PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV-2026-YAR-4693
Date: 15 June 2026
Queensland Government

CLA CONSULTANTS
Consulting Civil/Structural Engineers, Project Managers

CIVIL ENGINEERING REPORT
71 JOBS CIRCUIT YARRABILBA
PROPOSED INDUSTRIAL BUILDING

REVISION A
OUR REF: 25619

REVISION	DATE	AMENDMENTS
A	4/04/2026	-

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Prepared For:	**360 Developments Aus Pty Ltd**
Prepared By:	**Richard Leonard**
Release Date	**4/04/2026**
Job Number:	**25619**
Document Name:	**Civil Engineering Report**
	71 Jobs Circuit Yarrabilba
Revision:	**A**

Approved for release by

Campbell Leonard
FIEAust CPEng NPER3
RPEQ 4293
Director

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1. Introduction

This Civil Engineering Report has been in order to accompany an application for a material change of use.

The objectives of this report are to assess the following in the context of the proposed development:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection

2. Site Information

The site is located at 71 Jobs Circuit Yarrabilba (Lot 43 SP345729). This lot was created as part of Stage 3 of Precinct 5 of the Yarrabilba Priority Development Area (PDA). The site has a frontage to Jobs Circuit to the south and west. It grades generally from the north west to south east at generally 1.0%. The area of the site is 1,016m^2 in size, and it is currently vacant.

Figure 1 Aerial Photo of Site (Copyright Qld Globe)

The proposal for the site is for the construction of an industrial building, with associated car parking.

3. Engineering Assessment

3.1 Erosion and Sediment Control

During the course of the construction, the following processes are expected:

- Bulk earthworks
- Detailed earthworks to trim lot to final levels
- Construction

Management of stormwater runoff from the exposed earthwork surfaces will be based on containment, diversion and retention. At all stages of construction, current standards of building practices will be adhered to. These include:

- Placement of sediment fences
- Vehicle shakedown to prevent suspended solids being exported from site and consequently into surrounding stormwater infrastructure
- Sediment traps to field inlet pits and gullies

An Erosion and Sediment Control Plan has been prepared, refer to CLA Consultants Drawing 25619 - 002 in Figures. It will be the responsibility of the contractor to ensure that these and any other sedimentation and erosion controls are carried out.

3.2 Bulk Earthworks

The development of the site is taking place in conjunction with Lots 43-45, and will require earthworks to level the site to provide the building pad. This process will result in a cut from the site of approximately 360m^3. Drawing 25619 - 003 provides details of the earthworks proposed on the sites.

3.3 Vehicular Access

It is proposed that access to the site for vehicles will be provided by a crossover to Jobs Circuit. These will be constructed as 'General Wide' crossovers as per IPWEA standard drawing RS-051.

The service vehicle for the development is a Heavy Rigid Vehicle (HRV). A Traffic Engineering Report will be provided for assessment separately.

3.4 Stormwater Drainage

As discussed above, the subject site lies within a new subdivision. As part of the subdivision works, stormwater management has been provided within the downstream network through a series of bio-retention filters with additional ponding. As such, no treatment in terms of stormwater quantity is required within the site. It is proposed however to install SQIDEP approved Gross Pollutant Traps (Atlan Stormsacks or similar) to all field inlet pits. This will manage the release of gross pollutants and coarse sediments into the downstream infrastructure.

Stormwater from roofs and car park areas will be collected in a new internal stormwater drainage system. This system will use the existing stormwater pit on the site as the lawful point of discharge. The stormwater layout is shown on Drawing 25619 - 004, and the stormwater drainage longitudinal sections and catchment plan/calculations are shown at Drawings 25619 – 006, 008 and 009.

3.5 Sewer Connection

The proposed sewer connection point will be the existing property connection to the south east of the site. CLA Consultants Drawing 25619 - 004 shows the location of this connection point.

3.6 Water Connection

A new private water meter assembly will be provided to the site from the existing 150mm diameter PVC-M water main which runs within the verge of Jobs Circuit to the south. The size and final location of this connection will be nominated by the hydraulic consultant prior to application for Plumbing and Drainage approval.

3.7 Electrical and Telecommunications Connections

The existing energex pillar boxes will be used as the connection point for the site. There is existing telstra infrastructure outside the site, this will be the connection point for communications purposes.

5. Conclusion

This report has assessed the following:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection
- Electrical and telecommunications connections

The proposed development can be serviced by all required infrastructure, and in accordance with the relevant local government requirements.

Figures

Site Survey J Surveyors

CLA Consultants Drawings

25619 – 001 – Site Plan, Drawing Schedule & Notes
25619 – 002 – Erosion and Sediment Control Plan
25619 – 003 – Bulk Earthworks Plan
25619 – 004 – Grading & Drainage Plan Sheet 1 of 2
25619 – 005 – Grading & Drainage Plan Sheet 2 of 2
25619 – 006 – Stormwater Long Sections Sheet 1 of 2
25619 – 007 – Stormwater Long Sections Sheet 2 of 2
25619 – 008 – Stormwater Catchment Plan
25619 – 009 – Stormwater Calculation Sheet

PHOTO 1

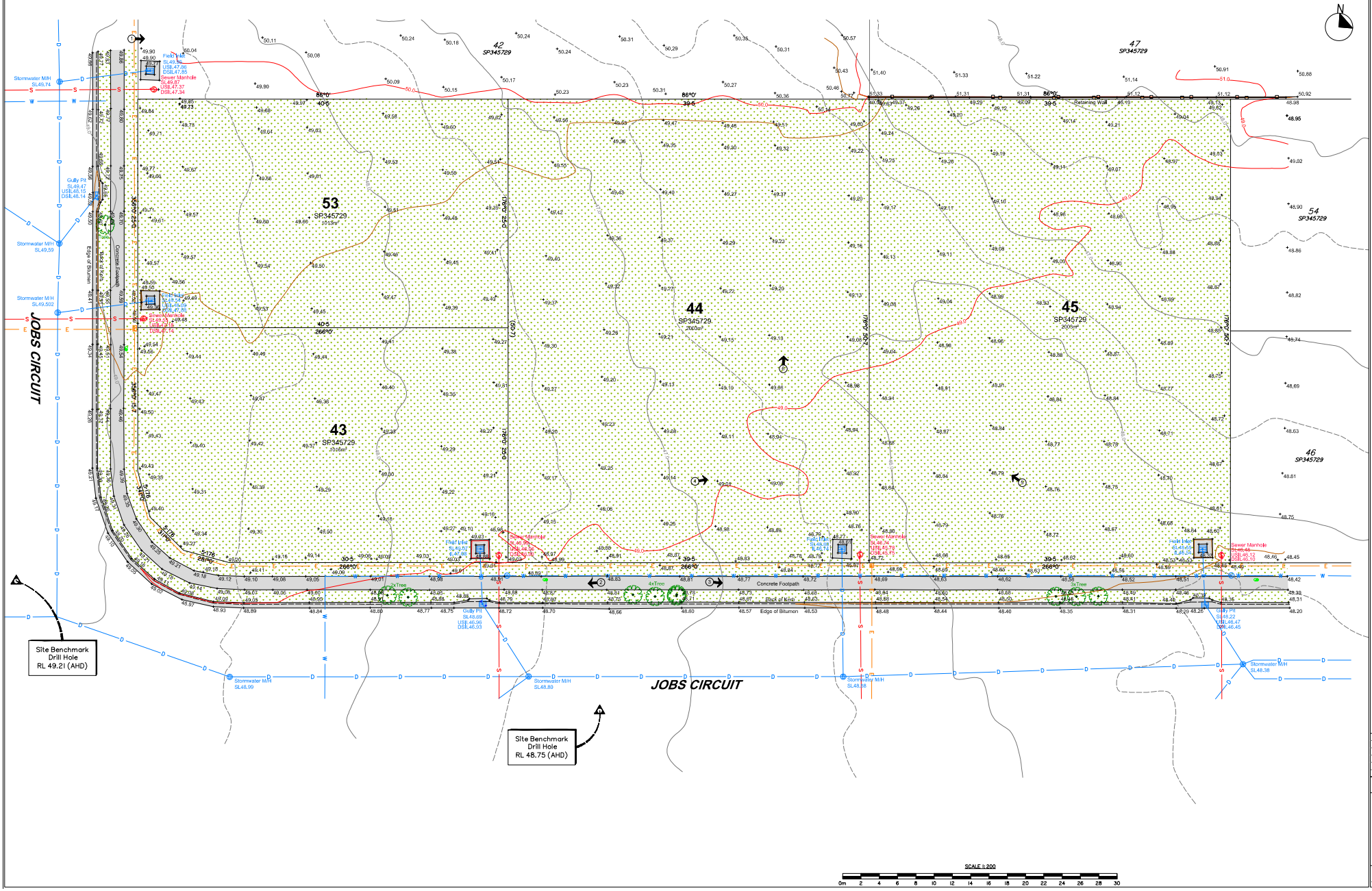
PHOTO 2

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6



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admin@jsurveyors.com.au
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NOTES

1. Drawn to scale on A1 at 1:200 (A1) or 1:400 (A3)
2. Property boundaries have not been defined by this survey. An Identification survey must be completed to confirm the exact location of the property boundaries prior to any operational works.
3. This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.
4. Underground features have been plotted from records. Only those services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.
5. This plan may not be photocopied unless these notes are included.
6. JSURVEYORS accepts no responsibility for any loss or damages caused in contravention of the above.
7. All levels are in metres on Australian Height Datum and have been derived from OPM12463 RL48.131 via GNSS.
8. Natural surface contours have been plotted by LCC eBimap records 2002.
9. Contour Interval . . . 0.5m

LEGEND

- Underground Stormwater Line
- Underground Water Line
- Underground Sewer Line
- Underground Gas Line
- Underground Telstra Line
- Underground Comms Line
- Underground Power Line
- Overhead Power Line
- Retaining Wall
- Fence Line
- Top of Bank
- Bottom of Bank
- Major Contour (Existing)
- Minor Contour (Existing)
- Major Contour (Natural)
- Minor Contour (Natural)
- Column/Concrete Wall below
- Stormwater Manhole
- Fire Hydrant
- Water Valve
- Water Meter
- Roof Water Outlet
- Sewer Manhole
- Sewer Inspection Opening
- Gas Valve
- Gas Meter
- Telstra Pit
- Comms Pit
- Electrical Pillar
- Electrical Pit
- Electrical Light/Power Pole

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Issue	Description	Date	Drawn	Check
A	ORIGINAL ISSUE	22.02.26	QT	BC

Client: 360 Developments Pty Ltd

Title:

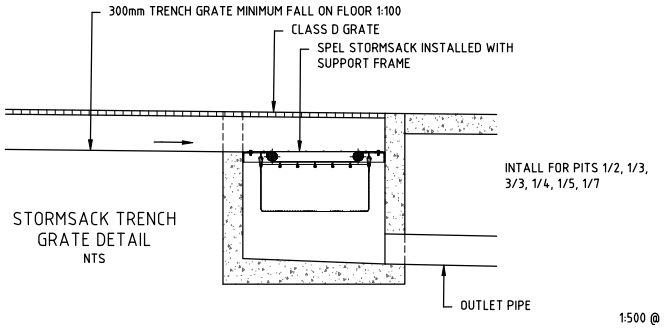
Plan of Detail Survey of Lots 43,44,45 and 53 on SP345729

71, 79, 63 & 55 Jobs Circuit, Yarraloiba, QLD

Drawing No:	Sheet, No:
JS 343 - DET01 - REV.A	1 of 1

DRAWING SCHEDULE	
NUMBER	TITLE
25619 – 001	SITE PLAN, DRAWING SCHEDULE & NOTES
25619 – 002	EROSION & SEDIMENT CONTROL PLAN
25619 – 003	BULK EARTHWORKS PLAN
25619 – 004	SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2
25619 – 005	SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2
25619 – 006	STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2
25619 – 007	STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2
25619 – 008	STORMWATER CATCHMENT PLAN
25619 – 009	STORMWATER CALCULATION SHEET

GENERAL NOTES:
1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOGAN CITY COUNCIL'S SPECIFICATIONS. CONTRACTOR TO OBTAIN AND RETAIN A COPY ON SITE DURING THE COURSE OF THE WORKS.
2. ALL NEW WORKS ARE TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS, AND MARRY IN A 'WORKMANLIKE' MANNER.
3. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY OR AS DETERMINED FROM SERVICE DIAGRAMS. CLA CONSULTANTS CANNOT GUARANTEE THE INFORMATION SHOWN NOR ACCEPT ANY RESPONSIBILITY FOR INACCURACIES OR INCOMPLETE DATA.
4. SERVICES & ACCESSES TO THE EXISTING PROPERTIES ARE TO BE MAINTAINED IN WORKING ORDER AT ALL TIMES DURING CONSTRUCTION.
5. ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
6. REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
8. ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, EROSION AND SEDIMENTATION CONTROL PLAN AND LOCAL COUNCIL'S REQUIREMENTS WHERE APPLICABLE.
9. CONTRACTOR TO CHECK AND CONFIRM SITE DRAINAGE CONNECTIONS ACROSS THE VERGE PRIOR TO COMMENCEMENT OF SITE DRAINAGE WORKS.
10. PROPERTIES AFFECTED BY THE WORKS ARE TO BE NOTIFIED IN ADVANCE WHERE DISRUPTION TO EXISTING ACCESS IS LIKELY.



STORMSACK TRENCH GRATE DETAIL
NTS

1:500 @ A3
0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

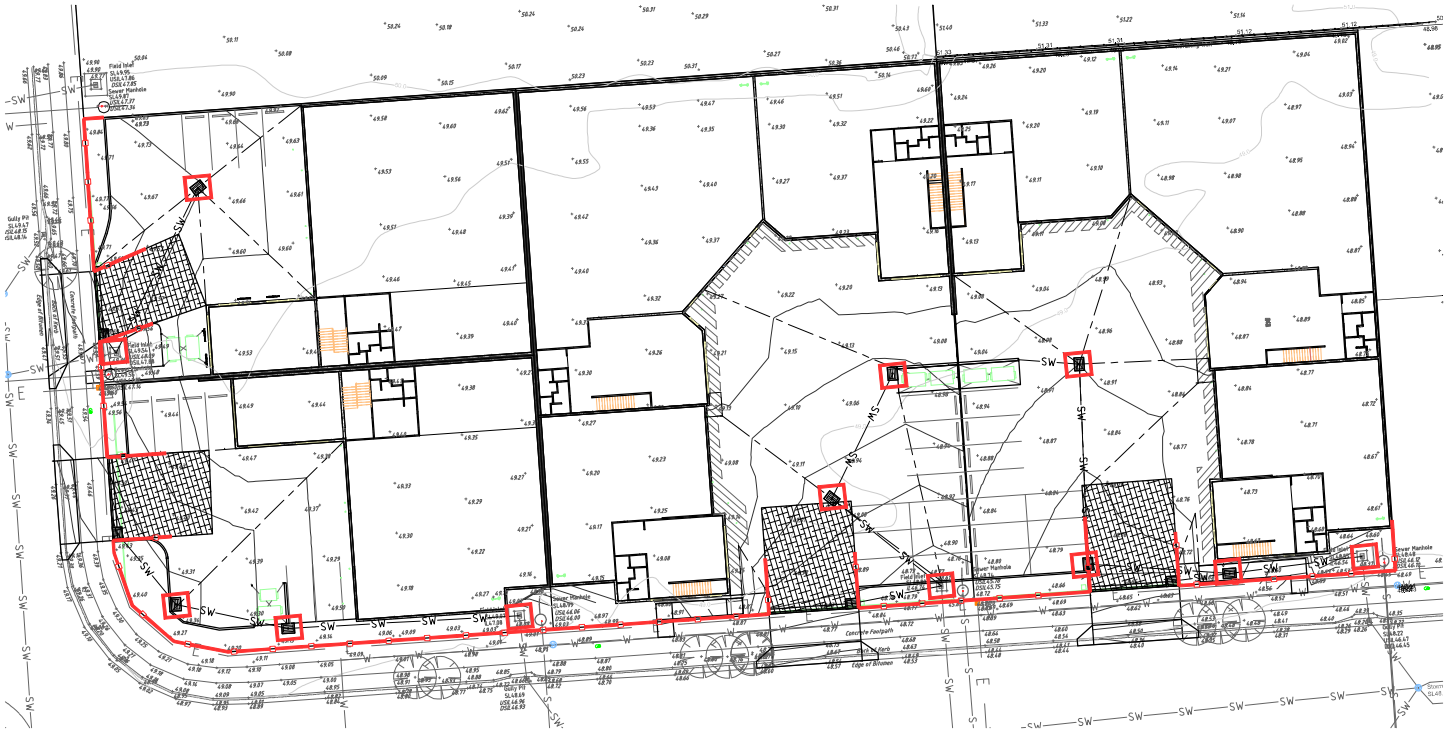
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE PLAN, DRAWING SCHEDULE & NOTES

PROJECT REF.	DRAWING NO.	REVISION
25619	001	-



Sedimentation and Erosion Control

1. Sedimentation and erosion control implementation and maintenance shall be in accordance with LOGAN City Council's Development Manual as read in conjunction with the document titles "Environmental Best Management Practices". The Contractor shall make himself aware of the prevailing weather conditions and shall take all necessary precautions to secure the site at the completion of each day's work, and whenever else is considered necessary.
2. Sediment and erosion control measures shall be provided as required to prevent the movement of dust and/or silt from the site.
3. Sediment and erosion control measures shall be installed downstream of any work area prior to the commencement of work in that area.
4. Erosion and sedimentation control measures shall be installed prior to the disturbance of the site and as required during the course of the works.
5. Topsoil shall be stripped in accordance with the specification and stockpiles at locations as agreed by the superintendent and Council's designated representative.
6. All disturbed areas shall be stabilised with the provision of 75mm minimum topsoil and grass seeded, mulched, re-vegetated etc within 7 days of the completion of final allotment earthworks.
7. All sediment control measures and devices shall be inspected for structural damage after each rainfall event and at the completion of each days work. All trapped sediment shall be removed to an approved location on site for re-use on site or for subsequent removal from the site. Site disposal will only be approved when it can be established that no additional erosion can occur.
8. Sediment and erosion control measures around stockpiles shall include but not necessarily be limited to:-

a) Provision of a silt fence below the stockpile, as indicated by the natural slopes of the land,
b) Provision of grass cover if stockpile is to remain in place for more that 30 days,
c) Provision of a surface emulsion or approved equivalent to prevent wind erosion.

9. Place 600mm width turf at both top and toes of retaining walls and tops of new kerb.
10. Water areas of construction regularly as required to obviate potential for dust nuisance to adjoining properties and the site generally.

Construction Traffic Shakedown

Provide construction traffic shake down device at all relevant site exit points. Clean out and maintain shake down device regularly to ensure efficient operation.

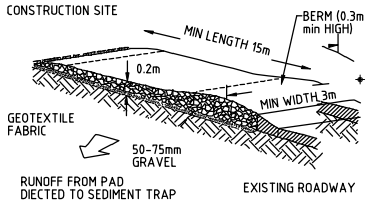
LEGEND

SILT FENCE

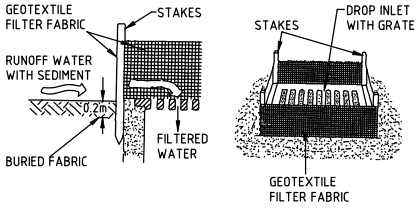
VEHICLE SHAKEDOWN

INLET SEDIMENT TRAP

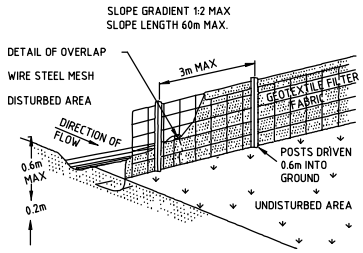
PLACE PORTABLE KERB SEDIMENT TRAP AS PER DETAIL AT ALL GULLY PITS AFFECTED BY SITE CONSTRUCTION WORKS



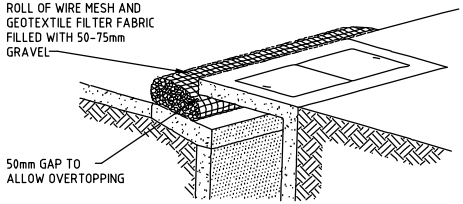
VEHICLE SHAKEDOWN AREA



INLET SEDIMENT TRAP



SILT FENCE



PORTABLE GRAVEL KERB SEDIMENT TRAP

1:500 @ A3

0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

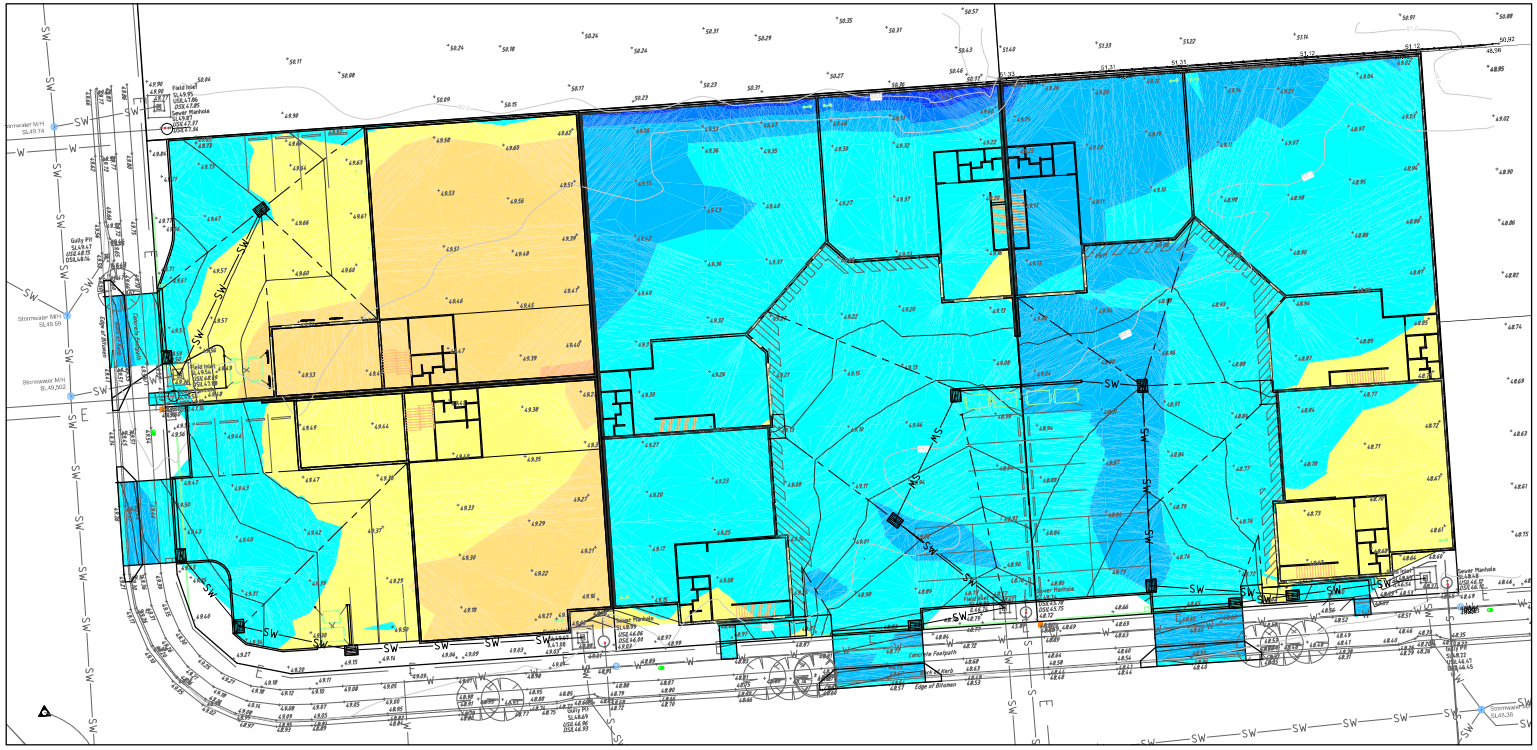
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
EROSION & SEDIMENT CONTROL PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	002	-



LEGEND	
CUT/FILL DEPTH (m)	Colour
-1.25 to -1.00	
-1.00 to -0.75	
-0.75 to -0.50	
-0.50 to -0.25	
-0.25 to 0.00	
0.00 to 0.25	
0.25 to 0.50	
0.50 to 0.75	

EARTHWORKS SUMMARY	
TOTAL CUT	742m³
TOTAL FILL	380m³
BALANCE	362m³

NOTES:
1. CALCULATIONS BASED ON EARTHWORKS LEVEL 250mm BELOW FINISHED LEVEL COMPARED TO EXISTING SURFACE LEVEL

NOTES
1. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARD 3798-GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. EXCESS SPOIL MATERIAL SHALL BE REMOVED FROM THE SITE TO AN APPROVED LOCATION THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SPOIL SITE TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO THE COMMENCEMENT OF SPOIL REMOVAL OPERATIONS.
3. SEDIMENTATION AND EROSION CONTROL MEASURES TO BE INSTALLED AND APPROVED PRIOR TO THE COMMENCEMENT OF EARTHWORKS.
4. ANY FILL BATTERS STEEPER THAN 1V:4H AND GREATED THAN 1.0M IN HEIGHT REQUIRE LODGEMENT OF BUILDING APPLICATION.
5. ALL WORKS TO BE IN ACCORDANCE WITH COGC PLANNING SCHEME POLICIES.
6. THE CONTRACTOR SHALL PROVIDE LEVEL 1 CERTIFICATION OF THE FILL MATERIAL PRIOR TO THE COMMENCEMENT OF FURTHER CIVIL WORKS.
7. BATTERS TO BE TURFED/MULCHED PRIOR TO ON MAINTENANCE INSPECTION.
8. ALL EXPOSED EARTHWORKS TO BE SEEDED PRIOR TO ON MAINTENANCE INSPECTION.

