

Environmental Management
System



Gelliargwellt Farm Quarry

# Report produced for Bryn Aggregates Ltd

#### Provided by Walker Resource Management Ltd (WRM)

Document Title	Environmental Management System		
Revision	v1.0		
Date	17/03/2023		
Document Reference	Bryn_Aggregates-1		
Project Reference	1193/F05		
Author	Martin Ropka	Mhr. When	
Reviewer	Beth Watson	B.leatser	

Version No.	Date	Description of change
0.1	10/03/2023	Initial draft
0.2	14/03/2023	Internal review
0.3	16/03/2023	Client review
1.0	17/03/2023	First issue

# Copyright ©

All material on these pages, including without limitation text, logos, icons and photographs, is copyright material of Walker Resource Management Limited (WRM). Use of this material may only be made with the express, prior, written permission of WRM. This document was produced solely for use by the named client to whom the document refers.

The methodology (if any) contained in this report is provided to you in confidence and must not be disclosed or copied to third parties without the prior written agreement of WRM. Disclosure of that information may constitute an actionable breach of confidence or may otherwise prejudice our commercial interests.

# **CONTENTS**

1.0	INTRODUCTION	1
2.0	SITE DETAILS	2
2.1	Site Address	2
2.2	Description	2
2.3	Site Plan	2
2.4	Permits and Licences	2
2.5	Permitted Activities	2
2.6	Exempt Activities	3
2.7	Planning Permission	3
2.8	Directly Associated Activities	3
3.0	OPERATIONAL OVERVIEW	4
3.1	Quarrying Activities	4
3.2	Hours of Operation	4
3.3	Staffing	4
3.4	Technical Competence	4
3.5	Site Security	5
3.6	Relevant Convictions	5
3.7	Change of Operators or Holders Details	5
3.8	Maintenance of Financial Provision	5
3.9	Notification of Operations	5
3.10	Commencement or Cessation of Operations	5
3.11	Notifications and Submissions to the Local Authority	6
4.0	SITE ENGINEERING	7
4.1	Access and Parking	7
4.2	Operational Area	7
4.3	Site Office	7
4.4	Site Infrastructure	7
4.5	Drainage	8
4.6	Weighbridge	8
5.0	SITE PROCEDURES	9
5.1	Blasting	9
5.2	Crushing and Grading	9
5.3	Dust Washing	9

5.4	Wa	ter Storage	10	
5.5	Cor	mmunications	10	
5	5.5.1	Operative Training		
6.0	РО	LLUTION AND EMISSION CONTROL	11	
6.1	Ma	intenance	11	
6.2	Pot	ential for Emissions	11	
ć	5.2.1	Dust	11	
ć	5.2.2	Noise and Vibration	12	
ć	<i>5.2.3</i>	Release of Solids in Water Discharges		
6.3	Aba	atement Techniques	12	
ć	<i>5.3.1</i>	Dust		
ć	5. <i>3.2</i>	Noise and Vibration		
6.4	Me	teorological Monitoring	14	
6.5	Tra	ining	14	
ć	5.5.1	Training Requirements	14	
7.0	REC	CORDS	16	
7.1	Мо	nitoring	16	
7.2	2 Site Logbook			
7.3	Ma	terial Records	16	
7.4	Tra	ining Records	16	
7.5	Calibration1			
7.6	Cor	mplaints	16	

#### 1.0 INTRODUCTION

This Management System has been prepared in accordance with the Environmental Permitting Regulations (EPR) 2016, setting out the considerations and operational details that are relevant to the operation of quarrying activities by JAW Services Ltd at Gelliargwellt Farm, Gelligaer which is owned and controlled by Bryn Aggregates Ltd (hereon referred to as Bryn Aggregates). This Management System details the nature of the site, relevant site and infrastructure works, methods of operation and environmental controls. It has been prepared in accordance with the following documents:

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

This management system has been produced in conjunction with the following documents:

- Bryn Aggregates-0 Non-Technical Summary
- Bryn Aggregates-2 Emissions Management & Monitoring Plan
- Bryn Aggregates-3 Environmental Risk Assessment
- Bryn Aggregates-4 Habitats Risk Assessment

This document details procedures for the operation of rock crushing and grading activities at the quarry, with reference to the associated activities of blasting, washing and material storage. 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. Sand is also produced for use as a building material, as is pea gravel.

