### **Peel NRE Limited**

## **Port Salford Deposit for Recovery**

Land at Port Salford, Liverpool Road, Eccles M30 7RX

# Dust & Emissions Management Plan (DEMP)

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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 Peel NRE Ltd (the Operator). It sets out how the risk of poor air quality emissions will be managed at the Land at Port Salford during the proposed land raising and reprofiling. It is located immediately south of Liverpool Road (A57) in Eccles, on the outskirts of Manchester. The site is not located within an existing Air Quality Management Area. The site location is shown in drawing 193237/D/001. The nearest residential property is circa 50 m north west from the site on the opposite side of the A57.
- 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 including 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 Sites¹. 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 west of the site. The site layout and access are shown by drawing 193237/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.

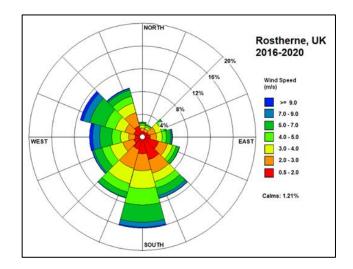
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<sup>&</sup>lt;sup>1</sup> Guidance used as it is the most authoritative for the type of operations at the site.

#### 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 2016-2020, has been acquired from ADM Limited. The wind data has been taken from the Met Office Station in Rostherne, which is approximately 11 km south of the site. This data is considered representative of the site, given that the surrounding topography of the weather station is akin to that of the site and also considering proximity of the station to the site. The prevailing wind direction is from the south quadrant.



- 2.2 The site is located within an area of predominantly commercial and industrial / infrastructure land uses, including the Manchester City Airport north of the site, Culina/Great Bear Warehouse to the west, a football stadium and outdoor sports pitches to the east, Barley Farm Dining and Carvery to the north east and Davyhulme Wastewater Treatment Works 280 m south east of the site. The A57 public highway runs parallel to the northern site boundary, and the Manchester Ship Canal runs parallel to the southern boundary circa 110 m south. The nearest sensitive receptors susceptible to fugitive emissions will be the residential properties circa 50 m north west and 185 m north east of the site. The site and surrounding sensitive receptors are shown on drawing 193237/D/002.
- 2.3 With the dominant wind direction from the south, the most sensitive receptors at risk from fugitive emissions are likely to be the residential properties circa 50 m north of the site. Drawing 193237/D/002 shows all the surrounding receptors within 1 km. The neighbouring surrounding area is generally of lower sensitivity.
- 2.4 DEFRA Air Quality Management Areas (AQMAs) data indicates the site is not within an AQMA. Sections of the A57 Liverpool Road, immediately to the north of the site, have been designated as part of the Greater Manchester AQMA for the potential exceedance of the annual mean nitrogen dioxide (NO<sub>2</sub>) air quality objective.
- 2.5 The A57 is listed as a road with a proportion of HGVs and buses exceeding 7 % and NO<sub>2</sub> exceeding 36 μg/m³ in the Greater Manchester Air Quality Action Plan 2016–2021.
- 2.6 The site is located within the Salford City Council (SCC) area. The nearest automatic monitoring locations to the site are not representative of the character of the site. The nearest diffusion tube monitoring location to the site is location SA52, which is situated 700 m north east of the site, on the A57 roadside. This recorded a 2020 annual mean of 21.8 μg/m³ for NO₂. There was no PM2.5 or PM10 monitoring undertaken.

- 2.7 DEFRA estimate the background concentration for a number of pollutants over a number of years on a 1 km grid resolution for the whole of the UK<sup>2</sup>.
- 2.8 Table 1 shows the Defra estimated background concentration of PM<sub>10</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> at the grid location closest to the site. Estimates are presented for 2021.

Table 1. Estimated Annual Average Background Concentrations for 2021 (μg/m³) <sup>1</sup>				
Grid Receptor Location	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	
374500, 396500 (2018, last available record)	11.9	7.9	16.7	
374500, 396500 (2021, government projection)	11.4	7.5	14.5	

2.9 Table 1 shows that the DEFRA projected background concentration of PM<sub>10</sub>, PM<sub>2.5</sub> & NO<sub>2</sub> for 2021 and 2018.

