



Document No. 1297061
GPC Ref: DA2016/07

Gladstone Ports Corporation
Growth, Prosperity, Community.

DECISION NOTICE – DA 2016/07

Application:	Port Application (Operational Works) for Raw Water Pipeline
Applicant Name and address:	Knauf Plasterboard Pty Limited c/- Peter Moonie GHD Pty Ltd PO Box 712 BUNDABERG QLD 4670
Owner:	Gladstone Ports Corporation Limited
Subject Land:	Part of Lot 5 on RP7193, Lot 6 on SP166192 and Lot 501 on SP271547
Location:	Port of Bundaberg
Present Zoning	Strategic Port Land
Proposed Use:	Construction and Operation of Raw Water Pipeline
Application Received:	29 August 2016

This development application was assessed on: **21 November 2016**

1. Details Of The Approval

Development Permit:

Construction and operation of raw water pipeline.

2. Assessment Manager's Conditions

In general the facilities are in compliance with the requirements of Gladstone Ports Corporation. It is to be noted that the following conditions will be complied with in the granting of this Development Application.

GENERAL

1. The proposed development must be carried out generally in accordance with the plans as lodged with the application except where modified by conditions of this permit.
2. Unless otherwise stated, all conditions must be completed prior to the commencement of the use.

3. Where additional "approval" is required under these conditions by the Gladstone Ports Corporation for drawings or documentation, the proponent must submit for review, amend to the satisfaction of, and obtain written acceptance from the Gladstone Ports Corporation. Only in this manner can compliance with the condition be achieved.
4. All other relevant regulatory approvals must be obtained before commencement of works or operation of the facility.
5. The proponent must inform the GPC of completion of works within 14 days of practical completion and undertake a site inspection with GPC. The proponent must also certify that the development is constructed as per design and provide RPEQ certification that the development has been constructed in accordance with the approved plans.
6. The proponent must at its cost and expense, keep and maintain the subject area, including existing services, in a state that is satisfactory to the Port.

ENGINEERING

7. The proponent must supply the Port with "As Constructed" plans in both hard copy (2 of) and electronic (CAD format) which illustrates all infrastructure on Port land which is associated with the activity.
8. The proponent must provide to GPC for approval a Construction Traffic Management Plan (CTMP) at least 10 business days prior to initiation of works. The CTMP must include vehicle routes on port roads, duration of project and hours of operation, location of vehicle access point/s to the construction site, details of on-site vehicle/plant storage and security and any vehicle control signage to be utilised.
9. Any construction laydown areas are to be contained within the existing easements for the pipeline unless otherwise approved in writing by GPC.
10. No mud, dirt or other debris is to be tracked onto public roads from the construction site.
11. Unless otherwise approved in writing by GPC, any material excavated during the construction period which is not reused as fill, is to be removed from GPC lands with the exception of dredged river sands which must remain on GPC land.

ENVIRONMENT

12. Upon receipt of this Development Approval (DA), the holder must forward to GPC within 10 business days prior to operation of the activity, a copy of any environmental approvals issued for activities related to this land or DA, including those held by third parties e.g. an Environmental Authority, tidal works approval etc. Any permissible changes or amendments to these approvals must also be forwarded to GPC within 20 business days of the variation coming into effect.
13. The following management plans must be provided to Gladstone Ports Corporation for approval prior to construction works commencing:
 - Environmental Management Plan (Construction);
 - Erosion and Sediment Control Plan; and
 - Acid Sulphate Soils Management Plan.

GPC will require no less than ten (10) business days to initially assess the plans. Should further information be required for the assessment of the plans, GPC will require a further five (5) business days to complete the assessment.

14. The holder of this DA shall carry out site works in accordance with the approved management plans.

15. GPC's Environmental Hotline (4976 1617) is to be notified as soon as practical after the proponent has become aware of any non-compliance with any environmental approval conditions (including those of other regulatory agency approvals) specific to this approval and its associated works.
16. GPC's Environmental Hotline (4976 1617) is to be notified of the occurrence of any incident resulting in environmental nuisance or harm (to air, land, water, flora or fauna) as a result of the activity/s specific to this approval and its associated works, according to the following methods and timeframes:
 - a. Verbal notification immediately after occurrence of incident
 - b. Written notification within 24 hours of occurrence of incident
17. GPC's Environmental Hotline (4976 1617) is to be notified of the occurrence of any release or spill of contaminants to ground greater than 10L (e.g. fuels, oils, chemicals or other hazardous substance etc.) as a result of the activity/s specific to this approval and its associated works, according to the following methods and timeframes:
 - a. Verbal notification immediately after occurrence of incident
 - b. Written notification within 24 hours of occurrence of incident
18. Any spillage of wastes, contaminants or other materials must be cleaned immediately. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such materials to any stormwater drainage system, roadside gutters or waters.
19. Spill kits must be located within ten meters of any loading/unloading points for fuel, oil, lubricants or similar material. All spill response materials must be disposed of in accordance with the sites Environmental Management Plan (Construction). All personnel involved with this activity are to be trained and competent in the proper use of these spill kits.
20. The Gladstone Ports Corporation, shall be permitted upon written agreement from the holder of the approval (which shall not be unreasonably withheld), to enter upon the Licensed Land or any part or parts thereof for the purpose of enabling the Gladstone Ports Corporation to conduct an Environmental Audit/Inspection.

3. The Approved Plans –

The approved plans and/or documents forming part of this decision notice are listed in the following table:

Document Reference	Plan / Document Name	Date
Draw. No. 41-29918-W001 Rev B	Locality Plan and Drawing Index	26/08/2016
Draw. No. 41-29918-W002 Rev B	Standard Notes and Legend	26/08/2016
Draw. No. 41-29918-W003 Rev B	Water Main Layout Plan and Longitudinal Section – Sheet 1 of 5	26/08/2016
Draw. No. 41-29918-W004 Rev B	Water Main Layout Plan and Longitudinal Section – Sheet 2 of 5	26/08/2016
Draw. No. 41-29918-W005 Rev B	Water Main Layout Plan and Longitudinal Section – Sheet 3 of 5	26/08/2016
Draw. No. 41-29918-W006 Rev B	Water Main Layout Plan and Longitudinal Section – Sheet 4 of 5	26/08/2016

Document Reference	Plan / Document Name	Date
Draw. No. 41-29918-W007 Rev B	Water Main Layout Plan and Longitudinal Section – Sheet 5 of 5	26/08/2016
Draw. No. 41-29918-W008 Rev B	Scour Valve and Air Valve Details	26/08/2016
Draw. No. 41-29918-W009 Rev B	Connection Details	26/08/2016
Draw. No. 41-29918-W010 Rev B	Wallace Creek Crossing Plan	26/08/2016

4. When the Development Approval Takes Effect –

If the application is approved, or approved subject to conditions, the decision notice, or if a negotiated decision notice is given, the negotiated decision notice, is taken to be the development approval and has effect on the date that the notice is signed by an authorised delegate of the Gladstone Ports Corporation.

5. When Approval Lapses if Development Not Started

The relevant period stated below applies to each aspect of development in this approval, as outlined below:-

- 4 years

6. Other Necessary Development Approvals

Listed below are the other development permits that are necessary to allow the development to be carried out:

- N/A

7. Appeal Rights

No legislated appeal rights are afforded with this decision notice as the application was not made under the provisions of The Sustainable Planning Act 2009.

If you have concerns or queries regarding the conditions, please contact the undersigned on 4976 1287.

8. Assessment Manager Certification

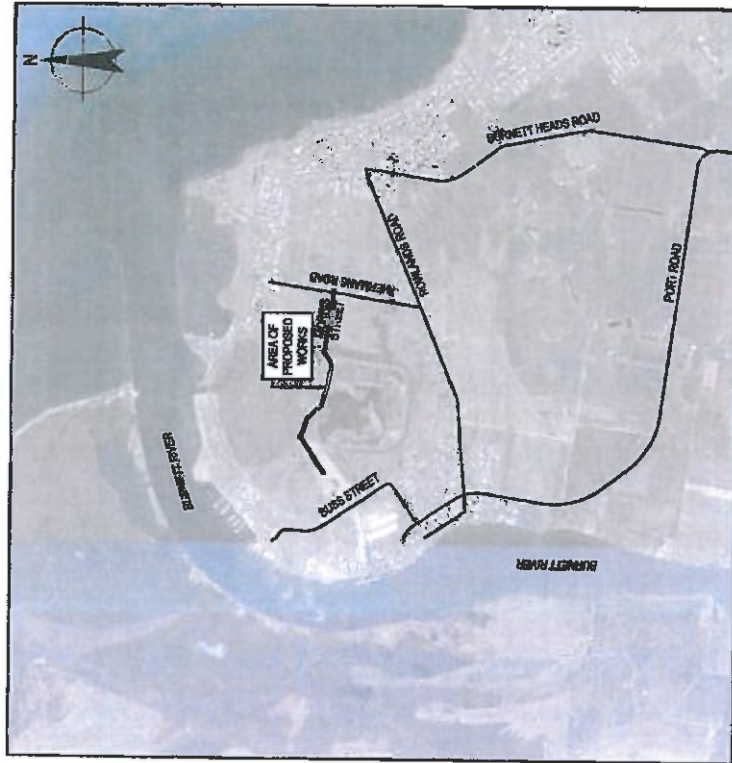


Sarah Hunter
Senior Planning Officer
21 November 2016



KNAUF PLASTERBOARD PTY LTD RAW WATER PIPELINE GHD PROJECT NUMBER: 41-29918

APPROVED



DRAWING LIST

DRG No.	DRAWING TITLE
41-29918-W001	LOCALITY PLAN AND DRAWING INDEX
41-29918-W002	STANDARD NOTES AND LEGEND
41-29918-W003	WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 1 OF 6
41-29918-W004	WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 2 OF 6
41-29918-W005	WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 3 OF 6
41-29918-W006	WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 4 OF 6
41-29918-W007	WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 5 OF 6
41-29918-W008	SCOUR VALVE AND AIR VALVE DETAILS
41-29918-W009	CONNECTION DETAILS
41-29918-W010	WALLACE CREEK CROSSING PLAN

