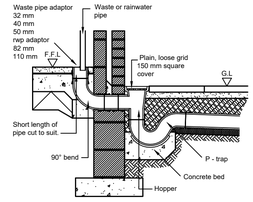
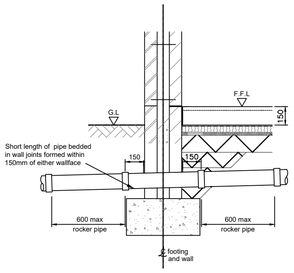
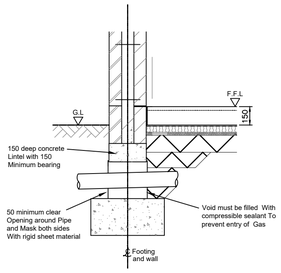
DO NOT SCALE



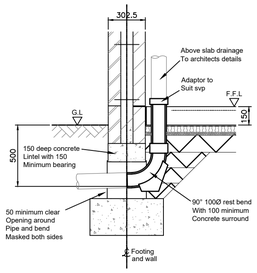
Back Inlet Gully Connection Detail



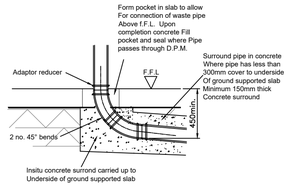
Typical Pipe Through Wall Detail



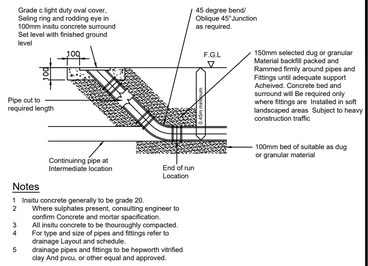
Arch or Lintelled Opening Through Wall



Typical SVP Pipe Detail



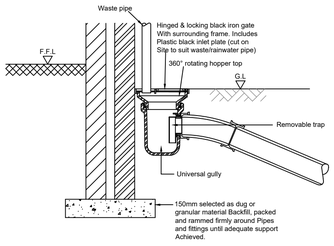
Typical Drain Connection



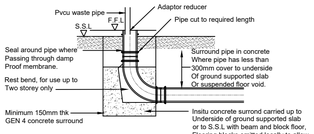
Notes

1 Insitu concrete generally to be grade 20.
2 Where sulphates present, consulting engineer to confirm Concrete and mortar spacification.
3 All insitu concrete to be thouroughly compacted.
4 For type and size of pipes and fittings refer to drainage Layout and schedule.
5 drainage pipes and fittings to be hepworth vitrified clay And pvcu, or other equal and approved.

Rodding Eye



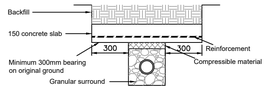
Direct Rainwater Connection



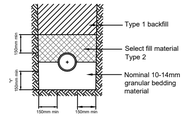
Notes

1 Insitu concrete generally to be grade 20.
2 Where sulphates present, consulting engineer to confirm concrete and mortar specification.
3 All insitu concrete to be thouroughly compacted.
4 For type and size of pipes and fittings refer to Drainage layout and schedule
5 Drainage pipes and fittings to be hepworth Vitrified clay and PVCU, or other equal and Approved.

Direct Rainwater Connection

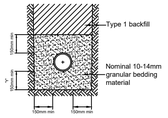


Protection for Pipes laid at Shallow Depths



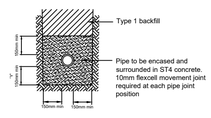
Bedding Class B

to Be Used In Soft Landscaped Areas



Bedding Class S

to Be Used Under Road



Bedding Class Z

to Be Used Where Cover <0.6m To Drain / Sewer Landscaped Areas (Clayware)

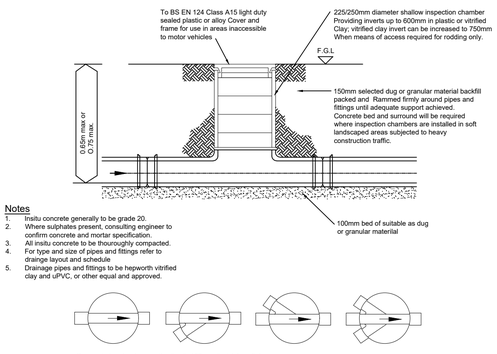
To Be Used Where Cover <1.2m To Drain / Sewer Under Road (Clayware)

