



CIVIL ENGINEERING REPORT

CIVIL PLANNING & DEVELOPMENT CODES

FOR

PROPOSED MATERIAL CHANGE OF USE

21-23 WATLAND STREET, SPRINGWOOD. QLD 4127

JOB NO: 26.0294 DA REPORT

FEBRUARY 2026

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DOCUMENT CONTROL

Civil Engineering Report Civil Planning & Development Codes

Job Number:	26.0294 DA REPORT
Issue No:	-
Report Date:	25/02/2026
Author:	Mary Nguyen
Site Address:	21-23 WATLAND STREET, SPRINGWOOD. QLD 4127 4077
RP Description:	Lot 1 on RP 196371
Proposed Development:	MATERIAL CHANGE OF USE
Logan City Council Ref:	-

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1 INTRODUCTION

DEQ Consulting Pty Ltd has been commissioned to prepare a Civil Engineering Report Civil Planning & Development Codes for inclusion with the Development Application with Logan City Council for the proposed development at 21-23 WATLAND STREET, SPRINGWOOD. QLD 4127.

This Civil Engineering Report Civil Planning & Development Codes document should be read in conjunction with the Civil Concept Plan and the associated Civil Development Code Assessments/Forms/Reports (attached in appendices):

- | | |
|--|--------------------|
| • Infrastructure Design Code | – Refer Appendix D |
| • Filling and Excavation Code | – Refer Appendix E |
| • Property Flood Report | – Refer Appendix F |
| • Erosion and Sediment Control
Hazard Assessment Form | – Refer Appendix G |

2 SITE CHARACTERISTICS

2.1 LOCATION

The subject development site (Lot 1 on RP 196371) has a total area of 2028m². The development area is currently occupied by two buildings, car park and hardstand area. A site location plan is shown on Figure 1 below. The site is bounded by the Watland Street to the North (site's frontage) and existing commercial properties to the adjacent surrounding boundaries.

2.2 TOPOGRAPHY AND SITE DRAINAGE

It is proposed to provide a multiple dwelling development (20 units) with associated driveway, car parking and landscaping areas. Vehicle access to the site is proposed via a new concrete crossover to Watland Street. The natural ground levels grade generally at approximately 1 in 11 (9.1%) from the North (road frontage of the site) and towards the South Boundaries (rear of the site). Stormwater runoff currently discharges to the rear downstream boundary as broad sheet flows and into the existing drainage network within the rear 4m wide easement.

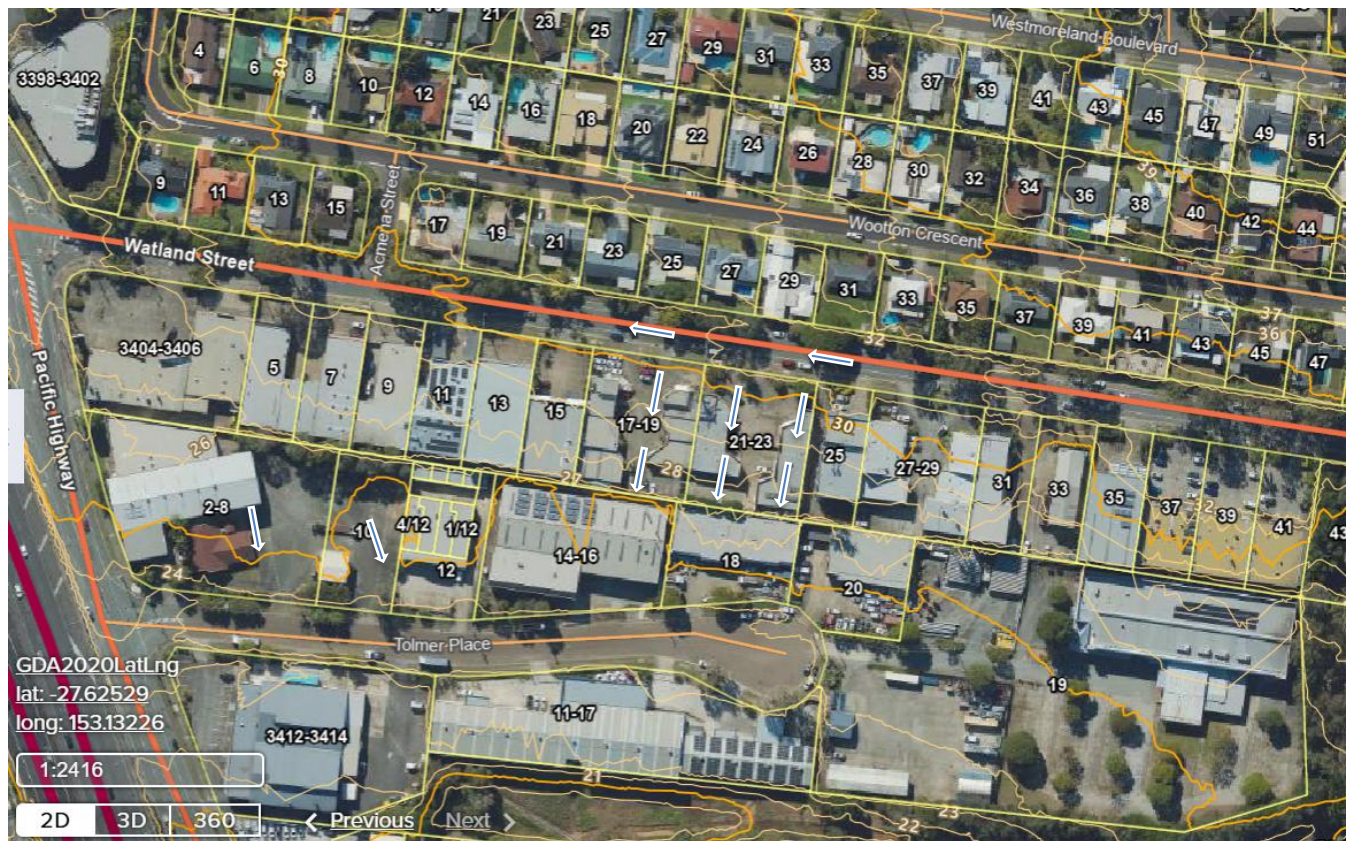


Figure 1 - Site Location Plan (source LCC Development City Plan)

Refer Appendix A - Site Survey Plan & Existing Services

3 DEVELOPMENT PROPOSAL

3.1 PROPOSED DEVELOPMENT

It is proposed to provide a multiple dwelling development (20 units) with associated driveway, car parking and landscaping areas. Vehicle access to the site is proposed via a concrete crossover to Watland Street.

The development proposal shall be in accordance with Local Authority Guidelines, Development Codes, State Planning Policies and Australian Standards.

Refer Appendix B – Development Proposal

4 DEVELOPMENT SERVICING

4.1 WATER SUPPLY

Survey records indicate that a water main and water connection exist within the front verge of Watland Street. The water connection can be upgraded for re-use subject to Logan Water conditions and requirements.

Logan Water maintains the water reticulation network and proposed connections are subject to Logan Water advice and conditional development requirements.

Refer Appendix C – Civil Concept Plans

4.2 SEWER RETICULATION

Survey records and Logan Council records indicate that a 150mm diameter VC sewer main and two sewer property connections exist within 4m wide easement at the rear boundary, this connection can be upgraded for re-use subject to Logan Water conditions and requirements.

Logan Water maintains the water reticulation network and proposed connections are subject to Logan Water advice and conditional development requirements.

Refer Appendix C – Civil Concept Plans

4.3 ELECTRICAL AND TELECOMMUNICATION

The electrical supply and communications supply for this proposed development will be by others.

5 STORMWATER DRAINAGE

5.1 LAWFUL POINT OF STORMWATER DISCHARGE

Survey records and Logan Council records indicate a stormwater drainage network exists within 4m wide easement at the rear boundary. The existing drainage network is in a suitable location to provide a Lawful Point of Discharge (LoPD) for the proposed development via grated inlet pit.

The majority of the proposed impervious areas (roofwater and small pavement areas) will be collected and piped to the existing drainage network (LoPD) within the rear easement with no adverse impacts when compared to pre-development conditions. No detention tank is proposed.

Proposed stormwater design shall be in accordance with Logan City Council's City Plan 2015 and the Queensland Urban Drainage Manual (QUDM, 2013).

Refer Appendix C – Civil Concept Plans

5.2 STORMWATER QUALITY MANAGEMENT

5.2.1 Construction Phase

All construction work will be undertaken in accordance with the Erosion and Sediment Management Plan prepared in association with the detail design documentation for the Operational Works submission.

5.2.2 Operational Phase

Logan City Council's City Plan 2015 & the State Planning Policy (State Interest – Water Quality) supports the requirement for implementing Water Sensitive Urban Design (WSUD) principles into the operational phase of the Management Plan.

The proposed Material Change of use development, with total site area of 2028m², does **not** involve greater than **2,500m²** of land. As such, the development falls within a category where 'Best practice' pollutant load reduction approach qualifies to satisfy the requirements as outlined by local authority guidelines and state policies.

A 'Best practice' approach is proposed to satisfy the developments stormwater quality requirements.

As summary of the proposed developments additional stormwater best practice management (& recommendations for each individual dwelling as part of future building works) is presented in the following table:

Table 1 – Target opportunities for Stormwater ‘Best Management Practices’

Proposed Management	Description	Best Management Design Objective
Recommend Roofwater ‘First Flush’ Diverters as part of future building works	‘First Flush’ Diverters	- Conveyance of the first flush of roofwater in soft landscaped areas provides some minor stormwater treatment
Recommend Porous Pavements as part of future building works	Coarse (open) graded concrete / asphalt pavement or open modular paving	- Minor stormwater treatment - to facilitate infiltration to underlying soil (permeable surface)
Pipe Drainage & Levels	Q10 Piped Drainage Design	- Design Pipe Capacity (Q10) to convey minor stormwater flows
Overland (localised) Flows & Levels	Overland sheet flows to designated flow paths	- Manage Stormwater Flow during major storm events (Q100 – Q10 piped), broad sheet flow conveyance away from Buildings
Grass Coverage & Landscape areas	Grass Buffer Strips / Grass Swale& Landscape areas	- Grass buffer strips and grassed swales provide some minor stormwater treatment - Minor infiltration allowance (permeable surface)
Recommend Onsite Landscape and Litter Management as part of future building works	Landscape and Litter Management	- Onsite sweeping and proper disposal of rubbish has a moderate to high impact on litter control - minor to moderate control of coarse sediment

5.3 STORMWATER QUANTITY MANAGEMENT

The majority of the proposed impervious areas (roofwater and small pavement areas) will be collected and piped to the existing drainage network within the rear easement.

A Site Based Stormwater Management Plan is attached under a separate cover for inclusion with the Development Application. Final details shall be further confirmed in association with the detailed design documentation for the Operational Works Phase.

6 FLOODING

Logan City Council Property Flood report indicates the property has no flood levels or flags for building or development purposes.

Proposed development is located above minimum flood immunity levels.

Latest Flood Risk

The extract below comes from the flood risk map based on the latest (most recent) flood studies accepted by Council applicable for this property.



