

Permit Variation Application to Include a Wash Plant

Environmental Risk Assessment

31Nobel Road, Eley Industrial Estate, London, N18 3BH

JOD Group

March 2025

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1. Introduction

- 1.1 This document supports the application submitted by J O'Doherty Haulage Limited (operating as JOD Group) to the Environment Agency under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) to vary an existing environmental permit (reference EPR/JP3795EL) to include an additional area of land to operate a wash plant.
- 1.2 The additional land is located at;

31 Nobel Road Eley Industrial Estate London N18 3BH and centred on the National Grid Reference TQ 35571 93002.

- 1.3 In accordance with the Environment Agency's guidance, this Environmental Risk Assessment (ERA) is completed in accordance with the environment agency's guidance¹ for the preparation of risk assessments. The Environment Agency guidance promotes the following process
 - Identify and consider risks for the site, and the sources of the risks.
 - Identify the receptors (people, animals, property and anything else that could be affected by the hazard) at risk from the site.
 - Identify the possible pathways from the sources of the risks to the receptors.
 - Assess risks relevant to the specific activity and check they are acceptable and can be screened out.
 - State what will need to be done to control risks if they are too high.
 - Submit the risk assessment as part of your permit application.
- 1.4 The risk assessment should identify whether any of the following risks could occur and what environmental impact could be:
 - any discharge, for example sewage or trade effluent to surface or groundwater
 - accidents

¹ <u>https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit</u>

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

Risk Assessment Layout

- 1.5 A qualitative assessment for generic risks identified for the site is provided in Section xx and quantitative assessments in derived from specific operations and release points are provided in Section xx.
- 1.6 For the qualitative assessment, each actual or possible hazard has been identified and the assessment of risk has been assessed using the following criteria:
 - the hazard for example dust, litter, type of visible emission;
 - the receptors people, animals, property and anything else that could be affected by the hazard;
 - the pathways how the hazard can get to a receptor;
 - what measures will be taken to reduce risks;
 - probability of exposure, for example whether a risk is unlikely or highly likely;
 - consequences what harm could be caused; and
 - what the overall risk is, based on what the information presented in the table for example 'low if management techniques applied'.
- 1.7 For the quantitative assessment, it is possible to screen out potential risks from emissions to air, discharges to water or deposition onto land by carrying out quantitative tests to check whether they are within acceptable limits within environmental standards. If they are then the risk is considered to be insignificant and no further assessment is required.

Identification of Risks

Activities

- 1.8 It is intended to develop a washing plant operation that would process construction and demolition waste to create recycled aggregates.
- 1.9 The proposed layout of the site is shown on drawing JOD-ED-WAS-PLAN-02, provided in Appendix 1.
- 1.10 Elevations of the proposed washing plant are provided on drawing X607-SL8956 JOD Group Rev C, also provided in Appendix 1.
- 1.11 The waste-derived aggregates will be produced via treatment in accordance with the WRAP quality protocol.
- 1.12 The adjacent waste management site involves sorting, separation, crushing, screening and blending of waste for recovery as a soil, soil substitute or aggregate. The development proposes the addition of washing as a further treatment process to complement the existing site operations.
- 1.13 Pre-sorted waste suitable for recycling into secondary aggregate will be transferred from the existing waste management operations to the north of the proposed site for processing by the washing plant. The inert waste will be first screened, which entails the loading of soil and stone into the screening plant using a front-end loader. The screener separates hardcore and stones from soil. Separated hardcore/stones are passed onto the hardcore stockpile for processing through a crusher, followed by further screening to produce different graded products.
- 1.14 Washing may be carried out post crushing and screening. The wash plant operations would be fully enclosed so that water is continually recirculated and there is no liquid discharge associated with the operations. A filtercake is produced from the washed-out sediment which will be disposed off-site. Process water will be lost through filter cake production and within the aggregate produced removed off-site. It is proposed that the wash plant will be topped up with fresh water from the either mains water or abstraction of water will combination of both.
- 1.15 The waste types applicable to these proposed activities will be concrete, bricks, soil and stones from construction, demolition and excavation.
- 1.16 The wash plant will be used to produce aggregate products according to the WRAP end of waste criteria, therefore only the waste codes listed in table C1 of the quality protocol, and the restrictions within that table, will be washed. These include:

Wast Code	Description
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07 - may include excavation from mineral workings

01 04 09	waste sands and clays - must not include contaminated sand
10 11 03	waste glass fibrous materials (without organic binders)
15 01 07	clean glass only
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 170106
17 02 02	glass - not including fibreglass or glass fibre
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19 12 05	glass – does not include glass from cathode ray tubes
19 12 09	minerals (for example sand, stones)
20 01 02	glass – must not include fibreglass
20 02 02	soil and stones - must not contain contaminated stones from garden and parks waste.

1.17 The maximum capacity at the site for the storage of inert waste and recycled aggregate would be 50,000 tonnes.

Additional Land Description

- 1.18 The site has a concrete hard surface over the whole of its extent. Access into this site is from the west and passes through lockable steel gates, into the site itself. The site is presently an open, clear yard.
- 1.19 It lies adjacent to the Pegamoid site, sharing a common boundary (the northern boundary of the application site). Access to the site will continue to be via the existing, separate access.

2. Identification of Receptors

Sensitive Receptors

- 2.1 The nearest residential properties are located approximately 265 m to the north-west of the site on the western side of the railway that runs alongside Meridian Way. There are no schools or hospitals within 1 km of the site.
- 2.2 The MAGIC database confirms that the Chingford Reservoirs SSSI lies within 1 km of the site. There are no other statutory designated sites within 1 km.
- 2.3 Non-statutory designations within 1 km of the site include the adjacent Salmon Brook, which is identified as a Drinking Water Protected Area, the Lea Navigation Enfield Lock to Tottenham Lock, Chingford and William Girling Reservoirs water bodies.
- 2.4 The Nature and Heritage Conservation Screening Report provided by the Environment Agency confirmed the following species and habitats which are required to be considered within the application.

Nature and Heritage conservation sites

Chingford Reservoirs (SSSI)	- screening distance 1000m
Protected Species	
European eel migratory route	- screening distance up to 500 m
Protected Habitats	
Deciduous woodland	- up to 50 m

Identification of receptors

2.5 The location of the site in relation to potential sensitive receptors is shown on Drawing JOD/EDM/WP/04. For the purposes of this risk assessment, receptors further than 250 m away from the site boundary other than those identified in the Nature and Heritage Conservation Screening are not considered to be at risk from the activities. Potential receptors are summarised in the table below.

Receptor	Direction from	Approximate			
Residential Receptors					
None n/a n/a					
Commercial/industrial/agricultural					

Lidl Enfield Distribution Centre	NE	145m				
Bestway Wholesale	NW	154m				
TOT Shirts	W	35m				
Ark Data Centre	E	40m				
Access Self Storage	SW	35m				
Biffa Waste Management	E	240m				
Embassy Demolition Contractors	S	230m				
Public Rights	of Way					
None	n/a	n/a				
Highway or Mii	nor Road					
Meridian Way	W	75m				
Nobel Road	S	5m				
Controlled Waters						
None	n/a	n/a				
Ecological Receptors						
Salmons's Brook	E	adjacent				

Residential Receptors

2.6 There are no residential receptors within 250 m of the site boundary.

Industrial/Commercial Receptors

2.7 There are a number of commercial and industrial units within 250 m of the site. The closest units are a data centre and self storage centre, both within 50 m of the site. There are a number of distribution units and waste operations, including Biffa and Embassy Demolition Contractors within the 250 m radius of the site.

Public Rights of Way

2.8 There are no public rights of way within 250m of the site boundary.

Highway or Minor Road

2.9 The site is adjacent to Nobel Road, 5 M to the south. Meridian Way is located approximately 75 m to the west, which serves the whole industrial estate in which the site is located.

