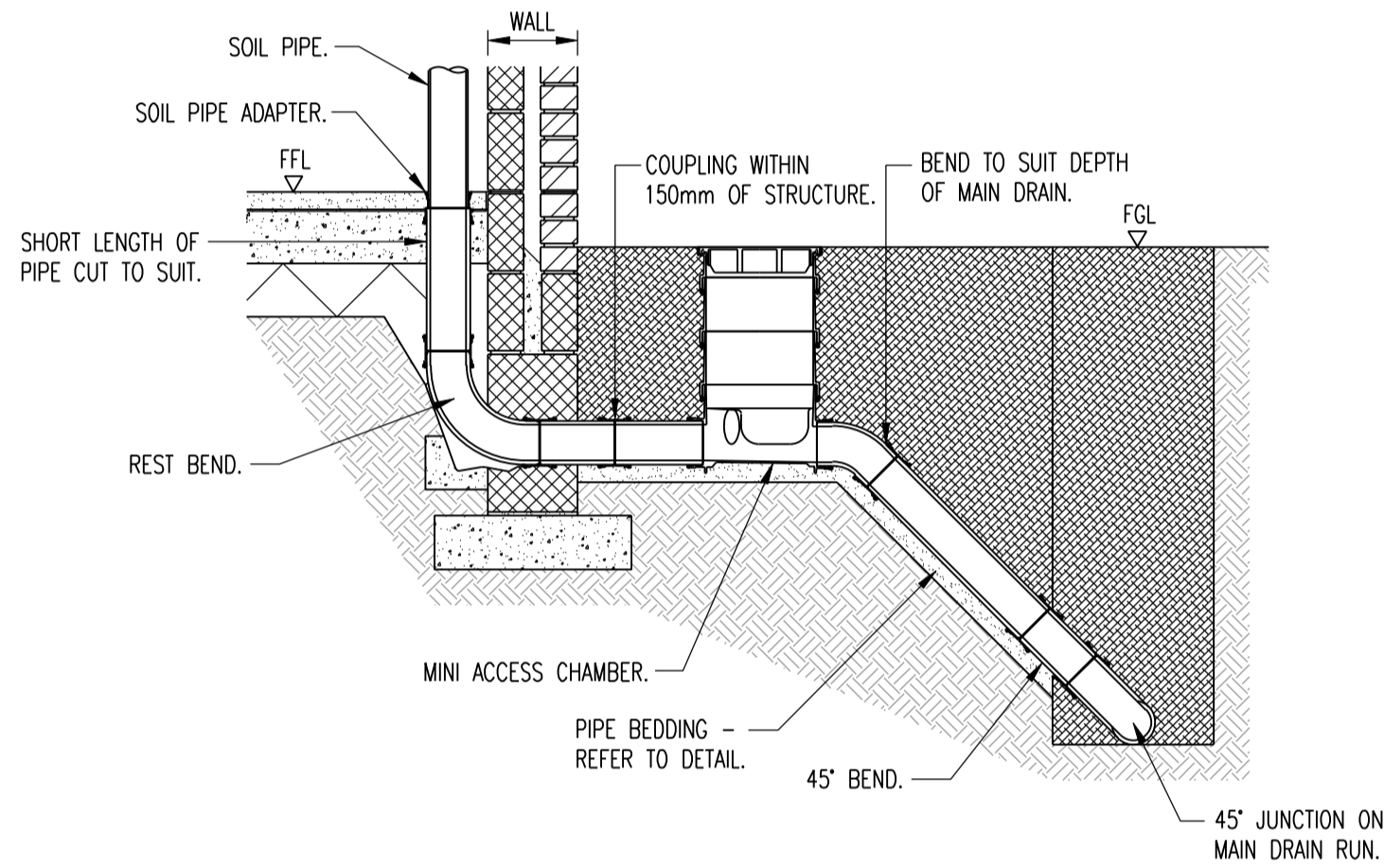


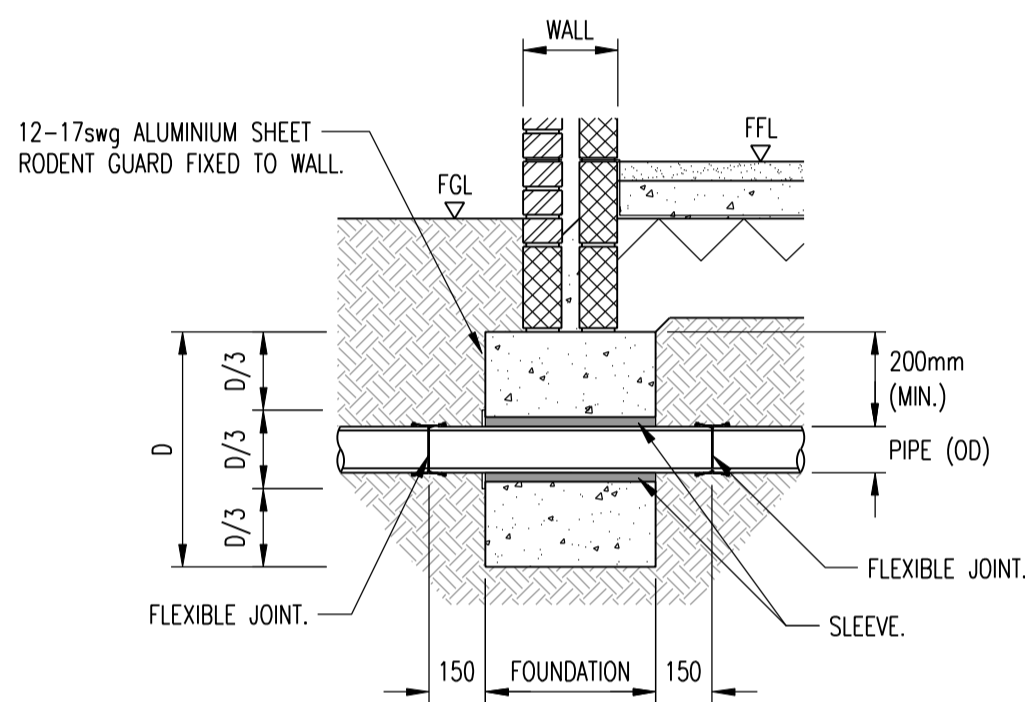
**MINIMUM DIMENSIONS FOR MANHOLES**

TYPE	SIZE OF LARGEST PIPE (DN)	INTERNAL DIMENSIONS (MINIMUM) (1)		MINIMUM CLEAR OPENING SIZE (1)		TYPE OF COVER & FRAME
		LENGTH x WIDTH	CIRCULAR DIA.	LENGTH x WIDTH	CIRCULAR DIA.	
<1.5m TO SOFFIT	150mm	750mm x 675mm (1)	1000mm (1)	750mm x 675mm (1)	N/A (1)	SEE NOTE 1 i), ii), iii) & iv)
	225mm	1200mm x 675mm	1200mm	1200mm x 675mm (1)		
	300mm	1200mm x 750mm	1200mm			
	>300mm	1800mm x (DN+450mm)	THE LARGER OF 1800mm OR (DN+450mm)			
>1.5m TO SOFFIT	225mm	1200mm x 1000mm	1200mm	600mm x 600mm	N/A	SEE NOTE 1 i) & ii)
	300mm	1200mm x 1075mm	1200mm			
	375mm-450mm	1350mm x 1225mm	1200mm			
	>450mm	1800mm x (DN+775mm)	THE LARGER OF 1800mm OR (DN+775mm)			
MANHOLE SHAFT (1) >3.0m DEEP TO SOFFIT OF PIPE	STEPS (1)	1050mm x 800mm	1050mm	600mm x 600mm	600mm	SEE NOTE 1 i) & ii)
	LADDER (1)	1050mm x 800mm	1200mm			
	WINCH (1)	900mm x 800mm	900mm	600mm x 600mm	600mm	