The quarry is located to the southeast of the composting facility, anaerobic digestion facility and general farming activities carried out at Gelliargwellt Farm.

#### 2.0 SITE DETAILS

#### 2.1 Site Address

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

Grid Reference: Easting 312871, Northing: 196245

## 2.2 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.

#### 2.3 Site Plan

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

#### 2.4 Permits and Licences

The permit application for which this Management System supports has been identified as the sole required permit or licence for operation of the quarrying activities.

## 2.5 Permitted Activities

Bryn Aggregates Ltd hold 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 1, 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.

## 2.6 Exempt Activities

Bryn Aggregates do not currently undertake any exempt activities on the site.

## 2.7 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.

The most recent planning permission granted was that for an extension to the period of abstraction to 31<sup>st</sup> December 2024 under reference number 22/0175/NCC.

## 2.8 Directly Associated Activities

The activities associated with the crushing and grading processes are:

- 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; and
- Treatment of water from the quarry in settlement lagoons prior to discharge from site.

#### 3.0 OPERATIONAL OVERVIEW

This section provides an overview of the quarrying operations at Gelliargwellt Farm.

#### 3.1 Quarrying Activities

JAW Services Ltd extract 11,000 tonnes per annum of blue pennant sandstone on behalf of Bryn Aggregates which is processed via a conical crusher and grading line to produce an aggregate of varying sizes to PSV68 motorway standard. The finer material is also processed to produce a sand for use in the building industry and to produce a pea gravel via a washing line. The water used in the washing line is processed in a settlement pond before being re-used in the wash process. All surface water from the quarry is directed to a sump in the quarry before being pumped into a number of settlement lagoons outside the quarry prior to redirection to the farms clean water lagoon or discharge from site into an adjacent un-named watercourse.

All rock material is stockpiled in the quarry prior to removal from site.

## 3.2 Hours of Operation

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

Day	Blasting	Processing of Stone Water Pumpir	
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

Table 1 - Site Operational Hours

#### 3.3 Staffing

JAW Services Ltd will continue to operate the quarrying activities on behalf of Bryn Aggregates Ltd. The site will continue to operate with the same number of staff members without the need for additional staff members. There are currently 15 members of staff that operate the site.

## 3.4 Technical Competence

The site manager and operatives will be appropriately trained and will have a thorough understanding of the requirements of the quarrying activities, the Permit and Management System with particular regard to:

- Operational controls
- Record keeping
- Emissions monitoring
- Awareness of regulatory implications of the permit
- Awareness of all potential environmental effects from the operations

• Notification to regulatory authorities

A copy of the Permit and Management System will be kept on site and will be accessible to staff and regulatory authorities for reference.

Several site staff will be appropriately trained in order to operate the site compliantly. No activities pertaining to the operation of the quarrying activities shall take place unless there are sufficient, trained and competent staff present on site.

## 3.5 Site Security

The site is fully secure with a fence surrounding the site and CCTV. The gates and fences are checked on a regular basis for damage or sign of attempted entry. Any damage identified upon inspection is repaired at the earliest opportunity.

#### 3.6 Relevant Convictions

In the unlikely event of the permit holder or a relevant employee being convicted of any relevant offence, full details of the conviction shall be provided to the local authority within 14 days. Details of any appeals shall also be reported to the authority.

#### 3.7 Change of Operators or Holders Details

The following information shall be notified in writing within 5 working days to the local authority:

- Any change to the Permit holders trading name;
- Any steps taken with a view to the Permit holder going into administration; and,
- Any change in the operators trading name, address registered name or registered office address.

#### 3.8 Maintenance of Financial Provision

Bryn Aggregates will make financial provisions to meet the requirements and obligations of the Permit.