1:500 @ A3

0 4 8 12 16 20m

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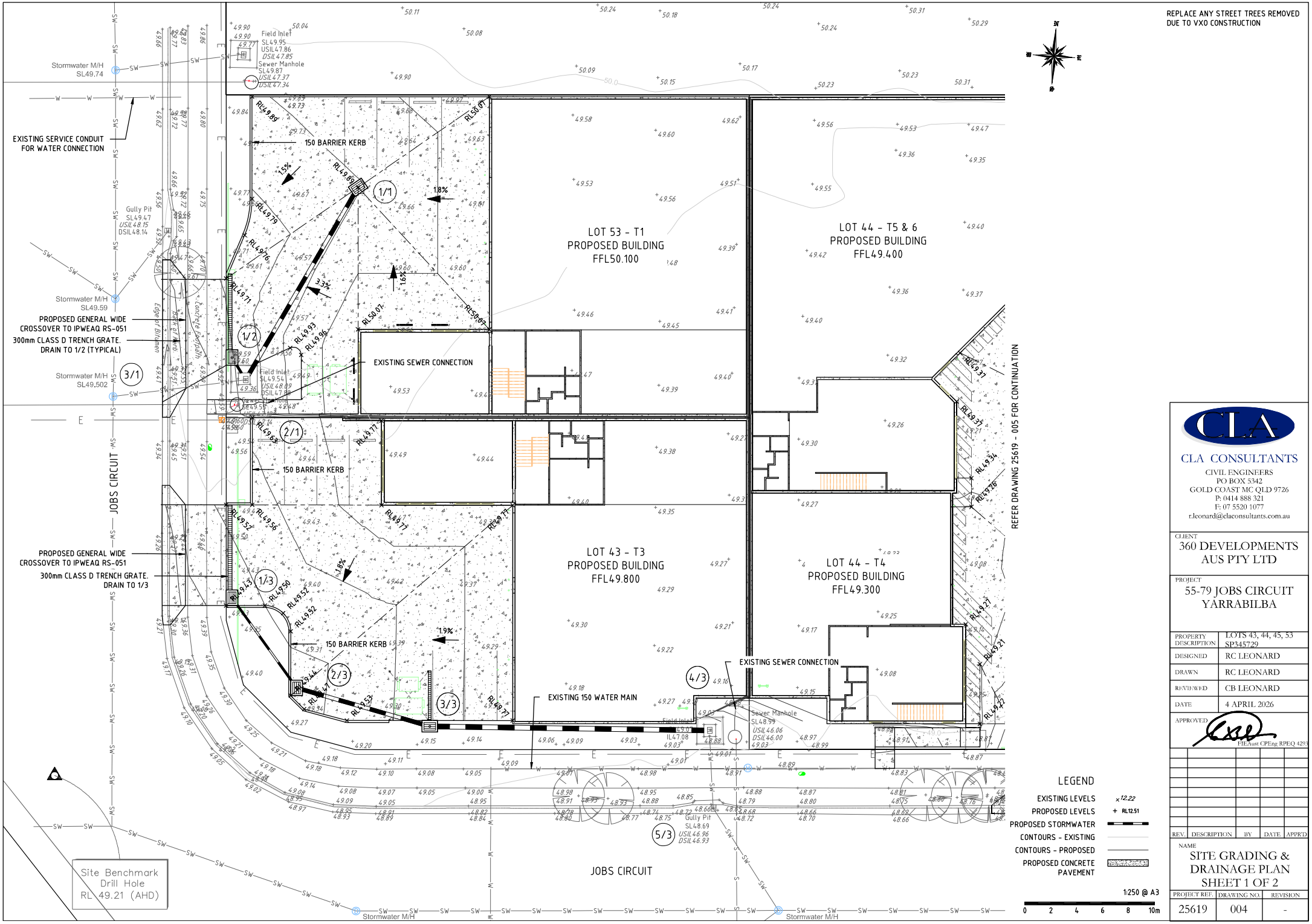
NAME
BULK EARTHWORKS PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	003	-



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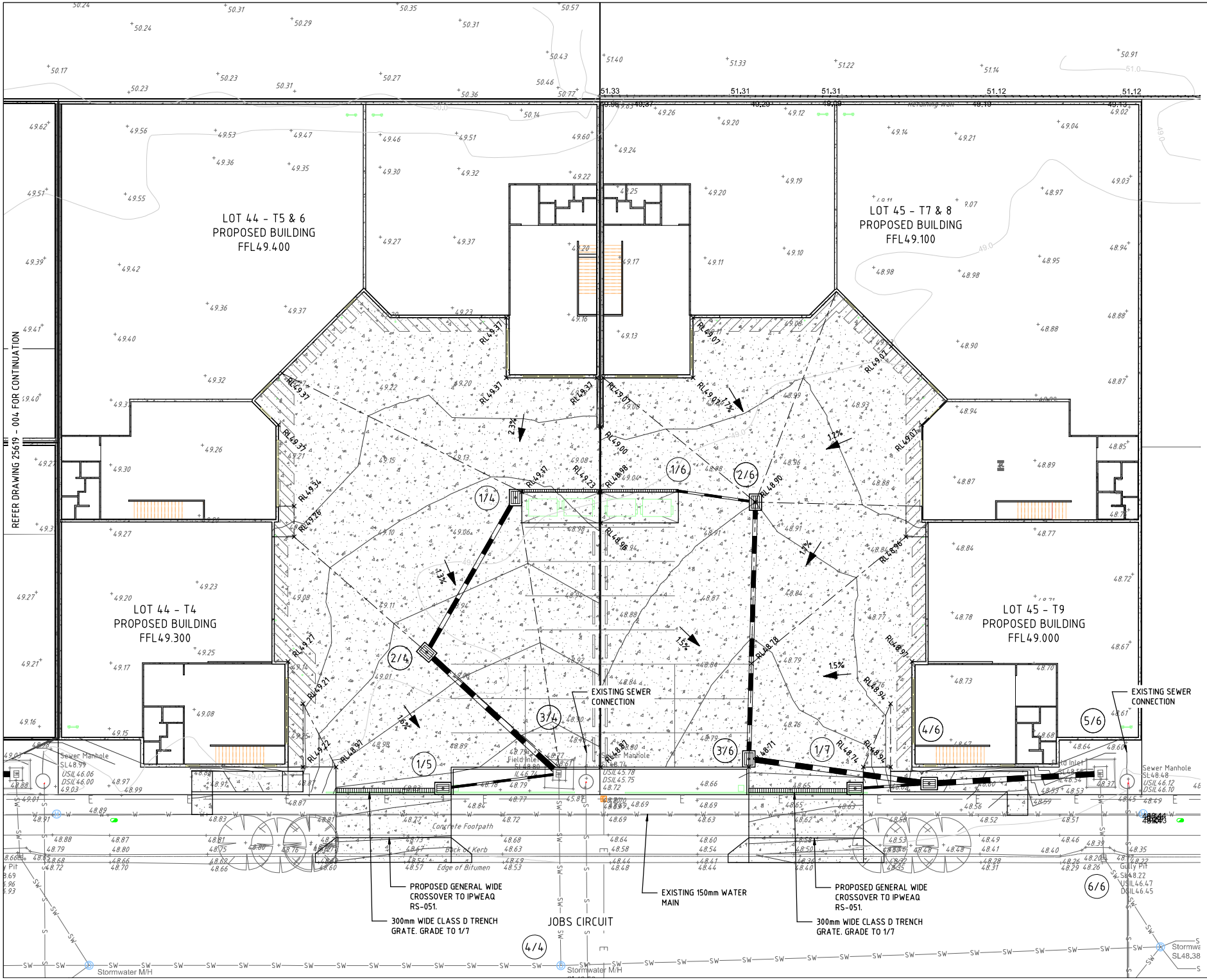
NAME
SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	004	-



REPLACE ANY STREET TREES REMOVED DUE TO VXO CONSTRUCTION

LEGEND

EXISTING LEVELS	×12.22
PROPOSED LEVELS	+ RL12.51
PROPOSED STORMWATER	
CONTOURS - EXISTING	
CONTOURS - PROPOSED	
PROPOSED CONCRETE PAVEMENT	

1:250 @ A3

0 2 4 6 8 10m

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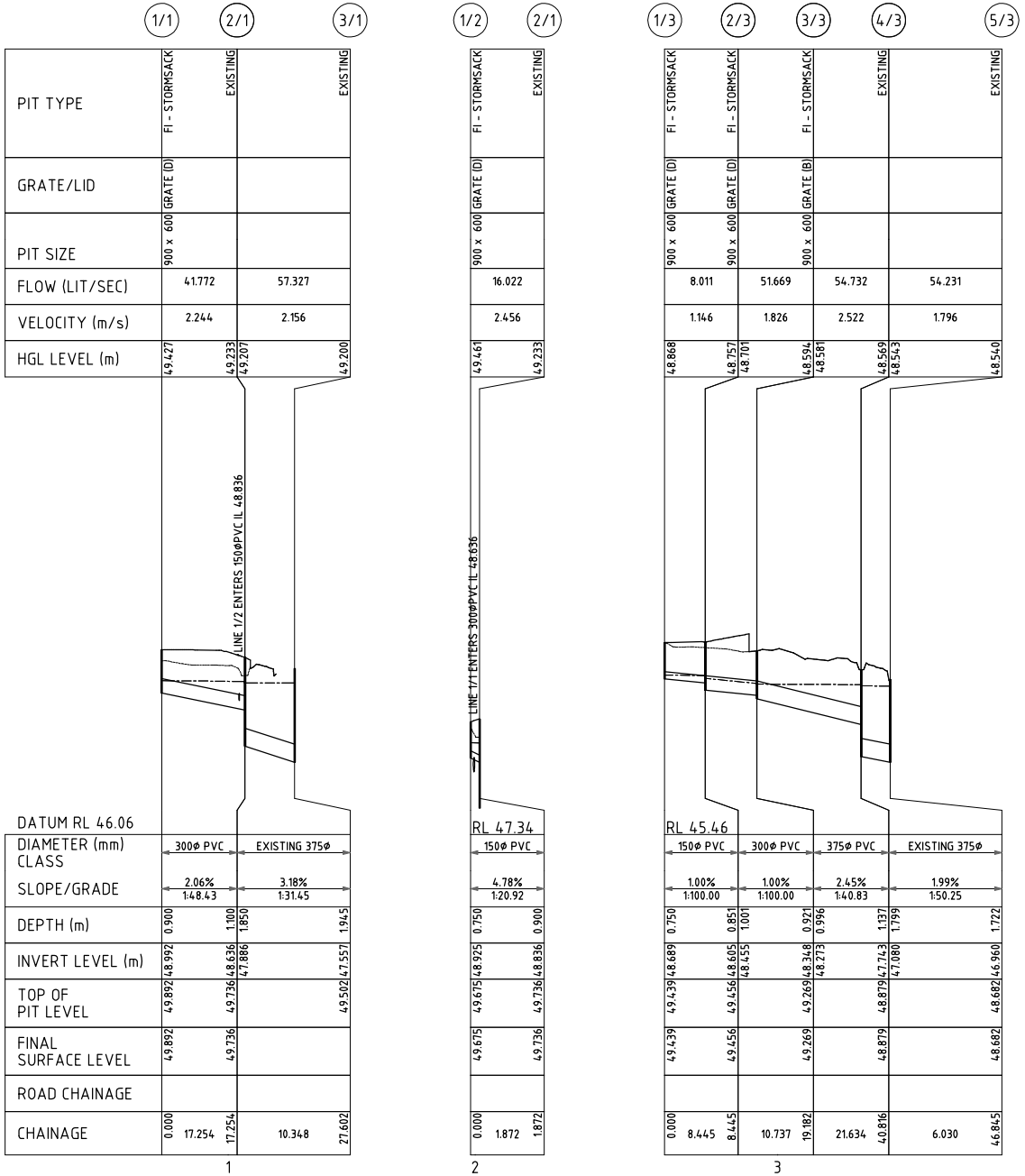
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	005	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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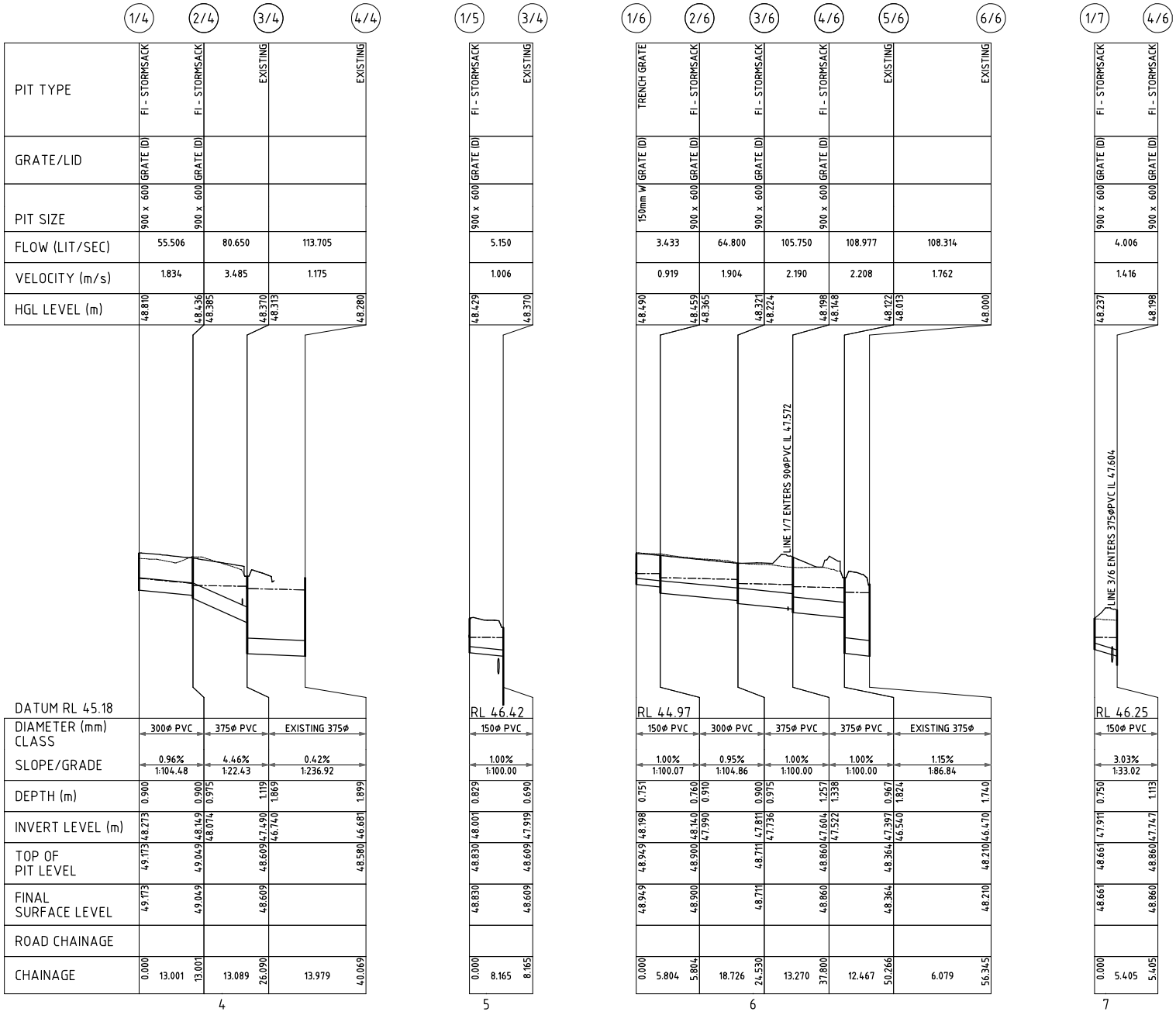
NAME
STORMWATER LONG SECTIONS
SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	006	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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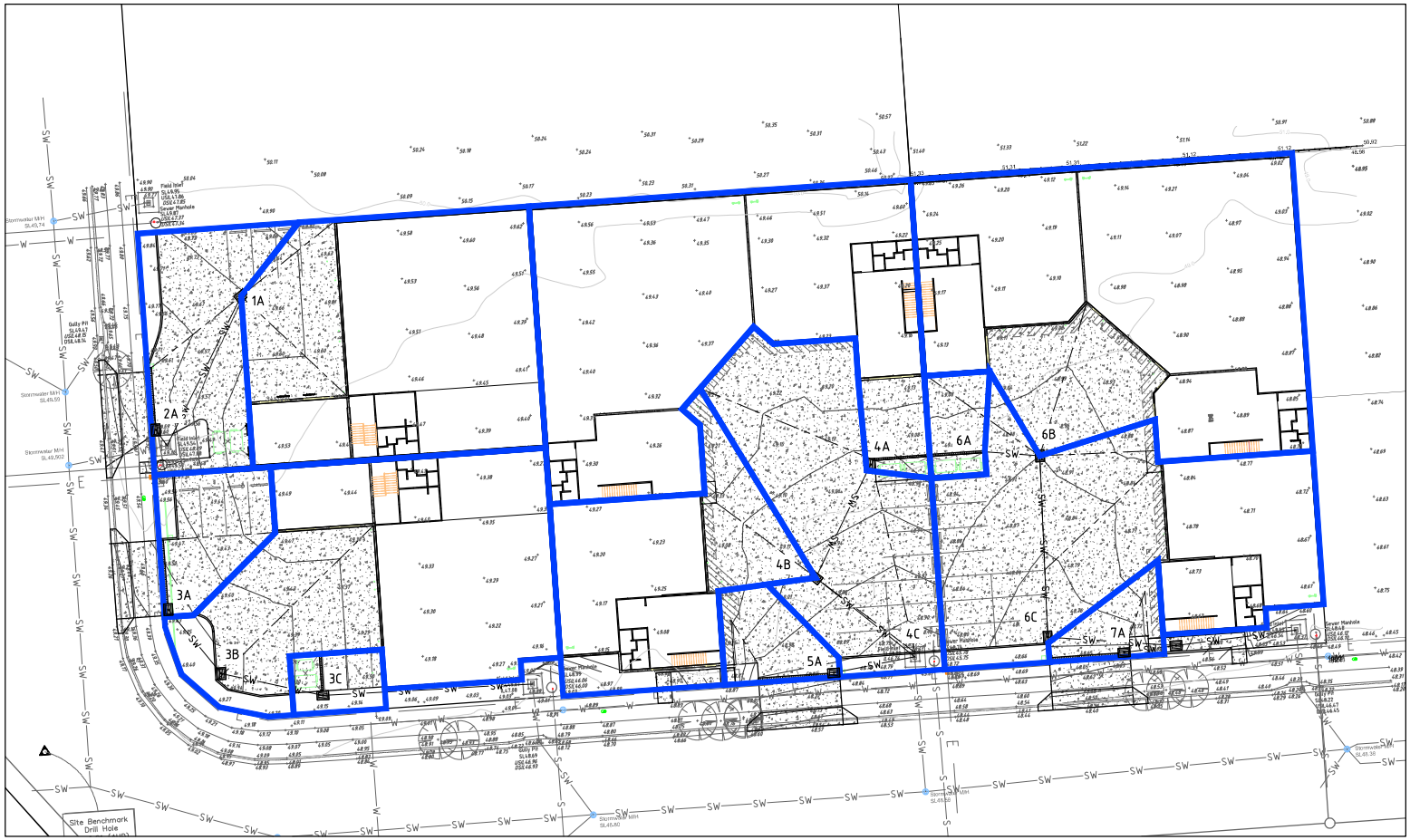
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	007	-



1:500 @ A3

0 4 8 12 16 20m

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REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER CATCHMENT PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	008	-

DRAINAGE CALCULATIONS - Return Period: 10yrs

LOCATION	STRUCTURE No.	DRAIN SECTION	TIME SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	SUBCATCHMENT RUNOFF	RUNOFF CO-EFFICIENT	SUB-CATCHMENT AREA	EQUIVALANT AREA	SUM OF EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	INLET DESIGN FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	HALF ROAD CAPACITY	INLET TYPE	INLET CURVE	FLOW TO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	FLOW WIDTH	FLOW DEPTH	DRAIN DESIGN CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (CxA)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	No. OF PIPES (1 IF BLANK)	PIPE CLASS	FLOW VELOCITY	TIME OF FLOW IN REACH	CAPACITY FLOW (MANNINGS)	CAPACITY FLOW (HGL)	HEADLOSSES STRUCTURE CHART No.	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCTURE HEADLOSSES	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L×Sf)	PART FULL	PART FULL DEPTH	PART FULL VELOCITY	DESIGN LEVELS OBVERT LEVELS	DRAIN SECTION HGL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
			tc min	I mm/hr		C	A ha	CxA ha	Sum CxA ha	Q L/s	L/s	%	L/s			Qg L/s	Qb L/s		m	m	tc min	I mm/hr	Sum CxA ha	Qp L/s	L m	S %	mm			V m/s	T min	L/s	L/s		$V^2/2g$ m	Ku	hu m	KL	hL m	Kw	hw m	Sf %	hf m		m	Vp m/s		m	m	m	m	m	m	
1A	1/1	1/12/1	5	206		1.00	0.073	0.073	0.073	42	42			FI	900x600	42		2/1		0.076		5.00	206	0.073	42	17	2	300		PVC	0.59	0.128	201	201		0.018	9.878	0.176					0.11	0.02		0.09	2.24		49.292	49.427	49.427	49.233	49.892	49.892	1/1
	2/1	2/13/1		206					0.101							0				0.000		5.13	206	0.101	57	10	3	375		Class 3 RRJ	0.52	0.080	313	441		0.014	1.930	0.027					0.06	0.01		0.11	2.16		48.261	49.207	49.233	49.200	49.736	49.736	2/1
																		3/1																																	
2A	1/2	1/22/1	5	206		1.00	0.028	0.028	0.028	16	16			FI	900x600	16		2/1		0.040		5.00	206	0.028	16	2	5	150		PVC	0.91	0.013	51	53		0.042	5.201	0.218					0.54	0.01		0.06	2.53		49.093	49.462	49.462	49.233	49.693	49.693	1/2
3A	1/3	1/32/3	5	206		1.00	0.014	0.014	0.014	8	8			FI	900x600	8		2/3		0.025		5.00	206	0.014	8	9	1	150		PVC	0.45	0.126	22	22		0.010	9.353	0.098					0.15	0.01		0.06	1.14		48.839	48.868	48.868	48.757	49.450	49.450	1/3
3B	2/3	2/33/3	5	206		1.00	0.077	0.077	0.091	44	44			FI	900x600	44		3/3		0.079		5.13	206	0.091	52	11	1	300		PVC	0.73	0.098	140	138		0.027	2.042	0.056					0.16	0.02		0.13	1.83		48.755	48.701	48.757	48.594	49.456	49.456	2/3
3C	3/3	3/34/3	5	206		1.00	0.006	0.006	0.097	3	3			FI	900x600	3		4/3		0.014		5.22	206	0.097	55	22	2	375		PVC	0.50	0.143	396	395		0.013	1.000	0.013					0.06	0.01		0.09	2.52		48.648	48.581	48.594	48.569	49.269	49.269	3/3
	4/3	4/35/3		206					0.097					FI	900x600	0		5/3		0.000		5.37	206	0.097	54	6	2	375		Class 3 RRJ	0.49	0.056	247	347		0.012	2.066	0.025					0.06	0.00		0.12	1.80		47.455	48.543	48.569	48.540	48.879	48.879	4/3
4A	1/4	1/42/4	5	206		1.00	0.097	0.097	0.097	56	56			FI	900x600	56		2/4		0.092		5.00	206	0.097	56	13	1	300		PVC	0.79	0.118	137	135		0.031	7.957	0.250					0.18	0.02		0.13	1.83		48.573	48.810	48.810	48.436	49.173	49.173	1/4
4B	2/4	2/43/4	5	206		1.00	0.045	0.045	0.142	26	26			FI	900x600	26		3/4		0.055		5.12	206	0.142	81	13	4	375		PVC	0.73	0.063	535	537		0.027	1.872	0.051					0.12	0.02		0.10	3.49		48.449	48.385	48.436	48.370	49.049	49.049	2/4
4C	3/4	3/44/4	5	206		1.00	0.050	0.050	0.201	29	29			FI	900x600	29				0.059		5.18	206	0.201	114	14	0	375		Class 3 RRJ	1.03	0.198	114	155		0.054	1.055	0.057					0.23	0.03		0.31	1.18		47.115	48.313	48.370	48.280	48.609	48.609	3/4
																		4/4																																	
5A	1/5	1/53/4	5	206		1.00	0.009	0.009	0.009	5	5			FI	900x600	5		3/4		0.019		5.00	206	0.009	5	9	1	150		PVC	0.29	0.141	22	22		0.004	12.385	0.054					0.07	0.01		0.05	1.01		48.151	48.429	48.429	48.370	48.847	48.847	1/5
6A	1/6	1/62/6	5	206		1.00	0.006	0.006	0.006	3	3			FI	900x600	3		2/6		0.014		5.00	206	0.006	3	6	1	150		PVC	0.19	0.105	22	22		0.002	14.910	0.029					0.03	0.00		0.04	0.92		48.348	48.490	48.490	48.459	48.949	48.949	1/6
6B	2/6	2/63/6	5	206		1.00	0.108	0.108	0.114	62	62			FI	900x600	62		3/6		0.099		5.11	206	0.114	65	19	1	300		PVC	0.92	0.164	136	135		0.043	2.197	0.094					0.24	0.04		0.15	1.90		48.290	48.365	48.459	48.321	48.900	48.900	2/6
6C	3/6	3/64/6	5	206		1.00	0.074	0.074	0.188	42	42			FI	900x600	42		4/6		0.077		5.27	206	0.188	106	13	1	375		PVC	0.96	0.101	253	248		0.047	2.071	0.097					0.20	0.03		0.17	2.19		48.111	48.224	48.321	48.198	48.711	48.711	3/6
	4/6	4/65/6		206					0.195					FI	900x600	0				0.000		5.37	206	0.195	109	12	1	375		PVC	0.99	0.094	253	248		0.050	1.000	0.050					0.21	0.03		0.17	2.21		47.897	48.148	48.198	48.122	48.860	48.860	4/6
																		5/6																																	
	5/6	5/66/6		206					0.195					FI	900x600	0		6/6		0.000		5.46	206	0.195	108	6	1	375		Class 3 RRJ	0.98	0.057	188	262		0.049	2.226	0.109					0.21	0.01		0.20	1.76		46.915	48.013	48.122	48.000	48.364	48.364	5/6
7A	1/7	1/74/6	5	206		1.00	0.007	0.007	0.007	4	4			FI	900x600	4		4/6		0.016		5.00	206	0.007	4	5	3	150		PVC	0.23	0.064	38	40		0.003	13.976	0.037					0.04	0.00		0.03	1.42		48.061	48.237	48.237	48.198	48.661	48.661	1/7

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

PROJECT
55-79 JOBS CIRCUIT
YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	FIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPR'D

NAME
STORMWATER CALCULATION SHEET

PROJECT REF.	DRAWING NO.	REVISION
25619	009	-

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV-2026-YAR-4693
Date: 15 June 2026
Queensland Government

CLA CONSULTANTS
Consulting Civil/Structural Engineers, Project Managers

CIVIL ENGINEERING REPORT
63 JOBS CIRCUIT YARRABILBA
PROPOSED INDUSTRIAL BUILDING

REVISION A
OUR REF: 25619

REVISION	DATE	AMENDMENTS
A	4/04/2026	-

PO Box 5342 Gold Coast MC Qld 9726
Ph: 0414 888 321
ABN 55 079 641 286

Prepared For:	**360 Developments Aus Pty Ltd**
Prepared By:	**Richard Leonard**
Release Date	**4/04/2026**
Job Number:	**25619**
Document Name:	**Civil Engineering Report**
	63 Jobs Circuit Yarrabilba
Revision:	**A**

Approved for release by

Campbell Leonard
FIEAust CPEng NPER3
RPEQ 4293
Director

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Figures

1. Introduction

This Civil Engineering Report has been in order to accompany an application for a material change of use.

