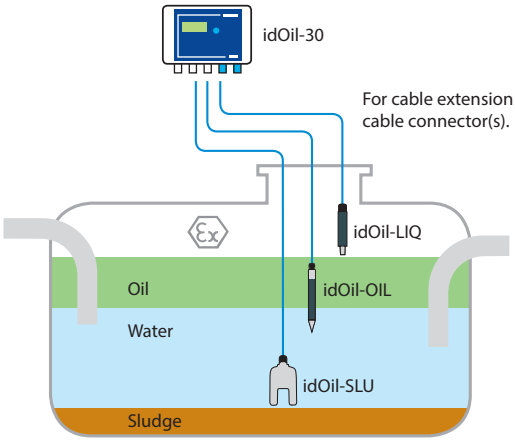
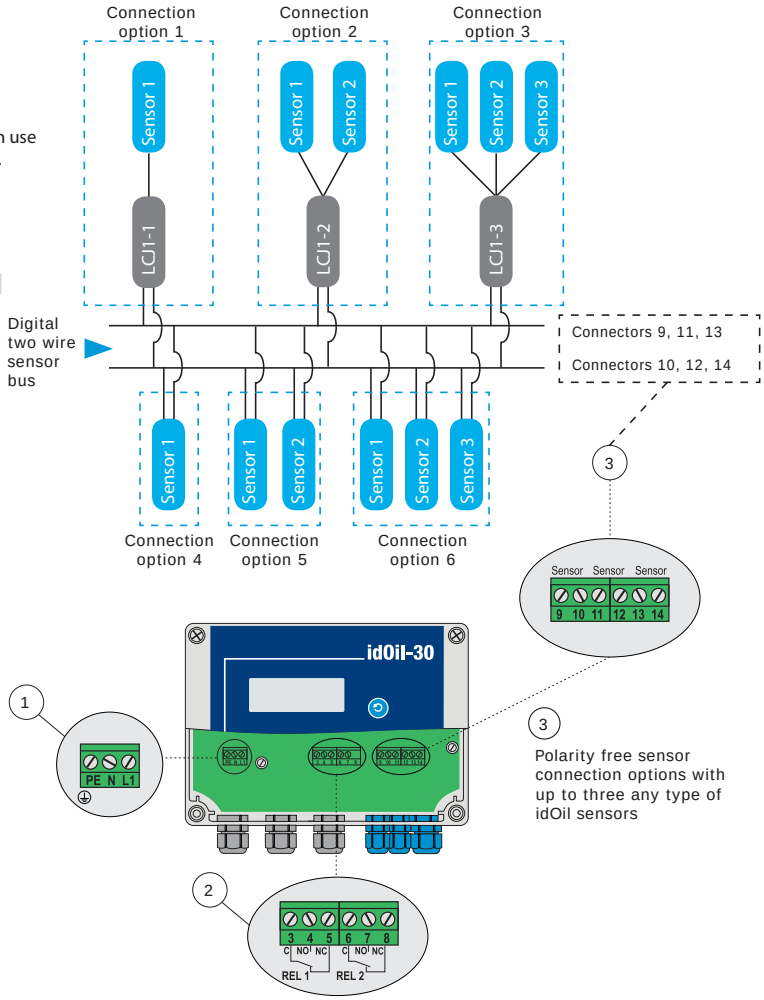
Application



Installation



Polarity free sensor connection options with up to three any type of idOil sensors

Settings, configurations and information via browser user interface



- System status view with current alarms
- Date and time settings
- Language selection
- Alarms log, downloadable
- Inspection settings
- Write inspection notes
- Inspection diary, downloadable
- Customer data input for display
- Alarm settings
- Sensor identification and naming
- Relay configuration
- Software update

Cable connectors



LCJ1-1
Cable connector for one sensor



LCJ1-2
Cable connector for two sensors



LCJ1-3
Cable connector for three sensors

1 Supply voltage 100-240 V AC
PE = Ground conductor
N = Neutral conductor
L1 = Phase conductor

2 Supply voltage 100-240 V AC
Relay 1
3 = Common pole
4 = Opening pole when alarm
5 = Closing pole when alarm
Relay 2
6 = Common pole
7 = Opening pole when alarm
8 = Closing pole when alarm

3 Sensor connectors
9 = Sensor 1 connection 1
10 = Sensor 1 connection 2
11 = Sensor 2 connection 1
12 = Sensor 2 connection 2
13 = Sensor 3 connection 1
14 = Sensor 3 connection 2

3.18 IdOil®-D30 Oil Separator Alarm Control Unit



Fulfils requirements of EN 858-1&2 standards

idOil-D30 is a control unit for oil separator alarm systems. It can be equipped with up to three types of idOil sensors. With the idOil-D30 and applicable Labkotec sensors following alarms can be monitored:

- High liquid level alarm, when the liquid level in the oil separator rises excessively e.g. in an outlet blockage situation.
- Oil layer thickness alarm, when the oil separator's full capacity for oil or petrol has been reached.
- Sludge layer thickness alarm, when the sludge layer in the bottom of the separator has reached its maximum level.
- Separator leakage alarm, when the liquid level drops unexpectedly.

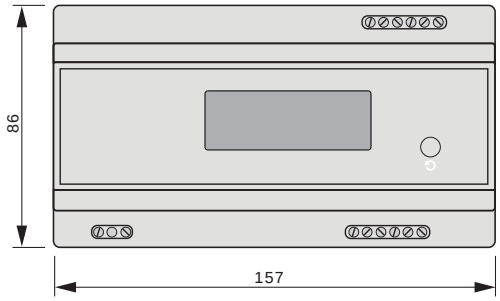
In these situations, an integrated alarm buzzer will sound, the display will show the alarm information and the relay(s) will switch. idOil-D30 can be connected locally to laptop/tablet/smartphone via WLAN to access the inbuilt browser user interface for further configurations and settings.

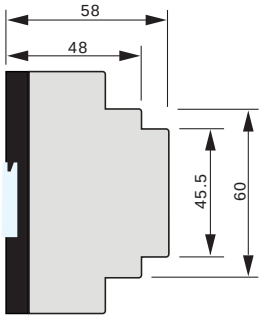
Features

- Multi supply voltage
- Selectable sensor combination with up to three sensors
- Polarity-free sensor connection
- Automatic sensor and sensor type detection
- Quick one touch commissioning
- Display for system status and alarm information
- Two fully configurable potential free relay outputs
- Alarm log
- Service and maintenance diary
- WLAN connection locally between control unit and laptop/tablet/ smartphone to access the built in browser user interface for settings and configuration

Mounting	M36 DIN rail mounting
Enclosure material	Lexan 940 (top), Noryl VO 1550 (base)
Weight	380g
IP classification	IP20
Display	4 line monochrome LCD
Ambient temperature	-30°C...+60°C
Supply voltage	100-240V AC, 50/60 Hz
Supply power fuse	Max. 10 A
Power consumption	Max. 12 VA
Relay outputs	5 A, 250 V AC/30 V DC, 100 VA potential free changeover contacts, 2 pcs
EMC	IEC/EN 61000-6-2 IEC/EN 61000-6-3
Electrical safety	Class 1, CAT II IEC/EN 61010-1, UL 61010-1 CAN/CSA-C 22.2 NO. 61010-1-12
Ex-classification	Ⓔx II (1) G [Ex is Ga] IIB
ATEX **IECEx**	VTT 16 ATEX 018X IECEx VTT 16.0005X
Exi interface values	U_o = 14.5 V, I_o = 78mA, P_o = 367 mW, R = 243 Ω
Max values in IIB	C_o = 4.0 µF, L_o = 16.7 mH
Compatible sensors	idOil-LIQ high liquid level sensor idOil-OIL oil sensor idOil-SLU sludge sensor
Accessories	LCJ1-1 cable connector for one sensor LCJ1-2 cable connector for two sensors LCJ1-3 cable connector for three sensors

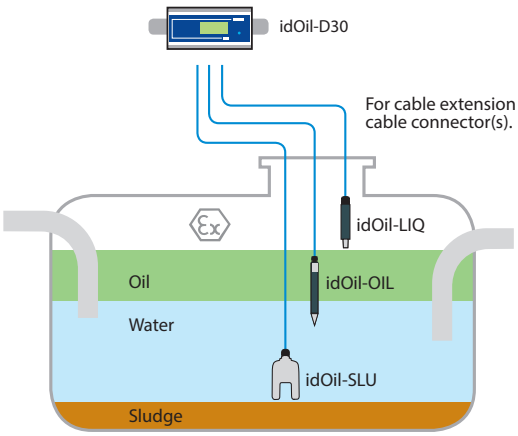
Dimensions (mm)





