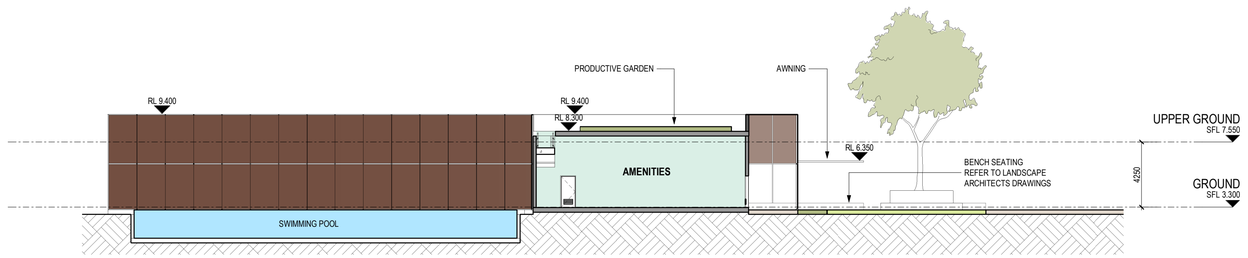

2 TP04.04 BUILDING 4 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions			
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P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:32 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 4**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.04 P5**

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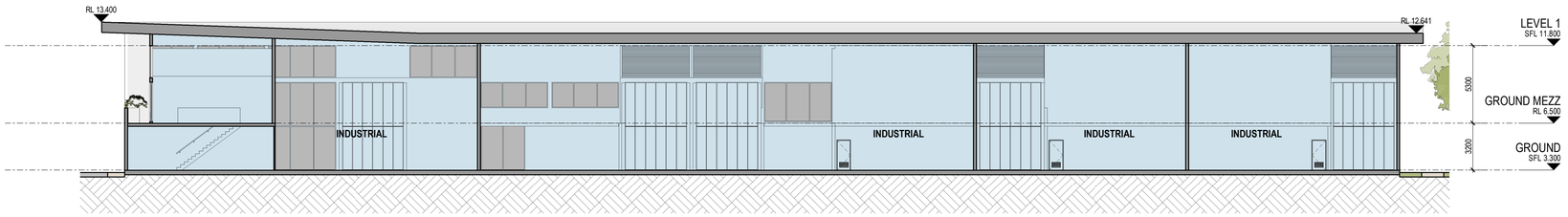

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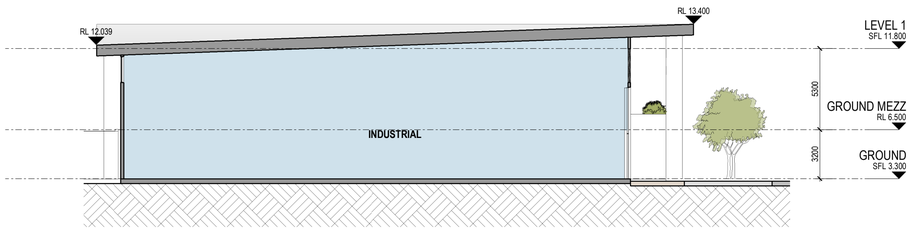

2 TP04.05 BUILDING 5 - SECTION 2
SCALE 1 : 200

PRELIMINARY

Revisions

P1	07.10.21	For Coordination	JH
P2	15.10.21	For Coordination	JH
P3	20.10.21	For Coordination	JH
P4	28.10.21	Draft DA	GT
P5	17.11.21	Final Coordination	JH

17/11/2021 10:05:40 AM

Project: **Eagle Farm Precinct**
110 Links Ave, 155 & 161 Fison Ave, Eagle Farm

Drawing: **Sections - Building 5**
Project No: **221044**
Date: **17.11.21**
Author: **JH**
Scale: @ A1: **1 : 200**
Drawing No.: **TP05.05 P5**

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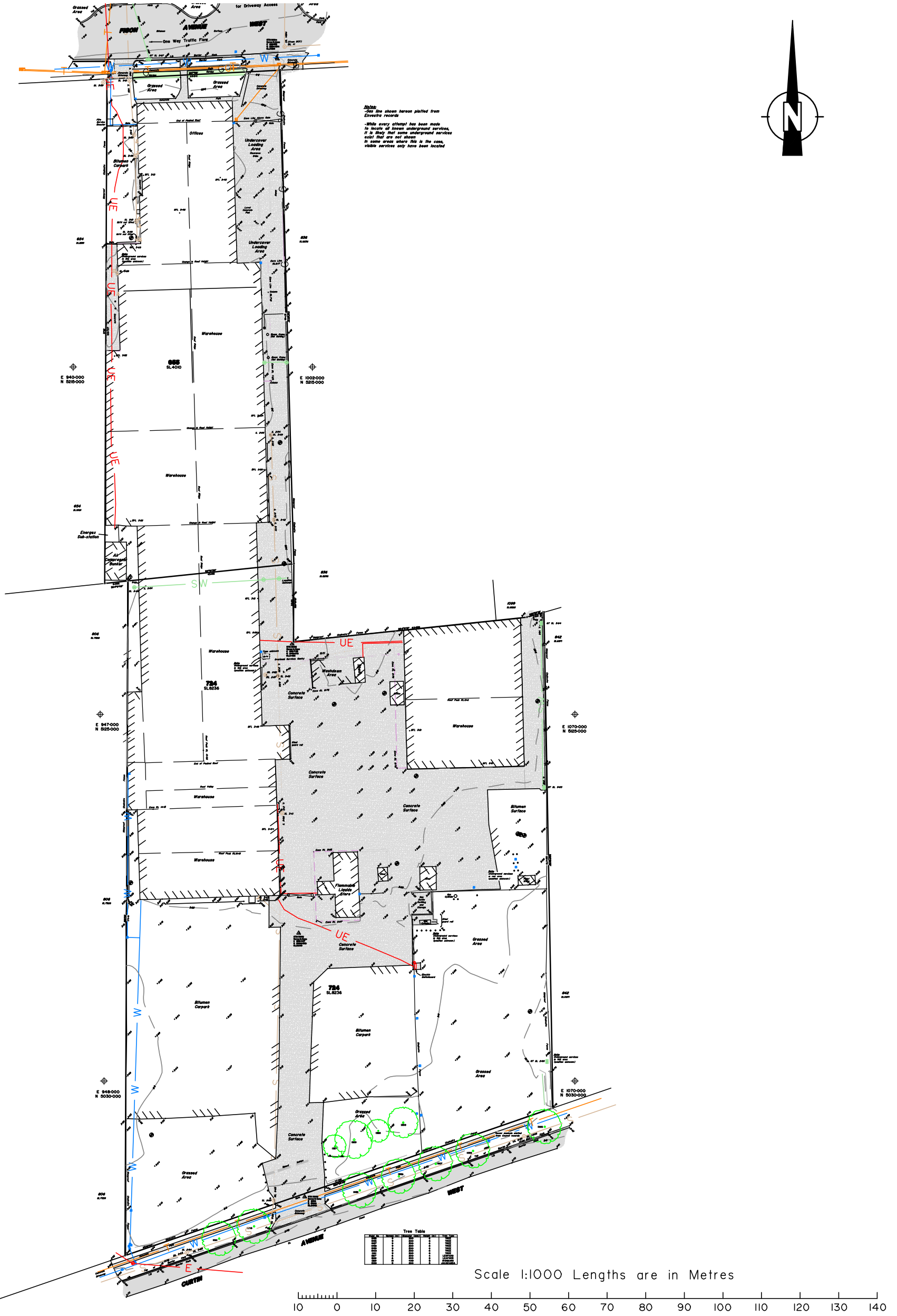
Appendix B – Survey Plan



Notes:
-Gas line shown hereon plotted from Envestra records

-While every attempt has been made to locate all known underground services, it is likely that some underground services exist that are not shown
In some areas where this is the case, visible services only have been located

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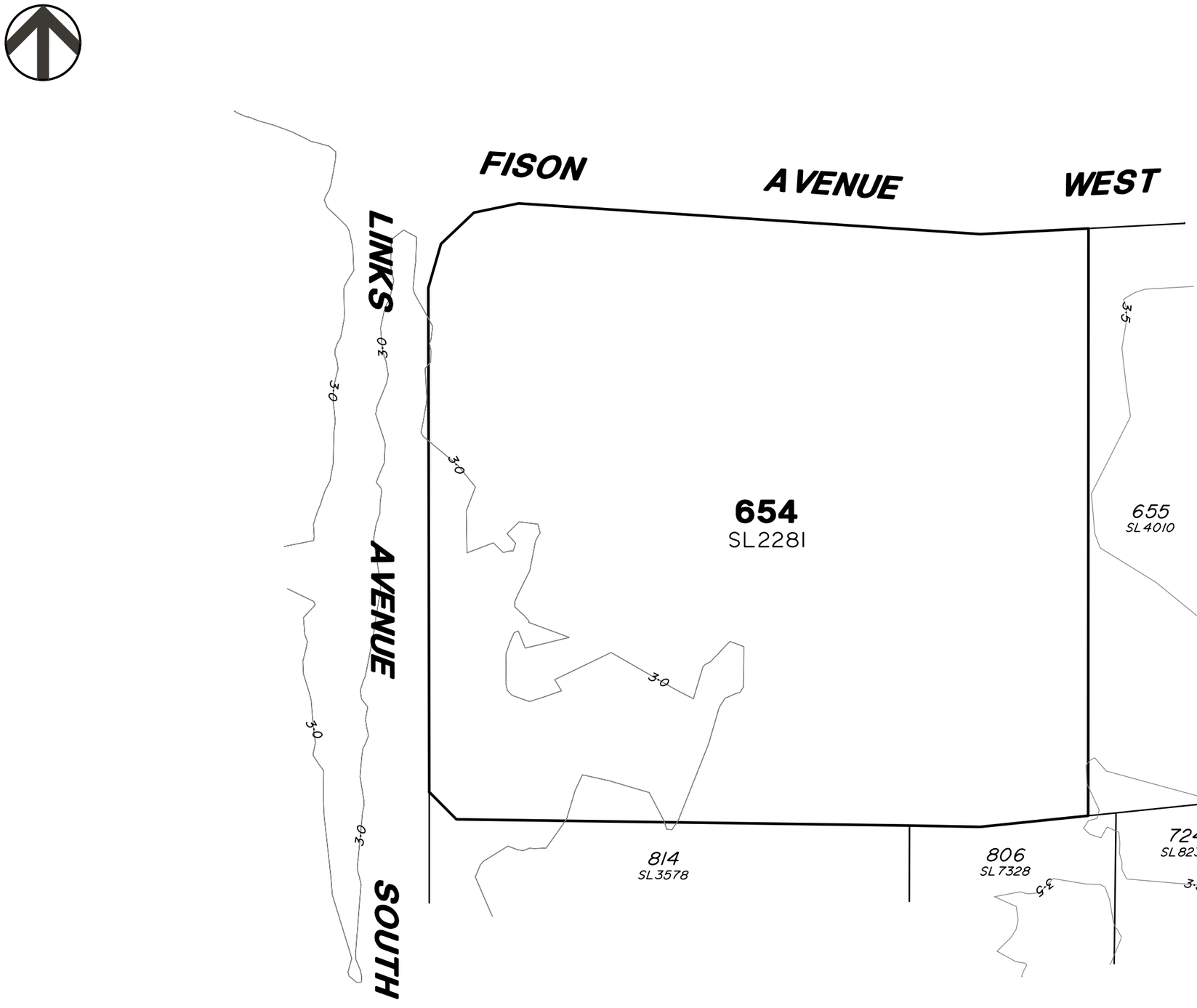
client: EPOCA Constructions Pty Ltd

project: 155 Fison Avenue West EAGLE FARM

drawing title: Overall Plan of Level and Detail Survey over Lot 655 on SL4010 and Lot 724 on SL8236

PARISH: *TOOMBUL* COUNTY: *Stanley*

horiz. datum: Cadastral
vert. datum: AHD PMI42475
drawn: GHJ 30/6/10
surveyed: GHJ 25/06/10
checked:
scale: 1:1000 A3
reference no: 14047-1 amdt



Scale 1:1000 Lengths are in Metres

10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

0 50m 50 mm 100m 100 mm 150m 150 mm SCALE BAR

110 Links Ave South Eagle Farm

For

Epoca Group Pty Ltd

IMPORTANT NOTES:
(These notes are an integral part of this plan)
This plan has been prepared for Epoca Group Pty Ltd for the purposes of Determining Natural Ground Level
It is not to be used by any other person or corporation or for any other purposes.

