EMS

Site Waste Recovery Facility

Appendix 5

Dust & Emission Management Plan

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Document Prepared by	April 2024 Version 1 Revision: 1
Joe Gatley Caldey View Clos Sant Cenydd Llangennith Swansea SA3 1JT **Tel:** 07900 698331 **E-mail:** joe.gatley@gmail.com	**This Plan is approved for use by:** **Arch Utility Services (SW) Ltd** **Name: Damian Tranter** **Position: Managing Director** **Revisions / Comments:** • NRW Request for further information 3rd November 2023 PAN-020881 • NRW Schedule 5 Request for further information 6th March 2023 PAN-020881

Version & Revision No.	Date	Originator	Checker	Company Approver(s)	Description of Changes
Version 1 **Revision 0**	**23/11/2023**	Joe Gatley, for Arch Services Permit Application	Anthony Hope, Commercial Director	Damian Tranter, Managing Director	NRW Request for further information 3rd November 2023 **PAN-020881** and Dust Management Plan
Version 1 **Revision 0**	**02/04/2024**	Joe Gatley, for Arch Services Permit Application	Anthony Hope, Commercial Director	Damian Tranter, Managing Director	NRW **Schedule 5** Request for further information **6th March 2024 PAN-020881** and Dust Management Plan, **Items 15 to 21**

Contents

1 Introduction

This Dust Emission Management Plan (DEMP) has been produced with regards to the Environment Agency & DEFRA Guidance, ''*Control and monitor emissions for your activities that may cause pollution*'', ''*Emissions management plan for dust''*, last updated on the Gov.UK web site on 24 November 2022. Reference to and use of the Dust and Emission Management Plan (DEMP) template, provided by air.quality@environment-agency.gov.uk has also been made within this DEMP.

This DEMP relates to the waste materials (waste code **20.03.03**) street cleaning residues - gulley sucking dredging's to be delivered to the **Arch Services Porth Depot Site Waste Recovery Facility** (the **Site**) for Treatment and Storage, pending off-site Disposal or Recovery elsewhere.

This DEMP accompanies a ***Bespoke Environmental Permit Application*** and sets out the risks, receptors, controls and procedures to minimise the risk of emissions of dust and particulate matter and any potentially adverse impacts to nearby sensitive receptors, from the waste treatment and storage operations to be carried out at the Site.

1.1 Sensitive Receptors

- **The Site is** located within 2 km an ***Air Quality Management Zone***, Rhondda-Cynon-Taff Council AQMZ, declared pollutant ***Nitrogen dioxide NO_2*** which situated ***1.7 km North West of the Site***.

- **The Site is not** located within 2km of any ***SSSI*** site.

- **The Site is not** located ***within 10 meters of a water course*** and has a sealed drainage system.

Wastes to be delivered to the site are non-hazardous ***20 03 03 Street cleaning residues (Gulley Sucking Dredging Waste)*** which is a mixture of rainwaters and solids that is ***treated by settlement and filtration*** to produce a non-hazardous inert solid sludge.

The resulting ***treated dewatered solid sludge*** will then be mechanically removed from the settlement pit and placed within a ***contained and confined and covered storage area,*** for off-site disposal or recovery.

Dust and particulate matter which may be emitted from the Site if operational controls and care are not adequately carried out, ***will consist of silts and coarse sand***, grits, pebbles and stones >10 microns that make up the solid fractions of the sludge that are removed from roadside rainwater drains and gully pots, by the gulley sucking and dredging vehicles. ***Finer particles*** <10 microns ***such as clay*** will remain suspended within the drain waters flowing through the road drains and ***are less likely to be entrained within the wastes*** delivered at the Site.

Any airborne dust and particulates emitted from the solid sludge would be considered as a ***nuisance to human receptors & local residents*** identified in Figures1.a, b, c & d and Table 1.1 .1 below, but do not have the potential to cause significant health impacts.

Only a high degree of smothering at surface levels of greater than 7g/m^2 may cause ***adverse effects on nearby vegetation and sensitive receptors*** which are also identified in the Figures 1.1a, b, c and Table 1.1 below.

Figure 1.1a: Nearby Sensitive Receptors

Key	PAN-020881 Sensitive Receptors
A. The Taff and Rhondda Rivers SINC **B.** The Birch Grove Slopes SINC **C.** Protected species Atlantic Salmon migratory **D.** Surface waters, Afon Rhondda Fach **E.** Ancient Woodlands **F.** Residential Houses **Approximate Distance of Locations from the [Site]:** **A.** 50 metres West **B.** 50 metres East **C.** 50 metres West **D.** 50 metres West **E.** 60 metres East **F.** 100 metres East, and West	

Figure 1.1b Nearby Receptors & Locations

Key:

= The Site Boundary **= 250 Metres Radius from the Site Centre** **= Direction of Predominant Prevailing Winds**