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Application



Settings, configurations and information via browser user interface



- System status view with current alarms
- Date and time settings
- Language selection
- Alarms log, downloadable
- Inspection settings
- Write inspection notes
- Inspection diary, downloadable
- Customer data input for display
- Alarm settings
- Sensor identification and naming
- Relay configuration

Cable connectors



LCJ1-1
Cable connector for one sensor

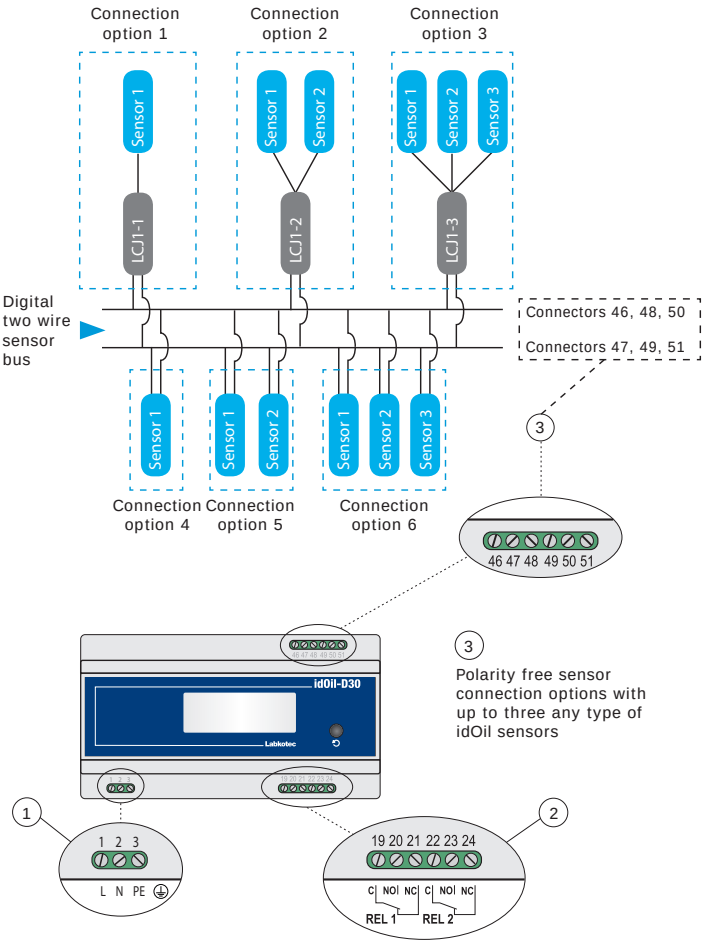


LCJ1-2
Cable connector for two sensors



LCJ1-3
Cable connector for three sensors

Installation



3 Polarity free sensor connection options with up to three any type of idOil sensors

1 Supply voltage 100-240 V AC
1 = L, phase conductor
2 = N, neutral conductor
3 = PE, ground conductor

2 Relay output
Relay 1
19 = Common pole
20 = Opening pole when alarm
21 = Closing pole when alarm
Relay 2
22 = Common pole
23 = Opening pole when alarm
24 = Closing pole when alarm

3 Sensor connectors
46 = Sensor 1 connection 1
47 = Sensor 1 connection 2
48 = Sensor 2 connection 1
49 = Sensor 2 connection 2
50 = Sensor 3 connection 1
51 = Sensor 3 connection 2

3.20 IdOil® Solar Oil Separator Alarm



idOil Solar with beacon light



idOil Solar

Enclosure material	Polycarbonate
Weight	8000g
IP classification	IP43 with two ventilation devices
Ambient temperature	-30 °C...+60 °C
Supply voltage	11-17 V DC
Compatible sensors	idOil-LIQ, idOil-OIL, idOil-SLU
Relay outputs	5 A, 30 V DC, 100 VA potential free, 2 pcs
EMC	IEC/EN 61000-6-2 IEC/EN 61000-6-3
Electrical safety	Class III, IEC/EN 61010-1, UL 61010-1 CAN/CSA-C 22.2 NO. 61010-1-12
Overvoltage category	
ATEX	VTT 16 ATEX 018X
IECEx	IECEx VTT 16.0005X
Ex-classification	Ⓔx II (1) G [Ex ia Ga] IIB

idOil Solar oil separator alarm

The idOil Solar is a solar powered oil separator alarm for off-grid areas. It can be equipped with a beacon light and/or 3G modem.

In an alert situation, the beacon light will flash and/or an alarm message will be sent to the user's mobile phone. The idOil Solar control unit has the same features as the idOil-30.



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The purpose of the automatic closure device (ACD) is to close the separator off automatically when the maximum storage capacity of light liquid is attained.

The ACD is to ensure that in the event of a major spillage, pollutants do not pass into the drainage system; it should not be regarded as a substitute for an automatic alarm/monitoring system.

Prior to installation

Prior to installation the ACD retaining tube should be covered with polythene to prevent ingress of concrete etc., which would fall onto the ACD and upset its calibration.

Operation and maintenance

If the tank should fill with light liquid the ACD, which is calibrated for a specific gravity of 0.85, will automatically fall and close off the SPEL Puraceptor®.

Normally routine maintenance would include removing light liquid intercepted within the Puraceptor®. If a SPEL automatic alarm/monitoring system is incorporated, it will automatically indicate when the Puraceptor® should be emptied. Only in an emergency will the Puraceptor® fill to its maximum and operate the ACD.

In such an event the Puraceptor® should be completely sucked out and the ACD lifted out (see Maintenance Procedure – Ref: 5.5).

SPEL Puraceptor® class 1 separators two chamber models and full retention class 2 separators

Commissioning

After the tank has been installed, leave the water in.

1. Remove the ACD from the packing box, taking care not to cause damage.
2. Remove the retaining cap from the top of the retaining tube in the separator.
3. Insert the ACD into the retaining tube using the lifting eye provided, ensuring it floats correctly with the float just visible above the water level.
4. Replace the retaining cap. This is to safeguard against the removal of the float by unauthorised persons or rising above the tube under abnormal conditions.

Note: If the tank's invert depth exceeds 1m it is advisable to remove the retaining cap prior to installation and only replace after inserting the ACD, if it is possible to do so from ground level.

SPEL Puraceptor® class 1 separators single chamber models

Models P004/1C to P050/1CSC.

Commissioning

After the tank has been installed, leave the water in.

1. Remove the ACD from the packing box, taking care not to cause damage.
2. Remove the retaining cap from the top of the retaining tube in the separator.
3. Insert the ACD into the retaining tube using the lifting eye provided. Allow it to sink to the bottom. The stainless steel retaining plate should seat on the base flange and the ACD attain its operating position as shown in the open position.
4. Replace the retaining cap. This is to safeguard against the removal of the float by unauthorised persons or rising above the tube under abnormal conditions.

Note: If the tank's invert depth exceeds 1m it is advisable to remove the retaining cap prior to installation and only replace after inserting the ACD, if it is possible to do so from ground level.

Larger Models

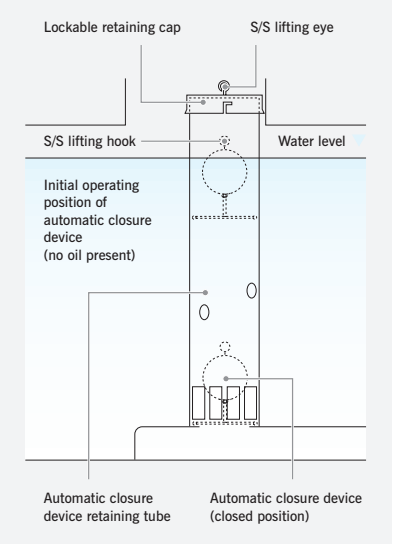
Where the ACD is already positioned in the unit, proceed as follows:

1. Before putting any water in the tank, lift rope attached to ACD up to the next knot and hang it from the rope hook. This is now in the 'operating position'.
2. As soon as the water level in the tank is above the ACD, the rope must be removed altogether and the rope hook must be unbolted. Do not leave the rope hook attached to the shaft. Ensure the ACD automatically remains in the 'operating position'.
3. Tape up or fill the hole(s) in the shaft where the rope hook was attached to prevent any backfill seeping into the shaft.