STANDARD DRAWING LIST

DRG No.	DRAWING TITLE
WMA-STD-001	WMA STANDARD DRAWINGS
WMT-156	THRUST BLOCK DETAILS - CONCRETE BLOCKS
WMT-157	THRUST AND ANCHOR BLOCKS - GATE VALVES AND VERTICAL BENS
WMT-158	VALVE AND HYDRANT IDENTIFICATION - IDENTIFICATION MARKERS AND MARKER POSTS
WMT-159	TYPICAL VALVE AND HYDRANT INSTALLATION - VALVE ARRANGEMENT
WMT-200	TYPICAL SURFACE FITTING INSTALLATION GATE VALVE SURFACE BOXES - NON TRACKABLE
ERC-STD-001	ERC STANDARD DRAWINGS
R1001	DRAWING TITLE PUBLIC UTILITIES - CONDUIT/SERVICE ROAD - CROSSING DETAILS

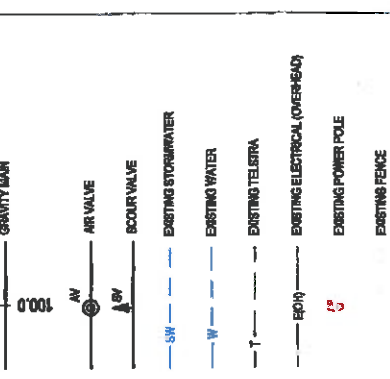
EXISTING SERVICE LOCATIONS
THE LOCATION OF EXISTING SERVICES SHOWN ARE INDICATIVE ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SERVICES ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION

ASSOCIATED SERVICES
KNAUF PLASTERBOARD PTY LTD
87 BARKLYN STREET, BUNDABERG
QLD 4670
PH: (07) 4161 6677

LEVEL DATUM AND VOICE
AUSTRALIAN DATUM
MADAGASCAR ZONE
PSAD/AGRS/1982
RL: 4.357m

NOTE: WHILE EVERY CARE HAS BEEN TAKEN TO PREPARE THIS MAP, GHD AND GOOGLE MAKE NO REPRESENTATIONS OR WARRANTIES ABOUT ITS ACCURACY, RELIABILITY, COMPLETENESS OR SUITABILITY FOR ANY PARTICULAR PURPOSE AND CANNOT ACCEPT LIABILITY AND RESPONSIBILITY FOR ANY KIND (WHETHER IN CONTRACT, TORT OR OTHERWISE) FOR ANY EXPENSES, LOSSES, DAMAGES AND/OR COSTS (INCLUDING INDIRECT OR CONSEQUENTIAL DAMAGES) WHICH ARE OR MAY BE INCURRED BY ANY PARTY AS A RESULT OF THE MAP BEING INACCURATE, INCOMPLETE OR UNSUITABLE IN ANY WAY AND FOR ANY REASON.
DATA SOURCE: GOOGLE EARTH PRO - IMAGEY DATE EXTRACTED: 10/06/2016

FOR APPROVAL		KNAUF PLASTERBOARD PTY LTD RAW WATER PIPELINE LOCALITY PLAN AND DRAWING INDEX	
<p>DO NOT SCALE Consideration should be given to the scale of the drawing. The drawing is not to be used for any other purpose than that for which it was prepared and shall not be used for any other purpose.</p>		<p>Client: KNAUF PLASTERBOARD PTY LTD Project: RAW WATER PIPELINE Title: LOCALITY PLAN AND DRAWING INDEX</p>	
<p>Scale: 1:2000m Scale bar: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100m</p>		<p>Drawn: A. PETERSON Checked: [Blank] Engineer: A. PETERSON Project: [Blank] Client: [Blank]</p>	
<p>Approval: [Blank]</p>		<p>Approval: [Blank]</p>	
<p>Issue: [Blank]</p>		<p>Issue: [Blank]</p>	
<p>Revision: [Blank]</p>		<p>Revision: [Blank]</p>	
<p>Final: [Blank]</p>		<p>Final: [Blank]</p>	
<p>Approved: [Blank]</p>		<p>Approved: [Blank]</p>	
<p>Date: 20 August 2019 - 08:59:00</p>		<p>Date: 20 August 2019 - 08:59:00</p>	
<p>Project: 41-29918-W001</p>		<p>Project: 41-29918-W001</p>	



- GENERAL**
- 61. READ THESE DRAWINGS IN CONNECTION WITH OTHER ENGINEERING DRAWINGS, SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED. THE CONSTRUCTION NOTES SHALL APPLY UNLESS OTHERWISE VARYED BY THE DRAWINGS OR SPECIFICATIONS.
 - 62. NOMINATION OF PROPRIETARY ITEMS DOES NOT INDICATE EXCLUSIVE PROPRIETARY BUT INDICATES THE REQUIRED QUALITY OF THE ITEM. SIMILAR ALTERNATIVES HAVING THE SAME FUNCTIONALITY MAY BE SUBMITTED FOR APPROVAL BEFORE ANY ORDERING WITH THE SUPERINTENDENT BEFORE THE WORK COMMENCES.
 - 63. ALL LATERAL DIMENSIONS ARE IN MILLIMETRES.
 - 64. ALL LATERAL DIMENSIONS ARE IN METRES.
 - 65. VERIFY SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS BEFORE CONSTRUCTION AND PARAGRAPHS IS COMMENCED.
 - 66. ALL CODES REFERENCED IN THESE DOCUMENTS WILL BE THE LATEST EDITION AVAILABLE AT DATE OF TENDER INVITATION UNLESS NOTED OTHERWISE.
 - 67. THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT ALL SERVICES THAT MAY BE AFFECTED BY THESE WORKS.
 - 68. SURVEY AND/OR FROM OLD RECORDS SUPPLIED ELECTRONICALLY, THEREFORE THE LOCATION OF SERVICES AND FEATURES MAY NOT BE EXACTLY AS SHOWN ON THE DRAWINGS.
 - 69. EXISTING SERVICES WHICH CROSS THE PATH OF THE MAIN AND ALL EXISTING UNDERGROUND SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL ON SHEET DRAWING W14.01. THE CONTRACTOR SHALL LOCATE THE ENDS OF EXISTING MAINS TO WHICH NEW CONSTRUCTION WILL JOIN. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT OF ANY DISCREPANCIES FOUND IN THE LOCATION OF EXISTING SERVICES THAT MAY REQUIRE REALIGNMENT OR REPAIRING OF THE PIPELINE. WORK ON AFFECTED SECTION OF PIPELINE SHALL NOT PROCEED UNTIL ISSUE HAS BEEN RESOLVED BY THE SUPERINTENDENT.
 - 70. ALL SERVICES SHOWN ARE INDICATIVE ONLY AND MUST BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONDUCT A TOLL BEFORE YOU 'DIG' SEARCH FOR EXISTING SERVICES ON SITE PRIOR TO CONSTRUCTION OF ANY APPROPRIATE PROCEDURES, PRECAUTIONS AND CARE MUST BE TAKEN WHEN WORKING WITHIN CLOSE PROXIMITY OF ANY SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS FROM SERVICE OWNERS/UTILITIES WHO ARE AFFECTED BY THE WORK.
 - 71. PIPE LENGTHS TO BE CONFIRMED BY CONTRACTOR.
 - 72. DESIGN LEVELS TO BE CONFIRMED BY CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.
 - 73. THE CONTRACTOR SHALL SUBMIT A PROJECT SPECIFIC SAFETY MANAGEMENT PLAN FOR THE PIPELINE CONSTRUCTION TO THE SUPERINTENDENT FOR APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.

