



Site Condition Report

For a waste deposit for recovery operation



Report produced for Bryn Recycling Ltd

Provided by Walker Resource Management Ltd (WRM)

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0.1	27/04/2023	First draft
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1.0 SITE DETAILS

Name of the applicant	Bryn Recycling Ltd
Activity address	Bryn Recycling Ltd Gelliargwellt Farm, Gelligaer, Hengoed, CF82 8FY
National grid reference	ST 12393 96501

Document reference and dates for Site Condition Report at permit application and surrender	Date at application: 22/12/2023 BRY-A03 – Site Condition Report
Document references for site plans (including location and boundaries)	BRY_001_Site_Location_Plan_v1 BRY_002_Site_Layout_Plan_v1

2.0 CONDITION OF THE LAND AT PERMIT ISSUE

<p>Environmental setting</p>	<p>Bryn Recycling Ltd (hereon referred to as Bryn Recycling) is applying for a bespoke environmental permit for the deposit of inert waste materials for recovery at Gelliargwellt Farm, CF82 8FY.</p> <p>The area in which the waste would be deposited for recovery is within land that makes up part of Gelliargwellt Uchaf Farm and is centred on grid reference ST 12393 96501. The primary vehicle access is from Gelligaer Road, which is located to the northwest of the site. It also connects neighbouring towns including Gelligaer and Penpedairheol which are located approximately 500m and 1,500m respectively, to the northeast of the site. Penybryn is located approximately 600m to the east, with the Penallta Industrial Estate located slightly further east. Caerphilly is located approximately 8km south of the site.</p> <p>The site is bound to the south by agricultural land and Parc Penallta Country Park, which comprises an area of public open space and woodland is located approximately 850m to the southeast. Nelson Bog Site of Special Scientific Interest (SSSI) is located 550m to the southeast of the site. Waun Rydd Site of Importance for Nature Conservation (SINC) is located to the east of the site and Coed Gelliau'r – Gwellt SINC is located immediately adjacent (west) to the site and comprises an ancient woodland.</p> <p><u>Geology</u></p> <p>The underlying geology of the former clay quarry is as follows:</p> <ul style="list-style-type: none"> • The site is underlain by predominantly one type of bedrock (i.e. rock types far below the surface), the Grovesend Formation. This is bedrock composed of mudstone, siltstone and sandstone. It was formed approximately 318 to 319 million years ago in the Carboniferous Period. <p>A portion of the north, north-eastern and eastern boundary of the site is underlain by the Marsden Formation. This is mudstone and siltstone sedimentary bedrock formed approximately 308 – 309.5 million years ago in the Asturian Substage.</p> <ul style="list-style-type: none"> • There is one superficial deposit under the site, this is Till which is formed of the rock type Diamicton. The Till formed approximately 11 – 116 thousand years ago in the Devensian stage. <p><u>Hydrogeology</u></p> <p>The hydrogeological features of the subsurface features of the site are as follows:</p> <ul style="list-style-type: none"> • There are two types of Bedrock Aquifer under the site. At the western portion of the site, it is designated as a Secondary A Aquifer. These are permeable layers of rock capable of supporting water supplies at a local
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	<p>rather than strategic scale, and in some cases forming an important source of base flows to rivers. They are generally aquifers formerly classified as minor aquifers. At the south-western portion of the site it has been determined that there is a Secondary Undifferentiated Aquifer, with this aquifer type it is not possible to apply either a secondary A or B definition because of the variable characteristics of the rock type. These of minor value.</p> <ul style="list-style-type: none"> • There is a productive superficial aquifer under the south-western portion of the site. <p><u>Groundwater</u></p> <p>The groundwater characteristics for the site location are presented below:</p> <ul style="list-style-type: none"> • The site is not situated within a Groundwater Source Protection Zone (SPZ). • The groundwater vulnerability classification for W and SW portions of the site the bedrock is classified as a Secondary Bedrock Aquifer – Medium Vulnerability. Medium vulnerability areas are of intermediate vulnerability between High Vulnerability and Low Vulnerability areas. For context, the definitions for High Vulnerability and Low Vulnerability areas are provided below: <p>High Vulnerability areas – Areas that are able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.</p> <p>Low Vulnerability areas – Areas that provide the greatest protection to groundwater from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits with a low permeability.</p> <ul style="list-style-type: none"> • There is one Superficial Aquifer located beneath the SW portion site, this is classified as a Productive Superficial Aquifer. • There is limited potential for groundwater flooding to occur at the majority of the site. • The nearest groundwater abstraction licence is recorded 1539m East of the site at a borehole operated by Whitchurch Holdings. <p><u>Flooding</u></p> <ul style="list-style-type: none"> • The site is located in Flood Zone 1 according to the EA flood map for planning tool (see Appendix D – Flood Zone Map). This indicates that there is no flood risk at site. <p><u>Hydrology</u></p> <ul style="list-style-type: none"> • The nearest surface water feature is a pond, which located in the southern and south-eastern boundary of the site.
	<p><u>Historical Land Use</u></p> <p>A review of historical Ordnance Survey maps and information pertinent to the entire site and within a 1km radius is summarised below:</p> <p>1884</p>