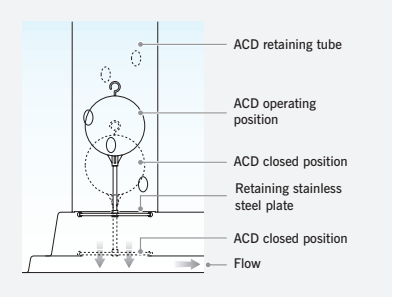
Maintenance

Dependent upon site conditions it is advisable to remove the ACD periodically taking care not to raise it too quickly and damage the plastic/copper float. Clean from debris/silt to prevent premature closing. Check the seating in the base unit is free of debris/silt that could prevent proper closing in an emergency.

Automatic closure device Type F (Floating) SPEL Puraceptor® class 1 separators (two chamber) & full retention class 2 separators.



Automatic closure device Type R (Retained) SPEL Puraceptor® class 1 separator (single chamber).

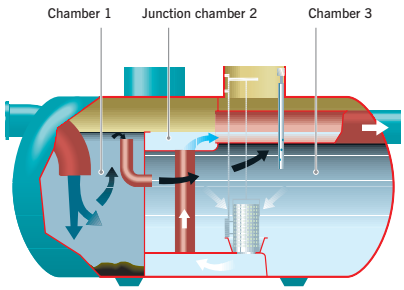


Maintenance

The SPEL Stormceptor® by-pass separator is a well proven high quality factory made unit, designed and tested in accordance with the European Standard BS EN 858-1 and meets the requirements of the Environment Agency and the Construction Products Regulations.

SPEL Stormceptors® are designed for long term performance and with SPEL high volume coalescer units, low maintenance.

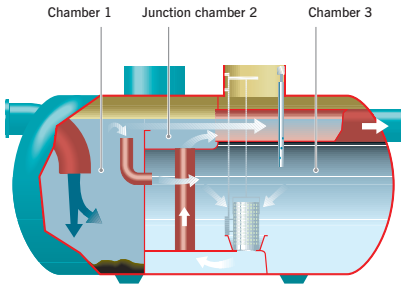
SPEL Stormceptor® by-pass separators are manufactured in class 1 and class 2 models and with or without silt capacity in accordance with BS EN 858-1. The range of models is listed in section 4 or on the SPEL Stormceptor® selection chart – available on request.



Flows according to nominal size (NSB)

The polluted surface water first enters the primary chamber where silt settles out and is retained. The fuel, oil and other pollutants lighter than water, rise to the surface and are efficiently skimmed off and transferred to the separation chamber.

In normal conditions all the flow is through the separation chamber, where the quiescent conditions allow the pollutants to separate out efficiently. Water from the cleanest zone in the separation chamber flows through a coalescer unit, to remove smaller globules of oil, up to the junction chamber and thence to the outlet



Storm flows above NSB

During a storm the level in the primary chamber rises and the stormwater passes over the weir into the junction chamber and to the outlet.

The design keeps the turbulence within the separation chamber to a minimum which avoids disturbing the contaminants retained.

Maintenance requirements

The SPEL automatic alarm/monitoring system will automatically warn you when the SPEL Stormceptor® requires emptying of light liquids, however, silt will accumulate and require removing at intervals depending on the site conditions.

We recommend the SPEL Stormceptor® is checked at 3, 6, or 12 monthly intervals to determine the depth of silt in the primary chamber.

Where a SPEL automatic alarm/monitoring system is not fitted, the SPEL Stormceptor® should be checked at 3, 6, 12 monthly intervals, depending upon site conditions, to determine the depth of retained pollutants. When the depth of light liquids retained has reached the predetermined design level in accordance with the European Standard BS EN 858-1, or if excessive silt has accumulated, it should be emptied.

When emptying ensure both chambers (primary - chamber 1 and separation - chamber 3) are emptied equally to prevent unequal pressure on the internal partition.

Chamber 1

The inlet connects directly into chamber 1 - the primary chamber where silt etc. is deposited and light liquids are skimmed off to be transferred to the main separation chamber, chamber 3.

Maintenance requires the removal of accumulated silt etc., checking the skim pipe is not blocked and removing floating debris.

Chamber 2

This is the junction chamber where the clean water passing out of the main separation chamber and the storm flow over the weir from the primary chamber meet and pass to the outlet. This chamber is an approved sampling point if samples are required for analysis. As it is mainly clean water passing though the chamber, maintenance is confined to checking the weir plate is free of debris.

Chamber 3

The main separation chamber is where the light liquids are retained and in the case of class 1 Stormceptors®, where the coalescer units are incorporated.

If coalescer units are incorporated, these should be removed and cleaned in accordance with the requirements set out in Data Sheet ref. 3.23 steps 1 to 5.

Retained light liquids should be removed from the top and any sediment from the bottom. Small Stormceptor® by-pass separators generally need to be completely emptied.

SPEL automatic alarm / monitoring system

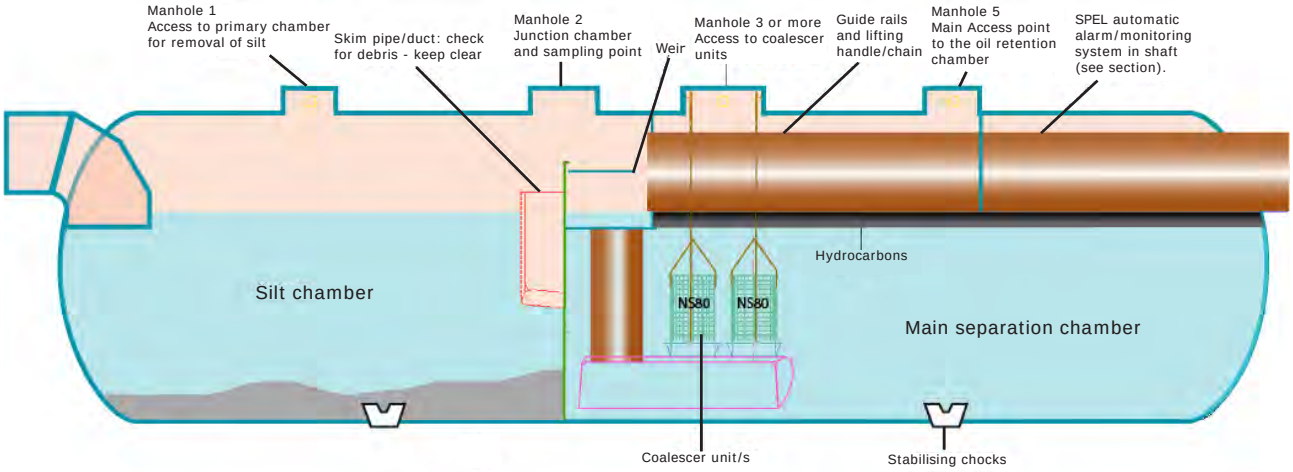
If a SPEL automatic alarm/monitoring system is fitted this will automatically signal when the Stormceptor® requires light liquids to be removed. If this system is fitted see 3.10 – 3.19.

When emptying take care not to damage or shift the probe protection tube situated in the access shaft of chamber 3.

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Maintenance Access

SPEL Stormceptor® class 1 by-pass separators 400, 500 & 600 Series



A wide range of SPEL Stormceptor® class 1 by-pass separators is available incorporating coalescer unit/s for small to large catchment areas.

When emptying ensure both chambers (primary – chamber 1 and separation – chamber 3) are emptied equally to prevent unequal pressure on the internal partition.

Manhole access 1

This is the access to the primary chamber for removal of silt, the inspection of the skim pipe and clearing of any floating debris.

Manhole access 2

This provides access to the junction chamber which is suitable as a sampling point for the final discharge.

Manhole access 3 & 4 (larger models)

These provide access for the inspection, the removal and reinsertion of the coalescer units and the removal of hydrocarbons and silt.

The SPEL automatic alarm/monitoring system probe is generally situated at the base of this access shaft (see section on alarms).

Maintenance

SPEL Puraceptor® class 1 separators

The SPEL Puraceptor® class 1 separator is available in single chamber or two chamber models.

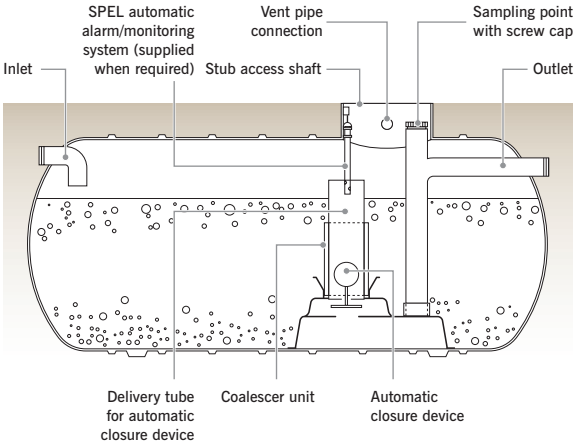
Single chamber models (Figure 1)

These incorporate a coalescer unit and an automatic closure device type 'R'. For maintenance see 3.20.