Figure 2 – Latest Flood Risk (source LCC Development City Plan)

Refer Appendix F – Property Flood Report

7 EARTHWORKS

The proposed development has earthworks associated with the building construction.

Concept volume estimates:

TOTAL CUT – Approx. 3870m³ (TBC at detailed design/operational work phase)

TOTAL FILL – Approx. 25m³ (TBC at detailed design/operational work phase)

All earthworks are proposed to be in accordance with Logan City Councils Filling and Excavation Code.

Refer Appendix E – Filling and Excavation Code

8 EROSION AND SEDIMENT CONTROL

Based on the information provided and anticipated construction scheme, an Erosion Hazard Assessment (EHA) score indicates the proposed development is 'Medium Risk' with respect to erosion and sediment control.

Refer Appendix G – Erosion and Sediment Control Hazard Assessment Form

All construction work will be undertaken in accordance with an Erosion and Sediment Control (ESC) Management Plan prepared in association with the detailed design documentation for the Operational Works submission.

9 CONCLUSION

9.1.1 Development Services

The development site has possible means of connection to the existing water and sewer reticulation network.

Logan Water maintains the existing water and sewer reticulation network and proposed connections are subject to Logan Water advice and conditional development requirements.

9.1.2 Stormwater Management

It has been proposed that the stormwater treatment measures are carried out to the requirements of Local Authority Guidelines and State Policies.

All Stormwater Management measures will be undertaken in accordance with the Stormwater Management Plan prepared in association with the detailed design stage.

9.1.3 Earthworks and Erosion and Sediment Control

A Bulk Earthworks and Erosion and Sediment Control Management Plan will be prepared in association with the detailed/operational design stage. All construction work will be undertaken in accordance with these plans.

APPENDIX A

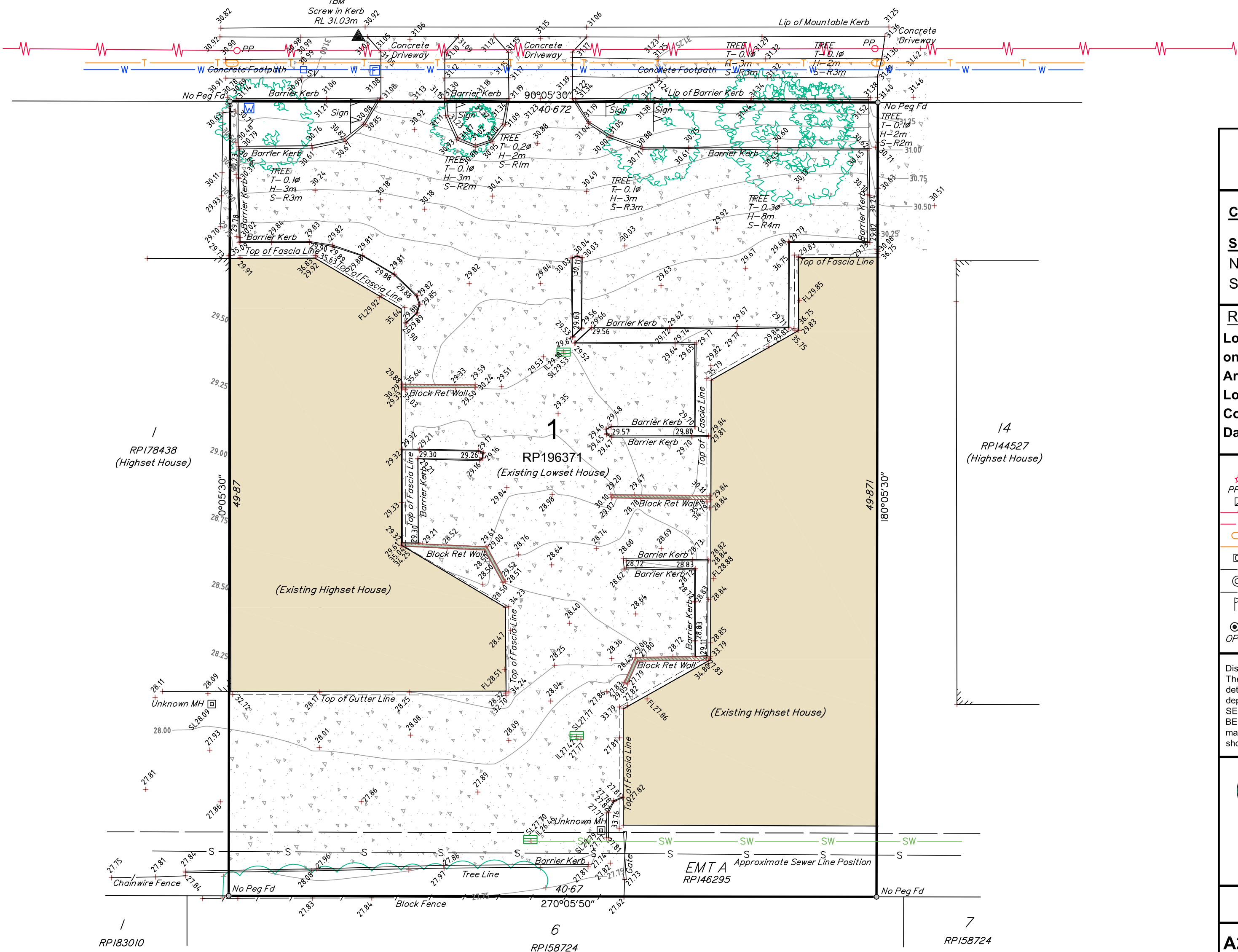
SITE SURVEY PLAN & EXISTING SERVICES

NOTE: Identification Survey is required prior to Construction. Please contact brisbane@kevinholtconsulting.com for a fee proposal. (Estimated Timeframe: 30 Business Days)

Warning: Heights are derived from GNSS observations based on AUSGEOD 2020 and adjusted to local AHD by interpolation. They should not be used to determine minimum or maximum floor levels if the site is or maybe subject to flooding, subject to a noise covenant or any other condition that nominates a specific AHD related floor level. Please contact the surveyor for more site specific level information if an exact floor level is required. This warning forms an integral part of this plan.



WATLAND STREET



DETAIL SURVEY PLAN

CLIENT: Andrew Watson
SITE ADDRESS:
No. 21 & 23 Watland Street
Springwood
REAL PROPERTY DESCRIPTION
Lot: 1
on: RP196371
Area: 2028 m²
Local Authority: Logan C. C.
Contour Interval: 0.25m
Datum: AHDD (GPS 3dCQ=0.006m)

LEGEND			
	LIGHT POLE		LOCATOR POTHOLE
	POWER POLE		FIRE HYDRANT
	POWER BOX		AIR VALVE
	POWER LINE		STOP VALVE
	UNDERGROUND ELEC		WATER METER
	TELSTRA PIT		WATER LINE
	TELSTRA LINE		STORMWATER M/HOLE
	GAS MARKER		GULLY GRATE
	GAS LINE		ROOFWATER PIT
	SEWER MANHOLE		STORMWATER LINE
	SEWER LINE		ROCK RETAINING WALL
	SIGN		TIMBER RET WALL
	TEMPORARY BENCH MARK		TOP OF BANK
	PERMANENT SURVEY MARK		TOE OF BANK
	ORIGINAL PEG		FENCE

Disclaimer:
The position of Fence Lines, Retaining Walls and other detail is indicative only and should not be relied upon as depicting the Boundary Lines. This is a plan of VISIBLE SERVICES ONLY. The location of pegs found have NOT BEEN CHECKED and as such should not be relied on as marking the corners of the lot. An Identification Survey should be carried out prior to any construction works.

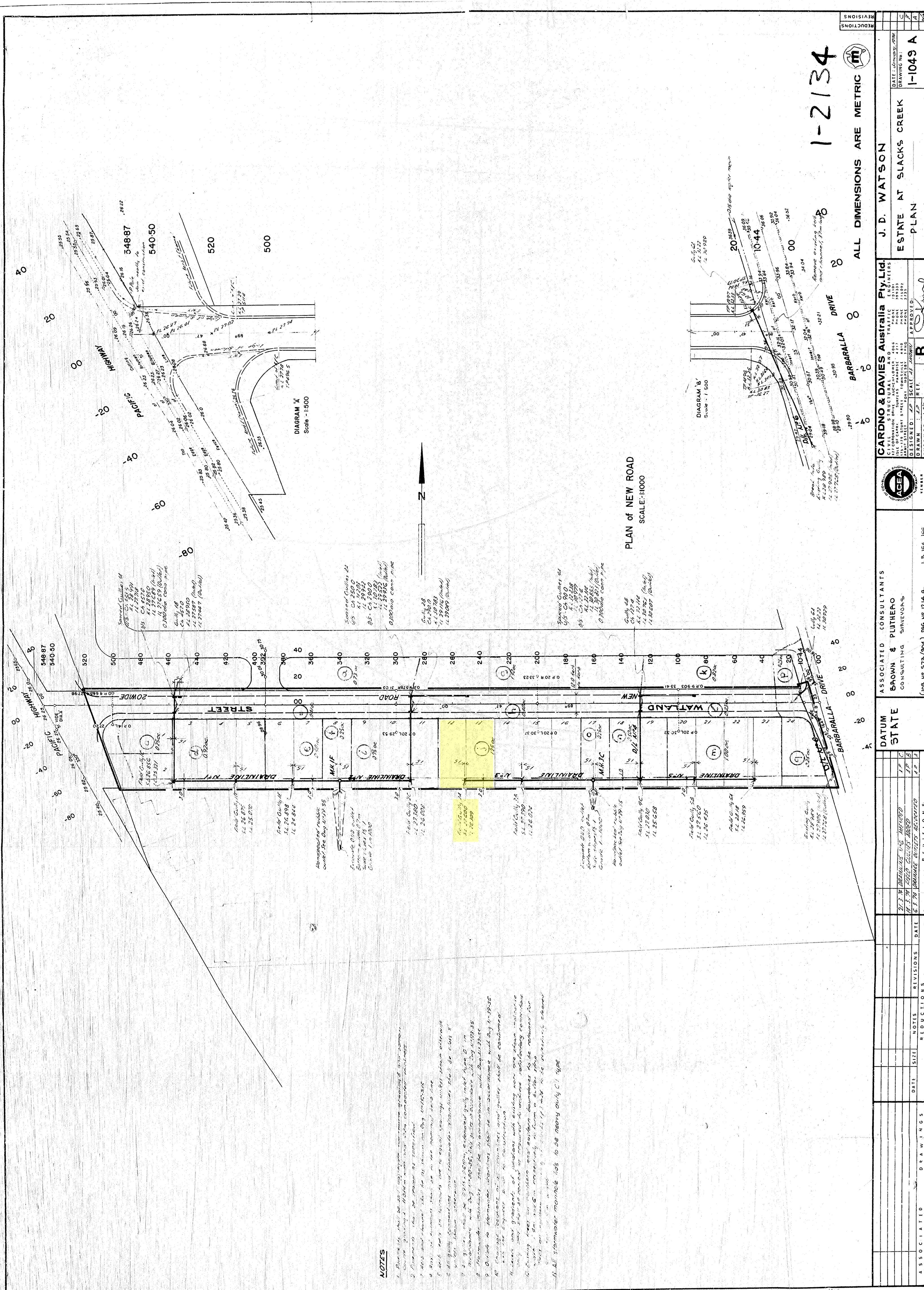


Level 1, Building 18
Technology Office Park
107 Miles Platting Road
Eight Mile Plains Qld 4113
Phone: 07 3219 0400
Email: brisbane@kevinholtconsulting.com

DATE SURVEYED: 23/08/2022
SURVEYOR: NW (SG)

A2 **SCALE:** 1:200
DATE DRAFTED: 26/08/2022

J224138 **PLAN NO. REV**
J224138-01A

[illegible]

APPENDIX B

DEVELOPMENT PROPOSAL

REFER ARCHITECTURAL DRAWINGS

APPENDIX C
CIVIL CONCEPT PLANS

CIVIL DA CONCEPT

LCC WATER CONNECTION NOTE:
PROPOSED WATER SERVICE AND METER TO BE IN ACCORDANCE WITH LCC STANDARDS AND DEVELOPMENT CONDITIONS. SIZE AND LOCATION TO BE COORDINATED AND CONFIRMED WITH HYDRAULIC CONSULTANT AS PART OF WATER APPROVAL PROCESS. ALL ASSOCIATED WORKS TO BE AT DEVELOPER'S EXPENSE.

