WASH PLANT ADDENDUM

Environmental Permit Variation Application

Prepared for: **Envar Composting Limited**

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1.0 Introduction

Envar Composting Limited has instructed SLR Consulting Limited (SLR) to prepare an addendum to Environmental Permit Variation Application (EPR/GP3930DF) under the Environmental Permitting (England and Wales) Regulations (as amended) 2016. This application is to update the current permit to enable the continued efficient use of the facilities for approved uses and to serve a community in the treatment of biological materials.

This document acts as an addendum to this application to include the addition of a wash plant to the permit variation.

This document provides a Non-Technical Summary (NTS), Environmental Risk Assessment (ERA), Operating Techniques and Appropriate measures for the addition of a wash plant to the permit variation. This addendum is to be read in conjunction with the permit variation and will only discuss the addition of the wash plant.

The wash plant will be used to clean street sweepings and separate them into the recoverable and recyclable aggregates from other wastes collected in the street sweepings.

2.0 Non-Technical Summary

This section provides a NTS of the proposed operation of the Wash Plant, including:

- An explanation of what is being applied for;
- A summary of the regulated facilities; and
- A summary of the key technical standards and control measures relating to the proposed changes.

2.1 Pre-Application Advice

Enhanced pre -application advice has been previously sought by Envar Composting Ltd (EPR/GP3930DF/P002). Grit washing of non-hazardous grits from AD plants, from WWTP's and from non-hazardous road sweepings was discussed during this enhanced pre-application advice request. The EA advised that "this operation is likely to be considered physical treatment and again this would require the addition of a new waste operation". This activity advised by the EA is "the addition of a new physical treatment of a non-hazardous waste activity (1.16.13)."

2.2 The Site

The site is located just north of St Ives in Cambridgeshire. The site has been in existence since the 1060s and has a long history of producing compost. The site is situated to the east of the B1040 and north of Bluntisham Road.

The closest residential property is a cottage at the Raptor Foundation which lies 120m to the north-west of the site boundary. Surface waters in the area are predominately made up of field drainage ditches and are mainly engineered.

3.0 Proposed Activities

3.1 Soil Washing Treatment Operation

The washing plant will treat wastes by **screening, washing and separating** the street sweepings into different size fractions suitable for use as recycled aggregate, sand or soils. The process will also remove metal, wood and residual organics.

The washing plant operation will only receive and process street sweeping. Other permitted wastes at the site will not be treated by the wash plant.

The wash plant will have its own sealed independent drainage separate from the wider site. This sealed system will drain to leachate tanks for testing and offsite disposal. These will be emptied as necessary to provide available capacity.

The wash plant is capable of processing up to 15 tonnes of material per hour and will have a maximum annual capacity of 40,000 tonnes. It is predicted that the actual throughput will be approximately 25,000 tonnes to 30,000 tonnes annually.

The main operation of the wash plant will be the receipt, off -loading, storage and processing of street sweeping and associated material and dispatch of recovered/ separated material. Upon arrival on site the road sweepings and gully waste will be discharged onto the concrete hard standing within a designated storage bay.

Large identified objects within the waste will be handpicked at this stage. Subject to the nature of the incoming material, it will be pre-screened to remove smaller items which are likely to cause damage to the plant using a mobile screening trommel if required.

Waste material will be subject to temporary storage in the designated storage bays until a sufficient and practical amount of material is available for the mobile screening operations. This would typically be no more than 15 working days.

A designated bay will be used to store all screened material. It will then be loaded progressively into the main processing plant feed hopper. The material will be fed via a conveyor under an over band magnet to remove any metal objects that may otherwise damage the pumps. Separated metals will be removed off site to an authorised metal recovery facility if economical volumes are recovered. The remaining material will be fed into the first washing system, which is a log washer. The log washer contains a body of water, additional spray bars and rotating paddles that generates forces of friction and attrition. This imparts a scrubbing action on the material which facilities the separation of contaminants. The majority of contaminants will leave the system at this stage on the process water.

The larger size organic matter and any litter present float out of the system over a vibrating deck to remove any further silt and water content. The remaining organic fraction drops into a discharge bay and at this point can be further litter picked when required.

The resulting useable separated / sorted fraction at this stage is mineral and stones with this material then subject to further processing ,

The aggregate in the log washer is then discharged and rinsed on a double deck screen before being discharged into two separate bays with each bay having its own aggregate grading size.

The finer mineral material that falls through the screens is then pumped into a sump tank fitted with filters before passing into a cyclone, which separates the sand from the process water.

The sand flows to the sand plant where it is further cleaned with high-pressure water sprays. The sand subsequently passes via two deck screens whereby it is subdivided into two fractions to produce a coarse and finer building sand. The two sand fractions then drop into individual storage bays.

The water is cleaned using a Parnaby cyclone.

