

SuDS MAINTENANCE MANAGEMENT PLAN

This document sets out the principles for the long-term management and maintenance of the proposed surface water Sustainable Drainage Systems (SuDS) installed at the Care Home at Stanhorn Grove, Felpham PO22 8FA

The purpose of this document is to ensure that the adopting operator of the building is entrusted with a robust inspection and maintenance programme, ensuring the optimum operation of the surface water drainage network is continually maintained for the lifetime of the development and to prevent the increased risk of flooding both on and off site.

As a managed care home all SuDS systems will be the responsibility of the company operating/running the care home to maintain.

SUDS are engineered solutions that aim to mimic natural drainage processes. They help to reduce pollution of watercourses and localised flooding, as well as providing amenity benefit and biodiversity.

Key Factors to be considered during maintenance

- Undesirable plants – all efforts should be made to prevent drains becoming blocked and the growth of unintentional vegetation which could be detrimental to the intentional plant regime, biodiversity aims and the building fabric.
- Regular site attendance for litter collection, grass cutting and checking of inlets, outlets and control structures.
- Occasional visits to brush clean inlet gullies and drainage channels, remove silt from source control features.
- Drain heads and outlets – all drainage points must be checked every year and cleared out if necessary to ensure optimum performance.

The maintenance of all drainage features serving the development will be maintained by the building owner/operator. Ongoing maintenance activities for this infrastructure are detailed below.

All those responsible for the maintenance operations should adhere to the relevant health and safety legislation for the activities listed within this report (including lone working, if relevant). Method statements and risk assessments should always be completed prior to the undertaking of any works.

Drainage Strategy

The surface water runoff from the proposed care home development is drained via a separate surface water drainage network. The system includes:

- Type C permeable paving to the access road and car parking bays. The subbase of the permeable paving collects and stores rainwater in high rainfall events before discharging to the attenuation crates.
- Attenuation crates are provided within the East car parking area to store runoff in high rainfall events.
- Discharge from SMH15 which is within the car parking area adjacent the substation is limited via a hydrobrake limiting discharge to 1.1l/s.
- The surface water discharges from the hydrobrake to a new headwall installed adjacent to the existing watercourse.
- The full network has been designed to accommodate rainfall events within the network over a range of storm durations up to 1 in 100 years with a 45% climate change allowance.

Permeable and Porous Surfaces

The ongoing maintenance activities for below Permeable and Porous Surfaces are detailed below.

Permeable and Porous Surfaces	
Regular Maintenance	Frequency
Cleaning Brush regularly and remove sweepings from all hard surfaces	Monthly
Occasional Tasks	Frequency
Brush and vacuum surface once a year to prevent silt blockage and enhance design life.	As required
Remedial Work	Frequency
Re-grit paving blocks	Annually
Relay block pavements	As required
Monitor effectiveness of permeable pavement and when water does not infiltrate immediately advise Client of possible need for reinstatement of top layers or specialist cleaning. - Recent experience suggests jet washing and suction efficiency. - cleaning will substantially reinstate pavement to 90%	As required

Attenuation Crates

The ongoing maintenance activities for below ground cellular storage crates are detailed below.

Attenuation	
Regular Maintenance	Frequency
Inspection - Record and clean as required	Monthly
Litter and debris removal	Monthly
Occasional Tasks	Frequency
CCTV survey is blockages identified, jet clean as required. In line with manufacturers recommendations	As required
Remedial Work	Frequency
Jet clean as required. In line with manufacturers recommendations	As required

Catch Pit / Silt interceptor

The ongoing maintenance activities for the petrol and silt interceptor should be in line with manufacturer recommendations. A summary of the typical expected requirements is detailed below.

Catch Pit / Silt interceptor	
Regular Maintenance	Frequency
Inspection - Record and empty/clean as required	Monthly
Litter and debris removal	Monthly
Testing alarm system	Annually
Occasional Tasks	Frequency
Service – in line with manufacturers recommendations	As required in line with manufacturers recommendations
Remedial Work	Frequency
Jet clean as required. In line with manufacturers recommendations	As required in line with manufacturers recommendations

Hydrobrake

The ongoing maintenance activities for the hydrobrake should be in line with manufacturer recommendations. A summary of the typical expected requirements is detailed below.

