

Site Specific Risk Assessment – *Discharge*

FURTHER INFORMATION



EPR/WB3893HZ/A001

Plot 1C, Martin Road, Tremorfa Industrial Estate, Tremorfa, Cardiff. CF24 5SD.

1. Drainage


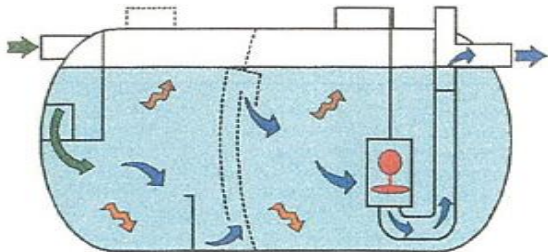
1.1. Interceptor Details

- 1.1.1. A class one oil interceptor will be installed on the western side of the site as indicated on the location plan. It forms part of the drainage system, along with the impermeable pad: all run off goes via this system. It ensures that contaminants, such as oil, are removed from the system leaving a complaint discharge from the site. Further details of the interceptor and its specifications can be found below and attached.
- 1.1.2. The camplas "filterceptor" is an advanced interceptor that is specially designed for "scrapyard" conditions. It performs well within allowed legal discharge limits.

✱

2. FULL RETENTION ***FILTERCEPTOR***®

'State of the art' interceptor giving effluent quality levels equivalent to Class 1 of the proposed European standard PrEN 858-1 (5ppm of residual oil under test conditions). Fitted with a Camplas Envirofilter (patent pending) a combined micro coalescent filter and automatic hydrocarbon closure device, designed to shut the outlet in the event of a major oil spillage.

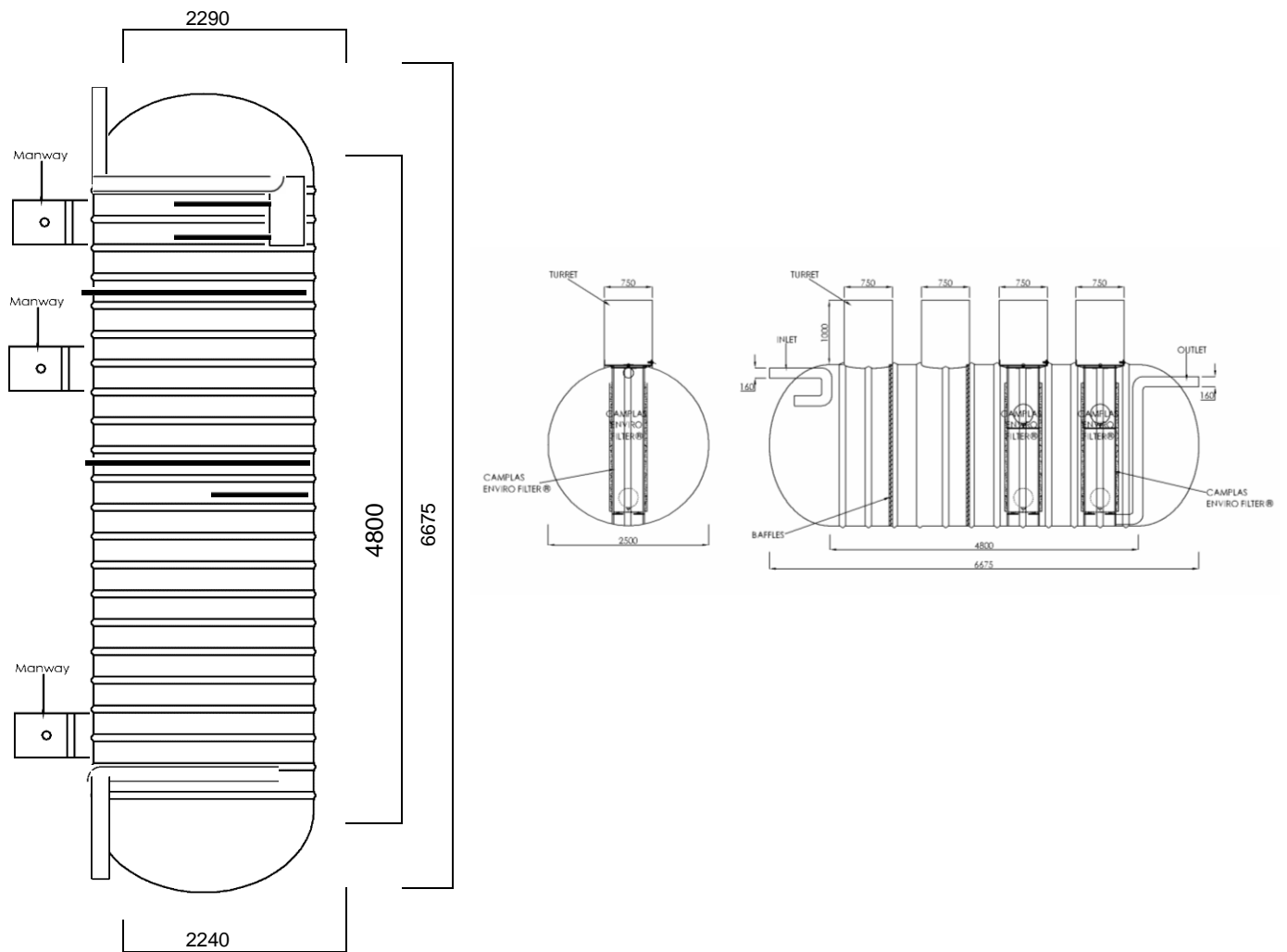
(Pat. Pending)