The objectives of this report are to assess the following in the context of the proposed development:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection

2. Site Information

The site is located at 63 Jobs Circuit Yarrabilba (Lot 44 SP345729). This lot was created as part of Stage 3 of Precinct 5 of the Yarrabilba Priority Development Area (PDA). The site has a frontage to Jobs Circuit to the south and west. It grades generally from the north west to south east at generally 1.0%. The area of the site is 2,003m^2 in size, and it is currently vacant.

Figure 1 Aerial Photo of Site (Copyright Qld Globe)

The proposal for the site is for the construction of an industrial building, with associated car parking.

3. Engineering Assessment

3.1 Erosion and Sediment Control

During the course of the construction, the following processes are expected:

- Bulk earthworks
- Detailed earthworks to trim lot to final levels
- Construction

Management of stormwater runoff from the exposed earthwork surfaces will be based on containment, diversion and retention. At all stages of construction, current standards of building practices will be adhered to. These include:

- Placement of sediment fences
- Vehicle shakedown to prevent suspended solids being exported from site and consequently into surrounding stormwater infrastructure
- Sediment traps to field inlet pits and gullies

An Erosion and Sediment Control Plan has been prepared, refer to CLA Consultants Drawing 25619 - 002 in Figures. It will be the responsibility of the contractor to ensure that these and any other sedimentation and erosion controls are carried out.

3.2 Bulk Earthworks

The development of the site is taking place in conjunction with Lots 43-45, and will require earthworks to level the site to provide the building pad. This process will result in a cut from the site of approximately 360m^3. Drawing 25619 - 003 provides details of the earthworks proposed on the sites.

3.3 Vehicular Access

It is proposed that access to the site for vehicles will be provided by a crossover to Jobs Circuit. These will be constructed as 'General Wide' crossovers as per IPWEA standard drawing RS-051.

The service vehicle for the development is a Heavy Rigid Vehicle (HRV). A Traffic Engineering Report will be provided for assessment separately.

3.4 Stormwater Drainage

As discussed above, the subject site lies within a new subdivision. As part of the subdivision works, stormwater management has been provided within the downstream network through a series of bio-retention filters with additional ponding. As such, no treatment in terms of stormwater quantity is required within the site. It is proposed however to install SQIDEP approved Gross Pollutant Traps (Atlan Stormsacks or similar) to all field inlet pits. This will manage the release of gross pollutants and coarse sediments into the downstream infrastructure.

Stormwater from roofs and car park areas will be collected in a new internal stormwater drainage system. This system will use the existing stormwater pit on the site as the lawful point of discharge. The stormwater layout is shown on Drawing 25619 - 005, and the stormwater drainage longitudinal sections and catchment plan/calculations are shown at Drawings 25619 – 007, 008 and 009.

3.5 Sewer Connection

The proposed sewer connection point will be the existing property connection to the south east of the site. CLA Consultants Drawing 25619 - 005 shows the location of this connection point.

3.6 Water Connection

A new private water meter assembly will be provided to the site from the existing 150mm diameter PVC-M water main which runs within the verge of Jobs Circuit to the south. The size and final location of this connection will be nominated by the hydraulic consultant prior to application for Plumbing and Drainage approval.

3.7 Electrical and Telecommunications Connections

The existing energex pillar boxes will be used as the connection point for the site. There is existing telstra infrastructure outside the site, this will be the connection point for communications purposes.

5. Conclusion

This report has assessed the following:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection
- Electrical and telecommunications connections

The proposed development can be serviced by all required infrastructure, and in accordance with the relevant local government requirements.

Figures

Site Survey J Surveyors

CLA Consultants Drawings

25619 – 001 – Site Plan, Drawing Schedule & Notes
25619 – 002 – Erosion and Sediment Control Plan
25619 – 003 – Bulk Earthworks Plan
25619 – 004 – Grading & Drainage Plan Sheet 1 of 2
25619 – 005 – Grading & Drainage Plan Sheet 2 of 2
25619 – 006 – Stormwater Long Sections Sheet 1 of 2
25619 – 007 – Stormwater Long Sections Sheet 2 of 2
25619 – 008 – Stormwater Catchment Plan
25619 – 009 – Stormwater Calculation Sheet

PHOTO 1

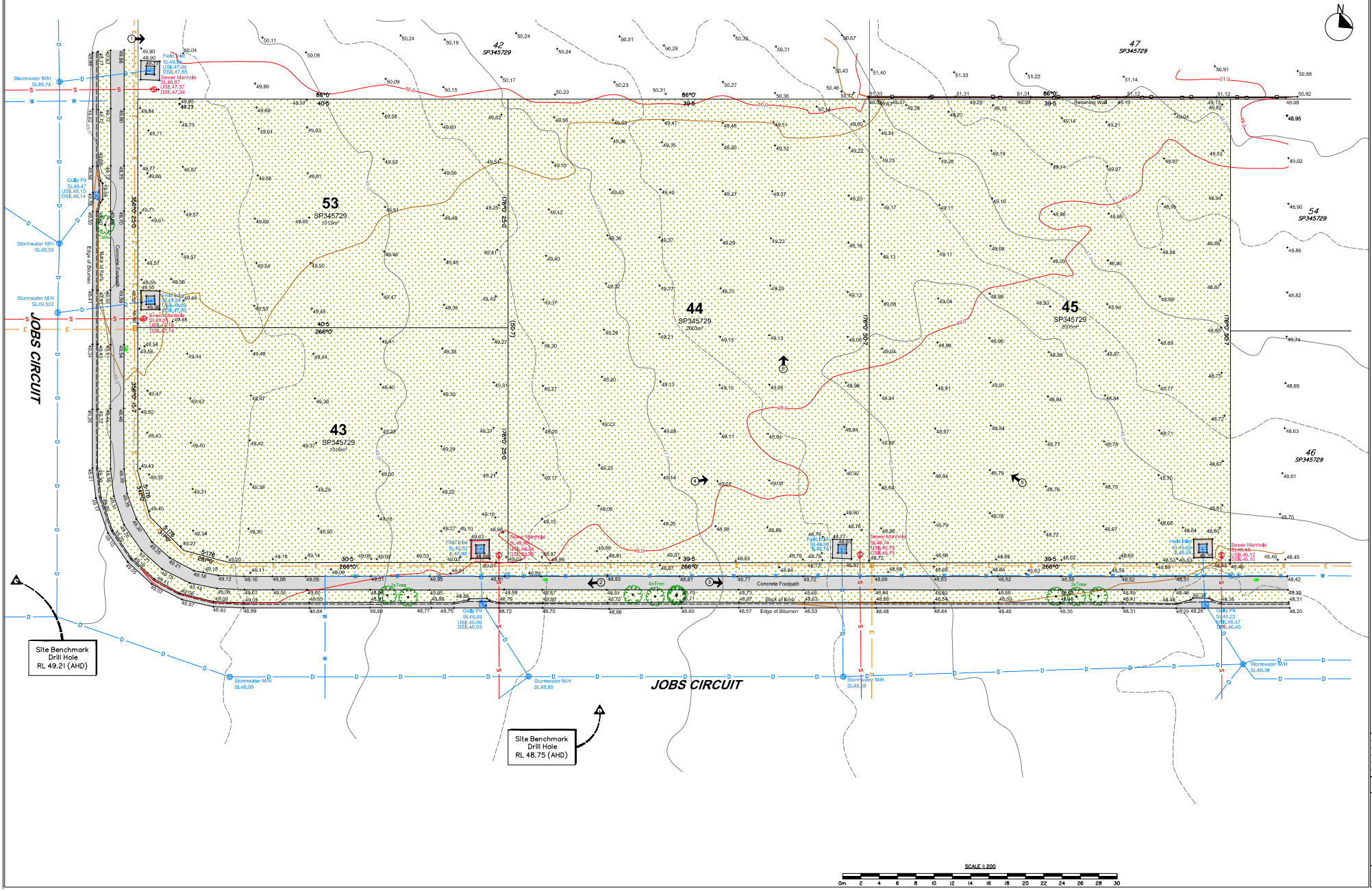
PHOTO 2

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6



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Ph (07) 3117 0730

NOTES

1. Drawn to scale on A1 at 1:200 (A1) or 1:400 (A3)
2. Property boundaries have not been defined by this survey. An Identification survey must be completed to confirm the exact location of the property boundaries prior to any operational works.
3. This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.
4. Underground features have been plotted from records. Only those services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.
5. This plan may not be photocopied unless these notes are included.
6. JSURVEYORS accepts no responsibility for any loss or damages caused in contravention of the above.
7. All levels are in metres on Australian Height Datum and have been derived from OPM12463 RL48.131 via GNSS.
8. Natural surface contours have been plotted by LCC eBimap records 2002.
9. Contour Interval . . . 0.5m

LEGEND

- Underground Stormwater Line
- Underground Water Line
- Underground Sewer Line
- Underground Gas Line
- Underground Telstra Line
- Underground Comms Line
- Underground Power Line
- Overhead Power Line
- Retaining Wall
- Fence Line
- Top of Bank
- Bottom of Bank
- Major Contour (Existing)
- Minor Contour (Existing)
- Major Contour (Natural)
- Minor Contour (Natural)
- Column/Concrete Wall below
- Stormwater Manhole
- Fire Hydrant
- Water Valve
- Water Meter
- Roof Water Outlet
- Sewer Manhole
- Sewer Inspection Opening
- Gas Valve
- Gas Meter
- Telstra Pit
- Comms Pit
- Electrical Pillar
- Electrical Pit
- Electrical Light/Power Pole

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Issue	Description	Date	Drawn	Check
A	ORIGINAL ISSUE	22.02.26	QT	BC

Client: 360 Developments Pty Ltd

Title:

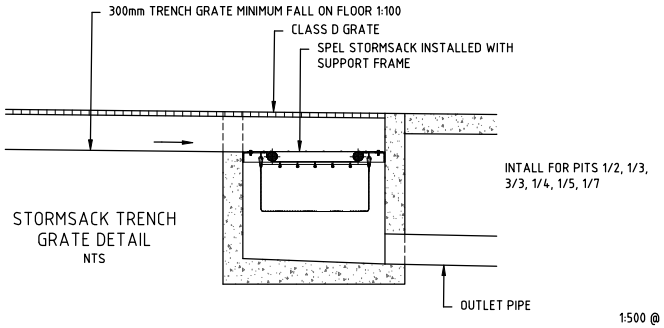
Plan of Detail Survey of Lots 43,44,45 and 53 on SP345729

71, 79, 63 & 55 Jobs Circuit, Yarraloiba, QLD

Drawing No:	Sheet, No:
JS 343 - DET01 - REV.A	1 of 1

DRAWING SCHEDULE	
NUMBER	TITLE
25619 – 001	SITE PLAN, DRAWING SCHEDULE & NOTES
25619 – 002	EROSION & SEDIMENT CONTROL PLAN
25619 – 003	BULK EARTHWORKS PLAN
25619 – 004	SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2
25619 – 005	SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2
25619 – 006	STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2
25619 – 007	STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2
25619 – 008	STORMWATER CATCHMENT PLAN
25619 – 009	STORMWATER CALCULATION SHEET

GENERAL NOTES:
1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOGAN CITY COUNCIL'S SPECIFICATIONS. CONTRACTOR TO OBTAIN AND RETAIN A COPY ON SITE DURING THE COURSE OF THE WORKS.
2. ALL NEW WORKS ARE TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS, AND MARRY IN A 'WORKMANLIKE' MANNER.
3. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY OR AS DETERMINED FROM SERVICE DIAGRAMS. CLA CONSULTANTS CANNOT GUARANTEE THE INFORMATION SHOWN NOR ACCEPT ANY RESPONSIBILITY FOR INACCURACIES OR INCOMPLETE DATA.
4. SERVICES & ACCESSES TO THE EXISTING PROPERTIES ARE TO BE MAINTAINED IN WORKING ORDER AT ALL TIMES DURING CONSTRUCTION.
5. ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
6. REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
8. ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, EROSION AND SEDIMENTATION CONTROL PLAN AND LOCAL COUNCIL'S REQUIREMENTS WHERE APPLICABLE.
9. CONTRACTOR TO CHECK AND CONFIRM SITE DRAINAGE CONNECTIONS ACROSS THE VERGE PRIOR TO COMMENCEMENT OF SITE DRAINAGE WORKS.
10. PROPERTIES AFFECTED BY THE WORKS ARE TO BE NOTIFIED IN ADVANCE WHERE DISRUPTION TO EXISTING ACCESS IS LIKELY.



STORMSACK TRENCH GRATE DETAIL
NTS

1:500 @ A3
0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

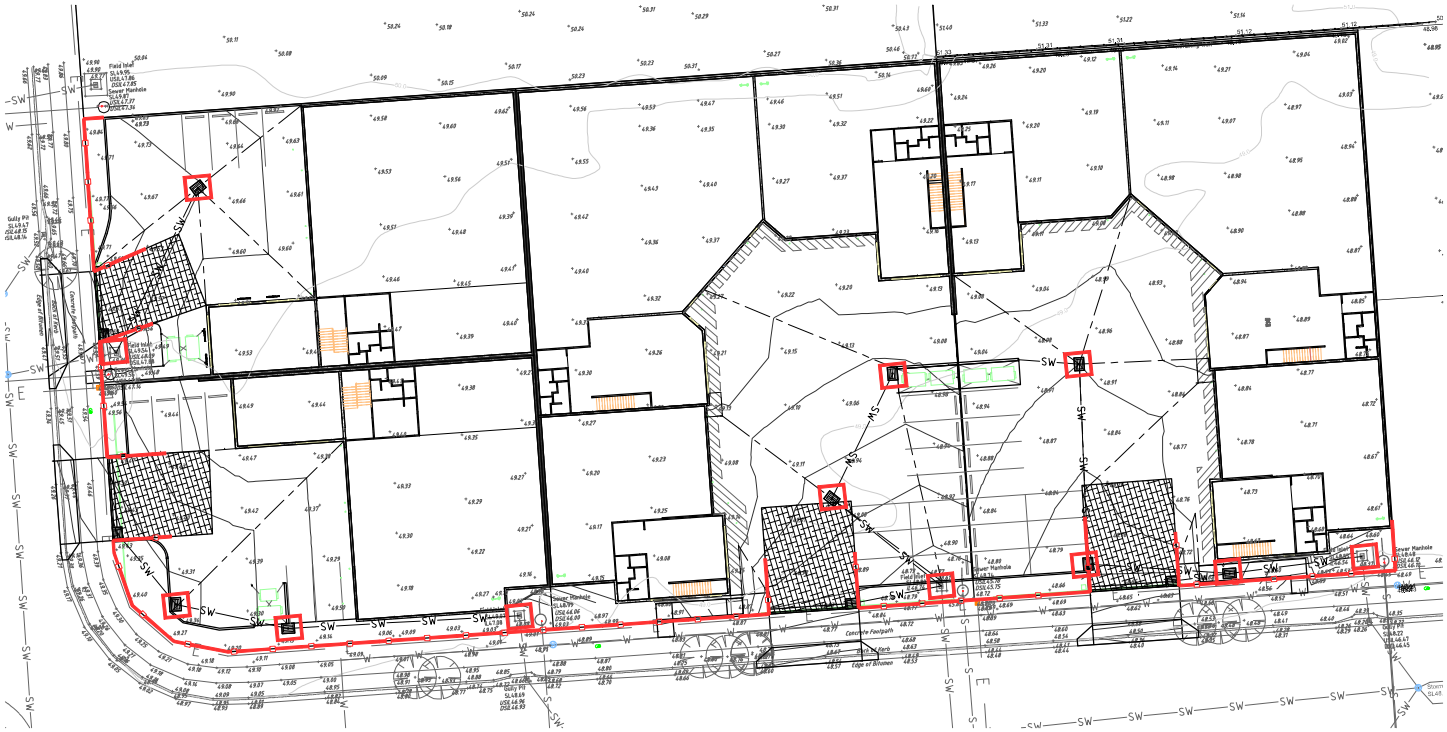
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE PLAN, DRAWING SCHEDULE & NOTES

PROJECT REF.	DRAWING NO.	REVISION
25619	001	-



Sedimentation and Erosion Control

1. Sedimentation and erosion control implementation and maintenance shall be in accordance with LOGAN City Council's Development Manual as read in conjunction with the document titles "Environmental Best Management Practices". The Contractor shall make himself aware of the prevailing weather conditions and shall take all necessary precautions to secure the site at the completion of each day's work, and whenever else is considered necessary.
2. Sediment and erosion control measures shall be provided as required to prevent the movement of dust and/or silt from the site.
3. Sediment and erosion control measures shall be installed downstream of any work area prior to the commencement of work in that area.
4. Erosion and sedimentation control measures shall be installed prior to the disturbance of the site and as required during the course of the works.
5. Topsoil shall be stripped in accordance with the specification and stockpiles at locations as agreed by the superintendent and Council's designated representative.
6. All disturbed areas shall be stabilised with the provision of 75mm minimum topsoil and grass seeded, mulched, re-vegetated etc within 7 days of the completion of final allotment earthworks.
7. All sediment control measures and devices shall be inspected for structural damage after each rainfall event and at the completion of each days work. All trapped sediment shall be removed to an approved location on site for re-use on site or for subsequent removal from the site. Site disposal will only be approved when it can be established that no additional erosion can occur.
8. Sediment and erosion control measures around stockpiles shall include but not necessarily be limited to:-

a) Provision of a silt fence below the stockpile, as indicated by the natural slopes of the land,
b) Provision of grass cover if stockpile is to remain in place for more that 30 days,
c) Provision of a surface emulsion or approved equivalent to prevent wind erosion.

9. Place 600mm width turf at both top and toes of retaining walls and tops of new kerb.
10. Water areas of construction regularly as required to obviate potential for dust nuisance to adjoining properties and the site generally.

Construction Traffic Shakedown

Provide construction traffic shake down device at all relevant site exit points. Clean out and maintain shake down device regularly to ensure efficient operation.

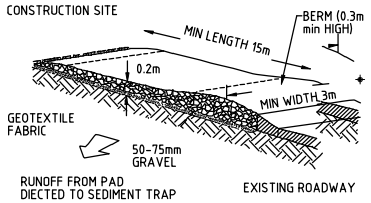
LEGEND

SILT FENCE

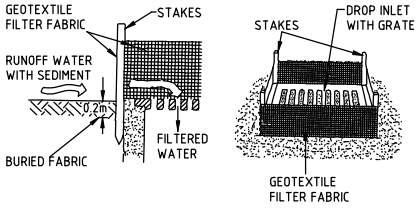
VEHICLE SHAKEDOWN

INLET SEDIMENT TRAP

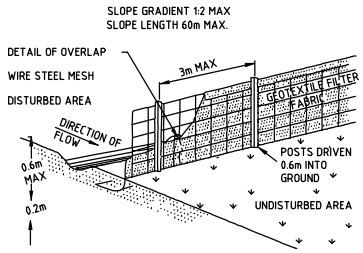
PLACE PORTABLE KERB SEDIMENT TRAP AS PER DETAIL AT ALL GULLY PITS AFFECTED BY SITE CONSTRUCTION WORKS



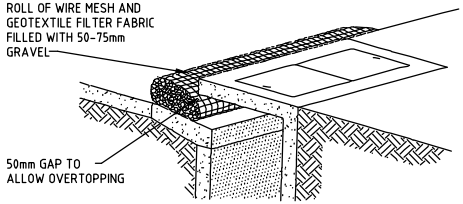
VEHICLE SHAKEDOWN AREA



INLET SEDIMENT TRAP



SILT FENCE



PORTABLE GRAVEL KERB SEDIMENT TRAP

1:500 @ A3

0 4 8 12 16 20m

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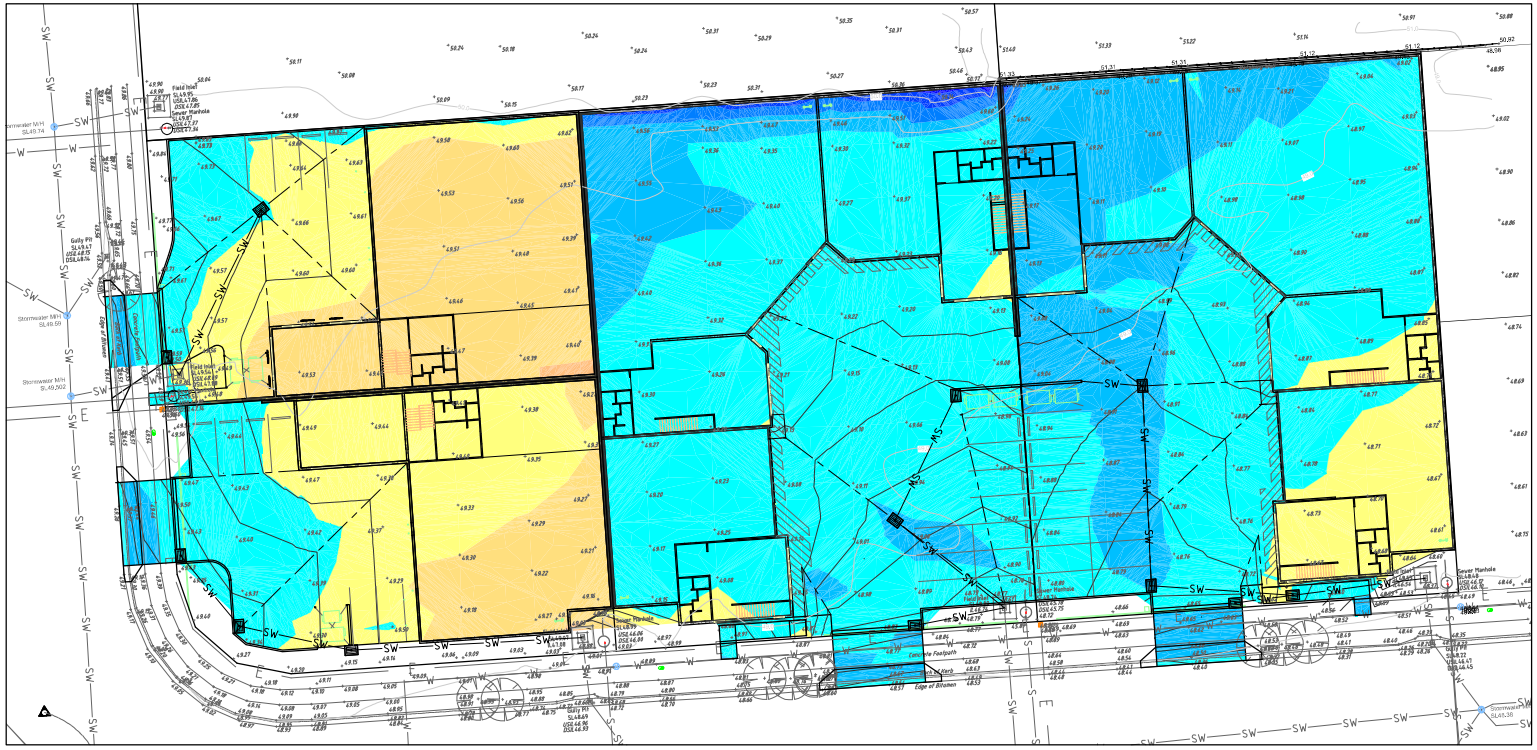
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
EROSION & SEDIMENT CONTROL PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	002	-



LEGEND	
CUT/FILL DEPTH (m)	Colour
-1.25 to -1.00	
-1.00 to -0.75	
-0.75 to -0.50	
-0.50 to -0.25	
-0.25 to 0.00	
0.00 to 0.25	
0.25 to 0.50	
0.50 to 0.75	

EARTHWORKS SUMMARY	
TOTAL CUT	742m³
TOTAL FILL	380m³
BALANCE	362m³

NOTES:
1. CALCULATIONS BASED ON EARTHWORKS LEVEL 250mm BELOW FINISHED LEVEL COMPARED TO EXISTING SURFACE LEVEL

NOTES
1. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARD 3798-GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. EXCESS SPOIL MATERIAL SHALL BE REMOVED FROM THE SITE TO AN APPROVED LOCATION THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SPOIL SITE TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO THE COMMENCEMENT OF SPOIL REMOVAL OPERATIONS.
3. SEDIMENTATION AND EROSION CONTROL MEASURES TO BE INSTALLED AND APPROVED PRIOR TO THE COMMENCEMENT OF EARTHWORKS.
4. ANY FILL BATTERS STEEPER THAN 1V:4H AND GREATED THAN 1.0M IN HEIGHT REQUIRE LODGEMENT OF BUILDING APPLICATION.
5. ALL WORKS TO BE IN ACCORDANCE WITH COGC PLANNING SCHEME POLICIES.
6. THE CONTRACTOR SHALL PROVIDE LEVEL 1 CERTIFICATION OF THE FILL MATERIAL PRIOR TO THE COMMENCEMENT OF FURTHER CIVIL WORKS.
7. BATTERS TO BE TURFED/MULCHED PRIOR TO ON MAINTENANCE INSPECTION.
8. ALL EXPOSED EARTHWORKS TO BE SEEDED PRIOR TO ON MAINTENANCE INSPECTION.

