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Sandown Quarry Access Road

Environmental Risk Assessment

Booth Ventures Waste (Midlands) Limited

Report No. 16-K5430-BLP-ENV-R-0012

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1 Introduction

1.1 Report Objectives

This Environmental Risk Assessment (ERA) has been produced to support a Bespoke Permit application by Booth Ventures Waste (Midlands) Limited (the Operator) to construct an access road at Sandown Quarry as a waste recovery activity. The construction of the access road is a critical step in the restoration of the quarry. The Environment Agency (Agency) agreed that the construction of the road would constitute a recovery activity with approval of the Waste Recovery Plan (WRP) referenced: 16-K5430-BLP-ENV-R-00010-01 that accompanies this application.

The access road will be constructed from a currently disused gateway to the base of the quarry. For Heavy Good Vehicles (HGVs) to safely use the road, it must have a gradient no steeper than 1v:10h and a minimum width of 10 m to allow two HGVs to safely pass. The access road will be gradually covered over as the quarry is restored to surrounding ground levels under a landfill permit for that allows for the deposit of wastes suitable for restoration. The landfill permit application is referenced as reports 5430-BLP_R_001_02 to 5430-BLP_R_001_09 inclusive and should be determined subsequent to the WRP.

Environment Agency (Agency) guidance¹ on risk assessments for environmental permits requires applications for new environmental permits or variations to an existing permit, to evaluate the risks posed by:

- any discharge, for example sewage or trade effluent to surface or groundwater
- accidents
- odour (not for standalone water discharge and groundwater activities)
- noise and vibration (not for standalone water discharge and groundwater activities)
- uncontrolled or unintended ('fugitive') emissions, for which risks include dust, litter, pests and pollutants that should not be in the discharge
- visible emissions, for example smoke or visible plumes
- release of bioaerosols, for example from shredding, screening and turning, or from stack or open point source release such as a biofilter

For each risk that applies, risks will be tabulated where the hazards, potential receptors and pathway from that hazard will be identified along with the preventative risk management practices to be employed along with an assessment of the mitigated risk.

¹ [Risk assessments for your environmental permit - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit)

1.2 Site Details

Sandown Quarry is located approximately 4km to the northeast of Walsall, 1.7km northwest of the town of Aldridge at National Grid Reference (NGR) SK 04386 01960. The site is currently an active quarry operated by Weinerberger UK, extracting marl and mudstone for the brick manufacturing industry. Additional quarry sites are located within the immediate area (some of which are operational) extracting the same natural resource (e.g. Ibstock's Atlas Quarry to the south and Aldridge Site to the east).

Brick making mineral (marl/mudstone) is extracted from the quarry and stored on the north-eastern section of the brick stocking yard prior to use in the brick making process. The mineral processing operations, kilns, workshop, brick stocking yard and offices are located immediately to the south-east of the quarry.

The ground level around the quarry is approximately 130m AOD and the current base of the quarry is approximately 90mAOD, making the depth of excavation approximately 40m. Rainwater accumulates in the base of the quarry during wet periods of the year and this water is removed to the on-site surface water settlement pond in the north-western corner of the site. The water from the settlement pond passively drains to the west into a pond called Swan Pool which connects to a larger lake to the west.

The excavation of the brick marl reserve will continue down to a terminal depth of 75mAOD. It is proposed to then infill the remaining void with non-hazardous wastes which are listed as qualifying materials. The infilling of the void will provide final restoration contours for the site to be commensurate with the surrounding land surface (as far as is reasonably practical). The restored surface will convey rainfall run-off towards the northwest corner of the site boundary to the enlarged surface water management / settlement pond.

The restoration of the quarry cannot be achieved without safe access to the base of void to place infill materials.

2 Scope of the Assessment

2.1 Proposed Operations

The construction of the access road is a critical step in the restoration of the quarry. The existing access road down into the quarry is at the far end of the Weinerberger UK manufacturing area and is used to move extracted marl to the brick works. The current access to the quarry is designed for internal use and is not a suitable access for vehicles entering the brickworks from the public highway.

Weinerberger UK and the Operator have entered into a lease agreement whereby the Operator will undertake the restoration of the quarry on Weinerbergers behalf. It is anticipated that there will be significant HGV traffic in and out of the quarry when restoration works commence. This volume of traffic cannot safely be accommodated through the Weinerberger facility and as such the exclusion of vehicles importing restoration materials through the brick works is a requirement of the lease agreement.

The restoration of the quarry cannot be achieved without safe access to the base of void to place infill materials. The existing point of access will not be available for restoration works under the terms of the lease agreement. As part of the planning application, the Local Planning Authority (LPA) recommended the re-opening of a former point of access on Stubbers Green Road (subject to Highway Authority approval).

Drawing referenced 5430/1/002: Quarry / Landfill Access Option 2 is attached in Appendix B of the WRP. This shows the proposed layout of the access road off Stubbers Green Road. Immediately west of the proposed site entrance will be the new site offices. The road will need to circle westward immediately after the site entrance to follow the south rim of the quarry. The sweep of the turn needs to be sufficient to accommodate the wide turning circle of an articulated HGV.

The volume of material required to construct the ramp is 35,000 m³ and on that basis it would meet the requirements for a standard rules permit. However, the presence of a number of Sites of Special Scientific within 500 m of the proposed site means a bespoke application will need to be submitted to demonstrate mitigation of the potential risks to the surrounding habitats.

2.2 Potential Hazards

2.2.1 Discharges to surface water and groundwater

There will be no point source discharges to surface water or groundwater onsite. A discharge consent (referenced: R/08/35782/T) is already in place for the active quarry and a separate permit application will be submitted for the proposed infilling and restoration of the Site. The proposed waste types are permitted by Standard Rules (SR) 2015No.39 and are inert. These materials have an inherently low pollution potential and will not contain substances at concentrations that are hazardous or may present a risk to surface water or groundwater. After its deposit and subsequent

profiling, the already low permeability of this material is further reduced. This further restricts the leachability of any potential soluble components and mobilisation of solids from its compacted surface. An Environmental Site Setting and Design (ESSD) (referenced: 16-K5430-BLP-ENV-R-00013-01) has been submitted with this application and provides further detail regarding surface water and groundwater. As such discharges to surface water and groundwater are not considered further in this ERA.

2.2.2 Odour

The risk of odours emanating from the site is considered low, due to the nonbiodegradable nature of the wastes being accepted. It is also expected to present a negligible risk in terms of leachate generation. Odour is not considered further in this report.

2.2.3 Noise and Vibration

Sandown Quarry is located within a semi-urban / industrial location with residential land use to the northwest, southwest and east (beyond Leighswood Industrial Estate), and limited agricultural land use to the west.

The waste recovery activity will take place in the existing active quarry which will already be generating noise and vibration and have its own controls in place. The risk of excessive noise and vibration associated with the proposed recovery activity will be restricted primarily to movement and operation of site plant. It is therefore considered that the proposed operations at the site are unlikely to generate an additional / unacceptable noise impact.

In addition, the majority of the activity is below ground surface (within a quarry / void) hence noise is lessened compared to above ground surface operations.

On site speed limits will be enforced and internal site roads will be maintained to minimise noise / vibration.

Appropriate maintenance of site vehicles in accordance with the manufacturer's or supplier's instructions. Where practicable, engines to be switched off when not in use. Silencers will be used on vehicles. Should it prove necessary alternatives to reversing beepers on site vehicles will also be considered. Deposit of recovery materials will not be made from height to reduce noise / vibration.

Risks associated with noise and vibration are detailed in Table 2 and will be managed in accordance with the site's Environmental Management System (current EMS).

2.2.4 Fugitive Emissions

2.2.4.1 Pests and Vermin

Only waste materials listed in SR2015 No.39 will be accepted at Site. They do not contain putrescible material and are unlikely to attract pests, scavengers or vermin. Pests and vermin will not be considered further in this ERA.

2.2.4.2 Litter

The nature of the materials also excludes the potential for the site to generate litter. Litter will not be considered further in this ERA.

2.2.4.3 Dust

The potential for dust emissions is considered and operations which may give rise to dust include the passage of haulage vehicles on site roads and the deposit and spreading of recovery materials. Any dust generated has the potential to impact upon sensitive receptors.

As the majority of the activity is below ground level, the recovery operation will not significantly increase the risk of dust emissions. No excessively dusty wastes to be accepted at the site.

On site vehicle speed limit enforced to ensure that vehicle movements do not generate excessive dust. Dampening of site roads/surfaces as necessary using a tanker during dry periods.

Daily visual inspection by appropriate site staff at suitable locations taking account of the prevailing wind direction. Twice daily visual inspection recommended in adverse weather conditions at the Site.

A road sweeper will be utilised as necessary to clean site roads and / or public highways of any mud trailed on from site vehicles, this will limit further dust generation.

For completeness, a DEMP is provided to support the application and is attached as Appendix B. It is noted that dust generation specifically associated with the recovery activity is deemed minimal (2-3 month activity). Crushing / screening / processing does not form part of the activity and is therefore not considered further.

The risks associated with dust and mitigation controls are considered in Table 3.

2.2.4.4 Mud

Mud can be trailed onto the highway by vehicles leaving the site after picking up mud from unpaved roads or from the point of deposit. The primary receptor to entrained mud will be the adjoining Stubbers Green Road.

The access roads and Stubbers Green Road will be regularly inspected allowing the operator to deploy road sweepers as necessary, as part of the Site's EMS.

A road sweeper will be utilised as necessary to clean site roads and / or public highways of any mud trailed on from site vehicles.

Drivers will be reminded of their responsibility to maintain clean vehicles and not to track mud onto the public highway.

Monitoring of shared access and appropriate maintenance will form part of the EMS for the site.

The risks associated with entrained mud are considered in Table 4.

2.2.5 Visible Plumes

The wastes types to be accepted are non-flammable, and no wastes will be burnt at the site, therefore the risk of smoke / visible plumes emanating from the site is considered low. The Site's EMS has a fire procedure in place to deal with fires should there be an occurrence. Visible plumes will not be considered further in this ERA.

2.2.6 Bioaerosols

The recovery activity and waste types to be accepted onsite will not give rise to bioaerosols. Bioaerosols will not be considered further in this ERA.

2.2.7 Accidents

There is potential for accidents to occur during this type of recovery activity which may have a detrimental environmental impact. This can include spillages of fuels or other polluting liquids; fires causing damage to containment measures or generating contaminated liquid; or, deliberate vandalism resulting in pollution similar to the aforementioned. The risks of pollution occurring from accidents and the proposed management measures are discussed further in Table 5.

2.3 Hazard Pathway

When identifying the receptors, the closest and the most sensitive (if different from the closest) have been considered in each direction from the hazard. Account has been taken of the mechanism of transport to the sensitive receptor e.g. proximity to highway access / egress points for mud and wind direction for airborne dust. Recent wind direction data from Walsall Wood² has been used to establish 'Airborne' hazard pathways to adjacent / nearby receptors.

² [Walsall Wood Wind Forecast, West Midlands WS9 9 - WillyWeather](#)

2.4 Probability of Exposure

Probability of exposure is determined by the distance of the receptor to the site and the likelihood of the hazard reaching the receptor i.e. frequency of prevailing wind in that direction. The probability of exposure is irrespective of the type of hazard presented.

2.5 Hazard Receptors

An appraisal of Site receptors has been undertaken, Table 1 identifies the most likely sensitive receptors adjacent to Sandown Quarry, this has been compiled using information available through internet-based searches. The location of these receptors are indicated on drawing 5430/3/002 and 5430/3/003 attached in Appendix C and have been taken from the proposed landfill permit which is being applied for separately. Therefore, this assessment is conservative and a 500m buffer has been used.