Hydrobrake	
Regular Maintenance	Frequency
Inspection - Record and empty/clean as required	Monthly
Litter and debris removal	Monthly
Occasional Tasks	Frequency
Service – in line with manufacturers recommendations	As required in line with manufacturers recommendations
Remedial Work	Frequency
Jet clean as required. In line with manufacturers recommendations	As required in line with manufacturers recommendations

Conventional Surface Water Drainage Features

The maintenance of all drainage features serving the development will be maintained by the building owner/operator. Ongoing maintenance activities for this infrastructure are detailed below.

Maintenance Activity	Action	Frequency
Check gully pots, linear drainage channels and catchpits	Check, clean and empty gully pots and catchpits as required to remove debris and sediment	Regular - Monthly
Check manholes and inspection chambers	Inspect manholes and inspection chambers for any signs of blockages. Clean, jet and empty as required	Regular - Annually
CCTV survey and jetting of drains	Check the integrity of drains, jet and clean as required. Remove collected debris as required	As necessary Every 5 years
Hydrobrake chambers / Vortex Flow Control – visual inspection	Check and remove any silt build up or blockages in accordance with the Manufacturers recommendations	Typically annually or as required

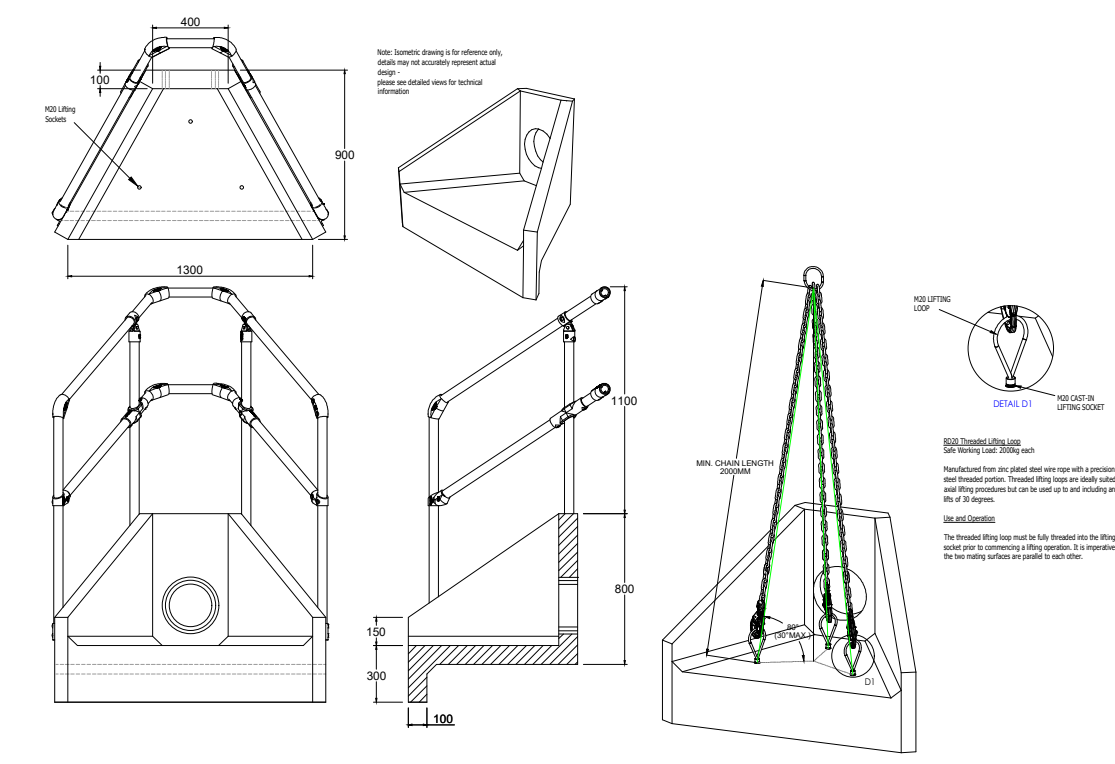
Records

A service log will be maintained which will include details of all scheduled maintenance required. Logs will be incorporated that record when checks were carried out and whether any actions are deemed necessary. If actions are required, a breakdown of the maintenance measures undertaken or in progress will be logged along with the date when the action was or is to be scheduled.

Records will be maintained by the management company for a minimum period of 5 years.

