

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

**CONSTRUCTION**  
1. -

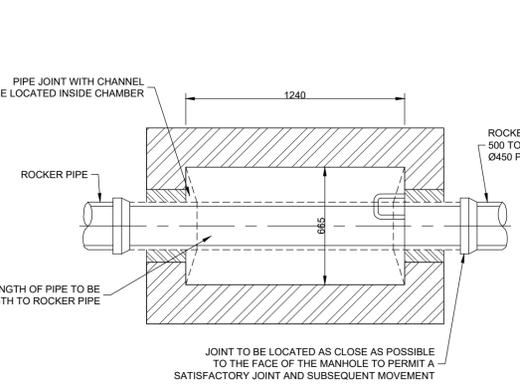
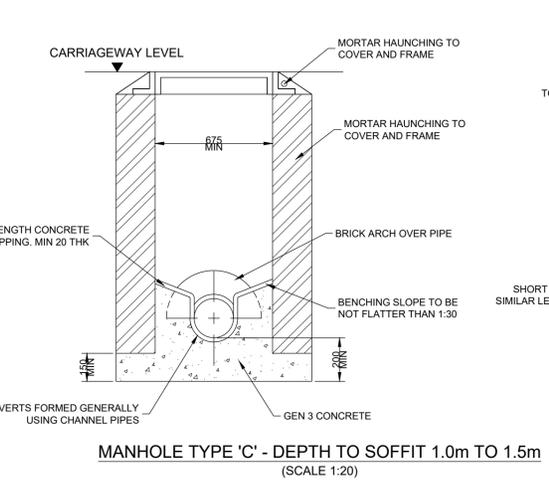
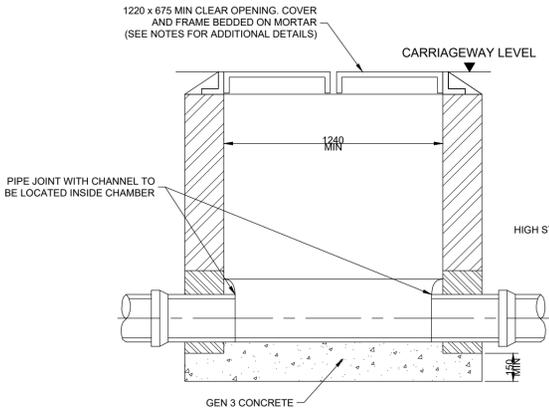
**MAINTENANCE**  
1. -

