



REPORT

Biffa Waste Services Ltd., Renwick Road Rail Hub
Environmental Permit Application, Dust Management Plan

Submitted to:

Biffa Waste Services Ltd

Redhill Landfill Site
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Submitted by:

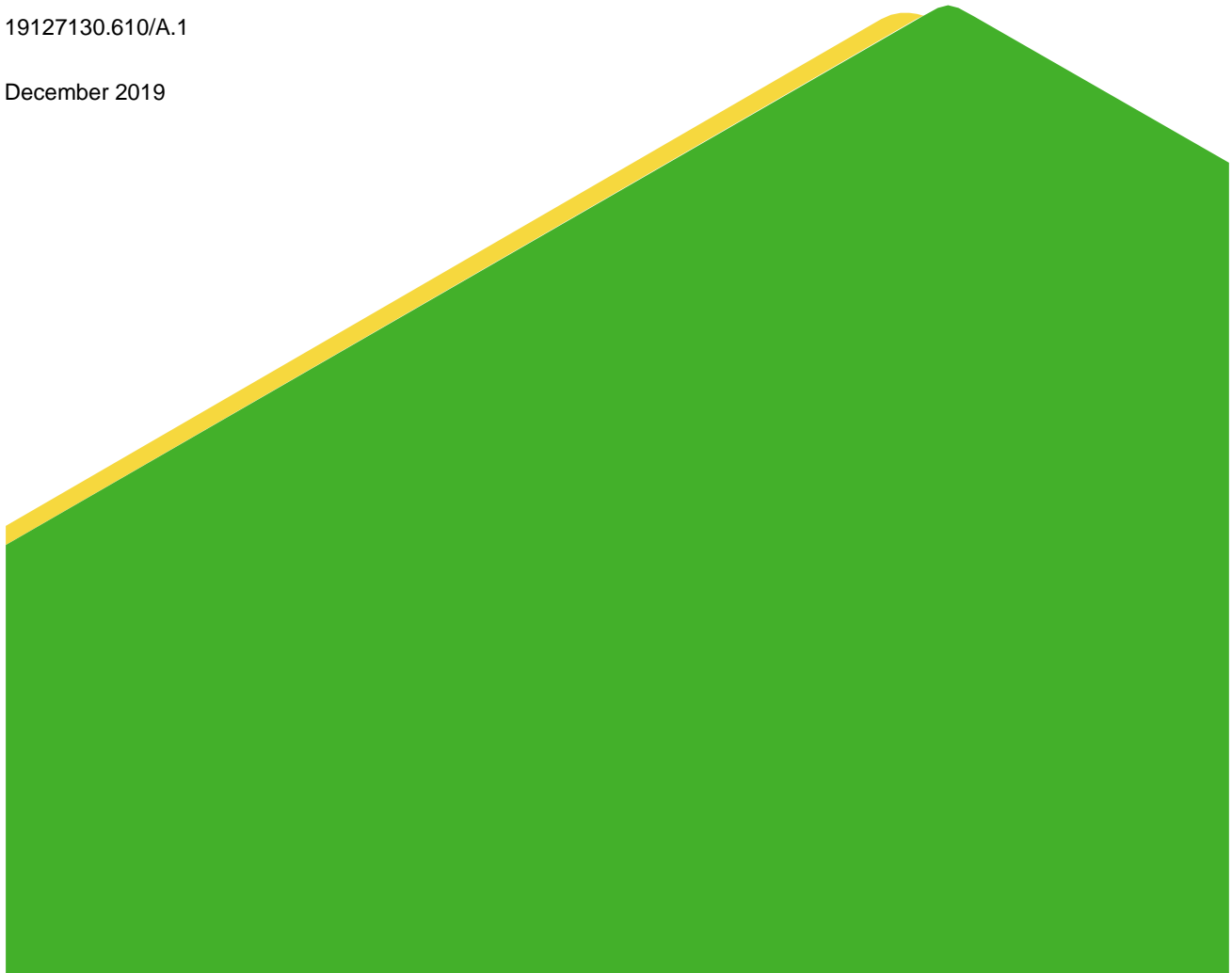
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1.0 INTRODUCTION

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** 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.

The operations will be the subject of an Environmental Management Plan ('EMP') and Environment Permit ('EP'). The EMP will form part of the overarching Biffa Environmental Management System (EMS), referred to as an 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 Dust Management Plan ('DMP') forms part of the EMP for the proposed Waste Transfer Station at the Site. The DMP is a requirement of the permit application for the proposed Site due to the nature of the operations and the proximity to sensitive receptors.