APPENDIX A

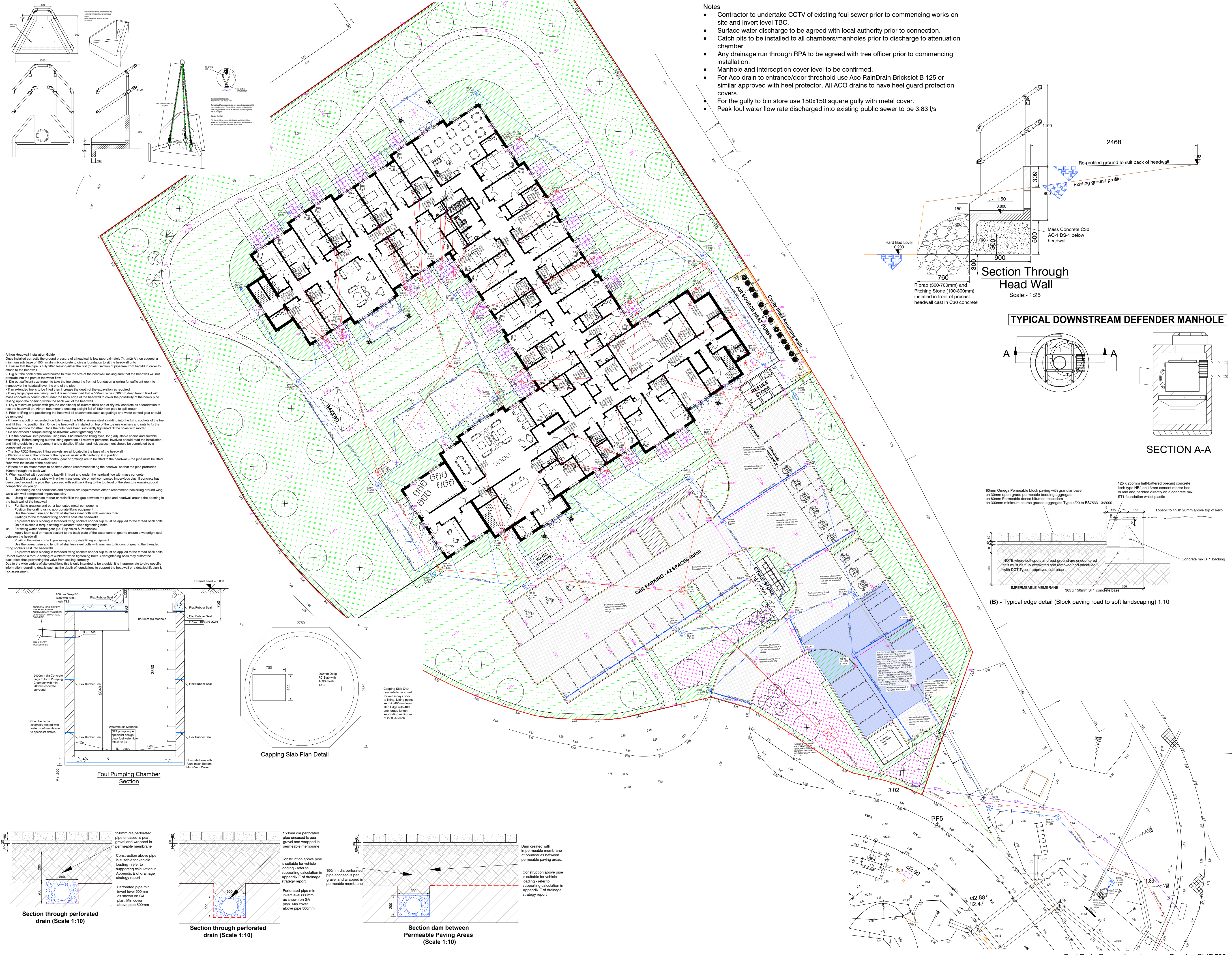
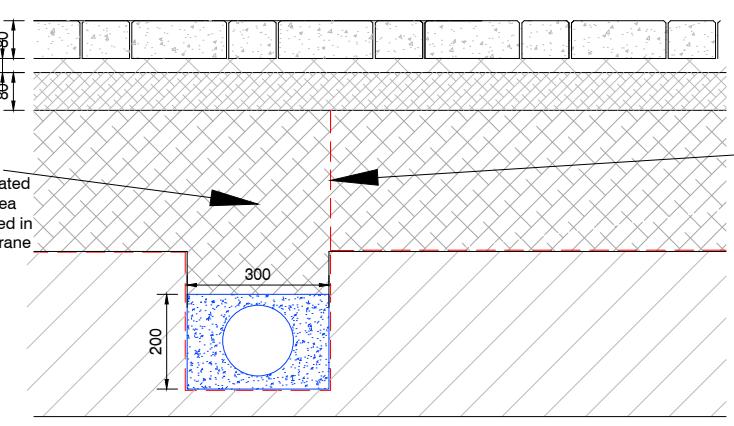
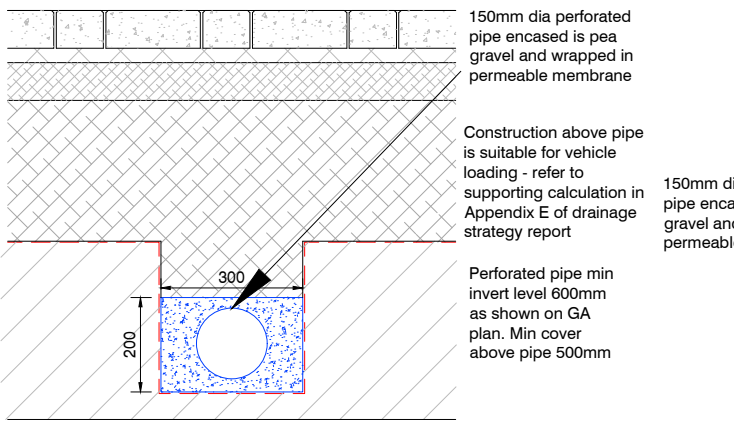