#### **Sensitive Receptors**

2.10 Table 2 sets out the potential sensitive receptors to dusts, by either land use or proximity to the operation. This table supplements drawing 203382/D/002. With the dominant wind direction from the south, the receptors at higher risk from fugitive emissions are likely to be the residential receptors on the A57 and the users of the flying schools and associated airport infrastructure north of the A57.

Table 2. Sensitive Receptor Locations					
Receptor ID	Receptor Name	Approximate Distance from site boundary (m)	Direction		
1	Industrial buildings along A57	< 50	North		
2	Residential properties along Liverpool Road	< 50	North/ north west		
3	Salteye Brook	On site	-		
4	Boyle Brook	250	North west		
5	Flying schools and airport garage	< 50	North		
6	Industrial estate off A57	200	North west		
7	Residential properties along Barton Moss Road	255	North west		
8	Manchester City Airport	< 50	North		
9	Barley Farm Dining and Carvery	160	North east		
10	Residential properties along Trident Road	185	North east		
11	AJ Bell Stadium	185	East		
12	Manchester Ship Canal	120	South		
13	Golf Course	317	West		
14	Residential properties along Ripley Crescent	300	South		
15	Residential properties along New Hall Avenue	490	North east		
16	Sports Ground	530	North east		
17	Residential properties along Robinia close	650	North east		
18	Peel Green Cemetery and War Memorial	480	North east		
19	Tunnel Farm	700	North west		
20	Residential properties along Liverpool Road	543	West		
21	Clubhouse Restaurant	580	South west		
22	Residential properties along Daresbury Avenue	560	South west		

<sup>&</sup>lt;sup>2</sup> https://uk-air.defra.gov.uk/data/laqm-background-home (accessed 03/09/21)

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Table 2. Sensitive Receptor Locations					
Receptor ID	Receptor Name	Approximate Distance from site boundary (m)	Direction		
23	Barton Moss Primary School	801	North east		
24	A57 public highway	<50	North		
25	Sewage Works	320	South		
26	Local Nature Reserve	200	South		
27	M60 public highway	750	East		
28	Sewage Works	840	East		
29	M62 public highway	960	North west		
30	Davyhulme Park Golf Club	735	South		

Table 3. Potential dust and emission emitters within 1 km of the site					
Receptor	Approximate distance from site boundary (m)	Direction	Comment		
Flying schools and airport garage	< 50	North	PM10, PM2.5 and NO <sub>2</sub> emissions from car, helicopters, traffic and planes		
Manchester City Airport	< 50	North	PM10, PM2.5 and NO <sub>2</sub> emissions from car, helicopters, traffic and planes		
AJ Bell Stadium	330	East	PM10, PM2.5 and NO <sub>2</sub> emissions from visitors' cars on match or training days.		
Manchester Ship Canal	150	South	PM10, PM2.5 and NO <sub>2</sub> emissions from navigation along the Canal		
A57 public highway	< 50	North	PM10, PM2.5 and NO <sub>2</sub> emissions from road users		
M60 public highway	900	East	PM10, PM2.5 and NO <sub>2</sub> emissions from road users		

#### 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 west of the site via the site office. This is shown on the site layout plan drawing 193237/D/004.
- 3.2 The platform across the site will be constructed in phases, most likely per unit space, 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, haul route, stockpiles/ bunds and the platform of graded suitable fill material at its current phase. There is no positive drainage system installed at the site. The site access/egress is located in the northwest of the site, off the A57 and the internal routing is delimited by the haul route.
- 3.4 880,000 tonnes 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 150,000 tonnes per year.
- 3.5 The overall dust risk for the typical waste stream is considered medium to high without mitigation. Table 4 highlights the potential dust risk from the typical waste streams expected on site.

EWC	Description	Tonnes per week (indicative)	Destination and Process	Potential Risk (with no mitigation)
17 05 04 17 01 01 17 01 02 17 01 03 17 01 07 20 02 02 19 13 02 19 12 09	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

- 3.6 All lorries will be 8-wheeled enclosed, sheeted lorries of vehicle with equivalent dust controls and will be sheeted upon arrival. The lorries will be briefly uncovered for visual inspection at the weighbridge and during 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 y 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.