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Data Sources

Cadastral Boundaries	BCC City Plan 2000
Contours / Topographic	BCC City Plan 2000
Aerial Images	*
Flood Level	*
Engineering Design	*
Architectural Design	*
Landscape Design	*

Issue	Revisions	Date	Drawn
A	Original	16.10.2017	ELH

Locality:	Eagle Farm
Local Authority:	Brisbane City Council
Projection:	*
Horizontal Meridian:	BCC City Plan 2000
Vertical Level Datum:	AHD
Level Origin:	BCC City Plan 2000
Scale:	1:1000 @ A3
Surveyed:	*
Designed:	*
Drawn:	RCS 6/10/17
Checked:	ELH 16/10/17
Plot Date:	16 Oct, 2017
Computer File Ref:	32448-GP01-A Natural Ground Level.dwg

Plan of Natural Ground Level over Lot 654 on SL2281 110 Links Ave South Eagle Farm

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WHITSUNDAYS (07) 4945 1722
MACKAY (07) 4951 2911
CAIRNS (07) 4051 6722

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Drawing No	Issue
32448-GP01	A

N

E 940·000
N 5215·000

E 1002·000
N 5215·000

E 947·000
N 5125·000

E 1070·000
N 5125·000

655
SL4010

724
SL8236

724
SL8236

Full Height Windows
Door
BFL 3·51
Board Room
Reception
Office
Office
Sill Height 1·15m
Sill Height 1·15m
Office
Sill Height 1·15m
Office
Sill Height 1·3m
Computer
Office
BFL 3·49 Door
Dispatch
Sill Height 1·15m
Office
Sill Height 1·3m
Office
Stairs
Door BFL 3·51
Office
Sill Height 0·96m
Office
BFL 3·48
Roller Door
Sill Height 0·75m
Office
Note
Internal Office
• Partitions have a sill height of 0·96m unless otherwise noted
Sill Height 1·28m
Office
Note
Mezzanine Level above offices
See Diagram A
Women's Toilet
Door
Stairs
Stairs
Guard Rail
Men's Toilet
First Aid Room
Door
Cleaner
Safe
Fence
Roller Door
See Typical Section AA
Women's Toilet
Fence
End of Warehouse Roof
Fence
A
A
3·0
Roller Door
Stairs
Lunch Room Above
Line of Roof Peak
Men's Toilet
BFL 3·51
Roller Door
Kitchen?
Roller Door
3·0
Roller Door
See Typical Section BB
Boom Crane (Not Working)
B
B
Roller Door
Roller Door
BFL 3·53
Boom Crane (Not Working)
Line of Roof Peak
Roller Door
BFL 3·48
Spray Painting Area
Paint Room
Door
Roller Door
End of Warehouse Roof
End of Warehouse Roof
Roller Door
Line of Roof Peak
Roller Door
See Typical Section CC
C
C
BFL 3·49
Caged Store
BFL 3·51
BFL 3·52
End of Warehouse Roof
End of Warehouse Roof
Horizontal Beam RL 8·35
Roller Door
Door
Power Meter
Main Switchboard
Energex Sub-station
Roller Door
Air Compressor Bunker
See Typical Section DD
BFL 3·50
Roller Door
D
D
Roller Door
Line of Roof Peak
Roller Door
Lunch Room
Double Sliding Door
Block Wall
See Typical Section DD
Showers
Men's Toilet
Note:
Storage area above Amenities
D
D
Roller Door
Note
Mezzanine Level above
See Diagram B
Workshop
Stairs
Line of Roof Peak
Roller Door
BFL 3·49
Roller Door
Workshop
Roller Door
BFL 3·50
Office
BFL 3·49
End of Warehouse Roof
Underside of Horizontal Beam RL 7·67
Roller Door
E
E
Underside of I Beam RL 7·16
Underside of I Beam RL 6·95
Underside of I Beam RL 6·60
Underside of I Beam RL 6·60
Roller Door
Roller Door
Underside of I Beam RL 7·32
Fire Exit
Fire Exit
Roller Door Opening Height 5·7m
Roller Door Opening Height 3·5m
See Typical Section EE
BFL 3·40
Line of Roof Peak
Roller Door Opening Height 5·7m
Roller Door Opening Height 3·5m
BFL 3·40
Fire Exit
Ramp
Ramp
RL 3·3m
Fire Exit
3·65
Roller Door
E
E
Fa
Fb
2·56 Above Mezzanine Floor
Men's Toilet
Women's Toilet
Mezzanine Level 3·065 above Concrete Floor
Fire Exit
Clearance Under Mezzanine Level
2·45 to Underside of I-Beams
2·86 to Underside of Floor Joists
Stairs
Stairs
Office
See Section FF
Roller Door
BFL 3·51
Note
3·9m x 4·9m Lunchroom an Storage Above Offices
Fire Exit
Sill Height 0·9m
Door
Office
Sill Height 0·9m
Sill Height 1·1m
Sill Height 0·9m
Office
Office
Stairs
Door
BFL 3·51
Roller Door
Sill Height 0·9m
Door
Roller Door
Roller Door
Flammable Liquids Store
Shed
Shed
Shed

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vertical datum	horizontal datum	field book:
		level book:
origin	origin	drawn GJF 9/7/10
		surveyed GHJ
		checked

E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

revisions

drawing title

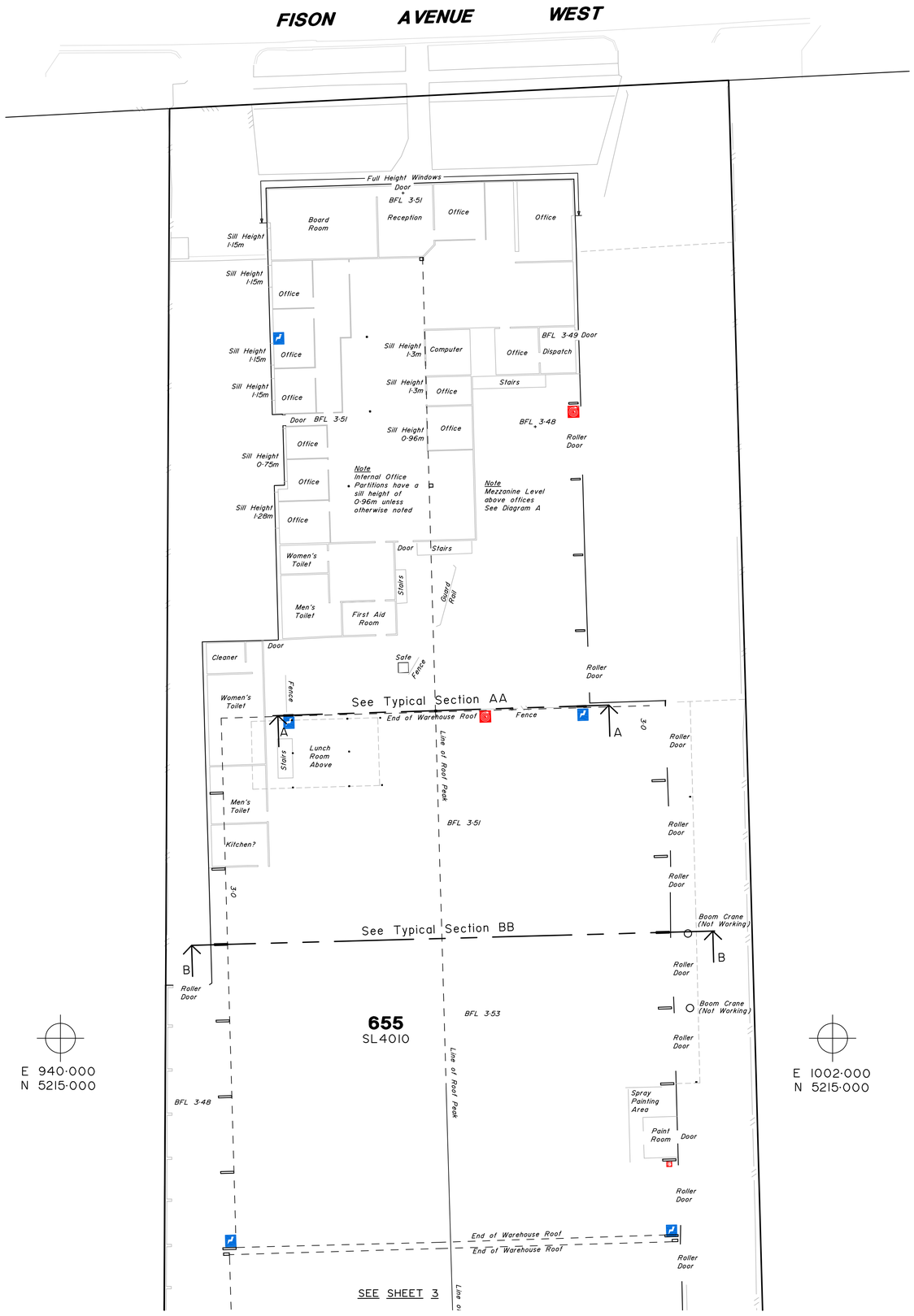
Plan of Internal Layout of Offices and Warehouse Areas

PARISH: COUNTY:

client
EPOCA Construction Pty Ltd

project
155 Fison Avenue West
EAGLE FARM

A1	scale 1:300	reference no 14047-2	amdt A



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N 5215·000

E 1002·000
N 5215·000

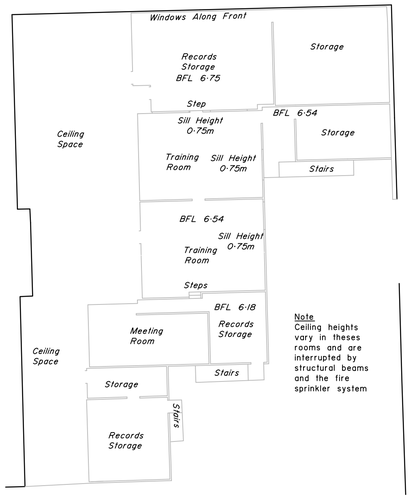
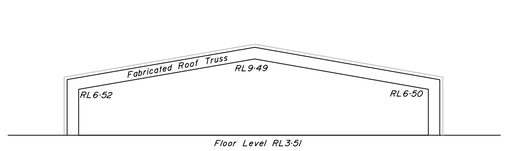
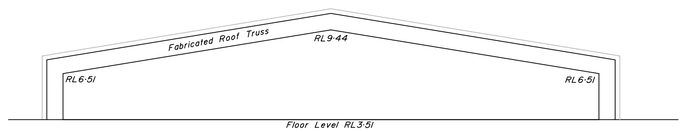


Diagram A
Mezzanine Level

TYPICAL WAREHOUSE SECTIONS



Typical Section AA



Typical Section BB

LEGEND

- Electrical Switchboard
- F — Fire Hydrant
- Fire Reel
- BFL 3·51 — Building Floor Level
- Switchboard Cabinet
- Internal Walls

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

Scale 1:200 Lengths are in Metres

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28

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project
155 Fison Avenue West
EAGLE FARM

drawing title
Plan of Internal Layout of Offices and Warehouse Areas

PARISH:
COUNTY:
Contour Interval:
field book: level book:
drawn GHJ
surveyed GHJ
checked

vertical datum	horizontal datum
AHD	
origin	origin
PM142475 RL3.267	

associated consultants

H			
G			
F			
E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

revisions

scale 1:200 — A1
reference no 14047-2 — amdt A

SEE SHEET 2

Roller Door

End of Warehouse Roof

End of Warehouse Roof

Roller Door

Line of Roof Peak

Roller Door

See Typical Section CC

C

C

BFL 3·49

Caged Store

BFL 3·52

BFL 3·51

End of Warehouse Roof

Horizontal Beam RL 8·35

End of Warehouse Roof

Door

Roller Door

Door

Power Meter

Energex Sub-station

Main Switchboard

Roller Door

Air Compressor Bunker

See Typical Section DD

BFL 3·52

Roller Door

D

D

Roller Door

Line of Roof Peak

Roller Door

Lunch Room

Double Sliding Door

Block Wall

See Typical Section DD

Showers

Note: Storage area above Amenities

D

D

Men's Toilet

Roller Door

724
SL8236

Note Mezzanine Level above See Diagram B

Workshop

Stairs

Roller Door

BFL 3·50

Office

BFL 3·49

End of Warehouse Roof
Underside of Horizontal Beam RL 7·67

BFL 3·49

Roller Door

Workshop

Roller Door

E 947·000
N 5125·000

Underside of I Beam RL 7·16

E

Underside of I Beam RL 6·95

Underside of I Beam RL 6·60

Underside of I Beam RL 6·60

Roller Door

Roller Door

Underside of I Beam RL 7·32

Fire Exit

Fire Exit

SEE SHEET 4

Store Room

Light Electric Crane

Floor Level RL 6·44

Stairs

Sill Height 0·9m

Lunch Room

Diagram B
Mezzanine Level

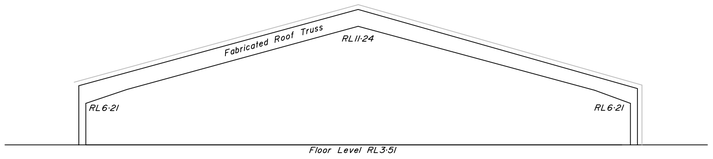
LEGEND

- Electrical Switchboard
- F — Fire Hydrant
- Fire Reel
- BFL 3·51 — Building Floor Level
- Switchboard Cabinet
- Internal Walls

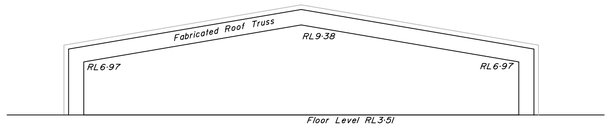
Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