	<ul style="list-style-type: none">• The land within the site boundary is indicated, and shows it to be undeveloped, The maps show a mixture of woodland and grassland present on the site.• To the southwest and south of the site there is presence of two collieries.• To the southwest is a railway track and the village of Nelson. <p>1901</p> <ul style="list-style-type: none">• The site remains the same, it is undeveloped and predominantly woodland with portions of grass land present. There are now signs of agricultural expansion for Gelliargwellt Farm to the east of the site.• The colliery to the SW is now classified as disused.• All previously noted features remain the same. <p>1921-1922</p> <ul style="list-style-type: none">• The site remains undeveloped and predominantly woodland with portions of grassland to the south and north.• The town of Nelson that now showing signs of increased residential areas that are beginning to encroach on the GWR Vale of Neath railway line.• All other stated features also remain the same. <p>1938-1945</p> <ul style="list-style-type: none">• Site remains undeveloped. To the southeast there is increased residential properties that resembles the early stages of a housing estate. These additional houses are in proximity the historical site that is denoted as roman camp on the map. <p>1965</p> <ul style="list-style-type: none">• Site remains undeveloped and all mentioned areas remain relatively unchanged• The southern colliery is no longer operational and is not mentioned on the map. <p>1974</p> <ul style="list-style-type: none">• The site remains undeveloped.• The residential area of Penybryn to the southwest has expanded considerably with a further increase housing and development of a school.• The town of Nelson has also undergone residential expansion.• The previous GWR railway line has now transitioned to the Mineral Line. There has been no alteration to the route.• All road networks in the vicinity of the site remain the same as previous years. <p>1999</p> <ul style="list-style-type: none">• The site remains undeveloped and is in the same condition as previously mentioned.• Neighbouring Gelliargwellt Farm shows the early stages of the development of a quarry.• Penybryn and Nelson remain predominantly the same in size and retain the same features as the previous years.• There is a new development in the southwest below Penybryn, this is the early sign of a community park that is replacing the area that was once the colliery.• There has been widening of the Gelligaer road to the north of the site. <p>2006</p> <ul style="list-style-type: none">• The site remains undeveloped and is in the same condition as previously mentioned.
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- Gelliargwellt Farm has now developed the sandstone quarry which is in proximity to the site on the south-eastern boundary.
- The Penallta Community Park is now fully developed and features a mixture of terrains and surface water features.
- All other areas and features remain predominantly unchanged.

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- The site remains undeveloped however woodland on the site has been cleared, this is also similar to the surrounding areas where the majority of wooded areas are now either grassland or agricultural land.
- Gelliargwellt Farm has expanded their operations further with the inclusion of an additional AD works and MRF alongside the quarry. There is also a lagoon on the eastern boundary of the site.
- There has been an expansion to the Gelligaer school to the northeast of the site.
- All other areas and features remain unchanged from 2006.

Pollution Incidents

- There have been four recorded pollution incidents to controlled waters within 1km of the site location. Of the four recorded pollution incidents, three were recorded as Category 3 – Minor Incidents, with the remaining incident categorised as a Category 2 – Significant incident. The nearest Category 3 incident, which comprised the pollution of a freshwater stream/river with mud/clay/soil occurred in 1996 at 794m away. The Category 2 incident took place in 1991 and involved the pollution of a bog, The Nelson, 769m south of the site.
- There have been 14 recorded incidents to air and land. The closest to the site was a category 2 incident for both air and land. This was located 92m to the east of the site.

Waste Register

- There are no registered landfill sites within 1km of the site.
- There is one local authority recorded landfill sites within 1km of the site, which is located 958m southwest of the site.
- There are five historical landfill sites within 1km of the site boundary, with the nearest being 56m southeast of the site.
- There are 15 Licensed Waste Management Facilities within 1km of the site boundary, with the closest 86m southeast of the site boundary and operated as a Transfer and Composting Station.

Industrial Activity

- There are a number of trade, commercial, and manufacturing production sites within 1km of the site. The closest activity located off site is 169m East of the site, which is quarry operated by Bryn Quarry Ltd.
- There are no fuel stations within 250m of the site.
- There are no oil or gas pipelines within 250m of the site.

Ground Stability

- The site has a very low potential for compressible ground stability hazards.