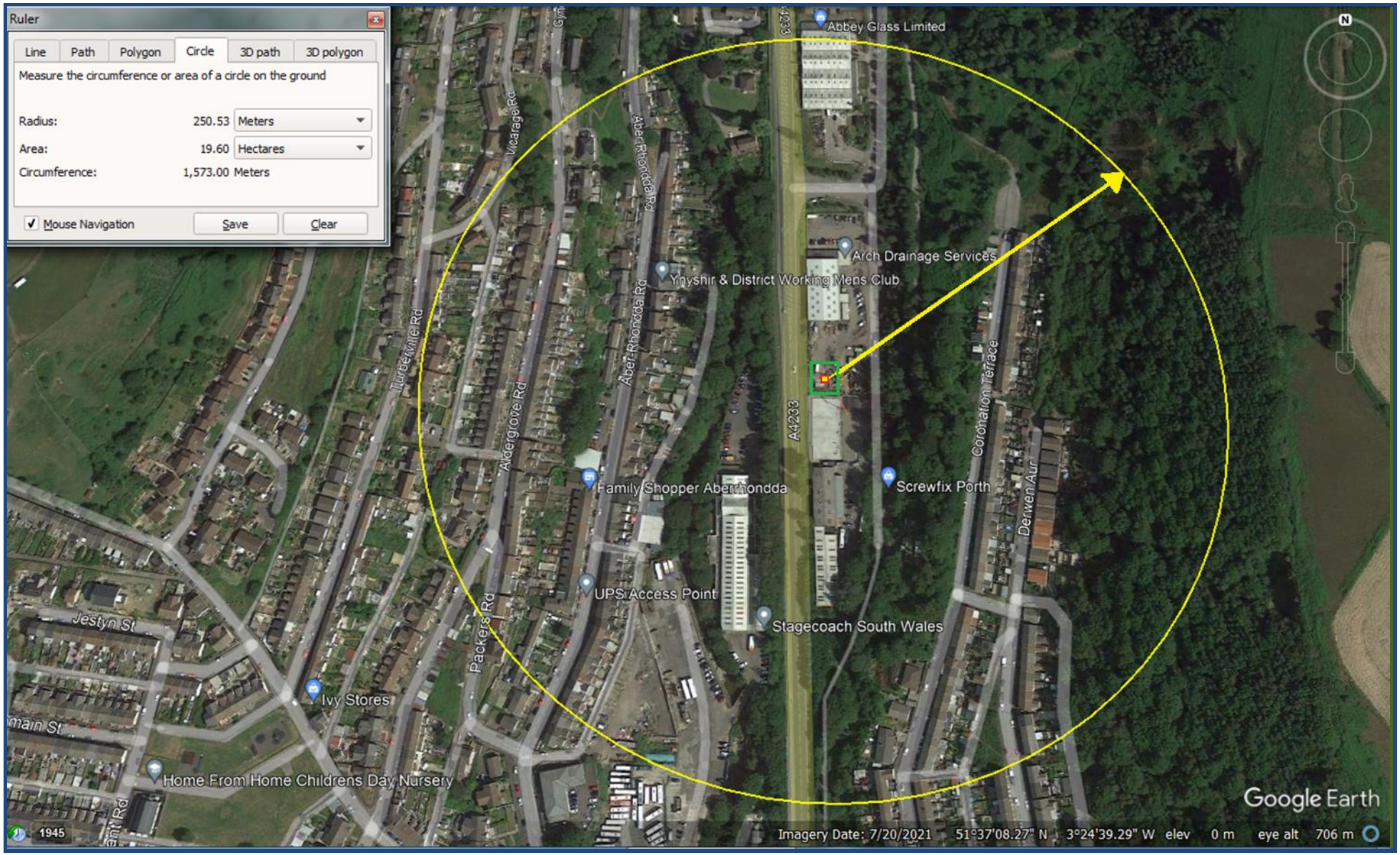


Figure 1.1c Receptors & Locations within ⊙ 1Km of the □ Site

https://magic.defra.gov.uk/MagicMap.aspx

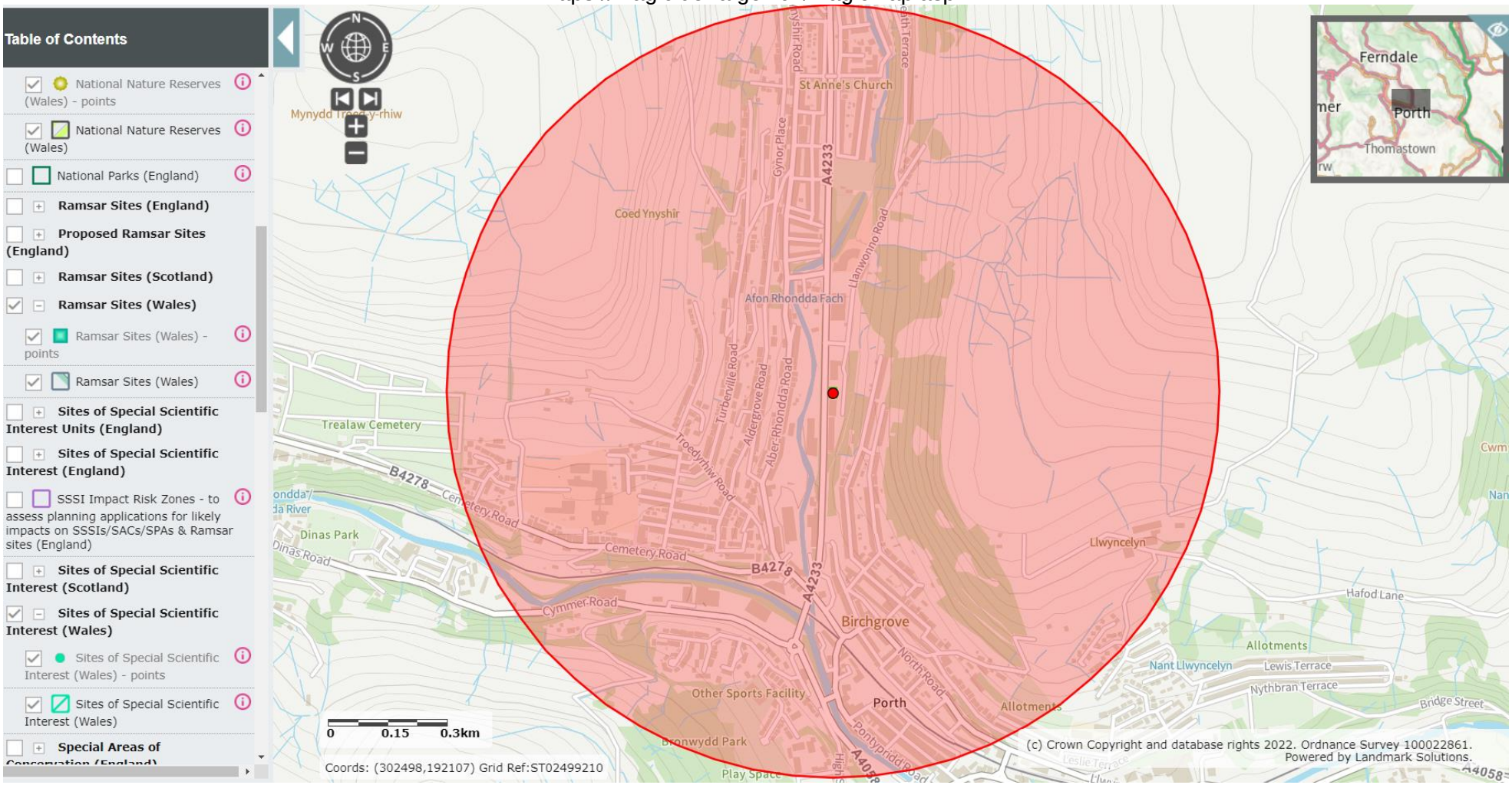
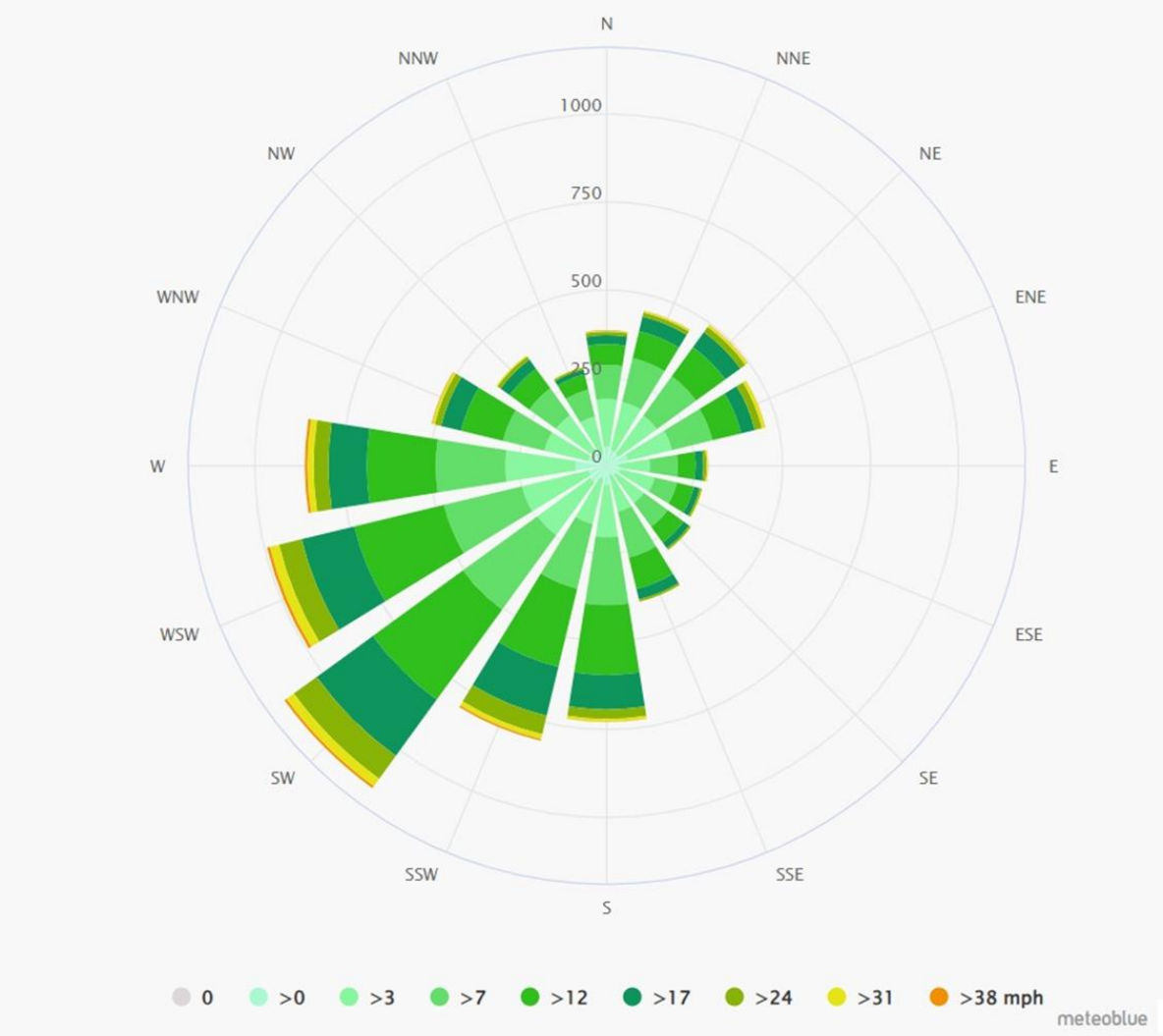


