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PB GELATINS UK LIMITED TREFOREST INDUSTRIAL ESTATE, PONTYPRIDD

ENVIRONMENTAL PERMIT SURRENDER APPLICATION

SITE CONDITION REPORT

January 2026

Commissioned by:

Issue: V1.1

Project Reference: NS_0118_32

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APPENDICES

1.0 INTRODUCTION

1.1 Project Introduction and Aims

Environmental Compliance Limited (ECL), on behalf of PB Gelatins UK Limited (PB Gelatins) has commissioned NSugg Ltd to prepare an updated Site Condition Report to support the surrender of PB Gelatins' Environmental Permit (reference: DP3030ZC) for their gelatin manufacturing site in Pontypridd.

A Site Condition Report (SCR) was prepared in March 2013[1], to support the permit application for PB Gelatin's gelatin manufacturing site, Unit A6, Severn Road, Treforest Industrial Estate, Pontypridd, CF37 5SQ, hereafter referred to as 'the installation'.

The 2013 SCR was updated in January 2020[2], with a further SCR update in 2023[3] to support a permit variation application for:

- A new effluent treatment plant, altered site drainage and additional point source emission to sewer.
- Expansion of the permit boundary to include additional storage areas (buildings A12 and A13).
- Installation of two new biofilters.
- Incorporation of ten new point source emissions to air.
- Installation of a new bunded hydrogen peroxide tank and a salt saturator (brine) vessel.

The installation is now closed and decommissioned. This surrender SCR has been prepared in accordance with Sections 8 – 10 of Natural Resources Wales (NRW's) SCR Template and should be read in conjunction with the 2013 SCR and the 2020 and 2023 SCR updates.

Paragraph 14 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations 2016 (as amended), states:

The regulator must accept an application to surrender an environmental permit in whole or in part under regulation 25(2) if it is satisfied that the necessary measures have been taken –

- *to avoid a pollution risk resulting from the operation of the regulated facility; and*
- *to return the site of the regulated facility to a satisfactory state, having regard to the state of the site before the facility was put into operation.*

The site setting, baseline conditions and permitted activities are summarised in Section 2 of this report for context. Section 3 outlines the decommissioning process, confirming the removal of pollution risks. The known on-site pollution incidents since permit issue, and their remediation, are detailed in Section 4. Section 5 assesses the condition of the land at permit surrender, compared to baseline data, to inform the surrender test.

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[1] Integral Geotechnique (Wales) Limited, March 2013, PB Gelatins UK, Application Site Condition Report. Report Reference: 11121/CS/13/SCR.

[2] Integral Geotechnique (Wales) Limited, January 2020, PB Leiner, Site Condition Report. Report Reference: 12588/CS/19/SCR.

[3] ECL, December 2023, Application for an Environmental Permit Variation under the Environmental Permitting (England and Wales) Regulations 2016 (as amended), Site Condition Report, PB Gelatins U.K. Limited. ECL Ref: PBGE.01.09/SCR.

1.2 Sources of Information

In addition to the 2013 SCR and the 2020 and 2023 SCR updates, the following sources of information have informed this report:

- December 2020 Geo-Environmental Ground Investigation[4] undertaken in response to an on-site sodium hydroxide spill in May 2020 (ECL Report 109.01.01/GIR). This incident is detailed in Section 3.
- August 2020 Geo-Environmental Ground Investigation[5] (ECL Report 095.01.01/GIR), subsequent December 2022 Ground Investigation[6] (ECL Report VEOL.01.02/GIR) and monitored natural attenuation[7] undertaken in response to an on-site sodium hydroxide spill in June 2020. This incident is detailed in Section 3.
- October 2022 Ground Investigation[8] (ECL Report: PBGE.01.06/SCR) undertaken in response to a June 2022 effluent discharge incident and to meet the routine permit sampling requirements. This incident is detailed in Section 3.
- June 2025 Site Closure Plan[9], which summarises the site setting and pollution history and details the decommissioning arrangements.
- Environmental monitoring undertaken by ECL in 2025 to support permit surrender; the data are reviewed in Section 5.
- NRW Compliance Assessment Reports (CARs), which are referenced where appropriate.
- Published information sources including Ordnance Survey mapping, NRW's interactive map viewer and the Welsh Government's Data Map Wales have also been relied on and are referenced where appropriate.

[4] ECL, December 2020, Geo-Environmental Ground Investigation Assessment at PB Leiners (PB Gelatins) '(A18)'. ECL Ref: ECL.109.01.01/GIR.

[5] ECL, August 2020, Geo-Environmental Ground Investigation Assessment at PB Leiners (PB Gelatins). ECL Ref: ECL.095.01.01/GIR.

[6] ECL, February 2023, Geo-Environmental Ground Investigation Assessment at PB Leiners (PB Gelatins). ECL Ref: VEOL.01.02/GIR.

[7] NSugg Ltd., March 2024, PB Leiner UK, Liquid Sodium Hydroxide Spill – Monitored Natural Attenuation (Ref: NS_0118_21/MNA) & NSugg Ltd., April 2025, PB Leiner UK, Liquid Sodium Hydroxide Spill – Monitored Natural Attenuation Addendum Report (Ref: NS_0118_21/MNA/ Addendum).

[8] ECL, November 2022, Site Investigation Report, PB Leiners (PB Gelatins), ECL Ref: PBGE.01.06/SCR, also reported in the 2023 SCR.

[9] ECL, June 2025, Site Closure Plan, Environmental Permit EPR/DP3030ZC, PB Gelatins UK Limited, ECL Ref: PBGE.01.14/SCP.

2.0 BASELINE CONDITIONS AND PERMITTED ACTIVITIES

2.1 Site History and Permitted Activities

The permitted activities are associated with the processing of ossein (small chippings/shavings of animal bones) and other raw materials for the production of gelatin. The 2023 SCR[3] and 2025 Site Closure Plan[9] include details of the installation layout, history and permitted activities; the following summary is provided for context.

Figure 1 presents the installation layout, with the permit boundary outlined in green. The permitted areas comprise:

- Area A18, which includes the process buildings of New Farm and Old Farm and an effluent treatment plant (discharge point DP2 has not been connected to the foul sewer, with all effluent discharging via DP1).
- Area A21, which includes buildings used for the remainder of the gelatin processing and production, and an effluent treatment plant installed following the June 2022 effluent discharge incident. This area includes the permitted discharge point DP1, for the discharge of site effluent to foul sewer.
- Waterworks Zone (adjacent to Area A21) used for the storage and treatment of raw water abstracted from the River Taff, for subsequent use within the on-site processes.
- Buildings A12 & A13, used for the storage of 'work in progress' material/intermediate product prior to blending, and storage of finished product prior to dispatch. These were added to the permit boundary via the 2023 variation.

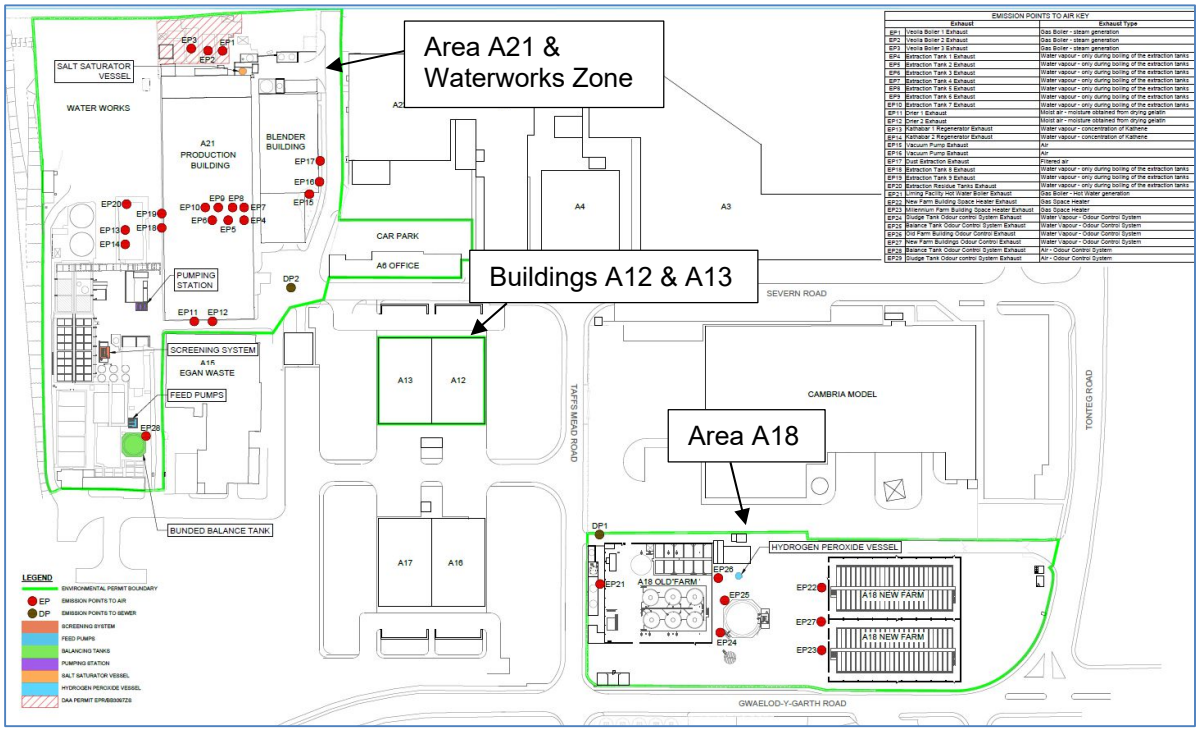


Figure 1. Installation Layout Plan (extracted from 2025 Site Closure Plan)

Historical maps confirm the site's partial use for gelatin manufacture since at least the 1970s. Pre-permit, historical land uses within the site also included a metal alloy works with potential contaminants including metals, metalloids, inorganics and non-metals, PAHs, Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), and hydrocarbons. The site is also known to have previous heavy and light industrial uses with

potential contaminants including, metals, inorganics and non-metals, PAHs, fuels/oils, acids and alkalis.

2.2 Off-Site Land Uses and Incidents

The site is within a wider industrial setting, with historic local land uses including the Taff Vale railway line, Maes-Mawr colliery, a power station and various heavy and light industries. Current land use within the wider industrial estate is generally light industrial and commercial.

The 2025 Site Closure Plan reviews a 2020 Envirocheck Report which identified ten off-site pollution incidents to controlled waters within 500m of the installation boundary; they are all classified as minor incidents with the most recent incidents recorded in 1997.

The installation and surrounding land are reported to have flooded in February 2020 (Storm Dennis), as indicated on Figure 2.

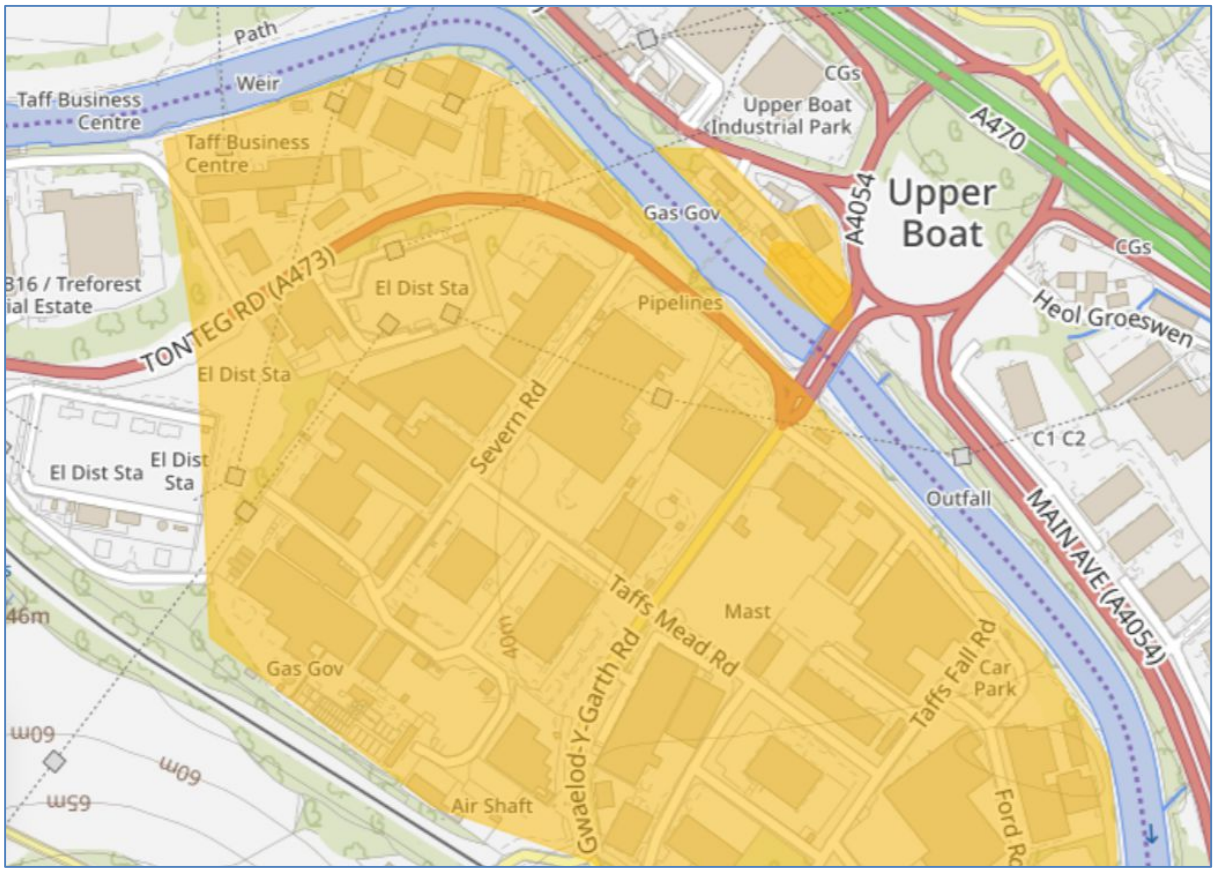


Figure 2. NRW Recorded Flood Outline **(extracted from Welsh Government's Data Map Wales, accessed 17th December 2025)**

In December 2023, a significant fire occurred at Rizla House, a commercial property on Severn Road, approximately 100m north-east (down-gradient) of Area A21.

