



**Burndell Road, Yapton
Arundel, West Sussex, BN18 0HR**

***SuDS & Drainage Operation and Maintenance Manual
Management Company***

Prepared by:

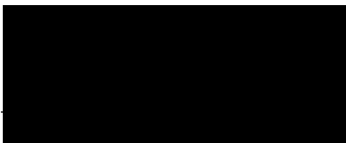
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ES1838/SuDSMC

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CONTENTS

1.0	INTRODUCTION.....	3
1.3	Foul Drainage	3
1.4	Foul Drainage Sewer and Drain Network within the Site and Connection to Public Sewer.....	4
1.5	Surface Water Drainage	4
2.0	OPERATION AND MAINTENANCE.....	6
2.1	Introduction.....	6
2.2	Attenuation Tanks.....	8
2.3	Vortex Flow Control Device	9
2.4	Drains	10
2.5	Surface Water Drain Headwall	12
2.6	Ancillary Drainage	13
2.7	Ditch	14
Appendix A	Drainage As-built Information	
Appendix B	Drainage Manufacturer's Information	
Appendix C	Drainage Inspection Records	
Appendix D	Drainage Maintenance Regime Monitoring and Amendments	

1.0 INTRODUCTION

1.1.1 This maintenance manual sets out the drainage provision and maintenance requirements for the drainage on the development site.

1.2 The drainage network is as follows:

- The site foul drainage network drains by gravity to an onsite Foul Water Pumping Station which in turn discharges via a rising main to the public sewer fronting the site in Burndell Road.
- The surface water drainage system, is a gravity system of pipework with underground geocellular attenuation tanks together with areas of porous paving driveways.

1.3 Foul Drainage

1.3.1 Connection to Public Foul Water Sewer Network

1.3.1.1 Southern Water granted S106 Water industry Act 1991 consent to connect the site Foul Water drainage to the public network on 15/5/2018, Southern Water reference SWS-S106-011473. The connection comprises a manhole break chamber at the terminal end of the site access with a gravity pipe link to a new manhole onto the public Foul sewer in Burndell Road immediately opposite the site entrance

1.3.1.2 The two manholes and gravity pipe connection will be offered up for adoption by Southern Water under Section 104 of the Water Industry Act 1991. This part of the infrastructure will be operated and maintained by Southern Water in accordance with their statutory duties.

1.4 Foul Water Sewer and Drain Network within the Site and Connection to Public Sewer

1.4.1.1 The foul sewer network on site comprises a private gravity piped network discharging to a manhole outside the proposed Foul Pumping Station in the northeast corner of the site. The Pumping Station discharge to the new break manhole as highlighted in 1.3.1.1 above via a rising main. The Pumping station and rising main will be offered up for adoption under Section 104 of the Water Industry Act 1991 and maintained by Southern Water in accordance with their statutory duties

1.4.1.2 The onsite foul drainage assets are privately owned and operated by the residents and the Estate Management Company (EMC).

1.4.1.3 Plot specific infrastructure is conveyed to the relevant plot owners and will be maintained by the respective householders. Shared infrastructure (e.g. pipes under estate roads) will be maintained by the EMC to a best practice standard.

1.5 Surface Water Drainage

1.5.1 Surface Water Drainage Network

1.5.1.1 Water butts are to be installed to the properties.

1.5.1.2 The surface water network on site comprises a private gravity piped network comprising underground geocellular storage tanks and areas of permeable driveways infiltrating to ground. The network outfalls to the ditch on the southern boundary via Vortex Flow Control Device. The system has been designed to accommodate 1% AEP + 30% climate change rainfall events and regulate discharge to a combined rate of 9.78 l/sec.

