Key

- Foul water pipe showing flow direction
- FMH00 — Foul water manhole & number
- FIC00 — Foul water inspection chamber & number
- Surface water pipe showing flow direction
- SMH00 — Surface water manhole & number
- SIC00 — Surface water inspection chamber & number
- Gulley
- Existing Foul water sewer
- Existing Surface water sewer
- 29.570 — Proposed site level
- 28.270 — Existing site level

FOUL MANHOLE SCHEDULE

MH	CL	IL OUT	MANHOLE DEPTH (m)	MANHOLE TYPE	PIPEØ OUT	MANHOLE SIZE	COVER TYPE	COVER SIZE
FMH01	27.000	26.370	0.630	B	150	1200Ø	Sealed & Locking	600x600
FMH02	27.000	26.145	0.855	B	150	1200Ø	Sealed & Locking	600x600
FMH03	27.000	26.060	0.940	B	150	1200Ø	B125 Recessed	600x600
FMH04	27.000	25.900	1.100	B	150	1200Ø	B125 Recessed	600x600
FMH05	27.000	25.740	1.260	B	150	1200Ø	B125	600x600
FMH06	27.000	25.560	1.440	B	150	1200Ø	B125 Recessed	600x600
FMH07	27.000	25.320	1.680	B	150	1200Ø	B125	600x600
FMH08	27.000	25.800	1.200	B	150	1200Ø	B125 Recessed	600x600
EX. FMH - Backdrop Connection	24.800	23.840	0.960	-	-	-	-	-
FMH09	2.150	TBC	TBC	B	225	1200Ø	D400	-
FIC01	27.000	26.000	1.000	Plastic IC	110	450Ø	B125	-
FIC02	27.000	26.000	1.000	Plastic IC	110	450Ø	B125	-
FIC03	27.000	26.000	1.000	Plastic IC	110	450Ø	B125 Recessed	-
FIC04	27.000	25.800	1.200	Plastic IC	110	450Ø	B125	-
FIC05	27.000	26.000	1.000	Plastic IC	110	450Ø	B125 Recessed	-
FIC06	27.000	26.000	1.000	Plastic IC	110	450Ø	B125 Recessed	-
FIC07	27.000	26.000	1.000	Plastic IC	110	450Ø	B125 Recessed	-
FIC08	27.000	26.000	1.000	Plastic IC	110	450Ø	B125 Recessed	-
FIC09	27.000	26.000	1.000	Plastic IC	110	450Ø	B125 Recessed	-

SURFACE WATER MANHOLE SCHEDULE

MH	CL	IL OUT	MANHOLE DEPTH (m)	MANHOLE TYPE	PIPEØ OUT	MANHOLE SIZE	COVER TYPE	COVER SIZE
SMH01	30.225	29.300	0.925	Plastic	100	450Ø	B125	300x300
SMH02	30.225	28.890	1.335	B	150	1200Ø	D400	600x600
SMH03 - Backdrop	30.225	28.765 / 26.500	3.725	A	150	1200Ø	B125	600x600
SMH04	28.300	26.650	1.650	B	150	1200Ø	D400	600x600
SMH05	26.950	26.400	0.550	B	225	1200Ø	B125	600x600
SMH06	26.950	26.220	0.730	B	225	1200Ø	B125	600x600
SMH07	26.950	26.040	0.910	B	225	1200Ø	B125	600x600
SMH08	26.900	25.770	1.130	B	225	1200Ø	D400	600x600
SMH09	27.000	26.245	0.755	B	150	1200Ø	D400	600x600
SMH10	26.850	26.180	0.670	B	150	1200Ø	D400	600x600
SMH11 - Downstream Defender	26.900	25.650	1.250	B	225	-	D400	600x600
SMH12 - Petrol & Silt Interceptor	26.900	25.550	1.350	B	225	-	D400	600x600
SMH13	30.225	29.600	0.625	Plastic	150	450Ø	B125 Recessed	300x300
SMH14 - Backdrop	30.225	29.350 / 26.300	3.925	A	150	1200Ø	B125 Recessed	600x600
SMH15	26.860	26.250	0.610	Plastic	150	450Ø	B125 Recessed	430x430
SMH16	26.860	26.070	0.790	B	225	1200Ø	B125 Recessed	600x600
SMH17	26.950	25.920	1.030	B	225	1200Ø	B125	600x600
SMH100 - Hydrobrake MH	26.800	24.600	2.200	B	150	1200Ø	D400	600x600
SMH101	26.800	24.300	2.500	B	150	1200Ø	B125	600x600
EX. SMH	24.800	23.825	0.975	-	-	-	-	-
EX. SMH - 6451	26.860	25.570	1.290	-	-	-	-	-
EX. SMH - 7353	21.080	19.730	1.350	-	-	-	-	-
SMH102	24.600	23.800	0.800	B	150	1200Ø	D400	600x600