**DEMOLITION**  
1. -

ALL WORKS TO BE CARRIED OUT BY A COMPETENT CONTRACTOR, WORKING (WHERE APPROPRIATE) TO AN APPROVED METHOD STATEMENT

**NOTES:**

- DO NOT SCALE OFF THE DRAWING
- ALL MEASUREMENTS IN MILLIMETERS U.O.N
- ALL MATERIALS AND WORKMANSHIP FOR MANHOLES AND SEWERS FOR ADOPTION ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE WATER AUTHORITIES ASSOCIATION PUBLICATION OF 'SEWERS FOR ADOPTION' 7<sup>TH</sup> EDITION, TOGETHER WITH AMENDMENTS AND ADDITIONS BY SOUTHERN WATER.
- WHERE CORBELLING IS REQUIRED, THE OVERSAIL SHOULD NOT EXCEED 30mm PER COURSE.
- MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124 AND THEY SHALL BE OF A NON-ROCKING DESIGN WHICH DOES NOT RELY ON THE USE OF CUSHION INSERTS.
- IN CARRIAGEWAYS OF ROADS, HARD SHOULDERS AND PARKING, AND AREAS USED BY ALL TYPES OF ROAD VEHICLES, CLASS D400 (GRADE A COMPLYING WITH BS 497/REF MA 60) COVERS AND FRAMES ARE TO BE USED. IN FOOTWAYS, PEDESTRIAN AREAS AND COMPARABLE LOCATIONS CLASS B125 COVERS AND FRAMES ARE TO BE USED.
- ALL MANHOLE COVERS SHALL HAVE CLOSED KEYWAYS.
- ALL PIPEWORK TO BE EITHER VITRIFIED CLAY PIPES OR CONCRETE UNLESS AGREED WITH THE WATER AUTHORITY. THE USE OF ANY PLASTIC PIPES, MANHOLES OR FITTINGS FORMING PART OF THE PUBLIC SYSTEM ARE NOT PERMITTED.
- VITRIFIED CLAY PIPES AND PIPE FITTINGS SHALL COMPLY WITH THE RELEVANT REQUIREMENTS OF BS EN 295 AND BS 65 RESPECTIVELY AND BE OF NORMAL TYPE WITH FLEXIBLE MECHANICAL JOINTS.
- CONCRETE PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT REQUIREMENTS OF BS 5911 PART 100.
- THE STYLE SHOWN FOR THE PIPE JOINTS IS INDICATIVE ONLY, WHETHER THESE ARE SLEEVE JOINTS OR SPIGOT AND SOCKET JOINTS WILL BE SPECIFIED SEPARATELY.
- SULPHATE RESISTING CEMENT IS TO BE USED IN ALL MORTAR AND IN SITU CONCRETE. MINIMUM CONCRETE GRADE TO BE C20. FOR PRECAST CONCRETE PIPES OR MANHOLES, A MINIMUM CONCRETE CLASS 3 SULPHATE RESISTANCE IS REQUIRED.
- TYPE 'A' GRANULAR PIPE BEDDING AND SURROUND MATERIAL SHALL BE IN ACCORDANCE WITH CLAUSE 503 (TABLE 5/3) OF THE S.H.W. AS FOLLOWS:  
SINGLE SIZED AGGREGATE:  
13.1. Ø100mm PIPES: 4/10mm  
13.2. Ø150mm PIPES: 6/14mm  
13.3. >Ø150mm PIPES: 10/20mm  
GRADED:  
13.4. UP TO Ø150mm PIPES: 2/14mm OR 4/20mm  
13.5. GREATER THAN 150mm: 2/14mm, 4/20mm OR 4/40mm
- TYPE 'B' MATERIAL MAY BE SELECTED 'AS DUG' MATERIAL OR IMPORTED GRANULAR MATERIAL. SELECTED 'AS DUG' MATERIAL SHALL BE READILY COMPACTABLE, BE FREE FROM STONES >40mm AND CLAY LUMPS >100mm. COHESIVE SOILS SUCH AS CLAY ARE NOT SUITABLE. IMPORTED MATERIAL SHALL CONFORM TO CLASS 8 TO THE SPECIFICATION FOR HIGHWAY WORKS CLAUSE 503.3(v).
- SPECIFICATION FOR GENERAL BACK FILL  
15.1. NORMALLY THE EXCAVATED MATERIAL FROM THE TRENCH WILL BE SUITABLE FOR BACKFILL ABOVE THE SELECTED MATERIAL. BOULDERS, LUMPS OF CONCRETE, TIMBER AND VEGETABLE MATTER SHOULD BE EXCLUDED.
- TYPE 'Z' BEDDING TO BE USED WHERE COVER TO PIPE SOFFIT < 1.20m.
- MANHOLE SIZES SHOWN IN THE TABLE ARE MINIMUM SIZES. WHERE MORE THAN ONE BRANCH CONNECTION OCCURS, THE CHAMBER SIZE SHALL BE INCREASED AS NECESSARY TO ACCOMMODATE ADEQUATE BENCHING.