- CONFINED SPACE NOTES**
- 691. WARNING SIGNS ARE TO BE PROVIDED FOR ALL CONFINED SPACES IN ACCORDANCE WITH AS/NZS 2061 - SAFETY SIGNS FOR THE OCCUPATIONAL ENVIRONMENT.
 - 692. ALL CONSTRUCTION AND/OR WORKS IN ACCORDANCE WITH AS/NZS 2061 - SAFE WORKING IN A CONFINED SPACE.
- FENCING NOTES**
- 71. ALL TEMPORARY AND PERMANENT FENCING SHALL BE IN ACCORDANCE WITH AS/NZS 4586.
- PIPEWORK**
- 71. ALL PIPE TO BE OF MATERIAL TYPE, CLASS AND COATING AS NOTED ON THE DRAWINGS.
 - 72. LENGTHS OF PIPE, SPACING OF FITTINGS, BEND ANGLES, ETC. MUST BE CONFIRMED ON SITE PRIOR TO ORDERING MATERIALS. AMENDMENTS TO BE MADE ON SITE IF REQUIRED.
 - 73. ALL FITTINGS TO BE COATED AND LINED WITH FURON BONDED EPOXY (MORFOX 418).
 - 74. INTERNAL CEMENT LININGS FOR DI PIPES TO BE SULL-PHATE RESISTANT CEMENT IN ACCORDANCE WITH AS/NZS 4586 AND MANUFACTURED TO THE THICKNESS AND TOLERANCES SPECIFIED IN AS/NZS 4586.
 - 75. EXTERNAL COATINGS FOR DI PIPES TO BE COULD APPLIED BLACK EPIDURAL COATING IN ACCORDANCE WITH AS/NZS 4586.
 - 76. MANUFACTURER OF A TIGHT PROOFING SHALL BE 'UP' OUT TO FIT PIPEWORK TO BE DESCRIBED ON SITE AND CARRIED OUT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. PVC FITTINGS WHEN SPECIFIED SHALL BE SUPPLIED WITH RUBBER RING JOINTS TO AS/NZS 4586.
 - 77. BURIED SLURVE VALVES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS ON SHEET DRAWING W14.01.
 - 78. ALL EPISODIC AND SOCKET ENDINGS VALVES AND VERTICAL DISKS TO BE INSTALLED WITH THE COORDINATE STREET HOLD DOWN PIPES AND VALVE FITTINGS IN ACCORDANCE WITH AS/NZS 4586 AND DRAWING W14.01.
 - 79. ALL FITTINGS SHALL BE PROVIDED ON ALL BURIED DIPE AND FITTINGS IN ACCORDANCE WITH AS/NZS 4586 AND THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.
 - 80. WHERE FE OR PVC FITTINGS ARE IN CONTACT WITH CONCRETE, FLANGES SHALL BE PAINTED TO RESIST WITH PAINTED FLANGE ENDINGS, AND CONSTRUCTION TO CONFIRM FLANGE COMPATIBILITY FOR VALVES AND FITTINGS.
 - 81. ALL FLANGED JOINTS TO HAVE STAINLESS STEEL BOLTS TO GRADE 8.8 AND NUTS TO GRADE 8.8. COME UP WITH JASKET AND FIT FLANGED GASKETS COMPACT WITH AS/NZS 4586.
- VALVES**
- 91. AIR VALVES SHALL NOT BE INSTALLED AT GREATER THAN 90° OFF VERTICAL.
 - 92. AIR VALVES TO BE VENT-O-MAT FROM BOREHOLE MALE CONNECTION, OR APPROVED EQUIVALENT AND OF SIZE AS INDICATED ON THE LONGITUDINAL SECTIONS.
 - 93. ALL SURVEY VALVES ARE TO BE HEAVY DUTY SEATED VALVES TO AS/NZS 4586 AND COATED AND LINED WITH FURON BONDED EPOXY (MORFOX 418) AND CLOSURE OPENING.
 - 94. SLURVE VALVE SURFACE BOX TO BE TYPE A1 IN ACCORDANCE WITH AS/NZS 4586 AND DRAWING W14.01.
 - 95. ALL VALVES TO BE OF GRADE 316 SS MATERIAL, CH HANDLE AND BE OF THE SAME SIZE AS THE SPECIFIED AIR VALVE.
 - 96. ALL VALVES SHALL BE CLASS 'C' UNLESS NOTED OTHERWISE IN THE DRAWINGS.
- CONCRETE CHAMBERS**
- 97. PROVIDE 40mm THICK BUILDING CONCRETE TO ALL MANHOLE BASES. CONSTRUCTION JOINTS ARE ONLY PERMITTED AT BASE LEVEL UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - 98. SELECTED BACKFILL MATERIAL UNDER MANHOLE BASES SHALL BE PLACED 150mm THICK LAYERS AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD.

- REINSTATEMENT OF CONCRETE ELEMENTS**
- 99. CONCRETE ELEMENTS INCLUDING KERBS, FOOTPATHS, MEDIANS, DRIVEWAYS, ETC. SHALL BE SAW CUT TO ALLOW TRENCHING AND BE REPAIRED WITH MATCHING SURFACE TEXTURE AND TREATMENT AS ADJOINING SURFACES. NEW SURFACE SHALL MATCH SMOOTHLY WITH ADJOINING SURFACES.
- GENERAL**
- 100. THE DATUM FOR ALL LEVELS IS THE AUSTRALIAN HEIGHT DATUM IN METRES AND POSITIONS ARE BASED ON HIGH 50 MIP GRID OF AUSTRALIA ZONE 56 COORDINATE SYSTEM.
 - 101. ALL SURVEY WORK SHALL BE CONDUCTED BY A REGISTERED SURVEYOR OR A PERSON UNDER THE SUPERVISION OF A REGISTERED SURVEYOR. THE SURVEYOR SHALL BE REGISTERED WITH THE SURVEYING AUTHORITY OF THE STATE IN WHICH THE WORK IS TO BE CONDUCTED. THE SURVEYOR SHALL BE REGISTERED WITH THE SURVEYING AUTHORITY OF THE STATE IN WHICH THE WORK IS TO BE CONDUCTED. THE SURVEYOR SHALL BE REGISTERED WITH THE SURVEYING AUTHORITY OF THE STATE IN WHICH THE WORK IS TO BE CONDUCTED.
 - 102. SURVEY POINTS AND ELEVATIONS DERIVED FROM GPS POSITIONS SHALL BE USED TO CHECK AND CORRECT SURVEY DATA. ELEVATIONS SHALL BE USED TO CHECK AND CORRECT SURVEY DATA.
 - 103. CONTIGUOUS INTERNAL SHOWS IS CLEAN ON DETAILED SURVEY RESULTS.