Two chamber models (Figure 2)

The maintenance procedure for the SPEL Puraceptor® class 1 two chamber models is detailed on sheet 3.20.

Figure 1



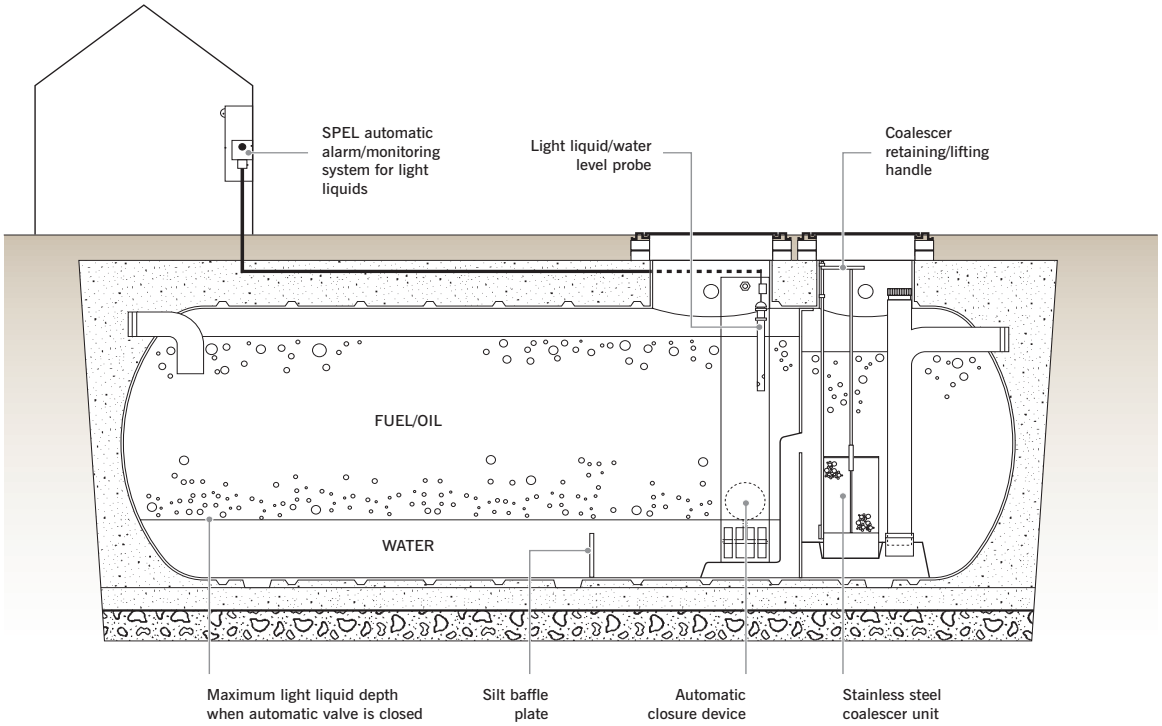
Maintenance requirements

The SPEL automatic alarm/monitoring system will automatically warn you when the SPEL Separator requires emptying of light liquids. See ref. 3.10 – 3.19. However, silt will accumulate and require removing at intervals depending on the site conditions.

We recommend the SPEL Separator is checked at 3, 6 or 12 monthly intervals to determine the depth of silt in the primary chamber.

Separators must be provided with a remote device to provide visual and audible warning when the level of oil reaches 90 per cent of the oil storage volume (V) under static liquid level conditions. This automatic warning device indicates that the separator is in need of immediate emptying for it to continue to work effectively.

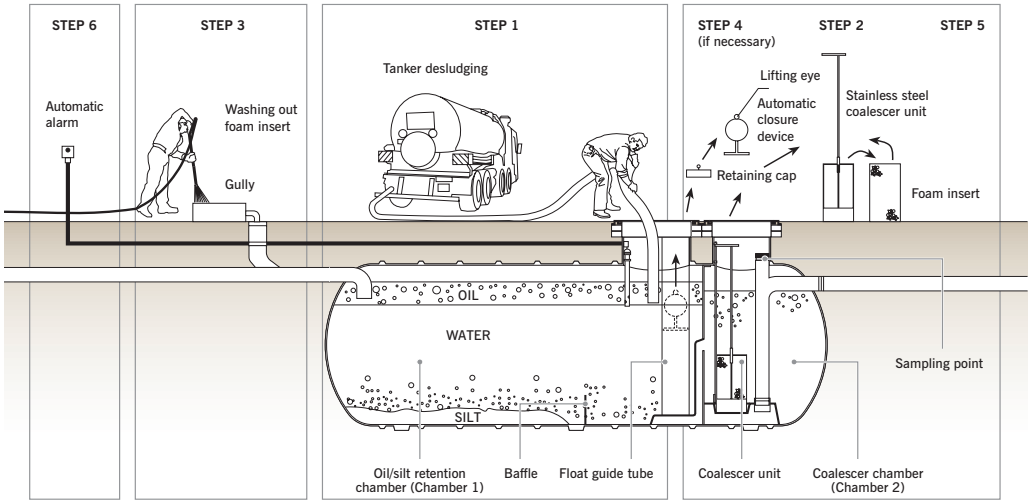
Figure 2



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Maintenance

SPEL Puraceptor® separator - two chamber model



Step 1: Coalescer unit

Use the lifting handle or unclip the retaining clip for the wire rope and lift the coalescer unit out of the tank and place ahead of the Puraceptor®.

Step 2: Cleaning foam insert

Remove foam insert and wash with normal water pressure ensuring the dirty water runs into the Puraceptor®.

Step 3: Sucking out oil/fuel and silt

Suck off the retained oil from both chambers of the Puraceptor® and then the silt deposited on the bottom, leaving sufficient water to ensure the ACD remains floating.

Step 4: Sucking out complete contents (if necessary)

If the quantity of pollutants exceeds recommended levels, the complete contents of the Puraceptor® may need to be removed.

After sucking out completely, remove the ACD in the ACD retaining tube by first removing the retaining cap (this is to safeguard against the removal of the float by unauthorised persons).

Then, by means of a pole with a hook, lift out the ACD using the lifting eye on the float. Check the seating at the base of the retaining tube is free of debris/silt that could prevent the ACD closing off in an emergency.

Step 5: Re-insert coalescer unit and ACD

Re-insert the foam insert into the stainless steel coalescer unit and re-insert the coalescer unit into the Puraceptor®. Re-clip the wire rope or location pin as provided with the SPEL lifting/locating/locking system (see 3.7).

Partially fill the Puraceptor® with clean water to ensure the ACD when re-inserted remains floating. Check the ACD is not damaged and the closure plate is clean. Re-insert the ACD.

Finally check the ACD is floating and the retaining cap has been replaced to safeguard against its removal by unauthorised persons, unless depth of tank precludes doing so from ground level.

ACD closes off in emergency due to oil spill

If the ACD closes off, the oil/fuel spill needs to be removed by a suction tanker. With a single chamber model, the complete contents will need to be removed in order to release the ACD. With the two chamber models, insert the suction hose into the first chamber (oil/silt retention chamber) and then the head in the second chamber will normally provide a back pressure and automatically release the ACD.

Precaution: never try to pull the ACD off its seating by force.

Step 6: SPEL automatic alarm / monitoring system

The SPEL automatic alarm/monitoring system probe should be lifted out of the probe protection tube, wiped clean and re-inserted. The system should now be reset according to instructions.
See 3.10 – 3.19.

Maintenance procedure

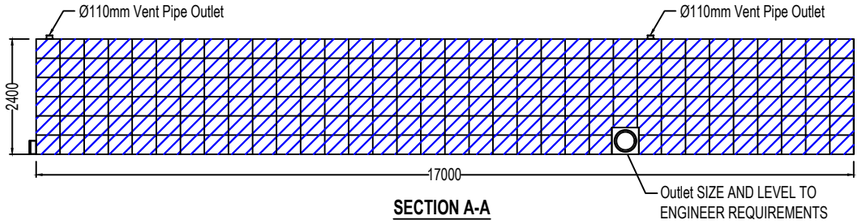
The SPEL automatic alarm/monitoring system will automatically warn you when the Puraceptor® requires emptying. See 3.10 – 3.19. Where a SPEL automatic alarm/monitoring system is not fitted, SPEL Puraceptors® should be checked at three, six or twelve-monthly intervals depending on site conditions, to determine the depth of retained pollutants and silt in both chambers and the correct operating of the ACD (automatic closure device). When the depth of the oil/fuel retained has reached the predetermined design level, in accordance with BS EN 858-1, it should be emptied.