- 1.5.1.3 Plot specific infrastructure is conveyed to the relevant plot owners, including the porous paving where specified and is to be maintained by the respective householders. Shared infrastructure (e.g. pipes under estate roads, the attenuation tank, vortex control device and outfall) are maintained by the EMC. A schedule of the Operation and Maintenance (O&M) requirements is outlined below.
- 1.5.1.4 The western perimeter ditch is within the ownership of the site. At construction stage a meeting will identify vegetation clearance and silt removal works with Arun DC Drainage Engineer. This will be undertaken at construction stage. Thereafter future inspection and maintenance works will be as scheduled for the ditch and will be undertaken by the EMC.
- 1.5.1.5 The southern perimeter ditches will not be owned by the EMC. At construction stage a meeting will identify vegetation clearance and silt removal works with Arun DC Drainage Engineer. If agreeable to the ditch owners this will be undertaken by the developer at construction stage. Otherwise the scheduled works will be addressed by the owner and the developer will provide reasonable access to the north bank to assist with this. Thereafter future inspection and maintenance works will be as scheduled for swales and will be undertaken by the owner and/or EMC as may be agreed between them on each occasion. If undertaken by the owner the EMC will provide reasonable access to the north bank to assist with this.

2.0 OPERATION AND MAINTENANCE

2.1 Introduction

2.1.1 Regular inspection and maintenance is important for the effective operation of the SuDS and drainage features across the development.

2.1.2 The following SuDS and drainage features have been designed into the development to control the surface water run-off created through the construction of impermeable areas such as roofs, drives and roads

-
- Attenuation Tank
- Porous Paving to Drives to maintained by householder
- Vortex Control Device
- Drains
- Headwall
- Ancillary Drainage (Road Gulleys, Silt Traps, Manholes and Pipes)
- Swales

2.1.3 The maintenance of the attenuation tank and associated drainage will be assigned to the EMC appointed to maintain the development. The EMC will be funded by the residents via an annualised sum and this will be contained within the individual property deeds.

2.1.4 In order to ensure the continued effective operation of the SuDS features maintenance regimes have been provided for each of the above features.

2.1.5 This document has been prepared at the design stage and should be considered as part of an evolving process. Following construction as built information and drawings should be included. The post construction information should include

drawings detailing the extent and location of SuDS and drainage features together with relevant manufacturer's details.

2.1.6 The following maintenance regimes should be amended/updated to suit specific manufacturer's requirements for the various components installed.

2.1.7 The following appendices have been included to allow for additional information and records to be included post construction.

- **Appendix A** Drainage As-built Information
- **Appendix B** Drainage Manufacturer's Information
- **Appendix C** Drainage Inspection Records
- **Appendix D** Drainage Maintenance Regime Monitoring and Amendments

2.1.8 It should also be recognised that for a maintenance regime to continue to be appropriate and fit for purpose a constant monitoring ethos should be adopted and any corrective measures implemented to ensure that the correct maintenance regimes going forward are in place. Inspection records should be kept and used as a basis for determining the suitability of the maintenance regimes and the areas of the development requiring attention.

2.2 Attenuation Tanks

2.2.1 The attenuation tanks are constructed using a geocellular system with limited access via manholes. These manholes will assist in the maintenance and inspection of the structures.

Table 1: Operation and Maintenance Requirements - Attenuation Tanks

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance.	Inspect and identify any areas that are not operating correctly, take remedial action.	Monthly for 3 months, then annually.
	Inspect silt traps and identify any not operating correctly, take remedial action.	Monthly for 3 months, then annually.
Remedial actions.	Repair/rehabilitate inlets, outlet, overflows and vents.	As required.
Monitoring.	Inspect/check all inlets, outlet, overflows and overflows to ensure that they are in good condition and operating as designed.	Annually
	Survey inside of tank for sediment build-up and remove if necessary.	Every 5 years or as required

2.3 Vortex Flow Control Device

2.3.1 A Vortex Flow control device has been provided to restrict outflow from the drainage network.

Table 2: Operation and Maintenance Requirements - Flow Control Devices

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance.	Inspect and identify any areas that are not operating correctly, take remedial action.	Monthly for 3 months, then annually.
	Remove any sediment from flow control devices.	Annually (or as required).
Remedial actions.	Repair/rehabilitate inlets, outlet, overflows and vents.	As required.
Monitoring.	Inspect/check all inlets, outlet, and overflows to ensure that they are in good condition and operating as designed.	Annually
	Where fitted check operation of by-pass door.	Annually
	Check operation of sluice gate penstock valve and access walkway	Annually

2.4 Drains

2.4.1 Surface Water Drains

2.4.1.1 Surface water drains have been constructed to convey surface water drainage from properties and roads through storage areas and ultimately discharging into the adjacent ditch.

