



# Non-Technical Summary

Gelliargwelt Farm Quarry





Report produced for Bryn Aggregates Ltd

Provided by Walker Resource Management Ltd (WRM)

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## 1.0 INTRODUCTION

This Non-Technical Summary sets out the considerations and operational details relevant to the operation of the crushing and grading and dust washing processes at the quarry at Gelliargwellt Farm, Gelligaer, Hengoed. This document details the nature of the site, relevant site infrastructure, methods of operation and environmental controls. It has been prepared in accordance with the following documents:

- The Environmental Permitting (England and Wales) Regulations 2016, and
- Environmental Permitting – General Guidance Manual on Policy and Procedures for A2 and B Installations

The Non-Technical Summary has been prepared in conjunction with the following documents:

- Bryn Aggregates-1 – Environmental Management System
- Bryn Aggregates-2 – Emissions Management & Monitoring Plan
- Bryn Aggregates-3 – Environmental Risk Assessment
- Bryn Aggregates-4 – Habitats Risk Assessment

### 1.1 Site Address

Bryn Aggregates Ltd  
Gelliargwellt Farm,  
Gelligaer,  
Hengoed,  
CF82 8FY

Grid Reference: Easting 312871, Northing: 196245

### 1.2 Description

The site has an area of approximately 29 hectares and comprises an operational quarry and agricultural land set within Gelliargwellt Farm. 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 of the quarry, with the Penallta Industrial Estate located slightly further east. Caerphilly is located approximately 8km south of the site.

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. Nelson Bog Site of Special Scientific Interest (SSSI) is located 350m to the south of the site. Waun Rydd Site of Importance for Nature Conservation (SINC) is located immediately adjacent to the north of the site and Coed Gelliau'r – Gwellt SINC is located approximately 550m to the northwest of the site and comprises an ancient woodland.

### 1.3 Site Plans

Reference Drawing: Bryn\_Aggregates\_Site\_Location\_Plan  
Bryn\_Aggregates\_Site\_Layout\_Plan

### 1.4 Permits and Licences

Bryn Aggregates Ltd is applying for a Part B local authority permit for the crushing and grading processes at the quarry at Gelliargwellt Farm. This is in line with the Environmental Permitting Regulations 2016, Schedule 1, Part 2, Chapter 3, Section 3.5 Other minerals activities Part B which states:

*“(a) Unless falling within Part A(1) or Part A(2) of any Section the crushing, grinding or other size reduction, other than the cutting of stone, or the grading, screening or heating of any designated mineral or mineral product except where the operation of the activity is unlikely to result in the release into the air of particulate matter.”*

Bryn Aggregates also hold an environmental permit, reference number EPR/CB3391ZY, regulated by Natural Resources Wales for the discharge of water from the quarry via settlement lagoons.

The operator of the crushing machine, JAW Services Ltd also hold an environmental permit for the operations of the crusher as a mobile plant. This permit, reference number PPC/118-3.5-JSL/1115, is regulated by Rhondda Cynon Taff County Borough Council. The permit being applied for in this application will effectively replace this mobile plant permit at Gelliargwellt Farm.

### 1.5 Planning Permission

The existing quarrying activities were first granted planning permission in March 2009 under planning permission reference 08/0055/FULL. Planning permission reference 12/0570/FULL for its original extension was granted in August 2013. This permission was subsequently amended as per reference numbers 19/0276/NCC and 17/0971/NCC which concerned the collection of material outside stated operational hours and the restoration scheme respectively. Conditions 9 and 10 of the planning permission were then discharged under the reference number 20/0172/COND.

A planning application was then made in 2020 under the reference number 20/0702/FULL which sought to extend the quarry, however this was rejected and is currently under appeal. Finally, an application was made in 2022 to extend the period of abstraction to December 2024, under the reference number 22/0175/NCC. This application was approved on 8<sup>th</sup> March 2023.

