



- NOTES:**
- All adoptable sewer works and material to be in accordance with "Code for Adoption". The Relevant British/European and Icos Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
  - Manhole covers shall have a clear opening of 675mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
  - Filled ground must be filled and consolidated under the supervision and to the satisfaction of Icos Water before any sewer works are carried out.
  - Icos 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 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.
  - Cover slabs must carry the BSI Kitemark or will be rejected by Icos 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 675mm x 675mm for the Icos Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.
  - Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
  - Adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
  - Sewers must have 5m clearance from trees and hedges.
  - Sewers to be laid in Class 'S' Bedding (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 non vehicle access areas) then a concrete slab should be provided above granular bed and surround.
  - Bedding and backfill 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.
  - Icos 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.
  - 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 Icos 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 bedding.
  - The minimum crushing strength for clay pipes should be as follows: 100mm dia, 40kN/m, 150mm dia, 40kN/m, 225mm dia, 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.
  - 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.
  - 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.

- NOTES:**
- Site Boundary
  - Proposed Adoptable Surface Water Sewer
  - Proposed Adoptable Surface Water Attenuation
  - Proposed Adoptable Foul Water Sewer
  - Proposed Gully
  - Proposed Sewer Easement
  - Private Surface Water Tank
  - Proposed Adoptable Surface Water Demarcation Chamber
  - Proposed Adoptable Foul Water Demarcation Chamber

REV	DESCRIPTION	SIG	CHK	DATE
P10	Revised to suit new site layout.	JR	CH	12.05.2025
P09	MH 10B & pipe 4.002 added to schedule.	JR	CH	15.04.2025
P08	Easements amended to suit new site layout.	JR	CH	24.03.2025
P07	Easements amended to suit ICOSA S104 comments.	JR	CH	31.01.2025
P06	Cover levels added to layout, Easements, Gullies and MH S10A note amended to suit ICOSA S104 comments.	JR	CH	17.01.2025
P05	Layout amended to suit ICOSA requirements.	JR	CH	10.12.2024
P04	Updated to show latest layout	AT	CH	30.10.2024
P03	Lateral levels shown, some positions and info amended	AT	CH	20.09.2024
P02	Mineshaft added	DAB	CH	19.09.2024
P01	First issue.	DAB	CH	30.08.2024

**HOOBER HOMES**

**WEST STREET, WORSBROUGH, BARNSELY**

**S104 LAYOUT**

**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: **48404** SCALE AT A1 STATUS: **S0** SUITABLE FOR: **Initial**

DRAWING NUMBER: **48404 - ECE - XX - XX - DR - C - 0042** P10

Project	Originator	Zone	Level	Type	Role	Number
48404	ECE	XX	XX	DR	C	0042

Private Attenuation:  
Tank to be lined with an impermeable membrane.  
Joints to be welded.  
Tank to be smoke tested before being made live.  
Four layers of polystyrene or similar approved  
170m<sup>2</sup> x 1.6m  
Volume: 258m<sup>3</sup> at 95% voids.  
Min CL: 54.35  
IL: 51.900

S10A Weir Wall with Flap Valve:  
Overflow for 100 yr - CC events  
Crest level 53.300

Connection on to existing culvert.  
Rates agreed with BMBC email dated 30.11.2023

Connection on to existing  
7500 combined sewer YW  
ref V240540. Easement  
agreed with Barnsley  
Council