Controlled Waters

2.10 There are no controlled waters within 250 m of the site boundary.

Ecological Receptors

2.11 Salmon's Brook runs along the eastern boundary of the site and is a small tributary to the River Lee Navigation. The Chingford Reservoir SSSI is located approximately 520m to the east of the site. The notification for the SSSI is for 'aggregations of non-breeding birds - Great Crested Grebe (*Podiceps cristatus*) and Shoveler (*Anas clypeata*).

Groundwater

2.12 The site is located outside of any bedrock aquifer designation and is mapped as low/unproductive on the Groundwater Vulnerability Map on the DEFRA MAGIC database.

Water Abstractions

- 2.13 Private water supplies are known at several locations within the vicinity of the site as indicated by the BGS water wells database. The nearest well is located approximately 860 m to the north (reference TQ39/229). There are several abstraction boreholes around the William Girling Reservoir, the closest being, approximately 590 m to the east of the site (ref TQ39/217). There are two boreholes identified approximately 400 m to the south-west of the site (ref TQ39/220 and TQ39/215), and there are three boreholes noted as being installed on behalf of Coca-Cola Enterprises in 2004 located approximately 400 m to the site (ref TQ39/209 194 and 237).
- 2.14 The nearest residential properties are located approximately 150 m to the north-west of the site on the western side of the railway that runs alongside Meridian Way. There are no schools or hospitals within 1 km of the site.
- 2.15 Non-statutory designations within 1 km of the site include the adjacent Salmon Brook, which is identified as a Drinking Water Protected Area, the Lea Navigation Enfield Lock to Tottenham Lock, Chingford and William Girling Reservoirs water bodies.
- 2.16 Confirmation of land use and proximity of sensitive receptors to the site is shown on Drawing JOD-WP-DEMP 1, attached in Appendix 1.
- 2.17 Copies of the MAGIC database interrogation results are provided in Appendix 2.

Surface Water

2.18 JOD's waste management site has a fully sealed drainage system with a discharge to foul sewer. The drainage system comprises a series of grates within the opening yard area which removes surface water run-off from the yard which passes through an oil and silt interceptor.

2.19 The wash plant operations will be designed to have a fully contained closed-loop system and the whole site comprises a sealed drainage system, with concrete surfacing falling to the perimeter collection drain to the rear which drains to a sump.

Identification of Hazards

- 2.20 Potential impacts resulting from the proposed activities have been identified as:
 - noise and vibration
 - mud and deleterious materials on the public highway
 - dust
 - uncontained run-off
 - accidents (contaminated material imported for processing)
- 2.21 This risk assessment considers the impacts of the changes proposed by the permit variation (i.e. the addition of a washing plant) to the potential hazards identified above.
- 2.22 The designation of the SSSI affords legal protection and means greater consideration is given to maintaining conditions which will allow the sensitive species to write stuff. The hazards applicable from the activity are those that may reduce the quality of the surrounding habitat. These include:
 - Settlement of contaminated dust due to accidental importation of hazardous material.
 - Disturbance of nesting birds due to noise and vibration.
 - Uncontrolled run-off carrying sediment or contaminants

Wind Direction

2.23 The wind rose data for London has been provided by Meteoblue. It confirms that the wind generally blows from the south west and are between 7-12 mph. A copy of the wind rose is provided below:



2.24 The wind rose data confirms that the wind blows from the SW (including WSW and SSW) for approximately 40% of the time.

Air Quality

- 2.25 The site is located within an Air Quality Management Area (AQMA). Since December 1997 there has been a responsibility for each local authority within the UK to carry out a review and assessment of air quality in their area. The aim of the review is to make sure that national air quality objectives are achieved across the country which have been put in place in order to protect people's health and the environment.
- 2.26 If a local authority finds any places where objectives are not likely to be achieved, it must declare an AQMA and the authority will be required to put in place a Local Air Quality Action Plan.
- 2.27 The site falls within the London Borough of Enfield, which declared an AQMA in 2001 that covers the whole of the borough. The AQMA was declared for both nitrogen dioxide and PM₁₀. Within the Enfield AQMA, there are seven Focus Areas where air quality issues are considered to be most acute. The site does not fall within any of these focus areas.
- 2.28 Figure 1 below identifies the focus area locations within the borough and the red dot represents the Pegamoid site location.