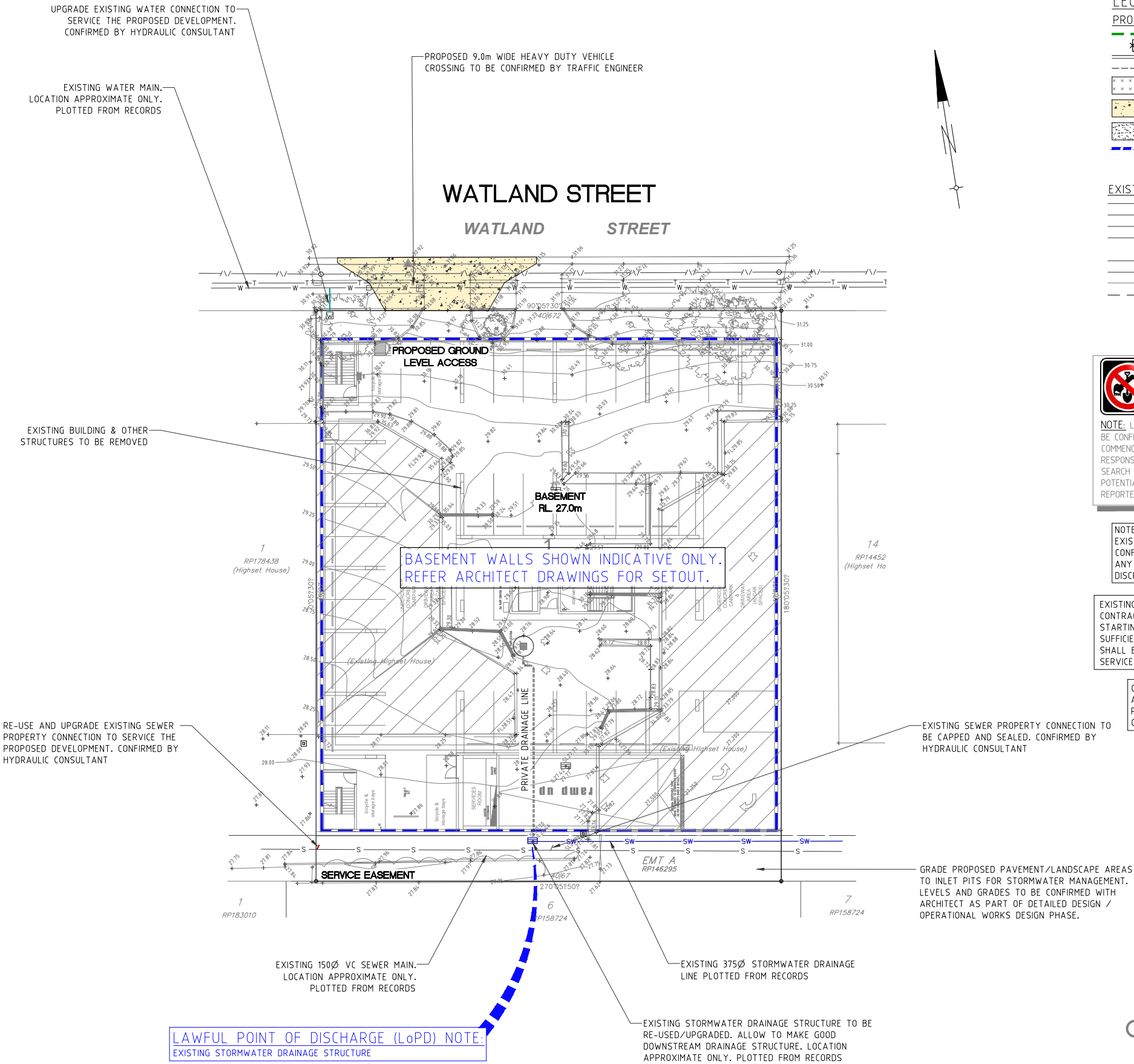
LCC SEWER CONNECTION NOTE:
PROPOSED SEWER CONNECTION TO BE IN ACCORDANCE WITH LCC STANDARDS AND DEVELOPMENT CONDITIONS. SIZE AND LOCATION TO BE COORDINATED AND CONFIRMED WITH HYDRAULIC CONSULTANT AS PART OF WATER APPROVAL PROCESS. ALL ASSOCIATED WORKS TO BE AT DEVELOPER'S EXPENSE.

INTERNAL PROPOSED LEVELS
REFER ARCHITECT'S DRAWINGS FOR ALL PROPOSED STEPS, LEVELS, GRADES/FALLS, BUILDING AND CARPARK SETOUT & HYDRAULICS CONSULTANT'S DRAWINGS FOR ROOFWATER AND PLUMBING AND DRAINAGE CONNECTION DETAILS.

STORMWATER MANAGEMENT NOTES:
SWD1 - STORMWATER QUALITY: IN ACCORDANCE WITH THE STATE PLANNING POLICY FOR WATER QUALITY (AND LOGAN CITY COUNCIL STORMWATER CODE SECTION P015 -SECTION B) - THE DEVELOPMENT IS ASSOCIATED WITH A MATERIAL CHANGE OF USE FOR AN URBAN PURPOSE **NOT** EXCEEDING **2500m² (TOTAL SITE IS 2028m²)**. A BEST PRACTICE APPROACH IS PROPOSED ACCORDINGLY.

SWD2 - STORMWATER QUANTITY (DETENTION):
REFER IMPERVIOUS AREA CALCULATION TABLE ON THIS PAGE.
THE INCREASE IN IMPERVIOUS AREA CAN BE DEEMED NEGLIBLE WHEN COMPARED TO THE PRE-DEVELOPMENT CONDITION. LOCALISED ONSITE DETENTION IS NOT PROPOSED IN THIS INSTANCE.

RPEQ ENGINEERS ASSESSMENT:
ACCEPTABLE OUTCOME IN THIS INSTANCE.



- LEGEND - CONCEPT PLAN**
- PROPOSED**
- PROPOSED STORMWATER DRAINAGE
 - PROPOSED LEVEL
 - PROPOSED KERB & CHANNEL
 - PROPOSED CONTOUR
 - PROPOSED LIGHT DUTY FLEXIBLE PAVEMENT
 - PROPOSED VEHICULAR CONCRETE PAVEMENT
 - PROPOSED PEDESTRIAN CONCRETE PAVEMENT
 - PROPOSED RETAINING WALL
 - PROPOSED RETAINING WALL HEIGHT
- EXISTING**
- EXISTING ELECTRICITY
 - EXISTING TELSTRA
 - EXISTING GAS
 - EXISTING STORMWATER DRAINAGE
 - EXISTING SPOT LEVEL
 - EXISTING SEWER
 - EXISTING WATER
 - EXISTING KERB/KERB & CHANNEL
 - EXISTING CONTOUR

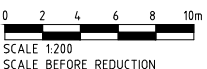
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NOTE: LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF WORKS. ANY POTENTIAL CONFLICT OF EXISTING SERVICES SHALL BE REPORTED TO THE SUPERINTENDENT.

NOTE: EXISTING SERVICES AND CONNECTIONS TO EXISTING SERVICES ARE TO BE LOCATED AND CONFIRMED ON SITE BY THE CONTRACTOR PRIOR TO ANY EXCAVATION. ENGINEER TO BE NOTIFIED OF ANY DISCREPANCIES FOR POSSIBLE REVISIONS.

EXISTING SERVICES HAVE BEEN PLOTTED FROM RECORDS. CONTRACTOR TO LOCATE EXISTING SERVICES PRIOR TO STARTING WORKS AND ENSURE THAT THEY HAVE SUFFICIENT COVER TO NEW FINISHED SURFACE. SERVICES SHALL BE RELAI/LOWERED WHERE NECESSARY. REFER SERVICES AUTHORITY REQUIREMENTS.

CONTRACTOR TO REPAIR ANY DAMAGE TO KERB AND CHANNEL, FOOTWAY, FOOTPATH, ROAD PAVEMENT OR SERVICES CAUSED DURING CONSTRUCTION TO THE SATISFACTION OF COUNCIL.



THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL STAMPED **APPROVED** BY RELEVANT AUTHORITY. ALL WORKS ARE TO BE CONSTRUCTED TO THE SATISFACTION OF RELEVANT AUTHORITIES. THE CONTRACTOR IS RESPONSIBLE FOR ORGANISING NECESSARY PERMITS, AUTHORISATION AND SUBSEQUENT INSPECTIONS AS REQUIRED BY RELEVANT AUTHORITIES.

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DATE	EVENT	DETAIL	INITIAL	DATE	EVENT	DETAIL	INITIAL
15.04.26	P2	PRELIMINARY ISSUE 2	MTN				
28.02.26	P1	PRELIMINARY PLANS	MTN				

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E: civil@deq.com.au

PROPOSED DEVELOPMENT
21-23 WATLAND STREET
SPRINGWOOD

WATLAND PTY LTD

CIVIL SITEWORKS
CONCEPT PLAN

CIVIL DA CONCEPT
SUBJECT FURTHER DETAIL DESIGN + COUNCIL DA CONDITIONAL REQUIREMENTS

CONCEPT CERTIFICATION ONLY
RONALD OTTO
RPEQ No. 27857
FOR AND ON BEHALF OF
DEQ CONSULTING ENGINEERS

SCALE	AS SHOWN	DATE	APR 2026
CONTACT:	RO/MTN	SHEET	1 OF 4
JOB No.	26.0294	SK.01	P2
CHECKED	RO	DRG. No.	AMMT.
		DATUM	: AHD

CIVIL DA CONCEPT

INTERNAL PROPOSED LEVELS
REFER ARCHITECT'S DRAWINGS FOR ALL PROPOSED STEPS, LEVELS, GRADES/FALLS, BUILDING AND CARPARK SETOUT & HYDRAULICS CONSULTANT'S DRAWINGS FOR ROOFWATER AND PLUMBING AND DRAINAGE CONNECTION DETAILS.