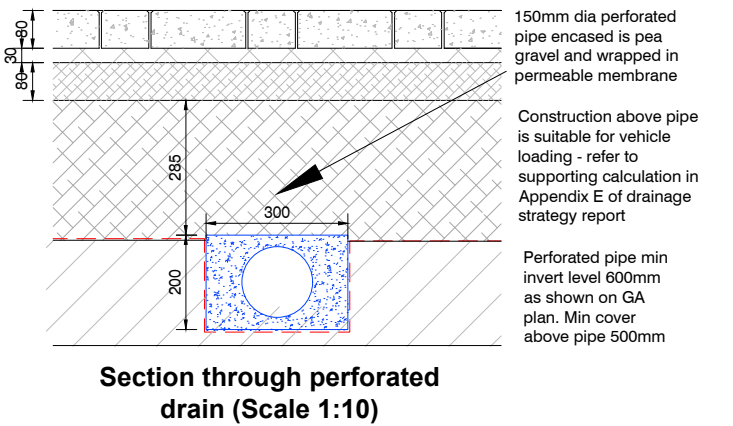
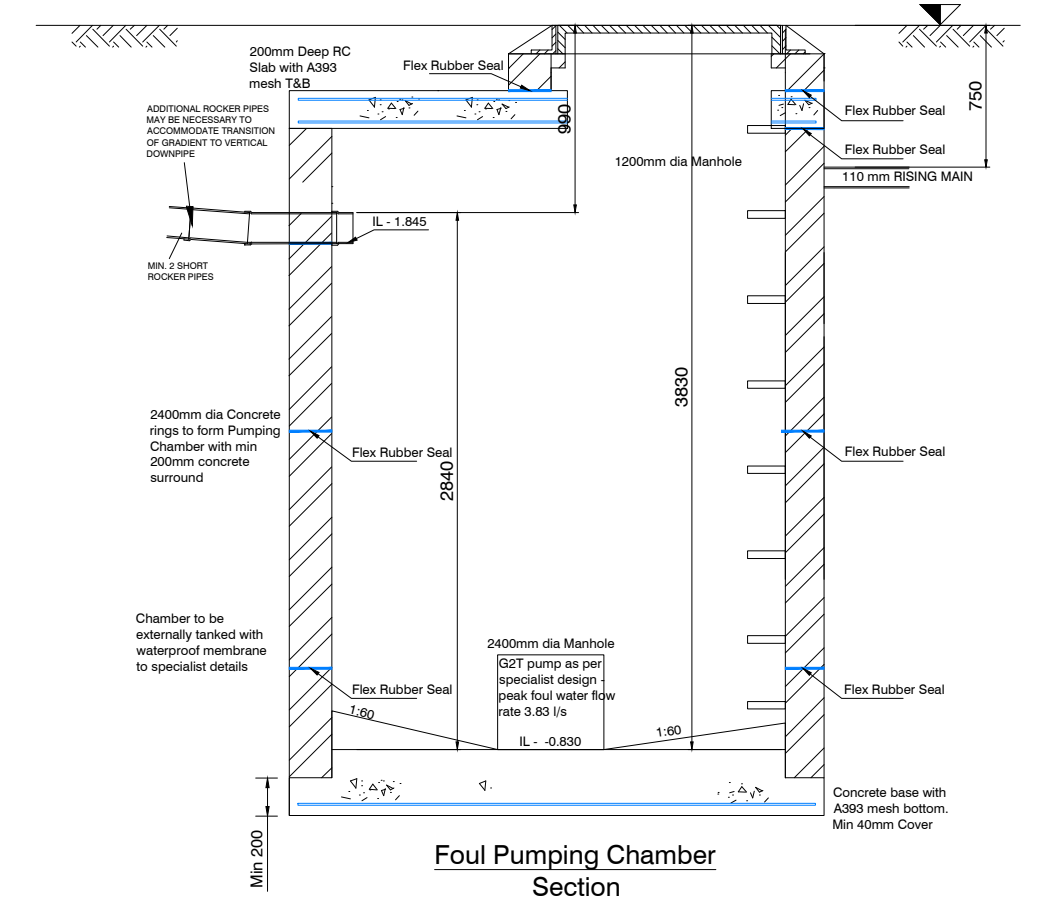
APPROVED DRAINAGE LAYOUT