2.4.1.2 A maintenance regime has been prepared for the surface water sewers serving the development as indicated in Table 3 below.

2.4.1.3 Inspection reports should be kept and the maintenance regime for the surface water sewers should be adjusted, if necessary, to suit ongoing site-specific circumstances as they arise.

Table 3: Operation and Maintenance Requirements – Surface Water Drains

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Jet sewers to remove silt	Every 5 years after winter
Remedial Actions.	Jet sewers if operation appears impaired.	As required.
	Reset any manhole covers which are loose	As required.
Monitoring.	Initial inspection.	Monthly for three months.
	Regular Inspection	After initial three month initial inspection annually.

2.4.2 Foul Drains

2.4.2.1 Foul drains have been constructed to convey foul water from properties through to the pump station.

2.4.2.2 A maintenance regime has been prepared for the foul water drains serving the development as indicated in Table 4 below.

2.4.2.3 Inspection reports should be kept and the maintenance regime for the surface water sewers should be adjusted, if necessary, to suit ongoing site-specific circumstances as they arise.

Table 4: Operation and Maintenance Requirements – Foul Drains

Maintenance Schedule	Required Action	Typical Frequency
Remedial Actions.	Jet sewers if operation appears impaired.	As required.
	Reset any manhole covers which are loose	As required.
Monitoring.	Initial inspection.	Monthly for three months.
	Regular Inspection	After initial three month initial inspection annually.

2.5 Surface Water Drain Headwall

- 2.5.1 The surface water drains discharge into the ditch via a headwall.
- 2.5.2 A maintenance regime has been prepared for the headwall serving the development as indicated in Table 4 below.
- 2.5.3 Inspection reports should be kept and the maintenance regime for the headwall should be adjusted, if necessary, to suit ongoing site-specific circumstances as they arise.

Table 5: Operation and Maintenance Requirements – Headwalls

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Clean silt/debris build up from pipe outlet	Annually following the winter.
Remedial Actions	Repair damaged headwall.	As required.
Monitoring.	Initial inspection.	Monthly for three months.
	Regular Inspection.	After initial three month initial inspection annually.

2.6 Ancillary Drainage

- 2.6.1 This includes for road gulleys, inspection chambers and manholes within the site road serving the development.

Table 6: Operation and Maintenance Requirements – Ancillary Drainage

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance.	Clean silt and debris from gulleys and silt traps.	Annually.
Remedial actions.	Reset any loose covers and gratings.	As required.
	Jet out system for any blockages.	As required.
Monitoring	Inspect grates and frames.	Annually.

2.7 Ditch

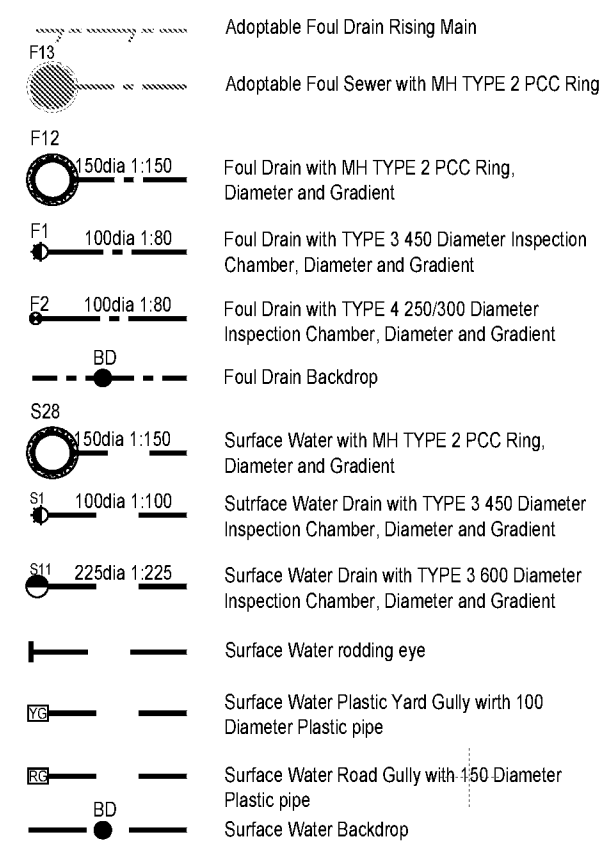
- 2.7.1 The western perimeter ditch is within the ownership of the site and maintenance works will be as scheduled below.
- 2.7.2 Maintenance of swales is relatively straight forward and typically require only a small amount of work.

