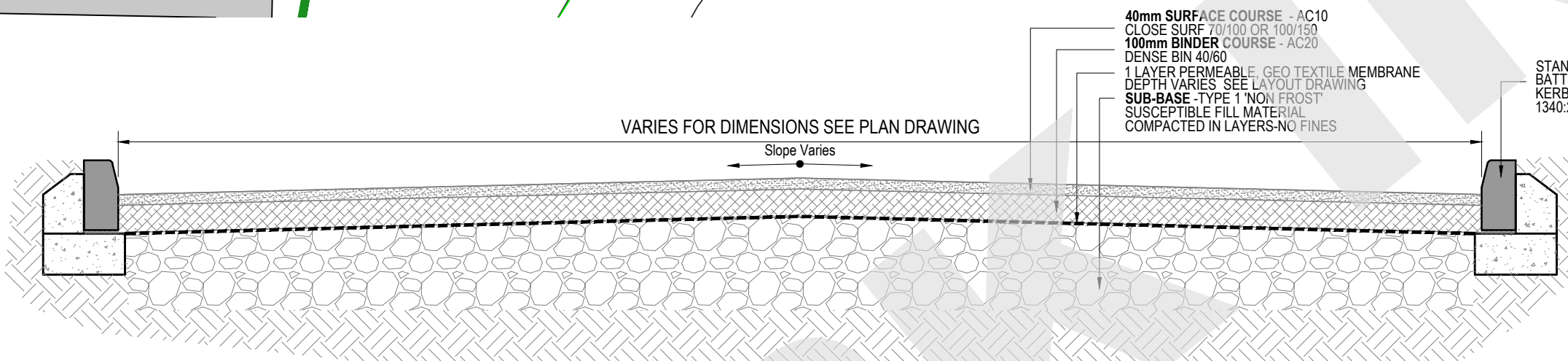
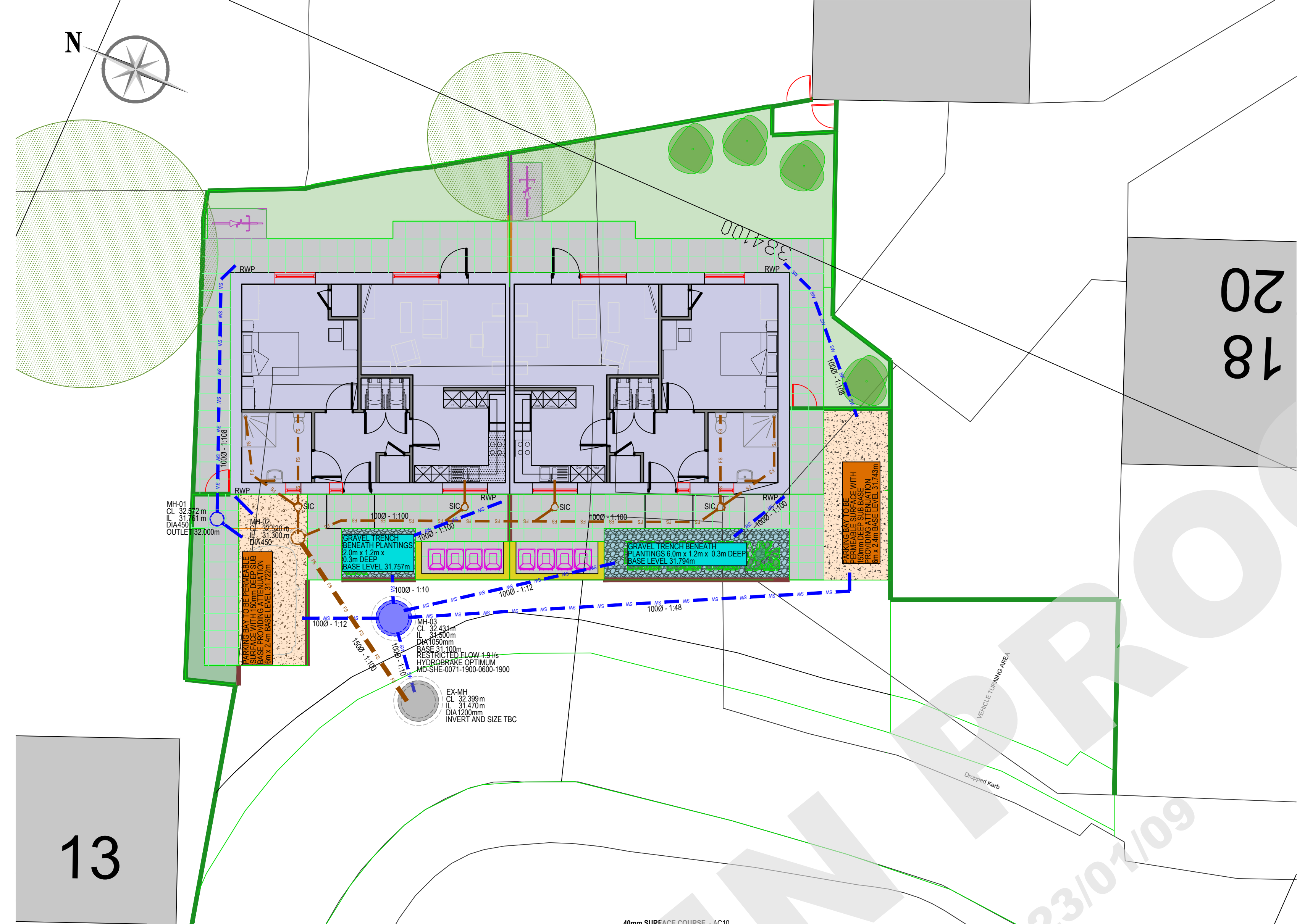