2.3 Hydrogeological and Hydrological Site Setting

The hydrogeological and hydrological site setting is summarised below, based on the previous referenced reports:

- The installation is underlain by at least 15m thickness of superficial deposits, comprising Alluvium and River Terrace Deposits associated with the River Taff overlying Glacial Till. Site-specific borehole logs confirm the near-surface superficial deposits are typically described as silty Sand and Gravel and are overlain by Made Ground. The superficial deposits overlie the Brithdir Member (sandstone) of the Carboniferous Pennant Sandstone Formation; bedrock has not been encountered within the site boreholes.
- Shallow groundwater is recorded within the Made Ground and/or superficial deposits beneath the installation and is typically 0.5m – 2.0m below ground level (mbgl). The groundwater flow direction is to the north-east, towards the River Taff.
- The superficial deposits (Alluvium and River Terrace Deposits) are classified as a Secondary A aquifer; the underlying Glacial Till which has not been proven on site, is classified as a Secondary aquifer (undifferentiated).
- The installation is located within the surface water catchment of the River Taff, which flows in a south-south-easterly direction, passing approximately 25m north-east of the installation at its closest point (Area A18). Shallow groundwater beneath the installation is assumed to be in continuity with the river, contributing baseflow to the watercourse.

The key receptors are shallow groundwater beneath the site, although this is of limited resource potential, and the River Taff.

2.4 Baseline Conditions

2.4.1 Permit Application SCR (2013)

The baseline condition of the land and groundwater, at permit issue, is summarised in the 2013 SCR as follows:

- Ground investigations prior to permit application (2013) are limited and focus on geotechnical ground conditions, rather than contamination; they are also limited in extent to Area A18 (refer to Figure 3). No additional ground investigation was undertaken to support the permit application.
- Report 10299/GNS/09 details a 2009 ground investigation in Area A18 to support an extension to New Tank Farm, as indicated on Figure 3; this included four trial pits and two boreholes. Made ground was confirmed in all locations, to a maximum depth of 1.6mbgl, with evidence of brick, ash, clinker, metal, concrete and pottery, and a slight hydrocarbon odour in one trial pit. Laboratory analysis of the made ground confirmed the presence of metals, semi-metals, PAHs and hydrocarbon compounds, although these were not considered to be at concentrations likely to migrate to affect controlled waters. The original ground investigation report is not available for review.
- Report 10762/GNS/11 details a 2011 ground investigation for proposed effluent tanks in Area A18 as indicated on Figure 3; this included two trial pits and two boreholes. Made ground was encountered at all locations with laboratory analysis confirming the presence of metals, semi-metals and PAHs, although these were not considered to be at concentrations likely to migrate to affect controlled waters. No groundwater samples were obtained.

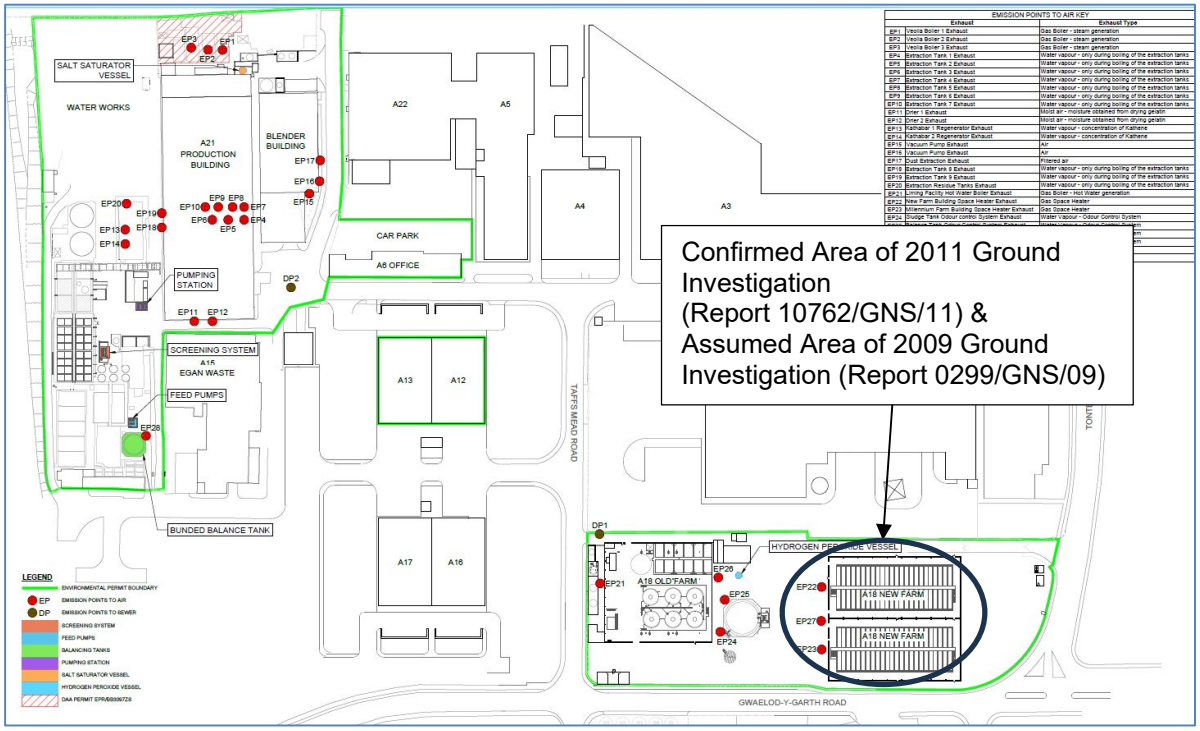


Figure 3. Baseline Ground Investigation Locations

As outlined above in Section 2.1 and 2.2, the site and surrounding land have been subject to significant historic industrial land use.

Section 2.5 below includes details of the potential sources of contamination associated with the permitted activities, which have occurred on the site since at least the 1970s.

2.4.2 2022 Ground Investigation

A comprehensive ground investigation was undertaken in October 2022 to satisfy permit condition 3.1.1 for routine soil and groundwater sampling, and to investigate a suspected failure of the effluent drainage system. Details regarding the pollution incident are presented below in Section 3, with the ground investigation reported fully within the 2023 SCR[3].

The 2022 ground investigation included the installation of boreholes across the installation, as indicated on Figure 4, with sampling also included from existing boreholes.

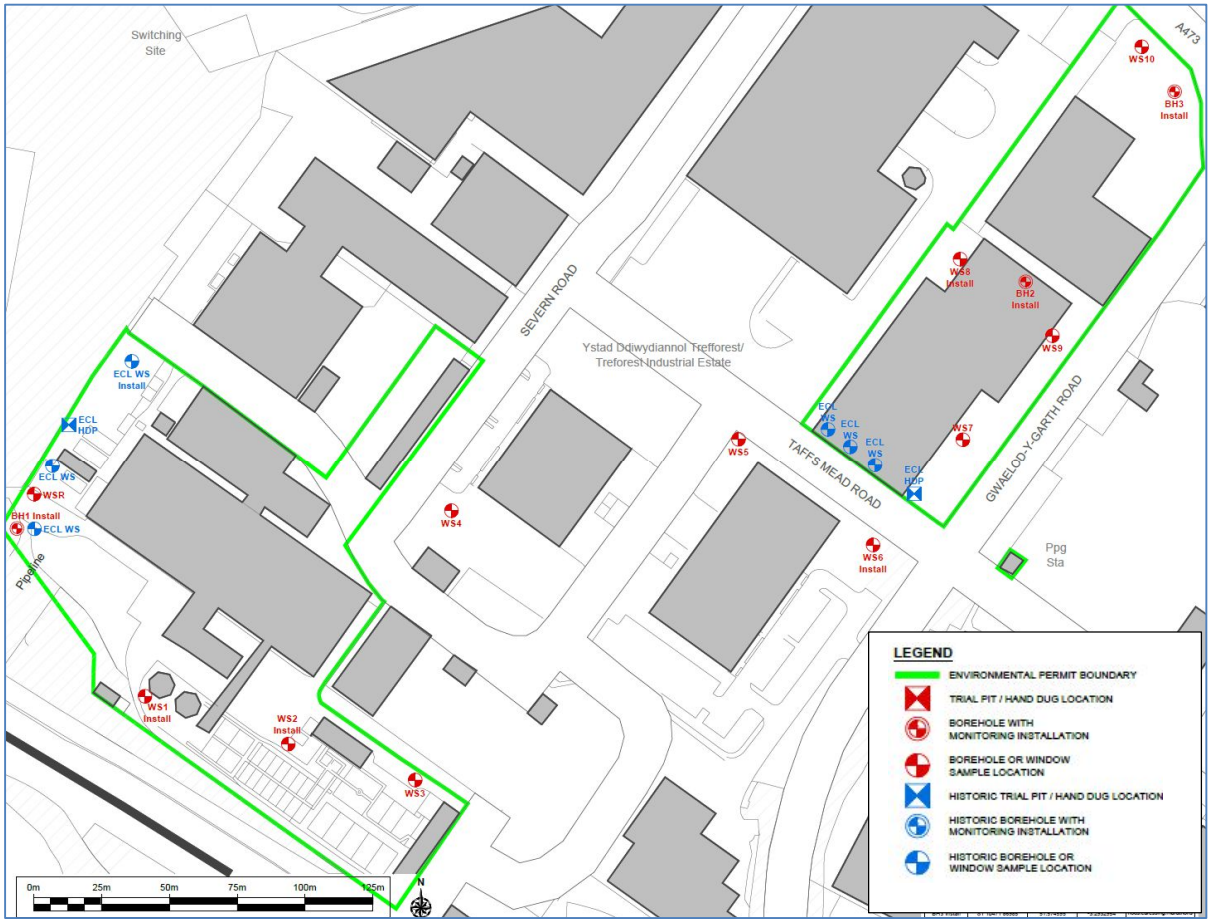


Figure 4. 2022 Ground Investigation Locations (extracted from ECL Report PBGE.01.06/SCR)

The results of the 2022 ground investigation can be summarised as follows:

- 13 samples of Made Ground were collected for laboratory analysis; asbestos was detected in four samples, and no exceedance of commercial Site Screening Values (SSVs) was noted for any parameter. Metals including aluminium, chromium, iron and manganese were noted as elevated and likely associated with the historic metal alloy works.
- 11 samples of natural ground underlying the Made Ground were collected for laboratory analysis. No parameters exceeded commercial SSVs, although metals such as aluminium and iron remained elevated, likely associated with the historic land use.
- Elevated calcium was reported in the Made Ground, relative to the underlying natural ground and is assumed to be associated with the presence of limestone gravels within the Made Ground.
- Three groundwater samples were obtained from BH1, BH2 and BH3, which were screened in the Alluvium. Freshwater Environmental Quality Standards (EQSs) were exceeded in groundwater for ammoniacal-nitrogen, nitrate, hydrocarbons, aluminium and manganese with the majority of exceedances and highest concentrations typically reported in up-gradient BH1. Calcium concentrations in groundwater were elevated at down-gradient BH2 and BH3, compared to up-gradient BH1; however, this is based on a single monitoring event.

The groundwater quality data are reviewed against recent, surrender data in Section 5.

2.5 Permitted Activities: Potential Sources of Contamination

As detailed within the 2025 Closure Plan[9], PB Gelatins has operated the facility in accordance with the permit and an Environmental Policy and Environmental Management System. Infrastructure inspections have been undertaken on a weekly basis and recorded. These measures have aimed to minimise the pollution risk from the facility.

The installation has been an operational gelatin manufacturing site since at least the 1970s; therefore, the currently permitted activities also occurred for a significant period pre-permit.

Section 2.4 of the 2013 SCR[1] identifies the potential sources of contamination associated with the permitted activities; these can be summarised as follows:

- Area A18: storage and use of
  - ossein (bone)
  - lime solution
  - phosphoric acid
  - hydrogen peroxide
  - sodium hypochlorite
  - flocculants
  - sulphuric acid
  - effluent
- Zone A21: storage and use of
  - resin
  - glycol
  - aluminium sulphate
  - sedipur
  - talosep
  - phosphoric acid
  - hydrogen peroxide
  - caustic soda
  - lithium chloride
  - acetic acid
  - oils and lubricants
  - hydrochloric acid
- Waterworks Zone: storage and use of
  - flocculants
  - sodium hypochlorite
  - caustic soda
- Effluent treatment system and site drainage (elevated BOD and COD)
- Oil fired boilers (fuel oil)
- Waste management (effluent sludge, bone chips, liquid effluent discharge to sewer)

Details of on-site pollution incidents and their remediation are presented in Section 3.

