

# Caulmert Limited

Engineering, Environmental & Planning  
Consultancy Services

## Alkerton Quarry

Alkerton 2022 Limited

## Environmental Permit Application

## Dust & Emissions Management Plan

### Prepared by:

#### Caulmert Limited

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## Dust & Emissions Management Plan

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## **DRAWINGS**

**4919-CAU-XX-XX-DR-V-1800** Sensitive Receptor Plan

## **APPENDICES**

**Appendix 1** Site Inspection Form

**Appendix 2** Complaints Record Form

## 1.0 INTRODUCTION

### 1.1 Report Context

1.1.1 Caulmert Limited have been appointed by Alkerton 2022 Limited ('the operator') to prepare an environmental permit application for a waste recovery operation at Alkerton Quarry, in Alkerton, Banbury, Oxfordshire ('the site'). This Dust & Emissions Management Plan (DEMP) has been prepared in support of the permit application for the proposed recovery activities.

### 1.2 Objectives

1.2.1 This Dust & Emissions Management Plan (DEMP) will provide thorough detail of appropriate measures that are required for effective dust and particulate emissions management at the site and will outline a 'Action Plan' for any increase in visual dust emissions. In addition, an Amenity and Accidents Risk Assessment (ARA) has been produced (ref. 4919-CAU-XX-XX-RP-V-0302) as part of the permit variation application which considers any potential risks (including dust) associated with the proposed recovery activities.

1.2.2 This DEMP has the aim of ensuring that potential dust emission sources are identified and controlled at source where possible. The DEMP aims to minimise the risk of dust emissions impact at locations outside of the activity boundary.

1.2.3 As a minimum this DEMP will consider the following elements:

- An assessment of the risks of dust emissions at the site;
- Identify the appropriate controls to manage the identified risks;
- Visual monitoring to confirm effectiveness of control measures;
- Complaints handling;
- Identify actions, contingencies, and responsibilities when dust emissions arise; and
- Regular review of the effectiveness of the dust control measures.

### 1.3 Site location

1.3.1 Alkerton Quarry occupies a triangular parcel of land with access to the main road networks which border the A422 (Stratford Road) and Rattlecombe road to the south as shown in Figure 1 below. Alkerton Landfill Site (operated by SUEZ Recycling and Recovering UK Ltd) lies immediately adjacent to the west.

1.3.2 The existing Alkerton Quarry covers an area of approximately 10.8 ha and is within a wider ROMP permissions which also includes restored and active mineral operations at Hornton and Wroxton respectively. The Alkerton Quarry has been largely exhausted of ironstone mineral.

1.3.3 The northern part of the Site was partially restored approximately 14 years ago and is in poor condition and requires re-working to improve restoration quality and drainage.

- 1.3.4 The site is located at National Grid Reference SP 38665 43039 and postcode OX15 6HY and is accessed off the main road that runs through Alkerton with Shennington, Banbury, Oxfordshire. The site location (boundary in red) is indicated in Figure 1 below:



**Figure 1 – Site Location (boundary in red)**

- 1.3.5 The site is set within predominantly agricultural land, with the A422 Stratford Road to the east, the access road to the south and Alkerton Landfill Site to the west. The village of Alkerton with Shenington is located 800m west of the site and the outskirts of Banbury are 4.7km to the east.

## 1.4 Proposed Operations

- 1.4.1 The previous Planning Permission MW.0020/19 for Alkerton Quarry included a restoration scheme that restores the site to a low level landform with agricultural after-use, hedgerows and areas of rough grassland, scrub and natural regeneration. This permission included for the relocation of the ephemeral pond and was approved in November 2019. This scheme provided 6.1 ha of agricultural land with rough grassland and perimeter scrub.
- 1.4.2 Restoration of Alkerton Quarry was due to be completed in 2019/20 under this Revised Restoration Scheme. However, only a section of the northern area of the site was partially restored approximately 14 years ago under previous ownership, whereby the haul road was also removed and over extracted the mineral beneath.

- 1.4.3 As a result of the mineral beneath the haul road being removed, this has prevented the restoration scheme that was approved in MW.0020/19 from being implemented. Following new ownership of Alkerton Quarry in 2021, the new operator, Alkerton 2022 Limited, seeks to restore Alkerton Quarry to re-establish the road through the site and complete a revised low-level restoration landform in accordance with a revised restoration scheme approved by Oxfordshire County Councils.
- 1.4.4 This revised scheme will require approximately a total of 130,000 m<sup>3</sup> of restoration material of which 90,000m<sup>3</sup> will be imported restoration material equating to approximately 150,000 tonnes that will be brought in over 3 years at around 50,000 tonnes per annum. It is estimated that approximately 40,000m<sup>3</sup> of topsoils and overburden materials is available on-site and this will be used around the ephemeral pond/wetland area and also as final cover material in the restoration of the site. There will be no imported waste materials used in the pond area, with only native on-site soils used, as shown in the area outlined in purple in drawing ref. AL1198-D12v4.
- 1.4.5 Following the completion of waste importation for recovery there will be a nature conservation after-use and holiday chalets for eco-tourism. The road through the site will be re-established which will provide access to the holiday chalets. Planning permission MW.0124/21 was approved on 9<sup>th</sup> November 2022 (see decision notice in Appendix 1) for the proposed modification of the approved restoration scheme through importation of inert soil material for nature conservation after-use and the erection of 18 single storey holiday lodges with associated landscaping and car parking.