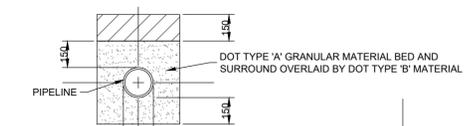


**MANHOLE CHAMBER SIZE TABLE**

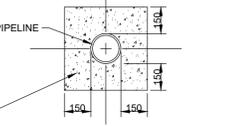
PIPE Ø	MANHOLE Ø
<375	1200
375-450	1350
500-700	1500
750-900	1800

**ROCKER PIPE LENGTH TABLE:**

PIPE Ø	ROCKER PIPE LENGTH
150-600	600
675-750	1000
> 750	1250



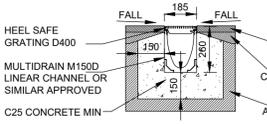
TYPE 'S' BEDDING & SURROUND (SCALE 1:10)



TYPE 'Z' BEDDING & SURROUND (SCALE 1:10)

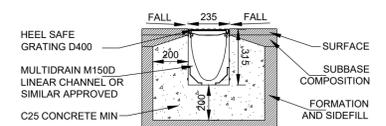
PIPE FULLY SURROUNDED BY C20 CONCRETE PLACED TO FULL DEPTH IN ONE OPERATION. MOVEMENT JOINTS TO BE COINCIDENT WITH PIPE JOINTS, AT SPACINGS NOT EXCEEDING 5m AND FORMED FROM 'FLEXCELL', BITUMEN IMPREGNATED, INSULATING BOARD (OR SIMILAR APPROVED), PRE-CUT TO EXTERNAL DIAMETER OF PIPE. AREA TO BE EQUAL TO X-SECTIONAL AREA OF CONCRETE SURROUND.

REFER TO MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE INSTALLATION DETAILS

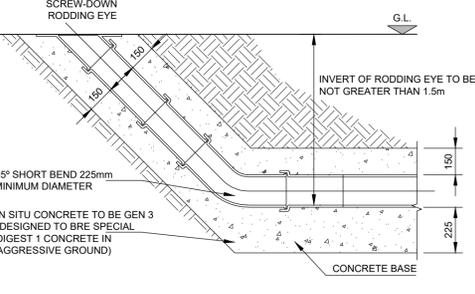


ACO CHANNEL PEDESTRIAN (SCALE 1:20)

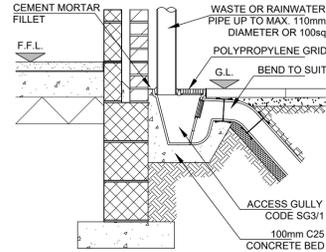
REFER TO MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE INSTALLATION DETAILS



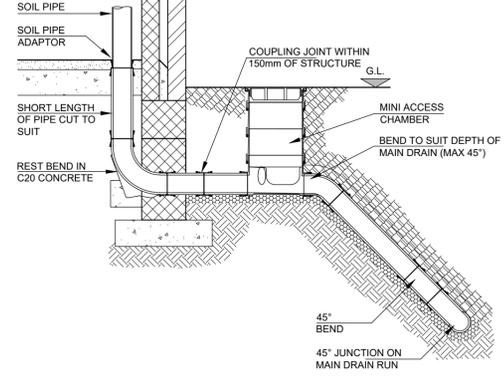
ACO CHANNEL VEHICULAR (SCALE 1:20)



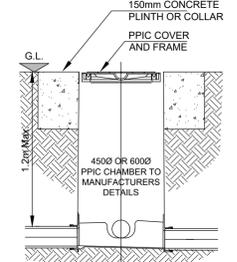
RODDING EYE DETAIL (SCALE 1:20)



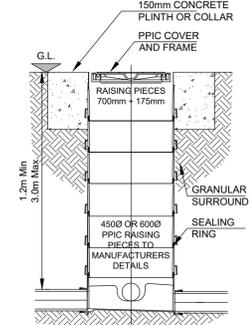
TRAPPED RWP WITH GULLY (SCALE 1:20)



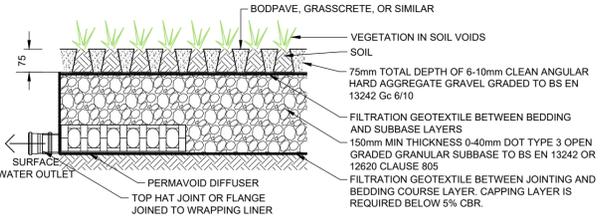
MINI ACCESS CHAMBER POSITIONED OFF MAIN DRAIN RUN (SCALE 1:20)



