

OCG ref: AP2022/006

23 October 2023

David Stolz

Assistant Coordinator-General – Planning and Services PO Box 15517, 1 William Street Brisbane, Queensland 4000

Dear David

Response to Information Request: SDA Application for a MCU for a utility installation (water pipeline) and operational works (vegetation clearing) in the GSDA

GAWB refers to the State Development Area (SDA) application for a Material Change of Use (MCU) for a utility installation (water pipeline) and operational works (vegetation clearing) in the Gladstone State Development Area (GSDA). This application was formally lodged for the installation of the proposed Fitzroy to Gladstone Pipeline (FGP), with the Office of Coordinator-General (OCG) on 27 June 2023. We acknowledge receipt of the information request sent by OCG dated 23 August 2023 and have provided the following responses based on the gueries from the information request.

1. Response to information request

1.1 Request 1: Air Value Assembly

Discussions between the proponent and Gladstone Ports Corporation (GPC) have been ongoing in the interest of reducing the impact of air valves along the transport corridor. The design of scour and air valves also potentially compromises the ability for inspection and maintenance vehicles to traverse without restraints along the corridor.

The proponent is requested to amend development plans and provide further detail regarding the air valve assembly (revised amount and design) with a view of reducing impacts along the transport corridor, with the aim of allowing motor vehicles along the infrastructure corridor (e.g., inspection vehicles and construction vehicles).

















1.2 Response

Review and rationalisation of the number and footprint of isolation, air and scour valves has occurred as part of both the Safety in Design / Hazard and Operability Analysis (SiD / HAZOP) and construction review processes.

Air valves (AVs) on water pipelines are required to:

- Assist with expelling air form the pipeline during filling operations
- Assist with allowing air into the pipeline during emptying operations
- Allow the expulsion of dissolved air from the water during normal operation.

The FGP now has a total of 226 AVs at a maximum spacing of 1,000 m and an average spacing of approximately 550 m. This total number has been reduced from the approximately 240 noted in the Planning Report for Material Change of Use for the Pipeline within the GSDA (Planning Report, GHD, 2023). Of these 226, 40 are within the GSDA, as shown on the issued for construction (IFC) design drawings broken down by landholder interest as follows:

- GPC land 15
- Coordinator-General (CG) land 14
- Minister for Economic Development Queensland (MEDQ) land 5
- Roads 2 Department of Transport and Main Roads (TMR) and 4 Gladstone Regional Council (GRC).

The 40 AVs remains unchanged from the Planning Report (GHD, 2023) and was not able to be further reduced due to undulating nature of the topography and the intrinsic AV functionality requirements.

The AVs will be located on the pipeline alignment, with each to be protected with a post and rail arrangement, which also came out of the SiD / HAZOP workshop, refer to drawing 1151-DL00-W3P-CIV-DRG-10010 at Attachment A. Trafficability along the right of way (ROW) will not be compromised given a three-metre wide maintenance track is to be retained adjacent to and for the length of the pipeline alignment (excluding trenchless crossing locations) to enable inspection and maintenance access by 4WD vehicles (i.e., not a formed or gravelled road).

Refer to Attachment A regarding IFC design drawings showing the AV locations and general arrangement.















1.3 Request 2: Height of scour valves and manholes

Scour valves and manholes are currently proposed to be located above ground, which may also impact the accessibility of the infrastructure corridor. To limit impacts on other proponents, locate scour valves and manholes at ground level wherever possible.

The proponent is requested to amend plans to locate scour valves at ground level to lessen development impacts within the infrastructure corridor. In areas where it is not feasible to locate the valves at ground level, identify and provide details of these locations and ensure that the distance between the scour valve and water pipeline is greater than 50 m.

1.4 Response

As noted at Section 1.2, review and rationalisation of valves has occurred as part of both the SiD / HAZOP and construction review processes.

Scour valves (SVs) are required to assist in draining the pipeline in the event of either planned or unplanned maintenance events. SVs have been included at major low points only and have been significantly reduced from a total of 230 with spacings every 200 m to 800 m along the FGP as outlined in the Planning Report (GHD, 2023). The number of above ground SVs have been reduced to 51 on the FGP with an average spacing of approximately 2,300 m. There are 11 SVs on GSDA land as indicated in the issued for construction drawings, broken down by landholder interest as follows:

- GPC land 3
- CG land 4
- MEDQ land 1
- Roads -3 (GRC).

Isolation valves (IVs) are required in the case of failure in the pipeline, pump station, storage reservoir or Water Treatment Plant (WTP). There are three above ground IVs in the GSDA – one each on CG lands (at ~CH102700, lot 20 SP272417), GAWB land (Aldoga Reservoirs, lot 2 SP260764) and a GRC road reserve (Lindherr Road, at ~CH113225).

Each valve would be protected with a post and rail arrangement (refer to response to Section 1.2). All AVs, SVs and IVs are located directly on the pipeline i.e., they are not offset, with trafficability maintained as per response at Section 1.2.

Refer to Attachment A regarding IFC design drawings showing the SV and IV locations and general arrangement.

No manholes are included in the FGP design.











All equipment identified in Section 1.2 and 1.4 (i.e., AV, SV and IV) is located above ground to assist with future maintenance and operability as agreed with GAWB and Owners Engineer during the Early Contractor Involvement (ECI) phase / innovations process, and extensive SiD / HAZOP workshops.

There is potentially the requirement for an above-ground tie-in to the GAWB system at Mt Miller on GPC land (Lot 7 SP145439) as indicated in the Planning Report (GHD, 2023), noting this is currently still subject to negotiation with GAWB / GPC. If needed, this would include a 20m x 12m compound on the ROW, secured by a 2.4 m high chain wire mesh fence (refer to drawings 1151-DL07-W3P-CIV-DRG-27013 and 1151-DL07-W3P-CIV-DRG-27014 Rev F at Attachment A).

1.5 Request 3: Proposed plans

The proposed plans provided as part of Appendix F – Design Details are labelled 'preliminary' and 'not to be used for construction purposes.' Construction plans are required to properly understand the impacts generated by the proposed development.

The proponent is requested to confirm the status of the plans and if they are to be used for construction. If not, please provide plans suitable for construction for the proposed development.

1.6 Response

The drawings for the GSDA (i.e., ~CH96000 to CH117000) have progressed to IFC and are included at Attachment A. Table 1 provides the drawing register.

Table 1 Drawing Register

Design Document Reference	Stage	Rev	Description
1151-DL00-W3P-CIV-DRG-10010	IFC	1	STANDARD DETAILS TYPLE POST AND RIAL
			ENCLOSURE
1151-DL05-W3P-PLE-DRG-65138	IFC	1	DL05 PIPELINE CH 95,785.10 - 96,485.10
1151-DL05-W3P-PLE-DRG-65139	IFC	2	DL05 PIPELINE CH 96,485.10 - 97,185.10
1151-DL05-W3P-PLE-DRG-65140	IFC	1	DL05 PIPELINE CH 97,185.10 - 97,885.10
1151-DL05-W3P-PLE-DRG-65141	IFC	1	DL05 PIPELINE CH 97,885.10 - 98,585.10
1151-DL05-W3P-PLE-DRG-65142	IFC	1	DL05 PIPELINE CH 98,585.10 - 99,285.10
1151-DL05-W3P-PLE-DRG-65143	IFC	1	DL05 PIPELINE CH 99,285.10 - 99,985.10
1151-DL05-W3P-PLE-DRG-65144	IFC	1	DL05 PIPELINE CH 99,985.10 - 100,685.10
1151-DL05-W3P-PLE-DRG-65145	IFC	1	DL05 PIPELINE CH 100,685.10 - 101,385.10
1151-DL05-W3P-PLE-DRG-65146	IFC	1	DL05 PIPELINE CH 101,385.10 - 102,085.10
1151-DL05-W3P-PLE-DRG-65147	IFC	1	DL05 PIPELINE CH 102,085.10 - 102,785.10
1151-DL05-W3P-PLE-DRG-65148	IFC	1	DL05 PIPELINE CH 102,785.10 - 103,485.10









Design Document Reference	Stage	Rev	Description
1151-DL05-W3P-PLE-DRG-65149	IFC	1	DL05 PIPELINE CH 103,485.10 - 104,185.10
1151-DL05-W3P-PLE-DRG-65150	IFC	1	DL05 PIPELINE CH 104,185.10 - 104,885.10
1151-DL05-W3P-PLE-DRG-65151	IFC	1	DL05 PIPELINE CH 104,885.10 - 105,585.10
1151-DL05-W3P-PLE-DRG-65152	IFC	1	DL05 PIPELINE CH 105,585.10 - 106,285.10
1151-DL05-W3P-PLE-DRG-65153	IFC	1	DL05 PIPELINE CH 106,285.10 - 106,985.10
1151-DL05-W3P-PLE-DRG-65154	IFC	1	DL05 PIPELINE CH 106,985.10 - 107,685.10
1151-DL05-W3P-PLE-DRG-65155	IFC	1	DL05 PIPELINE CH 107,685.10 - 108,385.10
1151-DL05-W3P-PLE-DRG-65156	IFC	1	DL05 PIPELINE CH 108,385.10 - 108,558.32
1151-DL07-W3P-CIV-DRG-17001	IFC	0	DL07 STANDARD DETAILS - ISOLATION VALVE
			ASSEMBLY
1151-DL07-W3P-CIV-DRG-17002	IFC	0	DL07 STANDARD DETAILS - AIR VALVE ASSEMBLY
1151-DL07-W3P-CIV-DRG-17003	IFC	0	DL07 STANDARD DETAILS - SCOUR ASSEMBLY
1151-DL07-W3P-CIV-DRG-27001	IFC	0	DL07 CONNECTION DETAILS - DL06/DL07 CONNECTION DETAIL
1151-DL07-W3P-CIV-DRG-37010	IFC	1	MT LARCOM YARWUN ROAD NORTH COAST RAIL CRITICAL CROSSING GENERAL ARRANGEMENT
1151-DL07-W3P-CIV-DRG-37011	IFC	1	MT LARCOM YARWUN ROAD NORTH COAST RAIL CRITICAL CROSSING DETAILS
1151-DL07-W3P-CIV-DRG-27013		F	CONNECTION DETAILS
1151-DL07-W3P-CIV-DRG-27014		F	CONNECTION DETAILS
1151-DL07-W3P-CIV-DRG-37020	IFC	1	GLADSTONE MT LARCOM ROAD CRITICAL
			CROSSING GENERAL ARRANGEMENT
1151-DL07-W3P-CIV-DRG-37021	IFC	1	GLADSTONE MT LARCOM ROAD CRITICAL
4454 54 55 55 55 55 55 55 55 55 55 55 55			CROSSING DETAILS
1151-DL07-W3P-CIV-DRG-37030	IFC	1	TARGINNIE ROAD & GLADSTONE MT LARCOM ROAD CRITICAL CROSSING GENERAL
			ARRANGEMENT
1151-DL07-W3P-CIV-DRG-37031	IFC	1	TARGINNIE ROAD & GLADSTONE MT LARCOM
			ROAD CRITICAL CROSSING DETAILS
1151-DL07-W3P-CIV-DRG-37040	IFC	1	RTA SLURRY PIPELINE CRITICAL CROSSING
1151 DL07 W2D CW DDC 27041	IEC	1	GENERAL ARRANGEMENT
1151-DL07-W3P-CIV-DRG-37041	IFC	1	RTA SLURRY PIPELINE CRITICAL CROSSING DETAILS
1151-DL07-W3P-CIV-DRG-37050	IFC	1	RTA COAL CONVEYOR CRITICAL CROSSINGS GENERAL ARRANGEMENT
1151-DL07-W3P-CIV-DRG-37051	IFC	1	RTA COAL CONVEYOR CRITICAL CROSSINGS
		_	DETAILS
1151-DL07-W3P-PLE-DRG-67002	IFC	3	DL07 PIPELINE CH 108899.44 - 109579.44
1151-DL07-W3P-PLE-DRG-67003	IFC	0	DL07 PIPELINE CH 109579.44 - 110279.44
1151-DL07-W3P-PLE-DRG-67004	IFC	3	DL07 PIPELINE CH 110279.44 - 110979.44
1151-DL07-W3P-PLE-DRG-67005	IFC	0	DL07 PIPELINE CH 110979.44 - 111679.44
1151-DL07-W3P-PLE-DRG-67006	IFC	3	DL07 PIPELINE CH 111679.44 - 112379.44
1151-DL07-W3P-PLE-DRG-67007	IFC	0	DL07 PIPELINE CH 112379.44 - 113079.44
1151-DL07-W3P-PLE-DRG-67008	IFC	0	DL07 PIPELINE CH 113079.44 - 113779.44









Design Document Reference	Stage	Rev	Description
1151-DL07-W3P-PLE-DRG-67009	IFC	0	DL07 PIPELINE CH 113779.44 - 114479.44
1151-DL07-W3P-PLE-DRG-67010	IFC	3	DL07 PIPELINE CH 114479.44 - 115179.44
1151-DL07-W3P-PLE-DRG-67011	IFC	3	DL07 PIPELINE CH 115179.44 - 115879.44
1151-DL07-W3P-PLE-DRG-67012	IFC	0	DL07 PIPELINE CH 115879.44 - 116568.03

The plans remain in general accordance with the preliminary SMEC drawings included in the Planning Report (GHD, 2023).

1.7 Request 4: Critical crossing detail plans

Critical crossing detail plans are requested to understand development impacts over four locations.

The proponent is requested to provide the following critical crossing detail plans: 37051, 37040, 37030 and 37010.

1.8 Response

The specific drawings requested are attached at Attachment A (also refer to Section 1.6).

1.9 Request 5: Temporary construction areas

Limited detail has been provided about temporary construction areas has been provided in the application material. Additional information is required to understand the impacts on [sic].

The proponent is requested to identify probable temporary construction areas on a map and provide a summary about how they will be appropriately used and managed to limit impacts such as transport and noise.

1.10 Response

GAWB and MBJV has investigated temporary construction areas to enable safe and efficient construction of the FGP. Due to the potential time impacts to grant of this MCU and operational works approval, additional workspace will not be considered at this time. However, it should be noted existing access tracks may be used to gain access to the ROW. This access will be managed under Appendix A of the Traffic Management Plan (MBJV, 2023), refer to Attachment B for an excerpt of the Traffic Management Plan (MBJV, 2023) specifically dealing with the matter (i.e., Appendix A: Temporary Site Access Routes). Please note the Traffic Management Plan (MBJV, 2023) was provided to OCG 24 July 2023.











There will be no change in use for these accesses, and as such, it is considered that there would not be any additional approvals required.

Conclusion 2.

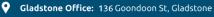
We trust the above information request responses are sufficient to allow your assessment of the application. Please do not hesitate to contact the undersigned should you have any questions in relation to the above matters.

