Groundscape
Environmental Ltd

Dust & Emissions Management Plan

G G & R M Carlyon
(Trading as G A Carlyon Haulage & Plant Hire)
The Fieldings, Fore St, Truro TR4 8DR

Permit Application Ref: EPR/QP3629LV/P001

Issue and Revision Record

Revision	Date	Originator	Checker	Company Approver	Description of Changes
Draft for Approval	12th April 2025	AL	RF	GAC	N/A
Draft for Approval 2nd Issue	28th Oct 2025	AL	RF	GAC	Receptors updated. Public RoW added.

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1. Introduction

1.1 Site Location and Context

The G A Carlyon site is located on Manor Parsley, Mount Hawke, Truro, TR4 8DH. The Ordnance Survey grid reference for the centre of the site is SW 70681 72695. The Company is seeking an Environmental Permit for their operation in order to be compliant with environmental permitting regulations.

The location of the site is shown in Figure 1.1 overleaf.

G A Carlyon are a small independent family run Company which has been trading for over 70 years with excellent relations with local residents and business alike.

Their site at Manor Parsley is situated in a secluded rural area with a small number of nearby residential properties. Access to the site is good with main feed road recently upgraded by the local authority.

G A Carlyon are well known in the local market for plant hire, haulage and contracting and have established regular customer base supplying these services to both professional contractors (General builders, specialist contractors, and the domestic market.

The land has an established use by G A Carlyon for storage of plant, equipment and storage of building materials. To date the site has been used in a low-key operation, but G A Carlyon are aware to operate the site in a compliant manor they need to obtain an Environmental Permit with associated controls in place.

The area of the site has a long history of mining and quarrying, with several disused vent shafts on the site. The Wheal Ellen copper mine (500m NW) and associated engine house are close by, once producing copper, lead and zinc in the early to mid 1800's.

The site currently accepts waste from the companies own groundworks and general contracting operation; principally inert soils, demolition hardcore and concrete.

Figure 1.1: The general location of G A Carlyon in relation to surrounding landmarks and usage.

1.2 Purpose & Objectives of This DEMP

This dust and emissions management plan has been created to ensure that potential dust emissions from the G A Carlyon site are assessed, appropriately managed and mitigated through effective control measures.

The definition and the main aims of this dust management plan are to provide:

- A live working document that describes and formalises how dust issues will be managed on site.
- Clarity in how dust and odours will be managed and controlled so as to prevent or minimise impacts. As well as covering normal operations, it anticipates and plans for abnormal events and foreseeable incidents;
- Clear mitigation/control measures; and
- Straight forward plans and processes that can be easily actioned by the TCM and site operatives.

Once released into the atmosphere, dust has the potential to be transported through the air to nearby receptors. Sensitive receptors include people living within close proximity of the proposed site, there can also be potential amenity affects for local businesses.

The document has been compiled to give both regulatory authorities and site operator a clear understanding as to the responsibilities and the procedures within the DEMP and the practical implementation and maintenance of the dust management systems for the site.

This report presents the approach and findings of the assessment of the operations on site which may produce dust emissions. This assessment sets out the methodology followed and presents the measures to be followed to mitigate emissions from the site in certain circumstances. The management system has been revised several times over the past five years taking into account the necessity to upgrade both equipment and procedures to account for the re-engineering of the site and the expansion of the production process.

1.3 Sensitive Receptors

The G A Carlyon site is located in a relatively remote location with a small number of residential properties in the immediate vicinity, with a few business premises nearby.

The principal receptors which may be impacted by dust emissions from the site are identified in table 1.1 and on the map overleaf.

The receptors identified in Tables 1.1 are marked on Figure 1.2 with an inlay wind rose to give an indication of majority prevailing wind direction. Details of the wind rose source data is provided at 1.3.1, with the wind rose also shown in more detail.

The majority prevailing wind to the G A Carlyon site is West Southwest, and consequently those receptors to the Northeast have potential to be most impacted in the event of airborn

dust from the site. The nearest receptors are domestic and small business premises, with SSSI, and Habitat areas shown in Figures 1.3.1 to 1.3.3.

The site is not within an Air Quality Management Area or AQMA zone.

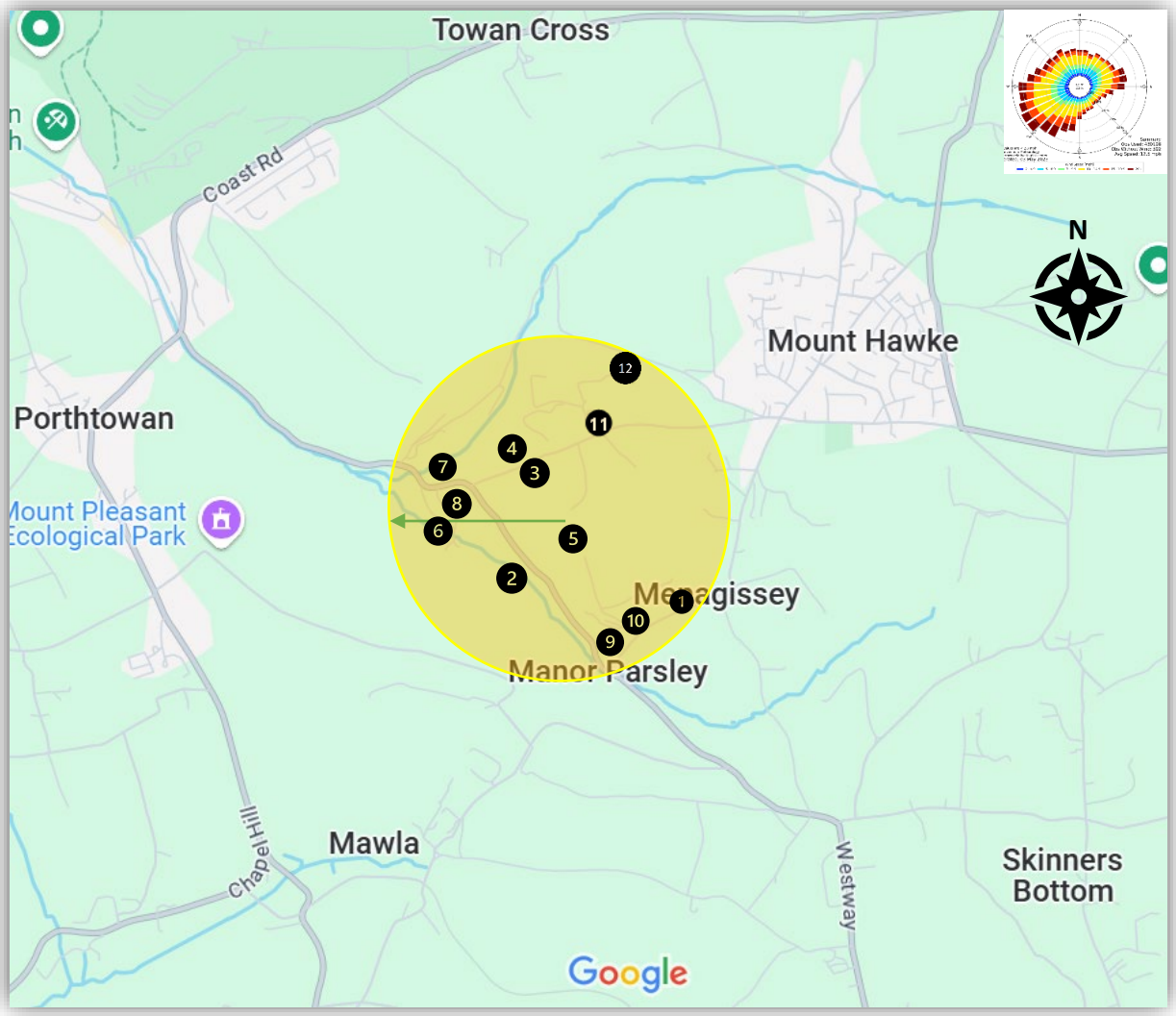
Table 1.1: Sensitive/Amenity Receptors
(All distances are measured from the nearest site boundary)