#### 3.9 Notification of Operations

Any additional preparatory works required as a result of the issuing of a new Environmental Permit or site improvement shall be notified to the local authority. The Permit holder shall give no less than 7 days' prior notice of any changes to the Management System.

# 3.10 Commencement or Cessation of Operations

In the event of any future cessation and subsequent re-commencement of the use of the site for quarrying activities, the relevant authorities will be notified in writing, specifying the date of any such cessation or re-commencement.

# 3.11 Notifications and Submissions to the Local Authority

Except where otherwise specified, all submissions to the local authority shall be in writing. These correspondences shall include the reference number and the name of the Permit holder.

#### 4.0 SITE ENGINEERING

### 4.1 Access and Parking

The main access route to the quarry is via the road off Gelligaer Road which continues through the farm and waste treatment site to the quarry which is located to the southeast of the farm. A car park is located in the quarry for the site operatives.

## 4.2 Operational Area

The quarry is located to the southeast of Gelliargwellt Farm. The site plan can be seen in document reference Bryn Aggregates Site Layout Plan. The working face of the quarry moves over time and the processing area i.e. the location of the crushing machine follows this. Within the quarry there are stockpiles of graded material, the dust washing plant, a settlement lagoon for the dust washing plant and a sump for water collected in the quarry. The water that collects in this sump is pumped out to a group of settlement lagoons to the southwest of the quarry prior to discharge into a clean water lagoon for wider farm use or discharge into the adjacent unnamed watercourse.

#### 4.3 Site Office

The site office is located in the quarry A hard copy of the Permit and Management System will be kept in the site office for reference. Toilets and washroom facilities are also provided.

The following documents and equipment will be kept in the site office:

- Environmental Permit;
- Management System:
- Emissions Management and Monitoring Plan;
- Environmental Risk Assessment;
- Habitats Assessment;
- Current Site Diary;
- First aid kit;
- Internal inspection sheets/monitoring forms; and
- Accident book.

## 4.4 Site Infrastructure

There are effectively three areas of working at any one time in the quarry, each featuring different types of infrastructure.

The first working area is the working face of the quarry. This is where the blasting occurs using explosives to break sections of rock away from the quarry. Typically, this occurs approximately once a month.

Following the blasting, the rock that has been blasted off is processed in the Pegson Premtrak primary jaw crusher. This crushes and grades the rock into different sizes from 6mm up to 40mm. The primary crusher follows the working face of the quarry.

The finer material (<6mm) is then transferred into a Finlay low water flow aggreclaim unit in which the fine sand (<4mm) is separated from the pea gravel (4-6mm). This unit is located in the southern corner of the quarry.

It takes approximately one month to process all of the rock separated from the quarry face by one period of blasting.

There are a number of vehicles used on site to help load the processing equipment, transfer the material around site and create stockpiles in the quarry including a loading shovel and excavator.

A table showing the infrastructure located on site at any one time can be seen below:

**Plant** Quantity **Function** Pegson Premtrak 1 Rock crushing 1100/650 1 Pegson Maxtrak 1000 Rock crushing 1 Powerscreen 2100 Rock grading Finlay 694+ 1 Dust washing CAT 966 loader 1 Loading of material Excavation / loading of CAT 360 excavator 1 material

Table 2 - Site Infrastructure

# 4.5 Drainage

The floor of the quarry features two water storage areas that are created by blasting holes into the ground. The first is the quarry sump which collects all surface water generated on the floor of the quarry following rain or the use of water as a dust mitigation technique. Over time the location of this sump moves depending on the location of the working face of the quarry. The water that collects in this sump is then pumped into a group of settlement lagoons located to the west of the quarry. Here, any dust in the surface water settles out before the clean water is either pumped into the clean water storage lagoon for wider site use or discharged into the adjacent un-named water course.

The other water storage area on the floor of the quarry is the settlement lagoons for the dust washing plant. This works in the same way as the settlement lagoons for the quarry surface water except rather than the water being discharged, it is re-used in the dust washing plant.

## 4.6 Weighbridge

The site is equipped with a weighbridge to ensure that the quantities of quarried rock/stone leaving site can be recorded.

