PHASE: 0

MH No.	MANHOLE DIAMETER (mm)	MANHOLE TYPE	COVER TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)	NORTHING (m)
9651	1350	Type C		11.240	10.284	0.731	516900.074	283672.163
9654	1350	Type C		12.205	11.188	0.792	516944.007	283652.506
9652	1350	Type C		11.330	10.585	0.595	516908.803	283659.024
S1	450	Flow Control	D400	11.453	10.750	0.553	516911.868	283641.555
S2	450	450 Inspection	D400	11.592	10.863	0.579	516890.479	283623.108
S3	450	450 Inspection	D400	11.691	10.948	0.593	516888.646	283602.002
S4	450	450 Inspection		11.568	10.994	0.424	516879.978	283594.539
S5	450	450 Inspection	D400	11.737	10.987	0.600	516895.074	283594.639
9600	1350	Type C		11.118	9.481	1.487	516900.688	283666.110
9601	1200	Type B		11.973	9.802	2.021	516941.039	283651.093

PHASE: 0 (PRIVATE)

MH No.	MANHOLE DIAMETER (mm)	MANHOLE TYPE	COVER TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)	NORTHING (m)
PS1	250	250 Inspection		11.800	11.492	0.208	516877.269	283572.315
PS2	250	250 Inspection		11.800	11.391	0.309	516873.413	283576.992
PS3	250	250 Inspection		11.800	11.240	0.460	516872.661	283586.000
PS4	250	250 Inspection		11.650	11.088	0.462	516878.716	283591.160
PS5	250	250 Inspection		11.800	11.415	0.285	516887.372	283581.339
PS6	250	250 Inspection		11.400	11.218	0.082	516869.390	283609.493
PS7	250	250 Inspection		11.400	11.092	0.208	516878.927	283617.753
PS8	250	250 Inspection		11.539	11.014	0.425	516884.126	283611.851
PS9	250	250 Inspection		11.400	11.105	0.195	516879.988	283603.326
PS10	250	250 Inspection		11.750	11.233	0.417	516901.732	283605.742
PS11	250	250 Inspection		11.750	11.150	0.500	516906.541	283610.291
PS12	250	250 Inspection		11.750	11.134	0.516	516893.074	283612.257
PF1	250	250 Inspection		11.800	11.311	0.389	516883.697	283577.303
PF2	250	250 Inspection		11.800	11.214	0.486	516888.064	283581.130
PF3	450	450 Inspection		11.800	11.077	0.623	516882.641	283587.317
PF4	450	450 Inspection		11.800	11.020	0.680	516880.411	283589.861
PF5	450	450 Inspection	D400	11.644	10.893	0.651	516886.146	283594.889
PF6	450	450 Inspection	D400	11.619	10.627	0.892	516887.201	283610.837
PF7	450	450 Inspection	D400	11.558	10.403	1.055	516889.539	283624.074
PF8	1200	Type E	D400	11.456	9.969	1.388	516900.136	283641.251
PF9	450	450 Inspection		11.550	10.678	0.772	516883.101	283611.108
PF10	250	250 Inspection		11.400	10.709	0.591	516881.464	283612.975
PF11	250	250 Inspection		11.400	10.772	0.528	516878.155	283616.751
PF12	250	250 Inspection		11.400	10.853	0.447	516873.265	283612.465
PF13	450	450 Inspection		11.750	10.722	0.928	516892.474	283608.619
PF14	450	450 Inspection		11.750	10.851	0.799	516897.548	283602.830
PF15	450	450 Inspection		11.750	10.922	0.728	516900.791	283605.672

Existing Manhole 9600 to be surveyed on site with position and invert level confirmed back to the Engineer prior to any works commencing.

New connection to Manhole 9600 subject to approval by Anglian Water under a Section 106 Agreement

New connection to Manhole 9652 subject to approval by Anglian Water under a Section 106 Agreement

Manhole S1 fitted with Polypipe Orifice Flow Control or similar approved
Head = 0.6m
Flwo = 2.0 l/sec
(subject to approval)

Existing Manhole 9652 to be surveyed on site with position and invert level confirmed back to the Engineer prior to any works commencing.

9651
CL: 11.24
IL: 10.284

9600
CL: 11.118
IL: 9.481

9652
CL: 11.33
IL: 10.585

9654
CL: 12.205
IL: 11.188

9601
CL: 11.973
IL: 9.802

S1
CL: 11.453
IL: 10.75

S2
CL: 11.592
IL: 10.863

S3
CL: 11.691
IL: 10.948

S4
CL: 11.568
IL: 10.994

S5
CL: 11.737
IL: 10.987

2250 1/54
1500 1/100
2250 1/53
1500 1/134
1500 1/108
1500 1/250 1.006
1500 1/250 1.005
1500 1/250 1.004
1500 1/251 3.000