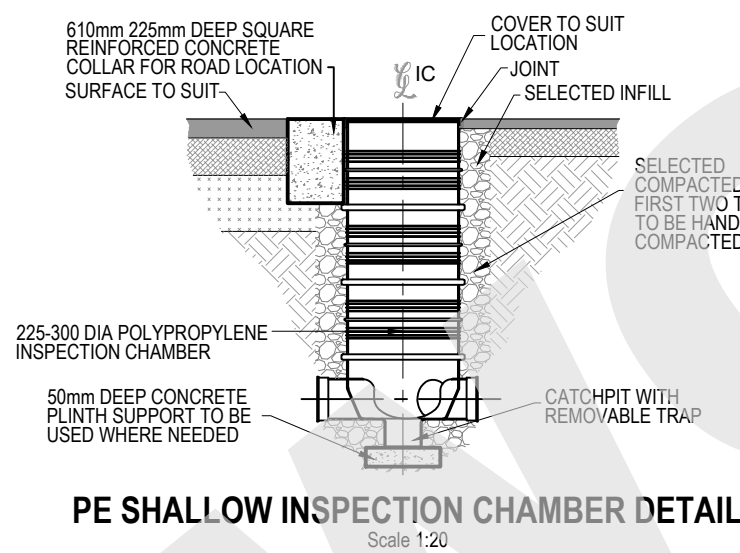