1:500 @ A3

0 4 8 12 16 20m

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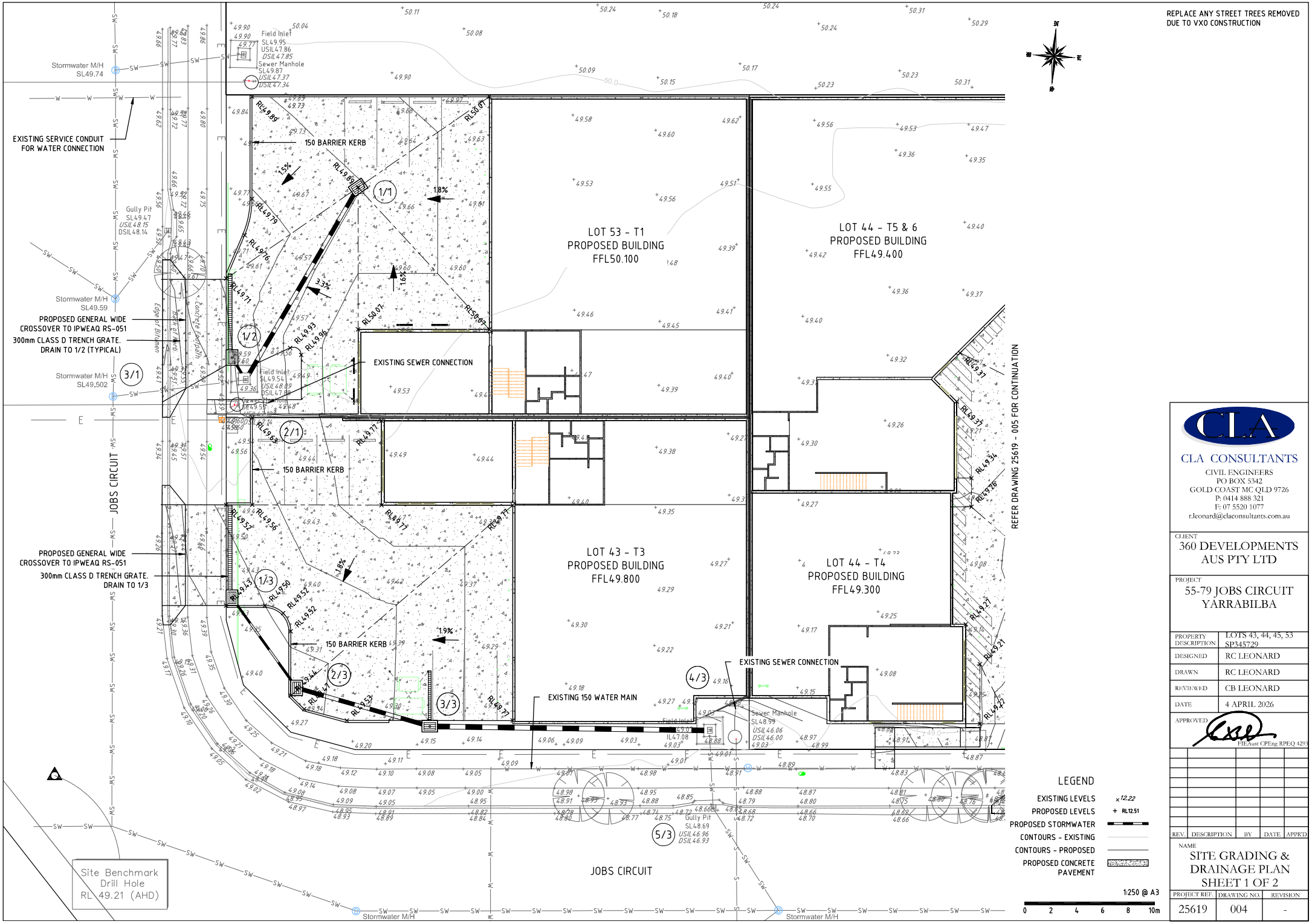
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
BULK EARTHWORKS PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	003	-



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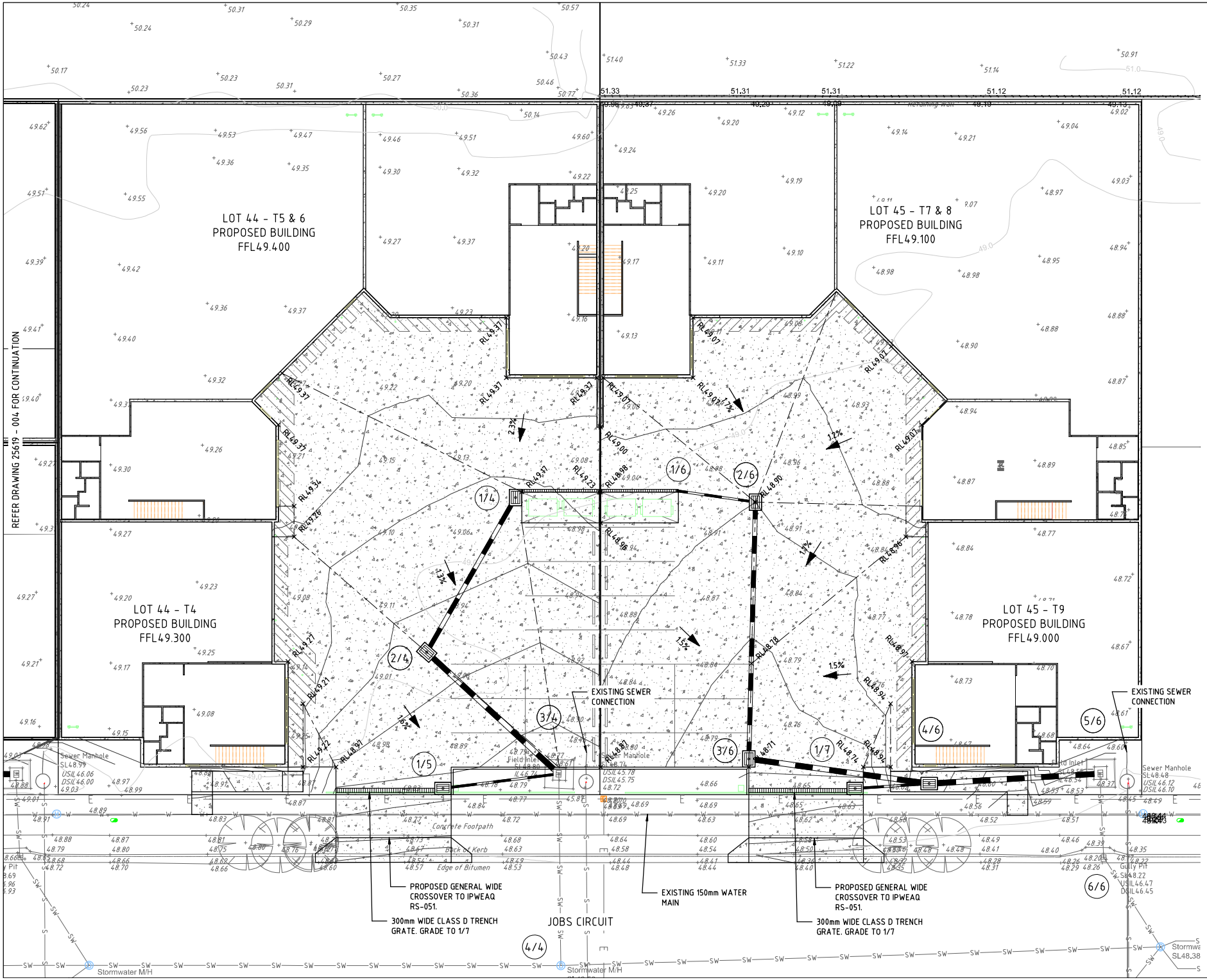
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	004	-



REPLACE ANY STREET TREES REMOVED DUE TO VXO CONSTRUCTION

LEGEND

EXISTING LEVELS	×12.22
PROPOSED LEVELS	+ RL12.51
PROPOSED STORMWATER	
CONTOURS - EXISTING	
CONTOURS - PROPOSED	
PROPOSED CONCRETE PAVEMENT	

1:250 @ A3

0 2 4 6 8 10m

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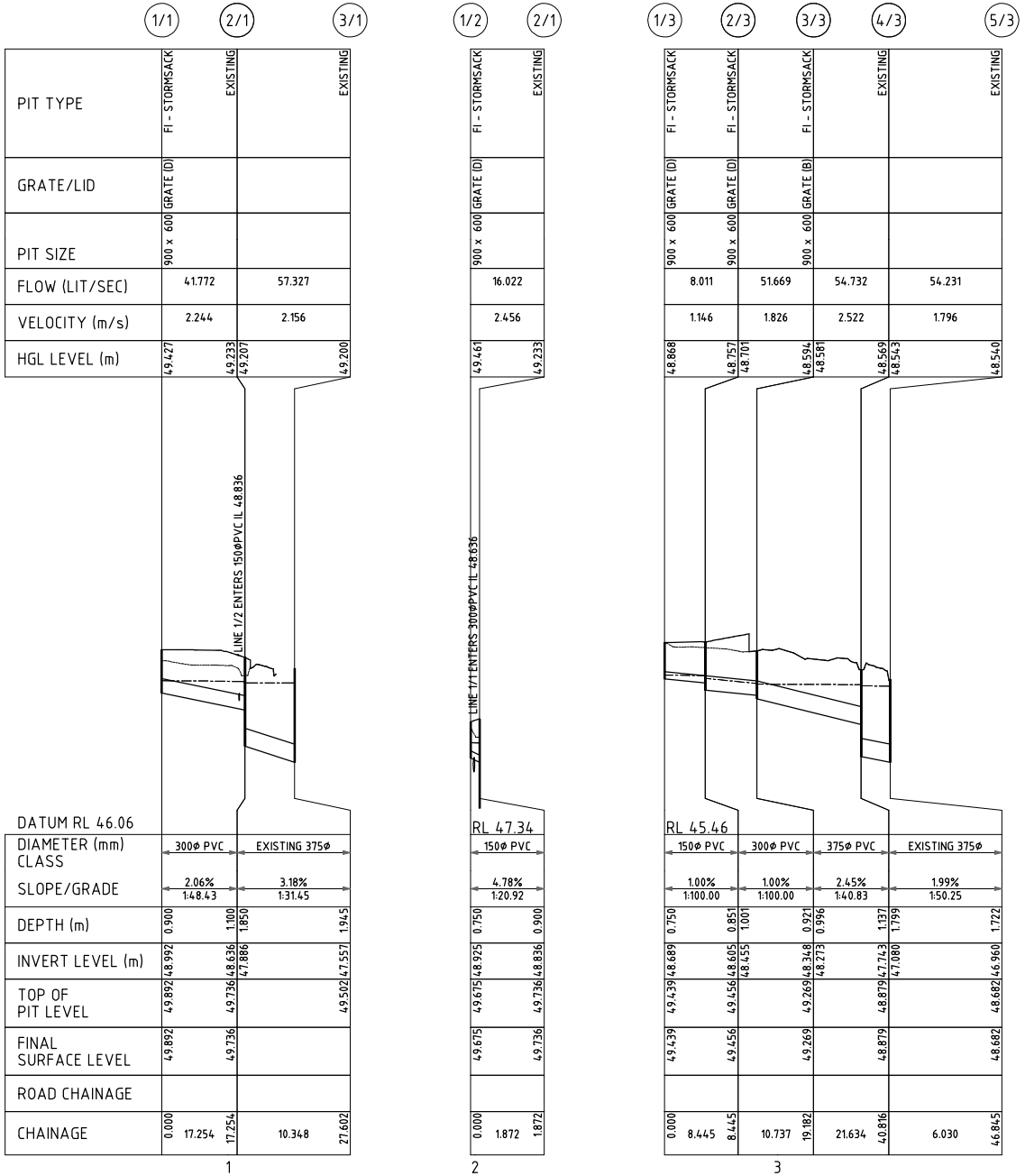
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	005	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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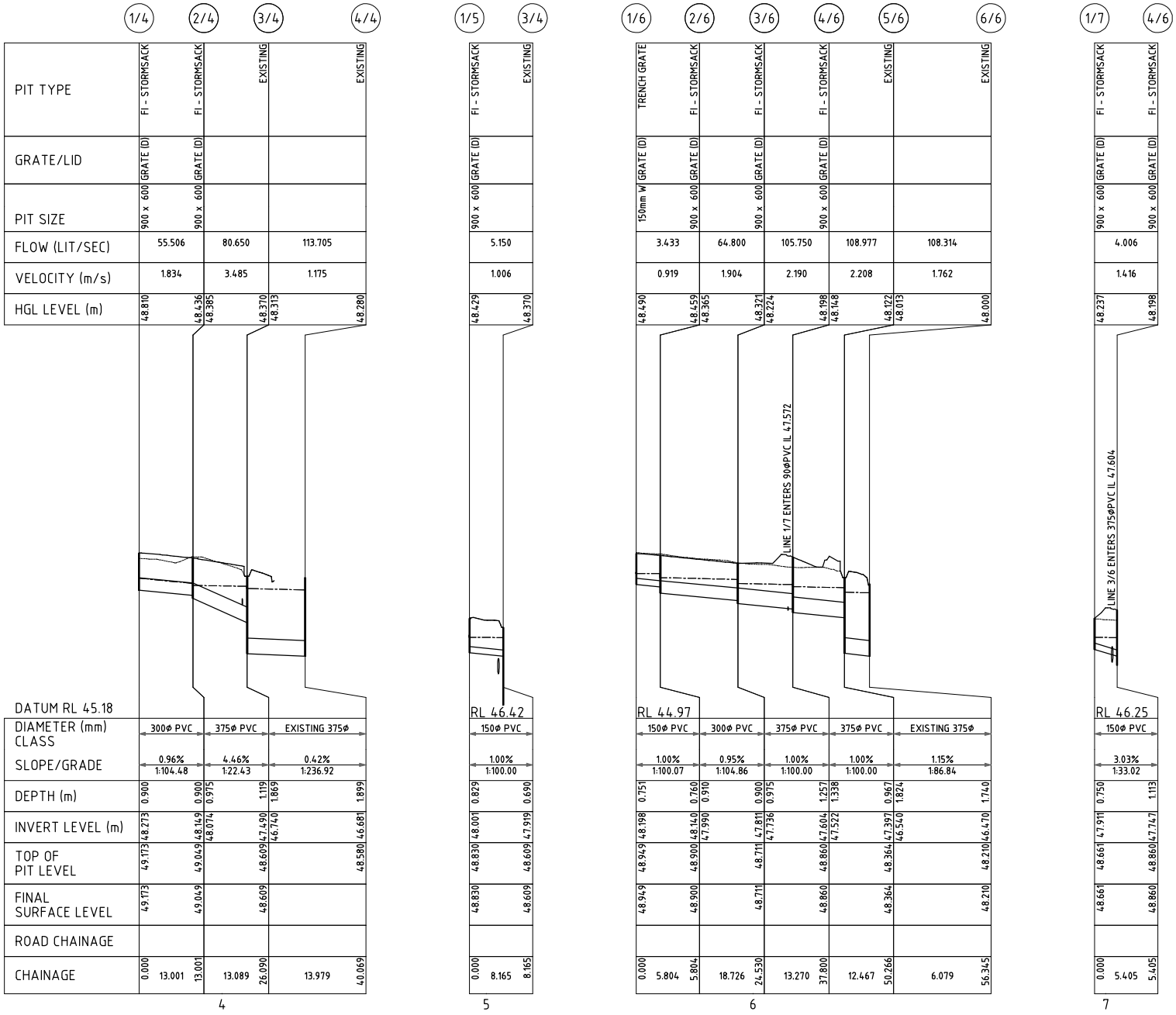
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	006	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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55-79 JOBS CIRCUIT
YARRABILBA

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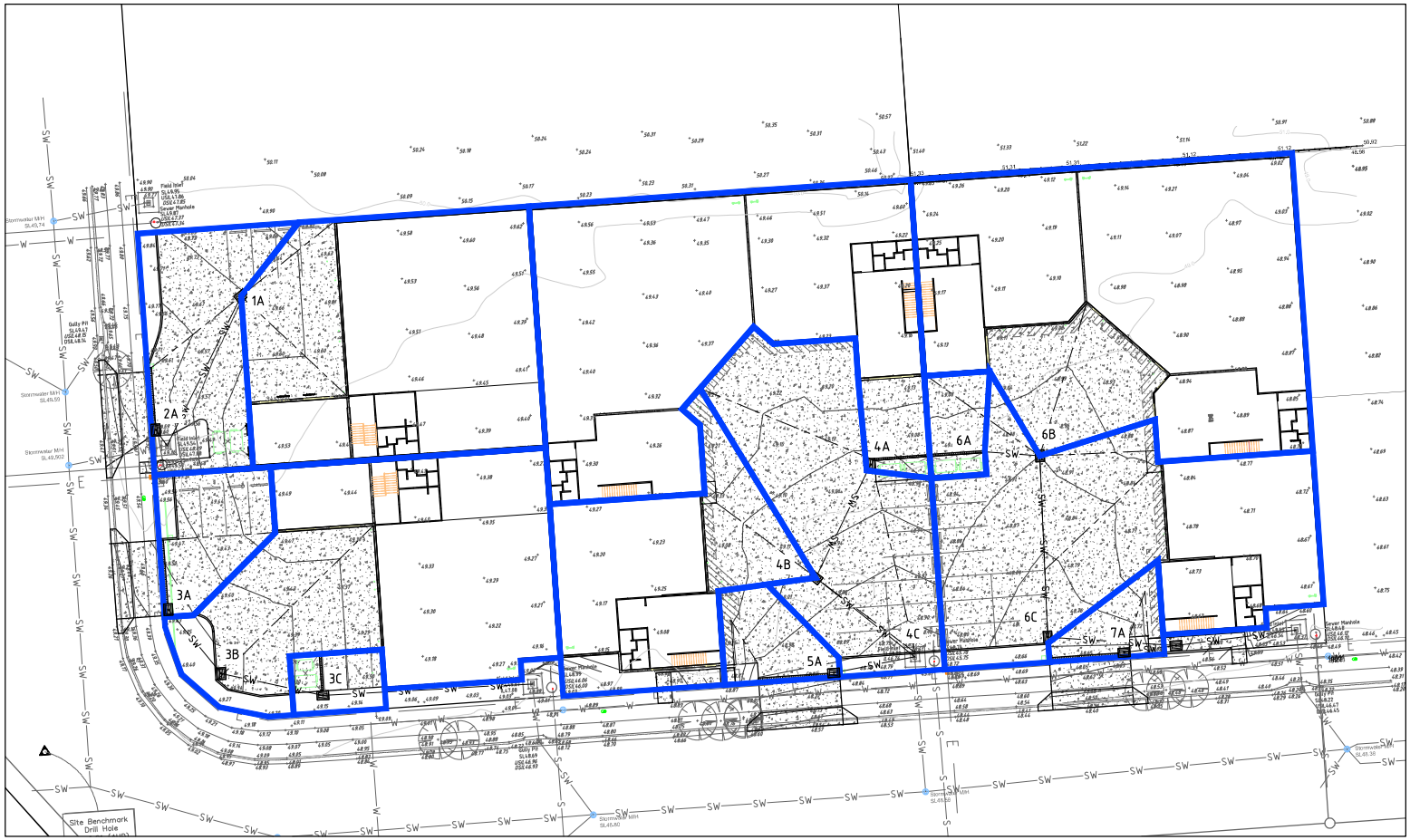
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	007	-



1:500 @ A3

0 4 8 12 16 20m

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REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER CATCHMENT PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	008	-

DRAINAGE CALCULATIONS - Return Period: 10yrs

LOCATION	STRUCTURE No.	DRAIN SECTION	TIME SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	SUBCATCHMENT RUNOFF	RUNOFF CO-EFFICIENT	SUB-CATCHMENT AREA	EQUIVALANT AREA	SUM OF EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	INLET DESIGN FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	HALF ROAD CAPACITY	INLET TYPE	INLET CURVE	FLOW TO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	FLOW WIDTH	FLOW DEPTH	DRAIN DESIGN CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (CxA)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	No. OF PIPES (1 IF BLANK)	PIPE CLASS	FLOW VELOCITY	TIME OF FLOW IN REACH	CAPACITY FLOW (MANNINGS)	CAPACITY FLOW (HGL)	HEADLOSSES STRUCTURE CHART No.	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCTURE HEADLOSSES	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L×Sf)	PART FULL	PART FULL DEPTH	PART FULL VELOCITY	DESIGN LEVELS OBVERT LEVELS	DRAIN SECTION HGL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
			tc min	I mm/hr		C	A ha	CxA ha	Sum CxA ha	Q L/s	L/s	%	L/s			Qg L/s	Qb L/s		m	m	tc min	I mm/hr	Sum CxA ha	Qp L/s	L m	S %	mm			V m/s	T min	L/s	L/s		$V^2/2g$ m	Ku	hu m	KL	hL m	Kw	hw m	Sf %	hf m		m	Vp m/s		m	m	m	m	m	m	
1A	1/1	1/12/1	5	206		1.00	0.073	0.073	0.073	42	42			FI	900x600	42		2/1		0.076		5.00	206	0.073	42	17	2	300		PVC	0.59	0.128	201	201		0.018	9.878	0.176					0.11	0.02		0.09	2.24		49.292	49.427	49.427	49.233	49.892	49.892	1/1
	2/1	2/13/1		206					0.101							0				0.000		5.13	206	0.101	57	10	3	375		Class 3 RRJ	0.52	0.080	313	441		0.014	1.930	0.027					0.06	0.01		0.11	2.16		48.261	49.207	49.233	49.200	49.736	49.736	2/1
																		3/1																																	
2A	1/2	1/22/1	5	206		1.00	0.028	0.028	0.028	16	16			FI	900x600	16		2/1		0.040		5.00	206	0.028	16	2	5	150		PVC	0.91	0.013	51	53		0.042	5.201	0.218					0.54	0.01		0.06	2.53		49.093	49.462	49.462	49.233	49.693	49.693	1/2
3A	1/3	1/32/3	5	206		1.00	0.014	0.014	0.014	8	8			FI	900x600	8		2/3		0.025		5.00	206	0.014	8	9	1	150		PVC	0.45	0.126	22	22		0.010	9.353	0.098					0.15	0.01		0.06	1.14		48.839	48.868	48.868	48.757	49.450	49.450	1/3
3B	2/3	2/33/3	5	206		1.00	0.077	0.077	0.091	44	44			FI	900x600	44		3/3		0.079		5.13	206	0.091	52	11	1	300		PVC	0.73	0.098	140	138		0.027	2.042	0.056					0.16	0.02		0.13	1.83		48.755	48.701	48.757	48.594	49.456	49.456	2/3
3C	3/3	3/34/3	5	206		1.00	0.006	0.006	0.097	3	3			FI	900x600	3		4/3		0.014		5.22	206	0.097	55	22	2	375		PVC	0.50	0.143	396	395		0.013	1.000	0.013					0.06	0.01		0.09	2.52		48.648	48.581	48.594	48.569	49.269	49.269	3/3
	4/3	4/35/3		206					0.097					FI	900x600	0		5/3		0.000		5.37	206	0.097	54	6	2	375		Class 3 RRJ	0.49	0.056	247	347		0.012	2.066	0.025					0.06	0.00		0.12	1.80		47.455	48.543	48.569	48.540	48.879	48.879	4/3
4A	1/4	1/42/4	5	206		1.00	0.097	0.097	0.097	56	56			FI	900x600	56		2/4		0.092		5.00	206	0.097	56	13	1	300		PVC	0.79	0.118	137	135		0.031	7.957	0.250					0.18	0.02		0.13	1.83		48.573	48.810	48.810	48.436	49.173	49.173	1/4
4B	2/4	2/43/4	5	206		1.00	0.045	0.045	0.142	26	26			FI	900x600	26		3/4		0.055		5.12	206	0.142	81	13	4	375		PVC	0.73	0.063	535	537		0.027	1.872	0.051					0.12	0.02		0.10	3.49		48.449	48.385	48.436	48.370	49.049	49.049	2/4
4C	3/4	3/44/4	5	206		1.00	0.050	0.050	0.201	29	29			FI	900x600	29				0.059		5.18	206	0.201	114	14	0	375		Class 3 RRJ	1.03	0.198	114	155		0.054	1.055	0.057					0.23	0.03		0.31	1.18		47.115	48.313	48.370	48.280	48.609	48.609	3/4
																		4/4																																	
5A	1/5	1/53/4	5	206		1.00	0.009	0.009	0.009	5	5			FI	900x600	5		3/4		0.019		5.00	206	0.009	5	9	1	150		PVC	0.29	0.141	22	22		0.004	12.385	0.054					0.07	0.01		0.05	1.01		48.151	48.429	48.429	48.370	48.847	48.847	1/5
6A	1/6	1/62/6	5	206		1.00	0.006	0.006	0.006	3	3			FI	900x600	3		2/6		0.014		5.00	206	0.006	3	6	1	150		PVC	0.19	0.105	22	22		0.002	14.910	0.029					0.03	0.00		0.04	0.92		48.348	48.490	48.490	48.459	48.949	48.949	1/6
6B	2/6	2/63/6	5	206		1.00	0.108	0.108	0.114	62	62			FI	900x600	62		3/6		0.099		5.11	206	0.114	65	19	1	300		PVC	0.92	0.164	136	135		0.043	2.197	0.094					0.24	0.04		0.15	1.90		48.290	48.365	48.459	48.321	48.900	48.900	2/6
6C	3/6	3/64/6	5	206		1.00	0.074	0.074	0.188	42	42			FI	900x600	42		4/6		0.077		5.27	206	0.188	106	13	1	375		PVC	0.96	0.101	253	248		0.047	2.071	0.097					0.20	0.03		0.17	2.19		48.111	48.224	48.321	48.198	48.711	48.711	3/6
	4/6	4/65/6		206					0.195					FI	900x600	0				0.000		5.37	206	0.195	109	12	1	375		PVC	0.99	0.094	253	248		0.050	1.000	0.050					0.21	0.03		0.17	2.21		47.897	48.148	48.198	48.122	48.860	48.860	4/6
																		5/6																																	
	5/6	5/66/6		206					0.195					FI	900x600	0		6/6		0.000		5.46	206	0.195	108	6	1	375		Class 3 RRJ	0.98	0.057	188	262		0.049	2.226	0.109					0.21	0.01		0.20	1.76		46.915	48.013	48.122	48.000	48.364	48.364	5/6
7A	1/7	1/74/6	5	206		1.00	0.007	0.007	0.007	4	4			FI	900x600	4		4/6		0.016		5.00	206	0.007	4	5	3	150		PVC	0.23	0.064	38	40		0.003	13.976	0.037					0.04	0.00		0.03	1.42		48.061	48.237	48.237	48.198	48.661	48.661	1/7

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REV.	DESCRIPTION	BY	DATE	APPR'D

NAME
STORMWATER CALCULATION SHEET

PROJECT REF.	DRAWING NO.	REVISION
25619	009	-

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV-2026-YAR-4693
Date: 15 June 2026
Queensland Government

CLA CONSULTANTS
Consulting Civil/Structural Engineers, Project Managers

CIVIL ENGINEERING REPORT
55 JOBS CIRCUIT YARRABILBA
PROPOSED INDUSTRIAL BUILDING

REVISION A
OUR REF: 25619

REVISION	DATE	AMENDMENTS
A	4/04/2026	-

PO Box 5342 Gold Coast MC Qld 9726
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Prepared For:	**360 Developments Aus Pty Ltd**
Prepared By:	**Richard Leonard**
Release Date	**4/04/2026**
Job Number:	**25619**
Document Name:	**Civil Engineering Report**
	55 Jobs Circuit Yarrabilba
Revision:	**A**

Approved for release by

Campbell Leonard
FIEAust CPEng NPER3
RPEQ 4293
Director

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2. Site Information 4

3. Engineering Assessment 5

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3.2 Bulk Earthworks 5

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3.5 Sewer Connection 6

3.6 Water Connection 6

4. Conclusion 7

Figures

1. Introduction

This Civil Engineering Report has been in order to accompany an application for a material change of use.