Table 1 – Sensitive Receptor Review

Receptor No.	Receptor	Receptor Type	Approx. Distance from Site Boundary (m)	Direction from Site	Freq (%) Prevailing Wind Direction
1	Residential properties on Stubbers Green Road	Residential	20	SW	4
2	Residential properties on New Street	Residential	125	NW	9
3	Residential properties on Swan Pool Grove	Residential	130	W	1
4	Residential properties on Brook Meadow Road	Residential	150	W	1
5	Residential properties on Woodhaven	Residential	180	W	1
6	Residential properties on Broadheath Drive	Residential	240	W	1
7	Residential properties on Woodbridge Close	Residential	210	NNW	22
15	Aldridge Sailing Club	Recreation	200	SW	4
16	Open parkland around The Swag	Recreation	40	W	1
17	Recreation Ground	Recreation	450	W	1
18	Sandown Brickworks	Industrial/Commercial	40	S	2
19	Empire Industrial Estate	Industrial/Commercial	80	E	5
20	Veolia Empire Work (waste treatment)	Industrial/Commercial	15	N	14
21	Highfields South Landfill Site	Industrial/Commercial	250	N	14
22	Vigo Utopia Landfill Site	Industrial/Commercial	210	NNE	10
24	Mercian Weldcraft Factory	Industrial/Commercial	280	SSE	0
25	Ibstock Brick Atlas brickworks	Industrial/Commercial	430	SSE	0
26	Ibstock Brick Atlas open quarry	Industrial/Commercial	410	S	2
27	Daw End Branch	Canal	15	E	5
28	Swan Pool	Pond	10	W	1
29	The Swag	Lake	75	W	1
30	Unnamed pond	Pond	90	NNW	22
31	Brick Kiln Pool	Pond	200	N	14

Receptor No.	Receptor	Receptor Type	Approx. Distance from Site Boundary (m)	Direction from Site	Freq (%) Prevailing Wind Direction
32	Unnamed pond	Pond	220	S	2
33	Unnamed pond	Pond	500	WSW	2
34	Unnamed pond	Pond	210	SSE	0
35	Unnamed pond	Pond	330	NE	7
36	On-site Drain – Highfield South	Site Drainage	320	N	14
37	Unnamed drain	watercourse	5	W	1
38	Unnamed drain	watercourse	20	NW	9
40	Unnamed drain	watercourse	200	NNW	22
41	Unnamed drain	watercourse	50	S	2
42	Swan Pool and The Swag SSSI	SSSI	0	W	1
43	Stubbers Green Bog SSSI	SSSI	50	S	2
44	Jockey Fields SSSI	SSSI	340	N	14
46	Dumblederry Lane LWS	LWS	220	SW	4
47	Anchor Brook Valley LWS	LWS	70	S	2
48	Daw End Branch Canal LWS	LWS	15	E	5
49	Stubbers Green LWS	LWS	15	W	1
50	Stubbers Green Road	Road	20	W	1
51	Barns Lane	Road	50	SW	4
52	Unnamed access road to Veolia Site	Road	20	ENE	8
53	Empire Close	Road	140	E	5

See drawings 5430/3/002 and 5430/3/003. Sensitive Receptors do not include former / historic landfill sites. Receptors numbered 8 to 14, 23, 39 & 45 relevant to the landfill have been removed.

A ‘Conservation & Heritage Screen’ was provided by the Agency (referenced: EPR/LB3107UP/A001) for a landfill permit at Sandown Quarry which is being applied for separately. No European Sites, National Nature Reserve (NNR), Local Nature Reserves (LNR), Ancient Woodland, Scheduled Ancient Monument or Great Crested Newts were identified. It did identify Sites of Special Scientific Interest (SSSI) Jockey Fields, Swan Pool & The Swag, and Stubbers Green Bog. It also established Local Wildlife Sites (LWS) Dumblederry Lane, Anchor Brook Valley, Daw End Branch Canal and Stubbers Green. Protected species (Floating-leaved Water Plantain) and Protected Habitats (Deciduous Woodland, Fens and Coastal and Floodplain Grazing Marsh) were also identified. These sites have been included in Table 1 and have been considered accordingly in the ERA and ESSD. These sites are not considered at risk from the activity associated with the WRP, the operation is below ground level and of a short duration only.

The activity meets all the location and operational requirements of a standard rules recovery permit (SR2015No.39) were it not for the presence of the SSSI, LWS and protected habitats therefore a bespoke permit is appropriate for the Site.

The recovery activity is not anticipated to impact these habitats. The road will be constructed in the void and below the surrounding ground levels. There is no direct pathway for surface run-off from the material placed for the road to enter these habitats. Water flowing from the activity will accumulate in the base of the quarry and this will be pumped out and discharged under an existing consent. No changes are proposed to the parameters of this consent and the previously assessed risk to the receiving environment remains unchanged. The majority of road construction

activities will also be carried out below surrounding ground levels, with the potential impact of emissions such as dust and noise disturbance reducing as the road progresses further into the void. The ESSD notes that the status of the most immediate habitats are unfavourable or in decline as a result of impacts associated with external activities. It is unlikely that the construction of the road will exacerbate these further.

3 Risk Assessments and Accident Management Plans

3.1 Risk Assessments

The site specific risk assessments completed for Noise & Vibration, Dust and Mud are detailed in Tables 2 to 4 below. Where there is an inter-relationship between the specific risk assessment and meteorological conditions, this has been identified. The pathway is determined by the location of the receptor relative to the site, the distance from the site boundary (m) and the frequency (likelihood) the prevailing wind will blow in the direction of the receptor (%) as determined by wind rose data².

The Mitigated Risk is the residual risk presented by the hazard after control measures have been implemented. This is the most realistic representation of the risk as effective controls will be maintained under the requirements of the environmental permit, planning consent and management procedures set out in the Operator's EMS.

3.2 Environmental Accidents

Agency guidance requires the completion of an Accident Risk Assessment and Management Plan. This should assess potential hazards associated with the proposed activity not described in the sections above. Accidents are considered in Table 5 herein for completeness.

Table 2 – Noise and Vibration Risk Assessment and Management Plan

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Noise through air and Vibration through ground from: Vehicle Movements associated with the delivering and handling of waste on site. Site plant.	1	20	SW	4	High – close proximity to Site	High – nuisance to residents	High	Most site activities will be below ground level. Road construction activities are unlikely to generate noise in excess of the current quarrying activities.	Low
	2	125	NW	9	Medium – proximity to Site	High – nuisance to residents	Medium		
	3	130	W	1	Medium – proximity to Site	High – nuisance to residents	Medium		
	4	150	W	1	Medium – proximity to Site	High – nuisance to residents	Medium	Noise screens to be considered (adjacent to nearest property) when operations are within 5m of ground level – only in the event of previous complaints.	
	5	180	W	1	Medium – proximity to Site	High – nuisance to residents	Medium		
	6	240	W	1	Medium – proximity to Site	High – nuisance to residents	Medium	On site speed limits will be enforced and internal site roads will be maintained to minimise noise / vibration.	
	7	210	NNW	22	Medium – proximity to Site	High – nuisance to residents	Medium		
	15	200	SW	4	Medium – proximity to Site	Medium – nuisance to users to open spaces	Medium	Appropriate maintenance of site vehicles in accordance with the manufacturer’s or supplier’s instructions	
	16	40	W	1	High – close proximity to Site	Medium – nuisance to users to open spaces	Medium		
	17	450	W	1	Low - distant to Site	Medium – nuisance to users to open spaces	Low	Where practicable, engines to be switched off when not in use.	
	18	40	S	2	High – close proximity to Site	Low – limited effect to industrial facilities	Low		
	19	80	E	5	Medium – proximity to Site	Low – limited effect to industrial facilities	Low	Silencers will be used on vehicles. Should it prove necessary alternatives to reversing beepers on site vehicles will also be considered.	
	20	15	N	14	High – close proximity to Site	Low – limited effect to industrial facilities	Low		
	21	250	N	14	Medium – proximity to Site	Low – limited effect to industrial facilities	Low	Where practicable, engines to be switched off when not in use.	
	22	210	NNE	10	Medium – proximity to Site	Low – limited effect to industrial facilities	Low		
	24	280	SSE	0	Medium – proximity to Site	Low – limited effect to industrial facilities	Low	Where practicable, engines to be switched off when not in use.	
	25	430	SSE	0	Medium – proximity to Site	Low – limited effect to industrial facilities	Low		
	26	410	S	2	Medium – proximity to Site	Low – limited effect to industrial facilities	Low	Where practicable, engines to be switched off when not in use.	
	27	15	E	5	High – close proximity to Site	Low - not sensitive to noise (canal)	Low		
	28	10	W	1	High – close proximity to Site	Low - not sensitive to noise (pond)	Low	Where practicable, engines to be switched off when not in use.	
29	75	W	1	High – close proximity to Site	Low - not sensitive to noise (lake)	Low			
30	90	NNW	22	Medium – proximity to Site	Low - not sensitive to noise (pond)	Low	Where practicable, engines to be switched off when not in use.		
31	200	N	14	Medium – proximity to Site	Low - not sensitive to noise (pond)	Low			
32	220	S	2	Medium – proximity to Site	Low - not sensitive to noise (pond)	Low	Where practicable, engines to be switched off when not in use.		

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
	33	500	WSW	2	Medium – proximity to Site	Low - not sensitive to noise (pond)	Low	Deposit of recovery materials will not be made from height to reduce noise / vibration. Planning conditions which set noise limits for the operations (if required) if set the limits will be adhered to at all times.	
	34	210	SSE	0	Medium – proximity to Site	Low - not sensitive to noise (pond)	Low		
	35	330	NE	7	Medium – proximity to Site	Low - not sensitive to noise (pond)	Low		
	36	320	N	14	Medium – proximity to Site	Low – landfill site drainage	Low		
	37	5	W	1	Medium – proximity to Site	Low - not sensitive to noise (watercourse)	Low		
	38	20	NW	9	Medium – proximity to Site	Low - not sensitive to noise (watercourse)	Low		
	40	200	NNW	22	Medium – proximity to Site	Low - not sensitive to noise (watercourse)	Low		
	41	50	S	2	Medium – proximity to Site	Low - not sensitive to noise (watercourse)	Low		
	42	0	W	1	High – close proximity to Site	Medium – potential noise disturbance	Medium		
	43	50	S	2	High – close proximity to Site	Medium – potential noise disturbance	Medium		
	44	340	N	14	Medium – proximity to Site	Medium – potential noise disturbance	Medium		
	46	220	SW	4	Medium – proximity to Site	Medium – potential noise disturbance	Medium		
	47	70	S	2	Medium – proximity to Site	Medium – potential noise disturbance	Medium		
	48	15	E	5	High – close proximity to Site	Medium – potential noise disturbance	Low		
	49	15	W	1	High – close proximity to Site	Medium – potential noise disturbance	Medium		
	50	20	W	1	High – close proximity to Site	Low – transient noise annoyance (road)	Low		
	51	50	SW	4	High – close proximity to Site	Low – transient noise annoyance (road)	Low		
	52	20	ENE	8	High – close proximity to Site	Low – transient noise annoyance (road)	Low		
	53	140	E	5	Medium – proximity to Site	Low – transient noise annoyance (road)	Low		

Table 3 – Dust Fugitive Emission Risk Assessment and Management Plan

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No	Dist.	Direc.	Freq.					
Dust through air from: vehicle movements or deposit of wastes	1	20	SW	4	High – close proximity to Site, low prevailing wind frequency	High – residential receptor	High	No excessively dusty wastes to be accepted at the site. Majority of the recovery activity below ground which will mitigate emissions.	Low
	2	125	NW	9	Medium – proximity to Site, prevailing wind frequency	High – residential receptor	Medium		
	3	130	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	4	150	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium	On site vehicle speed limit enforced to ensure that vehicle movements do not generate excessive dust.	
	5	180	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	6	240	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	7	210	NNW	22	High – proximity to Site, high prevailing wing	High – residential receptor	High	Dampening of site roads/surfaces as necessary using a tanker during dry periods.	
	15	200	SW	4	Medium – proximity to Site, low prevailing wind frequency	Low – open space	Low		
	16	40	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land	Low	The site booking-in office will conduct assessment of waste inputs and impose controls and restriction on potentially dusty waste (e.g. rapid cover following placement, refusal to tip).	
	17	450	W	1	Low - distant to Site, low prevailing wind frequency	Low – open land	Low		
	18	40	S	2	High – close proximity to Site, low prevailing wind frequency	Low – industrial facility	Low	Daily visual inspection by appropriate site staff at suitable locations taking account of the prevailing wind direction.	
	19	80	E	5	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	20	15	N	14	High – close proximity to Site, high prevailing wind frequency	Low – industrial facility	Low	Twice daily visual inspection recommended in adverse weather conditions at the Site.	
	21	250	N	14	Medium – proximity to Site, high prevailing wind frequency	Low – industrial facility	Low		
	22	210	NNE	10	Medium – proximity to Site, prevailing wind frequency	Low – industrial facility	Low	A road sweeper will be utilised as necessary to clean site roads and	
	24	280	SSE	0	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	25	430	SSE	0	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low	A road sweeper will be utilised as necessary to clean site roads and	
	26	410	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	27	15	E	5	High – close proximity to Site, low prevailing wind frequency	Low – open land, water	Low	A road sweeper will be utilised as necessary to clean site roads and	
	28	10	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	29	75	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land, water	Low	A road sweeper will be utilised as necessary to clean site roads and	
	30	90	NNW	22	Medium – proximity to Site, high prevailing wind frequency	Low – open land, water	Low		
	31	200	N	14	Medium – proximity to Site, high prevailing wind	Low – open land, water	Low	A road sweeper will be utilised as necessary to clean site roads and	
	32	220	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	33	500	WSW	2	Medium – proximity to Site, low prevailing wind frequency	Low – open land, water	Low		