Table 5. Waste processes, streams and description of management activities

Table 5. Waste processes,	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 Plan	Table 6. Mobile Plant / Equipment					
Description	Make	Model	Emission Rating			
Bull dozer	Caterpillar	D6	Tier 4			
Sheepsfoot roller	Bomag	BW6	Connected and operated through the bull dozer power.			
Excavator	TBC	TBC	Tier 4 or better.			
Smooth drum roller	Hamm	H20i	Tier 4			
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 ( $<100 \mu m$ ) 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 Sta	ndard 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.	Minimal mud generated.  Any mud/ dust tracked onto the haul route by HGVs is easy to clean.  The haul route will be subject to a 'deep clean' on a weekly basis to prevent the build up of dirt and dust.  Condition of haul route to be inspected and recorded during the daily visual monitoring inspection, with repairs made accordingly.  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.  Clear signage and direction from ticket office to follow haul route to tipping area.	Repairs will be made to the haul route within half a day of the identification of deterioration.  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.  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.	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.	All lorries will be 8-wheel enclosed, sheeted lorries or vehicle with equivalent dust controls.  Vehicles will be sheeted upon arrival.	Vehicles will temporarily uncover for visual inspection at the weighbridge or gate, then re-cover for the transit to the designated tipping location.	Operative responsible for ticket collection will enforce compliance with sheeting/ equivalent dust controls if dust control is inadequate.  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.
3	Tipping location situated in designated areas and under dust suppression	Vehicles will finally uncover at tipping location and under dust suppression spray (if required).  Direction and signage clearly displaying tipping location and adjustment of tipping location depending on progress of work in relation to receptors.	These designated areas are the only locations where unloading/ tipping will occur to ensure adequate suppression.  Clear signage to tipping area and direction given at weighbridge or gate.	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.	When tipping, manual dust suppression will be used during dusty conditions.  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 low.	Periodic wetting of stockpiles will occur by water bowser during dry conditions.  Critical spares for the dust suppression (sprays) will be maintained on site.  Another mobile water bowser can be sourced within half an hour from adjacent construction projects.	Suppression will be implemented whenever these activities are taking place during dusty conditions.

	able 7. Dust Emissions Standard Operating Controls					
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation		
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. A reduction in emissions from bulldozer/frontloader will also	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 & checklist	The visual monitoring checklist (VMC) (attached Appendix D) will be completed daily by nominated site operative, where wind direction, airborne dust, dust soiling and weather conditions will be monitored. 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 VMC 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.		
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		

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Table	7. Dust Emissions Sta	ndard Operating Controls		
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation
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 checklist 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 build up 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 be covered or removed from site immediately.  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	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	Table 7. Dust Emissions Standard Operating Controls					
Ref	Abatement Measure	Description/Effect	Overall Consideration and Implementation	Trigger for Implementation		
			recorded in the site diary. The EA can inspect the daily site diaries during inspections.			
16	Records of visual site inspections recorded	Records of visual site inspections recorded in Site Diary and on visual monitoring checklist.	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. The wheel wash will be a wheel bath type structure for wheels to be immersed in water. The water will be contained.	This is a permanent design feature which will be in place during works.	Going through the wheel wash is compulsory during wet conditions (or conditions causing mud on road) for all HGVs.		
			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.			