NS58 FC3-NRA - (Environment Agency)
- Heavy Plant Depot, Bridgend

APPLICATIONS

- Garage forecourts •Scrap yards •Lorry parks
- Waste depots •Aircraft refuelling
- Rail & sea terminals •Military bases
- Motorway junctions •Heavy plant depots
- Transformer stations •Oil tank bunds

Figure 1.0. Details of Camplas Filterceptor



Camplas Ref	NS	53	FC3	Max FLOW	53	Lit/sec
AREA DRAINED		3816	Sq meters	Oil capacity	15907	Litres
CAPACITY	-Working	19080	Litres	SILT	6868.8	Litres

Figure 2.0. Engineering Details of Camplas Filterceptor

1.2 ACO Drainage

1.2.1 The ACO Qmax surface water drainage provides an optimum drainage option for industrial applications. The system provides effective storage, attenuation and eliminates carryover in stormwater conditions. It is also suitable for all load classes meaning that it can withstand the heaviest traffic conditions – far in excess of the conditions at the site.

1.2.2 In the event of flooding, and to overcome potential flooding (causing contamination transfer), all water would be contained within the site. The return period has been increased from 2 years to 1 in 30 years (as current guidelines) and sized up the ACO accordingly. The size of the ACO and the outlet pipe size of 300mm diameter.

