



Report

Biffa Waste Services Ltd., Renwick Road Rail Hub

Environmental Permit Application, Fire Prevention Plan

Submitted to:

Biffa Waste Services Ltd

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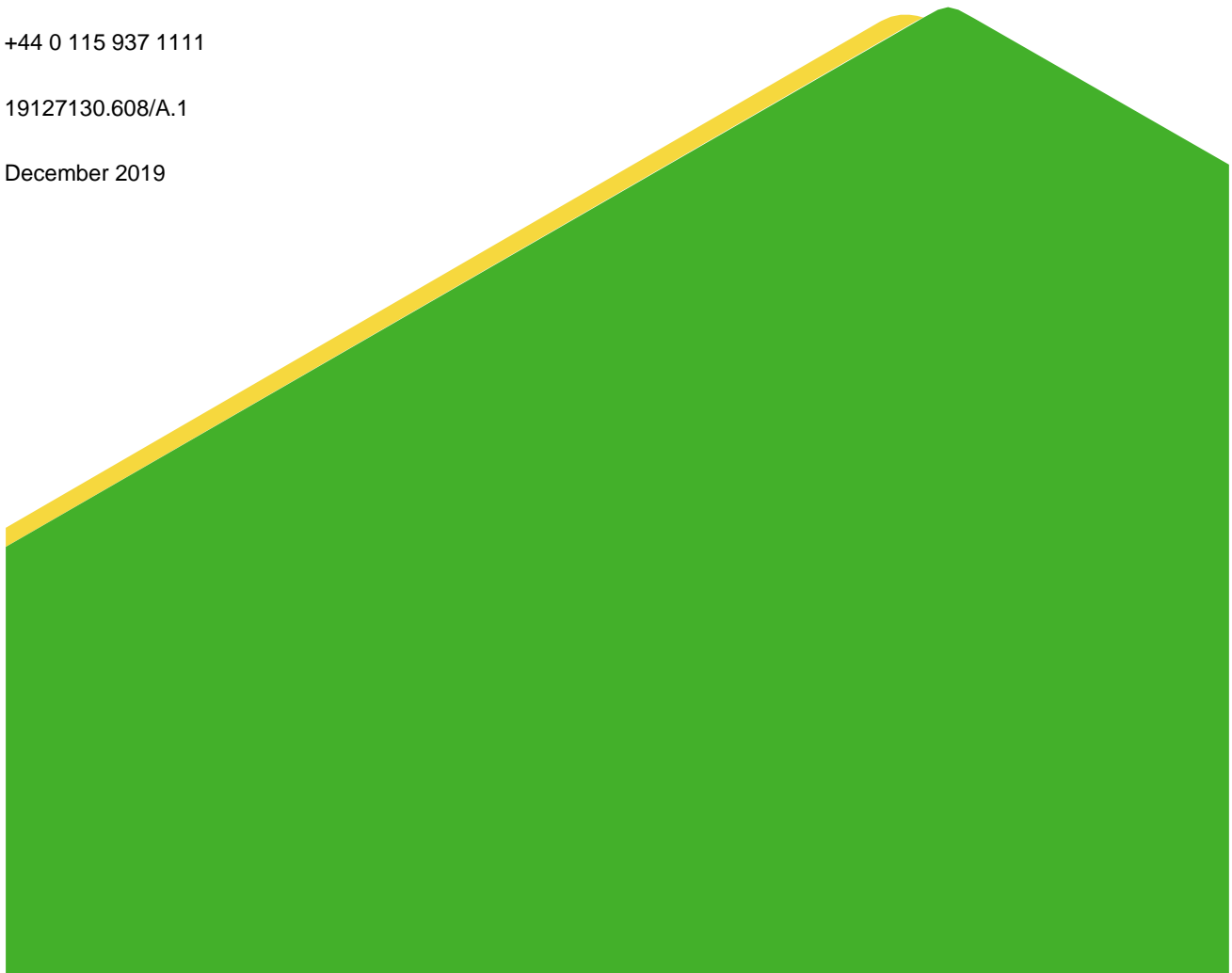
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1.0 INTRODUCTION

1.1 Report Context

Biffa Waste Services Ltd ('Biffa') has requested Golder Associates (UK) Ltd ('Golder') to prepare an Environmental Permit ('EP') Application ('Application') for a Waste Transfer Station at Renwick Road, Barking, East London ('Site') at NGR TQ 470 833. The location of the Site is shown on **Drawing 1 – Site Location Plan** and **Drawing 2 – Environmental Permit Boundary** in **Appendix 5**.