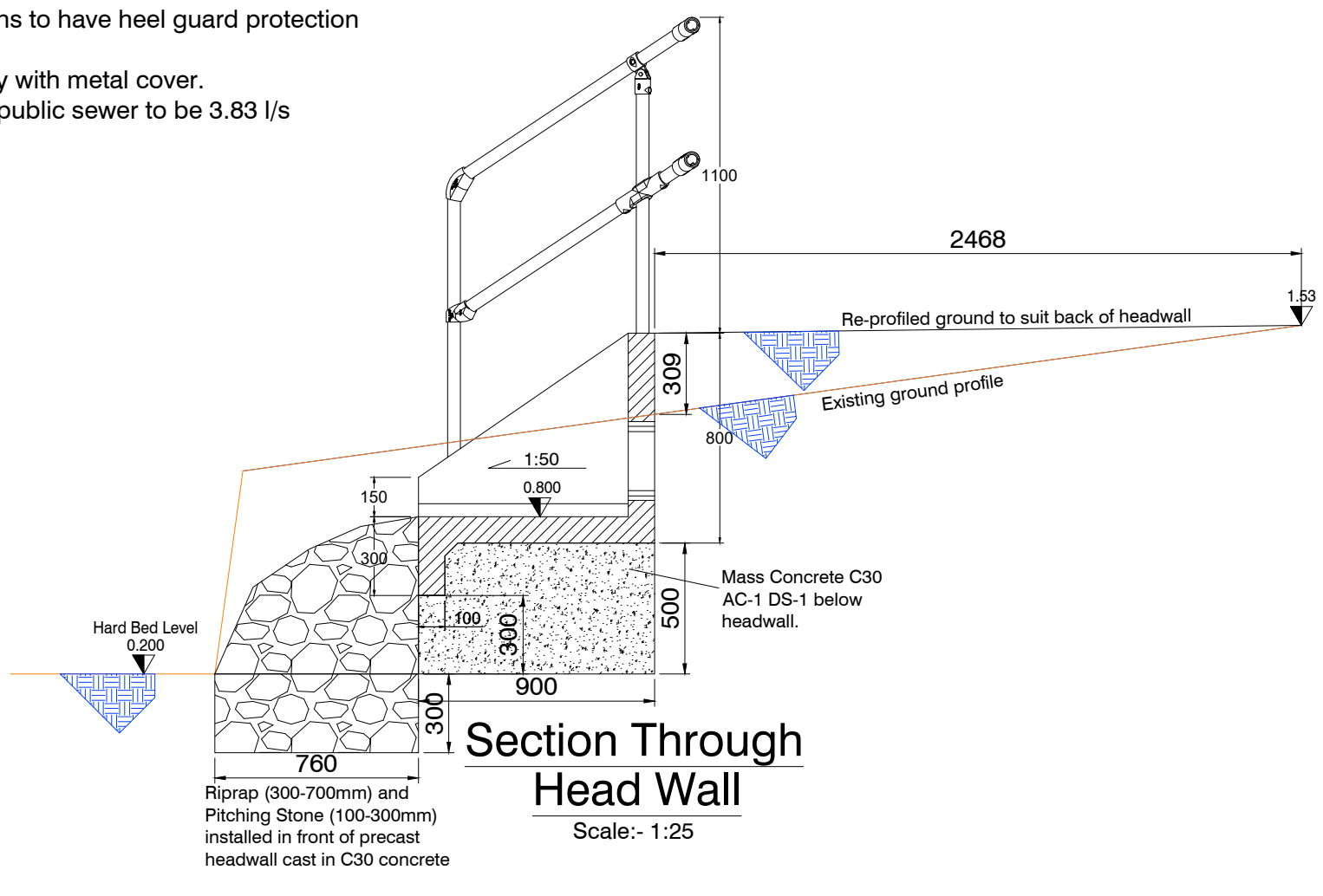
Althon Headwall Installation Guide

Once installed correctly the ground pressure of a headwall is low (approximately 70kN/m²). Althon suggest a minimum sub-base of 150mm dry mix concrete to give a foundation to all the headwall into.

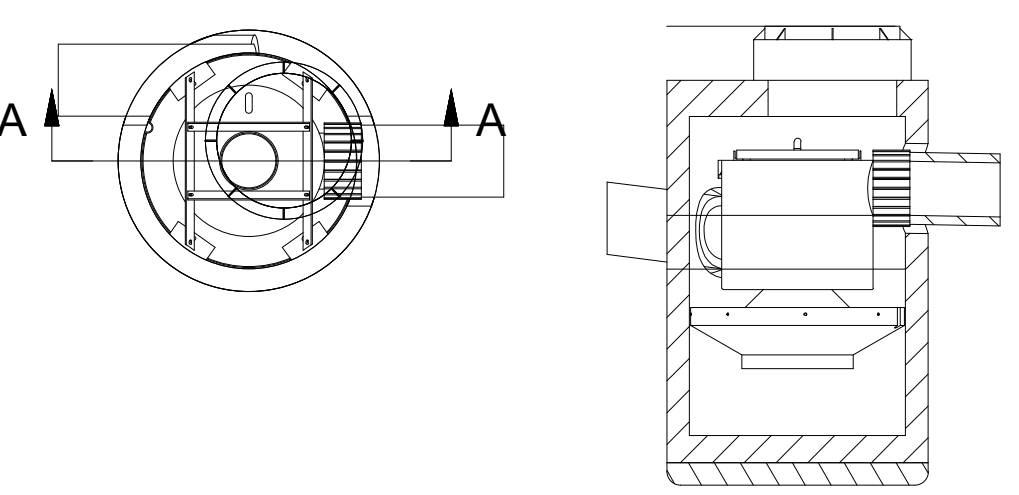
1. Ensure that the pipe is fully fitted leaving either the first (or last) section of pipe free from backfill in order to attach to the headwall.
2. Dig out the back of the watercourse to take the size of the headwall making sure that the headwall will not protrude into the path of the water flow.
3. Dig out sufficient size trench to take the toe along the front of the foundation allowing for sufficient room to manoeuvre the headwall over the end of the pipe.
4. If an extended toe is to be fitted then increase the depth of the excavation as required.
5. If very large pipes are being used, it is recommended that a 500mm wide x 700mm deep trench filled with mass concrete is constructed under the back edge of the headwall to cover the possibility of the heavy pipe resting upon the opening within the back wall of the headwall.
6. Lay a minimum (varies with ground conditions) of 100mm thick bed of dry mix concrete as a foundation to rest the headwall on. Althon recommend creating a slight fall of 1:50 from pipe to wall mouth.
7. Prior to fitting and positioning the headwall all attachments such as gratings and water control gear should be removed.
8. If there is a bolt on extended toe fully thread the M16 stainless steel stud into the fitting sockets of the toe and fit this into position first. Once the headwall is installed on top of the toe use washers and nuts to fix the headwall and toe together. Once the nuts have been sufficiently tightened fit the holes with mortar.
9. Do not exceed a torque setting of 40Nm when tightening bolts.
