



Proposed Off Site Drainage Plan (1:250)

ICOSA Water Notes

- All adoptable sewer works and material to be in accordance with Design and Construction Guidance, The Relevant British/European and Icosa Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
- Manhole covers shall have a clear opening of 600mm 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 Icoso Water before any sewer works are carried out.
- Icoso 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 BS1 Kitemark or will be rejected by Icoso 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 Icoso 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.
- The adoptable bedding to be 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 the Design and Construction Guidance for restrictions on tree planting adjacent to sewers)".
- Sewers to be laid in Class "B" 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 none vehicular 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.
- Icoso Water policy is not to accept Type "C" brick manholes and 1050mm dia manhole 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 BS1 Kitemarked (certified to WIS 4-35-01 and BS EN 13476). 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 Icoso 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.
- 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.
- Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height (please also refer to the Design and Construction Guidance for restrictions on tree planting adjacent to sewers).
- There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm - if crossover is near the rocker then the clearance needed may be increased.
- 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/BS EN 11-1-2002. Plastic pipes should conform to WIS 4-35-01 and BS EN 13476.

REV	DESCRIPTION	DATE	BY
P5	Revised to suit ICOSA comments	13/12/23	TM
P4	Y/I reference number removed	20/22/23	TM
P3	Reference amended to Icoso Water	07/22/23	TM
P2	Connection to combined sewer revised	23/12/23	TM
P1	Preliminary - initial issue	12/23	TM

		Project:	
		Residential Development off Wentworth Drive, Emley	
Client:		Newett Homes	
		Drawing:	
Drawing No:		AMA/22336/D/501	
		Date:	
Checked:		12/09/2023	
		Scale:	
Drawing No:		1:250	
		Rev:	
AMA/22336/D/501		A1	
		P5	