The objective of this Application is to obtain an EP which enables Biffa to accept up to 300,000 tonnes per year of selected non-hazardous wastes by road and transfer to rail (i.e. a 'Rail Hub'). This is a joint working agreement between Biffa and GB Railfreight ('GBRf') with Biffa being the permit holder and operator.

The information presented in this application accords with that approved by the Environment Agency ('EA') for Biffa's existing Rail Hub Waste Transfer Stations in Leeds and Manchester.

The Site will receive waste materials by road, then stockpile and then load onto rail wagons (for onward distribution) under an Environmental Permit. Wastes will comprise:

- Granular inert and non-hazardous materials delivered to the Site by HGV which will be placed into temporary stockpiles ('bays') prior to loading onto rail wagons for onward haulage for re-use, recovery or disposal at other suitably permitted sites; and
- Baled Refuse Derived Fuel ('RDF') in locked sea containers for temporary storage of those containers prior to loading the sea containers onto rail wagons for onward haulage for recovery or disposal at other suitably permitted sites.

Biffa operates its existing facilities in accordance with an Environmental Management System (EMS), referred to as an Integrated Management System (IMS), that is certified to ISO14001. The IMS includes a set of procedures that covers all Site activity from pre-acceptance checks, acceptance of waste, storage and handling of waste, to day-to-day operations of the Site. Biffa will implement the existing management system at the Renwick Road facility. A summary of it is provided in **Appendix 3** of this application, along with a copy of the certificate.

The operations will be the subject of an Environmental Management Plan ('EMP') and EP. The EMP will form part of the overarching Biffa Integrated Management System ('IMS') and relate specifically to Biffa's activities at the Renwick Road Waste Transfer Station. The EMP details the potential impacts that the activities may have on the environment, including the closest neighbours, and outlines measures in place to control, minimise and mitigate any potential environmental impacts. Information regarding operations management at the Site includes organisational structure and the roles and responsibilities of Biffa staff. Detailed Waste Acceptance Procedures (WAPs) are included in the EMP to control waste input.

This Fire Prevention Plan ('FPP') forms part of the Environmental Management Plan (EMP) for the proposed Waste Transfer Station at the Site. The FPP is a requirement of the permit application for the proposed Site due to the nature of the waste operations at the Site.

1.2 Objectives and Scope

This FPP outlines the approach to the management of potential fire hazards at the proposed Site as a result of the permitted activities, with a primary aim of preventing a fire related incident. In the event of a fire, this plan also describes the means by which the fire will be controlled, and any impacts minimised.

The FPP has been prepared in accordance with the Environment Agency ('EA') guidance 'Fire Prevention Plans: Environmental Permits' and the RDF Industry Group 'Residual Waste FPP Guidance' document and incorporates the statutory requirements of the Regulatory Reform (Fire Safety) Order 2005.

In accordance with the three primary objectives described in the EA guidance, this FPP describes measures in place to:

- 1) Minimise the likelihood of a fire happening;
- 2) Aim for a fire to be extinguished within four hours; and
- 3) Minimise the spread of fire within the Site and to neighbouring sites.

The waste types to be accepted at the Site are listed in **Table 1**. All waste types are classed as inert and non-hazardous. The maximum amount of waste to be accepted shall not exceed 300,000 tonnes per year.