The objectives of this report are to assess the following in the context of the proposed development:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection

2. Site Information

The site is located at 55 Jobs Circuit Yarrabilba (Lot 45 SP345729). This lot was created as part of Stage 3 of Precinct 5 of the Yarrabilba Priority Development Area (PDA). The site has a frontage to Jobs Circuit to the south and west. It grades generally from the north west to south east at generally 1.0%. The area of the site is 2,003m^2 in size, and it is currently vacant.

Figure 1 Aerial Photo of Site (Copyright Qld Globe)

The proposal for the site is for the construction of an industrial building, with associated car parking.

3. Engineering Assessment

3.1 Erosion and Sediment Control

During the course of the construction, the following processes are expected:

- Bulk earthworks
- Detailed earthworks to trim lot to final levels
- Construction

Management of stormwater runoff from the exposed earthwork surfaces will be based on containment, diversion and retention. At all stages of construction, current standards of building practices will be adhered to. These include:

- Placement of sediment fences
- Vehicle shakedown to prevent suspended solids being exported from site and consequently into surrounding stormwater infrastructure
- Sediment traps to field inlet pits and gullies

An Erosion and Sediment Control Plan has been prepared, refer to CLA Consultants Drawing 25619 - 002 in Figures. It will be the responsibility of the contractor to ensure that these and any other sedimentation and erosion controls are carried out.

3.2 Bulk Earthworks

The development of the site is taking place in conjunction with Lots 43-45, and will require earthworks to level the site to provide the building pad. This process will result in a cut from the site of approximately 360m^3. Drawing 25619 - 003 provides details of the earthworks proposed on the sites.

3.3 Vehicular Access

It is proposed that access to the site for vehicles will be provided by a crossover to Jobs Circuit. These will be constructed as 'General Wide' crossovers as per IPWEA standard drawing RS-051.

The service vehicle for the development is a Heavy Rigid Vehicle (HRV). A Traffic Engineering Report will be provided for assessment separately.

3.4 Stormwater Drainage

As discussed above, the subject site lies within a new subdivision. As part of the subdivision works, stormwater management has been provided within the downstream network through a series of bio-retention filters with additional ponding. As such, no treatment in terms of stormwater quantity is required within the site. It is proposed however to install SQIDEP approved Gross Pollutant Traps (Atlan Stormsacks or similar) to all field inlet pits. This will manage the release of gross pollutants and coarse sediments into the downstream infrastructure.

Stormwater from roofs and car park areas will be collected in a new internal stormwater drainage system. This system will use the existing stormwater pit on the site as the lawful point of discharge. The stormwater layout is shown on Drawing 25619 - 005, and the stormwater drainage longitudinal sections and catchment plan/calculations are shown at Drawings 25619 – 007, 008 and 009.

3.5 Sewer Connection

The proposed sewer connection point will be the existing property connection to the south east of the site. CLA Consultants Drawing 25619 - 005 shows the location of this connection point.

3.6 Water Connection

A new private water meter assembly will be provided to the site from the existing 150mm diameter PVC-M water main which runs within the verge of Jobs Circuit to the south. The size and final location of this connection will be nominated by the hydraulic consultant prior to application for Plumbing and Drainage approval.

3.7 Electrical and Telecommunications Connections

The existing energex pillar boxes will be used as the connection point for the site. There is existing telstra infrastructure outside the site, this will be the connection point for communications purposes.

5. Conclusion

This report has assessed the following:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection
- Electrical and telecommunications connections

The proposed development can be serviced by all required infrastructure, and in accordance with the relevant local government requirements.

Figures

Site Survey J Surveyors

CLA Consultants Drawings

25619 – 001 – Site Plan, Drawing Schedule & Notes
25619 – 002 – Erosion and Sediment Control Plan
25619 – 003 – Bulk Earthworks Plan
25619 – 004 – Grading & Drainage Plan Sheet 1 of 2
25619 – 005 – Grading & Drainage Plan Sheet 2 of 2
25619 – 006 – Stormwater Long Sections Sheet 1 of 2
25619 – 007 – Stormwater Long Sections Sheet 2 of 2
25619 – 008 – Stormwater Catchment Plan
25619 – 009 – Stormwater Calculation Sheet

PHOTO 1

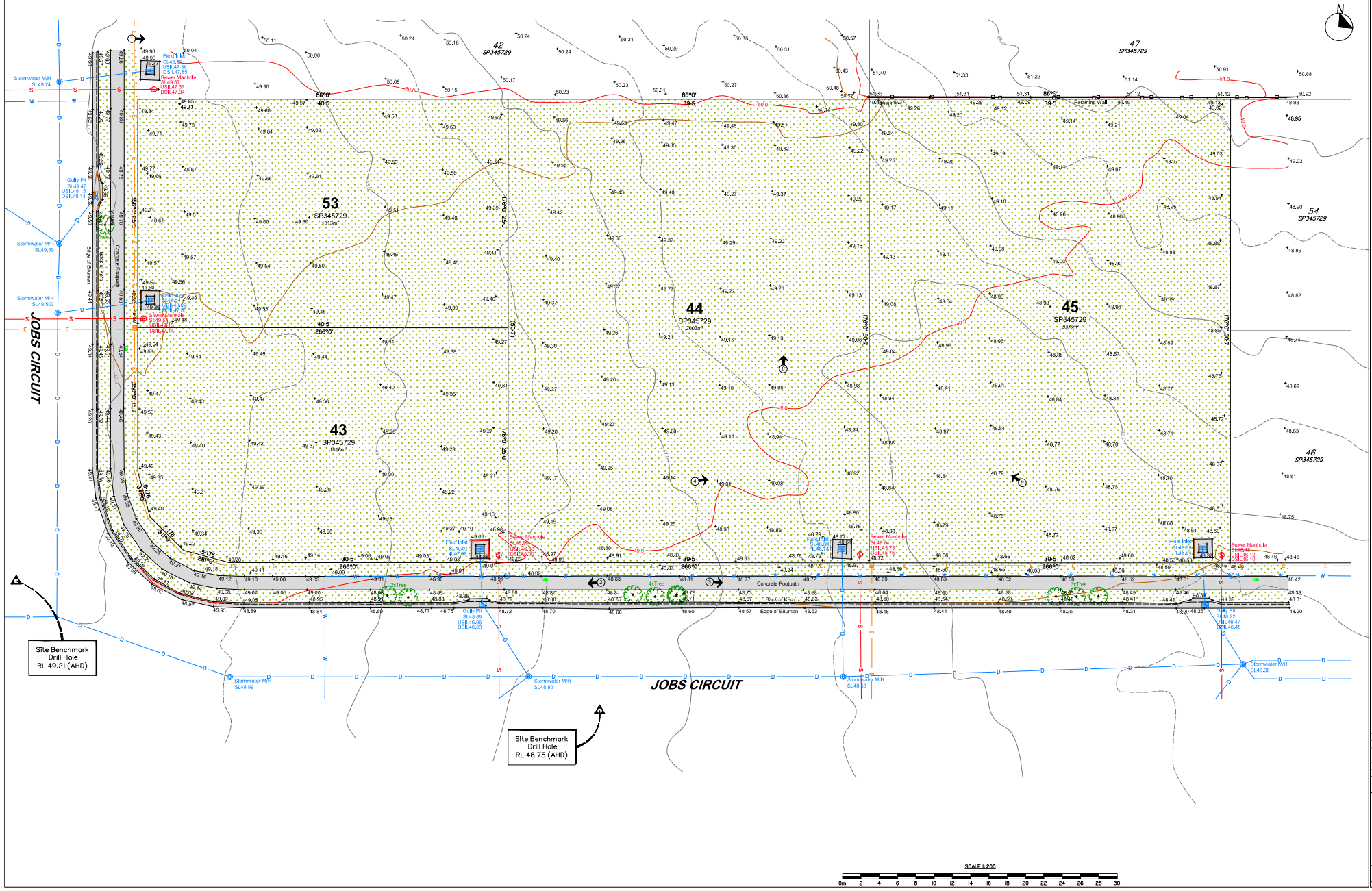
PHOTO 2

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6



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admin@jsurveyors.com.au
Ph (07) 3117 0730

NOTES

1. Drawn to scale on A1 at 1:200 (A1) or 1:400 (A3)
2. Property boundaries have not been defined by this survey. An Identification survey must be completed to confirm the exact location of the property boundaries prior to any operational works.
3. This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.
4. Underground features have been plotted from records. Only those services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.
5. This plan may not be photocopied unless these notes are included.
6. JSURVEYORS accepts no responsibility for any loss or damages caused in contravention of the above.
7. All levels are in metres on Australian Height Datum and have been derived from OPM12463 RL48.131 via GNSS.
8. Natural surface contours have been plotted by LCC eBimap records 2002.
9. Contour Interval . . . 0.5m

LEGEND

- Underground Stormwater Line
- Underground Water Line
- Underground Sewer Line
- Underground Gas Line
- Underground Telstra Line
- Underground Comms Line
- Underground Power Line
- Overhead Power Line
- Retaining Wall
- Fence Line
- Top of Bank
- Bottom of Bank
- Major Contour (Existing)
- Minor Contour (Existing)
- Major Contour (Natural)
- Minor Contour (Natural)
- Column/Concrete Wall below
- Stormwater Manhole
- Fire Hydrant
- Water Valve
- Water Meter
- Roof Water Outlet
- Sewer Manhole
- Sewer Inspection Opening
- Gas Valve
- Gas Meter
- Telstra Pit
- Comms Pit
- Electrical Pillar
- Electrical Pit
- Electrical Light/Power Pole

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Issue	Description	Date	Drawn	Check
A	ORIGINAL ISSUE	22.02.26	QT	BC

Client: 360 Developments Pty Ltd

Title:

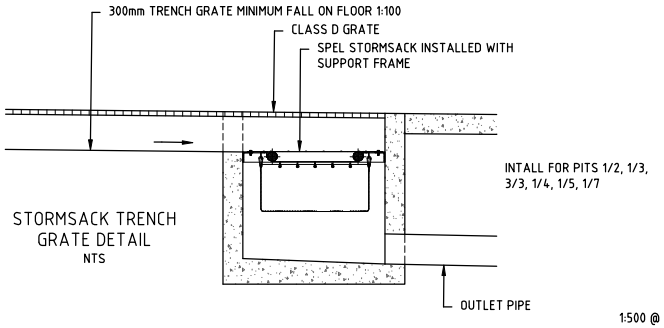
Plan of Detail Survey of Lots 43,44,45 and 53 on SP345729

71, 79, 63 & 55 Jobs Circuit, Yarraloiba, QLD

Drawing No:	Sheet, No:
JS 343 - DET01 - REV.A	1 of 1

DRAWING SCHEDULE	
NUMBER	TITLE
25619 – 001	SITE PLAN, DRAWING SCHEDULE & NOTES
25619 – 002	EROSION & SEDIMENT CONTROL PLAN
25619 – 003	BULK EARTHWORKS PLAN
25619 – 004	SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2
25619 – 005	SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2
25619 – 006	STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2
25619 – 007	STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2
25619 – 008	STORMWATER CATCHMENT PLAN
25619 – 009	STORMWATER CALCULATION SHEET

GENERAL NOTES:
1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOGAN CITY COUNCIL'S SPECIFICATIONS. CONTRACTOR TO OBTAIN AND RETAIN A COPY ON SITE DURING THE COURSE OF THE WORKS.
2. ALL NEW WORKS ARE TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS, AND MARRY IN A 'WORKMANLIKE' MANNER.
3. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY OR AS DETERMINED FROM SERVICE DIAGRAMS. CLA CONSULTANTS CANNOT GUARANTEE THE INFORMATION SHOWN NOR ACCEPT ANY RESPONSIBILITY FOR INACCURACIES OR INCOMPLETE DATA.
4. SERVICES & ACCESSES TO THE EXISTING PROPERTIES ARE TO BE MAINTAINED IN WORKING ORDER AT ALL TIMES DURING CONSTRUCTION.
5. ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
6. REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
8. ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, EROSION AND SEDIMENTATION CONTROL PLAN AND LOCAL COUNCIL'S REQUIREMENTS WHERE APPLICABLE.
9. CONTRACTOR TO CHECK AND CONFIRM SITE DRAINAGE CONNECTIONS ACROSS THE VERGE PRIOR TO COMMENCEMENT OF SITE DRAINAGE WORKS.
10. PROPERTIES AFFECTED BY THE WORKS ARE TO BE NOTIFIED IN ADVANCE WHERE DISRUPTION TO EXISTING ACCESS IS LIKELY.



STORMSACK TRENCH GRATE DETAIL
NTS

1:500 @ A3
0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

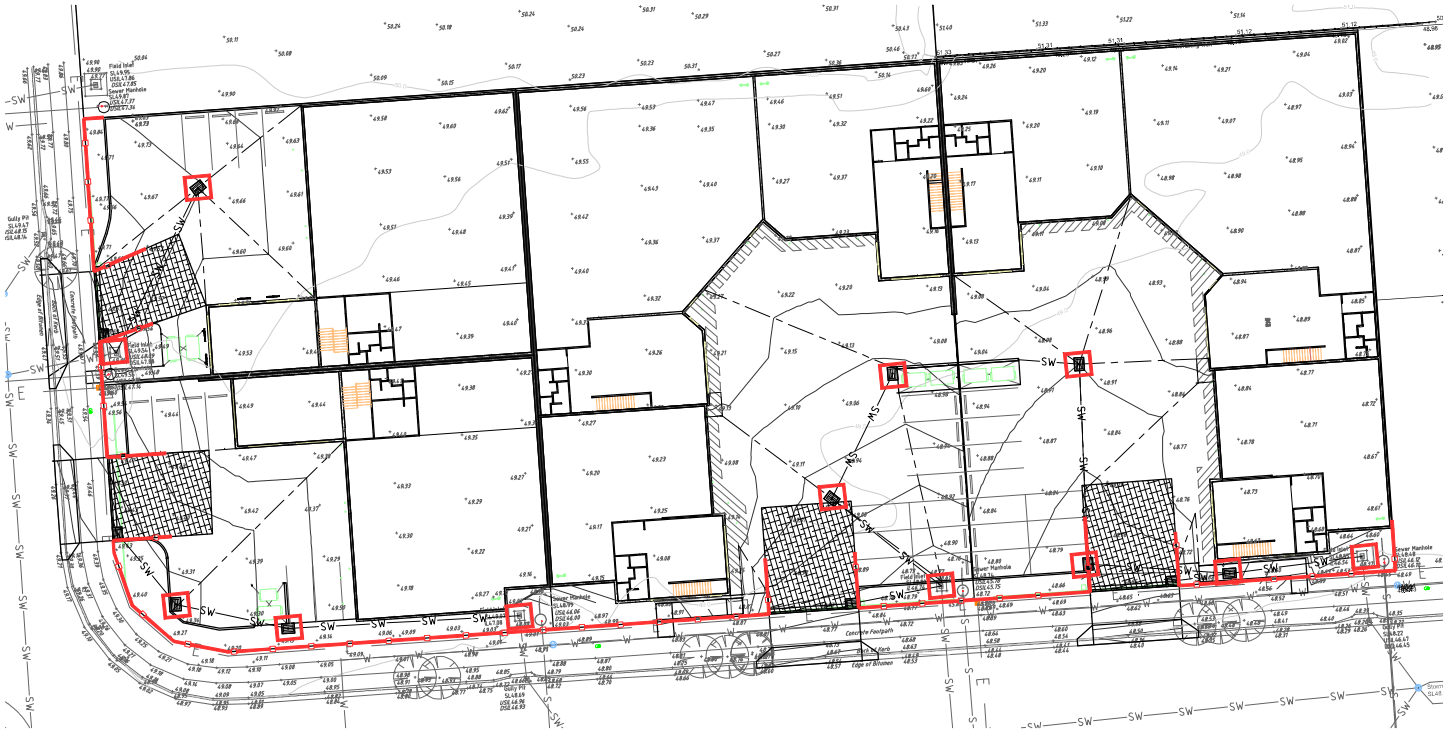
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE PLAN, DRAWING SCHEDULE & NOTES

PROJECT REF.	DRAWING NO.	REVISION
25619	001	-



Sedimentation and Erosion Control

1. Sedimentation and erosion control implementation and maintenance shall be in accordance with LOGAN City Council's Development Manual as read in conjunction with the document titles "Environmental Best Management Practices". The Contractor shall make himself aware of the prevailing weather conditions and shall take all necessary precautions to secure the site at the completion of each day's work, and whenever else is considered necessary.
2. Sediment and erosion control measures shall be provided as required to prevent the movement of dust and/or silt from the site.
3. Sediment and erosion control measures shall be installed downstream of any work area prior to the commencement of work in that area.
4. Erosion and sedimentation control measures shall be installed prior to the disturbance of the site and as required during the course of the works.
5. Topsoil shall be stripped in accordance with the specification and stockpiles at locations as agreed by the superintendent and Council's designated representative.
6. All disturbed areas shall be stabilised with the provision of 75mm minimum topsoil and grass seeded, mulched, re-vegetated etc within 7 days of the completion of final allotment earthworks.
7. All sediment control measures and devices shall be inspected for structural damage after each rainfall event and at the completion of each days work. All trapped sediment shall be removed to an approved location on site for re-use on site or for subsequent removal from the site. Site disposal will only be approved when it can be established that no additional erosion can occur.
8. Sediment and erosion control measures around stockpiles shall include but not necessarily be limited to:-

a) Provision of a silt fence below the stockpile, as indicated by the natural slopes of the land,
b) Provision of grass cover if stockpile is to remain in place for more that 30 days,
c) Provision of a surface emulsion or approved equivalent to prevent wind erosion.

9. Place 600mm width turf at both top and toes of retaining walls and tops of new kerb.
10. Water areas of construction regularly as required to obviate potential for dust nuisance to adjoining properties and the site generally.

Construction Traffic Shakedown

Provide construction traffic shake down device at all relevant site exit points. Clean out and maintain shake down device regularly to ensure efficient operation.

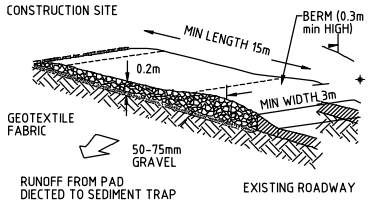
LEGEND

SILT FENCE

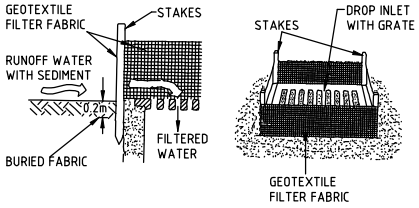
VEHICLE SHAKEDOWN

INLET SEDIMENT TRAP

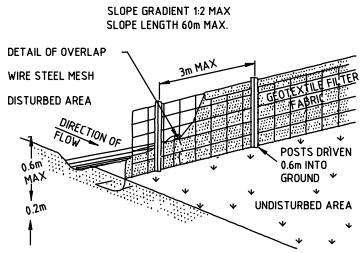
PLACE PORTABLE KERB SEDIMENT TRAP AS PER DETAIL AT ALL GULLY PITS AFFECTED BY SITE CONSTRUCTION WORKS



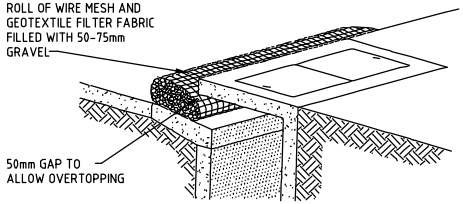
VEHICLE SHAKEDOWN AREA



INLET SEDIMENT TRAP



SILT FENCE



PORTABLE GRAVEL KERB SEDIMENT TRAP

1:500 @ A3

0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

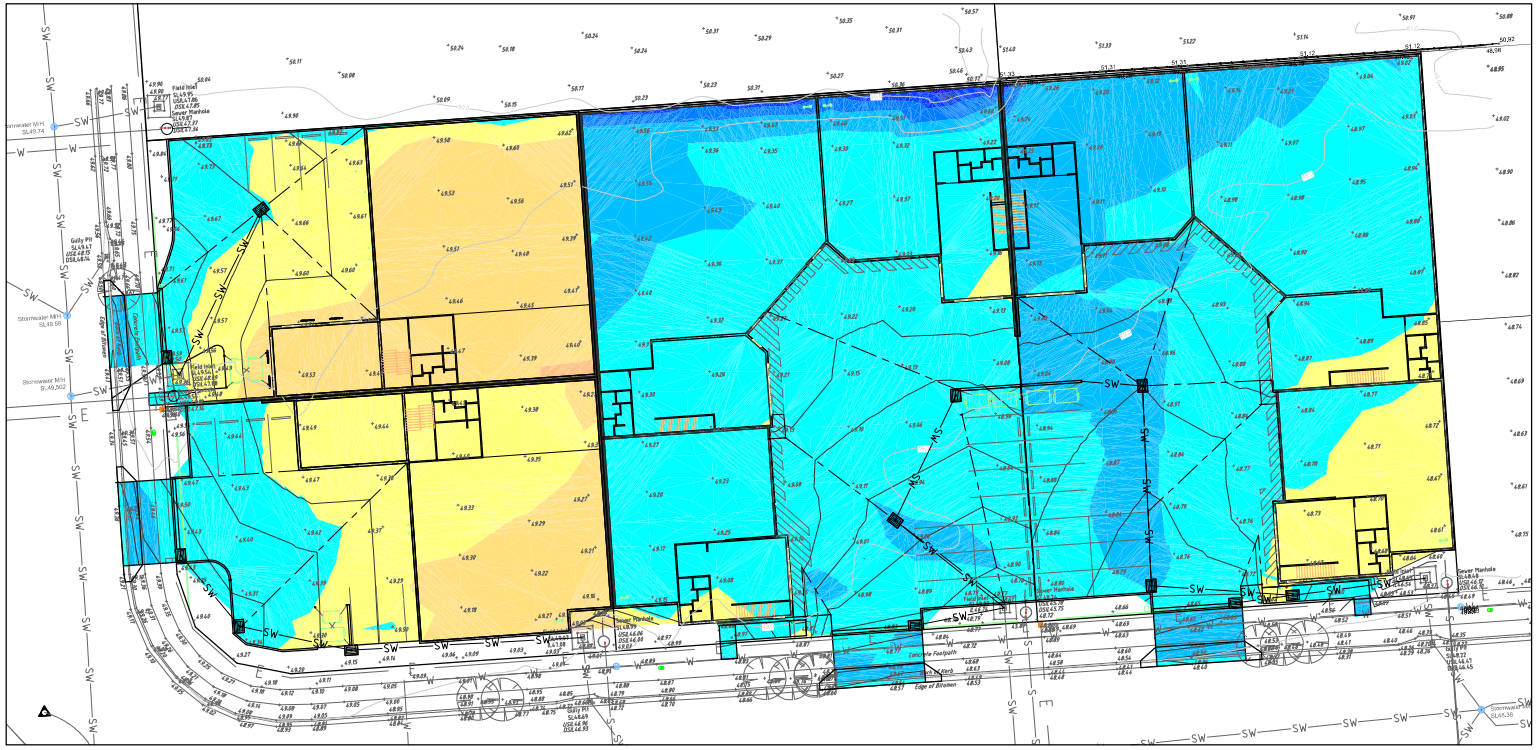
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
EROSION & SEDIMENT CONTROL PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	002	-



LEGEND	
CUT/FILL DEPTH (m)	Colour
-1.25 to -1.00	
-1.00 to -0.75	
-0.75 to -0.50	
-0.50 to -0.25	
-0.25 to 0.00	
0.00 to 0.25	
0.25 to 0.50	
0.50 to 0.75	

EARTHWORKS SUMMARY	
TOTAL CUT	742m³
TOTAL FILL	380m³
BALANCE	362m³

NOTES:
1. CALCULATIONS BASED ON EARTHWORKS LEVEL 250mm BELOW FINISHED LEVEL COMPARED TO EXISTING SURFACE LEVEL

NOTES
1. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARD 3798-GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. EXCESS SPOIL MATERIAL SHALL BE REMOVED FROM THE SITE TO AN APPROVED LOCATION THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SPOIL SITE TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO THE COMMENCEMENT OF SPOIL REMOVAL OPERATIONS.
3. SEDIMENTATION AND EROSION CONTROL MEASURES TO BE INSTALLED AND APPROVED PRIOR TO THE COMMENCEMENT OF EARTHWORKS.
4. ANY FILL BATTERS STEEPER THAN 1V:4H AND GREATED THAN 1.0M IN HEIGHT REQUIRE LODGEMENT OF BUILDING APPLICATION.
5. ALL WORKS TO BE IN ACCORDANCE WITH COGC PLANNING SCHEME POLICIES.
6. THE CONTRACTOR SHALL PROVIDE LEVEL 1 CERTIFICATION OF THE FILL MATERIAL PRIOR TO THE COMMENCEMENT OF FURTHER CIVIL WORKS.
7. BATTERS TO BE TURFED/MULCHED PRIOR TO ON MAINTENANCE INSPECTION.
8. ALL EXPOSED EARTHWORKS TO BE SEEDED PRIOR TO ON MAINTENANCE INSPECTION.

