Former Befesa Salt Slags Site, Whitchurch

Drainage Strategy

July 2026



Waterco

Assessment | Modelling | Design

Project Information	
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Document History		
Revision	**Date**	**Comment**
01	19/09/2025	First issue
02	02/10/2025	Second issue – Updated following Client comments
03	19/12/2025	Third issue – Updated following NRW comments
04	05/01/2026	Fourth issue – Updated following Client comments
05	22/04/2026	Fifth issue – Updated following NRW objection
06	21/07/2026	Sixth issue – Updated following Client comments

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Introduction

Waterco has been instructed to prepare a Drainage Strategy in respect of a proposed industrial composting facility at the former Befesa Salt Slags site, Fenns Bank, Whitchurch, SY13 3PA.

The aim of this Drainage Strategy is to identify water management measures, including Sustainable Drainage Systems (SuDS), to provide surface water runoff reduction and treatment. This report has been prepared in accordance with the Welsh Government 'Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems' (2018) – herein referred to as 'the Statutory Standards for SuDS'.

Existing Conditions

The site covers an area of approximately 5.74 hectares (ha) and is located at National Grid Reference (NGR) 350628, 339097. A location plan and an aerial image are included in Appendix A.

Online mapping (including Google Maps / Google Streetview imagery, accessed July 2026) shows that the site comprises a former salt slags recycling service with associated car park and decommissioned lagoon. The site is bordered by agricultural land to the north, an unnamed access road with agricultural land beyond to the east, an industrial unit to the south, and agricultural land to the west. Access to the site is provided from an unnamed access road to the east.

Local Topography

A topographic survey has been undertaken by JPP Consulting in June 2025. The topographical survey shows that the site slopes from 91.57 metres Above Ordnance Datum (m AOD) in the south to 89.31m AOD in the north. An isolated area in the southern extent of the site, associated with the crest of an earth bund, rises to 91.99m AOD.

Topographic levels to m AOD have also been derived from a 1m resolution Natural Resources Wales (NRW) composite 'Light Detecting and Ranging' (LiDAR) Digital Terrain Model (DTM). The LiDAR data generally corroborates with the topographical survey.

Topographical information is included in Appendix B.

Ground Conditions

The British Geological Survey (BGS) online mapping (1:50,000 scale) indicates that the northern extent of the site is underlain by superficial glaciofluvial deposits of sand and gravel. The south-western extent of the site is underlain by Devensian Till, comprising diamicton. The superficial deposits are identified as being underlain by the Branscomb Mudstone Formation.

The geological mapping is available at a scale of 1:50,000 and as such may not be accurate on a site-specific basis.

According to NRW's Aquifer Designation data, obtained from the BGS GeoIndex online mapping [accessed September 2025], the glaciofluvial deposits of sand and gravel are classified as a Secondary A Aquifer. 'Secondary A aquifers comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers.'

The Devensian Till is classified as a Secondary Undifferentiated Aquifer. Secondary Undifferentiated are aquifers where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type.

The underlying Branscomb Mudstone Formation is classified as a Secondary B Aquifer. Secondary B aquifers are mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks (called fissures) and openings or eroded layers.

Local Drainage

Public sewer records have been obtained from Dwr Cymru Welsh Water (DCWW) and are included in Appendix C. The DCWW sewer records show that there are no public sewers within the vicinity of the site.

A Drainage Survey was undertaken by Invek Surveys Ltd in September 2025 and is included as Appendix D. The drainage survey is supplemented by the topographical survey and anecdotal information by the Client.

The drainage survey shows that surface water drainage from the site is drained by a network of surface water drains which ultimately discharge to a 600mm surface water drain located in the northern extent of the site. The 600mm surface water drain discharges to an unnamed watercourse located approximately 240m north-west of the site. The unnamed watercourse is a tributary of Red Brook. Red Brook is located approximately 750m north-east of the site.

Surface water manhole MH04 located on the 600mm drain in the northern extent of the site has a cover level of 89.86m AOD and an invert level of 86.86m AOD.

A number of the surface water chambers within the site were noted to be surcharged. Anecdotal information from the Client suggests that the existing drainage network has been capped to prevent discharge from the site.

Foul flows from the existing facility drain to an existing private treatment plant located in the north-western extent of the site.

Development Proposals

The proposed development is for the conversion of the salt slags recycling service to a 50,000tpa In-vessel composting facility with associated bio filters, refining plant, maturation pad and associated car park. Existing and proposed development plans are included in Appendix E.

The proposed development will include hardstanding areas in the form of a composting facility, access roads

and a car park. Hardstanding will comprise 27,512m^2. Measurements have been taken from a PDF copy of the 'Proposed Site Layout' (Drawing No. VES_TD_WREXIVC_200_000) and are approximate only.

Hardstanding associated with the unnamed access road located east of the site and outside of the site boundary has been included within the hardstanding area measurement, as runoff from this road will be captured via road gullies and conveyed into the site's proposed surface water drainage system.

The proposals also include for the decommissioning and backfilling of the existing lagoon in the southern extent of the site. A new pond, for ecological purposes, is proposed in the northern extent of the site.

Correspondence

NRW correspondence received following review of version 04 of this Drainage Strategy are included in Appendix F. The NRW correspondence states:

'Pollution of Controlled Waters

Surface water drainage

As noted above, the existing site has a complex sealed drainage system, with several pumps which transferred surface water to various locations onsite whilst the previous business was operational (we understand the previous process utilised the surface water in the waste treatment). The water table is high in this area, and the yard was often subject to extensive flooding. This was also due to the presence of deep drains along the main access road (raised brick manhole chambers) which drain the triangular field to the East of the access road.

We have reviewed Version 4 of the Site Drainage Strategy (5 January 2026), and we still have concerns in relation to surface water drainage proposals.

It is noted that ground infiltration at the site is unsuitable due to very shallow groundwater, the presence of existing groundwater contamination and the underlying geology restricting infiltration. Therefore, the drainage hierarchy cannot proceed to infiltration methods.

- Contaminated water entering drainage system.

There remains a risk of contaminated groundwater entering the proposed drainage system. In particular, we have concerns in relation to the existing deep drains that connected to the access road and the adjacent triangular field, which have historically acted as a conduit for contaminated groundwater into the site drainage system. There remains the potential for mobilising pollution to controlled waters including the unnamed watercourse and Red Brook by re-connecting to or altering the historic drainage network.

We advise that further information is sought from the applicant to demonstrate -

- *How ingress of contaminated groundwater will be prevented.*

- *How the design will ensure that no contaminated flows enter the proposed attenuation system.*
- *Whether flows from deep drains have been included in attenuation calculations.*

- Attenuation pond

In relation to the proposed attenuation pond, while we welcome the use of a sealed system, we advise that an impermeable geotextile liner alone is insufficient given shallow groundwater pressures and that a structurally rigid construction is required to prevent liner compromise during wet periods or groundwater flooding. We therefore advise that the applicant provides:

- *Revised engineering details for the pond*
- *Evidence that the system will prevent ingress of contaminated groundwater.*
- *Flood-resilience measures for periods of elevated groundwater.*

- Surface water contaminants

Table 2 of the drainage strategy identifies the treatment of the following surface water contaminants - total suspended solids, metals and hydrocarbons. However, the following pollutants are also known to be present on site - ammonium, nitrite and nitrate, chloride, phosphate. It is essential that any system to treat surface water contaminants is capable of addressing all contaminants likely to exceed environmental quality standards on the site.

We advise that further information is sought from the applicant to show how they propose to manage all surface water contaminants.

- Existing lagoon

The future use of the existing lagoon remains unclear, we advise that additional information is required to clarify whether the lagoon will be infilled, decommissioned, or reused. We also advise that landfill gas is known to accumulate beneath the lagoon liner and therefore a gas assessment is required prior to any future use being approved.'

Surface Water Management

The site currently comprises a former salt slags recycling service with associated car parking and access roads. Surface water runoff currently drains to a 600mm surface water drain immediately north of the site which in turn discharges to an unnamed watercourse approximately 240m north-west of the site.

The proposed development will include 27,512m² of hardstanding in the form of a composting facility, access road and a car park. The drainage system for the site will include 'clean' and 'process' water areas. Hardstanding from 'clean' water areas (roofs, car parks and roads) will drain into a dedicated surface water

drainage system. The contributing clean water drainage area is 21,534m² (includes the access road east of the site). The process water area will cover 5,978m² in the form of the refining plant and maturation pad. Rainfall from the refining plant and maturation pad will be captured and conveyed to on-site storage tanks situated adjacent to the proposed biofilters. From these tanks, the stored water will be pumped back into the process network as required.

Discharge Method

Standard S1 of the Statutory Standards for SuDS sets out the following hierarchy of drainage options:

Priority Level 1: Surface water runoff is collected for use;

Priority Level 2: Surface water runoff is infiltrated to ground;

Priority Level 3: Surface water runoff is discharged to a surface water body;

Priority Level 4: Surface water runoff is discharged to a surface water sewer, highway drain, or another drainage system;

Priority Level 5: Surface water runoff is discharged to a combined sewer.

Priority Level 1: Surface water runoff collected for use

Rainfall falling on the proposed refining plant and maturation pad will be captured and conveyed to on-site storage tanks situated adjacent to the proposed biofilters. From these tanks, the stored water will be pumped back into the process network as required. Runoff generated from designated 'clean water areas', such as roof and roads, will require discharge to a lower priority destination.

Priority Level 2: Surface water runoff is infiltrated to ground

As described above, the northern extent of the site is underlain by superficial glaciofluvial deposits of sand and gravel. The south-western extent of the site is underlain by Devensian Till comprising diamicton. The superficial deposits are identified as being underlain by Branscomb Mudstone Formation.

Due to the impermeable nature of the underlying geology in the site's south-western extent, infiltration techniques may not be suitable for the discharge of surface water in this location.

Furthermore, a locally high water table is recorded at the site. This may be a result of the impermeable geology and that the site's existing drainage system has been historically capped, resulting in frequent exceedance of the drainage system and subsequent waterlogging.

Priority Level 3: Surface water runoff is discharged to a surface water body

As infiltration techniques are not suitable, a connection to watercourse is the next consideration. The drainage survey undertaken by Invek Surveys Ltd (Appendix D) identified a 600mm surface water drain in the northern extent of the site which flows north-west and discharges to an unnamed watercourse located approximately 240m north-west of the site. The unnamed watercourse is a tributary of Red Brook. Discharge to watercourse via the 600mm surface water drain appears to be a feasible option. Surface water manhole

MH04 located in the northern extent of the site has a cover level of 89.86m AOD and an invert level of 86.86m AOD. Based on a minimum site level of 89.31m AOD, a gravity connection can be achieved. Discharge will be made at a limited discharge rate. MH04 is located downstream of the capped extent of the existing drainage system.

The existing drainage system upstream of the connection point (existing 600mm piped drain to Red Brook) will be discontinued and a new system installed as part of the development. The new drainage system will comprise a sealed pipe network. Any storage tanks will be lined with an impermeable textile to prevent groundwater ingress. To fully ensure no groundwater ingress into the drainage system, further protective measures such as laying pipework within lined pipe trenches or wrapping the pipework in an impermeable geotextile will be employed.

Discharge Rate

In order to establish the proposed limited discharge rate, greenfield runoff rates have been estimated using the ICP SuDS method in MicroDrainage (based on the IoH 124 method). A summary of the greenfield runoff rates for a range of events is provided as Appendix G. The greenfield QBAR runoff rate for the 20,534m^2 contributing clean water drainage area is 9.4 l/s. A discharge rate of 9.4 l/s is therefore proposed for this site.

Attenuation Storage

In order to achieve a discharge rate of 9.4 l/s, attenuation storage will be required. Attenuation storage will be distributed on site with an attenuation storage feature and flow control serving the main composting facility compound and access road. A separate attenuate storage feature and flow control will serve a car park and an existing office building in the northern extent of the site. A plan showing the contributing drainage catchment areas is provided as Appendix H.

The proposed discharge rate will be split between the two drainage catchments. Drainage area 1 (composting facility & access road) will have a limited discharge rate of 8.4 l/s. Drainage area 2 (existing office building and car park) will have a limited discharge rate of 1 l/s.

Attenuation storage estimates have been provided using MicroDrainage and are included in Appendix I.

Drainage Area 1

An estimated storage volume of 1,993.5m³ will be required to accommodate the 1 in 100 year plus 40% Climate Change (CC) event. The storage estimate is based on a discharge rate of 8.4 l/s, storage within a tank structure, an impermeable drainage area of 19,422m^2, a design head of 1m and hydro-brake flow control.

Drainage Area 2

An estimated storage volume of 213m³ will be required to accommodate the 1 in 100 year plus 40% CC event. The storage estimate is based on a discharge rate of 1 l/s, storage within a tank structure, an impermeable drainage area of 2,112m^2, a design head of 1m and hydro-brake flow control.

Sustainable Drainage Systems

Drainage Area 1

Attenuation storage will be provided in the form of an attenuation tank located within the landscaped area north-east of the composting facility and an additional attenuation tank located within the access road. The tank dimensions are as follows:

- A 1.6m deep attenuation tank covering 817m^2 with a 95% void ratio would provide 1,241.8m^3 of storage.
- A 49.5m long x 10m wide x 1.6m deep attenuation tank with a 95% void ratio would provide 752.4m^3 of storage.

The attenuation tanks would provide 1994.2m^3 of storage, sufficient to accommodate the 1 in 100 year plus 40% CC event.

Drainage Area 2

Attenuation storage will be provided in the form of a below ground attenuation tank beneath the car park. A 16m long x 14m wide x 1m deep geo-cellular storage tank (with a 95% void ratio) would provide 212.8m^3 of storage, which combined with storage within the flow control chamber, is sufficient to accommodate the 1 in 100 year plus 40% CC event.

An attenuation pond or alternative open SuDS solutions are not proposed due to the high groundwater table and contamination risk. To prevent groundwater uplift, a pond or basin would require underdrains to collect and discharge groundwater to a topographically lower downstream destination. Given the potential contamination risks (from the previous site use) raised by NRW, underdrains are not proposed as they could potentially mobilise contaminated groundwater.

Concept Surface Water Drainage Scheme

Surface water runoff will be discharged to the unnamed watercourse located 240m north-west of the site via an existing 600mm surface water drain located in the northern extent of the site. Discharge will be made at a limited QBAR greenfield runoff rate of 9.4 l/s. Surface water runoff up to the 1 in 100 year plus 40% climate change allowance event will be attenuated on site. A total attenuation volume of 2,206.5m³ will be required to achieve the discharge rate and will be provided in the form of attenuation tanks.

The proposed surface water drainage scheme will ensure no increase in runoff over the lifetime of the development.

The proposed drainage system will operate as a sealed system with all attenuation tanks sealed with an impermeable geotextile. This will prevent any mobilisation of groundwater and ensure that the drainage system only accommodates rainfall from hardstanding areas on site. Further protective measures such as laying pipework within lined pipe trenches or wrapping the pipework in an impermeable geotextile will also be employed.

A Concept Drainage Sketch is included in Appendix J.

Exceedance Event

Storage will be provided for the 1 in 100 year plus 40% CC event. Storm events in excess of the 1 in 100 year plus 40% CC event should be permitted to produce temporary shallow depth flooding within the car park, access road and landscaped areas. Consideration will be given to finished floor levels and site levels at the detailed design stage to ensure any potential exceedance flooding will be directed away from buildings and sensitive equipment.

Surface Water Treatment

The Statutory Standards for SuDS sets out the following guidance for surface water treatment:

S3 - Surface water quality management

Treatment for surface water runoff should be provided to prevent negative impacts on the receiving water quality and/or protect downstream drainage systems, including sewers.

In accordance with the CIRIA C753 publication 'The SuDS Manual' (2015), industrial roofs have a 'low' pollution hazard level, with non-residential car parks also classified as having a 'low' pollution hazard level. Industrial sites with potential for heavy pollution have a 'high' pollution hazard level. Table 1 shows the pollution hazard indices for each land use.

Table 1 – Pollution Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Industrial Roofs	Low	0.3	0.2	0.05
Non-residential car park	Low	0.5	0.4	0.4
Sites with heavy pollution	High	0.8	0.8	0.9

Table extract taken from the CIRIA C753 publication 'The SuDS Manual' – Table 26.2
* Indices values range from 0-1.

Based on the industrial nature of the development, surface water treatment will be provided in the form a separator such as the Klargester Aquatreat full retention separator which provides removal of suspended solids, metals and hydrocarbons. The surface water drainage system will accommodate clean rainwater only and no other pollutants (in addition to suspended solids, metals and hydrocarbons) are anticipated.

Amenity

The Statutory Standards for SuDS provide the following guidance in relation to Standard S4 – Amenity:

'The design of the surface water management system should maximise amenity benefits.'

The proposed development is for industrial land use in an area where there is potential for contaminated

ground together with a high water table. In line with NRW correspondence, a sealed drainage system is required, and SuDS features such as pond or basins are not feasible for attenuation purposes due to potential groundwater uplift. Therefore, the site is not suitable for SuDS which provide amenity benefits.

Biodiversity

The Statutory Standards for SuDS provide the following guidance in relation to Standard S5 – Biodiversity:

'The design of the surface water management system should maximise biodiversity benefits.'

The proposed development is for industrial land use in an area where there is potential for contaminated ground together with a high water table. In line with NRW correspondence, a sealed drainage system is required, and SuDS features such as pond or basins are not feasible for attenuation purposes due to potential groundwater uplift. Therefore, the site is not suitable for SuDS which provide biodiversity benefits.

Construction, Operation and Maintenance

Standard S6 of the Statutory Standards for SuDS states:

S6 – Design of drainage for Construction, Operation and Maintenance

1) All elements of the surface water drainage system should be designed so that they can be constructed easily, safely, cost-effectively, in a timely manner, and with the aim of minimising the use of scarce resources and embedded carbon (energy).

2) All elements of the surface water drainage system should be designed to ensure maintenance and operation can be undertaken (by the relevant responsible body) easily, safely, cost-effectively, in a timely manner, and with the aim of minimising the use of scarce resources and embedded carbon (energy).

3) The surface water drainage system should be designed to ensure structural integrity of all elements under anticipated loading conditions over the design life of the development site, taking into account the requirement for reasonable levels of maintenance.