## 2.0 POTENTIAL SENSITIVE RECEPTORS

### 2.1 Overview

- 2.1.1 A search of sensitive receptors within a 1km radius of the activity boundary at Alkerton Quarry was conducted using the DEFRA Magic Maps<sup>1</sup> website and other publicly available information sources, and the identified receptors are listed below in Table 1, and also shown on drawing ref. 4919-CAU-XX-XX-DR-V-1800.
- 2.1.2 A Pre-Application Heritage & Nature Conservation Screen was undertaken by the Environment Agency (EA) as part of the pre-application advice for this application.

### 2.2 Receptors

- 2.2.1 The nearest human and residential receptors are Jenny's Sanctuary (a non-denominational centre) and a residential property, Heath Farm (also known as White Gables) are located immediately south-east of the site. Langley House is 340m to the southeast. The villages of Alkerton and Shenington are situated 800m and 1200m to the west respectively.
- 2.2.2 A definitive public footpath (reference 418/6) crosses east to west through the site, another open footpath (reference 418/12) passes along the western edge of the site. As part of the revised restoration scheme, public footpath (reference 418/10) would be returned to its definitive route.
- 2.2.3 The nearest surface water features are a pond within Balscote Quarry Local Wildlife Site, approximately 250m to the southeast of the site. The Sor Brook watercourse is located approximately 440m to the northeast of the site, and another watercourse, the Shutford Stream, is located 970m to the west.
- 2.2.4 The screening report identified that the site is within a Secondary A Aquifer within bedrock, however the majority of bedrock (ironstone) has been extracted out of the site during quarrying and so the groundwater is now at a significant depth. The site is not within a Source Protection Zone, with the closest, a Zone 2c, located over 15km to the northwest of the site. It is noted that groundwater is not sensitive to dust or particulate emissions from the site and therefore is not considered further in this report.

### 2.3 Ecological Designations

- 2.3.1 Balscote Quarry Local Wildlife Site (and ponds) is located 250m southeast from Alkerton Quarry, and Cotswolds Area of Outstanding Natural Beauty (AONB) is c1.2km north. South of Rattlecombe Road is an area of woodland categorised under Deciduous Woodland.
- 2.3.2 The EA screening report and a search on Magic Maps confirmed that the site is not within 1000m of any designated or sensitive habitats including: Special Areas of Conservation (SAC),

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<sup>1</sup> DEFRA Magic Maps website, 2022: <https://magic.defra.gov.uk/MagicMap.aspx>



Special Protection Areas (SPA), Ramsar sites, Sites of Special Scientific Interest (SSSI), Local Nature Reserves (LNR), Ancient Woodlands, National Nature Reserves (NNR), Protected Habitats or Protected Species.

- 2.3.3 There are no Scheduled Monuments or Listed Buildings within 500m of the site boundary. There are no Priority Habitats that apply to the site or in adjacent areas.

## 2.4 Identified Receptors

- 2.4.1 The nearby sensitive receptors within 1km of the site are summarised in Table 1 below:

**Table 1 – Sensitive Receptors within 1km of the site**

Receptor	Designation	Distance and direction
Secondary A Aquifer (bedrock)	Groundwater	Below site
Footpath 418/6	Public right of way	Crosses through site, E to W
Footpath 418/12	Public right of way	0-15m W
Heath Farm (the White Gables)	Residential Receptor	Directly adjacent, SE
Jenny's Sanctuary	Non-denominational centre	Directly adjacent, SE
Rattlecombe Road	Public road	10-15m S
A422, Stratford Road	Public road	10-15m E
Agricultural Fields	Agricultural	5m up to 1000m N, E, S, W
New Inn	Restaurant	35m NNE
Alkerton Landfill Site	Landfill site	30-50m W
Balscote Quarry Local Wildlife Site (& pond)	Habitat/Surface Water	250m SE
Langley House	Residential dwelling	340m SE
Motor Racing Circuit	Recreational centre	375m NE
Residential dwellings located off Shutford Road	Residential dwellings	350-400m E
Alkerton Recycling Centre	Civic amenity recycling centre	400m NW
Sor Brook	Surface Water	440m NE
Langley Quarry	Disused pits and quarry	450m ESE
St Michael & All Angels Church	Place of worship	800m W
Southfields Farm	Agricultural and residential dwelling	810m SE
Alkerton Oaks Business Park	Commercial and Business premises including: The Event Business Limited TP Knotweed Solutions Workshop Heaven (Tool shop)	830m NW