- NOTES**
- LARGER SIZES MAY BE REQUIRED FOR MANHOLES ON BENDS OR WHERE THERE ARE JUNCTIONS.
  - MAY BE REDUCED TO 600mm x 600mm WHERE REQUIRED BY HIGHWAY LOADING CONSIDERATIONS, SUBJECT TO SAFE SYSTEM OF WORK BEING SPECIFIED.
  - NOT APPLICABLE DUE TO WORKING SPACE NEEDED.
  - MINIMUM HEIGHT OF CHAMBER IN SHAFTED MANHOLE - 2.0m FROM BENCHING TO UNDERSIDE OF REDUCING SLAB.
  - MINIMUM CLEAR SPACE BETWEEN LADDER OR STEPS AND THE OPPOSITE FACE OF THE SHAFT SHOULD BE APPROXIMATELY 900mm.
  - WINCH ONLY - NO STEPS OR LADDERS, PERMANENT OR REMOVABLE.
  - THE MINIMUM SIZE OF ANY MANHOLE SERVING A SEWER (i.e. ANY DRAIN SERVING MORE THAN ONE PROPERTY) SHOULD BE 1200mm x 675mm RECTANGULAR OR 1200mm DIA.

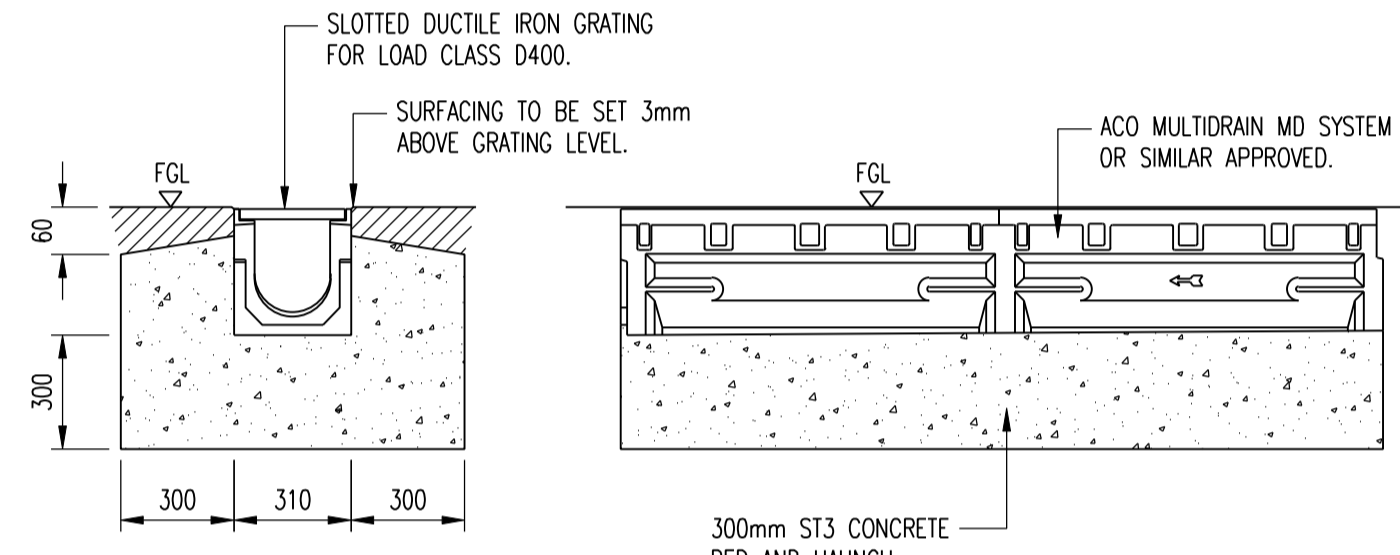


**ACCESS CHAMBER CONNECTION TO MAIN DRAIN RUN**



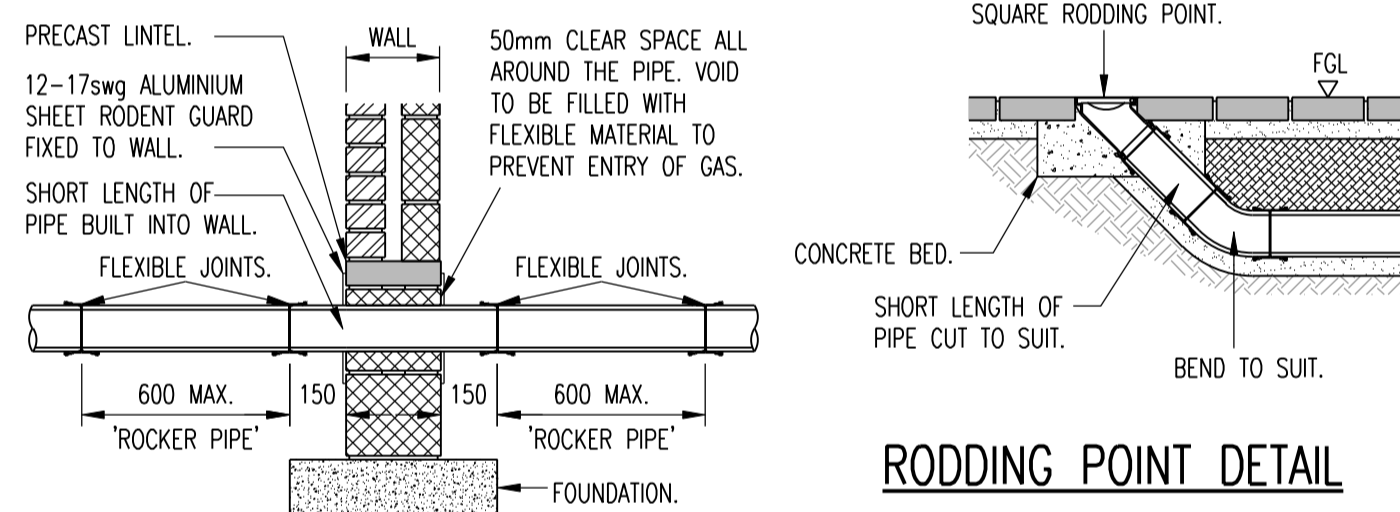
**NOTE:** DRAIN SLEEVE/DUCT TO BE LOCATED WHOLLY WITHIN THE MIDDLE THIRD OF THE FOUNDATION DEPTH (D). THE ENGINEER IS TO BE ADVISED IF THIS IS NOT POSSIBLE. IN NORMAL; SOIL CONDITIONS THE SLEEVE/DUCT IS TO GIVE A 25mm CLEARANCE ALL ROUND THE OUTSIDE OF THE DRAIN PIPE (THIS MAY BE ACHIEVED BY LIGHTLY PACKING THE SPACE WITH FLEXIBLE MATERIAL) MAXIMUM SLEEVE SIZE TO BE 300mm WITHOUT REFERENCE TO THE ENGINEER.