3.0 POLLUTION INCIDENTS & THEIR REMEDIATION

3.1 Introduction

This section of the report details the known pollution incidents that have occurred at the installation since the permit was issued. Details of their remediation and any potential residual impacts on the quality of the land are also presented. Figure 5 identifies the pollution incident locations; further details are provided in Sections 3.2 – 3.4.

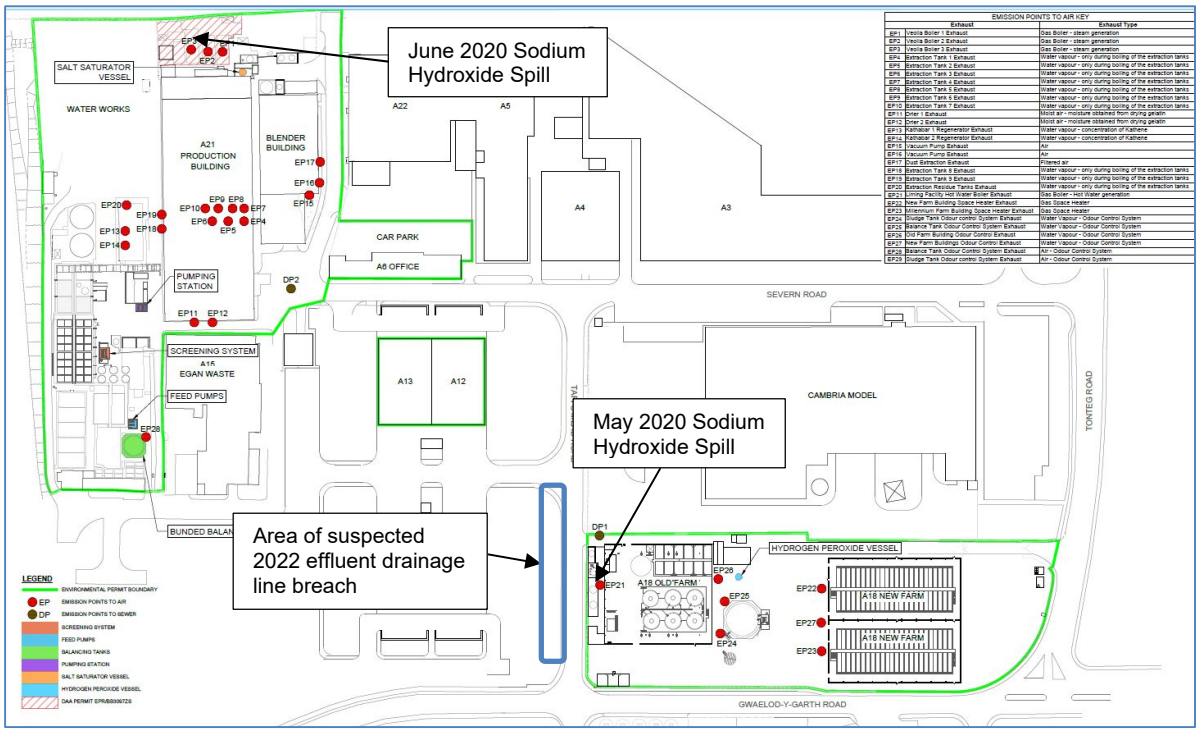


Figure 5. Pollution Incident Locations

3.2 26th May 2020: Sodium Hydroxide Spill

This incident involved the accidental release of approximately 14 tonnes of liquid sodium hydroxide from a bulk storage container in Area A18. The spill occurred onto a concrete pad surrounding the storage container and was washed down, with the effluent discharging into the site's drainage system.

A ground investigation was undertaken in November 2020 (ECL Report 109.01.01/GIR) and included the installation of three boreholes (WS01 – WS03) through the concrete pad spill area, to a maximum depth of 3.1mbgl. Groundwater was not encountered and the boreholes were subsequently backfilled. Soil samples were obtained for laboratory analysis, with results compared against baseline data from HDP1 and previous studies. Ground investigation locations are indicated on Figure 6.

The release of sodium hydroxide would be associated with elevated concentrations of sodium, which may release other cations via cation exchange, and elevated pH. The strongly alkaline solution may result in other secondary groundwater quality impacts, including increased metal solubility.

The ground investigation concluded no evidence of sodium hydroxide beneath the concrete spill area. The concrete hardstanding and drainage system were in good condition, with the spill managed via the site's drainage system.

NRW has confirmed, via CAR NRW0037315 dated 11th January 2021, that: *NRW are satisfied that adequate evidence has been provided, at the time of testing, to indicate that there is no caustic contamination within the ground where the spillage took place.*

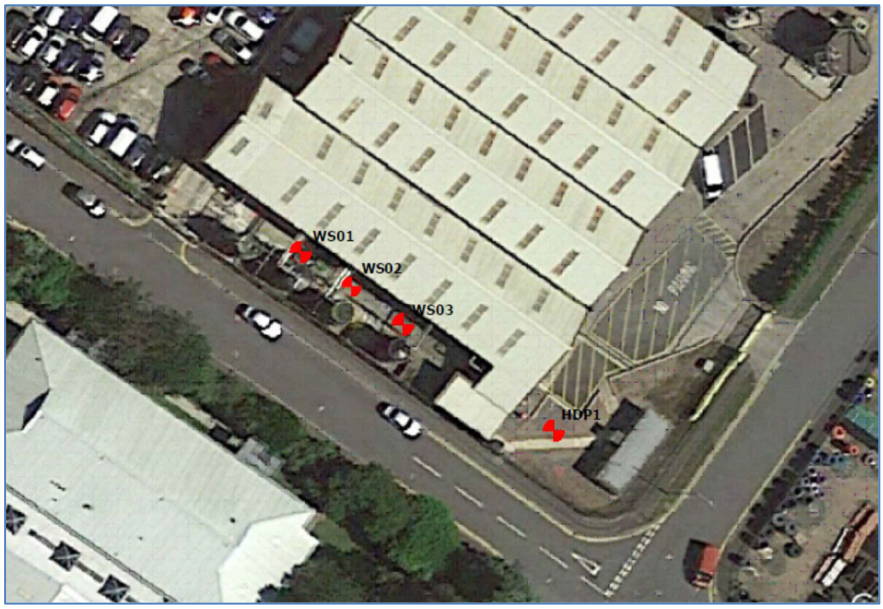


Figure 6. November 2020 Ground Investigation Locations (extracted from ECL, December 2020 Geo-Environmental report).

3.3 11th June 2020: Sodium Hydroxide Spill

This incident involved the accidental release of approximately 20 tonnes of liquid sodium hydroxide from a supply pipeline onto approximately 25m^2 of land in Area A21, as indicated in Figures 5 and 7. The surface spill was removed by vacuum tanker, with the area subsequently washed down and the effluent also removed by tanker.

A preliminary 2020 ground investigation (ECL Report 095.01.01/GIR) included the installation of three boreholes (BH01 – BH03) and three hand-augered trial pits (HDP1 – HDP3) within and surrounding the spill area. Borehole BH03 was retained as a long-term monitoring borehole. The site investigation identified near surface soil material within the immediate spill area contaminated with elevated levels of sodium and increased pH values. However, the impact of the spill appeared constrained to the immediate spill location, with limited down-gradient migration.

Repeat groundwater monitoring was undertaken in December 2021 (ECL report: VEOL.01.01.GE) and identified potential down-gradient migration of contaminants due to a marginal increase in sodium levels since 2020. However, this evidence was based on a single monitoring event at BH03.

Further ground investigation undertaken in December 2022 (ECL report: VEOL.01.02.GIR) included the installation of two additional groundwater monitoring boreholes (WS201 within the spill area and WS202 down-gradient of the spill area). Repeat analysis of soil and groundwater samples was undertaken for comparison against 2020 data. The long-term ground investigation locations and approximate spill area are confirmed on Figure 7.

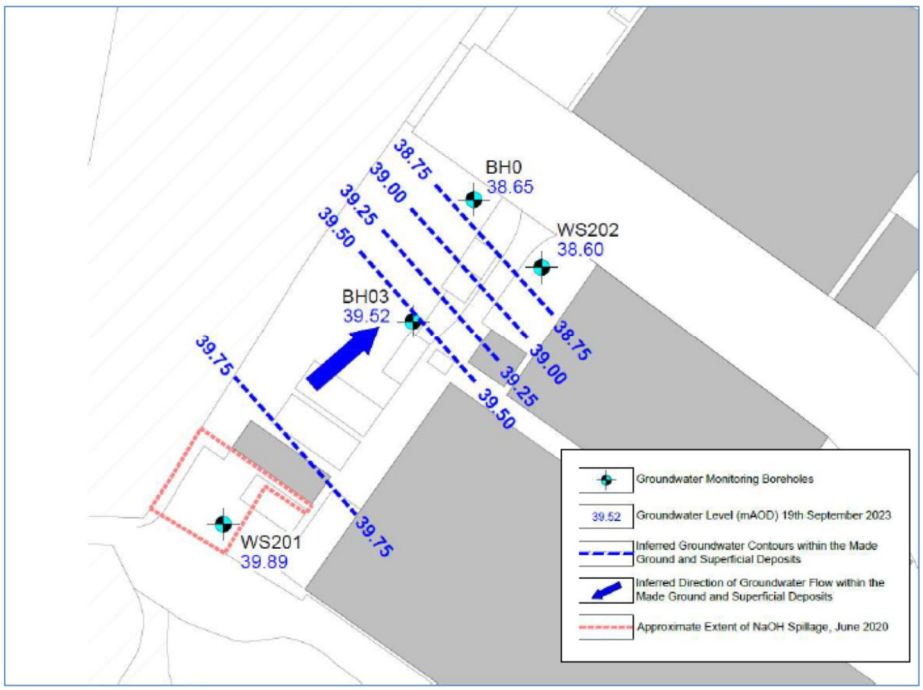


Figure 7. 2022 Ground Investigation Locations (extracted from NSugg Ltd. 2024, NS_0118_21/MNA).

Following NRW's review of the 2022 Ground Investigation report, a six-month period of monthly groundwater monitoring was undertaken between August 2023 and January 2024, to support Monitored Natural Attenuation. Additional groundwater analysis for EQS metals was undertaken in April 2025. The datasets were reviewed in March 2024 (NSugg Ltd. report: NS_0118_21/MNA) and April 2025 (NSugg Ltd. report: NS_0118_21/MNA/ Addendum), with the following conclusions:

- The sodium hydroxide spill resulted in the release of ammonium and manganese from the subsurface, with locally elevated concentrations in groundwater.
- The monthly groundwater monitoring (2023-2024) confirmed concentrations of ammonium and manganese had returned to background levels within the spill area. Concentrations in down-gradient monitoring boreholes had peaked and were following a declining trend indicating migration of the plume down-gradient towards the River Taff. The data and trends are masked by wider and historic anthropogenic inputs but there is evidence of attenuation of contaminants along the flow pathway, with the River Taff offering significant dilution potential for any residual concentrations.
- Concentrations of EQS metals in groundwater (April 2025) were assessed using NRW's risk screening approach for surface water pollution risk assessments. All metals were screened out, confirming that the residual concentrations of EQS metals in groundwater do not represent a significant risk to the River Taff.

The Monitored Natural Attenuation undertaken following the June 2022 sodium hydroxide spill confirmed source concentrations had returned to background baseline levels, with no significant residual risk to the River Taff; the spill investigation was therefore concluded in 2025.

3.4 June 2022 & Subsequent Events: Effluent Discharge

In June 2022, degradation of the below ground drainage system resulted in discharge of effluent to the River Taff. A ground investigation was undertaken in October 2022 (reported

within the 2023 SCR, ECL Report PBGE.01.09/SCR) which noted elevated calcium concentrations in groundwater down-gradient of the suspected drainage line breach. Whilst calcium is utilised within the installation's liming process, it is also a natural component of many rock forming minerals with limestone gravel noted within the Made Ground samples. As outlined above in Section 2.4.2, Table A7 of the 2022 ground investigation report confirmed elevated calcium in groundwater down-gradient of the site, relative to up-gradient. However, Table A4 of the ground investigation report confirms calcium concentrations in made ground are comparable or lower in the vicinity of the pipe failure compared to concentrations up-gradient and down-gradient. Therefore, there was no conclusive evidence of impact to ground or groundwater.

Remedial works included the installation of a new effluent treatment plant (commissioned 2024) and reconfiguring the drainage network to eliminate the use of aged pipework.

NRW has issued subsequent CARs associated with effluent discharges:

- CAR NRW0042707 (issued 09/02/2024): unauthorised release of process effluent onto Taffs Mead Road, 28th August 2023, due to failure of the pumping station.
- CAR NRW0044968 (issued 19/08/2024): release of effluent to the River Taff at the end of Bridge Road, 23rd April 2024, due to failure of a newly installed section of drainage pipe.
- CAR NRW0045837 (issued 16/12/2024): release of effluent to the River Taff at the end of Bridge Road, 4th August 2024 and 23rd September 2024 due to effluent spills into the surface water drainage system at the effluent pumping station.

The above effluent discharges occurred off site.

4.0 DECOMMISSIONING AND REMOVAL OF POLLUTION RISK

The installation was decommissioned between June 2025 and November 2025, in accordance the Site Closure Plan[9]. Specialist contractors were employed to empty and clean the relevant equipment and storage vessels to a satisfactory standard and safely dispose of all waste materials.