	Bike-More	
Hornton Grounds	Farmhouse Bed & Breakfast	870m N
Residential properties of Alkerton Village	Residential dwellings	650-1000m W, NW, SW
Shutford Stream	Surface Water	970m W

## 2.5 Meteorological Setting

- 2.5.1 Fugitive emissions of dust, litter, odour, visible plumes, mud, debris and noise from the site are likely to be affected by local weather conditions, in particular by wind direction and rainfall.
- 2.5.2 Wind statistics observed from London Oxford Airport weather station (located approximately 28.5 km south-southeast from site) is the closest weather station actively recording wind statistics and is considered to be representative of the typical weather conditions of the site.
- 2.5.3 A review of the data recorded daily between April 2015 and August 2022 on the Windfinder.com<sup>2</sup> website indicates that the most dominant wind direction is from the west-southwest, as shown below in Figure 2:

### Monthly wind direction and strength distribution

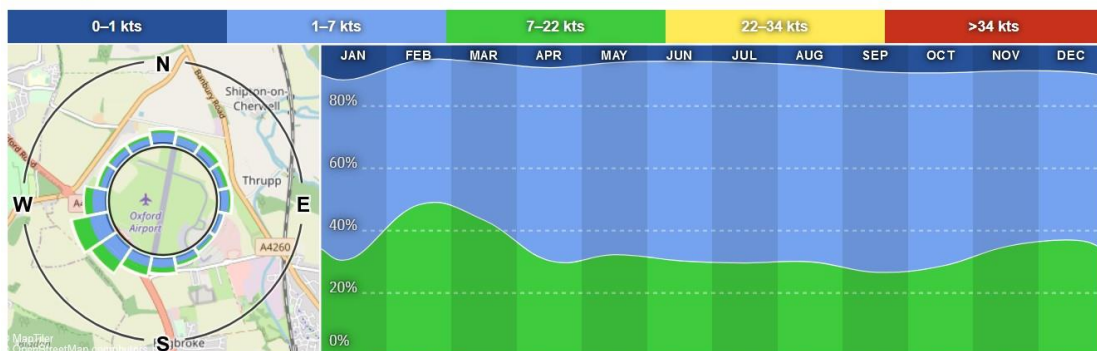


Figure 2 – London Oxford Airport – average annual wind direction & strength 2015-2022

- 2.5.4 A review of the sensitive receptors in Table 1 indicates that prevailing wind conditions for most of the year are likely to be towards the agricultural fields and the New Inn to the northeast of the site.

<sup>2</sup> [https://www.windfinder.com/windstatistics/oxford-airport\\_kidlington](https://www.windfinder.com/windstatistics/oxford-airport_kidlington)

## 3.0 POTENTIAL DUST SOURCES

### 3.1 On-Site Sources

- 3.1.1 There are no longer any quarrying activities undertaken at Alkerton Quarry, and therefore on-site activities likely to cause dust will be limited to restoration activities.
- 3.1.2 Restoration activities and the stockpiles of material will be designed, set up and operated in such a way that any particulates released have the minimum impact on the environment and people. Fugitive dust could result in visible dust being observed crossing the site boundary and nuisance can be caused by dust deposition on surfaces at sensitive receptors.
- 3.1.3 Potential dust sources have been identified at the site from the operational activities to be carried out and these are detailed below:
- Vehicle movements (particularly on un-surfaced routes. Tyres and exhausts may cause dust and particulate emissions);
  - Restoration materials placement/movement (deposition, spreading, compacting);
  - Loading and tipping of restoration materials (dusts may be given off through impact);
  - Handling and movement of stockpiles; and,
  - Wind blown action across stockpiles.

### 3.2 Off-site Sources

- 3.2.1 Agricultural land surrounding the site may be a source of dust, particularly in drier summer months as a result of movement of plant and machinery, and activities such as crop harvesting, ploughing, harrowing etc.
- 3.2.2 The adjacent Alkerton Landfill and associated management operations may also be a source of dust, located on the north-western boundary of Alkerton Quarry, operated by SUEZ.
- 3.2.3 The Alkerton Recycling Centre 400m northwest of the site could be a potential source of dust emissions, however this is likely to blow towards the northeast and away from residences further to the southeast.