Receptor ID	Name	Type of receptor	Distance from site (m)	Direction from site
1	Menagissey	Various Domestic	450m	Southeast
2	Gems	Domestic	188m	Southwest
3	Carlyon Funeral Directions	Domestic/ Business	83m	North
4	Hilldale	Domestic	160m	Northwest
5	Saint Agnes	Domestic/Farm	40m	South
6	Old Basset Cottage	Domestic/Business	325m	West
7	The Hyde	Domestic/Business	347m	Northwest
8	Little Music Cottage	Domestic/Business	250m	West
9	Unidentifiable Farm	Domestic/Farm	400m	South
10	Beaulieu & Lambourne Cottage	Domestic	350m	Southeast
11	Unidentifiable	Domestic/Farm	185m	Northeast
12	Mount Hawke Holiday Bungalows	Holiday Business	460m	Northeast
See DEMP Figure 1.3.2	Deciduous Woodland	Primary Habitat	100m 360m 320m 510m	Southwest South North East
See DEMP Figure 1.3.1	Godrevey Head to St Agnes (SSSI)	SSSI	410m	Northwest
See DEMP Figure 1.3.1	Carrick Heaths (SSSI)	SSSI	610m	South
See DEMP Figure 1.3.3	Right of Way/Footpath	Public RoW	260m	Northwest
See DEMP Figure 1.3.3	Bridle Path	Public RoW	390m	Northwest

The following nature and heritage conservation sites, protected species and habitats, and other features have been checked through Environment Agency pre-application screening but have not been found within the 500m screening distance of the site.

Special Areas of Conservation (cSAC or SAC), Special Protection Area (pSPA or SPA), Marine Conservation Zone (MCZ), Ramsar, Sites of Special Scientific Interest (SSSI), Air quality Management area (AQMA), National Nature Reserve (NNR), Local Nature Reserve (LNR), Local Wildlife Sites (LWS), Ancient Woodland, Watercourse, Groundwater Source Protection Zone 1/2/3, Flood Risk Zone 2/3, Scheduled Monuments, relevant species and habitats.

Figure 1.2: Receptors numbered 1 to 7 (Ref Table 1.1) on a 500m Radius Centred on The G A Carlyon Site



1.3.1 Wind Rose Data

To aid the interpretation of receptor and land classification information in the next few pages, a small wind rose is inserted into the maps provided. Wind data used is for Culdrose which is located some 20km to the Southwest of the G A Carlyon site. This provides the nearest available historic wind rose data The historic wind data used is for the period Jan 2001 to Jan 2021, measured at 10m above ground level.

Wind rose data at Figure 1.3 is displayed in both km/h and m/s, on the left and right respectively. The overlaid wind rose used in some of the map data is in km/h.

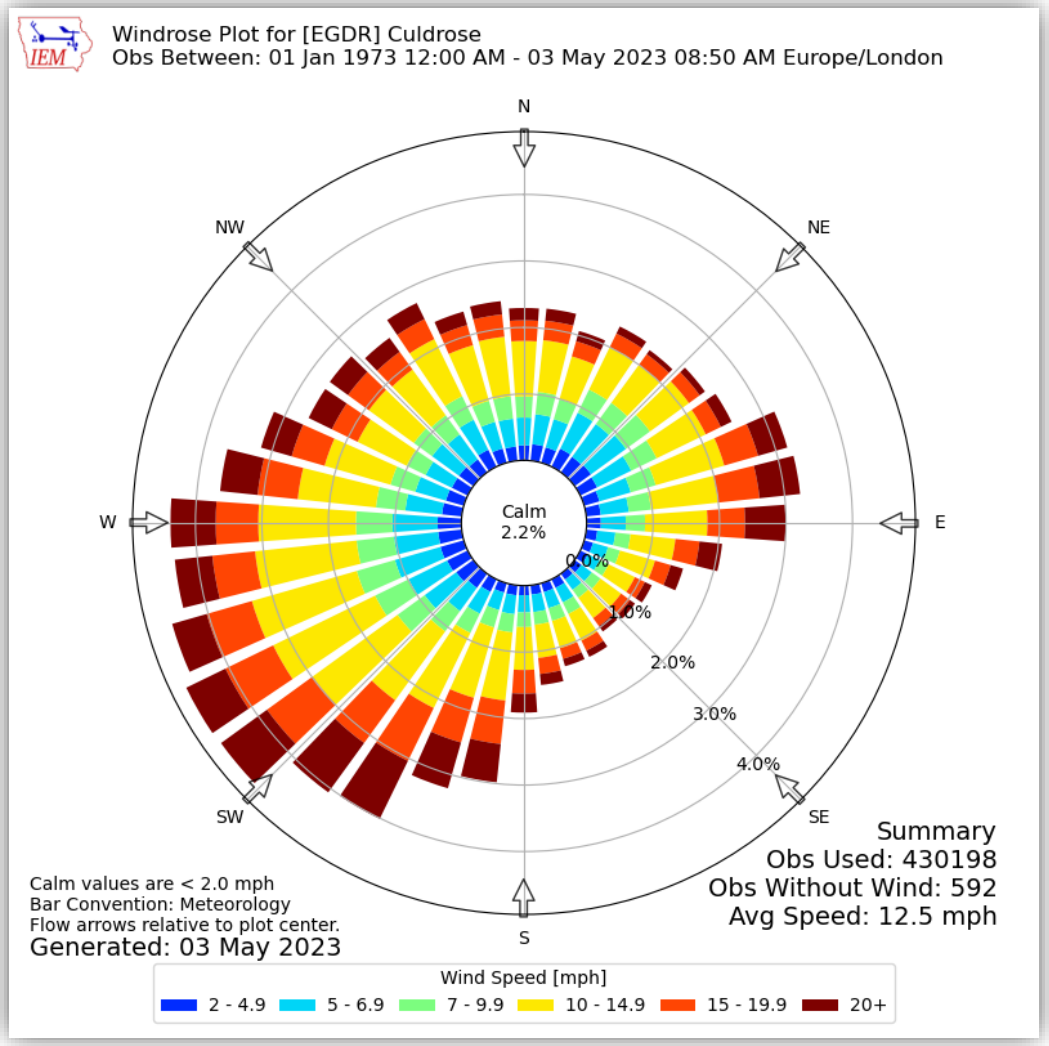
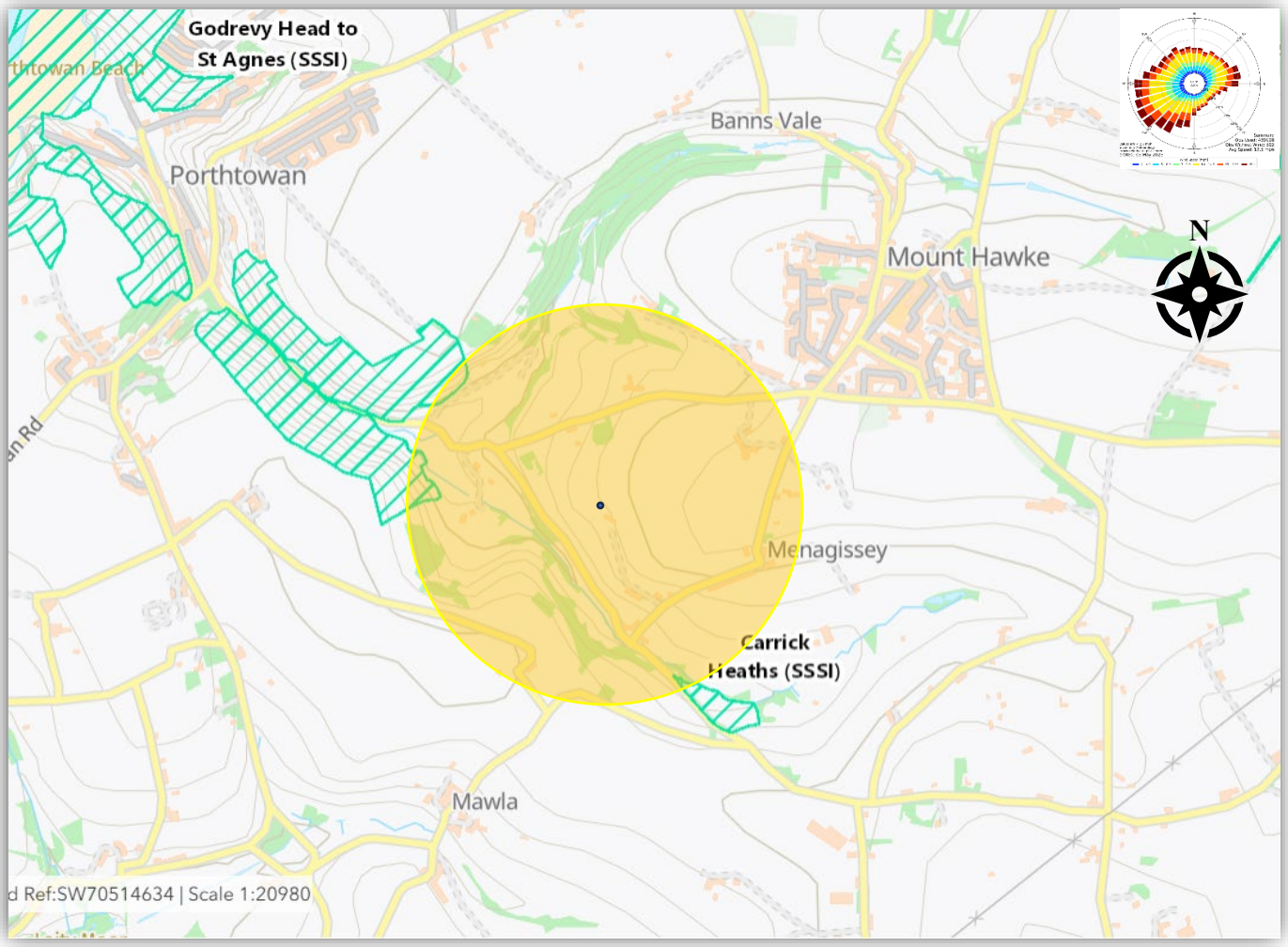