	<ul style="list-style-type: none"> • The potential for Landslide Ground Stability Hazards to be present on site is classified as Low and very Low. • The potential for Running Sand Ground Stability Hazards to be present on site is classified as Very Low. • The potential for Shrinking or Swelling Clay Ground Stability Hazards to be present on site is classified as Very Low.
Baseline Soil and Groundwater Reference Data	<p>No baseline soil and groundwater reference data has been collated for the site. Given the historical land use on and around the site, it is considered that there is only a very low likelihood that the land beneath the site has levels of contamination. The client has accepted that the lack of any baseline soil or groundwater data means that they are liable for any remedial works required following permit surrender in order to return the land to an uncontaminated state.</p>
Supporting information	<ul style="list-style-type: none"> • Appendix A: Historical Site Maps • Appendix B: Environmental Setting Maps • Appendix C: Datasheet

3.0 PERMITTED ACTIVITIES

<p>Permitted activities</p>	<p><u>Current</u> Bryn Recycling Ltd are applying for a bespoke environmental permit to extend the area next to the MRF facility for the storage and processing of soil and create a storage bund.</p> <p>Permitted activity will be agreed in accordance with the environmental permit issued.</p> <p><u>Proposed</u> Bryn Recycling are seeking permission to import 420,000m³ / 672,000 tonnes of inert waste material onto site for recovery. The waste will be recovered in a number of engineering operations. The SR2017 No.1 permit allows recovery of up to 60,000m³ however due to the quantity material required for this proposed development, a bespoke permit is required.</p> <p>R13: Storage of wastes pending any of the operations numbered R5 and R10.</p> <p>R5: Recycling or reclamation of other inorganic materials.</p> <p>R10: Land treatment resulting in benefit to agriculture or ecological improvement.</p>
<p>Non-permitted activities undertaken</p>	<p>There are no non-permitted activities undertaken.</p>
<p>Document references for:</p> <ul style="list-style-type: none"> • Plan showing activity layout • Historical land use maps • Site sensitivity maps 	<p>Historical Site Maps: Appendix A Environmental Setting Maps: Appendix B Datasheet: Appendix C</p>

4.0 CHANGES TO THE ACTIVITY

To be maintained during the life of the permit.

Have there been any changes to the activity boundary?	
Have there been any changes to the permitted activities?	
Have any 'dangerous substances' not identified in the Application Site Condition Report been used or produced as a result of the permitted activities?	
Checklist of supporting information	<ul style="list-style-type: none"> • Plan showing any changes to the boundary (where relevant) • Description of the changes to the permitted activities (where relevant) • List of 'dangerous substances' used/produced by the permitted activities that were not identified in the Application Site Condition Report (where relevant)

4.1 Measures Taken to Protect Land

Use records that you collected during the life of the permit to summarise whether pollution prevention measures worked. If you can't, you need to collect land and/or groundwater data to assess whether the land has deteriorated.	
Checklist of supporting information	<ul style="list-style-type: none"> • Inspection records and summary of findings of inspections for all pollution prevention measures • Records of maintenance, repair and replacement of pollution prevention measures

4.2 Pollution Incidents and Remediation

Summarise any pollution incidents that may have damaged the land. Describe how you investigated and remedied each one. If you can't, you need to collect land and /or groundwater reference data to assess whether the land has deteriorated while you've been there.	
Checklist of supporting information	<ul style="list-style-type: none"> • Records of pollution incidents that may have impacted on land • Records of their investigation and remediation

4.3 Soil Gas and Water Quality Monitoring

Provide details of any soil gas and/or water monitoring you did. Include a summary of the findings. Say whether it shows that the land deteriorated as a result of the permitted activities. If it did, outline how you investigated and remedied this.

Checklist of supporting information	<ul style="list-style-type: none">• Description of soil gas and/or water monitoring undertaken• Monitoring results (including graphs)
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5.0 DECOMMISSIONING AND REMOVAL OF POLLUTION RISK

To be completed at Permit surrender.

Describe how the site was decommissioned. Demonstrate that all sources of pollution risk have been removed. Describe whether the decommissioning had any impact on the land. Outline how you investigated and remedied this.	
Checklist of supporting information	<ul style="list-style-type: none"> • Site closure plan • List of potential sources of pollution risk • Investigation and remediation reports (where relevant)

5.1 Reference Data and Remediation

<p>Say whether you had to collect land and/or groundwater data. Or say that you didn't need to because the information from section 4 of the Surrender Site Condition Report shows that the land has not deteriorated.</p> <p>If you did collect land and/or groundwater reference data, summarise what this entailed, and what your data found. Say whether the data shows that the condition of the land has deteriorated, or whether the land at the site is in a "satisfactory state". If it isn't, summarise what you did to remedy this. Confirm that the land is now in a "satisfactory state" at surrender.</p>	
Checklist of supporting information	<ul style="list-style-type: none"> • Land and/or groundwater data collected at application (if collected) • Land and/or groundwater data collected at surrender (where needed) • Assessment of satisfactory state • Remediation and verification reports (where undertaken)

5.2 Statement of Site Condition

<p>Using the information from sections 4 and 5, give a statement about the condition of the land at the site. This should confirm that:</p> <ul style="list-style-type: none"> • the permitted activities have stopped • decommissioning is complete, and the pollution risk has been removed • the land is in a satisfactory condition. 	
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