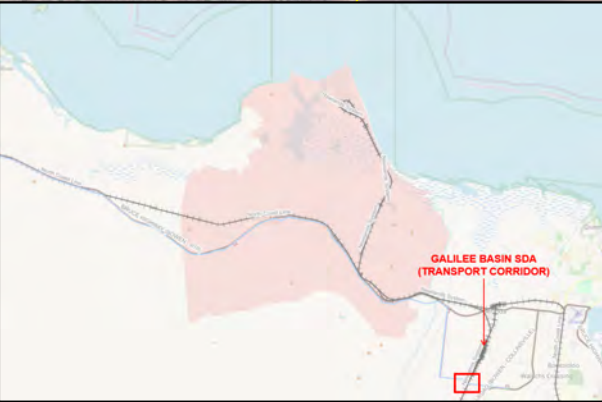
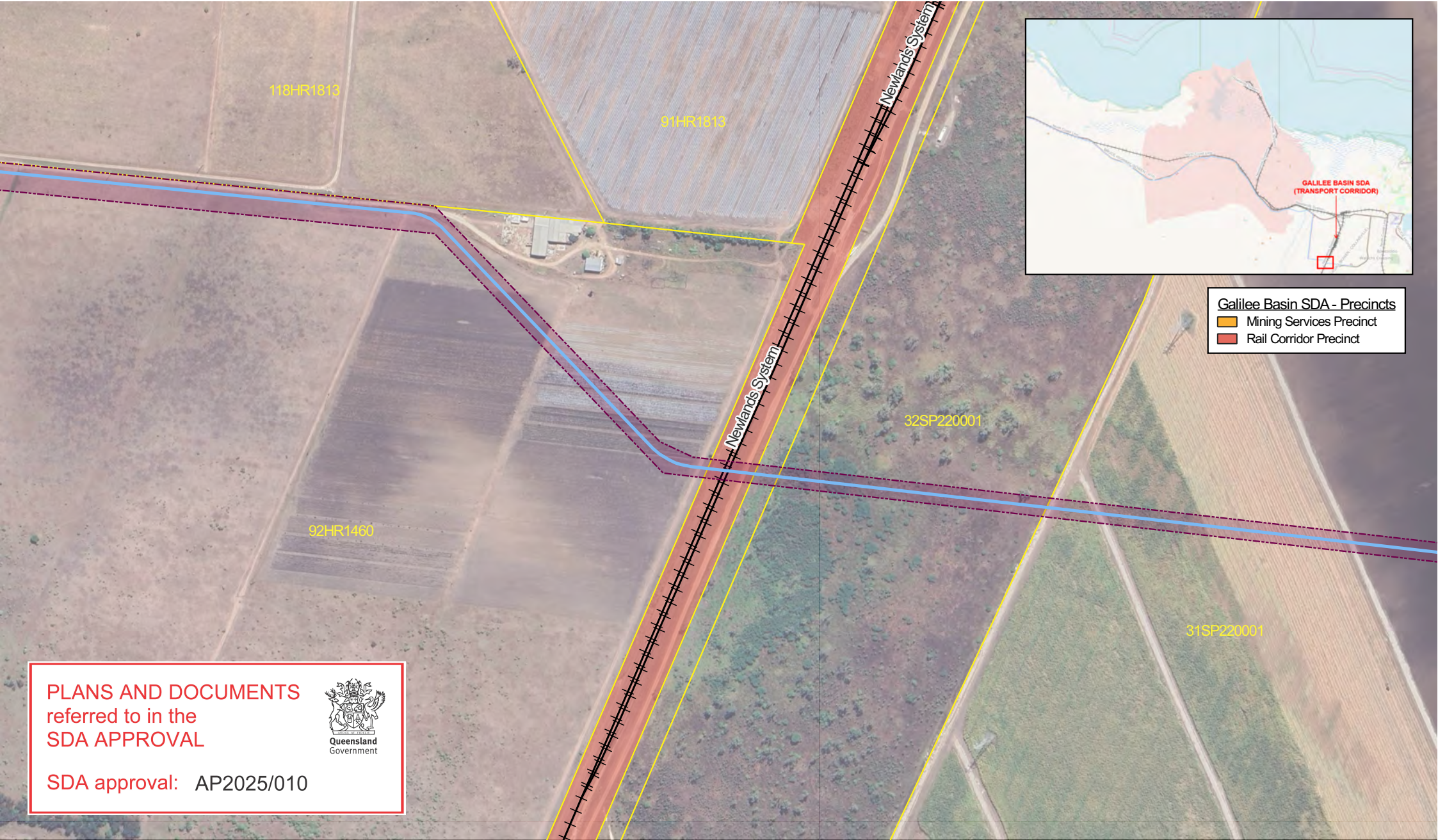