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No	Dist.	Direc.	Freq.					
	34	210	SSE	0	Medium – proximity to Site, low prevailing wind frequency	Low – open land, water	Low	or public highway of any mud trailed on from site vehicles, this will limit further dust generation.	
	35	330	NE	7	Medium – proximity to Site, prevailing wind frequency	Low – open land, water	Low		
	36	320	N	14	Medium – proximity to Site, high prevailing wind frequency	Low – landfill site drainage	Low		
	37	5	W	1	Medium – proximity to Site, low prevailing wind frequency	Low – drainage / ditch	Low		
	38	20	NW	9	Medium – proximity to Site, prevailing wind frequency	Low – drainage / ditch	Low		
	40	200	NNW	22	Medium – proximity to Site, high prevailing wind frequency	Low – drainage / ditch	Low		
	41	50	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – drainage / ditch	Low		
	42	0	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land SSSI, water	Low		
	43	50	S	2	High – close proximity to Site, low prevailing wind frequency	Low – open land SSSI, water	Low		
	44	340	N	14	Medium – proximity to Site, prevailing wind frequency	Low – open land SSSI	Low		
	46	220	SW	4	Medium – proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	47	70	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	48	15	E	5	High – close proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	49	15	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	50	20	W	1	High – close proximity to Site, low prevailing wind frequency	Low – road	Low		
	51	50	SW	4	High – close proximity to Site, low prevailing wind frequency	Low – road	Low		
	52	20	ENE	8	High – close proximity to Site	Low – road	Low		
	53	140	E	5	Medium – proximity to Site, low prevailing wind frequency	Low – road	Low		

Table 4 – Mud Fugitive Emission Risk Assessment and Management Plan

Hazard and Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Overall Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
Mud tracked from site onto public roads by associated site vehicles	1	100*	SW	4	High – direct contact with Site access	High - potential hazardous road conditions	High	<p>A road sweeper will be utilised as necessary to clean site roads and / or public highway of any mud trailed on from site vehicles.</p> <p>Drivers will be reminded of their responsibility to maintain clean vehicles and not to track mud onto the public highway.</p> <p>Monitoring of shared access and appropriate maintenance will form part of the EMS for the site.</p>	Low
	2	535*	NW	9	High – direct contact with Site access	High - potential hazardous road conditions	High		
	3	535*	W	1	High – direct contact with Site access	High - potential hazardous road conditions	High		
	4	580*	W	1	High – direct contact with Site access	High - potential hazardous road conditions	High		
	5	770*	W	1	High – direct contact with Site access	High - potential hazardous road conditions	High		
	6	860*	W	1	High – direct contact with Site access	High - potential hazardous road conditions	High		
	7	735*	NNW	22	High – direct contact with Site access	High - potential hazardous road conditions	High		
	15	90*	SW	4	High – direct contact with Site access	High - potential hazardous road conditions	High		
	16	40	W	1	Low – no physical connection	Low – no impact	Low		
	17	450	W	1	Low – no physical connection	Low – no impact	Low		
	18	315*	S	2	High – direct contact with Site access	High - potential hazardous road conditions	High		
	19	>1000*	E	5	Medium – significant distance	High - potential hazardous road conditions	Medium		
	20	505*	N	14	High – direct contact with Site access	High - potential hazardous road conditions	High		
	21	250	N	14	Low – no physical connection	Low – no impact	Low		
	22	210	NNE	10	Low – no physical connection	Low – no impact	Low		
	24	550*	SSE	0	High – direct contact with Site access	High - potential hazardous road conditions	High		
	25	550*	SSE	0	High – direct contact with Site access	High - potential hazardous road conditions	High		
	26	550*	SSE	0	High – direct contact with Site access	High - potential hazardous road conditions	High		
	27	15	E	5	Low – no physical connection	Low – no impact	Low		
	28	10	W	1	Low – no physical connection	Low – no impact	Low		
	29	75	W	1	Low – no physical connection	Low – no impact	Low		
	30	90	NNW	22	Low – no physical connection	Low – no impact	Low		
	31	200	N	14	Low – no physical connection	Low – no impact	Low		
	32	220	S	2	Low – no physical connection	Low – no impact	Low		
	33	500	WSW	2	Low – no physical connection	Low – no impact	Low		

Hazard and Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Overall Risk	Risk Management	Mitigated Risk
	No.	Dist.	Direc.	Freq.					
	34	210	SSE	0	Low – no physical connection	Low – no impact	Low		
	35	330	NE	7	Low – no physical connection	Low – no impact	Low		
	36	320	N	14	Low – no physical connection	Low – no impact	Low		
	37	5	W	1	Low – no physical connection	Low – no impact	Low		
	38	20	NW	9	Low – no physical connection	Low – no impact	Low		
	40	200	NNW	22	Low – no physical connection	Low – no impact	Low		
	41	50	S	2	Low – no physical connection	Low – no impact	Low		
	42	0	W	1	Low – no physical connection	Low – no impact	Low		
	43	50	S	2	Low – no physical connection	Low – no impact	Low		
	44	340	N	14	Low – no physical connection	Low – no impact	Low		
	46	220	SW	4	Low – no physical connection	Low – no impact	Low		
	47	70	S	2	Low – no physical connection	Low – no impact	Low		
	48	15	E	5	Low – no physical connection	Low – no impact	Low		
	49	15	W	1	Low – no physical connection	Low – no impact	Low		
	50	20	W	1	High – direct contact with Site access	High - potential hazardous road conditions	High		
	51	90*	SW	4	High – direct contact with Site access	High - potential hazardous road conditions	High		
	52	505*	ENE	8	High – direct contact with Site access	High - potential hazardous road conditions	High		
	53	>1000*	E	5	Medium – significant distance	High - potential hazardous road conditions	Medium		

Notes: * approximate distance via road

Table 5 – Accident Risk Assessment and Management Plan

Hazard	Receptor	Pathway	Probability	Unmitigated Consequence	Overall Risk	Risk Management	Mitigated Risk
Fuel / engine oil Leak or damage to portable fuel bowser, static fuel storage tank or site vehicles	Groundwater	Base of excavation	Low	Low - pollution of groundwater (low sensitivity)	Medium	Fuel and engine oils stored away from proposed recovery activity with appropriate secondary containment and spillage contingencies. Site vehicles will not be refuelled within recovery area. Site vehicles and plant subject to regular preventative maintenance in accordance with EMS procedures.	Low
	Surface Water	Lateral	Low	High - pollution of surface water	Medium		
Fire Uncontrolled burning of residual wastes or site vehicles.	Groundwater	Base of excavation	Low	Low - pollution of groundwater through firewater run-off or leaks from damaged equipment (low sensitivity)	Medium	Wastes to be accepted at site will effectively be inert, have a low organic content and inherently non-combustible in nature, or through production of landfill gas. Site vehicles and plant subject to regular preventative maintenance in line with site EMS procedures. Fire control equipment will be on hand, with major incidents to be dealt with by the Fire Brigade in accordance with site EMS procedures.	Low
	Receptors listed in Table 1 above	Airborne	Low	Medium - smoke / odour annoyance	Medium		
Explosion Compressed gas cylinders, combustion of landfill gas or fuel storage tank	Site staff	Airborne	Low	High - danger of serious injury	Medium	Fuel is stored away from proposed recovery activity with appropriate controls to prevent fire or explosion (i.e. no smoking on site). Compressed gases not required and therefore present for operation at recovery area. Low organic content of waste will generate negligible volumes of landfill gas and will not present an explosion risk.	Low
	Groundwater	Base of excavation	Low	High - pollution of groundwater through leaks from damaged equipment	Medium		
Wastes deposited Chemical reaction of incompatible wastes	Receptors listed in Table 1 above	Airborne	Low	Medium - odour annoyance or smoke from oxidising agents	Medium	Waste acceptance protocols will exclude the deposit of chemically reactive wastes. Those accepted will be of an inert nature and will not generate noxious gases or contaminating leachate.	Low
Vandalism Damage to site vehicles, fuel bowsers, gas or leachate extraction pipework (if relevant)	Groundwater	Base of excavation	Low	Low - pollution of groundwater through leaks from damaged equipment (low sensitivity)	Medium	Existing site security will prevent access by unauthorised persons. Plant will be kept overnight in a secure area with appropriate security measures. Wastes will not require active gas or leachate control infrastructure which could be subject to damage.	Low
	Receptors listed in Table 1 above	Airborne	Low	Medium - odour annoyance	Medium		

4 Conclusions

The operational hazards associated with the proposal have been considered in the tables above, these hazards relate to health and amenity.

It has been concluded that, where necessary, with the use of appropriate mitigating management controls the Site will not present a significant risk to surrounding receptors.

Appendix A – Nature and Heritage Conservation Screening Report

Nature and Heritage Conservation

Screening Report: Bespoke Waste

Reference	EPR/LB3107UP/A001
NGR	SK 04390 01950
Buffer (m)	450
Date report produced	07/03/2022
Number of maps enclosed	4

The nature and heritage conservation sites and/or protected species and habitats identified in the table below must be considered in your application.

Nature and heritage conservation sites	Screening distance (m)	Further Information
--	------------------------	---------------------

Sites of Special Scientific Interest (SSSI) Jockey Fields (SSSI) Swan Pool & The Swag (SSSI) Stubbers Green Bog (SSSI)	1000	
---	------	--

[Natural England](#)

Local Wildlife Sites (LWS) Dumblederry Lane Anchor Brook Valley Daw End Branch Canal Stubber's Green	200	
--	-----	--

[Appropriate Local Record Centre \(LRC\)](#)

Protected Species	Screening distance (m)	Further Information
-------------------	------------------------	---------------------

Floating-leaved Water Palntain	up to 500m	
--------------------------------	------------	--

[Natural England](#)

[Appropriate Local Record Centre \(LRC\)](#)

Protected Habitats

Screening distance (m)

Further Information

Deciduous Woodland

up to 50m

[Natural England](#)

Fens

Coastal and Floodplain Grazing Marsh

Where protected species are present, a licence may be required from [Natural England](#) to handle the species or undertake the proposed works.


The relevant Local Records Centre must be contacted for information on the features within local wildlife sites. A small administration charge may also be incurred for this service.