Regards

Simon Wakefield

FGP Approvals Manager



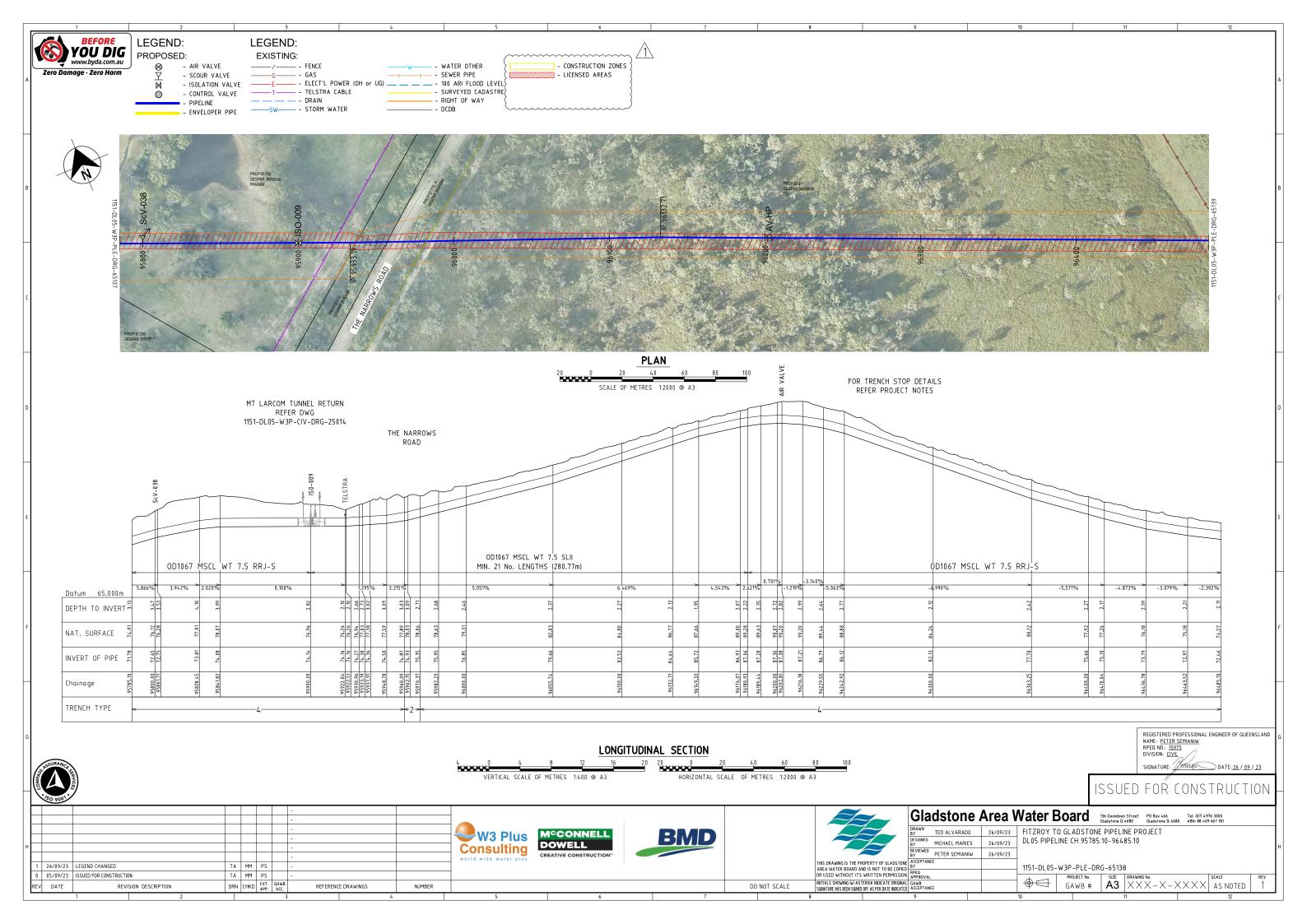


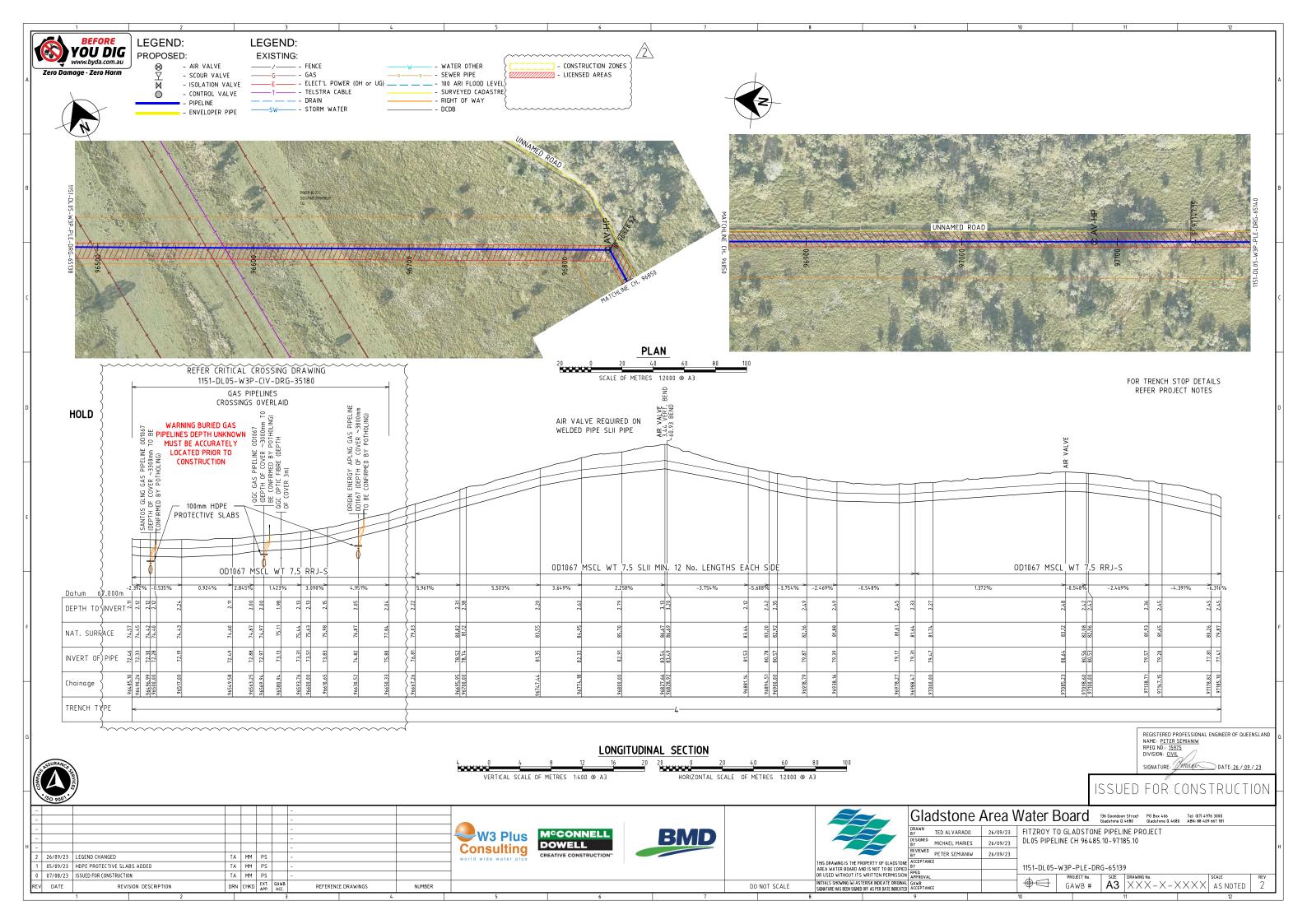


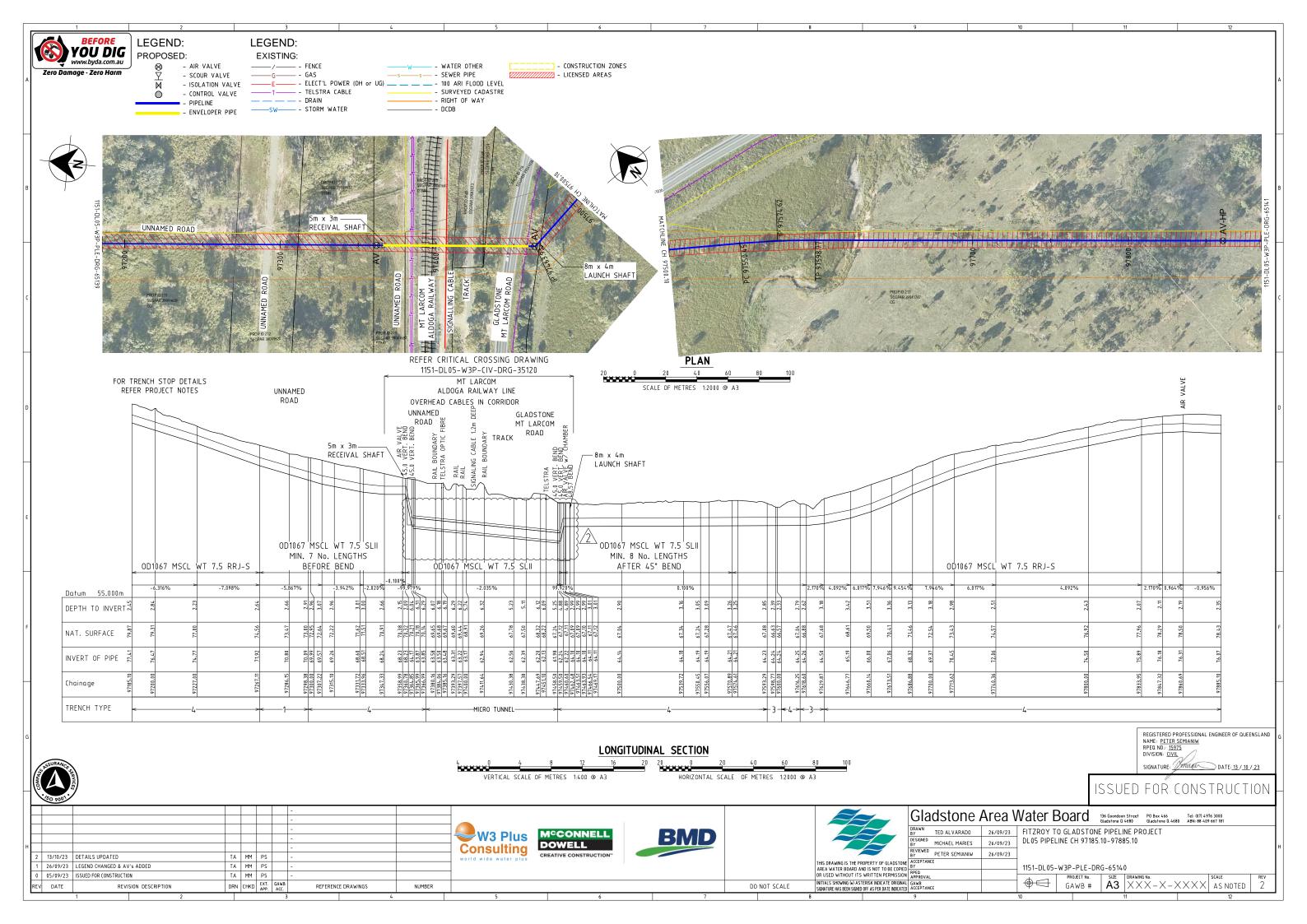
Attachment A – IFC Design Drawings

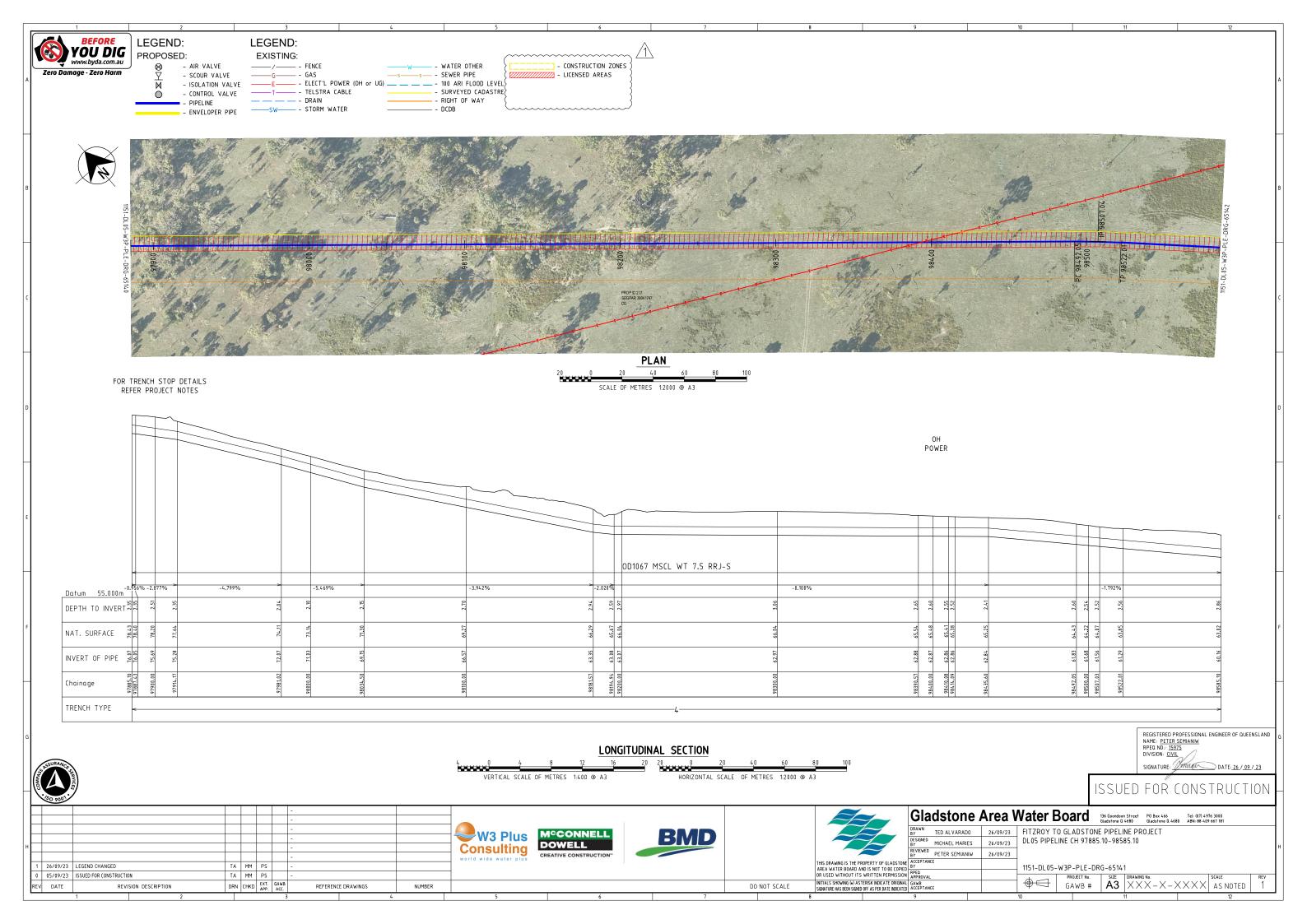


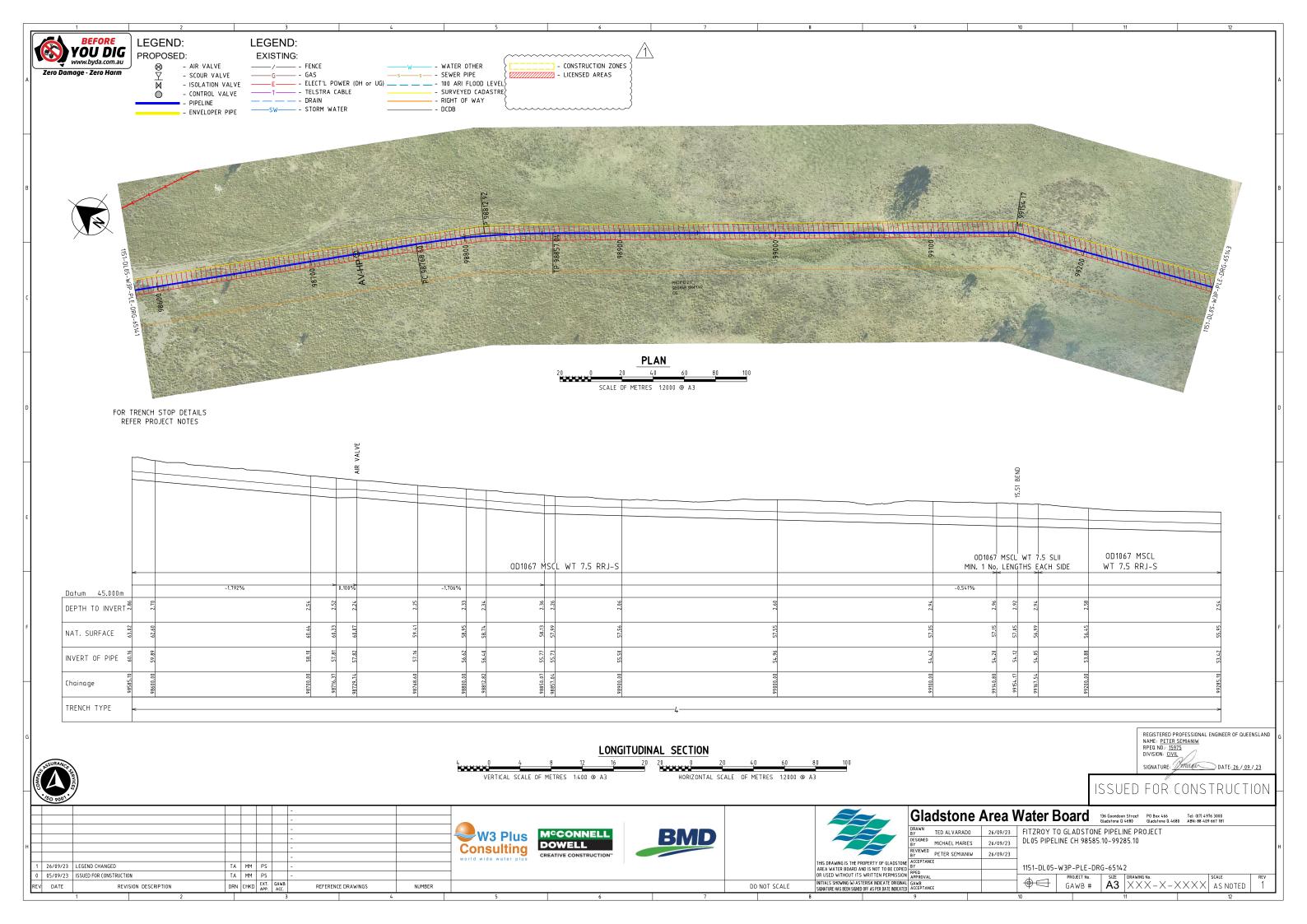


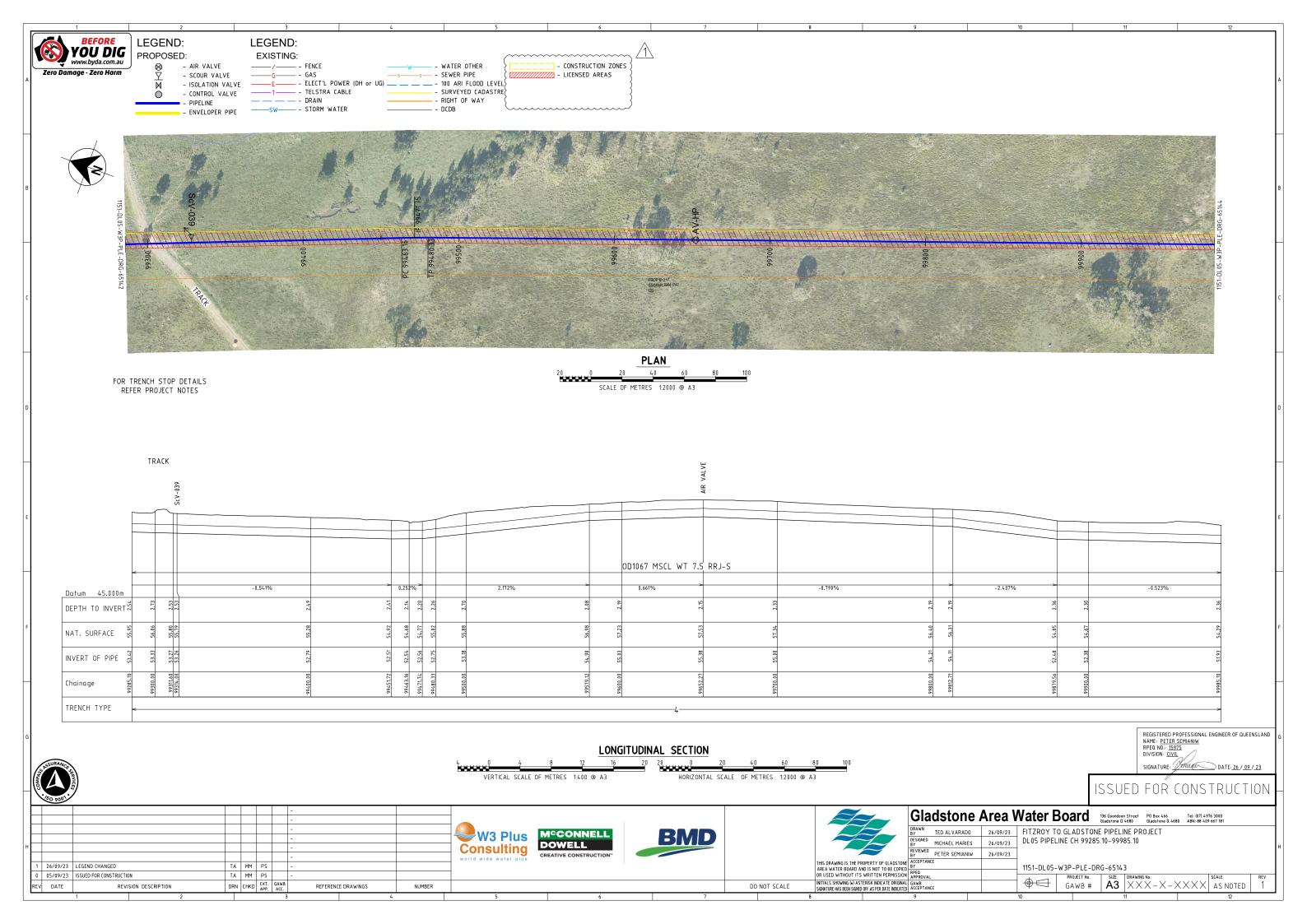


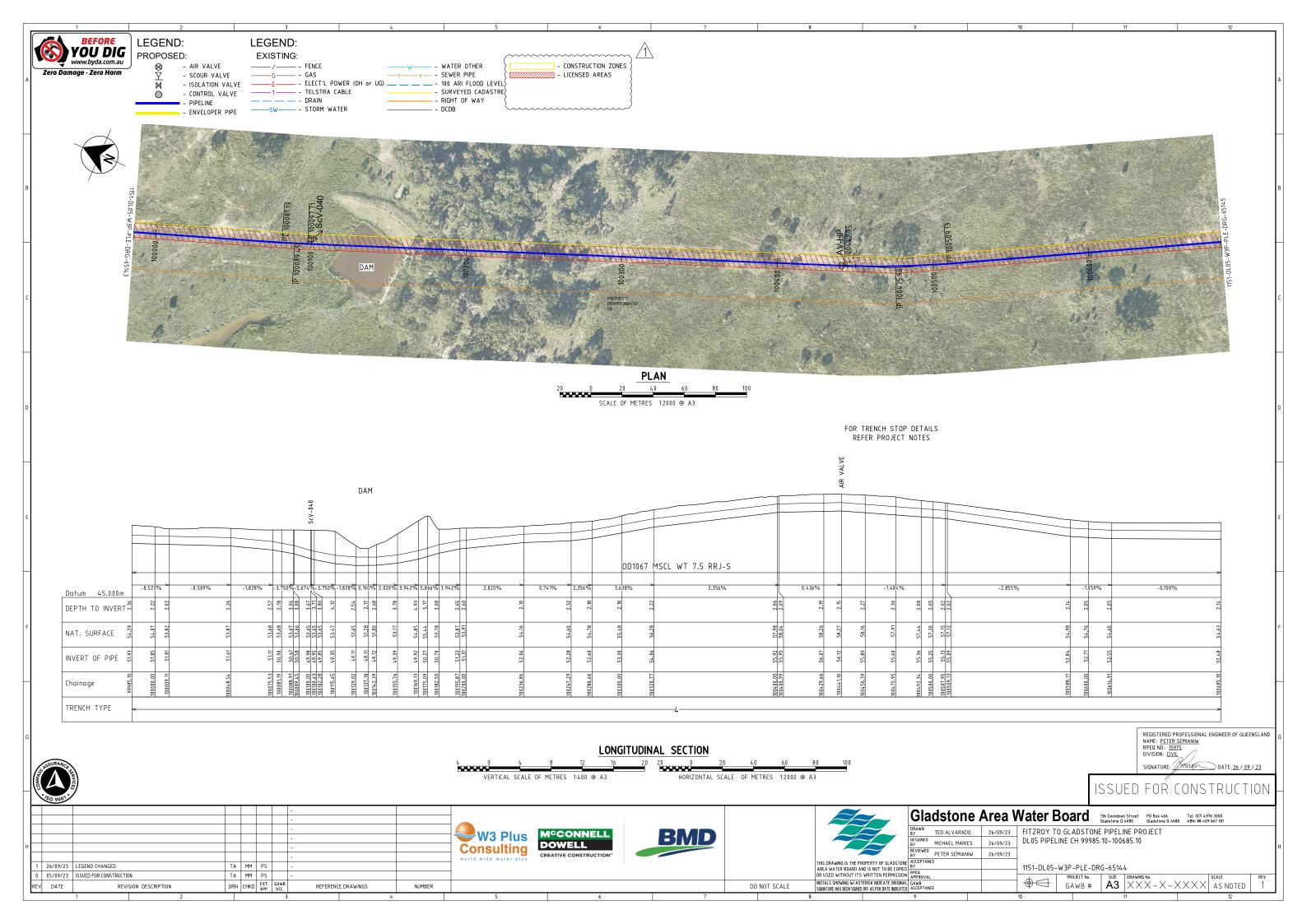


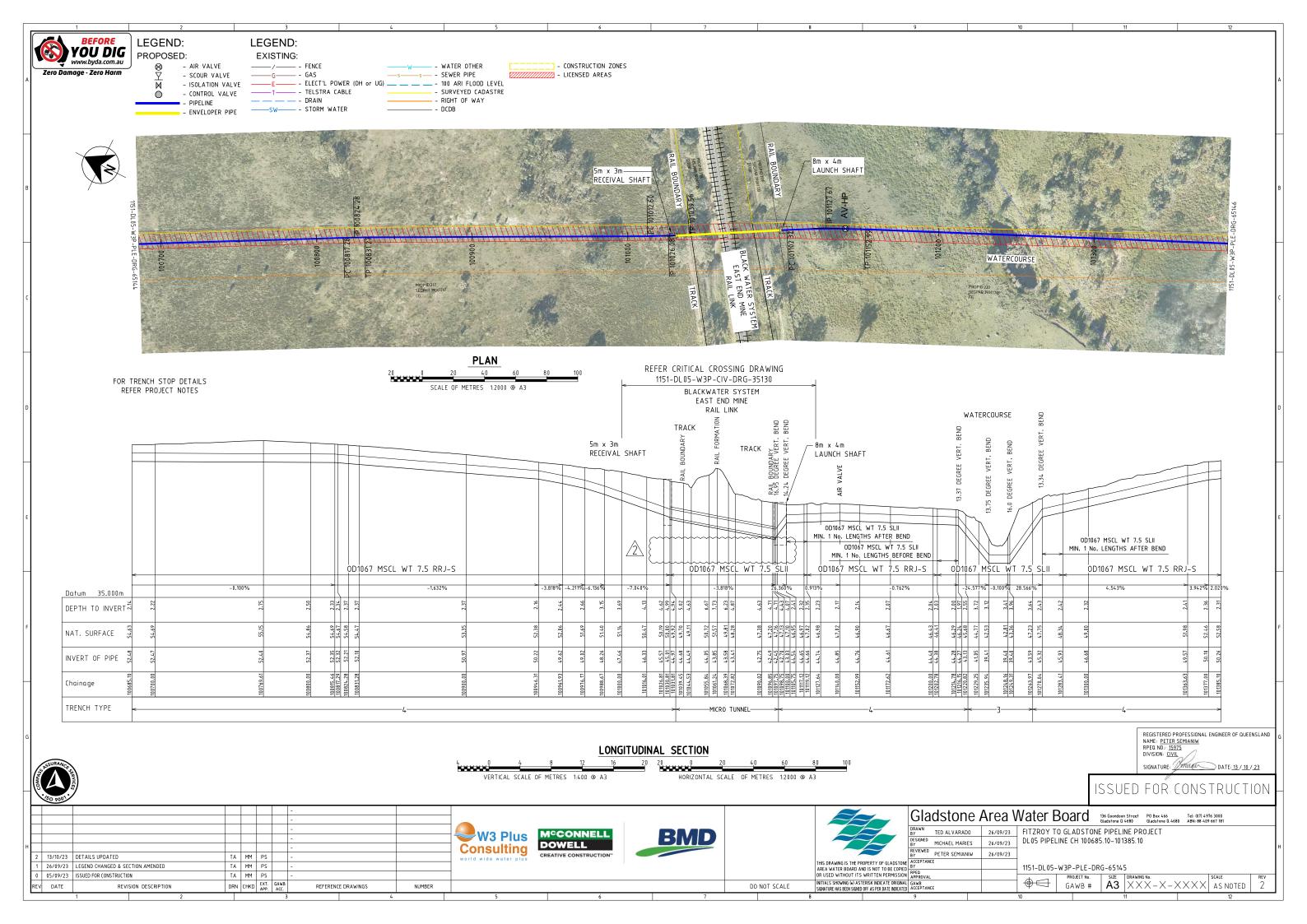


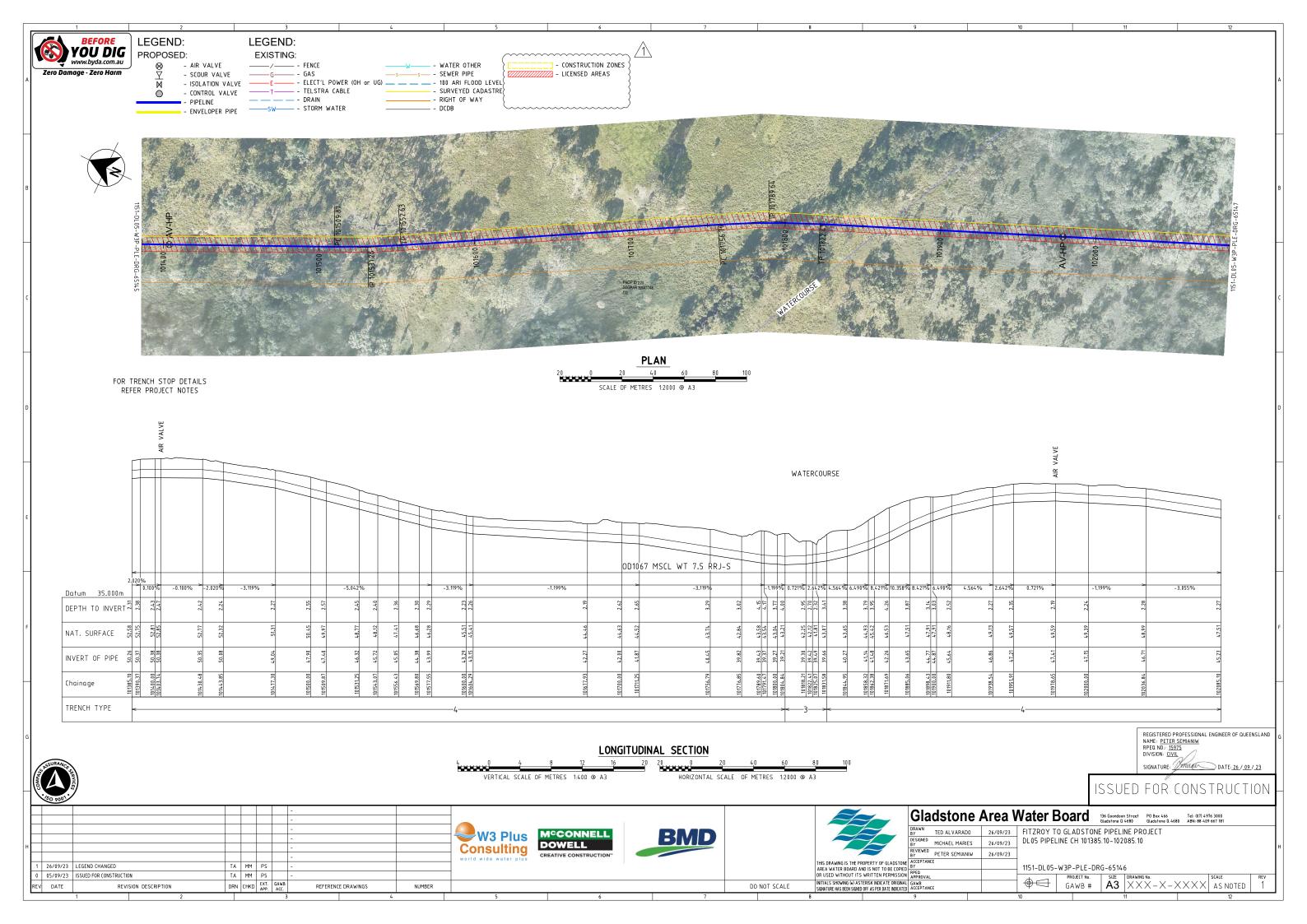


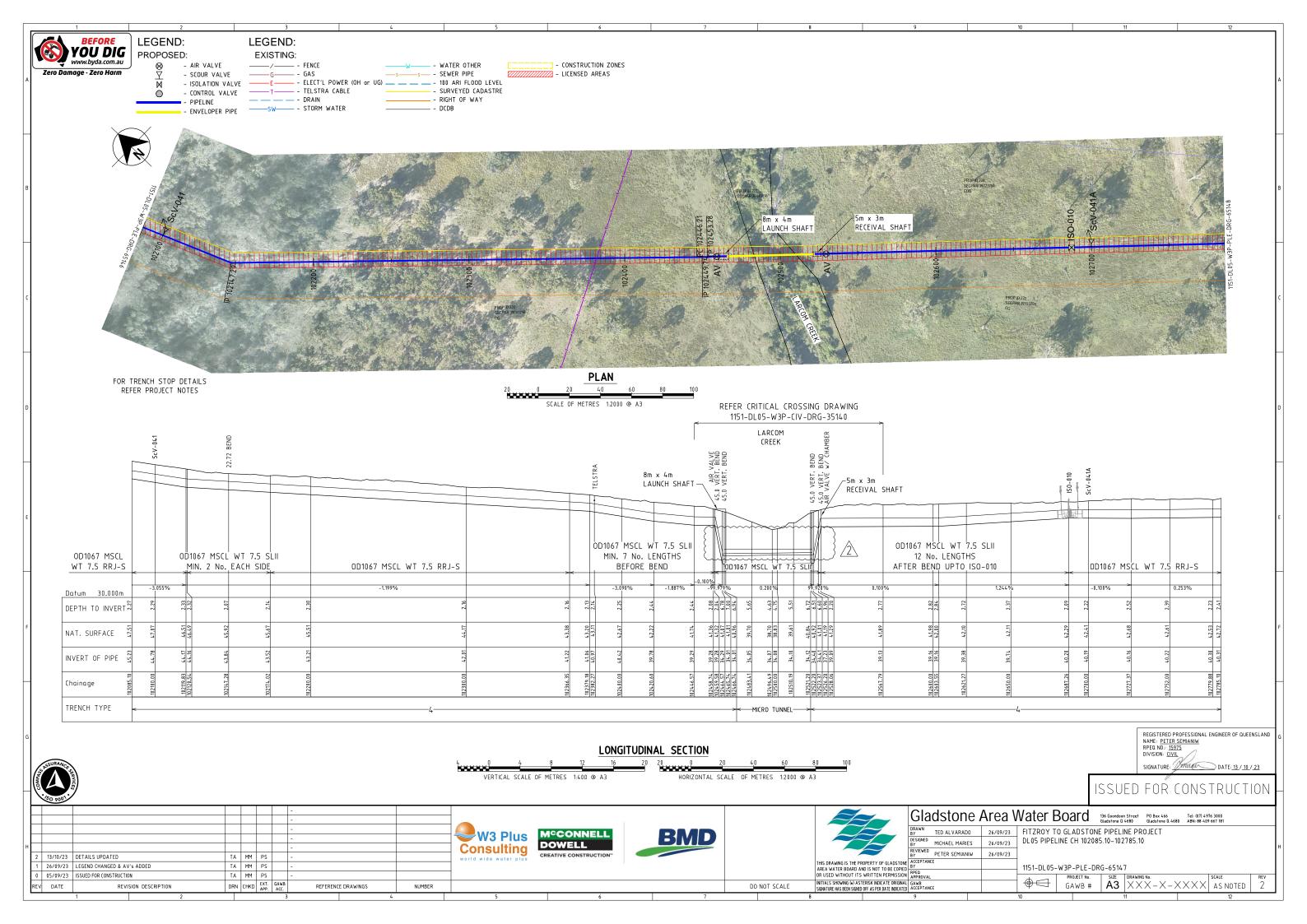


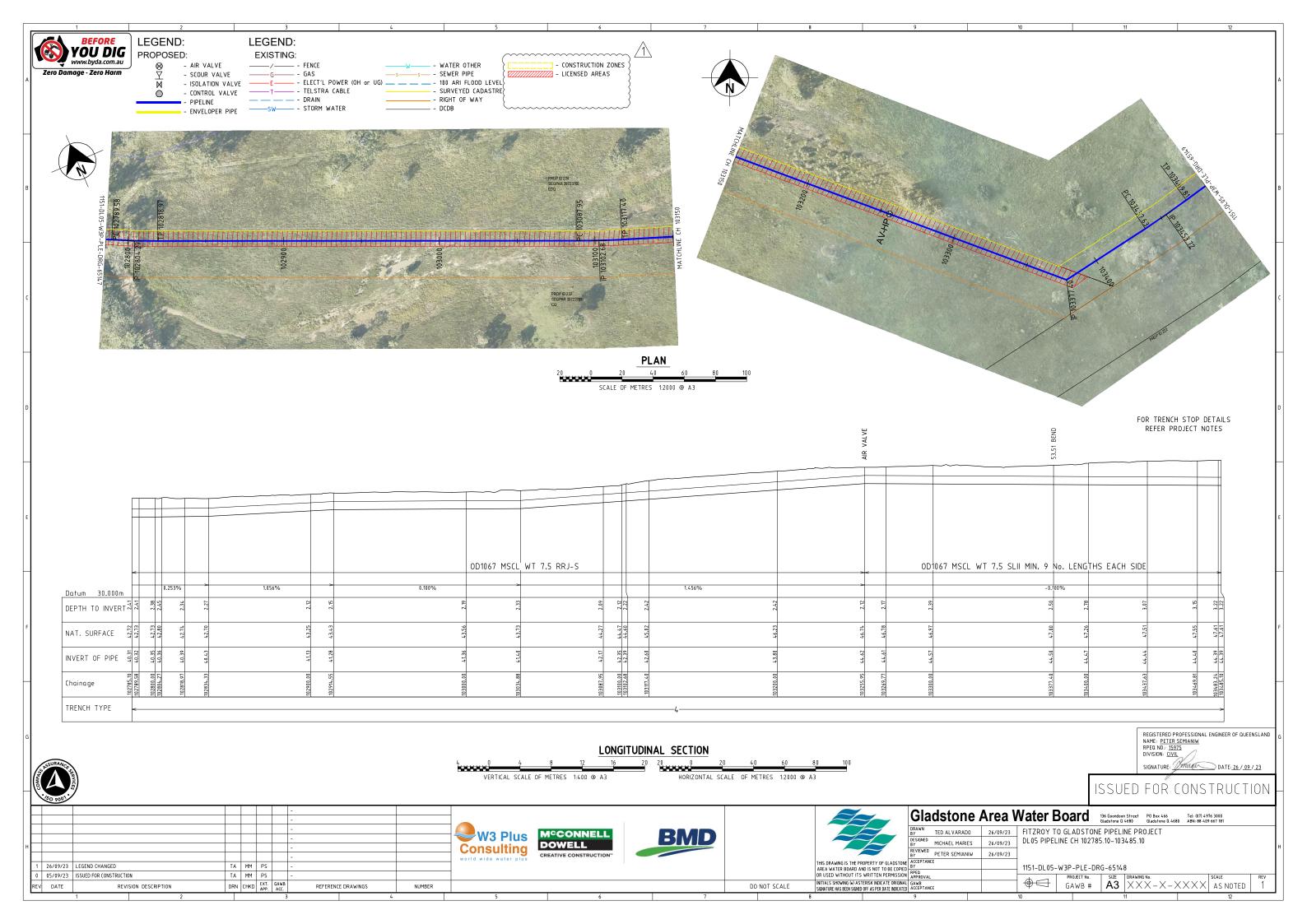


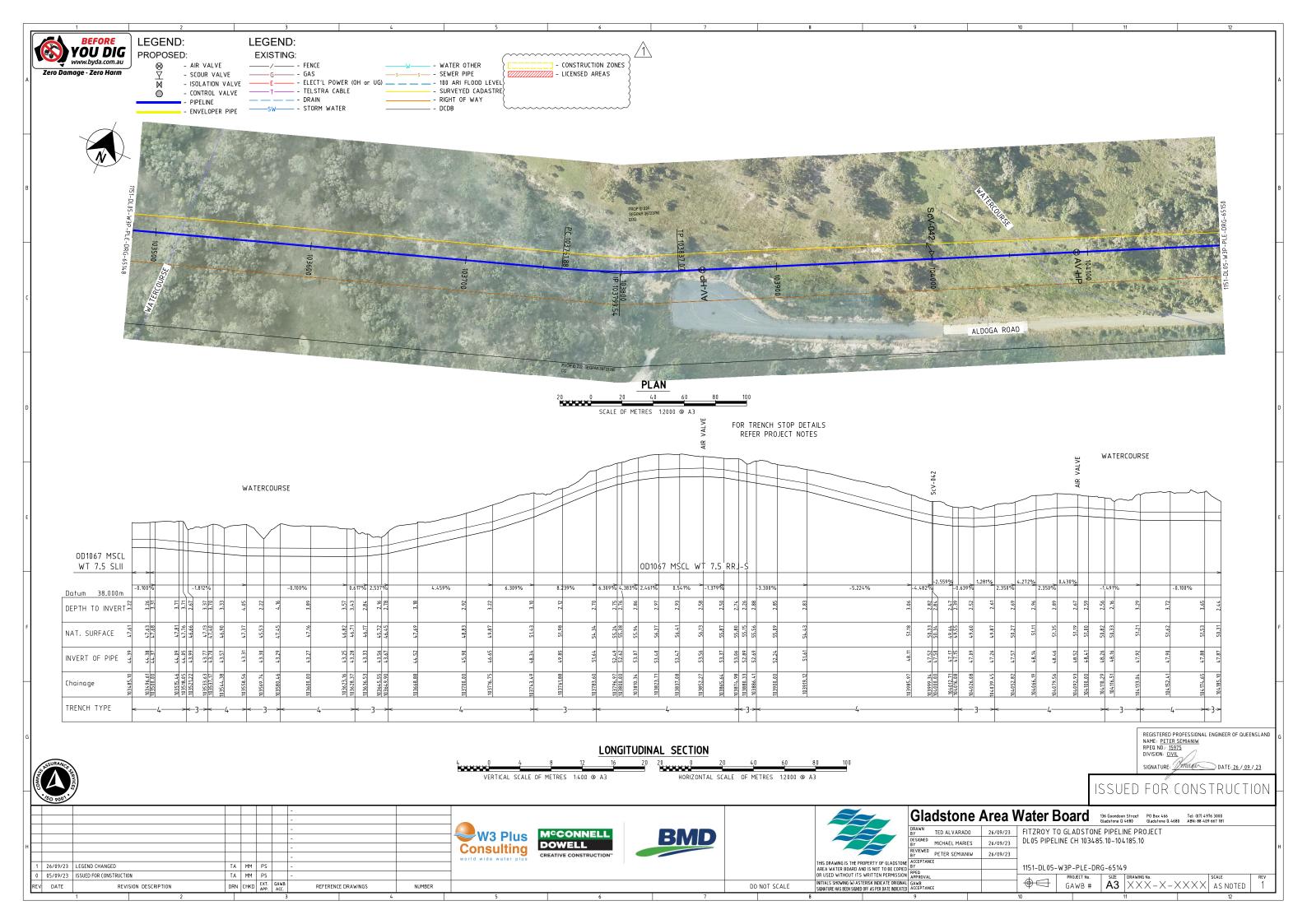


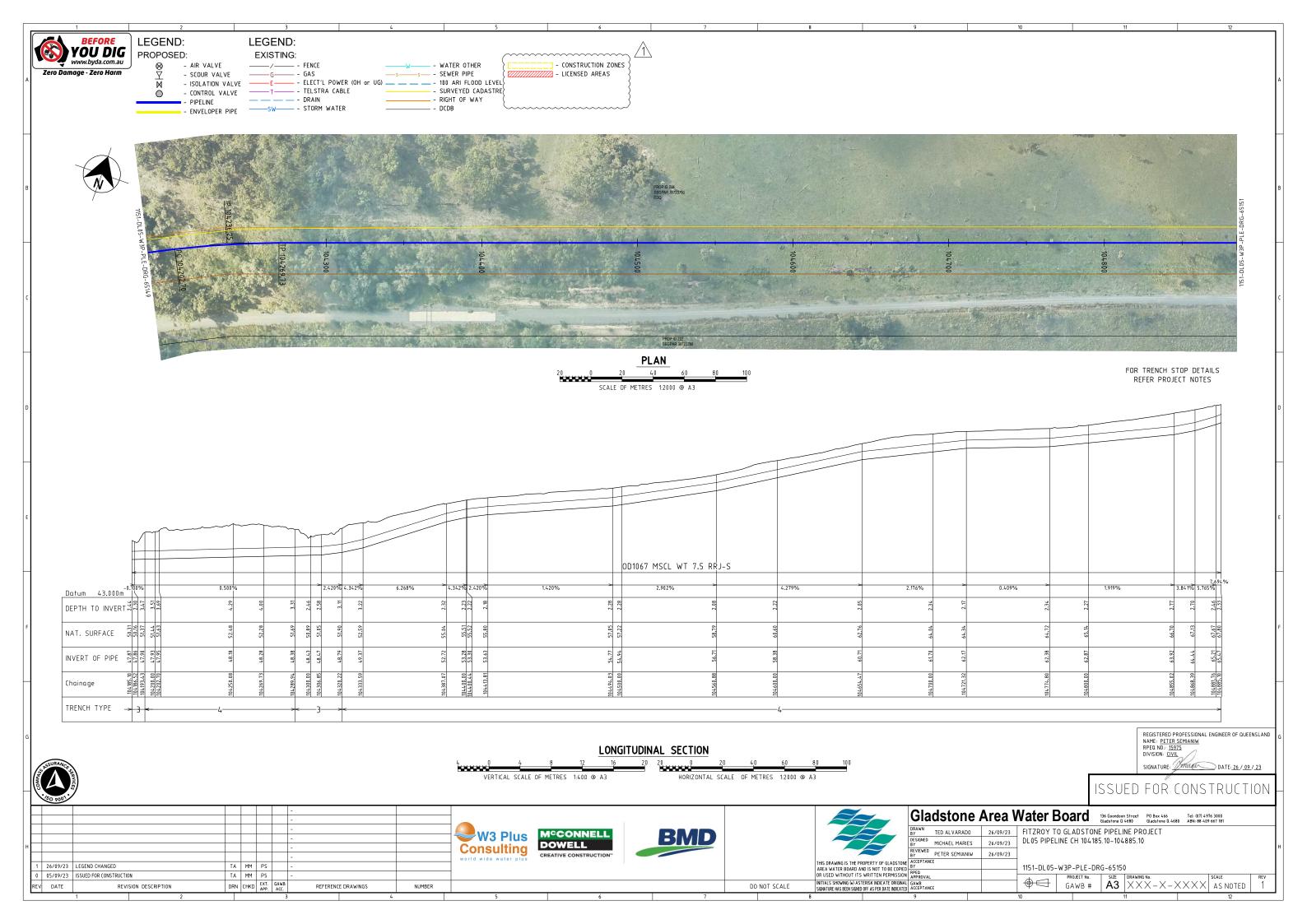


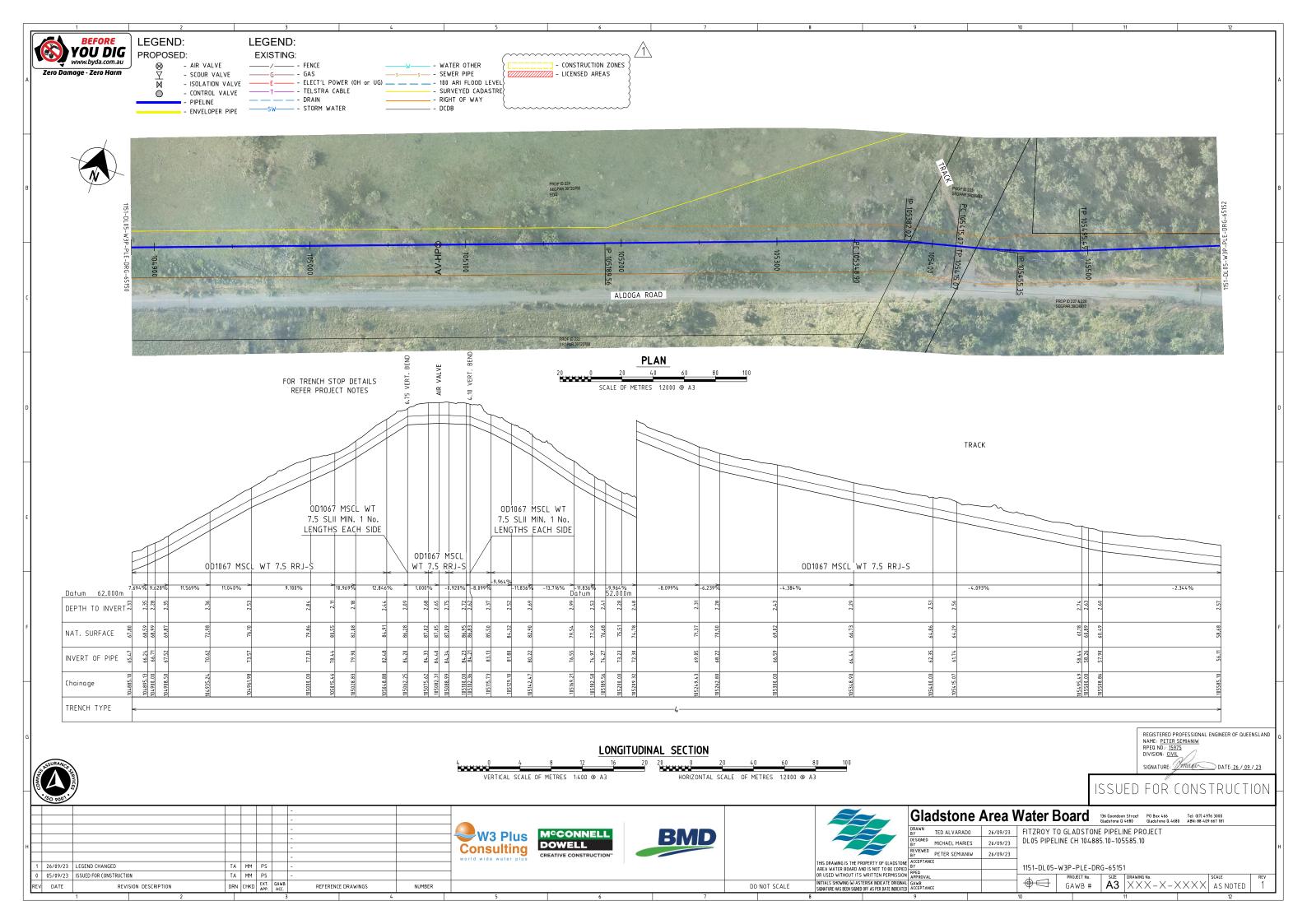


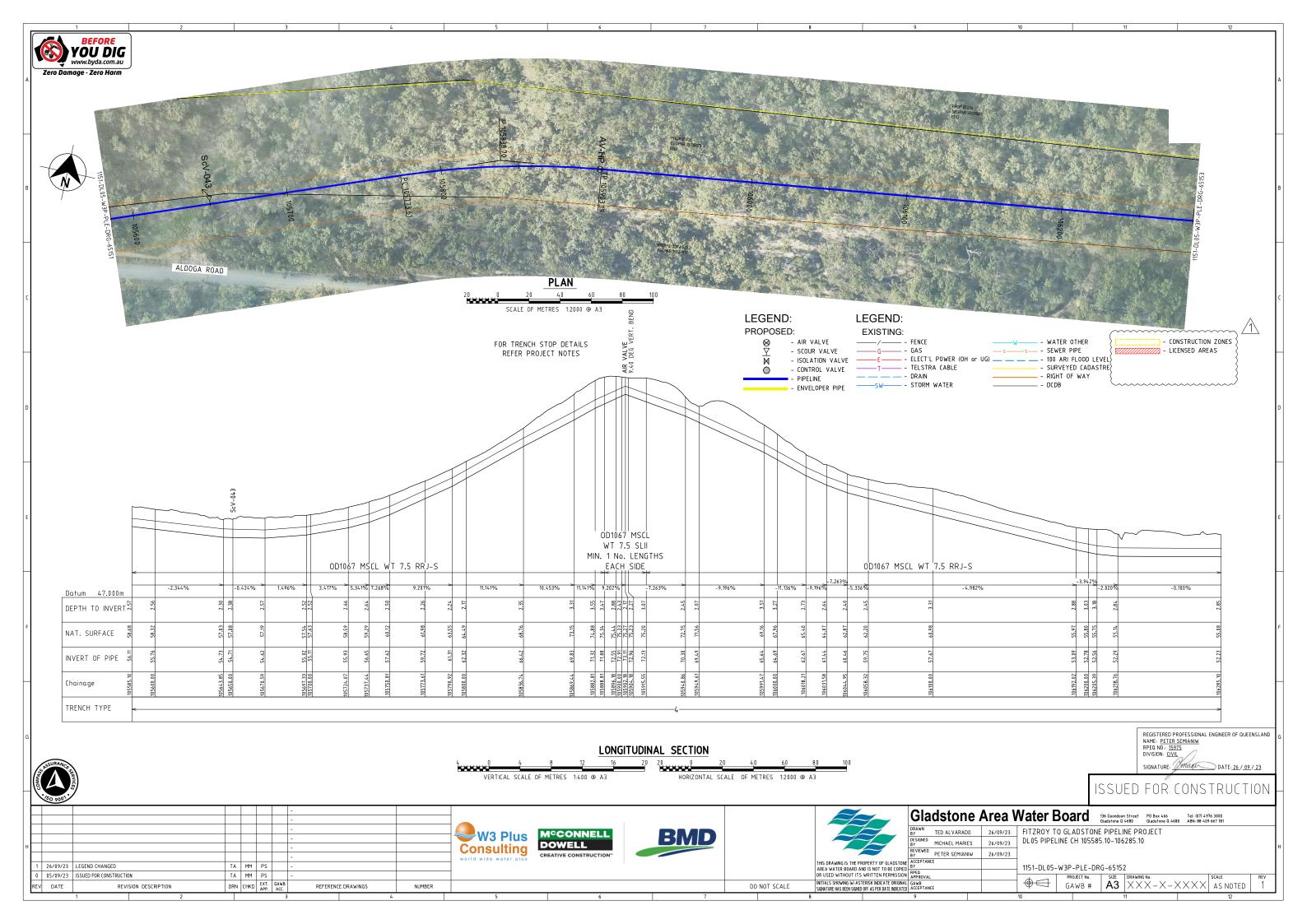


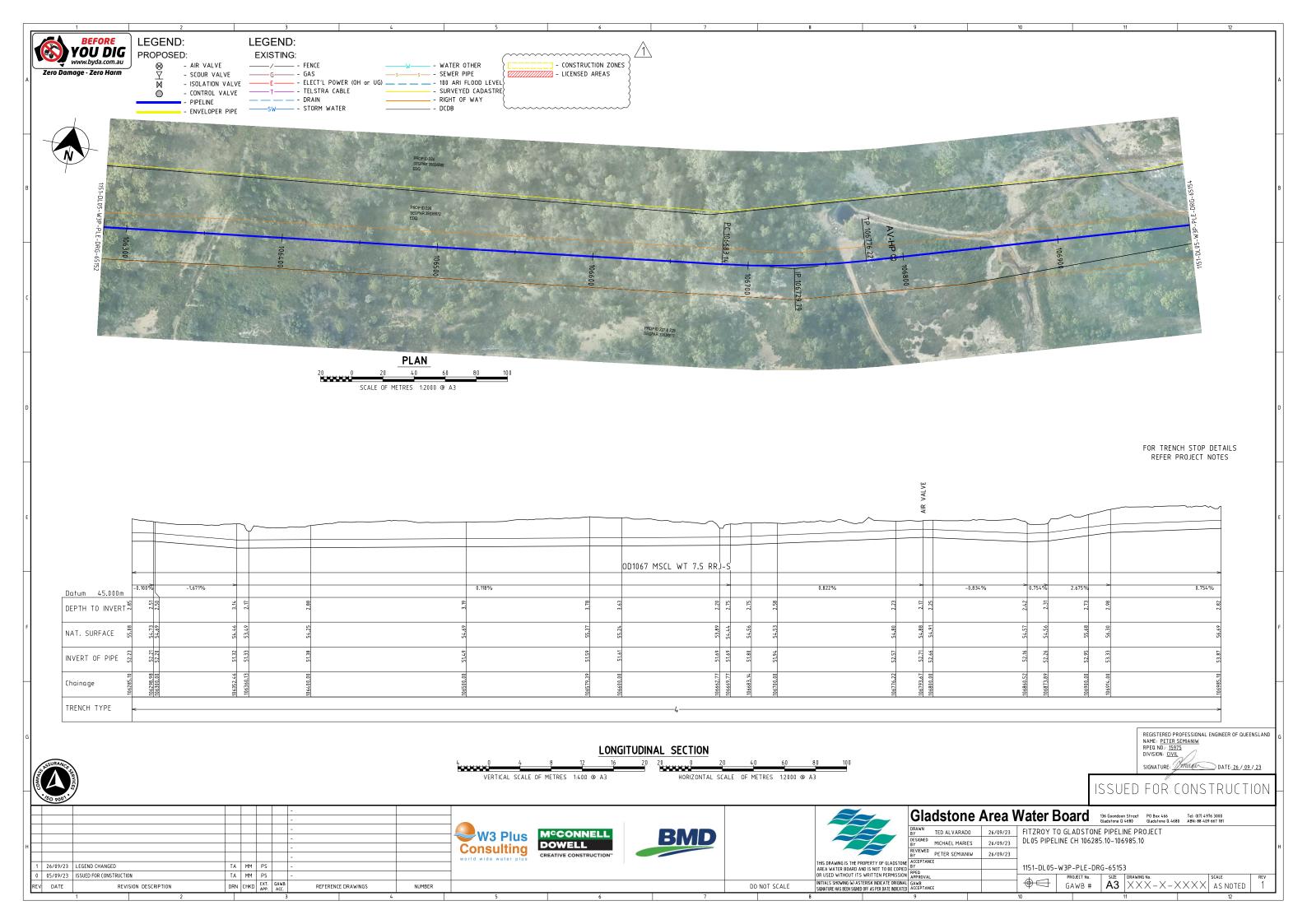


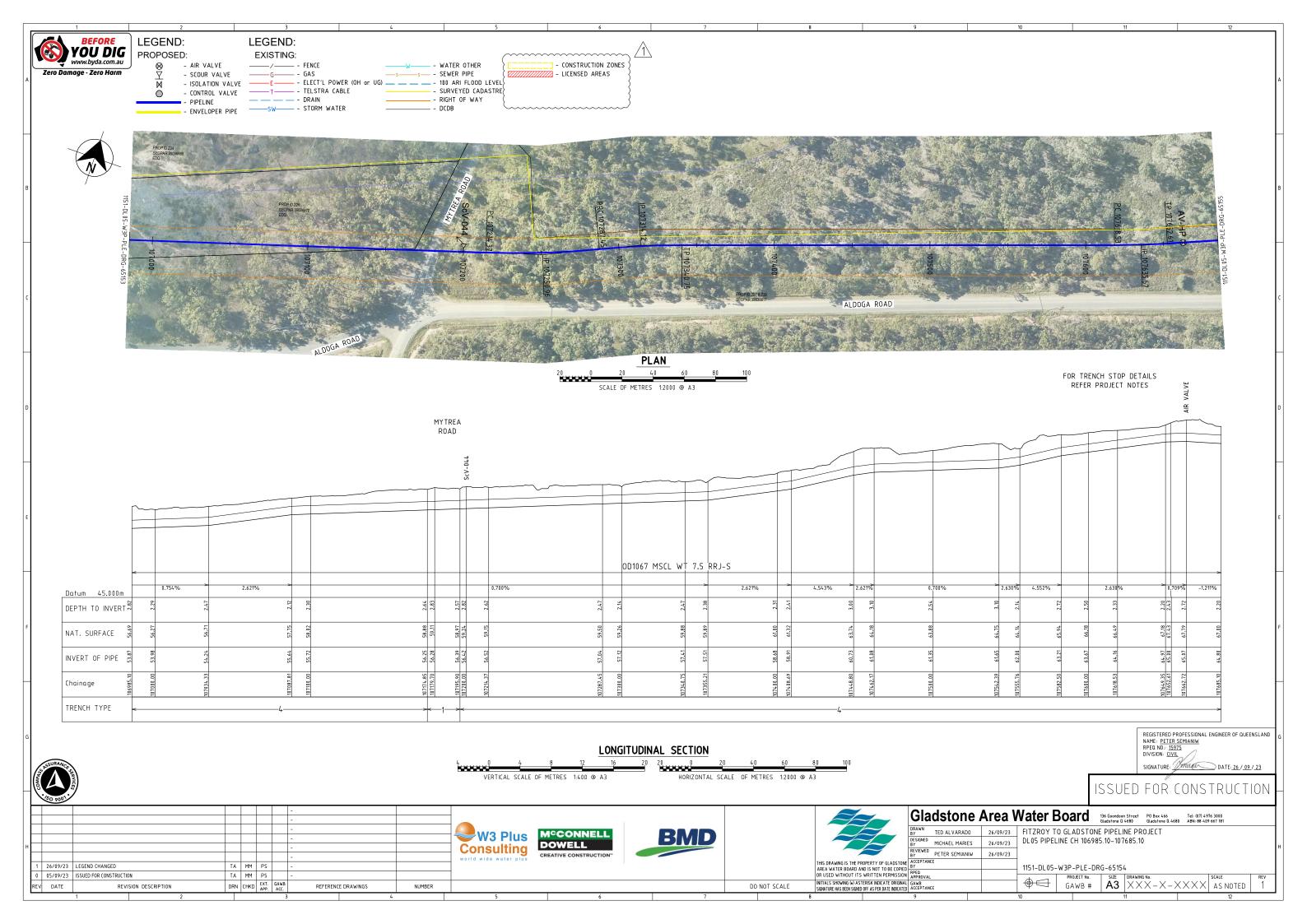


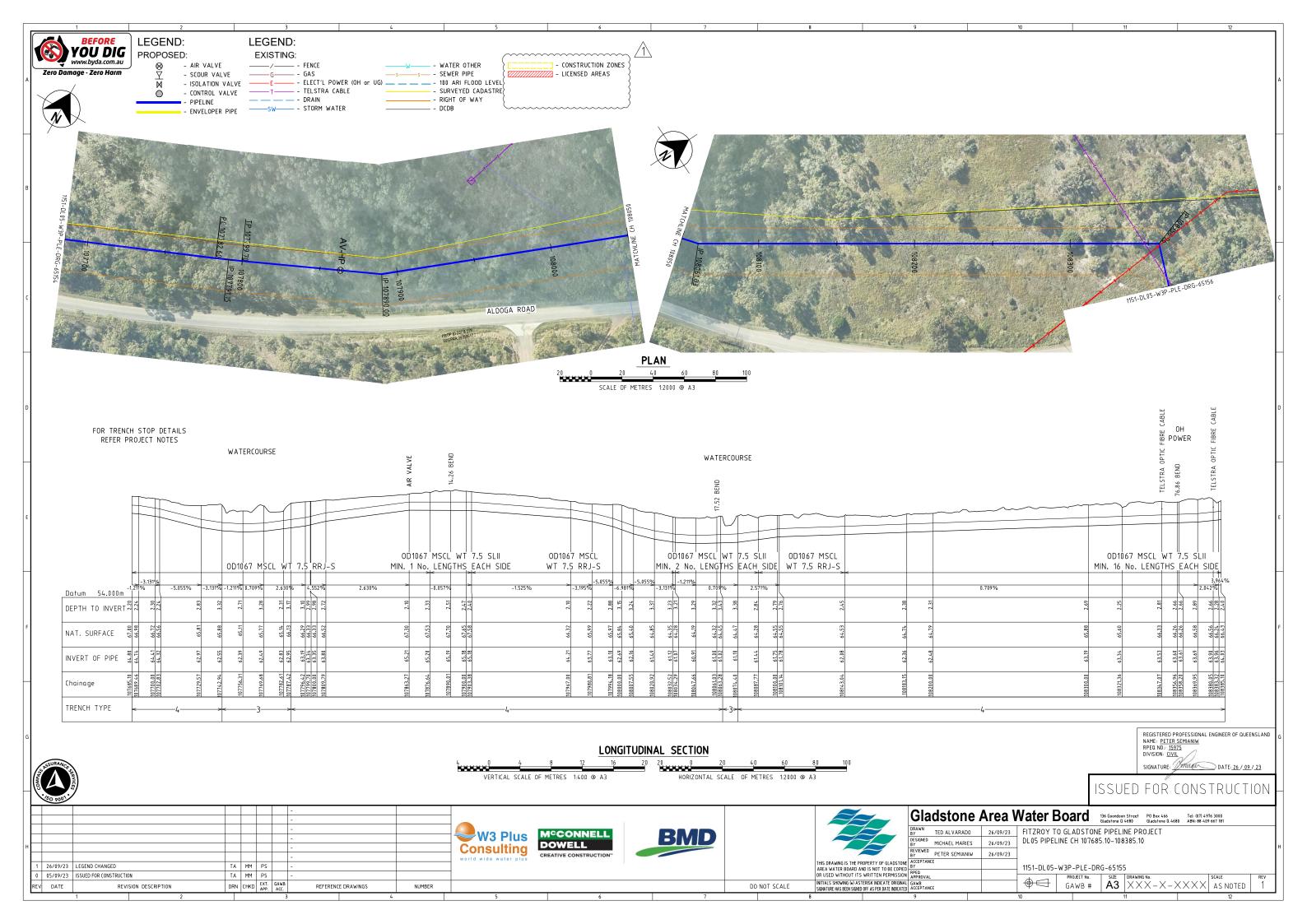


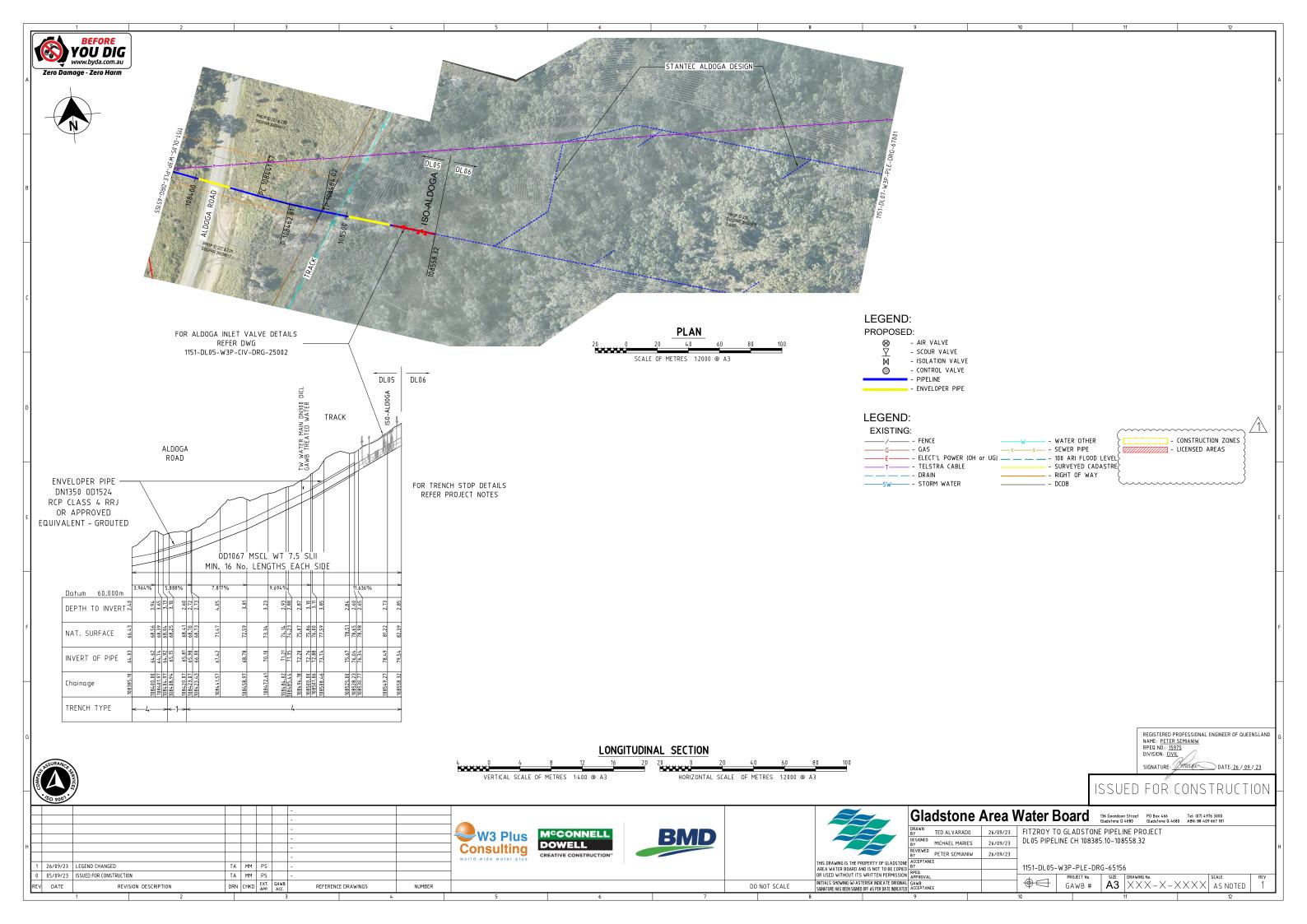












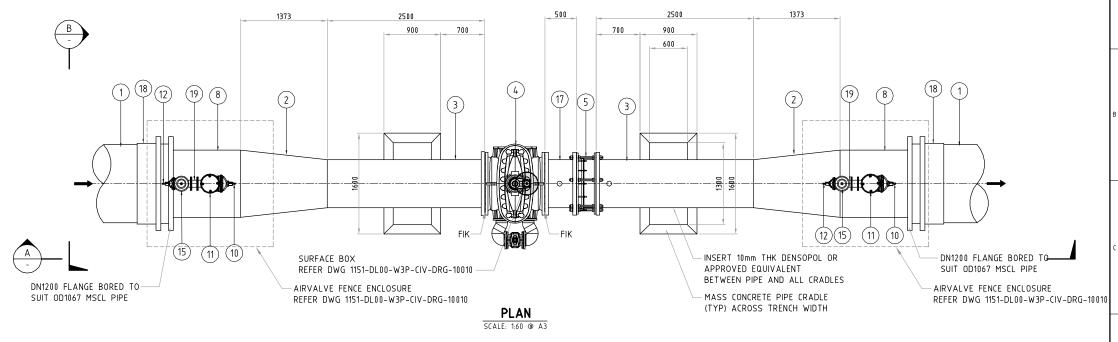


DATE

REVISION DESCRIPTION

PIPEWORK SCHEDULE

ITEM	DESCRIPTION	QTY	PN RATING	MATERIAL
1	DN1200 HDPE PIPE	2	PN14.2	HDPE
2	0D1067-DN750 WELDED ECCENTRIC REDUCER	2	PN16	MSCL
3	DN750/DN150 WELD-FL-FL TEE	2	PN16	MSCL
4	DN750 FLANGED GATE VALVE W/ INTEGRAL BYPASS & GEARBOX	1	PN16	DIEL
5	DN750 DISMANTLING JOINT (THRUST TYPE)	1	PN16	DIEL
6	NOT IN USE	-	-	ı
7	NOT IN USE	-	-	
8	OD1067/DN150 WELD-FL-FL TEE	2	PN16	MSCL
9	DN150 FLANGED PIPE (LENGTH TO SUIT)	2	PN16	DIEL
10	DN150 GATE VALVE	2	PN16	DIEL
11	DN150 CSA FOX 3F RFP AIR VALVE	2	PN16	DIEL
12	DN100 FLANGED GATE VALVE	2	PN16	DIEL
13	DN100 FLANGED 90° BEND	2	PN16	DIEL
14	NOT IN USE	-	-	-
15	DN100 CSA MOD VFCA RELIEF VALVE	2	PN16	DIEL
16	DN150/DN100 FLANGED TEE	2	PN16	DIEL
17	DN750 FLANGED PIPE (500mm LONG)	1	PN16	MSCL
18	DN1200 STUB FLANGE w/ MS BACKING RING	2	PN16	HDPE/MS
19	DN100 FLANGED PIPE	2	PN16	DIEL



PRO IECT No

GAWB # A3 XXX-X-XXXX AS NOTED

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INITIALS SHOWING (*) ASTERISK INDICATE ORIGINAL GAWB