- PIPELINE CONSTRUCTION**
- 104. MINIMUM COVER FOR PRIVATE PROPERTY IS FOOTPATHS - 600, ROADSWAYS - 900, CULTIVATED AREAS - 900.
 - 105. 'Y' DENOTES MINIMUM COVER FROM NATURAL SURFACE TO TOP OF PIPE.
 - 106. EXISTING MATERIAL SHALL BE GRUBBED 300mm IN ACCORDANCE WITH AS/NZS 4586. DENSITY UNDER 17%.
 - 107. APPROVED SELECT FILL AND TRENCH BACKFILL SHALL COMPLY WITH THE FOLLOWING MINIMUM COMPACTED REQUIREMENTS. UNLESS OTHERWISE NOTED OTHERWISE.
 - 108. COMPACTED MATERIAL SHALL BE COMPACTED TO 17% DENSITY UNDER 17%.
 - 109. COMPACTED MATERIAL SHALL BE COMPACTED TO 95% RELATIVE DENSITY UNDER 17%.
 - 110. ALL MATERIAL TO BE COMPACTED IN 150mm LAYERS.
 - 111. THE ALIGNMENT OF ALL PIPES SHALL BE MARKED BY PIPES WITH 100mm DIA. PIPES SHALL BE MARKED AT 100m INTERVALS. THE PIPES SHALL BE MARKED WITH A CONTINUOUS METAL STRIP AND BE COLoured AS APPROPRIATE.
 - 112. MATERIAL LOCATION MARKERS PLATES AND OTHER MARKERS FOR THE ACCORDANCE WITH AS/NZS 4586. DRG. W14.01.
 - 113. MINIMUM SEPARATION DISTANCES FROM OTHER UNDERGROUND SERVICES SHALL BE IN ACCORDANCE WITH TABLE A1 IN W14.03-2002 PART 1.
 - 114. THRUST BLOCK DETAILS SHALL COMPLY WITH AS/NZS 4586 STANDARD SECTION AND FITTINGS IN ACCORDANCE WITH AS/NZS 4586. DRG. W14.01.
 - 115. CONCRETE THRUST BLOCKS IN ACCORDANCE WITH AS/NZS 4586. DRG. W14.01 AND W14.02 AND THE DESIGN DRAWINGS.
- ENVIRONMENTAL**
- 116. THE EXTENT OF CLEARING AND GRADING DISTURBANCE SHALL BE KEPT TO THE ABSOLUTE MINIMUM NECESSARY TO UNDERTAKE THE WORKS.
 - 117. THE CONTRACTOR SHALL AT ALL TIMES TAKE MEASURES TO MAINTAIN EROSION AND SEDIMENTATION ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND INITIAL APPROPRIATE EROSION AND SEDIMENTATION CONTROLS.
 - 118. CONSTRUCTION SHALL COMPLY WITH ALL ENVIRONMENTAL AND LEGISLATIVE REQUIREMENTS SET OUT IN THE PROJECT CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN (CEMP).
 - 119. NO VEGETATION CLEARANCE IS TO OCCUR WITHOUT PROOF APPROVAL OF THE SUPERINTENDENT.
 - 120. SENSITIVE WETLAND AREAS ARE TO BE CLEARLY MARKED ON SITE AND NO CLEARING OR DAMAGE TO VEGETATION (INCLUDING NON-WOODY VEGETATION) IS TO OCCUR WITHIN THESE ZONES. LIMITS OF CLEARING SHALL BE CLEARLY MARKED AND IDENTIFIED. NO REPELLING WITHIN 20m OF A WATER-COURSE OR DRAINAGE LINE.
- ACID SULFATE SOIL MANAGEMENT:**
- 121. THE CONTRACTOR IS REQUIRED TO UNDERTAKE TESTING FOR POTENTIAL ACID SULFATE SOILS IN AREAS IDENTIFIED AS ACID SULFATE SOIL RISK AREAS.
 - 122. ACID SULFATE SOIL RISK AREAS ARE DEFINED AS ANY DISTURBANCE OF LAND WITH A SURFACE ELEVATION OF 10m BELOW SEA LEVEL AND A DISTANCE FROM THE SOIL TYPE IS DERIVED FROM THE AS/NZS 4586 STANDARD.
 - 123. LABORATORY TESTS DETERMINED THROUGH LABORATORY ANALYSIS AND WETLAND ASSESSMENT SHALL BE USED TO DETERMINE THE ACID SULFATE SOIL RISK LEVEL AND THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT AN ACID SULFATE SOIL MANAGEMENT PLAN IN ACCORDANCE WITH THE OVERSEAS AND AUSTRALIAN TECHNICAL MANUAL - SOIL MANAGEMENT GUIDELINES V1.0.4. RECOMMENDATIONS FOR THE ACID SULFATE SOIL MANAGEMENT PLAN SHALL BE INCLUDED IN THE ACID SULFATE SOIL MANAGEMENT PLAN AND THE CONTRACTOR SHALL TAKE THE NECESSARY MEASURES TO ENSURE THE ADEQUATE TREATMENT AND DISPOSAL OF ANY GROUNDWATER ENCOUNTERED WITHIN AREAS OF ACID SULFATE SOIL.

FOR APPROVAL

KNAF PLASTERBOARD PTY LTD
RAW WATER PIPELINE

STANDARD NOTES AND LEGEND

Drawing No: **41-29918-W002** Rev: **B**

DO NOT SCALE	DO NOT SCALE
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1 RPT (K)

ROADWAY TO BE RECONSTRUCTED WITH 150mm DIAMETER WATER MAIN WITH 2% CEMENT STABILIZED SUBGRADE MATERIAL IN ACCORDANCE WITH IRC STANDARD DRAWING R101 REFER TO NOTES EXL, EX2 AND EX3 ON DRAWING 41-28918-W002

EXISTING TELUKA SERVICE (SHOWN INDICATIVELY ONLY) LOCATION AND DEPTH TO BE CONFIRMED ON SITE BY THE CONTRACTOR PRIOR TO WORK.

EXISTING 400mm DIAMETER WATER MAIN (PRIVATE) RPT 201728

HERMANS ROAD
40.445 (ANGLE 48.0)
41.108 (ANGLE 45.0)
16.886 (ANGLE 90.5)

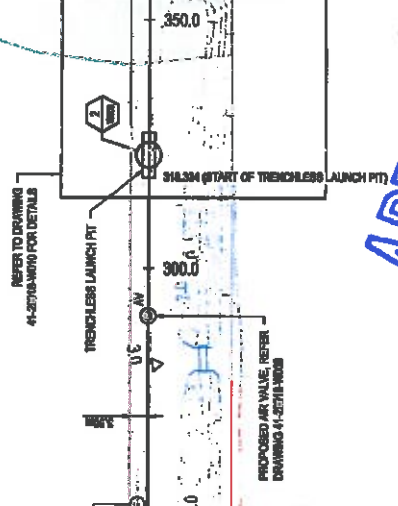
REFER TO NOTES EXL, EX2 AND EX3 ON DRAWING 41-28918-W002

REFER TO NOTES EXL, EX2 AND EX3 ON DRAWING 41-28918-W002

PROPOSED SCOUR VALVE. REFER DRAWING 41-28918-W003

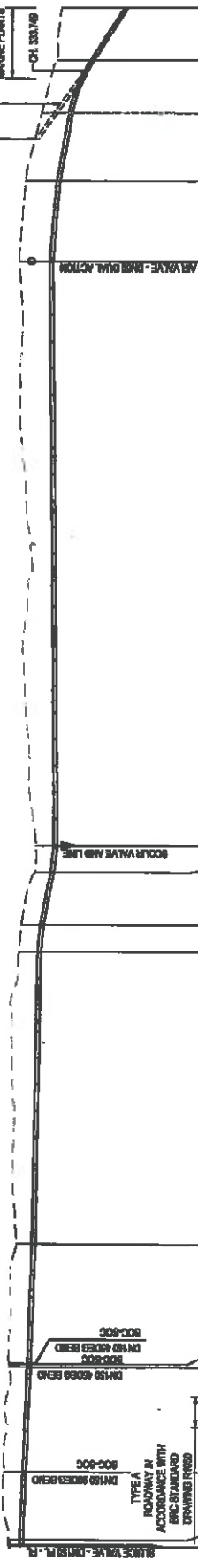
REFER TO NOTES EXL, EX2 AND EX3 ON DRAWING 41-28918-W002

REFER TO DRAWING 41-28918-W003 FOR DETAILS



LAYOUT PLAN
SCALE 1:500N

APPROVED



TRENCH TYPE	PIPE DIAMETER AND TYPE	PIPE GRADE (%)	DEPTH TO INVERT LEVEL	INVERT LEVEL	EXISTING SURFACE LEVEL	CONTROL CHAINAGE
	DATUM RL 80.0	-0.72	0.60	80.72	81.40	0+00
			0.67	80.35	81.03	1+00
			0.73	79.27	79.95	2+00
			0.77	78.20	78.88	3+00
			0.81	77.13	77.71	4+00
			0.85	76.06	76.64	5+00
			0.89	74.99	75.57	6+00
			0.93	73.92	74.50	7+00
			0.97	72.85	73.43	8+00
			1.00	71.78	72.36	9+00
			1.00	70.71	71.29	10+00
			1.00	69.64	70.22	11+00
			1.00	68.57	69.15	12+00
			1.00	67.50	68.08	13+00
			1.00	66.43	67.01	14+00
			1.00	65.36	65.94	15+00
			1.00	64.29	64.87	16+00
			1.00	63.22	63.80	17+00
			1.00	62.15	62.73	18+00
			1.00	61.08	61.66	19+00
			1.00	60.01	60.59	20+00
			1.00	58.94	59.52	21+00
			1.00	57.87	58.45	22+00
			1.00	56.80	57.38	23+00
			1.00	55.73	56.31	24+00
			1.00	54.66	55.24	25+00
			1.00	53.59	54.17	26+00
			1.00	52.52	53.10	27+00
			1.00	51.45	52.03	28+00
			1.00	50.38	50.96	29+00
			1.00	49.31	49.89	30+00
			1.00	48.24	48.82	31+00
			1.00	47.17	47.75	32+00
			1.00	46.10	46.68	33+00
			1.00	45.03	45.61	34+00
			1.00	43.96	44.54	35+00
			1.00	42.89	43.47	36+00
			1.00	41.82	42.40	37+00
			1.00	40.75	41.33	38+00
			1.00	39.68	40.26	39+00
			1.00	38.61	39.19	40+00
			1.00	37.54	38.12	41+00
			1.00	36.47	37.05	42+00
			1.00	35.40	35.98	43+00
			1.00	34.33	34.91	44+00
			1.00	33.26	33.84	45+00
			1.00	32.19	32.77	46+00
			1.00	31.12	31.70	47+00
			1.00	30.05	30.63	48+00
			1.00	28.98	29.56	49+00
			1.00	27.91	28.49	50+00
			1.00	26.84	27.42	51+00
			1.00	25.77	26.35	52+00
			1.00	24.70	25.28	53+00
			1.00	23.63	24.21	54+00
			1.00	22.56	23.14	55+00
			1.00	21.49	22.07	56+00
			1.00	20.42	21.00	57+00
			1.00	19.35	19.93	58+00
			1.00	18.28	18.86	59+00
			1.00	17.21	17.79	60+00
			1.00	16.14	16.72	61+00
			1.00	15.07	15.65	62+00
			1.00	14.00	14.58	63+00
			1.00	12.93	13.51	64+00
			1.00	11.86	12.44	65+00
			1.00	10.79	11.37	66+00
			1.00	9.72	10.30	67+00
			1.00	8.65	9.23	68+00
			1.00	7.58	8.16	69+00
			1.00	6.51	7.09	70+00
			1.00	5.44	6.02	71+00
			1.00	4.37	4.95	72+00
			1.00	3.30	3.88	73+00
			1.00	2.23	2.81	74+00
			1.00	1.16	1.74	75+00
			1.00	0.09	0.67	76+00
			1.00	-0.98	-0.40	77+00
			1.00	-2.05	-1.37	78+00
			1.00	-3.12	-2.44	79+00
			1.00	-4.19	-3.51	80+00
			1.00	-5.26	-4.58	81+00
			1.00	-6.33	-5.65	82+00
			1.00	-7.40	-6.72	83+00
			1.00	-8.47	-7.79	84+00
			1.00	-9.54	-8.86	85+00
			1.00	-10.61	-9.93	86+00
			1.00	-11.68	-11.00	87+00
			1.00	-12.75	-12.07	88+00
			1.00	-13.82	-13.14	89+00
			1.00	-14.89	-14.21	90+00
			1.00	-15.96	-15.28	91+00
			1.00	-17.03	-16.35	92+00
			1.00	-18.10	-17.42	93+00
			1.00	-19.17	-18.49	94+00
			1.00	-20.24	-19.56	95+00
			1.00	-21.31	-20.63	96+00
			1.00	-22.38	-21.70	97+00
			1.00	-23.45	-22.77	98+00
			1.00	-24.52	-23.84	99+00
			1.00	-25.59	-24.91	100+00