#### 5.0 SITE PROCEDURES

On behalf of Bryn Aggregates Ltd, JAW Services Ltd shall only carry out activities associated with the blasting, crushing, grading and washing of rock from the quarry face.

## 5.1 Blasting

Blasting typically occurs once a month in the quarry. It occurs by placing explosives, strategically in the quarry face before setting them off. Each blasting period dislodges between approximately 16,000 to 22,000 tonnes of rock. Blasting moves across the face of the quarry wall and therefore takes place in slightly different places each time.

# 5.2 Crushing and Grading

Once the rock has been dislodged from the quarry face, it needs to be processed. It is loaded into the mobile crusher using an excavator or loading shovel. The mobile crusher contains a rock crusher and a series of conveyors and screens to separate out the different sizes of stones between 10mm and 100mm. The different grades of stones are then transferred to a chosen location on the quarry floor where they are stockpiled prior to removal from site. The table below presents the different grades of stone produced and the expected maximum tonnages stored in each stockpile.

Grade of stone	Maximum stockpile tonnage	
10mm	9,000 tonnes	
10mm A	4,500 tonnes	
10mm chips	1,100 tonnes	
14mm	3,500 tonnes	
20mm	1,800 tonnes	
25mm chips	2,100 tonnes	
50mm chips	3,400 tonnes	
50-100mm	700 tonnes	
CR-Run	6,300 tonnes	
GSB	12,300 tonnes	
Total	44,700 tonnes	

## 5.3 Dust Washing

One of the outputs from the crushing and grading process is fine material that is less than 6mm. This material is transferred across the quarry floor to the dust washing plant. The material is loaded into the reception hopper by the CAT 966 front end loader. A belt feeder regulates the feed onto a main conveyor which transports the material up and discharges into the AggReclaim

recovery system. The pre-sized material is dropped into a tub containing water and subject to light attrition by a heavy-duty single shaft spiral and paddle assembly. This slurry-fied material is discharged on a twin deck screen box. The top deck is fitted with 4mm aperture polyurethane modules. Any material which is more than 4mm in size is subject to a pressure rinse throughout its travel along the horizontal top deck. This >4mm sized material is then de-watered and it discharges from the screen onto a large vibrating conveyor which carries the material onto a vibrating conveyor to the ground. The <4mm sized material is rinsed through the top deck and onto the screen box bottom deck dewatering screen. This screen captures and retains a percentage of fine particles. The underflow from the dewatering screen is recirculated through a small cyclonic cluster so as to recover finer material prior to discharge to the dedicated water treatment settlement lagoon. The recovered fines material is deposited on to a separate 15m mobile stockpile conveyor and discharged to the ground.

The two different grades of material, <4mm building sand and >4mm pea gravel, are then transferred to the dust stockpile area located near the open windrow composting facility.

#### 5.4 Water Storage

There are three water storage locations used by the quarrying activities across the quarry and wider site.

As mentioned in Section 5.3 above, the dust washing plant requires a water feed. This plant is fed by a lagoon which is located next to the plant. The dust settles out in the lagoon and the water is recirculated through the dush washing plant.

All of the surface water in the quarry is directed via natural falls to a quarry sump. This collects any surface water generated on the floor of the quarry following rain or the use of water as a dust mitigation technique. The location of this sump changes over time depending on where the quarry face is.

The water that collects in the quarry sump is pumped across to the group of settlement lagoons which is located to the west of the quarry site. These settlement lagoons are regulated by the Environment Agency. The fine material that is in the water in the quarry sump settles out in the lagoons before being discharged into the clean water lagoon for on site use or discharged into the adjacent un-named water course.

#### 5.5 Communications

#### 5.5.1 Operative Training

All operatives responsible for the operation of the quarrying activities will receive full training prior to use. The training will be delivered by the subcontractors operating the site to their employees. At a minimum, this training shall include:

- Operation of equipment;
- Identification of dust emissions;
- Use of dust abatement equipment;
- Environmental permit responsibilities;
- Monitoring responsibilities; and
- Recording keeping.

