PLOT 2 GARDEN

PLOT 3 GARDEN

PLOT 1 GARDEN

GARAGE FFL 1.75

GARAGE FFL 1.675

GARAGE FFL 1.675

FFL 1.9

FFL 1.9

FFL 1.9

SIC 9 CL1.75 SIL1.109

SIC 1 CL1.75 SIL1.

SIC 2 CL1.75 SIL0.937

SIC 8 CL1.75 SIL0.904

FIC 14 CL1.75 FIL1.191

FIC 11 CL1.75 FIL1.119

FIC 13-Pump CL1.75 FIL0.982

SIC 7 CL1.75 SIL0.738

SIC 3 CL1.75 SIL0.664

SIC 10 CL1.75 SIL0.675

FIC 6 CL1.75 FIL1.295

FIC 5 CL1.675 FIL1.244

SIC 4 CL1.75 SIL0.459

FIC 2 CL1.7 FIL1.165

SIC 6 CL1.75 SIL0.3

FIC 10 CL1.75 FIL1.355

FIC 9 CL1.75 FIL1.32

FIC 8 CL1.75 FIL1.292

FIC 7 CL1.75 FIL1.28

SIC 5 CL1.75 SIL0.662

FIC 1 CL1.3 FIL0.906

SIC 1 CL1.9 SIL1.453

CP

CP

CP

CP

CR

750mm diameter x 1500mm deep GRP chamber fitted with submersible centrifugal pump with vortex impeller. For full details refer to Pumping Solutions specification and recommendation.

Install pump station for Plot 2 close to manhole FIC13 and run a 63mm rising main to FIC2. The flow from the pump station through the 63mm rising main will have a self-cleaning velocity, and also the flow will not exceed Anglian Waters 3.8 L/Sec subjecto to approval.

PolyStorm / Wavin AquaCell Crates Storage System Area=30m2 Depth=0.8m (2xCrates High)

T-T Pumps Package Pump Station Flow = 5.0 L/Sec Model = Mercury Diameter = 1.0m Depth = 1.2m

Rising Main 51mm (63mm O/D) Black HPPE SDR11

Lateral Connection already made on site

Lateral Connection already made on site

Chamber installed to allow connection to public main via gravity

STORM CP IC 9393
INV A = 136 DIA = 0.15
INV B = 1.36 DIA = 0.15
INV C = 1.36 DIA = 0.15
DUMP = 1.37
WL = 1.39

FOUL IC 9301
INV A = 4.43 DIA = APP 01-015 UNCLEAR
INV B = 4.44 DIA = APP 01-015 UNCLEAR
INV C = 4.46 DIA = APP 01-015 UNCLEAR
INV D = 4.53 DIA = APP 01-015 UNCLEAR

Precast Concrete cover slab bedded on concrete surround (by others)

Appropriately load rated VENTED cover & frame in accordance with BS EN 124. Clear access opening above ladder to be maintained (By Others)

FGL

Impermeable Gesynthetic encapsulation

Ø150mm Ridgidrain Ventilation Pipe

Polystorm Structure

Varies A)

Structure Height

Inlet

Structure Length

Outlet

RIDGISTORMSeperate

Typically min. 50mm thick concrete binding layer (by others)

Cast in-situ concrete base slab (by others)

Ridgidrain

POLYSTORM SYSTEM
Scale (1:75)

PUMP ARRANGEMENT TO BE CONFIRMED ONSITE AND AS AGREED WITH PUMP MANUFACTURER

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)
- Foul BR manhole PCC Ring (1.50-2.7m)
- 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)
- Storm BR manhole PCC Ring (1.50-2.7m)
- Backdrop on SW Chamber
- Backdrop on FW Chamber
- RE / RE — Rodding eye with Invert Level
- ACO — ACO channel or similar with gully and rodding point.
- Gully
- Road Gully
- Low Point
- FFL 12.50 — FFL Level
- Bullnosed dropped kerb

Surface Water Attenuation

Wavin "Aquacell" Storm Water Management System
Cellular storage tanks suitable for vehicular loading (where applicable) with 95% voids wrapped in a permeable geo-membrane

Permeable Block Paving
Load Category 4 permeable paving (infiltration) on subgrade 5% soaked CBR. 80mm Permeable Block, 50mm laying course material comprising mostly passing 6.3mm sieve and mostly retained on a 3mm sieve. 70mm dense bitumen macadam hole punched with 75mm Dia holes at 750mm centres. 300mm Hydraulically bound coarse graded aggregate laid in layers not exceeding 100mm thick, each layer to be well compacted.

Pump Details

750mm diameter x 1500mm deep GRP chamber fitted with submersible centrifugal pump with vortex impeller. For full details refer to Pumping Solutions specification and recommendation.

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 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.

Anglian Water Notes

All S.104 adoptable drainage shall conform to the design and construction guide for developers, Sewers for Adoption 6th 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.

All connections to adoptable sewers will be made in vitrified clay, to be a minimum of 100mm diameter and be connected at soffit to soffit level.

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

NOTE:
At the location of the proposed lateral connection the contractor shall establish the position and depth of any existing services to prevent any clash in level and abortive costs.

REV	DATE	DESCRIPTION/REASON FOR ISSUE	APPR
A	18.12.19	GARAGE FFL REVISED	JTC

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TITLE

65 PETERBOROUGH ROAD CROWLAND PROPOSED DRAINAGE PLAN

ORIG J.T.C	DATE DECEMBER 2019
CHKD	SCALE 1/200 @ A1
APPR	DRAWING NO 2439-02 REV A

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