Notes

- Contractor to undertake CCTV of existing connection prior to commencing works on site and verify invert level.
- Surface water discharge to be agreed with local authority prior to connection.
- Surface water invert at connection to be verified prior to commencing works.
- Catch pits to be installed to all chambers/manholes prior to discharge to attenuation chamber.
- Any drainage run through RPA to be agreed with tree officer prior to commencing installation.
- Manhole and interception cover level to be confirmed.
- For Aco drain to entrance/door threshold use Aco RainDrain Brickslot B 125 or similar approved with heel protector.
- For the gully to bin store use 150x150 square gully with metal cover.

Worthing - Maintenance Schedule					
Item	Visual Inspection	Cleanse / De-sludge	CCTV Survey	Responsibility	Comments
Surface Water Drainage System (pipework, chambers etc.)	1 years	10 years	10 years	Building Owner	Cleansing to be carried as necessary
Gullies / Channels / Rainwater Stacks	Monthly	1 years	N/A	Building Owner	Cleansing to be carried as necessary
Catch Pit / Petrol / Silt Interceptor	Monthly	1 years	N/A	Building Owner	Maintenance in accordance with manufacturer's instructions
Attenuation Crates / inlet and outlet headwalls	Monthly	As required	N/A	Building Owner	Clear inlet and outlet grates as required. Desludge as requied
Foul Drainage System (pipework, chambers etc.)	1 year	10 years	10 years	Building Owner	Cleansing to be carried as necessary
Downstream Defender	Monthly	1 years	N/A	Building Owner	Maintenance in accordance with manufacturer's instructions

DO NOT SCALE FROM THIS DRAWING

GENERAL

1. These notes are intended to augment drawings and specifications. Where conflict of requirements exists the order of precedence shall be as shown in the specifications. Otherwise the strictest provision shall govern.
2. This drawing is to be read in conjunction with all other relevant Engineers and Architects drawings,
3. Drawings not to be scaled. All dimensions to be checked on site by the Contractor prior to the commencement of any work or shop drawing. Any discrepancies to be notified to the Architect & Engineer and further instructions obtained before work is commenced.

DRAINAGE NOTES

1. Invert of foul and surface water inspection chambers to be min 600mm below FFL
2. Covers HD in road, MD in paths and landscaped areas.
3. All branches from stacks 100mm Ø.
4. All inspection chambers 450mm Ø with 450mm covers.
5. Manholes generally to be 1200x750 or 1050 Ø with 600x600 or 600 Ø covers except manholes between 1.5 & 2.7m deep which are to be minimum 1200mm Ø.
6. Ground floor ensuite shower and bath connections made below floor into nearest run min. 2000mm downstream using 135 branch pipe. Trap to be demountable for rodding.
7. RWP to discharge into roddable access gullies compatible
8. Gullies in hardstanding to be Hepworth semi-universal-square top (200m² capacity).
9. Ensure trap is fitted on laundry installation (separate connection).
10. Drain runs in the car park area to be surrounded in minimum 150mm pea gravel giving class s bedding factor 2.5.
11. All soil stacks to be vented - those marked SVP are taken through the roof and vented to air , all other to be fitted with Agrement Certified Air Admittance Valves.
12. Invert levels, pipe diameters, gradients, and connection points associated with petrol interceptors, storage and infiltration areas to be specified by Subcontractor.
13. Rocker pipes are to be fitted at each side of any pipes penetrating walls or relieving lintels are to be provided.
14. See project specification for further information.
15. 150Ø drains assume 1:150 unless stated
16. 100Ø drains assume 1:80 unless stated
17. Kitchen wastes connected to above floor grease trap and then into soil stack.
18. Where manhole/inspection chamber covers are located in paved or block paved areas, then covers need to be recessed to accept paving type.