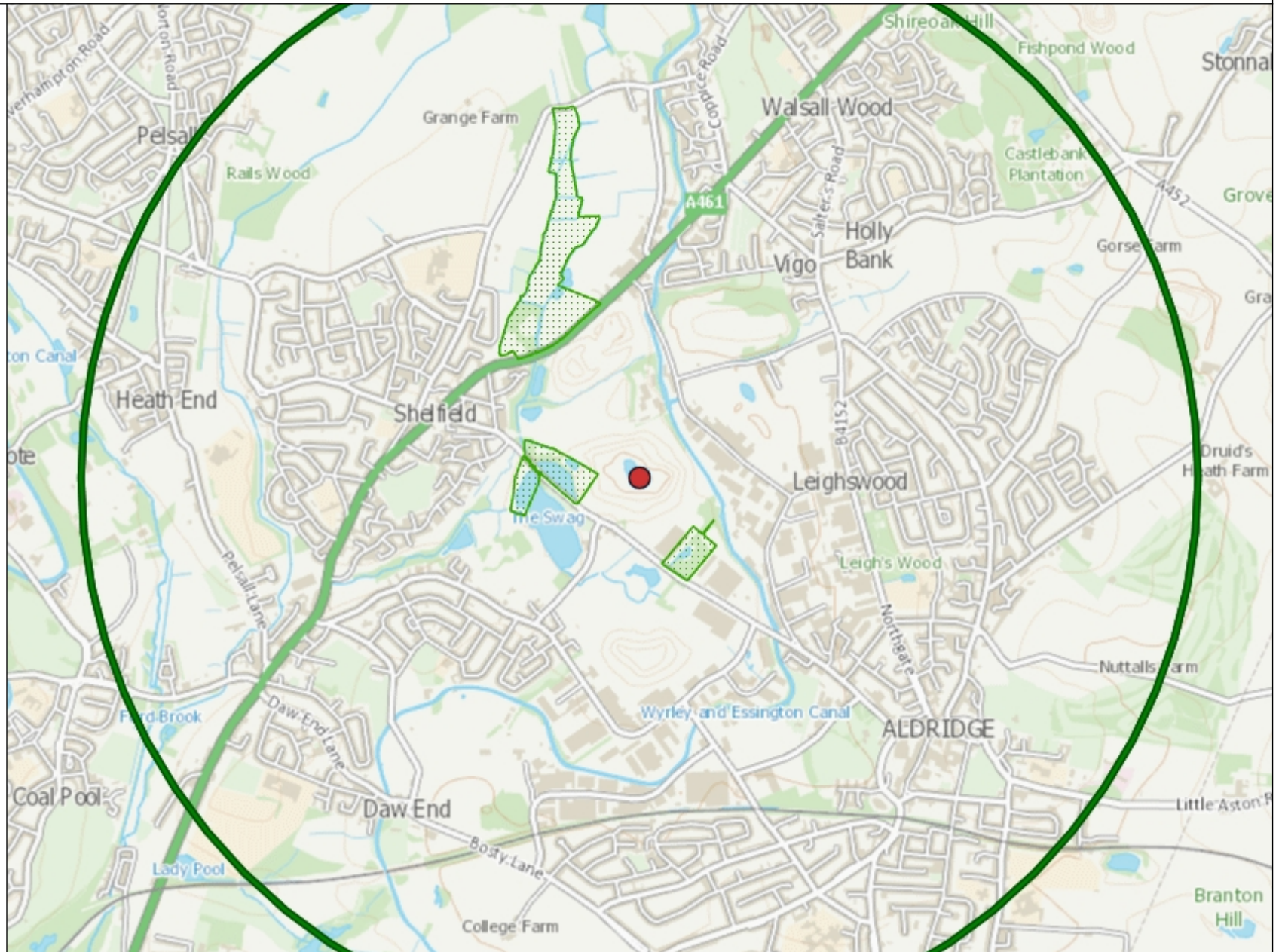
Please note we have screened this application for protected and priority sites, habitats and species for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

Please note the nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application, which could result in the return of an application or requesting further information.

Sites of Special Scientific Interest

Legend

 SSSI (England)



1: 25,000

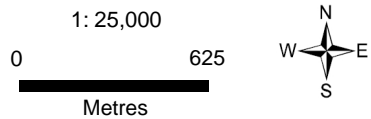
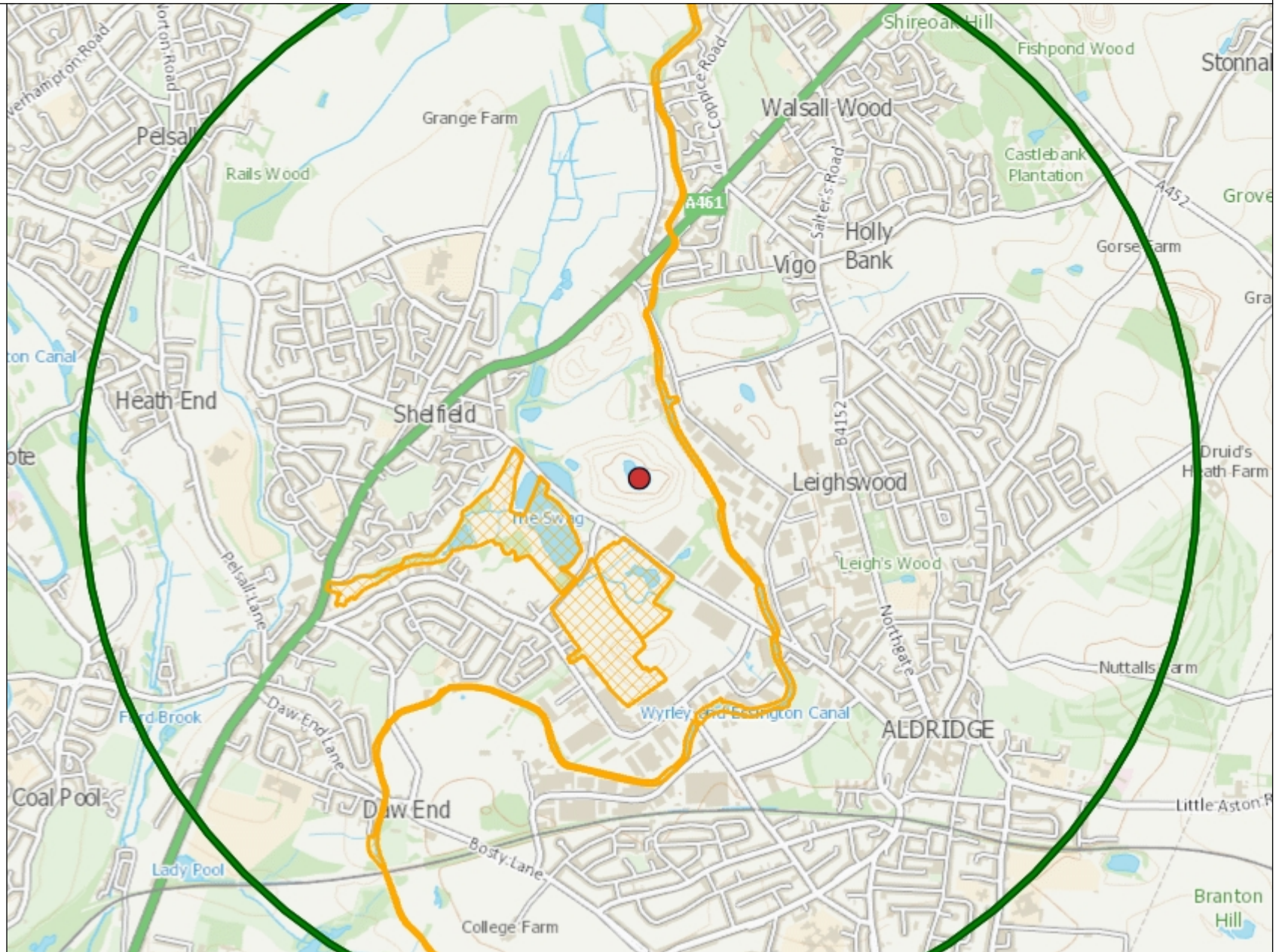


Local Wildlife Sites



Legend




 Local Wildlife Sites



Protected Species

Legend


Protected species screened for Env Permits - complete set

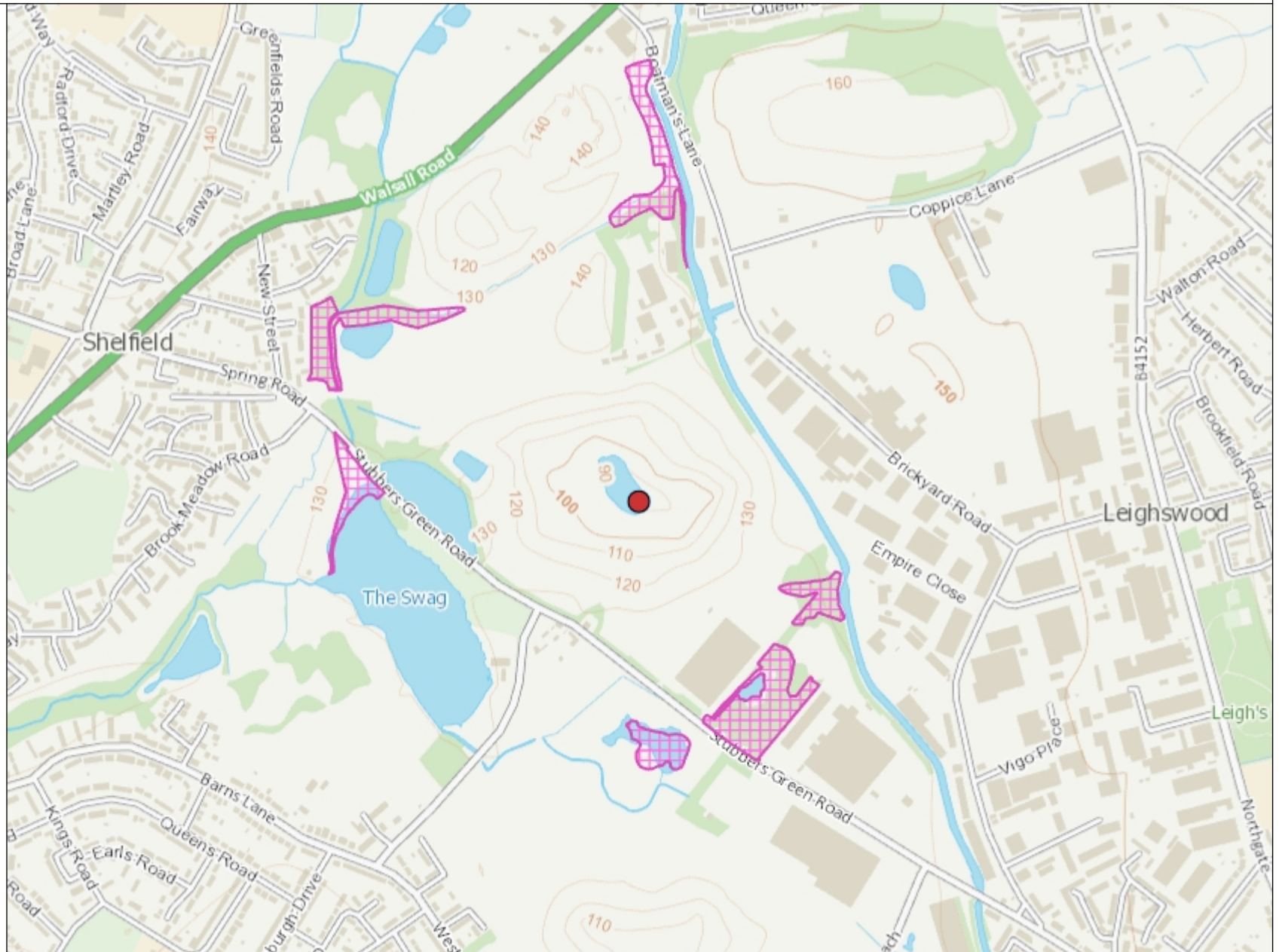
-  Protected species, non fish
-  Protected fish
-  Protected fish migratory route



Protected Habitats

Legend

-  Protected Habitats screened for En Permits



1: 10,000

0 250

Metres



Appendix B – Dust and Emissions Management Plan

BYRNELOOBY

AN **ayesa** COMPANY

IRELAND | UK | UAE | BAHRAIN | KSA

Booth Ventures Waste (Midlands) Ltd

Report No. 5430-BLP-R-12 – (App B)

February 2024

Sandown Quarry Access Road

Environmental Risk Assessment DEMP – Appendix B



BYRNELOOBY
AN **ayesa** COMPANY

Document Control

Document: Environmental Risk Assessment DEMP – Appendix B
 Project: Sandown Quarry Access Road
 Client: Booth Ventures Waste (Midlands) Ltd
 Report Number: 5430-BLP-R-12 – (App B)

Document Checking:

Revision	Revision/ Review Date	Details of Issue	Authorised		
			Prepared By	Checked By	Approved By
01	February 2024	Final	<i>Dan King</i>	<i>Phil Sootney</i>	<i>John Baxter</i>

Disclaimer: Please note that this report is based on specific information, instructions and information from our Client and should not be relied upon by third parties.

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APPENDICES

Appendix A Dust Compliant Form

1 Introduction

1.1 Background

This Dust and Emissions Management Plan (DEMP) has been prepared in support of a waste recovery plan (WRP) for Sandown Quarry Access Road (the Site). The Site is located near Aldridge and will be operated by Booth Ventures Waste (Midlands) Ltd.