- Water for suppression will be sourced from mains supply, and in the very unlikely event, the abstraction borehole (licence no. NW/069/0007/016) within the soil washing plant area (this has a maximum abstraction of 260 m³ per day). In addition, if other water needed to be sourced, third party provision (circa 10,000 L tanker 6 times a day giving 60 m³) can be organised. There is also water storage from the tanks in the soil washing plant which can be utilised (circa 200 m³). The site will also have a temporary rainwater water pit for dust suppression needs (anticipated to provide 20 m³).
- 4.7 The estimated worst-case water consumption of on-site operations is calculated below:

Table 8. Onsite worst-case water consumption					
Dust suppression Activity	Worst Case Water Consumption (per day)				
Road sweeper	35L/min x 5 hours = 10.5 m <sup>3</sup>				
Drive-on wheel wash	11.5 m <sup>3</sup> (conservatively assessed as re-filled periodically)				
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>				
Total	44.5 m <sup>3</sup>				
1 Water consumptions taken from WRAP 'Case Study: Water Efficiency on construction site'					

- Water consumptions taken from WRAP 'Case Study: Water Efficiency on construction site'.
- 2. The operating working hours are taken from the Operational Plan. These are conservative and do not include break times.
- 4.8 Based on the worst-case scenario in Table 8, the water capacity at the site can accommodate site operations given the conservative estimates.
- 4.9 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. The Operator is part of the wider Peel Group which have at least five locations within Greater Manchester with water resource which can be utilised.
- 4.10 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.
- 4.11 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

- 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 and visual monitoring checklist (an example is attached in Appendix D, which may be incorporated into the Site Diary check). 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 6 locations across the site and the external location (locations seen in drawing

193237/D/005), 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.

- Weather conditions (temperature, precipitation and wind speed/direction) will be recorded on the visual monitoring checklist 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.
- 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 check 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.
- 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 equipment and consultant will be carried out under MCERTS accreditation. The quantitative dust monitoring PM10 threshold will be 75 μg/m³ 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;
  - 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 4.9 and 4.10 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

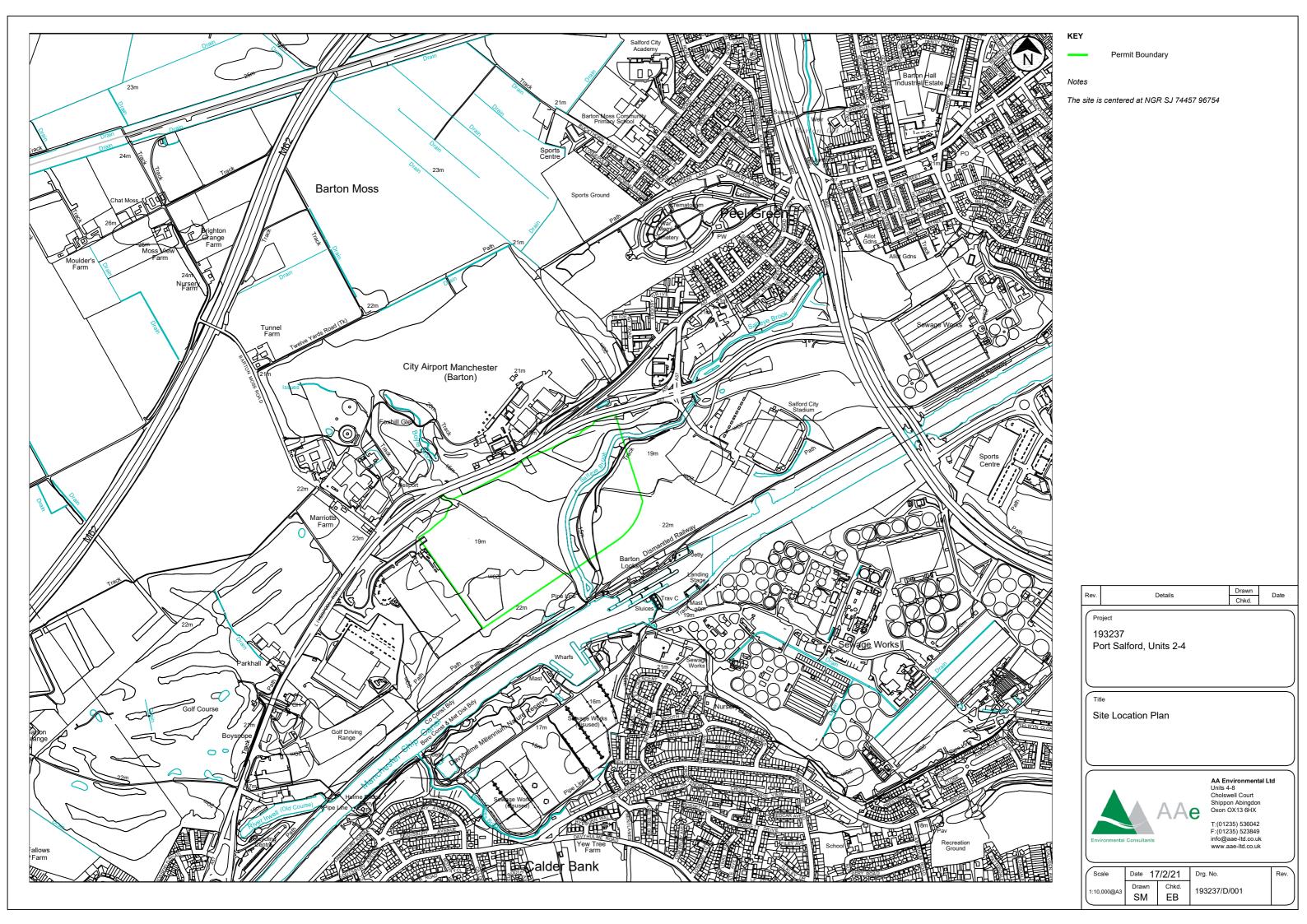
permanent use of remedial actions or alternative measures, as agreed. In the event that the implemented systems change, the DEMP will be reviewed and amended accordingly.

