

**Clark Contracting Ltd**

**Aston Le Walls Deposit for Recovery**  
**Aston Le Walls Equestrian Centre,**  
**Aston Le Walls,**  
**Northamptonshire**  
**N11 6RT**

# **Dust & Emissions Management Plan** **(DEMP)**

**Document Ref:** 193224/DEMP

February 2023



**AA Environmental Limited**

Units 4 to 8 Cholswell Court

Shippon

Abingdon

OX13 6HX

T01235 536042

F01235 532849

[info@aae-ltd.co.uk](mailto:info@aae-ltd.co.uk)

[www.aae-ltd.co.uk](http://www.aae-ltd.co.uk)

# Document Control

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**Report for**

Clark Contracting Ltd  
Brentford Grange Farm  
Beaconsfield Road  
Amersham  
HP7 0JU

**Aston Le Walls Equestrian  
Centre  
Washbrook Farm  
Welsh Road  
Aston le Walls  
Northamptonshire  
N11 6RT**

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**Issued by**

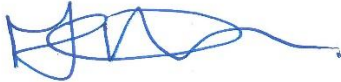
Samantha Muir BSc AMIEnvSc

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**Reviewed by**

Ed Brown BSc (Hons) MCIWM

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**Approved by**

Matthew Lawman MSc BSc (Hons)

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**AA Environmental Limited**

4-8 Cholswell Court  
Shippon  
Abingdon  
OX13 6HX

T 01235 536042

F 01235 523849

E [info@aae-ltd.co.uk](mailto:info@aae-ltd.co.uk)

W [www.aae-ltd.co.uk](http://www.aae-ltd.co.uk)

Registered Office (England and Wales) as above  
Company No. 8474322

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Revision No.	Description

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## 1.0 INTRODUCTION

### Scope Of Plan and Site Details

- 1.1 This Dust and Emissions Management Plan (DEMP) forms part of the supporting management systems for the Bespoke Permit operated by Clark Contracting Ltd (the Operator). It sets out how the risk of poor air quality emissions will be managed at the Aston Le Walls Equestrian Centre during the proposed land raising and reprofiling. It is located west of Welsh Road in Aston Le Walls. The site is not located within an existing Air Quality Management Area. The site location is shown in drawing 193224/D/001. The nearest residential property is circa 330 m south east from the site in the village of Aston Le Walls.
- 1.2 The purpose of this plan is to:
- minimise the emissions of dust, particulates and NO<sub>2</sub> produced by site activities, as far as is practicable, using appropriate best practice measures; and
  - mitigate the potentially adverse impacts of the residual emissions of dust, particulates and NO<sub>2</sub> after all appropriate control measures have been applied with due regard to the sensitivity of the local surroundings.
- 1.3 There is no quantitative assessment / modelling of the dust/air emissions as there are no point source emissions. This management plan incorporates industry good practice to ensure the air quality emissions risk remains low during the site's operation. The plan has been developed following the principals set out in the EA dust control guidance, and SPG Mayor of London Guidance and City of London Code of Practice for Deconstruction and Construction Sites<sup>1</sup>. The relevant guidance in these plans relates primarily to construction processes which are consistent with those of the recovery operation and present good industry practice.
- 1.4 The movement, storage and placement of waste may generate particulates and litter. The sources of emissions and associated controls are described in Section 3 of this plan. The plan sets out the proactive and reactive measures that will be implemented to control the emissions during standard and abnormal operational circumstances. These controls are described in subsequent sections.
- 1.5 In the event that the implementation of controls fails, corrective actions will be identified and implemented. The Site Manager will be responsible for implementation of the DEMP on site and site operatives will be provided with copies of this plan and trained on its implementation. Additional copies of the latest revision can be found in the site office and welfare area.
- 1.6 The site is accessed from the north east. The site layout and access are shown in drawing 193224/D/004. Waste being received at the site will be predominantly from construction and demolition contracts. The types of material will be aggregate, mineral and soil-based consisting of large inert to finer soil fraction material.
- 1.7 The waste recovery processes can generate particulates. The sources of emissions and associated controls are described in Section 3 of this plan. The plan sets out the proactive and reactive measures that will be implemented to control the emissions during standard and abnormal operational circumstances. These controls are described in subsequent sections.
- 1.8 In the event that the implementation of controls fails, corrective actions will be identified and implemented.
- 1.9 The scope of this management plan follows the Environment Agency's (EAs) requirements set out in the Dust and Emissions Management template. Monitoring is in line with EA Guidance M17.

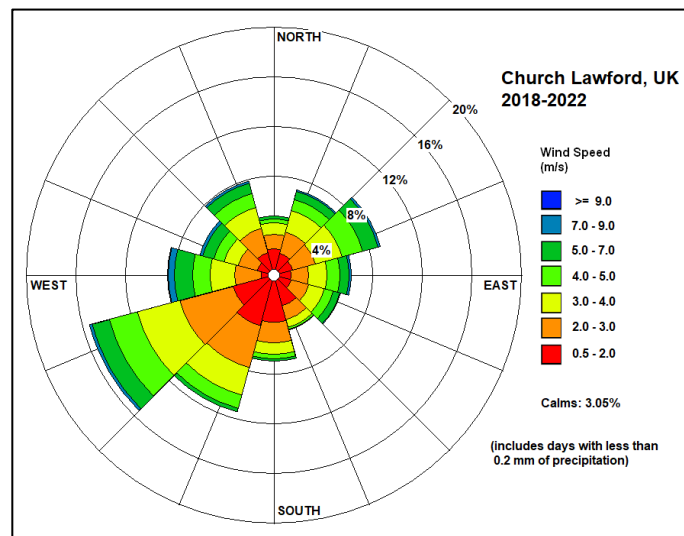
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<sup>1</sup> Guidance used as it is the most authoritative for the type of operations at the site.

## 2.0 SENSITIVE RECEPTORS & BASELINE CONDITIONS

### Baseline Conditions

- 2.1 The frequency of exposure and likelihood of any fugitive emissions on sensitive land uses is determined by the magnitude of release, proximity of receptors and prevailing meteorological conditions. Meteorological wind data, for five years, has been acquired from the ADM Limited. The wind data has been taken from the Met Office Station in Church Lawford, which is located circa 24 km north of the site. The prevailing wind direction is from the south west quadrant.



- 2.2 The site is located within a rural / predominantly agricultural setting. The east of the site is bound by the existing Equestrian Centre. The Highfurlong Brook and woods run parallel to the boundary circa 100 m north of the site, beyond which are further fields associated with the Equestrian Centre. The Welsh Road public highway is north east of the main site boundary. There are field and woods to the west, which is destined to become reworked as part of the HS2 development. South east of the site is a golf course, and there are fields to the south west. The fields to the south west are also destined to be reworked as part of the HS2 development.
- 2.3 The nearest sensitive receptors susceptible to fugitive emissions will be the residential properties circa 330 m south east in Aston Le Walls village and users of the Equestrian facilities to the north and east. The site and surrounding sensitive receptors are shown on drawing 193224/D/002. The neighbouring surrounding area is generally of lower sensitivity.
- 2.4 DEFRA Air Quality Management Areas (AQMAs) maps<sup>2</sup> show that the site is not within an AQMA.

