

TRENCH BACKFILL AND BEDDING DETAILS

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
# 40 RISING MAIN	SEE NOTE 10
100	500
150	600
200	600
250	750
300	750
350	750
400	800
450	800

PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
#10	100
100-400	200

TRENCH BACKFILL AND BEDDING NOTES:-

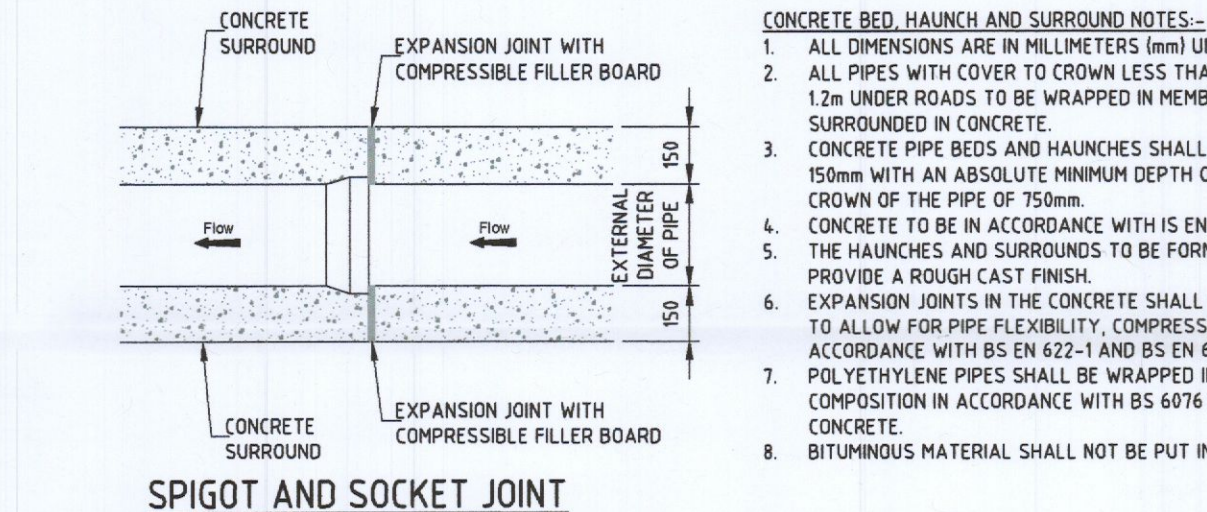
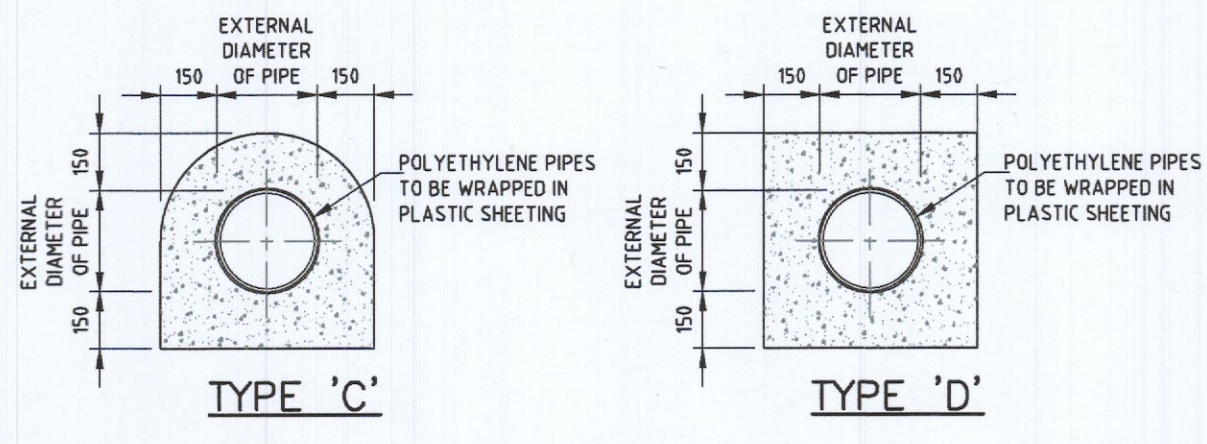
- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
  - CARPENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.5. (THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNDESIRABLE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS).
  - DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75m.
  - DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (EG. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GREAT GROSS VEHICLES WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9m.
  - DEPTHS OF SEWERS IN GATED SPACES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.
  - AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9m.
  - OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.20m.
- BACKFILL BELOW BUILDINGS AND FOR A DISTANCE OF 1200mm FROM A BUILDING SHOULD BE IN ACCORDANCE WITH IS EN13242 AND SR21:2014+A1:2016
- CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROAD AUTHORITY SPECIFICATION OF IRISH WATER.
- SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUNDED MATERIAL SUBJECT TO THE APPROVAL OF IRISH WATER. SELECTED FILL TO BE COMPACTED IN LAYERS OF 300mm DEPTH
- PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE IS EN 13242. CONCRETE BED, HAUNCH & SURROUND, WHERE REQUIRED, SHALL BE TO STD-WW-08.
- IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING.
- IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF A MINIMUM DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES, AND TYPE B MATERIAL MAY BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE.
- PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
- NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT TOP OF PIPE BEDDING LAYER. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION AND THE DISCHARGE MANHOLE.

