Permit Variation Application to Include a Wash Plant

Non Technical Summary

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

JOD Group

May 2025 -

Contents

Appendices

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1. Introduction

1.1 J O'Doherty Haulage Limited (operating as JOD Group) owns and operates the Pegamoid Waste Transfer Station Site located in Edmonton, London.

1.2 The site was first granted an Environmental Permit in January 2008 under permit reference EPR/JP3795EL which has subsequently been amended on four previous occasions.

1.3 This Non Technical Statement accompanies an application to modify the permit to operate a wash plant to produce recycled aggregate on land adjacent to the Pegamoid site.

1.4 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.

1.5 The extent of the additional land to be included within the existing permit to site the wash plant is identified on the Permit Location Plan and provided in Appendix 1 and the site layout for the wash plant is shown on the Site Layout Plan, which is also located in Appendix 1. The additional land lies adjacent to a small water body known as Salmon's Brook which skirts along the northern and eastern boundary of the site and which ultimately feeds into the River Lee which is located approximately 425 m to the east of the site.

1.6 Immediately to the west and south are industrial units and beyond the Brook are further industrial units associated with the large industrial area of Edmonton.

1.7 The additional land is accessed off Meridian Way (A1055) via Thornton Road. To the west of Meridian Way which runs the whole length of the industrial area, is located a mainline railway beyond which are further industrial units. The site therefore sits in a heavily industrialised area.

Additional Land Description

1.8 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.

1.9 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.

Sensitive Receptors

1.10 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.

1.11 The MAGIC database confirms that the Chingford Reservoirs SSSI lies within 1 km of the site. There are no other statutory designated sites within 2 km.

1.12 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.

1.13 Confirmation of land use and proximity of sensitive receptors to the site is shown on Drawing JOD-WP-DEMP 1, attached in Appendix 1.

1.14 Copies of the MAGIC database interrogation results are provided in Appendix 2.

2. Wash Plant Operations

2.1 It is intended to develop a washing plant operation that would process construction and demolition waste to create recycled aggregates.

2.2 The proposed layout of the site is shown on drawing JOD-ED-WAS-PLAN-02, provided in Appendix 1.

2.3 Elevations of the proposed washing plant are provided on drawing X607-SL8956 JOD Group Rev C, also provided in Appendix 1.

2.4 The waste-derived aggregates will be produced via treatment in accordance with the WRAP quality protocol.

2.5 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.

2.6 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.

2.7 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.

2.8 The waste types applicable to these proposed activities will be concrete, bricks, soil and stones from construction, demolition and excavation.

2.9 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
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 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.

2.10 The maximum capacity at the site for the storage of inert waste and recycled aggregate would be 50,000 tonnes. It would process a maximum of 260,000 tonnes per annum.

3. Wash Plant Site Drainage

3.1 The wash plant site will have a fully contained drainage system. The site plan layout JOD-WP-03 indicates the location of a collection sump (located beneath the washing plant) and a perimeter drain to the southand east of the plant, along the site boundary. The existing concrete hardstanding will be supplemented with an additional layer of concrete that will be designed to provide a fall on the site towards the plant.

3.2 The fall will ensure any wash water from the plant will drain back towards the plant and be collected by the rear drain and then into the collection sump.

3.3 The rear drain will be supplemented by raised kerbing along its length to the side furthest from the plant. Any water run-off will therefore be contained by the kerb and drain.

3.4 Incoming waste will be deposited at the north eastern end of the site before crushing and screening. Any material following crushing and screening considered appropriate for washing will be loaded into the wash plant where the material is washed to remove fines (silt - sub 63 microns) and enable grading of the washed material into various washed product fractions such as sand, 5mm single size, 10mm single size, 10mm-20mm, 40mm, etc.

3.5 The washing operation will create an affluent of suspended solids in water. The suspended solids are removed via a filter press. The press uses high pressure to squeeze water out of the sludge from the wash plant to recover up to 95% of the water for re-use. Flocculant is added automatically into the system to assist in the removal of fines (the flocculant binds small particles together).

3.6 Water recovered from the filter press will be returned to the wash plant. This will be supplemented with rain water collected by the perimeter drain.