10. Lift the headwall into position using 3x RD20 threaded fitting eyes, long adjustable chains and suitable machinery. Before carrying out the fitting operation all relevant personnel involved should read the installation and fitting guide in this document and a detailed fit plan and risk assessment should be completed by a competent person.
11. The 3x RD20 threaded fitting sockets are all located in the base of the headwall.
12. Placing a firm at the bottom of the pipe will assist with overlying it in position.
13. If attachments such as water control gear or gratings are to be fitted to the headwall - the pipe must be fitted flush with the inside of the back wall.
14. If there are no attachments to be fitted Althon recommend fitting the headwall so that the pipe protrudes 50mm through the back wall.
15. When satisfied with positioning backfill in front and under the headwall toe with mass concrete.
16. Backfill around the pipe with either mass concrete or well-compacted impervious clay. If concrete has been used around the pipe then proceed with soil backfilling to the top level of the structure ensuring good compaction as you go.
17. Depending on soil conditions and specific site requirements Althon recommend backfilling around wing walls with well compacted impervious clay.
18. Using an appropriate mortar or resin fill in the gap between the pipe and headwall around the opening in the back wall of the headwall.
19. For fitting gratings and other fabricated metal components:
Position the grating using appropriate fitting equipment.
Use the correct size and length of stainless steel bolts with washers to fix gratings to the headwall fitting sockets cast into headwalls.
To prevent bolts loading in threaded fitting sockets copper slip must be applied to the thread of all bolts. Do not exceed a torque setting of 40Nm when tightening bolts. Overlightening bolts may distort the back plate thus preventing the valve from sealing correctly.
Due to the wide variety of site conditions this is only intended to be a guide. It is inappropriate to give specific information regarding details such as the depth of foundations to support the headwall or a detailed fit plan & risk assessment.