DRAWING REVISIONS

REV	DESCRIPTION	DATE	BY	CHK
A	Updated to suit LA comments	07-03-2023	GB	GB
B	Updated to suit LA comments	03-10-2023	GB	GB

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PROJECT

Care Home Development at
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DRAWING TITLE

Drainage Layout - Clean Version

DRAWING STATUS

CONSTRUCTION

SCALE	DATE
1:200 @ A1	April 2021
DRAWN BY	CHECKED BY
GB	GB

JOB NO.	DWG NO.	REV
2969	SL(5)502	B

TANK LONG SECTION (Typical Installation)

Backfill to be compacted granular material Type 1(or Type 2). Tracked excavators (not exceeding 21 tonnes weight) should be used to placed fill over the AquaCell units

At least 300mm of fill should be placed before Construction Traffic delivering the backfill are allowed to traffic over the units.

Compact in 150mm layers after the initial 300mm layer. Compaction Plant should should not exceed 2300kg/m width.

TANK CROSS SECTION (Typical Installation)

Backfill to be compacted granular material Type 1(or Type 2). Tracked excavators (not exceeding 21 tonnes weight) should be used to placed fill over the AquaCell units

At least 300mm of fill should be placed before Construction Traffic delivering the backfill are allowed to traffic over the units.

Compact in 150mm layers after the initial 300mm layer. Compaction Plant should should not exceed 2300kg/m width.

INSTALLATION METHOD

1. Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the AquaCell units to provide a minimum 300mm to allow for compaction.
2. Lay 150mm bed of coarse sand(gravel, level and compact. Alternatively 75mm of blinding concrete may be used. A 25mm Lean mix blinding layer would also be suitable.
3. Lay the geotextile over the base and up the sides of the trench.
4. Lay the geomembrane on top of the geotextile over the base and up the sides of the trench (if being used for Attenuation)
5. Lay the AquaCell units parallel with each other. In multiple layer applications, the AquaCell units with continuous vertical joints should be avoided. AquaCell units can be laid in a brick bond pattern where they overlap the joints below. For single layer applications use the AquaCell Base Plate or the AquaCell Clips and AquaCell Clips and the AquaCell Shear Connectors (vertical rods).
6. Place the flange adaptors/ socket adaptors into position and fix using self-tapping screws.
7. Backfill the excavation around the AquaCell structure and to manufacturers recommendations. Compaction holes for flange/pipe connections.
8. Wrap and overlap the geotextile covering the entire AquaCell structure, to protect the geomembrane.
9. Lay 100mm of coarse sand between the trench walls and the AquaCell Core/ Plus units and compact
10 Lay 150mm bed of coarse sand over the AquaCell units and compact. Backfill with suitable backfill material.

NB: A storage tank must be vented, and it is recommended that one vent pipe, 110mm in diameter is provided per AquaCell Core unit within the stormwater catchment area on a site.

GEOMEMBRANE/GEOTEXTILE SPEC

Geomembrane:

- 1mm thick Polypropylene or 0.75mm LLDPE geomembrane is recommended and joints should be sealed using proprietary welding techniques.

Geotextile:

- 300g Non-woven with sewn or glued joints.

It is crucial that the specified material will:

- Withstand the rigours of installation
- Resist puncture
- Resist multi-axial elongation stress and strains associated with settlement
- Resist environmental stress cracking
- Resist chemical attack from site constituents
- Remain intact for the full design life of the AquaCell installation

Geomembranes with a thickness less than 1mm thick Polypropylene or 0.75mm LLDPE are unlikely to meet these criteria and are therefore not recommended for use with the AquaCell system in this application

See Drainage Layout for Site Specific Connections

TYPICAL VENT

TYPICAL PLAN

BACKFILL SPECIFICATION

Backfill to be compacted granular material Type 1(or Type 2). Tracked excavators (not exceeding 21 tonnes weight) should be used to placed fill over the AquaCell units

At least 300mm of fill should be placed before Construction Traffic delivering the backfill are allowed to traffic over the units.

Compact in 150mm layers after the initial 300mm layer. Compaction Plant should should not exceed 2300kg/m width.

See continuation of site plan below

Continuation of site pan