### Sensitive Receptors

- 2.5 Table 1 sets out the potential sensitive receptors to dusts, by either land use or proximity to the operation. This table supplements drawing 193224/D/002. With the dominant wind direction from the south west, the receptors at higher risk from fugitive emissions are likely to be the users of the Equestrian Centre and residents Washbrook Farm and the Priority Habitat.

<sup>2</sup> Department for Environment Food & Rural Affairs, UK AIR <https://uk-air.defra.gov.uk>, accessed 24/01/2023

<b>Table 1. Sensitive receptors</b>		
<b>Description</b>	<b>Sensitivity</b>	<b>Distance from operational site</b>
<b>Residential</b>		
Lower Boddington off Banbuy Road	High	650 m north
Manor House		330 m south east
Lower Farm House		410 m south east
Dwellings off Blacksmith Lane / Main Street (Aston Le Walls)		440 m south east
<b>Commercial / Industrial</b>		
Aston Le Walls Equestrian Centre	Medium	<10 m east
Sewage Treatment Works		250 m north east
<b>Agricultural</b>		
Valley View Farm	Low	480 m south
Field Farm		570 m south west
Washbrook Farm		< 10 m east
Bridge Meadow Farm		393 m north
Tilbrooke Farm		691 m north west
<b>Environmental</b>		
Highfurlong Brook	High	100 m north west
Canal Feeder	Medium	560 m north
Pond / lagoon	Medium	<10 m south east; 20 m north east; 37 m north 41 m south; 140 m south west; 160 m south; 180 m east 300 m south east 420 m south east; See Receptor Plan
Spring	Medium	203 m south east
Land drain	High	30 m east
Priority Habitats	Medium	On site (south east); 24 m south; 60 m north; 102 m south east; 160 m north west; 230 m south west; 240 m south; 290 m north; and 560 m east.
Local Wildlife Site (LWS)	Medium	<10 m south
<b>Other</b>		
St Leonard Church	Low	457 m south east
The Catholic Church of the Sacred Heart of Our Lady	Low	660 m south east
St Mary's Catholic Primary School	Medium	575 m south east
Listed Building	Low	345 m south east; 500 m south east (group); 580 m south east; and 810 m north.
Public Right of Way (PRoW)	Low	530 m south; 600 m north / north west; 670 m east.

2.6 Table 2 sets out the potential contributors to dust emissions.

<b>Table 2. Potential dust and emission emitters within 1 km of the site</b>			
<b>Emitter</b>	<b>Approximate distance from site boundary (m)</b>	<b>Direction</b>	<b>Comment</b>
HS2 Development	Currently 350	South	Dust from material movements PM10, PM2.5 and NO <sub>2</sub> emissions from vehicles / traffic
Agricultural - arable	140; 250; 30; & 350.	West; North; South; and North east.	Dust from material movements
Welsh Road	< 10 m	east	PM10, PM2.5 and NO <sub>2</sub> emissions from vehicles / traffic

2.7 The HS2 development to the east and directly south of the site has not yet commenced fully, however work may progress closer during the importation time period of the permit. This may contribute to baseline emissions.

### 3.0 OPERATIONS

#### Site Overview & Waste Operations

- 3.1 The operations on site will involve transfer, placement and storage of suitable waste streams originating from construction and demolition sources, to enable the capping and reprofiling the entire site. The site layout includes access / egress from the north east of the site via the site office. This is shown on the site layout plan drawing 193224/D/004.
- 3.2 The platform across the site will be constructed in phases and, prior to any placement of material, the bull dozer will remove all topsoil (if found) from the surface of each phased area.
- 3.3 The external area will comprise of a site office and small scale welfare facilities, wheel wash<sup>3</sup>, haul route, stockpiles/ bunds and the platform of graded suitable fill material at its current phase. The site access/egress is located in the north east of the site, off Welsh Road and the internal routing is delimited by the haul route.
- 3.4 207,000 m<sup>3</sup> of waste is proposed for importation and placement, consisting solely of suitable construction and demolition mineral-based (soil and aggregate) waste types. This is anticipated to take place at circa 103,500 tonnes per year.
- 3.5 The overall dust risk for the typical waste stream is considered medium to high without mitigation. Table 3 highlights the potential dust risk from the typical waste streams expected on site.

<b>EWC</b>	<b>Description</b>	<b>Tonnes per week (indicative)</b>	<b>Destination and Process</b>	<b>Potential Risk (with no mitigation)</b>
01 01 02 01 04 08 01 04 09 19 12 09 17 05 04 19 13 02 20 02 02	Inert C&D arisings & soils	< 5,000 tonnes	Tipped at the currently designated tipping area. Material bulked up into stockpile form with excavator if necessary. Material graded and compacted with bulldozer.	Medium - High
Notes: 1. The tonnes per week and processes are considered worst case and are subject to varying factors.				

- 3.6 All lorries will be 8-wheeled enclosed, sheeted lorries or vehicles with equivalent dust controls and will be sheeted upon arrival. The lorries will be briefly uncovered for visual inspection at the weighbridge and at the final placement location only. The vehicle will remain sheeted for the duration of the internal haul route and site access.
- 3.7 All driver delivery waste will be subject to signage reminders of speed limit (10 mph), dust controls and the operator at the ticket office. Driver's under the Operator's primary control will be subject to a site induction and toolbox talks
- 3.8 Prior to any placement of material, the bull dozer will remove all topsoil from the surface. Any topsoil (not anticipated) will be temporarily stored in the adjacent construction phase of the site, pending reinstatement following the works.
- 3.9 The waste types are all mineral / soil based. The associated risk with these waste types are the finer fraction of the matrix drying out and becoming mobile via wind or site disturbance. This is most likely during the drier, summer months
- 3.10 Table 5 sets out the waste streams, waste management activities and the potential for fugitive particulate emissions. The dust risk derives from the finer fraction which can become airborne during dry conditions and without abatement controls. Appendix A has the source pathway receptors for all potential dust activities below.

<sup>3</sup> The wheel wash will consist of a high pressure hose and bowser in the event it is required. Requirement is based off the bi-daily inspections for dust, must and emissions by the designated operative.



Table 5. Waste processes, streams and description of management activities		
Description	Processes (area)	Potential for fugitive particulate emissions without mitigation
Haulage and site operation	Import of material (on site and at access / egress)	Possible exhaust emissions and fugitive dusts from loads from vehicles (NO <sub>x</sub> , PM <sub>10</sub> (<10 µm) and Total Suspended Particulates (TSP)).
		Possible: Wind entrainment of dust on operating surface and haul route.
Movement and placement of suitable engineering fill waste streams	Transfer and tipping of material and temporary storage	Possible emissions from the movement of plant over the operational area if there is significant build-up of mud and waste.
		As the material is dropped onto the ground there is the potential for wind entrainment of fines/ lighter fractions.
	Manual segregation of material into stockpiles	As the material is transferred into stockpiles there is the potential for wind entrainment of fines.
	Grading of material by bulldozer	Possible emissions during the levelling of deposited material due to mechanical disturbance and tracking over breakable/friable material.
Storage of Waste	Storage of material or waste within stockpiles	Possible wind entrainment of waste.

3.11 Dust and emission controls are outlined in Section 4.

#### Plant and Equipment

3.12 The delivery plant involved are sheeted 8-wheel delivery lorries with an emission rating of Euro 5 and above. The deliveries are with either standard, sheeted tipper lorries, or sheeted skip loaders at a rate per day compliant with planning permission.