Figure 1 – Enfield AQMA Priority Areas



- 2.29 The Air Quality Action Plan dated 2022, identified that pollution within the borough comes from a variety of sources. Where a significant proportion arising from outside of the borough and even the UK. Of the pollution that originates within the borough, the main sources of nitrogen dioxide are associated with road transport, industrial processes, and the power generators.
- 2.30 The main sources of particulate matter are from road transport, construction and biomass with resuspension also a significant source.
- 2.31 Within the AQMA, priority areas have been identified namely:
 - 1) make active travel the natural choice (e.g. walking, cycling)
 - 2) make more school trips safe, sustainable and healthy
 - 3) reduce the impact of private vehicles through reduction in emissions
 - 4) make the public transport network more accessible and the natural choice for longer trips
 - 5) reduce emissions from both existing buildings and new development.
- 2.32 The Plan identifies that these priorities will be supported by such measures including;
 - new cycle routes

- promoting safe active and sustainable transport to and from schools
- monitoring air quality and delivering interventions that address local issues
- managing growing demand for on street parking,
- improving the local public transport network.
- 2.33 As is evident from the key priority areas, the majority of concerns within the AQMA are associated with public transport and where emissions are associated with built development these are predominantly associated with issues from heat and power sources.
- 2.34 JOD Haulage has a modern fleet of vehicles that are all Euro VI compliant and therefore do not significantly contribute to nitrogen dioxide or particulate emission issues within the AQMA.

Flooding

- 2.35 The application site is located within Flood Zone 3, which means that there is a high risk of flooding. The currently permitted operations also lie within the same Flood zone, which has no history of flooding. Notwithstanding this, there is a risk of potential contamination should the site ever flood.
- 2.36 Flooding was assessed as part of the planning application submitted in 2019 for the change of use from plant depot to scrap metal yard, and was considered acceptable, subject to protection measures along the eastern boundary of the site to the waterway Pymmes Brook. These measures were fully implemented.

3. Risk Assessment

Assessing the Likelihood and Consequence

3.1 Within the risk assessment, each hypothesised relationship between contaminants, pathways and receptors is assessed to determine the likelihood of a receptor being exposed to pollution and the consequences of exposure using the rankings listed in the tables below.

Table 1 - Likelihood Rankings

Very Low	Low	Medium	High

Exposure to pollution	Exposure is	Exposure is	Exposure is
is considered to be	considered to be	considered to be <i>likely</i>	considered to be
highly unlikely	unlikely		<i>highly likely</i> to occur

Table 2 - Consequence Ranking

Very Low	Low	Medium	High
No impact or	Low level of impact	Moderate impact,	Hari impact, requiring
imperceptible impact	easily and quickly	which will not be	significant intervention
on the receptor mitigated or may not		rectified without some	or mitigation and may
	require any	mitigation or	have caused
	intervention to rectify	intervention	irreparable damage to
	any impact		the receptor

Assessment of Risk

3.2 Following the determination of the likelihood and consequence rankings for the assessed relationships developed using the source-pathway-receptor concept, the matrix below is used to determine the overall risk of the pollution exposure occurring.

		Likelihood			
		Very Low	Low	Medium	High
e,	High	Low	Medium	High	High
nend	Medium	Low	Medium	Medium	High
bəsu	Low	Low	Low	Medium	Medium
Cor	Very Low	Very low	Low	Low	Low

Table 3 - Risk Matrix

3.4 An event could have a high probability of occurring but have minor environmental consequences; therefore it will be designated as a low risk. Likewise, a risk with severe consequences could be unlikely to and would also be designated as a low risk. A high-risk designation would be assigned to an event that has severe consequences and is expected to occur.