DRAINAGE NOTES

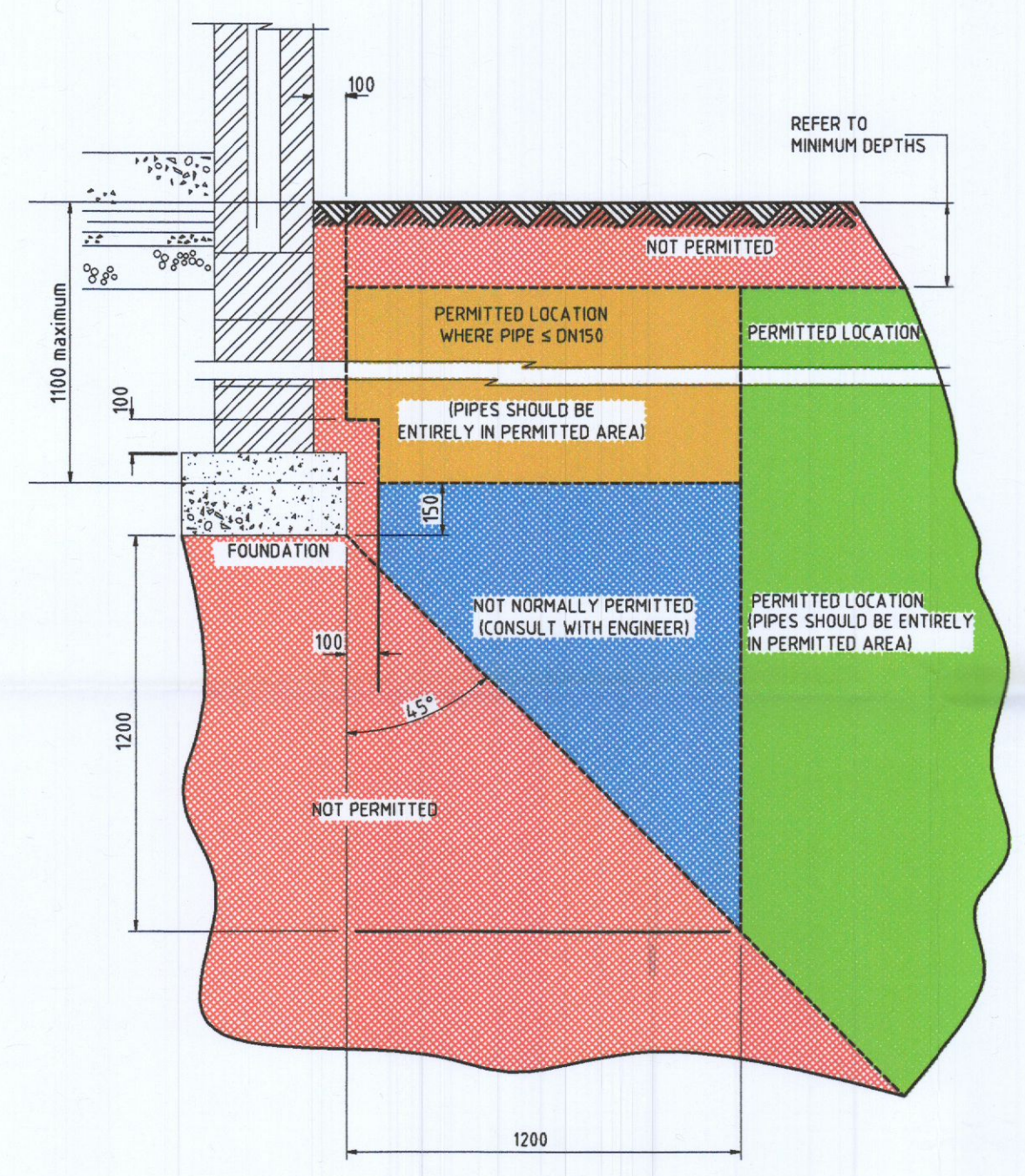
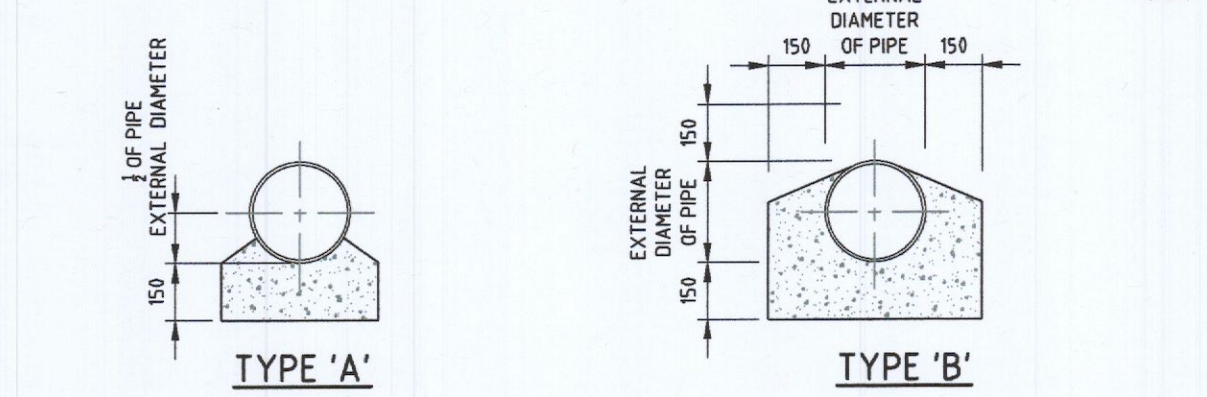
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS
- ALL FOUL SEWERS TO BE FULLY SEALED UPVC PIPES IN ACCORDANCE WITH I.S. EN 1401-1
- ALL INTERNAL MANHOLE COVERS TO BE DOUBLE SEALED RECESS 'SET-IN' TYPE
- ALL EXTERNAL MANHOLE COVERS TO BE ROUND GRADE ON 400 E.N. 124
- ALL EXISTING REDUNDANT PIPEWORK, GULLYS, MANHOLES ETC. TO BE FULLY REMOVED AND BACKFILLED/MADE GOOD ETC. ANY REDUNDANT INTERNAL PIPEWORK TO REMAIN SHOULD BE CAPPED AND FULLY SEALED.
- CONTRACTOR TO CAREFULLY SURVEY & LOCATE ALL EXISTING DRAINAGE AND ENSURE ALL REMAINING DRAINAGE CONNECTIONS ARE RECONNECTED TO NEW DRAINAGE SYSTEM, INCLUDING EXISTING S.P.'S
- ANY REPAIRS NECESSARY DUE TO DAMAGE BY THE CONTRACTOR WILL BE AT THE CONTRACTORS EXPENSE.
- ALL WORKS AND TEMPORARY DISCONNECTION OF SERVICES TO BE PHASED AND AGREED WITH THE CLIENT AND DESIGN TEAM.