724
SL8236

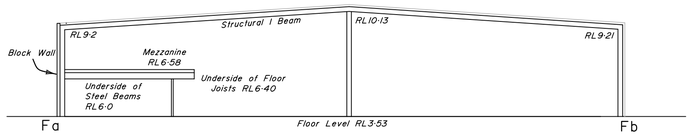
TYPICAL WAREHOUSE SECTIONS



Typical Section CC



Typical Section DD



Section FaFb

Fa

2·56 Above Mezzanine Floor

Men's Toilet

Women's Toilet

Mezzanine Level 3·065 above Concrete Floor

Fire Exit

Clearance Under Mezzanine Level
2·45 to Underside of I-Beams
2·86 to Underside of Floor Joists

Stairs

Stairs

Office

See Section FF

Roller Door

BFL 3·51

Note 3·9m x 4·9m Lunchroom on Storage Above Offices

Sill Height 0·9m

Door

Office

Sill Height 0·9m

Sill Height 1·1m

Office

Sill Height 0·9m

Office

Stairs

Door

Sill Height 0·9m

Door

Roller Door

Fire Exit

BFL 3·51

Roller Door

Fb

E 1070·000
N 5125·000

Scale 1:200 Lengths are in Metres

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28

N

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project

155 Fison Avenue West
EAGLE FARM

drawing title

Plan of Internal Layout of Offices and Warehouse Areas

PARISH:

COUNTY:

Contour Interval:

field book: level book:

drawn GHJ

surveyed GHJ

checked

vertical datum	horizontal datum
AHD	
origin PMI42472 RL3.267	origin

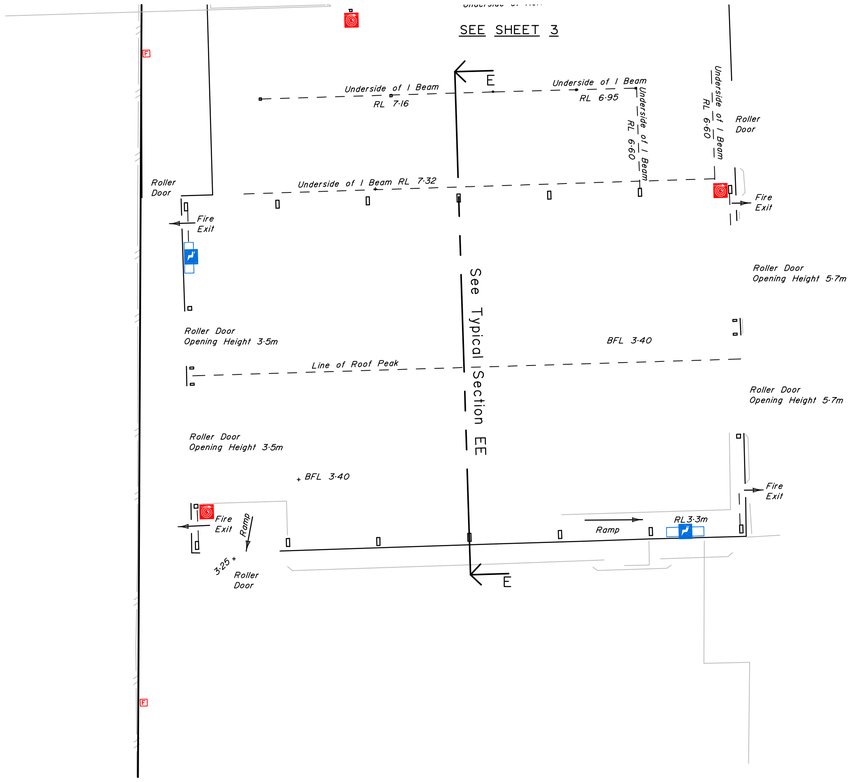
associated consultants

H			
G			
F			
E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

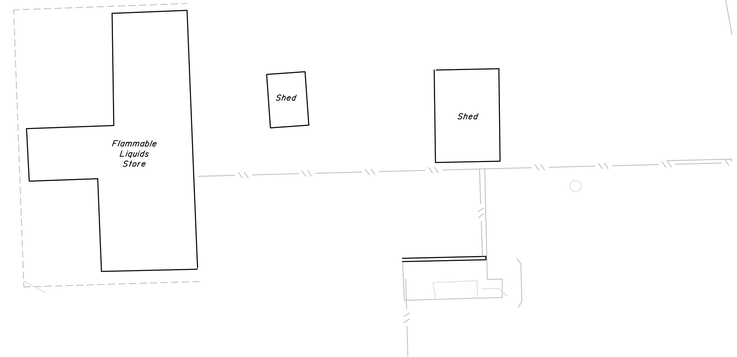
revisions

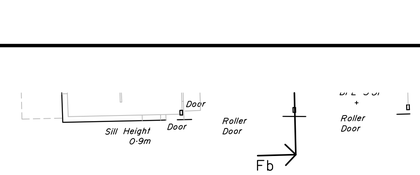
scale 1:200 A1

reference no 14047-2 amdt A



724
SL8236



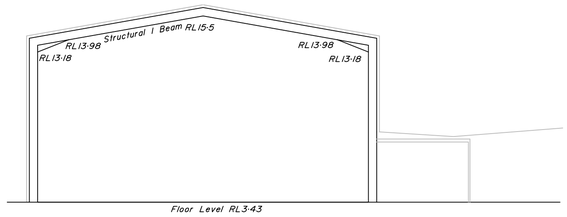


LEGEND

- Electrical Switchboard
- Fire Hydrant
- Fire Reel
- BFL 3·51 — Building Floor Level
- Switchboard Cabinet
- Internal Walls

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

TYPICAL WAREHOUSE SECTION



Typical Section EE

Scale 1:200 Lengths are in Metres

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28

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client
EPOCA Construction Pty Ltd

project
155 Fison Avenue West
EAGLE FARM

drawing title
Plan of Internal Layout of Offices and Warehouse Areas

PARISH:
COUNTY:
Contour Interval:
field book: level book:
drawn GHJ
surveyed GHJ
checked
vertical datum AHD
horizontal datum
origin PMI42475 RL3.267
origin
associated consultants

H			
G			
F			
E			
D			
C			
B			
A	6/8/10	GHJ	Revised Structure Location

revisions

scale 1:200 A1
reference no 14047-2 amdt A

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LEGEND

- Bench Mark
- Station
- Electric Pole
- Electric Pole with Light
- Electrical Pit
- Telco Pillar
- Telco/Comms Pit
- Fire Hydrant
- Water Meter
- Water Tap
- Water Valve
- Sewer Manhole
- Sewer Inspection Opening
- Gully Trap
- Stormwater Manhole
- Gas Marker
- Gas Valve
- Sign
- Miscellaneous Manhole
- Post / Bollard
- Comms
- Electricity
- Fence
- Gas
- Sewerage
- Stormwater
- Telco
- Water

Symbols indicated on this plan are representative only and do not relate to the actual attributes of the physical object

Contour Interval: 0.25M

FISON AVENUE

WEST AVENUE

SOUTH LINKS AVENUE

STN 3360 Nail E 762-339 N 5304-648 RL 2-786

SL 2-80 COULD NOT OPEN

SL 3-40 FULL COULD NOT GET DEPTH

STN 3359 Nail E 809-146 N 5301-575 RL 3-557

SL 3-31 RCP IL 0-81 SW 450ø

SL 3-03 IL 2-03 SW 450ø

SL 3-00 IL 0-00

Grassed Traffic Island

Kerb

Invert

STN 3380 Screw E 922-638 N 5303-599 RL 3-481

STN 3381 Screw E 865-408 N 5296-374 RL 3-285

Water lines plotted from council records

Bitumen Surface

Concrete Surface

Grassed

Area

Metal Warehouse

Workshops

Offices

Demountable

Garages

Transformer Sub Station

Ret Wall

Fence

Footpath

Kerb

Back of Kerb

Lip of Kerb

Concrete Path

Drain

Unable to Trace Line Further

Water line plotted from council records

Telstra Pillar

Grass

Footpath

Ramp

Floor RL4-06

Floor RL3-30

Floor RL3-25

Floor RL3-32

Floor RL3-34

STN 3372 Nail E 819-933 N 5269-013 RL 3-248

STN 3373 Nail E 858-085 N 5271-339 RL 3-191

STN 3374 Nail E 882-551 N 5283-097 RL 3-407

STN 3377 Nail E 821-728 N 5231-654 RL 3-048

STN 3362 Nail E 796-329 N 5227-544 RL 2-869

STN 3364 Nail E 837-726 N 5223-946 RL 3-686

STN 3378 Nail E 904-997 N 5271-416 RL 3-275

STN 3379 Nail E 936-150 N 5267-742 RL 3-172

STN 3375 Nail E 941-994 N 5228-686 RL 3-323

654 SL2281

Scale 1:250 Lengths are in Metres

12.5m 50mm | 25m 100mm | 37.5m 150mm SCALE BAR

110 Links Ave South
Eagle Farm
For
Epoca Group Pty Ltd

IMPORTANT NOTES:
(These notes are an integral part of this plan)
This plan has been prepared for Epoca Group Pty Ltd for the purposes of Level and Detail survey.
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Data Sources	
Cadastral Boundaries	-
Contours / Topographic	Survey
Aerial Images	-
Flood Level	-
Engineering Design	-
Architectural Design	-
Landscape Design	-

Issue	Revisions	Date	Drawn
A	Original	16.10.2017	ELH

Locality:	Eagle Farm
Local Authority:	Brisbane City Council
Projection:	-
Horizontal Meridian:	SP249195
Vertical Level Datum:	AHD
Level Origin:	PM142475 RL 3.267
Scale:	1:250 @ A1
Surveyed:	JM 25-08-2017
Designed:	-
Drawn:	RCS 30-09-2017
Checked:	ELH 16-10-2017
Plot Date:	17 Oct, 2017
Computer File Ref:	32448-DS01-A.dwg

Plan of Level and Detail survey over
Lot 654 on SL2281
110 Links Ave South
Eagle Farm

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WHITSUNDAYS (07) 4945 1722
MACKAY (07) 4951 2911
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ACN 604 671 374
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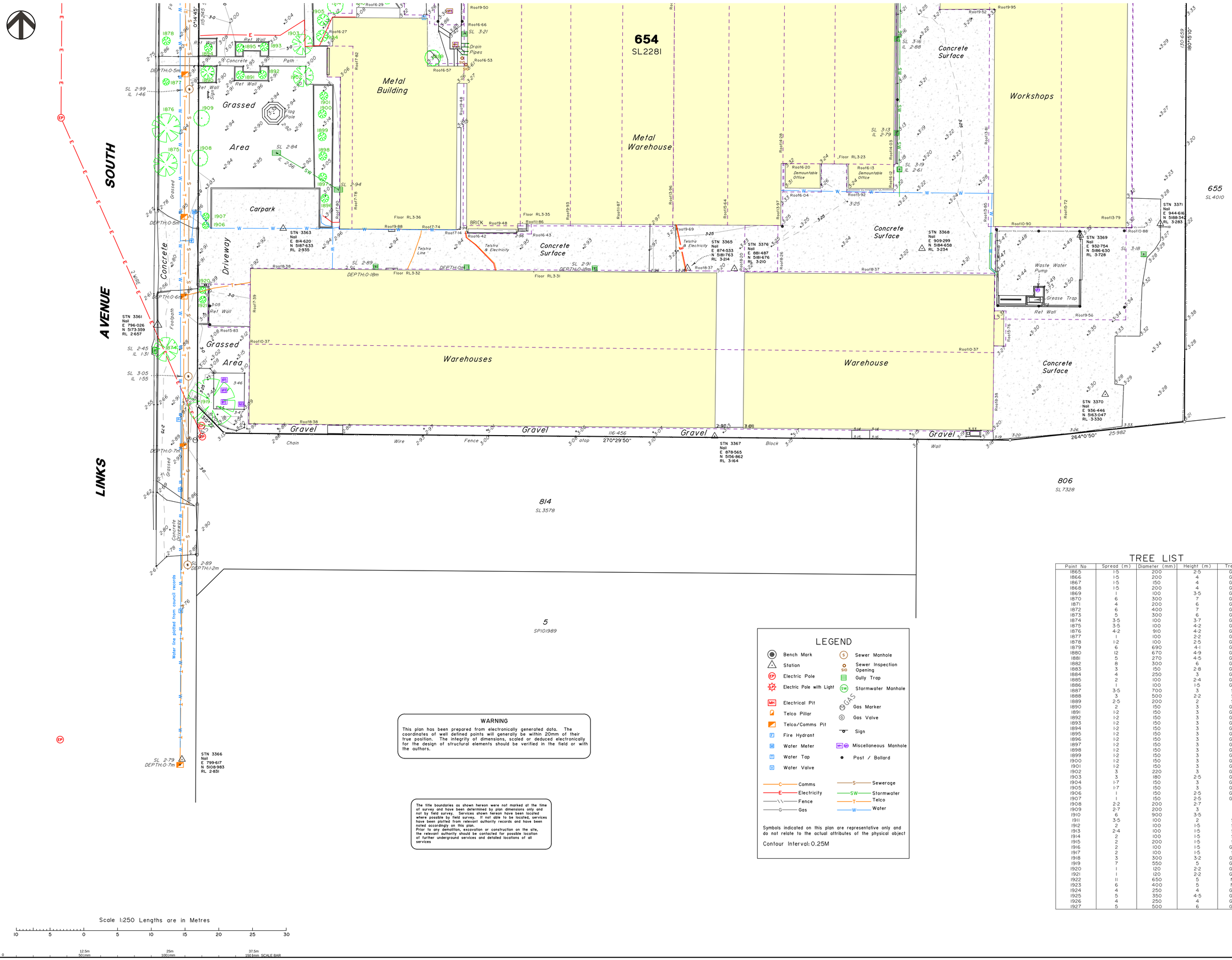
Drawing No 32448-DS01 Sht 1 | Issue A



