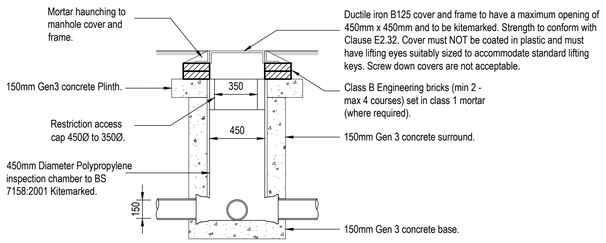
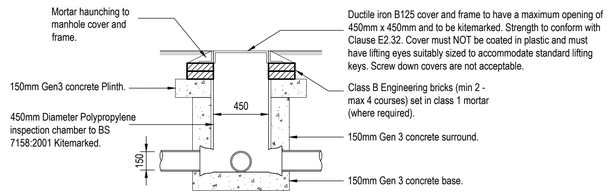
DEMARCATION CHAMBER LOCATED IN DRIVEWAY - TYPE D

Depth from cover level to invert level of pipe chamber greater than 1200mm (maximum depth 3000mm). Maximum lateral drain diameter 150mm.



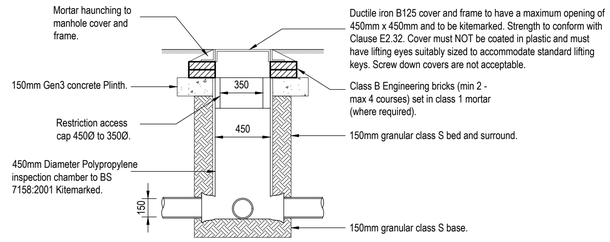
DEMARCATION CHAMBER LOCATED IN DRIVEWAY - TYPE D

Depth from cover level to invert level of pipe chamber less than 1200mm. Maximum lateral drain diameter 150mm.



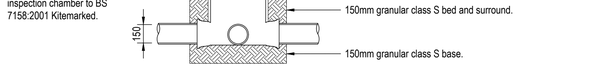
DEMARCATION CHAMBER LOCATED IN GARDENS DETAILS - TYPE D

Depth from cover level to invert level of pipe chamber greater than 1200mm (maximum depth 3000mm). Maximum lateral drain diameter 150mm.

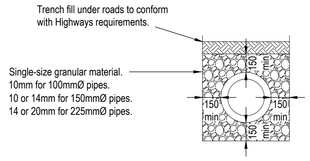


DEMARCATION CHAMBER LOCATED IN GARDENS DETAILS - TYPE D

Depth from cover level to invert level of pipe chamber less than 1200mm. Maximum lateral drain diameter 150mm.



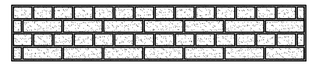
LATERAL DRAIN BEDDING DETAIL



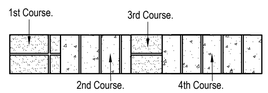
BRICKWORK DETAIL

ENGLISH BOND

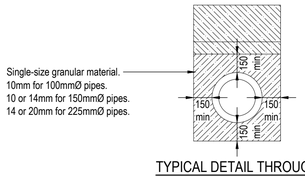
All brickwork to be minimum 2 - maximum 4 courses of Class B engineering bricks constructed in English Bond.



BRICKWORK PLAN VIEW



PIPE SURROUND DETAILS

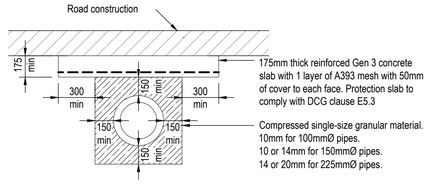


TYPICAL DETAIL THROUGH CLASS S BED AND SURROUND

Boxing/ Sheet to be removed progressively during placement of the main backfill above the pipe to prevent displacement of the granular material.

Side fill material to be place evenly on both sides of the pipe taking care to work material under the lower quadrant of the pipe whilst ensuring the pipe is not lifted. Both sides of the trench should be filled simultaneously to avoid horizontal movement of the pipe.

Trench fill under roads to conform with Highways requirements.



TYPICAL DETAIL THROUGH CLASS S BED AND SURROUND WITH CONCRETE SLAB PROTECTION (TO BE USED WHERE SEWER IS LESS THAN 1200mm IN DEPTH IN TRAFFICKED AREAS AND LESS 900mm IN UN-TRAFFICKED AREAS)

Rigid Pipes and Joints Adjacent to Structures

- Where rigid pipes are used, a flexible joint shall be provided as close as is feasible to the outside face of any structure into which a pipe is built, within 150 mm for pipe diameters less than 300 mm. The design of the joints shall be compatible with any subsequent movement.
- The recommended length of the next pipe (rocker pipe) away from the structure is shown in Table E 13.