Figure 1.3: Wind rose showing the wind direction and strength at Culdrose (20km SSW of the G A Carlyon site)

1.3.2 Sites of Special Scientific Interest (SSSI) and Protected Habitat

SSSI areas are shown below hatched in green.
There are no RAMSAR sites within the 1km dia area shown.

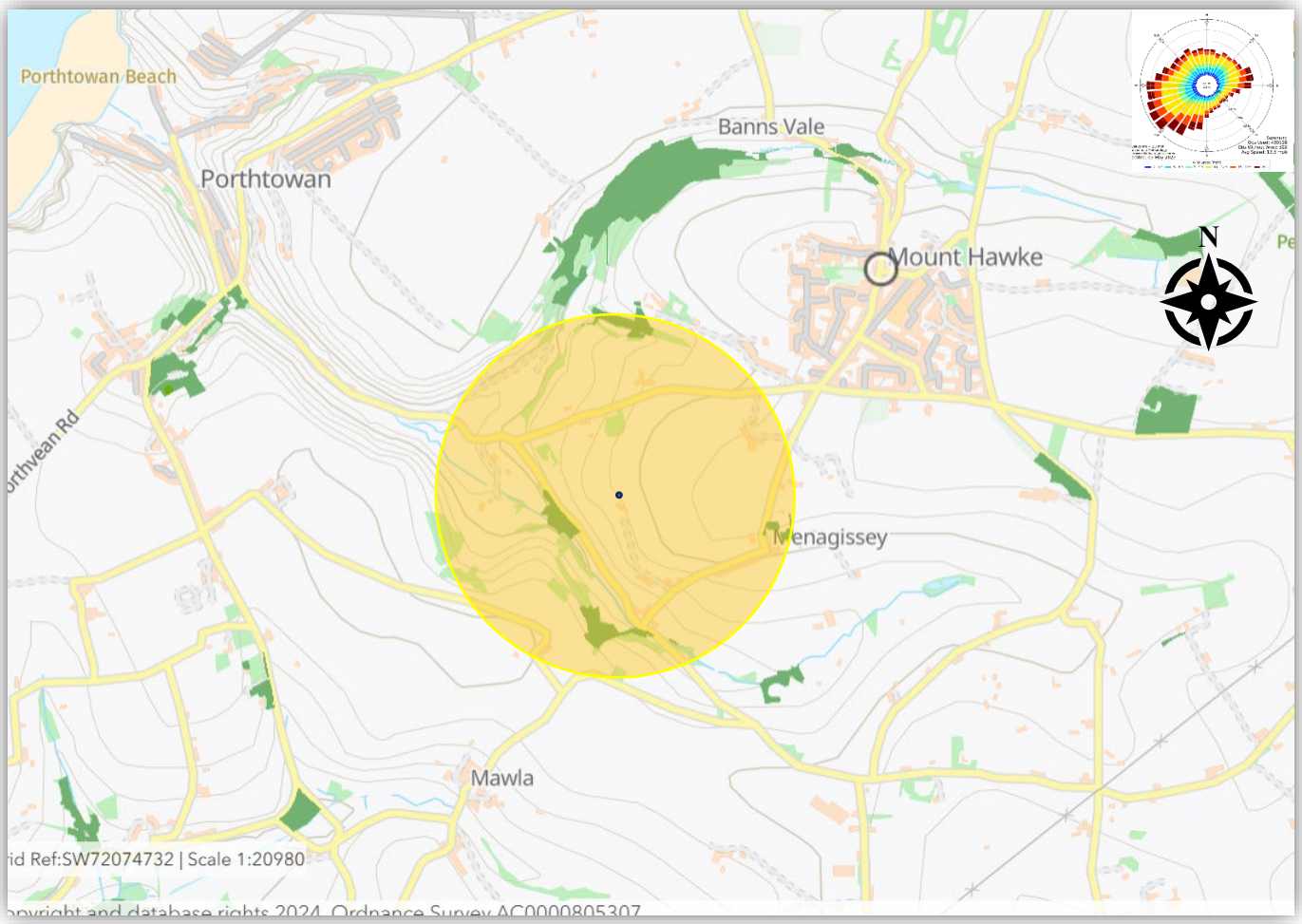
Figure 1.3.1: SSSI Designated Regions



The map in Fig 1.3.2 below shows areas of primary habitat in the region of the G A Carlyon site.