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LEGEND

- Bench Mark
- Station
- Electric Pole
- Electric Pole with Light
- Electrical Pit
- Telco Pillar
- Telco/Comms Pit
- Fire Hydrant
- Water Meter
- Water Tap
- Water Valve
- Sewer Manhole
- Sewer Inspection Opening
- Gully Trap
- Stormwater Manhole
- Gas Marker
- Gas Valve
- Sign
- Miscellaneous Manhole
- Post / Bollard

C Comms	S Sewerage
E Electricity	SW Stormwater
Fence	T Telco
G Gas	W Water

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Contour Interval: 0.25M

Scale 1:250 Lengths are in Metres

10 5 0 5 10 15 20 25 30

0 12.5m 50 mm 25m 100 mm 37.5m 150 mm SCALE BAR

TREE LIST

Point No	Spread (m)	Diameter (mm)	Height (m)	Tree Type
1865	1-5	200	2-5	General
1866	1-5	200	4	General
1867	1-5	150	4	General
1868	1-5	200	4	General
1869	1	100	3-5	General
1870	6	300	7	General
1871	4	200	6	General
1872	6	400	7	General
1873	5	300	6	General
1874	3-5	100	3-7	General
1875	3-5	100	4-2	General
1876	4-2	910	4-2	General
1877	1	100	2-2	General
1878	1-2	100	2-5	General
1879	6	690	4-1	General
1880	12	670	4-9	General
1881	5	270	4-5	General
1882	8	300	6	General
1883	3	150	2-8	General
1884	4	250	3	General
1885	2	100	2-4	General
1886	1	100	1-5	General
1887	3-5	700	3	Shrub
1888	3	500	2-2	Shrub
1889	2-5	200	2	Shrub
1890	2	150	3	General
1891	1-2	150	3	General
1892	1-2	150	3	General
1893	1-2	150	3	General
1894	1-2	150	3	General
1895	1-2	150	3	General
1896	1-2	150	3	General
1897	1-2	150	3	General
1898	1-2	150	3	General
1899	1-2	150	3	General
1900	1-2	150	3	General
1901	1-2	150	3	General
1902	3	220	3	General
1903	3	180	2-5	General
1904	1-7	150	3	General
1905	1-7	150	3	General
1906	1	150	2-5	General
1907	1	150	2-5	General
1908	2-2	200	2-7	Pine
1909	2-7	200	3	Pine
1910	6	900	3-5	Pine
1911	3-5	100	2	Shrub
1912	2	100	1-5	Shrub
1913	2-4	100	1-5	Shrub
1914	2	100	1-5	Shrub
1915	2	200	1-5	Shrub
1916	2	100	1-5	General
1917	2	100	1-5	Shrub
1918	3	300	3-2	General
1919	7	550	5	General
1920	1	120	2-2	General
1921	1	120	2-2	General
1922	11	650	5	Native
1923	6	400	5	Native
1924	4	250	4	General
1925	5	350	4-5	General
1926	4	250	4	General
1927	5	500	6	General

110 Links Ave South
Eagle Farm
For
Epoca Group Pty Ltd

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Landscape Design	-

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Computer File Ref:	32448-DS01-A.dwg

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Drawing No 32448-DS01 Sht 2
Issue A

Appendix C – Civil Design Drawings

LEGEND

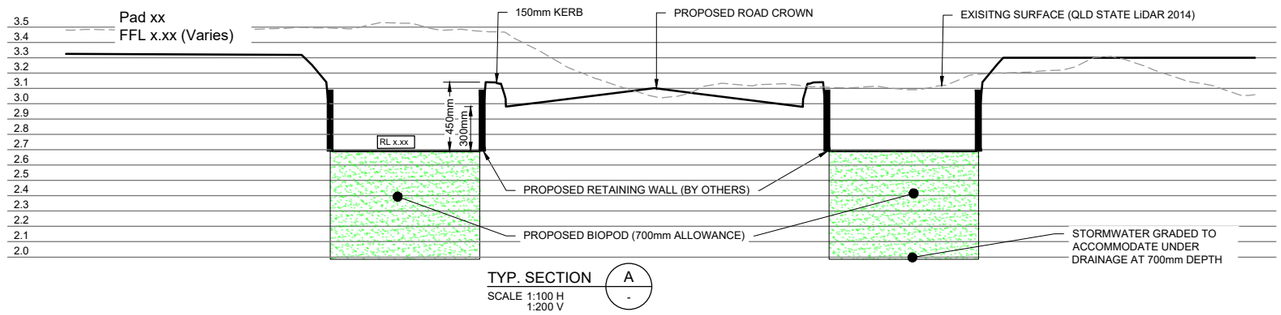
———	SITE BOUNDARY
– – – – XX.XX – – – –	EXISTING CONTOURS (AT 0.25m INTERVALS)
———	EXISTING KERB
----------	EXISTING EDGE OF BITUMEN
——— – ———	EXISTING ROAD CENTRELINE
———	EXISTING TOP OF BATTER
———	EXISTING BOTTOM OF BATTER
——— ExSW ———	EXISTING STORMWATER
——— ExS ———	EXISTING SEWERAGE
——— ExW ———	EXISTING WATER
——— ExT ———	EXISTING TELSTRA
——— ExG ———	EXISTING GAS
——— ExOH ———	EXISTING OVERHEAD ELECTRICITY
——— ExE ———	EXISTING UNDERGROUND ELECTRICITY
– – – – – – XX.XX – – – – – –	FINISHED SURFACE CONTOUR (INTERVAL 0.10m)
RL XXX	BIOPOD BASE HEIGHT
FFLXX.XXXm	FINISHED FLOOR LEVELS

EARTHWORKS VOLUMES (LIDAR TO FINISHED DESIGN SURFACE)	
TOTAL CUT	1100
TOTAL FILL	6100
TOTAL BALANCE (IMPORTED FILL)	5000

EARTHWORKS LEGEND			
Cut		Fill	

NOTES:

- CUT AND FILL IS PROVIDED FOR GUIDANCE ONLY AND DENOTES LEVEL DIFFERENCE BETWEEN FINSHED SURFACE AND EXISTING SURFACE .
- AREAS NOT REQUIRING EARTHWORKS ARE TO REMAIN UNDISTURBED.
- CUT/FILL IS TO ULTIMATE FINISHED INCLUDING TOPSOIL AND ROAD SURFACE AND DOES NOT CONSIDER EXCAVATION NEEDED FOR ROAD PAVEMENTS, TOPSOIL ETC.
- FINAL EXTENTS OF CUT/FILL ARE TO BE DETERMINED BY THE CONTRACTOR ON SITE IN CONJUNCTION WITH THE EARTHWORKS DESIGN.



TYP. SECTION A
SCALE 1:100 H
1:200 V

FOR APPROVAL

REV	DESCRIPTION	DATE	DRAWN	REVIEWED
B	REISSUED FOR APPROVAL	22.11.21	EG	NR
A	ISSUED FOR APPROVAL	15.01.21	EG	NR

NORTH POINT: N

ARCHITECT: ROTHELOWEMAN

CLIENT: KING FISO & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L

Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359
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SCALE BARS: 0 9 18 24 36m
SCALE 1:750 @ A1

PROJECT: PROPOSED DEVELOPMENT EAGLE FARM PRECINCT STAGE 1

DRAWING TITLE: EARTHWORKS LAYOUT PLAN

DESIGNED:

JOB No. 9914

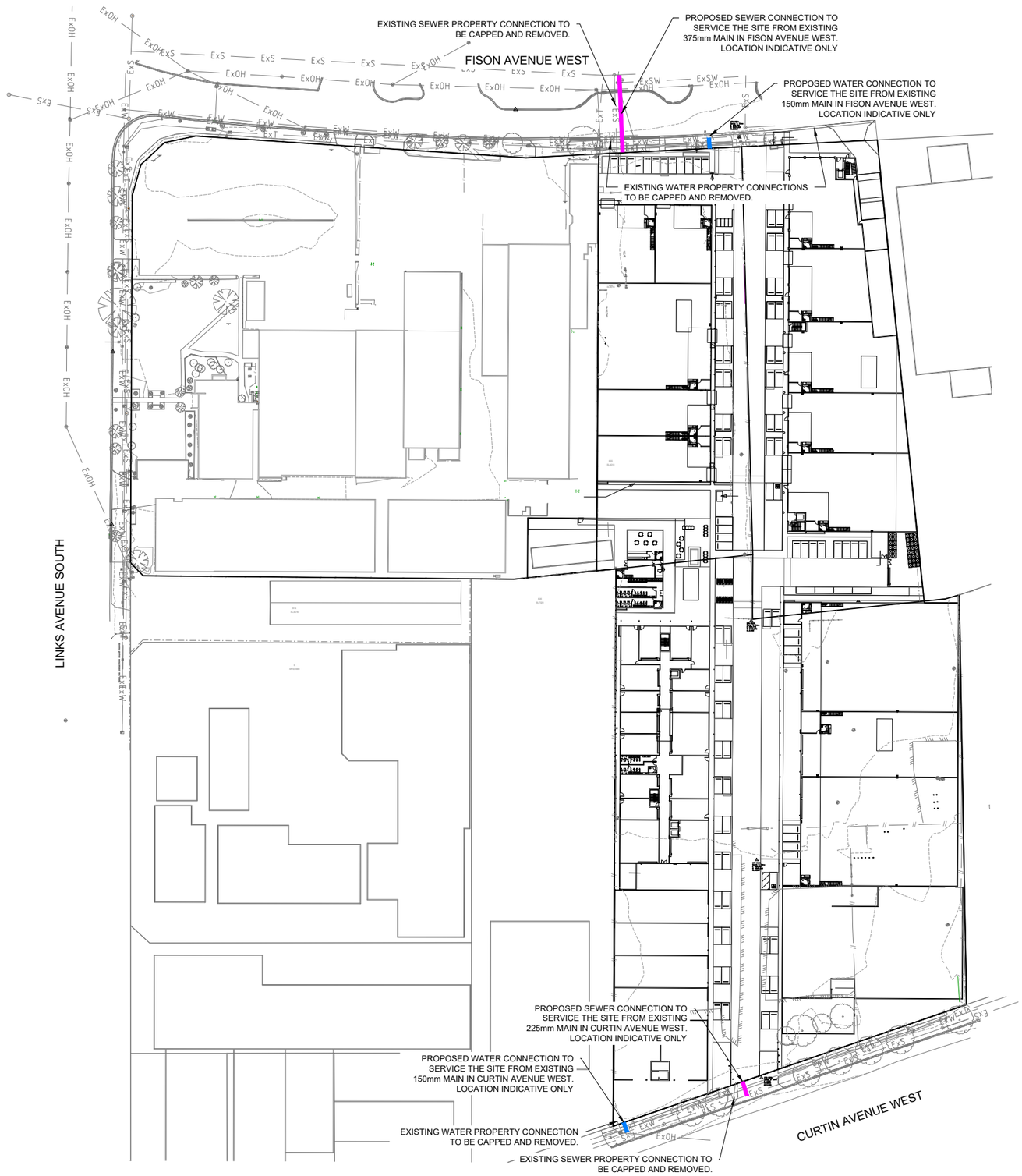
DWG. No. 100

REVISION B

S:\Inertia\Current Jobs\9xx_dwg\Contract Dwg\Inertia Projects\J_20175 – Eagle Farm Precinct\4_Model\AutoCAD\9914_100 Earthworks Layout Plan.dwg

LEGEND

- SITE BOUNDARY
- EXISTING CONTOURS (AT 0.25m INTERVALS) — xx.xx
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- EXISTING ROAD CENTRELINE
- EXISTING TOP OF BATTER
- EXISTING BOTTOM OF BATTER
- EXISTING STORMWATER — ExSW
- EXISTING SEWERAGE — ExS
- EXISTING WATER — ExW
- EXISTING TELSTRA — ExT
- EXISTING GAS — ExG
- EXISTING OVERHEAD ELECTRICITY — ExOH
- EXISTING UNDERGROUND ELECTRICITY — ExE
- PROPOSED WATER CONNECTION
- PROPOSED SEWER CONNECTION



FOR APPROVAL

REV	DESCRIPTION	DATE	DRAWN	REVIEWED
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A	ISSUED FOR APPROVAL	15.01.21	EG	NR

NORTH POINT:

ARCHITECT: ROTHELOWEMAN

CLIENT: KING FISO & KOM INDUSTRIAL 5 P/L & LINK BROSE NO.1 P/L

Inertia
ABN 82 115 498 023
E-mail: info@inertiaeng.com.au
Phone: 3857 7868
Fax: 3262 7359
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SCALE BARS: 0 9 18 24 36m
SCALE 1:750 @ A1

PROJECT: PROPOSED DEVELOPMENT EAGLE FARM PRECINCT STAGE 1

DRAWING TITLE: SERVICES LAYOUT PLAN

DESIGNED:

9914 JOB No.

500 DWG. No.

B REVISION

C:\Users\NPAETZ~1.P\AppData\Local\Temp\AcPublish_16796\$\9914_500 - Services Layout Plan.dwg

Appendix D – Erosion Hazard Assessment

BRISBANE CITY COUNCIL ABN 72 002 765 795

Erosion Hazard Assessment - June 2014

Brisbane City Council (BCC), *Erosion Hazard Assessment* form must be read in conjunction with the *Erosion Hazard Assessment- Supporting Technical Notes* (June 2014 or later version) for explanatory terms and Certification information.