1:500 @ A3

0 4 8 12 16 20m

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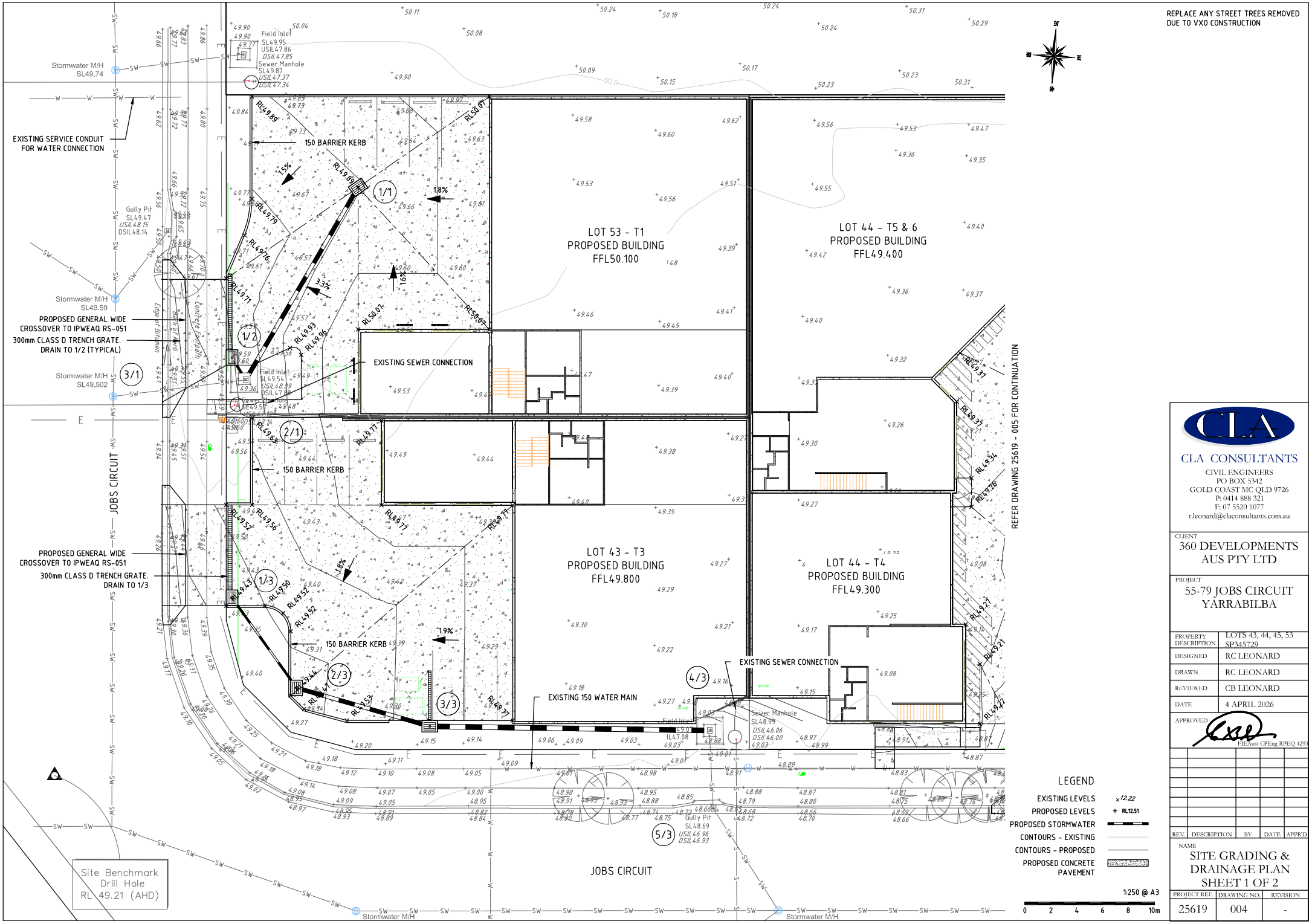
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
BULK EARTHWORKS PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	003	-



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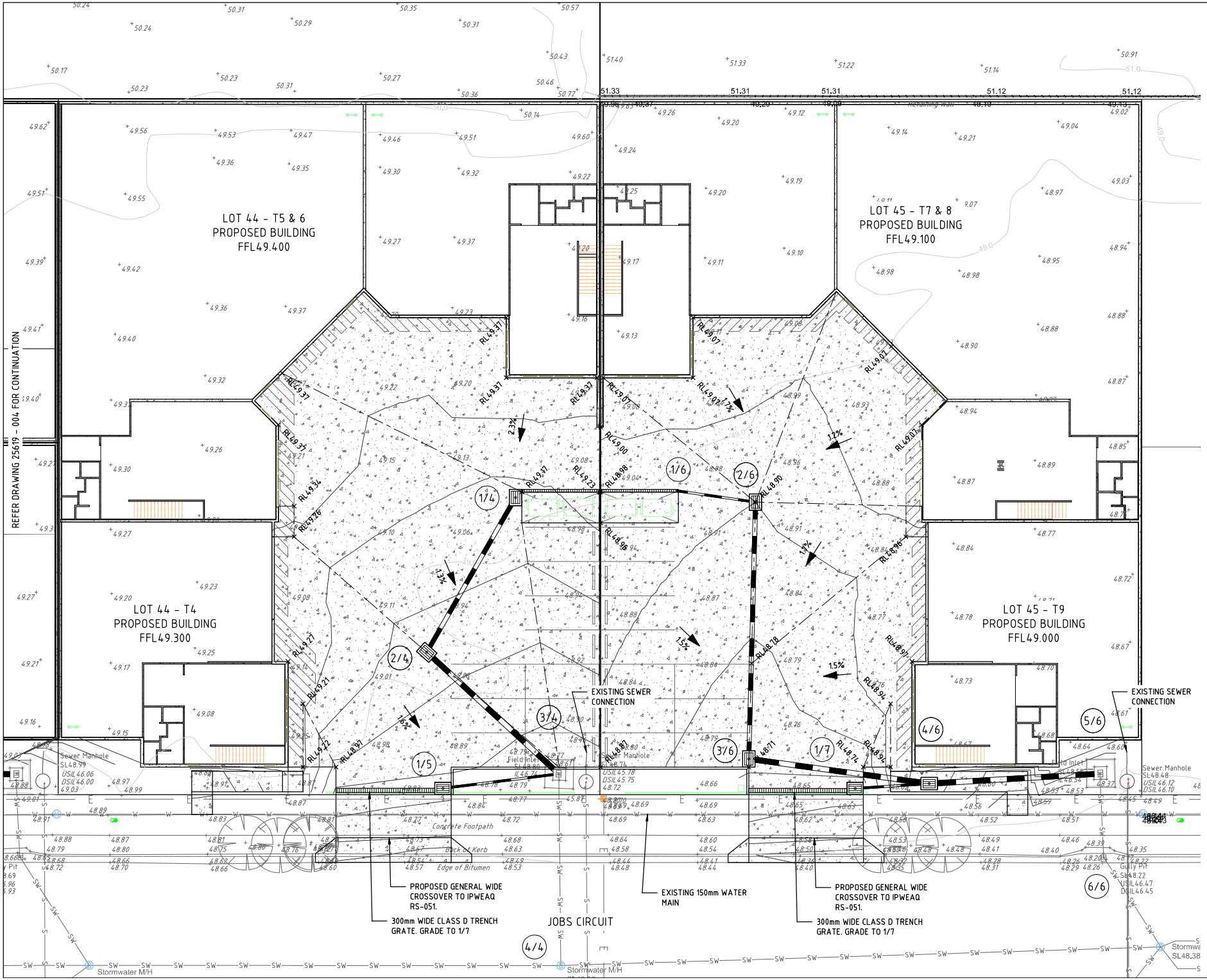
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	004	-



REPLACE ANY STREET TREES REMOVED DUE TO VXO CONSTRUCTION

LEGEND

EXISTING LEVELS	×12.22
PROPOSED LEVELS	+ RL12.51
PROPOSED STORMWATER	
CONTOURS - EXISTING	
CONTOURS - PROPOSED	
PROPOSED CONCRETE PAVEMENT	

1:250 @ A3

0 2 4 6 8 10m

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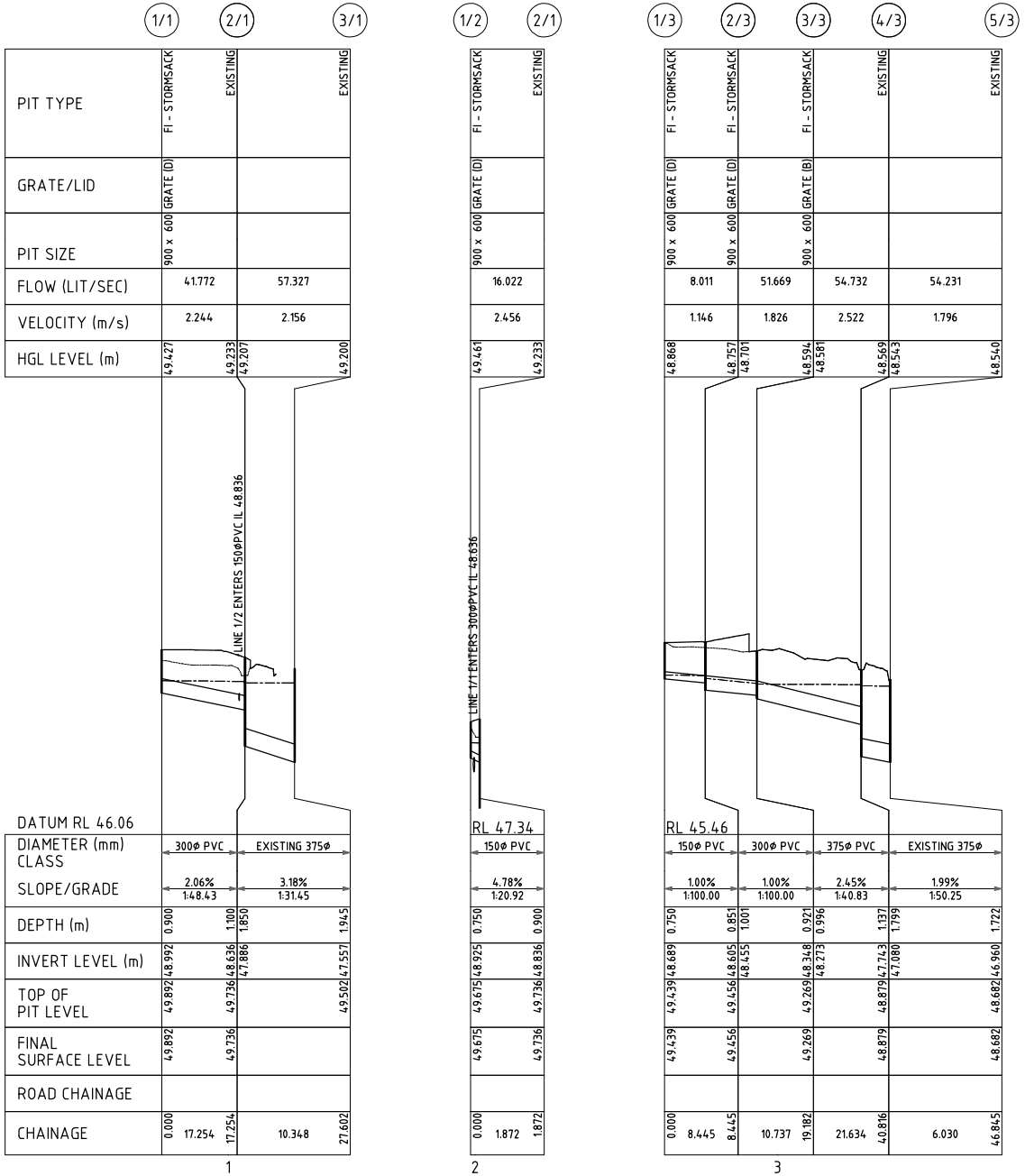
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	005	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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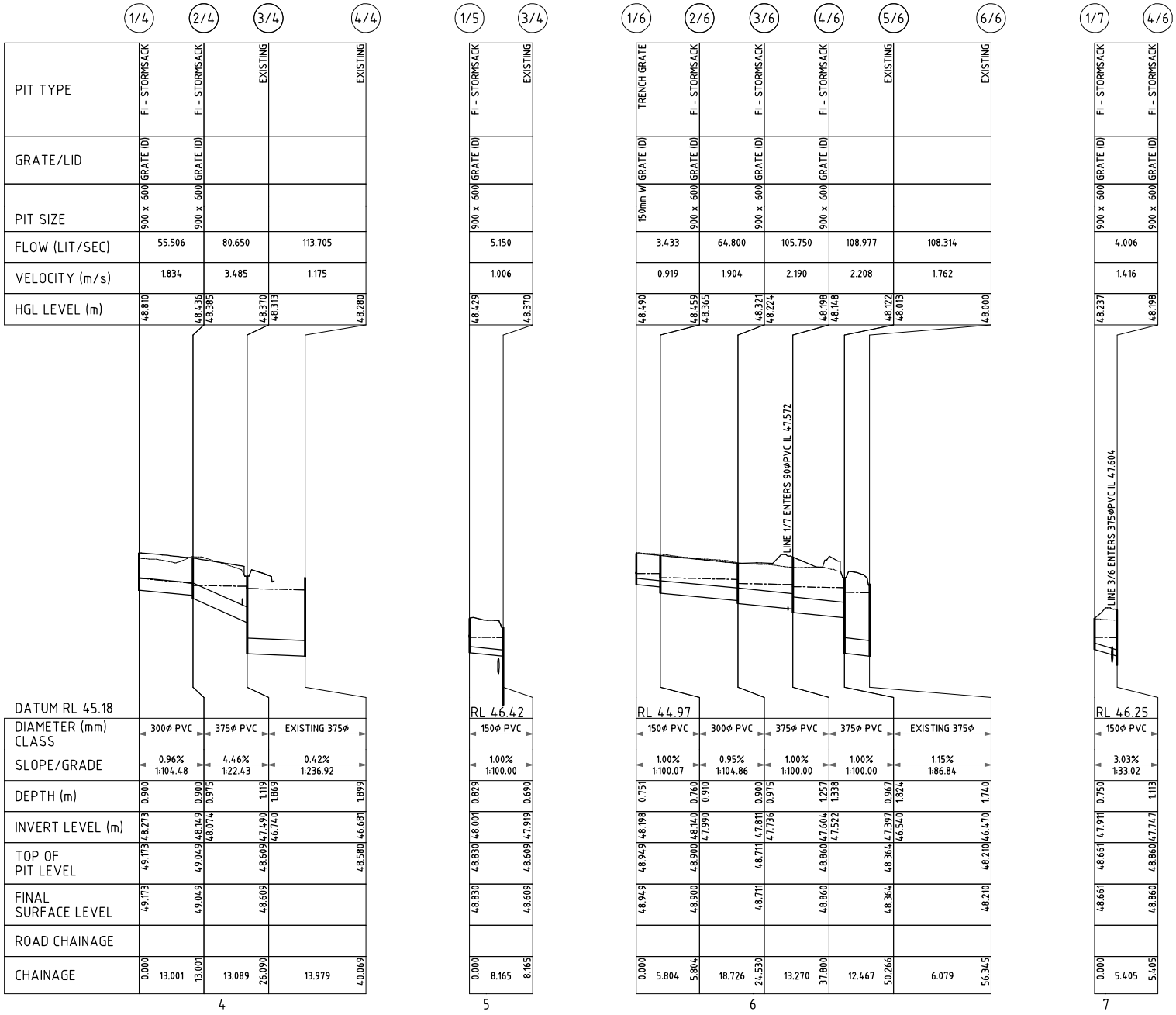
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	006	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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PROJECT
55-79 JOBS CIRCUIT
YARRABILBA

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APPROVED

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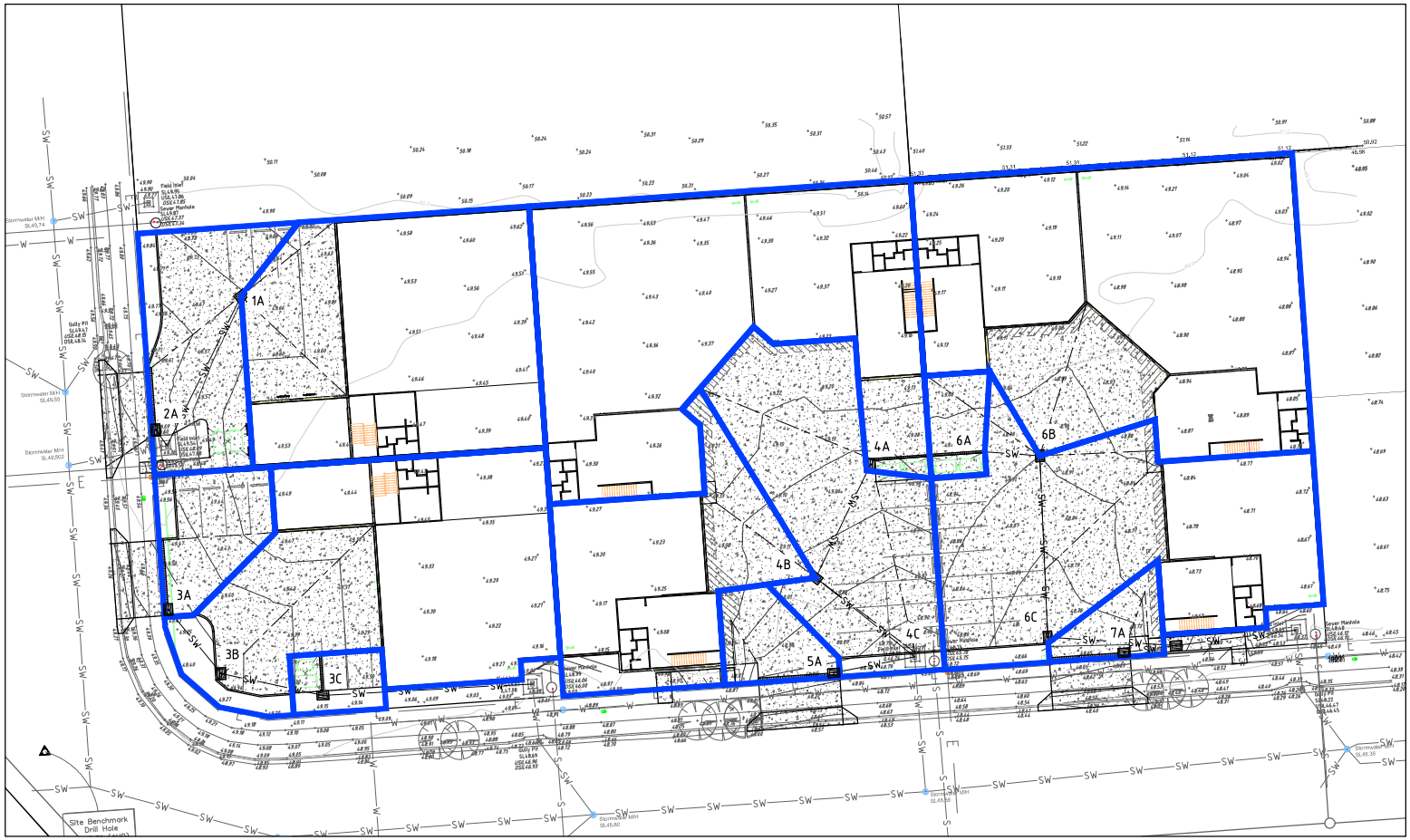
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	007	-



1:500 @ A3

0 4 8 12 16 20m

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PROJECT
55-79 JOBS CIRCUIT YARRABILBA

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APPROVED
PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER CATCHMENT PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	008	-

DRAINAGE CALCULATIONS - Return Period: 10yrs

LOCATION	STRUCTURE No.	DRAIN SECTION	TIME SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	SUBCATCHMENT RUNOFF	RUNOFF CO-EFFICIENT	SUB-CATCHMENT AREA	EQUIVALANT AREA	SUM OF EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	INLET DESIGN FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	HALF ROAD CAPACITY	INLET TYPE	INLET CURVE	FLOW TO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	FLOW WIDTH	FLOW DEPTH	DRAIN DESIGN CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (CxA)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	No. OF PIPES (1 IF BLANK)	PIPE CLASS	FLOW VELOCITY	TIME OF FLOW IN REACH	CAPACITY FLOW (MANNINGS)	CAPACITY FLOW (HGL)	HEADLOSSES STRUCTURE CHART No.	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCTURE HEADLOSSES	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L×Sf)	PART FULL	PART FULL DEPTH	PART FULL VELOCITY	DESIGN LEVELS OBVERT LEVELS	DRAIN SECTION HGL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
			tc min	I mm/hr		C	A ha	CxA ha	Sum CxA ha	Q L/s	L/s	%	L/s			Qg L/s	Qb L/s		m	m	tc min	I mm/hr	Sum CxA ha	Qp L/s	L m	S %	mm			V m/s	T min	L/s	L/s		$V^2/2g$ m	Ku	hu m	KL	hL m	Kw	hw m	Sf %	hf m		m	Vp m/s		m	m	m	m	m	m	
1A	1/1	1/12/1	5	206		1.00	0.073	0.073	0.073	42	42			FI	900x600	42		2/1		0.076		5.00	206	0.073	42	17	2	300		PVC	0.59	0.128	201	201		0.018	9.878	0.176					0.11	0.02		0.09	2.24		49.292	49.427	49.427	49.233	49.892	49.892	1/1
	2/1	2/13/1		206					0.101							0				0.000		5.13	206	0.101	57	10	3	375		Class 3 RRJ	0.52	0.080	313	441		0.014	1.930	0.027					0.06	0.01		0.11	2.16		48.261	49.207	49.233	49.200	49.736	49.736	2/1
																		3/1																																	
2A	1/2	1/22/1	5	206		1.00	0.028	0.028	0.028	16	16			FI	900x600	16		2/1		0.040		5.00	206	0.028	16	2	5	150		PVC	0.91	0.013	51	53		0.042	5.201	0.218					0.54	0.01		0.06	2.53		49.093	49.462	49.462	49.233	49.693	49.693	1/2
3A	1/3	1/32/3	5	206		1.00	0.014	0.014	0.014	8	8			FI	900x600	8		2/3		0.025		5.00	206	0.014	8	9	1	150		PVC	0.45	0.126	22	22		0.010	9.353	0.098					0.15	0.01		0.06	1.14		48.839	48.868	48.868	48.757	49.450	49.450	1/3
3B	2/3	2/33/3	5	206		1.00	0.077	0.077	0.091	44	44			FI	900x600	44		3/3		0.079		5.13	206	0.091	52	11	1	300		PVC	0.73	0.098	140	138		0.027	2.042	0.056					0.16	0.02		0.13	1.83		48.755	48.701	48.757	48.594	49.456	49.456	2/3
3C	3/3	3/34/3	5	206		1.00	0.006	0.006	0.097	3	3			FI	900x600	3		4/3		0.014		5.22	206	0.097	55	22	2	375		PVC	0.50	0.143	396	395		0.013	1.000	0.013					0.06	0.01		0.09	2.52		48.648	48.581	48.594	48.569	49.269	49.269	3/3
	4/3	4/35/3		206					0.097					FI	900x600	0		5/3		0.000		5.37	206	0.097	54	6	2	375		Class 3 RRJ	0.49	0.056	247	347		0.012	2.066	0.025					0.06	0.00		0.12	1.80		47.455	48.543	48.569	48.540	48.879	48.879	4/3
4A	1/4	1/42/4	5	206		1.00	0.097	0.097	0.097	56	56			FI	900x600	56		2/4		0.092		5.00	206	0.097	56	13	1	300		PVC	0.79	0.118	137	135		0.031	7.957	0.250					0.18	0.02		0.13	1.83		48.573	48.810	48.810	48.436	49.173	49.173	1/4
4B	2/4	2/43/4	5	206		1.00	0.045	0.045	0.142	26	26			FI	900x600	26		3/4		0.055		5.12	206	0.142	81	13	4	375		PVC	0.73	0.063	535	537		0.027	1.872	0.051					0.12	0.02		0.10	3.49		48.449	48.385	48.436	48.370	49.049	49.049	2/4
4C	3/4	3/44/4	5	206		1.00	0.050	0.050	0.201	29	29			FI	900x600	29				0.059		5.18	206	0.201	114	14	0	375		Class 3 RRJ	1.03	0.198	114	155		0.054	1.055	0.057					0.23	0.03		0.31	1.18		47.115	48.313	48.370	48.280	48.609	48.609	3/4
																		4/4																																	
5A	1/5	1/53/4	5	206		1.00	0.009	0.009	0.009	5	5			FI	900x600	5		3/4		0.019		5.00	206	0.009	5	9	1	150		PVC	0.29	0.141	22	22		0.004	12.385	0.054					0.07	0.01		0.05	1.01		48.151	48.429	48.429	48.370	48.847	48.847	1/5
6A	1/6	1/62/6	5	206		1.00	0.006	0.006	0.006	3	3			FI	900x600	3		2/6		0.014		5.00	206	0.006	3	6	1	150		PVC	0.19	0.105	22	22		0.002	14.910	0.029					0.03	0.00		0.04	0.92		48.348	48.490	48.490	48.459	48.949	48.949	1/6
6B	2/6	2/63/6	5	206		1.00	0.108	0.108	0.114	62	62			FI	900x600	62		3/6		0.099		5.11	206	0.114	65	19	1	300		PVC	0.92	0.164	136	135		0.043	2.197	0.094					0.24	0.04		0.15	1.90		48.290	48.365	48.459	48.321	48.900	48.900	2/6
6C	3/6	3/64/6	5	206		1.00	0.074	0.074	0.188	42	42			FI	900x600	42		4/6		0.077		5.27	206	0.188	106	13	1	375		PVC	0.96	0.101	253	248		0.047	2.071	0.097					0.20	0.03		0.17	2.19		48.111	48.224	48.321	48.198	48.711	48.711	3/6
	4/6	4/65/6		206					0.195					FI	900x600	0				0.000		5.37	206	0.195	109	12	1	375		PVC	0.99	0.094	253	248		0.050	1.000	0.050					0.21	0.03		0.17	2.21		47.897	48.148	48.198	48.122	48.860	48.860	4/6
																		5/6																																	
	5/6	5/66/6		206					0.195					FI	900x600	0		6/6		0.000		5.46	206	0.195	108	6	1	375		Class 3 RRJ	0.98	0.057	188	262		0.049	2.226	0.109					0.21	0.01		0.20	1.76		46.915	48.013	48.122	48.000	48.364	48.364	5/6
7A	1/7	1/74/6	5	206		1.00	0.007	0.007	0.007	4	4			FI	900x600	4		4/6		0.016		5.00	206	0.007	4	5	3	150		PVC	0.23	0.064	38	40		0.003	13.976	0.037					0.04	0.00		0.03	1.42		48.061	48.237	48.237	48.198	48.661	48.661	1/7

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

PROJECT
55-79 JOBS CIRCUIT
YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	FIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPR'D

NAME
STORMWATER CALCULATION SHEET

PROJECT REF.	DRAWING NO.	REVISION
25619	009	-

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV-2026-YAR-4693
Date: 15 June 2026
Queensland Government

CLA CONSULTANTS
Consulting Civil/Structural Engineers, Project Managers

CIVIL ENGINEERING REPORT
79 JOBS CIRCUIT YARRABILBA
PROPOSED INDUSTRIAL BUILDING

REVISION A
OUR REF: 25619

REVISION	DATE	AMENDMENTS
A	4/04/2026	-

PO Box 5342 Gold Coast MC Qld 9726
Ph: 0414 888 321
ABN 55 079 641 286

Prepared For:	**360 Developments Aus Pty Ltd**
Prepared By:	**Richard Leonard**
Release Date	**4/04/2026**
Job Number:	**25619**
Document Name:	**Civil Engineering Report**
	79 Jobs Circuit Yarrabilba
Revision:	**A**

Approved for release by

Campbell Leonard
FIEAust CPEng NPER3
RPEQ 4293
Director

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Figures

1. Introduction

This Civil Engineering Report has been in order to accompany an application for a material change of use.

The objectives of this report are to assess the following in the context of the proposed development:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection

2. Site Information

The site is located at 79 Jobs Circuit Yarrabilba (Lot 53 SP345729). This lot was created as part of Stage 3 of Precinct 5 of the Yarrabilba Priority Development Area (PDA). The site has a frontage to Jobs Circuit to the west. It grades generally from the north west to south east at generally 1.0%. The area of the site is 1,013m^2 in size, and it is currently vacant.