4. Water Supply and Use

4.1 The wash plant is designed to recirculate water and minimise water use, however, there will be water loss from the system primarily from moisture content contained within the aggregates and filtercake. In addition, there will be some evaporation of water from materials held in stockpiles. Whilst water will be recovered as much as possible to reduce reliance on mains or borehole water, there will nevertheless be significant losses arising from water retention in the filtercake and products as well as evaporation.

4.2 To indicate the anticipated level of water losses, the following assumptions are made;

- Filtercake average moisture content 20%
- Aggregate >5mm average moisture content 5%
- Aggregate <5mm average moisture content 10%

4.3 From waste imported it is expected that the filtercake represents approximately 15% of the final process output, >5mm aggregates will be circa 35% and <5mm 50% of the output.

4.4 Based on these approximate values which are based on values experienced at other similar operations, with the proposed treatment facility operating at a maximum capacity of 250,000 tonnes per annum, this would equate to the loss of approximately 39,000 litres per day.

4.5 The intention is to use water from either a mains supply or borehole. If the water requirement is in line with the anticipated maximum level of 20,000 litres per day, then no abstraction licence would be necessary. If a level greater than this is required then an abstraction licence would be sought.

4.6 The wash process is likely to necessitate the use of a flocculant to assist in the removal of suspended solids. It is advised that anionic flocculant in powdered form is recommended with a feed rate of between 3 to 5 kg per hour dependent upon the nature of the waste material being processed, with the rate increasing when material with a higher silt/clay content is encountered.

4.7 The flocculant is designed to be non-harmful to the environment.

4.8 In addition, an anti-foaming agent may be required. This is dependent on the level of organics removed from the waste materials as these are responsible for phoning of the wash water. Given the nature of the waste materials, the level of organics is anticipated to be low and therefore may not require the addition of anti-foaming agents. Where they are required the dosage is usually less than 1lt per day and are designed to be non-harmful to the environment.

4.9 Water recovered from the filter press will contain some flocculant and therefore the recirculation of this water helps reduce further dosing.

5. Wash Water Control

5.1 The operation of the wash plant will introduce the potential hazard of spillage or leakage of process water from the plant. However, the wash plant will be 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.

5.2 To assess whether contaminants are being concentrated in the recycled wash water or filtercake a programme of testing will be carried out. It is proposed to test for the following common contaminants:

- Arsenic
- Chromium
- Cadmium
- Copper
- Lead
- Nickel
- Zinc
- Total Petroleum Hydrocarbons (TPH)
- PAH 16
- pH

5.3 Testing will be carried out weekly for the first month and then monthly for the second and third months. The data will then be assessed and the testing schedule will be reviewed.

5.4 The wash plant and quarantine area will be subject to daily visual checks, with the checks and any necessary actions taken reported on a weekly check sheet.

5.5 The wash water test results will be kept on-site for inspection and the results noted on a summary check sheet to enable an evaluation on contamination level trends. This will ensure that appropriate action can be taken i.e. change of wash water and its removal to a suitably licenced facility before maximum threshold levels being reached.

5.6 Therefore, the control measures in place to manage surface water run-off are considered to be adequate to ensure a low to very low risk to nearby receptors.

5.7 The parameters for the washwater determinants are to be agreed with the Environment Agency once industry-wide standards have been set.

5.8 The methodology for obtaining representative samples of wash water will be developed and introduced into the Water Management Plan once the specific plant type has been agreed upon. This will be developed in discussion with the plant supplier/manufacturer.

5.9 The site manager will be responsible for obtaining representative wash water samples. These will be delivered in appropriate sealed containers to the accredited testing laboratory for testing. The test results will be reviewed against the determinant threshold levels. A lower trigger level for each determinant will be set to ensure that the wash water can be changed before the contaminant levels are allowed to build up to a level that exceeds the maximum level for each determinant. This trigger level will be agreed with the EA based initially on industry-wide standards to be set and then reviewed to take account of trends from the testing of the wash water from the plant at Pilkington.

5.10 In addition to the laboratory testing of the wash water, there will be a visual inspection of the wash water before the commencement of operations each day or in the event of a fuel/oil spillage at the site. The visual inspection will be to check for evidence of oils on the surface of the wash water. The location of the visual inspection will be dependent upon the specific plant. The visual inspection will establish whether there is a level of oil contamination that would give rise to a need to change the water. The Site Manager will be responsible for training operatives to establish how to visually check the water.