What is an Erosion Hazard Assessment?
Soil erosion and sediment from urban development, particularly during construction activities, is a significant source of sediment pollution in Brisbane's waterways. The Erosion Hazard Assessment determines whether the risk of soil erosion and sediment pollution to the environment is 'low' , 'medium' or 'high'.

When is the EHA required?
An *Erosion Hazard Assessment* form must be completed and lodged with BCC for any Development Application (ie MCU or ROL) that will result in soil disturbance OR Operational Works or Compliance Assessment Application for 'Filling' or Excavation.

Failure to submit this form during lodgement of an application may result in assessment delays or refusal of the application.

Privacy Statement
The personal information collected on this form will be used by Brisbane City Council for the purposes of fulfilling your request and undertaking associated Council functions and services. Your personal information will not be disclosed to any third party without your consent, unless this is required or permitted by law.

Assessment Details

1 Please turn over and complete the erosion hazard assessment.

2 Based on the erosion hazard assessment overleaf, is the site:

☐ ***A 'low' risk site***

Best practice erosion and sediment control (ESC) must be implemented but no erosion and sediment control plans need to be submitted with the development application. Factsheets outlining best practice ESC can be found at http://www.waterbydesign.com.au/factsheets

☑ ***A 'medium' risk site***

If the development is approved, the applicant will need to engage a Registered Professional Engineer (RPEQ) or Certified Professional in Erosion and Sediment Control (CPESC) to prepare an ESC Program and Plan and supporting documentation — in accordance with the requirements of the Infrastructure Design Planning Scheme Policy.

☐ ***A 'high' risk site***

If the development is approved, the applicant will need to engage a RPEQ and CPESC to prepare an ESC Program and Plan and supporting documentation — in accordance with the requirements of the Infrastructure Design Planning Scheme Policy. The plans and program will need to be certified by a CPESC.

3 Site Information and Certification

Application number (if known)

Site address

364 Curtin Avenue West

155, 161 Fison Avenue West

Postcode 4009

I certify that:

☑ I have made all relevant enquiries and am satisfied no matters of significance have been withheld from the assessment manager.

☑ I am a person with suitable qualifications and/or experience in erosion and sediment control.

☑ The Erosion Hazard Assessment was completed in accordance with the Erosion Hazard Assessment Supporting Technical Notes and the BCC Infrastructure Design Planning Scheme Policy.

☑ The Erosion Hazard Assessment accurately reflects the site's overall risk of soil erosion and sediment pollution to the environment.

☑ I acknowledge and accept that the BCC, as assessment manager, relies, in good faith, on this certification as part of its development assessment process and the provision of false or misleading information to the BCC constitutes an offence for which BCC may take punitive steps/ action against me/ enforcement action against me.

Certified by *Print name*

Nathan Green

Certifier's signature

Date

22/ 09 / 2021

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Assessment Table

Table 1: Low Risk Test

		Yes	*No*
1.1	is the area of land disturbance > 1000 m^2	☑	☐
1.2	does any land disturbance occur in a BCC mapped waterway corridor	☐	☑
1.3	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 5%	☐	☑
1.4	does any land disturbance occur below 5 m AHD	☑	☐
1.5	does development involve endorsement of a staging plan	☑	☐
1.6	is there an upstream catchment passing through the site > 1 hectare	☐	☑

	Yes	*No*	
Have you answered 'yes' to any of the questions in Table 1?	☑	☐	**If '*No*' then site is <u>low risk</u> with respect to erosion and sediment control**

If '*Yes*' then proceed to Table 2

Table 2: Medium Risk Test

		Yes	*No*	
2.1	is the area of land disturbance > 1 hectare	☑	☐	**If '*No*' then site is <u>medium risk</u> with respect to erosion and sediment control**

If '*Yes*' then proceed to Table 3

Table 3: High Risk Test

3.1	is there an upstream catchment passing through the site > 1 hectare	☐	☑
3.2	does any land disturbance occurs in a BCC mapped waterway corridor	☐	☑
3.3	is there any slope on site (longer than three metres in length) before, during or after construction that is steeper than 15%	☐	☑

	Yes	*No*	
Have you answered 'yes' to any of the questions in Table 3?	☐	☑	**If '*No*' then site is <u>medium risk</u> with respect to erosion and sediment control**

If '*Yes*' then site is <u>high risk</u> with respect to erosion and sediment control

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Appendix E – Brisbane City Council Codes

Project Location: 110 Links Avenue South, 155, 161 Fison Avenue West and 364 Curtin Avenue West Job Reference: 9914

BCC – Filling and Excavation Code

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO1 Development for filling or excavation minimises visual impacts from retaining walls and earthworks.	**AO1** Development ensures that the total height of any cut and fill, whether or not retained, does not exceed: (a) 2.5m in a zone in the Industry zones category; (b) 1m in all other zones, or if adjoining a sensitive zone.	**AO**	The proposed retaining walls and earthworks will not create adverse visual impacts to the surrounding properties. The retaining walls will not exceed 1m.	
PO2 Development of a retaining wall proposed as a result of filling or excavation: (a) is designed and constructed to be fit for purpose; (b) does not impact adversely on significant vegetation; (c) is capable of easy maintenance. Editor's note—A retaining wall also needs to comply with the Building Regulation and embankment gradients will need to comply with the Building Regulation. Note—Guidance on the protection of native	**AO2.1** Development of a retaining structure, including footings, surface drainage and subsoil drainage: a) is wholly contained within the site; b) if the total height to be retained is greater than 1m, then: (i) the retaining wall at the property boundary is no greater than 1m above the ground level; (ii) all further terracing from the 1m high boundary retaining wall is 1 vertical unit:1 horizontal unit; (iii) the distance between each successive retaining wall (back	**AO**	Retaining walls at the property boundary have been terraced where exceeding 1m in height. No significant vegetation is located in or near the subject site. Retaining wall finishes will be acceptable to Council standards. Clean fill will be used where required.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
vegetation is included in the Biodiversity areas planning scheme policy.	of lower wall to face of higher wall) is no less than 1m horizontally to incorporate planting areas. **AO2.2** Development of a retaining wall over 1m in height protects significant vegetation on the site and on adjoining land and is designed and constructed in accordance with the structures standards in the Infrastructure design planning scheme policy and certified by a Registered Professional Engineer Queensland. **AO2.3** Development provides a retaining wall finish that presents to adjoining land that is maintenance free if the setback is less than 750mm from the boundary. **AO2.4** Development for filling only uses clean fill that does not include any construction rubble, debris, weed seed or viable parts of plant species listed as an undesirable plant species in the Planting species planning scheme policy. .			

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO3 Development ensures that a rock anchor is designed and constructed to be fit for purpose.	**AO3** Development ensures that a rock anchor: a) is constructed in accordance with the standards in the Infrastructure design planning scheme policy; b) where it extends beyond the property boundary, is supported by a letter of consent from the adjoining land and building owners.	**N/A**	No rock anchors are required as a part of this development	
PO4 Development protects all services and public utilities.	**AO4** Development protects services and public utilities and ensures that any alteration or relocation of services or public utilities meets the standard design specifications of the responsible service authorities.	**AO**	Construction of the development will take necessary precautions and actions to ensure the protection of existing services and public utilities.	
PO5 Development provides surface and sub-surface drainage to prevent water seepage, concentration of run-off or ponding of stormwater on adjacent land.	**AO5** Development ensures all flows and subsoil drainage are directed to a lawful point of discharge of a surface water diversion drain, including to the top or toe of a retaining wall in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	**AO**	Acceptable surface drainage has been designed in accordance with the infrastructure design planning scheme policy. Appropriate subsoil drainage will be designed at the detailed design stage according to the infrastructure design planning scheme policy.	
PO6 Development ensures that the design and construction of all open drainage works is undertaken in accordance with natural	**AO6** Filling or excavation does not involve the construction of open drainage.	**AO**	No major open drainage works are proposed as a part of the development.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
channel design principles, being the development of a stormwater conveyance system for major flows, by using a vegetated open channel or drain that approximates the features and functions of a natural waterway to enhance or improve riparian values of those stormwater conveyance systems. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.				
PO7 Development for filling or excavation: a) does not degrade water quality or adversely affect environmental values in receiving waters; b) ensures site sediment and erosion control standards are best practice.	**AO7.1** Development for filling or excavation provides water quality treatment that complies with the stormwater drainage section of the Infrastructure design planning scheme policy. **AO7.2** Development provides erosion and sediment control standards that are in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	**AO**	Water quality treatment has been designed in accordance with the infrastructure design planning scheme policy and the State Planning Policy. An erosion and sediment control plan will be designed at the detailed design stage and will be in accordance with the infrastructure design planning scheme policy.	
PO8 Development for filling or excavation is conducted such that adverse impacts at a sensitive use due to noise and dust are prevented or minimised.	**AO8.1** Development ensures that no dust emissions extend beyond the boundary of the site, including dust from construction vehicles entering and leaving the site.	**AO**	Erosion and sediment control measures will be implemented on site to ensure no dust emissions.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO8.2** Development for filling or excavation activity only occurs between the hours of 6:30am and 6:30pm Monday to Saturday, excluding public holidays.		Earthworks will be restricted to the recommended working hours.	
PO9 Development ensures that vibration generated by the filling or excavation operation does not exceed the vibration criteria in Table 9.4.3.3.B, Table 9.4.3.3.C, Table 9.4.3.3.D and Table 9.4.3.3.E. Note—A noise management report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO9** Development involving filling or excavation does not cause a ground-borne vibration beyond the boundary of the site.	**AO**	Filling and excavation activities undertaken on site will ensure that ground-borne vibration does not exceed the criteria set out by BCC.	
PO10 Development ensures that heavy trucks hauling material to and from the site do not affect the amenity of established areas and limits environmental nuisance impact on adjacent land.	**AO10** Development ensures that heavy trucks hauling material to and from the site: a) occur for a maximum of 3 weeks; b) use a major road to access the site; c) only use a minor road for the shortest-most-direct route that has the least amount of environmental nuisance if there is no major road alternative.	**AO**	Truck movements to and from site will be restricted as per BCC guidelines.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO11 Development for filling or excavation protects the environment and community health and wellbeing from exposure to contaminated land and contaminated material.	**AO11** Development does not involve: a) excavation on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register; b) filling with material containing a contaminant.	**AO**	Due to the existing nature of the site it is not expected that the site is listed on the contaminated land register. A search can be undertaken if requested. All fill material sourced for the development will be free of contaminants.	
PO12 Development provides for: a) landscaping for water conservation purposes; b) water sensitive urban design measures which are employed within the landscape design to maximise stormwater use and to reduce any adverse impacts on the landscape; c) stormwater harvesting to be maximised and any adverse impacts of stormwater minimised.	**AO12.1** Development provides landscaping which is designed using the standards in the Landscape design guidelines for water conservation planning scheme policy. **AO12.2** Development ensures that the design and requirements for irrigation are in compliance with the standards in the Landscape design guidelines for water conservation planning scheme policy. **AO12.3** Development provides areas of pavement, turf and mulched garden beds which are drained. Note—This may be achieved through the provision and/or treatment of swales, spoon drains, field gullies, sub-surface	**AO**	Landscaping areas are provided throughout the proposed development. Where appropriate, surface drainage has been provided to remove excess runoff from the site.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
	drainage and stormwater connections.			
PO13 Development ensures cutting and filling for the development of canals or artificial waterways avoids adverse impacts on coastal resources and processes.	**AO13** Development does not involve the creation of canals or artificial waterways.	**AO**	The development does not involve the creation of canals or artificial waterways.	