- 3.5 The risks associated with these hazards as a result of the proposed changes to the permit (i.e. the addition of a washing plant operation) have been assessed and are presented in Tables xx to xx, including mitigation and control measures.
- 3.6 Risks have been assessed based on the likely impact of the proposed operations. Mitigation and control measures have been identified where required and these are presented in the following section.

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall
Mud on the road	Chigwell Reservoir SSSI	No pathway as vehicles do not traverse the designated area	N/A	Highly unlikely: HGVs do not traverse across the designated site	N/A	N/A	N/A
	Local Roads	Material carried on vehicle wheels and axles on leaving the site.	Mud carried onto public highway which could be a skid hazard for motorists.	Possible due to the nature of operations.	Medium	Local roads will be inspected daily when operational and road sweeper will be deployed if necessary. EMS Standard Operating Procedure is in place to ensure a site inspection regime to identify any excessive mud and effective operation of wheel cleaning equipment.	Low

Table 4 - : Assessment of Risk of Mud on Road

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall
Dust arising from washing operation	Chigwell Reservoir SSSI	Airborne. Wind direction is predominantly to the north- east	Dust settling on the water may lead to siltation/clouding of the water restricting sunlight to aquatic flora and fauna	 Unlikely due to 1) Wet nature of the operations 2) All stockpiles contained within enclosed bays 	Low	EMS Standard Operating Procedures will be in place to control dust emissions	Very Low
	Residential Receptors		During dry conditions, windblown dust deposited on cars and properties/inhaled	Unlikely as overall likelihood of dust production reduced by dampening effect of aggregate washing. Nearest receptors are located approx. 400m to the north-west	Low	Dust controls are instigated through existing Dust and Emission Management Plan	Low
	Employees at Industrial/ Commercial Receptors		During dry conditions, windblown dust deposited on cars and properties/inh aled	Unlikely as overall likelihood reduced by dampening effect from aggregate washing	Low	Dust controls are instigated through existing Dust and Emission Management Plan	Low
	Salmon's Brook		Dust settling on the water may lead to siltation/clouding of the water	Unlikely due to 1) Wet nature of operations	Low	Dust controls are instigated through existing Dust and Emission Management Plan	

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	restricting sunlight to aquatic flora and fauna	2) Proximity of the brook. Any fugitive dust is likely to be generated by high winds and therefore carried beyond the brook only located 5m to the east.			
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Table 5 - : Assessment of Risk from Dust

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall Risk
Uncontrolled run- off carrying sediment Spillage/escape of process water	Chigford Reservoir SSSI	Overland flow of surface water carrying aggregate fines	Turbid water due to high suspended solids may impair wetland species	Very unlikely due to distance of the reservoir and elevated position of the SSSI (approx. 7m above the site level)	Negligible	Not applicable - water would have to be pumped uphill to reach the SSSI.	Negligible
from washing operation	Salmon's Brook			Possible runoff, but unlikely due to physical containment of surface water on the site	Low	The wash plant will be fully contained and all process water will be recirculated. All plant and equipment will be maintained as per EMS Standard Operating Procedure	Low
	Underlying ground & groundwater; Surface water run-off.		Water run-off soaks into underlying ground strata	Very unlikely due to underlying geology is London Clay Formation. The site operations will take place on a fully sealed impermeable surface	Negligable		Low
	Local roads and surface water drains		Sediment laden run-off reaches local roads and surface water drains causing sediment accumulation exacerbating local flooding risks	Possible runoff, but unlikely due to physical containment of surface water on the site	Low		

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Private Water Supplies in the area	Turbid water due to high suspended solids may impair quality of abstracted water	Possible runoff, but unlikely due to physical containment of surface water on the site	Low	Negligible

Table 6 - : Assessment of Risk from Uncontained Runoff or Spillage of Process Water

