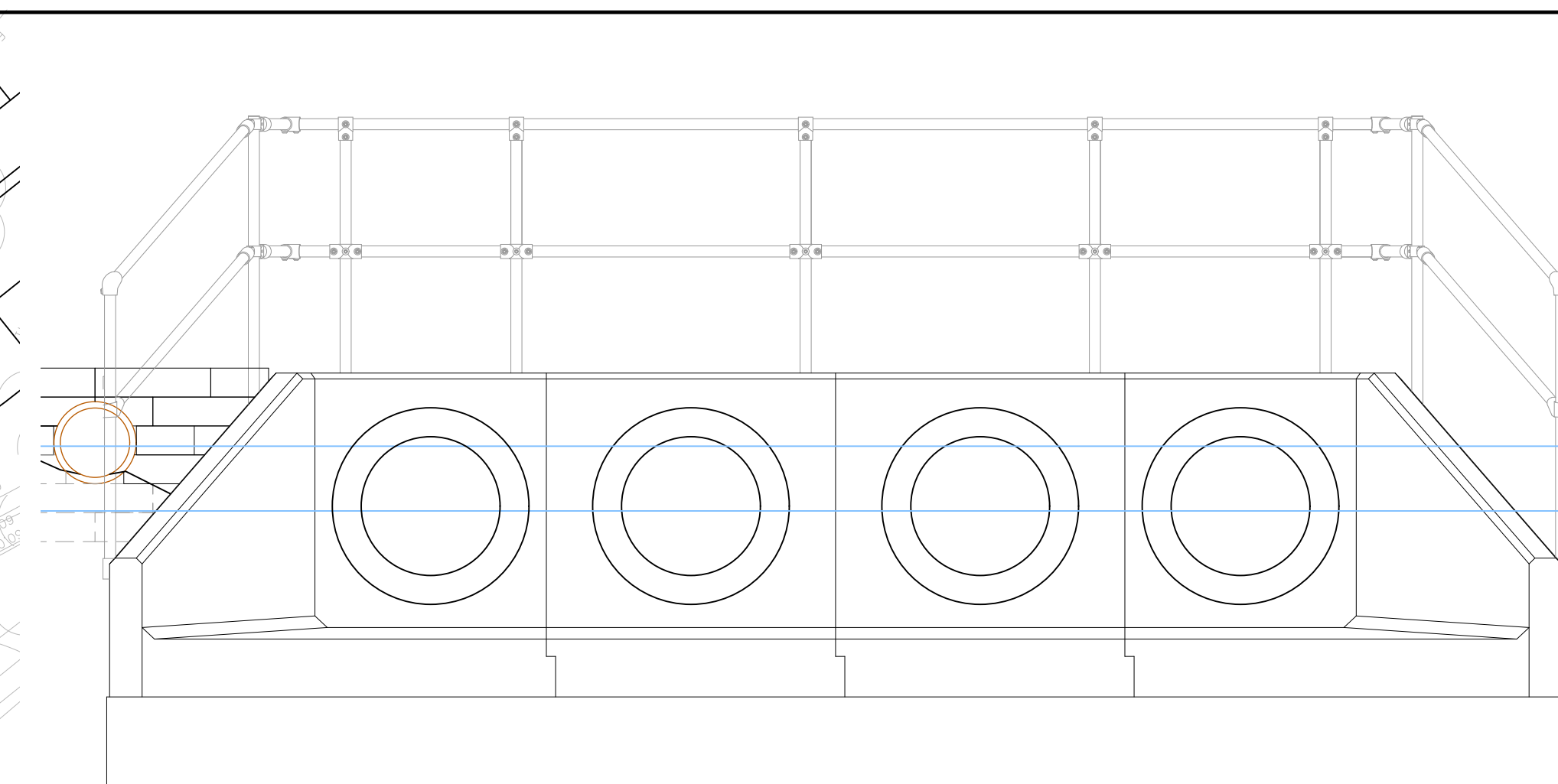


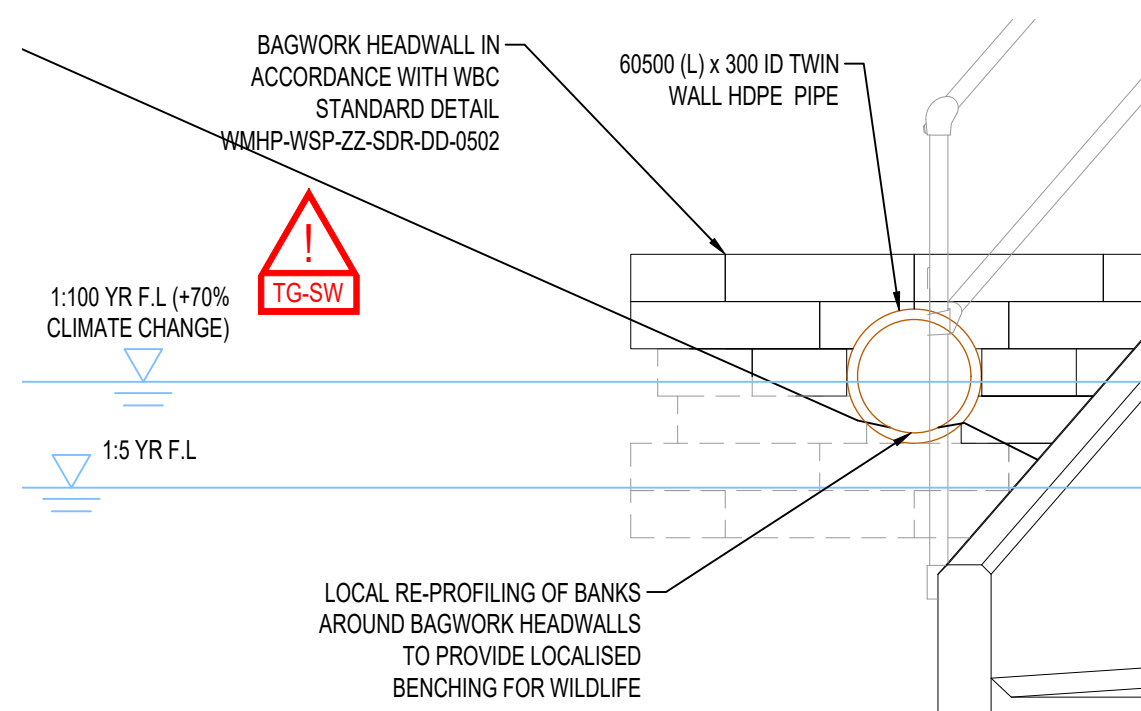


SETTING OUT COORDINATES			
SOP_NO.	EASTING	NORTHING	INVERT LEVEL
SOP 001	482821.903	167822.159	59.305
SOP 002	482798.754	167875.994	58.815