- PRIOR TO COMMENCEMENT, CONTRACTOR TO CARRY OUT FULL INVESTIGATION INCLUDING CCTV SURVEY AND LEVELS ETC. OF ALL EXISTING DRAINAGE.
- CONTRACTOR TO CARRY OUT PRESSURE TESTING OF ALL NEW DRAINAGE FOR INSPECTION BY THE ENGINEER AND TO CARRY OUT A CCTV SURVEY OF COMPLETED DRAINAGE NETWORK SURVEY OF INVERT LEVEL OF ALL PIPES AND ACCESS POINTS TO BE SENT TO THIS OFFICE FOR APPROVAL PRIOR TO BACKFILLING.
- ALL WORKS TO FOUL LINE TO CODE OF PRACTICE FOR WASTE WATER INFRASTRUCTURE & WASTEWATER INFRASTRUCTURE STANDARD DETAILS (LATEST VERSIONS BY IRISH WATER)
- ALL DRAINS WITH COVER LESS THAN 0.6m IN PAVED AREAS AND LESS THAN 1.2m UNDER ROADS TO BE WRAPPED IN A MEMBRANE AND BEDDED AND SURROUNDED IN C20/25 CONCRETE. A 20mm GAP SHALL BE PROVIDED IN THE CONCRETE SURROUND AT PIPE JOINTS AND NOT MORE THAN 6m APART. ALL OTHER PIPEWORK SHALL BE BEDDED AND SURROUNDED IN GRANULAR MATERIAL TO SPECIFICATION.