All drainage systems will be readily accessible for maintenance access. The proposed drainage system will not be adopted by the SAB and will be in the private ownership of the site operator who will be responsible for maintenance.

Maintenance schedules for an attenuation tank, flow control chamber and piped drainage systems are included in Appendix K. Maintenance of the full retention separator will be as per the manufacturers guidance.

To ensure the proposed drainage system is functioning correctly following construction, water sampling will be undertaken each month from December to March for the first year following completion of the development.

Foul Drainage

The existing site previously accommodated approximately 56 employees during its final 10–15 years of operation. The proposed development will employ 9 full-time staff, representing a substantial reduction in site occupancy. Consequently, the associated foul flow and phosphate load generated by the site will reduce compared to the existing situation. Therefore, the proposed development will not have any adverse effects on the River Dee SAC.

The existing sewage treatment plant, which previously served a population equivalent of 56 employees, will be decommissioned and replaced with a new Marsh Ensign treatment unit to ensure optimal treatment performance for the significantly reduced proposed population (approximately 9 staff). The proposed system can be fitted with an integrated biological phosphate reduction module capable of achieving final effluent concentrations of 0.2 mg/l. This will provide further phosphate reduction in addition to that achieved by reducing the number of staff.

Treated foul flows from the treatment plant will be discharged to the existing 600mm drain in the northern extent of the site.

Rainfall from the refining plant and maturation pad will be captured and conveyed to on-site storage tanks situated adjacent to the proposed biofilters. From these tanks, the stored water will be pumped back into the process network as required.

Conclusions

The proposed development is for the conversion of a salt slags recycling service to a 50,000tpa in-vessel composting facility with associated bio filters, refining plant, maturation pad and associated car park.

The proposed development will include impermeable drainage area in the form of a composting facility, access roads and a car park. In order to comply with the Statutory standards for sustainable drainage systems, flow control will be used and attenuation provided on site to accommodate storm events up to and including the 1 in 100 year plus 40% climate change event.

All methods of surface water discharge have been assessed. Discharge of surface water will be made to an unnamed watercourse located 240m north-west of the site via an existing 600mm surface water drain located in the northern extent of the site. Discharge will be made at a limited QBAR greenfield runoff rate of 9.4 l/s. The discharge method will replicate the existing situation.

Attenuation storage will be required on site in order to restrict surface water discharge to a rate of 9.4 l/s. Attenuation will be provided within sealed below ground attenuation tanks.

The proposed drainage system will operate as a sealed system with all attenuation tanks sealed with an impermeable geotextile. This will prevent any mobilisation of groundwater and ensure that the drainage system only accommodates rainfall from hardstanding areas on site. Further protective measures such as laying pipework within lined pipe trenches or wrapping the pipework in an impermeable geotextile will also be employed.

Domestic foul flows, generated from staff welfare facilities, will be discharged to the existing on-site package treatment plant for treatment and disposal (subject to a survey to determine the condition and capacity of the treatment plant). Rainfall from the refining plant and maturation pad will be captured and conveyed to on-site storage tanks situated adjacent to the proposed biofilters. From these tanks, the stored water will be pumped back into the process network as required.

A Concept Designer's Risk Assessment (cDRA) has been prepared to inform future designers of any identified hazards associated with the scheme. The cDRA has been included in Appendix L.

Table 2 sets out the concerns raised by NRW and how that have been addressed.

Table 2 – NRW Comments & Responses

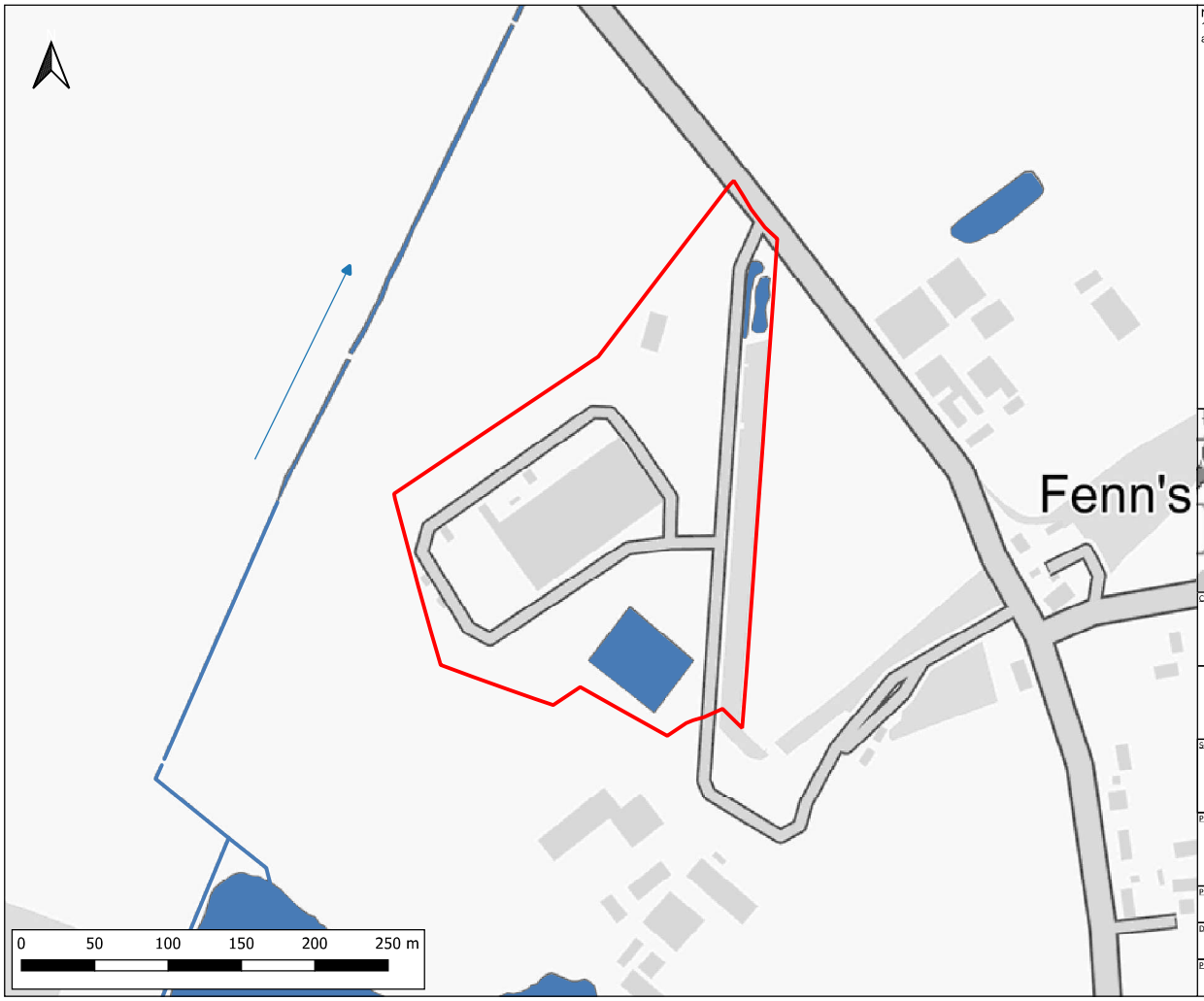
NRW Comment	Response
How ingress of contaminated groundwater will be prevented.	The proposed drainage system will comprise of a fully sealed below ground system, preventing ingress of groundwater.
How the design will ensure that no contaminated flows enter the proposed attenuation system.	All attenuation systems will be below ground tanks lined with an impermeable geotextile. Suitable ground cover / loading will prevent floatation.
Whether flows from deep drains have been included in attenuation calculations.	The attenuation storage calculations include for inflow from the existing access road (gullies) east of the main site. The drainage area plan (Appendix H) shows the contributing drainage areas to the drainage system.
Attenuation pond – revised engineering details for the pond to mitigate groundwater ingress and uplift.	To prevent groundwater uplift, a pond or basin would require underdrains to collect and discharge groundwater to a topographically lower downstream destination. Given the potential contamination risks (from the previous site use), underdrains are not proposed as they could potentially mobilise contaminated groundwater. The attenuation pond has therefore been removed and replaced with a below ground tank.
Treatment of ammonium, nitrite and nitrate, chloride, phosphate.	The drainage system for the site will include 'clean' and 'process' water areas. Hardstanding from 'clean' water areas (roofs, car parks and roads) will drain into a dedicated surface water drainage system and pollutants will be limited to suspended solids, metals and hydrocarbons. Existing pollutants (listed by NRW) would not be mobilised into the sealed drainage system. Rainfall from the refining plant and maturation pad will be captured and conveyed to on-site storage tanks situated adjacent to the proposed biofilters. From these tanks, the stored water will be pumped back into the process network.
Proposals for the existing lagoon	The lagoon which was previously used in the process of the site will be decommissioned and backfilled.

Recommendations

1. Submit this Drainage Strategy to the Planning Authority in support of the Planning Application.

2. Verify the attenuation volumes included in this report when undertaking detailed drainage design.

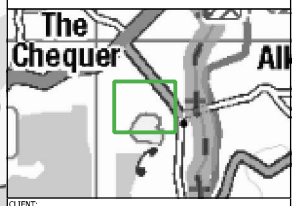
Appendix A Location Plan & Aerial Image



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Watercourses
- Waterbodies



CLIENT:
Axis P.E.D Ltd

waterco
www.waterco.co.uk

SCHEME:
Former Befesa Salt Slags Site, Whitchurch

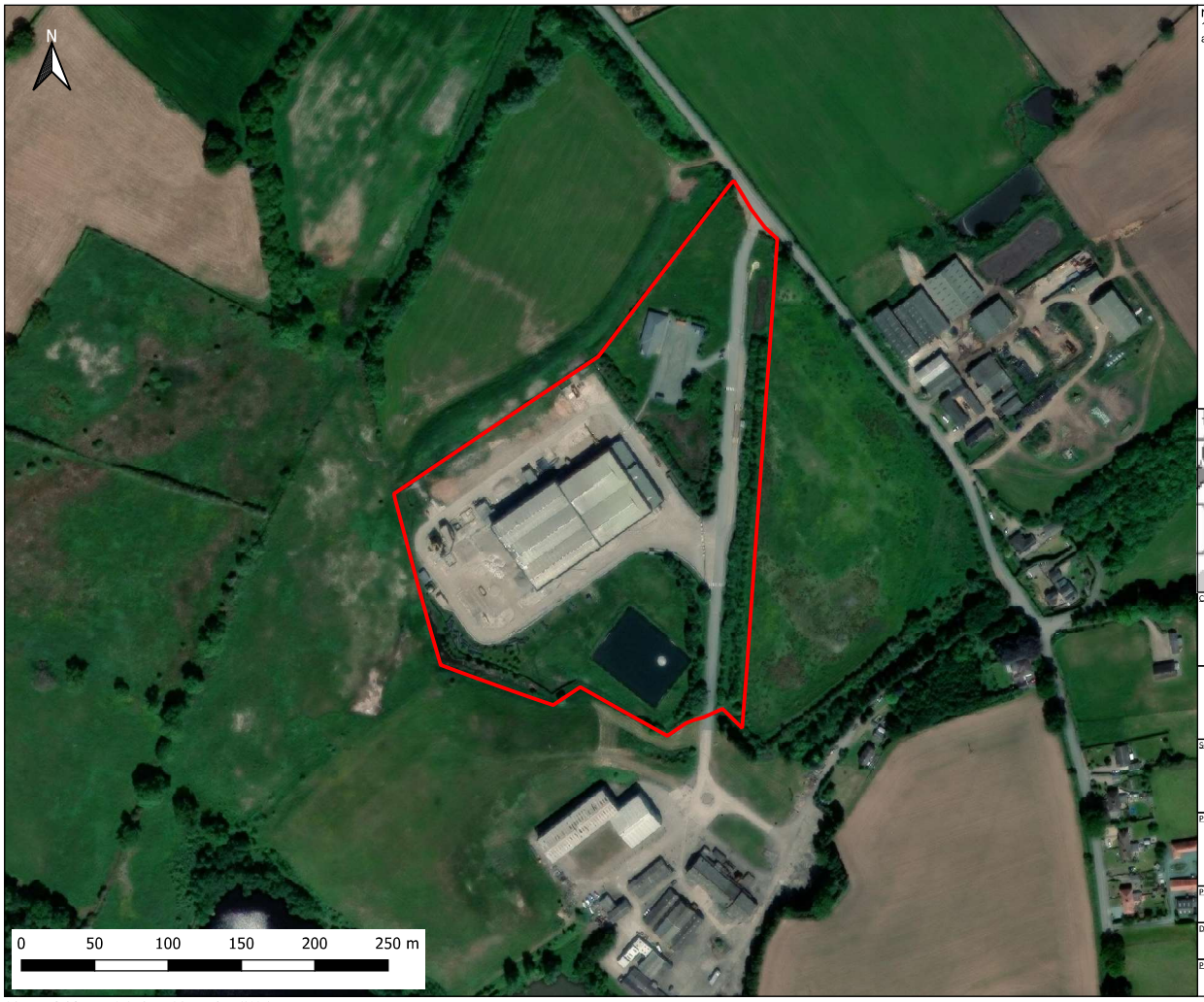
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Location Plan

PLOT STATUS:	DATE:
FINAL	18-12-2025

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:2500

PLOT NAME:	REVISION:
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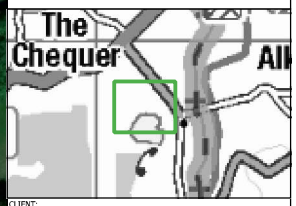
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Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary



CLIENT:

Axis P.E.D Ltd

waterco
www.waterco.co.uk

SCHEME:

Former Befesa Salt Slags Site, Whitchurch

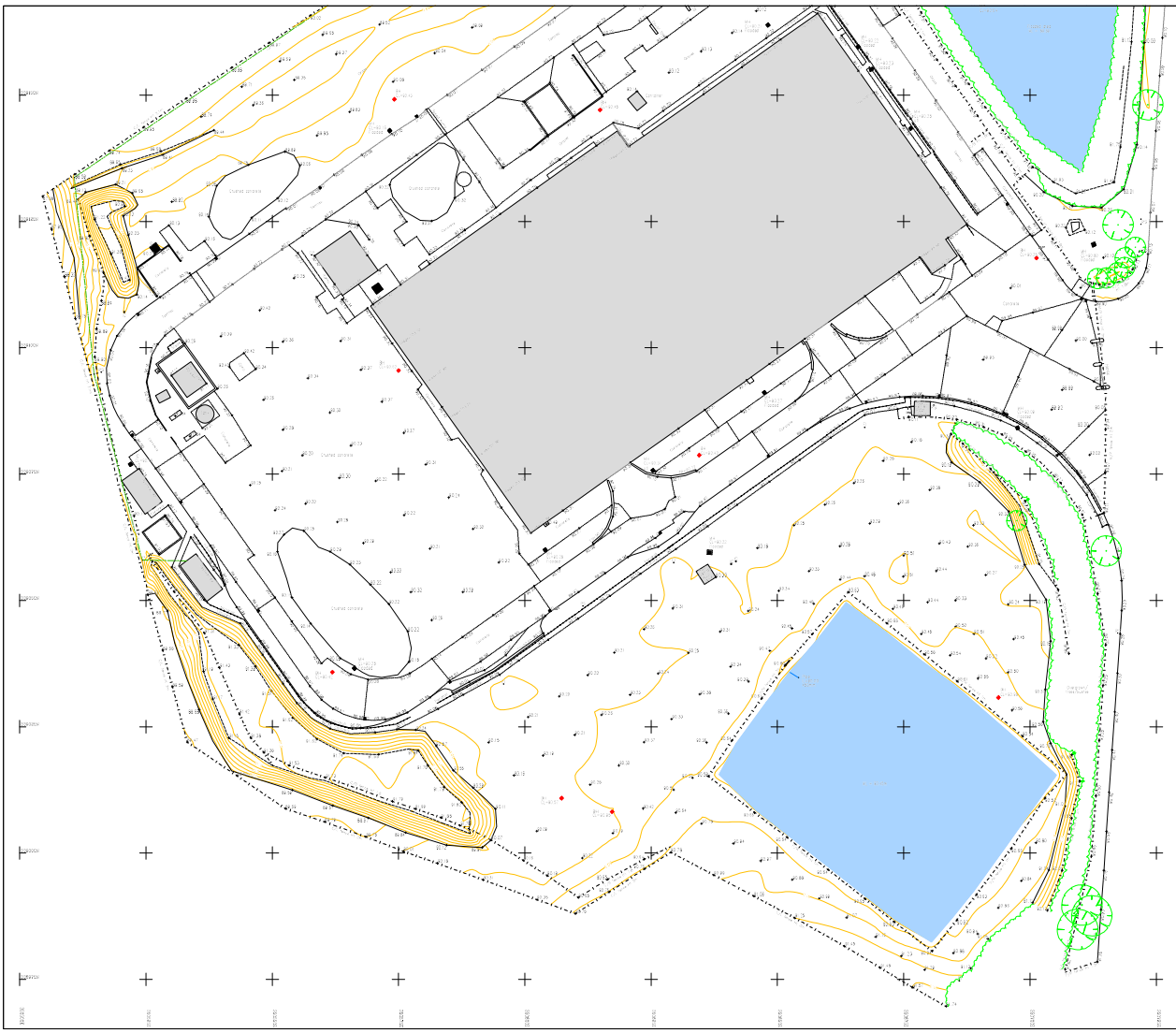
PLOT TITLE:

Aerial Plan

PLOT STATUS:			DATE:
FINAL			18-12-2025
DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
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PLOT NAME:			REVISION:
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Appendix B Topographical Information



General Notes

Survey Control Information

STATION	EASTING	NORTHING	LEVEL	DESC
10	355556.211	339774.670	46.106	PK FND
11	355556.211	339774.670	46.177	PK FND
12	355556.211	339774.670	46.133	PK FND
13	355556.211	339774.670	46.106	PK FND