TABLE 1

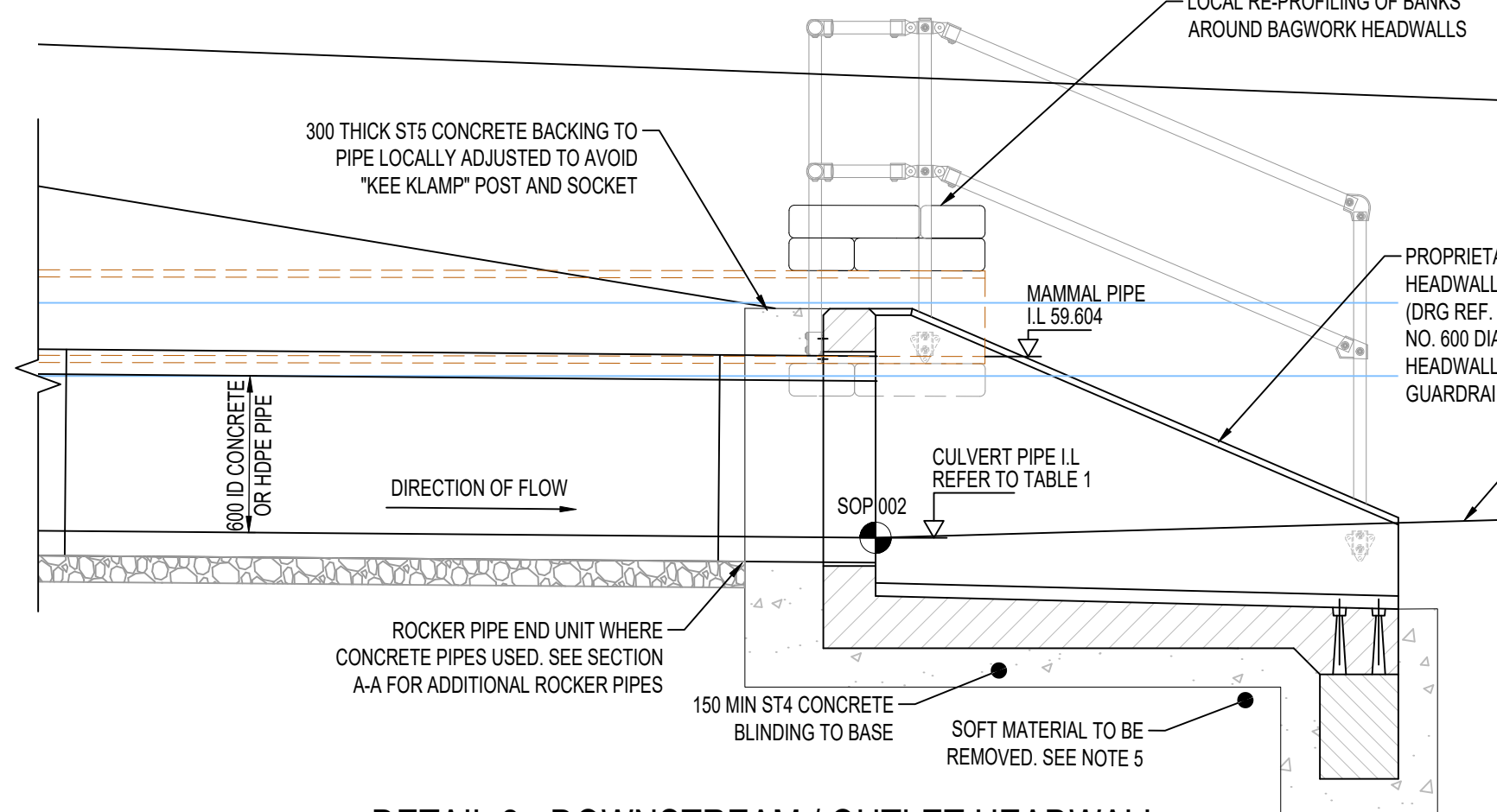
HEADWALL ELEVATION

SCALE 1:25



ELEVATION B-B
MAMMAL TUNNEL HEADWALL

SCALE 1:25

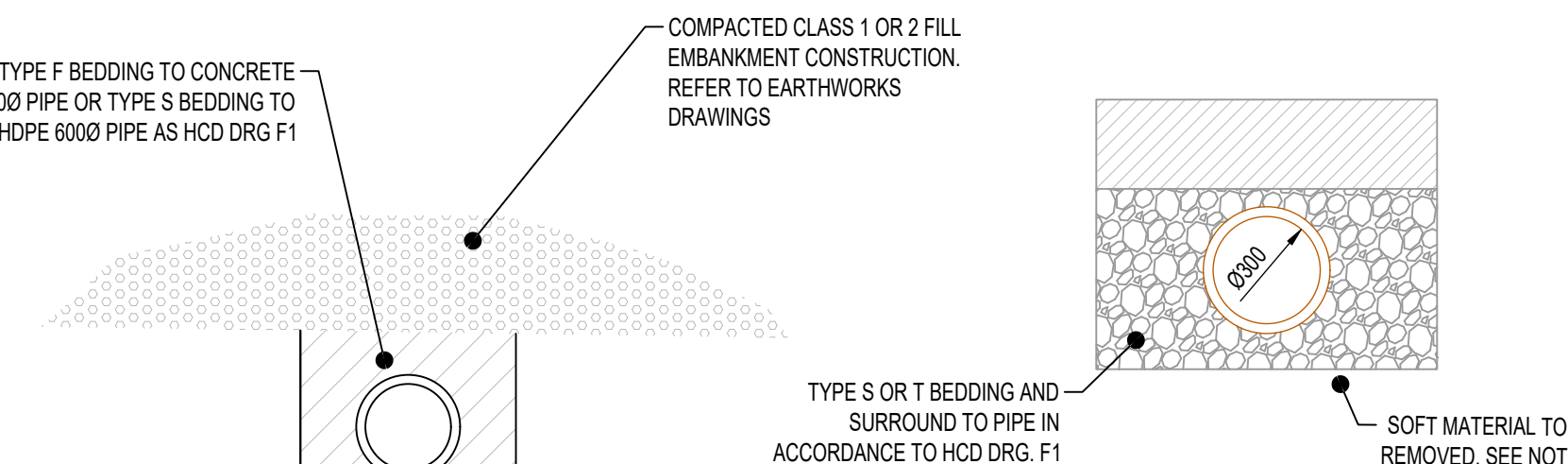


DETAIL 1 - UPSTREAM / INLET HEADWALL

SCALE 1:25

DETAIL 2 - DOWNSTREAM / OUTLET HEADWALL

SCALE 1:25

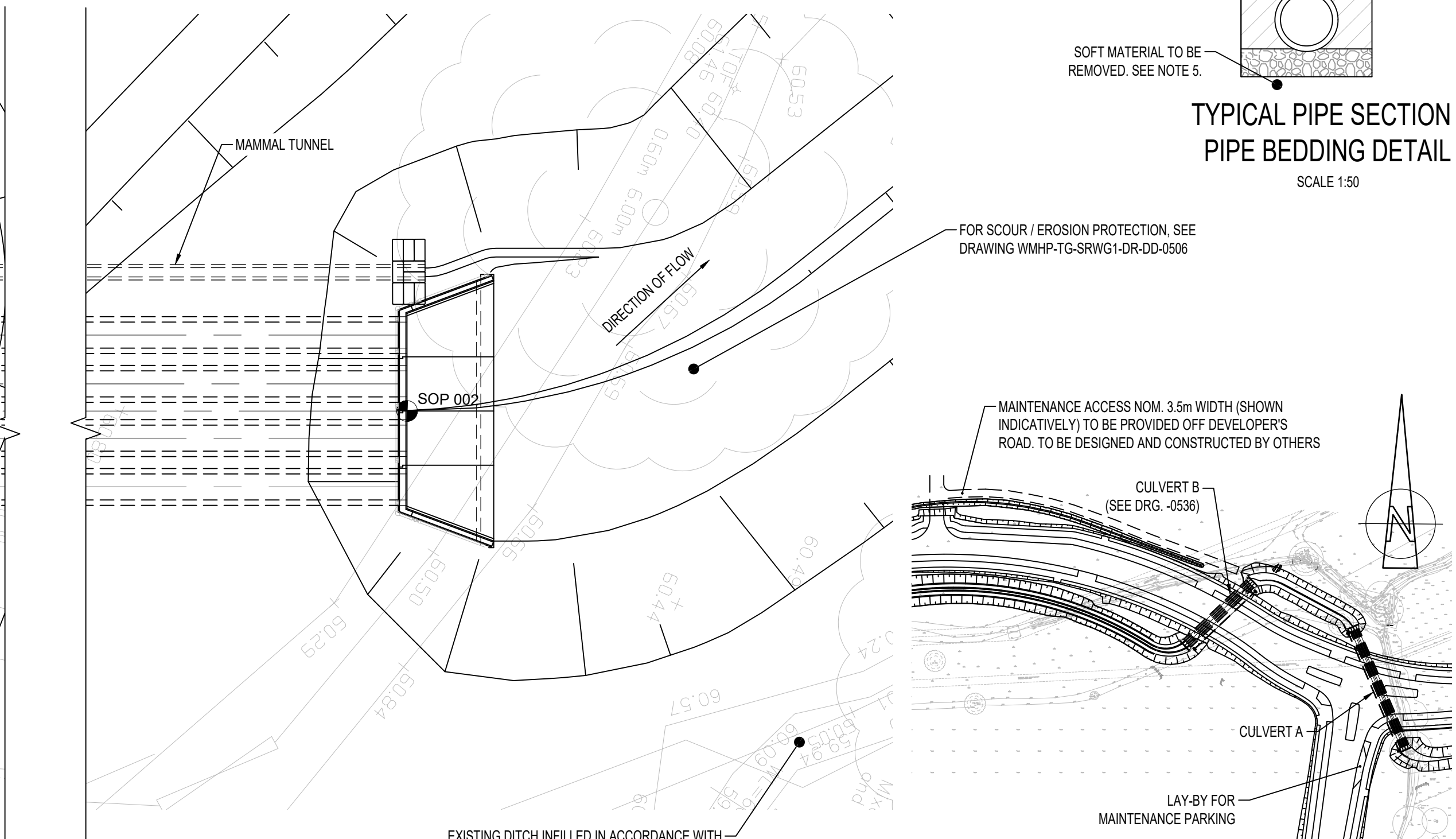


SECTION C-C
THROUGH MAMMAL TUNNEL

SCALE 1:20

TYPICAL PIPE SECTION
PIPE BEDDING DETAIL

SCALE 1:50



KEY PLAN

SCALE 1:2000

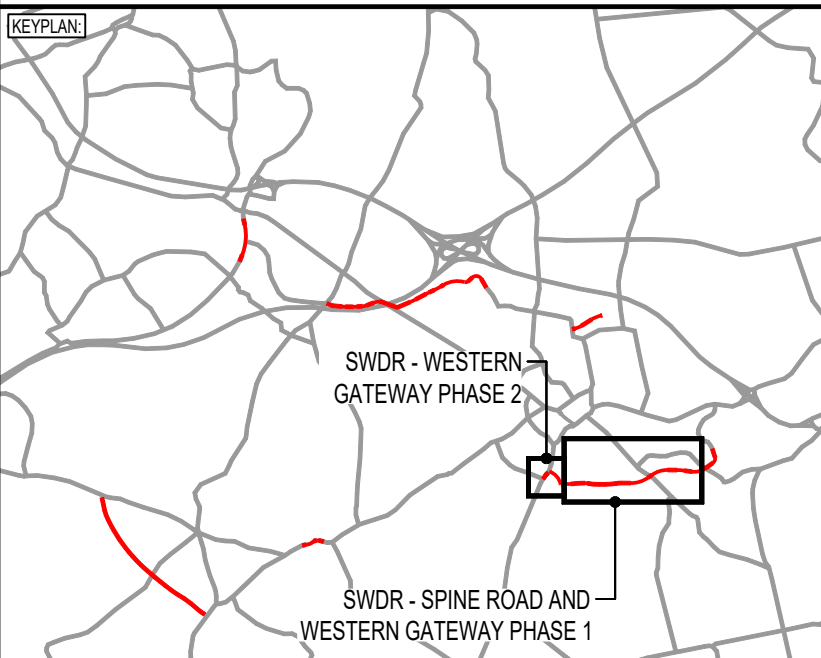
SIGNIFICANT RESIDUAL HAZARDS		
RESIDUAL HAZARD	STAGE	SUGGESTED CONTROL MEASURE