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall Risk
Noise from operation of the wash plant	Chigwell SSSI	Noise through atmosohere and vibration through the ground	Disturbance of Feeding birds due to noise and vibration	Unlikely due to the distance to the SSSI and intervening built development providing acoustic screening.	Low	The operations would be controlled by the Environmental Management System	Low
	Salmon's Brook		Disturbance to eel migratory route	Low – the noise levels from the operations would not be sufficiently loud to give rise to any disturbance of eels passing along the Brook.	Low	The operations would be controlled by the Environmental Management System	Low
	Residential Receptors		Nuisance noise from processing operations	Unlikely due to the distance to residential receptors	Low		Very Low

beyond me sile	
boundary during	
daytime operating	
hours	

Table 7-: Assessment of Risk from Noise and Vibration

Hazard	Receptor	Pathway	Consequence	Probability of Exposure	Risk	Risk Management	Overall Risk
Generating hazardous dust from importation and processing of non-compliant contaminated	Chigwell Reservoir SSSI	Atmosphere	Toxic effects on species from contaminated dust deposit; Accumulation of phytotoxic material in soil and water	n Unlikely as hazardous material not included on permit. Likelihood further reduced by of dampening effect from aggregate washing	Low	Permit conditions preclude acceptance of hazardous material. Waste acceptance procedures are in place to assess that material is suitable to be imported onto site	Very low
material	Local residents and employees	Health impacts from dust and particulates			These are detailed in EMS		

Table 8: Assessment of Risk from Contaminated Dust

Hazard	Receptor	Pathway	Consequence	Probability of	Risk	Risk Management	Overall Risk
Fire and firewater	Chigwell reservoir SSSI	Overland flow of firewater. Increased airborne particulates from smoke.	Contaminated firewater flows into SSSI, may impair wetland species. Settlement of particles from smoke	Very unlikely: (i) the risk of fire is very low as the material processed is mainly non- combustible; (ii) the SSSI is in an elevated postion and located over 500m from the site	Negligable	Permitted activities do not allow flammable materials to be accepted on site and burning of waste not allowed on site. The waste accepted will not be combustable (comprising soils and demolition waste)	Very Low
	Salmon's Brook		Contaminated firewater flows into the Brook	Very unlikely: (i) the risk of fire is very low as the material processed is mainly non- combustible; (ii) the site will have a retaining wall along its eastern perimeter to prevent flow from the site	Low		
	Underlying ground, groundwater and local surface water	Overland flow of firewater. Soak away into underlying bedrock.	Contaminated firewater seeps into groundwater or enters local surface water catchment quality.	Very unlikely: As (i) above.	Low		

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Local	Increased airborne	Increased airborne	Very unlikely:	Low	Very Low
residents and	particulates from	particulates from	Ac (i) above		
employees	smoke.	smoke.	As (I) above.		

Table 8: Assessment of Risk from Accidents (Fire Water)

Very Low
Very Low
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		groundwater or local surface water. Contaminated water seeps into local groundwater impairing water quality	Very unlikely due to impermeable and sealed site	Low		
Flooding	Site floods and waste is washed off-site, adding solids to the water environment	Non-hazardous or Inert material may be washed out of the site	Likely - The site is located within Flood Zone 3 so at high risk of flooding.	Likely	The site is designed to contain all surface water. This will also prevent flood water from entering the site.	Low

Table 9: Assessment of Risk from Accidents (Flood Water)

4. Mitigation and Control

4.1 Risks have been assessed based on the likely impact of the proposed permit changes (ie the addition of the wash plant process). Mitigation and control measures have been identified where required and these are presented in the following section

Mud on Road

- 4.2 Excessive mud on roads and site surfaces is monitored through the environmental management system.
- 4.3 The condition of site roads and accumulation of mud will be inspected daily when operational and a road sweeper will be deployed if required. Wheel cleaning facilities will be available and subject to a regular inspection and maintenance schedule.
- 4.4 The proposed aggregates processing and washing operations will take place on a concrete pad. Access to the pad will be via existing metaled roads. There should be no deleterious materials being trafficked into the site. Any mud will therefore be as a consequence of the aggregates processing operations.
- 4.5 The process will involve the use of water to separate aggregate fractions and remove non-conforming materials. Water from washed stockpiled aggregates will flow across the site to the site drainage system. The concrete pad will be designed to have a minimum fall of 1:100 to assist in the free drainage of the site. The surface water will assist in controlling the build up of mud on the site. In the event that mud and other deleterious material does accumulate, then a road sweeper would be employed to clean the concrete pad.
- 4.6 In this manner, there should be limited opportunity for the trafficking of mud from the site.