Green – Primary Habitat Deciduous Woodland

Figure 1.3.2: Primary Habitat (Deciduous Woodland) Within 500m Radius of the G A Carlyon Facility



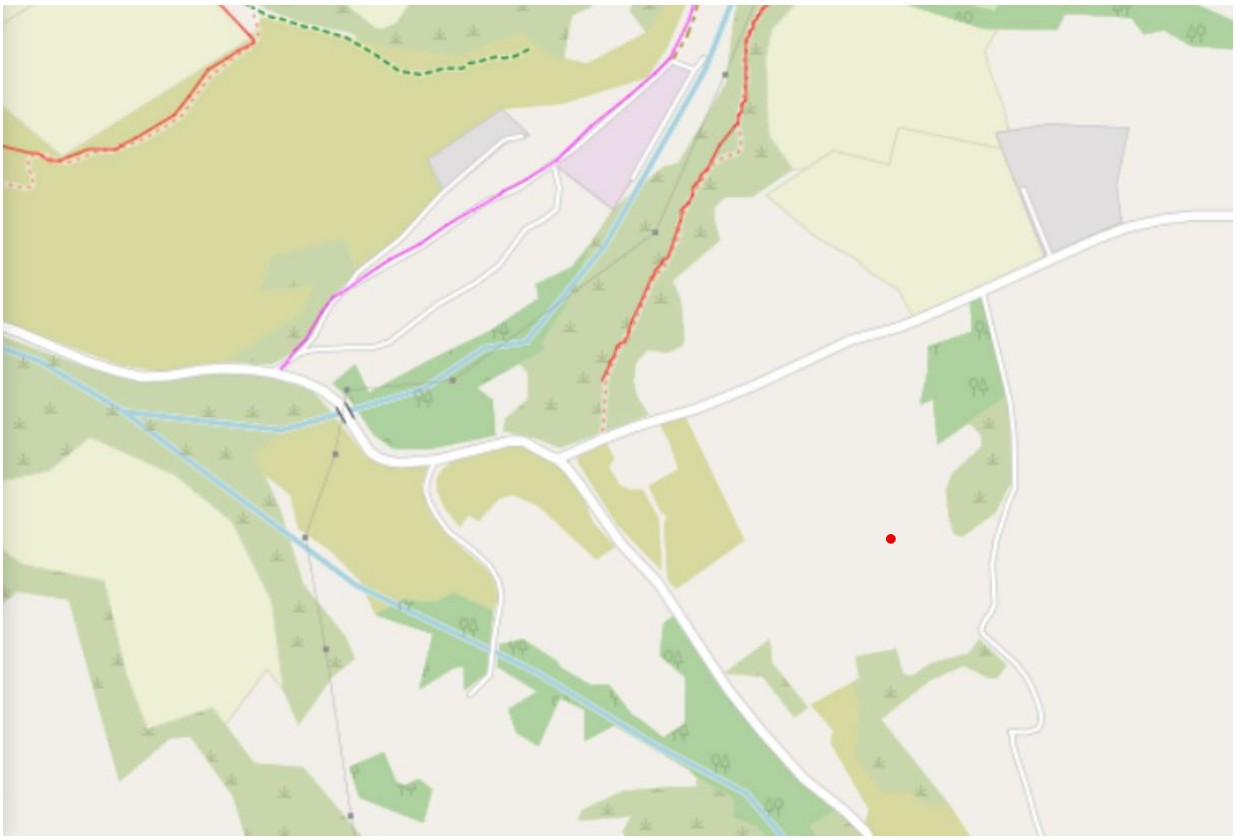
1.3.3 AQMA Zones

The G A Carlyon site as not within an AQMA zone, with the nearest AQMA designated areas approximately 3.2Km and 5.2Km to the SW and East respectively. These areas relate to NO_2 and will not be impacted by proposed operations at the site.

1.3.4 Public RoW

Local footpaths (red) and bridleways (purple) are shown in the map below. The red dot shows the approximate location of the centre of the G A Carlyon site.

Figure 1.3.3



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1.4 DEMP Management and Accessibility

This document is integrated into the EMS and as such is reviewed annually, or should something change which may have an impact on its effectiveness. Annual review considers new developments in emissions control which might be relevant to operations at G A Carlyon. It also considers things such as customer complaints and the number of occasions when the dust suppression systems have been deployed.

The DEMP is briefed to all site staff (See 3.1) . The working elements of the DEMP will be integrated into company standard operating procedures with delegated responsibilities for implementation and compliance.

2. Operations at G A Carlyon, Manor Parsley

2.1 Waste Deliveries

Waste materials are delivered to site loose in two principal vehicle types depending on whether it is carried/delivered by G A Carlyon own transport or by a third party.

G A Carlyon own transport comprises either 4 wheeler lorry (12 tonne), or 6 wheeler (16 tonne). All vehicles arrive and leave the site sheeted.

Third party carriers – There may be occasions where transport is subcontracted to third parties on behalf of G A Carlyon but this is not envisaged to be a frequent occurrence. The same rule and principals of operation apply regardless of operator.

The G A Carlyon facility opens at 7:00am for general transport activities. Operations for recycling will commence after daily checks have been completed, operations will cease at 5:30pm. Weekend operations will be from 8:00am to 12:00pm on Saturdays. The timetable of operations is below:

Mondays to Fridays 7.00am to 17.30hrs
Saturdays 08.00am to 12.00hrs

Office Contact:
01209 890 221
info@gacarlyon.com

Site Contact:
Mr Graham Carlyon 07977 585 206

All vehicles must arrive with the correct documentation, a waste transfer note and third-party haulage contractors must have a valid waste carriers' licence.

Unless weather dictates otherwise, i.e. persistent wet weather, loads are assessed on arrival for their potential to generate airborne dust. If assessed as particularly dusty it will be damped down before and during tipping with clean water spray. Signs informing drivers of the need to damp down are positioned at the entrance.

At times of dry weather, mobile misting systems may be hired in and positioned in accordance with prevailing winds. This will depend on measure PM10 values at the site boundary.

Section 2.2 below summarises how the various waste streams are handled and the emissions mitigation measures to be adopted.

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

2.2.1 Waste Processing

The facility's main objective is to take in waste hardcore/concrete and soils to produce controlled subbase and recycled soil, principally for use by the company, with a secondary purpose of being available for sale commercially in small quantities. The aim is to produce high quality products with the minimum amount of waste requiring transfer to other regulated facilities.

The two processes by which these products are produced are periodic crushing and screening. The waste will enter the site loose in lorries and smaller commercial vehicles. Once the correct paperwork has been completed the material will be discharged onto the relevant stockpile ready for processing.

Hardcore and concrete waste are stockpiled until sufficient quantities are available to make crushing commercially viable. Crushing may only be performed every few years, when it is crushed and graded to comply with the current WRAP protocol "End of Waste Criteria for the Production of Aggregates from Inert Wastes". Soils will be screened and graded.

Given the flexibility in timing of crushing activities, the operation can be planned for periods of damp/wet weather.

Table 2.1 below shows approved waste types brought to the site and Table 2.2 shows the Typical Destination for Recovered Materials and Residual Wastes.

Several items of mobile plant operate on the site, from screen and tracked 360 excavators to very occasional mobile crusher.

The G A Carlyon site is approximately 11000 m2 in area with a naturally occurring stone/gravel surface. Approximately 1200 m2 of the site is utilised for crushing activities, as this is surrounded by natural plant screening such as bamboo, trees and shrubs.

Figure 2.1 provides an aerial image of the site identifying operational areas. Surrounding properties/businesses are shown on page 6.

The South, East and West boundaries have a high soil bank with foliage, shrubs and trees which reduces the effect of wind whipping across the site. The crushing area

The EMS stipulates that the height of stockpiles will not exceed 2.5 meters. The volumes of material kept on site is estimated to be no more than 12,000 Tonnes at any one time. The majority of this material will be processed into product.

It is the responsibility of the TCM or appointed deputy in the event of stockpiles tenpoarily exceeding the permitted height of 2.5m and agree the action to be taken. This will be done via e-mail as well as being recorded in the site diary and daily site reports.

Figure 2.1: Site Plan (See Table 2.1)

Note - Illustrative and not to scale.