EXISTING DRAINAGE NOTES

- CONTRACTOR TO CARRY OUT A DILAPIDATION SURVEY OF THE EXISTING CORRIDOR AND COURTYARD AND ALL AREAS INTERESTED BY THE UPGRADE WORKS PRIOR TO COMMENCEMENT.
- CONTRACTOR TO ALLOW FOR NECESSARY STORAGE/OVERLAPPING OF SEWAGE DURING THE DURATION OF THE WORKS TO ENSURE EXISTING TOILET FACILITIES ARE OPERATIONAL.
- CONTRACTOR PARKING, DELIVERY AND STORAGE TO BE FULLY AGREED WITH CLIENT PRIOR TO COMMENCEMENT.
- CONTRACTOR TO ALLOW FOR ALL NECESSARY RE-CONNECTION OF EXISTING BRANCHES/OUTLETS ETC. TO REPLACE SEWER THAT MAY NOT BE SHOWN ON DRAWINGS.



CONCRETE BED, HAUNCH BED AND SURROUND DETAILS

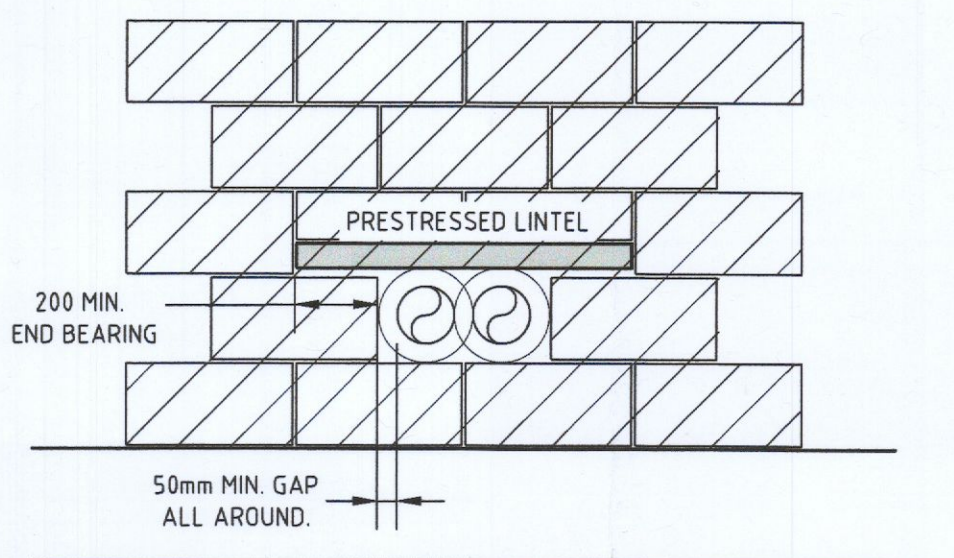


