

Yorkshire Water will provide future access to the sewer CL109.800 tanks and flow control man.

The attention has been drawn to the fact that the sewerage system is subject to a 1 in 100 year or 320mm diameter change storm event due to the topography of the site.

Statements will be required to all sewers outside of the public highway. Statements to be a minimum of 3m either side of proposed sewer. Large plastic attenuation tank and deeper sewers will require larger off-set distances as specified in Code for Adoption.

Flow Control Manhole S53
CL110.050
IL105.318 600
IL105.288 250
Design Head: 3.50m
Discharge Rate: 25 l/s

Land drainage to discharge to River Holme via new headwall separate to the Yorkshire Water adoptable headwall IL 105.025

Proposed Adoptable Toul PS
Discharge: 6.4 l/s
80mm bore valve Rising main
171.8m/10mm OD PE100 SRP11
6mm 12mm OD SRP11
Inlet: 1.5mD x 3.732m depth
Compound: 14.4m(l) x 10.4m(w)

Proposed access track to flow control chamber.
Yorkshire Water require rights of access in perpetuity over the track.
Please refer to drawing no. 0425/50/14 for vehicle tracking.

Flow Control Manhole S54
CL108.150
IL106.725

Flow Control Manhole S55
CL108.500
IL105.056

Flow Control Manhole S56
CL108.500
IL105.056

Flow Control Manhole S57
CL108.500
IL105.056

Flow Control Manhole S58
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Flow Control Manhole S59
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Flow Control Manhole S65
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Flow Control Manhole S149
CL108.500
IL105.056

Flow Control Manhole S150

MANUFACTURER	HYDRO INTERNATIONAL
TELEPHONE	01275 878371
TYPE	HYDRO-BRAKE OPTIMUM
FLOW/HEAD	25.0 l/s @ 3.500m
HYDRO REF	SHE-0183-2500-3500-2500
To be installed in accordance with manufacturers specifications and recommendations before the manhole cover slab is installed	

NOTE
Lateral sewers to be Plastidrain (110 & 160 O.D.) in UPVC and manufactured by Hepworth or similar approved by Yorkshire Water. Demarcation chamber to be polypropylene Non-Entry Inspection Chamber up to 2.0m depth manufactured by Wavin or similar approved by Yorkshire Water to BS EN 13598-1:2003.

NOTE
There should be enough clearance to accommodate the bedding for both pipes, approx 300mm. If crossover is near the rocker then the clearance needed may be increased.

NOTE
All demarcation chambers within soft areas/landscaped areas to be B125 covers.

PLASTIC PIPES NOTES:
All adoptable sewers to be BSI Kitemark (certified to WIS 4-35-01).

Adoptable 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 Yorkshire 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.

1. For longitudinal sections refer to drawing 0425/08/06.
2. No services are to be sited directly over, or within 1m of, an adoptable sewer or water main.
3. Private drainage connections to adoptable sewers to be via 45° junction.
4. Off site manholes already built must have invert levels checked prior to connection to the off site drainage.
5. Any connections to existing sewers/manholes are to be supervised by Yorkshire Water.
6. All connections to proposed public sewers to be minimum 150mm.
7. Any land drain or water course on site to be diverted as not to pass under proposed buildings. Diversion to be approved and inspected on site by the Local Authority.

Yorkshire Water General Notes

1. All adoptable sewer works and material to be in accordance with "Code for Adoption". The relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.