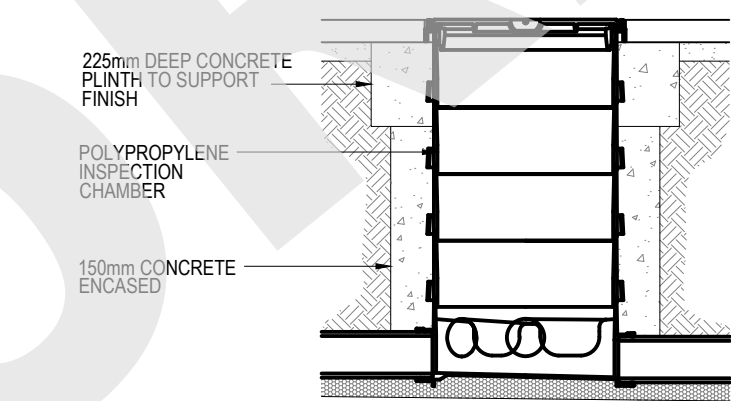
DO NOT SCALE



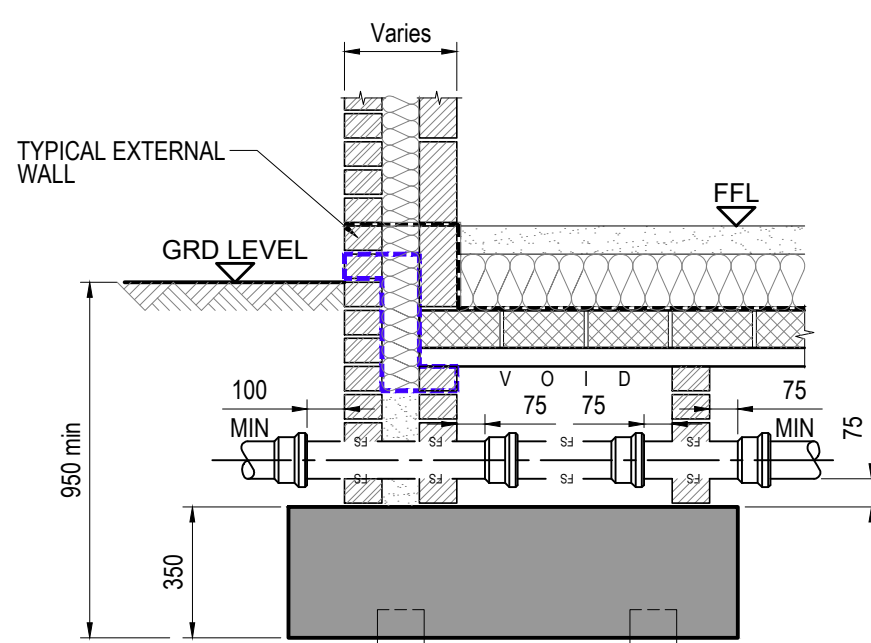
PERMEABLE ROAD/CAR PARK SOAKAWAY
ALLOWING PERCOLATION OF SURFACE WATER INTO EXISTING GROUND
Scale 1:20



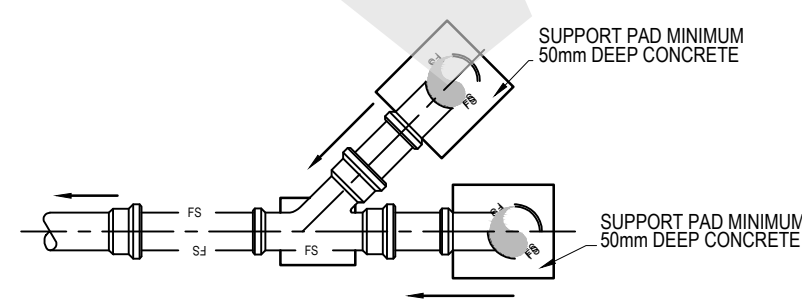
PE SHALLOW INSPECTION CHAMBER DETAIL
Scale 1:20



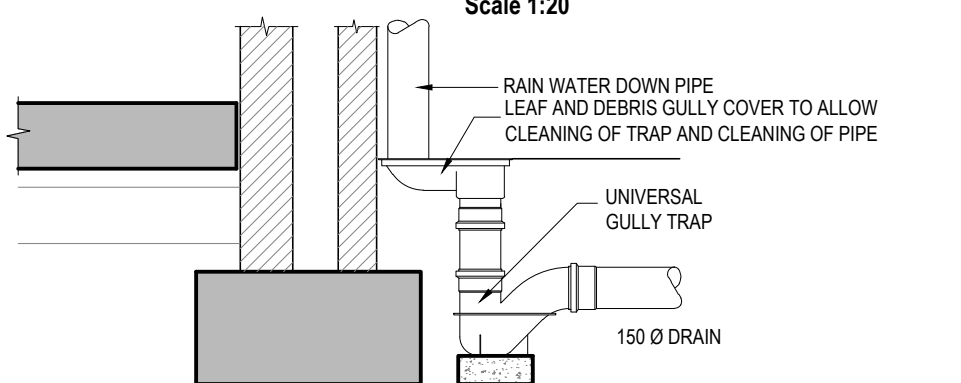
POLYPROPYLENE MANHOLE SITED IN
CAR PARK WITH B125/C250 COVER
Scale 1:20