BCC – Stormwater Code

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Section A—If for a material change of use, reconfiguring a lot, operational work or building work **Note—Compliance with the performance outcomes and acceptable outcomes in this section should be demonstrated by the submission of a site-based stormwater management plan for high risk development only.**				
PO1 Development provides a stormwater management system which achieves the integrated management of stormwater to: (c) minimise flooding; (d) protect environmental values of receiving waters; (e) maximise the use of water sensitive urban design; (f) minimise safety risk to all persons; (g) maximise the use of natural waterway corridors and natural channel design principles. Editor's note—The stormwater management system to be developed to address PO1 is not intended to require management of stormwater quality.	**AO1** Development provides a stormwater management system designed in compliance with the Infrastructure design planning scheme policy.	**AO**	The proposed stormwater quantity and quality management system is designed in accordance with the Infrastructure design planning scheme policy. Please refer to the report for further design details relating to the stormwater management system. Please also refer to the existing and developed catchment and the proposed stormwater drainage layout.	
PO2 Development ensures that the stormwater management system and site work does not adversely impact	**AO2.1** Development does not result in an increase in flood level or flood hazard on up slope, down slope or adjacent premises.	**AO**	The proposed stormwater management system is designed in compliance with the standards in the Infrastructure design planning scheme policy and will not result in an increase in flood level or	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
flooding or drainage characteristics of premises which are up slope, down slope or adjacent to the site.	**AO2.2** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.		flood hazard on upstream, downstream or surrounding properties.	
PO3 Development ensures that the stormwater management system does not direct stormwater run-off through existing or proposed lots and property where it is likely to adversely affect the safety of, or cause nuisance to properties.	**AO3.1** Development ensures that the location of the stormwater drainage system is contained within a road reserve, drainage reserve, public pathway, park or waterway corridor. **AO3.2** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy. **AO3.3** Development obtains a lawful point of discharge in compliance with the standards in the Infrastructure design planning scheme policy. **AO3.4** Where on private land, all underground stormwater infrastructure is secured by a drainage easement.	**AO**	The stormwater management system and lawful point of discharge is in compliance with the infrastructure design planning scheme policy. Easements have been provided over stormwater infrastructure where applicable.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO4 Development provides a stormwater management system which has sufficient capacity to safely convey run-off taking into account increased run-off from impervious surfaces and flooding in local catchments.	**AO4.1** Development provides a stormwater conveyance system which is designed to safely convey flows in compliance with the standards in the Infrastructure design planning scheme policy. **AO4.2** Development provides sufficient area to convey run-off which will comply with the standards in the Infrastructure design planning scheme policy.	**AO**	The development provides a stormwater conveyance system which is designed to safely convey stormwater runoff in accordance with the infrastructure design planning scheme policy. The development provides sufficient area to convey runoff in accordance with the infrastructure design planning scheme policy.	
PO5 Development designs stormwater channels, creek modification works, bridges, culverts and major drains to protect and enhance the value of the waterway corridor or drainage path for fauna movement.	**AO5** Development ensures the design of stormwater channels, creek modifications or other infrastructure, permits terrestrial and aquatic fauna movement.	**N/A**	No stormwater channels or creek modification works are proposed as a part of the development.	
PO6 Development ensures that location and design of stormwater detention and water quality treatment: a) minimises risk to people and property; b) provides for safe access and maintenance; c) minimises ecological impacts to creeks and waterways.	**AO6.1** Development locates stormwater detention and water quality treatment: a) outside of a waterway corridor; b) offline to any catchment not contained within the development. **AO6.2** Development providing for stormwater detention and water quality treatment devices are designed in compliance with the standards in the Infrastructure design	**AO**	The proposed stormwater quality and quantity management system is not located within a waterway corridor and is in accordance with the Infrastructure design planning scheme policy.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
	planning scheme policy.			
PO7 Development is designed, including any car parking areas and channel works to: a) reduce property damage; b) provide safe access to the site during the defined flood event.	**AO7.1** Development (including any ancillary structures and car parking areas) is located above minimum flood immunity levels in Table 9.4.9.3.B, Table 9.4.9.3.C, Table 9.4.9.3.D, Table 9.4.9.3.E and Table 9.4.9.3.F. Note—Compliance with this acceptable outcome can be demonstrated by the submission of a hydraulic and hydrology report identifying flood levels and development design levels (as part of a site-based stormwater management plan).	**AO**	The development achieves the minimum flood immunity levels nominated. Safe pedestrian and vehicle access has been designed in accordance with the planning scheme policy.	
	AO7.2 Development including the road network provides a stormwater management system that provides safe pedestrian and vehicle access in accordance with the standards in the Infrastructure design planning scheme policy.			
PO8 Development designs stormwater channels, creek modification works and the drainage network to protect and enhance the environmental values of the waterway corridor or drainage path.	**AO8.1** Development ensures natural waterway corridors and drainage paths are retained.	**AO**	Development ensures natural waterway corridors and drainage paths are retained. Appropriate energy dissipation devices have been provided at stormwater outlets to minimise scour where required.	
	AO8.2 Development provides the required hydraulic conveyance of the drainage channel and floodway, while maximising its potential to maximise environmental			

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
	benefits and minimise scour. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.			
	AO8.3 Development provides stormwater outlets into waterways, creeks, wetlands and overland flow paths with energy dissipation to minimise scour in compliance with the standards in the Infrastructure design planning scheme policy.			
	AO8.4 Development ensures that the design of modifications to the existing design of new stormwater channels, creeks and major drains is in compliance with the standards in the Infrastructure design planning scheme policy.			
PO9 Development is designed to manage run-off and peak flows by minimising large areas of impervious material and maximising opportunities for capture and re-use.	**AO9** No acceptable outcome is prescribed.	**PO**	Development has incorporated landscaping to minimise impervious area and allowed for stormwater re-use where appropriate.	
PO10 Development ensures that there is sufficient site area to accommodate an	**AO10** No acceptable outcome is prescribed.	**PO**	There is sufficient area on-site to accommodate an effective stormwater management system.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
effective stormwater management system. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.				
PO11 Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to the: a) existing capacity of stormwater infrastructure within and external to the site, and any planned stormwater infrastructure upgrades; b) safe management of stormwater discharge from existing and future up-slope development; c) implication for adjacent and down-slope development.	**AO11.1** Development with up-slope external catchment areas provides a drainage connection sized for ultimate catchment conditions that is directed to a lawful point of discharge. **AO11.2** Development ensures that existing stormwater infrastructure that is undersized is upgraded in compliance with the Infrastructure design planning scheme policy.	**AO**	There are no major external catchments draining through the site that need to be provided with a drainage connection. The existing infrastructure has sufficient capacity to cater for the runoff from the development.	
PO12 Development provides stormwater infrastructure which: a) remains fit for purpose for the life of the development and maintains full functionality in the design flood event; b) can be safely accessed and maintained cost effectively;	**AO12.1** The stormwater management system is designed in compliance with the Infrastructure design planning scheme policy. **AO12.2** Development provides a clear area with a minimum of 2m radius from the centre of	**AO**	The stormwater management system is in compliance with the infrastructure design planning scheme policy. No existing stormwater manholes are located on the subject site.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
c) ensures no structural damage to existing stormwater infrastructure.	an existing manhole cover and with a minimum height clearance of 2.5m.			
PO13 Development ensures that all reasonable and practicable measures are taken to manage the impacts of erosion, turbidity and sedimentation, both within and external to the development site from construction activities, including vegetation clearing, earthworks, civil construction, installation of services, rehabilitation, revegetation and landscaping to protect: a) the environmental values and water quality objectives of waters; b) waterway hydrology; c) the maintenance and serviceability of stormwater infrastructure. Note—The Infrastructure design planning scheme policy outlines the appropriate measures to be taken into account to achieve the performance outcome.	**AO13** No acceptable outcome is prescribed.	**PO**	An erosion and sediment control plan will be designed at the detailed design stage, which will incorporate industry best practice methods to reduce any possible impacts to receiving waters and stormwater infrastructure.	
PO14 Development ensures that: a) unnecessary disturbance to soil, waterways or drainage channels is avoided; b) all soil surfaces remain effectively	**AO14** No acceptable outcome is prescribed.	**PO**	The development will avoid unnecessary disturbance to soil, waterways and drainage channels and erosion control measures will be implemented for both short and long term stabilisation.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
stabilised against erosion in the short and long term.				
PO15 Development does not increase: a) the concentration of total suspended solids or other contaminants in stormwater flows during site construction; b) run-off which causes erosion either on site or off site.	**AO15** No acceptable outcome is prescribed.	**PO**	The development will be designed to minimise increases in run-off and TSS concentrations during construction.	
Section B—Additional performance outcomes and acceptable outcomes which apply to high-risk development, being one or more of the following: a) a material change of use for an urban purpose which involves greater than 2,500m^2 of land that: i. will result in an impervious area greater than 25% of the net developable area; or ii. will result in 6 or more dwellings. b) reconfiguring a lot for an urban purpose that involves greater than 2,500m^2 of land and will result in 6 or more lots; c) operational work for an urban purpose which involves disturbing greater than 2,500m^2 of land.				
PO16 Development ensures that the entry and transport of contaminants into stormwater is avoided or minimised to protect receiving water environmental values. Note—Prescribed water contaminants are defined in the *Environmental Protection Act 1994*. *Note—Compliance with the performance*	**AO16** Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	**AO**	The proposed stormwater quality management system is designed in accordance with the standards in the Infrastructure design planning scheme policy.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.				
PO17 Development ensures that: a) the discharge of wastewater to a waterway or external to the site is avoided; or b) if the discharge cannot practicably be avoided, the development minimises wastewater discharge through re-use, recycling, recovery and treatment. Note—The preparation of a wastewater management plan can assist in demonstrating achievement of this performance outcome. Editor's note—This code does not deal with sewerage which is the subject of the Wastewater code.	**AO17** No acceptable outcome is prescribed.	**PO**	The development will ensure that wastewater discharge is managed in accordance with the Infrastructure design planning scheme policy.	
Section C—Additional performance outcomes and acceptable outcomes for assessable development for a material change of use or reconfiguring a lot				
PO18 Development protects stormwater infrastructure to ensure the following are not compromised:	**AO18** Development protects stormwater infrastructure in compliance with the following:	**AO**	The development will not adversely impact on existing or future planned stormwater infrastructure and is in compliance with the standards of the Infrastructure design planning scheme	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
a) the long term infrastructure for the stormwater network in the Long term infrastructure plans; b) the existing and planned infrastructure for the stormwater network in the Local government infrastructure plan; c) the provision of long term, existing and planned infrastructure for the stormwater network which: I. is required to service the development or an existing and future urban development in the planning scheme area; or II. is in the interests of rational development or the efficient and orderly planning of the general area in which the site is situated. Editor's note—A condition which requires a proposed development to keep permanent improvements and structures associated with the approved development clear of the area of long term infrastructure, may be imposed.	a) for long term infrastructure for the stormwater network, the Long term infrastructure plans; b) for existing and planned infrastructure for the stormwater network, the Local government infrastructure plan; c) the standards for stormwater drainage in the Infrastructure design planning scheme policy.		policy.	
PO19 Development provides for the payment of extra trunk infrastructure costs for the following: a) for development completely or partly outside the priority infrastructure area	**AO19** No acceptable outcome is prescribed.	**PO**	The developer will pay the appropriate infrastructure costs in accordance with Council's infrastructure plans.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
in the Local government infrastructure plan; b) for development completely inside the priority infrastructure area in the Local government infrastructure plan involving: I. trunk infrastructure that is to be provided earlier than planned in the Local government infrastructure plan; II. long term infrastructure for the stormwater network which is made necessary by development that is not assumed future urban development; III. other infrastructure for the stormwater network associated with development that is not assumed future urban development which is made necessary by the development. Editor's note—The payment of extra trunk infrastructure costs for development completely inside the priority infrastructure area in the Local government infrastructure plan is to be worked out in accordance with the Charges Resolution. Editor's note—See section 130 Imposing				

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Development conditions (Conditions for extra trunk infrastructure costs) of the *Planning Act 2016*.				