- Galilee Basin SDA - Precincts**
- Mining Services Precinct
 - Rail Corridor Precinct

PLANS AND DOCUMENTS
referred to in the
SDA APPROVAL

SDA approval: AP2025/010





**MAKING
COMPLEX
EASY**

A TETRA TECH COMPANY

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Drawing title:
Bowen Pipeline - Galilee Basin SDA - Sheet 1

Project: Bowen Pipeline
Job ref: 5676
Client: Bowen Pipeline Company

0 50 100 150 200 250 m

Scale @ A3: 1:4000

Revision	Drawn By	Date
A	TE	02/09/2025
B	TE	03/09/2025
C	TE	09/09/2025

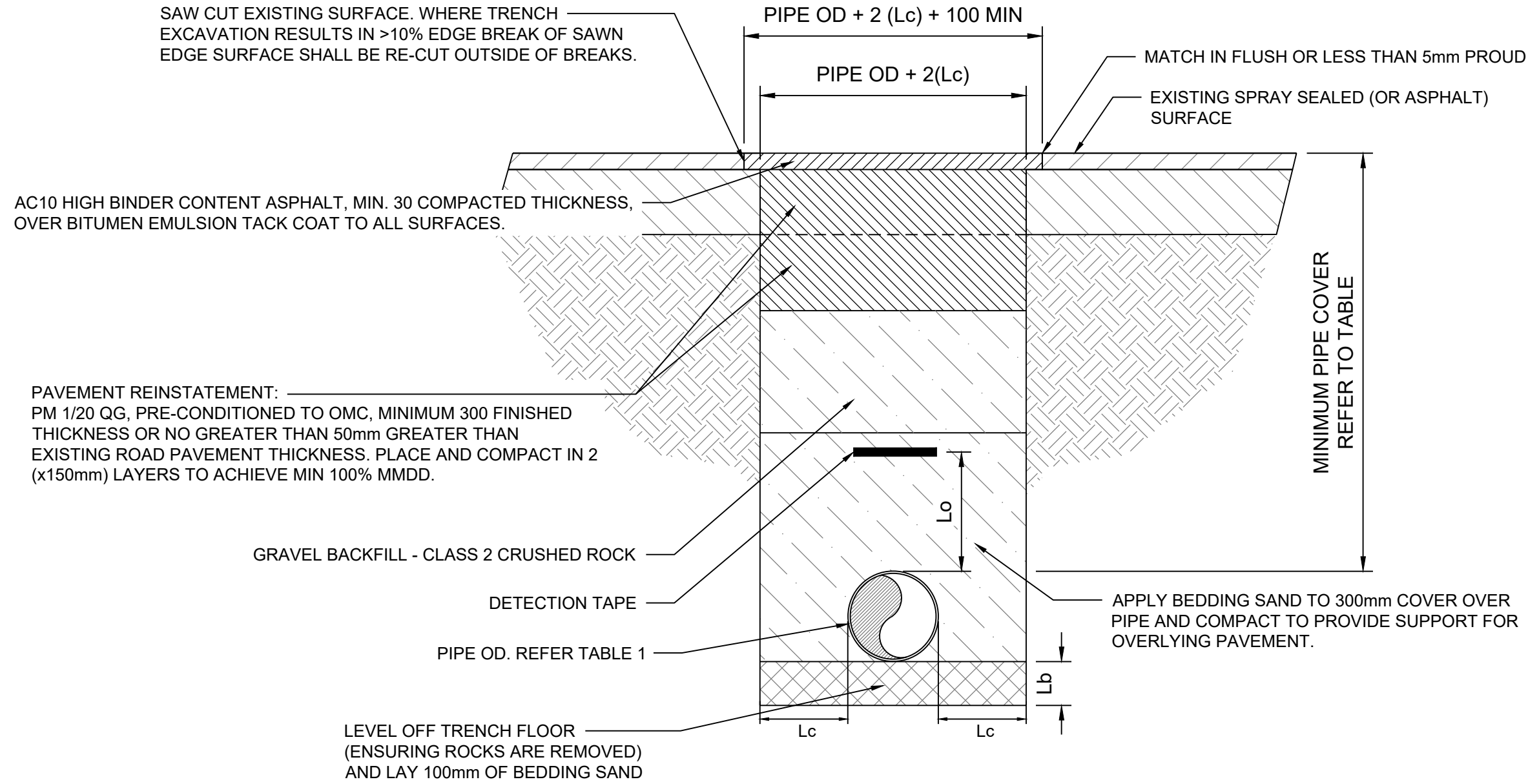
Legend

- Pipeline
- Pipeline Corridor
- Railways
- Roads
- Land Parcels



N

Drawing file: 27KBR0BOWENP2-130 (INSTALLATION DETAILS) - review.dwg Saved at: 14/2/2024 8:51:10 AM - Plotted at: 15/2/2024 8:53:44 AM - Original Size: A3 (8.50 x 11.00 inches)