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NOTE: LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF WORKS. ANY POTENTIAL CONFLICT OF EXISTING SERVICES SHALL BE REPORTED TO THE SUPERINTENDENT.

REDUNDANT INTERNAL STRUCTURES NOTE:
REDUNDANT DRAINAGE PIPEWORK, EXISTING SLABS, FOOTINGS, BUILDERS RUBBLE, AND OTHER DELETERIOUS MATERIAL TO BE TAKEN UP AND REMOVED FROM SITE.

PRIOR TO CONSTRUCTION, THE CIVIL CONTRACTOR IN ASSOCIATION WITH SITE SUPERINTENDENT AND PROJECT MANAGER SHALL LOCATED BY POTHOLING (OR EQUIVALENT METHOD) ALL EXISTING SERVICES. SERVICES SHALL BE RELAID/LOWERED WHERE NECESSARY. REFER SERVICES AUTHORITY REQUIREMENTS.
CONTACT CIVIL ENGINEER IF REQUIRED TO INVESTIGATE ALTERNATIVE SOLUTION IN THE EVENT SERVICE CLASH OR CONFLICT.

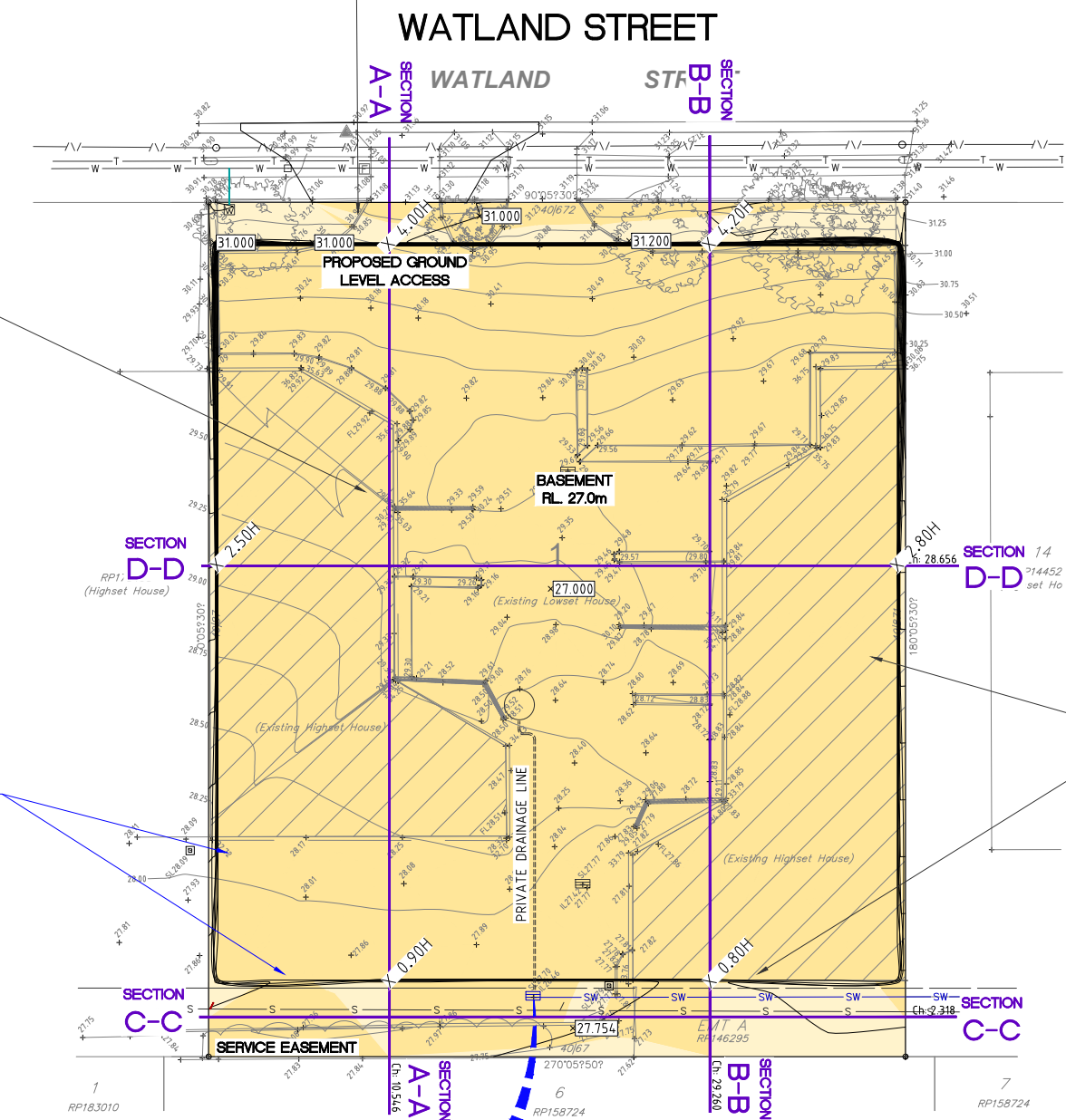
AS DIRECTED BY THE SUPERINTENDENT, THE CONTRACTOR SHALL REMOVE ALL EXISTING FOOTINGS, PIPES AND UNDESIRABLE MATTER AND REPLACE WITH AN APPROVED SUITABLE MATERIAL COMPACTED TO 98% DRY DENSITY RATIO.

AT THE END OF SITE EARTH WORKS, THE EXPOSED EXCAVATION FACE IS TO BE STRUCTURALLY STABILISED TO SUPPORT UPSTREAM PROPERTIES BEFORE THE COMPLETION OF THE ULTIMATE RETAINING WALL. RPEQ IS TO CERTIFY AND MAINTAIN THE TEMPORARY EXCAVATION MEASUREMENTS.

LAWFUL POINT OF DISCHARGE (LoPD) NOTE:
EXISTING STORMWATER DRAINAGE STRUCTURE

CONSTRUCTION EXIT LOCATION AS DETERMINED BY SUPERINTENDENT REFER DETAIL.

PROPOSED 9.0m WIDE HEAVY DUTY VEHICLE CROSSING TO BE CONFIRMED BY TRAFFIC ENGINEER



LEGEND-CONCEPT EARTHWORKS PLAN

- PROPOSED BULK EARTHWORKS LEVEL
- EXISTING CONTOUR
- EXISTING SPOT LEVEL
- PROPOSED CUT AREA
- CUT VOLUME 3870m³
- PROPOSED FILL AREA
- FILL VOLUME 25m³
- PROPOSED RETAINING WALL
- PROPOSED RETAINING WALL HEIGHT

BULK EARTHWORKS LEVELS APPROX ONLY. EXACT LEVELS TO BE CONFIRMED PRIOR TO CONSTRUCTION.

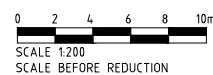
- BASEMENT EXCAVATION NOTES**
- B1. PROPOSED EXCAVATIONS, BATTERS, TEMPORARY BULK EARTHWORKS, AND SHORING TO BE DESIGNED AND CERTIFIED BY RPEQ GEOTECHNICAL/STRUCTURAL ENGINEER; TEMPORARY SLOPES TO FOLLOW GEOTECHNICAL RECOMMENDATIONS (E.G., 1IN1).
 - B2. GROUND ANCHORS/ANCHOR SYSTEMS ARE NOT PROPOSED.
 - B3. RETAINING WALLS, BASEMENT WALLS, SHORING SYSTEM, AND ASSOCIATED BATTERS TO BE DESIGNED, CONSTRUCTED, AND CERTIFIED BY A SUITABLY QUALIFIED ENGINEER; REFER TO STRUCTURAL/GEOTECHNICAL DRAWINGS/REPORTS.
 - B4. PERIMETER TO BE BUNDED AND PROTECTED TO MAINTAIN A MINIMUM 150 MM FREEBOARD ABOVE MAJOR STORM EVENTS.
 - B5. DEWATERING, EROSION & SEDIMENT CONTROL, AND DUST SUPPRESSION SHALL BE CARRIED OUT PER COUNCIL SPECIFICATION AND ESC PLAN; DIVERT UPSTREAM STORMWATER AWAY FROM EXCAVATION AREAS.
 - B6. ALL EARTHWORKS, RETAINING STRUCTURES, AND BASEMENT CONSTRUCTION TO BE INSPECTED AND CERTIFIED PRIOR TO COMPLETION OF STAGED EARTHWORKS AND/OR BACKFILLING.

BASEMENT WALLS SHOWN INDICATIVE ONLY. REFER ARCHITECT DRAWINGS FOR SETOUT.

PROPOSED TEMPORARY 1in1 BULK EARTHWORKS BATTER. PROPOSED EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH LCC FILLING AND EXCAVATION CODE.

- EARTHWORKS NOTE:**
- E1 - TEMPORARY 1in1 BULK EARTHWORKS BATTER SHALL BE PROVIDED FOR ANY EXCAVATIONS WITHIN VICINITY OF PROPERTY BOUNDARY (OR FOR STEP-DOWNS) EXCEEDING 0.5m IN HEIGHT.
 - E2 - TEMPORARY EARTHWORKS BATTER SHALL TERMINATE WITHIN 0.3m OF ADJACENT PROPERTY BOUNDARIES.
 - E3 - COVER EXCAVATION FACE WITH PLASTIC EACH DAY.
 - E4 - ALL BATTERS TO BE EXPOSED FOR MINIMUM PERIOD. DETAIL EXCAVATION REQUIRED PRIOR TO RETAINING WALL CONSTRUCTION.
 - E5 - RETAINING WALL DESIGN BY OTHERS.
 - E6 - WHERE APPLICABLE, RETAINING WALLS IN EXCESS OF 1.0m IN HEIGHT TO BE DESIGNED AND CERTIFIED BY RPEQ.