The completed tasks are listed within Appendix A and included the removal of gelatin product, contaminants and the flushing/cleaning of associated tanks and pipework. Elements identified for remediation within each area of the installation (refer to Figure 1 and Appendix A), included:

- Area A18: hydrated lime silo, lime mixing pits and drainage channels and effluent treatment system.
- Area A21: internal drainage channels, ion exchange vessels, water softener, glycol tanks, lithium chloride tank and effluent treatment system.
- Waterworks: flocculators, settling pits and reservoirs.

A photographic record is available of the decommissioned elements, confirming removal of potential pollutants.

It is concluded that the decommissioning process has effectively removed all sources of pollution risk associated with the installation and its permitted activities.

5.0 SURRENDER MONITORING DATA & CONDITION OF THE LAND

5.1 Introduction

This section of the report reviews the current condition of the land and groundwater, to assess if the surrender test is met, i.e. *necessary measures have been taken to avoid a pollution risk resulting from the operation of the facility; and the site of the facility is returned to a satisfactory state, having regard to the state of the site before the facility was put into operation*. Surrender monitoring data are presented, for comparison against the condition of the land and groundwater at permit application, as detailed in Section 2.4.

5.2 Surrender Monitoring

5.2.1 Scope of Work

The 2022 ground investigation (ECL Report PBGE.01.06/SCR) included comprehensive soils and groundwater analysis across the installation. Further, targeted investigations have subsequently been undertaken in response to isolated pollution incidents. These reports confirm the presence of Made Ground with low-level contamination associated with historic land uses, as evident within the 2013 application SCR. Previous reports confirm the on-site pollution incidents were contained within the site drainage systems or effectively remediated and/or naturally attenuated. Therefore, the benefit of further analysis of the land beneath the installation is considered limited.

The primary receptor and pathway is shallow groundwater, which discharges to the River Taff (secondary receptor); therefore, the surrender monitoring has focussed on groundwater quality.

Site-specific monitoring was undertaken by ECL in November 2025 to obtain details of the groundwater quality at permit surrender. Groundwater level and quality monitoring was undertaken in all available on-site boreholes, which are summarised in Table 1 and on Figures 4 and 7. At the time of monitoring, boreholes WS1, WS2 and WS9 were reported as dry or blocked and off-site boreholes WS6 and WS8 could not be located. Available borehole logs are included in Appendix B; these confirm boreholes BH1-BH3 are screened in the Alluvium, underlying the River Terrace Deposits with boreholes BH03, WS201 and WS202 screened in the near-surface Made Ground and River Terrace Deposits. No borehole log is available for BH0; however, based on the borehole depth, it is assumed screened in Made Ground and/or River Terrace Deposits.

Table 1: 2025 Surrender Data – Field Monitoring

Borehole	Location	Dip to Groundwater (mbgl)	Dip to Base of Well (mbgl)	Visible Evidence of Hydrocarbons	Odour
BH0	Area A21, down-gradient of June 2020 sodium hydroxide spill event	1.93	3.60	No visible sheen	Earthy
BH03		1.69	3.57	No visible sheen	Earthy
WS202		1.65	3.02	No visible sheen	Mild odour – cannot distinguish
WS201	Area A21, area of June 2020 sodium hydroxide spill event	0.81	2.94	No visible sheen	None
BH1	Area A21, up-gradient of the installation	0.94	11.35	No visible sheen	None
BH2	Area A18 down-gradient of the majority of the installation	1.63	13.32	No visible sheen	None
BH3		3.60	11.70	No visible sheen	None

Table Notes: All boreholes were monitored on 4th November 2025, except BH2 and BH3 which were monitored on 5th November 2025.

5.2.2 Surrender Monitoring Data

Groundwater samples were obtained from the boreholes detailed in Table 1 and analysed for general chemistry / inorganics, metals, metalloids, hydrocarbons and PAHs; laboratory certificates are included as Appendix C.

Data from the site-wide monitoring boreholes installed in the Alluvium (up-gradient BH1 and down-gradient BH2 and BH3) confirm:

- Concentrations of most metals and metalloids (including arsenic, chromium, copper, magnesium and selenium) are highest in groundwater up-gradient of the site (BH1).
- Concentrations of BTEX and TPH remained below laboratory reporting limits at BH1 – BH3.
- Concentrations of PAHs were relatively low and consistent across the site, indicative of the historic land use and Made Ground.

Borehole WS202, located in Area A21, recorded the highest concentrations of many parameters including PAHs, chloride, cobalt, potassium, lithium and manganese, reflecting the borehole's installation in Made Ground. Borehole WS202 was installed in 2022, and the borehole log (Appendix B) confirms the Made Ground as gravel of limestone and anthropogenic materials in a matrix of brown-black sand. Groundwater monitoring undertaken at WS202 during 2023/2024[7] confirmed a consistent heavy oil/diesel odour. The November 2025 surrender concentration of manganese at WS202 was significantly elevated, compared to 2023/24 data, and an additional sample was collected in January 2026 for re-testing (refer to Appendix C); the results are discussed further below. Whilst baseline, pre-permit data are not available for comparison, the operational and surrender data are considered indicative of the historic industrial land uses of the site and surrounding area.

The key contaminants associated with the permitted activities and pollution incidents, are:

- Ammoniacal-nitrogen and manganese, associated with known and potential sodium hydroxide spills, although it is recognised manganese is also elevated in the Made Ground due to historic land uses.

- Calcium, associated with potential effluent leaks and liming works. Calcium is also elevated in the Made Ground due to the presence of limestone gravel.
- Elevated BOD and COD associated with potential effluent leaks.

As detailed in Section 3, the pollution incidents have been remediated via physical removal of the contaminants and/or natural attenuation. The monitored natural attenuation of ammoniacal-nitrogen and manganese following the June 2020 sodium hydroxide spill[7] confirm natural attenuation with residual concentrations in groundwater representing an acceptable, low risk to the River Taff.

As detailed in Section 2.4, limited baseline monitoring data are available regarding the condition of the land and groundwater, with no groundwater monitoring data from permit application. Therefore, the surrender monitoring data for the key contaminants associated with the permitted activities are compared against the available 2022 groundwater monitoring data for BH1 – BH3 in Table 2. EQS limits are included, where applicable.

Table 2: Review of November 2025 Surrender Data

A: Ammoniacal-Nitrogen as N (mg/l)

Borehole	Location	November 2025 (Surrender)	October 2022	Freshwater EQS
BH0	Area A21, down-gradient of June 2020 sodium hydroxide spill event	0.46	-	'Good': 0.3 – 0.6
BH03		1.5	-	
WS202		4.2	-	
WS201	Area A21, area of June 2020 sodium hydroxide spill event	0.069	-	
BH1	Area A21, up-gradient of the installation	0.033	1.01	
BH2	Area A18 down-gradient of the majority of the installation	0.032	0.35	
BH3		0.045	0.016	

Table Notes: For surrender monitoring, all boreholes were sampled on 4th November 2025, except BH2 and BH3 which were monitored on 5th November 2025.
October 2022 data extracted from ECL Report PBGE.01.06/SCR.

B: Manganese (Dissolved) (µg/l)

Borehole	Location	November 2025 (Surrender)	October 2022	Freshwater EQS
BH0	Area A21, down-gradient of June 2020 sodium hydroxide spill event	930	-	123 (bioavailable)
BH03		870	-	
WS202		4500 (Jan 2026: 1734)	-	
WS201	Area A21, area of June 2020 sodium hydroxide spill event	91	-	
BH1	Area A21, up-gradient of the installation	13	170	
BH2	Area A18 down-gradient of the majority of the installation	9.7	610	
BH3		37	78	

Table Notes: For surrender monitoring, all boreholes were sampled on 4th November 2025, except BH2 and BH3 which were monitored on 5th November 2025.
October 2022 data extracted from ECL Report PBGE.01.06/SCR.

C: Calcium (mg/l)

Borehole	Location	November 2025 (Surrender)	October 2022
BH0	Area A21, down-gradient of June 2020 sodium hydroxide spill event	48	-
BH03		120	-
WS202		160	-
WS201	Area A21, area of June 2020 sodium hydroxide spill event	55	-
BH1	Area A21, up-gradient of the installation	140	19
BH2	Area A18 down-gradient of the majority of the installation	68	58
BH3		50	42

Table Notes: For surrender monitoring, all boreholes were sampled on 4th November 2025, except BH2 and BH3 which were monitored on 5th November 2025.
October 2022 data extracted from ECL Report PBGE.01.06/SCR.

C: COD and BOD (mg/l)

Borehole	Location	November 2025 (Surrender)	
		BOD (mg/l)	COD (mg/l)
BH0	Area A21, down-gradient of June 2020 sodium hydroxide spill event	6.9	12
BH03		5.3	<10
WS202		<2.0	17
WS201	Area A21, area of June 2020 sodium hydroxide spill event	3.5	11
BH1	Area A21, up-gradient of the installation	<2.0	18
BH2	Area A18 down-gradient of the majority of the installation	2.1	18
BH3		1.4	11

The surrender monitoring data for ammoniacal-nitrogen, manganese and calcium at BH1 – BH3 are comparable to, or lower than, the available 2022 data and remain indicative of the historic, pre-permit land uses. Calcium in groundwater at BH1 in 2025 (140mg/l) is significantly higher than in 2022 (19mg/l); this borehole is located up-gradient of the installation.

Concentrations of ammoniacal-nitrogen and manganese remain elevated within the Made Ground and superficial deposits in the vicinity of the 2020 sodium hydroxide spill, relative to the wider Alluvium groundwater of BH1-BH3. Excluding manganese at WS202, the 2025 concentrations are generally comparable to previous data that supported Monitored Natural Attenuation[7]. The manganese concentration at WS202 in the January 2026 re-test is within the previous trend, confirming the November 2025 result is an outlier. The spill occurred over five years ago, and current concentrations are considered indicative of the baseline conditions.

It is reiterated that the River Taff provides significant dilution potential, with groundwater throughflow beneath the installation calculated as between 0.0001% and 0.012% of the mean river flow. The sodium hydroxide spill investigation[7] included a surface water pollution risk assessment confirming groundwater beneath the installation represents a low, acceptable risk to the River Taff.

No historic data are available for BOD or COD in groundwater. The 2025 COD levels are low and comparable across the site (no EQS limit is available for COD, but concentrations are significantly lower than typical permitted emission limits). The 2025 BOD levels are also low and typically within freshwater EQS limits (4mg/l – 5mg/l for ‘good’ standard).

5.3 Surrender Test

Paragraph 14 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations 2016 (as amended), states:

The regulator must accept an application to surrender an environmental permit in whole or in part under regulation 25(2) if it is satisfied that the necessary measures have been taken –

- *to avoid a pollution risk resulting from the operation of the regulated facility; and*
- *to return the site of the regulated facility to a satisfactory state, having regard to the state of the site before the facility was put into operation.*

Baseline data at permit application are limited but confirm the influence of historic industrial land uses and Made Ground. This has also been confirmed by monitoring undertaken during the operational life of the facility.

The facility has been operated in accordance with the site permit and relevant management systems to minimise the risk of pollution incidents. All pollution incidents have been appropriately managed, monitored, documented and remediated.

The installation has been decommissioned and all sources of pollution risk removed.

The surrender data confirm the site is in a satisfactory state having regard to the pre-permit condition of the site, with no evidence of deterioration. Therefore, the test for permit surrender is considered passed.

6.0 SUMMARY AND CONCLUSIONS

This report presents an updated SCR to support the surrender of PB Gelatins' Environmental Permit for their gelatin manufacturing site in Pontypridd. The surrender SCR should be read in conjunction with the 2013 permit application SCR and the subsequent 2020 and 2023 SCR updates.

The installation has been operated in accordance with the permit and associated management plans for the processing of ossein (small chippings/shavings of animal bones) and other raw materials for the production of gelatin. A gelatin manufacturing plant has been operational at the site since at least the 1970s, with significant previous industrial land uses including a metal alloy works.

Limited ground investigation data supported the 2013 permit application, but reports confirm the presence of Made Ground containing metals, semi-metals, PAHs and hydrocarbon compounds. No pre-permit groundwater monitoring data are available.

The Made Ground overlies at least 15m thickness of superficial deposits, with shallow groundwater flowing to the north-east, towards the River Taff which is immediately down-gradient of the site. Groundwater within the Made Ground and superficial deposits beneath the site is considered of limited resource potential but represents a pathway to the River Taff secondary receptor. Previous studies have confirmed the River Taff offers significant dilution potential; groundwater beneath the site poses an acceptable, low risk to the watercourse.

A number of pollution incidents have been recorded at the installation; these have been appropriately managed, monitored, documented and remediated.

The facility was decommissioned between June 2025 and November 2025, with specialist contractors employed to empty and clean the relevant equipment and storage vessels to a satisfactory standard and safely dispose of all waste materials. The decommissioning process effectively removed all sources of pollution risk associated with the facility.

Groundwater quality monitoring was undertaken in November 2025 to support permit surrender, with 2025 data compared against relevant available historic data and EQS limits. The surrender monitoring data confirm the site is in a satisfactory state, having regard to the pre-permit condition of the site, with no evidence of deterioration.

Therefore, the test for permit surrender is considered passed.

7.0 CLOSURE

This report has been prepared by Nicola Sugg (trading style of NSugg Limited) with all reasonable skill and care, and in accordance with the services agreed with ECL. Relevant information provided by ECL and PB Gelatins has been accepted in good faith as being accurate and valid. This report is based on the relevant guidance and legislation in force at the date of the report and should be reviewed if such guidance and legislation are amended or superseded.