TYPICAL DETAIL FOR FOUL
PIPE EXIT FROM BUILDING
Scale 1:20

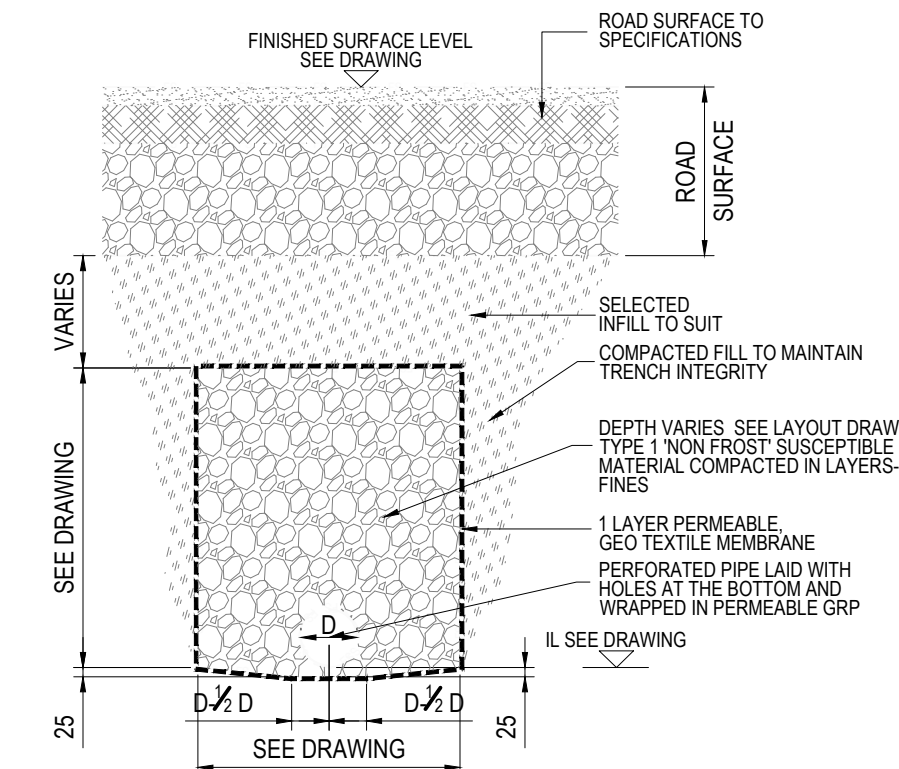


PLAN ON ANGLED FOUL PIPE