3.13 The plant is owned by the Operator and is maintained in line with manufacturer's specification. If plant must be replaced, the replacements will be of the lowest emission standard possible at the time of purchase. Table 5 sets out the known combustion engine powered plant and their emission ratings.

Table 6. Mobile Plant / Equipment			
Description	Make	Model	Emission Rating
Bull dozer (or equivalent)	Caterpillar (or equivalent)	TBC	Tier 4
Sheepsfoot roller	Bomag (or equivalent)	TBC	Connected and operated through the bull dozer power.
Excavator	TBC	TBC	Tier 4 or better.
Wheeled loading shovel	TBC	TBC	Tier 4 or better.

## 4.0 DUST & PARTICULATE MANAGEMENT

### Sources of Fugitive Particulates and Control Processes

- 4.1 The potential dusts include fine particulate matter which consist of inhalable fractions (total suspended particulates (<100 µm) and the more dangerous respirable fraction (less than PM<sub>10</sub>). Such dust types are termed as friable. Friable dusts may occur in hardcore and aggregate waste.
- 4.2 There will be no point source emissions of air pollutants. Any release will be fugitive. All tipping operations and material storage will take place as far as practically possible from the site boundary. Lorries will drive directly to the area of placement (dependent on work programme). A bull dozer will spread the directly tipped material into the final landform area.
- 4.3 All lorries leaving the site will go through the wheel wash to remove tyre mud/dust and will be supplemented by a road sweeper to limit risk of dust from residual waste and dust picked up on the tyres. In the event that the wheel wash is in need of repair, implementation of a temporary alternative method of wheel washing should be put in place which may include, but is not limited to, manual washing with a jet wash.
- 4.4 The stockpiles will be subject to periodic wetting by water bowser during dry conditions. There will be some trickle through within the waste depending on the particle size of the stockpile. Stockpiles will be compacted to minimise wind entrainment. When moved or disturbed by bull dozer or excavator, the inside of stockpile may be exposed. Manual dust suppression using a high pressure hose and bowser will suppress any exposures to ensure dust emissions remain low during dry conditions.
- 4.5 All imported waste streams have the potential for fine particulates emission. Table 7 sets out the controls that will be implemented at all time the site is operational, unless specified otherwise.

Table 7. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
1	Haul route well maintained with clear signage and repairs made in good time.	<p>Minimal mud generated.</p> <p>Any mud/ dust tracked onto the haul route by HGVs is easy to clean.</p> <p>The haul route will be subject to a 'deep clean' on a weekly basis to prevent the buildup of dirt and dust.</p> <p>Condition of haul route to be inspected and recorded during the daily visual monitoring inspection, with repairs made accordingly.</p> <p>The interface and section of haul route leading up to the tipping area will be cleared of mud and debris at the end of each shift, or if significant accumulation is identified.</p> <p>Clear signage and direction from ticket office to follow haul route to tipping area.</p>	<p>Repairs will be made to the haul route within half a day of the identification of deterioration.</p> <p>A trained operative will inspect the access / egress of the site with the external road three times a day to determine whether there is beginning to be an accumulation of dust/mud on the internal impermeable concrete. In the event there is, a road sweeper will be deployed.</p> <p>The operative will also be manned with a strong brush for manual assistance. The operative will be aware of the DEFRA's CoP grading classifications and the corrective action response time will be immediate, provided it is safe to do so. As a minimum, the section of road external to the site access/egress will be swept within half a day of identification.</p>	Excess mud/ dust will be identified in daily visual inspections. Grading classification and triggers will be in accordance with DEFRA's CoP.
2	Requirement for delivery lorries to implement dust controls.	<p>All lorries will be 8-wheel enclosed, sheeted lorries or vehicle with equivalent dust controls.</p> <p>Vehicles will be sheeted upon arrival.</p>	Vehicles will temporarily uncover for visual inspection at the weighbridge or gate, then re-cover for the transit to the designated tipping location.	<p>Operative responsible for ticket collection will enforce compliance with sheeting/ equivalent dust controls if dust control is inadequate.</p> <p>If non-compliance is observed, a strike will be given, which when tallied up to 3 strikes for repeat offenders, the haulier will be contacted and driver banned from site.</p>
3	Tipping location situated in designated areas and under dust suppression	<p>Vehicles will finally uncover at tipping location and under dust suppression spray (if required).</p> <p>Direction and signage clearly displaying tipping location and adjustment of tipping location depending on progress of work in relation to receptors.</p>	<p>These designated areas are the only locations where unloading/ tipping will occur to ensure adequate suppression.</p> <p>Clear signage to tipping area and direction given at weighbridge or gate.</p>	Site operatives are briefed on the tipping location and will ensure that tipping occurs here. All vehicular unloading will be supervised by a banksman operative to ensure tipping is not uncontrolled.
4	Mobile dust suppression operational during tipping and regular dampening of stockpiled material.	<p>When tipping, manual dust suppression will be used during dusty conditions. This will be by high pressure hose attachment and mobile water bowser/pump system.</p> <p>Stockpile material will be regularly dampened in dusty conditions. There will be some trickle through within the material depending on the particle size of the stockpile. Material within the stockpile is intrinsically sealed and therefore low risk of causing dust emissions. When moved or disturbed by front loader or excavator, the inner part of the waste stockpile may be exposed. Manual dust suppression will minimise any exposure and ensure that dust emissions remain</p>	<p>Periodic wetting of stockpiles will occur by water bowser during dry conditions.</p> <p>Critical spares for the dust suppression (sprays) will be maintained on site.</p>	Suppression will be implemented whenever these activities are taking place during dusty conditions.

Table 7. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
		low.		
5	Drop heights and double handling minimised.	Drop heights will be minimised and double handling minimised at all times.  To note, the tipping location will be clearly signposted and moved in accordance with the current phase of work, with relation to location of receptors. This will allow material to be tipped and then immediately graded.	Operatives who drive front loader and excavator will be briefed on the need to minimise drop heights.	Tipping location will be reviewed during daily visual inspection and relocated if found to be impractical.
6	Sealing / patting down stockpiled material	Stockpiles will be compacted to minimise wind entrainment and be stored at safe angles of repose (typically 1:3), to minimise the risk of instability that can lead to a greater risk of wind entrainment.	The compaction of aggregate will decrease the pore space between particles and increasing the bonds between soil particles, in turn reducing the potential for wind entrainment. The compaction method is solely by the excavator tidying up the perimeter of the stockpile and compacting with the bucket to minimise debris rolling down the slopes and will minimise mobilisation by wind or rain.	Site operatives are briefed on the stockpile management controls and these will be implemented at all times.
7	Site wide speed limit set at 10 mph for all HGVs	Minimisation of fugitive emissions from site surfacing/ vehicle wheels/ loads by keeping vehicle speed low.	All drivers delivering waste will be subject to signage reminders of speed limit, dust controls and by the operator at the ticket office. Driver's under the Operator's primary control will be subject to a site induction and toolbox talks.	If non-compliance is observed, a strike will be given, which when tallied up to 3 strikes for repeat offenders, the haulier will be contacted and driver banned from site.
8	Anti idling policy	Limit the fugitive emissions from vehicles by implementing a no idling policy.	All drivers delivering waste will be subject to reminders of no idling policy by the Operator at the ticket office.  Driver's under the Operator's primary control will be subject to a site induction and toolbox talks.	If non-compliance is observed, a strike will be given, which when tallied up to 3 strikes for repeat offenders, the haulier will be contacted and driver banned from site.
9	Visual monitoring inspection	The visual monitoring check will be completed daily by nominated site operative, where wind direction, airborne dust, dust soiling and weather conditions will be monitored. This will be recorded in the site diary. The checklist will be kept on site in the Site Office. These conditions will be monitored using the Met Office website and real-time observations on site. Notes of weather conditions off site may also be noted if different from on site notes.  This will inform the need to use additional preventative measures.	The number of visual inspections will be increased in accordance with the weather conditions and following an emissions incident or complaint.  The inspections will be undertaken during normal operating hours, not during breaks. The inspection will include check of concrete surfacing, acceptance of loads and tipping/loading activities.	A minimum of 2 visual monitoring inspections will be undertaken per day. During dry / windy conditions, 3 inspections will be undertaken per day. A check record should be filled out for each inspection, and kept in the Site Office.  In the event of dust identification, the procedure and actions set out in Section 5 of this DEMP will be implemented.