Key

AC	Air Valve	FL	Flood Light	PFR	Post & Rail Fence
Bol	Bollard	FW	Foul Water	PRR	Post & Wire Fence
BH	Borehole	G	Gully	PB	Pedestrian Barrier
BL	Bin Level	GC	Gas Valve	PC	Power Control Box
BT	BT Cover	GV	Gate	RWP	Rainwater Pipe
CMH	Cable TV Cover	IC	Inspection Chamber	SV	Stop Valve
CPF	Close Boarded Fence	JL	Junction Level	SVP	Soil & Vent Pipe
CWF	Chain Link Fence	LB	Letter Box	TBM	Temporary Bench Mark
CL	Crest Level	LH	Light Head	TP	Traffic Light
DR	Drainage	LC	Lighting Column	TC	Telegraph Pole
EL	Eye Level	LU	Light Unit	TW	Top of Wall
EM	Electricity	MH	Manhole	UP	Unidentified Pipe
EP	Electricity Pole	OHL	Overhead Line	VC	Vehicle Crossing
FH	Fire Hydrant	OH	Overhead	VL	Valve Level
FL	Floor Level	PB	Post Box	WM	Water Meter
		PH	Post	WO	Waste Out

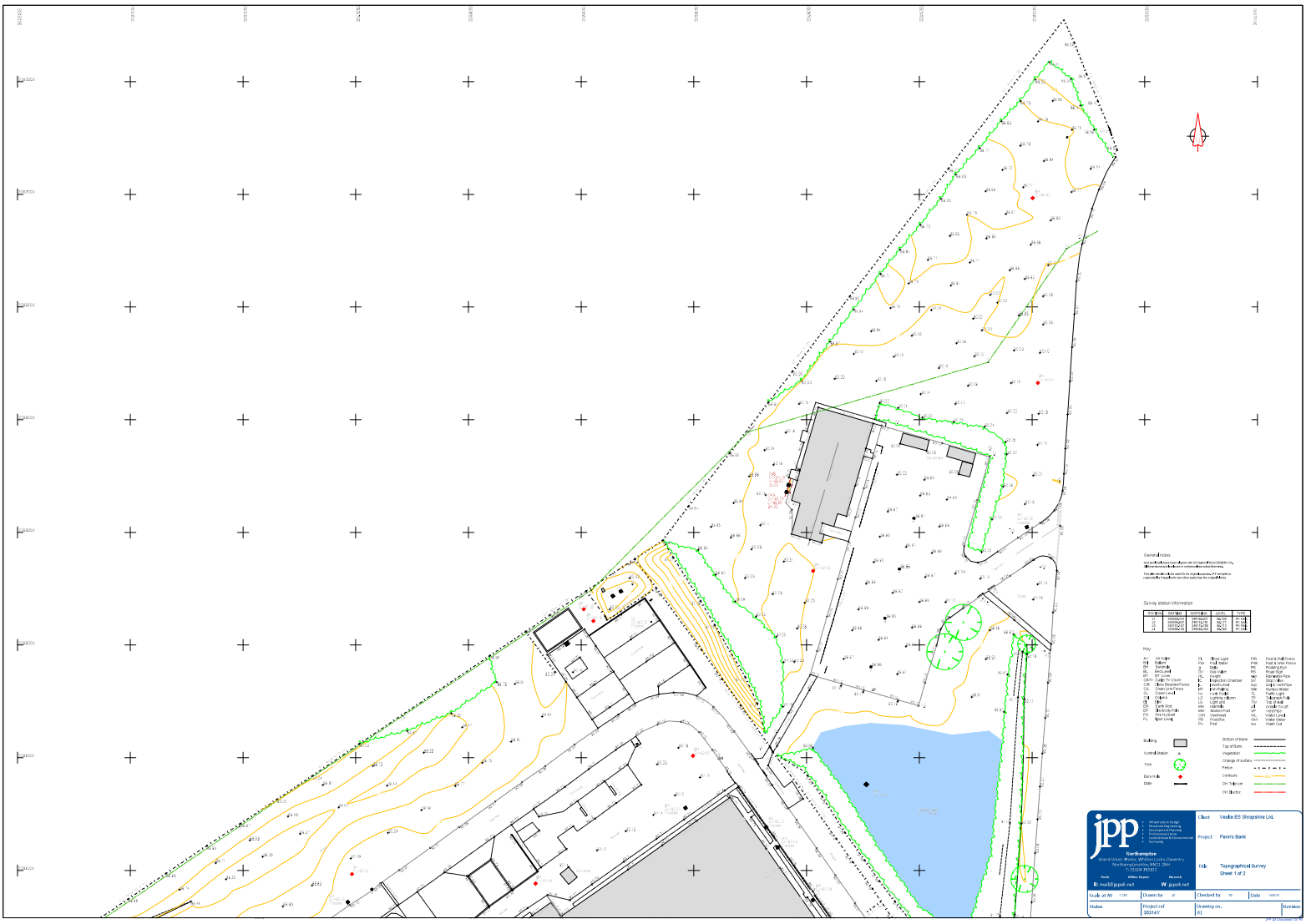
Building
Control Station
Tree
Bore Hole
Gate

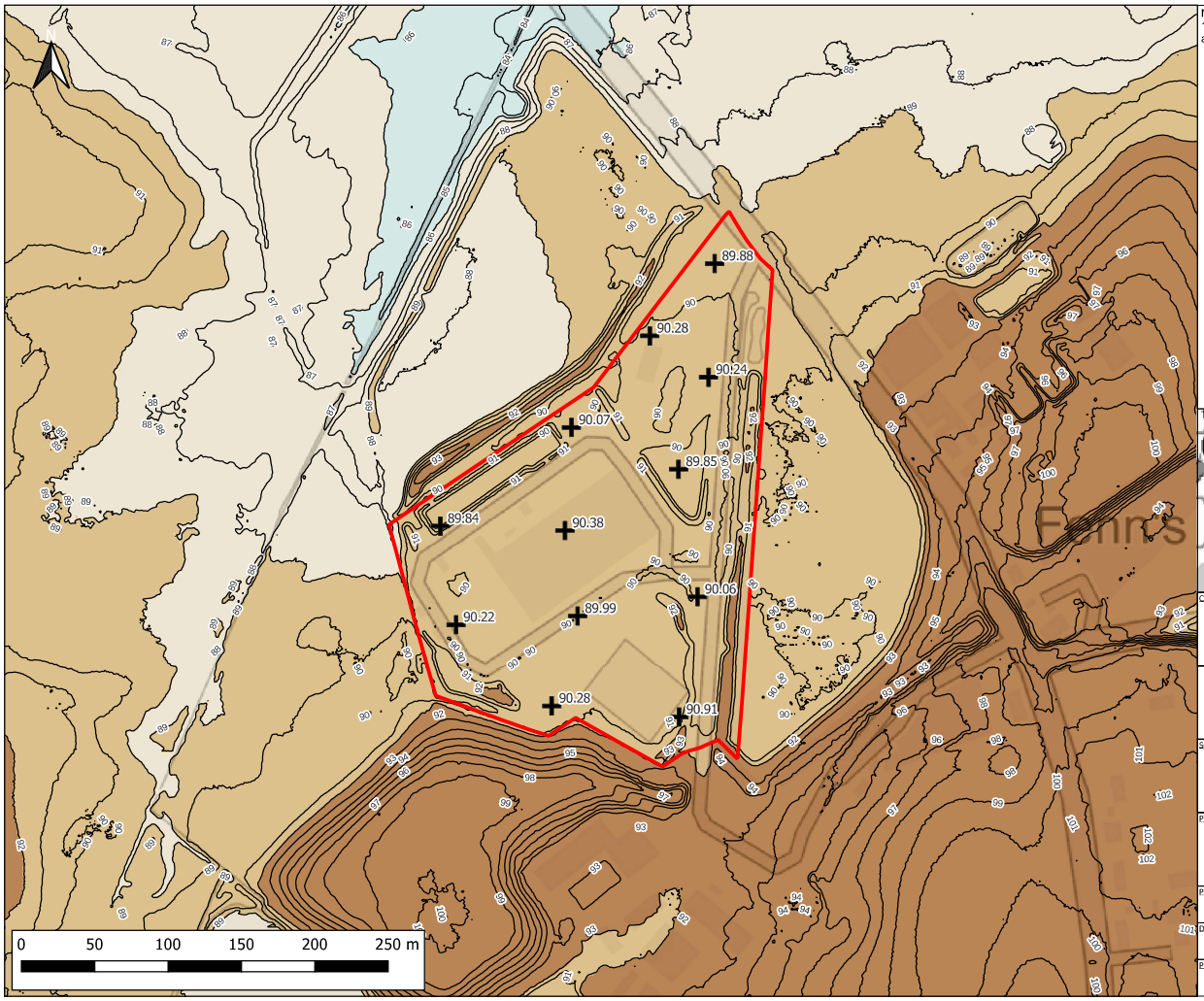
Bottom of Bank
Top of Bank
Vegetation
Change of Surface
Fence
Centre Line
OH Telecom
OH Electric

jpp
Northampton
Grand Union Works, Whilton Locks, Daventry
Northamptonshire, NN11 2NH
T: 01604 892821
E: mail@jppuk.net W: jppuk.net

Client	Veolia ES Shropshire Ltd.
Project	Fenn's Bank
Title	Topographical Survey Sheet 2 of 2
Scale at A1	1:250
Drawn by	JS
Checked by	NI
Date	10/8/21
Status	
Project ref	3021647
Drawing no.	02
Revision	

JPP UK Geomatics Ltd


General Notes
Survey station information
Key
Client Veolia ES Shropshire Ltd.
Project Fenn's Bank
Title Topographical Survey
Sheet 1 of 2
Scale at A1 1:250
Drawn by JS
Checked by TB
Date 18/8/21
Status
Project ref 3021647
Drawing no. 01
Revision



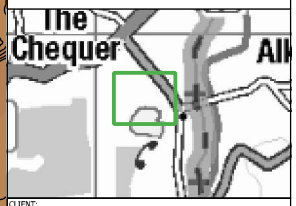
Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Site Levels (m AOD)
- 1m contour

Ground Elevation (m AOD)

- <= 83
- 83 - 86
- 86 - 89
- 89 - 92
- > 92



CLIENT:
Axis P.E.D Ltd

waterco
www.waterco.co.uk

SCHEME:
Former Befesa Salt Slags Site, Whitchurch

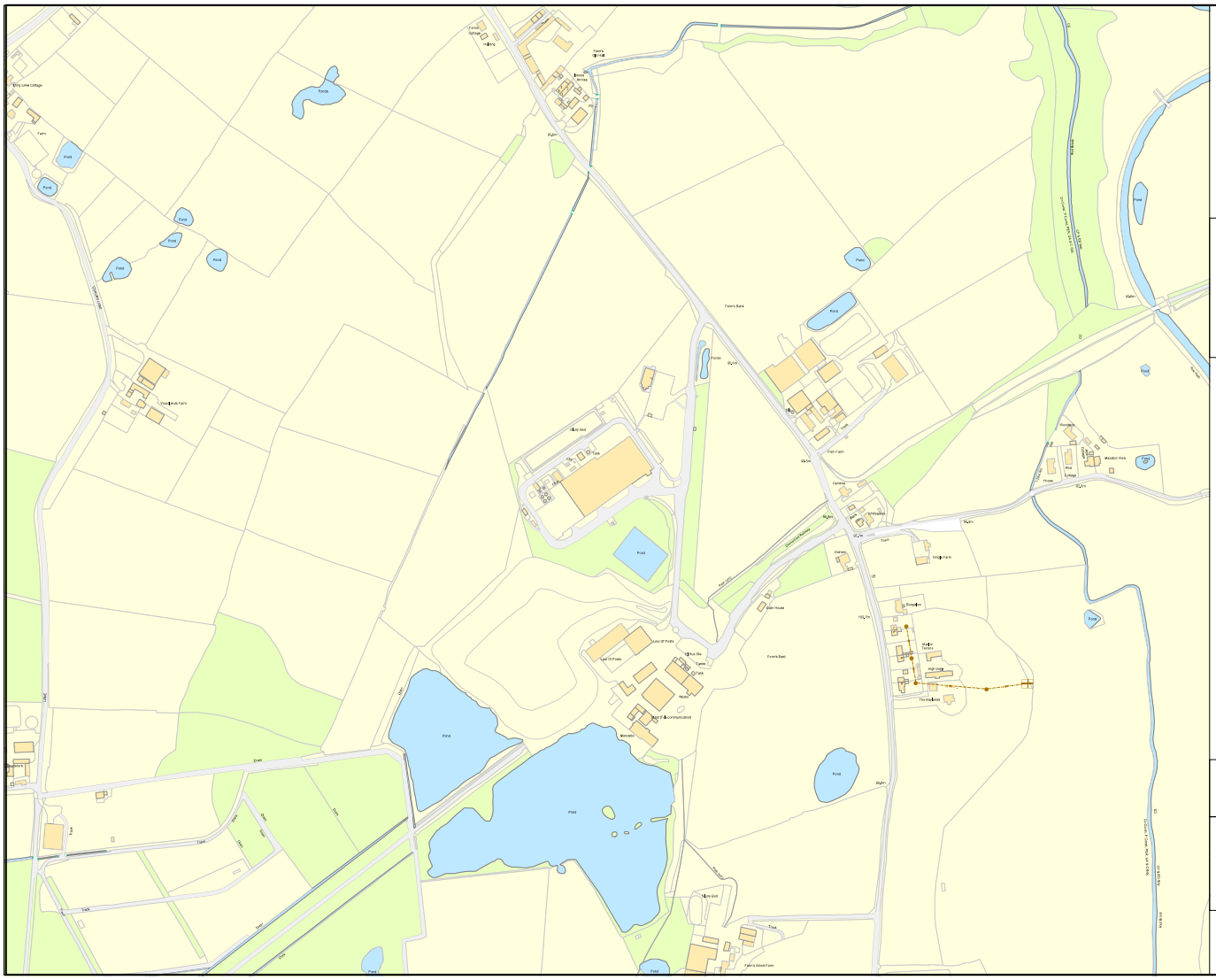
PLOT TITLE:
LiDAR Plan
1m Resolution
Data from Natural Resources Wales

PLOT STATUS:			DATE:
FINAL			18-12-2025
DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:2500

PLOT NAME:	REVISION:
16076_LiDAR_Plan	-

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Appendix C DCWW Sewer Plan



Dŵr Cymru
Welsh Water

former Befesa Salt Slags site, Wrexham, SY13 3PA

N
W E
S

LEGEND(Representative of most common features)

Waste network:

Foul chamber
Surface water chamber
Combined chamber
Combined sewer overflow
Special purpose chamber
Treatment works
Pumping station
Outfall
Lamphole
Storm Overflow
Rising main
Gravity sewer
Private sewer
Private sewer subject to final S104 adoption agreement
Private Sewer Transfer
Lateral Drain
Inspection Chamber

Notes:

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases, pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF) . It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

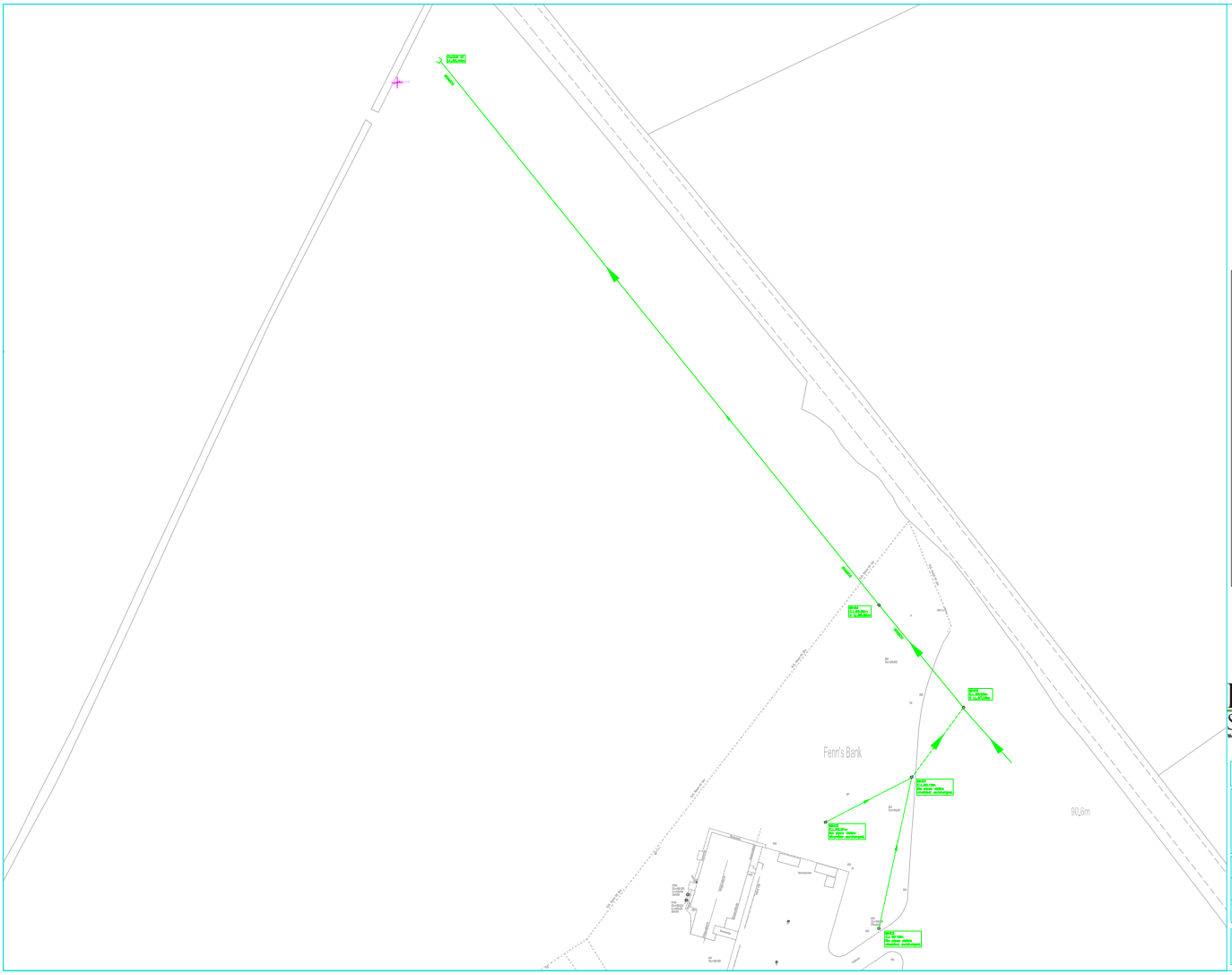
Dŵr Cymru Welsh Water (the Company) gives this information as to the position of its underground apparatus by way of general guidance only. Whilst every reasonable effort has been taken to ensure that the information is correct, the Company does not warrant its accuracy and will not be liable in the event of inaccuracies or other faults in the records of the position of apparatus. Any person using this information for the purposes of excavation or any other activity in the vicinity of the apparatus is required by the Company to take his or her own precautions to avoid damage to the apparatus and to prevent any interruption to the services supplied by the Company. Nothing in this notice shall limit the liability that any such person would have to the Company for damage to the apparatus or any interruption to the services supplied by the Company caused by his or her negligence. Any such person will be liable for the reasonable cost of repairing any damage to the apparatus and for any consequential losses. Service pipes are not generally shown but their presence should be anticipated.