The site is surrounded by a number of roads, industrial, commercial and residential properties, woodland which may be considered receptors. The purpose of this DEMP is to identify if the construction of a new site road is likely to cause a potentially harmful emission of uncontrolled dust and how these emissions will be minimised.

A copy of this DEMP will be included in the site's Environmental Management System (EMS) held at the Site Office and all members of staff will have access to this document.

This report makes reference to the dust and emissions management plan template provided by the Environment Agency (Agency), specifically the following sections:

- Dust and Particulate Management
 - Responsibility for Implementation of the dust management plan
 - Sources and control of fugitive dust
 - Potential pathways and receptors to fugitive dust
 - Fugitive dust risk assessment
- Visual Monitoring
- Community Engagement, Reporting and Contingencies

2 Dust and Particulate Management

2.1 Responsibility for Implementation

The site manager would be responsible for implementing the dust management plan. Additional support will be provided by the Technical Competent Managers (TCMs) within the Booth Ventures Waste (Midlands) Ltd organisation (Booth Ventures). Provision of appropriate TCMs is necessary to demonstrate to the Agency that the applicant is a fit and proper person, a test all prospective environmental permit holders must pass to be granted a permit. The site manager and/or TCM would be responsible for the training of site staff.

Booth Ventures operates an Environmental Management System (EMS) that has attained 14001 accreditations at their other active sites and head office, it is intended that the EMS would include Sandown Quarry and that the dust management plan would form part of the EMS.

All staff to be employed on site would be given training and instruction on implementing the dust management plan. Training will be part of the initial induction process and reviewed annually.

All site staff would be responsible for visual monitoring of dust and would be instructed on appropriate reporting and actions.

All third-party contractors would be required to be inducted; the induction process would include their responsibility concerning compliance with the dust management plan.

2.2 Proposed Operations

Sandown Quarry is part of a larger area of extraction, which includes the currently active Atlas and Aldridge Brickworks excavating mudstone / clay for brickwork manufacture. Clay extraction has been taking place locally since the early to mid-1880's.

The construction of the access road is a critical step in the restoration of the quarry. The access road will be constructed from a currently disused gateway to the base of the quarry. For Heavy Good Vehicles (HGVs) to safely use the road, it must have a gradient no steeper than 1v:10h and a minimum width of 10 m to allow two HGVs to safely pass.

The access road will be gradually covered over as the quarry is restored to surrounding ground levels under a landfill permit that allows for the deposit of wastes suitable for restoration. The volume of material required to construct the access road landform is 35,000 m³ with a construction duration of between 2 and 3 months.

A separate permit application has been submitted to the Agency which proposes to restore the current void with suitable wastes to tie in with adjoining ground levels in accordance with the restoration proposed in the current planning application. This separate application also contains a DEMP for the landfilling activity.

3 Potential Dust Emissions Sources

3.1 On-site Dust Emission Sources

A summary of the wastes to be utilised is shown below in Table 1 with the approximate tonnage for construction completion.

Table 1 Destination Waste Types

General Waste Description	Approximate Input	Location
Inert & non-hazardous (non-biodegradable) soils and excavations wastes	35,000 m ³	Direct to Sandown Quarry

The wastes to be received will include soils, construction and demolition wastes. Under certain environmental conditions, i.e. dry and windy, such wastes can present a risk of fugitive dust emissions during transit and deposition and following placement. Fugitive dust emissions can potentially arise from the following site activities:

- Transport of waste to and upon the site;
- Unloading / deposition of waste material;
- Wind-blown dust accumulated on site surfaces;

- Placement of waste by on-site plant; and,
- Vehicle movements on dusty roads.

Fugitive dust may present a dust nuisance to surrounding human receptors or cause an adverse impact if excessive deposits settle on sensitive habitats and smother sensitive plant life or surface water receptors as accumulated sediment.

3.2 Off-Site Dust Emissions Sources

The site is located in an area of significant industrial activity, brickworks, chemical industries, landfills (two active sites within 300m) all of which have the potential to generate dust emissions. Other sources of off-site dust include the surrounding roads.

3.3 Control Measures for On-site Dust Emissions

3.3.1 Waste Delivery

Wastes would be delivered to the site by third party standard road-going HGV tipper wagons, which will be subject to appropriate emission standards and regulated as would be required by all road-going HGVs.

The transport of waste is regulated by Duty of Care code of practice issued under section 34(7) of the Environmental Protection Act 1990, this code requires that waste is stored securely to prevent escape during transport. Consequently, the vast majority of vehicles will arrive at site with sheeted covers which will only be removed to allow inspection of wastes at the site booking-in office.

The HGVs will (unless the waste is rejected) transport the waste along internal roads to the deposit area where a second inspection will be undertaken by site staff prior to the placement of the waste by site plant.

Site staff will enforce strict waste acceptance protocols to manage the deposit of potentially dusty wastes. All waste will be subject to pre-acceptance checks to confirm suitability before the waste arrives on site (this will be regulated by the environmental permit). On site verification checks will confirm acceptability, these checks will consist of reviewing associated paperwork and inspection of the load. It is unlikely that any specific dusty loads will be received, however if the load is identified as unsuitable prior to deposit it will be rejected. If the load is identified as having the potential to generate dust at the point of deposit it would be damped with water spray prior to placement or reloading or rejection. In both cases all subsequent loads from the same source will be suspended until confirmed suitable.

All hauliers would be informed of the site rules at the point of entry to the site, these would include measures to minimise dust and emissions including limiting vehicle speeds, no vehicle engine idling when stationary for prolonged periods to reduce exhaust emissions and appropriate locations to deposit wastes.

3.3.2 On-site Transport

The access from the public highway to the booking-in office and the egress from the wheel wash to the public highway would be hard surfaced with concrete or tarmac. The hard surfaced areas would allow sweeping by mechanical sweeper.

A reduced speed limit of 10mph would be imposed, this was selected with regard to the principles outlined in The Quarries Regulations 1999 approved code of practice and IAQM Guidance on the Assessment of Mineral Dust impacts for Planning (May 2016 (v1.1)). Speed limits will be clearly displayed using signage around the site.

HGV may be re-sheeted following waste acceptance checks prior to internal transit if the wastes are identified as potentially dusty or if the weather conditions dictate (e.g. dry/windy conditions). This would be required if instructed at the booking-in office.

The site manager or appointed deputy would be responsible for imposing restrictions or measures on the transport of waste during weather conditions that could generate dust (e.g. dry/windy conditions). These include:

- reducing speed limits on site;
- re-directing site traffic to limit transit on unmade surfaces; and
- damping down roads and operational areas using sprayed water from a mobile bowser.

Mud or other particulates may accumulate on site surfaces through the course of normal operations. Dry sediment may also build up where water ponds after rainfall events. High winds can mobilise accumulated dust or it can be disturbed by passing traffic. Consequently, all site haul roads and access roads will be regularly maintained and cleaned to prevent the accumulation of mud and dusty material. Haul and access road inspections will be increased if necessary and the frequency of proactive maintenance increased accordingly.

3.3.3 Waste deposit

Site operatives supervising deposit of the waste material will be in constant communication with the booking-in office to advise on the current conditions at the area of deposit. Supervising site operatives will also advise the booking office if dusty loads incorrectly described by the supplier have been accepted.

Waste drop heights are to be minimised with no deposition to take place over high faces. It will be necessary for other site plant such as dozers to be operational at point of waste deposit by HGVs to blade out the material. It may also be necessary to operate excavators or dump trucks during restoration works where more nuanced material management is required e.g. constructing drainage ditches (more applicable to the landfill DEMP). These vehicles will be subject to the same operational controls to reduce the risk of dust emissions.

The site manager or appointed deputy will be responsible for imposing additional restrictions or measures on the deposit of waste with regard to weather conditions (e.g. dry/windy conditions). These include:

- damping down waste at point of deposit;
- selecting deposit areas that are sheltered from the wind;
- restricting waste types that can be deposited (i.e. not accepting wastes with a high dust generation potential); and

- suspending waste acceptance operations.

3.3.4 Vehicles Leaving the Site

The site entrance road would be hard surfaced (e.g. tarmac or concrete) from the site entrance to the wheel wash (as a minimum). This will allow a distance for vehicles to travel from the wheel wash allowing mud to drop off before leaving site.

3.3.5 Dust suppression water management

Clean water from the base of the quarry is currently pumped into a settlement lagoon prior to discharge in accordance with the existing discharge consent to surface water, some of this clean water may be utilised for the dust suppression and for topping up the vehicle wheelwash.

The public right of way (PROW) footpath is located approximately 20m from the settlement pond and 10m from the proposed new access road. At both locations the PROW is separated by substantial vegetation growth. In addition, the PROW would be separated from the proposed access road by a screening bund approximately 3m high.

The type of wheelwash proposed for use will be an autonomous system only activated when a vehicle enters. The wheelwash is to be located on the surface of the road and would apply jets of water to the wheels, sides and under-carriage of departing vehicles. Spray would be contained within the unit by large metal screens and all water collected and filtered back through the system. The wheelwash would be located on the exit side of the access/egress road, the side furthest from the PROW. There is very low probability of any clean water spray impacting the PROW.

The hard surface access/egress road may be swept by a standard mechanical road sweeper, the type that commonly operates safely on public highways adjacent to footpaths. It is considered the distance, bund and vegetation cover will result in no spray or water discharge to the PROW.

Internal site roads may be sprayed by mobile water bowsers during dry weather, however the use of water bowsers is likely to be limited to unmade road surfaces within the quarry at a greater distance (> 40m) from the PROW, it is considered that the distance, topography and vegetation separation will result in a very low likelihood of clean water spraying onto the PROW.

The probability of water spraying onto the PROW is considered very low, although potential impact on the PROW resulting from water use will be taken into account during the monitoring of the efficacy of dust control measures.

3.3.6 General Maintenance / House Keeping

All internal roads including the hard surfaces will be inspected daily by site staff and recorded by the site manager.

Road surfaces would be maintained to prevent and repair potholes with repair actioned within 72 hours of identification of damage.

Road surfaces would be cleaned as necessary to minimise the accumulation of mud or dusty materials and reduce the amount of mud or dusty materials tracked off-site. The site manager or appointed deputy will ensure dry dusty waste and dusty haul roads are wetted down to reduce wind

whipped dust. Wetting of haul roads would be undertaken as a preventative measure if it is suspected that dust from the haul roads may be a problem.

Any vehicles leaving site would be required to utilise the wheel wash located on the site egress road to remove mud or debris which may cause fugitive dust emissions on the public highway. During wet weather site staff would observe vehicles leaving the site to ensure appropriate use of the wheel wash.

Site staff at the booking-in office and at the tipping face would be vigilant to excessive mud tracked from the site by visiting HGV's and site plant. Any vehicles observed to be carrying mud in their tyres would be directed back through the wheel wash until the wheels are clean before leaving site. Drivers will be reminded as part of the site induction of their responsibility to maintain clean vehicles and not to track mud onto the public highway.

All systems involving water usage for dust management including wheel washes would be operational throughout the recovery, infilling and restoration period, and maintained accordingly.

Monitoring and appropriate maintenance of the site access will form part of the EMS for the site.

The site manager (or nominated deputy) will be responsible for assessing predicted meteorological conditions each day, which would determine the type of dust suppression methods required on all or some operational areas of the site.

All personnel employed on site will undertake visual monitoring for dust.

Any problems observed will immediately be reported to the site manager (or nominated deputy) who will be responsible for investigating the cause and implementing any necessary remedial plan.

All plant and wheel wash would be maintained in accordance with the manufacturer's instruction, critical spacers would be retained on site and hire arrangements would be in place for short term replacement of critical items of plant including such as bowser and road sweeper.

Dust generation is not expected to increase materially as the access road is constructed in the existing working quarry.

3.4 Remedial Actions for On-Site Dust Emissions

In the unlikely event that unacceptable dust emissions arise from the site, one or more of the following remedial actions will be undertaken:

- Operations identified as generating unacceptable emissions of dust will be reduced or suspended until effective remedial actions have been taken or weather conditions resulting in the fugitive emissions have moderated;
- Additional dust suppression may be employed by spraying water onto affected areas;
- Where practicable on-site vehicle movement routes may be reconsidered with regard to location (i.e. relocating further from the receptor at risk), speed limits may be further reduced, or surfaces and gradients altered;
- All vehicles leaving the site will pass through the wheel wash facility and additional wheel cleaning may be employed if required, such as a mobile pressure washer;

- Waste handling procedures may be altered and waste acceptance procedures reviewed, such as covering dusty wastes upon deposit, or stopping accepting problematic wastes; and,
- Additional quantitative monitoring may be implemented, if complaints are received and the corrective actions above have not resolved the problem, as discussed further in Section 7.