Bedding Class dimensions					
Pipe Diam	Y min		Z min	Max Trench Width	L
	Y1 Min	Y2 Min			
150	100	200	100	750	18
200	100	200	100	800	
225	100	200	100	825	
250	100	200	100	850	
300	100	200	100	925	
350	100	200	100	975	
375	100	200	100	1000	
400	150	200	150	1025	
450	150	200	150	1100	
500	150	200	150	1150	36
525	150	250	150	1175	
600	150	250	150	1250	
675	150	250	225	1325	

Y1 shall normally be used except in rock or uneven trench bottom.

Z is the dimension of concrete bed/surround.

L is the thickness of compressible filler when concrete bed/surround is used.



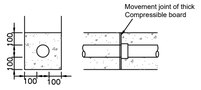
Notes

1. Insitu concrete generally to be grade 20.
2. Where sulphates present, consulting engineer to confirm concrete and mortar specification.
3. All insitu concrete to be thouroughly compacted.
4. For type and size of pipes and fittings refer to drainge layout and schedule
5. Drainage pipes and fittings to be hepworth vitrified clay and uPVC, or other equal and approved.

Range of chamber base units all with 100mm dia inlets/outlets
Check possible availability with selected manufacturer

225/250 Shallow Domestic Inspection Chamber

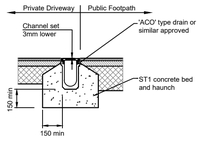
100mm dia. Connections: up to 600 and 750mm inverts



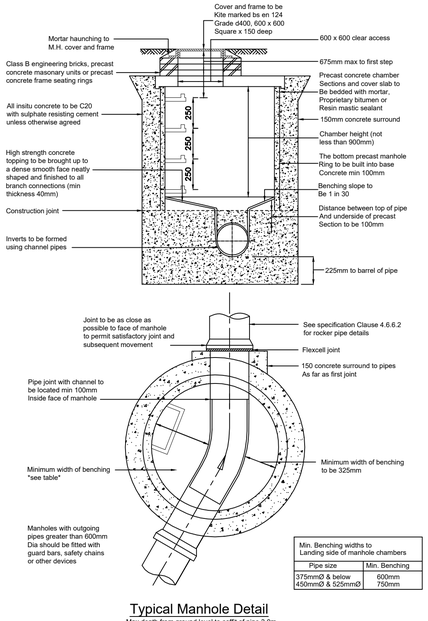
Joints For Concrete Encased Pipes

Notes

A drain may run under a building if at least 100mm of granular or other flexible filling is provided round the pipe. On sites where excessive subsidence is possible additional flexible joints may be advisable or other solutions such as suspending drainage particularly where the pipe is adjacent to structures or where soil conditions change in the course of the pipe run. Where the crown of the pipe is within 300mm of the underside of the slab, special protection should be provided (see detail)



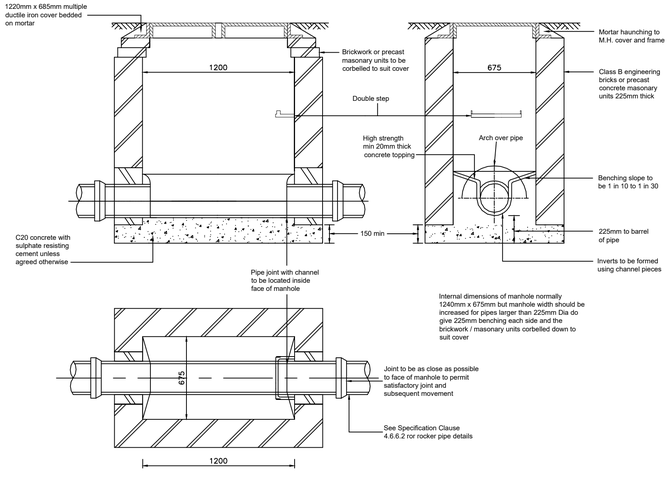
Linear Drain (Driveway)