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15.04.26	P2	PRELIMINARY ISSUE 2	MTN				
28.02.26	P1	PRELIMINARY PLANS	MTN				



DEQ DESIGN ENGINEERS QUEENSLAND

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E: structural@deq.com.au
E: civil@deq.com.au

PROPOSED DEVELOPMENT
21-23 WATLAND STREET
SPRINGWOOD

WATLAND PTY LTD

CIVIL SITEWORKS
CONCEPT BULK EARTHWORKS
SHEET 1 OF 2

CIVIL DA CONCEPT

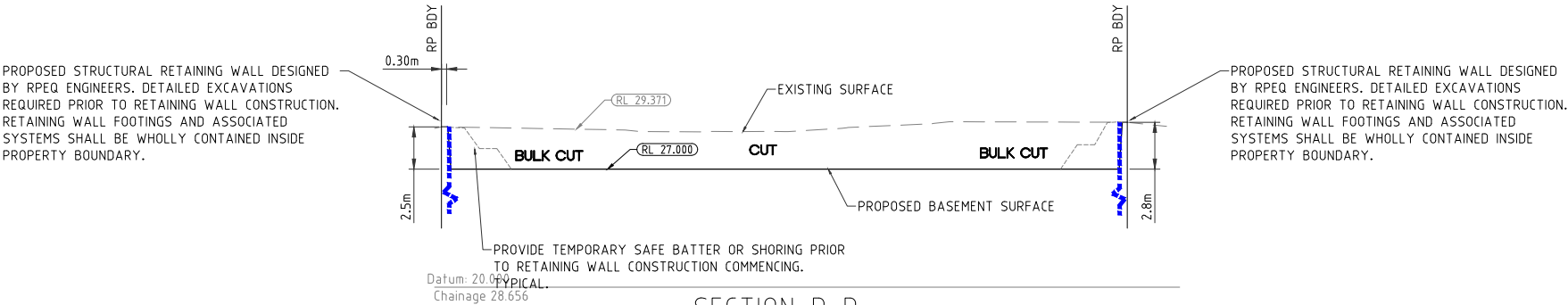
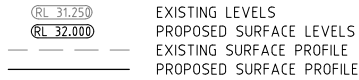
SUBJECT FURTHER DETAIL DESIGN + COUNCIL DA CONDITIONAL REQUIREMENTS

CONCEPT CERTIFICATION ONLY
RONALD OTTO

RPEQ No. 27857
FOR AND ON BEHALF OF
DEQ CONSULTING ENGINEERS

SCALE	AS SHOWN	DATE	APR 2026
CONTACT:	R0/MTN	SHEET	2 OF 4
JOB No.	26.0294	SK.02	P2
CHECKED	R0	DRG. No.	AMMT.
		DATUM	: AHD

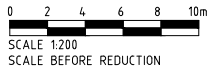
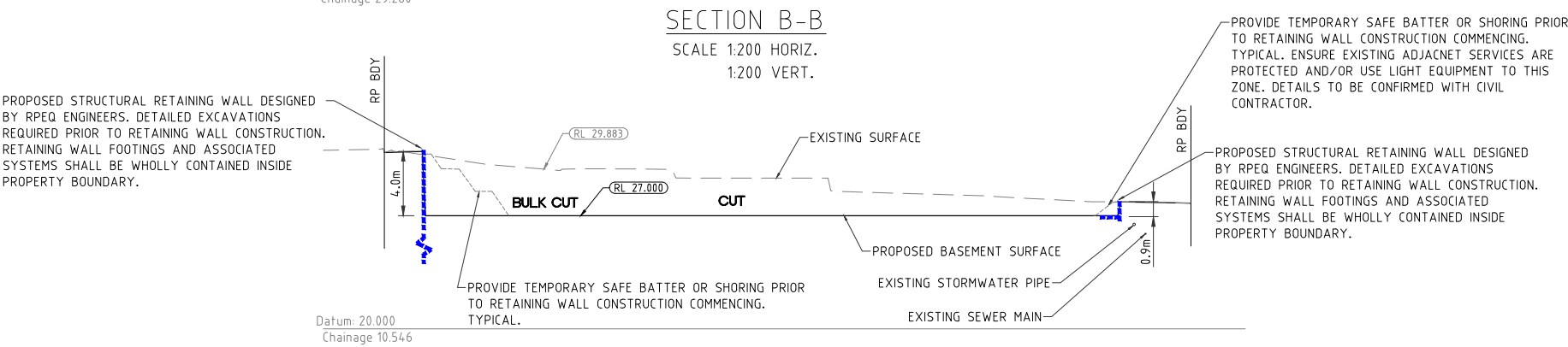
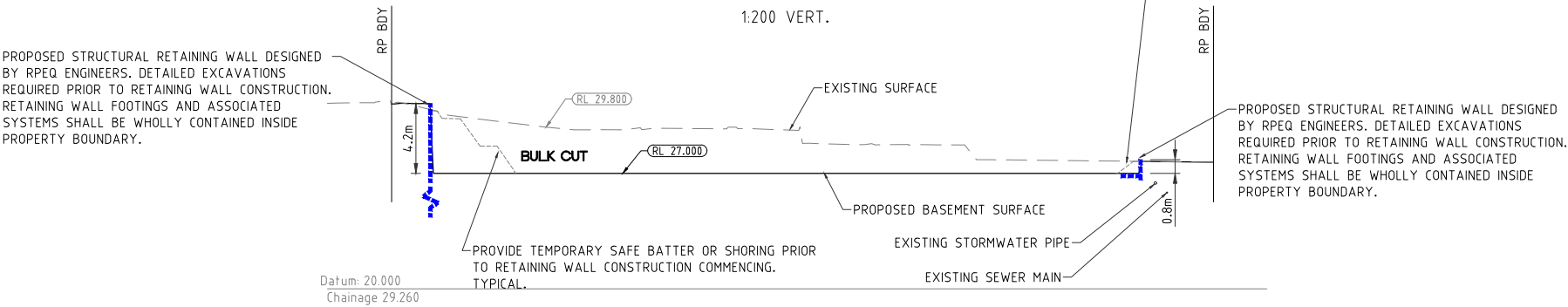
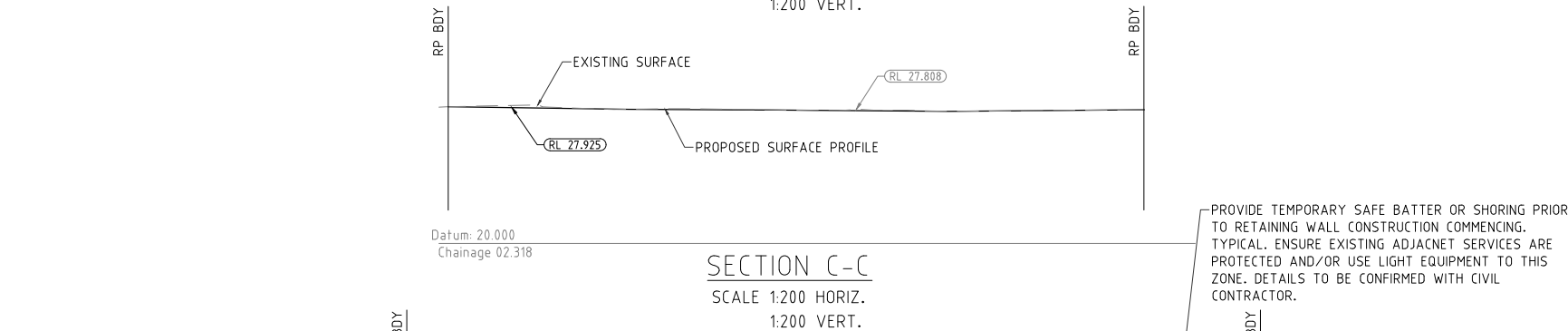
LEGEND-FILLING & EXCAVATION SECTIONS



BASEMENT EXCAVATION NOTES

- B1. PROPOSED EXCAVATIONS, BATTERS, TEMPORARY BULK EARTHWORKS, AND SHORING TO BE DESIGNED AND CERTIFIED BY RPEQ GEOTECHNICAL/STRUCTURAL ENGINEER; TEMPORARY SLOPES TO FOLLOW GEOTECHNICAL RECOMMENDATIONS (E.G., 1 IN 1).
- B2. GROUND ANCHORS/ANCHOR SYSTEMS ARE NOT PROPOSED.
- B3. RETAINING WALLS, BASEMENT WALLS, SHORING SYSTEM, AND ASSOCIATED BATTERS TO BE DESIGNED, CONSTRUCTED, AND CERTIFIED BY A SUITABLY QUALIFIED ENGINEER; REFER TO STRUCTURAL/GEOTECHNICAL DRAWINGS/REPORTS.
- B4. PERIMETER TO BE BUNDED AND PROTECTED TO MAINTAIN A MINIMUM 150 MM FREEBOARD ABOVE MAJOR STORM EVENTS.
- B5. DEWATERING, EROSION & SEDIMENT CONTROL, AND DUST SUPPRESSION SHALL BE CARRIED OUT PER COUNCIL SPECIFICATION AND ESC PLAN; DIVERT UPSTREAM STORMWATER AWAY FROM EXCAVATION AREAS.
- B6. ALL EARTHWORKS, RETAINING STRUCTURES, AND BASEMENT CONSTRUCTION TO BE INSPECTED AND CERTIFIED PRIOR TO COMPLETION OF STAGED EARTHWORKS AND/OR BACKFILLING.

BASEMENT WALLS SHOWN INDICATIVE ONLY.
REFER ARCHITECT DRAWINGS FOR SETOUT.



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DATE	EVENT	DETAIL	INITIAL	DATE	EVENT	DETAIL	INITIAL
15.04.26	P2	PRELIMINARY ISSUE 2	MTN				
28.02.26	P1	PRELIMINARY PLANS	MTN				

DEQ DESIGN ENGINEERS QUEENSLAND

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Civil, Structural and Soil Testing

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F: (07) 3367 0205
W: www.deq.com.au
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E: civil@deq.com.au

PROPOSED DEVELOPMENT
21-23 WATLAND STREET
SPRINGWOOD

WATLAND PTY LTD

CIVIL SITEWORKS
CONCEPT BULK EARTHWORKS
SHEET 2 OF 2

CIVIL DA CONCEPT

SUBJECT FURTHER DETAIL DESIGN +
COUNCIL DA CONDITIONAL REQUIREMENTS

CONCEPT CERTIFICATION ONLY
RONALD OTTO
RPEQ No. 27857
FOR AND ON BEHALF OF
DEQ CONSULTING ENGINEERS

SCALE	AS SHOWN	DATE	APR 2026
CONTACT:	R0/MTN	SHEET	3 OF 4
JOB No.	26.0294	SK.03	P2
CHECKED	R0	DRG. No.	AMMT.
		DATUM	: AHD

CIVIL DA CONCEPT

LCC WATER CONNECTION NOTE:
PROPOSED WATER SERVICE AND METER TO BE IN ACCORDANCE WITH LCC STANDARDS AND DEVELOPMENT CONDITIONS.
SIZE AND LOCATION TO BE COORDINATED AND CONFIRMED WITH HYDRAULIC CONSULTANT AS PART OF WATER APPROVAL PROCESS.
ALL ASSOCIATED WORKS TO BE AT DEVELOPER'S EXPENSE.

LCC SEWER CONNECTION NOTE:
PROPOSED SEWER CONNECTION TO BE IN ACCORDANCE WITH LCC STANDARDS AND DEVELOPMENT CONDITIONS.
SIZE AND LOCATION TO BE COORDINATED AND CONFIRMED WITH HYDRAULIC CONSULTANT AS PART OF WATER APPROVAL PROCESS.
ALL ASSOCIATED WORKS TO BE AT DEVELOPER'S EXPENSE.



NOTE: LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF WORKS. ANY POTENTIAL CONFLICT OF EXISTING SERVICES SHALL BE REPORTED TO THE SUPERINTENDENT.