Table 5: Operation and Maintenance Requirements for Swales

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance.	Remove litter and debris.	Monthly, or as requested.
	Cut grass – to retain grass height within specified design range.	Monthly (during growing season), or as required.
	Manage other vegetation and remove nuisance plants.	Monthly at start, then as required.
	Inspect inlets, outlets and overflows for blockages, and clear if required.	Monthly.
	Inspect vegetation coverage.	Monthly for 6 months, quarterly for 2 years, then half yearly.
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies.	Half yearly.
Occasional maintenance.	Reseed areas of poor vegetation growth, alter plant types to better suit conditions, if required.	As required or if bare soil is exposed over 10% or more of the swale treatment area.
Remedial actions.	Repair erosion or other damage by re-turfing or reseeded.	As required.
	Relevel uneven surfaces and reinstate design levels.	As required.
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface.	As required.
	Remove build-up of sediment or upstream gravel trench, flow spreader or at top of filter strip.	As required.
	Remove and dispose of oils or petrol residue using safe standard practices.	As required.

Appendix A

Private and Adoptable Drainage Legend:



NOTE: See drawing number ES1838-502-02 for Drainage Schedules.

THIS DESIGN
DRAWING TO BE
REPLACED WITH
AS-BUILT DRAWING
WHEN DEVELOPMENT
IS COMPLETED

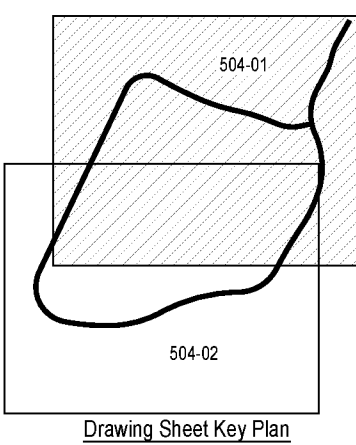
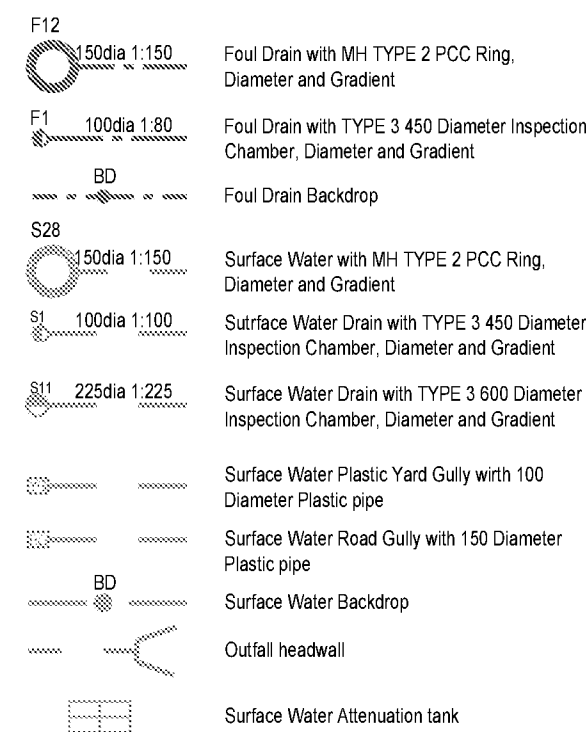


- + Connection via new manhole on existing sewer. Invert level calculated from surveyed levels and sewer records. Contractor to confirm level before commencing works by advising on survey levels of upstream and downstream levels.
- + Engineer to be advised. Connection subject to a section 106 application which must be approved prior to commencing works.
- + Highway opening licence to be obtained by contractor to facilitate laying of new sewer under Burndell Road.