PERMITTED LOCATIONS OF DRAINAGE PIPES ADJACENT TO BUILDINGS

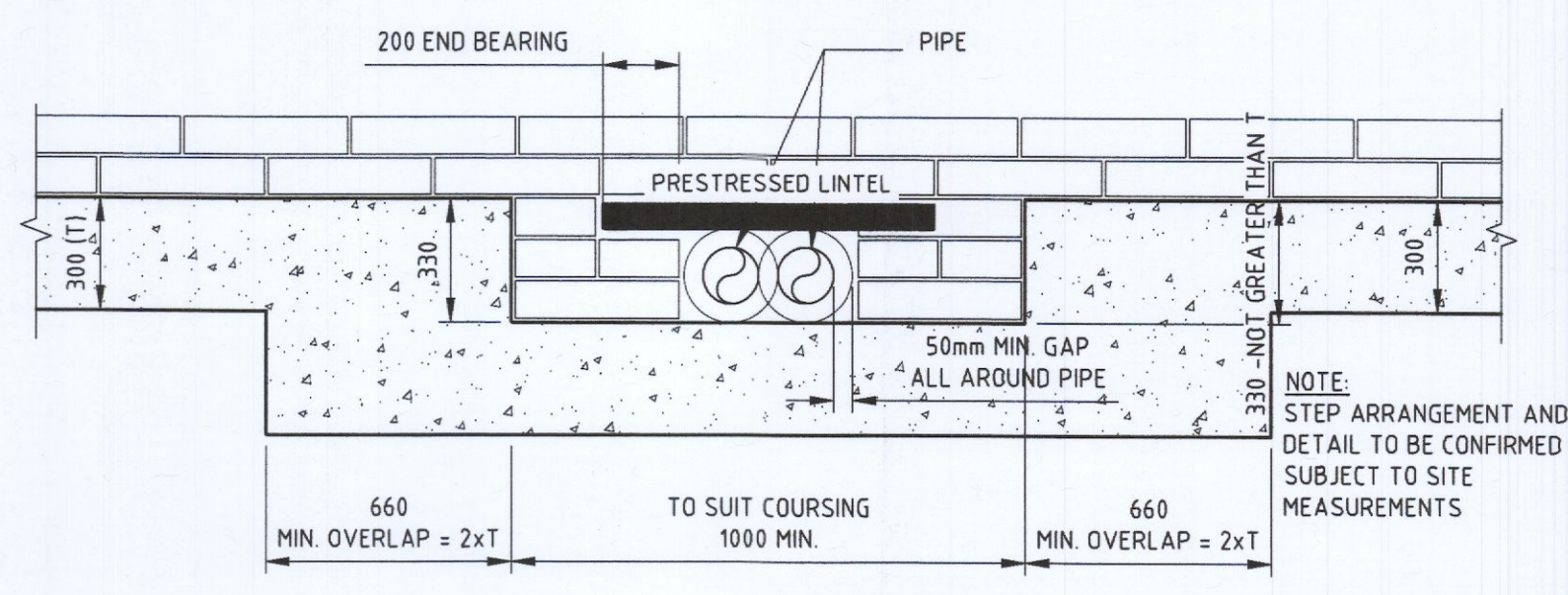
Table 9 Minimum dimensions for access fitting and chambers

Type	Depth to (m)	Internal Sizes		Cover Sizes	
		length x width (mm x mm)	circular (mm)	length x width (mm x mm)	circular (mm)
Rodding eye		As drain but min 100			
Access fitting					
small	0.6 or less	150 x 100	150	150 x 100	150
large		300 x 100	-	300 x 100	-
Inspection chamber	0.6 or less	300 x 300	190*	300 x 300	190*
chamber	1.0 or less	450 x 450	450	450 x 450	450†
Manhole	1.5 or less	1200 x 750	1000	600 x 600	600
	over 1.5	1200 x 750	1200	600 x 600	600
	over 2.07	1200 x 840	1200	600 x 600	600
Shaft	over 2.7	900 x 840	900	600 x 600	600