SIGNATURE HAS BEEN SIGNED OFF AS PER DATE INDICATED
AFFROME

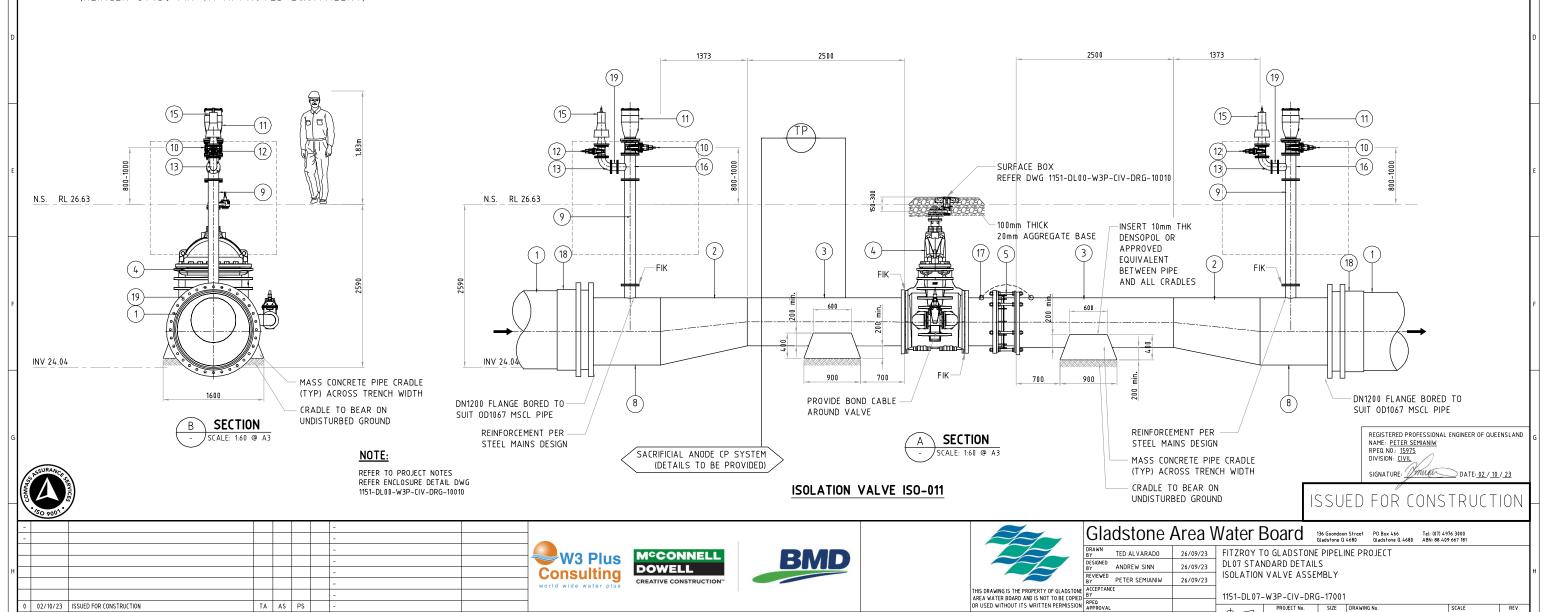
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FIK = FLANGE INSULATION KIT (KLINGER C4430 FIK OR APPROVED EQUIVALENT)

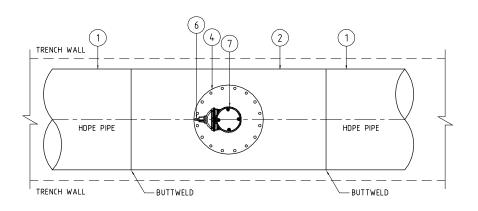
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REFERENCE DRAWINGS

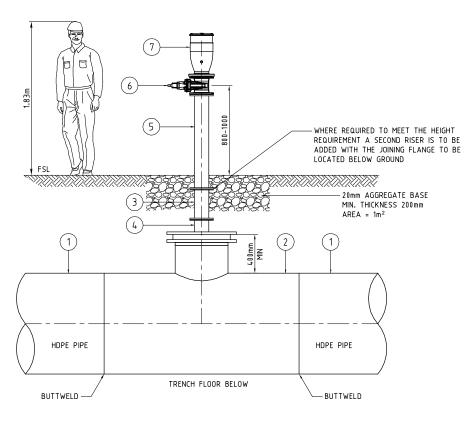
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AIR VALVE INSTALLATION PLAN



AIR VALVE INSTALLATION - HDPE ABOVE GROUND

AIR VALVE PIPEWORK SCHEDULE

ITEM	MATERIAL	DESCRIPTION	PN RATING	DIAMETER
1	HDPE	DN1200 PIPE	PN14.2	DN1200
2	HDPE	DN1200 x 600 FABRICATED WE-WE FL TEE w/ BACKING FLANGE	PN14.2	DN1200/600
3	DIEL	DN150 DIEL OR MSCL RISER PIPE, LENGTH TO SUIT	PN16	DN150
4	MSEL	DN600 BLIND FLANGE WITH DN150 FLANGED RISER	PN16	DN150
5	DIEL	DN150 DIEL OR MSCL RISER PIPE, LENGTH TO SUIT	PN16	DN150
6	DIEL	DN150 GATE VALVE	PN16	DN150
7	DIEL	DN150 CSA FOX 3F RFP AIR VALVE FLANGED	PN16	DN150

NOTE:

REVISION DESCRIPTION

REFER TO PROJECT NOTES REFER ENCLOSURE DETAIL DWG 1151-DL00-W3P-CIV-DRG-10010

TA AS PS DRN CHKD EXT. GAWB

REFERENCE DRAWINGS



REV DATE

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TED ALVARADO 26/09/23 FITZROY TO GLADSTONE PIPELINE PROJECT

ANDREW SINN 26/09/23 DL 07 STANDARD DETAILS AIR VALVE ASSEMBLY 26/09/23

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4 —	PROJECT No.	SIZE	DRAWING No.	SCALI			
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W3 Plus
Consulting
world wide water plus

NUMBER



	BY	ANDREW SINN
	REVIEWED BY	PETER SEMIANIW
	ACCEPTANCE BY	
OR USED WITHOUT ITS WRITTEN PERMISSION	RPEQ APPROVAL	
	GAWB ACCEPTANCE	

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REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND

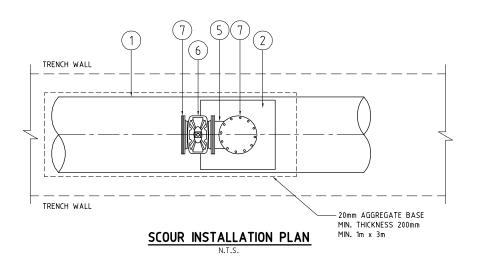
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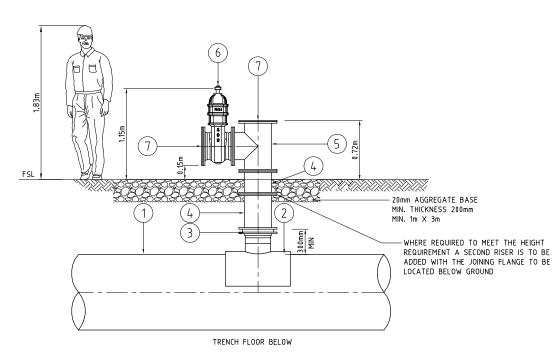