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

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Map Ref:	350628,339098
Map scale:	1:1500
Printed by:	Jessica Asamoah
Printed on:	16 May 2025

Appendix D Drainage Survey



Legend/Notes:

- Combined Sewer
- Foul Sewer
- SW Sewer
- Assumed Sewer (Not Proven)
- Rising Main
- Highway Drainage
- Culvert Sewer
- Open Water Course
- Overflow Line
- Treated Line
- RWP Rain Water Down Pipe
- FDP Foul Down Pipe
- CDP Combined Down Pipe
- GDP Grey Water Down Pipe
- Gully
- Highway Gully
- Direction of overland flows
- +104 Spot levels

Survey Notes

Disclaimer:

Please note that all levels shown on the drawings are assumed unless survey. Any drainage information is to be used in accordance with the related underground document for indicative purposes only.
Cover levels are taken with a Leica CS10 GPS unit, and not from local site control points.
Survey data is for monitoring purposes and should be checked prior to using for any construction purposes.

BUILDER'S PROFILE

CHAS

INVEK SURVEYS Ltd.
Warrington Business Park, Long Lane, Warrington, Cheshire, WA2 8TX
Tel: 01925 244378 Fax: 01925 241517
Email: invek@invek.com – www.invek.com

Client: Waterco

Drawing Title:

Former Befesa
Salt Slags Site
Drainage Layout

Scale(s)	N.T.S	Drawn	PW
Date	11.09.25	Checked	RD
Job Number	2416	Approved	KN

Sheet Size, Drawing Number & Revision

A1_2416/01_Rev_00

Invek Surveys 6.16 — Manhole Details

11/09/25

OS ref SJ5039747287 — M/H no SJ50397253

Location FORMER BEFESA SITE

Year laid — Status PR — Function S — Type M — Survey date 10/09/25

COVER — Shape D — Hinged N — Lockable N — Duty H — Size 610 x 610 — Toxic N

SHAFT — Side N — Noreg — Depth 950 — Size 610 x 770 — Vermn N

CHAMBER — Soffit N — Steps — Ladders 0 — Lndgs 0 — Size 1800 x 1200 — Const B

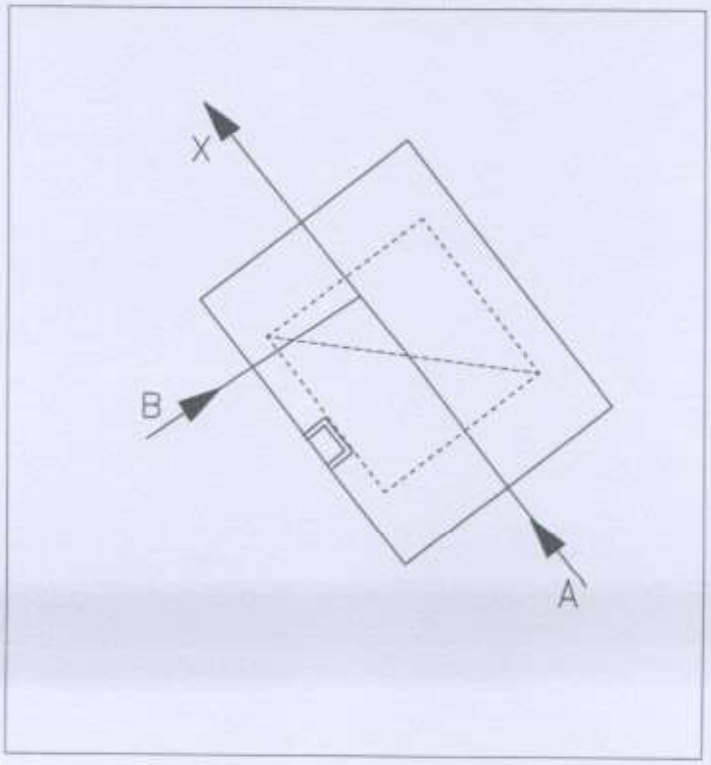
Depth flow — Depth silt 30 — Ht surch 80 — Cover level 89.85

	Up/dn ref	Shp	Size		Bdrop		Mat	Lng	Depth	Invert
In A	50397250	C	600	x			CO		2.78	87.07
B		C		x			U		2.50	87.35
C				x						
D				x						
E				x						
F				x						
					TV	Crt				
Ou X	50397350	C	600	x	N	B	CO		2.79	87.06
Y				x	N	C				

Attention — Cover N — Step/Lad N — Shaft N — Chamb N — Bch/ch N — Other N

Remarks MH05. BRICK IN CHANNEL. WATER MAIN RUNNING DOWN PIPE X. BRACING IN CHAMBER, MAYBE BLOCKING OLD B PIPE. LOOKS TO BE POND / DITCH NEXT TO CHAMBER IS PUMPED INTO THIS LINE. — DAC





Invek Surveys 6.16 — Manhole Details

11/09/25

OS ref SJ5039602466 — M/H no SJ50396450

Location DITCH S/O FORMER BEFESA SITE

Year laid — Status PR — Function S — Type F — Survey date 10/09/25

COVER — Shape U — Hinged N — Lockable N — Duty U — Size x — Toxic N

SHAFT — Side N — Noreg — Depth — Size x — Vermn N

CHAMBER — Soffit N — Steps — Ladders 0 — Lndgs 0 — Size x — Const U

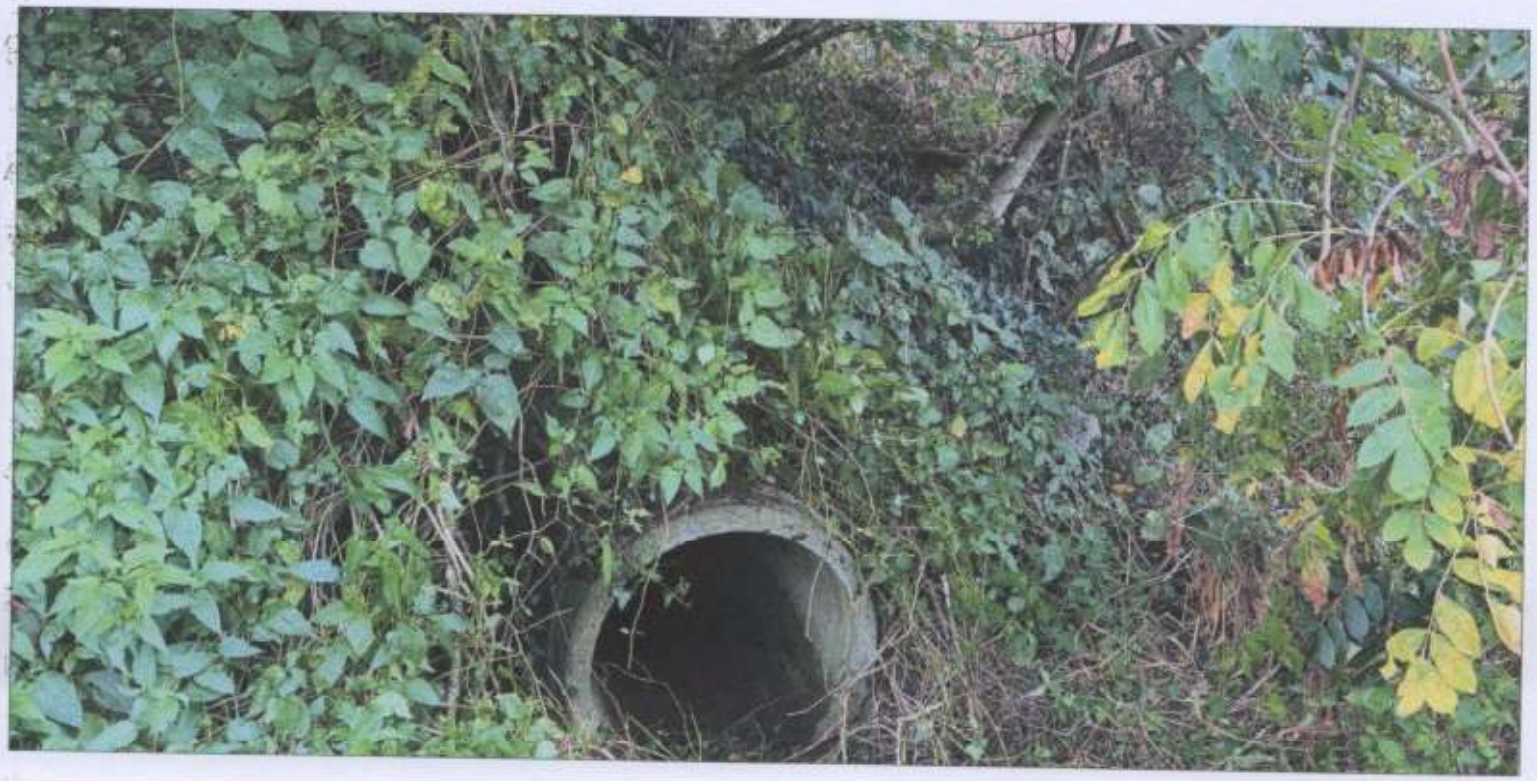
Depth flow — Depth silt — Ht surch — Cover level 84.45

	Up/dn ref	Shp	Size		Bdrop	Mat	Lng	Depth	Invert
A	50397350	C	600	x		CO		0.01	84.44
B				x					
C				x					
D				x					
E				x					
F				x					

		TV	Crt
X	x	N	C
Y	x	N	C

Attention — Cover N — Step/Lad N — Shaft N — Chamb N — Bch/ch N — Other N

Remarks OUTFALL 01. NO HEADWALL OR SCREEN. — DAC



Invek Surveys 6.16 — Manhole Details

11/09/25

OS ref SJ5039723315 — M/H no SJ50397350

Location FORMER BEFESA SITE

Year laid — Status PR — Function S — Type M — Survey date 10/09/25

COVER Shape U — Hinged N — Lockable N — Duty U — Size x — Toxic N

SHAFT Side N — Noreg — Depth 340 — Size 550 x — Vermn N

CHAMBER Soffit S — Steps 5 — Ladders 0 — Lndgs 0 — Size 1050 x — Const P

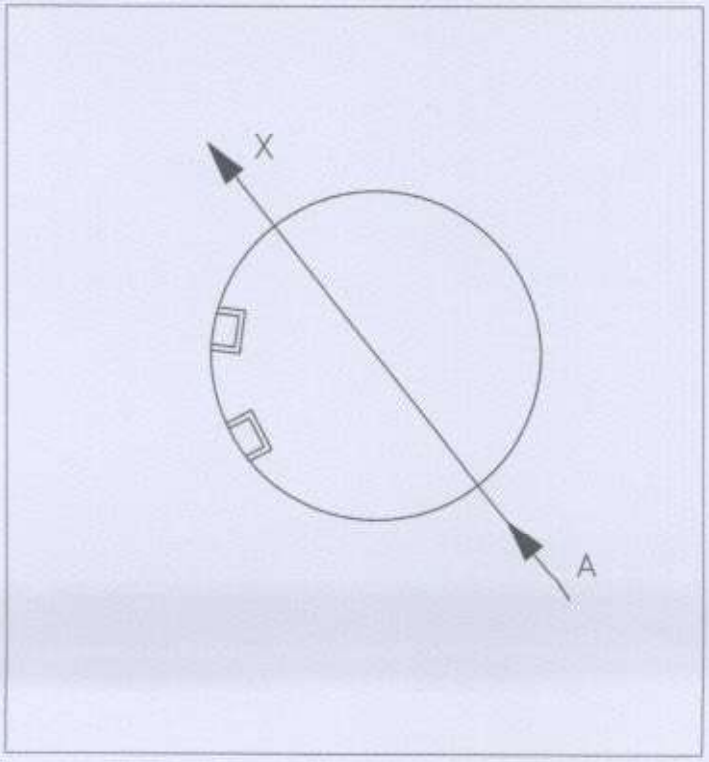
Depth flow — Depth silt 30 — Ht surch 100 — Cover level 89.86

	Up/dn ref	Shp	Size		Bdrop	Mat	Lng	Depth	Invert
In A	50397253	C	600	x		CO		2.99	86.87
B				x					
C				x					
D				x					
E				x					
F				x					
					TV	Crt			
Out X	50396450	C	600	x	N	B CO		3.00	86.86
Y				x	N	C			

Attention Cover Y — Step/Lad N — Shaft N — Chamb N — Bch/ch N — Other N

Remarks MH04. COVER BROKE, PALLET USED AS COVER. FLOW MONITOR IN PIPE A. — DAC





Appendix E Existing & Proposed Development Plans



Revision A

Drawing No. VES_TD_WREXIVC_200_001

PLANNING

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4. IN CASE OF ANY DISCREPANCY BETWEEN THE DRAWING AND THE WORKS INFORMATION, THE WORKS INFORMATION WILL TAKE PRECEDENCE AND THE CONTRACTOR WILL BE DEEMED TO HAVE INTENDED TO COMPLY WITH THE WORKS INFORMATION AND SHALL DO SO.

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APPLICATION BOUNDARY

Rev.	Description of revision	Drawn	Chkd	App	Date
A	BOUNDARY UPDATED	RB			14.11.25

VEOLIA
Technical Direction,
8th Floor, 210 Pentonville Road, London, N1 9JY
Tel: 0207 812 5165

Project
MERESIDE INDUSTRIAL PARK
FENNS BANK
WHITCHURCH

Title
FENN'S BANK IVC
EXISTING SITE LAYOUT

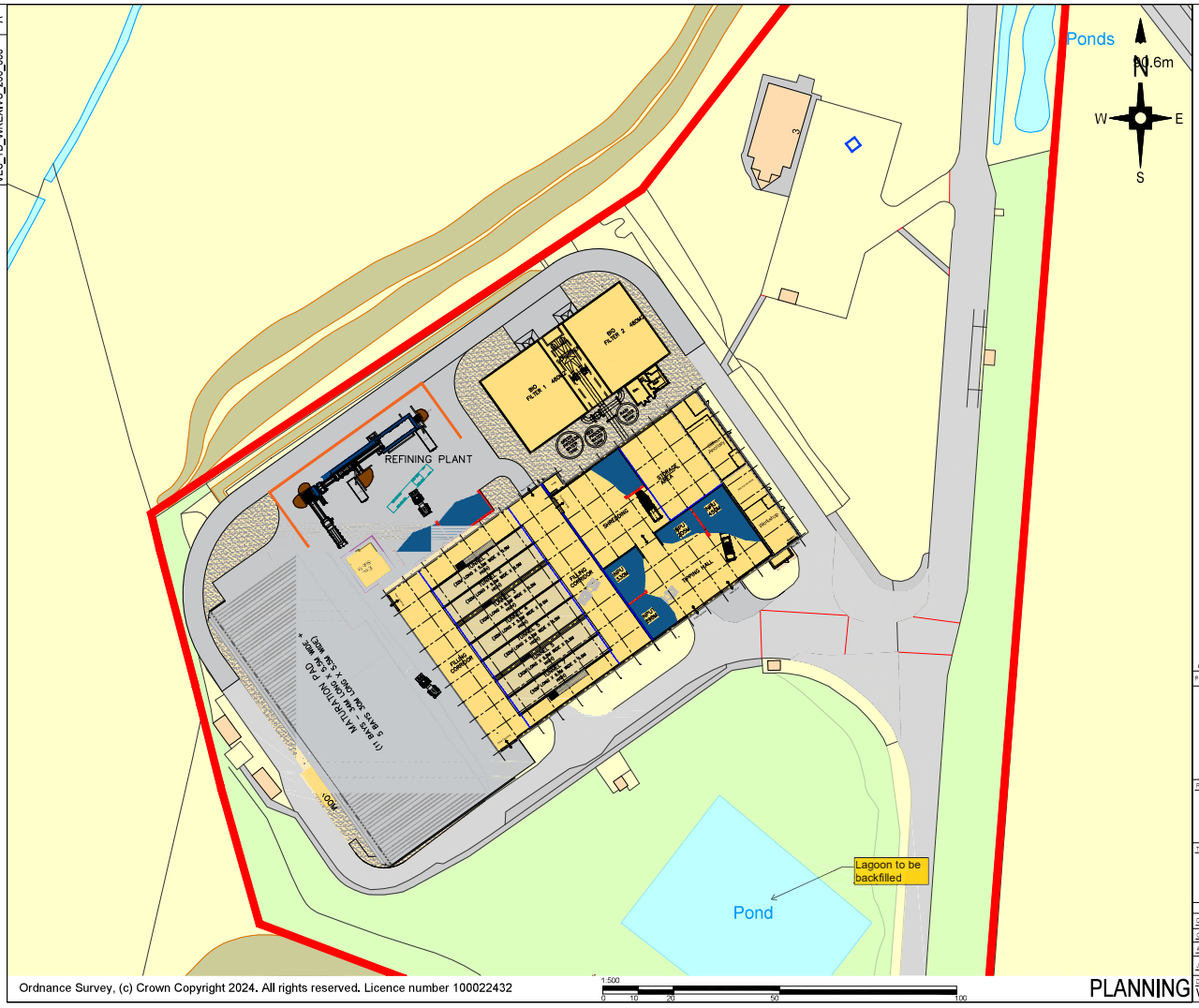
	Initials	Date	Scale	Sheet size
Drawn	RB	02.05.25	1:500 @A1	A1
Checked				
Approved				

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Job No. WREXIVC

Drawing No. VES_TD_WREXIVC_200_001

Revision A



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1:500
0 10 20 50 100

PLANNING

Drawing No. VES_TD_WREXIVC_200_000
Revision A

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3. THIS IS A CONCEPTUAL DRAWING SUBJECT TO DETAILED DESIGN BY A DESIGN & BUILD CONTRACTOR.