The final component of the dewatering process is a centrifuge. Settled solids are pumped to a buffer tank and then to the centrifuge where the solids are spun at high speeds.

This removes fine solids from the waste stream and provides recycled water for reuse.

The silt / solids fall into a collection bay and are currently sent to landfill.

Other Recovered materials are kept in discrete locations on the concrete hard standings

3.2 Waste Operation

The washplant process will be covered in the EP as a waste activity. The facility will screen, wash and separate material into different size fractions suitable for use as recycled aggregate, sand or soils.

The activities that will be carried out at the site as defined under Annex II of the Waste Framework Directive can be summarised as follows:

- **R3:** Recycling/reclamation of organic substances which are not used as solvents;
- **R5:** Recycling/reclamation of other inorganic materials; and
- **R13:** Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where is produced).

3.3 Waste Types and Storage

The plant will have a maximum annual capacity of 40,000 tonnes, although predicted actual; throughput will be circa 25,000 to 30,000 tonnes.

As materials are processed through the plant, different stockpiles of material will be generated based on the particle size.

The wash plant operation will only receive and process street sweepings. Other permitted wastes will not be accepted to the wash plant at present time.

Table 3-1
Waste Types for Acceptance

Waste Code	Description
20 03 03	Street sweepings (non-hazardous), excluding gully pit and interceptor waste.
19 12 12	Grits from anaerobic digestion of source segregated biodegradable waste
19 12 12	Stones and aggregate recovered from composting

3.4 Environmental Risk Assessment

This Environmental Risk Assessment has been produced to assess the environmental risk posed by the wash plant operation at the site. This will not discuss Environmental Risks already assessed in the permit variation application and is to be read in conjunction with Risk Assessments from the Envar Cambridge Permit Variation.

The assessment has been completed in accordance with the Environment Agency (EA) Guidance 'Risk Assessments for your Environment Permit' last updated 3 January 2025. The aim of the assessment is to identify any significant risks and demonstrate that the risk of pollution or harm will be acceptable by taking the appropriate measures to manage these risks.

The ERA uses the following approach for identifying and assessing the risks from the proposed operation:

This ERA uses the following approach for identifying and assessing the risks from the proposed operation:

Step 1 Identify risks and sources of risk from your activity.

Step 2 Where risks are identified from Step 1 then identify the receptors that could be affected

Step 3 Identify potential pathways between the sources of risk and receptors

Step 4 Assess the risks and check that they are acceptable. Justify appropriate measures to control your risks, if necessary.

Step 5 Submit your assessment

Table 3-2 Environmental Risk Assessment

What do you do that can harm and what could be harmed.			***Managing the Risk***	***Assessing the Risk***		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Odour						
Acceptance, processing and storage of wastes	As per the receptors identified in section 2 of Non-Technical Summary (315160 Envar Composting Ltd Non-Technical Summary (Oct 24, 1.0)	Air	The waste types to be accepted as part of the wash plant operation are not considered to be putrescible or contain readily degradable residues. The waste types to be accepted are inert in nature and are not considered to be odours. The street sweeping washing process will not produce odours emissions and is an inherently enclosed process. The site will be monitored for odours by site personnel throughout the working day. If odours are detected, investigations will be undertaken to determine the cause and appropriate mitigation measures will be actioned.	Negligible	Odour Nuisance and loss of amenity.	Not significant – due to the type of waste accepted on site
Noise						
Operation of fixed and mobile plant	As per the receptors identified in	Air	All fixed plant will be maintained and repaired to the manufactures	Low	Noise nuisance and health risk to human	**Not significant**

What do you do that can harm and what could be harmed.			***Managing the Risk***	***Assessing the Risk***		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
(processing waste)	section 2 of Non-Technical Summary (315160 Envar Composting Ltd Non-Technical Summary (Oct 24, 1.0)		specification to minimise unnecessary noise emissions. Plant will be fitted with nose silencers if necessary. Inspections will be carried out by site personal daily and in response to complaint. If noise levels are deemed a nuisance, investigation will be undertaken to determine the cause and appropriate mitigation measures will be implemented.		receptors during daytime hours.	
Fugitive Emissions						
Dust from wash plant processing operations	As per the receptors identified in section 2 of Non-Technical Summary (315160 Envar Composting Ltd Non-Technical Summary (Oct 24, 1.0)	Air	Measures will be incorporated into the design of the operation of the wash plant to include: • Drop heights minimised • Stockpile management The wash plant itself is a sealed system with a low risk of dust emissions.	Medium	Dust nuisance	**Not Significant**