### 3.3 Pathways

- 3.3.1 It is considered the potential pathway for dust and particulate emissions to receptors are via airborne transmission. Factors affecting dust and particulate emissions include:
- Quantity of wastes;
  - Type of wastes;
  - Warm, dry weather;
  - Wind direction, exposure and speed; and,
  - Exposure of sensitive receptor to site operations.

## 4.0 DUST CONTROL MEASURES

4.1.1 This section details the control measures that will be undertaken on site to mitigate dust emissions from site activities. The abatement of dust emissions will be based on best management practices. General principles will include:

- i) The use of clean water for suppression to avoid re-circulating fine material;
- ii) The storage and processing area will be used during short term adverse weather conditions such as prolonged rain/wet conditions. It is considered that dust emissions are likely to be extremely low to negligible taking into account the weather conditions, where rain and wet environment will act as a form of dust suppression.
- iii) Anti-idling policy for vehicles (monitored by weekly reports for mobile plant);
- iv) High standards of house-keeping to minimise track-out and wind-blown dust; and
- v) Effective staff training in respect of the causes and prevention of dust.

### 4.2 Waste Acceptance

4.2.1 Waste carriers will report to the weighbridge and waste transfer notes inspected for their load, and if in compliance with the permit, the waste carrier will then be sent to the appropriate unloading area within the site and site operatives will visually inspect the waste load, including for excessive dust emissions. Waste loads will be dampened down where necessary to mitigate dust. Any non-conforming wastes, particularly excessively dusty wastes, will be rejected from site.

4.2.2 Drop heights will be minimised during the loading and unloading of materials to reduce the likelihood of dispersion of dust as a consequence of agitation. The weighbridge will conduct assessments of waste inputs and impose controls and restrictions on potentially dusty wastes. If required, the surface of the material will be dampened down prior to entering site.

4.2.3 Taking into account the meteorological conditions for that day, Site Management may impose the following restrictions to reduce the impact of dust and particulate emissions:

- Limiting only one vehicle at a time to tip, any load carrying high particulate matter will be deposited and covered as quickly as possible;
- Instructions given to all incoming waste loads that all wastes remain sheeted until immediately prior to waste deposition;
- Rejection of dusty and high particulate wastes at weighbridge; and,
- Complete site closure during adverse weather conditions.

### 4.3 Dust Suppression

- i) Dust suppression will be carried out via a tractor and tank bowser and is recorded by the number of fills and deployment. Water is taken from a mains supply.
- ii) The equipment used for dust suppression will be inspected weekly and any maintenance requirements implemented and recorded by site operatives. Where necessary the equipment used for the processing and movement of materials around site shall be regularly inspected and cleaned to remove excess mud and debris which could generate dust around site. Site operatives will be adequately trained in the safe and appropriate use and maintenance of dust suppression equipment.
- iii) An adequate water supply for dust suppression will be maintained at the site using either mains water or a bowser storage tank. It is anticipated only small amounts of water will be used, higher in summer if prolonged hot dry conditions. The use of additives in the water used for dust suppression is not proposed.
- iv) Suitable road cleaning equipment will be kept available to ensure that areas are kept clear and tidy and trafficked areas kept routinely dampened in dry, windy conditions to reduce the risk of airborne dust emissions.
- v) A road sweeper will be deployed promptly to remove any debris or other deposits from adjacent highways if debris is tracked off-site by vehicles.

### 4.4 Site Management

- vi) Site management shall be responsible for the satisfactory working of the whole site and operations ensuring full compliance with the dust and emissions management plan.
- vii) In line with the site permit and waste acceptance procedures, wastes consisting solely or mainly of dusts will be excluded from site.
- viii) The impacts and overall risk of dust emissions at the site in relation to the proposed activity has been assessed in the Amenity and Accidents Risk Assessment, document ref: 4919-CAU-XX-XX-RP-V-0302.
- ix) As part of the company management system, staff will receive the necessary training and instruction in their duties relating to all operations and the potential sources of dust emissions. Emphasis will be given to plant and equipment malfunctions and abnormal conditions.
- x) Site management shall ensure that customers, contractors', suppliers and visitors to the site are aware of the need to comply with this dust and emissions management plan summarising road transport.

- xi) Any persons on site failing to comply with the requirements of the dust and emissions management plan will be re-trained as necessary. External hauliers failing to abide by site road rules in respect of vehicle operations will be reported and if required, asked to leave site.