Table E 13

Nominal Diameter (mm)	Effective Length (m)
150 to 600	0.6
601 to 750	1.0
over 750	1.25

PIPES

Diameter (mm)	Gradient	
	Foul	S.W.
100	1:80	-
150	1:80	1:80

NOTE:
Vitrified clay pipes to BS EN 295 kitemakred. Unplasticised PVC pipes to BS 4660:200 & BS EN 1401-1 kitemarked. Structured Wall Unplasticised PVC pipes to WIS 4-35-01 kitemarked.

DEMARCATION CHAMBER COVERS & FRAMES

Surface	Class (Loading in kN)	Loading
Road	D400	Vehicle Impact
Footway & Driveway	B125	Occasional vehicle loading
Gardens	B125	Pedestrian/cyclist

MINIMUM DPETH OF LATERAL DRAINS

Location	Minimum Depth (m)
Gardens	0.9
Agricultural/Open spaces	0.9
Driveways (trafficked areas)	1.2 (see detail)

NOTES:

1. All pipes shall be either:
   A - Vitrified clay to BS EN 295 with a minimum crushing strength as follow :-
   150 dia. - 40 kN/m
   225 dia. - 45 kN/m
   300 dia. - 72 kN/m
   B - PVC (certified to WIS 4-35-01 & BS/EN 13476)
   C - Class 120 concrete to BS 5911-1:2002/EN 1916.
2. All pipes should always connect soffit to soffit unless noted otherwise.
3. All sewers to have BSI kitemark status (certified to WIS 4-35-01 & BS EN 13476). Maximum pipe length to be 3m. Plastic channel sections in manholes are not acceptable, Clay channel sections shall be used.
4. Sewers to be laid in Class "S" Bedding as per DCG clause E2.25 (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in none vehicular access areas) then a concrete slab should be provided above granular bed and surround.
5. Manhole covers shall/must have a clear opening of 600 and shall be class D400 to BS EN 124 with 150 deep frames in highways.
6. Pipes entering manholes and road gullies shall have a flexible joint within 600 of the inside the manhole or gully joining with a short Rocker pipe.
7. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
8. Sewers must have 5m clearance from trees and hedges
9. All trenches in roads and paved areas shall be backfilled with Type 1 DOT granular sub-base material, or other granular material approved by the highway authority.
10. Fill ground must be filled and consolidated under the supervision and to the satisfaction of Anglian Water before any sewer works are carried out.
11. All insitu concrete to be designated mix FND2 to BS 8500-1 unless agreed otherwise.
12. The invert levels at the proposed points of connection to existing public sewers shall be checked before any new drains are constructed. Any variation to the levels shown on the drawing shall be notified to Eastwood & Partners.
13. The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
14. Cover levels are indicative only. Covers to be set to suit camber/gradient of existing and proposed roads.
15. Cover slabs must carry the BSI Kitemark or will be rejected by Anglian Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a loading bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the Anglian Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), "Technical Bulletin" issued Autumn 2004 for Kitemarked cover slab opening sizes.
16. All foul lateral sewers and drains to be 150Ø unless noted otherwise.
17. Anglian Water policy is that Type "C" brick manholes and 1050mm dia manhole rings are not preferred. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
18. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
19. Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
20. All adoptable sewer works and material to be in accordance with "Code for Adoption". The Relevant British/European and Anglian Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
21. Anglian Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the filter drain/land drainage run-off.
22. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
23. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
24. Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476).Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Anglian Water would prefer clayware channel in manholes. We have found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the benching.
25. The clearance of the crossover points (min 300mm) between the surface water, foul sewers, rising main and other services should be sufficient clearance to provide 150mm surround of a certain mm that exceeds this (200mm).
26. All adoptable laterals to be 150Ø and VC unless stated otherwise

NOTE:
For all clauses and table references please refer to the Design and Construction Guidance contained within the Code for Adoption.

REV	DESCRIPTION	SIG	CHK	DATE
P05	Concrete Slab Pipe surround detail amended to show a 300mm slab and to state Compressed single-sized granular material as per Anglian Water S104 Comments.	JR	CH	07.05.24
P04	Irrelevant drainage details removed from dwg, remaining details amended to suit latest DCG standards	JR	CH	05.04.24
P03	Demarcation Chamber type's specified & table E13 with corresponding notes added, to align with AW S104 Comments	JR	CH	08.03.24
P02	Amended to suite Anglian Water S104 Comments	JR	CH	29.01.24
P01	First issue.	JR	RJ	14.11.23

ONGO DEVELOPMENTS

INGS LANE, HIBALDSTOW

ADOPTABLE DRAINAGE DETAILS SHEET 2

Eastwood
CONSULTING ENGINEERS
St Andrew's House
23 Kingfield Road
Sheffield, S11 9AS
T: 0114 255 4554
E: mail@eastwoodce.com
eastwoodce.com

ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
48492	1:25	S4	Approval

DRAWING NUMBER: 48492 - ECE - XX - XX - DR - C - 0015 (Project - Originator - Zone - Level - Type - Role - Number)

REV: P05