SECTION 104 SURFACE WATER ATTENUATION MANHOLE SCHEDULE								
No	Reference	Cover Level (m)	Invert Level (m)	Sump Invert Level (m)	Depth to pipe soffit (m)	Chamber Size (mm)	Type	Cover Grade
1	HD1 (S38)	11.470	10.925	10.425	0.320	1135x1360	Brick (Flow control)	D400
2	HD2 (S38)	12.020	11.045	10.745	0.525	1810x2935	Brick	D400
3	HD3 (S38)	12.220	11.120	10.820	0.650	1810x2935	Brick	D400

SECTION 104 SURFACE WATER MANHOLE SCHEDULE							
No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
1	S16	9.960	7.965	1.845	450	3	D400*
2	S17	10.266	7.897	2.219	450	3	D400*
3	S18	10.070	7.865	2.055	450	3	D400*
4	S19	9.500	7.745	1.605	450	3	D400*
5	S20	10.100	7.514	2.436	450	3	D400*
6	S21	10.240	7.259	2.831	1200	2	D400

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

SECTION 104 FOUL WATER MANHOLE SCHEDULE							
No	Reference	Cover Level (m)	Invert Level (m)	Depth to soffit (m)	Chamber Size (mm)	Type	Cover Grade
1	F4	12.000	10.631	1.219	450	3	D400*
2	F5	12.140	10.512	1.478	450	3	D400*
3	F6	11.740	10.392	1.198	450	3	D400*
4	F7	11.660	10.300	1.260	450	3	D400*
5	F8	11.380	9.763	1.467	450	3	D400*
6	F9	11.270	9.661	1.509	450	3	D400*
7	F10	11.160	9.480	1.530	1200	2	D400
8	F11	11.030	9.252	1.678	450	3	D400*
9	F12	10.890	9.023	1.767	450	3	D400*
10	F13	10.660	8.710 /BD9.360	1.800	450	3	D400*
11	F14	10.580	8.741	1.689	450	3	D400*
12	F15	9.960	8.228	1.582	450	3	D400*
13	F16	10.183	8.190	1.843	450	3	D400*
14	F17	10.080	8.162	1.768	450	3	D400*
15	F18	9.550	8.037	1.363	450	3	D400*
16	F19	9.810	7.880	1.780	450	3	D400*
17	F20	10.250	7.711	2.389	450	3	D400*
18	F21	10.050	7.580	2.320	450	3	D400*
19	F22	10.070	7.556	2.364	1200	2	D400

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

Drainage Key

- Existing Surface Water Sewer and Manhole
- Existing Foul Water Sewer and Manhole
- S104 Adoptable Foul Sewer
- S104 Adoptable Foul Manhole Type 2 (1200mm diameter unless indicated otherwise)
- S104 Adoptable Foul Inspection Chamber Type 3
- S104 Adoptable Surface Sewer
- Section 38 Surface Water Gully with 150 Diameter Connection
- S104 Adoptable SW Manhole
- 6.0m Sewer Easement

CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015 (CDM 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 (refer to site investigation for soil parameters for temporary works design).
- Services (contractor to trace and identify all services)
- Working adjacent live Highway
- Connection to live sewer

It is assumed that all works will be carried out by a competent contractor working to an appropriate construction phase plan.

NOTES

1. All levels relate to Ordnance Datum.
2. All gullies to be rodable or connected to inspection chambers. All road gullies connections to be 150ø , 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.
3. All domestic drainage to be 100ø U.N.O or as noted. Minimum gradient for 100ø SW is 1:100 and 100ø FW is 1:80. Bedding for domestic drainage Class B. All pipe runs near buildings to comply with the Building Regulations 2002 Part H1.
4. 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.
5. All materials to be agreed by LA. Trench fill under roads to be clause 613 material as agreed with LA.
6. All slab levels shown are for guidance only and may need to be adjusted on site, subject to approval by the engineer.
7. The contractor must comply with all current legislation relating to Health and Safety. The contractor/client must familiarise himself with all service companies records of existing plant locations prior to any excavation works. All existing services/sewers to be traced/sureyed. Any indiscrepancies to be reported to the engineer immediately.
8. All concrete and concrete products to be in accordance with BRE 363 for sulphates.
9. All stub stacks to be fitted with air admittance valves where branch drain exceeds 12m except at the head of run.
10. 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.
11. Driveways to garages with step approaches to laid with suitable HOG & SAG curvature to avoid grounding out.
12. 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.
13. Where block paved areas fall towards building to a 100mm filter strip/perforated drain connected to drainage system.
14. All existing/new utility services within the vicinity of ANY trees to be carried out in accordance with 'NJUG' Publication number 10, 'Guide line for planning, installation and maintenance of utility services in proximity to trees'
15. 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.
16. Do not scale from this drawing, work only from stated dimensions or setting out details.
17. This drawing is to read in conjunction will all relevant Escher Silverman drawings and specifications.
18. Do not scale from this drawing, work only from stated dimensions or setting out details.
19. For manhole type and covers refer to standard details.
20. Manhole levels at existing drainage connections to be confirmed prior to commencement of drainage works and engineer advised if there is any discrepency.