Figure 1.2 Wind rose showing the AVERAGE WIND DIRECTION AND STRENGTH at the Site



The wind rose for Pontypridd shows how many hours per year the wind blows from the indicated direction.

The nearby Town of Pontypridd is located only 5Km South East of the Site

Climate Summary - Rhondda, Cynon, Taf

Located at an elevation of 175.29 meters (575.1 feet) above sea level, Rhondda, Cynon, Taf has a Marine west coast, warm summer climate (Classification: Cfb). The city's yearly temperature is 10.19ºC (50.34ºF) and it is -0.56% lower than United Kingdom's averages. Rhondda, Cynon, Taf typically receives about 99.51 millimetre's (3.92 inches) of precipitation and has 176.55 rainy days (48.37% of the time) annually.

Annual high temperature	12.01ºC (53.62ºF)
Annual low temperature	6.94ºC (44.49ºF)
Average annual precipitation.	99.51mm (3.92in)
Warmest month	July (18.21ºC / 64.78ºF)
Coldest Month	February (2.78ºC / 37.0ºF)
Wettest Month	December (130.74mm / 5.15in)
Driest Month	April (64.0mm / 2.52in)
Number of days with rainfall (≥ 1.0 mm)	176.55 days (48.37%)
Days with no rain	188.45 days (51.63%)
Annual high temperature	12.01ºC (53.62ºF)

Source: https://weatherandclimate.com/united-kingdom/rhondda-cynon-taf#t8

Table 1.1 Distances to further away Sensitive Locations

Other notable Sensitive receptors and Locations to the Site are provided in the table below:

Boundary	Closest property	Distance to the Site boundary (m)
North	Ynyshir County Primary School	310
South	Rheola Hotel, Rheola Rd, Porth CF39 0AD	470
North	Ynyshir Park, Cricket & Football Field	510
South	Ty Porth Care Home	610
South	Porth Community School	650

Table 1.2 Other possible off-site Sources of Dust and/or other Emissions

Possible other sources of dust generators or off-site activities which may give rise to dust emissions are provided in the table below:

Company / Location	Address	Type of Business	Distance and direction from the Site boundary (m)
Adjacent Highway	A423	Heavy Road Traffic	10 West
Stagecoach South Wales	Aber-Rhondda Rd	Transport & Maintenance Depot	75 South West
Abbey Glass Ltd	Unit 3, Ynyshir Industrial Estate,	Manufacture & supply of glass products	150 North

2 Site Operations

2.1 Waste Deliveries to Arch Services Porth Depot (the Site) Waste Recovery Facility

Wastes delivered to the site ***are fully contained within the tanker barrel*** of the Gulley Sucking vehicles, only these types of vehicles will be delivering wastes to the Site.

Waste deliveries to the Site will be via the **A4233** highway into ***Ynyshir Industrial Estate*** and then approximately 150m along the ***adjoining asphalt surfaced Llanwonno Road*** via the second ***Site entrance gate*** on the right into the ***concrete surfaced open yard area*** where the weighbridge, settlement pit treatment systems, storage area for the dewatered sludge and waters will be located and contained. The deliveries are checked by the Site Supervisor and recorded via the electronic weighbridge.

Following satisfactory checks, the gulley pot dredging's are then discharged into an impermeable concrete settlement pit.

Dusts or dusty wastes are not accepted or produced at the site.

Only surface water drain-waters containing solids are accepted, *and the resulting separated and* ***treated waters and wet sludges are stored at the site.***

- There is only one single waste stream & type accepted at the site, and only one single in-line treatment process, that is carried out at the site.

Waste delivered to and processed through the Site treatment systems will be**:**

- Less than 250 tonnes per week, and;
- Less than 50 tonnes per day

Maximum storage capacities at the site will be**:**

- Less than 50 tonnes of dewatered moist sludge, contained within the contained and covered drying bay.
- Less than 20 tonnes of treated water – contained within the Steel Water Storage Tank

Further detailed information is provided in **EMS – Site Waste Recovery Facility, Section 2 Site Operations**.