0 2 4 6 8 10m
SCALE 1:200
SCALE BEFORE REDUCTION

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DATE	EVENT	DETAIL	INITIAL	DATE	EVENT	DETAIL	INITIAL
15.04.26	P2	PRELIMINARY ISSUE 2	MTN				
28.02.26	.	PRELIMINARY ISSUE	MTN				

DEQ DESIGN ENGINEERS QUEENSLAND

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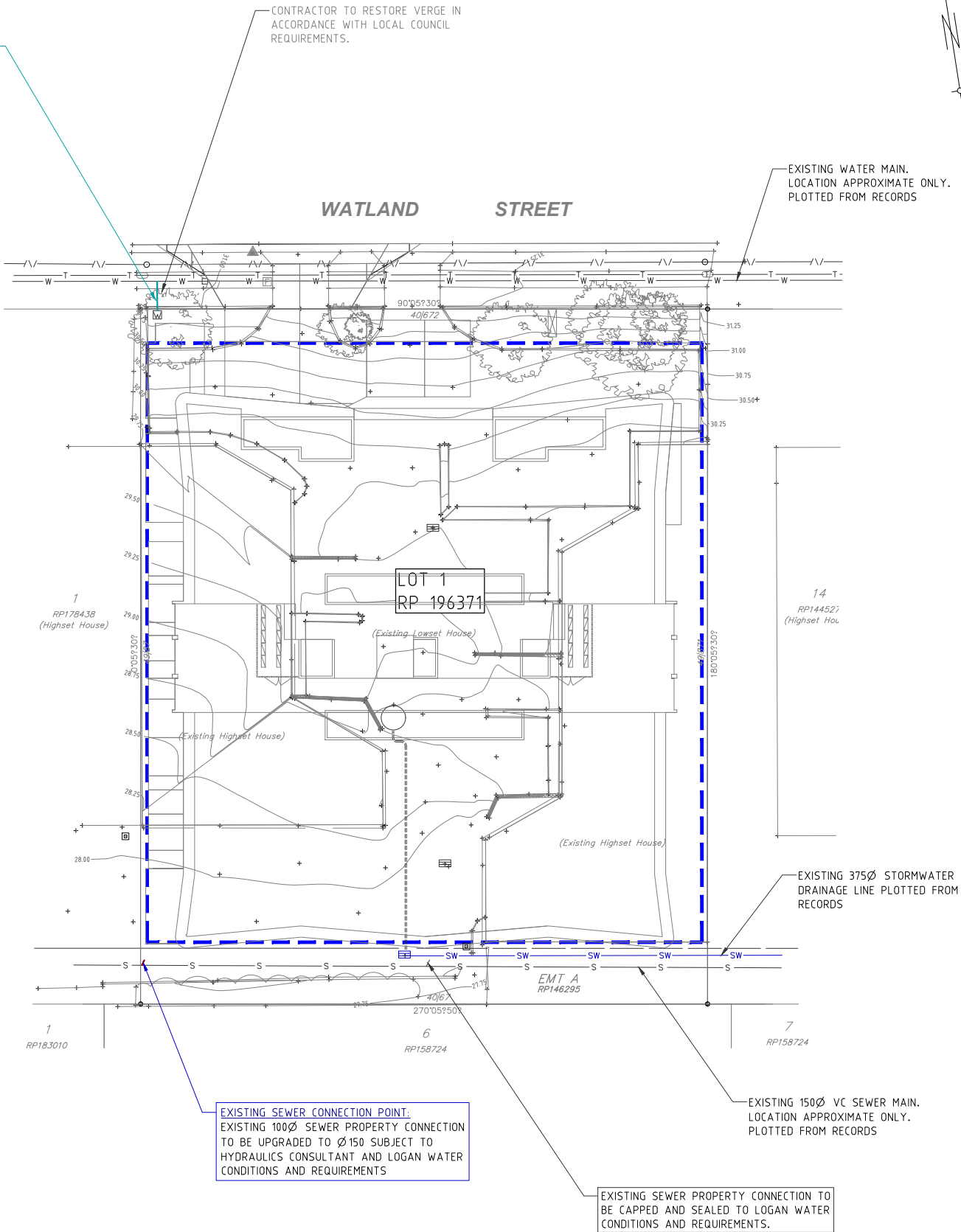
PROPOSED DEVELOPMENT
21-23 WATLAND STREET
SPRINGWOOD

WATLAND PTY LTD

CIVIL SITEWORKS
SEWER & WATER
CONCEPT SERVICE PLAN

SCALE AS SHOWN	DATE APR 2026
CONTACT: RO/MTN	SHEET 4 OF 4
26.0294	SK.04
JOB No.	DRG. No.
CHECKED RO	DATUM : AHD

SEWER AND WATER CONCEPT SCHEMATIC PLAN



LEGEND - SEWER/WATER CONCEPT PLAN

- EXISTING SEWERAGE
- PROPOSED SEWERAGE
- EXISTING WATER MAIN
- PROPOSED WATER SERVICE
- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE CONTOURS
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- STORMWATER DRAINAGE
- WATER RETICULATION
- TELSTRA RETICULATION
- UNDERGROUND ELECTRICITY

CIVIL DA CONCEPT

SUBJECT FURTHER DETAIL DESIGN + COUNCIL DA CONDITIONAL REQUIREMENTS

CONCEPT CERTIFICATION ONLY
RONALD OTTO
RPEQ No. 27857
FOR AND ON BEHALF OF
DEQ CONSULTING ENGINEERS

APPENDIX D
INFRASTRUCTURE DESIGN CODE

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
Provision, design, construction and location of infrastructure				
PO1 Development is demonstrated to be capable of being serviced by necessary infrastructure.	AO1 Reports, plans and drawings are provided in accordance with part 2 of Planning scheme policy 5 - Infrastructure.	✓	Development is demonstrated to be capable of being serviced by necessary infrastructure.	
PO2 Development: a. provides necessary infrastructure to service the development; b. provides that the design, construction and location of necessary infrastructure: i. protects existing and planned infrastructure networks; ii. services proposed development; iii. integrates with existing and planned infrastructure networks; iv. delivers a standard of service that is efficient and equitable; v. minimises the cost to the community for the life of the infrastructure by providing a suitable design life, ease of maintenance and ease of replacement; vi. protects personal health, safety and premises; vii. protects environmental values.	AO2 Development: a. in a water supply service area connects to the water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; b. not in a water supply service area provides a tank with a minimum storage capacity of 45,000 litres; c. in a sewerage supply service area connects to the waste water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; d. not in a sewerage supply service area complies with part 1 of the Queensland Plumbing and Wastewater Code; e. provides stormwater infrastructure in accordance with part 3.6 of Planning scheme policy 5 - Infrastructure; f. provides a movement network infrastructure in accordance with part 3.4 of Planning scheme policy 5 - Infrastructure;	✓	Development is proposed to comply with SEQ Code Sewer and Water Design and LCC Plumbing and Drainage requirements.	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
	g. provides parks in accordance with part 3.12 of Planning scheme policy 5 - Infrastructure; h. provides road lighting in accordance with part 3.5 of Planning scheme policy 5 - Infrastructure; i. provides electricity reticulation in accordance with part 3.8 of Planning scheme policy 5 - Infrastructure; j. provides gas and telecommunications reticulation in accordance with part 3.9 of Planning scheme policy 5 - Infrastructure. k. is consistent with the general planning layouts in part 7.2 of Planning scheme policy 5 - Infrastructure. Editor's note - The delivery of any part of a network identified in the plans for trunk infrastructure is governed by Part 4 - Local government infrastructure plan.			
Location of development				
PO3 Development is located to protect existing and planned infrastructure networks.	A03 Development is located outside a network identified in Local government infrastructure plan map LGIP-03.00 to 08.00 Plans for trunk infrastructure in Schedule 3 - Local government infrastructure plan mapping and tables.	✓	Development is located to protect existing and planned infrastructure networks.	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
Fire fighting				
PO4 Development in a water service area accessed by common private title provides: a. fire hydrant infrastructure; b. unimpeded access for emergency services vehicles. Editor's note - The term common private title refers to areas such as access roads in community title developments or strata title unit access, which are private and under group or body corporate control.	AO4 Development in a water service area involving a material change of use or reconfiguring a lot where, or to be, accessed by common private title ensures that fire hydrant placement and technical requirements for streets and access ways are in accordance with: a. Australian Standard (AS) 2419.1 - 2005 <i>Fire hydrant installations</i>; b. QFES: <i>Fire Hydrant and vehicle access guidelines for residential, commercial and industrial lots</i>.	✓	Development provides necessary fire hydrant infrastructure and unimpeded access for emergency services vehicles. The internal domestic and fire service requirements will be confirmed by a hydraulic engineer during the detailed design stage.	
PO5 Development not in a water service area provides sufficient water storage with adequate pressure, volume and flow to service development for fire fighting purposes.	AO5 Development: a. is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or b. has on-site water storage in accordance with Table 9.4.3.3.2 - Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is:	n/a	Development in a water service area	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
	i. a separate tank; or ii. a reserve section in the bottom part of the main water supply tankwater tank. Editor's note - The requirement in AO5 is: - in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development; - reflected in AO5 in Table 8.2.3.3.1 - Bushfire hazard overlay code: accepted development (subject to requirements) and assessable development.			
Waste management				

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
PO6 Development provides refuse and recycling collection and storage facilities that are located and managed so that adverse impacts on building occupants, neighbouring properties and the public realm are minimised.	AO6.1 Development provides refuse and recycling collection and storage facilities in accordance with Planning scheme policy 9 - Waste management. AO6.2 Development ensures that the location and design of refuse and recycling collection and storage facilities does not have any adverse impact including odour, noise or visual impacts on the amenity of land uses within or adjoining the development. Note - Planning scheme policy 9 - Waste management provides guidance on how to achieve this outcome.	✓	Development provides refuse and recycling collection and storage facilities in accordance with Planning scheme policy 9 - Waste management	
Disposal of trade waste				
PO7 The disposal of trade waste in a sewerage supply service area does not adversely affect the sewerage network.	AO7 The disposal of trade waste in a sewerage supply service area complies with the sewer admission standards in section 3.2.6 - Sewer admission standards in Planning scheme policy 3 - Environmental management.	✓	The disposal of trade waste in a sewerage supply service area complies with the sewer admission standards in section 3.2.6 - Sewer admission standards in Planning scheme policy 3	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
Roof water drainage and surface water drainage				
PO8 Development provides stormwater infrastructure for the drainage of the premises so as not to cause any of the following: a. ponding of stormwater on the premises; b. a hazard to personal health and safety; c. damage to premises; d. an increased risk of flooding to premises within the catchment.	AO8 Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.	✓	Development provides stormwater infrastructure for the drainage in accordance with LCC Planning scheme policy 5 - Infrastructure.	
Natural flow of surface water				
PO8 Development provides that the natural flow of surface water is: a. not altered so as to cause a risk to personal health and safety or damage to property; b. not increased in intensity, velocity or frequency; c. not concentrated onto adjoining premises.	AO8 Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.	✓	Development provides stormwater infrastructure for the drainage in accordance with LCC Planning scheme policy 5 - Infrastructure.	
Water sensitive urban design				

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
PO10 Development which provides stormwater infrastructure incorporates water sensitive urban design principles having regard to: a. protecting existing natural features and ecological processes; b. protecting the natural hydrologic behaviour of catchments; c. protecting the existing natural flow and water quality regimes of waterways; d. protecting water quality of surface and ground waters; e. minimising demand on the water network; f. minimising sewage discharges to the natural environment; g. integrating water into the landscape to enhance visual and ecological values.	AO10 Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.	✓	Development provides stormwater infrastructure for the drainage in accordance with LCC Planning scheme policy 5 - Infrastructure.	
Movement network				
PO11 The projected traffic levels for a use do not adversely affect the planned standards of service for a road or intersection.	AO11 Development does not cause or contribute to projected traffic levels: a. exceeding the maximum vehicle trips per day in Table 3.4.1.4.2 in Planning scheme policy 5 - Infrastructure; or	✓	Refer Traffic Impact Assessment report by MODUS Transport & Traffic Engineering.	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
	b. exceeding the maximum control delays through intersections in peak periods in Table 3.4.1.4.3 in Planning scheme policy 5 - Infrastructure.			
Integrated movement concept report				
PO12 Development which generates more than 3,000 vehicle trips per average weekday is designed to integrate the movement network to minimise the transportation costs required to service the use.	AO12 Development which generates more than 3,000 vehicle trips per average weekday provides an integrated movement concept report which integrates the planning of the movement network in accordance with part 2 and 3 of Planning scheme policy 5 - Infrastructure.	✓	Refer Traffic Impact Assessment report by MODUS Transport & Traffic Engineering.	
For assessable development only Land use and transport integration				
PO13 Development within 400 metres of existing or future public passenger transport facilities where the total site area is 5,000m ² or more: a. supports a road hierarchy which facilitates efficient, safe and accessible bus services connecting to existing and future public passenger transport facilities; b. enhances connectivity between existing and future public passenger transport facilities and other transport modes;	AO13 No acceptable outcome provided.	n/a		

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
c. optimises the walkable catchment to existing and future public passenger transport facilities; d. provides for direct and safe access to and use of existing or future public passenger transport facilities. Note - SPP code: Land use and transport integration in Appendix 4 of the state planning policy provides guidance to achieve this outcome.				