Table 1: Waste types to be accepted at the Site

Waste Code	Description
01 04	Wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
01 04 13	Wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 05	Drilling muds and other drilling wastes
01 05 04	Freshwater drilling muds and wastes
01 05 07	Barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	Chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
05 01	Wastes from petroleum refining
05 01 10	Sludges from on-site effluent treatment other than those mentioned in 05 01 09
10 11	Wastes from manufacture of glass and glass products
10 11 12	Waste glass other than those mentioned in 10 11 11
10 12	Wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 08	Waste ceramics, bricks, tiles and construction products (after thermal processing)
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil
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

Waste Code	Description
17 05 08	Ballast
17 09	Other construction and demolition wastes
17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19 02	Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 06	Sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 05	Glass
19 12 09	Minerals (for example sand, stones)
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other waste (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11
19 13	Wastes from soil and groundwater remediation
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	Sludges from soil remediation other than those mentioned in 19 13 03
20 02	Garden and park wastes (including cemetery waste)
20 02 02	Soil and stones
20 03	Other municipal wastes
20 03 03	Street-cleaning residues (<i>Site cleaning residues from Renwick Road only, not third party</i>)

Only waste EWC 19 12 10 (known as Refuse Derived Fuel or RDF) *is* combustible and *is* considered in this FPP. All other wastes are *not* combustible. The maximum amount all waste stored at the Site at any one time will not exceed 10,000 tonnes.

2.0 ACTIVITIES ON SITE

The following activities relating to RDF will be carried out on Site:

- Delivery of baled RDF in locked shipping containers by HGVs to Site;
- Unloading of locked shipping containers by mobile plant (i.e. reach stacker) either onto the ground or onto another locked shipping container;
- Temporary storage of baled RDF in locked shipping containers; and
- Loading of locked shipping containers (by reach stacker) onto rail wagons for onward haulage by rail for recovery or disposal at other suitably permitted sites.

Shipping containers will be stored either in a designated bay or at the eastern or western ends of the Site. A maximum of 48 full sea containers will be stored in an orderly fashion on the Site at any one time and will be stacked no more than three containers high. The shipping containers will remain locked at all times, except in the event that the Site Manager needs to check the contents of the containers upon their arrival to the Site.

The Site will be 24/7 operation. Incoming road deliveries will tend to be daytime (07:00 to 18:00) and export by train at evening or night-time. The bays will be managed and loading rotated to ensure the minimum residence time for RDF waste.

Trains will typically comprise 20 to 22 boxed wagons (for granular materials) or flat-bed wagons (for sea containers). Each wagon is about 14 m long. Trains will stand in the terminal for typically 4 hours (i.e. 4 hours terminal time).

3.0 SITE PLANS AND MAPS

The following plans are provided in **Appendix 5**

- Drawing 1 – Site Location Plan.
- Drawing 2 – Environmental Permit Boundary.
- Drawing 3 – Environmental Site Setting.
- Drawing 4 – Site Layout Plan.
- Drawing 5 – Site Infrastructure.

The following information is provided in these plans:

- Access routes for fire engines.
- Site Layout.
- Hardstanding and surface water drainage.
- Nearest fire hydrant.
- Environmental setting.

4.0 SENSITIVE RECEPTORS

Drawing 3 – Environmental Site Setting shows the sensitive receptors located within a 1 km radius of the Site that could be affected by a fire at the Site.

5.0 MANAGING THE COMMON CAUSES OF FIRE

5.1 Arson

The integrity of the boundary fencing and the site gates will be inspected on a daily basis. Any damage to the boundary fencing or gates will be made secure by the end of the working day of inspection. If it is not possible to make repairs within a working day, temporary measures will be implemented to control unauthorised access to the Site. Final repairs will be carried out within 5 working days or a longer timescale as agreed in writing with the Environment Agency. A record of all inspections and any repairs necessary together with their implementation is made in the Site Diary.

The site will be monitored by a Closed-Circuit TV (CCTV) system which will be available for inspection on site.

The Site will be operated mostly on a 24 hours per day, 7 days per week basis, which will act as a deterrent to intruders.