Figure 1 Aerial Photo of Site (Copyright Qld Globe)

The proposal for the site is for the construction of an industrial building, with associated car parking.

3. Engineering Assessment

3.1 Erosion and Sediment Control

During the course of the construction, the following processes are expected:

- Bulk earthworks
- Detailed earthworks to trim lot to final levels
- Construction

Management of stormwater runoff from the exposed earthwork surfaces will be based on containment, diversion and retention. At all stages of construction, current standards of building practices will be adhered to. These include:

- Placement of sediment fences
- Vehicle shakedown to prevent suspended solids being exported from site and consequently into surrounding stormwater infrastructure
- Sediment traps to field inlet pits and gullies

An Erosion and Sediment Control Plan has been prepared, refer to CLA Consultants Drawing 25619 - 002 in Figures. It will be the responsibility of the contractor to ensure that these and any other sedimentation and erosion controls are carried out.

3.2 Bulk Earthworks

The development of the site is taking place in conjunction with Lots 43-45, and will require earthworks to level the site to provide the building pad. This process will result in a cut from the site of approximately 360m^3. Drawing 25619 - 003 provides details of the earthworks proposed on the sites.

3.3 Vehicular Access

It is proposed that access to the site for vehicles will be provided by a crossover to Jobs Circuit. These will be constructed as 'General Wide' crossovers as per IPWEA standard drawing RS-051.

The service vehicle for the development is a Heavy Rigid Vehicle (HRV). A Traffic Engineering Report will be provided for assessment separately.

3.4 Stormwater Drainage

As discussed above, the subject site lies within a new subdivision. As part of the subdivision works, stormwater management has been provided within the downstream network through a series of bio-retention filters with additional ponding. As such, no treatment in terms of stormwater quantity is required within the site. It is proposed however to install SQIDEP approved Gross Pollutant Traps (Atlan Stormsacks or similar) to all field inlet pits. This will manage the release of gross pollutants and coarse sediments into the downstream infrastructure.

Stormwater from roofs and car park areas will be collected in a new internal stormwater drainage system. This system will use the existing stormwater pit on the site as the lawful point of discharge. The stormwater layout is shown on Drawing 25619 - 004, and the stormwater drainage longitudinal sections and catchment plan/calculations are shown at Drawings 25619 – 006, 008 and 009.

3.5 Sewer Connection

The proposed sewer connection point will be the existing property connection to the south west of the site. CLA Consultants Drawing 25619 - 004 shows the location of this connection point.

3.6 Water Connection

A new private water meter assembly will be provided to the site from the existing 150mm diameter PVC-M water main which runs within the verge of Jobs Circuit to the west. The size and final location of this connection will be nominated by the hydraulic consultant prior to application for Plumbing and Drainage approval.

3.7 Electrical and Telecommunications Connections

The existing energex pillar boxes will be used as the connection point for the site. There is existing telstra infrastructure outside the site, this will be the connection point for communications purposes.

5. Conclusion

This report has assessed the following:

- Erosion and sediment control
- Bulk Earthworks
- Vehicular Access
- Stormwater Drainage
- Sewer Connection
- Water Connection
- Electrical and telecommunications connections

The proposed development can be serviced by all required infrastructure, and in accordance with the relevant local government requirements.

Figures

Site Survey J Surveyors

CLA Consultants Drawings

25619 – 001 – Site Plan, Drawing Schedule & Notes
25619 – 002 – Erosion and Sediment Control Plan
25619 – 003 – Bulk Earthworks Plan
25619 – 004 – Grading & Drainage Plan Sheet 1 of 2
25619 – 005 – Grading & Drainage Plan Sheet 2 of 2
25619 – 006 – Stormwater Long Sections Sheet 1 of 2
25619 – 007 – Stormwater Long Sections Sheet 2 of 2
25619 – 008 – Stormwater Catchment Plan
25619 – 009 – Stormwater Calculation Sheet

PHOTO 1

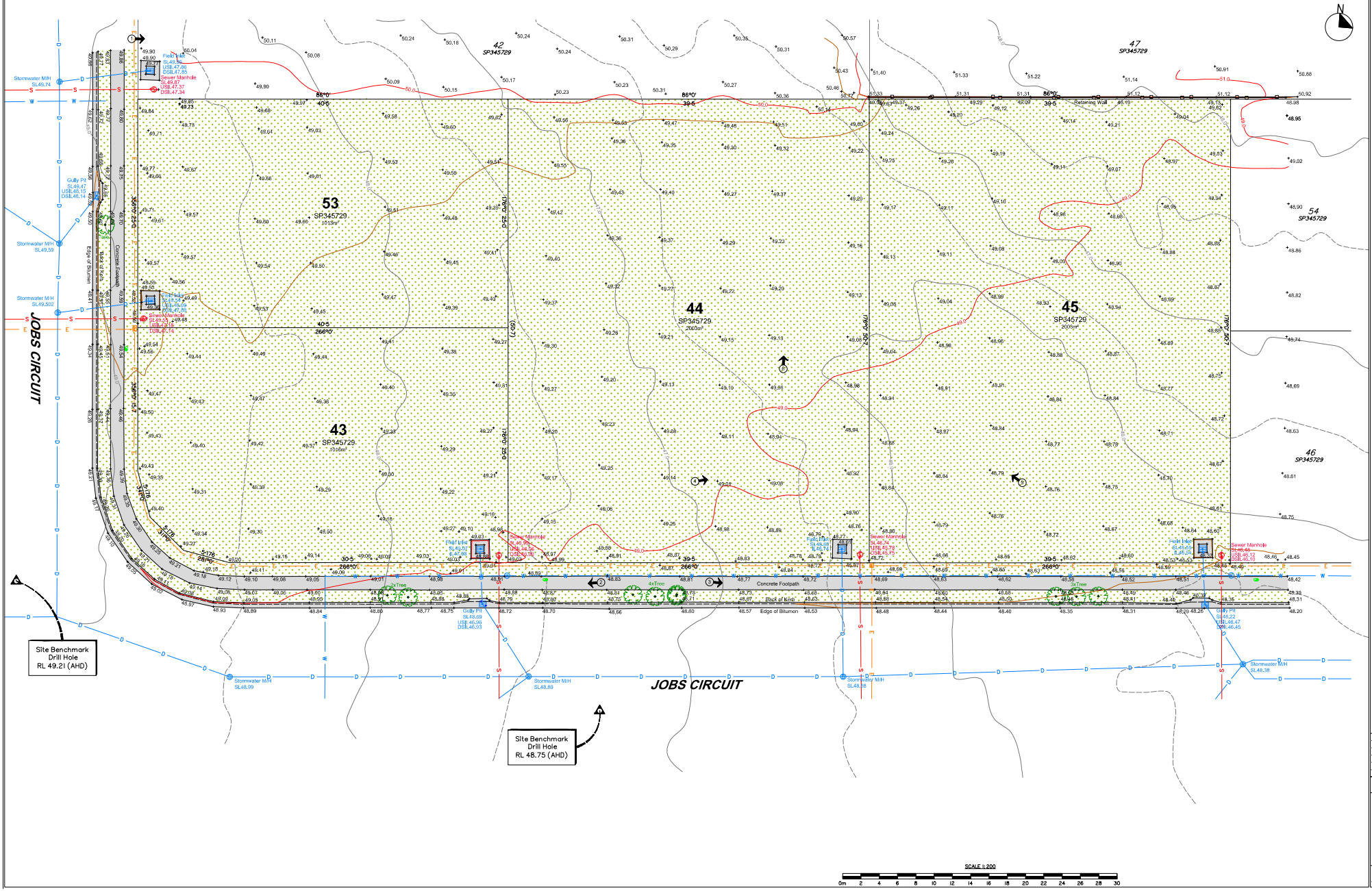
PHOTO 2

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6



Unit 5/121 Newmarket Road, Windsor 4030
admin@jsurveyors.com.au
Ph (07) 3117 0730

NOTES

1. Drawn to scale on A1 at 1:200 (A1) or 1:400 (A3)
2. Property boundaries have not been defined by this survey. An Identification survey must be completed to confirm the exact location of the property boundaries prior to any operational works.
3. This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.
4. Underground features have been plotted from records. Only those services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.
5. This plan may not be photocopied unless these notes are included.
6. JSURVEYORS accepts no responsibility for any loss or damages caused in contravention of the above.
7. All levels are in metres on Australian Height Datum and have been derived from OPM12463 RL48.131 via GNSS.
8. Natural surface contours have been plotted by LCC eBimap records 2002.
9. Contour Interval . . . 0.5m

LEGEND

- Underground Stormwater Line
- Underground Water Line
- Underground Sewer Line
- Underground Gas Line
- Underground Telstra Line
- Underground Comms Line
- Underground Power Line
- Overhead Power Line
- Retaining Wall
- Fence Line
- Top of Bank
- Bottom of Bank
- Major Contour (Existing)
- Minor Contour (Existing)
- Major Contour (Natural)
- Minor Contour (Natural)
- Column/Concrete Wall below
- Stormwater Manhole
- Fire Hydrant
- Water Valve
- Water Meter
- Roof Water Outlet
- Sewer Manhole
- Sewer Inspection Opening
- Gas Valve
- Gas Meter
- Telstra Pit
- Comms Pit
- Electrical Pillar
- Electrical Pit
- Electrical Light/Power Pole

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Issue	Description	Date	Drawn	Check
A	ORIGINAL ISSUE	22.02.26	QT	BC

Client: 360 Developments Pty Ltd

Title:

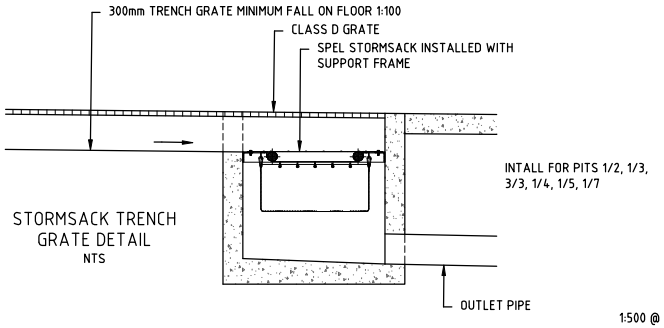
Plan of Detail Survey of Lots 43,44,45 and 53 on SP345729

71, 79, 63 & 55 Jobs Circuit, Yarraloiba, QLD

Drawing No:	Sheet, No:
JS 343 - DET01 - REV.A	1 of 1

DRAWING SCHEDULE	
NUMBER	TITLE
25619 – 001	SITE PLAN, DRAWING SCHEDULE & NOTES
25619 – 002	EROSION & SEDIMENT CONTROL PLAN
25619 – 003	BULK EARTHWORKS PLAN
25619 – 004	SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2
25619 – 005	SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2
25619 – 006	STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2
25619 – 007	STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2
25619 – 008	STORMWATER CATCHMENT PLAN
25619 – 009	STORMWATER CALCULATION SHEET

GENERAL NOTES:
1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH LOGAN CITY COUNCIL'S SPECIFICATIONS. CONTRACTOR TO OBTAIN AND RETAIN A COPY ON SITE DURING THE COURSE OF THE WORKS.
2. ALL NEW WORKS ARE TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS, AND MARRY IN A 'WORKMANLIKE' MANNER.
3. THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL SERVICES WITH EACH RELEVANT AUTHORITY. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY OR AS DETERMINED FROM SERVICE DIAGRAMS. CLA CONSULTANTS CANNOT GUARANTEE THE INFORMATION SHOWN NOR ACCEPT ANY RESPONSIBILITY FOR INACCURACIES OR INCOMPLETE DATA.
4. SERVICES & ACCESSES TO THE EXISTING PROPERTIES ARE TO BE MAINTAINED IN WORKING ORDER AT ALL TIMES DURING CONSTRUCTION.
5. ADJUST EXISTING SERVICE COVERS TO SUIT NEW FINISHED LEVELS TO RELEVANT AUTHORITY REQUIREMENTS WHERE NECESSARY.
6. REINSTATE AND STABILISE ALL DISTURBED LANDSCAPED AREAS.
7. MINIMUM GRADE OF SUBSOIL SHALL BE 0.5% (1:200) FALL TO OUTLETS.
8. ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE TO BE CONSTRUCTED, PLACED AND MAINTAINED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, EROSION AND SEDIMENTATION CONTROL PLAN AND LOCAL COUNCIL'S REQUIREMENTS WHERE APPLICABLE.
9. CONTRACTOR TO CHECK AND CONFIRM SITE DRAINAGE CONNECTIONS ACROSS THE VERGE PRIOR TO COMMENCEMENT OF SITE DRAINAGE WORKS.
10. PROPERTIES AFFECTED BY THE WORKS ARE TO BE NOTIFIED IN ADVANCE WHERE DISRUPTION TO EXISTING ACCESS IS LIKELY.



STORMSACK TRENCH GRATE DETAIL
NTS

1:500 @ A3
0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

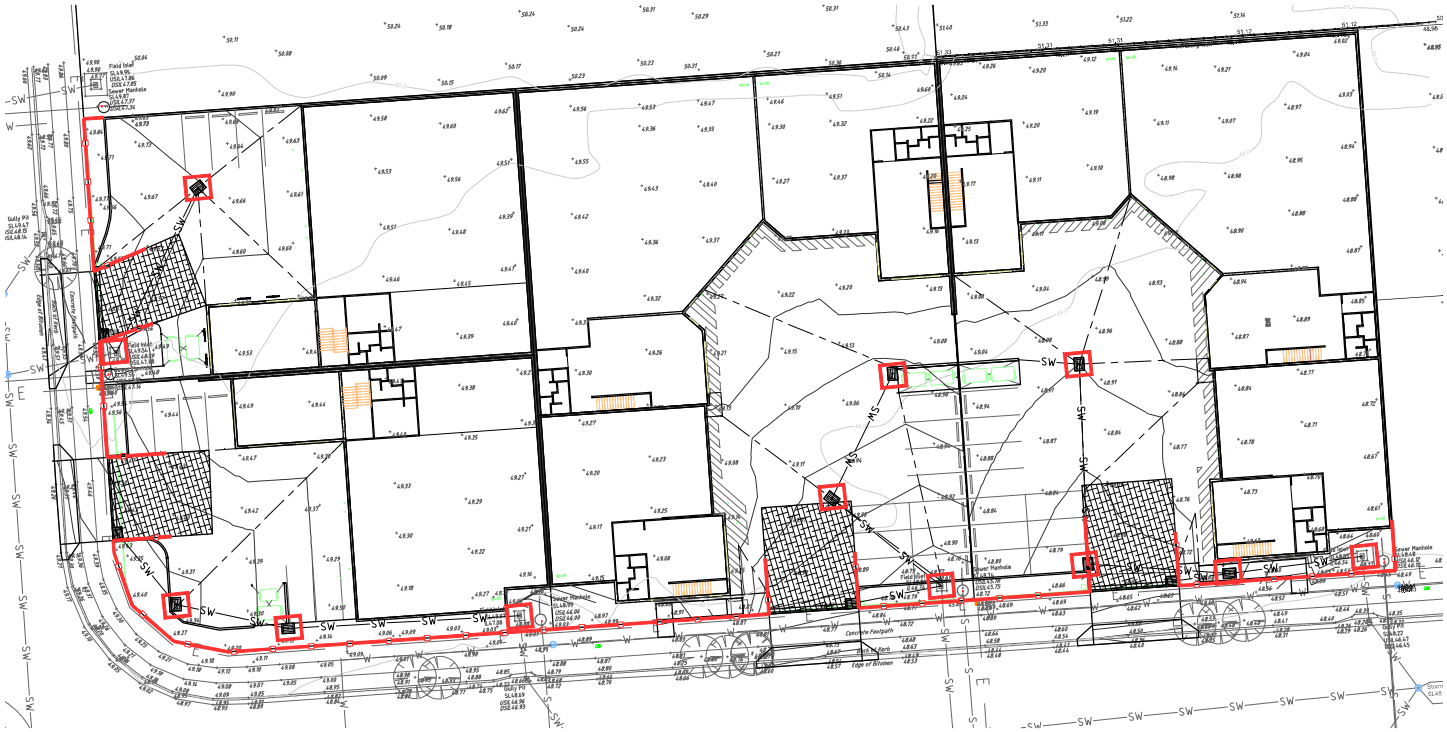
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE PLAN, DRAWING SCHEDULE & NOTES

PROJECT REF.	DRAWING NO.	REVISION
25619	001	-



Sedimentation and Erosion Control

1. Sedimentation and erosion control implementation and maintenance shall be in accordance with LOGAN City Council's Development Manual as read in conjunction with the document titles "Environmental Best Management Practices". The Contractor shall make himself aware of the prevailing weather conditions and shall take all necessary precautions to secure the site at the completion of each day's work, and whenever else is considered necessary.
2. Sediment and erosion control measures shall be provided as required to prevent the movement of dust and/or silt from the site.
3. Sediment and erosion control measures shall be installed downstream of any work area prior to the commencement of work in that area.
4. Erosion and sedimentation control measures shall be installed prior to the disturbance of the site and as required during the course of the works.
5. Topsoil shall be stripped in accordance with the specification and stockpiles at locations as agreed by the superintendent and Council's designated representative.
6. All disturbed areas shall be stabilised with the provision of 75mm minimum topsoil and grass seeded, mulched, re-vegetated etc within 7 days of the completion of final allotment earthworks.
7. All sediment control measures and devices shall be inspected for structural damage after each rainfall event and at the completion of each days work. All trapped sediment shall be removed to an approved location on site for re-use on site or for subsequent removal from the site. Site disposal will only be approved when it can be established that no additional erosion can occur.
8. Sediment and erosion control measures around stockpiles shall include but not necessarily be limited to:-

a) Provision of a silt fence below the stockpile, as indicated by the natural slopes of the land,
b) Provision of grass cover if stockpile is to remain in place for more that 30 days,
c) Provision of a surface emulsion or approved equivalent to prevent wind erosion.

9. Place 600mm width turf at both top and toes of retaining walls and tops of new kerb.
10. Water areas of construction regularly as required to obviate potential for dust nuisance to adjoining properties and the site generally.

Construction Traffic Shakedown

Provide construction traffic shake down device at all relevant site exit points. Clean out and maintain shake down device regularly to ensure efficient operation.

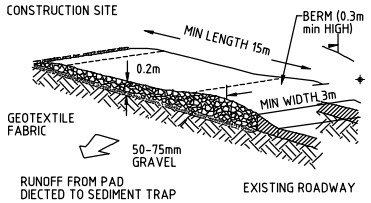
LEGEND

SILT FENCE

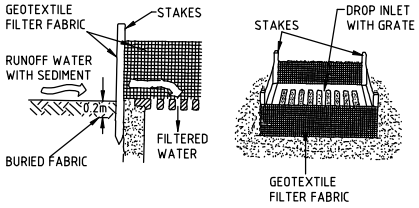
VEHICLE SHAKEDOWN

INLET SEDIMENT TRAP

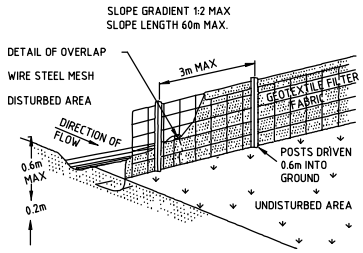
PLACE PORTABLE KERB SEDIMENT TRAP AS PER DETAIL AT ALL GULLY PITS AFFECTED BY SITE CONSTRUCTION WORKS



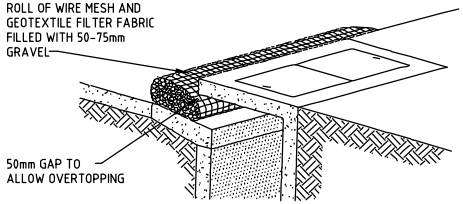
VEHICLE SHAKEDOWN AREA



INLET SEDIMENT TRAP



SILT FENCE



PORTABLE GRAVEL KERB SEDIMENT TRAP

1:500 @ A3

0 4 8 12 16 20m

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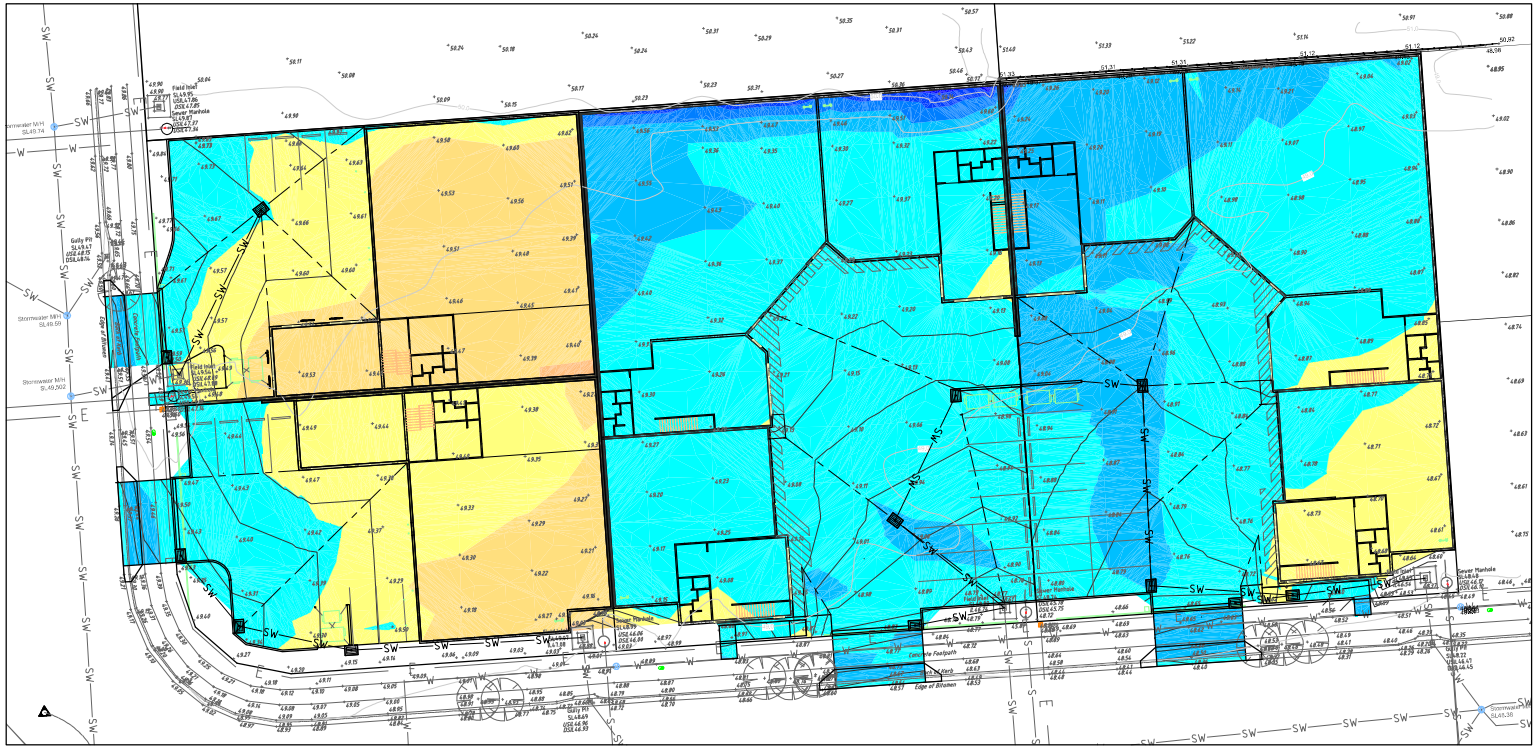
EROSION & SEDIMENT CONTROL PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	002	-



LEGEND	
CUT/FILL DEPTH (m)	Colour
-1.25 to -1.00	
-1.00 to -0.75	
-0.75 to -0.50	
-0.50 to -0.25	
-0.25 to 0.00	
0.00 to 0.25	
0.25 to 0.50	
0.50 to 0.75	

EARTHWORKS SUMMARY	
TOTAL CUT	742m³
TOTAL FILL	380m³
BALANCE	362m³

NOTES:
1. CALCULATIONS BASED ON EARTHWORKS LEVEL 250mm BELOW FINISHED LEVEL COMPARED TO EXISTING SURFACE LEVEL

NOTES
1. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARD 3798-GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. EXCESS SPOIL MATERIAL SHALL BE REMOVED FROM THE SITE TO AN APPROVED LOCATION THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SPOIL SITE TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO THE COMMENCEMENT OF SPOIL REMOVAL OPERATIONS.
3. SEDIMENTATION AND EROSION CONTROL MEASURES TO BE INSTALLED AND APPROVED PRIOR TO THE COMMENCEMENT OF EARTHWORKS.
4. ANY FILL BATTERS STEEPER THAN 1V:4H AND GREATED THAN 1.0M IN HEIGHT REQUIRE LODGEMENT OF BUILDING APPLICATION.
5. ALL WORKS TO BE IN ACCORDANCE WITH COGC PLANNING SCHEME POLICIES.
6. THE CONTRACTOR SHALL PROVIDE LEVEL 1 CERTIFICATION OF THE FILL MATERIAL PRIOR TO THE COMMENCEMENT OF FURTHER CIVIL WORKS.
7. BATTERS TO BE TURFED/MULCHED PRIOR TO ON MAINTENANCE INSPECTION.
8. ALL EXPOSED EARTHWORKS TO BE SEEDED PRIOR TO ON MAINTENANCE INSPECTION.