Table 2.1 Permitted Waste Types Brought to G A Carlyon, Manor Parsley

The above site plan and table below will be used to plan and regularly review the site layout to ensure waste is handled, stored and processed in a manner which minimises the potential for source emissions.

European Waste Code (EWC	Product Description	Locations					
		Waste Storage Area Hardcore	Waste Storage Area Soils	Screening Area	Crushing Area	Finished Soil Storage Area	6F5 Storage Area
01 04 08	Waste Gravel not containing Hazardous Material	A			D		
17 05 08	Track Ballast not containing Hazardous Material	A			D		
17 03 02	Bituminous mixtures not containing Hazardous Material	A			D		
17 01 01	Concrete	A			D		
17 01 02	Bricks	A			D		
17 01 03	Tiles and Ceramics	A			D		
17 01 07	Mixtures of concrete, bricks, tiles and ceramics not containing hazardous substances	A			D		
17 05 04	Soil and Stone other than those mentioned in 17 05 03		B	B		C	E
17 09 04	Mixtures of soil, bricks and concrete	A			D		

Table 2.2: Recycled/Processed Product Destinations.

EWC	**Destination for Recovered and Residual Materials: Export from G A Carlyon, Manor Parsley and Product Description In Accordance with WRAP,** Aggregates from inert waste (F.C.P)	Material End Use
01 04 08	Waste Gravel not containing Hazardous Material	Higways Specification Table 800 6f5 Subbase
17 05 08	Track Ballast not containing Hazardous Material	Higways Specification Table 800 6f5 Subbase
17 03 02	Bituminous mixtures not containing Hazardous Material	Higways Specification Table 800 6f5 Subbase
17 01 01	Concrete	Higways Specification Table 800 6f5 Subbase
17 01 02	Bricks	Higways Specification Table 800 6f5 Subbase
17 01 03	Tiles and Ceramics	Higways Specification Table 800 6f5 Subbase
17 01 07	Mixtures of concrete, bricks, tiles and ceramics not containing hazardous substances	Higways Specification Table 800 6f5 Subbase
17 05 04	Soil and Stone other than those mention in 17 05 03	In accordance with RPS 190 Use of Manufactured Top Soil Stone to Aggregate Feedstock for 6F5 Subbase
17 09 04	Mixtures of soil, bricks and concrete	Higways Specification Table 800 6f5 Subbase

2.2.2 Overview of Dust & Emissions Control Measures

A general description of the various procedural and engineered dust and emissions control measures are laid out in Table 2.3.

There is no mains water supply to the G A Carlyon site. The water source for any dust suppression requirements will be provided from a mobile bowser of minimum 8000 Ltrs, allowing the process of damping down or periodic spraying/misting to be performed at any part of the site.

Operations on the site are very localised and in turn require localise dust management controls. The bowser and pumped misting spray/canon/s can be mobilised to any part of the site as required.

Table 2.3: General Description of Dust & Emission Control Measures

Monitoring	
1	A twice daily visual site inspection is carried out (when operational) this is prior to the commencement of daily activities and at mid-day by the TCM, or in his/her absence the nominated employee. The weather conditions will be taken into consideration before any processing commences. Details to be recorded in the site diary and daily operations check sheet.
2	PM-10 dust monitoring equipment will be used during operational periods to monitor and record typical dust levels at a number of points on the site boundary and to activate mitigation measures where required.
3	Weather conditions, wind speed and PM monitor readings will be recorded.
4	If at any time emissions reach the lower dust thresholds (when averaged over 5 minutes) then dust control measures may need to be implemented depending on the source.
5	If at any time emissions reach the higher dust thresholds, then the site operations may have to cease if containment measures cannot be implemented or are ineffective.
6	Wind speeds will be monitored through local weather forecasts and wind conditions observed visually on site to assess the risk of dust mobilisation.
Plant & Vehicles	
7	Ensure all vehicles switch off engines when stationary – no idling vehicles. A sign to this effect will be positioned at the site entrance.
8	It isn't envisaged that site generators will be required except in exceptional circumstances where lighting may be required due to light conditions.
9	Aim that all plant will be Tier 4f / Stage IV or V emissions standard.
10	Minimise drop heights from material handling plant and tippers and use water spray on such equipment wherever appropriate (PM10 dust measurement levels). Site inspections ensure this policy is routinely applied.
11	Deployment of road sweeping vehicle for use on external routes as triggered by visual observation/inspection. Road sweeper immediately available from plant hire firm and deployable between the times of 7.00am and 5.00pm, as triggered by the inspections described above.
12	All loads transported to and from site sheeted and contained to minimise any dust.

Dust Controls	
13	Haul road connecting local highway and permitted area is of tarmac surface which is to be damped down using bowser as appropriate.
13	Manual water spray from bowser/tanker at tipping/material handling areas overseen by Site Foreman.
14	A 10mph speed limit is implemented on site to limit lifting of dust with tyres.
15	Double handling of materials avoided as far as is practicable.
16	Adequate water supply is assured on site for effective dust suppression. Non-potable water is not currently an option due to the risk of legionella bacteria.
17	Dampening loads at source (producer site) during dry conditions. A sign informing drivers to be positioned at the site entrance.
18	Crushing activities performed with machine with in built dust suppression fed from gravity fed tanker/bowser.
19	Misting cannons to be utilised when required and PM10 emissions dictate.
20	Vegetation growth on long term stockpiles to be allowed/encouraged in order to stabilise the surface.
21	Natural vegetation/screening to be encouraged around the boundary, particularly around crushing/screening areas and on North and Northeast facing boundary.
Communications	
22	Display the name and contact details of the person(s) accountable for air quality and dust issues on the site boundary.
23	It is not envisaged that notification of works is required to nearby residents other than those residents on local transport routes. It is at the discretion of the landowner to inform neighbours given the very minimal potential the proposals have for impacting neighbours.
24	Staff involved in the site works will be trained in the required procedures for implementing the DEMP. This will be provided by means of a toolbox talk covering the relevant aspects of the DEMP. A training record will be kept as part of the appendix to the sites copy of the DEMP.
25	Good relations exist with all neighbours and will be maintained through continued engagement. Any complaints will be recorded, identifying cause(s) and appropriate measures to reduce emissions in a timely manner, and record measures taken.
26	In the very unlikely event of exceptional incidents that cause high dust emissions, either on – or off site, records will be kept in the logbook along with the action taken to resolve the situation.
27	Notices to be posted on rights of way entrances/exits with contact details and information on the project (where notices are permitted by the local authority)

As the plant is relatively new, engine management systems are such that they reduce emissions and noise. Operators are trained not to leave plant idling. (As per manufactures recommendations)

Table 2.4: Site Plant & Equipment (examples only which may need substitution depending on availability)

Description	Make	Model	Emission Rating
Crusher (Hired in upon requirement)	Hire equipment		Tier 4f / Stage V
Screener	Screening Bucket	N/A	Tier 4f / Stage IV
360 Excavators	Hitachi	180	Tier 4f / Stage IV

3. Dust and Particulate (PM_{10}) Management

3.1 Responsibility for Implementation of the DEMP

The person with overall responsibility for the DEMP and its implementation is Mr Graham Carlyon. The persons with responsibility for implementation of the DEMP are the duty Technically Competent Manager (TCM) and Site Foreman.

The DEMP is reviewed annually or in the event of an incident, change to work processes or where revised legislation requires earlier review.
The TCM is experienced in the workings of the DEMP and how to review and implement DEMP requirements.

The site staff are given in house training on the DEMP by means of toolbox talks which are recorded. Elements of the DEMP are applied as standard working procedures for staff.

Staff are encouraged to offer feedback and suggestions as to practical improvements to the sites dust suppression systems. The in-house training is provided by the duty site TCM, refresher training will be given annually or if new operating systems are implanted, complaints received that are caused by incorrect implementation of the DEMP or an amended DEMP submitted to the regulatory authority.