Dust Control

- 4.7 The crushing and screening operations of the treatment plant will be fitted with manufacturer's dust suppression systems that will be in use on dry days when there is potential to generate dust. This will be fed via mains water.
- 4.8 Stockpiled aggregate produced through the wash plant process will retain moisture from the process. The smaller the particle size the greater potential for dust generation but the greater the moisture content of the product. This will significantly inhibit dust generation. In the event that dust is produced which is migrating from the site then stockpiles will be dampened during dry spells to reduce dust generation. Mains water will be utilised on an as and when required basis.

- 4.9 Adequate water supplies will be maintained on site to suppress dust arising on the access and haul roads, plant storage area, and operational area. The water for dampening down surface areas will be either mains water or collected surface water run-off from the pond to the north of the site and used to fill a bowser for use around the site.
- 4.10 In the event of dust migrating from the site despite the mitigation measures employed then stockpile improvements will be made. These will include;
 - Formation of storage bays to minimise potential for wind action against exposed surfaces,
 - Minimising stockpile heights to reduce potential for dust generation,
 - Relocation of stockpiles to ensure they are not exposed to wind exposure. This is particularly relevantfor small particle sized aggregates (i.e. <5mm)
 - Ensuring stock levels are managed on site to reduce overall stocking levels.
- 4.11 In the event that dust is identified as migrating from site, following daily site inspections or during routine operations, then measures including dampening down will be employed.
- 4.12 In the event of complaints of dust generation associated with the washing and stockpiling operations or dust noted as affecting neighbouring businesses or sensitive areas, then a review of the dust issue will be carried out and reported to the Site Manager as part of the Standard Operating Procedure. Any review will note the prevailing weather conditions/wind direction and assessment of where/how the dust is being generated.
- 4.13 In the event that a normal operational mitigation measures do not result in an adequate control of the dust issue; then additional longer-term measures will be required to be considered including the aspects mentioned in 5.10 above.

Noise Control

- 4.14 Noise is managed through the environmental management system.
- 4.15 All plant and equipment are operated and maintained in accordance with factory/manufacturer guidelines and will be operated in line with the condition of the local authority planning permission
- 4.16 The site operations do not occur during un-sociable hours i.e. night-time hours (under noise regulations these are considered to be 23:00 hrs to 0700 hrs).

- 4.17 Noise is minimised by the maintenance of plant and the use of silencers, maintenance of roads and working within the permitted operational hours.
- 4.18 Effects of noise and vibration associated with HGV movements are considered to be minor, short-lived effects therefore minimising the impacts to receptors on traffic routes.
- 4.19 The Department for Communities and Local Government published the document "Planning Practice Guidance" to the National Planning Policy Framework in March 2014. The section of the document which applies to minerals excavation and surface workings quantifies specific noise standards. These are summarised as:
- 4.20 During the daytime from 07.00 to 19.00 hours the sound level at noise-sensitive properties should not exceed the background level by more than 10 dBA.
- 4.21 The nearest noise sensitive receptors would be agreed with the Local authority and background noise measurements would be taken when the plant is not operational to establish baseline noise levels. Noise monitoring with then take place with the plant operational to establish the impact at the sensitive receptors.
- 4.22 All measurements would be undertaken by a qualified noise consultant using appropriately calibrated sound monitoring equipment. The consultant would provide records of noise levels recorded which would be made available to the Local Authority on request.
- 4.23 It is anticipated that monitoring at noise sensitive receptors would be undertaken once during appropriate weather conditions to establish baseline levels. Thereafter, monitoring should be undertaken quarterly on at least two occasions to establish noise levels during normal operating hours. In the event that the increase in noise levels at any of the sensitive receptors exceeded the background level by more than 10 dBA, then noise mitigation would be required to be considered in order to reduce levels to acceptable limits. Additional noise monitoring to establish the impact of the mitigation would then be required.
- 4.24 In the event that the noise monitoring identifies that noise impact levels were below the threshold limit, then noise monitoring would only be required in the event of complaints or any concerns raised during regular site inspections as part of compliance with the site Standard Operating Procedures (SOP) in respect of daily auditory assessments.
- 4.25 The SOP requires that auditory assessments should be made on site each day. It is possible that these daily assessments can be undertaken by site operatives and management dating noise levels heard on