General Notes:

- All levels relate to Ordnance Datum.
- All gullies to be rotatable or connected to inspection chambers. All road gully connections to be 1500 connections other than at manholes to be "Y" junctions. Gully's coincident with pedestrian crossings to have pedestrian type gully covers. Positions of yard and house gullies are nominal and may be adjusted on site.
- All domestic drainage to be 1000 UN O or as noted. Minimum gradient for 1000 SW s 1:100 and 1000 FW s 1:80. Bedding for domestic drainage Class B. All pipe runs near buildings to comply with the Building Regulations 2002 Part H1.
- All works to be in accordance with WRC Sewers for Adoption 7th Edition or as stipulated in Southern Water Authority addendum, the Local Authority and BS8301 1985.
- All materials to be agreed by LA. Trench fill under roads to be clause 613 material as agreed with LA.
- All adoptable roadwork's shall be in accordance with West Sussex County Council specification & details.
- All slab levels shown are for guidance only and may need to be adjusted on site, subject to approval by the engineer.
- The contractor must comply with all current legislation relating to Health and Safety. The contractor must familiarise himself with all service companies records of existing plant locations prior to any excavation works. All existing services/sewers to be traced/surveyed. Any discrepancies to be reported to the engineer immediately.
- All concrete and concrete products to be in accordance with BRE 363 for sulphates.
- All stub stacks to be fitted with air admittance valves where branch drain exceeds 12m except at the head of run.
- Position of soil pipes, standing wastes, wc outlets etc. are shown on the Architect's working drawings. Rainwater downpipe positions are to be checked against architects details to ensure compatibility. Rainwater downpipes to have rodding access facilities where surface water drainage passes under buildings.
- Driveways to garages with step approaches to laid with suitable HOG & S/G curvature to avoid grounding out.
- All plots to have which has gardens sloping towards the back of the house to have french drains. Drain to be connected to surface water system.
- Where block paved areas fall towards building to a 100mm filter stipperforated drain connected to drainage system.
- All existing/new utility services within the vicinity of ANY trees to be carried out in accordance with "NUG" Publication number 10. "Guide line for planning, installation and maintenance of utility services in proximity to trees"
- All properties to have level access front and rear where ever possible. Final levels of paths and patios to be set such that they not obstruct subfloor ventilation.
- This drawing is to read in conjunction with all relevant Escher Silverman and Crayfern Homes drawings and specifications.

Management Company Drainage Legend:



SAFETY, HEALTH & ENVIRONMENTAL
INFORMATION
CDM Regulations 2015

In addition to the hazards/risks normally associated with the type of work detailed on this drawing note should be made of the following:

- Working in vicinity of deep excavations.
- Working in live Highway
- Existing Services across site and in Highway

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.
Contractor is not relieved of any of his obligations under all applicable health and safety regulations.

Client: Burndell Road, Yapton

Crayfern
HOMES

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Drawing Title: Engineering Details
Management Company Drainage Plan 1 of 2

Drawn	Checked	Scales	Paper Size	Date
HN	KAM	1:250	A1	09.18
Job No.	Drawing No.			Revision
ES1838	510-01			A

Private and Adoptable Drainage Legend:

	Adoptable Foul Drain Rising Main
	Adoptable Foul Sewer with MH TYPE 2 PCC Ring
	Foul Drain with MH TYPE 2 PCC Ring, Diameter and Gradient
	Foul Drain with TYPE 3 450 Diameter Inspection Chamber, Diameter and Gradient
	Foul Drain with TYPE 4 250/300 Diameter Inspection Chamber, Diameter and Gradient
	Foul Drain Backdrop
	Surface Water with MH TYPE 2 PCC Ring, Diameter and Gradient
	Surface Water Drain with TYPE 3 450 Diameter Inspection Chamber, Diameter and Gradient
	Surface Water Drain with TYPE 3 600 Diameter Inspection Chamber, Diameter and Gradient
	Surface Water rodding eye
	Surface Water Plastic Yard Gully with 100 Diameter Plastic pipe
	Surface Water Road Gully with 150 Diameter Plastic pipe
	Surface Water Backdrop