#### 6.0 POLLUTION AND EMISSION CONTROL

#### 6.1 Maintenance

Effective control of airborne dust emissions requires the maintenance and proper operation of all plant and equipment, including fixed and mobile dust extraction and suppression equipment.

A programme of planned maintenance will be carried out on all plant and equipment in accordance with the manufacturers' recommendations to ensure that it operates at optimum efficiency. Stocks of essential spares and consumable items shall be held at the site or kept readily available for use at short notice.

Any malfunction or breakdown leading to abnormal emissions will be dealt with promptly and operations will be modified or suspended until normal working can be restored. All such malfunctions and the actions taken shall be recorded in the site logbook.

No plant/equipment may be operated unless full instructions and training have been given by a person competent to do so.

Any newly arrived equipment is subject to scrutiny to ensure it meets the standards required by both the company and current legislation.

The site is operated by a subcontractor on behalf of Bryn Aggregates. The subcontractor is responsible for all maintenance activities.

#### 6.2 Potential for Emissions

## 6.2.1 Dust

Dust is generally produced by mechanical action on materials and is carried by moving air when there is sufficient energy in the airstream. More energy is required for dust to become airborne than for it to remain suspended. Dust is removed through gravitational settling (sedimentation), washout (for example during rainfall or by wetting) and by impaction on surfaces (e.g. on vegetative screening). Dust can be re-suspended where conditions allow, such as from bare ground.

Dust emissions from a minerals site, its propagation and potential impacts can be considered in terms of 'source-pathway-receptor' relationships. Dust can arise from a variety of processes and locations within a site and can be difficult to quantify.

Potential sources or site activities likely to give rise to dust at the quarry are as follows:

- Mineral extraction and handling (including transfer and loading of aggregates);
- Mineral processing (including crushing, grading and screening);
- Mobile plant (both on site and off site vehicle movements); and
- Wind scouring of exposed surfaces and stockpiles.

## 6.2.2 Noise and Vibration

Noise and vibration emissions are clearly possible from the site because of the types of activities that are undertaken. These are most likely to occur from the following activities:

- Mineral extraction and handling (including transfer and loading of aggregates);
- Mineral processing (including crushing, grading and screening); and
- Mobile plant (both on site and off site vehicle movements).

## 6.2.3 Release of Solids in Water Discharges

Given the dusty nature of the activities that take place in the quarry, the water collected on site is likely to be heavily laden with dust. The site has a group of settlement lagoons that serve the quarry sump which collects surface water. These lagoons allow the solid material to settle out before the water is discharged. This activity is regulated separately by Natural Resources Wales under environmental permit reference number EPR/CB3391ZY.

## 6.3 Abatement Techniques

#### 6.3.1 Dust

To ensure the reduced dust emissions during blasting is achieved, the rock face is wetted prior to blasting via a water bowser. This water bowser is then left on during the blasting process.

As blasting is infrequent and takes place within the quarry void, it is unlikely to result in significant dust emissions beyond the quarry. However, careful planning is undertaken to control the release of dust such as packing the blast holes with chippings instead of dust.

The Blast Supervisor, contracted by the Site Operators shall determine whether blasting shall be restricted.

Additional dust control measures (such as the use of mist-cannon) will be considered to reduce emissions when blasting.

There is a low risk of airborne dust propagation emissions from mineral extraction by hydraulic excavator but additional control measures such as wetting down with a water bowser will be used if there is a risk of visible dust from the extraction being blown over the site boundary towards the off-site receptors.

All of the mineral processing activities, including crushing, grading and screening, takes place within the quarry site. All mineral processing equipment shall be serviced and maintained as per the manufacture's guidance. All drop heights on machinery shall be minimised and built-in dust suppression methods such as conveyor covers and water sprays will be used as required. The requirement for this is determined by the site operatives.

The greatest risk of dust from mineral workings is often considered to be associated with site traffic and there is a high risk of dust emissions from transport on unpaved roads unless appropriate mitigation measures are applied.