LONGITUDINAL SECTION SCALE 1:500H 1:100V

FOR APPROVAL

KNauf PLASTERBOARD PTY LTD
RAW WATER PIPELINE
WATER MAIN LAYOUT PLAN AND
LONGITUDINAL SECTION - SHEET 1 OF 5

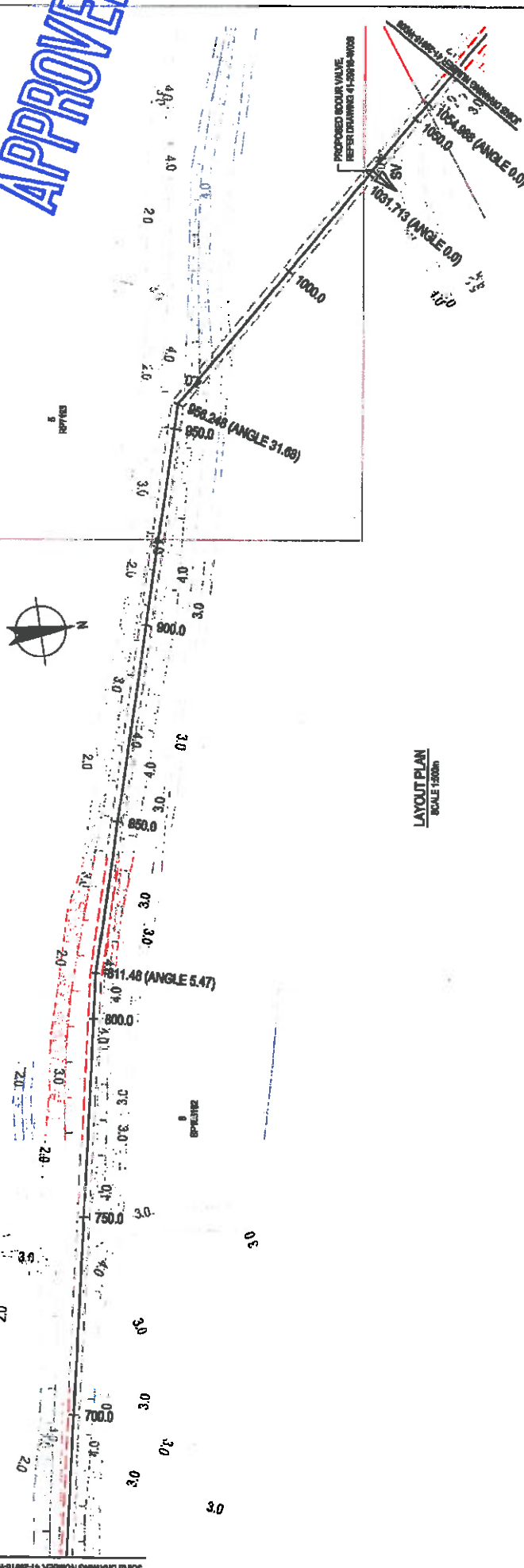
Client: KNauf Plasterboard Pty Ltd
 Project: Raw Water Pipeline
 Design: A1
 Scale: AS 1:500H 1:100V

DO NOT SCALE
 Check of this drawing is the responsibility of the Designer. It is not to be used for any other purpose without the written consent of the Designer.

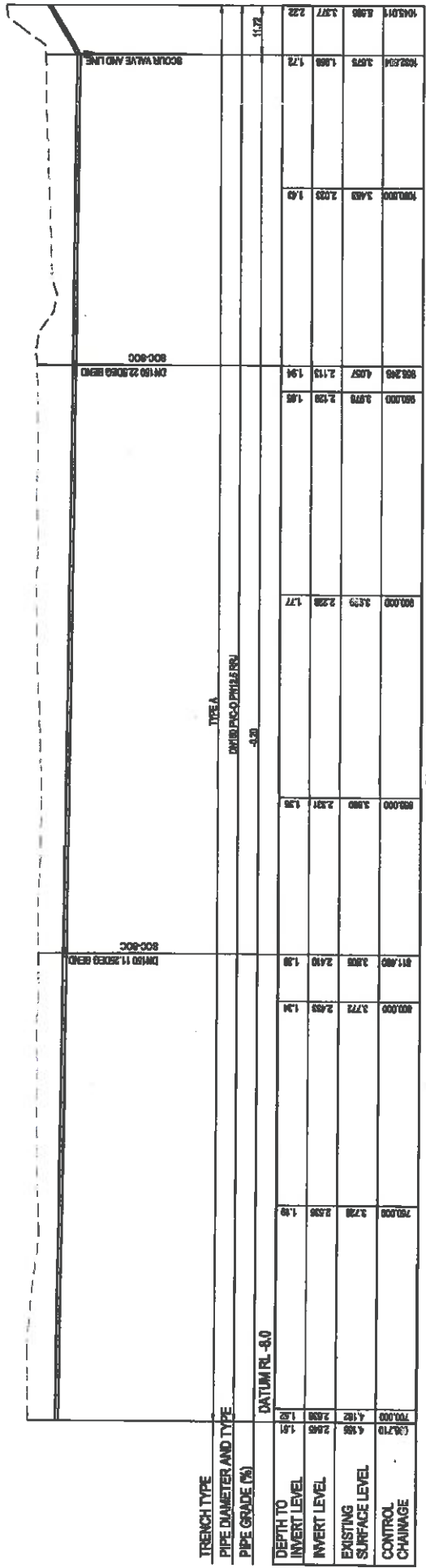
DATE: 28/04/2014
 DRAWING NO: 41-28918-W003

Rev: B

APPROVED



LAYOUT PLAN
SCALE 1:500m



LONGITUDINAL SECTION SCALE 1:500m (1:100V)

FOR APPROVAL

Client: **KNAPF PLASTERBOARD PTY LTD**
 Project: **RAW WATER PIPELINE**
 Title: **WATER MARK LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 3 OF 5**

Designer: **AUTOPROVA** (Scale: **AS 1:500**)
 Checker: **ALAN**
 Date: **10/10/2018**

DO NOT SCALE
 Conditions of Use: This drawing is to be used for the project only. It is not to be used for any other project. It is not to be used for any other purpose. It is not to be used for any other purpose. It is not to be used for any other purpose.