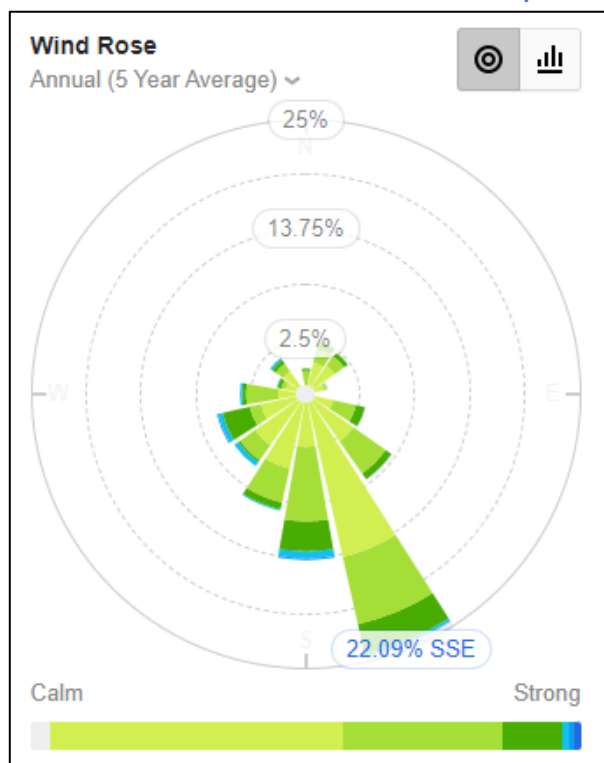
A record relating to the management and monitoring of dust will be maintained in the site log. This record will include the following details: a record of all dust events including date, time and the cause of the problem; a record of all complaints; details on the corrective action taken and any subsequent changes to operational procedures.

4 Potential Pathways

4.1 Airborne Pathways

The potential pathways for dust and particulates to reach sensitive receptors are via the air or over land, namely via the wind. Transit of airborne emissions will be determined by the prevailing wind direction and physical obstructions. Wind statistics have been referenced from data obtained at nearby Walsall (4.5km to the southwest) for a 5yr period¹ have been used to determine the prevailing wind direction. The frequency the wind blows toward potentially sensitive receptors is detailed in Table 2. The relevant wind rose is presented below in Figure 1, this data shows a statistical representation of data obtained between 2015 and 2020. Predominant wind direction is from the south-southeast at ~22%.

Figure 1 Walsall Wind Direction Distribution % (2015 – 2020)



¹ <https://wind.willyweather.co.uk/wm/west-midlands/walsall.html>

4.2 Overland Pathways

Transit of emissions which could travel overland will primarily be limited by the distances to receptors from site and the locations of receptors in relation to the prevailing wind direction and less so by physical barriers such as the trees.

5 Potential Sensitive Receptors

5.1 Receptor Locations

When identifying the receptors, the closest and the most sensitive (if different from the closest) have been considered in each direction from the hazard. Account has been taken of the mechanism of transport to the sensitive receptor e.g. proximity to highway access / egress points for mud and wind direction for airborne dust.

Recent wind direction from Walsall has been used to establish hazard pathways to adjacent receptors.

Probability of exposure is determined by the distance of the receptor to the site and the likelihood of the hazard reaching the receptor i.e. frequency of prevailing wind in that direction. The probability of exposure is irrespective of the type of hazard presented.

A review of the sensitive receptors has been completed in relation to the site; a list of receptors is shown in Table 2. The nearest sensitive receptors to the site are identified in drawings referenced ESID 2 and ESID 3, of which the most susceptible to dust are the adjacent Swan Pool SSSI and Daw End Canal.

Wind statistics have been referenced from data obtained at nearby Walsall (4.5km to the southwest) for a 5 year period and details provided in Table 2 with reference to the relevant receptors identified in the vicinity of the site. The wind rose is reproduced as Figure 1.

The Agency guidance template² for dust management requires consideration to be given to the impact of dust emissions on receptors within a 1km of the site boundary. Although Table 2 identifies potential receptors within a greater distance beyond 1km from the site boundary, these are considered to be at low risk.

A review of other local sources of dust and particulates has been completed in relation to the site and an assessment of each receptor type (in regard to sensitivity to dust) has been summarised in Table 3.

5.2 Receptor Types

Habitats and Watercourses

Receptor types are tabulated in Table 3 for completeness. Greatest sensitivity relates to habitats, residential, recreational, commercial uses, and public amenity. An Agency 'Nature and Heritage

² Environment Agency Example Dust and Emissions Management Plan (template supplied by the EA, April 2022), guidance at <https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit>

Conservation Screening Report' (ref: EPR/LB3107/A001) was requested and received in March 2022 which identified the Jockey Fields, Swan Pool & Swag and Stubbers Green Bog SSSI within 1km.

Table 2 Sensitive Receptors

Receptor No.	Receptor	Receptor Type	Approx. Distance from Site Boundary (m)	Direction from Site	Freq (%) Prevailing Wind Direction
1	Residential properties on Stubbers Green Road	Residential	20	SW	4
2	Residential properties on New Street	Residential	125	NW	9
3	Residential properties on Swan Pool Grove	Residential	130	W	1
4	Residential properties on Brook Meadow Road	Residential	150	W	1
5	Residential properties on Woodhaven	Residential	180	W	1
6	Residential properties on Broadheath Drive	Residential	240	W	1
7	Residential properties on Woodbridge Close	Residential	210	NNW	22
8	Ormiston Shelfield Community Academy	School	850	SE	4
9	St John's CE Primary School	School	1230	NNE	10
10	Leighswood Primary School	School	960	ESE	2
11	St Francis Catholic Primary School	School	520	WNW	5
12	Greenfield Primary School	School	870	W	1
13	Radleys Primary School	School	900	SW	4
14	Greenfields Allotments	Recreation	670	N	14
15	Aldridge Sailing Club	Recreation	200	SW	4
16	Open parkland around The Swag	Recreation	40	W	1
17	Recreation Ground	Recreation	450	W	1
18	Sandown Brickworks	Industrial/Commercial	40	S	2
19	Empire Industrial Estate	Industrial/Commercial	80	E	5
20	Veolia Empire Work (waste treatment)	Industrial/Commercial	15	N	14
21	Highfields South Landfill Site	Industrial/Commercial	250	N	14
22	Vigo Utopia Landfill Site	Industrial/Commercial	210	NNE	10
23	Linley Lodge Industrial Estate	Industrial/Commercial	590	SSW	4
24	Mercian Weldcraft Factory	Industrial/Commercial	280	SSE	0
25	Ibstock Brick Atlas brickworks	Industrial/Commercial	430	SSE	0
26	Ibstock Brick Atlas open quarry	Industrial/Commercial	410	S	2
27	Daw End Branch	Canal	15	E	5
28	Swan Pool	Pond	10	W	1
29	The Swag	Lake	75	W	1
30	Unnamed pond	Pond	90	NNW	22
31	Brick Kiln Pool	Pond	200	N	14
32	Unnamed pond	Pond	220	S	2
33	Unnamed pond	Pond	500	WSW	2
34	Unnamed pond	Pond	210	SSE	0
35	Unnamed pond	Pond	330	NE	7
36	On-site Drain – Highfield South	Site Drainage	320	N	14
37	Unnamed drain	watercourse	5	W	1
38	Unnamed drain	watercourse	20	NW	9
39	Unnamed drain	watercourse	300	W	1
40	Unnamed drain	watercourse	200	NNW	22

Receptor No.	Receptor	Receptor Type	Approx. Distance from Site Boundary (m)	Direction from Site	Freq (%) Prevailing Wind Direction
41	Unnamed drain	watercourse	50	S	2
42	Swan Pool and The Swag SSSI	SSSI	0	W	1
43	Stubbers Green Bog SSSI	SSSI	50	S	2
44	Jockey Fields SSSI	SSSI	340	N	14
45	Daw End Railway Cutting SSSI	SSSI	1250	SSW	4
46	Dumblederry Lane LWS	LWS	220	SW	4
47	Anchor Brook Valley LWS	LWS	70	S	2
48	Daw End Branch Canal LWS	LWS	15	E	5
49	Stubbers Green LWS	LWS	15	W	1
50	Stubbers Green Road	Road	20	W	1
51	Barns Lane	Road	50	SW	4
52	Unnamed access road to Veolia Site	Road	20	ENE	8
53	Empire Close	Road	140	E	5

Frequency stats from [Walsall Wood Wind Forecast, West Midlands WS9 9 - WillyWeather](#). The prevailing wind direction is the direction / frequency towards the receptor.

Table 3 Types of Receptors

Receptor Type	Sensitivity to Dust
Habitats / Watercourses	High
Residential	High
Recreational	High
Commercial	High
Public Amenity	High
Public Highways / Railways / Footpaths	Moderate
Industrial / Agricultural	Low to Moderate

Local Wildlife Sites (LWS) within 200m include Dumblederry Lane, Anchor Brook Valley, Daw End Branch Canal and Stubbers Green. Protected species include “floating leaved plantain” and protected habitats include Deciduous Woodland Fens and floodplain grazing marsh.

The Screening Report also highlighted that there are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or RAMSAR areas located near the Site. The Screening Report is attached to the accompanying WRP (Appendix C).

Additionally, it is noted that none of the identified receptors are located downwind of the significant prevailing wind direction which is from the south, southeast towards the north, northwest (Figure 1). The recovery activity will be predominantly “below ground level” and are not expected to be significantly different from the current quarry extraction operations that have been undertaken at site (and continue locally) since the late 1880’s.

Residential, recreational, industrial and commercial premises

The potential emissions from the site are likely to have a similar impact on persons occupying residential, recreational or commercial premises. Exposure of emissions to persons at industrial / agricultural or commercial premises may be lower as they are more likely to be inside during the working day or they may be transient visitors to the premises. Certain industrial / agricultural

premises may generate similar emissions similar to the site and the employees may be desensitised as a result.

Industrial activities (quarrying) and landfilling locally is significant.

Fine dust particulates may be able to travel further than larger particles that may settle on surfaces nearby. Finer particulates may elicit an unpleasant or harmful respiratory effect from sensitive individuals, whilst settlement of dust may be unsightly or damaging by smothering to sensitive flora. Dust is less likely to affect internal spaces; however a sustained source of fine suspended particulates may eventually permeate inside buildings.

The proposed permitted activities are unlikely to generate dust in such sufficient quantities that a plume would be visible beyond the site boundary. The proposed working hours will be similar to surrounding business and may affect persons in residential housing, but have little effect on persons in businesses operating to normal working hours e.g. 0900 to 1700.

The closest residential properties are on Stubbers Green Road (nearest at a distance of ~20m) from the site boundary however site activities are of only a short duration, additionally there are an extensive existing barrier of established trees in this area of the site. Significantly however, the prevailing wind only blows towards the receptor at 4% (based on a 5 year average). For conservatism this management plan assumes the residences are occupied during the operational hours of the site by members of the public most sensitive to emissions from the site.

Industrial premises are the most abundant (predominantly to the east, beyond the Daw End Canal), uses include haulage yards, builders merchants, aggregate processing, brickworks, landfills, container storage and industrial / engineering units.

It is likely that the combination of waste type and operational controls, distance to the receptors and the prevailing wind direction prevent most potentially harmful emissions from reaching receptors. As such these receptors noted above are considered unlikely to be sensitive to dust emissions associated with the site.

Highways, railways and footpaths

The transitory nature of highways, railways or footpaths means receptors using those locations will be exposed to potential emissions from the site for shorter (albeit variable) periods of time than residences or businesses. Pedestrians will have longer and more direct exposure to emissions compared to vehicle users who are less likely to be exposed to emissions and for significantly shorter periods of time.

Walsall Road to the north, the B4152 to the east (beyond the Leighswood Industrial Estate) and the adjacent Stubbers Green Road (directly to the west) are all located within 1km.

The closest of these receptors is Stubbers Green Road, which is rarely downwind from the site and pedestrian usage is considered infrequent and minimal. All of these road receptors are sources of dust and particulates in their own right and are therefore considered unlikely to be sensitive to dust emissions associated with the site. The nearest railway is located 1.4km to the south, and as such is not considered to be at risk from site dust emissions.