Table 7. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
10	Air emissions awareness training	All staff receive internal air emissions awareness training at site induction and through regular toolbox talks to engender awareness on emissions reduction.	All staff receive internal air emissions awareness training at site induction and through regular toolbox talks	All staff receive internal air emissions awareness training at site induction and through regular toolbox talks
11	Routine servicing of plant and equipment.	All plant and equipment will be routinely serviced in line with manufacturers' guidance.	All plant and equipment will be routinely serviced in line with manufacturers' guidance.	Frequency of servicing will take be undertaken in line with manufacturer's guidance, or as faults or excessive emissions are identified.
12	Plant and equipment will be switched off when not in use	Plant and equipment will be switched off when not in use to reduce excessive emissions.	The importance of this measure will be reinforced during the daily briefing, site induction and during site walkovers (as part of the daily site inspection) by the Site Manager and the site operative nominated for visual dust monitoring.	During site walkovers (as part of the daily site inspection) by the Site Manager and the site operative nominated for visual dust monitoring, operatives will be reminded to switch off their engines if idling is identified. Incidences will be recorded in the visual monitoring check in the site diary and appropriate action taken upon repeat offences.
13	Higher Tier generators used where possible	For permanent infrastructure requiring constant power, Tier 4 compliant generators will be used. For short term operations, as a minimum, Tier 2 or 3 will be used (where electricity cannot be provided).	Any procurement of generators will be aware of the classification and the need for the more suitable Tier 4 standard, where practically possible.	Any procurement of generators will be aware of the classification and the need for the more suitable Tier 4 standard, where practically possible.
14	Dusty load response procedure	Upon entering the site, loads are inspected on the gate by staff member responsible for waste ticket collection/examination. Waste composition information is relayed onto machine driver via two-way radio. A second inspection is undertaken during tipping. If an unacceptably dusty load is identified at either of these stages, the load will be returned to the waste producer. If the load has been tipped, it will be re-loaded under suppression from water bowser, adsorbing any dust generated.  To note, it is the overall responsibility of the Site Manager to implement the dusty load response procedure.	The inspection at weighbridge/gate should not overly disturb the dusty load. In the event dust is identified at the acceptance stage, additional handheld misting can be applied.  In the unlikely event that a dusty load is accepted, the load will be dealt with under dust controls.  The waste producer will be notified, and an investigation initiated to prevent recurrence.	Inspection and identification of dusty loads undertaken at ticket office and during tipping.
15	Weekly litter pick	A litter pick will be undertaken by a nominated site operative who has been briefed internally on housekeeping requirements (shown in Appendix C). This will prevent buildup of debris and airborne emissions of waste.  To note, the waste types to be imported are not considered to be of high risk for litter generation.	If litter has migrated offsite as identified, litter pick will also cover external road.  In the event that there is an escape of litter from the confines of the site and into the local environment, it will be the responsibility of the site staff to arrange for litter picking of the affected areas within the working day. The operation or delivery generating the escape of litter will be stopped and thereafter controlled to minimise further releases and any container releasing fugitive material will	Visual Inspections will identify unacceptable conditions and trigger the litter pick in addition to the daily scheduled litter pick.  Records of inspections or remedial actions will be made in the site diary.

Table 7. Dust Emissions Standard Operating Controls				
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
			<p>be covered or removed from site immediately.</p> <p>An excessive spillage of materials anywhere within the site or on the adjacent road will be dealt with immediately by sweeping of the surface and litter picking if required. Such a spillage and the action taken will be recorded in the site diary. The EA can inspect the daily site diaries during inspections.</p>	
16	Records of visual site inspections recorded	Records of visual site inspections recorded in Site Diary.	Records allow for easy review and identification of dust sources in the event of complaints/ emission incident etc.	Results and checklist of visual inspections are to be filled out and recorded each time.
17	Wheel wash at access / egress for HGVs	HGVs entering and leaving the site will pass through a wheel wash of a high-pressure hose and mobile bowser (when required). The water will be contained.	<p>This is a permanent design feature which will be in place during works.</p> <p>If broken and/or repairs being made, critical parts will be kept on site and an alternative method of mobile high-pressure hose will be utilized.</p>	Going through the wheel wash is compulsory during dry conditions (or conditions causing mud on road) for all HGVs.

- 4.6 Water for suppression will be sourced from mains supply and on site storage ponds (this is estimated at circa 50 m<sup>3</sup> conservatively). The estimated worst-case water consumption of on-site operations is calculated below:

<b>Table 8. Onsite worst-case water consumption</b>	
<b>Dust suppression Activity</b>	<b>Worst Case Water Consumption (per day)</b>
Road sweeper	35L/min x 5 hours = 10.5 m <sup>3</sup>
Manual misting system	15 L/min x 20 minutes per hour (12 hour working day) = 3.6 m <sup>3</sup>
Mobile tractor and bowser suppression	2,200 L tank emptied x 10 trips (1 per hour) = 22 m <sup>3</sup>
Maintenance (cleaning, washing down)	Estimated at 0.5 m <sup>3</sup>
<b>Total</b>	<b>36.6 m<sup>3</sup></b>
1. Water consumptions taken from WRAP 'Case Study: Water Efficiency on construction site' and or equivalent specification sheets from leading manufacturers. 2. The operating working hours are taken from the Operational Plan. These are conservative and do not include break times.	

- 4.7 Based on the worst-case scenario in Table 8, the water capacity at the site can accommodate site operations given the conservative estimates.
- 4.8 In the unlikely event that further contingency measures are required, off-site / third party sources can be used during drought conditions and/or water supply disruptions. These could include private water suppliers or off site (private or public) mains, tanks and boreholes.
- 4.9 There will be a tractor and 2,200 L water bowser trailer hired in within 24 hours to suppress the haul route during prolonged dry or windy periods. The bowser discharge point will allow a deluge type effect to cover the haul route with water. This will minimise potential fugitive dusts from HGV's driving along the haul route and on site.
- 4.10 Mobile misting systems will be deployed during period of dry weather to ensure there is effective suppression in all wind directions. Other measures during high winds include a review of certain types of works or additional controls e.g. hire in more road sweepers, or mobile misters; or no delivery lorries on certain days and placement of material only. These are subject to further review at the beginning of each working day.