4. IN CASE OF ANY DISCREPANCY BETWEEN THE DRAWING AND THE WORKS INFORMATION, THE WORKS INFORMATION WILL TAKE PRECEDENCE AND THE CONTRACTOR WILL BE DEEMED TO HAVE INTENDED TO COMPLY WITH THE WORKS INFORMATION AND SHALL DO SO.

5. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.

6.PLEASE ENSURE DRAWING LICENCE DATE IS STILL VALID, ALL LICENCES ARE 12 MONTH UNLESS OTHERWISE STATED.

APPLICATION BOUNDARY
FULL HEIGHT PARTITION WALL
2 HOUR FIRE RATED CONCRETE PUSHWALLS
ACOUSTIC SCREEN

Rev	Description of revision	Drawn	Chkd	App	Date
A	ACOUSTIC FENCE ADDED	RB			18.09.25

VEOLIA
Technical Direction,
8th Floor, 210 Pentonville Road, London, N1 9JY
Tel: 0207 812 5185

Project
MERESIDE INDUSTRIAL PARK
FENNS BANK
WHITCHURCH

Title
FENN'S BANK IVC
PROPOSED SITE LAYOUT

	Initials	Date	Scale	Sheet size
Drawn	RB	02.05.25	1:500 @A1	A1
Checked				
Approved				

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Job No. WREXIVC
Drawing No. VES_TD_WREXIVC_200_000
Revision A

Appendix F NRW Correspondence

Cyfoeth Naturiol Cymru
Natural Resources Wales

Ein cyf/Our ref: CAS-301032-B4C9
Eich cyf/Your ref: P/2026/0075

Wrexham County Borough Council
The Guildhall
Wrexham
LL11 1AY

Dyddiad/Date: 25 March 2026

Annwyl Syr/Madam/Dear Sir/Madam,

BWRIAD/PROPOSAL: Installation of in-vessel composting (IVC) facility and associated development

LLEOLIAD/LOCATION: Befesa, Fenn's Bank, Whitchurch, SY13 3PA

Thank you for consulting Cyfoeth Naturiol Cymru (CNC)/Natural Resources Wales (NRW) about the above, which we received on 18 February 2026.

We have concerns with the application as submitted because inadequate information has been provided in support of the proposal. To overcome these concerns, you should seek further information from the applicant regarding protected sites and pollution of controlled waters. If this information is not provided, we would object to this planning application. Further details are provided below.

Protected Sites

Nutrient Sensitive Special Area of Conservation

We note the application site is within the catchment of the River Dee and Bala Lake Special Area of Conservation (SAC). In line with our Advice to Planning Authorities for Planning Applications Affecting Nutrient Sensitive River Special Areas of Conservation, under the Habitats Regulations, Planning Authorities must consider the impact of proposed developments on water quality within SAC river catchments.

This application proposes connection of foul water to the mains sewer. The proposed development could potentially lead to an increase of phosphorus load from the receiving wastewater treatment works into the River Dee and Bala Lake SAC. The majority of the River Dee and Bala Lake catchment is currently failing to meet water quality targets for phosphorus. The nutrient impacts of new connections need to be considered on a case-by-case basis within the Habitats Regulations Assessment process.

Ultimately, the suitability of foul drainage arrangements for the proposed development is a matter for your Authority to determine. We advise your Authority that further consideration is required and to follow our Advice specifically the section titled '*What does this mean for development proposals involving connection to public wastewater treatment works?*'

We therefore advise you to take the above into account in your determination of whether the development is likely to have a significant effect on the SAC. Should you conclude that an Appropriate Assessment is required, the Applicant will need to provide whatever evidence they consider appropriate (seeking advice from consultants as necessary) to demonstrate no adverse effect on site integrity.

Please consult us on any Appropriate Assessment under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended). However, until the development can demonstrate it will not lead to an increase of phosphorus load from the receiving wastewater treatment works into the river, we would be unable to advise you that the proposed development would not result in an adverse effect on the integrity of the site.

Special Area of Conservation (SAC) /Ramsar

The application site is within 185m of the following protected sites:

- Midland Meres & Mosses Phase 2 (Wales) Ramsar - 185m
- Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (Wales) SAC - 185m

We have concerns that harm from the proposed development on the SAC/Ramsar site cannot be ruled out**.**

Aerial Emissions

We have reviewed the updated documents listed below.

- Fichtner Consulting Engineers Limited, 04/02/2026, Shropshire In-Vessel Composting Facility, Veolia, Air Quality Assessment Addendum – Planning (AQA)
- Barry, K., 29/01/26, Veolia Fenn's Bank IVC facility, Ecological interpretation of AQA, V 2.0 / Ref: K25-003

The updated assessments were provided following our statutory response (CAS-289730-K2Y6, 14 November 2025).

As per section 5.1.2 of the Air Quality Assessment (AQA) - 'The Air Emissions Guidance' which states that to screen out impacts as 'insignificant' at European and UK statutory designated sites "…the long-term PC (process contributions) must be less than 1% of the long-term environmental standard (i.e., the Critical Level or Load)"**.**

The assessment has used two scenarios to predict impact from operations:

- Scenario 1: Ammonia emission concentrations at proposed emission limit value (ELV) of 3.5 mg/Nm³
- Scenario 2: Seasonally varying emission. Scenario 2 assumes lower ammonia emissions.

  - Classification of receptors

We previously advised that receptors E10, E12, E13 and E14 must be treated as statutory designated sites, not merely “local nature sites”.

The addendum document states this has been corrected, however, Table 19 still lists E10 and E12 with % of Critical Level values over 1% under Scenario 1 (e.g. E10 = 1.63%). These exceedances are still only partially acknowledged, and the implications are not fully addressed. We therefore advise that the tables need to be updated to treat E10, E12, E13 and E14 as SAC/SSSI/Ramsar receptors applying the 1% threshold for insignificance the text within the document updated where these were still referred to implicitly as “local” receptors.

- Stack height

We note that the stack height sensitivity analysis used Scenario 2 (lower, seasonally varying emissions), however if Scenario 1 (ELV emissions) were used, the required 1% threshold could not be met with a 27 m stack.

We advise that the applicants need to provide the results of the height sensitivity analysis under Scenario 1 emissions. In addition, they should demonstrate the minimum stack height required to achieve <1% PC at SAC features under a true worst-case approach. Should these results show that the above 1% persists they will need to propose a revised stack height or incorporate abatement methods.

The applicant’s PAC response states that increasing the stack height reduces process contributions (PC) to below 1% in areas “bunded for rewetting,” and therefore any impacts are “inconsequential.” However, this conclusion is not supported by the evidence and therefore we cannot agree.

The SAC feature ‘active raised bog’ and ‘degraded raised bog capable of natural regeneration’ occur close to the application site, and the supporting SSSI is already exceeding its ammonia Critical Level. Any additional ammonia input therefore has the potential to worsen an already unfavourable condition.

Furthermore, Table 19 of the addendum shows exceedances above the 1% threshold at receptors E1, E10, and E12. Despite this, the addendum’s conclusions state that these exceedances occur only in areas “not supporting qualifying features” and are therefore “inconsequential.” This overlooks both the presence of qualifying SAC features in proximity to these receptors, and the fact that the designated site is already above its Critical Level, meaning any further increase is ecologically significant.

We would draw your attention to Natural Resources Wales / Applications that reduce the impact or risk of pollution (GN 020) which states if the PC plus the background level reaches or exceeds the Critical Level then abatement must be used to reduce the PC to below 1% of the Critical Level. We therefore advise that the applicants acknowledge that Scenario 1 predictions exceed 1% at designated sites, provide revised modelling outputs or updated mitigation to comply with 1% threshold and explicitly assess the PC added to the background combination, not PC alone.

- In-Combination Assessment

While the addendum states that no other sources need to be included in an in-combination assessment, we advise that other sources of ammonia may need consideration in particular:

- Any permitted or planned installations including agriculture (details of any permitted installations may be available on NRW public register)

Even if impacts from these developments remain small, this must be documented to meet HRA test of “no adverse effect.”

- Abatement / mitigation

As Scenario 1 predicts PC >1% at statutory sites and levels at background and that PC exceeds Critical Level at E1 the requirement for abatement measures is triggered.

As the data provided to date appear to show that to date, we advise that the planning application should not proceed without the inclusion of adequate and effective abatement and evidence is provided that any impacts from the development fall below 1% at SAC features.

Therefore, we advise that the developers need to identify an abatement solution (e.g., enhanced biofilter performance, secondary scrubber, taller stack) and then provide modelling demonstrating that after abatement, long-term PC is <1% at SAC/SSSI receptors. Any mitigation strategy should also outline how ELV compliance will be maintained year-round and should be supported by revised modelling results.

- Updates/corrections to addendum wording

We advise that the section stating “no significant effects” is updated to reflect that Scenario 1 fails screening. We advise the applicant revise or remove where it is stated that “seasonal emissions” represent the appropriate basis for assessment – as per NRW guidance, the ELV scenario must be assessed. The applicant should also include clear summary tables contrasting Scenario 1 vs 2 and highlighting key exceedances.

To summarise, revised submissions do not currently demonstrate that the proposed development will avoid adverse effects on the SAC/Ramsar site. Scenario 1 (ELV) emissions still result in PC’s above the 1% threshold at several designated receptors, and key assessments - including Scenario 1 deposition modelling, worst-case stack height analysis, and a complete in-combination review remain outstanding.

Further to this, the supporting SSSI is already exceeding its ammonia Critical Level, meaning any additional contribution poses a risk to the conservation status of qualifying SAC features.

We therefore advise that the applicant provides:

- Corrected receptor classifications
- Full Scenario 1 modelling for concentrations and deposition
- Worst-case stack height analysis
- In-combination assessment
- A clear abatement/mitigation strategy with revised modelling demonstrating PC <1% at all SAC features

Until these issues are satisfactorily addressed, harm to the protected sites cannot be ruled out.

- Pollution prevention

We have concerns that an adverse effect from the proposed development on the SAC and Ramsar site cannot be ruled out. To secure appropriate mitigation measures, we advise that the condition set out below should be attached to any planning permission for this development.

Condition 1:No development or phase of development, including site clearance, shall commence until a site wide Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP should include:

- Construction methods: details of materials, how waste generated will be managed.
- General site management: details of the construction programme including phasing of development, timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain.
- Biodiversity management: details of tree and hedgerow protection; invasive species management; species and habitats protection, avoidance and mitigation measures.
- Soil management: details of topsoil strip, storage and amelioration for re-use.
- CEMP masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.
- Control of nuisances: details of restrictions to be applied during construction including timing, duration and frequency of works; details of measures to minimise noise and vibration from piling activities, for example acoustic barriers; details of dust control measures; measures to control light spill and the conservation of dark skies.
- Resource management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use.
- Traffic management: details of site deliveries, plant on site, wheel wash facilities
- Pollution prevention: demonstrate how relevant guidelines for pollution prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan.
- Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details.
- Details of the landscape or ecological clerk of works to ensure construction compliance with approved plans and environmental regulations.

The CEMP shall be implemented as approved during the site preparation and construction phases of the development.

Justification**:** A CEMP should be submitted to ensure necessary management measures are agreed prior to commencement of development and implemented for the protection of the environment during construction.

Please see below land contamination and pollution of controlled waters sections for further details.

As the competent authority under the Conservation of Habitats and Species Regulations 2017 (as amended), the Local Planning Authority must, before deciding to give consent for a project which is likely to have a significant effect on a SAC/Ramsar site, either alone or in combination with other plans or projects, make an appropriate assessment of the implications of the project for that site in view of its conservation objectives. The Authority must for the purposes of the assessment consult NRW and have regard to any representations we make within such reasonable time as is specified. In the absence of that assessment, NRW cannot advise that the proposals would not result in an adverse effect upon the SAC/Ramsar site.

Site of Special Scientific Interest (SSSI)

The application site is within 185m of Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SSSI.

We consider the proposals have the potential to impact upon the Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SSSI. Providing the impact pathways referenced above for the SAC are adequately addressed, NRW consider the features of the SSSI will also be adequately safeguarded.

Land Contamination

Having reviewed the information submitted, we consider adequate investigations in relation to land contamination have been conducted. Under normal circumstances we would recommend the full suite of contaminated land conditions and improvements in line with Section 6.9 of Planning Policy Wales - Edition 12, however, this site and the adjacent landfill site have a complex site history with respect to polluting activities. We note that the applicant (and their consultants) refers to the adjacent landfill as being the primary source of soil, groundwater, and surface water contamination at and in the vicinity of the site however we do not agree with this conclusion. It is our contention that the current contamination in the site drainage system, lagoon and the shallow groundwater at the site, was primarily caused by the former operations of Befesa Salt Slags Ltd and not by the adjacent Wardle's Landfill. That being said, due to the complex nature of the site and the specific contamination, any potential cleanup (remediation) of contaminated land (soils and superficial deposits) is thought to be impractical.

Although the cleanup of contaminated land (soils / superficial deposits) is thought impractical, we do advise the removal and / or treatment of contaminated waters and the subsequent control of contaminated water leaving the site via the onsite drainage system and adjacent drainage ditches. The onsite drainage system is complex and will need careful management to avoid onsite flooding and contaminated water from impacting the surrounding water courses. The Drainage Strategy will need to conform with SuDs and be submitted to the SuDs Advisory Board (SAB, Wrexham County Council). Please see Pollution of Controlled Waters section below for further comments.

NRW Environmental Permit(s) may be required to ensure compliance with discharge and water quality standards and to protect the wider environment.

NRW has installed a number of groundwater monitoring boreholes on the site, which must be protected and made available for any future groundwater monitoring that may be required. Details can be provided as required.

Pollution of Controlled Waters

Surface water drainage

As noted above, the existing site has a complex sealed drainage system, with several pumps which transferred surface water to various locations onsite whilst the previous business was operational (we understand the previous process utilised the surface water in the waste treatment). The water table is high in this area, and the yard was often subject to extensive flooding. This was also due to the presence of deep drains along the main access road (raised brick manhole chambers) which drain the triangular field to the East of the access road.

We have reviewed Version 4 of the Site Drainage Strategy (5 January 2026), and we still have concerns in relation to surface water drainage proposals.

It is noted that ground infiltration at the site is unsuitable due to very shallow groundwater, the presence of existing groundwater contamination and the underlying geology restricting infiltration. Therefore, the drainage hierarchy cannot proceed to infiltration methods.

- Contaminated water entering drainage system.

There remains a risk of contaminated groundwater entering the proposed drainage system. In particular, we have concerns in relation to the existing deep drains that connected to the access road and the adjacent triangular field, which have historically acted as a conduit for contaminated groundwater into the site drainage system. There remains the potential for mobilising pollution to controlled waters including the unnamed watercourse and Red Brook by re-connecting to or altering the historic drainage network.

We advise that further information is sought from the applicant to demonstrate -
- How ingress of contaminated groundwater will be prevented.
- How the design will ensure that no contaminated flows enter the proposed attenuation system.
- Whether flows from deep drains have been included in attenuation calculations.

- Attenuation pond

In relation to the proposed attenuation pond, while we welcome the use of a sealed system, we advise that an impermeable geotextile liner alone is insufficient given shallow groundwater pressures and that a structurally rigid construction is required to prevent liner compromise during wet periods or groundwater flooding. We therefore advise that the applicant provides:
- Revised engineering details for the pond
- Evidence that the system will prevent ingress of contaminated groundwater.
- Flood-resilience measures for periods of elevated groundwater.

- Surface water contaminants

Table 2 of the drainage strategy identifies the treatment of the following surface water contaminants - total suspended solids, metals and hydrocarbons. However, the following pollutants are also known to be present on site - ammonium, nitrite and nitrate, chloride,

phosphate. It is essential that any system to treat surface water contaminants is capable of addressing all contaminants likely to exceed environmental quality standards on the site.

We advise that further information is sought from the applicant to show how they propose to manage all surface water contaminants.

- Existing lagoon

The future use of the existing lagoon remains unclear, we advise that additional information is required to clarify whether the lagoon will be infilled, decommissioned, or reused. We also advise that landfill gas is known to accumulate beneath the lagoon liner and therefore a gas assessment is required prior to any future use being approved.

Protected Species

We note that the information submitted in support of the above application (Preliminary Ecological Appraisal and Green Infrastructure Statement, Former Befesa Salt Slags Site, Fenn's Bank, Wrexham, Sambrook Associates ltd., 02 October 2025) has identified that protected species are unlikely to be using the application site. We therefore have no comments to make on the application as submitted in respect of protected species.

We recommend that you discuss the need to secure further measures/ avoidance measures with your internal authority's ecological advisor.

Permits

NRW Environmental Permits will be required to ensure compliance with discharge and water quality standards and to protect the wider environment. The current permit needs to be surrendered including the remediation of the surface water lagoon before the application of the composting permit can be considered.

Dewatering

Dewatering from excavations during construction may require an abstraction licence and a discharge permit Natural Resources Wales / Find out if you need a water abstraction or impoundment licence
If dewatering to a watercourse, it may require the registration of an exemption Temporary dewatering from excavations to surface water: RPS 261 - GOV.UK or as it is unlikely that it will meet the requirements in RPS 261, it may require a permit.

If dewatering to land, the discharge itself may qualify for an exclusion from requiring an environmental permit, only if it meets certain criteria: Groundwater activity exclusions from environmental permits - GOV.UK

Waste

Any excavation and removal of material offsite would need to consider the potential issues with land and GW contamination requirements and ensure compliance with waste duty of care and hazardous waste legislation. For further advice can be found here: Natural Resources Wales / Pre application advice for environmental permits.

Other Matters

The advice in this letter relates to matters which are included on our consultation topics list. We do not rule out the potential for the proposed development to affect other environmental interests that are not included on this list.

We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our website for further details.

If you have any queries on the above, please do not hesitate to contact us.

Yn gywir / Yours faithfully,

Sara Thomas
Uwch Gynghorydd - Cynllunio Datblygu/Senior Advisor - Development Planning
Cyfoeth Naturiol Cymru/Natural Resources Wales

E-bost/E-mail: northplanning@cyfoethnaturiolcymru.gov.uk

Croesewir gohebiaeth yn Gymraeg a byddwn yn ymateb yn Gymraeg, heb i hynny arwain at oedi./Correspondence in Welsh is welcomed, and we will respond in Welsh without it leading to a delay.