The RDF is the only combustible waste to be accepted at the Site, and it will be stored in locked metal shipping containers.

5.2 Plant and Equipment

The Site will require limited amounts of plant and equipment. Plant will typically comprise two loading shovels and one reachstacker. Equipment will be needed in the site reception office, welfare and weighbridge facilities.

All plant and equipment used at the Site will be fully maintained and will be the subject of daily plant inspections. In addition to providing for the optimum operation of the plant, the maintenance regime minimises the risk of abnormal operating conditions. Records of maintenance will be kept at the Site.

5.3 Electrical Faults including damaged or exposed electrical cables

The electrics on Site will be fully certified by a qualified electrician and there will be written procedures in place that set out the regular maintenance of the electrics. There will be no exposed cables on Site and wired electrics will only be present in the Site reception, which will be located away from the RDF storage area.

5.4 Discarded Smoking Materials

The Site will be a designated non-smoking site. The RDF will be the only combustible waste accepted on Site and will be stored in locked shipping containers so will not be open to any ignition sources.

5.5 Hot Works

There will be no hot works undertaken on Site.

5.6 Industrial Heaters

Heating will be required in the Site Reception area. Industrial heaters will not be used.

5.7 Hot Exhausts

A fire watch will be carried out in order to detect signs of a fire caused by dust settling on hot exhausts and engine parts. This fire watch will involve carrying out visual checks. All Site staff will be suitably trained to carry out this fire watch and to implement appropriate corrective actions. A record of corrective actions taken will be made in the Site Diary. A record of staff training will be held by Biffa

HGV's entering the Site will be fitted with upward facing exhausts where possible and will only operate away from the RDF storage area.

5.8 Ignition Sources

There will be no ignition sources present on Site.

5.9 Batteries in ELVs

There will be no batteries left connected in un-depolluted vehicles. Batteries will be disconnected and removed from any un-depolluted vehicles.

5.10 Leaks and Spillages of Oils and Fuels

Liquids with significant fire potential which will be used and stored on site will be limited to fuel, oil and cleaning liquids. Fuel will be stored in a mobile double skinned bowser. Oil and cleaning liquids will be stored in the ISO containers on the site. Only limited quantities of oil and cleaning liquids will be stored on site and oil will be stored over drip trays as necessary. Spill kits will be provided for use in the event of a spillage of fuel, oil or cleaning fluids.

Refuelling and maintenance works to mobile plant will be limited, where possible, to areas of the Site with a concrete or hardstanding surface. In the unlikely event of spillage of fuel or oil or cleaning liquids the spillage will be cleaned up as soon as possible, if necessary, using the spill kits available on site.

A record of any spillages and use of the spill kits will be made in the Site Diary. All site staff will be trained in the detection of leaks and the avoidance of spillages together with the use of spill kits. A record of all staff training will be held by Biffa.

5.11 Build-up of Loose Combustible Waste, Dust and Fluff

Wastes to be accepted at the Site are not susceptible to the generation of loose combustible waste, dust and fluff.

5.12 Reactions between Wastes

The waste acceptance procedure will ensure that only permitted wastes are accepted onto the Site and RDF is the only combustible waste type. The RDF will always be stored in locked shipping containers on Site which will effectively prevent reaction with other waste. Other wastes are granular non-combustible soil materials. There is no potential for reaction with other wastes.

5.13 Deposited Hot Loads

There will be no hot loads present on Site.

6.0 PREVENT SELF-COMBUSTION

6.1 Manage Storage Time

RDF materials will be stored on Site for a maximum of one week before removal by train. This will be controlled and monitored by Site staff as part of the weekly Material Management Spreadsheets. The quantity and type of waste accepted at the Site will be limited to the amount of each type of waste that can be removed from the Site in that week. Upon removal from the Site, wastes will be loaded on a 'first in, first out' basis.

In the event that a train is cancelled, the method of removal and timescale for the removal of waste from the site will be determined based on the quantity of waste on site, the nature of the waste and the timescales associated with rescheduling a train.