What do you do that can harm and what could be harmed.			*Managing the Risk*	*Assessing the Risk*		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
			Dust suppression systems will be purchased and utilised at the site if required. If at any time dust emissions are detected by the site staff or any complaints relating to dust are received, the incident is record in the Site Diary, and immediate action taken to identify the cause o he problem. A complaints procedure is in place to ensure that any perceived nuisance being caused to local residents is dealt with efficiently. Each compliant will be investigated. The wash plant will be used within in its design capacity to minimise the risk of dust emission. It is located away from the site boundary to minimise the risk of dust escaping the site boundary. Good standards of plant and equipment are maintained.			
To Water						

What do you do that can harm and what could be harmed.			*Managing the Risk*	*Assessing the Risk*		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
Treatment and Storage	As per the receptors identified in section 2 of Non-Technical Summary (315160 Envar Composting Ltd Non-Technical Summary (Oct 24, 1.0)	Land and surface water	The wash plant will have its own independent sealed drainage system that drainage to tanks and is tankered offsite. The types of waste stored will typically be inert with a low potential to create contaminated surface water under normal operating conditions. The site surfacing is inspected daily to ensure it is in good condition. Any weakness will be repaired immediately using temporary solutions and with permanent measures implemented as soon as practicable.	Low	Pollution to Water	**Not Significant**
Pests						
Birds, vermin and pests	As per the receptors identified in section 2 of Non-Technical Summary (315160 Envar Composting Ltd	Via air (flies) or over ground (vermin)	The proposed waste types to be processed by the wash plant will not attract birds, vermin and pests. The site is subject to a Pest Prevention Plan (pest Prevention plan v3) which is included with the permit variation application.	Negligible	Nuisance, loss of amenity and harm to human health.	**Not Significant**

What do you do that can harm and what could be harmed.			*Managing the Risk*	*Assessing the Risk*		
Hazard	**Receptor**	**Pathway**	**Risk management**	**Probability of exposure**	**Consequence**	**What is the overall risk?**
	Non-Technical Summary (Oct 24, 1.0)					
Fire	As per the receptors identified in section 2 of Non-Technical Summary (315160 Envar Composting Ltd Non-Technical Summary (Oct 24, 1.0)	Air (smoke) Ground (spillages and firewater)	The wastes that are processed are non-combustible. The plant inspection schedule will include checks of electrical equipment at the wash plant to ensure that any faults are identified, reported and repaired. Smoking will not be permitted in the wash plant operational areas.	Low	Harm to human health and the environment and nuisance	**Not significant**

3.4.1 Conclusion

This ERA has determined that there will be no additional risks will be generated as a result of the wash plant operation at the site.

4.0 Operating Techniques

The facility will be managed in accordance with an approved and existing Environmental Management System (EMS).

These operating techniques are to be read in conjunction with the Non-Technical Summary "315160 Envar Composting Ltd Non-Technical Summary (Oct 24, 1.0)".

The Operating Techniques details the management measures that will be implemented on site to minimise the risk of accidents or emissions that could impact workers and local receptors.

They includes the detailed process description and relevant roles and responsibilities to ensure the safe and effective management of the site to keep it in compliance with the EP.

The document includes the following information:

- Management;
- Site operations;
- Process Controls;
- Emissions; and
- Information.

Operational management procedures will ensure that:

- The risks that the activities pose to the environment are identified;
- The measures that are required to minimise the risks are identified;
- The activities are managed in accordance with the management system and the OT;
- Performance against the management system is audited at regular intervals; and
- The EP is complied with.

These OTs will be reviewed and updated on an annual basis or because any of the following activities (not exhaustive):

- The issue of an EP variation by the Environment Agency (EA);
- Finalisation of the wash plant installation
- A material change to the operational process;
- A substantiated compliant; or
- Any changes in legislation or guidance documents applicable

4.1 Dust Management Plan

A part of the permit variation application a Dust and Emissions Management Plan (DEMP) (315160 Envar Composting Ltd Dust & Emissions Management Plan (Oct 24, 1.0)) has been produced that explains the sites settings and risks from dust and particulate emissions and how these will be controlled during the lifetime of the activity. The wash plant activity itself is not discussed within this DEMP however, the site setting, risks and general control measures will apply.

4.2 Noise Assessment

A Noise Assessment (EnVar Noise v1.1 311024) has been undertaken at the site as part of the permit variation. The wash plant activity itself is not discussed within this Noise Assessment however, the receptors, risks and general control measures will apply.

4.3 Drawings

The location of the wash plant activity is shown in Drawing “402.065547.00001.013.001.2_Wash Plant Location”.

5.0 Technical Standard and Control Measures

The key technical standards laid out in the following documents govern the design and operation of the site:

- The Environmental Permitting (England and Wales) Regulations 2016 (as amended);
- Developing a management system: environmental permits;
- Controlling and monitor your emissions for an environmental permit;
- Sector Guidance Note S5.06; Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste; and
- Relevant EA Guidance e.g. Environmental Risk Assessment's, Site Condition Reports etc.

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