Important Note: When emptying, ensure both chambers are emptied equally starting with the oil retention chamber and then the coalescer chamber and back again until empty.

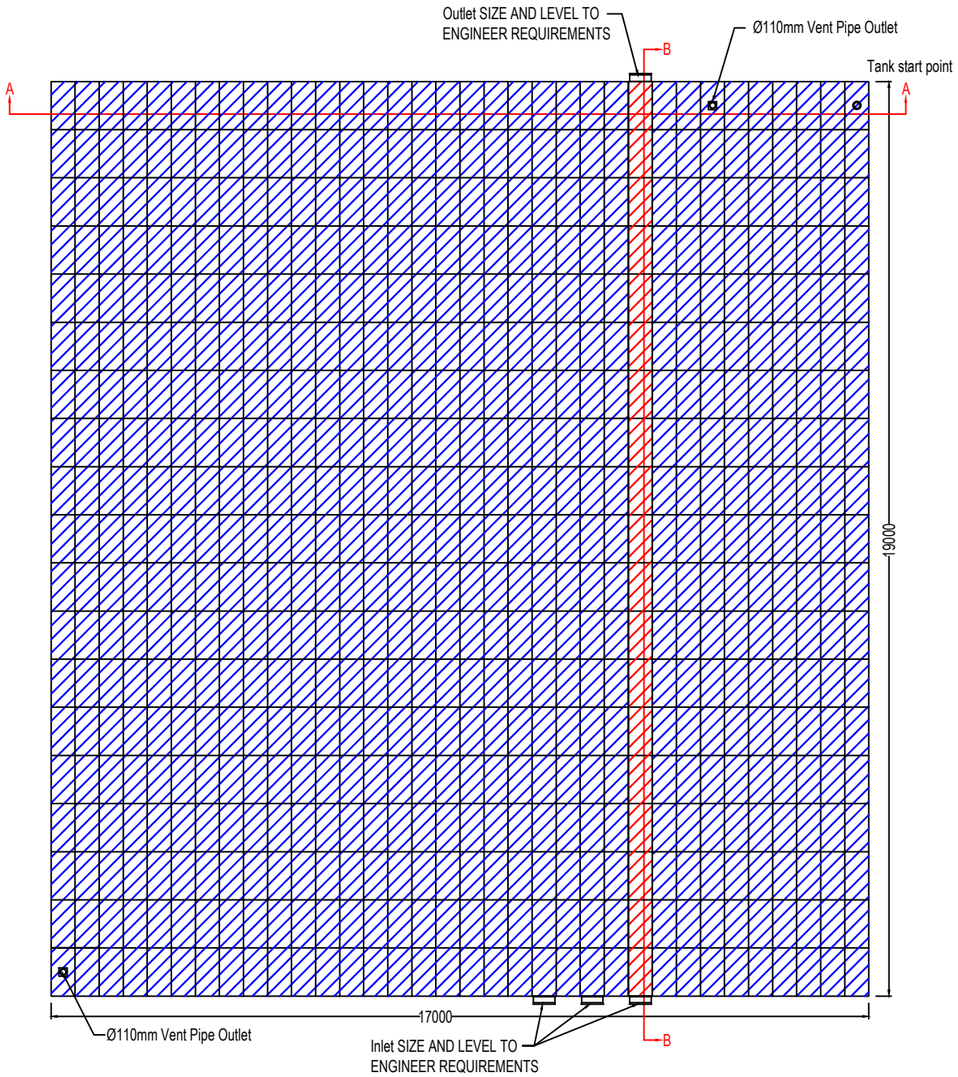
Appendix C

Rainwater Harvesting Tank Manufacturer Detail

APPENDIX E2 - ATTENUATION TANK 1 DETAILS



SECTION A-A

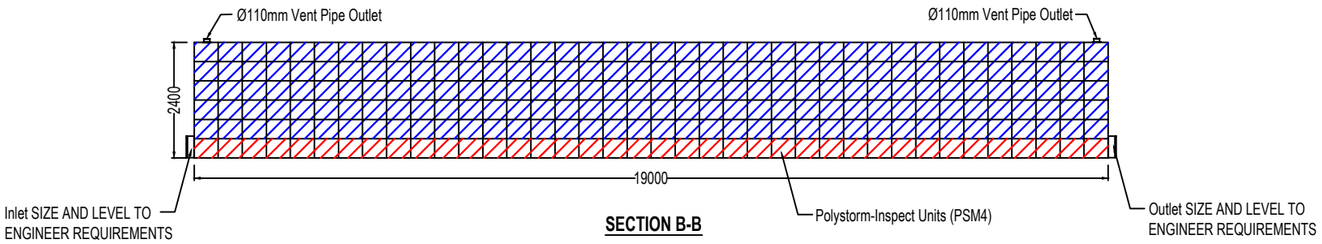


PROPOSED POLYSTORM STRUCTURE	
Plan Area	323m²
Tank Volume	775.2m³
Storage	736.44m³
Polystorm-R Units	3857 (PSM1A)
Polystorm-Inspect Units	19 (PSM4)

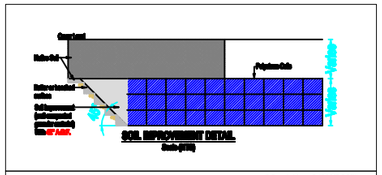
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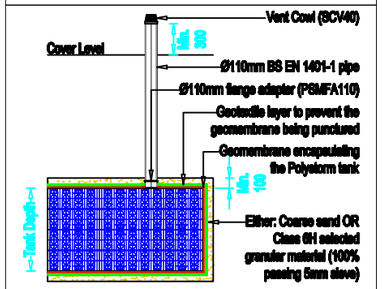
Polystorm-R Units (PSM1A)

Polystorm-Inspect Units (PSM4)

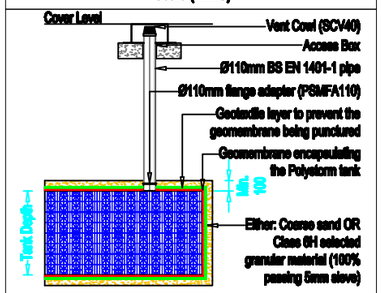


SECTION B-B

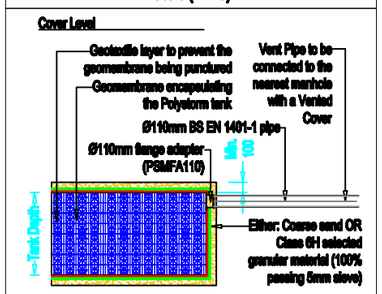




ATTENUATION TANK VENTILATION SYSTEM - OPTION 1)
Scale (N.T.S)



ATTENUATION TANK VENTILATION SYSTEM - OPTION 2)
Scale (N.T.S)



ATTENUATION TANK VENTILATION SYSTEM
Scale (N.T.S)

NOTES:-

1. THIS DRAWING DETAILS A PROPOSED POLYPIPE CIVILS & GREEN URBANISATION PRODUCT GENERAL ARRANGEMENT, REFLECTING OUR INTERPRETATION OF THE INFORMATION PROVIDED.
2. POLYPIPE CIVILS & GREEN URBANISATION (PCGU) PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH PCGU RECOMMENDATIONS (REFER TO PCGU TECHNICAL GUIDANCE FOR FURTHER INFORMATION); GIVING DUE CONSIDERATION TO THE SITE SPECIFIC CONDITIONS AND REQUIREMENTS, IN ADDITION TO ANY REQUIREMENTS MANDATED BY THE RELEVANT APPROVING AND ULTIMATE OWNER ORGANISATIONS).
3. DO NOT SCALE, REFER TO FIGURED DIMENSIONS ONLY.
4. ALL DIMENSIONS IN MILLIMETRES, UNLESS OTHERWISE STATED.
5. ALL DIMENSIONS ARE NOMINAL AND MAY VARY WITHIN MANUFACTURING OR CONSTRUCTION TOLERANCES.
6. ALL SITE TEMPORARY AND ENABLING WORKS BY OTHERS.
7. THIS DRAWING IS INTENDED FOR GUIDANCE ONLY. CONFIRMATION OF THE INFORMATION CONTAINED WITHIN THIS DOCUMENT SHOULD BE SOUGHT FROM THE OVERSEEING ENGINEER(S) PRIOR TO THE COMMENCEMENT OF FINAL DESIGN OR CONSTRUCTION ACTIVITIES.
8. PLEASE REFER TO POLYSTORM & POLYSTORM LITE TECHNICAL GUIDE.
9. THE PROPOSED POLYSTORM STRUCTURE GENERAL ARRANGEMENT HAS BEEN BASED ON PROVIDING THE MINIMUM STRUCTURE VOLUME STATED ONLY. NO STRUCTURAL OR HYDRAULIC ASSESSMENT HAS BEEN MADE OF THE SUITABILITY OF THE PROPOSED POLYSTORM STRUCTURE FOR THE PROPOSED APPLICATION, NOR HOW IT WILL INTEGRATES INTO THE PROPOSED DRAINAGE SYSTEM.
10. ALL MEMBRANE JOINTS TO BE WELDED RATHER THAN GLUED.