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NAME: PETER SEMIANIW RPEQ NO.: 15975 DIVISION: CIVIL

ISSUED FOR CONSTRUCTION







SCOUR INSTALLATION - DN1200 HDPE ABOVE GROUND

SCOUR PIPEWORK SCHEDULE

ITEM	MATERIAL	DESCRIPTION	PN RATING	DIAMETER
1	HDPE	DN1200 PIPE	PN14.2	DN1200
2	HDPE	OD315 PN16 PE100 EF SADDLE TO SUIT OD1200 HDPE PE112 SDR13.6	PN16	DN1200/DN315
3	-	DN315 STUB FLANGE w/ SS BACKING FLANGE	PN16	DN315/DN300
4	DIEL	DN300 FLANGED PIPE, LENGTH TO SUIT	PN16	DN300
5	DIEL	DN300 FLANGED TEE	PN16	DN300
6	DIEL	DN300 FLANGED GATE VALVE	PN16	DN300
7	DIEL	DN300 BLIND FLANGE	PN16	DN300

REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND NAME: PETER SEMIANIW RPEA NO. 15975 DIVISION: CIVIL SIGNATURE: 02 / 10 / 23

ISSUED FOR CONSTRUCTION



REV DATE

0 02/10/23 ISSUED FOR CONSTRUCTION

NOTE:

REVISION DESCRIPTION

REFER TO PROJECT NOTES REFER ENCLOSURE DETAIL DWG 1151-DL00-W3P-CIV-DRG-10010

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DRN CHKD EXT. GAWB

REFERENCE DRAWINGS

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W3 Plus Consulting
world wide water plus

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	OR USED WITHOUT ITS WRITTEN PERMISSION	RPEQ APPROVAL		
	INITIALS SHOWING (*) ASTERISK INDICATE ORIGINAL SIGNATURE HAS BEEN SIGNED OFF AS PER DATE INDICATED	GAWB ACCEPTANCE		
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DO NOT SCALE

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DRAWN BY	TED ALVARADO	26/09/23	FITZROY TO GLADST	ONE	PIPELINE PR	OJECT	
DESIGNED BY	ANDREW SINN	26/09/23	DL07 STANDARD DET	AIL	AILS		
REVIEWED BY	PETER SEMIANIW	26/09/23	SCOUR ASSEMBLY				

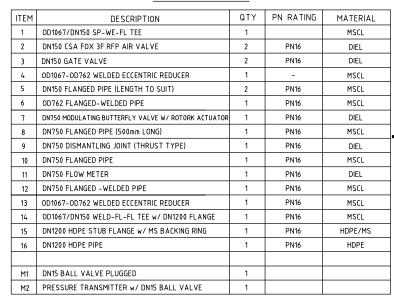
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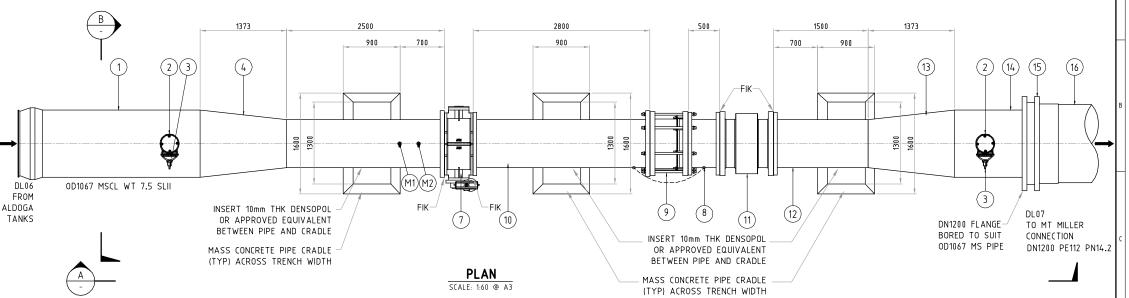
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⊕ □	PROJECT No. GAWB #	A3	DRAWING No.	AS NOTED