APPENDIX E
FILLING AND EXCAVATION CODE

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
Protection of natural processes and ecosystems				
PO1 The discharge of sediments and pollutants from filling or excavation does not adversely affect a waterway or the stormwater network.	AO1 The discharge of sediments and pollutants to a waterway or stormwater network complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	✓	All earthworks are proposed to be undertaken in accordance with LCC Infrastructure design Planning scheme policy 5 - Infrastructure. The construction issue drawings will detail the Erosion and Sediment Control plans in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	
PO2 Topsoil and spoil stockpiled on the premises do not adversely affect natural processes and ecosystems.	AO2 Topsoil and spoil is stockpiled to comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	✓	All earthworks are proposed to be undertaken in accordance with LCC Planning scheme policy 5 - Infrastructure. The construction issue drawings will detail the Erosion and Sediment Control plans in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
PO3 Filling is carried out using stable, solid and clean earth, free of organic and putrescible waste, rubbish and refuse material.	AO3 Filling complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	✓	All earthworks are proposed to be undertaken in accordance with LCC Planning scheme policy 5 - Infrastructure. The construction issue drawings will detail the Erosion and Sediment Control plans in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	
Protection of existing and planned infrastructure				
PO4 Filling or excavation works do not adversely affect infrastructure, including any services.	AO4 Filling or excavation works comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	✓	All earthworks are proposed to be undertaken in accordance with LCC Planning scheme policy 5 - Infrastructure. The construction issue drawings will detail the Erosion and Sediment Control plans in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
Protection and enhancement of personal health and safety and premises				
PO5 Filling or excavation works do not adversely affect personal health and safety.	AO5 Filling or excavation works comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	✓	All earthworks are proposed to be undertaken in accordance with LCC Planning scheme policy 5 - Infrastructure. Filling or excavation works do not adversely affect personal health and safety.	
Surface water flow				
PO6 Surface water drainage does not cause any of the following: a. ponding on any premises; or b. a hazard or adversely affect personal health and safety and premises; or c. diversion or concentration of flow from or onto adjoining premises or infrastructure.	AO6 Surface water drainage complies with part 3.3 - Filling or excavation standards in Planning scheme policy 5 - Infrastructure.	✓	Surface water drainage complies with part 3.3 - Filling or excavation standards in Planning scheme policy 5 - Infrastructure.	
Batters				
PO7 A batter:	AO7 A batter is designed and constructed to comply with the standards specified	✓	A batter is designed and constructed to comply with the standards specified	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
a. does not adversely affect the natural physical processes and ecosystems; b. protects existing and planned infrastructure; c. is safe, stable and easily maintained; d. is landscaped to enhance visual amenity.	in 3.3.6 - Batters and retaining walls in Planning scheme policy 5 - Infrastructure.		in 3.3.6 - Batters and retaining walls in LCC Planning scheme policy 5 - Infrastructure.	
Retaining walls				
PO8 A retaining wall: a. is not constructed of timber and is not located on existing or proposed lot boundaries, or movement networks; b. does not adversely affect the natural physical processes and ecosystems; c. is located to avoid conflict with adjoining premises; d. is located such that existing and planned infrastructure is not adversely affected; e. protects the visual amenity of adjoining premises or a public open space; f. is located within the premises that is being filled; g. is located within the premises that is cut and is designed to take any surcharge loading allowable on the uphill lot; h. is safe and stable;	AO8 A retaining wall is designed and constructed to comply with the standards specified in section 3.3.6.2 - Retaining walls in Planning scheme policy 5 - Infrastructure.	✓	A retaining wall is designed and constructed to comply with the standards specified in section 3.3.6.2 - Retaining walls in LCC Planning scheme policy 5 - Infrastructure.	

PERFORMANCE OUTCOMES	ACCEPTABLE OUTCOMES	ACCEPTABLE OUTCOME COMPLIANCE (✓/✗)	RESPONSE	COUNCIL USE ONLY
i. enables easy access for maintenance.				
Filling of a dam				
PO9 The filling of a dam: a. does not adversely affect the natural physical processes and ecosystems; b. creates a safe and stable surface; c. is integrated into the landscape.	AO9 The filling of a dam complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	n/a		

APPENDIX F
PROPERTY FLOOD REPORT

PROPERTY FLOOD REPORT



Property Details

Address: 21-23 Watland Street SPRINGWOOD QLD 4127

Lot/Plan: Lot 1 RP 196371

Size/Area: 2,027 m²

Property Key: 189413

Catchment(s): Logan River, Slacks Creek

View Logan's [catchments and waterways map](#) (PDF)



Summary Flood Assessment

The table below presents the flood risks applicable to the selected property. There may be multiple studies and flood scenarios affecting the property, particularly for larger sites.

Assessment	Details
Risk area(s)	Not applicable
Investigation area	Not applicable
Isolation risk	Not applicable
River flooding	Not applicable
Creek flooding	Not applicable
Overland flow	Applies. It is possible that flooding from a local waterway which has not yet been studied may also impact the property. Please contact Council for further advice. Overland flow is water (stormwater run-off) that travels over land during heavy rainfall events. It generally occurs quickly and for short durations.

Latest Flood Risk

The extract below comes from the flood risk map based on the latest (most recent) flood studies accepted by Council applicable for this property.



LEGEND

High

Floodwaters may be deep or fast flowing, or have a relatively high chance of occurrence (e.g. 80% chance in 30 years). Conditions may pose a risk to life and cause damage to buildings, possibly severe. Limited development may be considered if not increasing the flood risk exposure for people or property. These areas are generally better suited to environmental, recreational and some agricultural uses.

Moderate

Less frequently affected by flooding or if more frequent, with shallow or slower moving floodwater. Conditions may pose an unacceptable risk to people or property if not mitigated. Development may be tolerable if measures are taken to address flood impacts, protect people and limit damage.

Low

Extremely unlikely chance of flooding (1% chance or less over a 30 year period) and/or relatively shallow or benign flooding conditions. Development is generally acceptable except for essential community infrastructure (e.g. emergency services). Vulnerable uses (e.g. childcare, aged care) may be ok subject to building, site access and safe shelter mitigation measures. Shows the full floodplain under the largest flood that could conceivably occur.

Investigation area

Locations where a current flood study has not been delivered and information to determine flood risk is not available. The approximation of the floodplain in these areas is based on a citywide overland flow study. Development should avoid these areas until further investigation (updated flood study or localised risk assessment) is completed.



The flood studies this map is based on consider the impacts of climate change, as required by Queensland's planning legislation and policies. The map considers the whole floodplain for Logan and reflects a risk-based approach that takes into account:

- How likely a flood of a given size is in any given year, and
- What the impact or level of danger of that flood is.

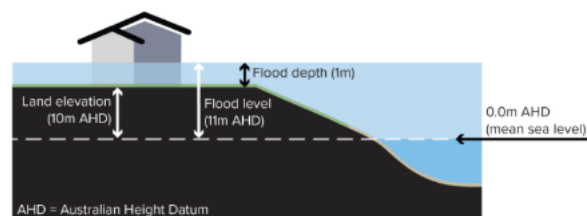
Ground Levels

Ground levels are based on an aerial LiDAR (Light Detection and Ranging) survey, which uses millions of laser point measurements to build a model of the ground surface. The source of the data is displayed in the table below so that you know when the survey was conducted.

Ground level	Details
Minimum ground level	27.5 metres AHD
Maximum ground level	31.5 metres AHD

Source: 2021 Digital elevation model (1 metre grid)

The projected flood depth (how deep the water may be above ground, in metres) is the difference between the flood levels in the section above and the ground levels in this table. The diagram below provides an example (land elevation is ground level).



Overland Flow

Overland flow is water (stormwater/rainfall run-off) that exceeds the capacity of drains, pipes and channels during heavy rainfall events and travels over land towards waterways. It generally occurs quickly and for shorter periods of time. The impact of overland flow is dependent on local conditions, so the mapping is a guide only. It is possible that flooding from a local waterway which has not yet been studied may also impact the property. Please contact Council for further advice.



LEGEND

 Overland flow extent (areas possibly impacted)

Current Climate Scenarios

This extract comes from the map showing flood affected areas **without** considering the impacts of climate change. This map represents modelled flooding under current conditions, and can be used for insurance purposes.



LEGEND

5% chance

The areas modelled to be impacted by a flood that has a 5% (or 1 in 20) chance of happening in any given year, or 80% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

2% chance

The areas modelled to be impacted by a flood that has a 2% (or 1 in 50) chance of happening in any given year, or 45% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

1% chance

The areas modelled to be impacted by a flood that has a 1% (or 1 in 100) chance of happening in any given year, or 25% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

0.5% chance

The areas modelled to be impacted by a flood that has a 0.5% (or 1 in 200) chance of happening in any given year, or 15% chance over a 30 year period, which is the common term of a mortgage. This modelling is based on **current (present day) conditions** and does not take into account the impacts of climate change.

0.05% chance

The areas modelled to be impacted by a flood that has a 0.05% (or 1 in 2000) chance of happening in any given year. This is an extremely unlikely flood event with a 1% chance of happening over a 30 year period, not including the impacts of climate change.

PMF

The PMF or probable maximum flood scenario represents the full extent of the floodplain, or the most serious flood that could be expected to occur. This is usually estimated based on the probable maximum rainfall, not including the impacts of climate change

Investigation area

Locations where a current flood study has not been delivered and information to determine flood risk is not available. The approximation of the floodplain in these areas is based on a citywide overland flow study. Further investigation is needed.

Historic Flood Events

Based on the best information available to Council, the table below indicates whether or not the selected property may have been impacted by significant historic flood events. It is possible that other creek flooding or overland flow, which is not included in Council's mapping of these events, may have impacted the property.