Removal of Wash Water

5.11 If one of the determinant trigger levels has been reached, then the wash water within the wash plant will be replaced. The contaminated water will be pumped from the plant into tankers that will dispose of the liquid at suitably licensed facilities. If the contamination levels exceed the maximum level permissible level when tested, the plant will cease operations until the wash water has been replaced or repeated testing confirms levels are below agreed trigger levels

6. Sensitive Areas

6.1 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.

6.2 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.

6.3 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.

6.4 Copies of the MAGIC database interrogation results are provided in Appendix 2.

Identification of receptors

6.5 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 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 Minor 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

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

Industrial/Commercial Receptors

6.7 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

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

Highway or Minor Road

6.9 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

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

Ecological Receptors

6.11 Salmon's Brook runs along the eastern boundary of the site and is a small tributary to the River Lee Navigation. There are no other ecologically sensitive receptors within 250 m of the site.

Groundwater

6.12 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

6.13 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 south of the site (ref TQ39/209 194 and 237).

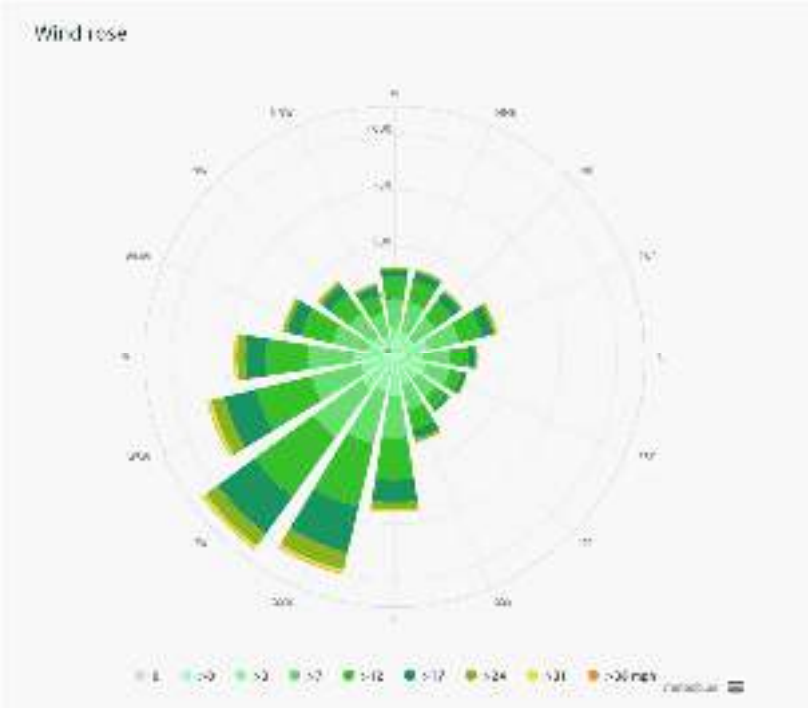
Identification of Potential Impacts

6.14 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)

Wind Direction

6.15 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:



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

Air Quality

6.17 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.

Flooding

6.18 The application site is located with Flood zone 3, which means that there is a high risk of flooding. The adjacent 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.

6.19 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 have been fully implemented.

7. Mitigation and Control

7.1 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.

Mud on Road

7.2 Excessive mud on roads and site surfaces is monitored through the environmental management system.

7.3 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.

7.4 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.

7.5 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.

7.6 In this manner, there should be limited opportunity for the trafficking of mud from the site.

Dust Control

7.7 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.

7.8 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.

7.9 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.

Noise Control

7.10 Noise is managed through the environmental management system.

7.11 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

7.12 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).

7.13 Noise is minimised by the maintenance of plant and the use of silencers, maintenance of roads and working within the permitted operational hours.

7.14 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.

7.15 Regular site inspections are in place as part of compliance with the site Standard Operating Procedures (SOP) in respect of daily auditory assessments.

7.16 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

7.17 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.

7.18 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).

7.19 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.

8. Site Condition Report

8.1 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.

8.2 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.

9. Conclusions

9.1 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