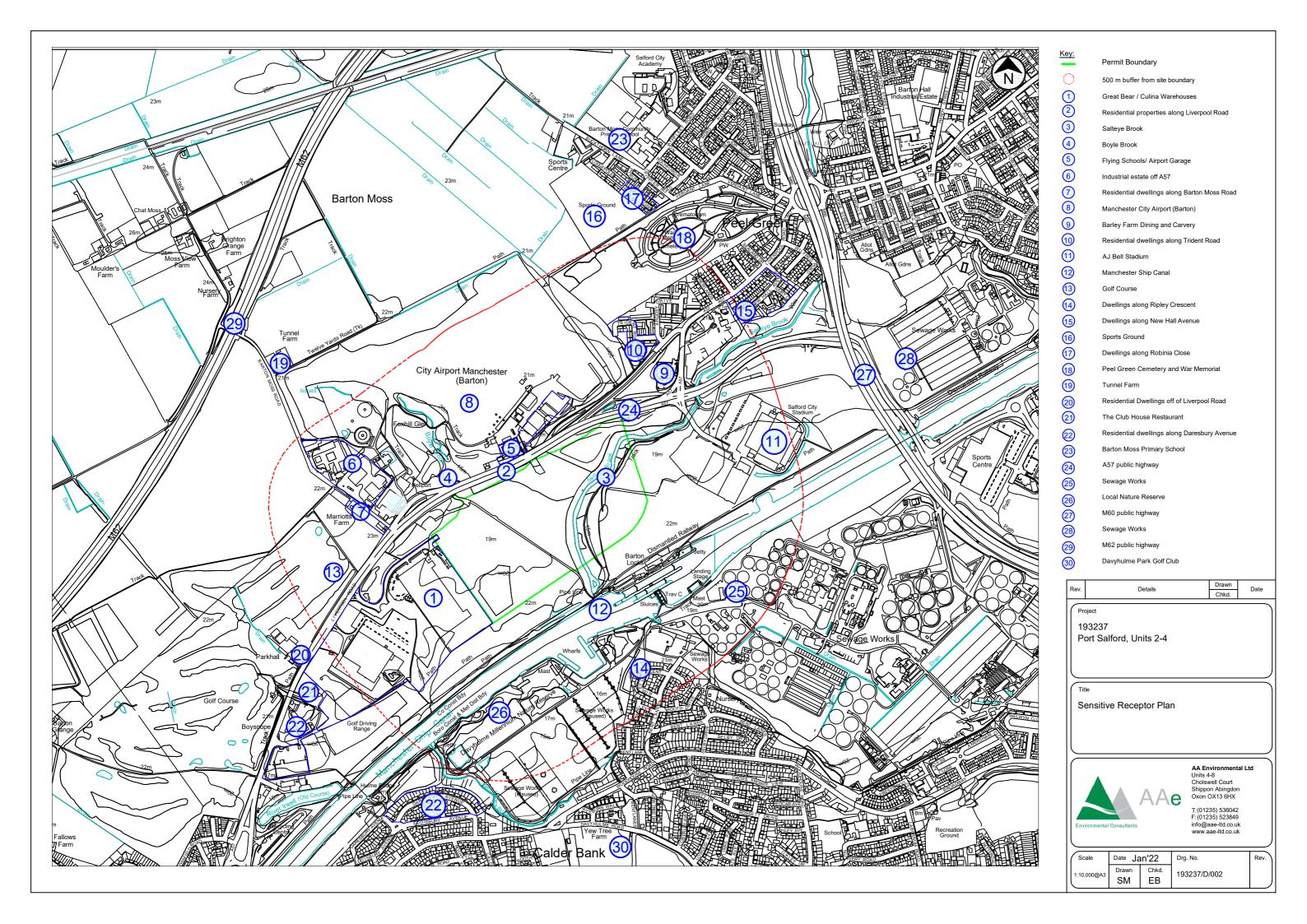
#### 6.0 DEMP MANAGEMENT, TRAINING & RESPONSIBILITIES