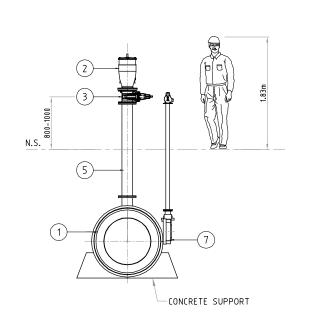
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Consulting world wide water plus	CREATIVE

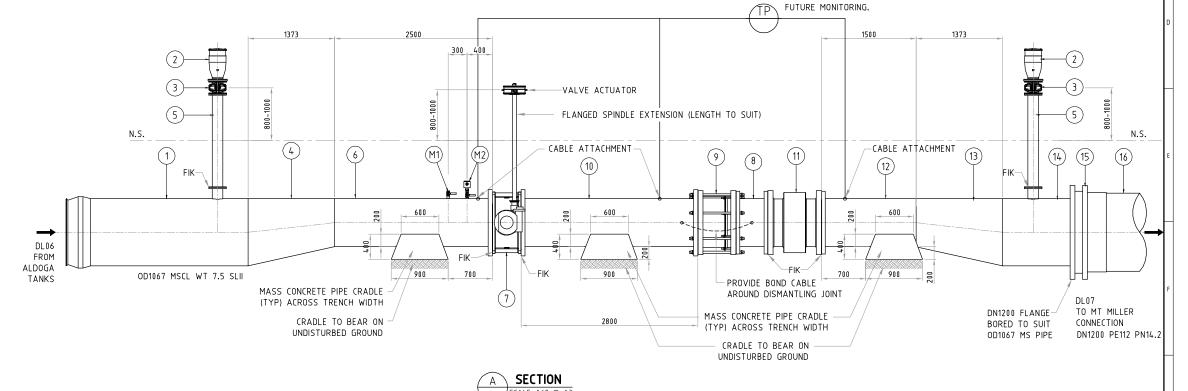


PIPEWORK SCHEDULE









SECTION

NOTE:

RFFFR TO PROJECT NOTES REFER ENCLOSURE DETAIL DRG 1151-DL00-W3P-CIV-DRG-10010

REVISION DESCRIPTION

TA AS PS

DRN CHKD EXT. GAWB

REFERENCE DRAWINGS

FIK = FLANGE INSULATION KIT (KLINGER C4430 FIK OR APPROVED EQUIVALENT)





DATE

0 02/10/23 ISSUED FOR CONSTRUCTION

W3 Plus Consulting

NUMBER





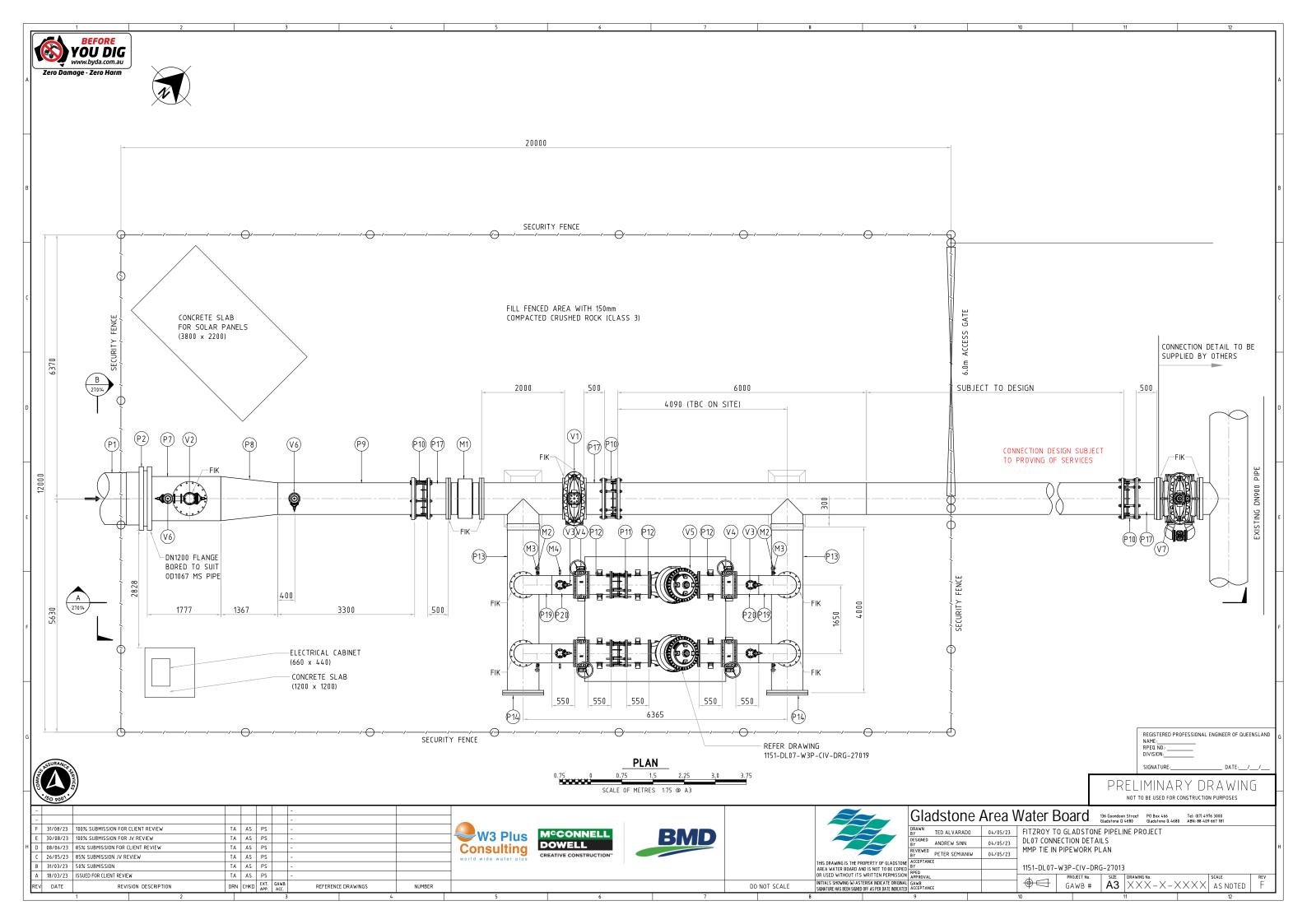


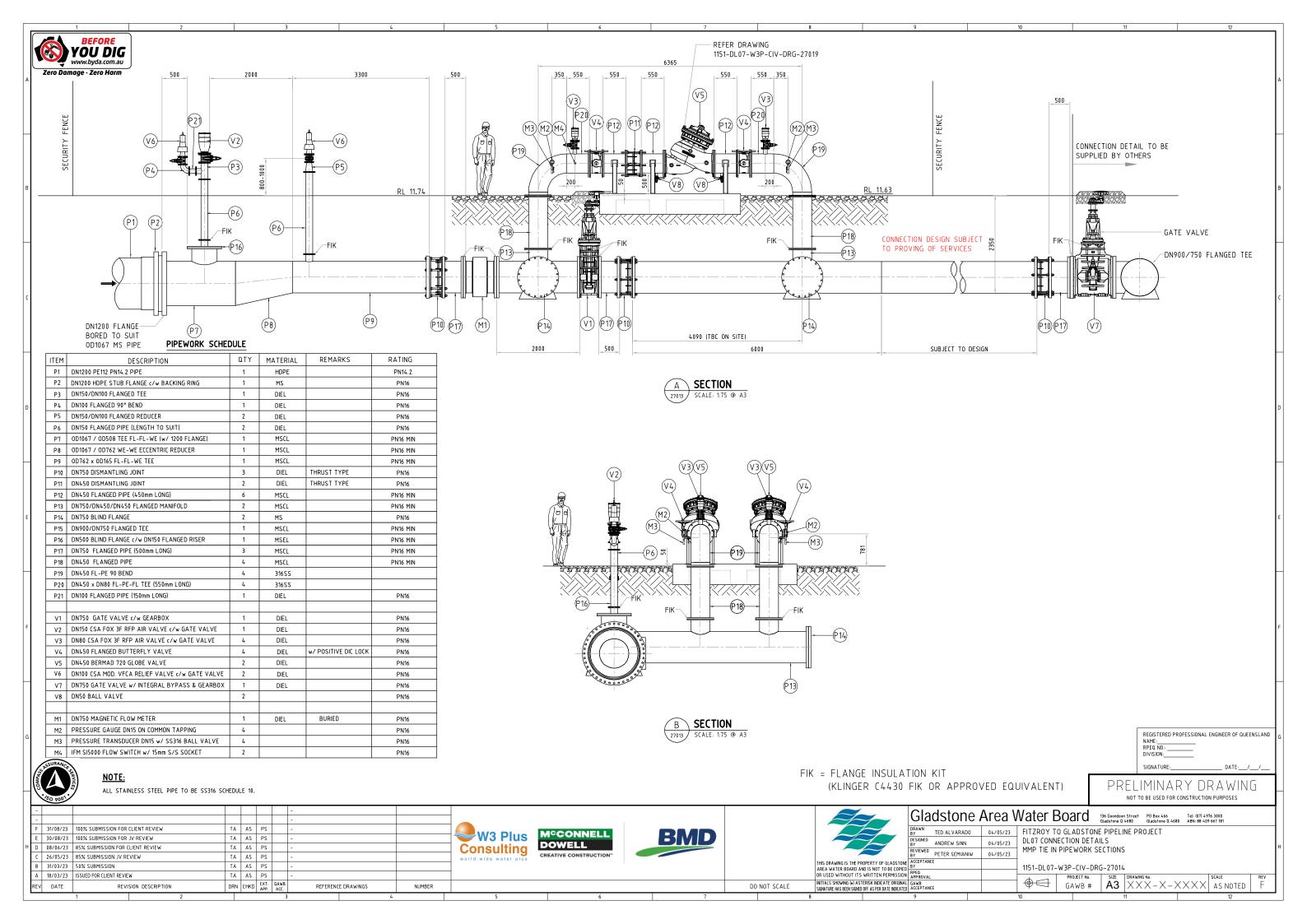
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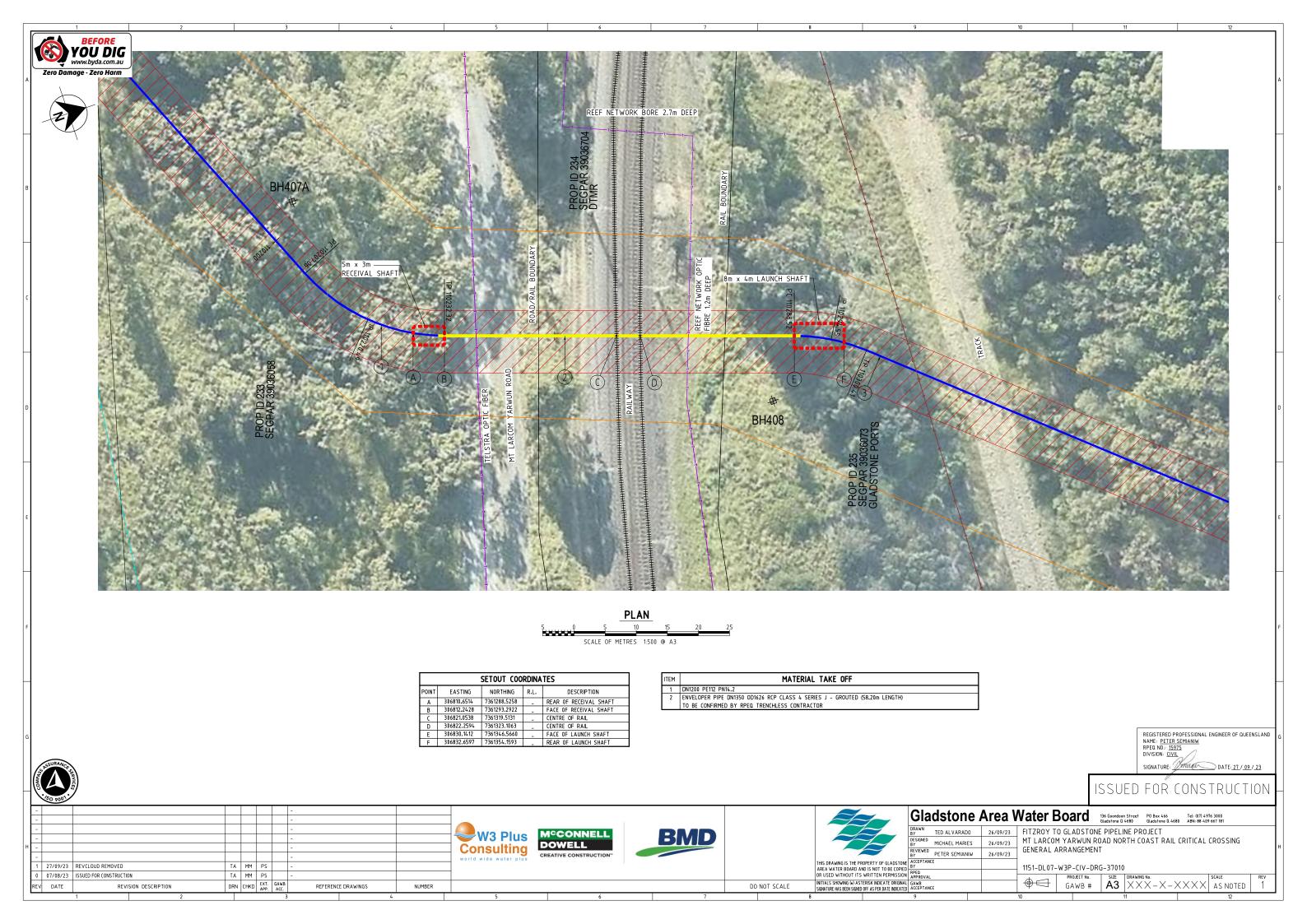
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DRAWN BY	TED ALVARADO	26/09/23	
DESIGNED BY	ANDREW SINN	26/09/23	
REVIEWED BY	PETER SEMIANIW	26/09/23	
ACCEPTANO BY	ΞE		

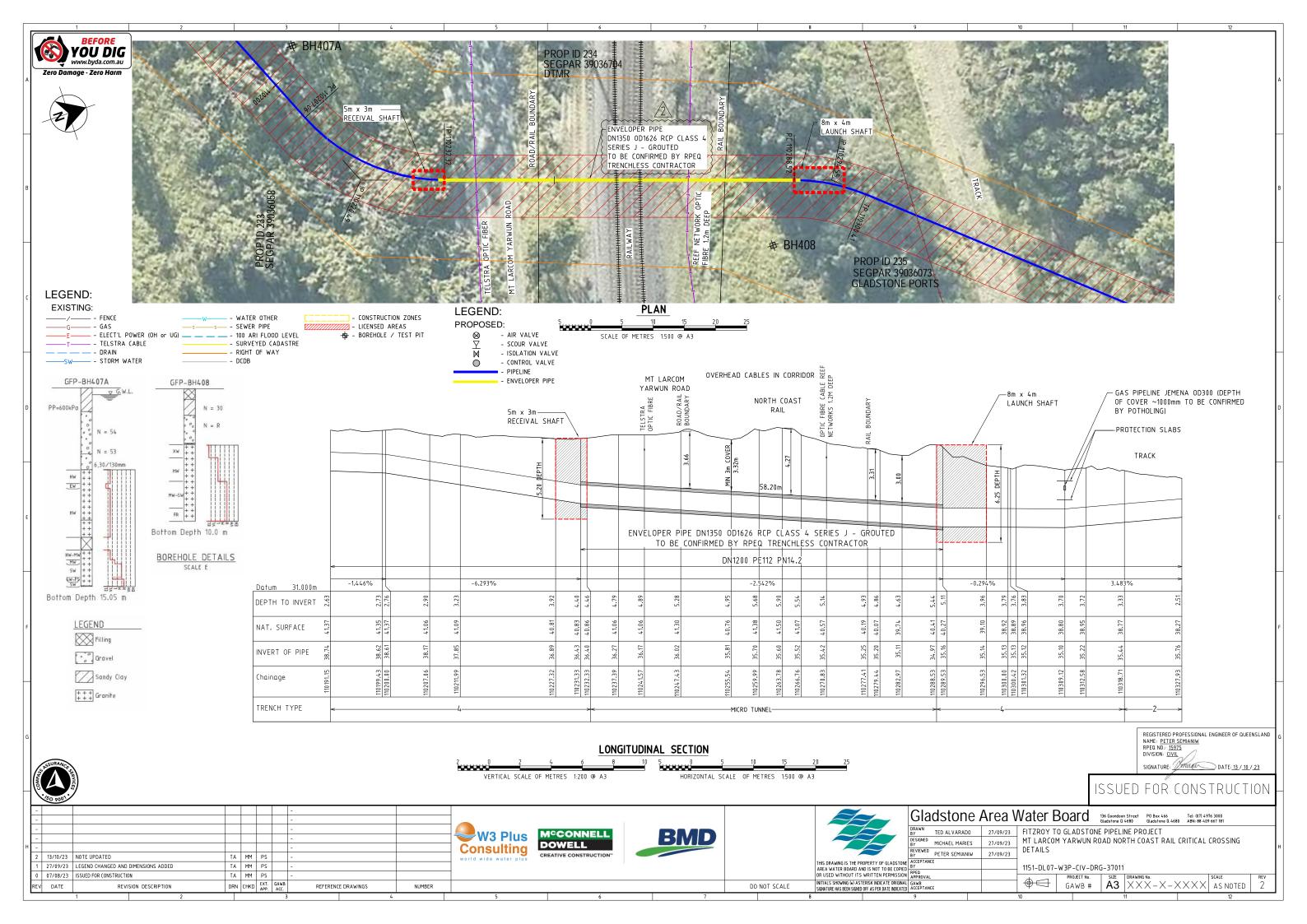
RUN CABLES UNDERGROUND AND TERMINATE AT TEST POINT (TP). PIPE CONTINUITY TO BE PROVIDED BY CABLE BONDS AT TP FOR

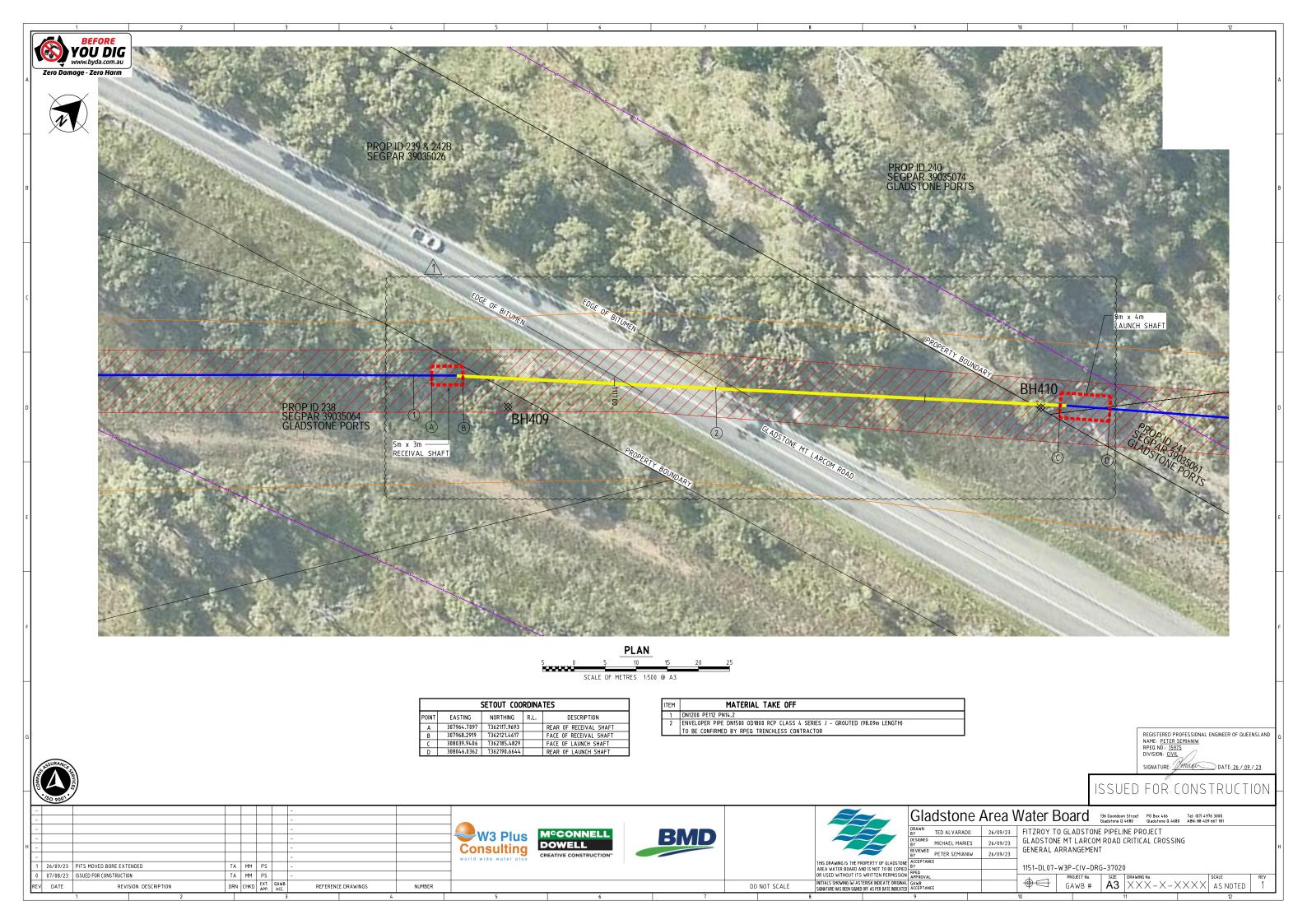
Gladstone Area Water Board 136 Guordoon Street PO Box 466 Tel. 1071 4576 3300 Guardoon Street PO Box 466 Guadstone Q 4680 ABN 88 407 607 187 FITZROY TO GLADSTONE PIPELINE PROJECT DL07 CONNECTION DETAILS DL06/DL07 CONNECTION DETAIL 1151-DL07-W3P-CIV-DRG-27001 PRO IECT No \bigoplus GAWB # | A3 | XXX-X-XXX | AS NOTED