#### **4.5 Plant, Machinery and Hauled Materials**

- i) All plant and machinery will be regularly maintained and washed down using on-site washing facilities available to limit the potential of airborne dusts.
- ii) In line with manufacture's specifications, all mobile plant and machinery shall be maintained as per the minimum requirements specified by the manufacturer.
- iii) Any malfunction or breakdown leading to abnormal emissions will be dealt with promptly and operations will be modified or suspended until normal working can be restored.
- iv) Haul routes will be located (where possible) in positions which are remote from sensitive receptors. Unpaved haul routes shall be kept damp in dry, windy conditions using a bowser.
- v) All vehicles delivering materials will be sheeted or enclosed to minimise dust generation. All loaded vehicles will be evenly loaded to avoid spillage or overtopping of material.
- vi) Regular grading and road maintenance will be carried out to reduce dust disturbance from vehicle movements;
- vii) Anti-idling policy will be in place for vehicles.
- viii) Vehicles will be supervised during unloading and loading to ensure that they deposit materials correctly and are not overfilled on dispatch.

#### **4.6 Vehicle Movements In/Out of Site**

- i) All haul and access roads within the site shall be kept free from mud and debris by manual clearing and hiring of road sweeper. Mud and debris on access and haul roads will be undergo visual daily monitoring by the site manager and his nominated deputy. Cleaning/remedial actions will be undertaken when required. A road sweeper will be hired if necessary and used on the nearby public highway if mud/debris builds up.
- ii) Site management shall ensure that adequate measures are provided throughout the site to dampen and wet surfaces. E.g. hoses/bowser during periods of dry weather.

- iii) All new drivers to site, contractors and visitors will be fully inducted on traffic movement and their responsibility to minimise dust emissions from site driving.
- iv) All vehicles and plant will be checked by the driver/operator prior to leaving site to ensure that deposits of mud and debris are not carried outside the site. Wash down of vehicles will be actioned if required.
- v) Where appropriate, soiled vehicles will be required to remove mud and debris using a hose/brush or wheel wash before leaving the site to as to prevent the deposition of mud and deleterious material on the public highway.
- vi) An Anti-idling policy will be in place for vehicles.
- vii) A site speed limit of 10mph will be enforced for all vehicles to minimise the potential entrainment of dust into the atmosphere.

#### **4.7 Loading and Tipping Operations**

- i) All wastes handled on site shall be done so in a controlled manner, with consideration given to the potential for dust generation at all times.
- ii) Loading and tipping heights will be minimised to avoid uncontrolled dust emissions.
- iii) Suppression equipment will be available (e.g. hoses and bowser) to dampen down dusty loads.
- iv) All vehicles will be sheeted when entering and leaving the site

#### **4.8 Movement of Stockpiles**

- i) Site Management will consider weather conditions at the site on a daily basis and shall have regard for high winds, wind speed and direction.
- ii) If high winds are encountered and towards sensitive receptors, site management will ensure that the movement of materials on site is controlled (reduced speeds/operations stopped/dust suppression applied) until wind speeds reduce significantly.
- iii) The covering and compacting of wastes at the end of the working day will be undertaken to reduce the potential for dust emissions and the effect of windblow on potentially dusty wastes.
- iv) Site management shall ensure that appropriate measures are used throughout the site to dampen surfaces during periods of dry weather.

#### **4.9 Windblow Action Across Stockpiles**

- i) The effects of windblow across stripped surfaces, unpaved areas, stockpiles and other areas of bare ground will be minimised by ensuring that loose materials are removed or treated as necessary.
- ii) Site Management will consider weather conditions at the site on a daily basis and shall have regard for high winds, wind speed and direction.
- iii) If high winds are encountered and towards sensitive receptors, site management will ensure that the movement of materials on site is controlled (reduced speeds/operations stopped/dust suppression applied) until wind speeds reduce significantly.
- iv) During dry conditions, unpaved haul road areas and surfaces of stockpiles in the open will be dampened down using a water bowser. Water will be applied as necessary to stabilise loose bare surfaces such as near the site boundary.
- v) Site management shall ensure that appropriate measures are used throughout the site to dampen surfaces during periods of dry weather.



## 5.0 EMISSIONS ACTION PLAN

5.1.1 In the event that an unacceptable dust impact is caused at a nearby sensitive receptor or observations of dust moving made beyond the site boundary, the following actions will be undertaken, including:

- Additional visual monitoring by site staff or site management to identify the extent of the impact and potential cause and dust source;
- Examination of the operational activities at site at the time of the complaint or identification of an impact;
- Examination of the meteorological conditions at the time of the complaint or identification of an impact;
- Carry out a review of the operational procedures and controls and instigate any control measures immediately following identification of the problem;
- Further monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

5.1.2 It is the responsibility of all site personnel to maintain a visual awareness of dust emissions during the working day as part of continual proactive environmental monitoring of the site operations. Any significant dust emissions occurring with the potential to travel beyond the site boundary will be reported to the Site Manager/designated person who will be responsible for investigating the cause and taking immediate action to minimise further dust emissions.