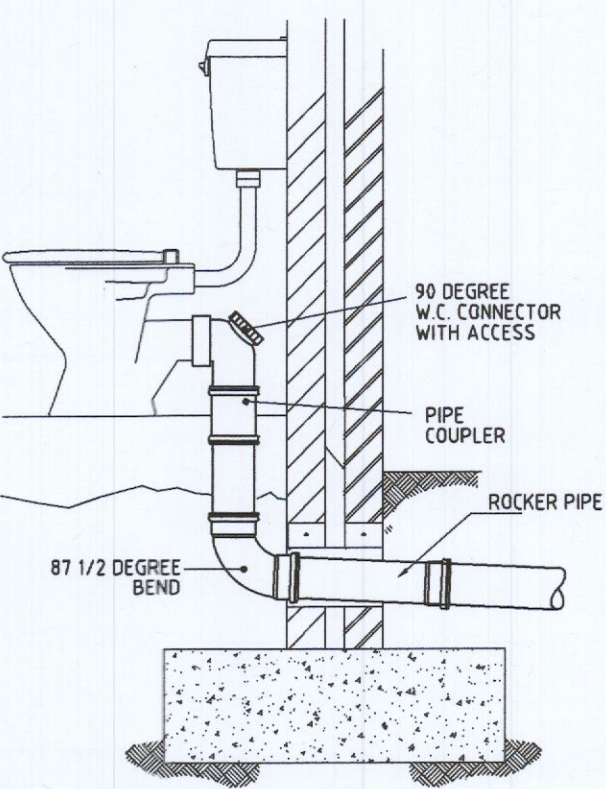
Notes:  
† For clayware or plastics may be reduced to 430 mm in order to provide support for cover and frame.  
\* Drains up to 150 mm.



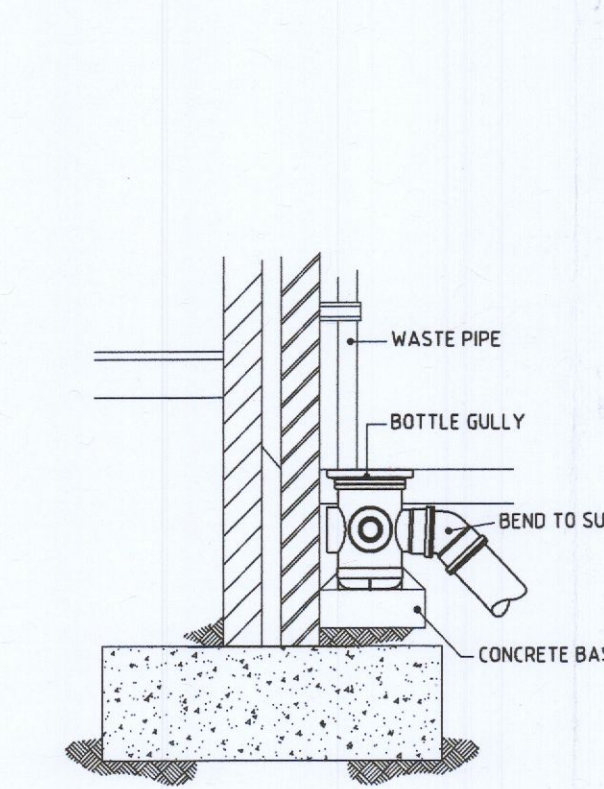
TYPICAL DETAIL TO SERVICES PENETRATION THROUGH RISING WALL SCALE 1:25



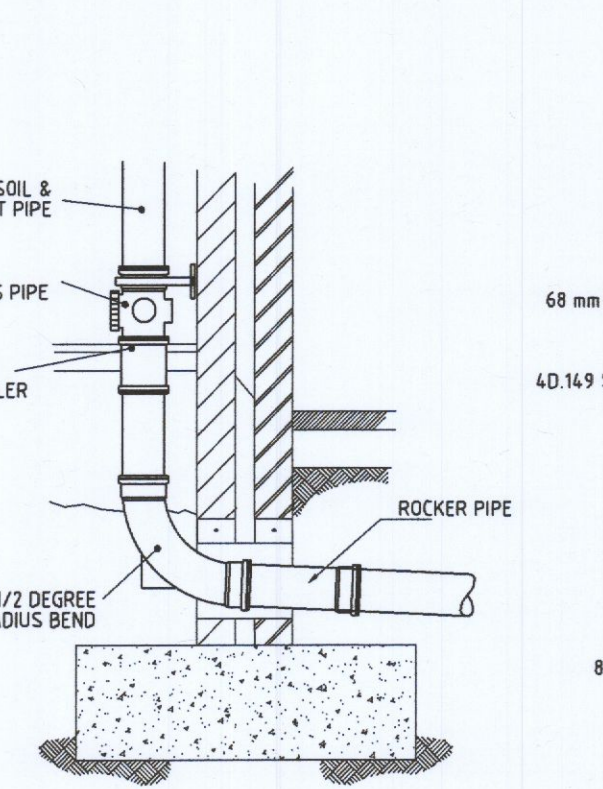
TYPICAL DETAIL TO SERVICES PENETRATION THROUGH RISING WALL/FOUNDATION SCALE 1:25