This report is for the exclusive use of ECL and PB Gelatins; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from Nicola Sugg.

APPENDIX A

Area	Sub Area	Description	Comments
A18	Effluent	Clean Effluent balance tank	Completed
A18	Effluent	Drain Effluent balance tank chemical scrubber unit	Completed
A18	Effluent	Clean pumping chamber	Completed
A18	Effluent	Clean DAF Unit	Completed
A18	Effluent	Clean DAF sludge tank	Completed
A18	Bulk Chemicals	Empty & Clean Sulphuric Acid Tank	Completed
A18	Bulk Chemicals	Flush out Sulphuric Acid pipe work	Completed
A18	Bulk Chemicals	Empty & Clean Caustic Soda Tank	Completed
A18	Bulk Chemicals	Flush out Caustic Soda pipe work	Completed
A18	Bulk Chemicals	Empty & Clean Hydrogen Peroxide Tank	Completed
A18	Bulk Chemicals	Flush out Hydrogen Peroxide pipe work	Completed
A18	Bulk Chemicals	Empty & Clean Phosphoric Acid tank	Completed
A18	Bulk Chemicals	Flush out Phosphoric Acid pipe work	Completed
A18	Liming	Empty & Clean Lime Silo	Completed
A18	Liming	Empty & Clean Lime Mixing Pits	Completed
A18	Liming	Drain water system	Completed
A18	Liming	Clean New farm building drainage channels	Completed
A18	Liming	Clean Millenium farm building drainage channels	Completed
A18	Liming	Drain water from Farm Portakabin	Completed
A18	Liming	Isolate gas supply to space heating	Completed
A18	Liming	Isolate gas supply to farm boiler	Completed
A18	Liming	Empty & clean internal recovered water tank	Completed
A18	Liming	Empty & clean external recovered water tank	Completed
A21	Bulk Chemicals	Empty & Clean Trufloc TAC40 Vessel	Completed
A21	Bulk Chemicals	Empty & Clean Caustic Soda Vessel	Completed
A21	Bulk Chemicals	Flush out Caustic Soda pipe work	Completed
A21	Bulk Chemicals	Empty & Clean Caustic Soda day tank	Completed
A21	Bulk Chemicals	Flush out Caustic Soda pipe work	Completed
A21	Bulk Chemicals	Empty & Clean HCL tank	Completed
A21	Bulk Chemicals	Flush out HCL pipe work	Completed
A21	Bulk Chemicals	Empty & Clean HCL scrubber tank	Completed
A21	Bulk Chemicals	Empty & Clean Acetic Acid tank	Completed

A21	Bulk Chemicals	Flush out Acetic Acid pipe work	Completed
A21	Bulk Chemicals	Empty & Clean Phosphoric Acid tank	Completed
A21	Bulk Chemicals	Flush out Phosphoric Acid pipe work	Completed
A21	Bulk Chemicals	Empty & Clean Recovered Acid tank	Completed
A21	Bulk Chemicals	Empty & Clean Salt saturator	Completed
A21	Bulk Chemicals	Flush out Brine pipe work	Completed
A21	Extraction	Empty Hydrogen Peroxide dosing storage tank	Completed
A21	Extraction	Clean drainage system	Completed
A21	Filters	Dispose of filter pads	Completed
A21	Filters	Clean drainage system	Completed
A21	De-Ionisers	Remove & dispose of resin from Alpha C1	Completed
A21	De-Ionisers	Remove & dispose of resin from Alpha C2	Completed
A21	De-Ionisers	Remove & dispose of resin from Alpha A1	Completed
A21	De-Ionisers	Remove & dispose of resin from Alpha A2	Completed
A21	De-Ionisers	Remove & dispose of resin from Alpha A3	Completed
A21	De-Ionisers	Remove & dispose of resin from Beta C1	Completed
A21	De-Ionisers	Remove & dispose of resin from Beta C2	Completed
A21	De-Ionisers	Remove & dispose of resin from Beta A1	Completed
A21	De-Ionisers	Remove & dispose of resin from Beta A2	Completed
A21	De-Ionisers	Remove & dispose of resin from Water Softener	Completed
A21	De-Ionisers	Drain Water Softener brine tank	Completed
A21	De-Ionisers	Drain Alpha brine tank	Completed
A21	De-Ionisers	Drain Alpha recovered acid tank	Completed
A21	De-Ionisers	Drain Beta brine tank	Completed
A21	De-Ionisers	Drain Beta recovered acid tank	Completed
A21	Chilling	Recover Ammonia from Compressor No 1	Completed
A21	Chilling	Recover Ammonia from Compressor No 2	Completed
A21	Chilling	Empty & clean glycol tank	Completed
A21	Kathabar	Drain and clean Kathabar No 1	Completed
A21	Kathabar	Drain and clean Kathabar No 2	Completed

A21	Kathabar	Dispose of Kathene	Completed
Blender	Heating	Isolate gas supply	Completed
A21	Steam	Isolate gas supply	Completed
A21	Steam	Empty & clean oil storage vessels	Completed
A21	Steam	Drain Boiler No 1	Completed
A21	Steam	Drain Boiler No 2	Completed
A21	Steam	Drain Boiler No 3	Completed
A21	Effluent	Empty & clean pumping chamber and bund	Completed
A21	Effluent	Empty & clean balance tank	Completed
A21	Water Works	Empty and clean Floculators	Completed
A21	Water Works	Empty & Clean settling pits	Completed
A21	Water Works	Empty and clean grade 1 reservoir	Completed
A21	Water Works	Empty and clean grade 3 reservoir	Completed

Request for Quotation (RFQ) for Decommissioning a Process Site

1. Introduction

- **Purpose**: To solicit proposals from qualified contractors for the decommissioning of PB Gelatins, to ensure that there are no substances that can cause environmental or personnel harm.
- **Background**: The site manufactures high purity Gelatins for use within various industries, including photographic and pharmaceutical applications. The site is arranged as a number of relatively discrete land parcels and buildings; these are shown on the site layout drawing in appendix. The main bulk raw material input to the facility consists of small chippings/shavings of degreased, acidulated and pre limed animal bones known as Ossein. These are delivered to A18 area of site, where they are subjected to various chemical processing techniques in the 'Old Farm' and 'New Farm' buildings, mainly including the addition of lime and other caustic and acidic solutions, before being transported by truck to the A21 'Production and Blender Building' area of site. Further physical and chemical processes are undertaken in the A21 building, again including the utilisation of caustics and acids as the gelatin production is completed. The various process areas of site are linked by below ground drainage pipes, all which channel effluent via the two Effluent Plants, situated in A18 & A21. These are effectively, below and above ground concrete sumps which gathers the various 'dirty' process waters and pumps them to the Balance Tanks. General filtering is completed prior to the balance tank, which discharges the screened wastewater to the 'DAF' plant in the Old Farm building for treatment. Following treatment, organic rich waters are pumped to the 'Sludge Tank' which is situated also in the A18 area of site.

2. Project Overview

- **Scope of Work**: to provide equipment and services to empty and clean the highlighted equipment and process vessels to a satisfactory standard and safely dispose of the waste materials.

A18 Process Area

Equipment Description	Lime Silo – contains Hydrated Lime
Size	8m Diameter, 3m High
Quantity	1
Waste	Hydrated Lime
Estimated Quantity	40 Tonne
CSE Required	Yes
Start Date	July 2025

Photograph

Equipment Description	Lime Mixing Pits
Size	5.8m long, 3.5m Wide, 2.6 high
Quantity	2
Waste	Hydrated Lime
Estimated Quantity	10 Tonne
CSE Required	Yes
Start Date	July 2025

Photograph

Equipment Description	40 Ton Liming Pits
Size	5.8m long, 3.5m Wide, 2.6 high
Quantity	10
Waste	Ossein, dispose of on site
Estimated Quantity	NA
CSE Required	No
Start Date	WC 23rd June

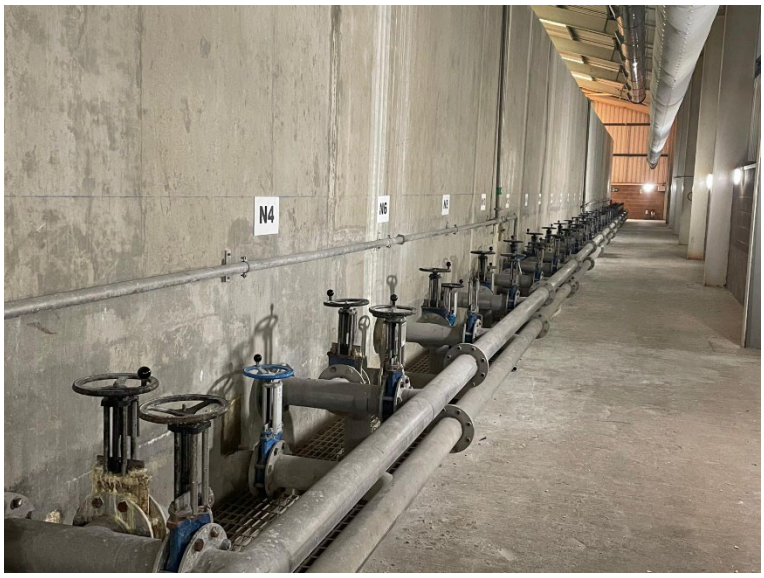
Photograph

Equipment Description	40 Ton Liming Pits Drainage Channels
Size	44m Long, 0.6m Wide, 1m Deep (176m in total)
Quantity	4
Waste	Hydrated Lime
Estimated Quantity	4 Tonne
CSE Required	No
Start Date	July 2025

Photograph

Equipment Description	New Farm Buildings Drainage Channels
Size	50m Long, 0.7m Wide, 1m Deep (200m in total)
Quantity	4
Waste	Hydrated Lime
Estimated Quantity	40 Tonne
CSE Required	No
Start Date	July 2025

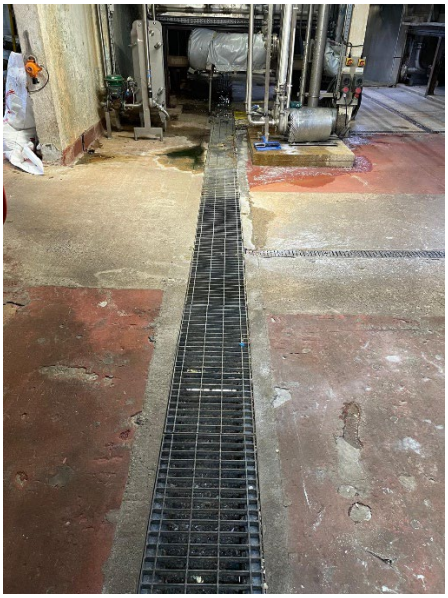
Photograph



A21 Process Area

Equipment Description	Internal Drainage Channels
Size	50m Long, 0.5m Wide, 0.5m Deep (200m in total)
Quantity	4
Waste	Ossein
Estimated Quantity	1Tonne
CSE Required	No
Start Date	July 2025

Photograph



Equipment Description	Ion Exchange Vessels
Size	1.4m Diameter, 3.5m High
Quantity	9
Waste	Anion & Cation Resins
Estimated Quantity	20 Tonne
CSE Required	No
Start Date	July 2025

Photograph

Equipment Description	Ion Exchanger water softener
Size	0.9m Diameter, 1.6m High
Quantity	1
Waste	Cation Resin
Estimated Quantity	0.25 Tonne
CSE Required	No
Start Date	July 2025

Photograph

Equipment Description	Glycol Tank
Size	2m Long, 1.2m Wide, 1.4m High
Quantity	1
Waste	Mono Propylene Glycol
Estimated Quantity	4,000 litres
CSE Required	No
Start Date	July 2025

Photograph

Equipment Description	Kathabar
Size	
Quantity	2
Waste	Lithium Chloride
Estimated Quantity	3,000 litres
CSE Required	No
Start Date	July 2025

Photograph

Water Works

Equipment Description	Floculators
Size	3m Diameter, 4.3m High
Quantity	6
Waste	River Silt
Estimated Quantity	180 Tonne
CSE Required	No
Start Date	Mid-August 2025

Photograph

Equipment Description	Settling Pits Trough
Size	45m Long, 1m Wide, 1m Deep
Quantity	1
Waste	River Silt
Estimated Quantity	30 Tonne
CSE Required	No
Start Date	Mid-August 2025

Photograph

Equipment Description	Settling Pits
Size	6m Long, 6m Wide, 4.5m Deep
Quantity	8
Waste	River Silt
Estimated Quantity	480 Tonne
CSE Required	No
Start Date	Mid-August 2025

Photograph

Equipment Description	Grade 1 Reservoir
Size	30m Long, 12m Wide, 4.5m Deep
Quantity	1
Waste	River Silt
Estimated Quantity	240 Tonne
CSE Required	Yes
Start Date	Mid-August 2025

Photograph

Equipment Description	Grade 3 Reservoir
Size	32m Long, 12m Wide, 4.5m Deep
Quantity	1
Waste	River Silt
Estimated Quantity	180 Tonnes
CSE Required	Yes
Start Date	Mid-August 2025

Photograph

Effluent Treatment A18

Equipment Description	A18 Pumping Chamber
Size	4m long, 4m Wide, m Deep
Quantity	1
Waste	Ossein
Estimated Quantity	30 Tonnes
CSE Required	Yes
Start Date	Mid-September 2025