3.2 Sources and Control of Fugitive Dust/Particulate Emissions

The waste operation at G A Carlyon has multiple potential sources for emitting dust and particulates into the air, the most significant of which are;

- Wind mobilising surface particles from stockpiles.
- Wind mobilising particles from processes.
- Vehicles entering and/or leaving the site with mud on wheels, and tracking dust onto or off the site.
- Airborne particulate from vehicles which travel to site uncovered.
- Vehicles and plant moving around the site mobilising dust.
- Excavators/360s sorting/handling waste
- Loading rejected/quarantined materials back onto vehicles.
- Particulate emissions from the exhaust of vehicles/plant/machinery on site.

Detailed below are the source – pathway – receptor routes applicable to the above.

Table 3.1: Source-Pathway-Receptor Routes

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
Vehicle movements	Tracking dust/mud/material on wheels and vehicles, then mud/soil dropping off wheels/vehicles migrating onto adjacent roads for pick up by other road users.	Neighbours, public roads.	Visual soiling and transfer to other road users vehicles, also consequential resuspension as airborne particulates when dry.	Site ground conditions are well draining, compacted naturally occurring stone/gravels. Material that could be transported elsewhere is removed manually before vehicles leave site. Road sweeper to be on standby. Site surfaces to be kept clean/swept. As well as through the multiple daily inspections, this is also triggered by the machine operator and tipper drivers through routine observation and statutory driver requirements.
Vehicle movements	Particles from loads.	Public roads.	Visual soiling, also consequent resuspension as airborne particulates when dry.	Vehicles are sheeted before leaving waste producer site or G A Carlyon site.
Stockpiles	Dust mobilised from stockpiles, lifted by plant and vehicle operations whilst being established.	Public right of way, primary habitat.	Visual dust deposits flora and fauna.	Allow growth of vegetation to stabilise. Keep stockpiles as low as possible and grade to minimise wind effect. Stockpiles to be maintained at a low level and natural boundary screening to be maintained to

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
				protect from wind whipping. Damp down if necessary.
Tipping, of wastes.	Atmospheric dispersion	Nearest neighbours, public right of way to the NE, primary habitat.	Visual soiling and airborne particulates	Minimise source strength by means of low drop heights. Damp down tipping area. Plan tipping times and locations on site accordingly.
Tipping, handling and tracking of wastes to access road.	Atmospheric dispersion	Nearest neighbours, public right of way, primary habitat.	Visual soiling and airborne particulates	Minimise handling once tipped. Damp down tipping area with bowser pumped water spray.
Movement/handling/sorting of tipped wastes.	Atmospheric dispersion	Nearest neighbours, public right of way, primary habitat.	Visual soiling and airborne particulates	Minimise source strength by means of low drop heights. Damp down tipping area. Deploy bowser pumped water spray or misting jet if required. Wind direction predominantly from SW reducing potential impact on public right of way or nearest neighbour or habitat.
Vehicle exhaust emissions	Atmospheric dispersion	Nearest neighbours, public right of way, primary habitat.	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. Eco friendly engines to reduce emissions. Prevailing winds from SW minimise impact to closest receptors. Plant only used periodically.
Crushing and screening operations.	Atmospheric dispersion	Nearest neighbours,	Airborne particulates	These operations are not performed regularly and can be timed to suit conditions

Source	Pathway	Receptor	Type of impact	Where relationship can be interrupted
		public right of way, primary habitat.		least likely to give rise to airborne particulate. PM10 emissions are monitored regularly at the site boundary and intervention measures such as misting or spraying can be instigated, including the stopping of work if necessary. All integral dust control sprays/misting on hired in plant will be in operation when required.
Plant and machinery exhaust emissions	Atmospheric dispersion	Nearest neighbours, public right of way, primary habitat.	Airborne particulates	Regulatory controls and best-practice measures to minimise source strength. Eco friendly engines to reduce emissions. Prevailing winds from SW minimise impact to closest receptors. Plant only used periodically.

Table 3.2: 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
Site / process layout in relation to receptors	Having regard for prevailing wind, natural barriers, buildings and such like in process and workflow design can greatly reduce the effects of wind on already mobile particulate.	Consideration to location of work is a continual process.	Site work location is considered as part of investigation procedures where levels of PM-2.5 and PM-10 are exceeding upper action levels and in the unlikely event of any complaints.
Site speed limit, 'no idling'	Site has speed limit which will remain under constant review, is compact in size with direct	In place as part of management system	Permanent speed limit in place.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
policy and minimisation of vehicle movements on site	routes to reduce vehicle movements and no idling policy in place.		
Minimising drop heights for waste.	Plant used for the movement of materials can significantly reduce the generation of dust by reducing drop heights and by cleaning deposited materials from the plant.	In place as part of management system. Constantly under review.	This is a permanent arrangement. Site is inspected several times per day (when operational) and excessive fall, or handling of materials will be highlighted and corrected.
Good housekeeping	Having a consistent, regular housekeeping regime that is supported by all involved will ensure site is regularly checked and issues remedied to prevent and remove dust and particulate build up.	In place as part of management system	Daily site inspections take place with respect to housekeeping and trigger processes to address the specific issues identified, such as litter picking, road sweeper etc.
Sheeting of vehicles	Prevents the escape of debris, dust and particulates from vehicles as they travel.	In place as part of management system. Engage with waste producers/carrier to ensure this is rigorously applied.	In place as part of management system
Ceasing 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 events.	Operations will not cease purely on the basis of high winds alone as other factors such as heavy rain and nature of operations are factors to be considered.	Strong winds would automatically prompt further particulate testing around the site. Where other control measures are ineffective in maintaining dust levels below the upper

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
		Appropriate times to cease operations are in place as part of management system	action level, operations will cease where impact on receptors is demonstrable.
Haul road maintenance	Maintain surfaces on-site such as access road. This reduces the amount of dust and particulate generated at ground level by vehicles and site activities.	In place as part of management system	Permanent solution.
Minimisation of waste storage heights and volumes on site	Excavated materials for re-use are stored in graded stockpiles as low as possible to reduce wind whipping. Vegetation to be encouraged to stabilise surface.	In place as part of management system	Not applicable.
Reduction in operations (waste throughput, vehicle size, operational hours)	Reducing the amount of activity on site, including tipping, movement and placement of higher risk loads during windy weather as well as associated traffic movements should result in reduced emissions and re-suspension of dust and particulates from a site.	The site has procedures to reduce activity/certain activities on site if required through adverse weather conditions.	Where other control measures are ineffective in maintaining dust levels below the upper action level, operations will relocate, cease or be cut back accordingly. Regular air monitoring will govern requirements.
On-site sweeping of hard surfaces where dust may settle.	Sweeping could be effective in managing larger debris, dust and particulates but may also cause the mobilisation of smaller particles.	Site sweeper available on demand is permanently available on site. Procedures in place for daily and weekly inspections and maintenance.	Regular site inspections take place with respect to airborne dust mobilised from hard surfaces. Visible mobilisation of dust, dust build up on surfaces and/or dust measurements above the lower action level.