WORKING IN WATER/ GROUNDWATER	C/M/D	CONTRACTOR TO USE SUITABLE MEANS TO MANAGE GROUNDWATER BY PUMPING OR CUT-OFF (E.G. GROUTING) METHODS.
UNEXPLODED ORDNANCE	C	"LOW RISK" CATEGORY IDENTIFIED BY "1ST LINE DEFENCE" DESK STUDY RA. UXO RISK MANAGEMENT PLAN AND SITE SPECIFIC UXO AWARENESS BRIEFINGS TO BE GIVEN TO ALL PERSONNEL CONDUCTING INTRUSIVE WORK
POSSIBLE PRESENCE OF BURIED SERVICES	C/D	SEARCH RESULTS HAVE INDICATED NO SERVICES IN CULVERT LOCATION (SEE NOTE 7). HOWEVER, CONTRACTOR TO CONFIRM V. LATEST STATUTORY UNDERTAKERS' SEARCHES AND SCAN AREA PRIOR TO CONSTRUCTION
PRESENCE OF OVERHEAD POWERLINES	C/D	CONTRACTOR TO ENSURE LOCATION OF 33 OVERHEAD CABLES AND ELECTRICITY PYLO (POLE(S) ARE DEMARCATED WITH SUITABLE WARNING POST SYSTEMS OR SIMILAR AND SITE OPERATIVES TO BE BRIEFED TO FOLLOW A SAFE SYSTEM OF WORK
STRIKING OF SERVICES WHILST INSTALLING BAGWORK PINS	C	LOCATION OF BAGWORK HEADWALLS TO BE SCANNED FOR SERVICES PRIOR TO INSTALLATION OF BAGWORK ANCHOR PINS

NOTE: The above hazards do not include every hazard or assumption, but identify significant residual construction hazards that are not likely to be obvious to a competent contractor and those that could be difficult to manage effectively. Refer also to the designer's risk documentation.