THIS DESIGN DRAWING TO BE REPLACED WITH AS-BUILT DRAWING WHEN DEVELOPMENT IS COMPLETED



No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
1	S1	7.210	5.285	1.925	1200	2	D400
2	S2	7.100	5.025	2.075	1350	2	B125
3	S3	7.030	4.921	2.109	1350	2	B125
4	S4	6.800	4.762/BD5.44	2.038	1350	2	D400
5	S4/1	6.890	6.113	0.777	450	3	A15
6	S4/2	6.920	6.100	0.820	450	3	B125
7	S4/3	6.980	6.186	0.794	450	3	B125
8	S4/4	6.855	6.085	0.770	450	3	D400
9	S4/4/1	6.900	6.300	0.600	450	3	B125
10	S4/5	6.870	6.270	0.600	450	3	B125
11	S4/6	6.920	6.116	0.804	450	3	B125
12	S4/7	6.920	6.203	0.717	450	3	B125
13	S5	6.710	4.688/BD5.40	2.022	1350	2	D400
14	S5/1	7.000	6.400	0.600	450	3	A15
15	S5/2	6.700	6.100	0.600	450	3	A15
16	S6	7.030	4.907	2.123	1350	2	D400
17	S6/1	7.045	6.215	0.830	450	3	B125
18	S6/2	7.100	6.224	0.876	450	3	A15
19	S6/3	7.054	6.443	0.611	450	3	B125
20	S7	6.920	5.285	1.635	1200	2	D400
21	S8	6.970	5.000	1.970	1200	2	D400
22	S8/1	7.039	6.059	0.980	450	3	D400
23	S8/1/1	6.935	6.335	0.600	450	3	A15
24	S8/2	6.965	6.263	0.702	450	3	A15
25	S9	6.990	5.930	1.060	450	3	D400
26	S10	7.160	5.340	1.820	600	3	D400*
27	S11	7.179	5.272	1.907	600	3	B125*
28	S12	7.011	6.200	0.811	450	3	B125
29	S13	7.057	6.106	0.951	450	3	A15
30	S14	6.970	5.900	1.070	450	3	D400
31	S15	6.350	4.660	1.690	1350	2	B125
32	S16	6.950	5.960	0.990	450	3	A15

No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
33	S17	7.000	5.714	1.286	600	3	A15*
34	S18	7.080	5.627	1.453	1200	2	B125
35	S19	6.850	5.530	1.320	1200	2	B125
36	S20	6.800	5.460	1.340	1200	2	B125
37	S21	7.000	5.401	1.599	1200	2	B125
38	S22	6.710	5.322	1.388	1200	2	B125
39	S23	6.530	5.278	1.252	1200	2	D400
40	S24	6.600	5.150	1.450	1200	2	D400
41	S25	6.500	5.084	1.416	1200	2	D400
42	S26	6.410	5.003	1.407	1200	2	D400
43	S27	6.560	4.802	1.758	1350	2	D400
44	S28	6.560	4.773	1.787	1350	2	D400
45	S29	6.520	4.745/BD5.20	1.775	1400	2	D400
46	S29/1	6.760	6.126	0.634	450	3	B125
47	S30	7.225	6.560	0.665	450	3	A15
48	S31	7.200	6.395	0.805	450	3	A15
49	S31/1	7.200	6.586	0.614	450	3	A15
50	S32	7.130	6.086	1.044	450	3	B125
51	S33	7.120	6.770	0.350	450	3	D400*
52	S34	6.960	5.150	1.810	600	3	D400*
53	S34/1	7.035	6.068	0.967	450	3	A15*
54	S34/2	7.155	6.225	0.930	450	3	B125
55	S35	6.850	4.700	2.150	1200	2	A15
56	S36	6.875	6.185	0.690	450	3	B125
57	S37	6.835	6.143	0.692	450	3	A15
58	S38	6.835	6.014	0.821	450	3	A15
59	S39	6.900	5.190	1.710	450	3	A15
60	S40	7.335	6.550	0.785	450	3	A15
61	S41	7.120	6.283	0.837	450	3	A15
62	S42	7.140	5.453	1.687	450	3	D400*
63	S42/1	6.940	5.990	0.950	450	3	D400*
64	S42/2	6.933	6.200	0.733	450	3	B125
65	S43	7.260	5.320	1.940	1200	2	D400