Abatement Measure	Description / Effect	Overall consideration and implementation	Trigger for implementation
	Any deposits likely to be cleaned as part of normal site housekeeping measures.	Consideration to proximity of livestock needs to be considered.	Action is unlikely to be required given location of source in relation to main site buildings and surfaces.
Water suppression bowser with water sprays.	Damping down of site areas can reduce dust and particulate re-suspension.	Bowser and manual hose outlets can be deployed as required. System under constant review in association with Groundscape Environmental Ltd.	Regular site inspections take place with respect to airborne dust mobilised from hard surfaces as well as depositing points. Visible mobilisation of dust or dust measurements above the lower action level will trigger the need for damping down with water jets.
Mobile dust and particulate monitor.	Deployment of a particulate monitor can alert site staff when short-term particulate concentrations are elevated in order that site practices can be reviewed, or application of mitigation measures increased.	Real-time tracker of dust and particulate concentrations PM-2.5 and PM-10 can be captured in conjunction with prevailing wind conditions. Used to monitor environmental performance and also to track the effectiveness of improvements made at the site and any trends.	Manual dust measurements made twice daily (minimum) or in the event of observed dust or receipt of complaint/feedback.
Monitor control measures	Regularly engage with nearest neighbours to ensure control measures are effective and improve where required. Note: existing relationships over many years are excellent.	Ongoing	Ongoing

3.3 Visual Dust Monitoring and Records

Daily observations within the site and at the site boundary record site dust conditions in the environmental site diary and on the daily operations report. Routine visual dust monitoring takes place throughout the day with metered readings taken a minimum of twice a day at specific locations when operational.

These records include information on the activities on site, time, weather conditions, wind direction and estimated speed if potential for dust generation is anticipated. The site has a complaints procedure in place which can cross reference any reported incidents with the diary to identify improvements to site operating procedures and this dust management plan.

If complaints are received, further visual monitoring will be carried out along with dust measurement at the nearest point on site upwind of the complainant. In the highly unlikely event of repeat complaints, dust measurements can be taken at the complainants' property.

The process described in Section 5 will be instigated where measurements demonstrate airborne dust above trigger levels.

3.4 Environmental Monitoring

Weather Monitoring

Weather conditions will be monitored each day as part of site inspections and reporting. Weather forecasts from the MET Office will also be monitored for the week ahead.

3.5 Water Usage & Control of Fugitive Dust

3.5.1 Water usage/availability

Water source for any dust suppression requirements will be provided from a mobile bowser of approximately 8000 Ltrs, allowing the process of damping down or periodic spraying to be performed.

The primary source of water for damping down and spraying, should it be required, will be via the aformentioned pumped bowser positioned adjacent to the working location.

A back up bowser is available in the event of breakdown.

3.5.2 Electrical Supply Failure

Electrical supplies are not required other than when operating water pumps or temporary lighting. A suitable back up facility will be available or accessible at short notice. Operations will cease where the availability of an electrical supply is crucial to control of emissions below action levels.

3.6 Training

Training in this DEMP and the various control measures and responsibilities outline within will be provided to all staff by the TCM. This will be in the form of a Toolbox Talk.

Training in specific responsibilities placed on the Site Foreman will be provided by the TCM as a structured session in the site office as requirements are more comprehensive.

A summary reference handbook with key points and day to day actions will be available for site personnel with specific responsibilities and as part of their training. Drivers will also receive induction on their first visit to the site.

4. Particulate Matter Monitoring

4.1 Monitoring Locations

It is the responsibility of the TCM to take manual air monitoring measurements at key points around the site perimeter during operational periods. In the absence of the TCM, this would be performed by the Site Foreman. The principal direction of wind affecting the site is South Westerly. Observation and measurement of dust levels should be undertaken at 3 locations which recognise the prevailing conditions on the day and the receptors potentially impacted as a result, and may be added to or adjusted/altered accordingly

It is the data from manual monitoring which is used to trigger further action when levels of PM-2.5 and PM-10 are exceeded, as described in Section 5.

Figure 4.1: Principal Dust Monitoring Locations

- Monitoring Points

4.2 Operation of the PM Monitoring Equipment

As well as undertaking routine manual measurements during the day, it is the TCM's responsibility to instigate mitigating measures in the event that action levels have been exceeded for periods exceeding 5 minutes. Similarly, the investigation of any trends that appear in the data.

The following actions are required by the TCM, or in their absence, the Site Foreman;

- Take manual dust measurements daily and record the results.
- Respond to any periods where PM-2.5 and PM-10 levels have exceeded upper action levels when averaged over a 5 minute period.
- Record the above events in the site diary.

In addition to the above, it is paramount that any trends or causal factors are identified where elevated dust events are recorded. Any factors identified are investigated in association with the Site Foreman and dust management measures reviewed accordingly.

The outcome of the monthly review will be documented and held on file by the TCM. Any revision to dust management measures as a result of the above review will be written into this DEMP and staff informed/trained accordingly.

4.3 Quality Assurance/Quality Control and Record Keeping

The following instruments/sensors are used on site for dust monitoring and are controlled, stored and maintained as detailed below.

HoldPeak Portable Air Monitor (or equivalent)

Model: HP-5800D Detect

This is the primary monitor for daily manual dust monitoring and is managed by the TCM and stored in the TCM office along with operating manual.

The unit is subject to annual calibration and inspection arranged by the TCM.

Measurement data is recorded manually and daily records filed in the TCM office.

4.4 Reporting of Data

Dust monitoring data will be reported to the EA on request or in accordance with any Environmental Permit conditions.

4.5 Additional Detailed Monthly Reporting

As detailed in 4.2, data from fixed and portable dust measuring equipment is reviewed monthly by the TCM and Site Foreman. The data is considered alongside records of activities (diary and daily operational reports) and weather data.

5. Procedure When Action Levels Exceeded

Table 5.1

Particulate	Lower Action Level (µg/m3)	Upper Action Level (µg/m3)
PM-2.5	>35	>50
PM-10	>53	>75

Daily manual dust monitoring will occur at three of five locations on site as shown in Figure 4.1, depending on the prevailing wind conditions. Each location will be subject to both PM-2.5 and PM-10 monitoring for a period of 1 minute each.

Should the sample exceed the lower action level (See Table 5.1), the TCM of Site Foreman will be informed immediately and the primary source of dust investigated and identified.

Any operations not being conducted using best-practice controls, as set out in Table 2.3, will be suspended and controls put in place accordingly. Should dust levels remain above the lower action level, and where the activity giving rise to the dust is likely to be prolonged, then further mitigation measures will be put in place as described in Table 3.2.

The alarm is not the sole indicator of a dust event at the site; the continuous visual monitoring of potential dust sources and the analysis of trends in data are essential elements in reviewing processes and management measures for effectiveness.

6. Reporting and Complaints Response

6.1 Engagement with the Community

G A Carlyon will make telephone contact with neighbours on a regular basis after initial communication takes place, and immediately in the event that complaints are made.

6.2 Reporting of Complaints

If a dust incident occurs or dust nuisance is reported directly to the site or through regular contact, and complaint form will be completed. A copy of the Complaint Form is attached at Appendix C. This triggers investigation, immediate corrective and mitigating actions. This should be signed off by the TCM. The complaints procedure aims to provide a response to the complainant within three working days. The results of which are fed into operating practice and reviews of this Dust Management Plan.

Where any dust can be attributed to G A Carlyon operations, immediate corrective measures include amending site activities, switching off offending plant and machinery until mitigation measures are completed, temporarily ceasing site activities during unfavourable weather conditions, enhancing mitigation measures such as increase water spray directly to the material or atmosphere in vicinity of the source. A more strenuous monitoring regime will be adopted with frequent observations within the site, at the boundary and beyond in the vicinity of the area of complaint until such time it can be concluded that the matter has been successfully addressed and resolved.

6.3 Management Responsibilities

In the event that businesses or individuals wish to complain regarding an aspect of G A Carlyon operations, the following contact information is freely available.

Telephone contact – Any complaint will be passed to the TCM or the Site Foreman where the TCM is unavailable.

E-mail – Messages would be received by TCM (copied to the Site Owner)

Where the complaint is from a local resident or business, G A Carlyon welcome personal visits during operational hours to discuss any concerns. Either the TCM or Owner would deal with such issues.