Appendix G Greenfield Runoff Rates

ICP SUDS Mean Annual Flood

Input

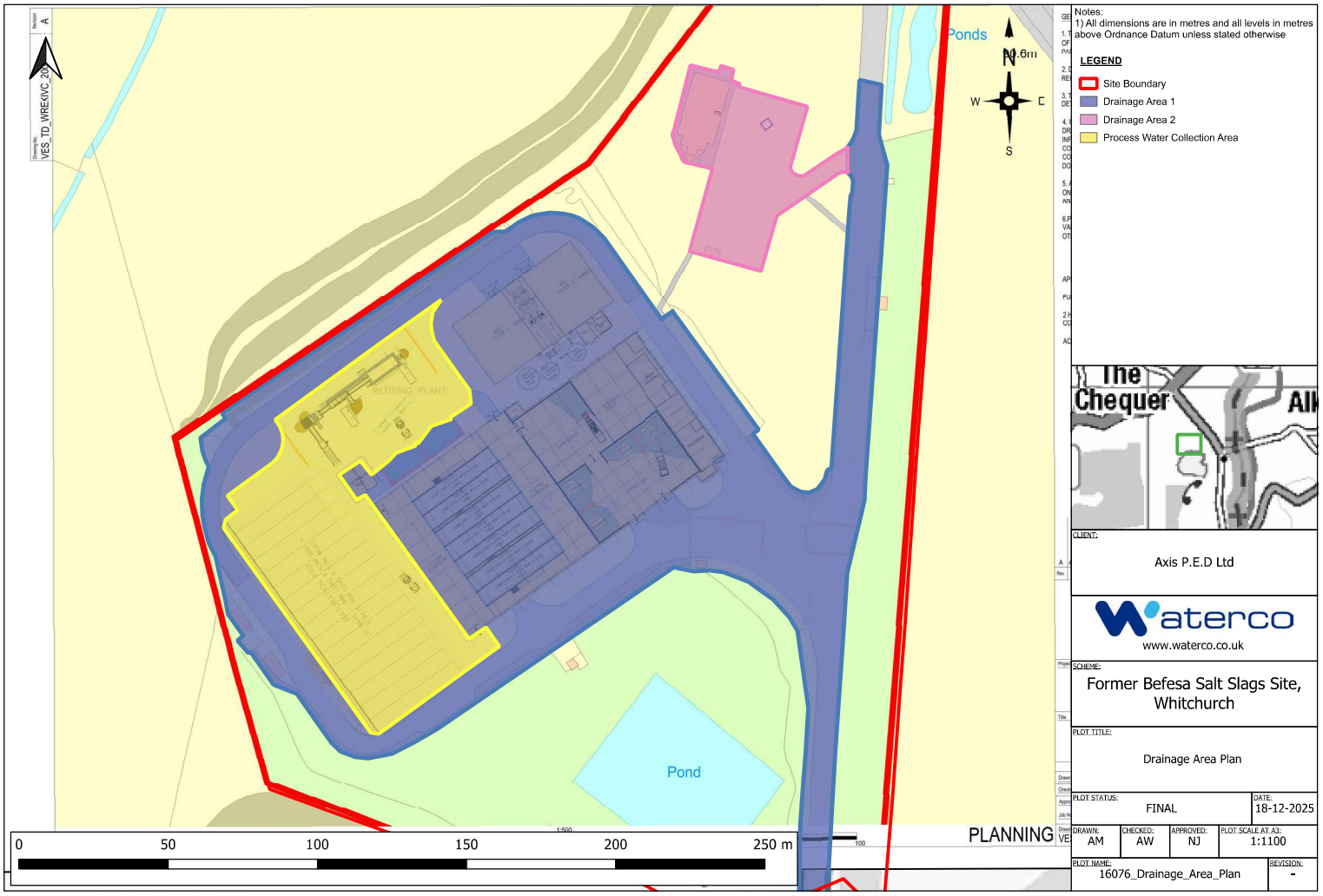
Return Period (years)	100	Soil	0.450
Area (ha)	2.053	Urban	0.000
SAAR (mm)	722	Region Number	Region 9

Results l/s

QBAR Rural	9.4
QBAR Urban	9.4
Q100 years	20.4
Q1 year	8.2
Q30 years	16.5
Q100 years	20.4

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Appendix H Contributing Drainage Area Plan



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Drainage Area 1
- Drainage Area 2
- Process Water Collection Area

CLIENT: Axis P.E.D Ltd

waterco
www.waterco.co.uk

SCHEME: Former Befesa Salt Slags Site, Whitchurch

PLOT TITLE: Drainage Area Plan

PLOT STATUS:	DATE:
FINAL	18-12-2025

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:1100

PLOT NAME:	REVISION:
16076_Drainage_Area_Plan	-

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Appendix I MicroDrainage Storage Estimates

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.394	0.394	8.3	785.3	O K
30 min Summer	9.521	0.521	8.3	1039.4	O K
60 min Summer	9.658	0.658	8.3	1312.9	O K
120 min Summer	9.777	0.777	8.3	1549.3	Flood Risk
180 min Summer	9.841	0.841	8.3	1676.5	Flood Risk
240 min Summer	9.883	0.883	8.3	1760.3	Flood Risk
360 min Summer	9.936	0.936	8.3	1866.4	Flood Risk
480 min Summer	9.967	0.967	8.3	1927.3	Flood Risk
600 min Summer	9.984	0.984	8.4	1962.5	Flood Risk
720 min Summer	9.994	0.994	8.4	1981.4	Flood Risk
960 min Summer	9.997	0.997	8.4	1987.8	Flood Risk
1440 min Summer	9.977	0.977	8.3	1947.7	Flood Risk
2160 min Summer	9.921	0.921	8.3	1836.7	Flood Risk
2880 min Summer	9.874	0.874	8.3	1742.9	Flood Risk
4320 min Summer	9.797	0.797	8.3	1589.4	Flood Risk
5760 min Summer	9.737	0.737	8.3	1469.5	Flood Risk
7200 min Summer	9.695	0.695	8.3	1386.4	O K
8640 min Summer	9.664	0.664	8.3	1324.0	O K
10080 min Summer	9.641	0.641	8.3	1278.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	162.792	0.0	639.0	16
30 min Summer	108.108	0.0	704.6	31
60 min Summer	68.670	0.0	1225.0	62
120 min Summer	40.967	0.0	1336.2	122
180 min Summer	29.882	0.0	1327.2	182
240 min Summer	23.787	0.0	1316.0	242
360 min Summer	17.172	0.0	1299.2	362
480 min Summer	13.578	0.0	1287.0	482
600 min Summer	11.289	0.0	1276.6	602
720 min Summer	9.693	0.0	1266.8	720
960 min Summer	7.594	0.0	1247.7	960
1440 min Summer	5.374	0.0	1214.0	1440
2160 min Summer	3.780	0.0	2472.8	1856
2880 min Summer	2.947	0.0	2420.6	2220
4320 min Summer	2.085	0.0	2192.0	3024
5760 min Summer	1.646	0.0	3054.7	3856
7200 min Summer	1.393	0.0	3225.7	4688
8640 min Summer	1.229	0.0	3408.6	5536
10080 min Summer	1.119	0.0	3601.6	6352

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Winter	9.394	0.394	8.3	785.2	O K
30 min Winter	9.521	0.521	8.3	1039.2	O K
60 min Winter	9.658	0.658	8.3	1312.5	O K
120 min Winter	9.777	0.777	8.3	1548.6	Flood Risk
180 min Winter	9.841	0.841	8.3	1676.3	Flood Risk
240 min Winter	9.883	0.883	8.3	1760.3	Flood Risk
360 min Winter	9.936	0.936	8.3	1867.0	Flood Risk
480 min Winter	9.967	0.967	8.3	1928.9	Flood Risk
600 min Winter	9.985	0.985	8.4	1965.0	Flood Risk
720 min Winter	9.995	0.995	8.4	1985.0	Flood Risk
960 min Winter	10.000	1.000	8.4	1993.5	Flood Risk
1440 min Winter	9.983	0.983	8.3	1959.3	Flood Risk
2160 min Winter	9.925	0.925	8.3	1844.9	Flood Risk
2880 min Winter	9.868	0.868	8.3	1731.6	Flood Risk
4320 min Winter	9.772	0.772	8.3	1540.0	Flood Risk
5760 min Winter	9.685	0.685	8.3	1366.0	O K
7200 min Winter	9.606	0.606	8.3	1207.6	O K
8640 min Winter	9.545	0.545	8.3	1086.8	O K
10080 min Winter	9.501	0.501	8.3	998.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Winter	162.792	0.0	639.1	16
30 min Winter	108.108	0.0	704.8	31
60 min Winter	68.670	0.0	1225.1	62
120 min Winter	40.967	0.0	1336.8	122
180 min Winter	29.882	0.0	1327.9	180
240 min Winter	23.787	0.0	1316.7	240
360 min Winter	17.172	0.0	1299.9	358
480 min Winter	13.578	0.0	1287.5	474
600 min Winter	11.289	0.0	1276.9	590
720 min Winter	9.693	0.0	1267.1	706
960 min Winter	7.594	0.0	1248.1	940
1440 min Winter	5.374	0.0	1215.0	1384
2160 min Winter	3.780	0.0	2475.1	2012
2880 min Winter	2.947	0.0	2431.2	2280
4320 min Winter	2.085	0.0	2224.4	3200
5760 min Winter	1.646	0.0	3055.5	4152
7200 min Winter	1.393	0.0	3228.3	4968
8640 min Winter	1.229	0.0	3413.9	5792
10080 min Winter	1.119	0.0	3611.5	6560

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Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 350625 339118 SJ 50625 39118
Data Type	Point
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	1.000
Cv (Winter)	1.000
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 1.942

Time (mins) From:	To:	Area (ha)
0	1	1.942

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Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	1994.0	1.000	1994.0

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0134-8400-1000-8400
Design Head (m)	1.000
Design Flow (l/s)	8.4
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	134
Invert Level (m)	8.995
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

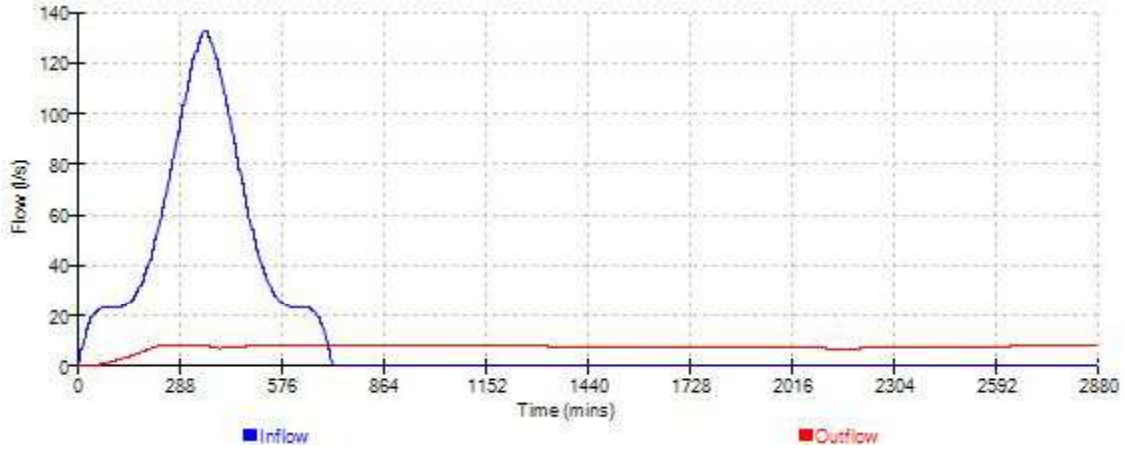
Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	8.4
Flush-Flo™	0.301	8.3
Kick-Flo®	0.662	6.9
Mean Flow over Head Range	-	7.2

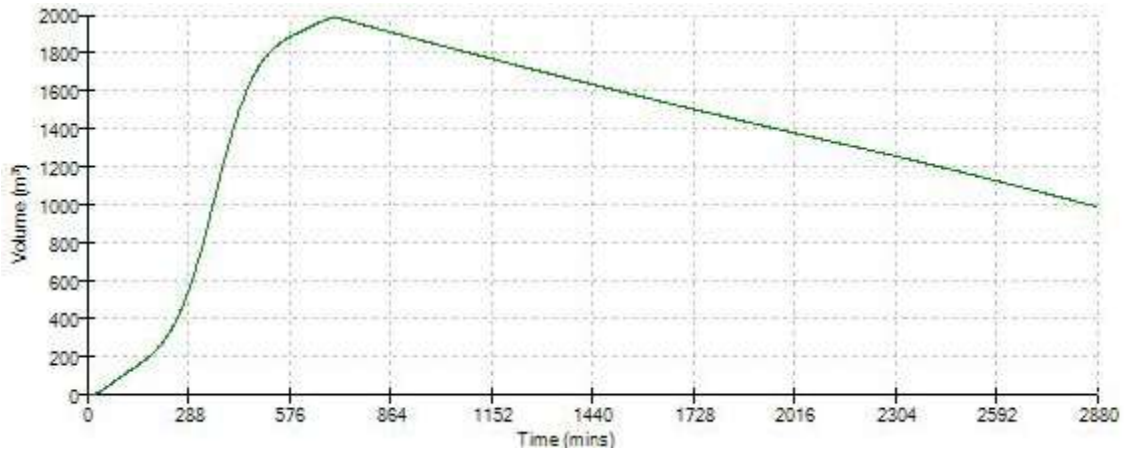
The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

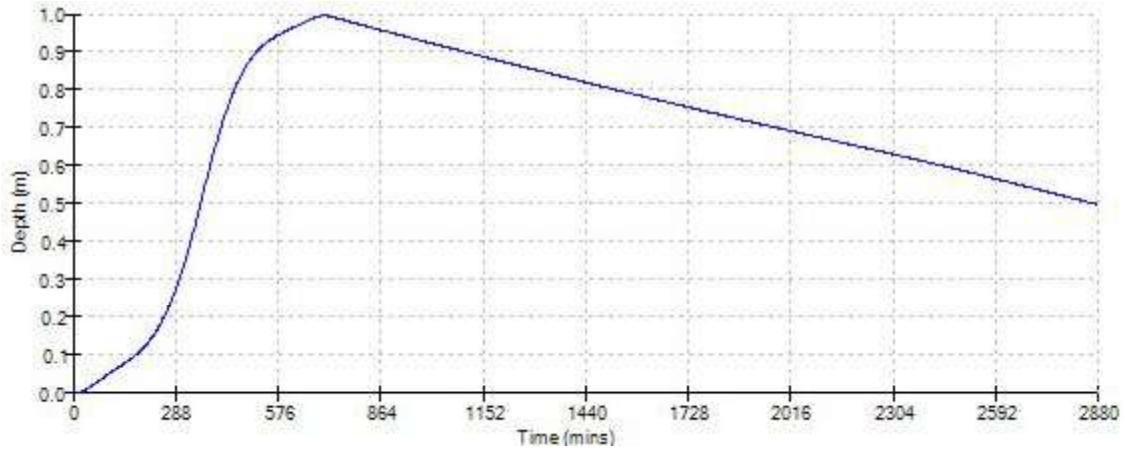
Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	4.8	1.600	10.5	5.000	18.0
0.200	8.1	1.800	11.1	5.500	18.8
0.300	8.3	2.000	11.6	6.000	19.6
0.400	8.2	2.200	12.2	6.500	20.4
0.500	8.0	2.400	12.7	7.000	21.2
0.600	7.5	2.600	13.2	7.500	21.9
0.800	7.6	3.000	14.1	8.000	22.6
1.000	8.4	3.500	15.2	8.500	23.2
1.200	9.1	4.000	16.2	9.000	23.9
1.400	9.8	4.500	17.1	9.500	24.5