2.2 Overview of Waste Processing, Dust, and other Emission Controls

Figure 2.1 Site Boundary and Nearby Buildings Plan

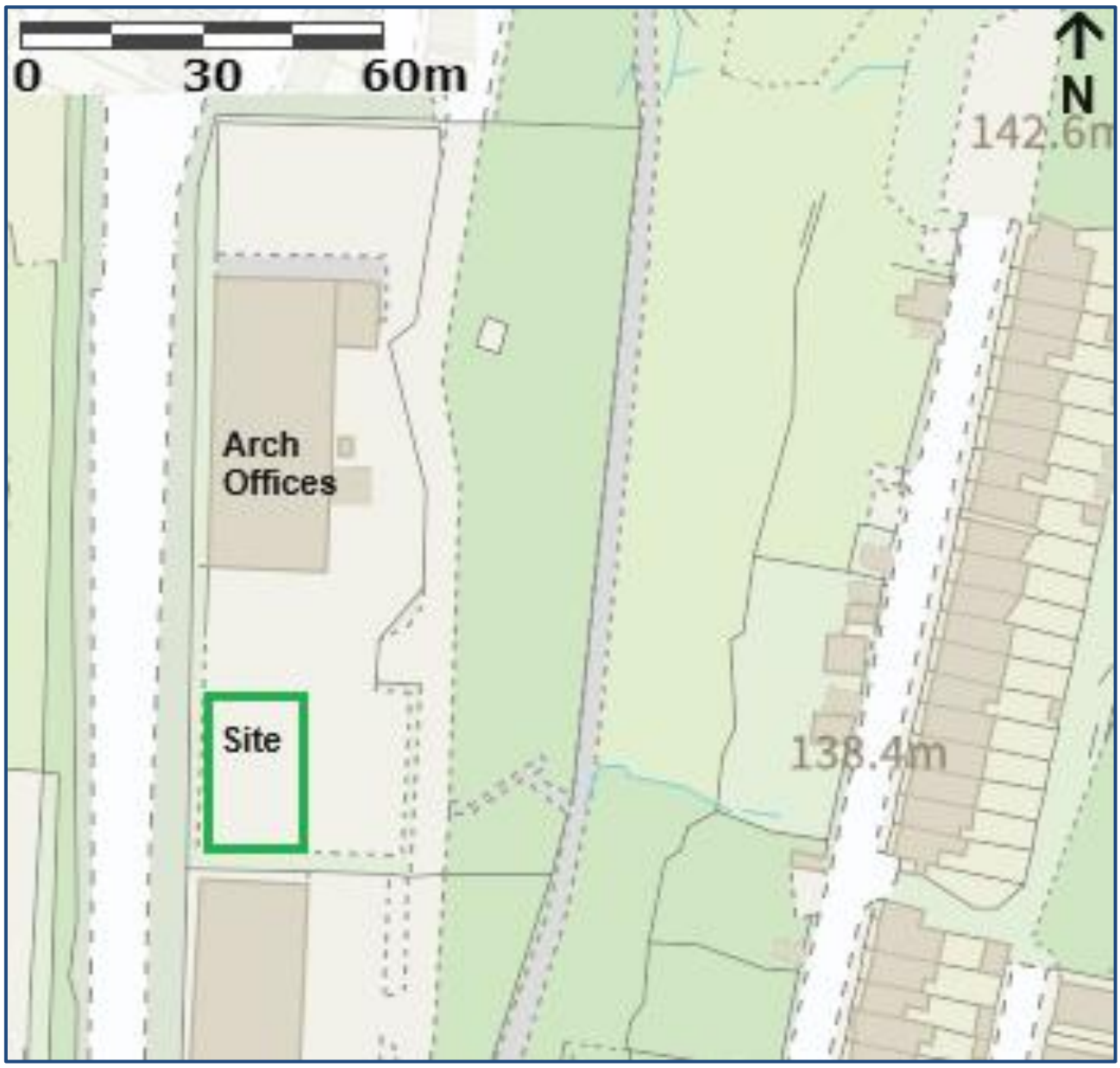


Figure 2.2 Site Layout & Drainage Plan

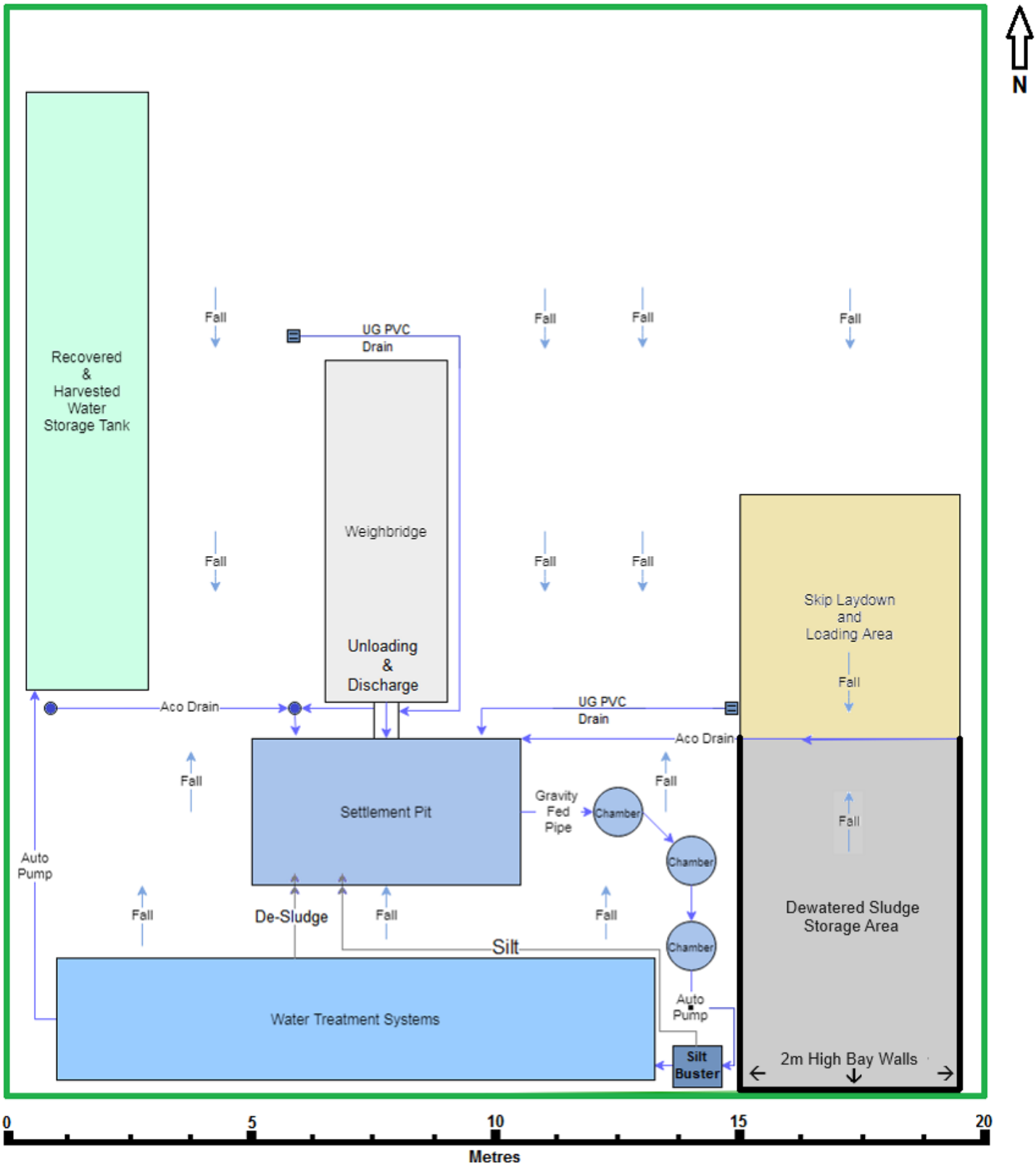


Figure 2.2.1 Numbered Stages Site Activities for Dust Mitigation & Control Measures

A simplified flow chart showing the stages of waste acceptance through to dispatch at the Site is provided in ***Figure 2.3*** along with supporting comments and references to the relevant sections within the **Site Waste Recovery EMS** document is also provided in ***Table 2.3*** below:

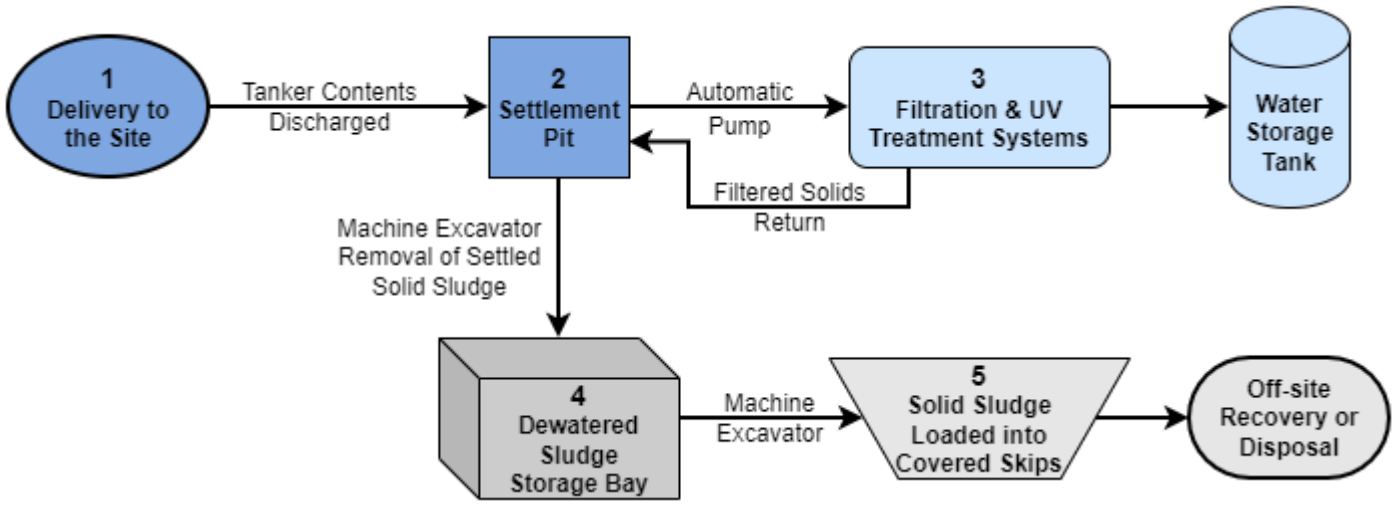


Table 2.2.1 Dust Emission Controls and Measures and Risk Factor

Stage No	Description and References	Dust Mitigation and Control Measures	Risk Factor
1 Delivery of Waste to the Site	Gulley Sucking Vehicles Delivering Waste to the Site **EMS – Site Waste Recovery Facility** **2.2 & 2.3 Waste Pre-acceptance & Acceptance Procedures**	There are 6 or less vehicle deliveries to the Site in any one day. Wet wastes / water with solids entrained are only accepted, dusty wastes are not accepted. The wastes are fully contained within the Tanker Barrel. Operational Site surfaces are paved with concrete and roadways to the Site are hard surfaced asphalt. All site surfaces regularly swept and if necessary, can be washed and cleaned with on-site water storage back into the settlement pit to prevent tracking out of mud and dust that may become windborne.	Insignificant / Very Low
2 Settlement Pit	Gulley dredging wastes are offloaded / discharged into the Settlement Pit by reversing the gulley sucking tanker into the weighbridge & reception area, where the driver opens the tanker valve or the rear hatch of the barrel to release the contents into the chute and settlement Pit below **EMS – Site Waste Recovery Facility**	Wet wastes / water with solids entrained are only discharged into the settlement pit. Wastes are inherently wet, there are no risks of dust being generated or emitted from this activity.	Insignificant / Very Low

Stage No	Description and References	Dust Mitigation and Control Measures	Risk Factor
	2.4.2 Waste Treatment Process 1		
3 Filtration & UV Treatment Systems	**EMS – Site Waste Recovery Facility** **2.4.2 Waste Treatment Process 2, 3, 4 & 5**	All water treatment systems and storage tank are enclosed. Transfers of waters are contained within pipes. Transfers to settlement pit of sludges is contained within pipes and end exit pipe is kept below water level of settlement pit.	Insignificant / Very Low
4 Dewatered Sludge Storage Bay	Regular removal (***Dig Out***) of Settled Solid Silts from the Settlement Pit to the Dewatered Sludge Storage Bay. **EMS – Site Waste Recovery Facility** **2.4.2 Waste Treatment Process 6**	Sludge stockpiles kept less than 1.5 m high (below painted line level height limit) and confined within 2m concrete walled Storage Bay. Sludge covered with sheeting and clamped within storage bay. Operations limited and not carried out under windy conditions, refer to; ➡ **EMS – Site Waste Recovery Facility** **2.5.2 (2) (c) *Site operations are to be limited and controlled*** in accordance with ***T*ables 2.5.2 (a) & (b) *Beaufort Scale*** Duration of dig out activity will be anticipated to be approximately 20 minutes. Storage duration will be kept to approximately 2 weeks or less of each stockpile containing approximately 15 tonnes each. Frequency is 1 a day or less than and 5 a week or less than.	Low
5 Loading of Solid Sludge into Skips for Dispatch	A mini digger is used to load the waste solid sludge into 15 tonne skips stored on the adjacent ***Skip Laydown Area*** concreted pad, for off-site treatment & recovery. **Process 6 Removal and Draining & Drying of Settled Solid Silts**	All site surfaces regularly swept and kept clean to prevent tracking out of mud and dust that may become windborne. Duration of loading activity will be anticipated to be approximately 10 minutes. Frequency is 1 a day or less than. Frequency is 5 a week or less than.	Low

Stage No	Description and References	Dust Mitigation and Control Measures	Risk Factor
Additional Information	There are no generators used on-the Site. All vehicles and plant used in connection with the waste Activities at the Site are Euro 6 compliant.		Insignificant

2.3 Mobile Plant and Equipment

Mobile plant employed at the Site is the Yanmar Mini Digger, SV60-B, which is used for transferring settlement sludges from the settlement pit and for loading skips for dispatch for off-site recovery or disposal elsewhere.

Details of this plant and emission rating is provided below:

CLEAN STAGE V ENGINE

The Yanmar engine meets all EU Stage V emission requirements. This is thanks to cooled exhaust gas recirculation (EGR) which dramatically reduces nitrogen oxide emissions and a diesel particulate filter (DPF) that helps clean up exhaust emissions. We have also developed an exclusive regeneration system to combat clogging and reduce time required for servicing. In addition, the advanced 28.3 kW TNV engine is equipped with direct injection to create clean burning power, plus a common rail system to allow fine-tuned electronic control of fuel injection.

This mini digger is owned by Arch Services and the maintenance schedule is in accordance with the manufacturers recommendations and recorded in-line within Arch Services ISO 14001 Environmental Management System, and will also be recorded within the **Site Waste Recovery EMS** – **Appendix 2.4** & **2.5 Maintenance Schedules** and **Checklist**, as and when the Site becomes permitted..

3 Dust and Particulate Management

3.1 Responsibility for Implementation of this Plan

Mr Damian Tranter, Managing Director, is responsible for implementing the DEMP and making sure it works.

Mr Kevin Sadd, Site Manager, is Mr Tranter's deputy is responsible for making sure the Site Supervisor complies with the DEMP and ensuring site operations do not give rise to dust emissions.

The Site Supervisor overseeing daily site operations will be Technically Competent and will be tasked to ensure that all relevant staff and operators will be briefed on the DEMP and use the controls measures provided within it.

This DEMP is reviewed annually and whenever there is a change to operations or there are remedial measures to be taken, e.g., dusts emissions have been detected or complaints have been received.

Appropriate environmental awareness training and CIWM courses will be programmed for relevant Site staff.