BCC – Infrastructure Design Code

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO1 Development provides roads, pavement, edging and landscaping which: a) are designed and constructed in accordance with the road hierarchy; b) provide for safe travel for pedestrians, cyclists and vehicles; c) provide access to properties for all modes; d) provide utilities; e) provide high levels of aesthetics and amenity, improved liveability and future growth; f) provide for the amelioration of noise and other pollution; g) provide a high-quality streetscape; h) provide a low-maintenance asset with a minimal whole-of-life cost. Note—This can be demonstrated in an engineering report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.	**AO1** Development provides roads and associated pavement, edging and landscaping which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	**AO**	The development will provide pavement, edging and landscaping to be in compliance with the road corridor design standards in the infrastructure design planning scheme policy.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO2 Development provides road pavement surfaces which: a) are well designed and constructed; b) durable enough to carry the wheel loads of the intended types and numbers of travelling and parked vehicles; c) ensures the safe passage of vehicles, pedestrians and cyclists, the discharge of stormwater run-off and the preservation of all-weather access; d) allows for reasonable travel comfort.	**AO2** Development provides road pavement surfaces which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	**AO**	Any required pavements will be designed in accordance with BCC Standard Drawings and the road corridor design standards in the Infrastructure design planning scheme policy at the detailed design stage.	
PO3 Development provides a pavement edge which is designed and constructed to: a) control vehicle movements by delineating the carriageway for all users; b) provide for people with disabilities by allowing safe passage of wheelchairs and other mobility aids.	**AO3** Development provides pavement edges which are designed and constructed in compliance with the road corridor design standards in the Infrastructure design planning scheme policy.	**AO**	Any required pavement edges will be designed in accordance with BCC Standard Drawings and the road corridor design standards in the Infrastructure design planning scheme policy at the detailed design stage.	
PO4 Development provides verges which are designed and constructed to: a) provide safe access for pedestrians	**AO4** Development provides verges which are designed and constructed in compliance with the road corridor design and	**AO**	The development will achieve the requirements set out in the road corridor design standards in the infrastructure design planning scheme policy.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
clear of obstructions and access areas for vehicles onto properties; b) provide a sufficient area for public utility services; c) be maintainable by the Council.	streetscape locality advice standards in the Infrastructure design planning scheme policy.			
PO5 Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which: a) allows equitable access for all modes; b) is safe and secure; c) has 24-hour access; d) is a low-speed shared zone environment; e) has a high-quality streetscape.	**AO5** Development provides a lane or laneway identified on the Streetscape hierarchy overlay map or in a neighbourhood plan which is embellished in compliance with the streetscape locality advice standards in the Infrastructure design planning scheme policy.	**N/A**	No lanes or laneways are proposed as a part of this development.	
PO6 Development of an existing premises provides at the frontage to the site, if not already provided, the following infrastructure to an appropriate urban standard: a) an effective, high-quality paved roadway; b) an effective, high-quality roadway kerb and channel; c) safe, high-quality vehicle crossings	**AO6** Development of an existing premises provides at the frontage of the site, if not already existing, the following infrastructure to the standard that would have applied if the development involved new premises as stated in the road corridor design standards in the Infrastructure design planning scheme policy: a) concrete kerb and channel;	**AO**	Infrastructure at the frontages of the site will be provided in accordance with BCC Standard Drawings and the road corridor design standards in the Infrastructure design planning scheme policy.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
over channels and verges; d) safe, accessible, high-quality verges compatible and integrated with the surrounding environment; e) safe vehicle access to the site that enables ingress and egress in a forward gear; f) provision of and required alterations to public utilities; g) effective drainage; h) appropriate conduits to facilitate the provision of required street-lighting systems and traffic signals.	b) forming and grading to verges; c) crossings over channels and verges; d) a constructed bikeway; e) a constructed verge or reconstruction of any damaged verge; f) construction of the carriageway; g) payment of costs for required alterations to public utility mains, services or installations; h) construction of and required alterations to public utility mains, services or installations; i) drainage works; j) installation of electrical conduits.			
PO7 Development provides both cycle and walking routes which: a) are located, designed and constructed to their network classification (where applicable); b) provide safe and attractive travel routes for pedestrians and cyclists for commuter and recreational	**AO7** Development provides cycle and walking routes which are located, designed and constructed in compliance with the road corridor design and off-road pathway design standards in the Infrastructure design planning scheme policy.	**N/A**	No cycle or walking routes are proposed as a part of the development.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
purposes; c) provide safe and comfortable access to properties for pedestrians and cyclists; d) incorporate water sensitive urban design into stormwater drainage; e) provide for utilities; f) provide for a high level of aesthetics and amenity, improved liveability and future growth; g) are a low-maintenance asset with a minimal whole-of-life cost; h) minimise the clearing of significant native vegetation. Note—This can be demonstrated in an engineering report prepared and certified by a Registered Professional Engineer Queensland in accordance with the Infrastructure design planning scheme policy.				
PO8 Development provides refuse and recycling collection, separation and storage facilities that are located and managed so that adverse impacts on building occupants, neighbouring properties and the public realm are minimised.	**AO8.1** Development provides refuse and recycling collection and storage facilities in accordance with the Refuse planning scheme policy. **AO8.2** Development ensures that refuse and recycling collection and storage location	**AO**	The development provides refuse and recycling collection and storage facilities that will not adversely impact on land uses within or adjoining the development in accordance with the Refuse planning scheme policy. Please refer to architectural drawings for further details.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
	and design do not have any adverse impact including odour, noise or visual impacts on the amenity of land uses within or adjoining the development. Note—Refer to the Refuse planning scheme policy for further guidance.			
PO9 Development ensures that: a) land used for an urban purpose is serviced adequately with regard to water supply and waste disposal; b) the water supply meets the stated standard of service for the intended use and fire-fighting purposes.	**AO9.1** Development ensures that the reticulated water and sewerage distribution system for all services is in place before the first use is commenced. **AO9.2** Development provides the lot with reticulated water supply and sewerage to a standard acceptable to the distributor–retailer.	**AO**	The development will be provided with reticulated water supply and sewerage connections to QUU's network prior to use commencing. Please refer to the concept services layout for details on how the site can be serviced by sewer and water infrastructure.	
PO10 Development provides public utilities and street lighting which are the best current or alternative technology and facilitate accessibility, easy maintenance, minimal whole-of-life costs, and minimal adverse environmental impacts.	**AO10.1** Development provides public utilities and street lighting which are located and aligned to: a) avoid significant native vegetation and areas identified within the Biodiversity areas overlay map; b) minimise earthworks; c) avoid crossing waterways, waterway corridors and wetlands or if a crossing is unavoidable, tunnel-boring techniques are used to minimise disturbance, and a	**AO**	Public utilities and street lighting location and alignment will be optimised to avoid significant native vegetation, minimise earthworks and avoid crossing waterways in accordance with the standards in the Infrastructure design planning scheme policy.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
	disturbed area is reinstated and restored on completion of the work. Note—Guidance on the restoration of habitat is included in the Biodiversity areas planning scheme policy.			
	AO10.2 Development provides compatible public utility services and street-lighting services which are co-located in common trenching for underground services.			
	AO10.3 Development provides public utilities and street lighting which are designed and constructed in compliance with the public utilities standards in the Infrastructure design planning scheme policy.			
PO11 Development ensures that land used for urban purposes is serviced adequately with telecommunications and energy supply.	**AO11** Development provides land with the following services to the standards of the approved supplier: a) electricity; b) telecommunications services; c) gas service where practicable.	**AO**	The development can be serviced adequately with gas, telecommunications, and electricity supply.	
PO12 Development ensures that major public projects promote the provision of affordable, high-bandwidth	**AO12** Development provides conduits which are provided in all major Council and government works projects to enable the	**AO**	Conduits will be provided where appropriate to enable the future provision of fibre optic cabling.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
telecommunications services throughout the city.	future provision of fibre optic cabling, if: a) the additional expense is unlikely to be prohibitive; or b) further major work is unlikely or disruption would be a major concern, such as where there is a limited capacity road; or c) there is a clear gap in the telecommunications network; or d) there is a clear gap in the bandwidth available to the area. Editor's note—An accurate, digital 'as built' three-dimensional location plan is to be supplied for all infrastructure provided in a road.			
PO13 Development provides public art identified in a neighbourhood plan or park concept plan which: a) is provided commensurate with the status and scale of the proposed development; b) is sited and designed: I. as an integrated part of the project design; II. as conceptually relevant to the context of the location;	**AO13** Development provides public art identified in a neighbourhood plan or park concept plan which is sited and designed in compliance with the public art standards in the Infrastructure design planning scheme policy.	**N/A**	No public art is proposed as a part of this development.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
III. to reflect and respond to the cultural values of the community; IV. to promote local character in a planned and informed manner.				
PO14 Development provides signage of buildings and spaces which promote legibility to help users find their way.	**AO14** Development provides public signage: a) at public transport interchanges and stops, key destinations, public spaces, pedestrian linkages and at entries to centre developments; b) which details the location of the key destinations, public spaces and pedestrian linkages in the vicinity, the services available within the development and where they are located. Editor's note—Signage is to be in accordance with Local Law Number 1 (Control of Advertisements Local Law).	**N/A**	Public signage is not required as a part of this development.	
PO15 Development that provides community facilities which form part of the development is functional, safe, low maintenance, and fit for purpose.	**AO15** Development that provides community facilities which form part of the development is designed in compliance with the community facilities standards in the Infrastructure design planning scheme policy.	**N/A**	No community facilities are proposed as a part of this development.	
PO16 Development provides public toilets	**AO16** Development that provides public toilets	**N/A**	No public toilets are proposed as a part of this development.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
which: a) are required as part of a community facility or park; b) are located, designed and constructed to be: i. safe; ii. durable; iii. resistant to vandalism; iv. able to service expected demand; v. fit for purpose.	is designed and constructed in compliance with the public toilets standards in the Infrastructure design planning scheme policy.			
PO17 Development provides bridges, tunnels, elevated structures and water access structures that are designed and constructed using proven methods, materials and technology to provide for: a) safe movement of intended users; b) an attractive appearance appropriate to the general surroundings and any adjacent structures; c) functionality and easy maintenance; d) minimal whole-of-life cost; e) longevity; f) current and future services. Note—All bridges and elevated and associated elements must be designed and certified by a Registered Professional	**AO17** Development that provides bridges, tunnels, elevated structures and water access structures is designed and constructed in compliance with the standards in the Infrastructure design planning scheme policy.	**N/A**	No bridges, tunnels, elevated structures or water access structures are proposed as a part of the development.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Engineer Queensland in accordance with the Infrastructure design planning scheme policy.				
PO18 Development provides culverts which are designed and constructed using proven methods, materials and technology to provide for: a) safety; b) an attractive appearance appropriate to the general surroundings; c) functionality and easy maintenance; d) minimal whole-of-life cost; e) longevity; f) future widening; g) current and future services; h) minimal adverse impacts, such as increase in water levels or flow velocities, and significant change of flood patterns. Note—All culverts and associated elements are to be designed and certified by a Registered Professional Engineer Queensland in accordance with the applicable design standards.	**AO18** Development that provides culverts is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.	**N/A**	No culverts are proposed as a part of the development.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
PO19 Development provides batters, retaining walls, and seawalls and river walls which are designed and constructed using proven methods, materials and technology to provide for: a) safety; b) an attractive appearance appropriate to the surrounding area; c) easy maintenance; d) minimal whole-of-life cost; e) longevity; f) minimal water seepage. Note—All retaining walls and associated elements are to be designed and certified by a Registered Professional Engineer Queensland in accordance with the applicable design standards.	**AO19** Development that provides batters, retaining walls, seawalls and river walls is designed and constructed in compliance with the structures standards in the Infrastructure design planning scheme policy.	**AO**	Batters and retaining walls will be designed and constructed in accordance with the structures standards in the Infrastructure design planning scheme policy.	
If for development with a gross floor area greater than 1,000m^2				
PO20 Development ensures that construction is managed so that use of public spaces and movement on pedestrian, cyclist and other traffic routes is not unreasonably disrupted and existing landscaping is adequately protected from short- and long-term impacts.	**AO20** Development ensures that during construction: a) the ongoing use of adjoining and surrounding parks and public spaces, such as malls and outdoor dining, is not compromised; b) adjoining and surrounding	**AO**	A construction management plan will be prepared prior to works commencing to ensure that surrounding parks, public spaces and landscaping is protected during construction and that pedestrian, cyclist and vehicular movements can be managed effectively.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Note—The preparation of a construction management plan can assist in demonstrating achievement of this performance outcome. Note—The Transport, access, parking and servicing planning scheme policy provides advice on the management of vehicle parking and deliveries during construction.	landscaping is protected from damage; c) safe, legible, efficient and sufficient pedestrian, cyclist and vehicular accessibility and connectivity to the wider network are maintained.			
PO21 Development ensures that construction and demolition activities are guided by measures that prevent or minimise adverse impacts including sleep disturbance at a sensitive use, due to noise and dust, including dust from construction vehicles entering and leaving the site. Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.	**AO21.1** Development ensures that demolition and construction: a) only occur between 6:30am and 6:30pm Monday to Saturday, excluding public holidays; b) do not occur over periods greater than 6 months.	**AO**	Demolition and construction works will be limited to the approved working hours. Dust will be managed during construction to ensure it is not blown beyond the property boundary.	
	AO21.2 Development including construction and demolition does not release dust emissions beyond the boundary of the site.			
	AO21.3 Development construction and demolition does not involve asbestos-containing materials.			
PO22	**AO22** Development ensures that the nature and	**AO**	Vibration levels will be effectively managed during demolition and	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Development ensures that: a) construction and demolition do not result in damage to surrounding property as a result of vibration; b) vibration levels achieve the vibration criteria in Table 9.4.4.3.B, Table 9.4.4.3.C, Table 9.4.4.3.D and Table 9.4.4.3.E. Note—A vibration impact assessment report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.	scale of construction and demolition do not generate noticeable levels of vibration.		construction works.	
If for a material change of use or reconfiguring a lot in an urban area (as defined in the Regulation) involving premises that is, or will be, accessed by common private title, where involving buildings, either attached or detached, that are not covered by other legislation mandating fire hydrants				
PO23 Development ensures that fire hydrants are: a) installed and located to enable fire services to access water safely, effectively and efficiently; b) suitably identified so that fire services can locate them at all hours.	**AO23.1** Above or below ground fire hydrants are provided on residential, commercial and industrial streets and private roads, at not more than 90m intervals, and at each street intersection. Note—On residential streets, above ground fire hydrants may be single outlet. On commercial and industrial streets above ground fire hydrants should have dual valved outlets.	**AO**	Fire hydrants will be provided at no more than 90m spacings and will be identified by marker posts and RRPMs.	