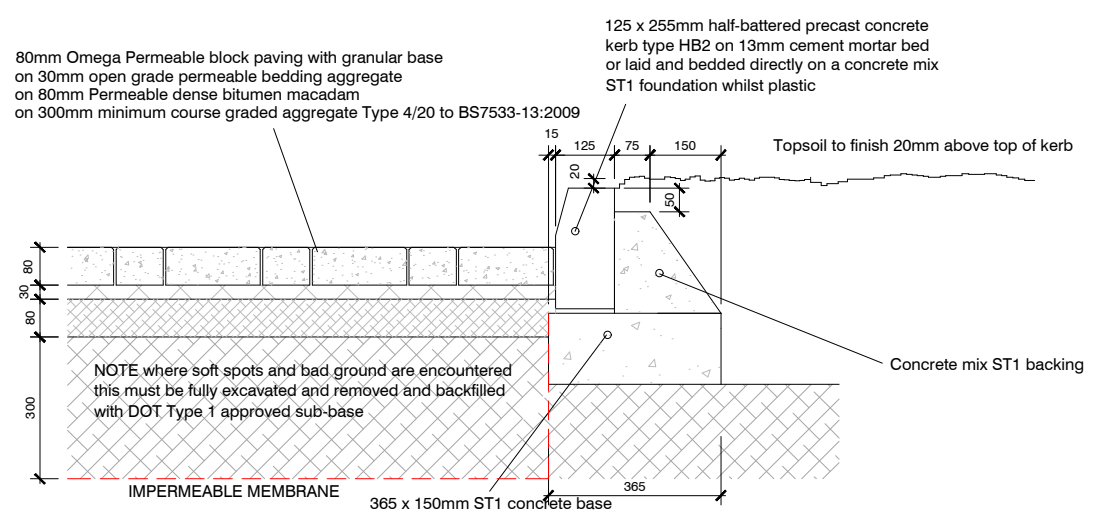
- Notes**
- Contractor to undertake CCTV of existing foul sewer prior to commencing works on site and invert level TBC.
 - Surface water discharge to be agreed with local authority prior to connection.
 - Catch pits to be installed to all chambers/manholes prior to discharge to attenuation chamber.
 - 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. All ACO drains to have heel guard protection covers.
 - For the gully to bin store use 150x150 square gully with metal cover.
 - Peak foul water flow rate discharged into existing public sewer to be 3.83 l/s



TYPICAL DOWNSTREAM DEFENDER MANHOLE



SECTION A-A



- 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 3 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 Agreement 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 inlets are to be provided.
 14. See project specification for further information.
 15. 1500 drains assume 1:150 unless stated
 16. 1000 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.