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Event: 720 min Winter

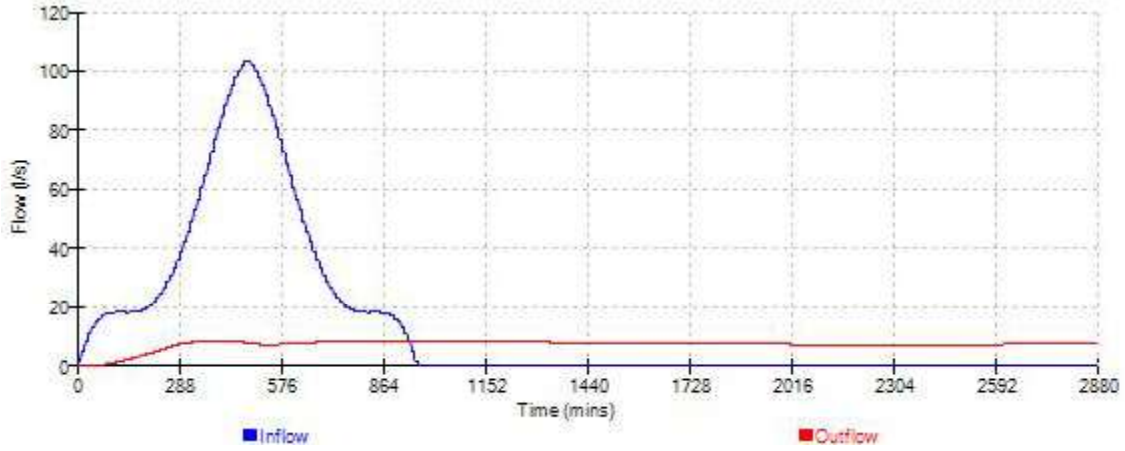


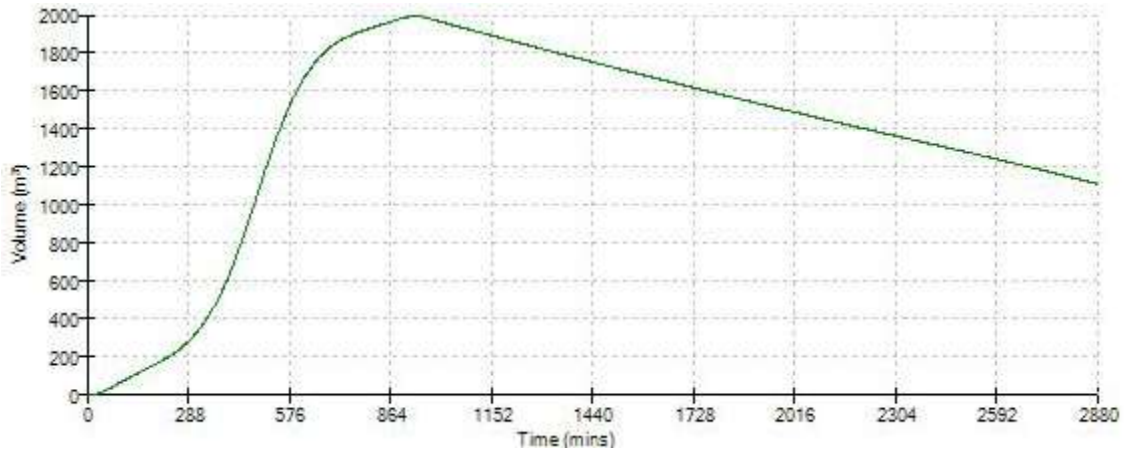


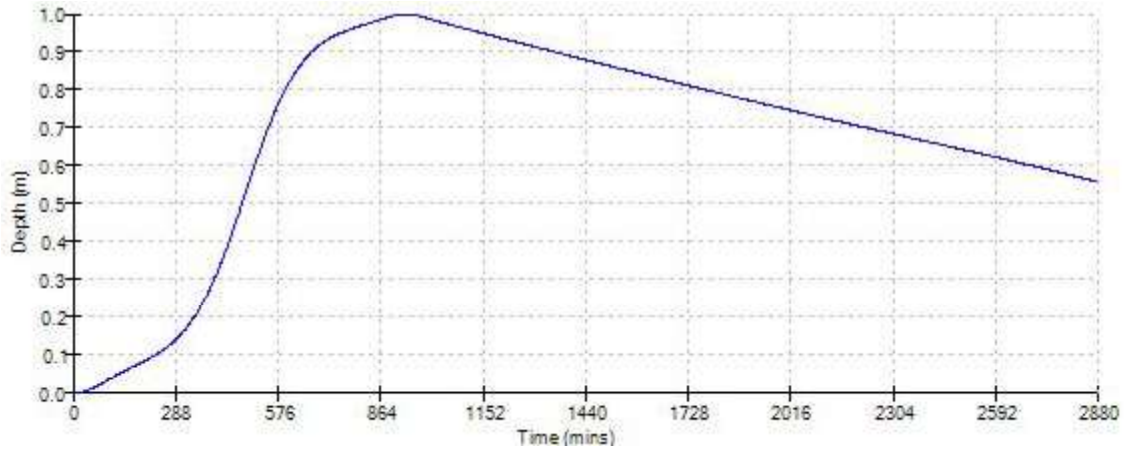


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Event: 960 min Winter

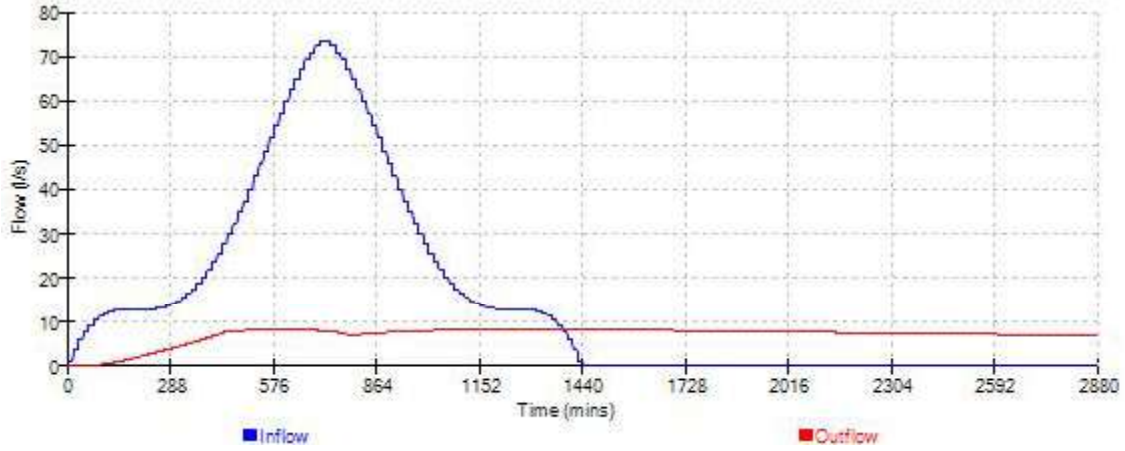


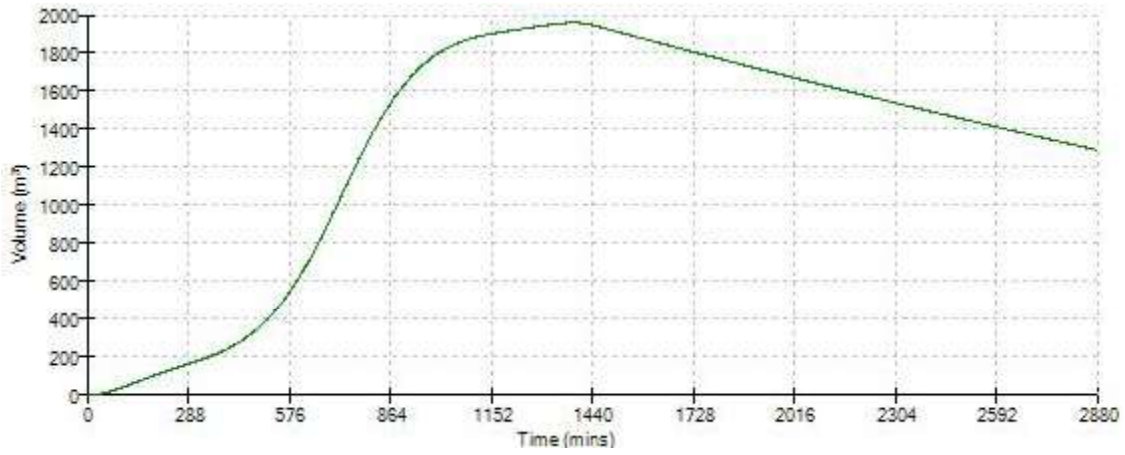


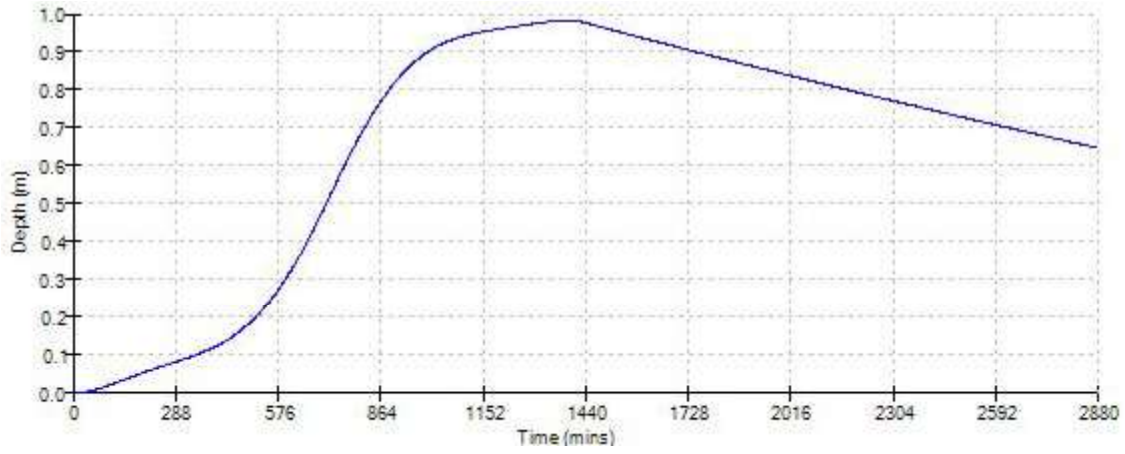


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Event: 1440 min Winter







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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.401	0.401	0.8	85.3	O K
30 min Summer	9.530	0.530	0.8	112.9	O K
60 min Summer	9.669	0.669	0.8	142.4	O K
120 min Summer	9.787	0.787	0.9	167.7	Flood Risk
180 min Summer	9.851	0.851	0.9	181.2	Flood Risk
240 min Summer	9.892	0.892	1.0	189.9	Flood Risk
360 min Summer	9.943	0.943	1.0	200.8	Flood Risk
480 min Summer	9.971	0.971	1.0	206.9	Flood Risk
600 min Summer	9.986	0.986	1.0	210.1	Flood Risk
720 min Summer	9.993	0.993	1.0	211.6	Flood Risk
960 min Summer	9.992	0.992	1.0	211.2	Flood Risk
1440 min Summer	9.962	0.962	1.0	204.8	Flood Risk
2160 min Summer	9.900	0.900	1.0	191.7	Flood Risk
2880 min Summer	9.850	0.850	0.9	180.9	Flood Risk
4320 min Summer	9.771	0.771	0.9	164.3	Flood Risk
5760 min Summer	9.715	0.715	0.9	152.3	Flood Risk
7200 min Summer	9.679	0.679	0.8	144.7	O K
8640 min Summer	9.656	0.656	0.8	139.7	O K
10080 min Summer	9.642	0.642	0.8	136.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	162.792	0.0	68.0	16
30 min Summer	108.108	0.0	64.5	31
60 min Summer	68.670	0.0	132.7	62
120 min Summer	40.967	0.0	135.6	122
180 min Summer	29.882	0.0	136.8	182
240 min Summer	23.787	0.0	138.0	242
360 min Summer	17.172	0.0	140.2	362
480 min Summer	13.578	0.0	142.3	482
600 min Summer	11.289	0.0	144.1	602
720 min Summer	9.693	0.0	145.2	720
960 min Summer	7.594	0.0	145.8	960
1440 min Summer	5.374	0.0	144.3	1440
2160 min Summer	3.780	0.0	271.6	1776
2880 min Summer	2.947	0.0	264.2	2160
4320 min Summer	2.085	0.0	243.4	2944
5760 min Summer	1.646	0.0	333.3	3800
7200 min Summer	1.393	0.0	352.5	4616
8640 min Summer	1.229	0.0	373.4	5448
10080 min Summer	1.119	0.0	395.3	6256

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Winter	9.400	0.400	0.8	85.3	O K
30 min Winter	9.530	0.530	0.8	112.9	O K
60 min Winter	9.669	0.669	0.8	142.4	O K
120 min Winter	9.788	0.788	0.9	167.7	Flood Risk
180 min Winter	9.851	0.851	0.9	181.3	Flood Risk
240 min Winter	9.893	0.893	1.0	190.2	Flood Risk
360 min Winter	9.945	0.945	1.0	201.2	Flood Risk
480 min Winter	9.974	0.974	1.0	207.5	Flood Risk
600 min Winter	9.990	0.990	1.0	210.9	Flood Risk
720 min Winter	9.998	0.998	1.0	212.6	Flood Risk
960 min Winter	9.998	0.998	1.0	212.6	Flood Risk
1440 min Winter	9.973	0.973	1.0	207.3	Flood Risk
2160 min Winter	9.907	0.907	1.0	193.2	Flood Risk
2880 min Winter	9.851	0.851	0.9	181.3	Flood Risk
4320 min Winter	9.756	0.756	0.9	161.0	Flood Risk
5760 min Winter	9.679	0.679	0.8	144.6	O K
7200 min Winter	9.624	0.624	0.8	132.8	O K
8640 min Winter	9.581	0.581	0.8	123.8	O K
10080 min Winter	9.550	0.550	0.8	117.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Winter	162.792	0.0	68.0	16
30 min Winter	108.108	0.0	64.6	31
60 min Winter	68.670	0.0	132.6	62
120 min Winter	40.967	0.0	135.5	120
180 min Winter	29.882	0.0	136.7	180
240 min Winter	23.787	0.0	137.9	240
360 min Winter	17.172	0.0	140.0	356
480 min Winter	13.578	0.0	142.1	474
600 min Winter	11.289	0.0	143.8	590
720 min Winter	9.693	0.0	144.8	706
960 min Winter	7.594	0.0	145.4	934
1440 min Winter	5.374	0.0	143.6	1382
2160 min Winter	3.780	0.0	271.0	1968
2880 min Winter	2.947	0.0	263.6	2224
4320 min Winter	2.085	0.0	243.9	3156
5760 min Winter	1.646	0.0	333.3	4088
7200 min Winter	1.393	0.0	352.5	4968
8640 min Winter	1.229	0.0	373.4	5872
10080 min Winter	1.119	0.0	395.6	6752

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Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 350625 339118 SJ 50625 39118
Data Type	Point
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	1.000
Cv (Winter)	1.000
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.211

Time (mins) From:	To:	Area (ha)
0	1	0.211

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Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	213.0	1.000	213.0

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0047-1000-1000-1000
Design Head (m)	1.000
Design Flow (l/s)	1.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	47
Invert Level (m)	8.995
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

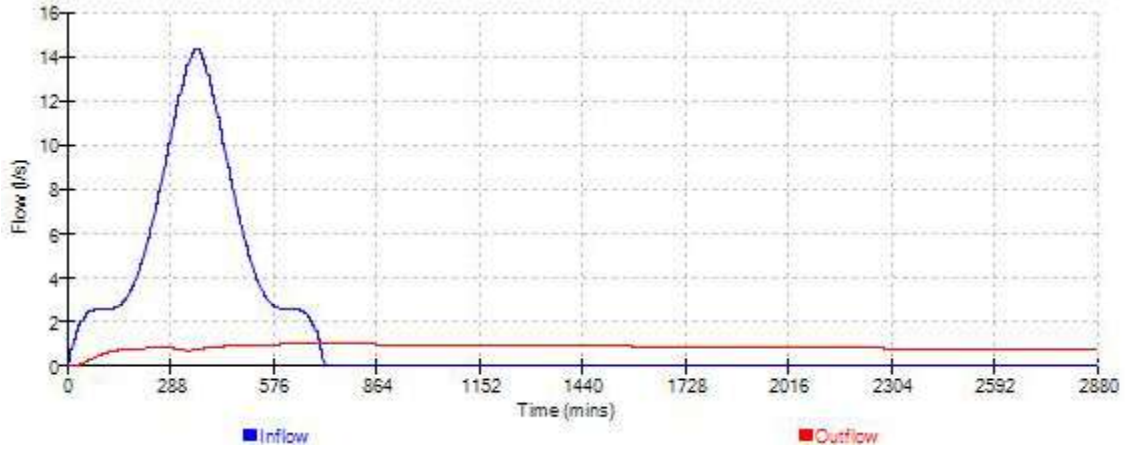
Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.0
Flush-Flo™	0.205	0.8
Kick-Flo®	0.415	0.7
Mean Flow over Head Range	-	0.8

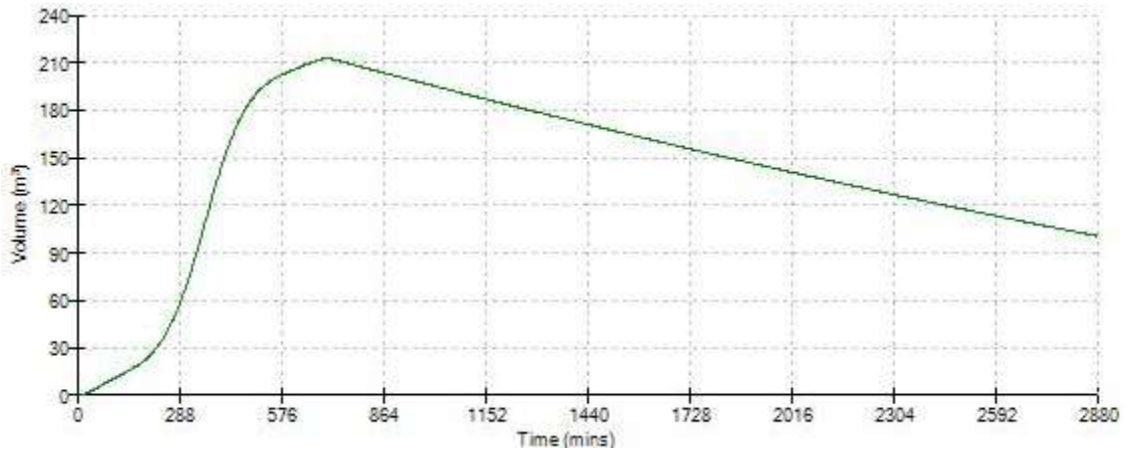
The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

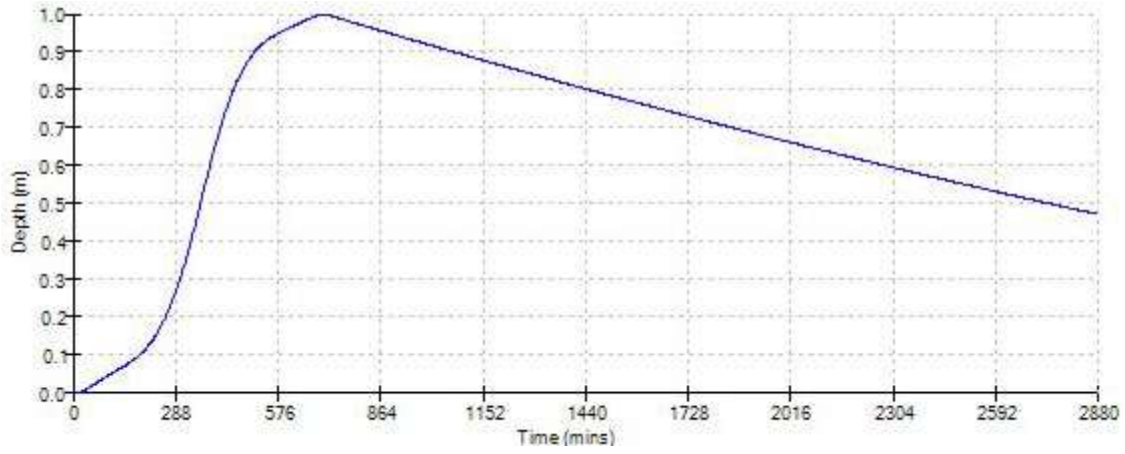
Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.8	1.600	1.2	5.000	2.1
0.200	0.8	1.800	1.3	5.500	2.2
0.300	0.8	2.000	1.4	6.000	2.3
0.400	0.7	2.200	1.4	6.500	2.3
0.500	0.7	2.400	1.5	7.000	2.4
0.600	0.8	2.600	1.5	7.500	2.5
0.800	0.9	3.000	1.6	8.000	2.6
1.000	1.0	3.500	1.8	8.500	2.7
1.200	1.1	4.000	1.9	9.000	2.7
1.400	1.2	4.500	2.0	9.500	2.8

