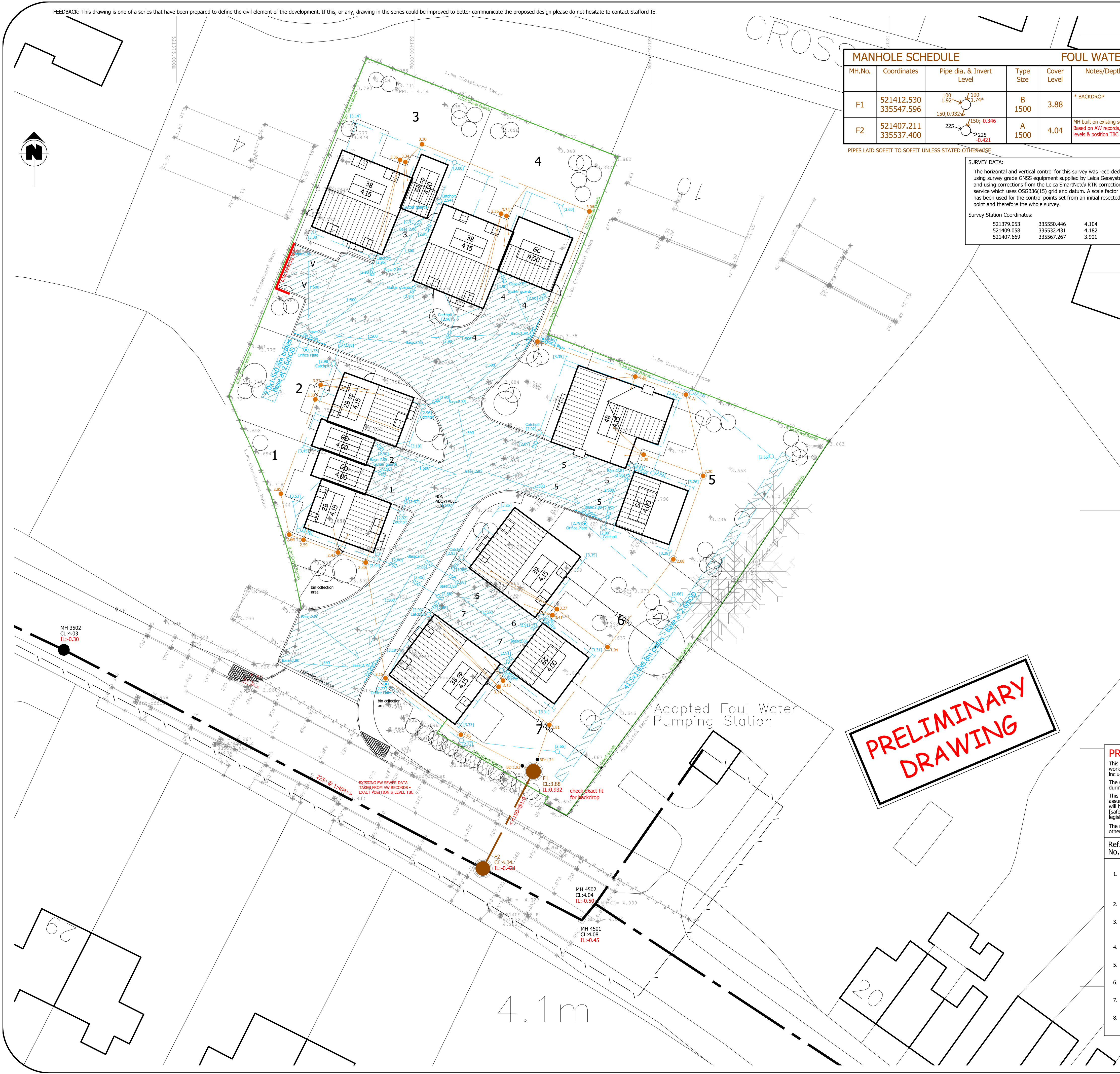




MANHOLE SCHEDULE				FOUL WATER	
MH.No.	Coordinates	Pipe dia. & Invert Level	Type Size	Cover Level	Notes/Depth
F1	521412.530 335547.596	100 1.92 150;0.932	B 1500	3.88	* BACKDROP 2.948
F2	521407.211 335537.400	225 1.50 225 -0.421	A 1500	4.04	MH built on existing sewer. Based on AW records, exact levels & position TBC. 4.461

PIPES LAID SOFFIT TO SOFFIT UNLESS STATED OTHERWISE

SURVEY DATA:		
The horizontal and vertical control for this survey was recorded using survey grade GNSS equipment supplied by Leica Geosystems and using corrections from the Leica SmartNet® RTK correction service which uses OSGB36(15) grid and datum. A scale factor of 1 has been used for the control points set from an initial resected point and therefore the whole survey.		
Survey Station Coordinates:		
521379.053	335550.446	4.104
521409.058	335532.431	4.182
521407.669	335567.267	3.901



- ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY' 5th EDITION, B.S.E.N.752 & 'SEWERS FOR ADOPTION' 6th EDITION FOR ADOPTABLE DRAINAGE, AND TO THE RELEVANT PROJECT SPECIFICATION AS DIRECTED BY THE ENGINEER FOR PRIVATE DRAINAGE.
- PIPE MATERIAL SHALL BE AS FOLLOWS:
100 TO 225 - CLAYWARE TO BS EN 295
300 AND ABOVE - CONCRETE TO BS EN 5911
NB. PVCU PIPES TO BS EN 1401:1998 MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER
- CLAY AND CONCRETE PIPES SHALL BE BEDDED ON CLASS S BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS A BEDDING.
- UPVC PIPES SHALL BE BEDDED ON CLASS P BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Q BEDDING.
- BACKFILL TO TRENCHES MAY BE SUITABLE EXCAVATED MATERIAL IN LANDSCAPED AREAS. TYPE 1 GRANULAR MATERIAL TO BE USED UNDER HARVESTINGS AND ROADS.
- GULLY CONNECTIONS SHALL BE 150mm DIAMETER AND WITH CLASS D400 FRAME AND GRATING TO BS EN 124 unless other wise stated..
- GULLIES SHALL BE TRAPPED 450mm DIAMETER x 900mm DEEP WITH CLASS D400 FRAME AND GRATING TO BS EN 124 unless other wise stated..
- DESIGN OF THE DRAINAGE CHANNELS WHERE SHOWN IS INDICATIVE ONLY. DETAILED DESIGN SHALL BE UNDERTAKEN BY THE CHANNEL MANUFACTURER/SUPPLIER. DESIGN & SUPPORTING CALCULATIONS SHALL BE SUPPLIED TO THE ENGINEER FOR APPROVAL.
- ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN124. MANHOLE COVERS WITHIN BLOCK PAVED AREAS & BUILDINGS SHALL BE RECESSED. COVER STRENGTHS TO BE:-
CLASS E600 IN AREAS SUBJECT TO HIGH POINT LOADS (E.G.FORKLIFTS)
CLASS D400 IN HEAVY TRAFFICKED AREAS (ACCESS ROADS, SERVICE YARDS ETC.).
CLASS C250 IN LIGHTLY TRAFFICKED AREAS (CAR PARKS ETC.)
CLASS B125 (WITH MIN. 100mm DEEP FRAME) IN LANDSCAPE & NON-TRAFFICKED AREAS (PLANTING, PEDESTRIAN AREAS ETC.).
- VENTILATION SHALL BE PROVIDED AT THE HEAD OF FOUL DRAINAGE RUNS.
- ACCESS FOR RODDING/JETTING SHALL BE PROVIDED TO ALL SOIL AND RAINWATER DOWNPIPES ABOVE FINISHED FLOOR LEVEL.
- FOR DETAILS OF MANHOLE TYPES AND PIPE BEDDING ETC., SEE STANDARD DETAIL DRAWING(S).
- COVER LEVELS SHOWN ARE APPROXIMATE. COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.
- THE CONTRACTOR IS TO PROTECT EXISTING BURIED PIPES (PARTICULARLY SHALLOW PIPES) AND TREE ROOTS FROM DAMAGE CAUSED BY LOADS IMPOSED BY CONSTRUCTION PLANT.

Anglian Water Notes

All S104 adoptable drainage shall conform to the design and construction guides for developers, Sewers for Adoption 5th Edition published by WRc plc and any AWSL additions & deletions current at the time of execution.

All covers and frames on adoptable AW sewers are to be D400, kitemarked and be badged 'FW' or 'SW' accordingly. Suppliers shall be Stanton, Paul Savage, Norinco or Wrekin.

Adoptable pipework shall be to the following specification:

Clayware: BS EN 295-1:1991
150 dia. Crushing Strength 34kN/m
225 dia. Class 160

Concrete: BS EN 5911-1:2002
>300 dia. Class 120

SOAKAWAY PROTECTION:
Please ensure that during the construction phase all soakaways, gullies and gully laterals are protected from the ingress of silt or grit from the site. Placing a fine heavy duty geotextile under the gully grating, between it and the frame should suffice.

sfA6; Clause 2.9.10 The first manhole upstream from the connection to the (existing) public sewer should, when constructed, be fitted with a screen in order to prevent debris entering the public sewer. The screen should not be removed until immediately prior to the occupation of premises to be served by the sewer.

PRINCIPAL OUTSTANDING HAZARDS

This schedule is provided to assist the principle contractor to determine appropriate working practices & plant requirements during the construction phase & should be included in the Health & Safety Plan File.