## 5.0 PARTICULATE MATTER MONITORING

- 5.1 A daily site inspection will be undertaken by the Operator including potential sources that day, the control of dusts and the provision of controls. This information will be recorded in the Site Diary. To note, any site operative can report incidents to their line manager and appropriate actions will be taken immediately. The inspection will be undertaken by the Site Manager and/or a nominated site operative who has been given appropriate internal training by Site Manager and/or Technically Competent Person (TCP), and/or environmental consultant. In the event the Site Manager is not at the site, the On-Duty Manager and/or nominated site operative will be expected to undertake the site inspection. The Site Diary is kept in the site office / welfare unit. Corrective actions are outlined in Section 6 and will be recorded in the Site Diary and effectiveness monitored.
- 5.2 The visual inspection will be performed on foot, allowing adequate opportunity to identify emission sources at the 5 locations across the site and the external location (locations seen in drawing 193224/D/004), where the operative will stop to observe from each monitoring point for a minimum of 2 minutes. The visual monitoring will be undertaken prior to ceasing operations each day. Inspection of static objects (cars, street furniture, storage containers) will be used to gauge the extent of dust soiling and will be wiped clean so an accurate judgement can be performed on the subsequent inspection. To note, no out of hour visual monitoring provision is deemed necessary given control measures applied.
- 5.3 Weather conditions (temperature, precipitation and wind speed/direction) will be recorded on the visual monitoring check in the site diary using a value obtained from the Met Office online resource. After completion of the inspection, the inspected wind directions will be compared against the desktop inspection. The comparison will be for information only. If the local weather conditions do not match the Met Office conditions, the local conditions will take precedence.
- 5.4 A minimum of 2 visual inspections will be undertaken per day. During dry / windy conditions, 3 inspections will be undertaken per day. One of the checks will be before cessation of works each day. The inspections will be undertaken during normal operating hours, not during breaks. The inspections will include checking of concrete surfacing, acceptance of loads and tipping/loading activities. To ensure this system is operating effectively, it will be reviewed monthly by the Site Manager. If found to be ineffective (e.g. recurring identification of dust sources on site, poorly filled out forms), the methodology and frequency of the monitoring will be reviewed, revised and briefings will be implemented. This is the responsibility of the Site Manager.
- 5.5 The daily inspections will have a trigger threshold of visual dust in the form of a visible dust (this may be in plume form or separated, this may also just be felt on your skin rather than visible) within the site, as a result of vehicle movements, wind whipping or material handling. This trigger threshold is an internal site action threshold only and not a compliance threshold. There is no severity to visual dust: if it is seen, the response procedure (set out in section 5.6 to 5.9 below) must be implemented.
- 5.6 In the unlikely event this threshold is breached, the Site Manager or nominated site operative will notify the Site Team and the response procedure will be initiated. The Site Manager is responsible for the implementation of the incident response procedure. The response procedure actions are set out below. When triggered, the Site Manager and/or nominated site operative will assess the operations, waste type being handled and deliveries immediately prior to the alarm being activated;
- If the source cannot be ascertained with certainty, the Site Team will temporarily cease the most likely operation;
  - If the source is within the site's control, the Site Team will take appropriate action in terms of dust/particulate abatement to ensure further observations do not encounter the same emissions for a similar activity. Actions will include:
    - Review of the activity's dust control measures;
    - Increased frequency of the existing control measures; and
    - Temporarily suspending likely works until suitable abatement can be introduced.
  - If an effective control measure cannot be identified and the internal trigger level is identified again within 30 minutes of the first identification raised; and the wind direction indicates it could be from the site; the source activity will be temporarily suspended. The activity will not resume until



- sufficient controls have been achieved (i.e. no visible identification). Visual inspection frequency will be every half an hour during the response procedure, until incident is closed out.
- If there are more than three incidents within a month, further targeted quantitative dust monitoring will be undertaken to establish source and effective control measures. Details of the quantitative monitoring is set out in section 5.7.
- 5.7 Quantitative monitoring will be undertaken within 10 working days (this covers consultant lead in times and procurement) of when the final of three incidents is identified. The quantitative monitoring will be one of the following and will be in accordance with the standard set out in M8 EA guidance:
- Pumped (active) sampling of PM10 onto filter paper; Gravimetric analysis; or
  - Light-scattering optical particle counter
- 5.8 The monitor will be set up in accordance with supplier recommendations and environmental consultant's procedures. The focus of the monitoring will be on determining the source activities and measurements will be collated within 10 m, within 30 m and at boundary in upwind and downwind locations. This will only be undertaken in dry conditions (to recreate similar conditions to the breaches and to preserve integrity of the equipment). Monitoring will also be undertaken at specific receptors to account for any complaints/concerns.
- 5.9 The monitoring activity will be carried out under MCERTS accreditation. The quantitative dust monitoring PM10 threshold will be 75 µg/m<sup>3</sup> over a 5-minute period average. If the quantitative action threshold is exceeded; and the wind direction indicates it could be from the site; the site will identify and cease the likely source operation until measured PM10 concentrations drop below the action threshold for a 30-minute period.
- 5.10 The internal action observation exceedance will be logged in the Site Diary and a report of the exceedance and corrective action response to the local EA officer via email within 1 week. To note, these are internal identifications of dust on site. Any exceedance which is not from the site but from an adjacent third-party activity, will be noted in the Site Diary.
- 5.11 All complaints will be logged and dealt with appropriately in accordance with the Operator's complaint procedure (shown in Appendix B). Operations and additional controls are in accordance with Appendix B.
- 5.12 All monitoring data will be made available to the Local Authority and Environment Agency, upon request or as specified within the Environmental Permit. This will include any reporting or notification response or contextual information regarding the monitoring data. This will be undertaken within 10 working days of when the monitoring data is issued.
- Controls in the Event of Abnormal Fugitive Emissions**
- 5.13 In the event that abnormal fugitive particulate emissions are identified during site inspections the following controls should be applied:
- take immediate action to cease operations;
  - investigate the incident;
  - record the incident and the remedial site action in the Site Diary; and
  - the DEMP will be updated accordingly and issued to the EA for review.
- 5.14 Remedial actions are dependent on the source but may include, but not limited to:
- Increase the frequency of road sweeping along the operational hardstanding and external road;
  - Deploy more misting systems, including manual hosing down, specifically targeting certain locations;
  - Limit activities to fewer hours each day (in addition to the standard controls being implemented);
  - Stop accepting certain mixed waste types which are likely to have more friable dust potential; and
  - Remove the dusty waste from site under dampened conditions immediately (under suppression systems).