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
	AO23.2 Fire hydrants are identified by: a) raised reflectorised pavement markers (RRPM) on sealed roads; b) marker posts at the fence line where on an unsealed road, as road (HR) or path (HP) hydrants.			
PO24 Development ensures road widths and construction within the development, are adequate for refuse vehicles and for fire emergency vehicles to gain access to a safe working area close to buildings and near water supplies whether or not on-street parking spaces are occupied.	**AO24** Internal private roads have a minimum roadway clearance between obstructions of 3.5m wide and 4.8m high in addition to any width required for on-street parking.	**AO**	Internal private roads have been provided with a minimum roadway clearance of 3.5m wide and 4.8m high for fire emergency vehicles to gain access to a safe working area.	
Development for major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy Interactive Mapping System where not in the Utility services zone precinct of the Special purpose zone				
PO25 Development avoids or otherwise minimises adverse impacts on surrounding land uses through the use of buffers and setbacks and the appropriate design and location of plant and operational areas within the site.	**AO25** No acceptable outcome is prescribed.	**N/A**	The development does not involve major electricity infrastructure or bulk water supply infrastructure.	
Development potentially impacting on major electricity infrastructure and bulk water supply infrastructure identified on the State Planning Policy				

Performance outcomes	Acceptable outcomes	Solutions*	Comments	Council Use
Interactive Mapping System where the infrastructure is not in the Utility services zone precinct of the Special purpose zone				
PO26 Development is sited and designed to: a) avoid safety risks to people or property; b) minimise noise and visual impacts to people and property; c) ensure the physical integrity and operation, maintenance and expansion of the infrastructure is not compromised.	**AO26** No acceptable outcome is prescribed.	**N/A**	The development is not located near major electricity infrastructure or bulk water supply infrastructure.	

Appendix F – FloodWise Property Report

Brisbane City Council

FloodWise Property Report

Report Reference
1637635801868
23/11/2021 12:50:01

Dedicated to a better Brisbane

THIS REPORT IS FOR BUILDING AND DEVELOPMENT PURPOSES ONLY

The FloodWise Property Report provides property or lot-based flood information for building and development requirements. This report provides information on estimated flood levels, habitable floor level requirements and more technical information on the four sources of flooding: river, creek / waterway, storm tide and overland flow. Refer to the Useful Definitions section for a glossary of terms.

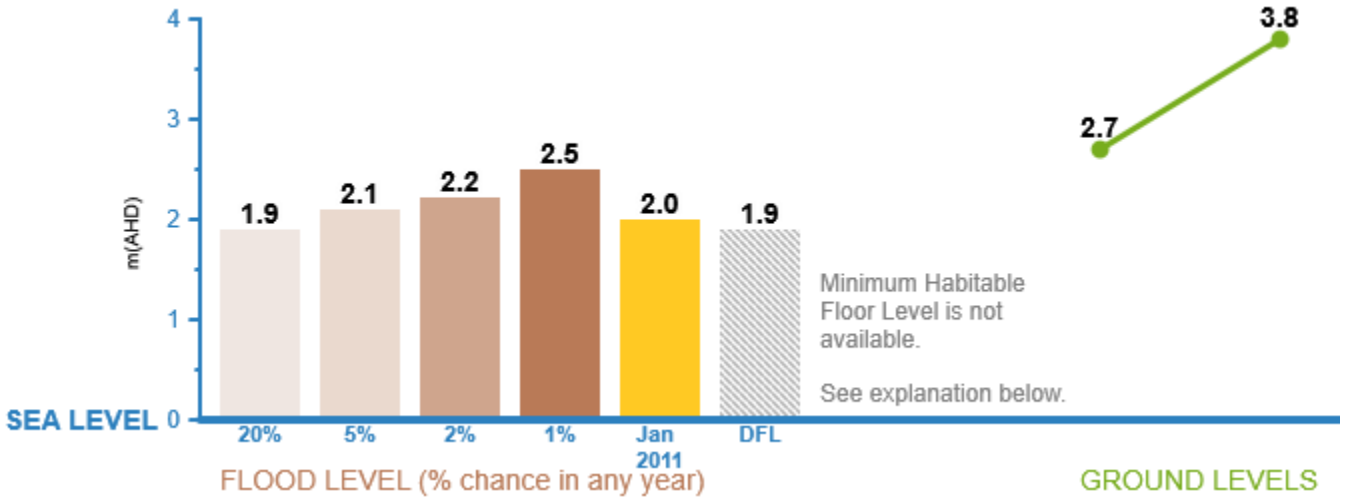
To find out more about how the contents of this report may affect building or development on this property, please visit www.brisbane.qld.gov.au/planning-building.For more general information about understanding your flood risk and how to prepare your property, family or business for potential flooding visit www.brisbane.qld.gov.au/beprepared

THIS IS A REPORT FOR:

Rateable Address: 161 FISON AVE, EAGLE FARM QLD 4009

Lot Details: L.836 SL.8236

FLOOD LEVEL INFORMATION



EXPLANATION

m(AHD) - Metres Australia Height Datum. The level of 0.0m AHD is approximately mean sea level.

Flood Levels - The Flood level bar chart above shows the possible flooding level and percentage chance of that level being reached or exceeded in any year. If an orange bar shows, it is the calculated January 2011 flood level at this address or lot. Refer to 'Useful Definitions' for further information.

Minimum Habitable Floor Level - Applies to residential development only. Please refer to Council's planning scheme to learn how this may affect you. If a property is in an overland flow path, or a large allotment, a minimum habitable floor level cannot be provided. Refer flood and planning development flags below.

Ground Levels- The green line above shows this property's approximate lowest and highest ground levels based on latest available information (2019 airborne laser survey) to Council. If you are building, please confirm with a surveyor.

For further information and definitions please refer to the Useful Definitions page

FLOOD AND PLANNING DEVELOPMENT FLAGS

DEVELOPMENT FLAG(S)

This property may also be affected by one or more flood or property development overlays or flags. These include: LARGE ALLOTMENT

Please review the technical summary over page and refer to Council's planning scheme for further information.

Brisbane City Council

FloodWise Property Report

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TECHNICAL SUMMARY

This section of the FloodWise Property Report contains more detailed flood information for this property so surveyors, builders, certifiers, architects and engineers can plan and build in accordance with Council's planning scheme. For more information about building and development in Brisbane please visit www.brisbane.qld.gov.au/planning-building or talk to a Development Assessment Planning Information Officer via Council's Contact Centre on (07) 3403 8888.

THIS IS A REPORT FOR:

Rateable Address: 161 FISON AVE, EAGLE FARM QLD 4009
Lot Details: L.836 SL.8236

PROPERTY INFORMATION (Summary)

The following table provides a summary of flood information for this property. More detailed flood level information is provided in the following sections of this report.

PROPERTY SUMMARY	LEVEL (mAHD)
Minimum Ground Level	2.7
Maximum Ground Level	3.8
Min Habitable Floor Level	Contact Council
Defined Flood Event Level	2.5
Defined Flood Event Level Source	STORMTIDE
Source of Highest Flooding	STORMTIDE
Flooding may also occur from	STORMTIDE,RIVER

ESTIMATED PEAK FLOODING LEVELS

The table below displays the peak estimated flood levels by probability for this property. Estimated flood level data should be used in conjunction with applicable planning scheme requirements - Refer to Flood Planning Development Information.

Note that the overland flow flooding level maybe higher than the levels below from other sources.

DESCRIPTION	LEVEL (mAHD)	SOURCE
20% AEP	1.9	STORMTIDE
5% AEP	2.1	STORMTIDE
2% AEP	2.2	STORMTIDE
1% AEP	2.5	STORMTIDE
1% AEP	2.2	RIVER
January 2011	2.0	RIVER
DFL	1.9	RIVER
RFL	2.2	RIVER

FLOOD PLANNING DEVELOPMENT INFORMATION

This section of the FloodWise Property Report contains information about Council's planning scheme overlays. Overlays identify areas within the planning scheme that reflect distinct themes that may include constrained land and/or areas sensitive to the effects of development.

FLOOD OVERLAY CODE

The Flood overlay code of Council's planning scheme uses the following information to provide guidelines when developing properties. The table below summarises the Flood Planning Areas (FPAs) that apply to this property. Development guidelines for the FPAs are explained in Council's planning scheme, which is available from www.brisbane.qld.gov.au/planning-building.

FLOOD PLANNING AREAS (FPA)		
RIVER	CREEK/WATERWAY	OVERLAND FLOW
FPA5		Not Applicable

COASTAL HAZARD OVERLAY CODE

The coastal hazard overlay code of Council's planning scheme uses the following information to provide guidelines when conducting new development. The table below summarises the coastal hazard categories that apply to this property. Development guidelines for the following coastal hazard overlay sub-categories are explained in the planning scheme, which is available from www.brisbane.qld.gov.au/planning-building.

COASTAL HAZARD OVERLAY SUB-CATEGORIES
Medium Storm Tide Inundation Area

NOTE: Where land is identified within one or more flood planning area on the Flood Overlay, or is identified within a Storm Tide Inundation area on the Coastal Hazard Overlay, the assessment criteria that provide the highest level of protection from any source of flooding applies.

PROPERTY DEVELOPMENT FLAGS

Large Allotment - This property is either a Large Allotment of over 1000 square metres or is located within a Large Allotment. Flood levels may vary significantly across allotments of this size. Further investigations may be warranted in determining the variation in flood levels and the minimum habitable floor level across the site. For more information or advice, it is recommended you engage a Registered Professional Engineer of Queensland.

Brisbane City Council

FloodWise Property Report

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Useful Definitions

Australian Height Datum (AHD) - The reference level for defining ground levels in Australia. The level of 0.0m AHD is approximately mean sea level.

Annual Exceedance Probability (AEP) – The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

Defined Flood Level (DFL) - The DFL for Brisbane River flooding is a level of 3.7m AHD at the Brisbane City Gauge based on a flow of 6,800 m^3/s.

Maximum and Minimum Ground Level – Highest and lowest ground levels on the property based on available ground level information. A Registered Surveyor can confirm exact ground levels.

Minimum Habitable Floor Level – The minimum level in metres AHD at which habitable areas of development (generally including bedrooms, living rooms, kitchen, study, family and rumpus rooms) must be constructed.

Council's Planning Scheme - The City Plan (planning scheme) has been prepared in accordance with the Sustainable Planning Act as a framework for managing development in a way that advances the purpose of the Act. In seeking to achieve this purpose, the planning scheme sets out the Council's intention for future development in the planning scheme area, over the next 20 years.

Residential Flood Level (RFL) – Residential flood level (RFL) for the Brisbane River flooding equates to the 1% Annual Exceedance Probability flood level.

Rateable Address - A Lot or Property may have more than one street address. The address shown on this report is the address used by Council for the Lot or property selected.

Property - A property will contain 1 or more lots. The *Multiple Lot Warning* is shown if you have selected a property that contains multiple lots.

Brisbane City Council's Online Flood Tools

Council provides a number of online flood tools:

- to guide planning and development
- to help residents and businesses understand their flood risk and prepare for flooding.

Planning and Development Online Flood Tools

Council's online flood tools for planning and development purposes include:

- FloodWise Property Report
- Flood Overlay Code

For more information on Council's planning scheme and online flood tools for planning and development:

- phone 07 3403 8888 to talk to a Development Assessment Customer Liaison Officer
- visit www.brisbane.qld.gov.au/planning-building
- visit a Regional Business Centre.

Helping residents and businesses be prepared for flooding

Council has a range of free tools and information to help residents and businesses understand potential flood risks and how to be prepared. This includes:

- Flood Awareness Map
- Flooding in Brisbane – A Guide for Residents
- Flooding in Brisbane – A Guide for Businesses
- Early Warning Alert Service. Visit www.brisbane.qld.gov.au/earlywarning to register for email, home phone or SMS severe weather alert updates.

Note: The Flood Awareness Map shows four levels of flood likelihood from high likelihood (flooding is very likely to occur) through to very low likelihood (very rare and extreme flood events).

For more information on Council's online flood tools for residents and business:

- Visit www.brisbane.qld.gov.au/beprepared
- Phone (07) 3403 8888.

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Disclaimer

1. Defined Flood Levels and Residential Flood Levels, and the Minimum Habitable Floor Levels are determined from the best available information to Council at the date of issue. These flood levels, for a particular property, may change if more detailed information becomes available or changes are made in the method of calculating flood levels.
2. Council makes no warranty or representation regarding the accuracy or completeness of a FloodWise Property report. Council disclaims any responsibility or liability in relation to the use or reliance by any person on a FloodWise Property Report.

Planning to build or renovate?

For information, guidelines, tools and resources to help you track, plan or apply for your development visit **www.brisbane.qld.gov.au/planning-building**

You can also find the Brisbane City Plan 2014 and Neighbourhood Plans as well as other information and training videos to help with your building and development plans.

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