PVC-U / POLYPROPYLENE INSPECTION CHAMBER (SCALE 1:20)

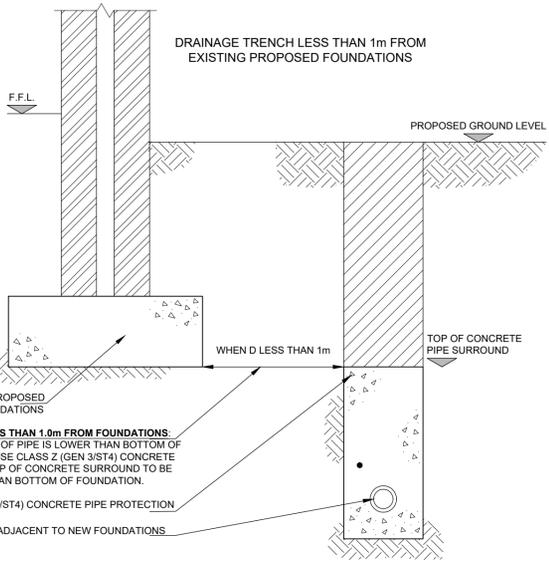


PVC-U / POLYPROPYLENE REDUCED ACCESS INSPECTION CHAMBER (SCALE 1:20)

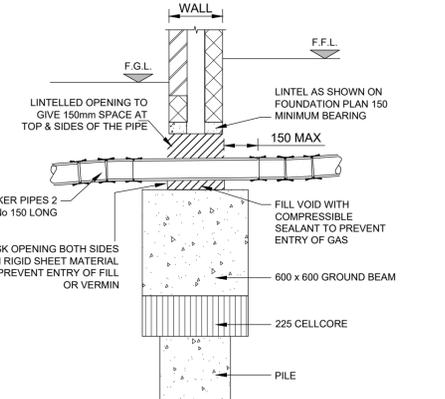


PARKING - REINFORCED GRASS PAVING (SCALE 1:20)

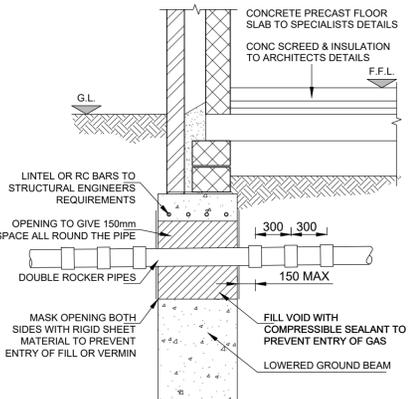
GROUNDWATER LEVELS ARE TO BE CHECKED ON SITE PRIOR TO START OF WORK. IF THERE ARE HIGH GROUNDWATER LEVELS THEN THE PAVING IS TO BE TANKED WITH IMPERMEABLE GEOTEXTILE TO PREVENT SUBBASE INGRESS



PIPE PROTECTION ADJACENT TO EXISTING/PROPOSED FOUNDATIONS (SCALE 1:20)



WALL PENETRATION DETAIL FOR SVP CONNECTIONS (SCALE 1:20)



TYPICAL FOUL PIPE RUNS OVER GROUND BEAMS (SCALE 1:20)



P1	ISSUED FOR INFORMATION	ET	16/04/2025	RGM
Rev	Description	By	Date	Chkd



Quarry Court, Lime Quarry Mews, Guildford, GU1 2RD 01483 565 986

Client: **EVOLVE NORSE Ltd**

Project: **YARDLEY PRIMARY SCHOOL 1FE EXPANSION**

Title: **PRIVATE DRAINAGE CONSTRUCTION DETAILS**

Perega Project No.	Checked	Passed	Size	Scale
C13942	RGM		A1	AS SHOWN
Project Code	Originator	Zone	Level	Type
C13942	PER	XX	XX	DR
Subtability Code	Status	Revision		
S2	PRELIMINARY	P1		