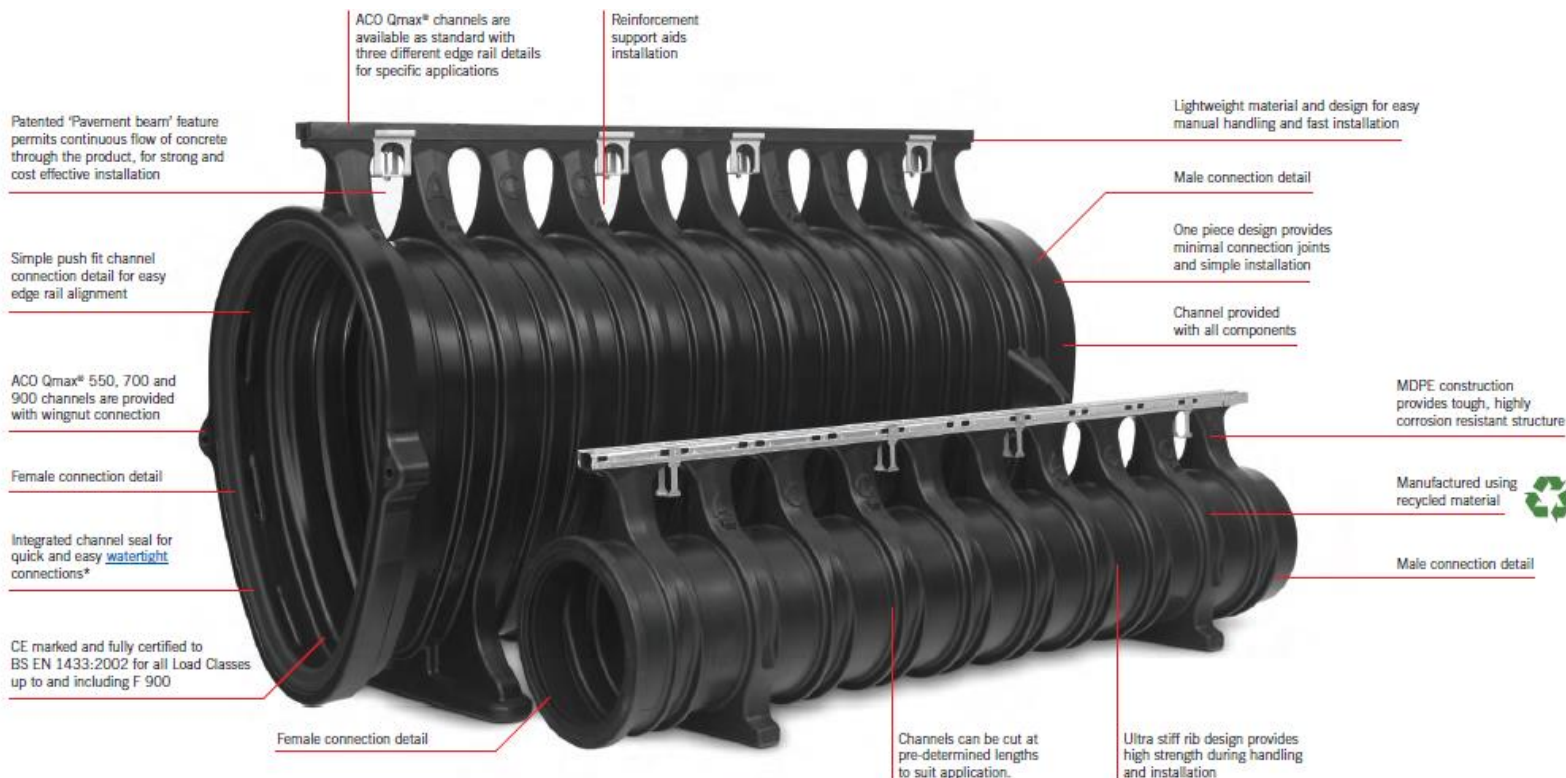


Figure 3.0. Details of ACO Drainage installed.(http://www.aco.co.uk/product_detail.php?id=790)

1.3 Sustainable Drainage System (SuDS)

- 1.3.1. The soakway system has been designed by C.D Gray and associates using the information gathered in the soak away test and other supporting information. Design drawing shown in Appendix 4.0.
- 1.3.2. The SuDS system to used is the SDS Geolight 400 units. The design details and layout are shown on the original design drawings.
- 1.3.3. The highest DIN 60/30 from the current industry guidelines has been used which allows for 60 tonne articulated vehicle. The applied loadings are well within the factored tolerance of the GEOLight 400 unit and engineered design details.
- 1.3.4. SDS, manufacturers of the Geolight 400 units, state that “when used in combination with oil/petrol interceptors, Geolight can replenish groundwater without the risk of contamination from oil, chemicals and suspended solids” (sdslimited.com).

1.4 Silt Chambers & Inspections

- 1.4.1 The ACO drainage will drain to and ACO Qmax access and silt chamber, as shown below. The chamber is designed for easy access and capture silt and sediment.



Figure 4.0. ACO Qmax access & silt chamber (Picture taken from http://www.aco.co.uk/product_detail.php?id=79)

- 1.4.2 Two pre-cast concrete 1200mm catchpit chambers will be installed for, inspection, silt and sediment trapping. One will be placed between the ACO drains and the interceptor, the second between the interceptor and soakaway (after the inline penstock described below).