SCALE BAR
 0 1 2 3 4 5 6 7 8 9 10

REVISIONS

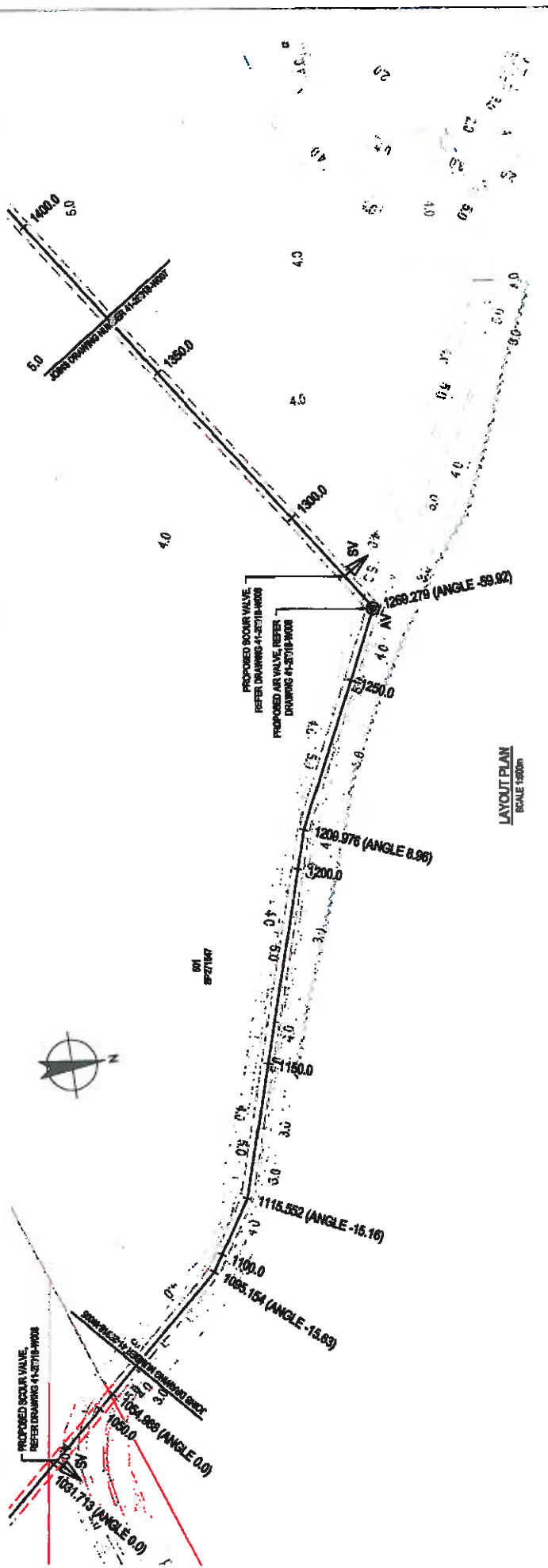
No.	Description	Date

APPROVALS

Role	Name	Date

Project No: **41-28918-W005**
 Drawing No: **A1**
 Rev: **B**

APPROVED



TRENCH TYPE	PIPE DIAMETER AND TYPE	PIPE GRADE (%)	DATUM RL -2.0	
			DEPTH TO INVERT LEVEL	2.16
			INVERT LEVEL	3.97
			EXISTING SURFACE LEVEL	6.08
			CONTROL CHAINAGE	495.014
				1095.000
				1100.000
				1115.552
				1150.000
				1200.000
				1209.976
				1250.000
				1259.278
				1300.000
				1350.000
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				1850.000
				1900.000
				1950.000
				2000.000
				2050.000
				2100.000
				2150.000
				2200.000
				2250.000
				2300.000
				2350.000
				2400.000
				2450.000
				2500.000
				2550.000
				2600.000
				2650.000
				2700.000
				2750.000
				2800.000
				2850.000
				2900.000
				2950.000
				3000.000

FOR APPROVAL

IONAUF PLASTERBOARD PTY LTD
RAW WATER PIPELINE
WATER MAIN LAYOUT PLAN AND
LONGITUDINAL SECTION - SHEET 4 OF 5

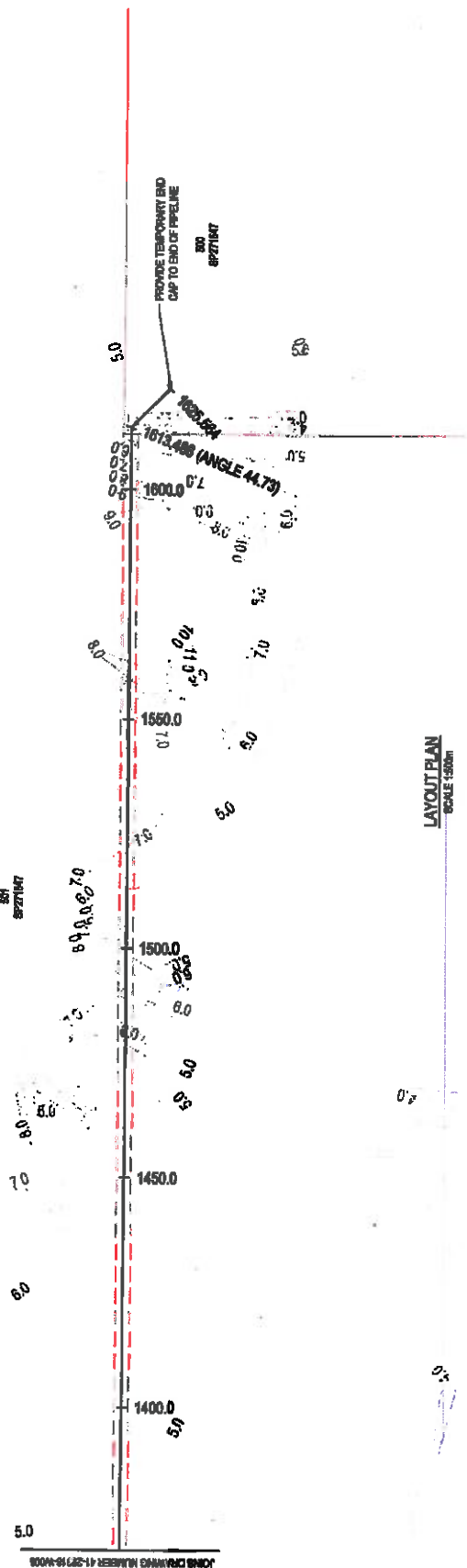
Client: IONAUF PLASTERBOARD PTY LTD
 Project: RAW WATER PIPELINE
 Title: WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 4 OF 5
 Drawing No: 41-29918-W006
 Rev: B

DO NOT SCALE SCALE: 1:500K 1:100V

Conditions of Use:
 This drawing is prepared by the
 IONAUFG CONSULTANTS PTY LTD
 48/50 Telfer Street, Perth, Western
 Australia 6150. It is the property
 of IONAUFG CONSULTANTS PTY LTD
 and is not to be used for any other
 purpose without the prior written
 permission of the project engineer.

Check: []
 Design: []
 Drawn: []
 Scale: AS 1500:1
 Date: []

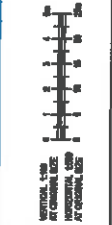
IONAUFG CONSULTANTS PTY LTD
 48/50 Telfer Street, Perth, Western Australia 6150
 Tel: 9442 4444 Fax: 9442 4444
 Email: info@ionauf.com.au Website: www.ionauf.com.au



APPROVED

TRENCH TYPE	PIPE DIAMETER AND TYPE	PIPE GRADE (%)	DEPTH TO INVERT LEVEL	INVERT LEVEL	EXISTING SURFACE LEVEL	CONTROL CHAINAGE
TYPE A	DRINKING WATER	0.41				
	DATUM RL - 2.0					
			1.82	1.61	1.79	1400.00
			2.02	1.81	1.79	1450.00
			2.07	1.86	1.79	1500.00
			2.08	1.87	1.79	1550.00
			2.08	1.87	1.72	1600.00
			2.09	1.88	1.72	1613.488
			2.09	1.88	1.72	1650.00
			2.09	1.88	1.72	1700.00
			2.09	1.88	1.72	1750.00
			2.09	1.88	1.72	1800.00
			2.09	1.88	1.72	1850.00
			2.09	1.88	1.72	1900.00
			2.09	1.88	1.72	1950.00
			2.09	1.88	1.72	2000.00