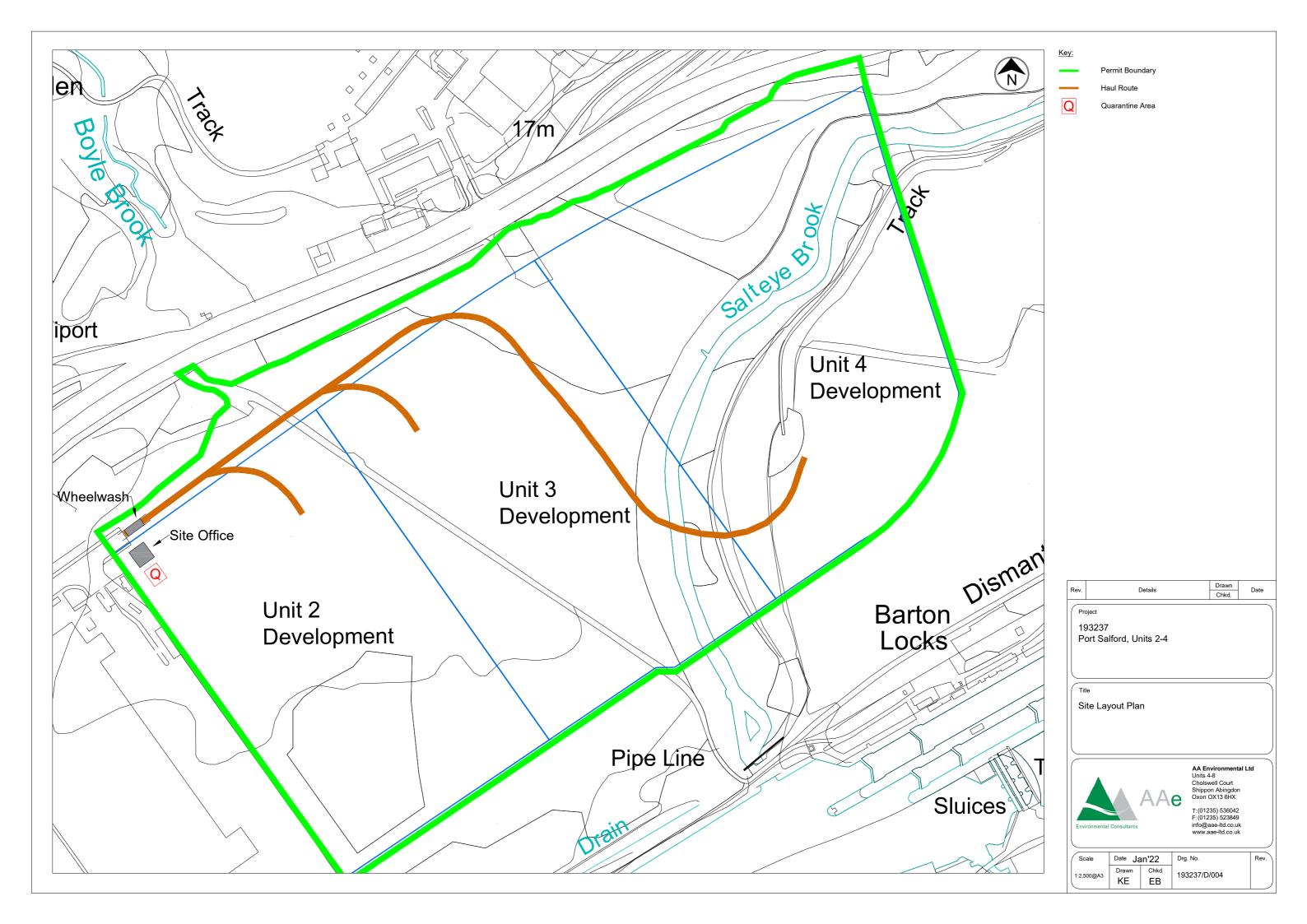
#### **Management Responsibilities**

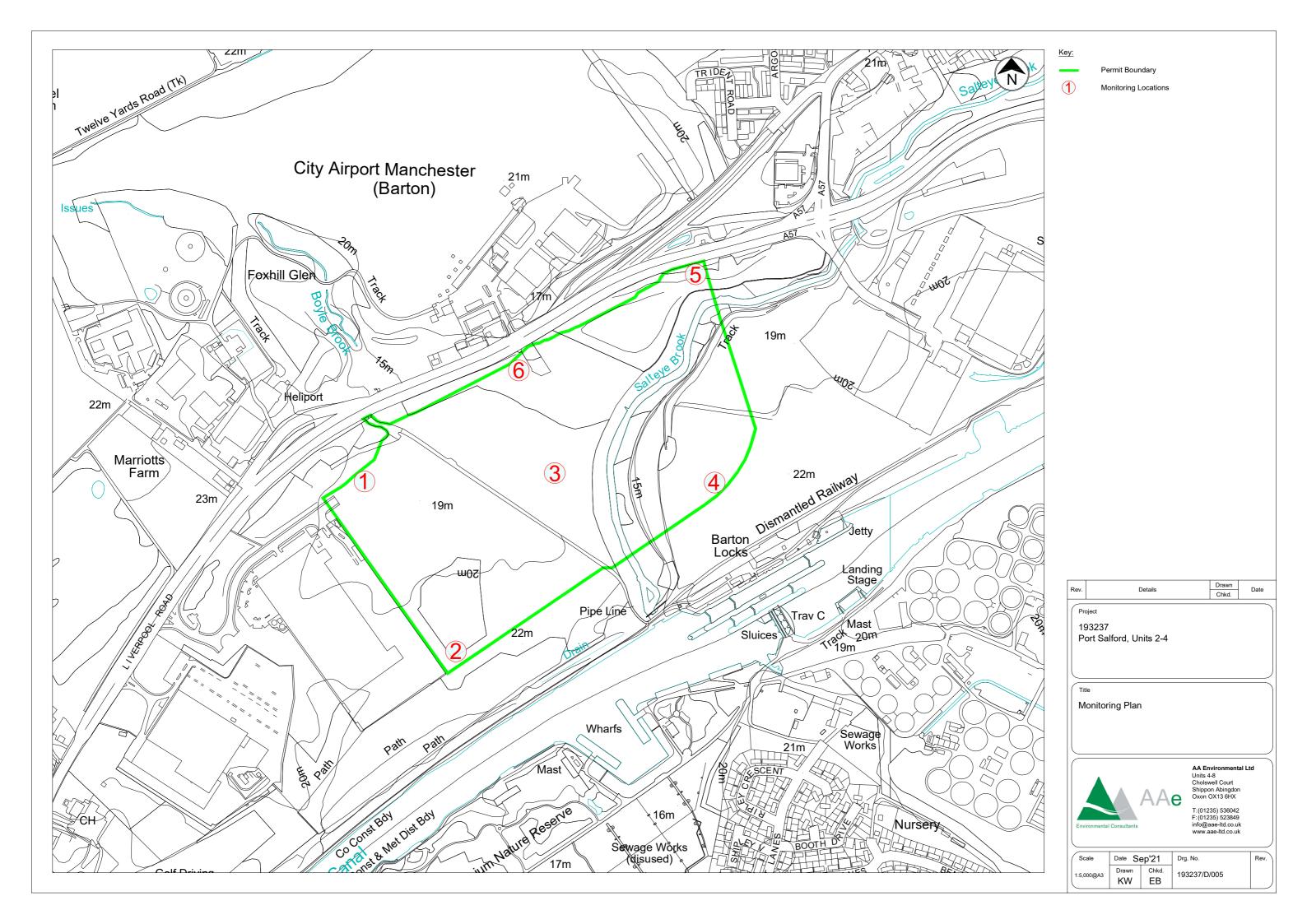
- The staff member responsible for implementation, updating and review of this document is the site manager. The site manager is given appropriate training regarding this document upon induction. Upon each document revision and review by site manager, a final review of the document and evaluation of 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.
- 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 processing plant. 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 Peel Group are well known within the Greater Manchester area. 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.
- In the event there is a change in the process or dust profile on site, the Operator will notify residents within 100 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**