## 1.6 Hours of Operation

The blasting and processing of stone shall occur within the following time periods:

**Table 1 - Site Operational Hours**

Day	Blasting	Processing of Stone	Water Pumping
Monday to Friday	10:00 – 16:00	07:00 – 18:00	As required
Saturday	NIL	07:00 – 13:00	As required
Sunday	NIL	NIL	As required
Bank Holidays	NIL	NIL	As required

## 1.7 Reason for Application

Although the quarrying activities have been operational since March 2009, Bryn Aggregates were only made aware at in the second half of 2022 that a Part B environment permit, regulated by Caerphilly County Borough Council, was required. Bryn Aggregates previously operated the quarry under a mobile plant license. However, Natural Resource Wales's (NRW) Local Authority Advice Unit (LAAU) have confirmed that this is no longer appropriate for a permanent operation. NRW guidance states the following regarding mobile equipment:

*'If you intend to set up your plant in one place for a long time instead of moving from place to place, or if you intend to bring waste to your plant instead of taking your plant to the waste, we are unlikely to consider your activity to be mobile plant. You will need to apply for a site based permit to cover your activity.'*

This means that even though the equipment used to carry out the quarrying activities are mobile and can be transported to different sites, the fact that they remain on site for large periods of time and because the quarrying activity is likely to continue for a significant number of years means that they are considered to be more permanent than mobile and as a result a permit for the site is required rather than a permit for the equipment.

Therefore, Bryn Aggregates are now applying for a Part B permit under Schedule 1, Part 2, Chapter 3, Section 3.5 of the Environmental Permitting Regulations 2016.

The activity that requires permitting is not one of blasting to extract the stone from the quarry face, rather the crushing and processing of stone.

Bryn Aggregates extract approximately 100,000 tonnes per annum of blue pennant sandstone which is processed via a conical crusher and grading line to produce an aggregate to PSV68 motorway standard. This is the main activity for which an environmental permit is required. Associated activities include the following:

- Extraction of blue pennant sandstone via blasting and digging
- Extraction of secondary shale which is sent off site for lower grade uses without any processing
- Washing of dust to produce sand
- Storage of sandstone and sand on site
- Treatment of water used in all quarrying activities in settlement lagoons prior to discharge from site.

## 2.0 PROPOSED OPERATIONS

The first stage of the quarrying activities on site consists of the blasting of blue pennant sandstone from the rock face using high explosives. This is necessary to break rock from the ground. This activity normally takes place once or twice per calendar month. Blasting is designed such that ground vibration measurements are within a series of thresholds to safeguard the amenity interests of local residents. Each blast extracts between 16-20,000 tonnes of rock from the quarry face.

The rock that has been blasted off the rock face is then fed into the front end of a mobile dual crusher which reduces the particle size of the rock and grades it at the same time. The mobile crusher moves across the rock face and around site as is necessary. The following grades are produced by the crusher:

- <6mm
- 10mm
- 12mm
- 14mm
- 20mm
- 40mm

Each of these grades of rock are stored in their own pile ready for removal from site as a PSV68 motorway standard aggregate with the exception of the <6mm material which is processed through a washing system to reclaim the sand present in the material.

The separated material that is less than 6mm in size is stored in a pile ready for front end loading into a Finlay 312 Wheeled Feed Unit which in turn feeds the aggregate reclaim recovery system. This works by dropping the rock material into tub containing water. This slurry-type material is then fed through a system with 4mm aperture polyurethane modules. The material which is greater than 4mm is de-watered and discharged to the ground. This is the sand which is stockpiled before leaving site to be used as a building material. Meanwhile, the fines are separated from the water via a screen and small cyclonic cluster before the water is discharged into a settlement pond. This material which is <4mm is once again stockpiled before leaving site as a pea gravel.

The settlement pond is located near the washing unit in which remaining fine particles settle to the bottom of the water before the "clean" water is re-used in the washing process.

The quarry sits within a landscape bund of trees and grazing land on its northern and eastern side to minimise landscape, noise and dust impacts.

### 3.0 SENSITIVE RECEPTORS

A desk-top study was undertaken in order to identify any sensitive receptor locations in the vicinity of the site that required specific consideration during the preparation of the Part B permit application. The site is located in a largely agricultural area with towns in the vicinity and the operator owns a bungalow on the corner of the site access road and Gelligaer Road. The location of the nearest sensitive receptors and the distances and direction of these receptors from the site are summarised below in Tables 2 and 3. Nelson Bog Site of Special Scientific Interest (SSSI) is located 350m to the south of the site. Waun Rydd Site of Importance for Nature Conservation (SINC) is located immediately adjacent to the north of the site and Coed Gelliau'r - Gwellt SINC is located approximately 550m to the northwest of the site and comprises an ancient woodland.