LONGITUDINAL SECTION SCALE 1:500H 1:100V



FOR APPROVAL

Client: **KNALF PLASTERBOARD PTY LTD**

Project: **RAW WATER PIPELINE**

Title: **WATER MAIN LAYOUT PLAN AND LONGITUDINAL SECTION - SHEET 6 OF 5**

Drawn By: **A1** Checked By: **A1** Date: **11/08/2018**

DO NOT SCALE

Contract No. **18/0000000000**

Project No. **18/0000000000**

Drawn By: **A1** Checked By: **A1** Date: **11/08/2018**

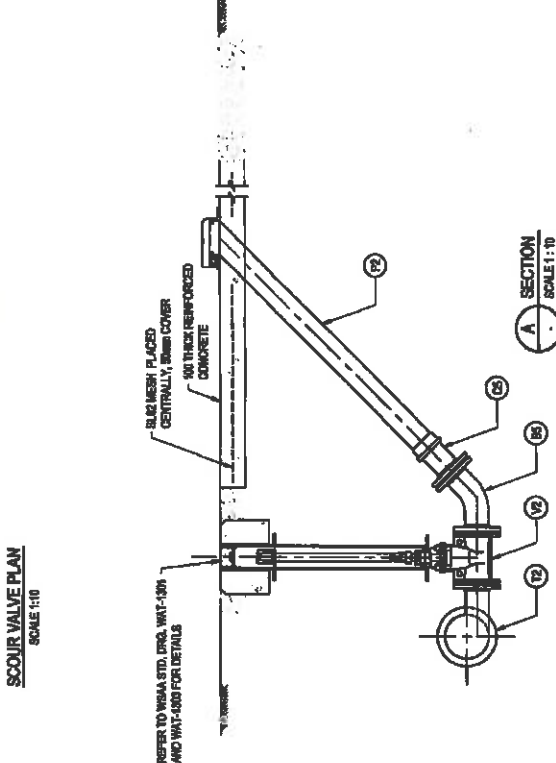
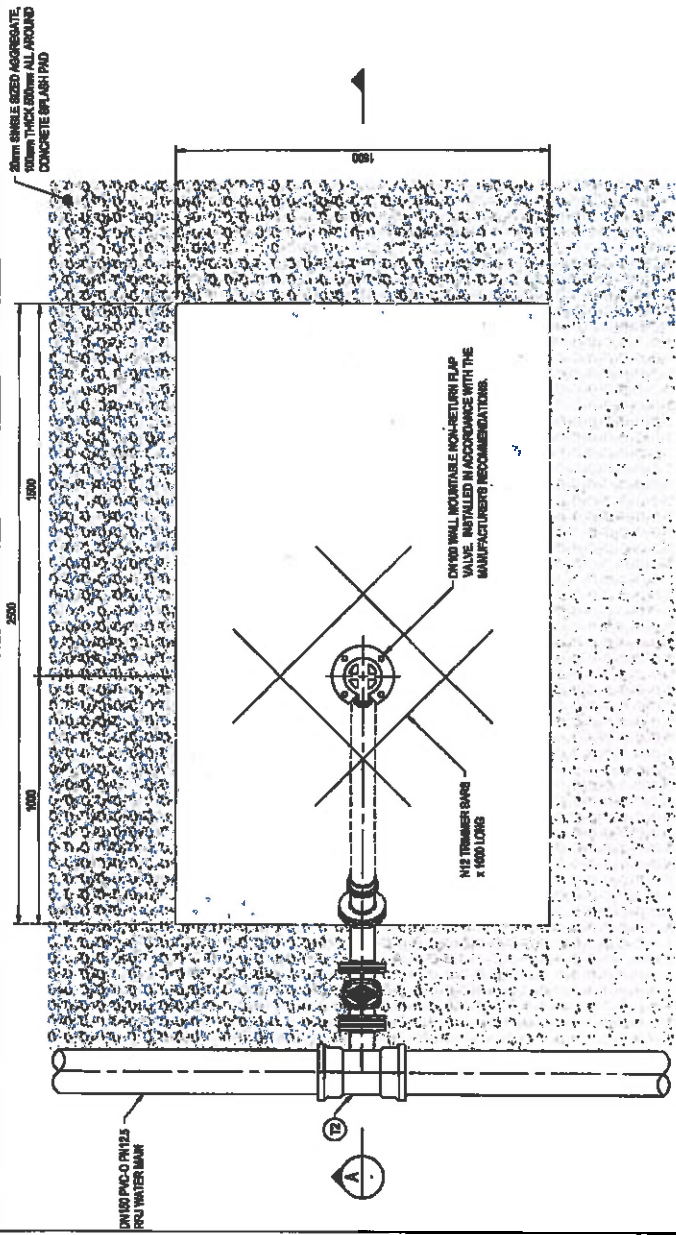
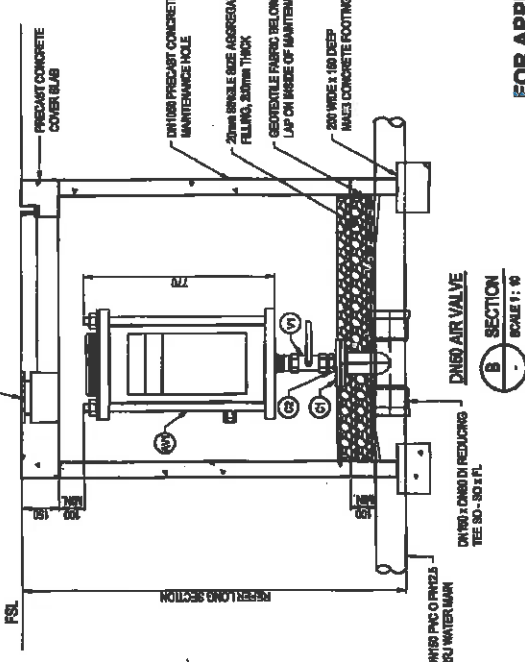
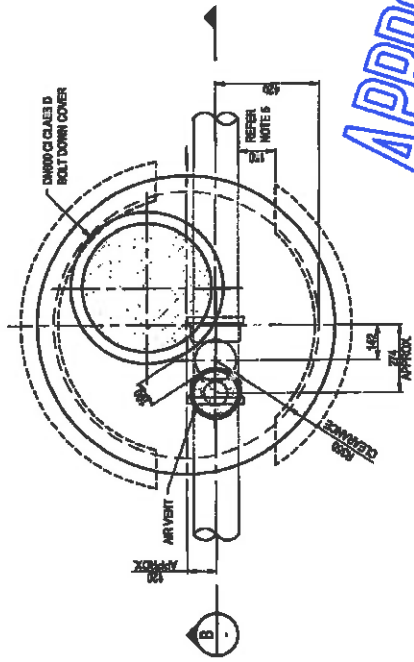
Scale: **AS SHOWN**

Revision: **1**

Drawn By: **A1** Checked By: **A1** Date: **11/08/2018**

APPROVED

- NOTES:**
1. HANGER POST LOCATION TO BE DETERMINED ON SITE BY SUPERINTENDENT AND INSTALLED IN ACCORDANCE WITH VISA STD.
 2. DN150 PVC 80-SP SCOUR PIPE, EXTENSION PIPE, SURFACE BOX AND SURROUND ETC. TO BE INSTALLED IN ACCORDANCE WITH VISA STD. (DN150, DN100, DN75, DN50, DN40, DN30, DN25, DN20, DN15, DN10, DN8, DN6, DN5, DN4, DN3, DN2, DN1).
 3. LOCATION AND ORIENTATION OF SCOUR VALVE SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT.
 4. THE PROFILE OF THE CONCRETE SPLASH PAD SHALL BE SHAPED TO MATCH SMOOTHLY WITH THE EXISTING GROUND SURFACE.
 5. CIRCULAR CONCRETE FOOTING TO BE CLASS 180 AND TO BE CONSTRUCTED A MINIMUM OF 150mm CLEAR OF THE PIPE.



ITEM NO	DESCRIPTION	QTY
P2	DN150 PVC 80-SP PIPE (LENGTH TO SLIT)	1
B6	DN150 X 4" DI BEND R-L	1
AV1	DN150 VERT. CLAMP BOX AIR VALVE, 1" ESP W/ HANDLE SCREWED	1
T2	DN150 X DN150 DI INVERTED SCOUR TEE 80-SP-F-L	2
V1	DN150 BALL VALVE, 2" ESP FEMALE CLASS 150, 80 GRADE 90 CW LONG HANDLE	1
V2	DN150 DI SLICE VALVE R-L	1
C1	DN150 DI FWD BLANK FLANGE CW 2" BSP FEMALE TRIPPING	1
C2	2" BSP HEX NIPPLE 80 GRADE 116	1
C3	DN150 DI CONNECTOR FL-SP	1

FOR APPROVAL

Client: **KNAUF PLASTERBOARD PTY LTD**
 Project: **RAW WATER PIPELINE**
 Title: **SCOUR VALVE AND AIR VALVE DETAILS**

Drawn: **CLAUDE** Designer: **ALAN**
 Check: **CLAUDE** Date: **10/11/2011**

DO NOT SCALE

Quantity of Materials to be used by Contractor to be determined on site. For the purposes of this schedule of quantities, the quantities are based on the quantities shown on the drawings and are not intended to be used for the purpose of tendering or for the purpose of procurement.