6 Dust Risk Assessment

6.1 Site Dust Emissions

The risk potential to each receptor as identified in Section 5 (Table 3) from dust potentially generated from the WRP activity is presented in Table 4 below.

This table evaluates the unmitigated risk to sensitive receptors from uncontrolled dust emissions and the control measures to be implemented at the site in order to minimise and mitigate this risk, producing a revised residual risk to receptors.

With appropriate risk management measures in place, the overall risk from dust generated from site is considered “low”. As a result of the recovery activity only operating for a short duration (2 to 3 months), the effects from windblown emissions are envisaged to be minimal and not detrimental to sensitive receptors.

Table 4 Dust Fugitive Emission Risk Assessment and Management Plan

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No	Dist.	Direc.	Freq.					
Dust through air from: vehicle movements or deposit of wastes	1	20	SW	4	High – close proximity to Site, low prevailing wind frequency	High – residential receptor	High	<p>No excessively dusty wastes to be accepted at the site. Majority of the recovery activity below ground which will mitigate emissions.</p> <p>On site vehicle speed limit enforced to ensure that vehicle movements do not generate excessive dust.</p> <p>Dampening of site roads/surfaces as necessary using a tanker during dry periods.</p> <p>The site booking-in office will conduct assessment of waste inputs and impose controls and restriction on potentially dusty waste (e.g. rapid cover following placement, refusal to tip).</p> <p>Daily visual inspection by appropriate site staff at suitable locations taking account of the prevailing wind direction.</p> <p>Twice daily visual inspection recommended in adverse weather conditions at the Site.</p> <p>A road sweeper will be utilised as necessary to clean site roads and or public highway of any mud trailed on from site vehicles, this will limit further dust generation.</p>	Low
	2	125	NW	9	Medium – proximity to Site, prevailing wind frequency	High – residential receptor	Medium		
	3	130	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	4	150	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	5	180	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	6	240	W	1	Medium – proximity to Site, low prevailing wind frequency	High – residential receptor	Medium		
	7	210	NNW	22	High – proximity to Site, high prevailing wing	High – residential receptor	High		
	15	200	SW	4	Medium – proximity to Site, low prevailing wind frequency	Low – open space	Low		
	16	40	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land	Low		
	17	450	W	1	Low - distant to Site, low prevailing wind frequency	Low – open land	Low		
	18	40	S	2	High – close proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	19	80	E	5	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	20	15	N	14	High – close proximity to Site, high prevailing wind frequency	Low – industrial facility	Low		
	21	250	N	14	Medium – proximity to Site, high prevailing wind frequency	Low – industrial facility	Low		
	22	210	NNE	10	Medium – proximity to Site, prevailing wind frequency	Low – industrial facility	Low		
	24	280	SSE	0	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	25	430	SSE	0	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	26	410	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – industrial facility	Low		
	27	15	E	5	High – close proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	28	10	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	29	75	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	30	90	NNW	22	Medium – proximity to Site, high prevailing wind frequency	Low – open land, water	Low		
	31	200	N	14	Medium – proximity to Site, high prevailing wind	Low – open land, water	Low		
	32	220	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	33	500	WSW	2	Medium – proximity to Site, low prevailing wind frequency	Low – open land, water	Low		
	34	210	SSE	0	Medium – proximity to Site, low prevailing wind frequency	Low – open land, water	Low		

Hazard / Pathway	Receptor				Probability of exposure	Unmitigated Consequence	Initial Risk	Risk Management	Mitigated Risk
	No	Dist.	Direc.	Freq.					
	35	330	NE	7	Medium – proximity to Site, prevailing wind frequency	Low – open land, water	Low		
	36	320	N	14	Medium – proximity to Site, high prevailing wind frequency	Low – landfill site drainage	Low		
	37	5	W	1	Medium – proximity to Site, low prevailing wind frequency	Low – drainage / ditch	Low		
	38	20	NW	9	Medium – proximity to Site, prevailing wind frequency	Low – drainage / ditch	Low		
	40	200	NNW	22	Medium – proximity to Site, high prevailing wind frequency	Low – drainage / ditch	Low		
	41	50	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – drainage / ditch	Low		
	42	0	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land SSSI, water	Low		
	43	50	S	2	High – close proximity to Site, low prevailing wind frequency	Low – open land SSSI, water	Low		
	44	340	N	14	Medium – proximity to Site, prevailing wind frequency	Low – open land SSSI	Low		
	46	220	SW	4	Medium – proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	47	70	S	2	Medium – proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	48	15	E	5	High – close proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	49	15	W	1	High – close proximity to Site, low prevailing wind frequency	Low – open land LWS	Low		
	50	20	W	1	High – close proximity to Site, low prevailing wind frequency	Low – road	Low		
	51	50	SW	4	High – close proximity to Site, low prevailing wind frequency	Low – road	Low		
	52	20	ENE	8	High – close proximity to Site	Low – road	Low		
	53	140	E	5	Medium – proximity to Site, low prevailing wind frequency	Low – road	Low		

7 Monitoring

7.1 Visual Monitoring

Visually monitoring will occur twice daily for dust by the site manager and continuously by the operatives in the course of their duties to establish whether any dust is likely to leave the site. This will include dust arising from vehicles arriving at site.

Records will be completed for each inspection and all site staff would be responsible for reporting dust and particulate problems as soon as practicable to the site manager or the next level of management if the site manager is not available.

The following locations will be targeted for dust monitoring at the frequency above with additional checks throughout the day around the SSSI:

- The site booking-in office or waste reception area (continuous monitoring of vehicles);
- Point of waste deposition;
- Around the Swan Pool and Swag SSSI; and,
- Subject to prevailing wind direction (i.e. up and down wind), appropriate areas of the site perimeter.

The following information will be recorded during each round of monitoring:

- Name of assessor and position at facility;
- Nature of any problem identified including location, source, date, time, duration, prevailing weather conditions and likely cause;
- On-site activities and operational condition at the time of the monitoring visit (this should include any of the abnormal events detailed in Section 8.7 below);
- Records of the likely source of any dust, even if it is not from the facility; and
- Details on the corrective action taken, realistic timeframes for remedial works and any subsequent changes to monitoring and operational procedures.

The Site Manager will be informed immediately of any findings of dust attributed to the site and will authorise remedial measures to be taken.

7.2 Quantitative Monitoring

Quantitative monitoring is not considered necessary for the duration of the WRP operation (2 – 3 months).

8 Community Engagement, Reporting and Contingencies

8.1 Overview

Prevention will be viewed as the most effective means of controlling dust before an adverse impact occurs from uncontrolled emissions. The Source → Pathway → Receptor model determined above allows for the identification of the critical control points where dust can arise, how it can travel to a receptor and the likely impact.

The performance of a dust management system will ultimately be judged by the impact of the recovery activity on the receptors. Should complaints be received, a procedure will be in place to effectively deal with the issue in a sensitive, efficient and auditable manner.

The controls for each potential dust source are detailed in previous sections of this report. The management of those controls will be based on the on-going monitoring regime on site. The monitoring regime can work as an early warning system against potential problems (e.g. meteorological monitoring) or a diagnostic tool to establish the cause of a dust event (e.g. perimeter monitoring).

8.2 Complaints Process

Any complaints received at the waste facility or via the Regulatory Bodies including the Agency and Local Authority, will be recorded using the form in Appendix A.

This will instigate further visual dust monitoring at the location of the complaint and on-site to determine the extent and location of the dust generating materials and/or process will be identified. Where possible, as much information and detail about the complaint will be recorded, whether this is from the relevant authority or a complaint direct to the site. This information will assist in the investigation and determining the source of the dust e.g. differentiating between potential dust from the site or other off-site activities.

All complaints and queries will be logged in accordance within the environmental management system (EMS) as soon as is practicably possible. All complaints logged will be subject to investigation, and complainants responded to within 48 hours of receipt, where possible. All responses will be through trained and experienced staff.

In the event that a substantiated dust complaint is received arising from the facility, additional monitoring will be undertaken at the nearest sensitive receptors. The person conducting the survey shall make note of any dust at each monitoring point including those not of obvious waste facility site origin.

Complaints regarding dust from the facility will be investigated in accordance with the protocol, and appropriate records maintained which may include:

- Complaints received including name and contact details of complainant (if known), and complainants description of the dust;
- Nature of problem including date, time, duration, prevailing weather conditions and cause of the problem;
- On-site activities and operational conditions at the time of the complaint;
- Records of the likely source of the dust, even if it is clearly not from the facility;
- Details on the corrective action taken and any subsequent changes to monitoring and operational procedures; and,
- The Agency will be proactively informed by the Operator of the complaint and the Operator will confirm to the best of its knowledge the information described above.

The Operator will ensure that the complainant has all the relevant contact details of the site (i.e. the Site Manager) and the officer responsible at the Agency. The operator will be in regular contact with the complainant and the Agency whilst the cause of the dust is being investigated and remediated.

An evaluation of the effectiveness of the techniques used will be carried out on completion of any remedial measures, or if the complaints persist. Records of the above will be retained by site for future reference.

8.3 Means of Contact

The facility will be readily contactable to outside organisations and to members of the public. The site signage board (placed in a readily visible location) will contain the necessary contact details for both the site operations and Agency. The company website also contains the necessary contact details for the site.

<https://www.boothventures.co.uk/>

Any complaints received directly to site will be notified to the Agency. Should an off-site issue arise, therefore, the complainant has a readily available means of getting in touch with the Operator.

8.4 Complaints Screening

As part of each dust complaint received, they will be objectively assessed against the wider environment to ensure that the source of the emission is traced back to the correct source. It is essential that the source is correctly identified in order that mitigating measures can be applied effectively and correctly. The complaint will also be assessed against previous records to place the nature of the complaint into context.

If patterns in complaints emerge, community groups or individuals (subject to their agreement) will be called upon to act as an additional dust monitoring resource.

8.5 Complaints Investigation

In the event that dust is found to be causing a problem from the site facility, as determined and confirmed by investigation into off-site complaints, or during routine monitoring, measures will be taken to determine the source of this dust and the following courses of action as detailed below shall be taken to ascertain if the dust is coming from the facility;

- Additional dust monitoring as detailed above to identify the extent of the dust emission and potential cause for the dust i.e. waste material and/or activity;
- Examination of the operational activities at the time of the dust complaint;
- Examination of the meteorological conditions at the time of the complaint;
- Carry out a review of the operational procedure and controls and instigate any control measures immediately following identification of the problem; and,
- Further monitoring will be carried out to ensure the issue has been addressed and to monitor the effectiveness of any control measures undertaken.

It is recognised that whilst complainants are encouraged to report valid complaints to the regulatory bodies, complaints that are received/submitted directly to the site are able to be investigated more rapidly. As a result, complaints reported directly can be substantiated, reviewed and actioned quicker. With the complainant still able to report the complaint to the regulatory bodies after, should it be necessary.

Nevertheless all complaints will be investigated.

8.6 Contingency and Emergency Plans

In the event that dust is proven to be from the site and found to be causing a problem, as determined by the investigation of off-site complaints or during routine on-site monitoring, action will be taken to determine the source and the following courses of action. Control and mitigation measures for each stage of the waste management process are as described in Section 3 and summarised in Table 4.

8.7 Abnormal Events

This Dust and Emissions Management Plan assumes that the facility will be running under expected operational conditions. There are however circumstances that could result in a dust emission from the site if not appropriately considered in advance, discussed below.

Strong Winds

Daily visual inspection of the site infrastructure will be undertaken and recorded. Additional inspection for damage resulting from high wind events will also be undertaken and contingency actions identified below considered should high wind conditions result in escape of significant dust emissions.

Hot / Dry Conditions

The warmer the weather the greater the potential for wastes to become dry and dusty, particularly when stored outside and when agitated. Daily inspections will be undertaken of the waste to ensure waste delivered to the site is not dusty and stockpiles of waste are kept to an operational minimum and wetted down if required to reduce dust emissions.

During prolonged periods of hot weather inspection frequency will be increased and the surface area of stored waste will be kept to a minimum.

Implementation of the Contingency plan and / or Emergency Plan

Unavailability should only take place due to unscheduled maintenance, emergency situations and for Health and Safety reasons such as a fire at the site (although considered highly unlikely). In such cases the site staff will initially inform the Site Manager who will in turn inform service managers, the Local Authority and the Agency. Site staff will implement measures to store or divert wastes as required.