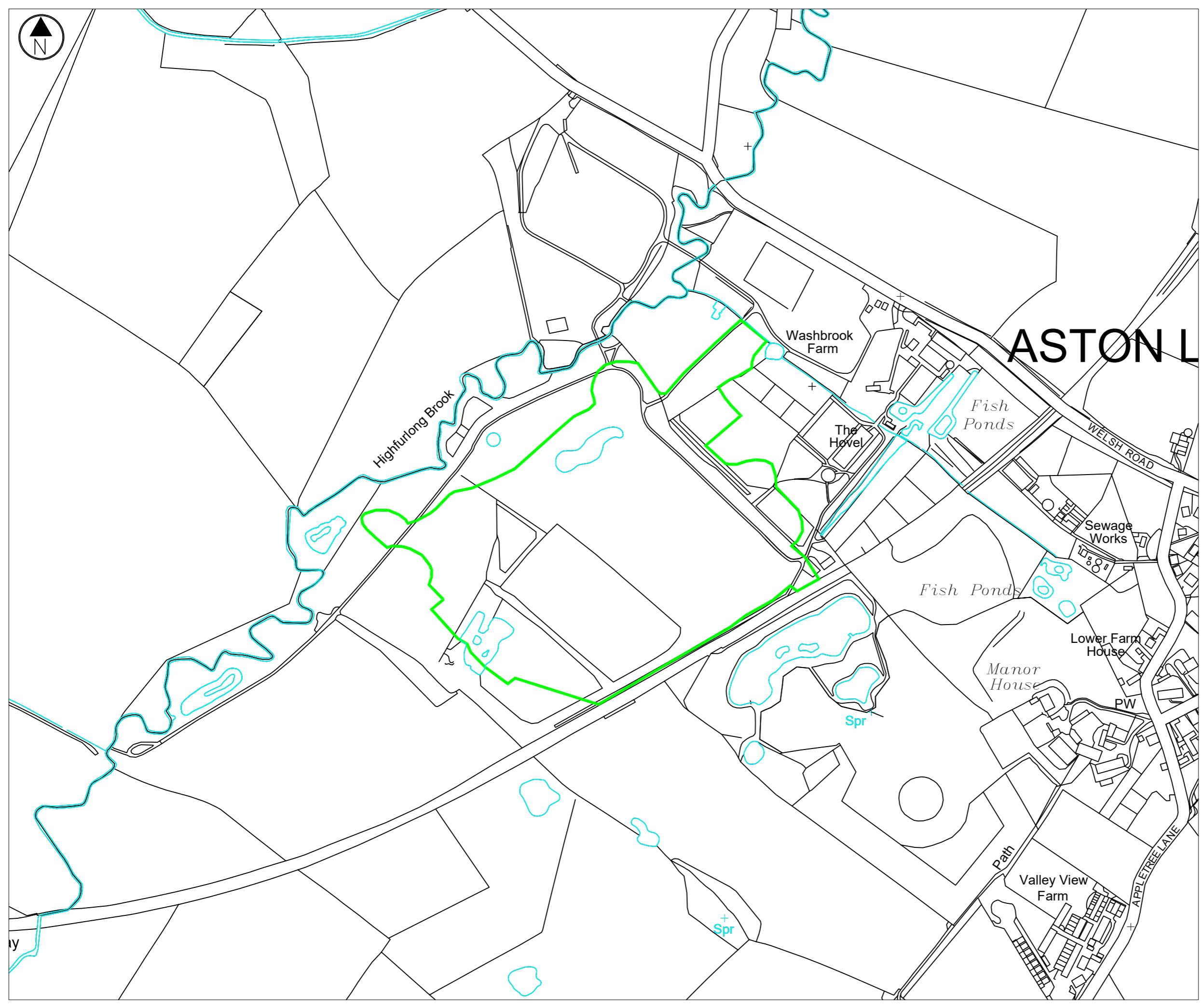
- 5.15 In periods of drought (defined as > 35 °C over 3 days consecutively or no rainfall in 14 days) and high winds (defined as > 25mph on any day), operations will be limited in the following ways:
- Install rain guns at key operations;
  - Wet down loads in main enclosure before transferring to external Yard 1A;
  - Limit the number of loads accepted proportional to the reduction in activities;
  - Deploy more misting systems, specifically targeting tipping and loading activities, including manual hosing down of stockpiles; or
  - If limited or no water is available, the Operator will operate in accordance with section 4.8 and 4.9 of this DEMP.
- 5.16 In the event that these controls do not resolve fugitive particulate emissions at the site, key source activities will be suspended until suitable arrestment systems are implemented. These systems will be implemented in agreement with the Local Authority and the EA. The systems may include permanent use of remedial actions or alternative measures, as agreed. In the event that the implemented systems change, the DEMP will be reviewed and amended accordingly

## 6.0 DEMP MANAGEMENT, TRAINING & RESPONSIBILITIES

### Management Responsibilities

- 6.1 The staff member responsible for implementation, updating and review of this document is the site manager. The site manager is given appropriate training regarding this document upon induction. Upon each document revision and review by site manager, a final review of the document and evaluation of training will be undertaken by senior management.
- 6.2 All site operatives will receive internal dust and emissions training. Training is included within the site induction (upon the start of employment), during daily site briefings, and through tool box talks.
- 6.3 As a minimum, this plan will be reviewed by the site manager on an annual basis to ensure that it is up to date, addressing the dust risks of the operations at any time. The plan will be reviewed by Senior Management either following an emissions incident quantified by a substantiated complaint, a monitoring threshold exceedance or observed emissions over the boundary, or change to the working area. The review procedure will be undertaken within 1 month of the incident to allow any further data to be interpreted. The review will ensure mistakes are learnt from and new/improved methods will be integrated.
- 6.4 The main site telephone number, including site emergency number is displayed on the exterior of the site boundary on signage and the site telephone number and email are found on the website. Complainants are readily able to contact site management through different avenues, allowing their concerns to be addressed in a timely manner.
- 6.5 In the event there is a change in the process or dust profile on site, the Operator will notify residents within 330 m of the site of any changes. This will be undertaken on an individual basis either by email, letter or door to door meeting.

# DRAWINGS



**KEY**

— Permit Boundary

**Note**

The site is centred at grid reference SP 48722 50969.