CONNECTION
Scale 1:20

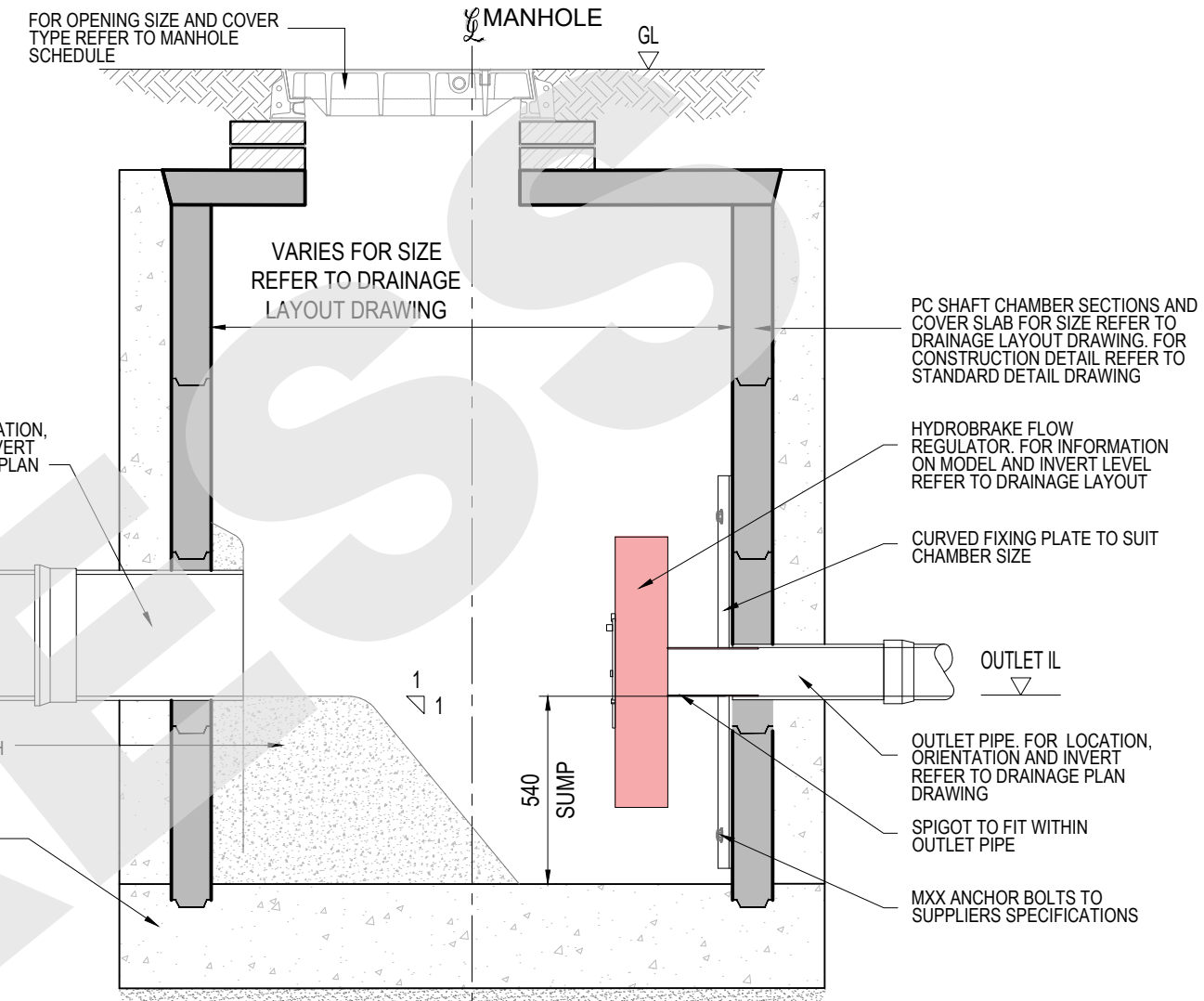
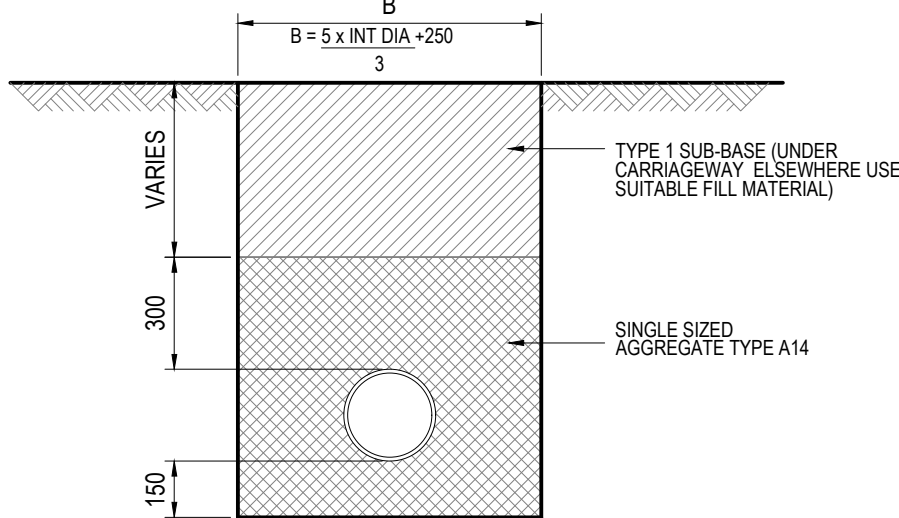