The RDF will be stored in locked shipping containers whilst on Site.

6.2 Monitor and Control Temperature

There are no hot loads being transported or stored on Site. The RDF will be stored in locked shipping containers with no exposure to direct sunlight.

6.3 Waste Bale Storage

There will be no loose RDF or loose waste bales of RDF stored on Site. Baled RDF will be delivered, stored and removed from the Site in locked shipping containers.

7.0 MANAGE WASTE PILES

7.1 Maximum Pile Sizes

No RDF shall be stored in loose stockpiles or stockpiles of loose bales.

7.2 Waste Stored in Containers

The RDF will only be stored in locked shipping containers with a typical capacity of 67 m³.

For the purpose of this FPP, the maximum 'waste pile' size will be ~67 m³ as the sea containers will effectively prevent the spread of fire.

8.0 PREVENT FIRE SPREADING

8.1 Separation Distances

The use of locked sea containers is considered to effectively prevent the spread of fire. A maximum of 48 full sea containers will be stored in an orderly fashion on the Site at any one time and will be stacked no more than three containers high.

8.2 Fire Walls and Bays

The use of locked sea containers is considered to effectively prevent the spread of fire. Should a hot or suspicious load be identified, a reach stacker will be used to move and isolate a locked shipping container, preferably within one of the soil bays.

9.0 QUARANTINE AREA

The Site will have a quarantine area for any unauthorised wastes (granular or RDF) which have been identified following delivery to the Site. Quarantined wastes will be removed by road as soon as possible. The method of removal and timescale for removal will be based on the nature of the unauthorised waste.

The quarantine area will not be located near to the RDF storage areas.

10.0 DETECTING FIRES

There will be a procedure in place to detect a fire in its early stages. All site staff will be trained in the detection of fires, emergency procedures and firefighting techniques. A record of all staff training will be held by Biffa

A CCTV system will be installed for security purposes and will provide the means of fire detection for the Site. The Site office will be fitted with a smoke alarm and be subject to routine checks to ensure that it remains in working condition.

11.0 SUPPRESSING FIRES

The Site Office will be the only indoor area of the Site and will have access to fire extinguishers for use in the event of a fire.

All waste will be stored outside and not inside buildings, therefore will not require a fire suppression system. The RDF will be stored in locked shipping containers at all times.

12.0 FIREFIGHTING TECHNIQUES

Firefighting equipment will include fire extinguishers, that will be stored in the Site Reception. A chosen number of employees will be provided with fire warden training and a record of this training will be kept by the Site Manager.

If a hot load is suspected and it is safe to do so, a reach stacker will be used to move and isolate a locked shipping container as soon as it is reasonably practicable to prevent the fire spreading.

Granular soil type wastes may be used to smother a fire, if appropriate and safe to do so.

13.0 WATER SUPPLIES

A fire hydrant is located on the other side of Renwick Road, approximately 85 m from the Site entrance (see **Drawing 3 – Environmental Site Setting**). There is no need for additional firefighting water to be supplied on Site.

14.0 MANAGING FIRE WATER

In accordance with the guidance, approximately 2,000 litres of water per minute per 300 m³ of waste will be required for a minimum of 3 hours.

RDF will be stored in a sea container of approximately 67 m³. Therefore 450 litres of water per minute will be required. One sea container volume of water will be discharged in about 150 minutes. This is considered the amount of fire water run-off to be managed.

Assuming a site area of 5,000 m², then this volume of water will immerse the Site area to a depth of <0.02 m and will be effectively retained by the site kerb and closed drainage system.

All fire water will be removed from the Site by pumping from the closed drainage system for removal by road.

15.0 DURING AND AFTER AN INCIDENT

There will be a list of contact numbers of the sensitive receptors nearby to the Site, to notify in the event of a fire. The Site will be cleared and decontaminated after a fire by designated Site staff members. A record will be kept on Site of any fire related incidents.

Signature Page

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Date: 20 December 2019

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