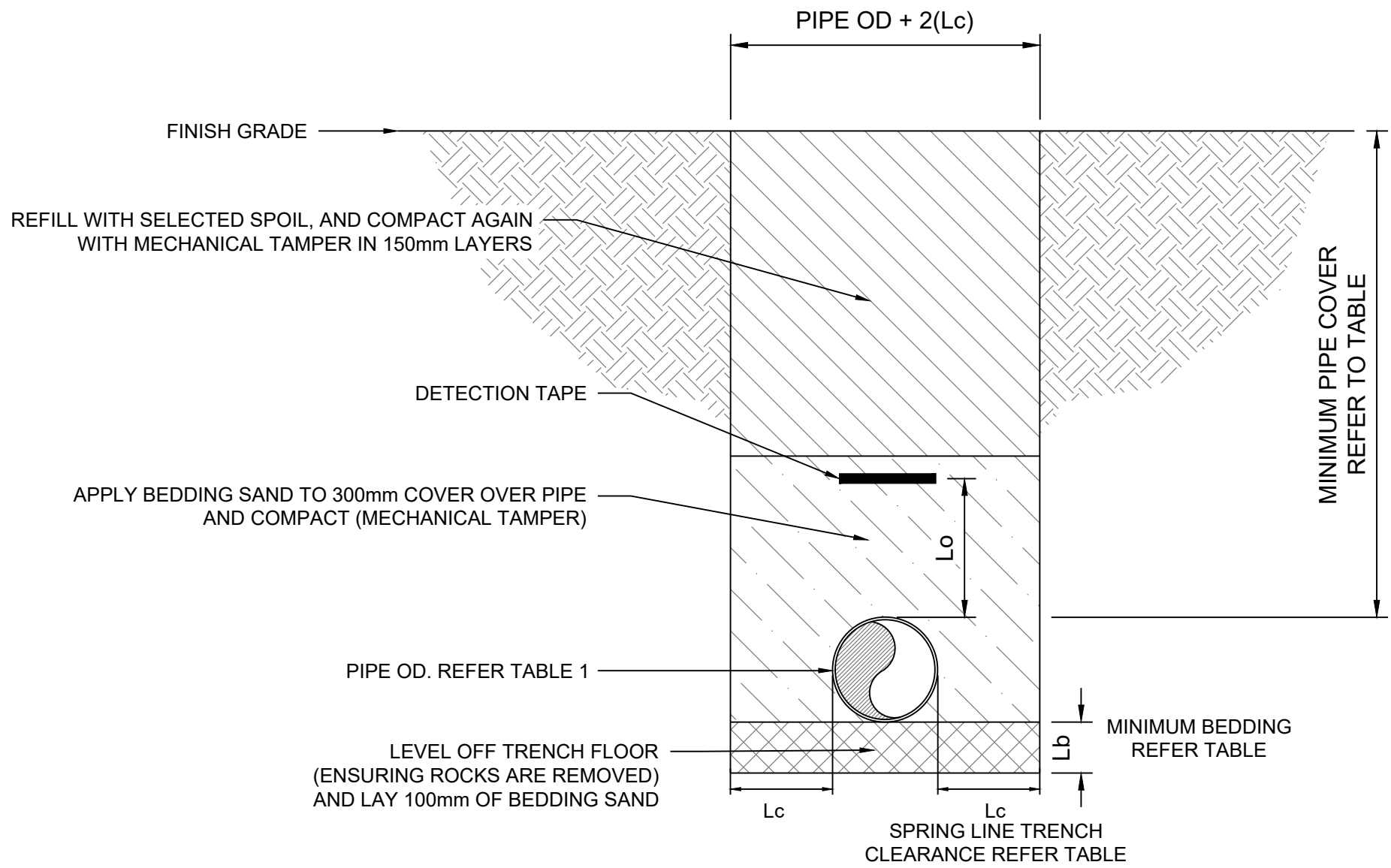


ROAD CROSSING BY TRENCH
TYPICAL INSTALLATION DETAIL
NOT TO SCALE

MINIMUM PIPE COVER	
LOCATION	MINIMUM COVER #
NON ROADWAYS - GENERAL - INDUSTRIAL / COMMERCIAL	450
	600
SEALED ROADS	600
MAJOR ROADWAYS/ EMBANKEMENTS	750
HIGHWAYS	1500

BACKFILL AND BEDDING DIMENSIONS TO AS/NZS 2566.1			
NOMINAL DIAMETER(DM)	MINIMUM CLEARANCE (Lc)	MINIMUM OVERLAY (Lo)	MINIMUM BEDDING (Lb)
> 150 - ≤ 300	150	150	100
> 300 - ≤ 450	200	150	100
> 450 - ≤ 900	300	150	150
> 900 - ≤ 1800	350	200	150

NOTE: TRENCH DIMENSIONS AS PER CODE WAT-120001 TRENCH WIDTH TO BE SUFFICIENT TO SAFELY LAY THE PIPE AND COMPACT THE SIDE SUPPORT ZONE. LABEL DIAMETER AS HIGHLIGHTED, KEEP MINIMUM BEDDING AS 100mm FOR ALL OPTIONS.



PIPELINE IN ROAD RESERVE/ WITHIN PROPERTY BOUNDARIES TRENCH
TYPICAL INSTALLATION DETAIL
NOT TO SCALE

NOTE:
1. FOR DEPTHS EQUAL TO OR GREATER THAN 1.5 M, TRENCHES MUST BE SHORED AS SPECIFIED BY SAFE WORK AUSTRALIA, EXCAVATION WORK CODE OF PRACTICE.
2. UNLESS STATED OTHERWISE, PIPE WORK LAID IN ROADS TO BE SEALED LATER TO HAVE A MINIMUM DEPTH OF 600mm FROM BOX-OUT OF THE ROAD.

PRELIMINARY