5.1.3 The Site Manager (or designated persons) will also be responsible for daily visual checks (as part of the daily 'Site Inspection Form') which will be carried out as part of their normal operational procedures of monitoring dust levels and conditions associated with the potential for fugitive emissions of dust. In particular, this is in relation to:

- Dry surfaces where mud or debris is present;
- Any part of the site where movement of vehicles may generate dust;
- Any part of the site where dust may be generated by wind;
- Stockpiles of material;
- Agitation of wastes for recovery; and,
- Material handling operations

## 6.0 ENGAGEMENT WITH NEIGHBOURS

### 6.1 Complaints Procedures

6.1.1 Typically, any complaints received at the site are likely to be through the Environment Agency or Local Authority, although the operator is willing to deal directly with complainants and where necessary the following can be implemented:

- Information can be provided to the local neighbours (via the Environment Agency) regarding the point and method of contact for the site in the event that fugitive dust has been detected.
- The neighbours can be advised that any complaints/concerns will be addressed immediately following identification/notification and contingency actions implemented.
- The neighbours can be advised of any corrective actions and a follow up call carried out if required.

6.1.2 The operator will continue to maintain a routine liaison with the Environment Agency regarding nuisance dust and emissions. In the event of an emission complaint being received by the EA the complaint is passed to the operator for the investigation. The primary point of contact at the site for complaints and liaison within the neighbours is the Site Manager who will ensure that the recording, investigation and close out of complaints is undertaken as described below and in accordance with company management procedures. Every complaint will be recorded on a 'Complaints Record Form' (Appendix 2) and notes made in the site diary. Electronic copies will also be held on FCC's database system.

- All complaints are recorded by the site manager or site staff;
- Depending on the severity, the complaint can be escalated to senior management for investigation if necessary; and,
- The system is a digitalised process and records a wide range of reporting.

### 6.2 Complaints Monitoring

6.2.1 Any complaints received directly to the site or via the regulatory bodies, will be recorded on the 'Complaints Record Form' (Appendix 2) and will instigate monitoring at the location of the complaint and on site to determine the extent and location of the plume and the source of dust and emissions will be identified. If necessary, monitoring will also be carried out at the nearest sensitive receptors to the site and the monitoring results recorded.

6.2.2 Following receipt of a complaint or identification of emissions at site which may give rise to an offsite impact the following action plan will be undertaken, including:

- Additional monitoring as detailed above to identify the extent of the impact and potential cause and source;
- Examination of the operational activities at site at the time of the complaint or identification of an impact;
- Examination of the meteorological conditions at the time of the complaint or identification of an impact; and,
- Carry out a review of the operational procedure and process controls and instigate any control measures immediately following identification of the problem.

6.2.3 Further monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

## 7.0 MONITORING

7.1.1 Monitoring will be undertaken in order to assess how successful the operational management and mitigating control measures are at site and to identify if necessary, whether dust emissions are causing a potential nuisance, to ensure that appropriate remediation measures are adopted early. In addition to monitoring, a visual awareness of dust is made and recorded in the daily log of the 'Site Inspection Form' (Appendix 1).

7.1.2 Monitoring will be undertaken by designated staff who will be fully trained by site management. All site personnel will be responsible for reporting any problem emissions identified during their day to day operations. Monitoring will consist of the following as shown in Table 2 below:

**Table 2 - Monitoring Overview**

Parameter	Monitoring Technique	Frequency
Meteorological Monitoring	Using weather station app or website.	Manually checked at start of each working day.
Dust Monitoring	Dust monitoring as part of daily site inspections.  On-site checks and off-site checks in response to an issue being identified.	Daily on-site checks (or more frequently following dust complaints, or during prolonged dry or windy conditions).
Complaints Monitoring	Logged in site diary in accordance with complaint procedure.	Ad-Hoc.

### 7.2 Meteorological Monitoring

7.2.1 In the event of dust complaints, the weather data enables complaints to be assessed against the meteorological conditions for the relevant period. Meteorological information will also be recorded in the 'Complaints Record Form' (Appendix 2).

### 7.3 Dust and Emissions Monitoring

7.3.1 Site staff will visually monitor the operations likely to cause airborne emissions. The frequency of these inspections will be risk-based but will occur daily as a minimum. Inspections will be increased in response to complaints or adverse weather conditions, and the activities undertaken on site. Inspections will be increased when the following situations are encountered (this list is for guidance only and is not exhaustive):

- Increases in wind speed;
- Intensity of wind increases;

- Changes in wind direction towards sensitive receptors;
- Periods of hot, dry weather; and,
- Any unscheduled activity (e.g. dealing with an emergency).

7.3.2 As part of the daily inspections, appropriately trained and experienced site personnel will carry out an on-site inspection to monitor dust and emissions, which will be recorded on the daily 'Site Inspection Form' (Appendix 1). The records of the site daily inspections will be made available to the Environment Agency on request. The records will include as a minimum the following:

- Date and time of dust emission;
- Meteorological conditions;
- Potential source of dust emissions/operations during the observation;
- Any complaints received and remedial actions to be taken to minimise or eliminate dust emissions.