# ASTON L

Rev.	Details	Drawn Chkd.	Date
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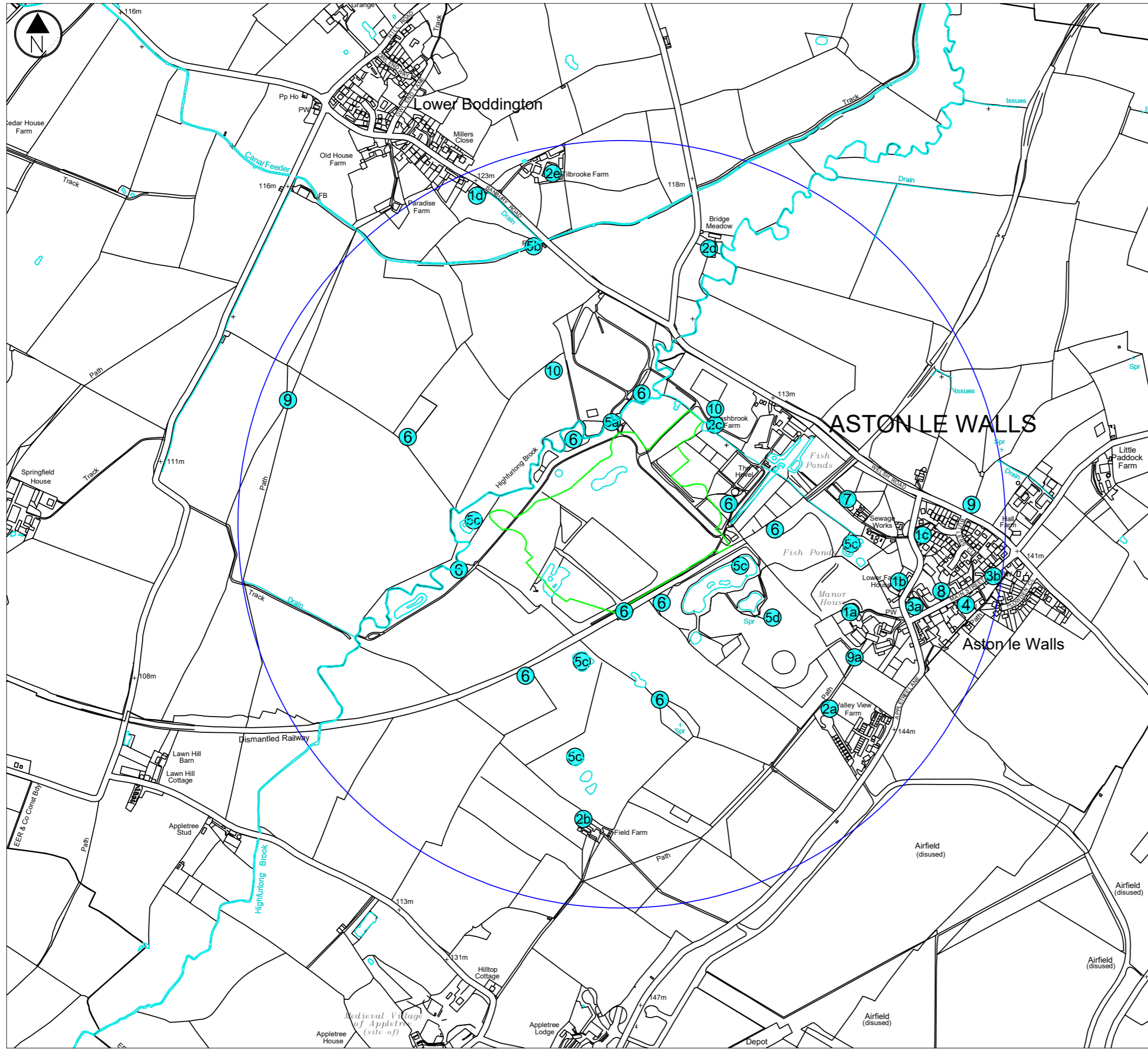
Project  
193224  
Aston Le Walls

Title  
Site Location Plan



**AA Environmental Ltd**  
Units 4-8  
Cholswell Court  
Shippon Abingdon  
Oxon OX13 6HX  
T: (01235) 536042  
F: (01235) 523849  
info@aae-ltd.co.uk  
www.aae-ltd.co.uk

Scale	Date	Jan '23	Drng. No.	Rev.
1:5000@A3	Drawn	Chkd.	193224/D/001	
	EF	EB		



- KEY**
- Permit Boundary
  - 1 km Radius
  - ① **Residential**
    - a) Manor House
    - b) Lower Farm House
    - c) Dwellings off Blacksmith Lane / Main Street
    - d) Lower Boddington
  - ② **Agricultural**
    - a) Valley View Farm
    - b) Field Farm
    - c) Washbrook Farm
    - d) Bridge Meadow Farm
    - e) Tilbrooke Farm
  - ③ **Religious**
    - a) St Leonard Church
    - b) The Catholic Church of the Sacred Heart and Our Lady
  - ④ **St Mary's Catholic Primary School**
  - ⑤ **Water Features**
    - a) Highfurlong Brook
    - b) Canal Feeder
    - c) Pond / Lagoon
    - d) Spring
  - ⑥ Priority Habitat / Local Wildlife Site
  - ⑦ Sewage Treatment Works
  - ⑧ Village Hall
  - ⑨ Public Right of Way
  - ⑩ Aston Le Walls Equestrian Centre









Rev.	Details	Drawn	Date
	Project <b>193224 Aston Le Walls</b>	Chkd.	
	Title <b>Receptor Plan</b>		
		<b>AA Environmental Ltd</b> Units 4-8 Chotswell Court Shippon Abingdon Oxon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk	
Scale 1:10,000@A3	Date <b>Jan '23</b>	Drawn EF	Rev. EB
	Drg. No. <b>193224/D/002</b>		

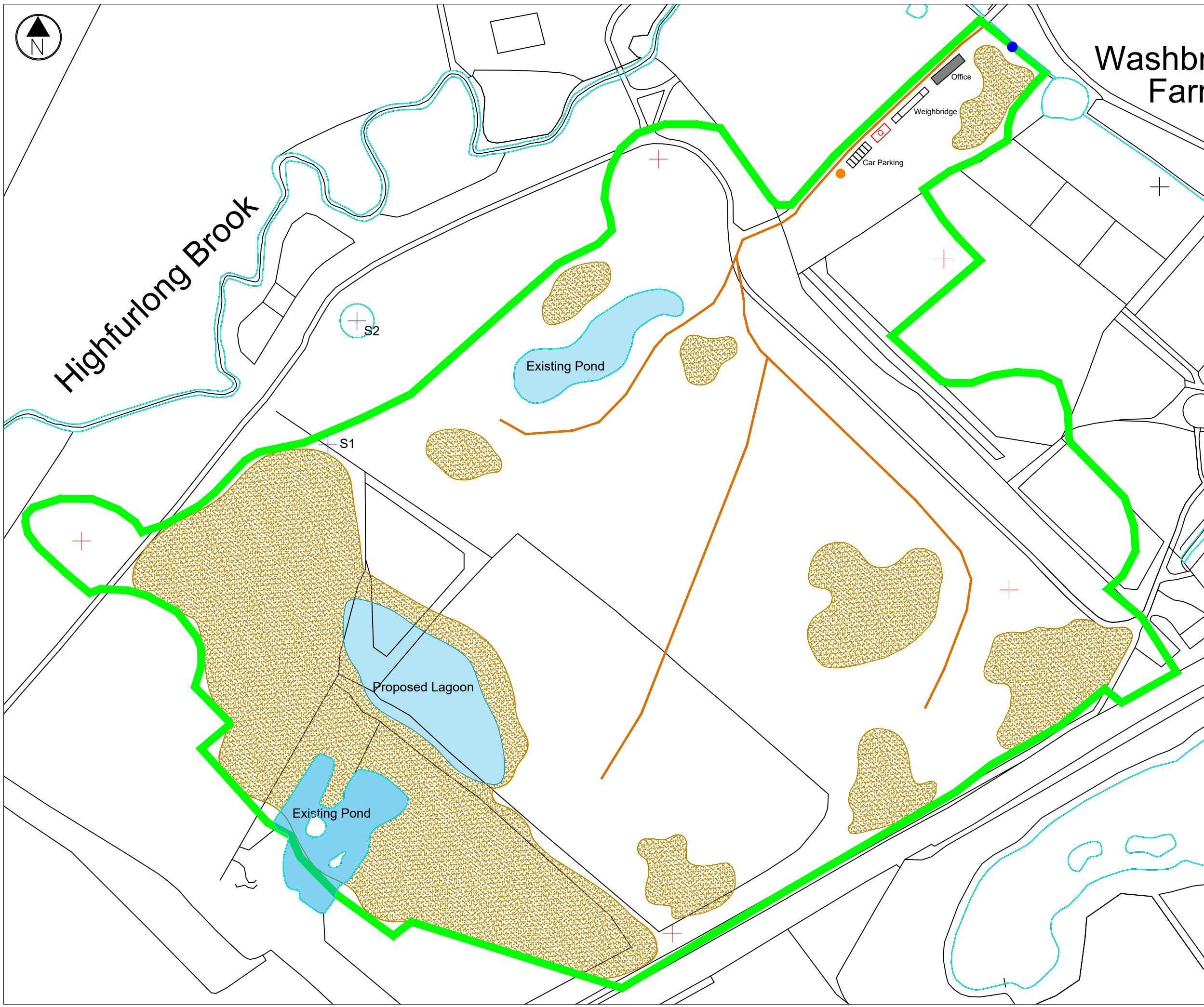




Highfurlong Brook

Washbr  
Farr

- KEY**
-  Permit Boundary
  -  Area of Fill
  -  Quarantine Area
  -  Site Access Point
  -  COSHH Storage
  -  Internal Haul Route (subject to change)
  -  Visual Monitoring Location
  -  Surface Water Monitoring Point



Rev.	Details	Drawn	Date
		Chkd.	