# Appendix A Source, Pathway Receptor Table

AA Environmental Limited
Port Salford
193237
Peel NRE Limited



#### **Assessment of fugitive emissions**

Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
To Air									
Dust from vehicle operations from external haul roads.  Dust from operations and handling of soil.  Dust from importation	Residential and commercial properties, circa 50 m north west and 185 m north east of the site.  Workers and visitors at the flying schools, circa 50 m north of the site.  Workers and visitors at the industrial estates and commercial buildings to the north and west.  A57 users.  Users of the open air sports pitches and AJ Bell Stadium 330 m east.  Flora and Fauna.	Harm to human health, respiratory irritation and illness.	Air then inhalation.	Moderate	Possible	Medium	Permitted wastes include wastes with small particle sizes and potential to generate dust, especially during re-grading.  Operations have the potential to generate dusts from off-site movements during prolonged dry periods.  The Operator will implement this dust management plan.	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.  Site wide speed limit set at 10 mph for all HGVs.  Haul route to be compacted and maintained, with repairs made within 24 hours.  Wheel wash and road sweeping implemented, with access point swept and maintained daily.  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.  Weather will be monitored and site operations limited	Low





Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
								accordingly./ higher frequency of water suppression.	
								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.	
								Drop heights will be minimized.	
								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 policity will be in place for all plant and vehicles.	
								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	





Hazard	Receptors	Harm	Pathway	Hazard Receptor Significance	Likelihood of Hazard Receptor Linkage	Magnitude	Justification	Risk Management	Residual Risk
								tidied, and an inspection of the haul route, car park and highway will be undertaken.	

## **Salford Port**



# Appendix B Complaints Procedure & Form

## **Complaints Procedure**

193237/CP

#### 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**

193237/CP

#### 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.

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

Close out Date

Preventative Measure Taken (if any)

Sign off

## **Salford Port**



# 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 / visual monitoring form		
Road sweeper brush	Access / egress to the site	Daily - if mud on road is identified	Nominated operative / third party contractor	Daily Site Diary / visual monitoring form		
Maintenance of haul route	Whole site.	Daily – end of each day	Plant operator	Daily Site Diary		

## **Salford Port**



**Appendix D Example of Visual Monitoring Form** 

## **Visual Monitoring Checklist**

Date	Wind Speed (m/s)		Completed by		Site Ma		
Start Time	Site Entrance	Centre o	f Yard	Enclosure Entra	ance	Externa	al Location
Wind Direction							
Extent of Dust Soiling (1 – 5)							
Airborne Dust Level (1 – 5)							
Notes							
Action Required ?							
Weather							