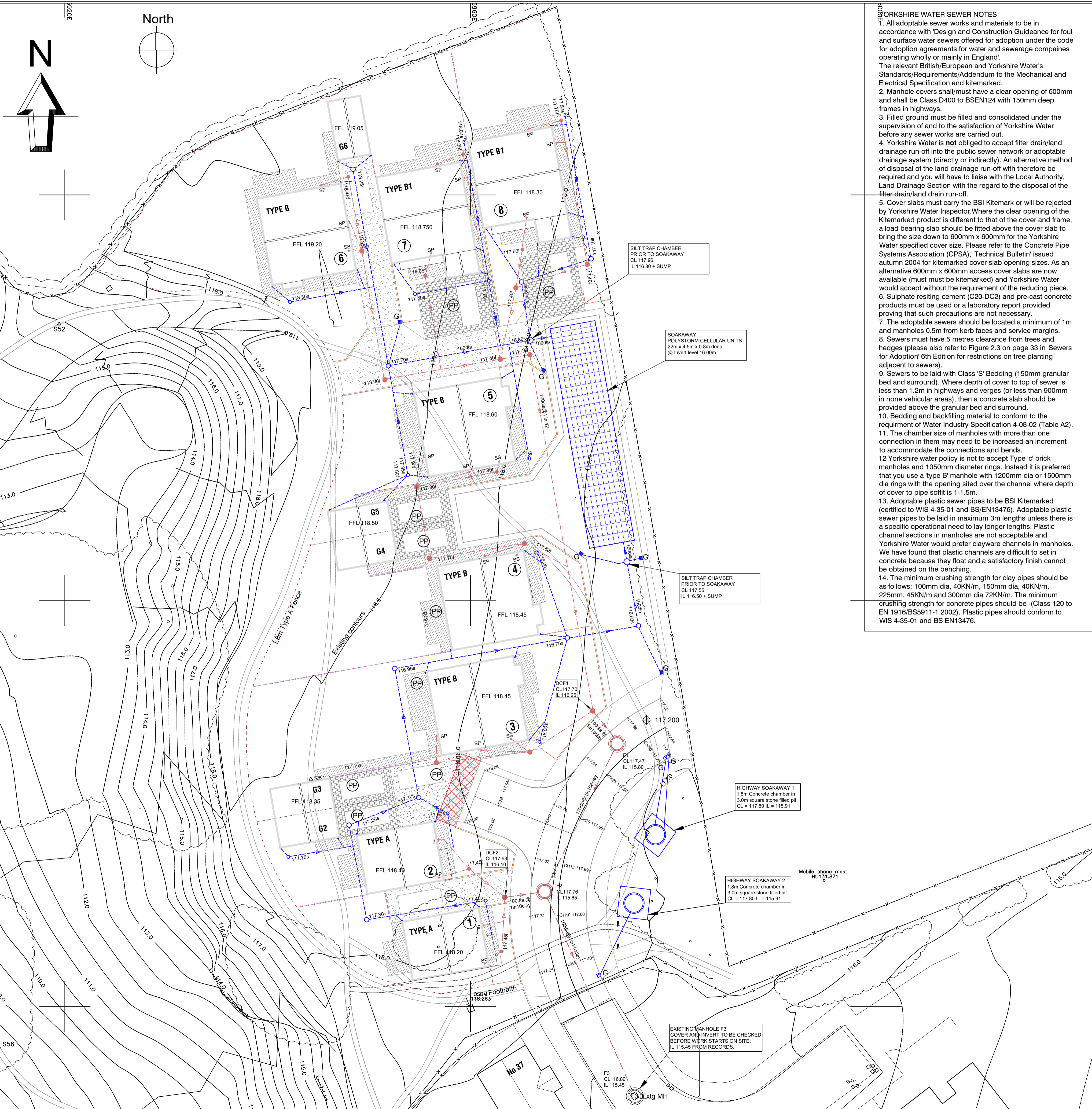


KEY

- Adoptable foul water sewer and chamber and invert level.
- Surface water drain with chamber and invert level.
- Surface water drain with rodding eye.
- Foul water drain with chamber and invert level.
- Surface water linear drainage channel.
- All plot drainage to be 100mm/110mm dia unless shown.
- Proposed highway road gully.
- Permeable paving private driveways.

The positions of foul outlets (SS, SP and g) and RWP's are approximate only. Use Architects drawings to locate. All levels relate to the topographical survey carried out to OSBM by GPS.



YORKSHIRE WATER SEWER NOTES

- All adoptable sewer works and materials to be in accordance with 'Design and Construction Guidance for four and surface water sewers offered for adoption under the code for adoption agreements for water and sewerage companies operating wholly or mainly in England'. The relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and kitemarked.
- Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BSEN124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision of and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- Yorkshire Water is not obliged to accept filter drain/land drainage run-off into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of the land drainage run-off with therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with the regard to the disposal of the filter drain/land drain run-off.
- Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a load bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the Yorkshire Water specified cover size. Please refer to the Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for kitemarked cover slab opening sizes. As an alternative 600mm x 600mm access cover slabs are now available (must be kitemarked) and Yorkshire Water would accept without the requirement of the reducing piece.
- Sulphate resisting cement (C20-DC2) and pre-cast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
- The adoptable sewers should be located a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- 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).
- Sewers to be laid with Class 'S' Bedding (150mm granular bed and surround). Where depth of cover to top of sewer is less than 1.2m in highways and verges (or less than 900mm in none vehicular areas), then a concrete slab should be provided above the granular bed and surround.
- Bedding and backfilling material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
- 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.
- Yorkshire water policy is not to accept Type 'c' brick manholes and 1050mm diameter rings. 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.
- 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 3m 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 channels 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.
- The minimum crushing strength for clay pipes should be as follows: 100mm dia, 40KN/m, 150mm dia, 40KN/m, 225mm, 45KN/m and 300mm dia 72KN/m. The minimum crushing strength for concrete pipes should be -Class 120 to EN 1916/BS5911-1 2002. Plastic pipes should conform to WIS 4-35-01 and BS EN13476.

- NOTES**
- The invert level of the public sewer should be determined prior to drainage works starting on site and on site inverts confirmed as satisfactory for connections.
 - Connection to public sewers requires the approval of Yorkshire Water.
 - Work within the highway requires the consent of Barnsley BMC
 - All foul outlets positions and RWP's to be confirmed by the architect. The location shown approximately on this drawing.
 - The following safety hazards remain after design and should be considered during construction
 - The sewer connection(s) may be at depth.
 - The sewer connections are within a public highway.
 - Utilities are likely to exist in the footway/verge/highway/on site.
 - Deep excavations are required for some drainage and the soakaway units.

C	Plots 2 and 3 location amended.	25/03/21
B	Updated to 8 units.	11/02/21
A	First issue for approvals	13/01/21
REV	DETAILS	DATE

SCALE = 1:200@ A1

CHARTERED CIVIL ENGINEER

HM Design
 10 The Green
 York
 YO26 5LR

07919 031289

Client
M BOOTH DESIGN

Drawing Title
DRAINAGE PLAN

Site Address
**RESIDENTIAL DEVELOPMENT
 LAND OFF CROSS STREET
 MONK BRETTON
 BARNSELY**

Drawn HM	Checked HM
Drg.No. YH743/2C	Date 13/01/2021