Photograph

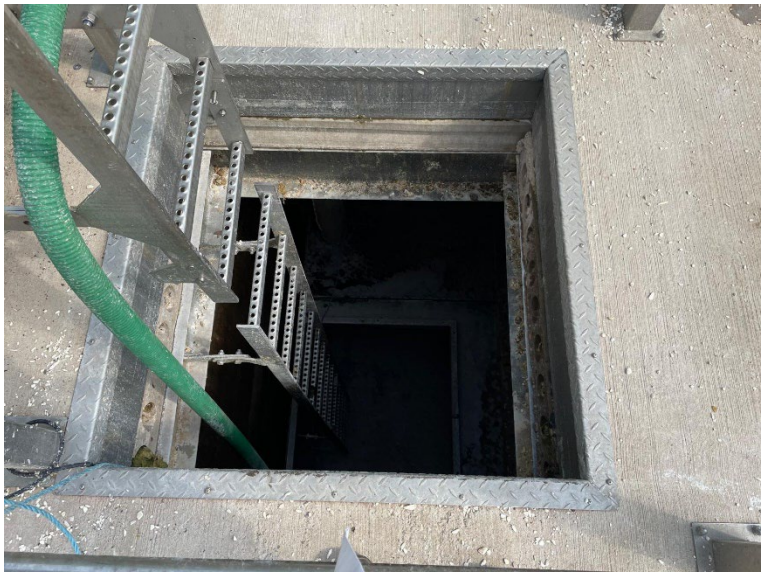
Equipment Description	A18 Balance Tank
Size	13m Diameter, 5.7m High
Quantity	1
Waste	Sludge
Estimated Quantity	40 Tonne
CSE Required	Yes
Start Date	End July 2025

Photograph

Effluent Treatment A21

Equipment Description	A21 Pumping Chamber
Size	6.6m long, 3.4m Wide, 4.8m Deep
Quantity	1
Waste	Sludge
Estimated Quantity	4 Tonnes
CSE Required	Yes
Start Date	Early September 2025

Photograph



Equipment Description	A21 Balance Tank
Size	8.5m Diameter, 7.7m High
Quantity	1
Waste	Sludge
Estimated Quantity	20 Tonne
CSE Required	Yes
Start Date	End July 2025

Photograph

- **Project Timeline**: The approximate dates for the activities are within the request, but detailed planning will be agreed once the contact has been awarded.

3. Submission Requirements

- **Proposal Format**: The quotation is to be priced, based on the relevant process area, A18, A21, Water Works and Effluent treatment plant

5. Instructions to Bidders

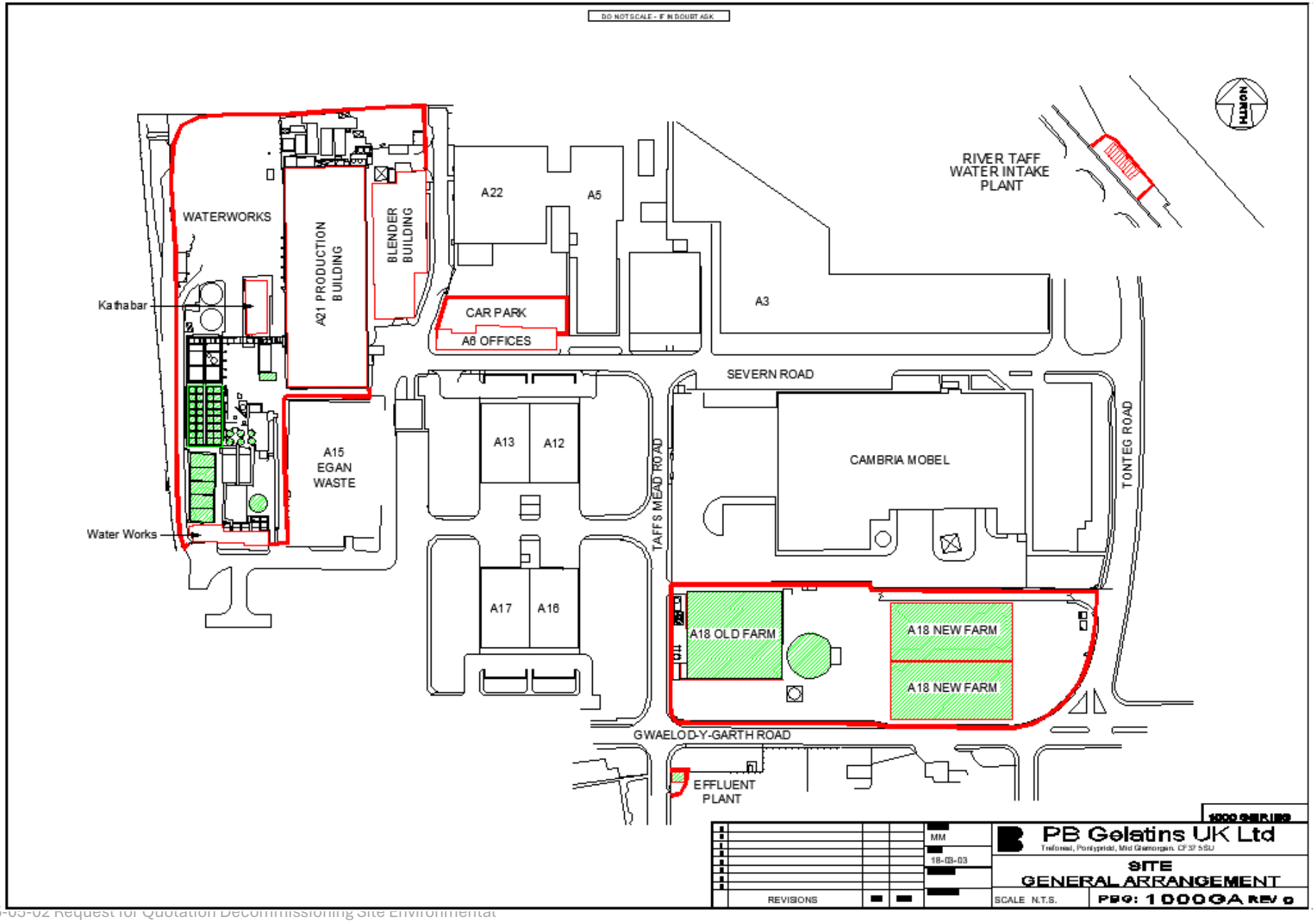
- **Submission Deadline**: End of business day, Friday 16th May 2025.
- **Submission Method**: Quotations to me sent via email to neil.davies@pbleiner.com or matthew.maidment@PBLeiner.com
- **Contact Information**: Point of contact for questions and clarifications Neil Davies

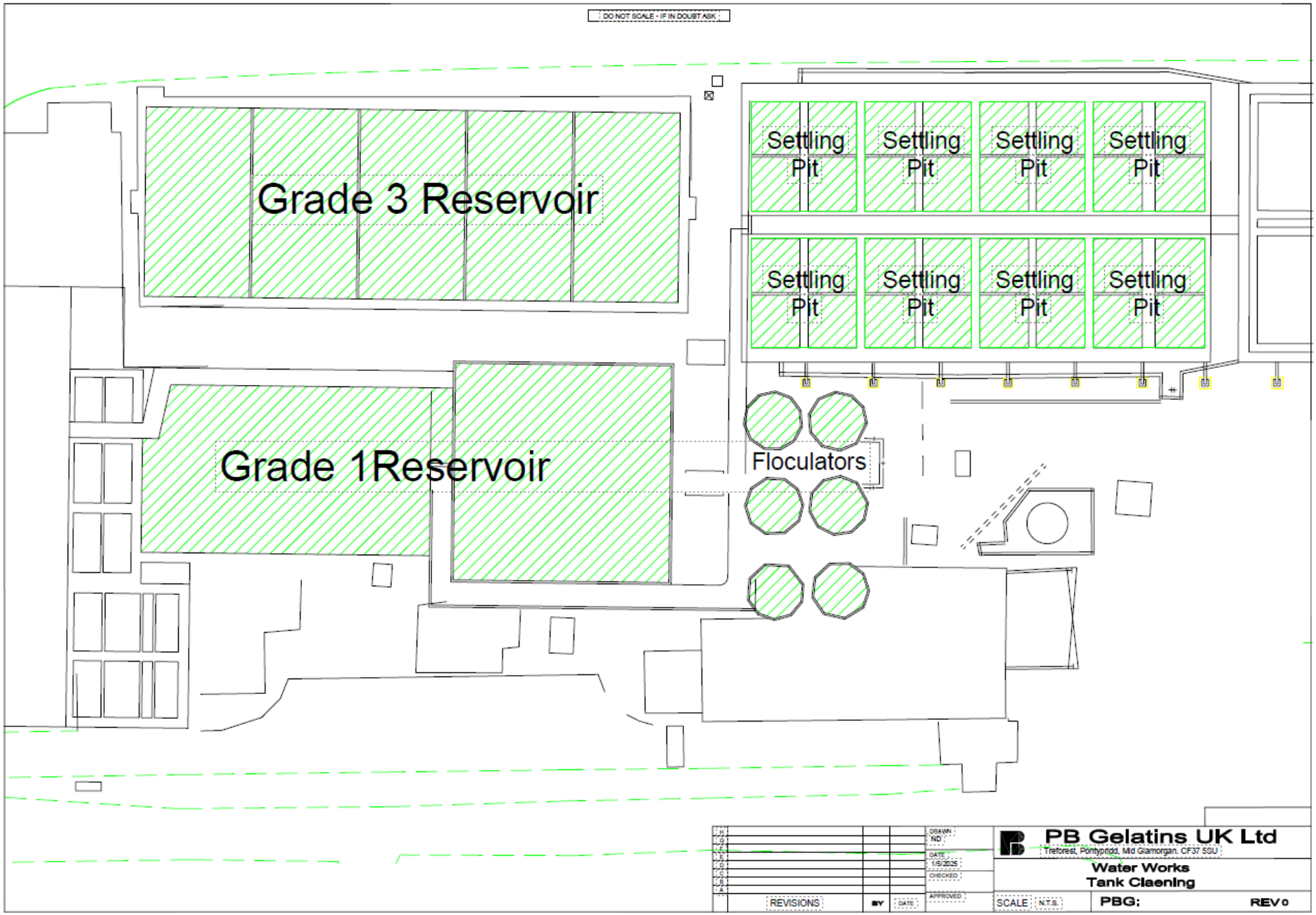
6. Terms and Conditions

- **Contract Terms**: Regular PB Leiner Terms and conditions

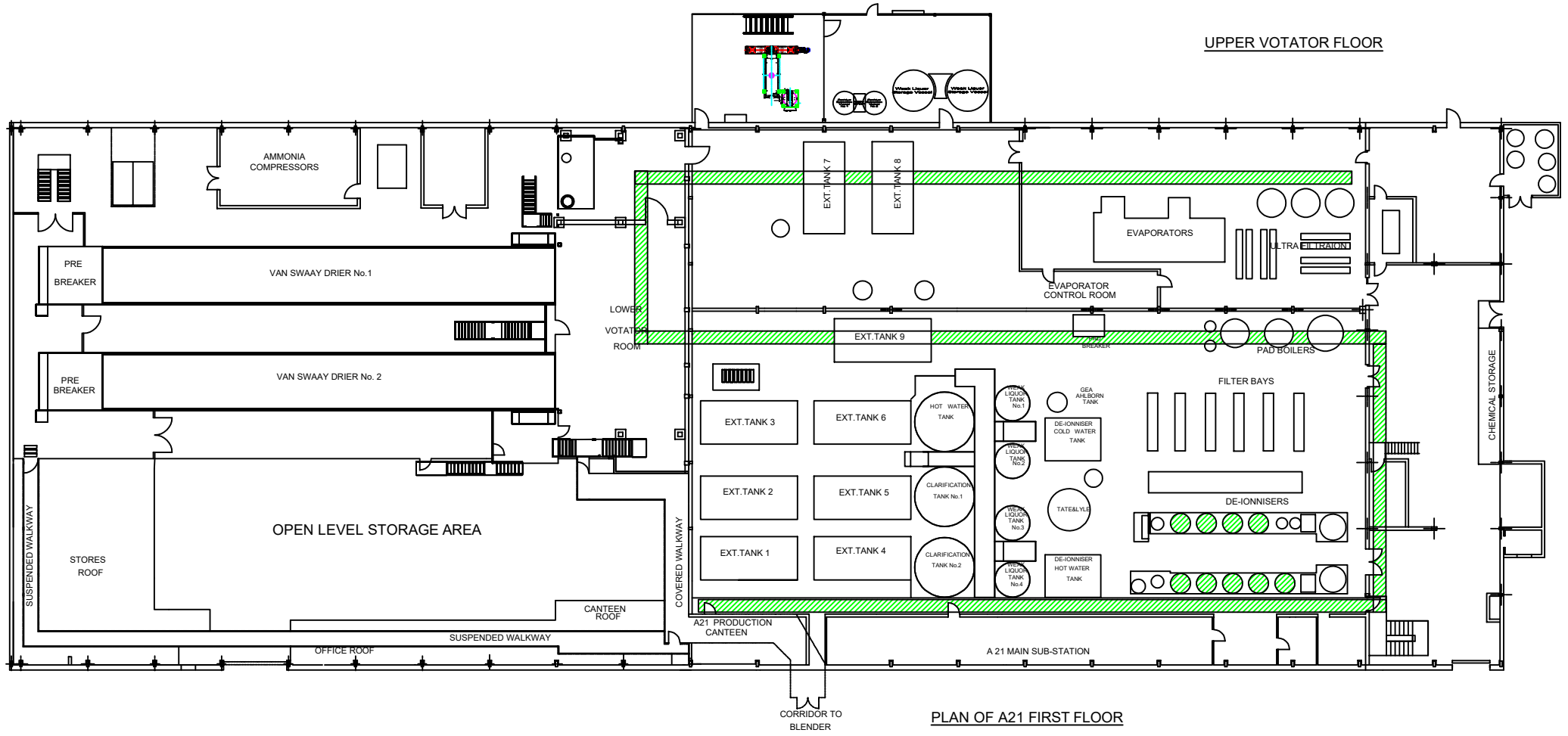
7. Appendices

- **Site Maps and Diagrams**: Site layouts indicating area
- **Additional Information**:
  SDS for Lithium Chloride
  SDS for Mono Propylene Glycol
  WAC Analysis for spent resin