NOT FOR CONSTRUCTION



PLANS AND DOCUMENTS
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SDA APPROVAL

SDA approval: AP2025/010



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SURVEY INFORMATION: MGA ZONE 55K ALL LEVELS ARE TO AHD		REFERENCED PLANS: -	DES./DRAWN: MG	CLIENT: BOWEN PIPELINE COMPANY DETAILED BUSINESS CASE	
			CHECKED: BL		
COPYRIGHT: This document is and shall remain the property of PINION ADVISORY PTY LTD. The document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission. The arrangement and general details as shown on this drawing are essentially diagrammatic and must be applied to the circumstances as found on site.			APPROVED: DM	PROJECT: TYPICAL INSTALLATION DETAILS PIPE TRENCH BACKFILL	
			DATE: 09/11/2023		
REV	ISSUED	D.DWN	APRVD	REVISION DESCRIPTION	
02	15/02/2024	MG	DM	FINAL ISSUE	
01	18/12/2023	MG	DM	PRELIMINARY DRAFT ISSUE	
PROJECT REF:	27KBR0BOWENP2	DRAWING No.	130-001	SHEET 1 OF 5	REVISION 02

Drawing file: 27KBR0BOWENP2-130 (INSTALLATION DETAILS) - review.dwg Saved at: 14/2/2024 8:51:10 AM - Plotted at: 15/2/2024 9:01:27 AM - Original Size: A3 (8.50 x 11.00 inches)