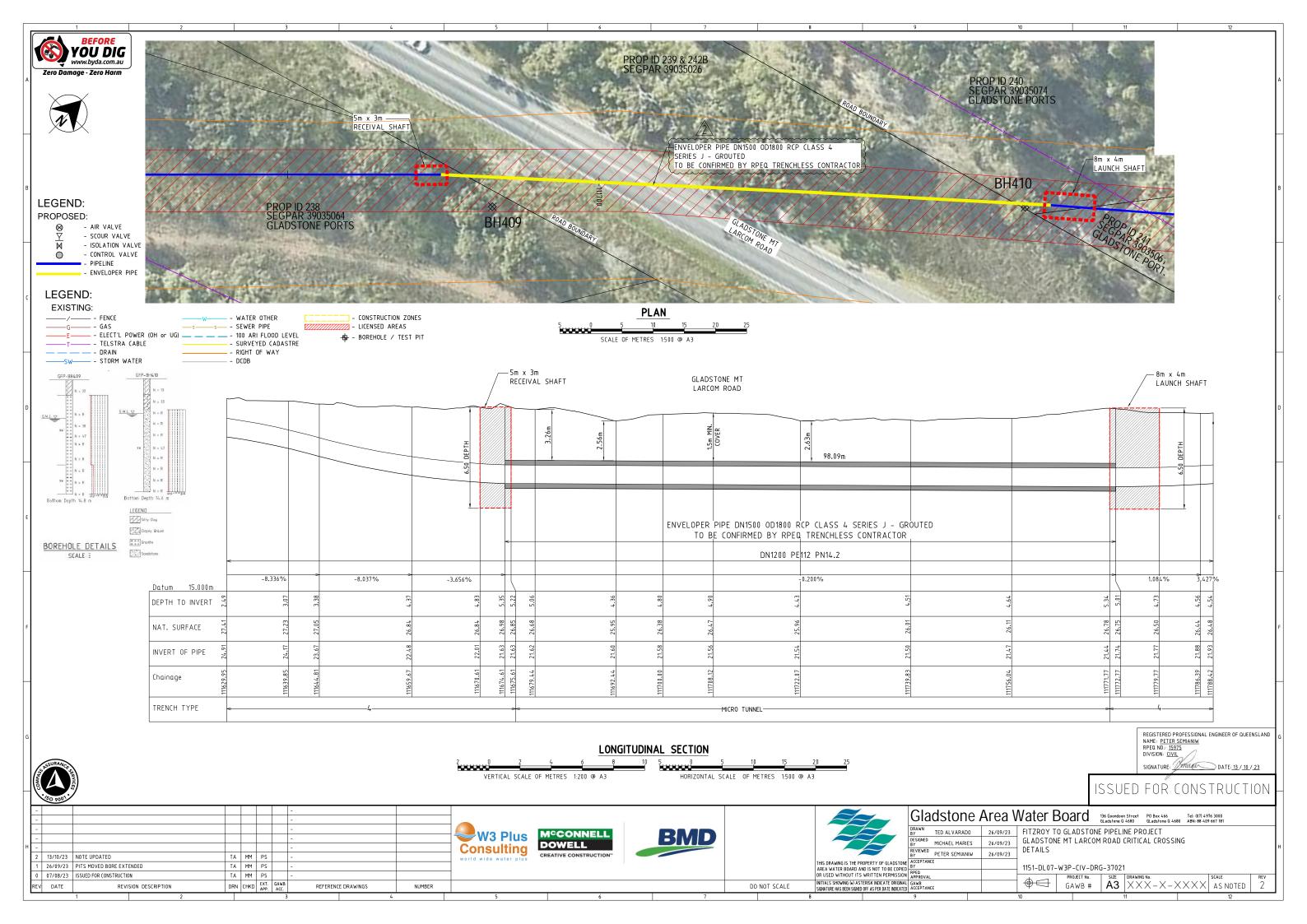


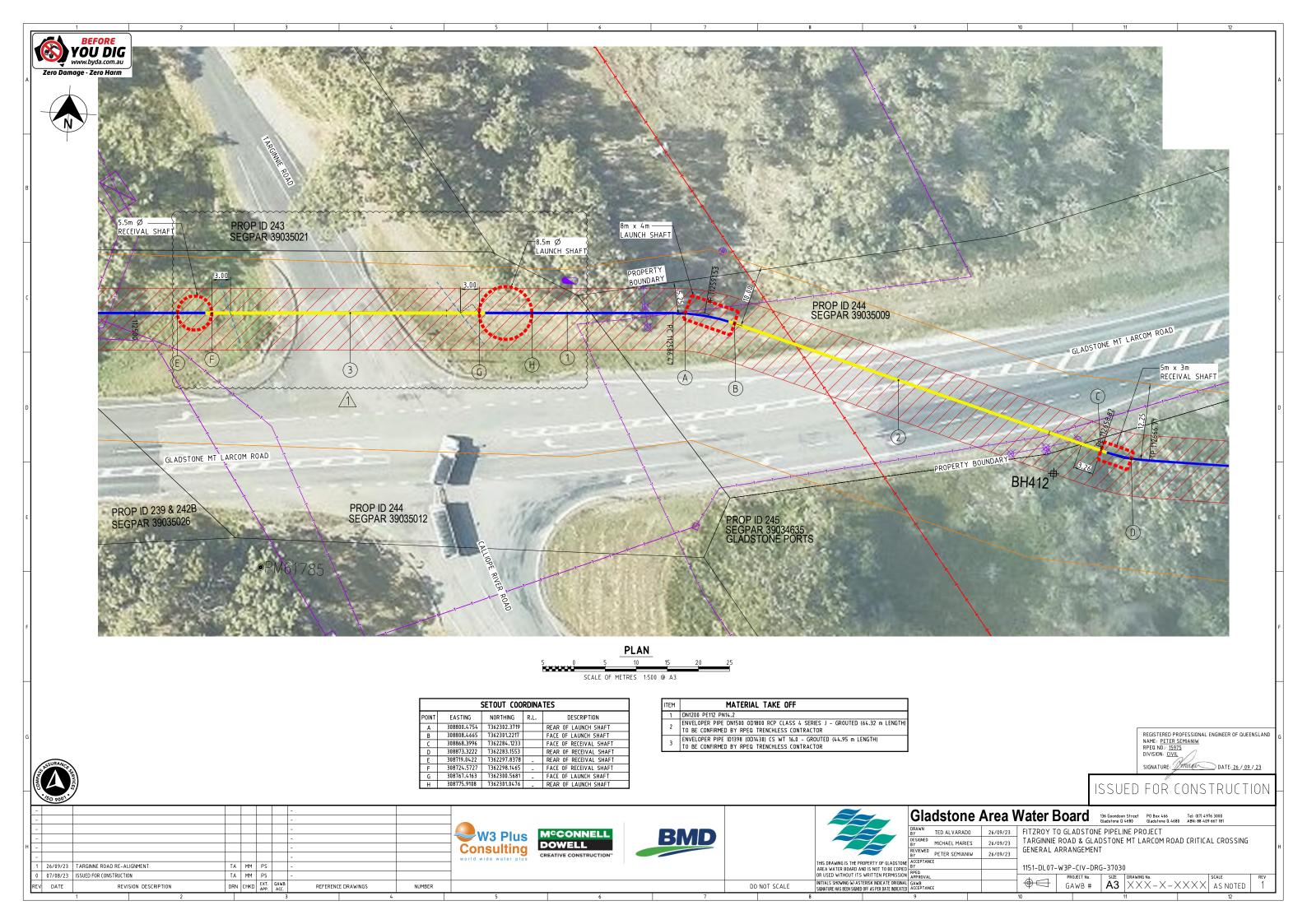


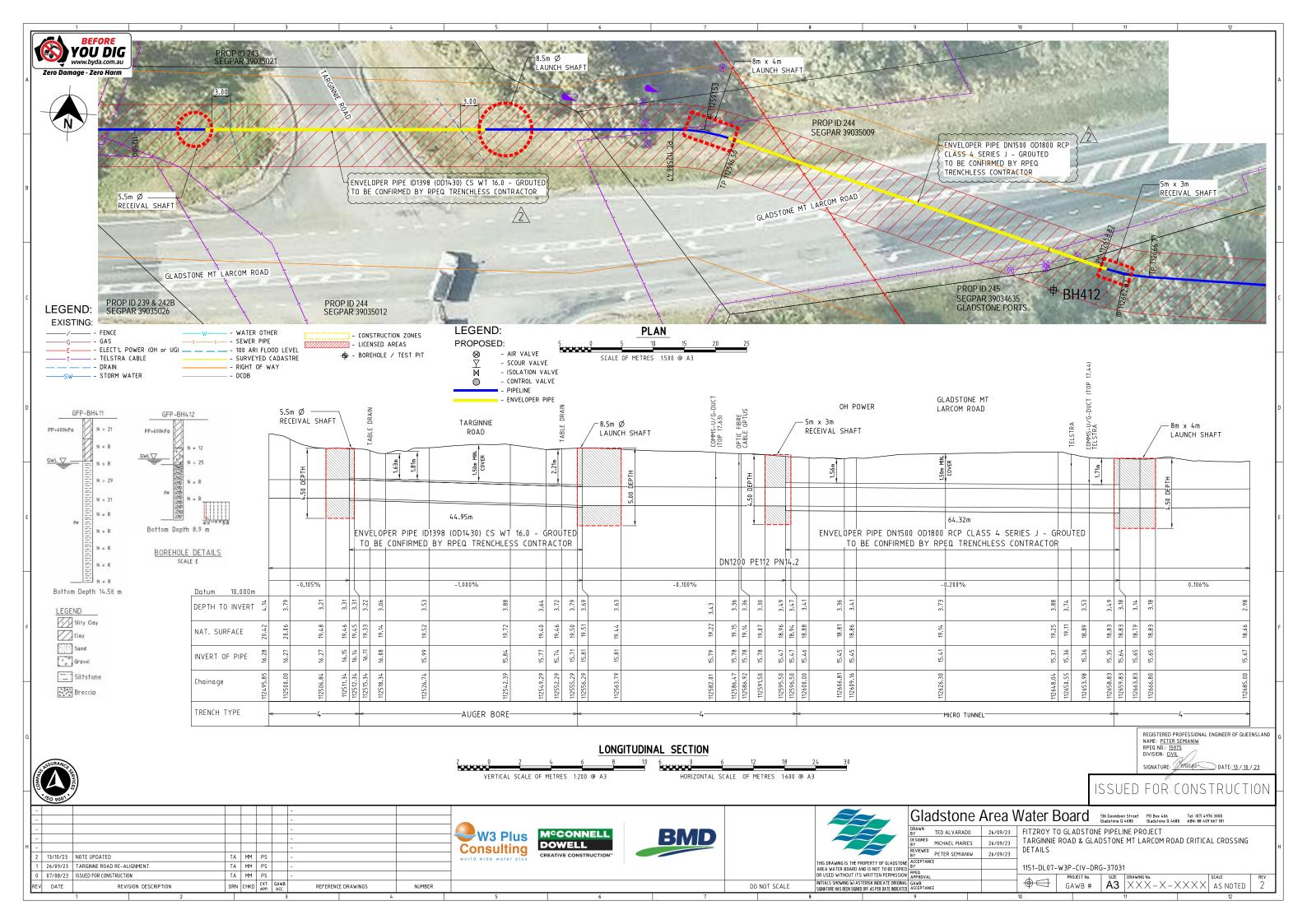


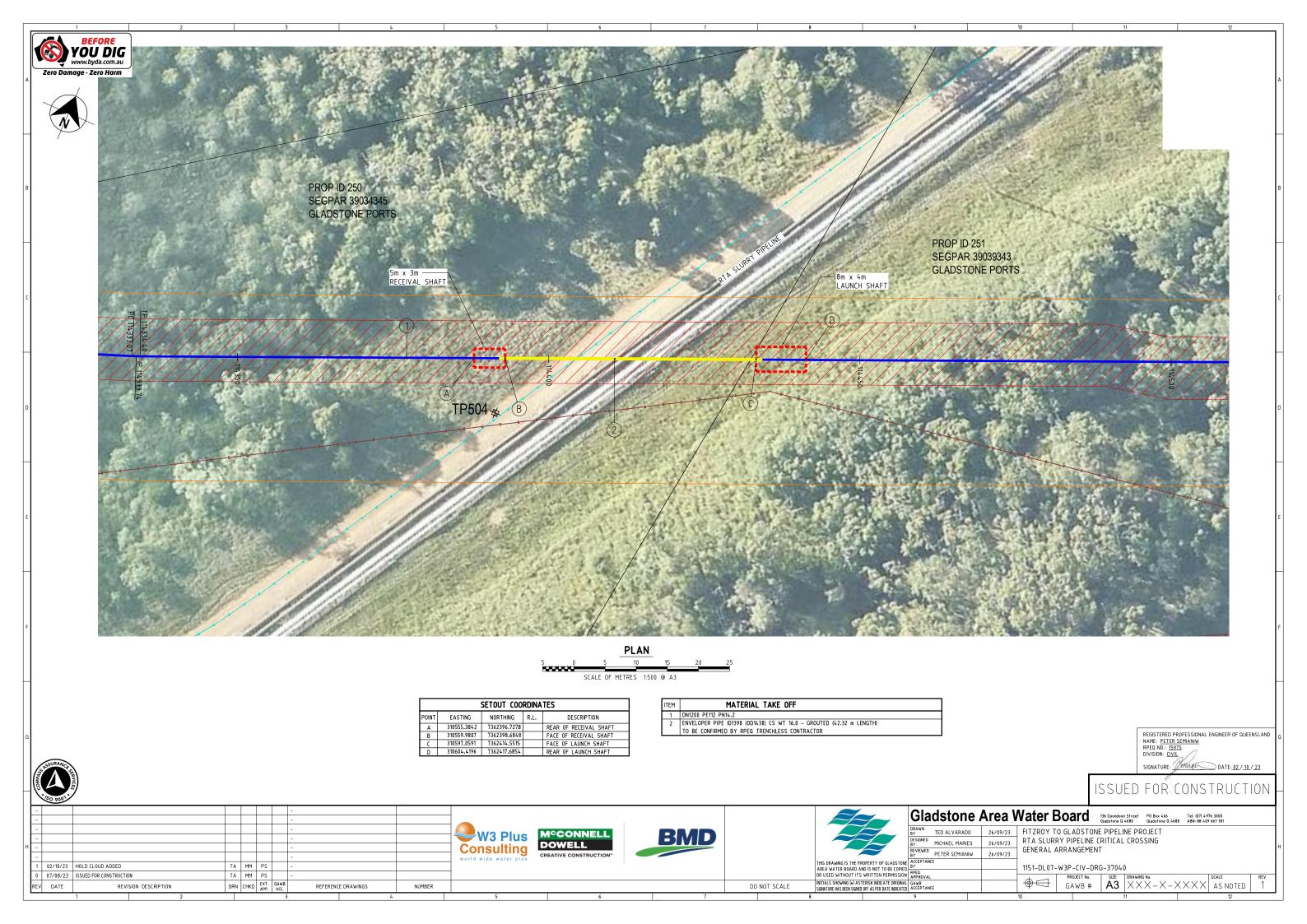


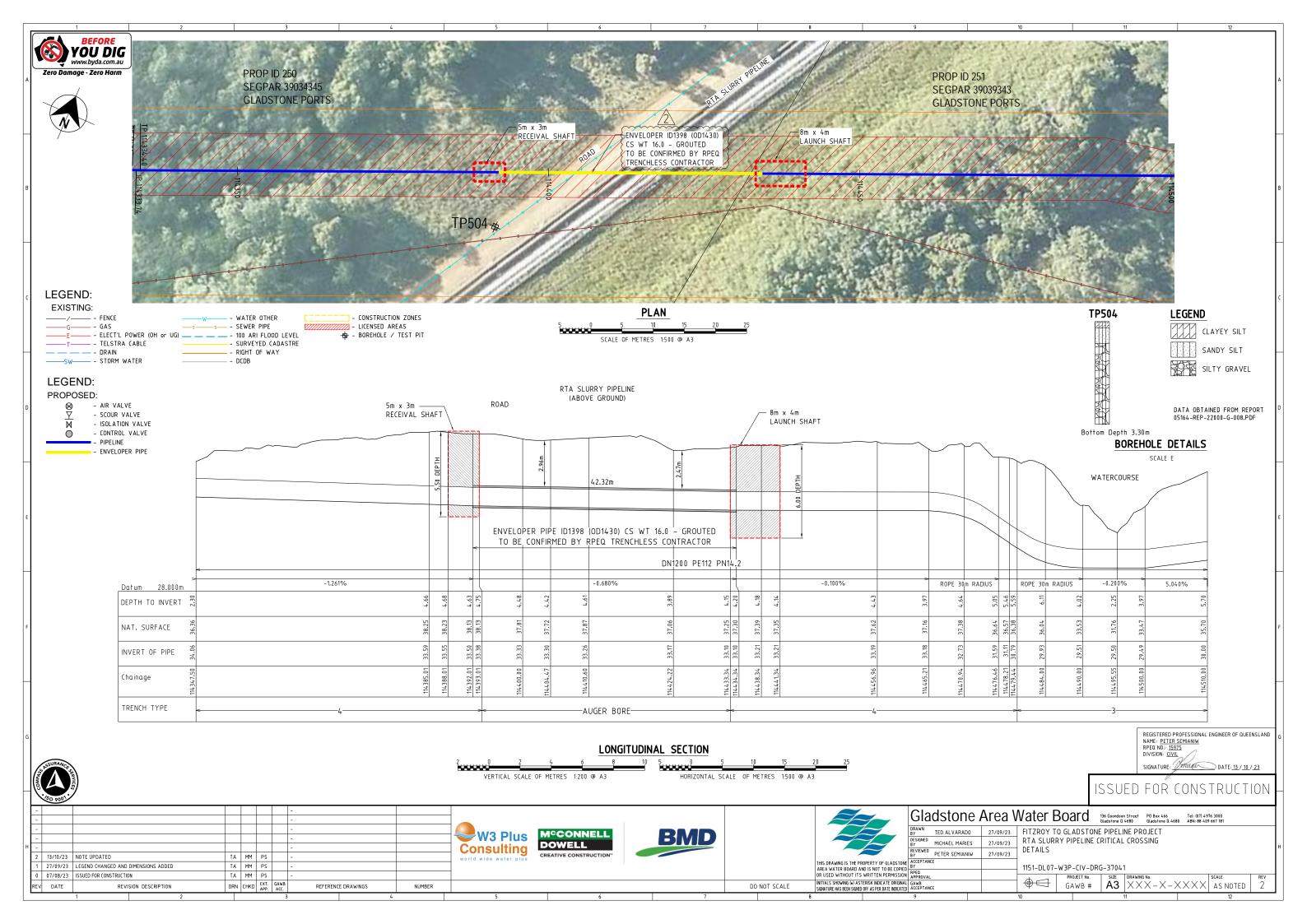


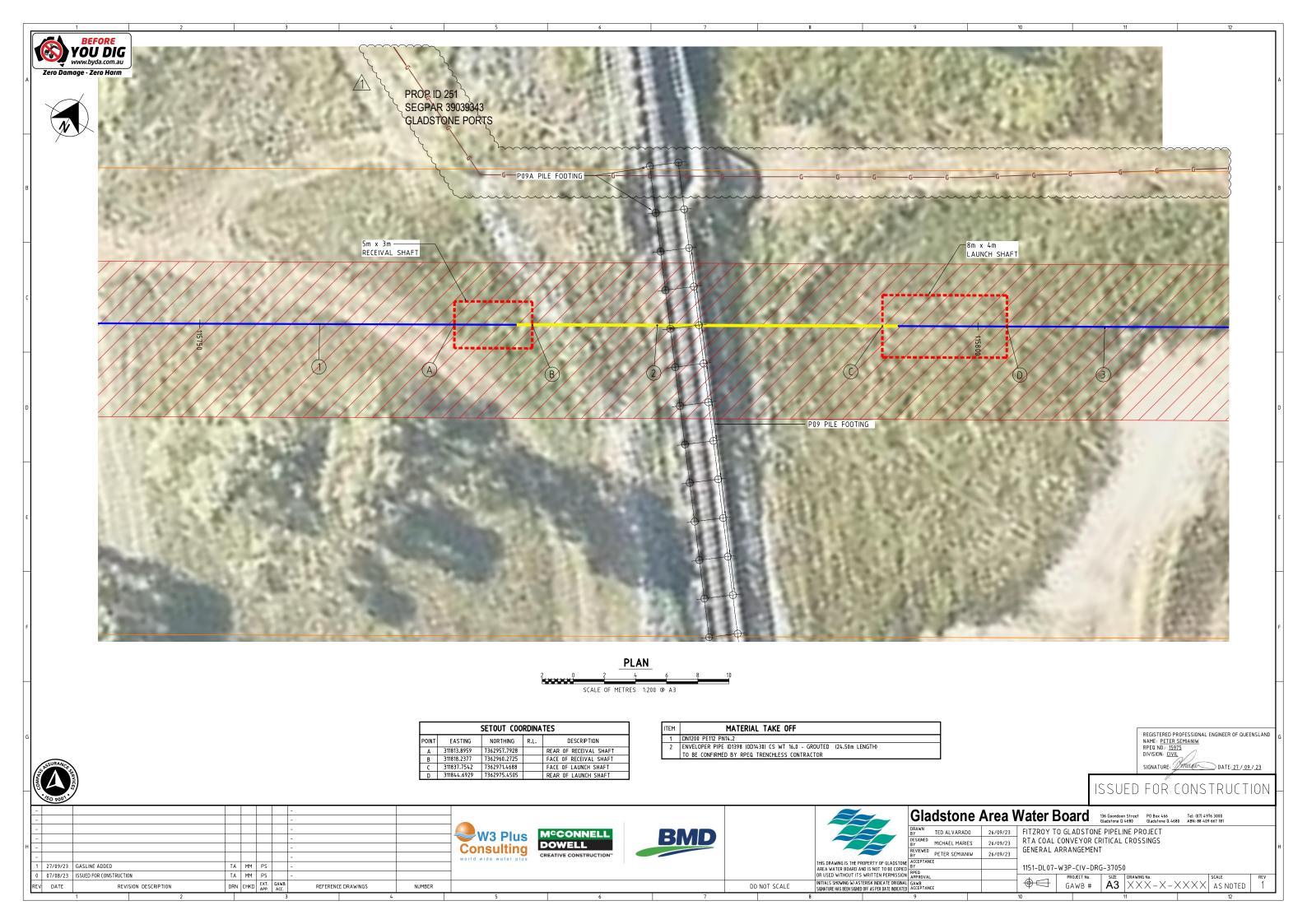


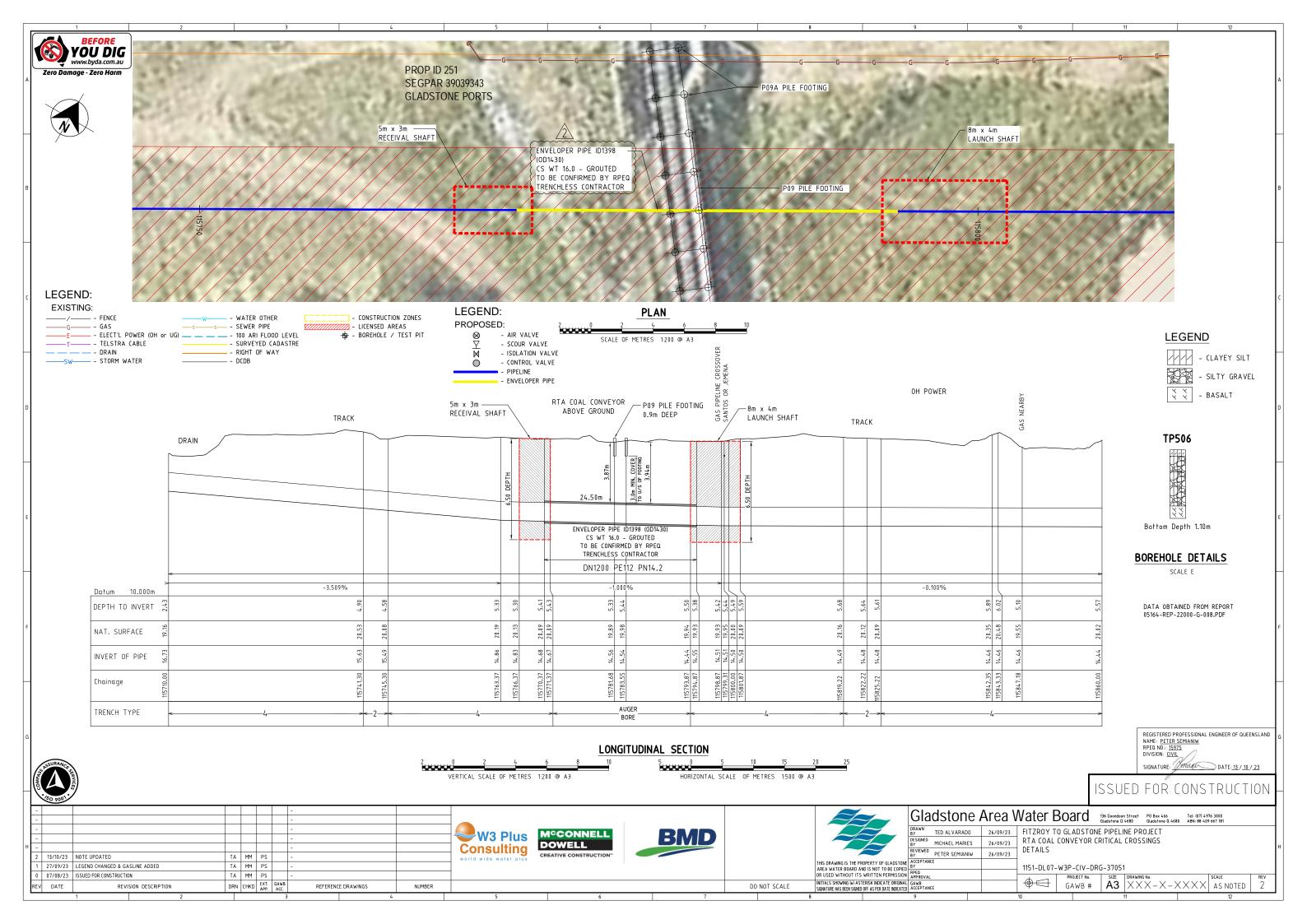


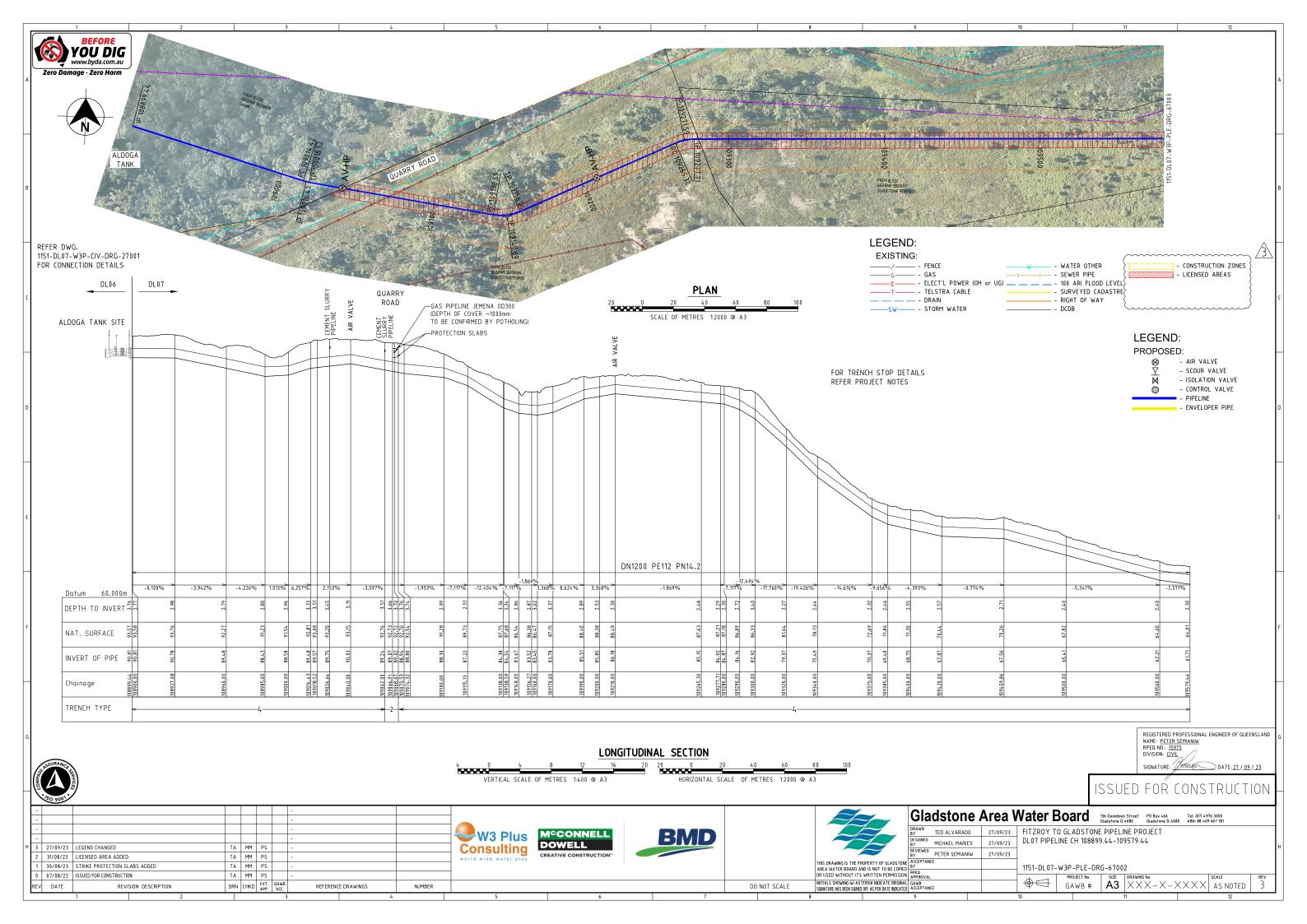


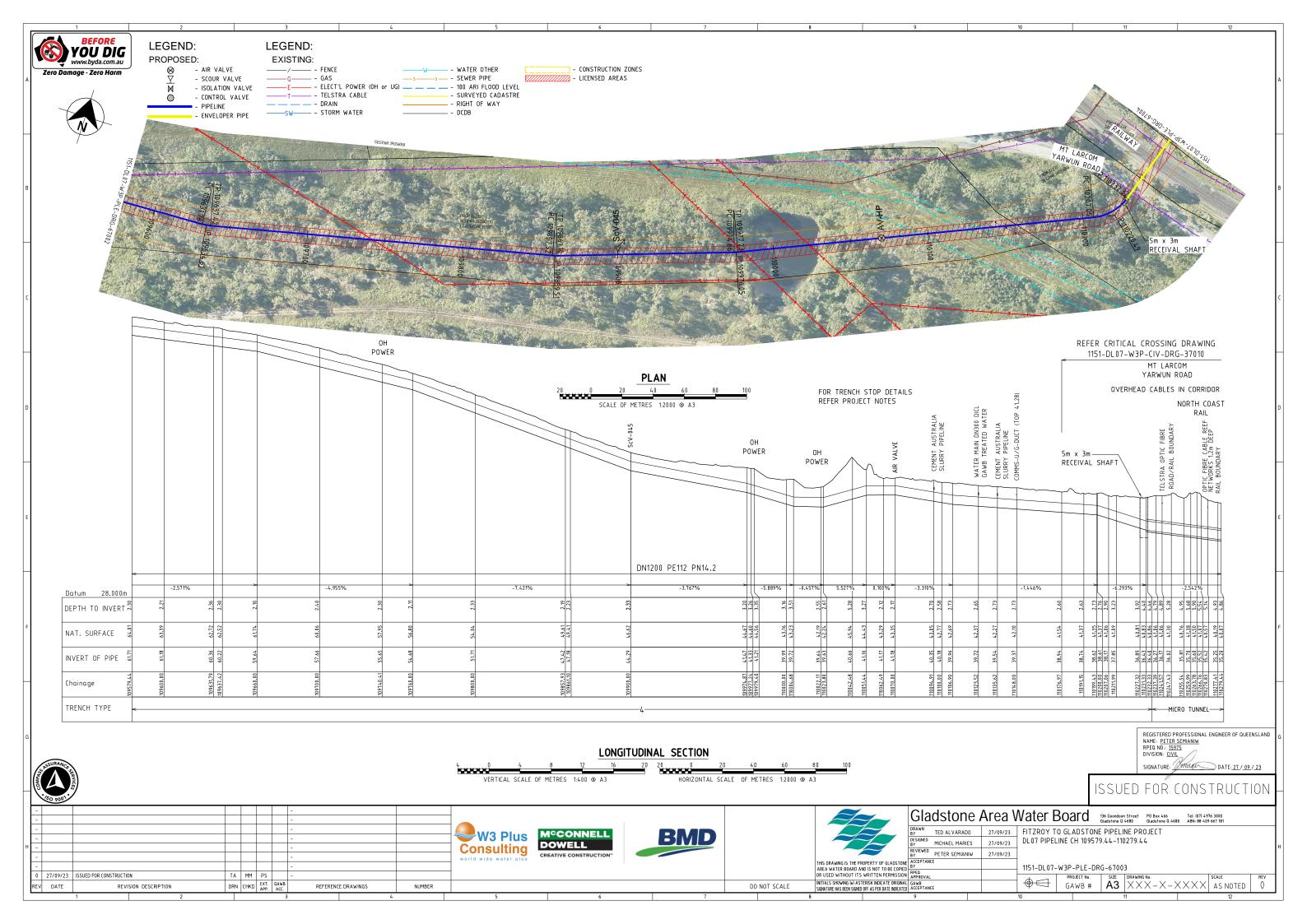


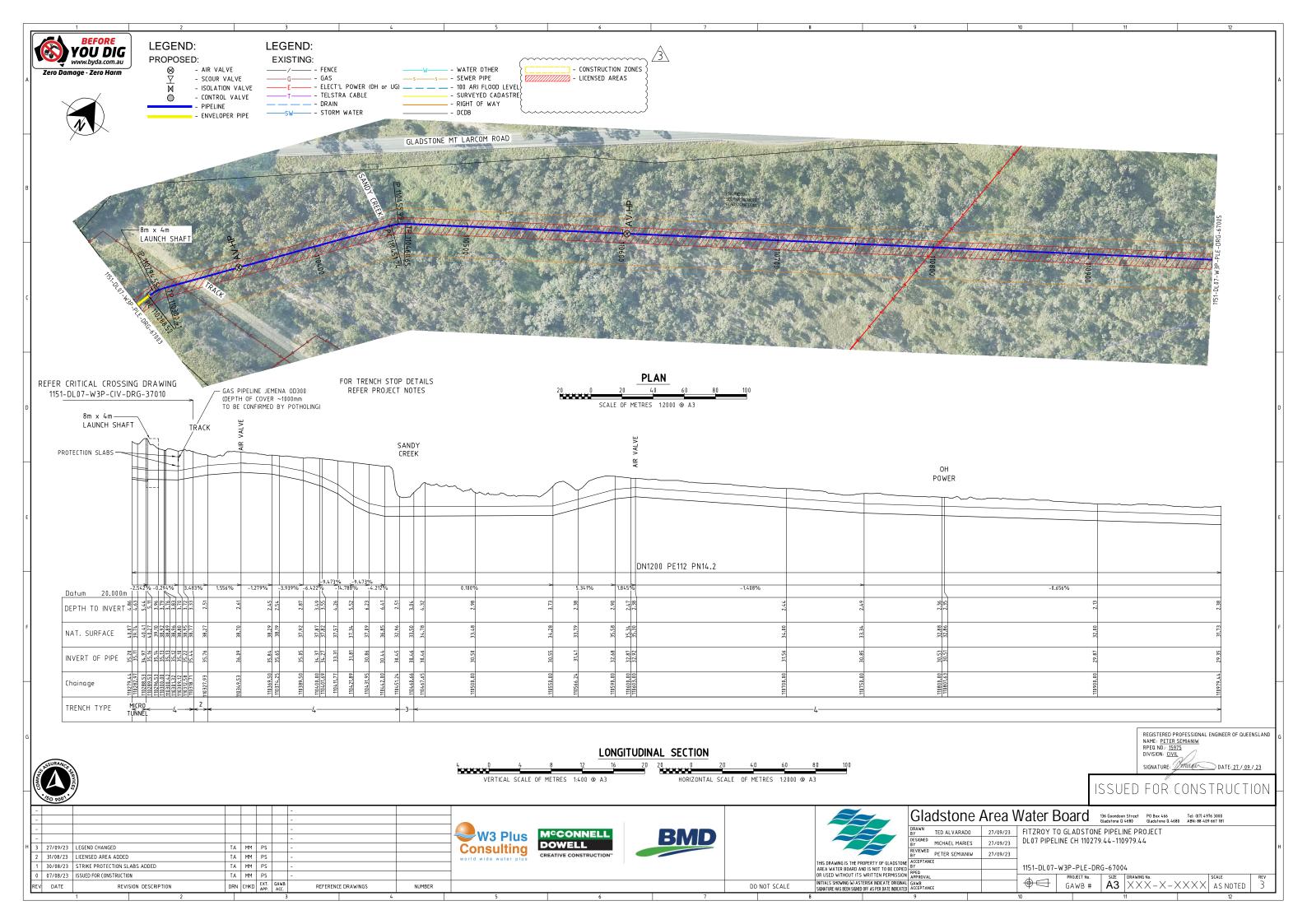


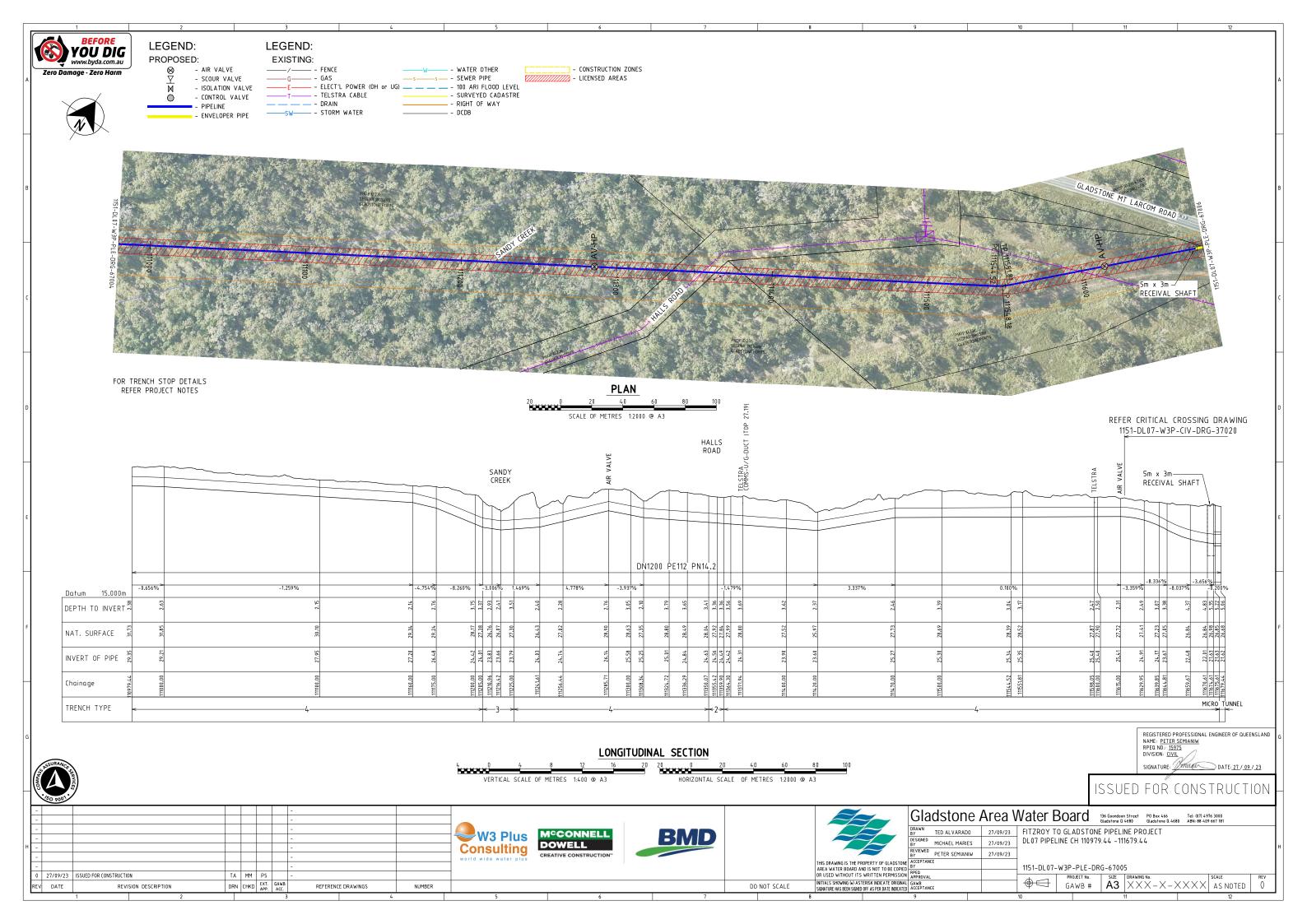


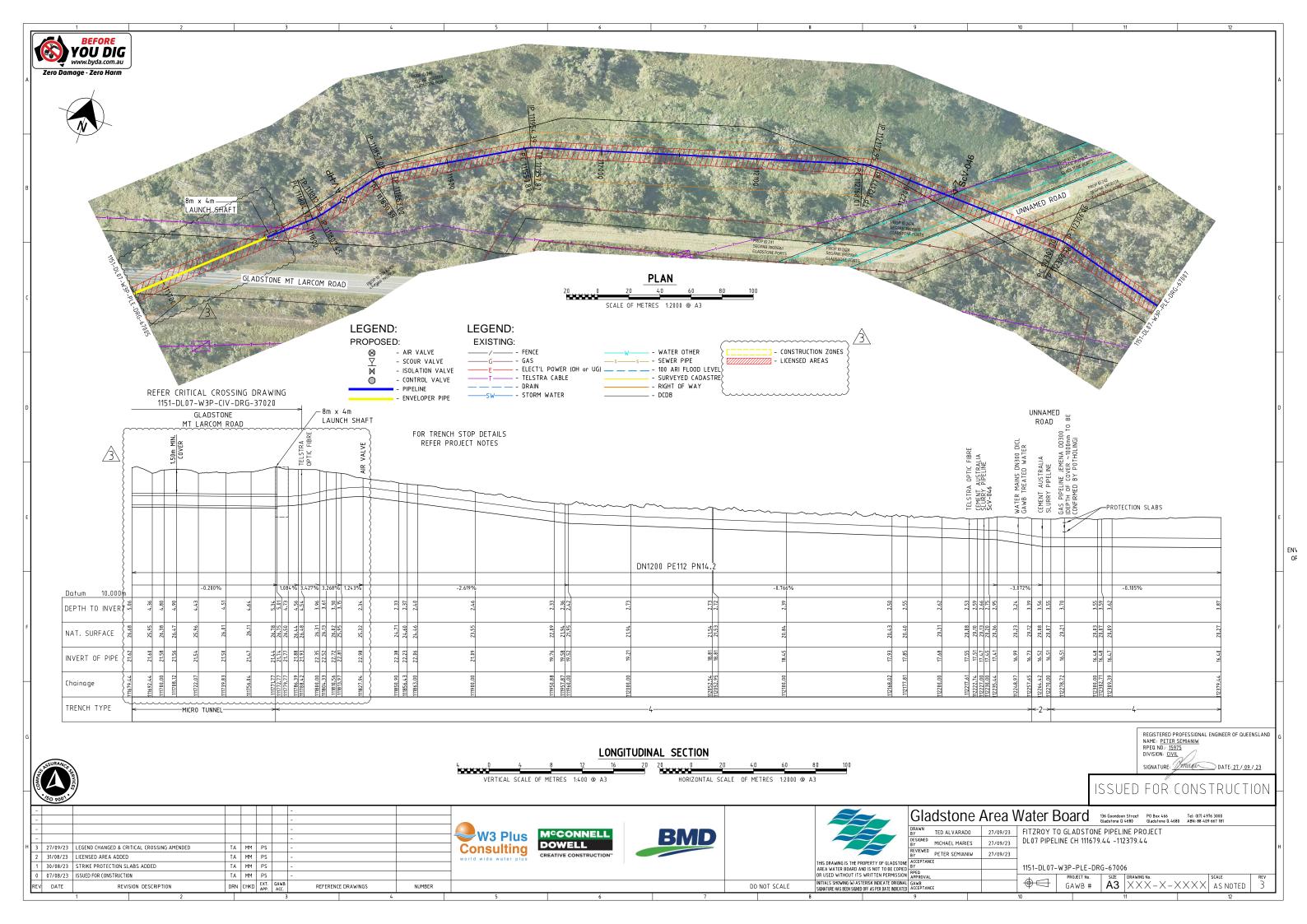


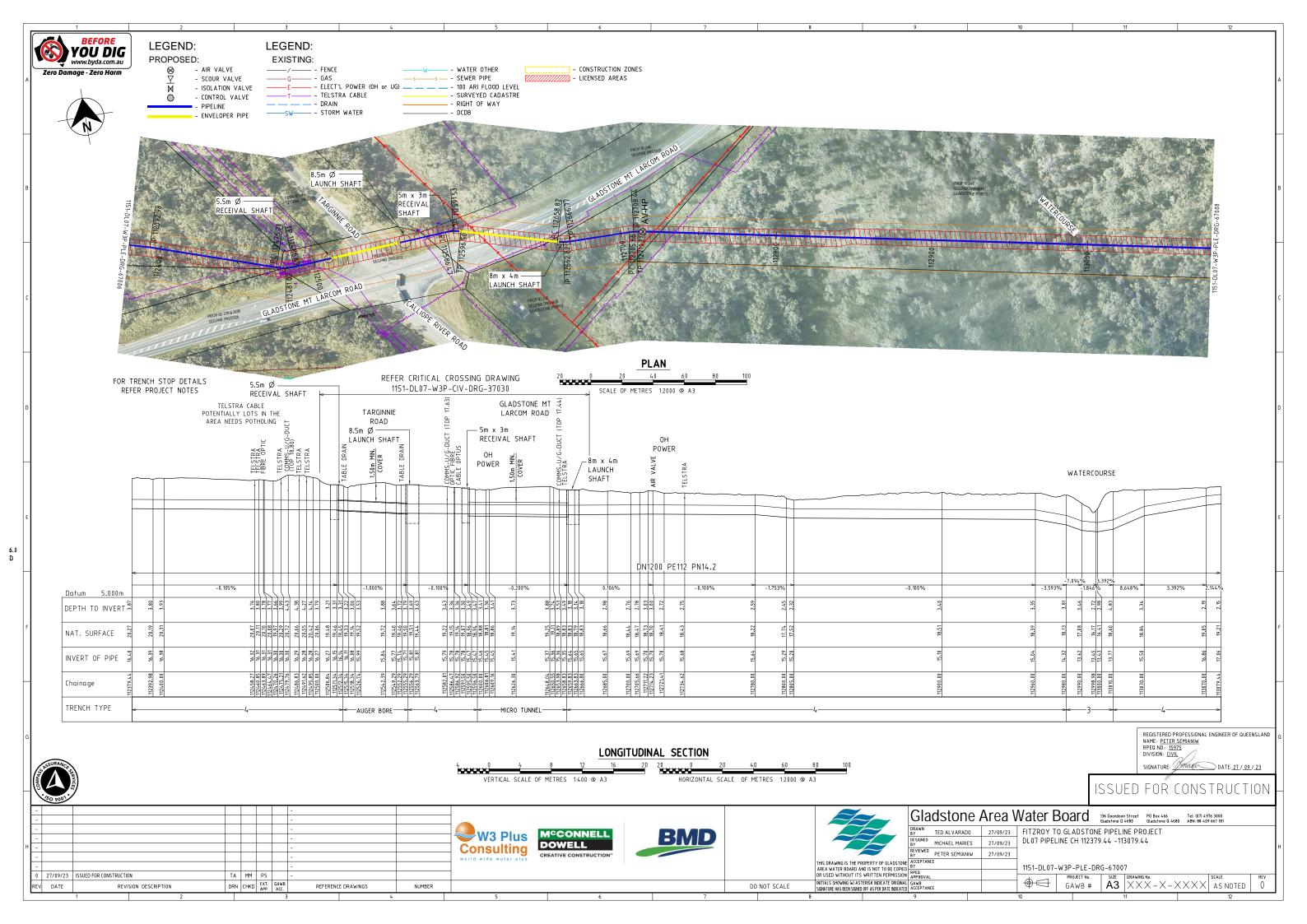


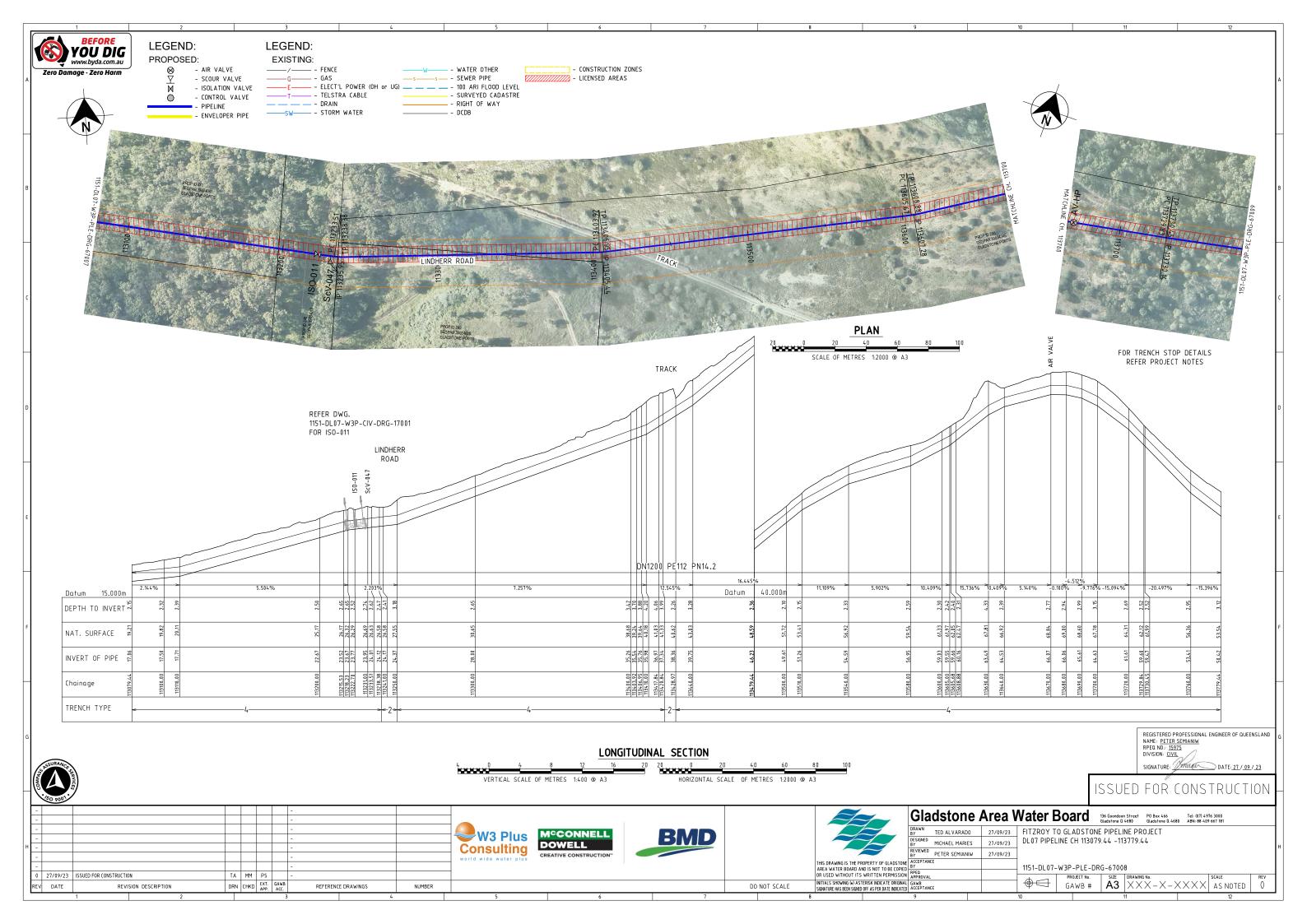


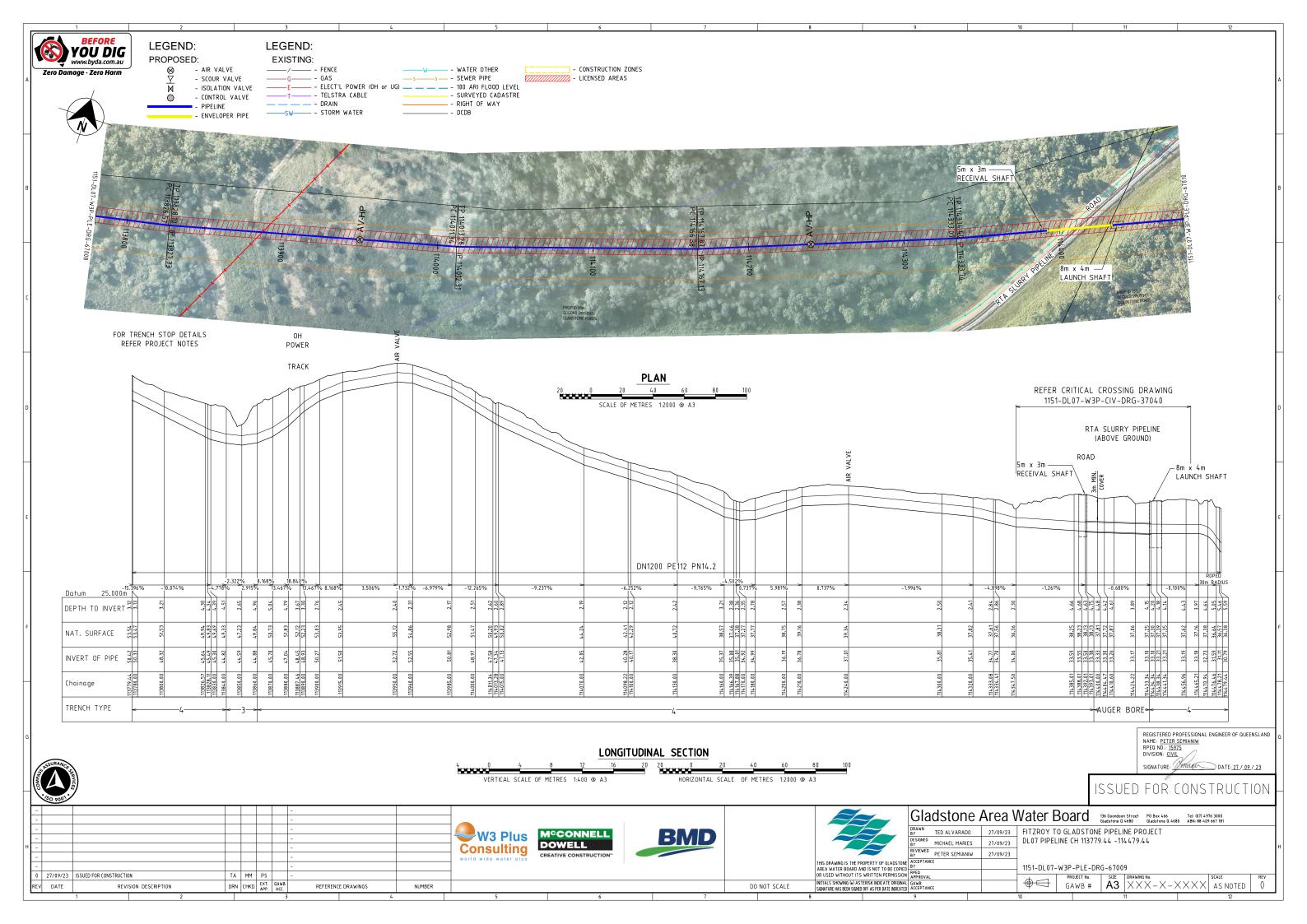


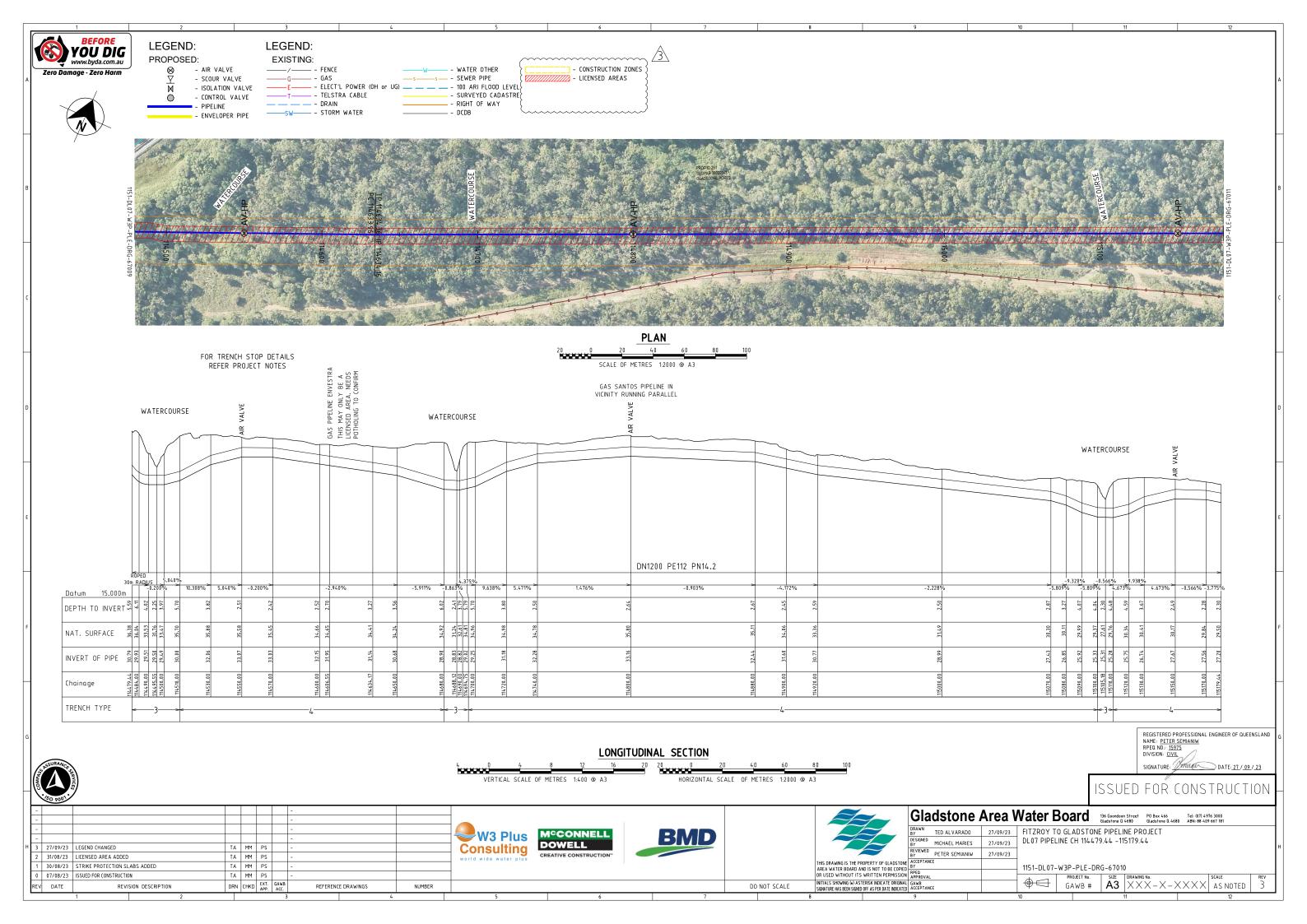


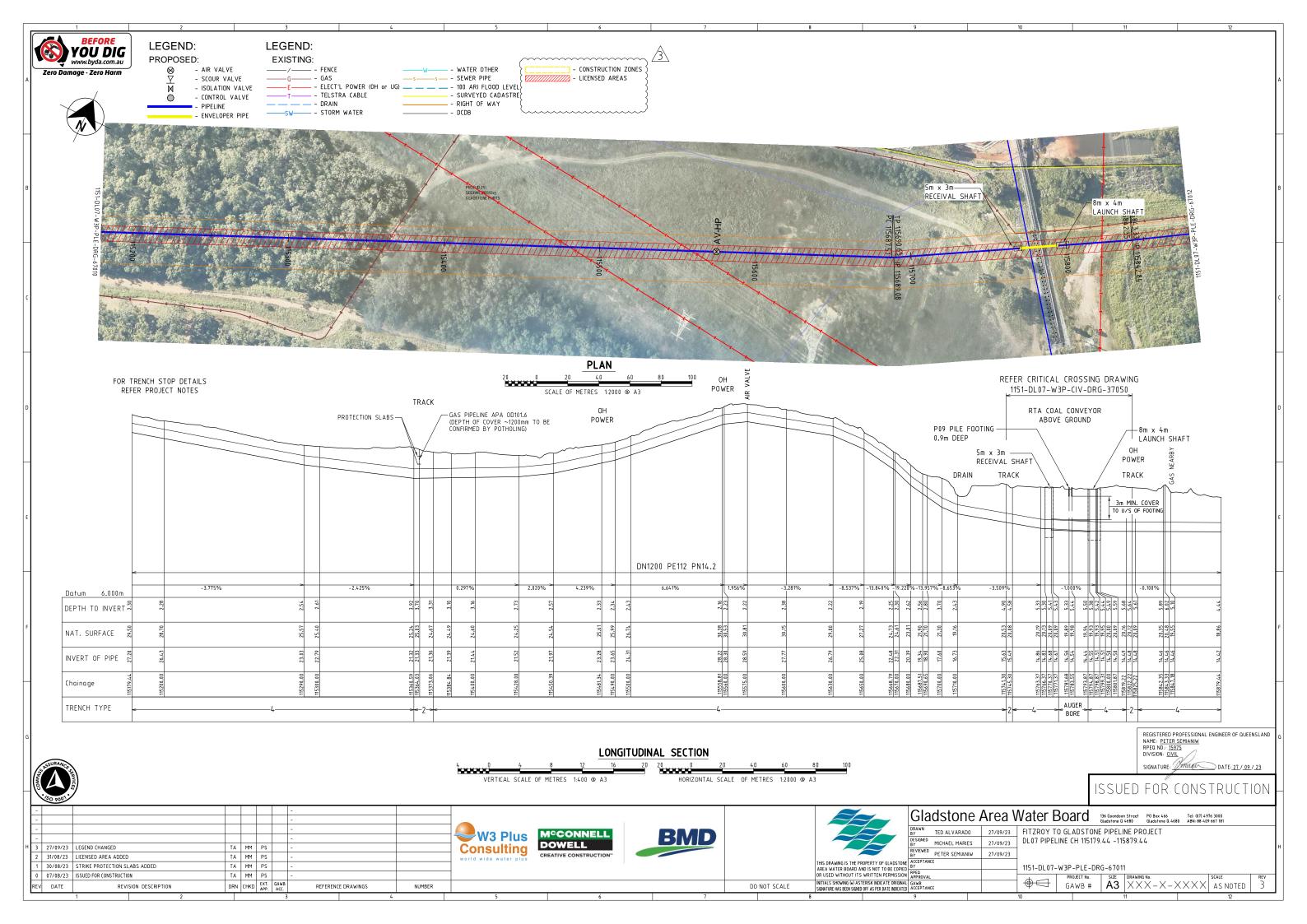


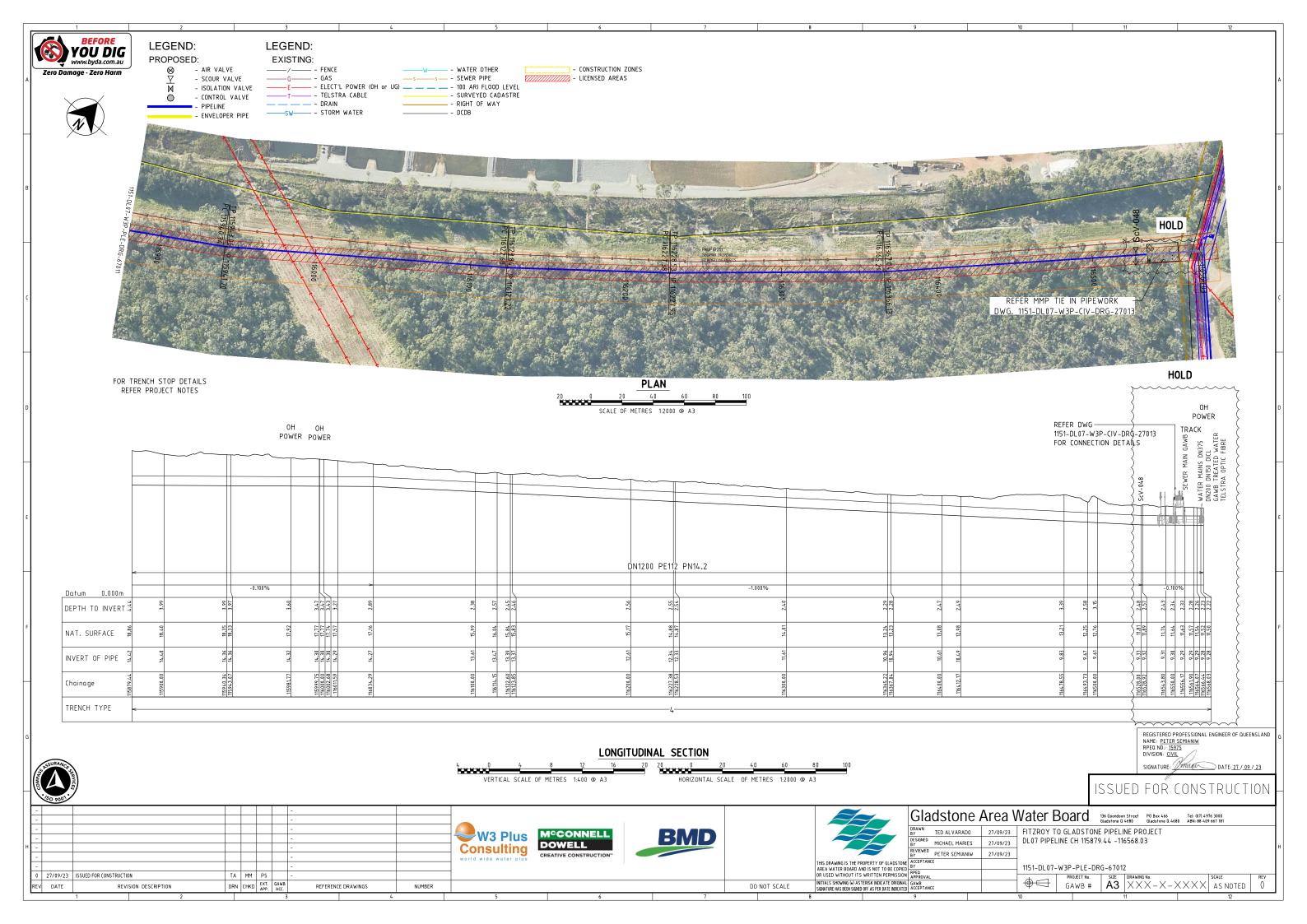


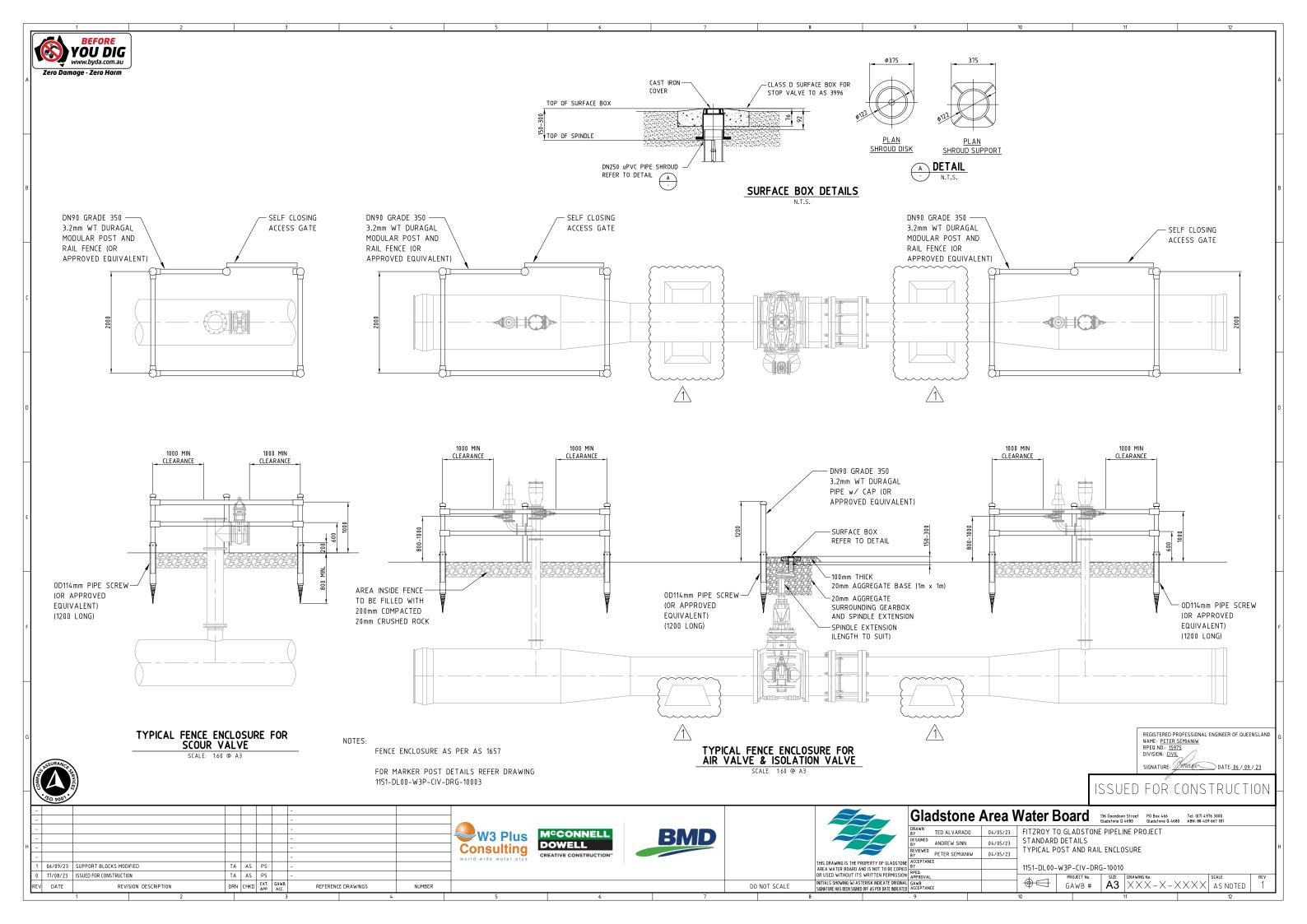














OUR WATER STORY, IS YOUR WATER STORY

Attachment B – Traffic Management Plan (Appendix A)



Appendix A - Temporary Site Access Routes

Extra land outside the FGP RoW is required for vehicle, equipment and personnel to gain temporary access to the pipeline RoW as construction progresses, in particular due to the following constraining circumstances:

- Trenchless crossing installation associated with significant environmental or infrastructure values, with no ability to traverse the RoW across the trenchless section due to significant environmental or infrastructure values (refer to blue line items in Table A1 below); and
- Other existing constraints within the RoW which limit accessibility (e.g., wet area and infrastructure bypasses, including the Rockhampton Ring Road as per second blue line item in Table A1 below).

The currently proposed temporary site access routes (green and white line items) and the respective landholder (and other interests) are listed in chainage order in Table A1, with significant access constraint locations giving rise to many of the additional access requirements also indicated (blue line items).

It is noted the list of proposed routes may be amended over time as construction progresses. These locations have been (and potential future additional access routes required will be) sited based on the following guiding principles:

- Existing roads / tracks will be used in accordance with any relevant road authority approvals, landholder agreements, exemptions and / or accepted development requirements; and
- Where existing roads / tracks are not currently available, but a RoW constraining feature is present (e.g., dams, wet areas), equipment will be driven around the feature (i.e., "blades up") only. No formal track is to be developed (e.g., via grading, laying gravel etc), although, localised filling of divots or use of bog mats may occur, and the area will be "made good" following use, in accordance with documented landholder agreements.

Table A1: Currently proposed temporary access routes

Ski Gardens Road	
Ski Gardens Road	
	RRC
Laurel Bank Road	RRC
Ridgelands Road	TMR
Cranston Road	RRC
Lions Lagoon trenchless crossing	
Lions Lagoon bypass	Private (Bell, Price & McMaster) and
	RRC (within Sunwater easement)
Stracey Road	RRC
Nine Mile Road	RRC
Malchi Nine Mile Road, off Fairy Bower	RRC
Road	
Wet area bypass	Private (Greenhalgh)
Wet area bypass	Private (Kirk)
Fogarty Road	RRC
Titman Road	RRC
Newman Road	RRC
Rockhampton Ring Road	
Rockhampton Ring Road bypass, off Nelson Street	Private (Brown) and RRC
Capricorn Highway trenchless crossing	
Old Capricorn Hwy	RRC
Unnamed road off Old Bruce Highway	RRC (although used by Private – Coombs)
Off Whyte Road	Private (Williams) and RRC
,	
River Road	RRC
Roope Road	RRC
	Private (Miller & Pierce)
	Private (West) and / or RRC
	RRC
FOLL STAFFORFUL OFFICE	Ridgelands Road Cranston Road Lions Lagoon trenchless crossing Lions Lagoon bypass Stracey Road Nine Mile Road Malchi Nine Mile Road, off Fairy Bower Road Wet area bypass Fogarty Road Titman Road Newman Road Rockhampton Ring Road Rockhampton Ring Road bypass, off Nelson Street Capricorn Highway trenchless crossing Old Capricorn Hwy Bruce Highway trenchless crossing Jnnamed road off Old Bruce Highway Off Whyte Road Gavial Creek trenchless crossing

Chainage	Route Description	Landholder
52600	Off Magazine Road	Private (Magowra) and RRC