Flood event	Property impacted
1974	No
2017 (after ex Tropical Cyclone Debbie)	No
2022 (late February / early March)	No

Further Information

1. Floods are highly unpredictable and variable, and properties may be affected by other sources of potential flooding. Each flood and its impact is different. Areas that were not flooded previously may be affected by future events. Areas that have been previously flooded may be impacted in different ways. This online report cannot take all of this into account.
2. The flood mapping and levels in this report are based on data from flood studies undertaken at a particular time and are subject to change. For example, if the method for calculating flood levels is updated, industry guidelines are updated or more recent information becomes available, this may result in changes to the information in this report. In areas where development is ongoing, the flood mapping and levels may not reflect developed conditions.
3. Flood studies do not create risk. They help us to understand the risk, based on relevant legislation and Queensland Government policies and guidelines. Flood studies also consider a range of other factors such as rainfall and river level information from recent events, climate change and trends, the impacts of development, changes to catchment conditions, new technologies and industry best practice (which help to improve accuracy).
4. Flood studies and models are developed from the best information available at the time. They do not tell you how the flood waters might behave, how quickly they may rise, or how dangerous the flooding will be. The models also cannot represent changes that have occurred since they were developed which may impact flood behaviour, such as earthworks, new developments or road infrastructure.
5. This report is not a substitute for independent professional advice. You should engage the services of a Registered Professional Engineer of Queensland (RPEQ) to get site specific information regarding the flood risk to your property, and how that might affect any proposed building or development work.
6. While Logan City Council takes reasonable care in producing this report, it does not guarantee that the information is accurate, complete or current. Logan City Council does not accept any responsibility for any loss or damage (however it was caused) in connection with the use of or reliance on the information in this report.

Contact Information

Where to go for further information depends on the type of information you need. Please refer to the [Flood Risk Fact Sheet](#) or contact Council using the details below.

Topic	Contact Details
Flood studies and modelling information, and the flood risk on your property	Contact Council on 07 3412 3412 or email council@logan.qld.gov.au . Further information about flooding and flood studies is available on the Flood page on Council's website.
Planning and development enquiries or proposals	Contact Council on 07 3412 3412 or email development@logan.qld.gov.au . Before lodging a development application, pre-lodgement advice is recommended.
Building information	Contact Council on 07 3412 3412 or email council@logan.qld.gov.au . You can also contact a private building certifier .
Properties in Priority Development Areas	Contact Economic Development Queensland . Council is not the planning authority for these properties.
Independent advice about flooding on your property	Contact a registered engineer through the Board of Professional Engineers of Queensland: Phone: 07 3210 3100 Email: admin@bpeg.qld.gov.au Web: Home - Board of Professional Engineers Queensland (bpeg.qld.gov.au)

APPENDIX G

EROSION AND SEDIMENT CONTROL HAZARD ASSESSMENT FORM

FORM: Erosion and Sediment Control Hazard Assessment

Complete and submit this form to Logan City Council with any development application that will result in soil disturbance. Failure to do so may result in assessment delays. This form must be used in accordance with section 3.3.7 of [Part 3 Standards](#) of Planning scheme policy 5 – Infrastructure, of the Logan Planning Scheme.

Soil erosion and sediment from urban development, particularly during construction activities, is a significant source of sediment pollution in Logan waterways. The Erosion and Sediment Hazard Assessment (ESHA) determines whether the risk of soil erosion and sediment pollution to the environment is low, medium or high.

Section 1: Development Details

Application Number	
Site address	

Section 2: Certification

Erosion and Sediment Hazard Assessment (ESHA) Risk Please refer to Section 3 to determine the level of risk. <u>Note:</u> <i>ESC = Erosion and Sediment Control</i>	☐ Low	No ESC plans need to be submitted. Best practice ESC must be implemented, with field guides available at: Publications - International Erosion Control Association (austieca.com.au)
	☐ Medium	The services of a RPEQ or CPESC will need to be engaged to prepare and sign an ESC Plan and ESC Program and supporting documentation in accordance with the requirements of Part 3.3.7 of Planning scheme policy 5 – Infrastructure.

PRIVACY COLLECTION NOTICE: Council collects personal information in order to provide services and information. It may be used to update records, contact you about Council businesses and can only be accessed by Councillors, employees and authorised contractors. All information is handled in accordance with Council's Privacy Policy and Procedure. Visit logan.qld.gov.au/privacy.

<i>RPEQ = Registered Professional Engineer of Queensland</i> <i>CPESC = Certified Professional in Erosion and Sediment Control</i>	☐ High	The services of a RPEQ and CPESC will need to be engaged to prepare and sign an ESC Plan and ESC Program and supporting documentation in accordance with the requirements of Part 3.3.7 of Planning scheme policy 5 – Infrastructure. The plans and program will need to be certified by a RPEQ and CPESC.
Statement of certification	I certify that: ☐ I have made all relevant enquiries and am satisfied that 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 and Sediment Hazard Assessment was completed in accordance with Part 3 of Planning Scheme Policy 5 – Infrastructure, of the Logan Planning Scheme. ☐ The Erosion and Sediment Hazard Assessment accurately reflects the development and site's overall risk of soil erosion and sediment pollution to the environment. ☐ I acknowledge and accept that: 1) Logan City Council, as the Assessment Manager, relies on this certification in good faith as part of its development assessment process; and 2) The provision of false, incomplete or misleading information constitutes an offence, in response to which Logan City Council may take enforcement action.	
Certified by <i>(name in full and position)</i>		
Contact details <i>(e.g. phone, email address)</i>		
Certifier's signature		

Date assessment
completed

Section 3: Risk Assessment - Erosion and Sediment Hazard

Item	Question	Risk
1	Is the area of soil disturbance 1 hectare or more?	☐ Yes: HIGH risk. ☐ No: go to next question.
2	Does any soil disturbance occur in an area mapped as a waterway corridor? (see Section 4 below)	☐ Yes: HIGH risk. ☐ No: go to next question.
3	Does any soil disturbance occur in an area mapped as a landslide hazard or steep slope? (see Section 4 below)	☐ Yes: HIGH risk. ☐ No: go to next question.
4	Is there an upstream stormwater catchment greater than 1 hectare passing through the site?	☐ Yes: HIGH risk. ☐ No: go to next question.
5	Does any soil disturbance occur below 5m AHD? <i>AHD = Australian Height Datum (0m approximates mean sea level)</i>	☐ Yes: MEDIUM risk. ☐ No: go to next question.
6	Is the area of soil disturbance more than 1,000 m ² and less than 1 hectare (10,000 m ²)?	☐ Yes: MEDIUM risk. ☐ No: go to next question.
7	Does development involve endorsement of a staging plan?	☐ Yes: MEDIUM risk. ☐ No: LOW risk.

Section 4: Using the Logan PD Hub

PD
Hub

To determine if soil disturbance is occurring in areas mapped as a waterway corridor, landslide hazard or steep slope you can use the [Logan PD Hub](#), Council's free online portal for planning and development services.

You can search for a property, either with a text search (start typing the street address, property key or plan number/lot) or a map search:

Selected property:

Previous properties Map search

150 wembly

LCC ADMINISTRATION CENTRE 150 Wembley Road LOGAN CENTRAL QLD 4114, RP219577/8, 194449

Once you have found your property, use the interactive mapping to identify whether the key overlays from the Logan Planning Scheme apply to the area where soil will be disturbed as part of your development:

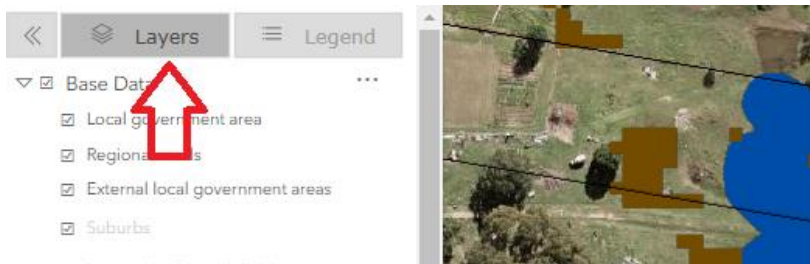


- OM-14 Waterway corridors and wetlands
- OM-08 Landslide hazard and steep slope areas

Click on the property on the map and use the pop-up box to see the list of overlays, as illustrated below. If OM-14 (waterways) and OM-08 (landslide / steep slope) are not listed, that means they are not applicable on the selected property. If one or both of those overlays are listed, tick the boxes to display them on the map. Use the legend at the top of the layers list, on the left of the map, to help you understand what the colour and patterns on the map mean. For example, in the illustration the brown areas have a slope hazard equal to or greater than 15%, and the dark blue represents a minor waterway. The legend will only display layers that are currently displayed on the map (turned on).

The screenshot shows the Logan PD Hub interface. On the left, there is a 'Layers' panel with a 'Legend' tab. The legend lists 'Logan Planning Scheme Layers 2015 V8.0' and 'Overlays (Part 8)'. Under 'Overlays (Part 8)', there are two sections: 'OM-08 Landslide hazard and steep slopes area overlay' and 'OM-14 Waterway corridors and wetlands trigger'. The 'OM-08' section includes 'OM-08.01 Landslide hazard and steep slopes' with a sub-entry 'Equal to or greater than 15 percent slope hazard area'. The 'OM-14' section includes 'OM-14.01 Waterways' with sub-entries: 'Minor waterway' (dark blue), 'Medium waterway' (medium blue), 'Major waterway' (light blue), and 'River waterway' (very light blue). The map shows a property with a red outline. A pop-up box on the right lists overlays for the selected property. The pop-up box has a 'zoom to a scale where the layer is visible.' instruction. The list includes: 'OM - 01.01 - Potential and actual acid sulphate soils <= 5 m AHD', 'OM - 01.01 - Potential and actual acid sulphate soils > 5 m AHD <= 20m AHD', 'OM - 02.01 - Primary vegetation management area', 'OM - 02.01 - Secondary vegetation management area', 'OM - 02.02 - Biodiversity corridor', 'OM - 02.03 - Locally significant Gossia gonoclada area', 'OM - 02.04 - Local and state environmental significance - Polygons', 'OM - 05.00 - Flooding and inundation area', 'OM - 08.01 - Landslide >= 15% slope' (checked), 'OM - 10.00 - Residential overlay', 'OM - 14.01 - River waterway' (checked), 'OM - 14.01 - Minor waterway' (checked), 'OM - 14.02 - Minor Wetland', 'OM - 14.02 - Wetland buffer area', and 'OM - 14.03 - Erosion prone areas'. A red arrow points to the 'OM - 14.01 - Minor waterway' entry in the pop-up box.

You can also use the Layers list on the left to turn on other information on the map.



For example, you can use the aerial imagery to help you identify the precise location of the proposed soil disturbance with respect to the overlays. You will find the base maps at the bottom of the list. Tick the 'Basemap' box and use the arrow (carat) to expand the list to display the options.



If a layer does not display on the map when you turn it on, it may be that:

- You have forgotten to tick the box at a higher level up the tree (when you were expanding the list); and/or
- You need to zoom in or out on the map – some maps are designed to be used at a property level, and others are designed at a broader scale.