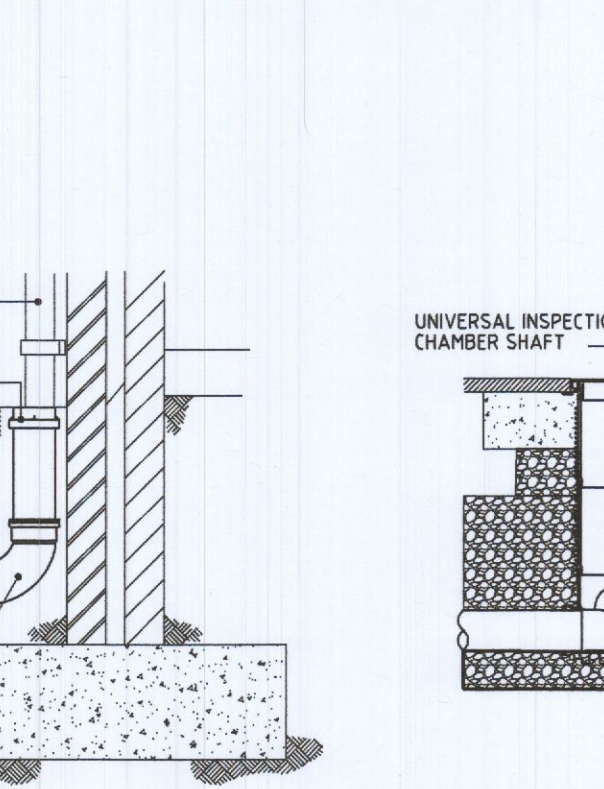
WC CONNECTION DIRECT TO DRAIN (1:20)



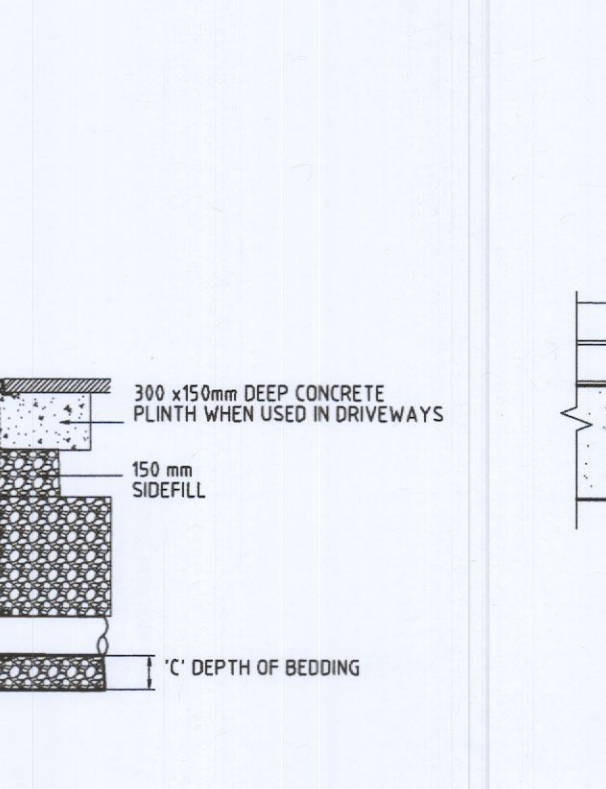
EXTERNAL WASTE TO GULLY (1:20)



INTERNAL S.V.P. TO DRAIN (1:20)



R.W.P. TO DRAIN (1:20)



SHALLOW ACCESS JUNCTION DETAIL (1:20)

A	ADDITIONAL INFORMATION	01/04/23
REV.	DESCRIPTION:	DATE:
STATUS:	ADDITIONAL INFORMATION	

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PROJECT:  
ALTERATIONS & EXTENSION TO  
2 HAYDEN'S PARK VIEW,  
LUCAN, Co. DUBLIN  
TITLE:  
DRAINAGE DETAILS

SCALE AT A1:	DATE:	DRAWN:	CHECKED:
AS SHOWN	MARCH '23	JM	GC
PROJECT NO:	DRAWING NO:	REVISION:	
22040	11	A	