No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
66	S43/1	7.135	6.397	0.738	450	3	A15
67	S43/2	7.135	6.555	0.580	450	3	A15
68	S44	6.750	5.996	0.754	450	3	A15
69	S45	6.735	5.822	0.913	450	3	A15
70	S45/1	6.735	6.135	0.600	450	3	A15
71	S45/2	6.735	6.135	0.600	450	3	A15
72	S46	6.790	5.664	1.126	450	3	A15
73	S47	6.870	5.572	1.298	450	3	D400*
74	S47/1	6.750	5.730	1.020	450	3	A15
75	S47/2	6.750	5.886	0.864	450	3	A15
76	S47/3	6.885	5.985	0.900	450	3	B125
77	S48	6.591	5.991	0.600	450	3	B125
78	S49	6.685	5.796	0.889	450	3	A15
79	S50	6.668	5.641	1.027	450	3	A15
80	S50/1	6.760	6.147	0.613	450	3	B125
81	S51	6.800	6.200	0.600	450	3	B125
82	S52	6.735	5.934	0.801	450	3	A15
83	S53	6.758	5.784	0.974	450	3	A15
84	S54	6.920	5.953	0.967	450	3	D400*
85	S55	7.000	6.400	0.600	450	3	A15
86	S56	6.710	6.108	0.602	450	3	A15
87	S57	7.055	5.837	1.218	450	3	A15*
88	S57/1	6.935	6.324	0.611	450	3	A15
89	S58	7.190	5.589	1.601	450	3	B125
90	S59	7.310	6.000	1.310	450	3	D400*
91	S59/1	7.135	6.465	0.670	450	3	A15

* Cover size restricted to 350mm dia or 300 x 300mm where depth of chamber to invert level is >1.2m.

No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
1	F1	6.810	6.060	0.750	450	3	A15
2	F2	6.930	5.930	1.000	450	3	D400*
3	F3	7.050	5.459	1.591	450	3	D400*
4	F3/1	7.100	6.035	1.065	450	3	A15
5	F4	7.100	5.215	1.885	450	3	D400*
6	F4A	7.090	5.071	2.019	450	3	D400*
7	F4/1	7.175	6.285	0.890	450	3	A15
8	F5	7.080	4.917	2.163	450	3	D400*
9	F5/1	7.100	6.360	0.740	450	3	A15
10	F5/2	7.100	6.500	0.600	250	4	B125
11	F6	6.860	4.828	2.032	450	3	D400*
12	F7	6.800	4.325	2.475	450	3	D400*
13	F7/1	7.100	6.500	0.600	250	4	A15
14	F7/2	6.800	6.000	0.800	300	4	A15
15	F7/3	7.000	6.335	0.665	300	4	A15
16	F7/4	7.000	6.235	0.765	300	4	A15
17	F7/5	6.900	6.200	0.700	250	4	A15
18	F8	6.800	4.981	1.819	450	3	D400*
19	F8/1	7.100	6.500	0.600	250	4	A15
20	F8/2	7.000	6.150	0.850	300	4	A15
21	F9	7.000	3.945	3.055	450	3	B125*
22	F9/1	7.050	6.200	0.850	450	3	A15
23	F9/2	7.000	6.150	0.850	300	4	A15
24	F10	7.000	3.715/BD4.570	3.285	1200	1	B125
25	F10/1	7.100	6.150	0.950	450	3	A15
26	F10/2	7.050	6.200	0.850	450	3	A15
27	F10/3	7.050	6.200	0.850	450	3	A15
28	F10/4	7.050	6.200	0.850	450	3	A15
29	F11	7.130	3.552/BD5.05	3.578	1200	1	D400
30	F11/1	6.935	6.035	0.900	450	3	A15
31	F11/2	6.935	6.035	0.900	450	3	A15
32	F12	6.670	3.715	2.955	1200	2	D400
33	F12/1	6.800	6.200	0.600	250	4	A15
34	F13	7.150	3.138	3.982	1200	1	B125
35	F13A	6.750	5.351	1.399	1200	2	D400
36	F13B	6.750	5.240	1.510	1200	2	D400
37	F14	7.040	5.790	1.250	450	3	D400*
38	F14/1	7.085	6.485	0.600	250	4	A15
39	F15	7.070	5.381	1.689	450	3	D400*
40	F15/1	7.135	6.595	0.540	250	4	A15
41	F15/2	7.135	6.535	0.600	250	4	A15
42	F16	7.040	6.208	0.832	450	3	B125
43	F16/1	7.075	6.325	0.750	300	4	B125
44	F16/2	7.100	6.500	0.600	250	4	A15
45	F17	7.290	5.885	1.405	450	3	A15*
46	F17/1	7.220	6.480	0.740	300	4	B125