LEGEND

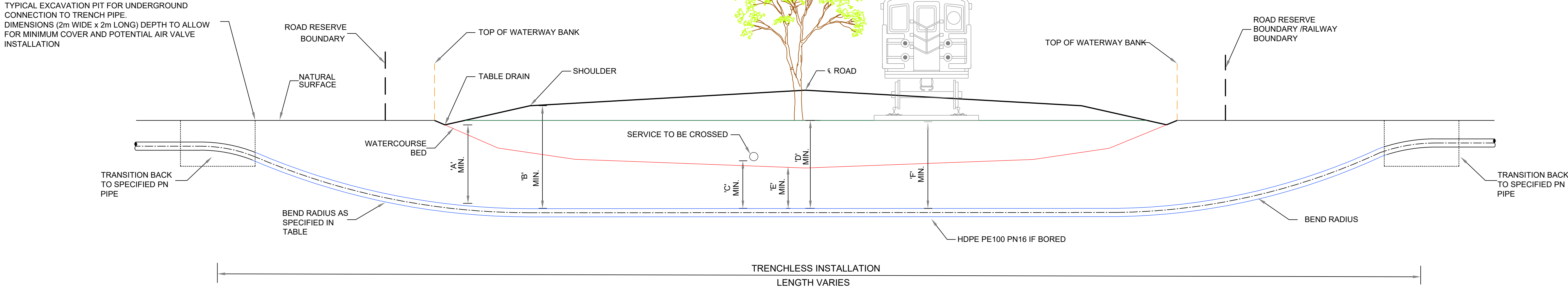
PIPELINE 'DESIGN' DRILL ROUTE

ROAD SURFACE

GROUND LEVEL AT BASE OF TREE

WATERCOURSE

EXISTING SERVICE



VERTICAL CLEARANCES			
TYPE	DIMENSION	LOCATION	MINIMUM CLEARANCE (mm)
ROAD CROSSING	'A'	TABLE DRAIN	900
	'B'	ROAD SHOULDER	1500
SERVICE CROSSING	'C'	BOTTOM OF SERVICE	SERVICE DEPENDENT-SEE TABLE
TREE CROSSING	'D'	BASE OF TREE	2000
WATERCOURSE	'E'	LOWEST POINT	2000
RAILWAY	'F'	UNDERNEATH TRACKS TO BE DETERMINED WITH RAILWAYS OWNER	

SERVICES CROSSINGS		
TYPE	MIN HORIZONTAL CLEARANCE	MIN VERTICAL CLEARANCE
WATER MAIN >DN375	600	300
WATER MAIN ≤DN375	300	150
GAS MAINS	300	150
TELECOMMUNICATION	300	150
ELECTRICAL	500	225
SEWERS GRAVITY	1000	500

HDD CONSTRUCTIBILITY & COST CATEGORIES		
CATEGORY	LENGTH (m)	COUNT
SMALL	20	52
MEDIUM	40	25
LARGE	100	6
TOTAL		83

BENDING RADIUS	
PIPE SIZE SDR	MIN BEND RADIUS (X DN)
9	12
11	15
13.6	21
17/17.6	25
21	35
26	45
33	65

NOTE: WHERE THE REQUIRED BEND RADIUS IS LESS THAN THE MANUFACTURER'S SPECIFIED MINIMUM RADIUS, FORMED BENDS SHALL BE USED TO PREVENT UNDUE STRESSES IN THE PIPELINE.

PLANS AND DOCUMENTS referred to in the SDA APPROVAL



SDA approval: AP2025/010

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REV	ISSUED	D.DWN	APRVD	REVISION DESCRIPTION
02	15/02/2024	MG	DM	FINAL ISSUE
01	18/12/2023	MG	DM	PRELIMINARY DRAFT ISSUE

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SURVEY INFORMATION: MGA ZONE 58K ALL LEVELS ARE TO AHD		REFERENCED PLANS: -	DES./DRAWN: MG	CLIENT: BOWEN PIPELINE COMPANY DETAILED BUSINESS CASE
CHECKED: BL		APPROVED: DM	PROJECT: TYPICAL INSTALLATION DETAILS HORIZONTAL DIRECTIONAL DRILL	
DATE: 09/11/2023		PROJECT REF: 27KBR0BOWENP2	DRAWING No. 130-004	SHEET 4 OF 5 REVISION 02