TYPICAL INSTALLATION DETAIL FOR
UNIVERSAL GULLY TRAP WITH INSPECTION
PORT FOR CLEANING
Scale 1:20

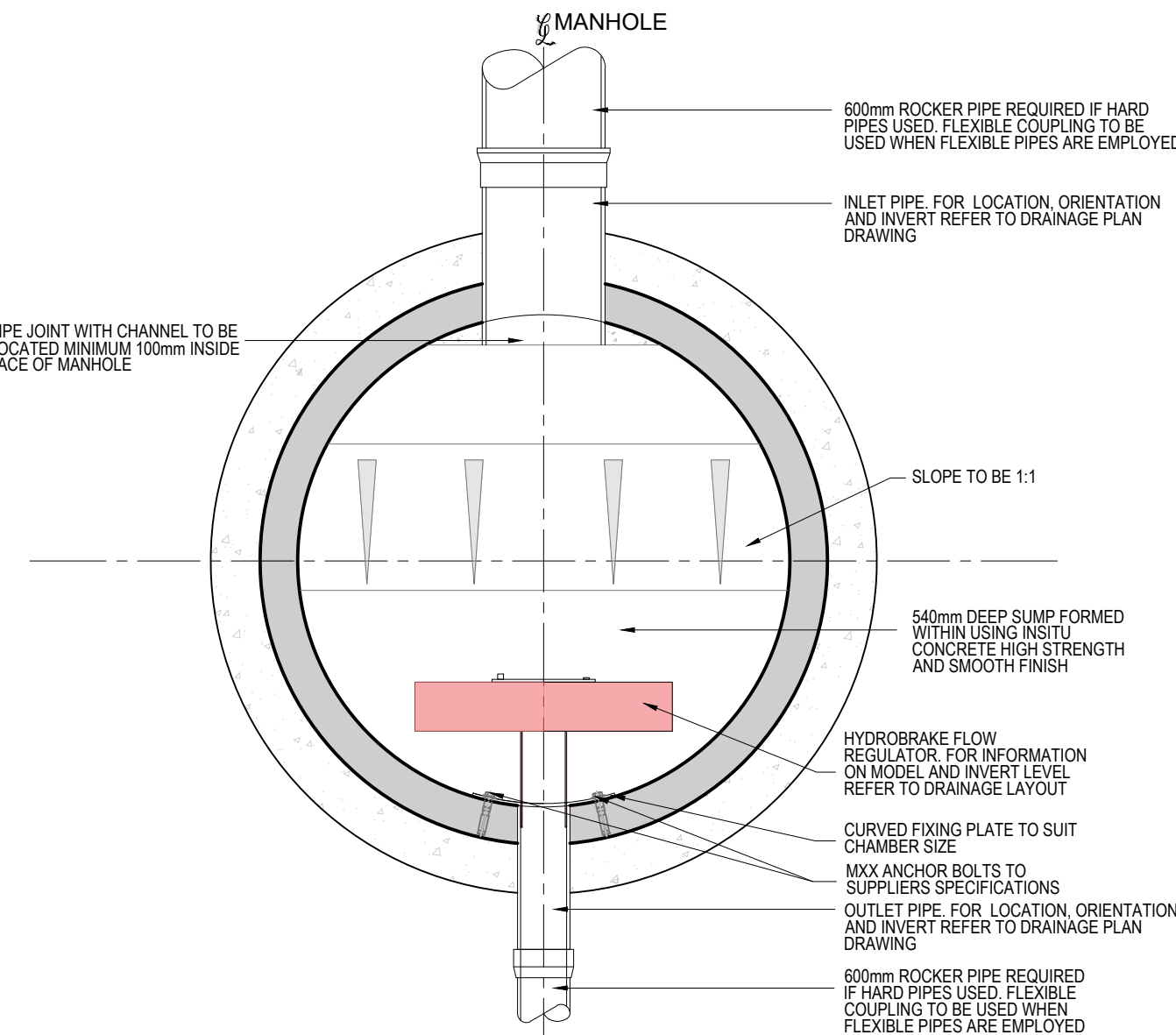
GRAVEL TRENCH ATTENUATION
Scale 1:20



TYPE S BEDDING DETAIL
Scale 1:20



SECTIONAL DETAIL THROUGH HYDRO-BRAKE MANHOLE
CURVED PLATE INSTALLATION
Scale 1:20



PLAN DETAIL THROUGH HYDRO-BRAKE MANHOLE
CURVED PLATE INSTALLATION
Scale 1:20

AREAS	
CONTRIBUTING AREAS	
BUILDING ROOFS	151.6m²
PERMEABLE PARKING AREAS	28.0m²
WALKWAYS	79.5m²
PLANTERS	11.7m²
TOTAL	270.8m²
NONCONTRIBUTING AREAS	
WALKWAYS	19.7m²
LANDSCAPED	62.8m²
TOTAL	82.5m²

DRAINAGE INFORMATION	
ASSESSMENT CRITERIA	VALUES
SITE CLASSIFICATION	BROWNFIELD
EXISTING RUNOFF RATE (Q _{bar})	2.5 l/s
PRE-DEVELOPMENT VOLUMES	50.1m³
CONTRIBUTING AREA	270.8m²
BETTERMENT	20%
PROPOSED RUNOFF RATE	1.9 l/s
CLIMATE CHANGE ALLOWANCE	40%
POST-DEVELOPMENT RUNOFF VOLUMES	13.7m³
STORAGE VOLUME PROVIDED	3.6m³