site. Excessive noise would be apparent if there were any significant changes to the tone or loudness of any be operating machinery which would trigger further evaluation and possible mitigation

Surface Water Control

- 4.26 The proposed waste process will introduce the potential hazard of spillage or leakage of process water from the plant. The wash plant will be fully contained and the control measures to manage surface water run-off will be in place to ensure a low risk to receptors.
- 4.27 Surface water run-off from the aggregate processing area will be collected within the sealed drainage of the site. The wash plant is designed to use recirculated wash water, topped up by mains water when required (due to losses within the product).
- 4.28 To ensure surface water is contained within the site and not able to flow into the adjacent Salmon Brook, the eastern perimeter of the site will incorporate a raised concrete wall with a height of at least 1m. The wall will be constructed so that the 'toe' of the wall is incorporated into the re-surfacing of the site to ensure a fully impermeable barrier is created.

5. Site Condition Report

- 5.1 A Site Condition Report has been prepared in respect of the proposed operations. The site has an existing concrete hardstanding, which has been in place for several years. The site until 2019 was used for a variety of low pollution risk activities such as aggregate storage and vehicle parking.
- 5.2 For the period 2019 to mid 2023, the site was used to store scrap metal. Whilst this presents a higher level of risk, due to the impermeable surfacing, there is a very low risk of ground contamination. The Site Condition Report did not therefore require groundwater or sub-surface sampling to complete the report.

6. Conclusions

6.1 The environmental risks resulting from the proposed permit variation, which is limited to the addition of aggregate washing plant to processing activities, have been determined and where required mitigation and control measures have been identified to reduce the risks to an acceptably low level.

- 6.2 Mud accumulation on site roads and traffic routes will be controlled by implementation of a regular inspection schedule and deployment of a road sweeper when necessary. Wheel cleaning facilities will be available for site vehicles.
- 6.3 There is expected to be an overall reduction in the risk from airborne dust as a result of the dampening provided by the proposed washing process. The residual risks will be managed by suppression: damping down stockpiles, working areas and site roads in dry conditions.
- 6.4 It is not considered that noise arising from the addition of a wash plant would result in a perceptible increase in impacts to receptors due to the implementation of the identified control measures, ie maintenance of plant and the use of silencers, maintenance of roads and working within the permitted operational hours.
- 6.5 Risks from surface water run-off will be minimised through containment within the site. The risks from surface water run-off to the SSSI are considered negligible due to the absence of a pathway. The risks to the adjacent Salmon's Brook which is a protected eel migration route is higher, due to its proximity, however the site containment will provide a physical barrier to the potential for surface run-off to enter the brook.
- 6.6 The risks to local groundwater abstractions and private water users from surface water run-off or accidental spillage of process water or fuels etc is considered to be very low due to the impermeable surface and sealed drainage of the site.
- 6.7 Risks from accidents will be reduced through effective management of the site through an environmental management system, including waste acceptance procedures to prevent the importation of contaminated waste
- 6.8 Based on the nature of the operations, the location of the facility and the site/plant design, there should be no risk of environmental harm caused through the operations of the facility.

Appendix I Drawings

Appendix II MAGIC Database Interrogation Results