R1	06/09/24	INLET PIPE CONNECTION LOCATION HAS CHANGED TO SUIT.

Notes :- All the Dimensions by Millimeters

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PROJECT
HAMMERSTONE ROAD DEPOT
ATTENUATION TANK

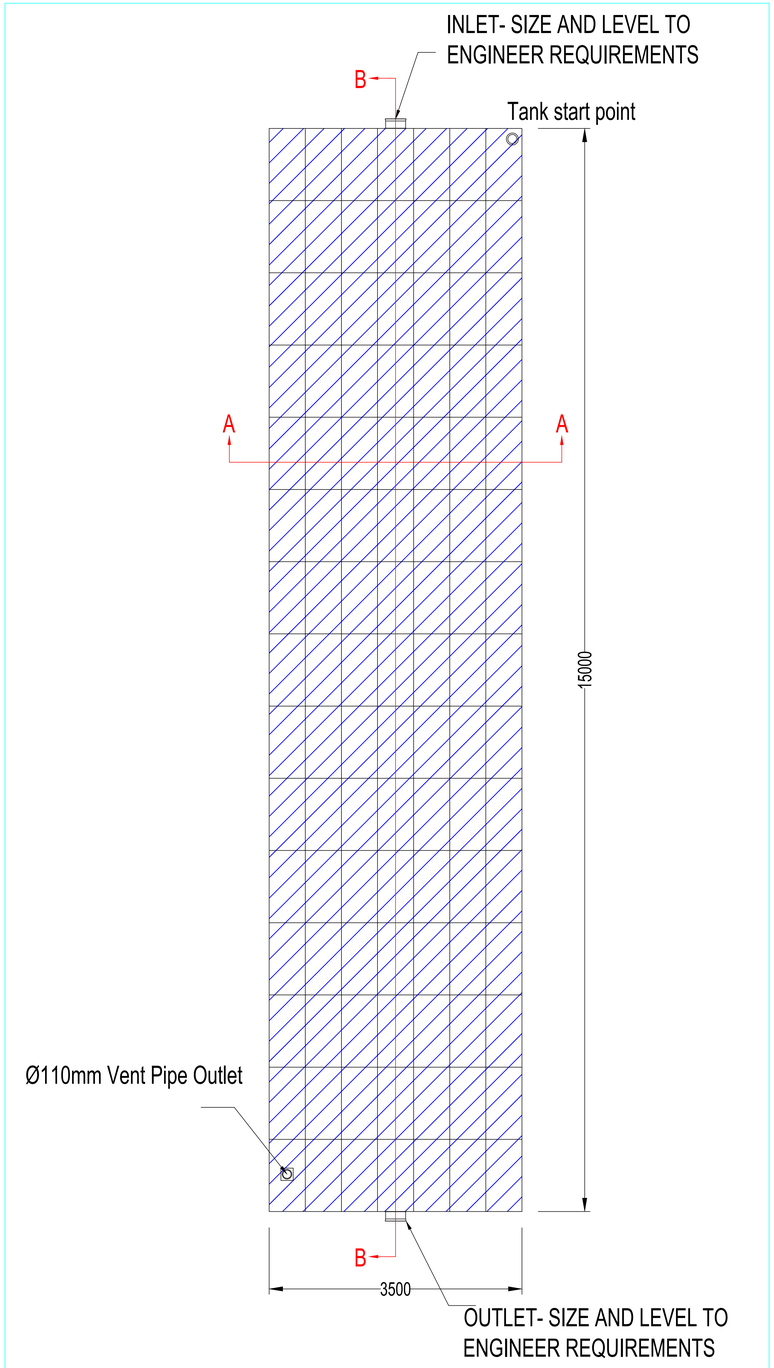
TITLE
DETAILS OF ATTENUATION/STORAGE TANK DETAILS USING POLYSTORM PSM1A UNITS.

Scale	Drawn	Checked
N.T.S.	AY	KD

Date	Drawing No.	Revision
14/06/2024	PSM - 6.0	R1

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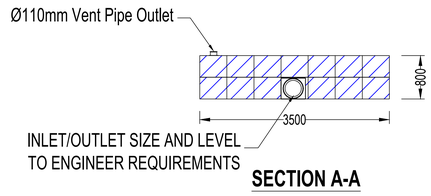
SCALE: 1:30



PLAN

APPENDIX E3 - ATTENUATION TANK 2 DETAILS

SCALE: 1:40



SECTION A-A

PROPOSED POLYSTORM STRUCTURE	
Plan Area	52.50m²
Tank Volume	42m³
Storage	39.90m³
Polystorm-R Units	210 (PSM1A)

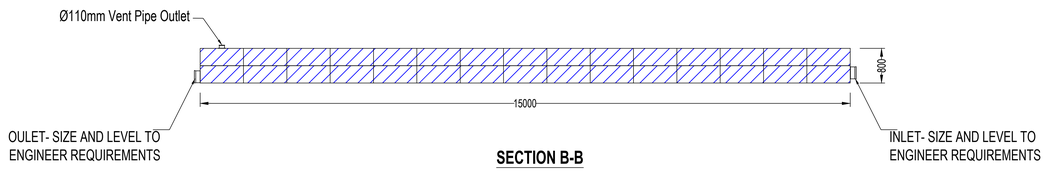
LEGEND:

Polystorm-R Units (PSM1A)

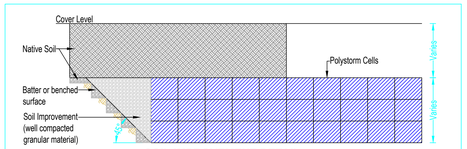
NOTE:

- Fall Arrest Grill to be provided by the developer / contractor (please refer to Consultant's drawings.
- The final position of the access cover should be confirmed by the Consultant and detailed on their drawing.
-Lifting Eyes are to be pointed type - to be provided by the Developer / Contractor (please refer to Consultant's drawings).
- All Polystorm tanks to be installed with a 1:500 fall, please note tank would still drain even if left flat due to our cells 3D flow.

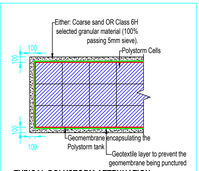
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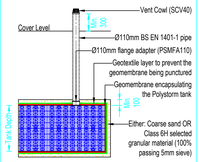
SECTION B-B



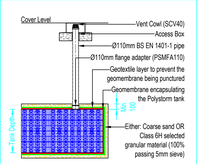
SOIL IMPROVEMENT DETAIL
Scale (1:40)



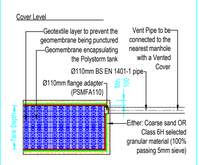
TYPICAL POLYSTORM ATTENUATION INSTALLATION DETAIL
Scale (1:40)



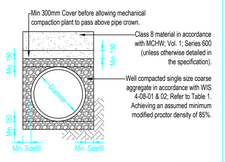
ATTENUATION TANK VENTILATION SYSTEM - OPTION 1)
Scale (1:40)



ATTENUATION TANK VENTILATION SYSTEM - OPTION 2)
Scale (1:40)



ATTENUATION TANK VENTILATION SYSTEM - OPTION 3)
Scale (N.T.S)



TYPICAL SINGLE PIPE INSTALLATION
Scale (1:40)

Table 1 -Pipe Bed & Surround Coarse Aggregate Material Grading

Product	Pipe Size (mm)	Minimum Sidefill (mm)	Material Grading (BS EN 13242, Clause 4.3.2)
Ridgistorm-XL	Ø750 - Ø900	150	4/10, 6/14, 10/20 or 20/40
	Ø1050 - Ø1200	425	
	Ø1500 - Ø3000	500	

NOTES
1. Coarse aggregate materials shall be in accordance with the relevent provisions of BS EN 13242; as detailed within WIS 4-08-02 amendment (Nov 2008). Tables A4 & 5.
2. Alternative pipe bed & surround material specifications shall not be used without prior written approval from the overseeing engineer.
3. For loading specific installation details, where concrete protection may be required, please request RST_SD_001 & 002.