53300	Wet area bypass	Private (Magowra) and TMR
55000	Wet area bypass	Private (Magowra)
56500	Inkerman Creek trenchless crossing	· ···ate (inage ina)
57700	Bajool Port Alma Road	TMR
65050	Off Twelve Mile Road	Private (Howkins / Butler) and RRC
65100	Twelve Mile Creek trenchless crossing	Titrate (Hewither Baser) and rate
65200	Twelve Mile Road	RRC
65950	Marble Creek trenchless crossing	TITO
68500	Twelve Mile Road	RRC
		RRC
71900	Horrigan Creek trenchless crossing	I D
72500	Off Raglan Station Road	Department of Resources and GRC
73000	Raglan Creek trenchless crossing	
76400	Off Raglan Station Road	Private (Christensen & Gildavis) and GRC
81300	Reedy Creek Road	GRC
87000	Wet area bypass	Private (Achay)
88300	Dart Creek Road	GRC
89700	Wet area bypass	Private (Sheppard) (within Powerlink easement)
91500	Wet area bypass	Private (Emmerton)
91800	Popenia Road	GRC
93800	Gostevsky Road	GRC
GSDA Section	Coolovoky Road	CITO
95900	Narrows Road	GRC
97400	Gladstone Mt Larcom / North Coast Rail (
99300	Off Gladstone Mt Larcom Road	MEDQ (LNG pipeline access)
100100	Wet area bypass	MEDQ (LING pipeline access)
	Blackwater System (East End Mine Rail L	
101100 101200	Wet area bypass	CG
102400 to 103500	Larcom Creek bypass	CG, DoR (Larcom Creek), GRC (Aldoga Road) (various easements in this location)
102500	Larcom Creek trenchless crossing	,
106800	Wet area bypass	GRC
107200	Myrlea Road	GRC
108400	Aldoga Road	GRC
109900	Wet area bypass	GPC
110200	Mt Larcom Yarwun Road / North Coast R	
111300	Halls Road	GRC
111700	Gladstone Mt Larcom Road trenchless cr	
112200	Off Targinnie Road	GPC (within GAWB easement)
112500	Targinnie Road trenchless crossing	Of 6 (Within GAWB easement)
112600	Off Targinnie Road	CG (Ergon powerline access)
112600	Gladstone Mt Larcom Road trenchless cr	
113200	Lindherr Road, off Calliope River Road	GPC and GRC (RTA pipeline access)
114400	RTA pipeline trenchless crossing	CDC
115700	RTA conveyor bypass	GPC
116200	RTA coal conveyor trenchless crossing	TMD
116567	Mt Miller Road	TMR
Pipeline constraining feature resulting in a non-continuous RoW Road reserve only Other landholder agreements required		