As a general rule, mobile plant with upward or sideways exhausts will be used and all site haulage will keep to designated haul routes.

Vehicles leaving the site shall be sheeted and be checked for loose deposits before joining Gelligaer Road. Any spillages shall be cleared as quickly as possible by appropriate means to prevent unnecessary track-out onto the public highway. A wheel wash station is used to clean vehicle wheels before the vehicles leave site.

A water bowser will be used for dampening down roads around the quarry in dry weather conditions. Unmade access roads will be kept in good repair and vehicle speed limits will be determined by the Site Manager according to the site and weather conditions pertaining at the time.

A powered road sweeper shall be available to ensure that any track-out onto Gelligaer Road is cleared immediately and dust from HGV traffic from the access road is kept to a minimum.

Dust emissions from exposed stockpile surfaces shall be minimised during operating hours by wetting down surfaces with a water bowser as necessary, especially in periods of dry, windy weather. This shall also be undertaken at the end of the working day if conditions are expected to continue to be dry and windy to prevent dust emissions outside of operating hours.

Where practicable, stockpiles shall be managed to maintain a smooth profile to minimise the spreading of loose materials and shall be disturbed as little as possible to encourage the formation and stabilisation of a surface crust via greening.

It may also be necessary to wet down stockpiled materials to reduce the risk of wind-blow from exposed surfaces.

Planted bunds have been constructed around site to further aid the prevention of dust emissions off site.

## 6.3.2 Noise and Vibration

A summary of the practical measures in the choice and use of plant to reduce noise is given below:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Ensure plant and vehicles are properly maintained, check silencers and bearings.
- If the noise is directional, point the source away from noise-sensitive locations.
- Keep internal haul routes well maintained and avoid steep gradients.
- Use rubber linings in, for example, chutes and dumpers to reduce impact noise.
- Minimise drop height of materials.
- Limit the use of particularly noisy plant or vehicles.
- Start up plant and vehicles sequentially rather than together.
- Ensure the plant and vehicles are operated with noise control hoods closed.
- Any reversing beepers should be minimised as far as is reasonably practicable and subject to maintaining site safety. This could involve muting / switching off reversing beepers and using a visual system at night; automatically set beeper volume relative to background noise; and / or manoeuvring vehicles in a circular manner to minimize the need to reverse/use reversing alarms.

Planted bunds have been constructed around site to further aid the prevention of noise emissions off site.

# 6.4 Meteorological Monitoring

Meteorological conditions are recorded on site using the sites dedicated weather station. This provides an up to date record of wind speed, wind direction, rainfall, barometric pressure and temperature with these parameters being noted on a daily schedule.

The purpose of monitoring the meteorological conditions is to provide weather data which could be of immediate use for managing the day to day operational activities although it is generally the dust monitor alarms that are more relevant in scheduling operations to assure prevailing wind conditions will not impact on sensitive receptors.

## 6.5 Training

Plant may not be operated unless full instructions, training and supervision have been given by a person competent to do so. Staff shall be made aware of their responsibilities, through training and reference to this document.

Staff shall be trained on actions to take when there are abnormal conditions or incidents that could result in emissions. This training will be delivered to the relevant operatives.

## 6.5.1 Training Requirements

Training Topic	Competencies required	Required by	Delivered by	Reference Material
Blasting	<ul> <li>Identification of suitable locations for explosives</li> <li>Requirements of water cannon use</li> </ul>	Blast operation team	Blast Supervisor	Bryn Aggregates     Management System
Use of crushing and grading machinery	<ul> <li>Use of machinery</li> <li>Maximum throughput</li> <li>Drop heights</li> <li>Health and safety</li> <li>Use of sprinklers and mist sprayers</li> <li>Emergency shutdown</li> <li>Monitoring sheets</li> </ul>	Site operatives	Subcontractor Site Manager	<ul> <li>Manufacturer instructions</li> <li>Bryn Aggregates Management System</li> <li>Dust Management Plan</li> </ul>
Use of dust washing plant	<ul> <li>Use of machinery</li> <li>Maximum throughput</li> <li>Drop heights</li> <li>Health and safety</li> <li>Emergency shutdown</li> <li>Monitoring sheets</li> </ul>	Site operatives	Subcontractor Site Manager	<ul> <li>Manufacturer instructions</li> <li>Bryn Aggregates Management System</li> <li>Dust Management Plan</li> </ul>
Maintenance	<ul> <li>General housekeeping requirements</li> <li>Correct frequency of maintenance task</li> <li>Use of maintenance records</li> <li>Health and safety</li> </ul>	Site	Maintenance subcontractor	<ul> <li>Manufacturer instructions</li> <li>Equipment maintenance schedule</li> </ul>