Min. Benching widths to Landing side of manhole chambers	
Pipe size	Min. Benching
375mmØ & below 450mmØ & 525mmØ	600mm 750mm

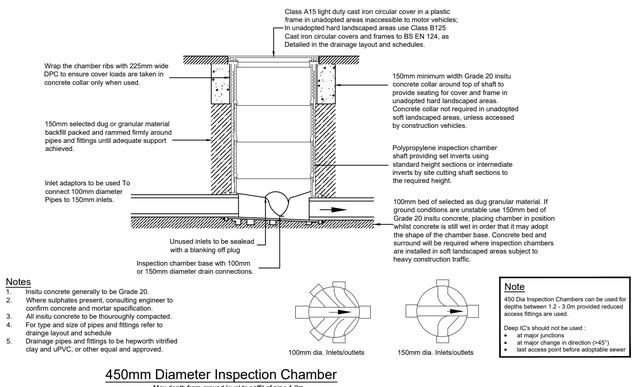
Typical Manhole Detail

Max depth from ground level to soffit of pipe 3.0m



Typical Brick Manhole Detail

Depth from ground level to soffit of pipe 1.0m to 1.45m



Notes

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3. All insitu concrete to be thouroughly compacted.
4. For type and size of pipes and fittings refer to drainge layout and schedule
5. Drainage pipes and fittings to be hepworth vitrified clay and uPVC, or other equal and approved.

100mm dia. Inlets/outlets

150mm dia. Inlets/outlets

Note

450 Dia Inspection Chambers can be used for depths between 1.2 - 3.0m provided reduced access fittings are used.

Deep IC's should not be used :
- at major junctions
- at major change in direction (>45°)
- last access point before adoptable sewer

450mm Diameter Inspection Chamber

Max depth from ground level to soffit of pipe 1.2m

NOTES

1. All dimensions are in millimetres unless otherwise shown.
2. All adoptable drainage shall be constructed in accordance with 'Sewers for Adoption' 6th Edition and United Utilities Details and Guidelines.
3. All private drainage works are to comply fully with Part H of the Building Regualations.
4. All existing invert levels to be checked by the contractor at the start of works and any other discrepencies notified to the Engineer prior to commencing works. All levels are based on topographical survey information provided by others.
5. All materials to bear the relevant B.S. Kitemark and comply fully with the specifications. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur to withstand a class 3 condition).
6. All opening notices etc. as required under Highways Acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A.,NHBC or United Utilities as applicable.
7. Where "Ultra Rib" UPVC pipes (or similar approved) are used in adoptable drainage they shall still be handled and laid in accordance with the specification and guidance issued by the High Performance Pipe Association.
   A Class S Bed and surround must be used for such pipes.
8. Trench backfill in highways to within 1m of highway shall, as directed by the Highway Authority be a suitable granular material all in accordance with Sewers for Adoption.
9. Cover loadings shall be as detailed on the Manhole Schedule.
10. Drain trenches should not be excavated lower than the foundations of any building nearby unless either:

    a) The trench is within 1m of the foundation, the trench is filled with concrete up to the lowest level of the foundation, or

    b) Where the trench is further than 1m from the building, the trench is filled with concrete to a level bellow the lowest level for the building equal to the distance from the build, less 150mm.

TENDER

Rev.	Date	Revision	By	Appd
A	20.04.22	Suds details removed	LW	AJ

coopers
chartered consulting engineers
Park House
Sandpiper Court
Chester Business Park
Chester
CH4 9QU
Tel: 01244 684910
Fax: 01244 684911
Email: admin@coopers.co.uk
Web: http://coopers.co.uk

Client

MANGROVES ESTATES LTD

Project

CHATSWORTH MILL,
WILLIAMS ROAD, GORTON.

Title

Drainage
Construction Details

DRAWING NUMBER	SCALE at A0	NTS	REVISION
7588 / 10	DATE	23.12.21	A
	DRAWN	LW	
	CHECKED	AJ	

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