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Event: 720 min Winter



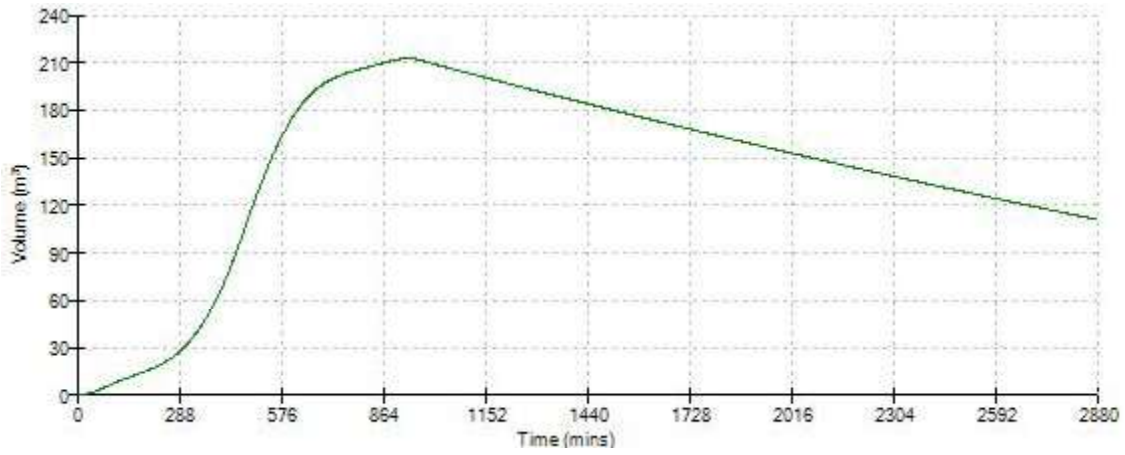


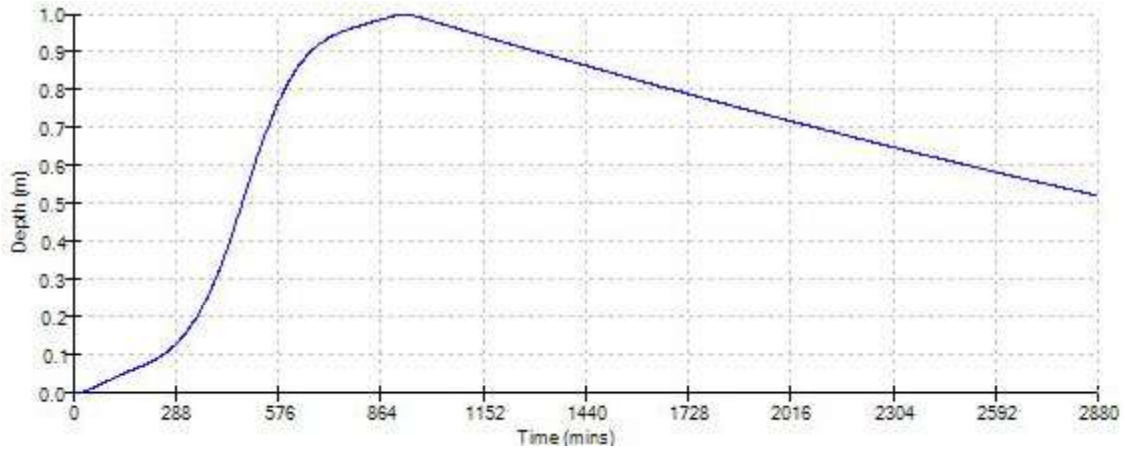


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Event: 960 min Winter

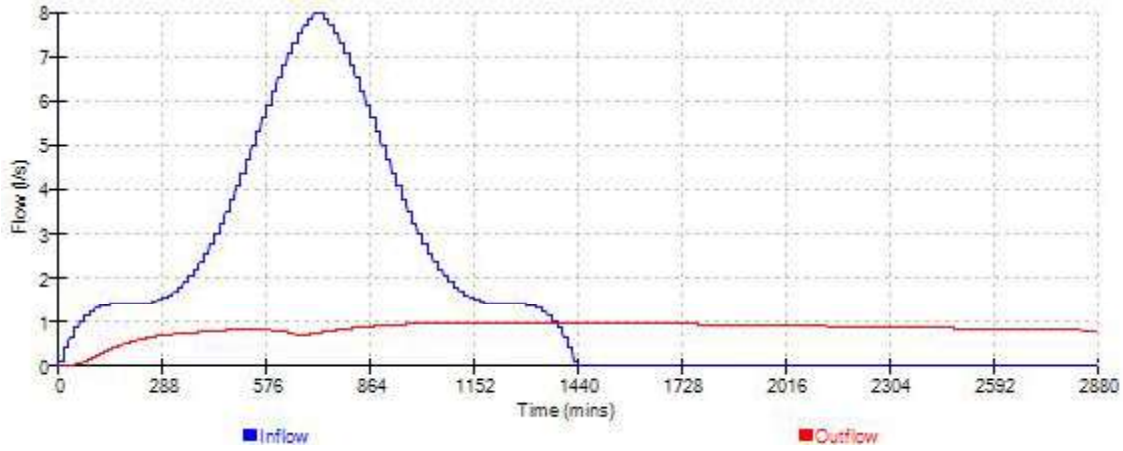


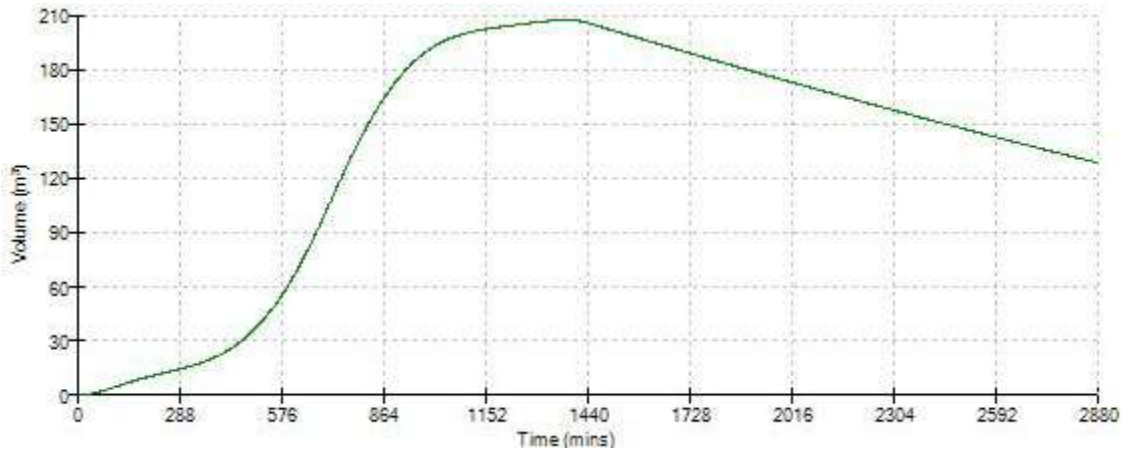


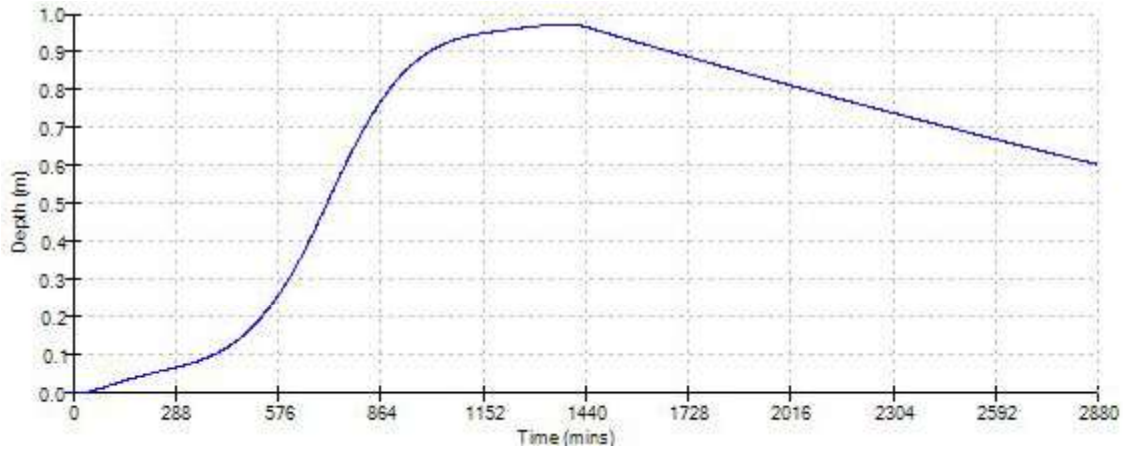


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Event: 1440 min Winter

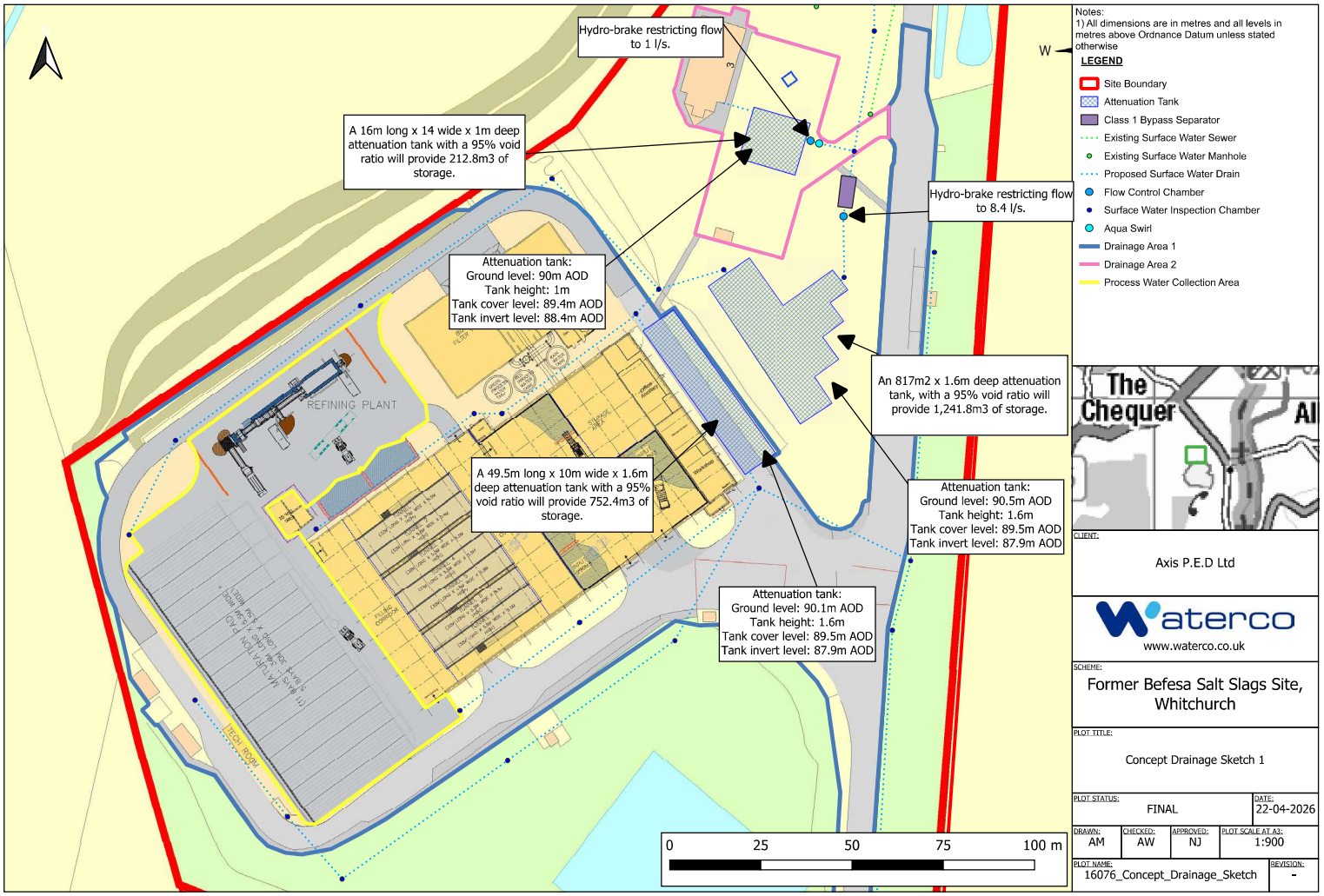






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Appendix J Concept Drainage Sketch



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Attenuation Tank
- Class 1 Bypass Separator
- Existing Surface Water Sewer
- Existing Surface Water Manhole
- Proposed Surface Water Drain
- Flow Control Chamber
- Surface Water Inspection Chamber
- Aqua Swirl
- Drainage Area 1
- Drainage Area 2
- Process Water Collection Area

CLIENT: Axis P.E.D Ltd

waterco
www.waterco.co.uk

SCHEME: Former Befesa Salt Slags Site, Whitchurch

PLOT TITLE: Concept Drainage Sketch 1

PLOT STATUS:	DATE:
FINAL	22-04-2026

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:900

PLOT NAME:	REVISION:
16076_Concept_Drainage_Sketch	-

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Appendix K Maintenance Schedules

Operation and Maintenance Requirements for Flow Control Chambers and Devices

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. Take remedial action if required.	Monthly (at start, then half yearly)
	Debris removal from catchment surface	Monthly
	Visual inspection of flow control chamber to assess if system is draining down correctly and the orifice or flow control device is not blocked. Assess if there is any build up of silt in chamber sump.	Monthly (at start, then half yearly) & after large storm events
	Removal of accumulated silt from silt trap and catchpit sumps.	As required
Remedial actions	Repair/rehabilitation of inlets/outlets.	As required

The maintenance requirements detailed above are to be undertaken by the site owner.

Name :

Position :

Date :

Signed on behalf of the site owner :

Operation and Maintenance Requirements for Piped Drainage Systems

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. Take remedial action if required.	Monthly (at start, then half yearly)
	Debris removal from catchment surface	Monthly
	Visual inspection of up/downstream chambers to assess if pipe length is draining down correctly and/or is blocked. Assess if there is any build up of silt in chamber sump.	Monthly (at start, then half yearly) & after large storm events
	Removal of accumulated silt from silt trap and catchpit sumps.	As required
Occasional Maintenance	CCTV Survey to confirm condition of pipework, identify any repairs/replacement works and action as required.	Following Poor Performance.
Remedial actions	Repair/rehabilitation of inlets/outlets.	As required

The maintenance requirements detailed above are to be undertaken by the site owner.

Name : _____

Position : _____

Date : _____

Signed on behalf of the site owner : _____

Operation and Maintenance Requirements for Attenuation Storage Tanks

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial actions	Repair/rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove If necessary	Every 5 years or as required

Ref. Table 21.3, CIRIA C753 'The SuDS Manual'

The maintenance requirements detailed above are to be undertaken by the site owner.

Name :

Position :

Date :

Signed on behalf of the site owner :

Appendix L Concept Designers Risk Assessment (cDRA)

CONCEPT DESIGNER'S RISK ASSESSMENT

Project:	Former Befesa Salt Slags Site, Whitchurch	**Project No:**	16076
Client:	Axis P.E.D Ltd		
Report Reference:	16076-Drainage Strategy-01		

Prepared by:	Adam McCulloch	**Date:**	16/09/2025
Checked by:	Aled Williams	**Date:**	19/09/2025
Reviewed by:	Nigel Jones	**Date:**	19/09/2025

Requirement:

The Construction (Design and Management) Regulations 2015 (CDM 2015) place an obligation on the Designer to take all reasonable steps to provide, with the design, sufficient information about the design, construction or maintenance of the structure, to adequately assist the client, other designers and contractors to comply with their duties under CDM. The Designer has undertaken this assessment to identify any extra-ordinary risks, or those that would not be expected on this particular project by an experienced and competent Contractor. The aim is to avoid needless paperwork and bureaucracy and ensure the assessment is project specific, relevant and proportionate to the risk.

DRA Summary

Each of the following risk areas has been considered using the question below. Is a risk present which is considered to be **extra-ordinary or unexpected** in this instance?

If **YES** - A detailed risk assessment is required at design stage
If **UNKNOWN** - Insufficient information has been provided at concept design stage and the risks are unknown. Further consideration must be given at design stage(s)
If **NO** - No further action is required.

Hazard Ref.	Risk Areas	YES, UNKNOWN or NO	Comments
1	Ground Conditions	Unknown	To be considered at detailed design
2	Hazardous Environment	Unknown	To be considered at detailed design
3	Existing Working Environment	Unknown	Former salt slags recycling site
4	Existing Services	Yes	Buried services present
5	Proximity to Other Structure(s)	Unknown	To be considered at detailed design
6	Near Waterbody / flood risk	Yes	Existing lagoon within Client land ownership to be decomissioned
7	Proximity to Other Activities	Unknown	Industrial land use adjacent
8	Sequence of Construction	Unknown	To be considered at detailed design
9	Access	Unknown	Access provided from unnamed access road
10	Interfaces	Unknown	To be considered at detailed design
11	Confined Space Working	Unknown	To be considered at detailed design
12	Maintenance Considerations	Unknown	Proposed attenuation tank and pond
13	Working at Height	Unknown	To be considered at detailed design
14	Steep Slopes	No	
15	Demolition / Refurbishment / Repair	Unknown	To be considered at detailed design
16	Welfare	Unknown	To be considered at detailed design
17	Occupational Health	Unknown	To be considered at detailed design
18	Environmental Issues	Unknown	To be considered at detailed design
19	Other Significant Hazards not Identified Above	Unknown	To be considered at detailed design
20	Residual Risk to Future Users	Unknown	To be considered at detailed design