DO NOT SCALE - IF IN DOUBT ASK
NORTH
RIVER TAFF
WATER INTAKE
PLANT
WATERWORKS
A21 PRODUCTION
BUILDING
BLENDER
BUILDING
A22
A5
A3
Kathabar
CAR PARK
A6 OFFICES
SEVERN ROAD
TONTEG ROAD
A13
A12
A15
EGAN
WASTE
CAMBRIA MOBEL
TAFF'S MEAD ROAD
Water Works
A17
A16
A18 OLD FARM
A18 NEW FARM
A18 NEW FARM
GWAELOD-Y-GARTH ROAD
EFFLUENT
PLANT
MM
18-03-03
REVISIONS
PB Gelatins UK Ltd
Treforest, Pontypridd, Mid Glamorgan. CF37 5SU
SITE
GENERAL ARRANGEMENT
SCALE N.T.S.
PB9: 1000GA REV 0


DO NOT SCALE - IF IN DOUBT ASK
Grade 3 Reservoir
Grade 1Reservoir
Settling Pit
Settling Pit
Settling Pit
Settling Pit
Settling Pit
Settling Pit
Settling Pit
Settling Pit
Floculators
REVISIONS
BY
DATE
DRAWN ND
DATE 1/5/2025
CHECKED
APPROVED
PB Gelatins UK Ltd
Treforest, Pontypridd, Mid Glamorgan. CF37 5SU
Water Works
Tank Cleaning
SCALE N.T.S.
PBG:
REV 0

DO NOT SCALE - IF IN DOUBT ASK



PLAN OF A21 FIRST FLOOR

200 SERIES

H				DRAWN	PB Gelatins UK Ltd
G				ND	Treforest, Pontypridd, Mid Glamorgan. CF37 5SU
F				DATE	A21 FIRST FLOOR
E				02/05/2025	Areas to be cleaned
D				CHECKED	
C					
B					
A				APPROVED	
	REVISIONS	BY	DATE		SCALE N.T.S. PBG:2001 FIRE REV ORG

APPENDIX B

BH1 PBGE.01.06

PROJECT NUMBER PBGE.01.06
PROJECT NAME PBGE Site Investigation
CLIENT PB Gelatins / PB Leiner
ADDRESS Pontypridd, CF37 5SQ

DRILLING DATE 05/10/2022
INSTALL DEPTH 15.0mbgl
SCREEN 6m slotted
GROUNDWATER 4.28

Grid Reference: ST 10052 86817
Drilling Rig Rotary open-hole
Total Depth 16.0mbgl

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
	0			Reddish brown and brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	2			Brown to dark brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)	
	5	Bentonite		Grey to brownish slightly clayey sandy SILT (Alluvium)	
BH1	9				
	12	Gravel pack			
	15	Collapse			
	16			Terminated 16mbgl	

BH2 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 03/10/2022	**Grid Reference:** ST 10420 86911
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** 15.0mbgl	**Drilling Rig** Rotary open-hole
CLIENT PB Gelatins / PB Leiner	**SCREEN** 6m slotted	**Total Depth** 15.0mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** 4.40mbgl	

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
	0			Greyish brown to brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	3			Brown to dark brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)	
	5	Bentonite		Grey to brownish slightly clayey sandy SILT (Alluvium)	
BH2	9				
	12	Gravel pack			
	15			Terminated 15mbgl	

BH3 PBGE.01.06

PROJECT NUMBER PBGE.01.06	**DRILLING DATE** 04/10/2022	**Grid Reference:** ST 10471 86985
PROJECT NAME PBGE Site Investigation	**INSTALL DEPTH** 15.0mbgl	**Drilling Rig** Rotary open-hole
CLIENT PB Gelatins / PB Leiner	**SCREEN** 6m slotted	**Total Depth** 15.0mbgl
ADDRESS Pontypridd, CF37 5SQ	**GROUNDWATER** 4.40mbgl	

COMMENTS

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Well Diagram	Graphic Log	Material Description	Additional Observations
	0			Greyish brown to brown, slightly silty gravelly fine to coarse SAND with low cobble content. Gravel is angular to sub-rounded, fine to coarse, or brick, limestone, sandstone and concrete. Cobbles are angular to subangular of concrete (MADE GROUND)	
	3	Bentonite		Dark yellowish brown, slightly silty gravelly fine to coarse SAND. Gravel fine to medium subangular to subrounded sandstone and limestone. (River Terrace Deposits)	
	5			Grey to brownish slightly clayey sandy SILT (Alluvium)	
BH3	9	Gravel pack			
	15			Terminated 15mbgl	

WS201 VEOL.01.02

PROJECT NUMBER VEOL.01.02
PROJECT NAME Veolia NaOH SI
CLIENT Veolia
ADDRESS CF37 5SQ

DRILLING DATE 16/12/2022
TOTAL DEPTH 3.2mbgl
INSTALL DEPTH 3.10mbgl
SCREEN 1.1m Plain and 2m (50mm) Slotted Pipe
GROUNDWATER 1.24mbgl

COORDINATES (X,Y) 310058, 186843

COMMENTS Groundwater monitoring borehole - spill area

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Graphic Log	Material Description	Well Diagram
201A	0.2		MADE GROUND: Yellowish-brown and grey, medium to coarse, medium dense to dense, angular GRAVEL of various lithologies, with red-brick fragments being observed. Some black staining at 0.7mbgl. Matrix of grey-brown coarse, slightly silty sand.	Concrete cement grout
	0.4			
	0.6			Bentonite
201B	0.8			
	1			
	1.2			
	1.4			
201C	1.6		SILTY SAND: Yellowish-brown mottled orange, slightly silty, fine to medium sand. Firm 1.4 to 2.0mbgl becoming soft, very loose at 2.0 - 3.2mblg with occasional coarse sandstone gravel fragments.	
	1.8			
	2			Filter Pack
201D	2.2			
	2.4			
	2.6			
	2.8			
201F	3			
	3.2		Refusal at 3.2mbgl	Collapse
	3.4			
	3.6			
	3.8			
	4			
	4.2			
	4.4			
	4.6			
	4.8			

WS202 VEOL.01.02

PROJECT NUMBER VEOl.01.02
PROJECT NAME Veolia NaOH SI
CLIENT Veolia
ADDRESS CF37 5SQ

DRILLING DATE 16/12/2022
TOTAL DEPTH 3.3mbgl
INSTALL DEPTH 3.15mbgl
SCREEN 1.15m Plain and 2m (50mm) Slotted Pip
GROUNDWATER 1.76mbgl

COORDINATES (X,Y) 310112, 186883

COMMENTS Downgradient, groundwater monitoring borehole

LOGGED BY FT
CHECKED BY SB

Samples	Depth (m)	Graphic Log	Material Description	Well Diagram
	0		Concrete	Concrete cement grout
202A	0.2		MADE GROUND: Brown/black medium to coarse medium dense angular GRAVEL of limestone and anthropogenic materials (observed brick, metal, plastic). Matrix of brownish-black coarse sand.	
	0.4			
	0.6			Bentonite
202B	0.8			
	1			
	1.2			
202C	1.4			
	1.6			
202D	1.8			
	2			Filter Pack
	2.2			
	2.4			
202F	2.6		GRAVELLY SAND: Yellowish-brown, loose to medium-dense, slightly silty coarse sand with frequent fine to medium gravel and occasional cobble sized fragments of sandstone. [Superficial deposits].	
	2.8			
	3			
202E	3.2			Collapse
	3.4		Refusal at 3.3mbgl	
	3.6			
	3.8			
	4			
	4.2			
	4.4			
	4.6			
	4.8			

Groundwater Monitoring - BH03 095.01.01

PROJECT NUMBER 095.01.01
PROJECT NAME PB Leiner
CLIENT Veolia
ADDRESS CF37 5SQ

DRILLING DATE 14/07/2020
TOTAL DEPTH 4.7mbgl
INSTALL DEPTH 4.0mbgl
SCREEN 1m Plain and 3m (50mm) Slotted Pipe
GROUNDWATER 1.89mbgl

COORDINATES (X,Y) 310088,186873

COMMENTS Downgradient, groundwater monitoring borehole

LOGGED BY FT
CHECKED BY SB

Samples	pH (field measurement)	Sample Type	Depth (m)	Graphic Log	Material Description	Additional Observations	Well Diagram
			0.2		MADE GROUND: Brown/black medium to coarse medium dense angular GRAVEL of limestone, some coal, occasional wood fragments and anthropogenic materials (observed brick, metal, plastic). Matrix of brownish-black coarse sand.		concrete cement grout
BH03a		S	0.4				
			0.6				Bentonite
			0.8				
			1				
			1.2				
			1.4				
			1.6			Very wet, water saturated, between 2.2-2.3mbgl, very soft, very loose. Very mild hydrocarbon odour at 2.2mbgl.	
			1.8		SILTY SAND: Brown, slightly clayey, silty, medium sand (stiff, loose), occasional fine gravel of sandstone. [Superficial deposits]		
BH03		GW	2				
	6.47		2.2				
BH03b		S	2.4		GRAVELLY SAND: Yellowish-brown, mottled black at 2.8mbgl, soft to firm, loose to medium-dense, slightly silty coarse sand with frequent fine to medium gravel and occasional cobbles of sandstone. [Superficial deposits].		filter pack
	6.48		2.6				
			2.8				
			3			Groundwater strike within Gravel between 2.6 and 3.2mbgl, rising to 1.9mbgl following completion of drilling.	
			3.2				
			3.4				
			3.6				
			3.8		GRAVEL: Greyish-brown becoming yellowish brown, medium to coarse, loose, sub-angular to sub-rounded gravel, becoming increasingly coarse to base, with coarse sand matrix.		
			4				
			4.2				
			4.4				Collapse
			4.6				
			4.8				
			5		Refusal at 4.7mbgl		
			5.2				

This bore log is intended for environmental not geotechnical purposes.
produced by ESlog.ESdat.net on 15 Jul 2020

APPENDIX C

Certificate of Analysis

Certificate Number	25-25760	*Issued:*	20-Nov-25

Client Environmental Compliance
Unit G1
Main Avenue
Treforest Industrial Estate
Pontypridd
CF37 5YL

Our Reference	25-25760
Client Reference ~	PBGE.01.15
Order No ~	C0551
Contract Title ~	GWM
Description	7 Groundwater samples.
Date Received	07-Nov-25
Date Started	07-Nov-25
Date Completed	20-Nov-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Water Samples