Operator's Experience with Contingency / Emergency Situations

The operator has a policy of continuous review of emergency and contingency procedures which helps improve procedures across the operator's operations.

Review and Update of Contingency and Emergency Plans

The Contingency Plan and Emergency Plan will be reviewed following any incident where they have had to be followed. They will be updated as necessary with any lessons learned.

8.8 Records and Reviews

Records relating to the management and monitoring of dust will be maintained as necessary and will include the following details:

- The results of inspections and visual monitoring carried out by installation personnel;
- Weather conditions including atmospheric pressure, wind speed and wind direction;
- Problems including date, time, duration, prevailing weather conditions and cause of the problem;
- Complaints received including name and address of the complainant; and
- Details of the corrective action taken, and any subsequent changes to operational procedures.

The Dust and Emissions Management Plan will be reviewed on a periodic basis with the scheduled review of the site's Environmental Management System or with every major decrease, or alteration to the dust generated at site (i.e. a change to dust source term, pathway or receptor).

8.9 Communication Tools

Stakeholders will typically include the Local Authority, the Agency, Parish Councils and members of the local community. Other stakeholders may include local businesses and/or householders should the facility be deemed to impact upon them.

In addition, and as covered within the complaints section, contact details will be made available so that any complaints can be directed to site and an investigation undertaken immediately.

8.10 Remedial Actions for On-Site Dust Emissions

In the unlikely event that unacceptable dust emissions arise from the site, one or more of the following remedial actions would be undertaken:

- Operations identified as generating unacceptable emissions of dust will be reduced or suspended until effective remedial actions have been taken or weather conditions resulting in the fugitive emissions have moderated;
- Additional dust suppression may be employed by spraying water onto affected areas;
- Where practicable on-site vehicle movement routes may be reconsidered with regard to location (i.e. relocating further from the receptor at risk), speed limits may be further reduced, or surfaces and gradients altered;
- All vehicles leaving the site will pass through the wheel wash facility and additional wheel cleaning may be employed if required, such as a mobile pressure washer;
- Waste handling procedures may be altered and waste acceptance procedures reviewed, such as covering dusty wastes upon deposit, or stopping accepting problematic wastes; and,
- Additional quantitative monitoring may be implemented, if complaints are.

A record relating to the management and monitoring of dust will be maintained in the site log. This record will include the following details: a record of all dust events including date, time and the cause of the problem; a record of all complaints; details on the corrective action taken and any subsequent changes to operational procedures.

Appendix A – Dust Complaint Form

Customer 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 and emissions management plan need to be updated	
Date that the dust and emissions management plan was updated	
Closure	
Site Manager review date	
Site Manager signature to confirm no further action required	



IRELAND | UK | UAE | BAHRAIN | KSA

BYRNELOOBY

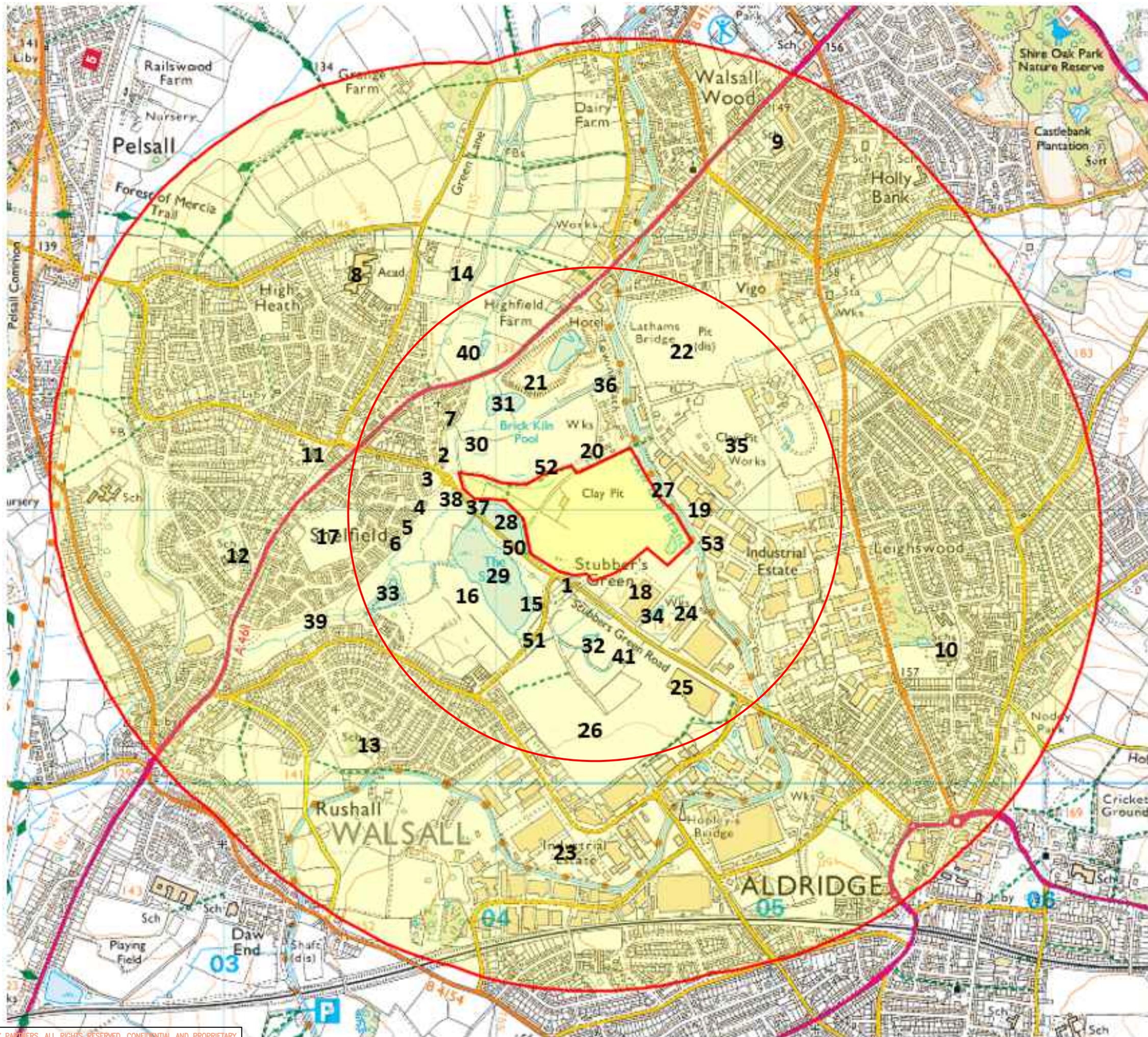
AN **ayesa** COMPANY

www.byrnelooby.com

www.ayesa.com/en/

Email: info@byrnelooby.com

Appendix C – Drawings



Notes

1. DO NOT SCALE
2. ANY ANOMALIES ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF BYRNE LOOBY LTD
3. RECEPTORS DETAILED IN REPORT 5430-BLP-R-003-01 (TABLE 1)

Key

- SITE LOCATION/ BOUNDARY
- 2 SITE RECEPTOR

Rev	Date	Description	By	Chk	App

BYRNE LOOBY

WWW.BYRNELOOBY.COM

IRELAND | UK | UAE | BAHRAIN | KSA

CLIENT



PROJECT

SANDOWN QUARRY LANDFILL

DRAWING TITLE

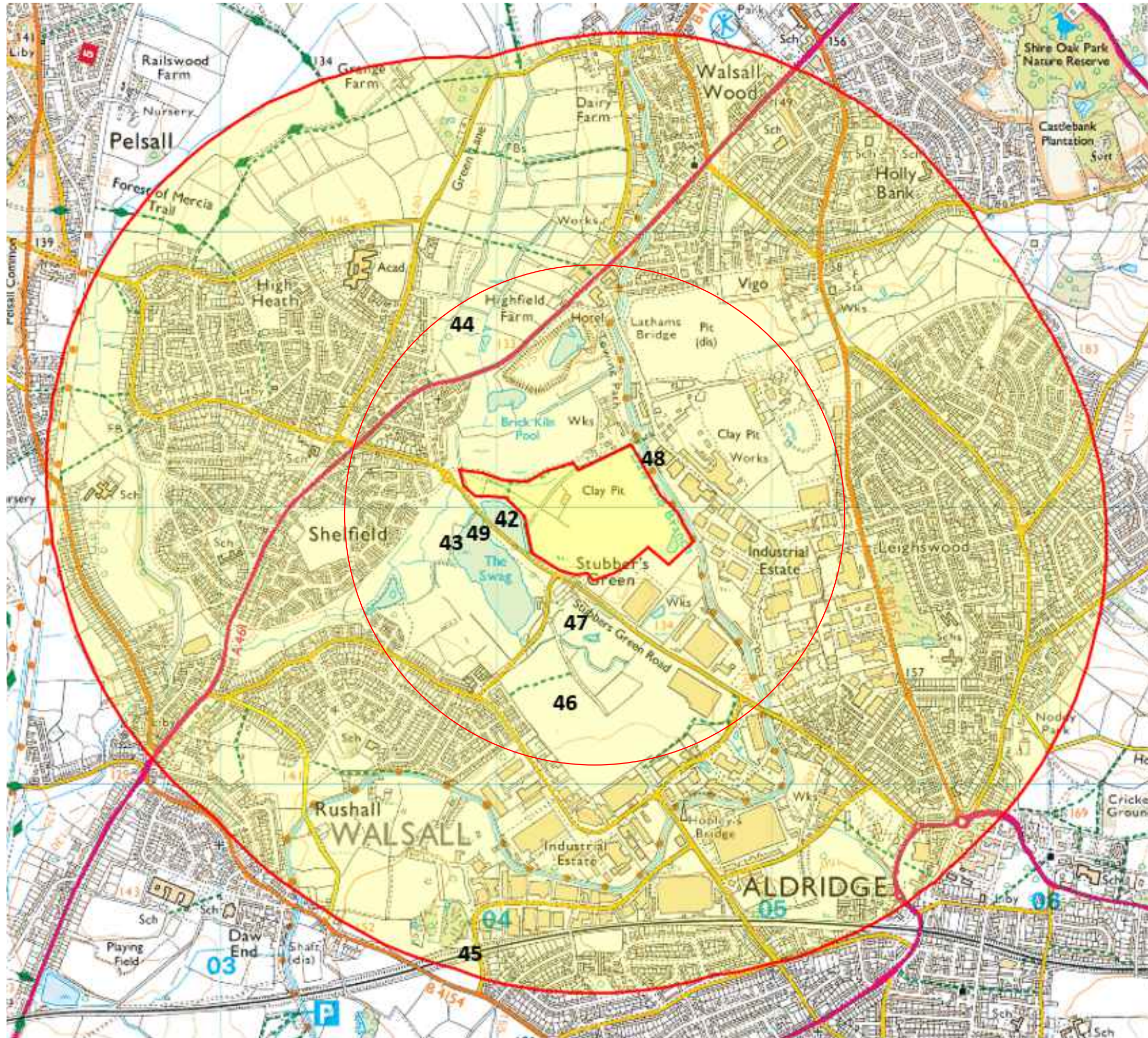
ESID 2
ENVIRONMENTAL SITE SETTING

STATUS

FINAL

Date: 31/05/22	Scale: N/A	Drawn: JM	Chk: GH	App:
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Project No: 5430	Drg. No: 5430/3/002	Rev:
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Notes

1. DO NOT SCALE
2. ANY ANOMALIES ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF BYRNE LOOBY LTD
3. RECEPTORS DETAILED IN REPORT 5430-BLP-R-003-01 (TABLE 1)

Key

- SITE LOCATION/BOUNDARY
- 42** CULTURAL AND NATURAL HERITAGE RECEPTOR

Rev	Date	Description	By	Chk	App

BYRNE LOOBY

WWW.BYRNELOOBY.COM

IRELAND | UK | UAE | BAHRAIN | KSA

CLIENT



PROJECT

SANDOWN QUARRY LANDFILL

DRAWING TITLE

ESID 3
CULTURAL AND NATURAL HERITAGE

STATUS

FINAL

Date: 31/05/22	Scale: N/A	Drawn: JM	Chk: GH	App:
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Project No: 5430	Drg. No: 5430/3/003	Rev:
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