NOTES - PE STUB PIPE ADAPTERS

	PIPE ADAPTOR
Ø160mm SDR26 PE - Ø150mm Polysewer	PS689
Ø250mm SDR26 PE - Ø225mm Polysewer	PS1089
Ø315mm SDR41 PE - Ø300mm Polysewer	PS1289
Ø450mm SDR17 PE - Ø400mm Ridgisewer	see note below*
Ø500mm SDR17 PE - Ø450mm Ridgisewer	see note below*
Ø560mm SDR17 PE - Ø500mm Ridgisewer	see note below*
Ø630mm SDR33 PE - Ø600mm Ridgisewer	see note below*

* - For this transition, Flexseals are required, please refer to their website.

LIFTING POINTS - UNSUITABLE FOR LIFT

1. Fabricated chamber supplied to site without direct means of lifting incorporated. The lift supervisor must assess and plan the lift, in the circumstances of the lift, and provide slings and / or other controls as deemed necessary to ensure a safe lift.

POLYSTORM NOTES

1. This drawing needs to be read in conjunction with all relevant Architects, Engineers and specialist drawings.
2. Stormwater Attenuation / Infiltration system shall be Polypipe Civil's Polystorm pre-formed geocellular system, with minimum 94% volumetric void. Units shall be installed using recommended jointing clips to maintain rigidity and minimise deflection.
3. Multi-layered Polystorm tank configurations shall be fixed with proprietary shear connectors between each vertical layer to maintain rigidity and minimise lateral displacement.
4. Drawings should be read in conjunction with the supportings structural calculations, which are illustrative and should be validated by a suitably qualified Engineer, or similar
5. For Field conditions, backfill should be placed and compacted in layers no greater than 300mm and for trafficked areas, backfill should be placed and compacted in layers no greater than 150mm.
6. The installer shall ensure that all expected temporary construction transient loads have been considered as part of the structural design and a minimum of 300mm backfill should be placed prior to initial compaction.
7. Polystorm Tanks should be installed in accordance with Polypipe Civils recommendations (refer to technical guidance for further information).

COVER SLAB THICKNESS

1. Where cover slabs are applicable, the slab thickness (shown in red) has been assumed and therefore needs to be confirmed by others.

STANDARD TOLERANCES

ALL DIMENSIONS IN MILLIMETRES, UNLESS OTHERWISE STATED.

Benching Slope	1:10 to 1:30 (1.9° - 5.7°)
Angles	+/- 1.5°
All Dimensions	+50mm / -30mm

STANDARD SPIGOTS IN ACCORDANCE WITH SPEC. ES23.

Team Leader inspection points identified by: (1) (2) (3)

JOINTING KEY

Socket	RS	Ring seal joint
Spigot	IEW	Internal extrusion welding joint
	EF	Electro-fusion joint

GENERAL NOTES

1. This drawing details Polypipe Civils proposed offering, reflecting our interpretation of the information provided.
2. Polypipe bespoke Ridgistorm-XL chambers are complete pre-formed units.
3. Polypipe products to be installed in accordance with Polypipe Civils recommendations (refer to Polypipe technical guidance for further information), giving due consideration to the requirements of the organisation who will take ultimate ownership of the installation.
4. Site conditions may require specific installation requirements. The installer should verify that the proposed installation method is acceptable, giving due consideration to the requirements of the relevant approving and adopting authorities, before construction activities commence.
5. Advice on any system requirements specific to the proposed Ridgistorm XL system should be sought from Polypipe Civils.
6. All PE stub connections will require adaptors (to be supplied by Contractor / Developer).

DRAWING NOTES

1. Drawings should not be scaled, refer to figured dimensions only.
2. All dimensions in millimetres, unless otherwise stated.
3. All dimensions are nominal and may vary within manufacturing or construction tolerances.
4. All site temporary and enabling works by others.
5. This drawing is intended for guidance only. Confirmation of the information contained within this document should be sought from the consulting engineers before final design or construction activities commence.

R1 14/01/2025 TANK SHAPE/SIZE REVISED BY CUSTOMER

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PROJECT

HAMMERSTONE ROAD

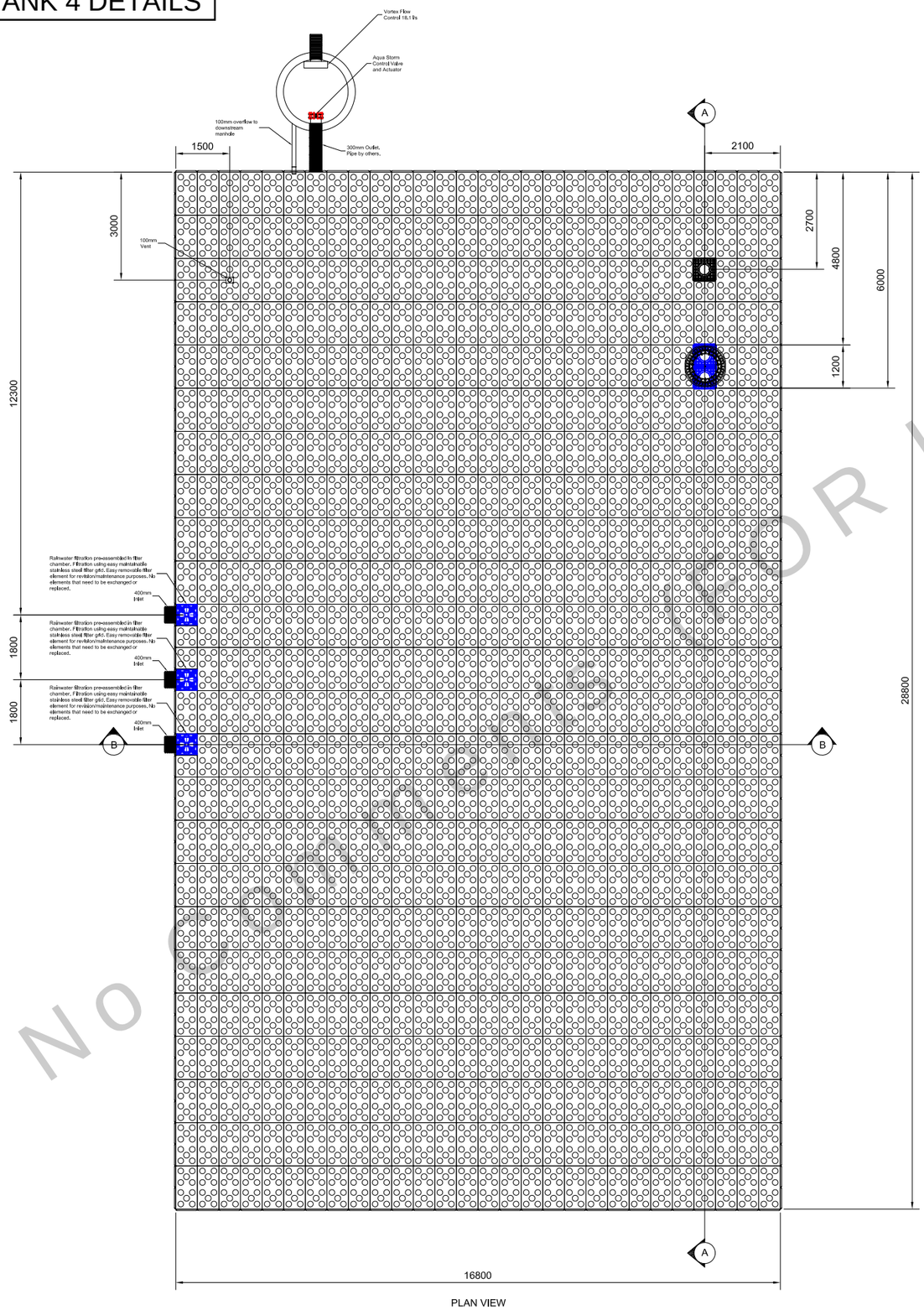
ATTENUATION TANK

TITLE

DETAILS OF ATTENUATION/STORAGE TANK DETAILS USING POLYSTORM PAM1A UNITS

Scale	Drawn	Checked
AS SHOWN	FA	KD
Date	**Drawing No.**	**Revision**
16/01/2025	PSM - 2.0	R0