Training Topic	Competencies required	Required by	Delivered by	Reference Material
Control of emissions	<ul> <li>Identification of excess emissions</li> <li>Emissions monitoring requirements</li> <li>Feedwater quality for abatement</li> <li>Optimum processing conditions</li> </ul>	Site operatives	Subcontractor Site Manager	<ul> <li>Manufacturer instructions</li> <li>Bryn Aggregates Management System</li> <li>Dust Management Plan</li> <li>Air Quality Impact Assessment</li> </ul>
Accident management	<ul> <li>Environmental pollution accidents</li> <li>Health and safety risk assessments</li> <li>Safe working practices</li> <li>Accident response, reporting and investigation procedures</li> </ul>	Site operatives	Subcontractor Site Manager	<ul> <li>Bryn Aggregates         Management System</li> <li>Bryn Aggregates         Emissions         Management &amp;         Monitoring Plan</li> </ul>

#### 7.0 RECORDS

Bryn Aggregates shall maintain records on site in line with the procedures outlined within the following section.

#### 7.1 Monitoring

The subcontractor operating the quarry site shall undertake monitoring as detailed in *Bryn Aggregates -2 Emissions Management & Monitoring Plan*. Bryn Aggregates shall maintain records of all monitoring required, including records of sampling, instrument, measurements, calibrations, examinations, tests and surveys and any assessments or evaluations made based on such data.

## 7.2 Site Logbook

A Site Logbook shall be maintained and retained on site. It shall record visitors, non-routine activities and other incidents. The Site Logbook should be checked periodically by the Permit Holder to ensure its correct use. The Site Logbook shall be readily available for inspection. Examples of activities recorded in the site diary include:

- Any accidents resulting in injury;
- Any incident of fire;
- Any incident of spillage;
- Any incidents causing pollution to the environment, harm to human health or detriment to the amenities of the locality;
- Any machinery breakdown;
- Incidence of litter, dust, pest, odour and noise problem; and
- Monitoring records.

#### 7.3 Material Records

Records of all materials entering and the leaving the site shall be recorded. All records will be made as soon as reasonably practicable and retained securely for a minimum of two years. Records will be clear, legible and available for viewing (on site).

# 7.4 Training Records

Each person, whose duties affect the process shall be trained, instructed and supervised commensurate with those duties, such that they are competent. Training records for personnel who affect site procedures, operations and quality shall be maintained by the subcontractor operating the quarry activities on behalf of Bryn Aggregates.

## 7.5 Calibration

All monitoring equipment will be regularly calibrated (minimum 12 monthly) by an externally verified company. This calibration will include the weighbridge.

#### 7.6 Complaints

Bryn Aggregates shall decide and implement any necessary action in response to any complaints or concerns expressed by interested parties, including operatives, customers, clients and

regulatory authorities about emissions or other negative externalities relating to quarrying activities.

The operator shall record the following:

- Name and contact details of the person who expressed concern or made a complaint;
- Specific subject(s) of the concern or complaint;
- The source / location of where the complaint comes from;
- Date and time communicated to the producer and name of the person to whom it was communicated;
- Nature and date(s) of any actions and checks and who carried them out;
- Nature and date of any response to the person who expressed a concern or made the complaint; and
- Name of the person who communicated the response.

Records of complaints shall be kept on site and made readily available to the local authority.



01943 468138 www.wrm-ltd.co.uk