3.2. Sources and Control of Fugitive Dust & Other Emissions

Typical examples of sources that have the potential to produce dust and particulates are provided in the ***table 3.2 a*** below:

Table 3.1.a Examples of Potential Dust Sources

Example of Potential Dust Source	Comments	Relevancy to the Site?
Vehicles entering and/or leaving the site with mud on wheels, and tracking dust on to or off the site.	Gulley Sucking Road Tanker Vehicles only travel over paved / hard road surfaces and are unlikely to track mud into or out of the site.	Yes
Debris falling off lorries which arrive uncovered.	Irrelevant, waste is contained within vehicle tanker barrel.	No
Vehicles and plant moving around the site kicking up dust	Only where spillages have occurred and have not been cleaned up immediately.	Yes
Road vehicles tipping waste	Irrelevant, wet waste contained within vehicle tanker barrel and discharged directly over and into settlement pit.	No
~~Excavators/360s sorting waste~~ Mini Digger moving and transferring settled sludges to Storage Bay	Potential for spillages to occur	Yes
Plant sorting waste – trommel screeners	Irrelevant, no trommel screeners	No
Plant treating waste – shredders, crushers etc	Irrelevant, no shredders, crushers etc.	No
Waste dropping from conveyors into bays	Irrelevant, no conveyors	No
Waste stored in bays – consider wind-whipping on the surface of the waste	Waste is contained and covered within storage bay	Yes
Site surfaces (not just the ground include around plant and equipment)	Operational Site surfaces are paved with concrete	Yes
Loading waste materials back on to vehicles.	Loading of sludge from Storage Bay into Skips	Yes
Particulate emissions from the exhaust of vehicles/plant/machinery on site.	Maximum number of Vehicles = 1 and, Plant operating at the site =1, at any one time.	Yes
Generators, plant and other non-road going mobile machinery	Irrelevant, water treatment systems & pumps are operated by mains electric	No

Table 3.2 b below is used to demonstrate the sources, pathways and receptors from the Site and how these pathways intend to be broken or interrupted.

Table 3.2.b: Source-Pathway-Receptor Routes

Source	Pathway	Receptor(s)	Type of impact	Where relationship can be interrupted
Mud	Tracking dust on wheels and vehicles, then mud dropping off wheels/vehicles when dry	The Birch Grove Slopes SINC Ancient Woodland Nearby Residents and Houses Ynyshir County Primary School Rheola Hotel, Rheola Rd, Porth CF39 0AD Ynyshir Park, Cricket & Football Field Ty Porth Care Home Porth Community School	Visual soiling & smothering of Vegetation, also consequent resuspension as airborne particulates	Site surfaces swept & cleaned, and Vehicles and mini digger washed to remove mud, using on-site dedicated Vehicle Wash Facility located adjacent to the Site Waste Recovery Facility.
Debris	Falling off vehicles			Waste is contained in covered skips on vehicles, before leaving the Site.
Unloading and Loading, Storage and Transfer of wastes in the open	Atmospheric dispersion		Visual soiling & smothering of Vegetation from airborne particulates	Wastes are wet (liquid) and fully contained that are discharged (unloaded) directly into the settlement pit. Storage of wet/moist Settlement Sludge is within a 3 side confined concrete bay, Stock pile(s) are to be kept 0.5 m below the height of the wall and 0.5 m inside the open end. Stock piles are also covered with windproof sheeting and clamped down. Transfer of waste settlement sludge to storage bay and loading into skips for off-site dispatch is not carried out during windy (beaufort scale 4 or above) conditions. Loads leaving the site are contained in covered skips. Wetting of waste, dampening and cleaning of operational areas can also be employed using the on-site water storage tank.
Vehicle and Non road going machinery exhaust emissions			Airborne particulates	Use of modern low emission rated vehicles and plant, regular servicing and maintenance carried out, frequency and duration of operations kept to a minimum i.e., 1 x Vehicle + 1 x Plant x 20 minutes maximum at any one time, typically once per day or less depending on seasonal variations, i.e., fewer operations during dry months.

Table 3.2.c: Measures that will be used on site to control dust/particulates (PM_{10}) and other emissions

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Preventative Measures			
Site speed limit, 'no idling' policy and minimisation of vehicle movements on site	*Procurement policy to only purchase clean burn road vehicles and non-road going mobile machinery.* *Enforcement of a speed limit may reduce re-suspension of particulates by vehicle wheels.*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.3.2 Arrival of Incoming Waste**	A mandatory speed limit of 10mph for vehicles entering, travelling in and out of the Site is enforced. Clearly visible signage is displayed at the site entrance and within the site. Vehicles are to be prevented from idling (engine stopped) during unloading and loading at the site by the site supervisor. Operational Plant (mini digger) to prevented from idling (engine stopped) when not in use by the site supervisor. Only Vehicles and Plant in using and in connection with the site, or requiring access to be allowed within the site. These measures to be used all the time the site is operational.
Good house-keeping	*Having a consistent, regular housekeeping regime that is supported by management, will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up.*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.5 Management and Risk Controls 2.5.1 ► *Site reconnaissance, housekeeping, and checks* ➡ *EMS - Appendix 2.9*** Site reconnaissance to be carried out daily and recorded by the site supervisor. ► ***Appendix 2.1 – Site Management Structure***	These measures to be used all the time the site is operational.
Minimise Drop Heights for Transfer & Loading	*Prevents the escape of debris, dust and particulates during loading operations*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.4.2 Waste Treatment, Process 6**	These measures to be used all the time the site is operational.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
Sheeting of vehicles	*Prevents the escape of debris, dust and particulates from vehicles as they travel.*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.4.2 Waste Treatment, Process 6**	These measures to be used all the time the site is operational.
Hosing / Jet Washing of vehicles on exit	*May remove some dirt, dust and particulates from the lower parts of vehicles although likely to be less effective than a more powerful wheel wash.*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.5 Management and Risk Controls 2.5.1 ► *Site reconnaissance, housekeeping, and checks* ➡ *EMS - Appendix 2.9***	This will be carried out as necessary and whenever vehicles are dirty and are capable of spreading and tracking dirt onto or from the site. Regular scheduled washing and cleaning of vehicles and plant are carried out at least weekly by using the on-site ***Vehicle Wash Facility***.
Ceasing Dig Out and Transfer operations during high winds and/or prevailing wind direction	*Mobilisation of dust and particulates is likely to be greater during periods of strong winds and hence ceasing operation at these times may reduce peak pollution events.*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.5.2 Fugitive Emissions (2) Measures to prevent emissions to air** **Wind Speeds** at the Site can be monitored by using Real Time Location Data at **https://www.windy.com/** or; a **Weather Station** installed **at the Site**.	These measures to be used all the time the site is operational.
Easy to clean concrete impermeable surfaces	*Creating an easy to clean impermeable surface,*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 1.5.6 Monitoring of uncontrolled emissions ► *Appendix 2.9 – Site inspection Checklist***.	These measures to be used all the time the site is operational.
On-site sweeping and cleaning combined with a water hose	*Wetting of site areas using hoses can reduce dust and particulate re-suspension and may assist in the cleaning of the site if combined with sweeping.*	Identified clearly in the: **EMS - Site Waste Recovery Facility, 2.5 Management and Risk Controls 2.5.1 ► *Site reconnaissance, housekeeping, and checks* ➡ *EMS - Appendix 2.9***	These measures to be used all the time the site is operational.

3.2.1 Additional Measures that will be used on site to control dust/particulates emissions

Site operations are to be limited and controlled in accordance with ***Tables 3.2.1 (a) & (b)*** provided below:

The following ***Beaufort Scale*** in ***Table 3.2.1 (a)*** below provides wind speeds and descriptions and the corresponding;
Table 3.2.1 (b) provides ***Key coloured action levels*** *for on-site operations to prevent fugitive dust emissions occurring*.