NOTES

CDM REGULATIONS 2015

IN LINE WITH THE ABOVE REGULATIONS WE ARE OBLIGED TO INFORM THE CONTRACTORS OF THE RISKS THAT MAY BE ENCOUNTERED IN THE CONSTRUCTION OF THESE WORKS. ALL DESIGN WORK HAS BEEN CARRIED OUT WITH HEALTH & SAFETY ASPECTS GIVEN FULL CONSIDERATION. WHEREVER POSSIBLE RISKS HAVE BEEN ELIMINATED FROM THE DESIGN, HOWEVER DUE TO THE VERY NATURE OF THIS TYPE OF WORK IT IS NOT POSSIBLE TO REMOVE ALL RISKS FROM THE DESIGN. WE WOULD ALSO RESPECTFULLY REMIND THE CONTRACTOR OF HIS OBLIGATIONS TO TAKE ALL REASONABLE STEPS ENSURING THAT ONLY COMPETENT WORKERS WHO HAVE A VALID SAFETY POLICY ARE EMPLOYED.

1. SUPPORT/TREATMENT FOR ALL EXCAVATION WORK.
2. GUARDING TO EDGES OF EXCAVATIONS TO PREVENT PEOPLE, MATERIALS AND VEHICLES FALLING INTO EXCAVATIONS.
3. GUARDING OF EXCAVATIONS OUTSIDE WORKING HOURS TO PREVENT UNAUTHORISED ACCESS.
4. UNDERMINING TO ADJACENT ROADS OR STRUCTURES.
5. CONFINED SPACE OPERATIONS.
6. DEALING WITH EXISTING SERVICES.
7. TRAFFIC MANAGEMENT ON EXISTING HIGHWAYS.
8. PROCEDURE TO BE FOLLOWED IN EVENT OF AN ACCIDENT OR EMERGENCY.
9. METHOD OF WORKING WHERE CONTAMINATED GROUND IS PRESENT ON SITE.
10. CONFIRMATION WILL BE REQUIRED THAT ALL OPERATIVES ARE ADEQUATELY TRAINED, AND COPIES OF RELEVANT CERTIFICATES TO BE SUPPLIED.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE OVERALL STABILITY OF THE STRUCTURE FROM THE COMMENCEMENT OF WORKS INCLUDING THE DESIGN AND PROVISION OF ALL NECESSARY TEMPORARY WORKS.

THE ABOVE LIST IS BY NO MEANS EXHAUSTIVE BUT IT DOES HIGHLIGHT OPERATIONS THAT PRESENT A RISK TO CONTRACTORS AND THE GENERAL PUBLIC.

GENERAL NOTES

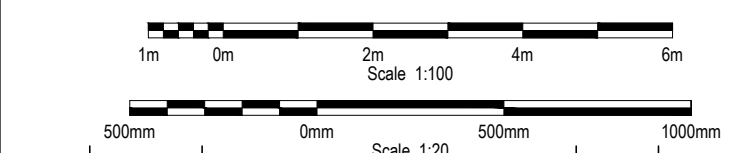
1. THIS DRAWING IS TO BE READ IN CONNECTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE FROM THIS DRAWING. ALL SETTING OUT DIMENSIONS ARE TO BE CHECKED AND VERIFIED ON SITE PRIOR TO COMMENCEMENT OF ANY BUILDING WORKS & FABRICATION OF MATERIALS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER.
3. ALL WORKMANSHIP AND MATERIALS ARE TO COMPLY WITH THE CURRENT BUILDING REGULATIONS, BRITISH STANDARDS AND CODES OF PRACTICE. ALL MATERIALS SHALL BE FIXED OR APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR IS TO TAKE INTO ACCOUNT EVERYTHING DEEMED NECESSARY FOR THE PROPER EXECUTION OF THE WORKS WHETHER INDICATED ON THE DRAWINGS OR NOT TO THE COMPLETE SATISFACTION OF THE LOCAL AUTHORITY.
4. FOR FINAL SETTING OUT INFORMATION RELATING TO WALL POSITIONS REFER TO ARCHITECTS DRAWINGS.