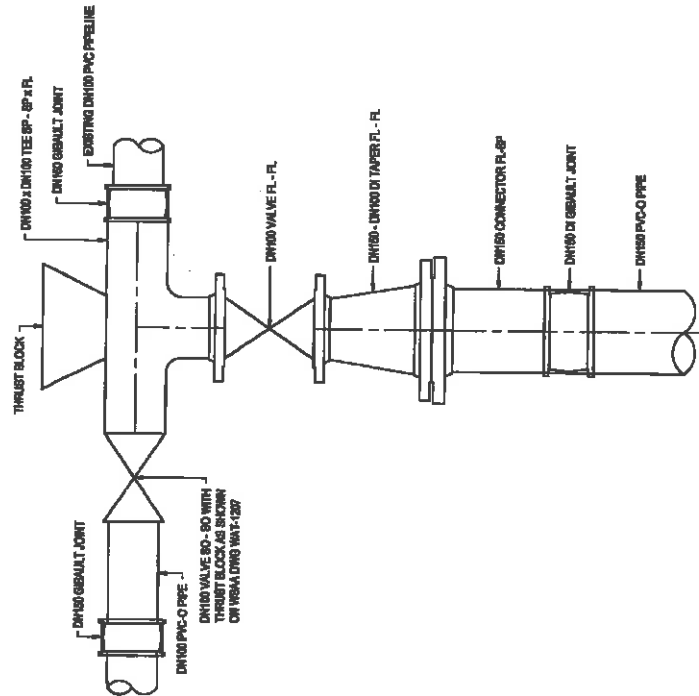
Scale: **A1** Drawing No: **41-29918-W008** Rev: **B**

EASTING	NORTHING	LEVEL	DESCRIPTION
407865.000	720017.450	4.317	PRIVY
408465.004	720011.500	4.614	STAR POCKET
408308.708	720014.801	3.514	STAR POCKET
408282.107	720004.500	4.501	STAR POCKET
408110.047	720000.500	1.424	STAR POCKET
408118.022	720000.544	3.030	SPACE
408083.200	720120.002	2.851	PRIVY

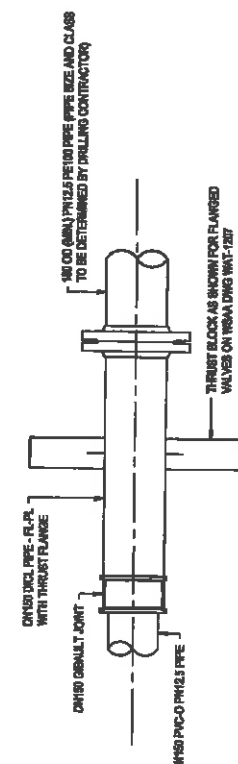
BORERHOLE ID	EASTING (APPROX)	NORTHING (APPROX)
BH1	408083.200	720000.500
BH2	408083.100	720030.000

CHAMERGE	EASTING	NORTHING	LENGTH	BEARING
0.000	408083.419	720004.170	114.53	000° 12' 02.07W
15.030	408083.403	720007.800		
40.446	408083.403	720007.800	24.76	001° 07' 16.07W
40.445	408083.403	720007.800		
45.108	408083.403	720007.800	0.76	003° 48' 44.67W
46.200	408083.403	720007.800	40.506	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	28.210	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	48.100	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	33.004	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	43.000	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	103.200	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	144.703	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	78.000	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	28.070	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	40.433	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	20.207	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	94.000	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	71.000	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	34.007	001° 07' 16.07W
46.200	408083.403	720007.800		
46.200	408083.403	720007.800	32.070	001° 07' 16.07W
46.200	408083.403	720007.800		

APPROVED



1 DETAIL SCALE 1:1.5



2 DETAIL SCALE 1:1

FOR APPROVAL

KHAUF PLASTERBOARD PTY LTD
RAW WATER PIPELINE
CONNECTION DETAILS

Drawing No: **41-29918-W009**

DO NOT SCALE

Check of this drawing is the responsibility of the drafter. It is not to be used for construction purposes unless approved by the drafter.

Client: **A1** Designer: **AJACON** Engineer: **AJACON**

Drawn: **AJACON** Checked: **AJACON** Project: **41-29918-W009**

Scale: **AS SHOWN**

Revision: **A1**

Prepared by: **Andrew Wilson**

Checked by: **Andrew Wilson**

Drawn by: **Andrew Wilson**

Scale: **AS SHOWN**

Project: **41-29918-W009**

Client: **A1**

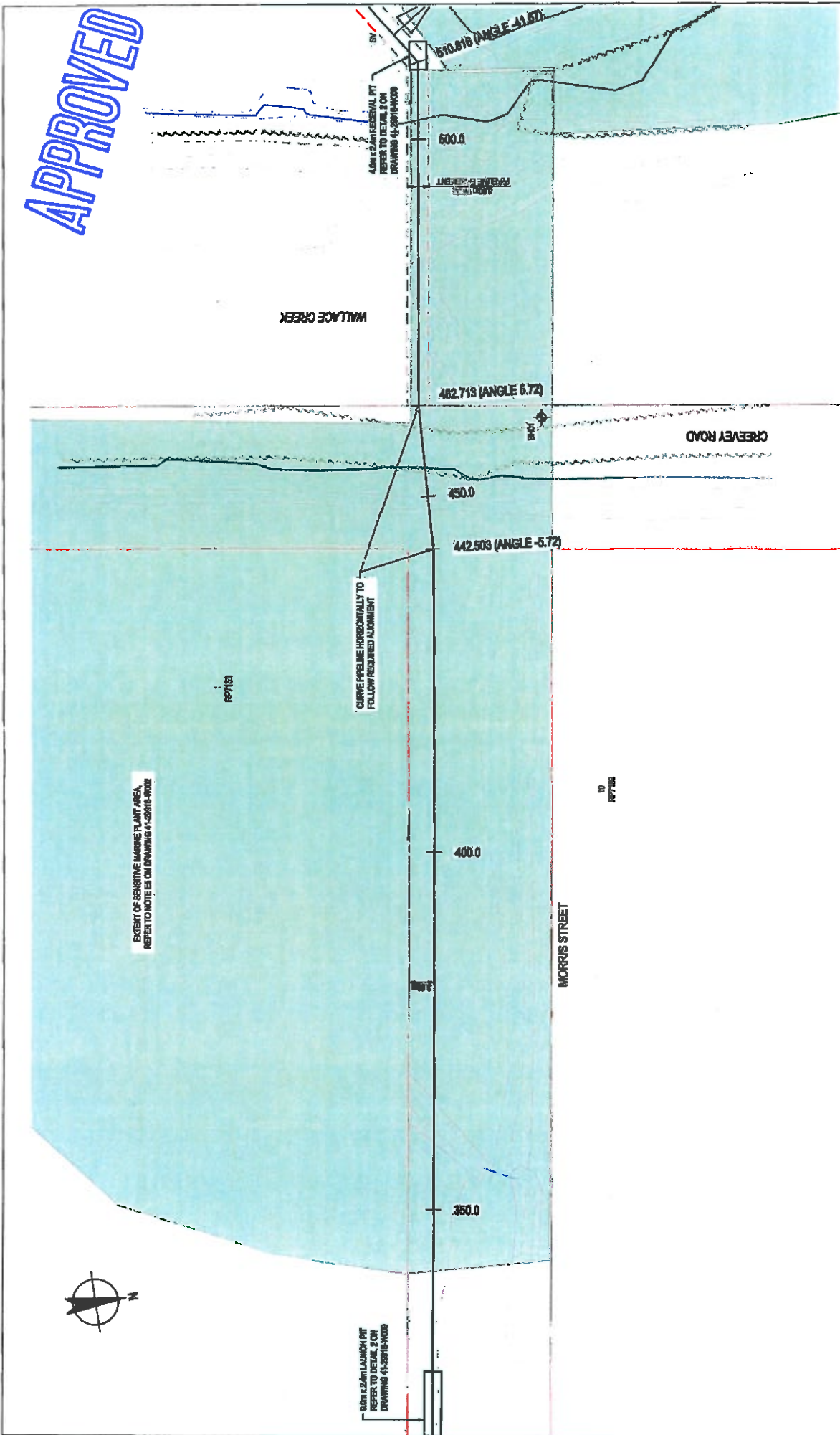
Revision: **A1**

Drawn by: **Andrew Wilson**

Checked by: **Andrew Wilson**

Scale: **AS SHOWN**

APPROVED



FOR APPROVAL

CLIENT: KWAIJ PLASTERBOARD PTY LTD
PROJECT: RAW WATER PIPELINE
TITLE: WALLACE CREEK CROSSING PLAN

DESIGNER: ALMOORE
DATE: 10/11/2011
SCALE: AS SHOWN

DO NOT SCALE
 This drawing is not to be used for construction purposes. It is for information only. All dimensions and angles are as shown. It is the responsibility of the client to ensure that the drawing is used for the correct purpose.

NOTES:
 1. REFER TO LONGITUDINAL SECTIONS ON DRAWING 41-29918-W010 FOR PROFILE OF TRENCHLESS CROSSING.

REVISIONS:

NO.	REVISION	DATE	BY	CHKD BY
1	ISSUE FOR APPROVAL			
2	INITIAL ISSUE			

SCALE: 1:1000
 0 10 20 30 40 50 METERS

DATE: 10/11/2011
PROJECT: 41-29918-W010
DRAWING NO.: AT
SCALE: B