Table 3.2.1 *(a)* BEAUFORT SCALE: Specifications and equivalent speeds for use on land

FORCE	EQUIVALENT SPEED 10 m above ground		DESCRIPTION	SPECIFICATIONS FOR USE ON LAND
	miles/hour	knots		
0	0-1	0-1	Calm	Calm; smoke rises vertical
1	1-3	1-3	Light air	Direction of wind shown by smoke drift, but not by wind vanes.
2	4-7	4-6	Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.
3	8-12	7-10	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag.
4	**13-18**	**11-16**	**Moderate Breeze**	**Raises dust and loose paper; small branches are moved.**
5	19-24	17-21	**Fresh Breeze**	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	25-31	22-27	Strong Breeze	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.
7	32-38	28-33	Near Gale	Whole trees in motion; inconvenience felt when walking against the wind.
8	39-46	34-40	Gale	Breaks twigs off trees; generally impedes progress.
9	47-54	41-47	**Severe Gale**	Slight structural damage occurs(chimney-pots and slates removed).
10	55-63	48-55	Storm	Seldom experienced inland; trees uprooted; considerable structural damage occurs.
11	64-72	56-63	Violent Storm	Very rarely experienced; accompanied by wide-spread damage.
12	73-83	64-71	Hurricane	

On-site Operations Restricted to Action Levels

Table 3.2.1 *(b)* Key coloured action levels

Operations continue under normal conditions
Loading of dewatered silts for off-site dispatch **are not to be carried out**
Stockpiles in bays to be kept moist and covered (sheeted) to prevent prolonged wind erosion
Site operations cease and are to be **carried out under emergency maintenance situations only** where safe and if necessary

Wind Speeds at the Site can be monitored by using Real Time Location Data at **https://www.windy.com/** or; a **Weather Station** installed **at the Site**

3.2.2 Other considerations

- **Water usage/ availability**

  The Site has a 20m^3 on-site water storage tank, and also has access to mains water supplied from the nearby maintenance building and Vehicle Wash Facility

- **In the event of a drought**

  In the event of a drought all site operations are likely to cease as the unblocking and cleaning of surface water road drains will not be required.

  Therefore, off-site waste generation will stop and the site will cease accepting treating and storing waste until drought conditions cease and sufficient rainfall begins to require off-site road drain gulley pots needing maintenance.

3.3 Enclosed and Open Yard areas of the Site

The only enclosed areas of the site are

- **Storage Bay** for Dewatered Settlement Sludge, which consists of:

  Three concrete retaining walls 2m high with a concrete base, measuring 4.5m wide x 7m long and covered with a wind resistant sheet clamped on top of the waste sludge.

- **Water treatment Filtration and UV System** ,which is:

  Housed within a Steel Container measuring 12.2m long x 3m width x 2.5m high.

- **Water Storage Tank** ,which is:

  A Steel Container measuring 12.2m long x 3m width x 2.5m high.

- **Enclosed 8 cu/yd Skip** for unsuitable debris

  All other operational areas of the Site are open

  Please refer to previous **Section 2 Figure 2.2 Site Layout & Drainage Plan** for their locations on the Site

3.4 Visual Dust Monitoring

Visual inspections for dust emissions will be undertaken at least once on each working day and during transfer and loading operations at the Site by the site supervisor as part of the ***Site reconnaissance checks*** and will be recorded using the **EMS** - **Site Waste Recovery Facility** ► ***Appendix 2.9 – Site inspection Checklist.***

Observations during on-site ***Site reconnaissance checks*** will also include ***external areas of the site***:

- **Along Llanwonno Rd**, adjacent to the East of the Site and along the road North and South of the Site.

- **From the Western Perimeter of the Site** adjacent to the A4233 looking North, South and West.

3.4.1 **The highest dust risk activities** carried out at the site to cause any dust generation from the Site are when, and if, ***procedures and control measures have not been carried out***:

- **Spillages from transfer and loading of settlement sludge** to the Storage Bay and Loading of Skips, ***where these spillages of sludge have not been cleaned up and have dried***, thus, being able to desiccate and become friable and subject to wind erosion and generation of air borne dust in dry and windy conditions.

- **Storage of settlement sludge** where they ***have not been adequately uncovered and/ or adequately uncontained or storage is above the stock pile height (less than 0.5m) below the retaining walls***, thus also, being able to desiccate and become friable and subject to wind erosion and generation of air borne dust in dry and windy conditions.

3.4.2 **If there are any dust emissions noted** from the site noted during the daily routine inspection, or if dust complaints are received the Site Manager is informed, ***then further actions are taken:***

- **To remedy the situation** and ensure the dust risk control procedures are put in place.

- **Record the observations and actions** additionally by using the **Dust Monitoring Report** in **Appendix A** of this DEMP.

- Record the Complaint using the **Dust Complaint Record Form** in **Appendix B** of this DEMP.

- **Review the DEMP and Site Operations** to consider if any additional changes or control measures are required.

3.4.3 **Out of hours provisions are provided by** an ***on-site residential night watchperson*** who is employed to carryout site reconnaissance and security checks outside operational hours.

- **If dust is detected**, the night watch person will ***contact the Site Manager, who will arrange to remediate the situation***.

3.4.4 **If a Complaint is received** the Site Manager, will arrange to remediate the situation and ***implement the Escalation Procedures*** in 3.4.4 below:.

Escalation Procedures If 2 or more **repeated dust emissions and complaints occur,** then the following **actions will be implemented**:

- **Continual visual dust monitoring** will be carried out by the Site Supervisor during operational hours to identify the source(s) of dust generation, the findings and actions will be recorded using the **Dust Monitoring Report** in **Appendix A** of this DEMP.

- **On Identification** of the source(s) of dust generation, ***the waste activity(s) will cease until the necessary dust control measures or operations have been rectified*** to eliminated any further dust emissions being generated from the Site.

- **Further Complaints Received** 3 or more **repeated dust emissions and complaints occur, then the Site will cease accepting wastes and suspend all waste activities and operations and will Arrange for Specialists** to carry out additional Dust Monitoring at the Site along with their findings, conclusions and remedial recommendations in their prepared final report.

- **Recommencement of Site Operations** will only take place after the reported necessary remedial dust controls and mitigation measures and / or works have been carried out and have been updated and incorporated into this DEMP.

4 Site Risk Rating for Dust Monitoring

4.1 Risk and Screening Summary for Dust Emission Monitoring

This Risk and Screening Assessment summary uses the Guidelines from ***The Institute of Air Quality Management (IAQM)*** on air quality monitoring in the vicinity of demolition and construction sites, which sets up-to-date monitoring protocols and techniques (IAQM (2018) Guidance on Monitoring in the Vicinity of Demolition and Construction Sites v1.1).

*The approach to monitoring is based on the risk rating for the demolition / construction site, derived from an assessment of construction dust emissions as described in the **IAQM** (2014) Guidance on the assessment of dust from demolition and construction v1.1*

The ***IAQM*** guidance used as a ***close match or best available methodology*** for the ***Site Waste Recovery Facility*** and its operations, with regards to possible dust emissions from the Site, and within this section of this DEMP, as provided below:

STEP 1 ➞ Screen the need for a Detailed Assessment: this has already been pre-determined and made with the compilation of and within the sections of this Dust Emissions Management Plan (DEMP), in accordance with the Environment Agency Guidance and Template.

4.2 STEP 2A ➞ Define the Potential Dust Emission Magnitude

The dust emission magnitude is based on the scale of the anticipated works and should be classified as ***Small, Medium, or Large***.

The following are examples of how the potential dust emission magnitude for different activities can be defined. Note that, in each case, not all the criteria need to be met, and that other criteria may be used if justified in the assessment:

4.2.1 Earthworks:

Earthworks will primarily involve excavating material, haulage, tipping and stockpiling. This may also involve levelling the site and landscaping.