2. Site Checklist, Training & Operations

- 2.1 Please see updated weekly site maintenance checklist along with the relevant procedure from the Environmental Management System attached.
- 2.2 All depollution shall take place inside the smaller (covered) building as previously indicated.
- 2.3 A training matrix, from the EMS, is shown in Appendix 3.0

3. Routine Maintenance

- 3.2 Clearance and jet washing of ACO drains (when identified as needed by maintenance checklist).
- 3.3 Clearance and jet washing of SuDS system via access point (indicated on submitted engineering drawings).
- 3.4 Interceptor Clearance. Completed on an annual basis. Details included on the original submission (non-technical summary). The interceptor will also be skimmed for oil using our Abernaki Oil Skimmer. A specially designed belt removes oil from the chambers leaving clean interceptor waters and an oil product that is contained and sent for recycling.

4. Emergency Procedures

- 4.1 Emergency procedures from our EMS, are included in Appendix 2.0 for:
 - Oil spills
 - Fire
 - Flooding

5. Inline Penstock

- 5.1 An inline penstock has been included in the design construction. This allows the manual shut off of the drainage system after the interceptor stage in case of major pollution incident etc...The design details are included on the original engineering drawings.

6. Groundwater & Aquifer

6.1 The ground beneath is made up of slag material is expected up to 10m in depth. Beneath that superficial deposits will be present in various thicknesses of between 10-20m. Mercia mudstone bedrock will be underneath that at approximately 16-20m (Site Condition Report, RPS 2015).

6.2 The whole assessment site is considered to have minor aquifer status and is, therefore, considered to be a low sensitivity receptor (Site Condition Report, RPS 2015).

Section	Description / Information				Issues / Comments
Geology & Hydrogeology**	Strata	Description	Aquifer Status	Anticipated Approx. thickness (m)	
	Made Ground	Unknown	Non-productive.	Unknown	-
	Superficial deposits.	Tidal Flat Deposits with possible peat - Clay and Sand & gravel.	Secondary (undifferentiated).	10-20 m	-
	Bedrock	Mercia Mudstone - Sedimentary Mudstone.	Secondary B.	Unknown	Mercia Mudstone bedrock anticipated to be at 16-20 m below ground level.
Groundwater Vulnerability		Minor Aquifer Low.	Negligibly permeable.		The designation of Minor Aquifer relates to the whole of the Assessment Site. The Minor Aquifer is considered a low sensitivity receptor.

Figure 5.0. Table illustrating the make-up of the ground beneath the site (Site Condition Report, RPS 2015).

6.3 The superficial deposits (tidal flat deposits with possible peat- clay sand and gravel, 10-20m) and bedrock (Mercia Mudstone, unknown depth) deposits under the site location are classed as a secondary (undifferentiated) and secondary B status aquifers respectively. These are generally regarded as containing insignificant quantities of groundwater and are at the low and very low end of the risk scale, as presented in Box 1.1 on page 14 of Environment Agency Horizontal Guidance Note Annex J – Groundwater.

6.4 The nature of the underlying rock and subsequent groundwater vulnerability assessment along with the nature of operations, infrastructure development and operational controls and procedures put in place, result in a risk assessment rating of low to very low.

References

1. **SDS Limited**. Unknown Date. Available at: <http://www.sdslimited.com/what-we-do/surface-water-management/storm-water-tanks/additional-uses-of-geolight>
2. **RPS**. March 2015. Site Condition Report, Unit 1C, Tremorfa Industrial Estate, Cardiff.
3. **ACO Technologies PLC**. April 2014. ACO Qmax® High Capacity Slot Drainage System: Interactive Digital Brouchure. Available at: http://www.aco.co.uk/product_detail.php?id=79



Appendix 1.0

Site Checklist

Appendix 2.0.

Emergency Procedures

Appendix 3.0.

Staff Training Matrix

Appendix 4.0.

SUDS Design