The schedule indicates the principle hazards that could not be wholly eliminated during the design phase or that are inherent in the layout of the construction.

This schedule should not be considered as an exhaustive list of hazards - It has been assumed an appropriately experienced contractor with a fully trained labour force will be appointed to carry out the work. Hazards implicit in the nature of construction (safe use of tools/plant & appropriate PPE) are assumed. Compliance with relevant legislation (Health and Safety at Work Act etc.) has been assumed.

The notes given here relate to work shown on this drawing ONLY - (Please note that other items may occur on other drawings.)

Ref. No.	IDENTIFIED HAZARD
1.	DRAINAGE WORKS DRAIN LAYING AND ASSOCIATED WORKS IS REQUIRED TO BE UNDERTAKEN IN OPEN EXCAVATIONS AND STABILITY OF TRENCHES PRESENTS POTENTIAL COLLAPSE HAZARD - TRENCH SUPPORT REQUIRED
2.	OPEN TRENCHES PRESENT HAZARD OF FALLING TO PERSONNEL AND PLANT - PROTECTION/BARRIERS REQD.
3.	SOME WORK REQUIRED ON EXISTING, LIVE DRAINAGE - HAZARD OF CONTAMINATION/ STORM FLOWS - PPE REQUIRED/ WORK TO BE CARRIED OUT BY EXPERIENCED PERSONNEL
4.	EXCAVATED MATERIALS POTENTIALLY CONTAMINATED (FILL) - REFER TO SITE INVESTIGATION INFO.
5.	HEAVY DRAINAGE COMPONENTS ARE SPECIFIED - SUITABLE LIFTING EQUIPMENT REQUIRED
6.	CEMENTITIOUS MATERIALS REQUIRED - HAZARD OF CONTACT WITH AGGRESSIVE MATERIALS
7.	WORKS REQUIRED IN ACTIVE HIGHWAYS - SUITABLE TRAFFIC CONTROL REQUIRED
8.	WORK IN POTENTIALLY CONFINED SPACES (MANHOLES) - COMPLETE MHS BEFORE INSTALLING COVER SLABS - USE EXPERIENCED PERSONNEL

NOTES:
All dimensions must be checked on site and not scaled from this drawing.

PRIVATE DRAINAGE NOTES:

Pipework to be 110mm dia. PVC-U Hepworth PlastiDrain or similar approved, unless otherwise stated.

Generally laid to falls of 1:50 on the foul drain and 1:60 on the surface water drain, minimum 1.80 on both.

160mm dia. pipework to be laid at a min. fall of 1:130.

The Specification and installation of the drainage systems are to comply with the Building Regulations Approved Document H & British Standard 8301 Building Drainage current at the time of construction and also the manufacturers recommendations. All connections are to be soffit to soffit.

- House Type FFL Level
- Foul (Mini chamber <0.6m [1 side connection])
- Foul (PPIC chamber <1.2m [2 side connections])
- Foul (Telescopic PPIC Chamber 1.2-3.0m)
- Foul (Tegra Chamber 1.20-5.0m)
- Surface (Mini chamber <0.6m [1 side connection])
- Surface (PPIC chamber <1.2m [2 side connections])
- Surface (Telescopic PPIC Chamber 1.2-3.0m)
- Surface (Tegra Chamber 1.20-5.0m)
- Backdrop on SW Chamber
- Backdrop on FW Chamber
- FW MH with invert level
- SW MH with invert level
- Rodding eye with Invert Level
- Soil vent pipe [SVP]
- Rainwater outlet [RWP]
- Trench soakaway [ED=Effective Depth] i.e. depth of trench below lowest invert.
- Dished drainage channel with gully.
- ACO channel or similar.
- Distribution diffuser grate with invert level.
- Gully
- Road Gully [with 150mm dia. lateral]

Cover levels generally to be 150mm below slab levels.

Private pipework under adopted areas to be laid as min. 150mm dia. Extra Strength Clayware at minimum fall of 1:130.

Pipework under drives and other areas likely to be trafficked shall be backfilled with Type 2 material. Where depth of cover less than 900mm pipe to have 175mm thick reinforced [A393] concrete slab over. Both treatments to extend a minimum of 1m behind kerb-face.

Foul sewers serving more than 10 dwellings should have a minimum diameter of 150mm.

A Soil Vent Pipe [SVP] must be added at the head of any foul drainage system. Air Admittance Valves [AAV] can be used in other locations if required.

Please Note: Where the bottom of a drainage trench is below foundation level, the trench should be filled with concrete as shown below.

A	01-05-20	Plan updated.
	Date	Revisions
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Job Title

Land Off Quadring Road,
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Drawing Title

Drainage Layout

Date	April 2020	Scale @ A1	1:200	Drawn	TRS
Drg.No.	8981-107			Rev.	A