**Table 2 - Human Sensitive Receptor Locations**

Receptor	Type	Distance to Site (m)	Coordinates (x,y)
HR01 – Alpine Cottage	Human	786	312213, 196269
HR02 – Tophill Cottage	Human	765	312236, 196939
HR03 – Green Acres Bungalow	Human	730	312310, 196952
HR04 – Tophill	Human	840	312202, 196999
HR05 – Residential properties on Legion's Way	Human	680	312840, 197040
HR06 – Greenhill Primary School	Human	625	312967, 196997
HR07 – Residential properties on Claerwen	Human	530	312940, 196886
HR08 – Residential properties on Claerwen	Human	470	312908, 196792
HR09 – Residential properties on Claerwen	Human	455	313107, 196715
HR10 – Allotments	Human	385	313012, 196777
HR11 – Residential properties on Aneurin Bevan	Human	500	313266, 196659
HR12 – Residential properties on Aneurin Bevan	Human	490	313371, 196599
HR13 – Residential properties on Heol Cattwg	Human	560	313547, 196552
HR14 – Residential properties on Trosnant Cres	Human	515	313527, 196398
HR15 – Residential properties on Brynheulog St	Human	470	313488, 196234
HR16 – Residential properties on Brynheulog St	Human	470	313463, 196152
HR17 – Residential properties on Gelliargwellt Rd	Human	460	313427, 196020
HR18 – Penallta Industrial Estate	Human	795	313843, 196346
HR19 – Residential property off Penallta Rd	Human	760	313705, 195855



Receptor	Type	Distance to Site (m)	Coordinates (x,y)
HR20 – Parc Penallta	Human	150	312920, 195886
HR21 – Tai Fforest Cottages	Human	1,000	312616, 195983
HR22 – Colliers Cottages	Human	1,000	312212, 195374
HR23 – Wern-ganol	Human	1,095	312050, 195371
HR24 – Nelson Football Club	Human	1,210	311761, 195535
HR25 – Residential properties on Wern Crescent	Human	1,350	311661, 195523
HR26 – Residential properties on Station Terrace	Human	1,555	311333, 195723
HR27 – Residential properties on Tawelfan	Human	1,485	311272, 195910
HR28 – Llancaiach-Isaf Farm	Human	1,110	311567, 196148
HR29 – Llancaiach-Isaf House	Human	1,455	311236, 196284
HR30 – Residential properties on Gelliargwellt Rd	Human	1,650	311054, 196586
HR31 – Llancaiach Fawr Manor	Human	1,360	311364, 196691
HR32 – Residential properties on Highfield Rise	Human	1,560	311246, 196910

Table 3 - Ecological Receptor Locations

Receptor	Habitat	Distance to Site (m)	Coordinates (x,y)
ER01 – Waun Rydd (SINC)	Marshy grassland / bog	Immediately adjacent	313200, 196500
ER02 – Land South of Gelligaer Infants School (SINC)	Marshy grassland, semi-improved acid grassland	955	313800, 196800
ER03 – Tredomen Tip Ponds (SINC)	Semi-natural wet woodland, ponds with semi-natural wetland vegetation, acid grassland	765	312700, 195000
ER04 – Pottery Road Slopes (SINC)	Marshy grassland, neutral grassland, broad-leaved woodland	775	314300, 196500
ER05 – Coed Penallta and Railway Line (SINC)	Marshy grassland, acid grassland, wet woodland	890	313700, 194900
ER06 – Wern Woodland (SINC)	Semi-natural wet woodland	1,300	311400, 195700
ER07 - Coed Gelliau'r-Gwellt (SINC)	Ancient woodland, marshy grassland	550	312000, 196600
ER08 – Llancaiach-fawr (SINC)	Semi-natural woodland, semi-improved neutral grassland	1,400	311200, 196300
ER04 – Nelson Bog (SSSI)	Valley mire	350m	312579, 195891



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