Project  
 193224  
 Aston Le Walls

Title  
 Site Layout Plan



**AA Environmental Ltd**  
 Units 4-8  
 Cholswell Court  
 Shippon Abingdon  
 Oxon OX13 6HX  
 T: (01235) 536042  
 F: (01235) 523849  
 info@aae-ltd.co.uk  
 www.aae-ltd.co.uk

Scale	Date	Jan '23	Drg. No.	Rev.
1:2000@A3	Drawn	EF	Chkd.	EB
			193224/D/004	

## Appendix A

### Source, Pathway Receptor Table



## Assessment of fugitive emissions

Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
<b>To Air</b>									
<p>Dust from vehicle operations from external haul roads.</p> <p>Dust from operations and handling of soil.</p> <p>Dust from importation and placement.</p>	<p>Equestrian Facility users and horses</p> <p>Residents of Aston le Walls to north east.</p> <p>Flora and Fauna.</p>	<p>Harm to human health, respiratory irritation and illness.</p>	<p>Air then inhalation.</p>	<p>Moderate</p>	<p>Possible</p>	<p>Medium</p>	<p>Permitted wastes include wastes with small particle sizes and potential to generate dust, especially during re-grading.</p> <p>Operations have the potential to generate dusts from off-site movements during prolonged dry periods.</p> <p>The Operator will implement this dust management plan.</p>	<p>All works will be undertaken in accordance with the Dust Management Plan. A dusty load check will be completed as part of the waste acceptance procedure.</p> <p>Haul route to be compacted and maintained, with repairs made within 24 hours.</p> <p>Wheel wash and road sweeping implemented, with access point swept and maintained daily.</p> <p>All lorries will pass through the wheel wash on exit. All lorries will be enclosed, sheeted or vehicle with equivalent dust controls upon arrival and until placement.</p> <p>Weather will be monitored and site operations limited accordingly./ higher frequency of water suppression.</p>	<p>Low</p>



Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
								<p>Material will be placed as soon as practicable. Stockpiles will be compacted to minimize wind and rain entrainment and stored at safe angles of repose.</p> <p>Drop heights will be minimized.</p> <p>Site wide speed limit for all HGVs (10 mph). Construction traffic and plant operations will be optimised including by ensuring full loading, minimising double handling and efficient routing. An anti-idling policy will be in place for all plant and vehicles.</p> <p>All staff will receive internal awareness training at site induction and through regular toolbox talks. A daily litter pick will be undertaken by a nominated site operative. At the end of each day temporary stockpiles will be compacted, large debris tidied, and an inspection of the haul route, car park and highway will be</p>	



# Aston Le Walls

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Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
								undertaken.	



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## Appendix B Complaints Procedure & Form

# Complaint Form

Complaint Form Reference No.	
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Date of Complaint	
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Details of Complainant			
Name			
Address			
Contact Number		Email Address	
Nature of Complaint			
Reported To		Date of Incident (if different to date of complaint)	
Corrective Measure Taken			
Follow up Communication with Complainant			
Preventative Measure Taken (if any)			
Sign off		Close out Date	

# Complaints Procedure

193224/CP

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## INTRODUCTION

This Complaints Procedure outlines how the Operator will respond in the event of a complaint. A complaint may arise relating to the site permitted activities involving a nuisance (dust, noise, odour, pests). This procedure contains information on how any complaint will be investigated and any actions taken as a result of the complaint.

## KEY CONTACTS

The key contacts will be shown on the site notice board at the site entrance. Alternatively, any complaints can be made at the site to any site operative and/or the Site Manager.

## PROCEDURE

1. Any complaints made will be immediately logged by the Site Manager and/or Site Operative. In the event a complaint is made to a Site Operative, the Site Operative will refer the complaint to the Site Manager. If able to do so, the complainant details will be taken on initial contact either by phone or in person. The response time is typically within 1 hour.
2. The Site Manager (or nominated operative) will discuss any concerns with the complainant directly within 1 working day of the complaint being made; and request contact details to notify the complainant of any updates/corrective measures. The complaint will be logged using the Complaint Form (attached) and given a unique reference number.
3. The Site Manager will review the site activities and ensure control measures are in accordance with the Site's Management Systems. This review will typically happen in conjunction with point 1 and review will be undertaken within 2 working days of complaint being made.
4. Once initial contact and review of the site has been undertaken, the Site Manager will investigate the location of concern raised in relation to the site i.e. at a local receptor location and/or public highway to inspect the impact on the receptor. This will occur within 3 working days.
5. The Site Manager will notify the complainant of any updates to the control measures / site operations. Control measures may be corrective and/or preventative and include additional control measures and/or increase the frequency of an existing control measure. Alternatively, the design of the site operations may change to decrease nuisance to that receptor. The notification will be within 1 week of the complaint being made.
6. In the event the same issue persists, the Site Manager will further review site operations and control measures. This may require a temporary cessation of certain operations whilst additional measure is implemented. The works will not recommence until further control measures have been incorporated and a review of effectiveness has been agreed / witnessed by the Site Manager. The complainant will be kept abreast of further measures. This is likely to be within 1-2 weeks subject to what the complaint is, severity of complaint and associated activity taking place.
7. In the event of an out of hour complaint, the complaint will be picked up on the next working day and dealt with as per point 1-6 above.

## RECORDS

### *On site Records*

A copy of this procedure is kept on site and briefed to all site operatives upon site induction. Any identified complaints, incidents or accidents, as well as corrective measures, are recorded in the Complaint Form. Copies of the complaint forms are kept on site.

# Complaints Procedure

193224/CP

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## *Review*

This procedure is reviewed on a yearly basis or post-incident to ensure it remains up-to-date with the site operations. The review procedure would involve the Senior Management Team and site team collectively to establish the root cause and the best available control techniques. The review will take place within 1 month of the incident.

## Appendix C House keeping Checklist

Housekeeping activity	Area of the site	Frequency	Personnel	Record
Litter inspection and pick	Whole site	Daily – typically beginning of each working day	Nominated operative	Daily Site Diary
Manual brush	Access / egress to the site	Daily - if mud on road is identified	Nominated operative	Daily Site Diary
Road sweeper brush	Access / egress to the site	Daily - if mud on road is identified	Nominated operative / third party contractor	Daily Site Diary
Maintenance of haul route	Whole site.	Daily – end of each day	Plant operator	Daily Site Diary