7.3.3 It is the responsibility of all site personnel to maintain a visual awareness of dust emissions during the working day. Any significant dust emission occurring during the working day with the potential to travel beyond the site boundary will be reported to site management and a record made in the site diary and also as part of the 'Site Inspection Form' (Appendix 1). Site Management who will be responsible for investigating the cause and taking immediate action to minimise further emissions. If necessary, site operations will be halted until appropriate remedial action(s) is completed.

7.3.4 Dust and emissions monitoring will include observing the movement of vehicles, stockpiling and movement of materials, to establish if such operations are giving rise to dust emissions and the size and frequency of these releases. Daily monitoring will also check for evidence of dust escaping beyond the site boundary or if surfaces are becoming soiled (e.g. trees/vegetation and cars).

7.3.5 In the event that dust emissions are observed to be crossing the site boundary or surfaces are becoming soiled, the Site Manager will be informed immediately and the approximate location and extent of the airborne dust, or deposited dust, will be assessed and site operations reviewed and the situation remediated.

## 8.0 GENERAL SITE PROCEDURES

### 8.1 Record Keeping

8.1.1 The daily 'Site Inspection Form' (Appendix 1) and the 'Complaints Record Form' (Appendix 2) will be completed where required and notes made in the Site Diary as necessary. The paper records and forms will be maintained free from damage and kept within the Site Office and will be made available to the regulating authorities on request. The record keeping will form part of the site's Management System. Electronic copies will also be held on FCC's database system.

### 8.2 Staff Training

8.2.1 The designated person or Site Manager will be responsible for ensuring staff receive proper and adequate training in respect of dust emissions management.

8.2.2 Site staff will undergo training to ensure that they understand how their actions and the site operations can affect airborne emissions. Staff will be instructed to not operate unless the dust controls are operational and alert site management at times when the site could potentially cause a dust/emissions nuisance. Staff will be trained to ensure that materials are sprayed with water during unloading and loading or when conditions require it and trained to visually inspect for airborne emissions. Staff will be instructed to report fugitive emissions to the designated person or the Site Manager with immediate effect.

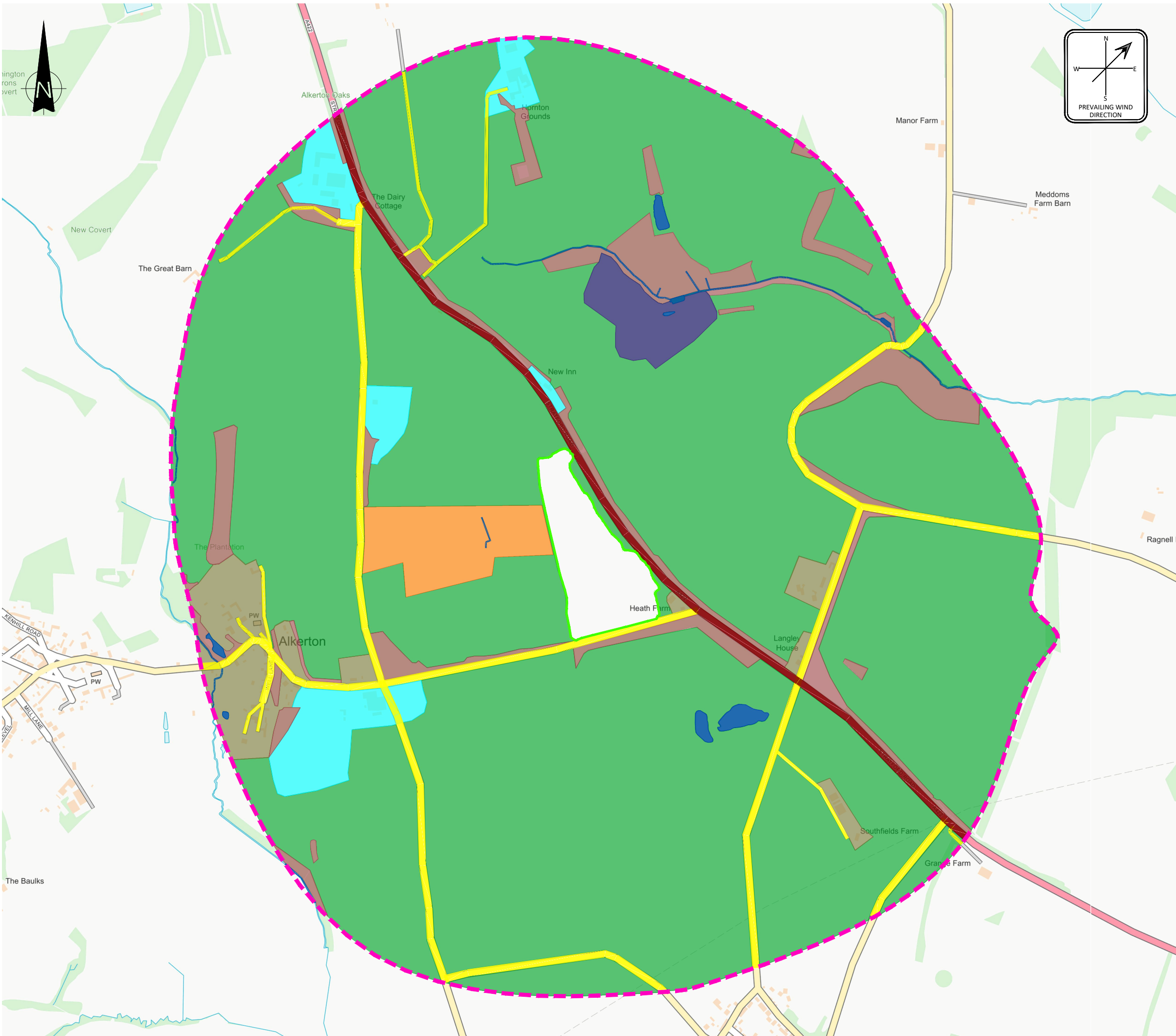
8.2.3 Staff training records will also be updated and stored within the site office.