DRAINAGE NOTES

1. ALL DRAINAGE WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH ADS STRUCTURAL LTD DESIGN SPECIFICATIONS. ANY DEVIATIONS WILL NEED TO BE APPROVED BY THE DESIGN ENGINEER PRIOR TO WORKS.
2. THE CONTRACTORS ARE TO CONFIRM FIRST ALL DIMENSIONS AND LEVELS PRIOR TO THE COMMENCEMENT OF ANY WORK. DISCREPANCIES MUST BE HIGHLIGHTED WITH THE DESIGN ENGINEER WHO IS TO ASSESS THE POTENTIAL IMPACT PRIOR TO FURTHER WORKS.
3. ALL DRAINAGE IS TO CONFORM TO THE ASSOCIATED STANDARDS OF BOTH BS EN 7524 CODE OF PRACTICE FOR BUILDING DRAINAGE AND TO SEWERS FOR ADOPTION WHERE APPROPRIATE.
4. THE CONTRACTOR IS TO PROVIDE PROTECTION TO ALL NEW AND EXISTING SERVICE PIPEWORK DURING THE CONSTRUCTION PHASE. A STATEMENT OF PROPOSED MEASURES TO BE PROVIDED TO THE DESIGN ENGINEER PRIOR TO THE COMMENCEMENT OF WORKS.
5. ALL PIPES WITHIN TRAFFICED AREAS TO HAVE A MINIMUM OF 900mm COVER UNLESS OTHERWISE STATED. WHERE THESE DO NOT CONFORM TO THIS STANDARD A MINIMUM OF 150mm SURROUND CONCRETE USING C20/20 AS PROTECTION. FLEXIBILITY OF PIPES EITHER SIDE OF THE PROTECTION MUST BE UTILISED.
6. PIPE TRENCHES ARE TO HAVE ALL SOFT SPOTS FILLED WITH APPROVED GRANULAR FILL. HARD SPOTS ARE TO BE BROKEN DOWN. THE CONTRACTOR TO ENSURE ALL TRENCHES OFFER ADEQUATE PROTECTION FOR SAFE WORKING.
7. TRENCHES ARE TO BE BACKFILLED WITH EITHER GRANULAR FILL OR TYPE 'B' SELECTED MATERIAL FROM EXISTING SITE. ANY TRENCH WITHIN 1M OF A LOAD BEARING STRUCTURE TO BE BACKFILLED WITH CONCRETE UP TO THE UNDERSIDE OF THE STRUCTURE.
8. ALL ACCESS COVERS MUST CONFORM TO BS EN 124 PART 1.
9. RWPS DISCHARGING TO A COMBINED SEWER MUST BE INSTALLED WITH TRAPPED BACK INLET GULLY.
10. ALL COVER LEVELS ARE APPROXIMATE AND ARE TO BE SET IN ACCORDANCE TO FINISHED LEVELS.

LEGEND

	MAHOLE
	INSPECTION CHAMBER
	ROAD GULLY
	RAIN WATER PIPE
	SLOT DRAIN
	BACKDROP PIPE
	SURFACE WATER PIPE
	FOUL WATER PIPE
	COMBINED SEWER
	EXISTING SURFACE WATER
	EXISTING FOUL WATER
	FLOW DIRECTION
	CONCRETE SURROUND PIPES
	PROPOSED LEVEL



P3	05.01.23	SITE LAYOUT AMENDED	GDR	DS	ADS
P2	29.08.19	PIPE SIZE REDUCED	JM	AEB	ADS
P1	16.08.19	FIRST ISSUE	JM	AEB	ADS
REV	DATE	REVISION DETAILS	DRN	CHK	APP

CLIENT
SOUTHWAY HOUSING

PROJECT
RAINFORD AVENUE

DRAWING TITLE
DRAINAGE LAYOUT & DETAILS

DRAWING STATUS: **PRELIMINARY** A1

ads: structural
Alexandra Business Park
2nd Floor
The Court
Prescot Road
St Helens
WA10 3TP
Tel: 0151 541 4000
info@adsstructural.co.uk

SCALE	PROJECT - ORIGINATOR - ZONE - LEVEL - TYPE - ROLE - NUMBER	REV
1:100	4248-ADS-XX-00-DR-C-500	P3