ANGLIAN WATER NOTES

ALL SECTION 104 ADOPTABLE DRAINAGE SHALL CONFORM TO THE DESIGN AND CONSTRUCTION GUIDE (DCG) FOR DEVELOPERS (SEWERAGE SECTOR GUIDANCE APPENDIX C, MARCH 2020) 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
- PLASTIC: BS EN 13476-1
  FOUL WATER - RUNKE HS PIPEWORK 16KN/M²
  SURFACE WATER - HDPE TWIN WALL PIPEWORK SN8
  - POLYPIPE POLYSEWER (#150 - #300mm)
  - POLYPIPE RIDGISEWER (#400 - #900mm)
  - POLYPIPE RIDGISTORM-XL (#750 - #3000mm)
  - WEHOLITE APPROVED PIPEWORK

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH "MTC STANDARD DETAIL 1: ADOPTABLE DRAINAGE CONSTRUCTION DETAILS (DCG APPENDIX C 2020)".

North Arrow

N W E S

NOTES

1. The contractor shall check all tie-ins for line and level with existing before commencing any works. The Engineer shall be notified immediately, in writing, should any errors be found.
2. Any discrepancies, of whatever nature, must be reported to the Engineer prior to the commencement or continuance of any further works.
3. All private drainage works to be in accordance with the requirements of Building Regulations 2010, Part H, "Drainage and waste disposal", (01st October 2015).
4. All pipes to be bedded and backfilled in accordance with Part H, Diagram 10. Shallow pipes shall be protected in accordance with Part H, Diagram 11.
5. Unless otherwise stated, all private drainage to be 100mm diameter. Gradients have been shown where there are pipe capacity issues and these should be regarded as minimums. Unless there are constraints dictating otherwise, gradients shall generally be 1 in 60. 100mm diameter pipes shall not be laid flatter than 1 in 80, 150mm diameter pipes shall not be laid flatter than 1 in 150.
6. All pipes, chambers and fittings to be installed strictly in accordance with the manufacturers instructions.
7. Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25 and Diagram 8.
8. All private manholes, inspection chambers and drainage channels to comply with BS EN124. Cover strengths to be:
   Class D400 in heavy trafficked areas (access roads, service yards etc.)
   Class C250 in lightly trafficked areas (car parks, driveways etc)
   Class B125 in Non trafficked areas
   Class A15 in landscaping areas
9. All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.
10. Private drainage frames must be tied to manhole risers by use of manufacturers ties (e.g. Polypipe ref. FRK500 fixing kit and FRK501 black ties.) The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturers fixing equipment.
11. All existing land drains encountered on site during construction to be re-connected.
12. Should any departure from the slab level be considered, agreement shall be sought from the Engineer immediately and prior to commencement or continuance of any works, and should take full account of all restrictions to the slab level.
13. Garage slabs relate to the finished level of the concrete at the front entrance of the garage.
14. Where a drive slopes towards a garage there is to be a 75mm ramp up to the garage slab.
15. Maximum gradients of gardens to be 1 in 6 (unless stated otherwise), except for designed banking works.
16. All dimensions in metres unless otherwise stated.
17. As underlying ground conditions may be variable across the site the Contractor shall undertake onsite porosity tests at the location and depth of each soakaway. Tests should be undertaken in accordance with BRE365 and results forwarded to the Engineers to allow verification of designs.
18. All existing services, sewers and drains indicated on this drawing and any other related drawings are shown only indicatively, and shall have their positions and level confirmed on site by the Contractor.
19. The invert levels of all existing sewers, drains, ditches, tanks or other features and apparatus where a new connection is to be made shall have their precise position and level confirmed on site by the Contractor prior to commencement of any construction work. The results of the investigations shall be confirmed to MTC Engineering (Cambridge) Ltd so that the design can be verified.

Private Drainage Key

- Foul Inspection Chamber (Depth <0.6m [1 side connection])
- Foul Inspection Chamber (Depth <1.2m [2 side connections])
- Foul-BR manhole PCC Ring (1.2-1.5m)
- Storm Inspection Chamber (Depth <0.6m [1 side connection])
- Storm Inspection Chamber (Depth <1.2m [2 side connections])
- Storm BR manhole PCC Ring (1.2-1.5m)
- ACO — ACO channel or similar with gully and rodding point.
- 1500|250 — Proposed Perforated Carrier drain 1500 @ 1:250

Surface Water Attenuation

Permeable Resin Bound Gravel
Minimum 400mm 20-4mm OGCR Sub-base laid in layers not exceeding 100mm thick, each layer to be well compacted.

FOR APPROVAL

REV	DATE	DESCRIPTION/REASON FOR ISSUE	APPR

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Tel (01223) 837270, fax (01223) 835648
E-mail office@mtcengineering.co.uk

PROJECT
Land at 12 Fen Lane, Sawtry
Residential Development

TITLE
Proposed Drainage Plan

ORIG	DATE
JTC	09.10.24
CHKD	SCALE 1:200 @ A1
APPR	DRAWING NO 3359-03 REV -

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