### 8.3 Dust & Emissions Management Plan Review

8.3.1 This Dust & Emissions Management Plan (DEMP) will be reviewed by site management on a regular basis as a minimum to ensure that the controls described are effective and reflect best available techniques. The DEMP will also be reviewed following a number of complaints at the site or if there are relevant changes in the site operations or procedures.

## DRAWINGS

4919-CAU-XX-XX-DR-V-1800 Sensitive Receptor Plan



- LEGEND**
- PERMIT BOUNDARY
  - 1000m OFFSET
  - SURFACE WATER
  - WOODLAND / SCRUBLAND
  - RECREATIONAL
  - INDUSTRIAL
  - COMMERCIAL
  - RESIDENTIAL
  - MAJOR ROAD
  - MINOR ROAD
  - RAIL
  - AGRICULTURAL

P01	ISSUED FOR INFORMATION	EJD	SH	SH	07.11.22
REV	MODIFICATIONS	BY	RE	AP	DATE
PURPOSE OF ISSUE				STATUS	
FOR INFORMATION				S2	
CLIENT:					
ALKERTON 2022 LIMITED					
PROJECT:					
ALKERTON RECOVERY PERMIT					
TITLE:					
SENSITIVE RECEPTORS PLAN					
DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY		
EJD	EJD	SH	SH		
DATE	SCALE @ A3	JOB REF:	REVISION		
04.11.2022	1:10,000	4919	P01		
DRAWING NUMBER					
4919-CAU-XX-XX-DR-V-1800					



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## APPENDIX 1

### Site Inspection Form

## SITE INSPECTION FORM (DAILY INSPECTIONS)

WEEK STARTING:							
DAILY SITE INSPECTION		DAY					
		M	T	W	T	F	S
SITE ENTRANCE/NOTICE BOARD							
SECURITY - GATES							
SECURITY - FENCING							
SITE ROADS / SURFACES							
WASTE CONTAINERS							
WASTE TYPES							
WASTE/SKIP STORAGE							
PLANT/EQUIPMENT							
FUEL TANK/BUND (if any)							
FLOORING & HARDSTANDING (if any)							
DRAINAGE CHANNELS/GULLIES							
WASTE TYPES/ QUANTITIES							
REJECTED WASTE TYPES / STORAGE							
NOISE LEVELS							
FIRES							
LITTER							
DUST							
ODOUR							
VERMIN							
RECORDS							
OTHER -							
INSPECTION CARRIED OUT BY							
NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):							
CHECKED BY		SIGNATURE					
POSITION		DATE					
Sheet		of					



## APPENDIX 2

### Complaints Record Form

**COMPLAINTS RECORDING FORM**

<b>Date recorded:</b>		<b>Reference Number:</b>	
Name and address of caller:			
Telephone number of caller:			
Time and Date of call:			
Nature of complaint (noise, odour, dust, other) (date, time, duration):			
Weather at the time of complaints: (rain, snow, fog, etc.)			
Any other complaints relating to this report			
Site activity/activities carried out at the time of the complaint:			
<b>FOLLOW UP</b>			
Actions taken:			
Date of call back to complainant:			
Summary of conversation:			
<b>RECOMMENDATIONS</b>			
Changes in procedures? Include details and date of changes made:			
<b>Form completed by:</b>			
<b>Signed:</b>			
<b>Date:</b>			

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