**DRAINAGE THROUGH TRENCH FILL FOUNDATIONS**



**ACO CHANNEL DRAIN DETAIL**

SCALE 1:20



**RODDING POINT DETAIL**

**DRAINAGE THROUGH WALLS**

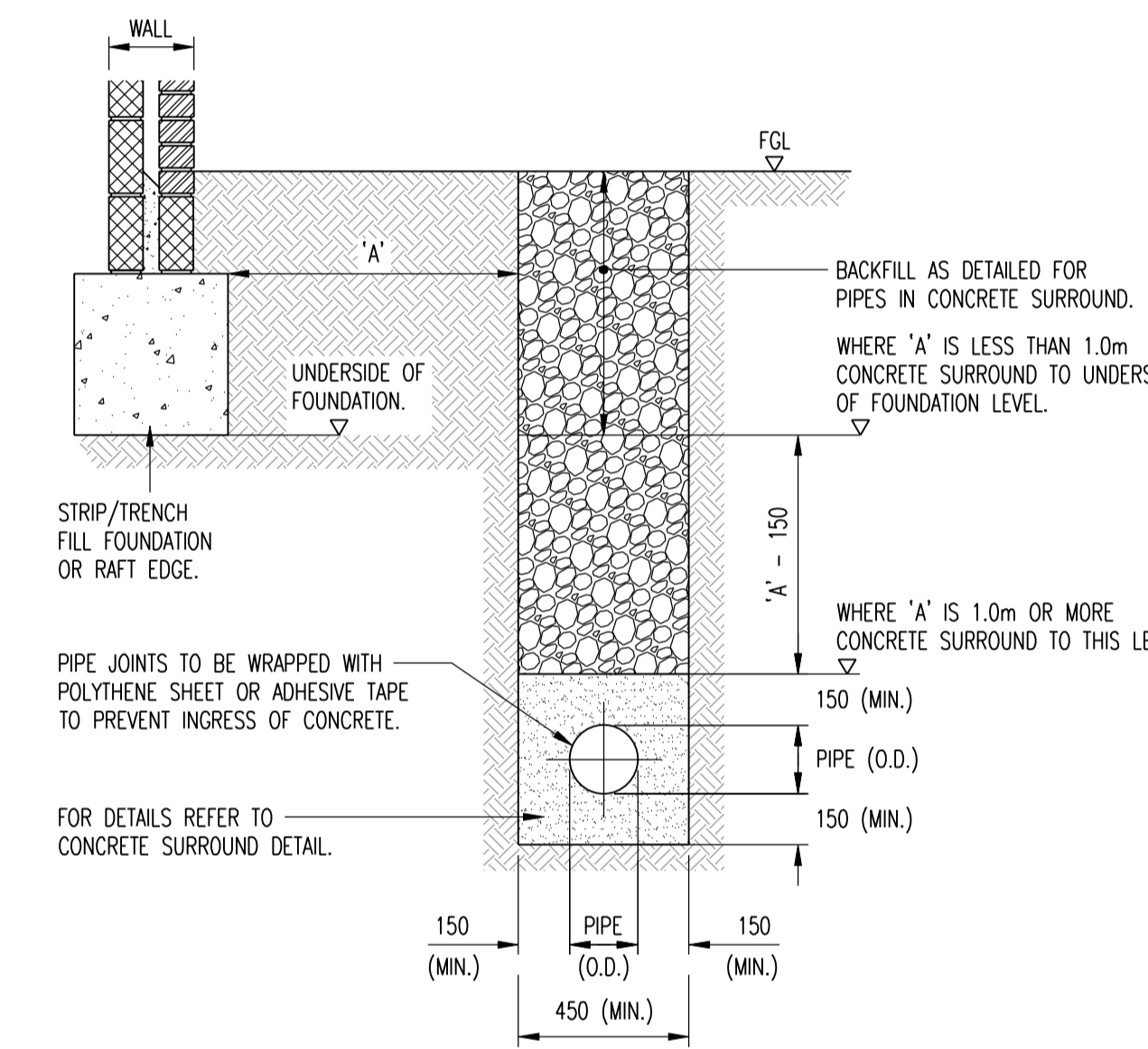
**MATERIALS FOR ACCESS POINTS**

MATERIAL	BRITISH STANDARD
1. INSPECTION CHAMBERS AND MANHOLES:	
CLAY BRICK & BLOCKS	BS 3921
VITRIFIED CLAY	BS EN 295, BS 65
CONCRETE-PRECAST	BS 5911
CONCRETE-IN SITU	BS 8110
PLASTICS	BS 7158
2. RODDING EYES AND ACCESS FITTINGS (EXCLUDES COVERS AND FRAMES)	AS PIPES REFER TO MATERIALS FOR BELOW GROUND DRAINAGE