Example definitions for earthworks are provided in **Table 4.2.1** below:

Size	Criteria	Close Match?
Large	Total site area >10,000m2, potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), >10 heavy earthmoving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes	No
Medium	Total site area 2,500 m2 – 10,000 m2, moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 4 m - 8 m in height, total material moved 20,000 tonnes – 100,000 tonnes	No
Small	Total site area <2 ,500 m2, soil type with large grain size (e.g. sand), <5 heavy earthmoving vehicles active at any one time, formation of bunds <4 m in height, total material moved <20,000 tonnes, earthworks during wetter months	**Yes**

4.2.2 Trackout:

Factors which determine the dust emission magnitude are vehicle size, vehicle speed, vehicle numbers, geology and duration. As with all other potential sources, professional judgement must be applied when classifying trackout into one of the dust emission magnitude categories.

Example definitions for trackout are provided in **Table 4.2.2** below:

Size	Criteria	Close Match?
Large	>50 HDV (>3.5t) outwardmovements16 in any one day17,potentially dusty surface material (e.g. high clay content), unpaved road length >100 m	No
Medium	10-50 HDV (>3.5t) outward movements16 in any one day17, moderately dusty surface material (e.g. high clay content), unpaved road length 50 m – 100 m	No
Small	<10 HDV (>3.5t) outward movements[16] in any one day[17], surface material with low potential for dust release, unpaved road length <50 m, unpaved road <50m	**Yes**

These numbers are for vehicles that leave the site after moving over unpaved ground, where they will accumulate mud and dirt that can be tracked out onto the public highway.

4.2.3 Dust Emission Magnitude

From the assessment criteria used in **Table 4.2.1** and **Table 4.2.2** above it can be concluded that the dust emission magnitude for the **Site Waste Recovery Facility** is **Small** and that ***the Site*** can be considered as a ***low risk*** category site.

4.3 Air Quality Monitoring and Risk Assessment

IAQM Guidance on Monitoring in the Vicinity of Demolition and Construction Sites, V1.1 2018, Section 4.15, provides the following comments:

For negligible and low risk category sites*, it should not normally be necessary to undertake any quantitative air quality monitoring, although in some circumstances it may be applicable to undertake occasional surveys (e.g. for TSP or for PM 10 concentrations) using hand-held monitors during the Qualitative Monitoring Surveys as a means of demonstrating the efficacy of site controls. An example of the need for occasional surveys would be if a site has a low risk status but a lengthy demolition or "high risk" phase; in this instance monitoring would be warranted for the high risk phase but not for the duration of the project.*

Quantitative Air quality Monitoring for the Site is therefore not proposed at this stage unless conditions or the current site operations change, controls, procedures and monitoring and reviews indicate further monitoring & procedures are required.

5. This section intentionally left blank

6. Reporting and Complaints Response

6.1 Engagement with the Community

Arch Utility Services will engage with the local residential and business community by establishing trust, and the company as a good neighbour, by ***finding ways to connect*** with them, such as:

- Letting community members know how to contact and engage with the company
- Using social media as a relationship-building tool
- Getting involved in causes or community events

Site Staff that are living within the community will be encouraged to attend and interact with people at local social and business community meetings and events.

6.2 Reporting of Complaints

Any complaints made about operations on the site must be made by telephoning the **Site** on **0800 707 6771**, **Natural Resources Wales** hotline **0300 065 3000** or in writing or by using the Dust Complaints form in **Appendix B**.

A ***Site Identification Board*** will be erected at the Site Entrance and will be made clearly visible for anyone wishing to contact the company or Natural Resources Wales using the Information provided on it.

If a complaint is received and registered, then the Site Manager will carry out investigations to identify the source of dust.

Complaints received will be will be responded to without delay (not longer than 2 working days) and further communication and post investigation feedback will be provided to the complainant within 5 working days of receipt.

Where Complaints are justified, and as necessary, a review of this DEMP, Site procedures and Site Operations will be updated, and where appropriate, staff will receive additional training or retraining.

Complaints will be investigated by the operator to find the cause of the complaint using information from the site investigation and site reconnaissance checks to determine the cause. As necessary, operational procedures will be updated, and staff will receive refresher training on procedures.

Complaints received by the site directly will also be notified to **Natural Resources Wales** by either using the telephone or ***WEB Site***, **Report an incident**: https://www.smartsurvey.co.uk/s/NU2VYV/, and in accordance with any requirements for ***notifications and reporting of complaints*** within the ***Environmental Permit*** for the Site.

A copy of the complaint, investigation(s) and response(s) will be recorded and kept at the Site Offices, and be made available to the **Natural Resources Wales** for review and inspection on request.

6.3 Management Responsibilities

The Site Manager will initially handle complaints by liaising with and directing the Site Supervisor to carry out the appropriate investigations and procedures.

The Site Manager will also report the complaint to the Managing Director who will then liaise with and oversee the actions carried out by the Site staff involved.

Findings of the investigations and any actions required from the Site investigations and causes of the complaint will be reviewed by the Site Manager and referred to the Managing Director for approval.

6.4 Summary

This Dust Emissions Management Plan (DEMP) identifies and assess the possible risks of Dust Emissions that may arise from the Site and prevent them from occurring and adversely affecting the locality.

The objectives of this DEMP are to implement effective control measures and procedures to prevent any adverse dust emissions being generated from the site and to monitor and record the

effectiveness of this DEMP and its application to the Site operations and controls, through monitoring, reporting and recording and review.

This DEMP is reviewed annually and whenever there is a change to guidance, operations or there are remedial measures to be taken, e.g., dusts emissions have been detected or complaints have been received.

A record of reviews and updates to this DEMP will be made, denoting the version number, date and approvals as provided on **Page 2** of this DEMP.

End of Main Document.

Appendix A – Dust Monitoring Report,

and;

Appendix B – Dust Complaint Form

Overleaf ⮯

Appendix A

DUST MONITORING REPORT

Date Monitoring carried out:	

Time Monitoring carried out:	

Location:	Unit 2 Llanwonno Road, Ynyshir Ind Est. CF39 0HU

Description of site & use:	

Description of Activity	Location 1	Location 2	Location 3
Any activities in progress			
Weather conditions (Dry, Rain, Fog)			
Temperature (Very Cold, Cold, Mild, Warm, Hot or degrees if known			
Wind Strength (None, Light, Steady, Strong, Gusting)			
Wind direction (e.g. from NE)			
Is dust present in the air?			
Dust reading			
Any Actions required			
Any other comments or observations			

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Appendix B – Dust Complaint Form

Dust Complaint Record Form			
Name of Complainant:		**Complaint Reference No.:**	
Address: **Post Code:**			
Phone No.: **E-mail:**			
Date of Complaint:		**Time of Complaint:**	

Investigation Details	
Investigation carried out by:	
Position:	
Date & time investigation carried out:	
Weather conditions:	
Wind direction and speed:	
Investigation findings:	
Feedback given to Environment Agency and/or local authority:	
Date feedback given:	
Feedback given to public;	
Date feedback given:	

Review and Improve	
Improvements needed to prevent a reoccurrence:	
Proposed date for completion of the improvements:	
Actual date for completion:	
If different insert reason for delay:	
Does the dust management plan need to be updated:	
Date that the dust management plan was updated:	

Closure	
Site manager review date:	
Site manager signature to confirm no further action required:	