All complaints, whether received by the Owner or not, will be managed and investigated by the TCM. In the TCM's absence, the Owner (or deputy) will investigate the complaint.

Any subsequent permit conditions requiring complaints to be reported to the Environment Agency will be adhered to.

6.4 Summary

This Dust Management Plan is provided to demonstrate the controls, processes and infrastructure in place to control potential dust emissions from the works at G A Carlyon. It forms part of the Environmental Management System for the site, a copy of which is held in the site office. It is communicated to all staff who receive refresher training on its purpose, content and individual responsibilities under this plan regularly from the TCM.

The Plan identifies dust sources on site and puts them in the context of local land uses and sensitive receptors. Site activities are summarised, with dust controls and management provisions explained. Liaison with local residents provide for communication with and feedback from local residents where deemed necessary. The site has a complaints and follow-up procedure, the responsibility for which sits with the TCM, overseen by the Site Owner. The Plan is regularly reviewed and revision updates are signed off.

Appendix A
Dust & Environmental Monitoring Equipment

HoldPeak HP-5800D PM2.5/10 Detector Indoor Outdoor PM2.5 Air Quality Tester monitoring Haze Meter Backlight Environmental Tester

HP-5800D PM2.5 detector designed to measure the air of PM2.5 (particulate matter into the lungs) dedicated instrumentation value. Applicable to the determination of public environment and atmospheric environment, can also be used for air purification purification efficiency evaluation analysis. This instrument measures air quality reading accuracy, dot matrix LCD LCD display, response time does not exceed 30s. HP-5800D with backlighting, easy to operate dark. Use for office, inside a car or during interior decoration and outdoor environmental testing. 24 hours of on-going real-time monitor of indoor formaldehyde and outdoor PM2.5/PM10 concentration.

Transducer: Electrochemical sensor Working Temperature Range: 5-45 C Barometric Pressure: 1 BP Input: AC 100 240V/50/60HZ0.15A Rated Output Voltage: 9V Rated Output Current: 2.0A Formaldehyde: 0-7.5mg/m3 Resolution: 0.01mg/m3 ±5% PM2.5: 0-999.9ug/m3 Resolution: 0.1ug/m3 PM10: 0-999.9UG/m3 Resolution: 0.1ug/m3 Temperature: 5-45'C

Modle	HP-5800D
The range of PM2.5 detection	0-999.9μg/m³
The resolution of PM2.5	0.1μg/m³
The resolution of PM10 detection	0-999.9μg/m³
The resolution of PM10	0.1μg/m³
The minimum of particle diameter	0.3μm
Accuracy	20% or ±15μg/m³ MAX
Display	Dot matrix LCD
Back Light	YES
Auto Power off	YES
Battery Type	3.6V NI-MH battery
Power Adapter	Capacity:1600mAh
Dimension	73*20*73mm
Weight	420g

HoldPeak HP-5800D PM2.5/10 Detector Indoor Outdoor PM2.5 Air Quality Tester monitoring Haze Meter Backlight Environmental Tester

HCHO Accurate Detection

PM2.5 PM2.5 Air quality monitoring

PM10 PM10 Air quality monitoring

AIR Air quality testing

Appendix B
Dust Complaint Form

Dust Complaint Form

Complainant Details	
Customer Name -	
Address – Postcode -	
Customer Contact Details -	
Tel -	
Email -	
Date -	
Complaint Ref Number -	
Complaint Details -	

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 Foreman review date	
Site Foreman signature to confirm no further action required	

Appendix C
Daily Site Report

G.A Carlyon Haulage & Plant Contractor

Daily Operational Report Form **Environmental Permit No:**

Date		**Site Manager**	

Weather am:	**Weather pm:**
Wind Conditions:	**Wind Conditions:**

T.C.M		On Site		Of Site		Total hrs	

Signed:

Item	**Remarks**							
Litter								
Security								
P.P.E								
Cleanliness								
Damage								
Fuel/ Lubricants								
Plant								
Deposits on Roads								
Odour								
Noise								
Dust	Time		PM10		Time		PM10	
Dust	Time		PM10		Time		PM10	
Dust	Time		PM10		Time		PM10	
Stock Pile Size								
Surface Water								
Pest Control								
Unsafe Practice								
Spill Kits								
First Aid Kits								
Paperwork								
Stocks								
Fire Control								
Non- Compliance								
Equipment								
Drainage/Interceptor								
Waste Storage								

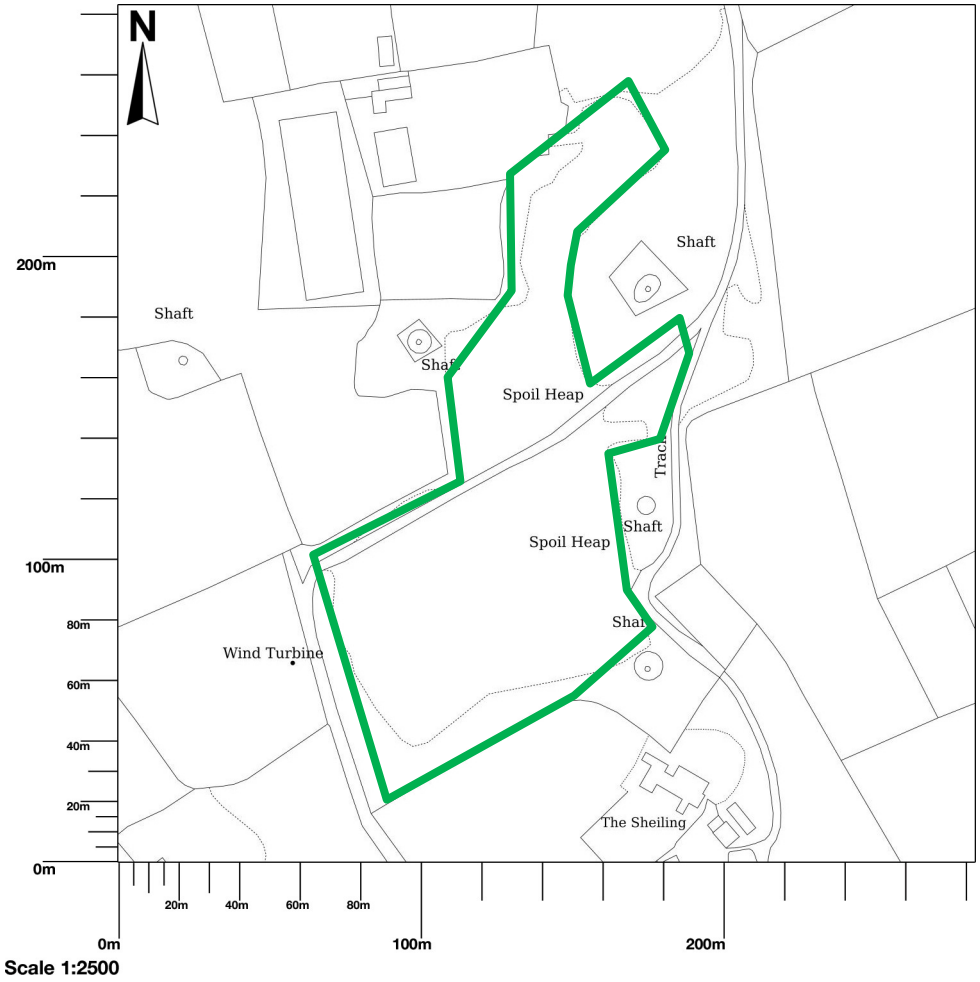
Additional Information:

Actions

Continue on reverse if required.

Appendix D
Site Plan

G A Carlyon, Manor Parsley, Truro, TR4 8DH



Permit Boundary