



KEY

- Existing culverted watercourse to remain
- Existing Public combined sewer to remain
- Existing Public surface water sewer to remain
- Proposed adoptable surface water sewer
- Proposed adoptable foul sewer
- Proposed foul lateral
- Proposed surface water lateral
- Proposed gully

NOTES

All drainage connection points to be located and checked for position and level prior to the commencement of any works.

Ordnance Survey Grid & Datum

CODE For Adoption Under a Section 104 Agreement

- All adoptable sewer works and material to be in accordance with "Code for Adoption", The Relevant British/European and Yorkshire Water's Standard Requirements/Addendum to the mechanical and electrical specification and Kitemarked.
- Manhole covers must 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 Yorkshire Water before any sewer works are carried out.
- Yorkshire Water is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or indirectly.) An alternative method of disposal of land drainage runoff will therefore be required. Please consult with the Local Authority/Land drainage Section.
- Cover slabs must carry the BSI kitemark or will be rejected by Yorkshire Water. 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 Yorkshire Water specified cover size. Please refer to 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 sewers should 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.
- Sewers to be laid in Class "S" bedding (150mm granular bed & surround.) Where depth of cover to the top of the sewer is less than 1.2m in Highway and verges (or less than 900mm in non vehicular areas) then a concrete slab should be provided above the granular bed and surround.
- Bedding and backfill material to conform to the requirements of Water Industry Specification 4-08-02 (Table A2)
- The chamber size of manholes with more than one connection 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 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 1.0-1.5m
- Adoptable plastic sewer pipes to be BSI 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 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.
- 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 EN 13476
- 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 jacks. Screw down covers are not acceptable.

Preliminary

F	Layout amended	24-6-22	AST
E	Lateral details added	10-5-21	AST
E	Scale on title block amended	27-4-21	AST
C	Spills added to footpath ends	16-4-21	AST
B	SW amended	6-4-21	AST
A	Site entrance amended	6-4-21	AST

Rev	Details	Date	Drwn	Chk
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Gates Homes

Cross Lane
Royston, Barnsley

Engineering Plan

Dwg No. : STE/20/16/01 F

Date : 28-10-20

Scale : 1:200

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REFERENCE	TYPE	DEPTH	DIAMETER	PIPE SIZE	MATERIAL	COVER LEVEL	INVERT LEVEL	D/S INVERT LEVEL	LENGTH	GRADIENT	EASTING	NORTHING
LM1	TYPE D	1.700m	450mm	150mm	UPVC	49.700	48.000	47.558	4.76m	1:10	437269.850	411577.540
LM2	TYPE D	1.250m	450mm	150mm	UPVC	49.000	47.750	47.550	4.42m	1:18	437278.680	411561.820
LM3	TYPE D	1.450m	450mm	150mm	UPVC	49.300	47.850	47.490	5.10m	1:80	437313.910	411574.510
LM4	TYPE D	1.150m	450mm	150mm	UPVC	48.850	47.700	47.432	4.93m	1:18	437319.000	411551.290
LM5	TYPE D	1.250m	450mm	150mm	UPVC	48.750	47.500	47.204	7.91m	1:27	437319.830	411542.380
LM6	TYPE D	1.050m	450mm	150mm	UPVC	48.550	47.500	47.409	3.64m	1:40	437310.350	411540.110
LM7	TYPE D	1.200m	450mm	150mm	UPVC	48.500	47.300	47.204	6.11m	1:64	437310.260	411538.310

MANHOLE TYPES DIFFER BASED UPON LOCATION AND DEPTH
PLEASE REFER TO "DESIGN & CONSTRUCTION GUIDANCE"
FOR STANDARD DETAILS AND ALTERNATIVE CONSTRUCTION OPTIONS.

RISK ASSESSMENT: SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT	LEVEL OF RISK (MM)	SUGGESTED ACTION
DEEP EXCAVATIONS ASSOCIATED WITH DEEP DRAINAGE WORKS	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE FENCED OFF TO PROTECT FROM FALLS
HANDLING LARGE DIAMETER MANHOLE AND SOAKAWAY RINGS	HIGH	USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT
CONTACT WITH SEWAGE/WORKING IN CONFINED SPACES	MEDIUM	USE GAS DETECTORS/BREATHING EQUIPMENT AND ENSURE OPERATIVES WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT
NOISE FROM MACHINERY	MEDIUM	OPERATIVES TO WEAR THE CORRECT EAR PROTECTION
EXCAVATIONS NEAR TO UTILITIES	HIGH	UTILITY MARKS TO BE INSPECTED AND APPARATUS LOCATED USING APPROPRIATE EQUIPMENT PRIOR TO EXCAVATION
EXCAVATIONS IN PUBLIC HIGHWAY	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS AND ARE FENCED OFF TO PROTECT FROM FALLS ENSURE THE CORRECT SIGNAGE/TRAFFIC CONTROL IS USED
IT IS ASSUMED THAT WORKS ASSOCIATED WITH THIS DESIGN WILL BE UNDERTAKEN BY A PERSON(S) WHO ARE COMPETENT AND HAVE THE REQUIRED LEVEL OF EXPERIENCE AND EXPERTISE.		