NOTE:

1. Contractor to apply for road opening license to carry out works in highway.
2. Contractor to trace and mark existing services prior to commencing any works. Engineer to be advised of any clashes.
3. Refer to standard details drawings for trench reinstatement in existing highway.
4. Contractor to confirm invert level of existing manholes prior to commencing any drainage works. Engineer to be advised of any discrepancies.

Please note: Adjacent ridge and eave heights and positions have been shown where possible and site lines allowed from within the main site.

Wavin AquaCell ® Attenuation Tank 1
Plan area = 152m²
Crate depth = 0.4m
Storage volume = 57.76m³
Lowest ground level = 11.780m
Top of tank = 10.900m
Base of tank = 10.500m
(Tank depth = 1.280m)
(Note: Concrete cover slab required)

Wavin AquaCell ® Attenuation Tank 7
Plan area = 19.5m²
Crate depth = 0.4m
Storage volume = 7.41m³
Lowest ground level = 12.000m
Top of tank = 11.475m
Base of tank = 11.075m
(Tank depth = 0.925m)

Wavin AquaCell ® Attenuation Tank 6
Plan area = 38m²
Crate depth = 0.4m
Storage volume = 14.44m³
Lowest ground level = 11.600m
Top of tank = 11.315m
Base of tank = 10.915m
(Tank depth = 0.665m)

Wavin AquaCell ® Attenuation Tank 2
Plan area = 20m²
Crate depth = 0.8m
Storage volume = 15.200m³
Lowest ground level = 11.280m
Top of tank = 10.530m
Base of tank = 9.618m
(Tank depth = 1.662m)
(Note: Concrete cover slab required)

Wavin AquaCell ® Attenuation Tank 3
Plan area = 152m²
Crate depth = 0.8m
Storage volume = 115.520m³
Lowest ground level = 11.100m
Top of tank = 9.960m
Base of tank = 9.160m
(Tank depth = 1.940m)

Hydrobrake Manhole 1500dia
Discharge rate = 3.4 l/s
Design Head = 0.554m

Existing surface sewer Manhole:
CL = 11.570m
IL = 10.820m

Existing foul sewer Manhole.
CL = 11.570m
IL = 10.290m

Refer to 509-02 for continuation

Refer to 509-02 for continuation

Refer to 509-01 for continuation

Refer to 509-01 for continuation

Refer to 502-02 for continuation

Refer to 502-02 for continuation

Rev.	Date	Details	Initials
I	03.07.2020	Section 104 Manhole Schedule added	DLS
H	18.12.2019	"Highway Drain" note removed from northern surface water sewer	MH
G	11.11.2019	Northern sw sewer added to104. Plots 1,2,12,11&10 connected to sw sewer	MH
F	25.10.2019	Plot 1 garage drainage connected to northern surface water outfall	MH
E	05.06.19	F21 & F22 amended	MA
D	27.03.19	Drainage notes added. MH F10 type changed to type 2	HN
C	05.03.19	Remaining foul water sewers added. Sewer connection to Emsworth road relocated to additional sheet	MA
B	22.01.19	Drawing title, number and status amended.	KAM
A	21.01.19	Initial issue	MA

Drawing Status
CONSTRUCTION

Project
Castle Avenue,
Havant

Client
PERSIMMON

Drawing Title
Section S104
Agreement Plan Sheet 1 of 3

Drawn	Checked	Scales	Paper Size	Date
MA	KAM	1:250	A1	01.19
Job No.		Drawing No.		Revision
ES1857		S104-01		I