1:500 @ A3

0 4 8 12 16 20m

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CLIENT
360 DEVELOPMENTS AUS PTY LTD

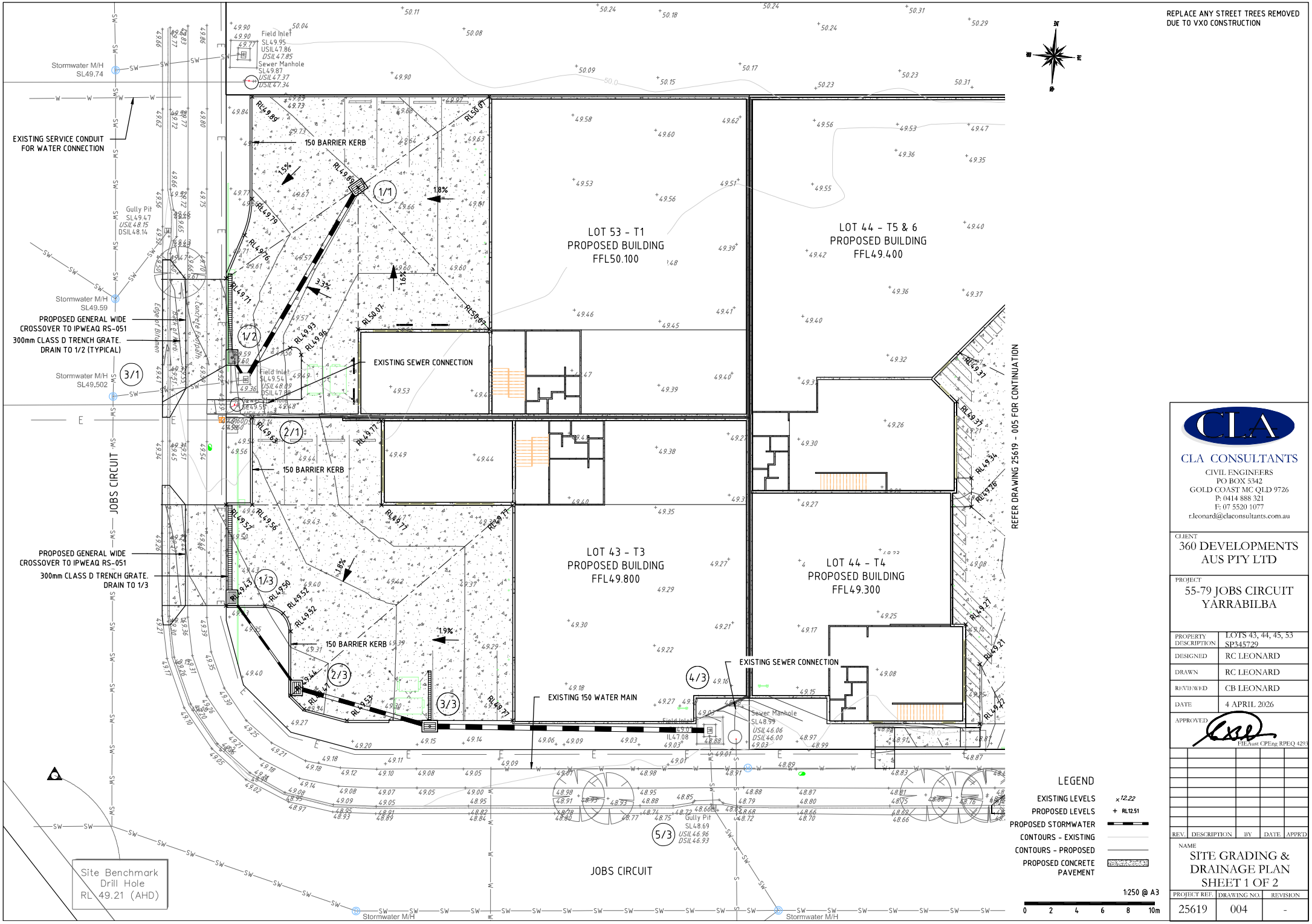
PROJECT
55-79 JOBS CIRCUIT YARRABILBA

PROPERTY DESCRIPTION	LOTS 43, 44, 45, 53 SP345729
DESIGNED	RC LEONARD
DRAWN	RC LEONARD
REVIEWED	CB LEONARD
DATE	4 APRIL 2026
APPROVED	PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
BULK EARTHWORKS PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	003	-



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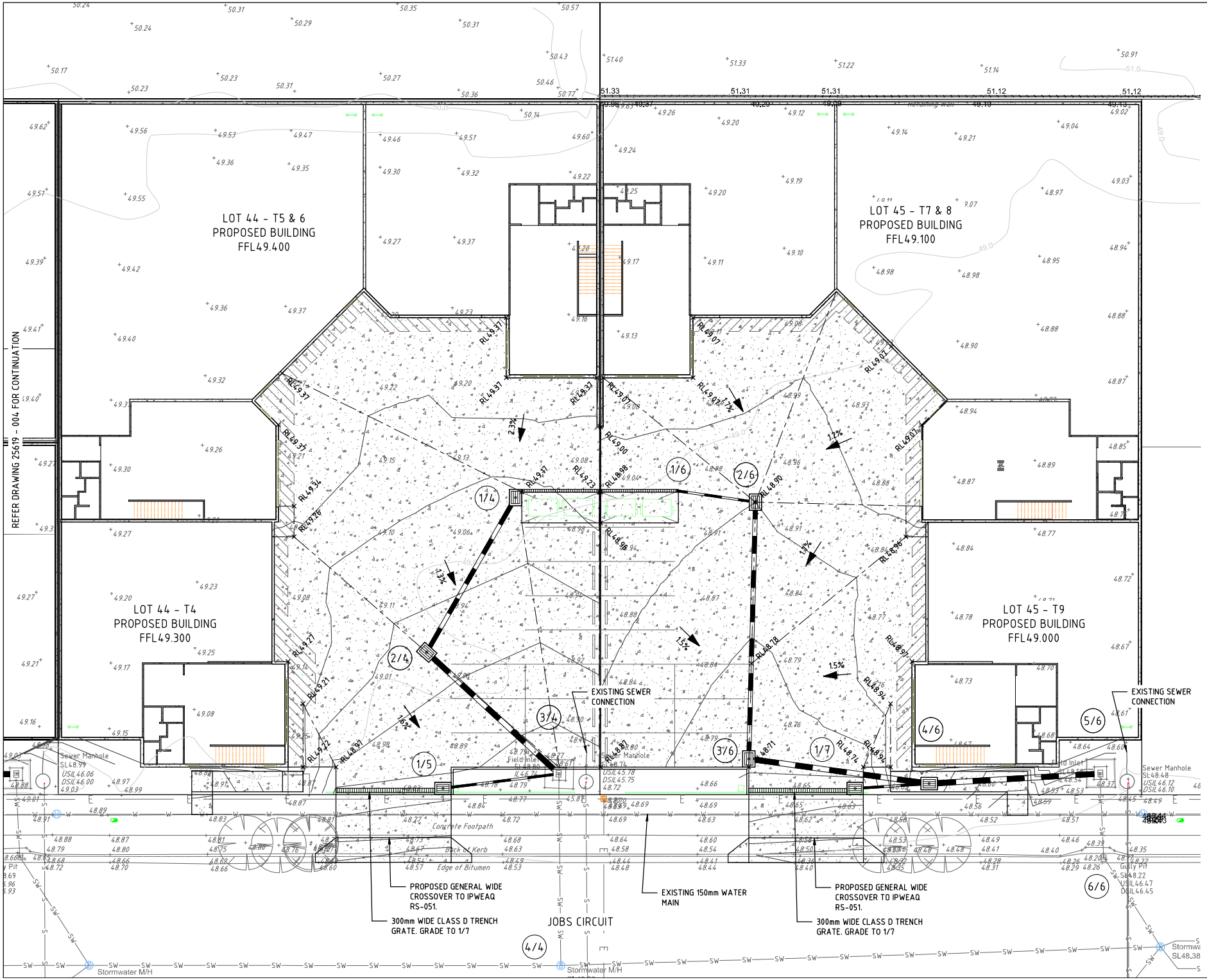
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	004	-



REPLACE ANY STREET TREES REMOVED DUE TO VXO CONSTRUCTION

LEGEND

EXISTING LEVELS	×12.22
PROPOSED LEVELS	+ RL12.51
PROPOSED STORMWATER	
CONTOURS - EXISTING	
CONTOURS - PROPOSED	
PROPOSED CONCRETE PAVEMENT	

1:250 @ A3

0 2 4 6 8 10m

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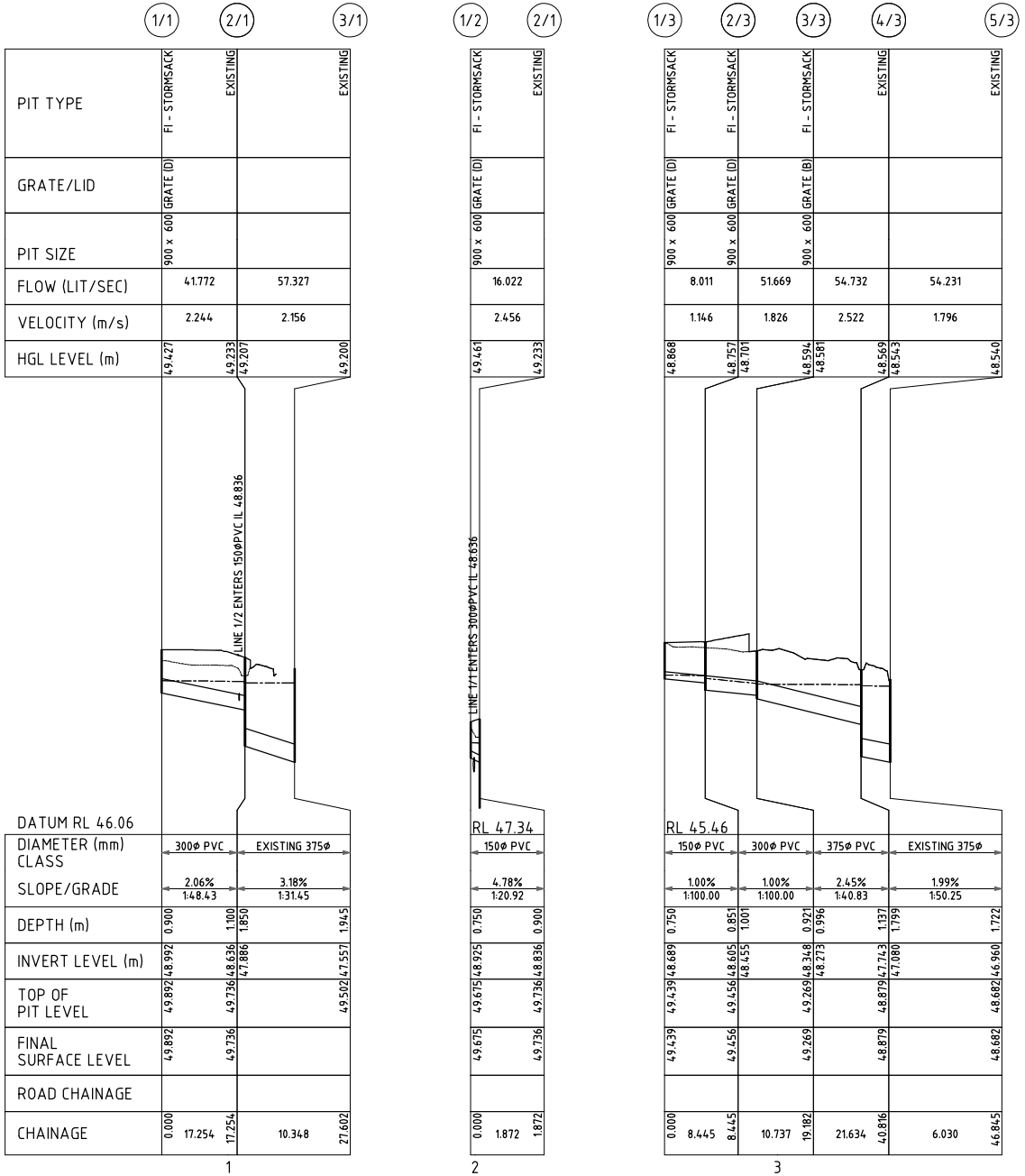
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
SITE GRADING & DRAINAGE PLAN SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	005	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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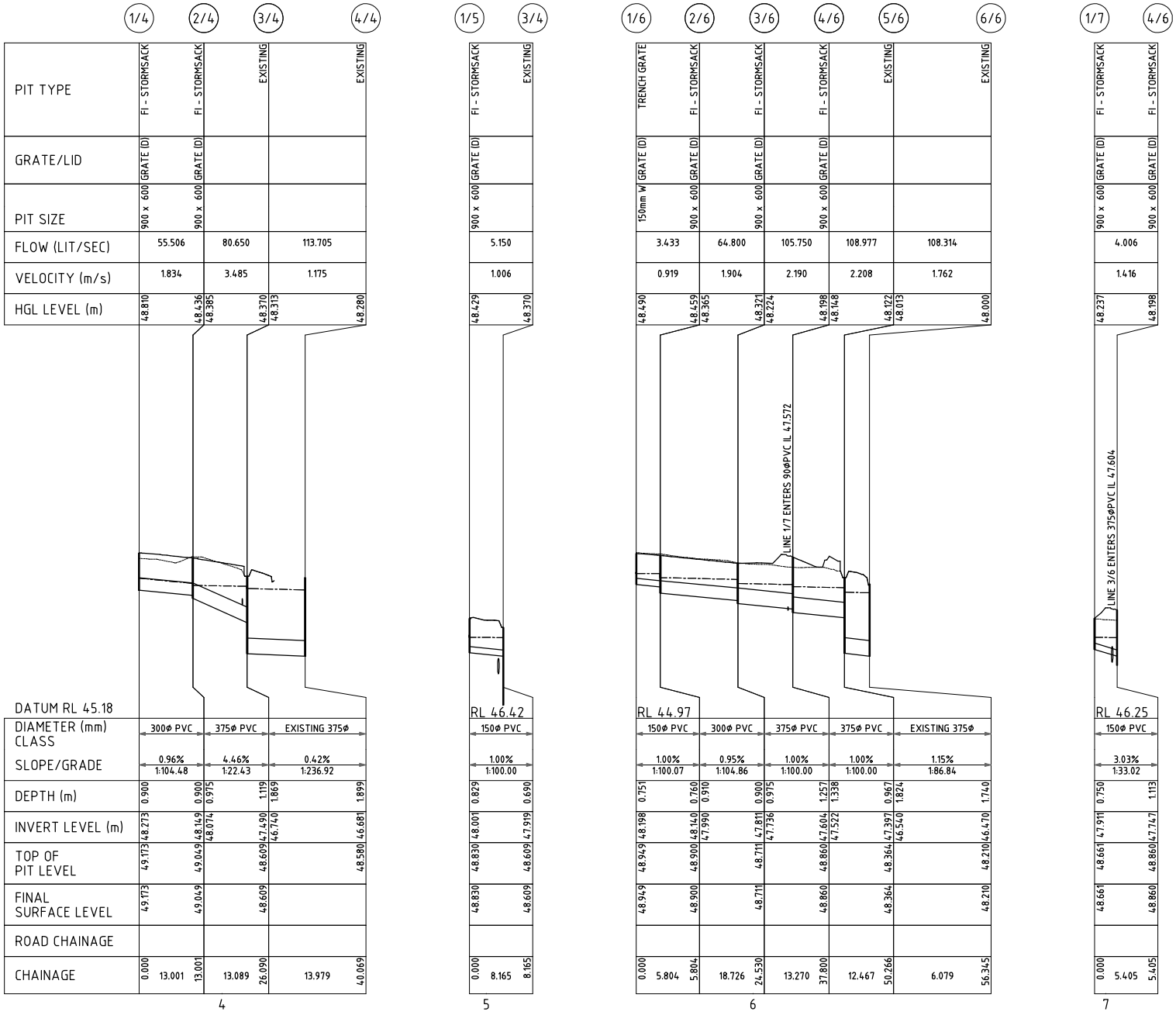
REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 1 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	006	-



VERTICAL 1:100 @ A3

HORIZONTAL 1:1,000 @ A3

0 1 2 3 4 5m

0 10 20 30 40 50m

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PROJECT
55-79 JOBS CIRCUIT
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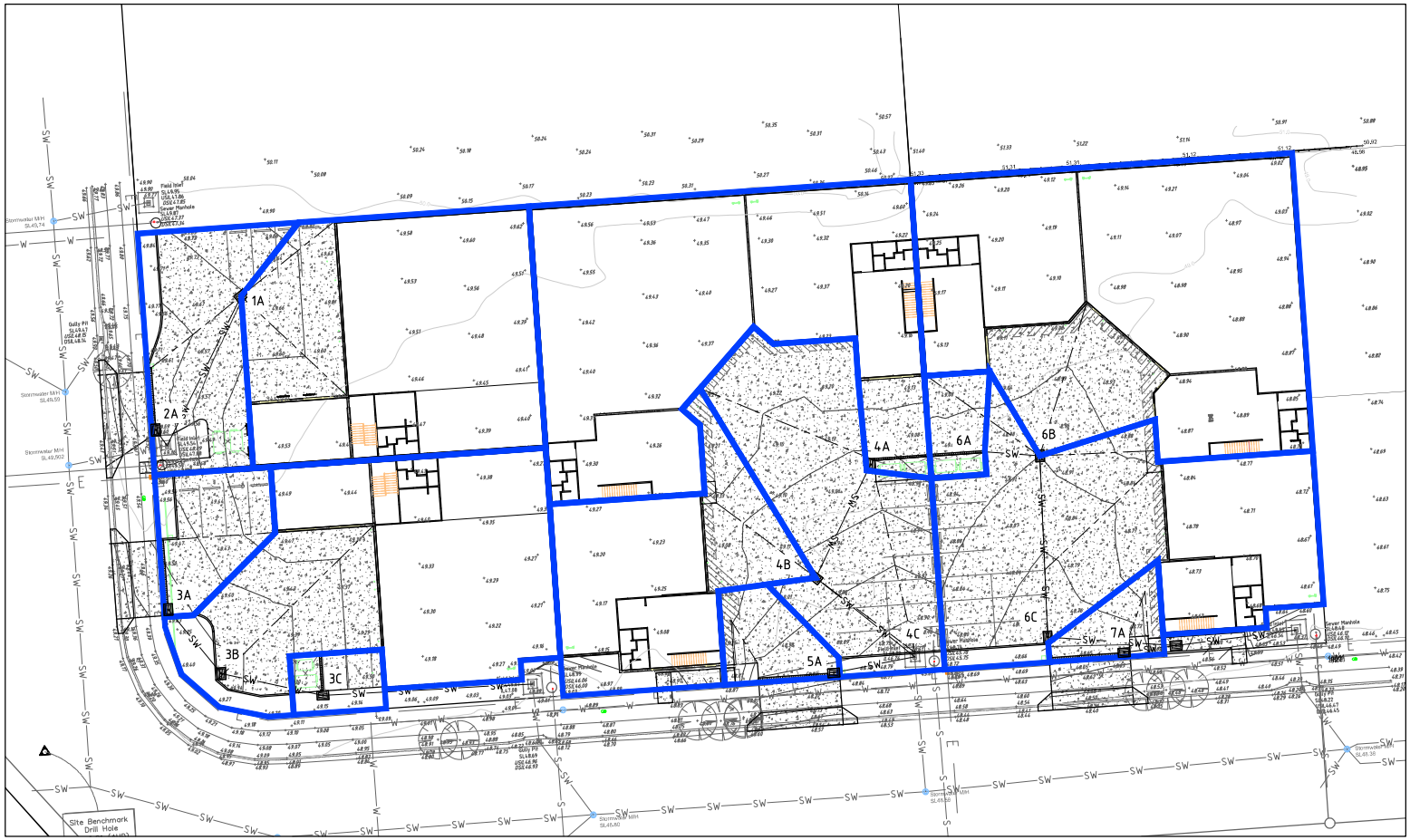
APPROVED

PIEAust CPEng RPEQ 4293

REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER LONG SECTIONS
SHEET 2 OF 2

PROJECT REF.	DRAWING NO.	REVISION
25619	007	-



1:500 @ A3

0 4 8 12 16 20m

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REV.	DESCRIPTION	BY	DATE	APPRD

NAME
STORMWATER CATCHMENT PLAN

PROJECT REF.	DRAWING NO.	REVISION
25619	008	-

DRAINAGE CALCULATIONS - Return Period: 10yrs

LOCATION	STRUCTURE No.	DRAIN SECTION	TIME SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	SUBCATCHMENT RUNOFF	RUNOFF CO-EFFICIENT	SUB-CATCHMENT AREA	EQUIVALANT AREA	SUM OF EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	INLET DESIGN FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	HALF ROAD CAPACITY	INLET TYPE	INLET CURVE	FLOW TO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	FLOW WIDTH	FLOW DEPTH	DRAIN DESIGN CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (CxA)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE SIZE	No. OF PIPES (1 IF BLANK)	PIPE CLASS	FLOW VELOCITY	TIME OF FLOW IN REACH	CAPACITY FLOW (MANNINGS)	CAPACITY FLOW (HGL)	HEADLOSSES STRUCTURE CHART No.	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCTURE HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCTURE HEADLOSSES	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L×Sf)	PART FULL	PART FULL DEPTH	PART FULL VELOCITY	DESIGN LEVELS OBVERT LEVELS	DRAIN SECTION HGL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
			tc min	I mm/hr		C	A ha	CxA ha	Sum CxA ha	Q L/s	L/s	%	L/s			Qg L/s	Qb L/s		m	m	tc min	I mm/hr	Sum CxA ha	Qp L/s	L m	S %	mm			V m/s	T min	L/s	L/s		$V^2/2g$ m	Ku	hu m	KL	hL m	Kw	hw m	Sf %	hf m		m	Vp m/s		m	m	m	m	m	m	
1A	1/1	1/12/1	5	206		1.00	0.073	0.073	0.073	42	42			FI	900x600	42		2/1		0.076		5.00	206	0.073	42	17	2	300		PVC	0.59	0.128	201	201		0.018	9.878	0.176					0.11	0.02		0.09	2.24		49.292	49.427	49.427	49.233	49.892	49.892	1/1
	2/1	2/13/1		206					0.101							0				0.000		5.13	206	0.101	57	10	3	375		Class 3 RRJ	0.52	0.080	313	441		0.014	1.930	0.027					0.06	0.01		0.11	2.16		48.261	49.207	49.233	49.200	49.736	49.736	2/1
																		3/1																																	
2A	1/2	1/22/1	5	206		1.00	0.028	0.028	0.028	16	16			FI	900x600	16		2/1		0.040		5.00	206	0.028	16	2	5	150		PVC	0.91	0.013	51	53		0.042	5.201	0.218					0.54	0.01		0.06	2.53		49.093	49.462	49.462	49.233	49.693	49.693	1/2
3A	1/3	1/32/3	5	206		1.00	0.014	0.014	0.014	8	8			FI	900x600	8		2/3		0.025		5.00	206	0.014	8	9	1	150		PVC	0.45	0.126	22	22		0.010	9.353	0.098					0.15	0.01		0.06	1.14		48.839	48.868	48.868	48.757	49.450	49.450	1/3
3B	2/3	2/33/3	5	206		1.00	0.077	0.077	0.091	44	44			FI	900x600	44		3/3		0.079		5.13	206	0.091	52	11	1	300		PVC	0.73	0.098	140	138		0.027	2.042	0.056					0.16	0.02		0.13	1.83		48.755	48.701	48.757	48.594	49.456	49.456	2/3
3C	3/3	3/34/3	5	206		1.00	0.006	0.006	0.097	3	3			FI	900x600	3		4/3		0.014		5.22	206	0.097	55	22	2	375		PVC	0.50	0.143	396	395		0.013	1.000	0.013					0.06	0.01		0.09	2.52		48.648	48.581	48.594	48.569	49.269	49.269	3/3
	4/3	4/35/3		206					0.097					FI	900x600	0		5/3		0.000		5.37	206	0.097	54	6	2	375		Class 3 RRJ	0.49	0.056	247	347		0.012	2.066	0.025					0.06	0.00		0.12	1.80		47.455	48.543	48.569	48.540	48.879	48.879	4/3
4A	1/4	1/42/4	5	206		1.00	0.097	0.097	0.097	56	56			FI	900x600	56		2/4		0.092		5.00	206	0.097	56	13	1	300		PVC	0.79	0.118	137	135		0.031	7.957	0.250					0.18	0.02		0.13	1.83		48.573	48.810	48.810	48.436	49.173	49.173	1/4
4B	2/4	2/43/4	5	206		1.00	0.045	0.045	0.142	26	26			FI	900x600	26		3/4		0.055		5.12	206	0.142	81	13	4	375		PVC	0.73	0.063	535	537		0.027	1.872	0.051					0.12	0.02		0.10	3.49		48.449	48.385	48.436	48.370	49.049	49.049	2/4
4C	3/4	3/44/4	5	206		1.00	0.050	0.050	0.201	29	29			FI	900x600	29				0.059		5.18	206	0.201	114	14	0	375		Class 3 RRJ	1.03	0.198	114	155		0.054	1.055	0.057					0.23	0.03		0.31	1.18		47.115	48.313	48.370	48.280	48.609	48.609	3/4
																		4/4																																	
5A	1/5	1/53/4	5	206		1.00	0.009	0.009	0.009	5	5			FI	900x600	5		3/4		0.019		5.00	206	0.009	5	9	1	150		PVC	0.29	0.141	22	22		0.004	12.385	0.054					0.07	0.01		0.05	1.01		48.151	48.429	48.429	48.370	48.847	48.847	1/5
6A	1/6	1/62/6	5	206		1.00	0.006	0.006	0.006	3	3			FI	900x600	3		2/6		0.014		5.00	206	0.006	3	6	1	150		PVC	0.19	0.105	22	22		0.002	14.910	0.029					0.03	0.00		0.04	0.92		48.348	48.490	48.490	48.459	48.949	48.949	1/6
6B	2/6	2/63/6	5	206		1.00	0.108	0.108	0.114	62	62			FI	900x600	62		3/6		0.099		5.11	206	0.114	65	19	1	300		PVC	0.92	0.164	136	135		0.043	2.197	0.094					0.24	0.04		0.15	1.90		48.290	48.365	48.459	48.321	48.900	48.900	2/6
6C	3/6	3/64/6	5	206		1.00	0.074	0.074	0.188	42	42			FI	900x600	42		4/6		0.077		5.27	206	0.188	106	13	1	375		PVC	0.96	0.101	253	248		0.047	2.071	0.097					0.20	0.03		0.17	2.19		48.111	48.224	48.321	48.198	48.711	48.711	3/6
	4/6	4/65/6		206					0.195					FI	900x600	0				0.000		5.37	206	0.195	109	12	1	375		PVC	0.99	0.094	253	248		0.050	1.000	0.050					0.21	0.03		0.17	2.21		47.897	48.148	48.198	48.122	48.860	48.860	4/6
																		5/6																																	
	5/6	5/66/6		206					0.195					FI	900x600	0		6/6		0.000		5.46	206	0.195	108	6	1	375		Class 3 RRJ	0.98	0.057	188	262		0.049	2.226	0.109					0.21	0.01		0.20	1.76		46.915	48.013	48.122	48.000	48.364	48.364	5/6
7A	1/7	1/74/6	5	206		1.00	0.007	0.007	0.007	4	4			FI	900x600	4		4/6		0.016		5.00	206	0.007	4	5	3	150		PVC	0.23	0.064	38	40		0.003	13.976	0.037					0.04	0.00		0.03	1.42		48.061	48.237	48.237	48.198	48.661	48.661	1/7

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PROJECT
55-79 JOBS CIRCUIT
YARRABILBA

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REV.	DESCRIPTION	BY	DATE	APPR'D

NAME
STORMWATER CALCULATION SHEET

PROJECT REF.	DRAWING NO.	REVISION
25619	009	-