FOUL WATER MAINS DRAINAGE SCHEDULE							
No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
47	F17/2	7.350	6.750	0.600	250	4	A15
48	F17/3	7.300	6.485	0.815	300	4	A15
49	F17/4	7.300	6.485	0.815	300	4	A15
50	F18	7.290	5.848	1.442	450	3	A15*
51	F18/1	7.300	6.450	0.850	300	4	A15
52	F18/2	7.300	6.450	0.850	300	4	A15
53	F19	7.070	5.314	1.656	450	3	D400
54	F19/1	7.280	6.350	0.930	300	4	A15
55	F20	7.260	5.259	2.001	450	3	D400
56	F20/1	7.135	6.535	0.600	250	4	A15
57	F20/2	7.085	6.485	0.600	250	4	A15
58	F21	7.100	4.729	2.371	450	3	B125*
59	F21/1	7.000	6.400	0.600	250	4	A15
60	F21/2	7.120	6.520	0.600	250	4	A15
61	F21/3	7.000	6.400	0.600	250	4	A15
62	F21/4	7.120	6.520	0.600	250	4	A15
63	F21/5	7.120	6.520	0.600	250	4	A15
64	F21/6	6.935	6.335	0.600	250	4	A15
65	F22	7.050	6.442	0.608	450	3	A15
66	F22/1	7.100	6.500	0.600	250	4	A15
67	F23	7.070	6.170	0.900	450	3	A15
68	F23/1	6.935	6.335	0.600	250	4	A15
69	F23/2	7.050	6.450	0.600	250	4	A15
70	F23/3	7.050	6.450	0.600	250	4	A15
71	F23/4	7.020	6.420	0.600	250	4	A15
72	F23/5	7.050	6.450	0.600	250	4	A15
73	F24	6.900	6.400	0.500	250	4	A15
74	F24	6.530	5.220	1.310	450	3	D400*
75	F24/1	6.680	5.830	0.850	450	3	B125
76	F24/2	6.685	6.005	0.500	250	4	A15
77	F25	6.620	4.704	1.816	450	3	D400
78	F25/1	6.685	6.085	0.600	250	4	A15
79	F25/2	6.760	6.100	0.500	250	4	A15
80	F25/3	6.652	5.683	0.959	450	3	B125
81	F25/5	6.685	6.085	0.600	250	4	A15
82	F25/5/2	6.725	6.000	0.625	300	4	B125
83	F25/4	6.620	5.818	0.702	450	3	B125
84	F25/4/1	6.685	6.085	0.600	250	4	A15
85	F25/4/2	6.725	5.925	0.700	300	4	B125
86	F26	6.865	4.843	2.022	450	3	D400*
87	F26/1	6.640	5.968	0.572	450	3	B125
88	F26/1/1	6.775	6.025	0.750	300	4	B125
89	F26/2	6.745	6.135	0.610	250	4	A15
90	F27	6.800	4.193	2.407	450	3	D400*
91	F27/1	6.800	5.806	0.984	450	3	A15
92	F27/2	6.770	5.955	0.715	300	4	B125

* Cover size restricted to 350mm dia or 300 x 300mm where depth of chamber to invert level is >1.2m

Appendix B

Appendix C

Appendix D

Monitoring and Review Table

Revision	Revision Description	Date	Initials