2. Filled ground must be filled and consolidated under the supervision, and to the satisfaction, of Yorkshire Water before any sewer works are carried out.
3. The design of the sewer must be in accordance with the design criteria specified by the Yorkshire Water inspector. Where the clear opening of the kitemarked product is different to that of the cover and frame, a loading bearing slab must be fitted above the cover slab to bring the size down to the 600mm minimum clear opening specified in the design criteria.
4. The design of the sewer must be in accordance with the design criteria specified by the Construction Products Association (CPA). "Technical Advice" issued autumn 2004 for kitemarked cover slab opening sizes.
5. The adoptable sewer must be a minimum of 1m and manholes 0.5m from kerb faces and 0.5m from boundaries.
6. Sewers must have 5 metres clearance from trees and hedges, (please also refer to Figure 2.3 on page 33 in "Sewers for Adoption" 6th Edition for restrictions on tree planting adjacent to Sewers).
7. Sewers to be laid in a Class "S" bedding (150mm granular bed and surround). Where depth of cover is less than 1.2m in highways and verges (or less than 900mm in non vehicle access areas) then a concrete slab must be provided above the granular bed and surround.
8. Adoptable plastic sewer pipes to be BS1 Kitemarked (Certified to BS 435–1 and BS EN12476). Adoptable sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to use longer lengths.
9. Plastic sectional sections in manholes are not acceptable and clayware is preferable. Plastic channels are difficult to set in concrete and a satisfactory finish cannot be obtained on the bedding.
10. The chamber size of manholes with more than one connection in them may need to be increased on increment to accommodate the connections and bends.
11. Yorkshire Water policy is not to accept "Type C" brick manhole and 1500mm diameter manholes. If a precast concrete manhole is used, it must be 1.2m in highways and verges (or less than 900mm in verges), with the opening sized over the channel where depth of cover to pipe is 1–1.5m. Surface water and foul rising mains to be provided with marker tape above the rising mains. If plastic pipes are to be used then the following should apply:
- a. All adoptable plastic pipes must be BS1 Kitemarked (Certified to BS 435–1).
- b. Bedding and backfill material to conform to the requirements of Water Industry Specification 4–08-02 (Table A2).
12. Where plastic pipes are proposed for adoptable sewers, structural calculations for the plastic pipes are not required. It is the responsibility of the contractor to prove that the ground condition is suitable for the plastic pipes to be produced.
13. Where plastic pipes are installed into the ground prior to getting full technical approval, the contractor must provide a full technical approval, a prospective adoptable sewer and a deformation test (Light-Line test) of the plastic pipes.
14. Demarcation channels to be a min. 450mm greater for 100mm c/w to a 150mm surface water pipes up to 1.2m depth. For depths greater than 1.2m, restricted access opening to be provided for required safety reasons.
15. Maximum depth of demarcation channel to be 2m, where depth exceeds 2m, manhole to be constructed as type B manhole.
16. Where a 6125 cover and frame has been approved, this must not be coated in plastic and a maximum 100mm thick base substrate stone to accommodate standard lifting rings. Screen down covers are not acceptable.
17. Yorkshire Water is not obliged to accept filter drain/land drainage running into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of water from the drainage run will therefore be required and you will liaise with the Land Drainage Authority/Land Drainage Section with regard to the disposal of the filter drain/land drainage run is required.
18. Sulfate resisting cement (C20–C22) and precast concrete products must be used or a concrete pump will be required.
19. The minimum crushing strength for clay pipes should be as follows: 100mm dia. 400N/m², 150mm dia. 400N/m², 225mm dia. 450N/m² and 300mm dia. 750N/m². The minimum crushing strength for concrete pipes must be – (Class 100 in BS EN 1916/BS911–1 2002). Plastic pipes must conform to BS EN 12476.
20. All levels of existing drainage to be confirmed prior to work commencing on site.
21. The contractor must allow for any fee's required for road and sewer opening permits, sewer connections and make the appropriate applications.
22. Bedding and backfill material to conform to the requirement of Water Industry Specification 4–08-02 (Table A2).

X	MI	15.05.24	S14a, S15b, F30a, F30b moved or added	MI	MI
W	DWG	07.05.24	Site boundary revised to exclude outlier		
V	DWG	09.04.24	New layout rev CC inserted	DJG	DJG
U	DWG	03.04.24	Revised to Kirklees Section 38 comments		
T	DWG	02.02.24	Revised to suit headwall detail		
S	RJ	17.11.23	Revised to Kirklees Section 38 comments	RJ	MI
R	RS	18.10.23	Revised to suit latest layout	RJ	MI
Q	RJ	02.02.23	Drawing revised to new official alignment	RJ	MI
P	RJ	07.09.23	Drawing revised to new official alignment	RJ	MI
O	RJ	19.05.23	Amended to Kirklees S38 comments	RJ	MI
N	BHP	16.01.23	Drainage Easement Amended	RJ	MI
M	MD	16.12.22	Demarcation details updated to suit S104	RJ	MI
L	MD	23.11.22	Drawing revised to S104 comments	RJ	MI
K	RJ	15.08.22	Drawing revised to S104 comments	RJ	MI
J	RJ	12.08.22	Drawing revised to phasing strategy	RJ	MI
I	RJ	27.07.22	Drawing revised to updated layout/comments	RJ	MI
H	RJ	23.06.22	Drawing revised to suit new layout	RJ	MI
G	RJ	29.03.22	Drawing revised to suit new layout	RJ	MI
F	RJ	28.03.22	Drawing revised to suit new layout	RJ	MI
E	RJ	22.03.22	Drawing revised following client comments	RJ	MI
D	RJ	11.03.22	Drawing revised following client comments	RJ	MI
C	JMG	04.03.22	Drawing revised to suit new layout	RJ	MI
B	RJ	07.01.22	Drainage outfall revised	RJ	MI
A	RJ	23.12.21	Drawing revised to suit new layout	RJ	MI
/	RJ	06.08.21	Issued for approval	RJ	MI
Rev	By	Date	Revision	Chk	Apvd

ARP ASSOCIATES
Chartered Consulting Engineers

PROJECT			
WOODHEAD ROAD, BROCKHOLES			
CLIENT			
MILLER HOMES (YORKSHIRE) LTD			
DRAWING STATUS			
PRELIMINARY			
Scale	Date	Drawn	RJ
1:500 @ A1	AUG 21	Chk.	RJ
Drg. No. 0425/58/03.02			Rev. X