Key

—	Foul water pipe showing flow direction
FMH00	Foul water manhole & number
FC000	Foul water inspection chamber & number
—	Surface water pipe showing flow direction
SMH00	Surface water manhole & number
SC000	Surface water inspection chamber & number
—	Soakaway exhalation zone
—	Perforated pipe & Rocking eye
—	Dam between permeable paving zones

DRAWING REVISIONS

REV	DESCRIPTION	DATE	BY	CHK
A	Updated to suit latest site plan	06-11-2025	GB	JF
B	Foul rising main added due to culvert	21-11-2025	GB	JF
C	Updated to attenuation solution following groundwater monitoring	26-01-2026	GB	JF
D	Updated SVPs, surface water discharge point	05-03-2026	JF	GB
E	Foul drainage to north of culvert Pumping Chamber Section	05-03-2026	JF	GB
F	Updated to suit comments	13-03-2026	JF	GB
G	Updated to suit clashes	24-03-2026	JF	GB
H	Updated to suit addition SVP + AGD underlay	26-03-2026	JF	GB
I	SVA location	27-03-2026	JF	GB
J	SVP locations	30-03-2026	JF	GB
K	Updated to suit comments for Bywater consent / Pumping Station cover	15-04-2026	GB	JF
L	Foul drainage level revised to suit site constraint	17-04-2026	JF	GB
M	Surface water discharge updated to suit LA comments	17-04-2026	GB	JF
N	Surface water discharge updated to suit LA comments	06-05-2026	GB	JF
O	Surface water discharge updated to suit LA comments	11-05-2026	GB	JF
P	Updated to suit comments	26-05-2026	GB	JF
Q	Updated to suit comments	12-08-2026	GB	JF



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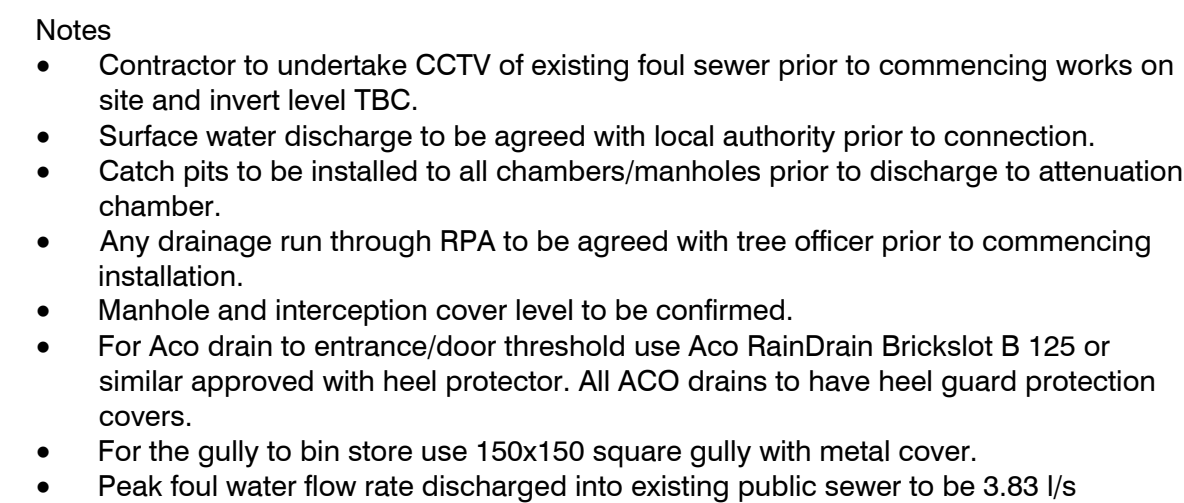
CLIENT
Halbourne Group

PROJECT
Felpham Carehome

DRAWING TITLE
Drainage Layout

DRAWING STATUS
CONSTRUCTION

SCALE	DATE	
1:250 @ A1	Jun 2025	
DRAWN BY	CHECKED BY	
JF	GB	
JOB NO.	DWG NO.	REV
0043	SL(5)500	Q



Technical cross-section drawing of a head wall structure. Key dimensions and components include:

- Overall Dimensions:** Total width of 2468, base width of 900, and a height of 1100.
- Structural Layers:**
 - Mass Concrete C30 AC-1 DS-1 below the headwall.
 - Riprap (300-700mm) and Pitching Stone (100-300mm) installed in front of the precast headwall.
- Ground Profile:** Shows the existing ground profile and the re-profiled ground to suit the back of the headwall.
- Other Dimensions:** A horizontal distance of 760 is shown at the base, and a vertical distance of 300 is shown for the riprap layer. A slope of 1:50 is indicated for the backfill.
- Scale:** 1:25

[illegible]

Unit Reference

CHE-0071-2200-0840-2200

Depth (m)

Flow (L/s)

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
	Soakway exclusion zone
	Perforated pipe & Rodding eye

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JOB NO.	DWG NO.	REV
0043	SL(5)503	A