Our Ref 25-25760
Client Ref ~ PBGE.01.15
Contract Title ~ GWM

	Lab No	2595751	2595752	2595753	2595754	2595755	2595756	2595757
	Sample ID ~	BH0	BH03	WS202	WS201	BH1	BH2	BH3
	Depth ~	1.93	1.69	1.65	0.81	0.95	1.63	6.40
	Other ID ~							
	Sample Type ~	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
	Sampling Date ~	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025	05/11/2025	05/11/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Metals								
Aluminium, Dissolved	DETSC 2306	0.01	mg/l	< 0.010	< 0.010	< 0.010	0.022	< 0.010	< 0.010	0.027
Antimony, Dissolved	DETSC 2306	0.0002	mg/l	< 0.0002	0.0006	< 0.0002	0.0024	0.0013	< 0.0002	0.0004
Arsenic, Dissolved	DETSC 2306	0.001	mg/l	< 0.0010	< 0.0010	0.014	0.0017	0.0012	< 0.0010	< 0.0010
Barium, Dissolved	DETSC 2306	0.26	ug/l	120	200	240	110	220	150	130
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	69.0	144.5	83.9	71.0	91.3	81.2	49.0
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.07	0.09	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	48	120	160	55	140	68	50
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	0.45	< 0.25	0.64	8.7	6.8	2.5
Cobalt, Dissolved	DETSC 2306	0.16	ug/l	1.5	3.8	12	< 0.16	< 0.16	< 0.16	< 0.16
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.0	1.9	< 0.4	1.9	3.1	0.7	1.2
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Lithium, Dissolved	DETSC 2306*	1	ug/l	6.8	19	36	12	40	33	5.9
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	8.5	12	43	4.1	14	11	8.7
Manganese, Dissolved	DETSC 2306	0.22	ug/l	930	870	4500	91	13	9.7	37
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Molybdenum, Dissolved	DETSC 2306	1.1	ug/l	< 1.1	2.9	16	2.2	2.5	< 1.1	< 1.1
Nickel, Dissolved	DETSC 2306	0.5	ug/l	11	7.4	12	0.9	3.9	5.1	1.4
Phosphorus as P, Dissolved	DETSC 2306	0.018	mg/l	0.019	0.024	0.16	0.11	0.033	< 0.018	< 0.018
Potassium, Dissolved	DETSC 2306	0.08	mg/l	4.1	6.5	15	3.7	5.9	3.8	3.0
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.58	1.2	0.34	0.96	1.2	< 0.25	0.39
Sodium, Dissolved	DETSC 2306	0.07	mg/l	17	96	230	24	9.2	40	23
Tin, Dissolved	DETSC 2306*	0.4	ug/l	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	< 0.6	< 0.6	< 0.6	9.6	8.5	< 0.6	< 0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	88	87	140	200	82	85	99
Inorganics								
Conductivity (25oC)	DETSC 2009	1	uS/cm	388	1140	2160	399	728	609	418
pH	DETSC 2008		pH	6.9	6.7	7.3	7.3	7.2	7.1	6.7
Alkalinity as CaCO3 (Manual)	DETSC 2030	10	mg/l	180	280	460	180	280	200	190
Biochemical Oxygen Demand, Total	DETSC 2031	1	mg/l	6.9	5.3	< 2.0	3.5	< 2.0	2.1	1.4
Chemical Oxygen Demand, Total	DETSC 2032	10	mg/l	12	< 10	17	11	18	18	11
Cyanide, Total	DETSC 2130	40	ug/l	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Cyanide, Free	DETSC 2130	20	ug/l	180	< 20	< 20	< 20	< 20	< 20	< 20
Cyanide, Complex	DETSC 2130*	40	ug/l	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Dissolved, Oxygen	DETSC 2048*	0.1	mg/l	7.9	5.8	6.5	8.3	7.3	8.6	8.1
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	155	356	582	154	417	215	161
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.46	1.5	4.2	0.069	0.033	0.032	0.045
Chloride	DETSC 2055	0.1	mg/l	20	130	390	16	15	44	26
Nitrate as N	*	0.1	mg/l	0.68	7.6	< 0.10	< 0.10	0.58	1.5	< 0.10
Nitrite as N	DETSC 2201	0.035	mg/l	< 0.035	0.13	< 0.035	< 0.035	< 0.035	< 0.035	< 0.035
Sulphate as SO4	DETSC 2055	0.0001	%	0.00	0.01	0.00	0.00	0.01	0.00	0.00

Summary of Chemical Analysis
Water Samples

Our Ref 25-25760
Client Ref ~ PBGE.01.15
Contract Title ~ GWM

				Lab No	2595751	2595752	2595753	2595754	2595755	2595756	2595757
				Sample ID ~	BH0	BH03	WS202	WS201	BH1	BH2	BH3
				Depth ~	1.93	1.69	1.65	0.81	0.95	1.63	6.40
				Other ID ~							
				Sample Type ~	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
				Sampling Date ~	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025	05/11/2025	05/11/2025
				Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**								
Sulphide	DETSC 2208	10	ug/l		17	< 10	< 10	< 10	< 10	< 10	< 10
Total Organic Carbon	DETSC 2085	1	mg/l		4.6	6.0	8.3	5.2	19	7.2	4.4
Petroleum Hydrocarbons											
Aliphatic C5-C6	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10	< 10	< 10	< 10	< 10
C5-C10 Gasoline Range Organics (GRO)	DETSC 3322	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
EPH (C6-C40)	DETSC 3311*	10	ug/l		< 10	< 10	< 10	44	< 10	< 10	49
Benzene	DETSC 3322	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	DETSC 3322	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylene	DETSC 3322	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE	DETSC 3322	1	ug/l		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs											
Naphthalene	DETSC 3304	0.05	ug/l		1.0	0.34	46	< 50.00	0.45	0.18	0.08
Acenaphthylene	DETSC 3304	0.01	ug/l		0.50	< 0.05	2.2	< 10.00	0.07	0.06	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l		0.22	< 0.05	9.9	< 10.00	0.14	0.07	0.03
Fluorene	DETSC 3304	0.01	ug/l		0.39	0.05	23	< 10.00	0.28	0.12	0.10
Phenanthrene	DETSC 3304	0.01	ug/l		1.8	0.32	71	24	1.0	0.58	0.43
Anthracene	DETSC 3304	0.01	ug/l		0.36	< 0.05	4.8	< 10.00	< 0.05	0.13	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l		2.5	0.38	49	< 10.00	0.40	0.71	0.09
Pyrene	DETSC 3304	0.01	ug/l		2.3	0.26	37	< 10.00	0.47	0.56	0.14
Benzo(a)anthracene	DETSC 3304	0.01	ug/l		1.6	0.23	29	< 10.00	0.25	0.54	0.04
Chrysene	DETSC 3304	0.01	ug/l		1.3	0.26	34	< 10.00	0.38	0.39	0.16
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l		2.9	0.42	53	< 10.00	0.61	0.86	0.22
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l		1.0	0.15	19	< 10.00	0.19	0.35	0.06
Benzo(a)pyrene	DETSC 3304	0.01	ug/l		1.8	0.26	32	< 10.00	0.41	0.61	0.07
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l		1.8	0.23	30	< 10.00	0.39	0.44	0.13

Summary of Chemical Analysis
Water Samples

Our Ref 25-25760
Client Ref ~ PBGE.01.15
Contract Title ~ GWM

			Lab No	2595751	2595752	2595753	2595754	2595755	2595756	2595757
			Sample ID ~	BH0	BH03	WS202	WS201	BH1	BH2	BH3
			Depth ~	1.93	1.69	1.65	0.81	0.95	1.63	6.40
			Other ID ~							
			Sample Type ~	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER	GROUND WATER
			Sampling Date ~	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025	05/11/2025	05/11/2025
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	0.30	< 0.05	8.1	< 10.00	0.06	0.11	0.04
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	2.9	0.28	25	19	0.40	0.40	0.16
PAH Total	DETSC 3304	0.2	ug/l	23	3.2	470	< 200.00	5.5	6.1	1.8
Phenols										
Phenol - Monohydric	DETSC 2130	100	ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 100

Information in Support of the Analytical Results

Our Ref 25-25760
Client Ref ~ PBGE.01.15
Contract ~ GWM

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2595751	BH0 1.93 GROUND WATER	04/11/25	GB 1L x3, GV	BOD (2 days), Dissolved Oxygen (2 days), pH/Cond (1 days)	
2595752	BH03 1.69 GROUND WATER	04/11/25	GB 1L x3, GV	BOD (2 days), Dissolved Oxygen (2 days), pH/Cond (1 days)	
2595753	WS202 1.65 GROUND WATER	04/11/25	GB 1L x3, GV	BOD (2 days), Dissolved Oxygen (2 days), pH/Cond (1 days)	
2595754	WS201 0.81 GROUND WATER	04/11/25	GB 1L x3, GV x2	BOD (2 days), Dissolved Oxygen (2 days), pH/Cond (1 days)	
2595755	BH1 0.95 GROUND WATER	04/11/25	GB 1L x3, GV	BOD (2 days), Dissolved Oxygen (2 days), pH/Cond (1 days)	
2595756	BH2 1.63 GROUND WATER	05/11/25	GB 1L x3, GV	pH/Cond (1 days)	
2595757	BH3 6.40 GROUND WATER	05/11/25	GB 1L x3, GV	pH/Cond (1 days)	

Key: G-Glass B-Bottle V-Vial
Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

Certificate of Analysis

Certificate Number	26-01430	*Issued:*	30-Jan-26

Client Environmental Compliance
Unit G1
Main Avenue
Treforest Industrial Estate
Pontypridd
CF37 5YL

Our Reference	26-01430
Client Reference ~	PBGE.01.15
Order No ~	CO574
Contract Title ~	GWM
Description	1 Groundwater sample.
Date Received	22-Jan-26
Date Started	22-Jan-26
Date Completed	30-Jan-26
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Louise Cook
Contracts Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Water Samples

Our Ref 26-01430
Client Ref ~ PBGE.01.15
Contract Title ~ GWM

Lab No	2629470
Sample ID ~	WS202
Depth ~	
Other ID ~	
Sample Type ~	GROUND WATER
Sampling Date ~	20/01/2026
Sampling Time ~	1030

Test	Method	LOD	Units	
Metals				
Aluminium, Dissolved	DETSC 2306	10	ug/l	< 10.00
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.21
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.52
Barium, Dissolved	DETSC 2306	0.26	ug/l	113.4
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.10
Boron, Dissolved	DETSC 2306*	12	ug/l	102.9
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03
Calcium, Dissolved	DETSC 2306	0.09	mg/l	73
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25
Cobalt, Dissolved	DETSC 2306	0.16	ug/l	2.71
Copper, Dissolved	DETSC 2306	0.4	ug/l	< 0.40
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09
Lithium, Dissolved	DETSC 2306*	1	ug/l	17.84
Magnesium, Dissolved	DETSC 2306	0.02	mg/l	13
Manganese, Dissolved	DETSC 2306	0.22	ug/l	1734
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01
Molybdenum, Dissolved	DETSC 2306	1.1	ug/l	3.31
Nickel, Dissolved	DETSC 2306	0.5	ug/l	5.19
Phosphorus as P, Dissolved	DETSC 2306	18	ug/l	< 18.00
Potassium, Dissolved	DETSC 2306	0.08	mg/l	8.2
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.30
Sodium, Dissolved	DETSC 2306	0.07	mg/l	110
Tin, Dissolved	DETSC 2306*	0.4	ug/l	< 0.40
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	< 0.60
Zinc, Dissolved	DETSC 2306	1.3	ug/l	48.56
Inorganics				
Conductivity (25oC)	DETSC 2009	1	uS/cm	1110
pH	DETSC 2008		pH	7.5
Alkalinity as CaCO3 (Manual)	DETSC 2030	10	mg/l	280
Biochemical Oxygen Demand, Total	DETSC 2031	1	mg/l	5.9
Chemical Oxygen Demand, Total	DETSC 2032	10	mg/l	< 10
Cyanide, Total	DETSC 2130	40	ug/l	< 40
Cyanide, Free	DETSC 2130	20	ug/l	< 20
Cyanide, Complex	DETSC 2130*	40	ug/l	< 40
Dissolved, Oxygen	DETSC 2048*	0.1	mg/l	7.2
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	235
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	6.2
Chloride	DETSC 2055	0.1	mg/l	150
Nitrate as N	*	0.1	mg/l	0.20
Nitrite as N	DETSC 2201	0.035	mg/l	< 0.035
Sulphate as SO4	DETSC 2055	0.1	mg/l	37

Summary of Chemical Analysis
Water Samples

Our Ref 26-01430
Client Ref ~ PBGE.01.15
Contract Title ~ GWM

Lab No	2629470
Sample ID ~	WS202
Depth ~	
Other ID ~	
Sample Type ~	GROUND WATER
Sampling Date ~	20/01/2026
Sampling Time ~	1030

Test	Method	LOD	Units	
Sulphide	DETSC 2208	10	ug/l	< 10
Total Organic Carbon	DETSC 2085	1	mg/l	4.5
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C5-C35	DETSC 3072*	10	ug/l	< 10
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aromatic C5-C35	DETSC 3072*	10	ug/l	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l	< 10
C5-C10 Gasoline Range Organics (GRO)	DETSC 3322	1	ug/l	< 1.0
EPH (C10-C12)	DETSC 3311	10	ug/l	< 20.0
EPH (C25-C40)	DETSC 3311	10	ug/l	< 20.0
Benzene	DETSC 3322	1	ug/l	< 1.0
Toluene	DETSC 3322	1	ug/l	< 1.0
Ethylbenzene	DETSC 3322	1	ug/l	< 1.0
Xylene	DETSC 3322	1	ug/l	< 1.0
MTBE	DETSC 3322	1	ug/l	< 1.0
PAHs				
Naphthalene	DETSC 3304	0.05	ug/l	0.33
Acenaphthylene	DETSC 3304	0.01	ug/l	0.02
Acenaphthene	DETSC 3304	0.01	ug/l	0.07
Fluorene	DETSC 3304	0.01	ug/l	0.15
Phenanthrene	DETSC 3304	0.01	ug/l	0.50
Anthracene	DETSC 3304	0.01	ug/l	0.03
Fluoranthene	DETSC 3304	0.01	ug/l	0.26
Pyrene	DETSC 3304	0.01	ug/l	0.23
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	0.12
Chrysene	DETSC 3304	0.01	ug/l	0.16
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.19
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.05
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.08

Summary of Chemical Analysis
Water Samples

Our Ref 26-01430
Client Ref ~ PBGE.01.15
Contract Title ~ GWM

Lab No	2629470
Sample ID ~	WS202
Depth ~	
Other ID ~	
Sample Type ~	GROUND WATER
Sampling Date ~	20/01/2026
Sampling Time ~	1030

Test	Method	LOD	Units	
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.08
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	0.03
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.07
PAH Total	DETSC 3304	0.2	ug/l	2.4
Phenols				
Phenol - Monohydric	DETSC 2130	100	ug/l	< 100

Information in Support of the Analytical Results

Our Ref 26-01430
Client Ref ~ PBGE.01.15
Contract ~ GWM

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2629470	WS202 GROUND WATER	20/01/26	GB 1L, GV, PB 1L x2	pH/Cond (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial
Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

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