DO NOT SCALE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES AOD UNLESS NOTED OTHERWISE.
3. CONCRETE PIPES TO BE CE-MARKED TO BS EN 1916. PIPES TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. PRECAST HEADWALLS TO BE DESIGNED BY PRECASTER BASED ON BS EN 1992-1-1 AND SHALL BE IN ACCORDANCE WITH BS EN 13369.
5. FORMATION LEVEL TO BE INSPECTED AND ANY SOFT AREAS (WHERE UNDRAINED SHEAR STRENGTH $C_u < 30$ kPa) TESTED IN ACCORDANCE WITH EARTHWORKS SPECIFICATION WMPH-TG-SRWG1-SP-GE-0601 WITH HAND SHEAR VANE TESTING. SOFT AREAS TO BE DUG AND REPLACED WITH MIN 300 THK CLASS 6A SELF-COMPACTING GRANULAR FILL WHERE WORKING IN GROUND WATER, OTHERWISE CLASS 1 GRANULAR FILL TO EARTHWORKS SPECIFICATION WMPH-TG-SRWG1-SP-GE-0601 GENERALLY.
6. 1 IN 100 YEAR FLOOD LEVEL BASED ON FLOOD MODELLING BY WSP SHOWN ON Dwg. 66439-CUL-001 REV A, DATED 30/09/20.
7. EXISTING UTILITIES INFORMATION TAKEN FROM WSP DRAWING WMPH-WSP-SR-DU-UT-0001 BASED ON C2 SEARCH INFORMATION. THE CONTRACTOR SHALL UNDERTAKE FURTHER SURVEYS, SCANS AND TRIAL HOLES TO CONFIRM AND LOCATE UTILITIES PRIOR TO CONSTRUCTION. SEE RESIDUAL HAZARDS TG-SQ AND TG-HB.
8. EXISTING BACKGROUND INFORMATION TAKEN FROM SURVEY FILE "XTOPOSURVEY" BY MURPHY SURVEYS, COMMISSIONED BY WSP, SUPPLIED BY WBC, FILE "XTOPO.ALL" SUPPLIED BY WSP AND "SD19630-02A-Spine Road and Western Gateway, 3D_Topo_FINAL" BY TECHNICS, COMMISSIONED BY BB. CONTRACTOR TO VERIFY SURVEY ACCURACY PRIOR TO CONSTRUCTION.
9. REFER TO Dwg. WMPH-TG-SRWG1-DR-D0-0534 FOR LOCATION PLAN



P05	29/10/2025	AH	CULVERT MOVED WEST TO AVOID 33KV POLE /STAYS	DJF	KL
P04	18/06/2025	AJP	UPDATED FOR PLANNING CONDITION DISCHARGE	DJF	JC
P03	02/06/2022	HD	MATTERS OUTSTANDING WMHP-TG-SRWG1-RG-DM-0010	BH	JC
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS:

SUITABLE FOR APPROVAL

S5

DESIGNER



Tony Gee and Partners LLP
Hardy House
140 High Street
Esher, Surrey
KT10 9QJ
Tel: 01372 461600
www.tonygee.com
Gee
Consulting Civil, Structural and Geotechnical Engineers

CONTRACTOR

Balfour Beatty

CLIENT:



WOKINGHAM
BOROUGH COUNCIL

Shute End, Wokingham, Berkshire RG40 1BN
Tel: (0118) 974 6000 Web: www.wokingham.gov.uk

PROJECT:

WOKINGHAM MAJOR HIGHWAYS PROGRAMME
SPINE ROAD AND WESTERN GATEWAY PHASE 1

TITLE:

PIPE CULVERT A -
UPPER EMM BROOK TRIBUTARY
DITCH DIVERSION

SCALE @ A1: N/A	CHECKED: KL	APPROVED: CMF
PROJECT NO:	DESIGNED:	DRAWN:
		DATE:

WMHP-TG-SRWG1-DR-DD-0535

P05