APPENDIX E4 - ATTENUATION TANK 4 DETAILS



PLAN VIEW

Project: Manchester - Hammerstone Road	
Title: Plantroom Layout Tank Layout	
System: **Geocellular Tank made from Aquality Storage Block SD** 28.8m x 16.8m x 1.392m	
Project-No: HRD-ABE-ZZ-ZZ-DR-M-5031	
Project state: S2	Date: 23/11/2023
Scale: NTS @A3	Revision: P03
Drawn by: AR	Checked by: CF

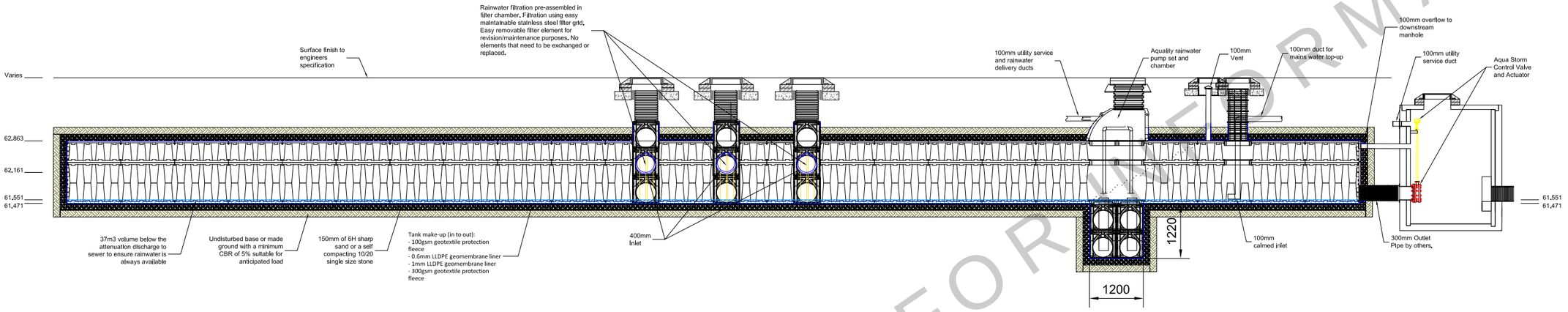
aquality
intelligent water management

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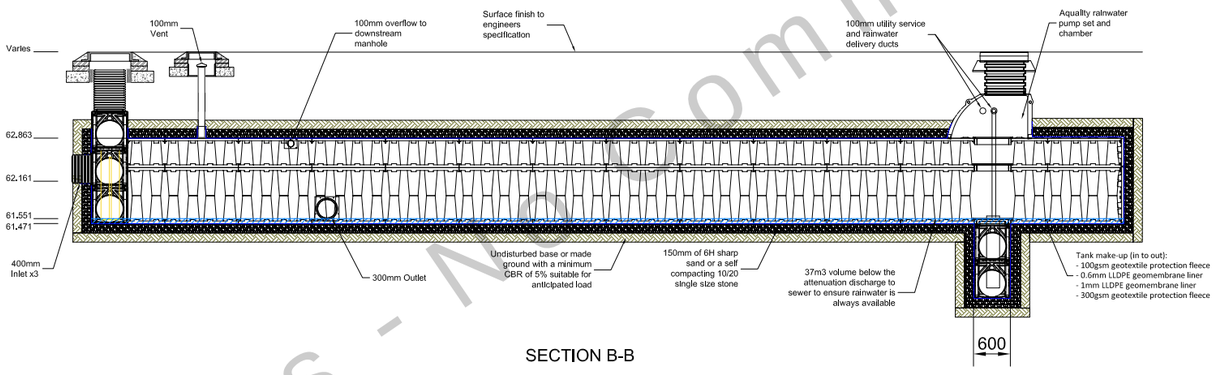
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A Status - No Comments (FOR INFORMATION)

APPENDIX E5 - ATTENUATION TANK 4 DETAILS



SECTION A-A



SECTION B-B

Project: Manchester - Hammerstone Road	
Title: Tank Layout	
System: **Geocellular Tank made from Aquality Storage Block SD** 28.8m x 16.8m x 1.392m	
Project-No: HRD-ABE-ZZ-ZZ-DR-M-5032	
Project state: S2	Date: 23/11/2023
Scale: NTS @A3	Revision: P03
Drawn by: AR	Checked by: CF

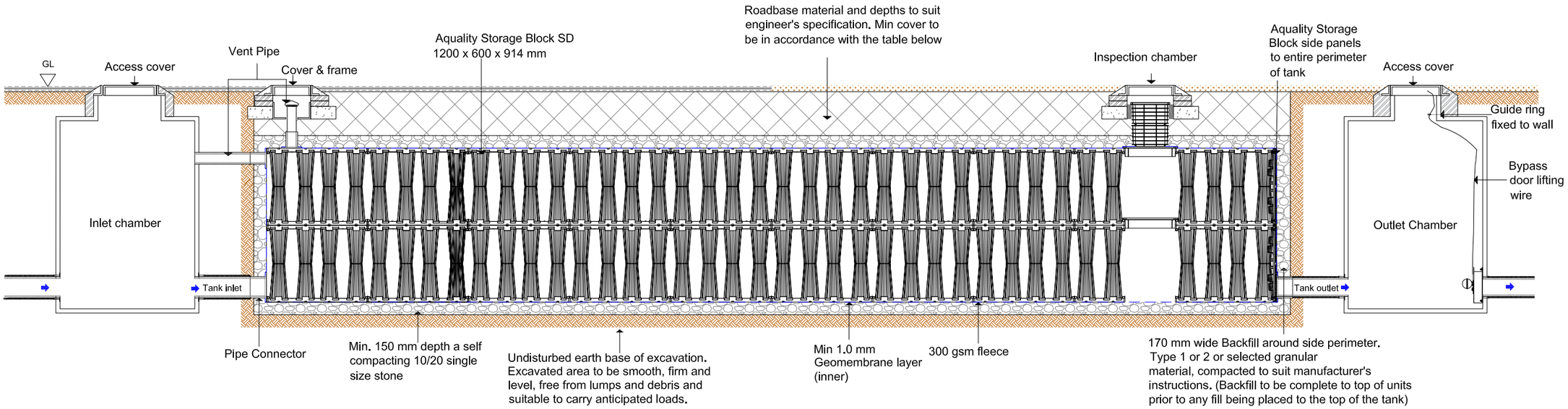
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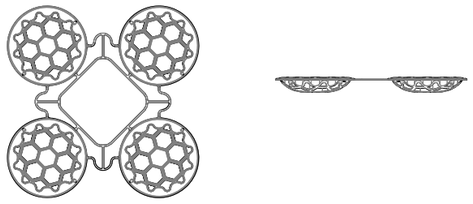
A Status - No Comments (FOR INFORMATION)

APPENDIX E6 - ATTENUATION TANK 4 DETAILS



Note:

Top cover shown below to be installed on top layer of Aquality Modules only.



Minimum cover depths (1) over the top of Aquality Geocellular	
Location	Minimum cover depth (m) (4)
Non-Trafficked areas i.e. Landscaping	0.5
Car parks, vehicle up to 2500kg gross mass	0.6
Car parks, occasional vehicle greater than 2500kg (3) gross mass	Please contact Aquality
Occasional HGV traffic up to 44000kg GVW (HA loading)	Please consult with Aquality

(1) Assumes 27 degree load distribution through fill material and overlaying surface asphalt or block paving
(2) Minimum cover depth to avoid accidental damage from gardening/landscaping work
(3) Occasional Trafficking by refuse collection or similar vehicles (typically one per week)
(4) Please check minimum frost cover depths for geographical location

Project: Manchester - Hammerstone Road	
Title: Aquality Sorage Block SD attenuation	
System: **Aquality Storage Block SD attenuation (on-line)**	
Project-No: HRD-ABE-ZZ-ZZ-DR-M-5033	
Project state: S2	Date: 22/09/2023
Scale: NTS @A3	Revision: P01
Drawn by: AR	Checked by: CF

aquality
intelligent water management

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