**MATERIALS FOR BELOW GROUND DRAINAGE**

MATERIAL	BRITISH STANDARD
1. RIGID PIPES:	
VITRIFIED CLAY	BS 65, BS EN 295
CONCRETE	BS 5911
GREY IRON	BS 437
DUCTILE IRON	BS EN 598
2. FLEXIBLE PIPES:	
UPVC	BS EN 1401
PP	BS EN 1852
STRUCTURE WALLED PLASTIC PIPES	BS EN 13476

\* APPLICATION AREA CODE UD SHOULD NORMALLY BE SPECIFIED.  
NOTE: SOME OF THESE MATERIALS MAY NOT BE SUITABLE FOR CONVEYING TRADE EFFLUENT.



**PIPE RUNS NEAR BUILDINGS**

- GENERAL**
- DO NOT SCALE THIS DRAWING. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. ANY DISCREPANCIES ARE TO BE RECORDED AND REPORTED TO THE ENGINEERS IMMEDIATELY.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ENGINEERS AND ARCHITECTS DRAWINGS AND THE SPECIFICATION.
  - ALL WORK IS TO BE TO THE SATISFACTION OF THE ENGINEER AND LOCAL AUTHORITY BUILDING CONTROL.
  - THE CONTRACTOR IS RESPONSIBLE FOR AND MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE STABILITY OF THE WORKS AT ALL TIMES DURING CONSTRUCTION.
  - ALL WORKMANSHIP AND MATERIALS ARE TO BE TO CURRENT BRITISH STANDARDS.
  - ALL SERVICES ARE TO BE LOCATED AND PROTECTED AS NECESSARY BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF THE WORKS.
  - ANY EXISTING DETAILS WHICH ARE SHOWN ON THIS DRAWING ARE FOR GUIDANCE ONLY AND ARE TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY VARIATIONS ARE TO BE RECORDED AND REPORTED TO THE ENGINEER IMMEDIATELY.
  - ALL PRIVATE DRAINAGE WORKS ARE TO BE IN ACCORDANCE WITH BUILDING REGULATIONS APPROVED DOCUMENT H - DRAINAGE AND WASTE DISPOSAL (2015 EDITION).
  - ALL PRIVATE CONNECTIONS TO ADAPTABLE SEWERS MUST BE A MINIMUM OF 100mm DIAMETER (FOUL) & 150mm DIAMETER (SURFACE) MADE IN VITRIFIED CLAY CONNECTING SOFFIT TO SOFFIT.
  - PRIVATE CRATE INFILTRATION SYSTEMS MUST BE LOCATED AT LEAST 5M AWAY FROM ANY BUILDING, STRUCTURE OR ADAPTABLE HIGHWAY.

Rev	Revision Notes	Drawn	Appr	Date

**INGENT**  
CONSULTING ENGINEERS  
Unit 1a Greenwood Court, Skyliner Way, Bury St Edmunds, IP32 7GY.

**PRELIMINARY**

Project:  
**LAND REAR OF EAST HOUSE  
GREAT FINBOROUGH, SUFFOLK**

Drawing Title:  
**PRIVATE DRAINAGE CONSTRUCTION DETAILS  
SHEET 2**

Client:  
**MCNAMARA DEVELOPMENTS**

Date:  
**JUN 2023**

Drawn: <b>LB</b>	Designed: <b>LB</b>	Checked: <b>RGW</b>	Approved: <b>RGW</b>
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Scale:  
1:20

Project No: <b>2305-819</b>	Drawing No & Revision: <b>006</b>	Size: <b>A1</b>
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