1.2 Objectives and Scope

This DMP outlines the approach to the management of potential dust emissions from the proposed Site as a result of the permitted activities, with a primary aim of minimising any adverse impacts.

A qualitative assessment of potential dust impacts from the proposed Site is undertaken in this report, addressing the nearby receptors, following the Environment Agency (EA) and the Department for Environment, Food & Rural Affairs (DEFRA) guidance – 'Control and Monitor Emissions for your Environmental Permit'¹. This DMP has been produced because the Site falls within 500 m of a sensitive receptor. As defined in the guidance, a sensitive receptor is a home, school, hospital or nursing home, food preparation facility or similar.

¹ Department for Environment, Food & Rural Affairs and Environment Agency, 2016. Guidance - Control and Monitor Emissions for your Environmental Permit. Available at: <<https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#dust-mud-and-litter>> [accessed 20/08/2019].

According to the EA/DEFRA guidance for controlling and monitoring emissions of dust, mud and litter, there are currently no English statutory standards or guidelines relating specifically to dust deposition thresholds for dust. Instead, dust is referred to as a 'fugitive emission' with no set limit in permit conditions. As a result, it is the responsibility of the operator to control these emissions to ensure that they do not cause pollution. This DMP sets out the methods and procedures by which Biffa will control dust emissions from the proposed Site to prevent unacceptable pollution.

Biffa is committed to undertaking the management and mitigation measures detailed below to control the release of dust from the Site during operation.

1.3 Site Location

The Site is located on Renwick Road, approximately 1.5 km north of the River Thames, and approximately 3 km southeast of Barking town centre. The Site is bounded by Renwick Road and some commercial units to the west, industrial and commercial units of the Rippleside Commercial Estate to the north and east, and a railway line and third-party Waste Soil Hub to the south. There is a small brook immediately to the east of the Site before the railway line. The closest residential properties are located approximately 130 m to the south and southwest. Other residential receptors are located 300 m to the north and 600 m to the east. The area surrounding the Site is largely flat.

1.4 Receptors

A desk study has been undertaken to identify the following general and sensitive receptors to potential dust emissions, located within 500 m the Site:

- Ukrani Cash & Carry, industrial and commercial receptor, approximately 5 m north;
- BK Automotives, industrial and commercial receptor, approximately 5 m east;
- The Deli Café, industrial and commercial receptor, approximately 10 m north;
- Gima UK Ltd, industrial and commercial receptor, approximately 10 m north;
- Capital Karts, industrial and commercial receptor, approximately 20 m north;
- Alba Beds, industrial and commercial receptors, approximately 20 m north;
- A13 Steel, industrial and commercial receptor, approximately 40 m north;
- Time Cash & Carry, industrial and commercial receptor, approximately 40 m west;
- Global Engines & Gearboxes, industrial and commercial receptor, approximately 50 m west;
- Just Hire Catering Equipment & Furniture, industrial and commercial receptor, approximately 50 m west;
- Global Reconditioning UK, industrial and commercial receptor, approximately 50 m west;
- Global Engines & Gearboxes, industrial and commercial receptor, approximately 50 m west;
- Shearforce Security Services UK Ltd, industrial and commercial receptor, approximately 60 m northwest;
- Uneek Forwarding, industrial and commercial receptors, approximately 70 m northwest;
- RJ Coachworks, industrial and commercial receptors, approximately 90 m north;
- Buildbase Barking, industrial and commercial receptors, approximately 90 m north-northwest;
- Replacement Engines, industrial and commercial receptor, approximately 100 m north;
- Amber Bakery, industrial and commercial receptor, approximately 100 m north;
- USB International, industrial and commercial receptors, approximately 110 m north;

- The Ship and Shovel pub, community receptor, approximately 120 m north-northwest;
- Safestore Self Storage, industrial and commercial receptor, approximately 120 m north;
- Crouch Avenue, residential receptors, approximately 130 m south-southwest;
- Stern Close, residential receptors, approximately 130 m south;
- QP Online, industrial and commercial receptor, approximately 130 m north;
- Luggage Travel Bags, industrial and commercial receptors, approximately 140 m north;
- SBS Eclipse, industrial and commercial receptor, approximately 140 m north;
- Baboo Wholesale Meats Ltd, industrial and commercial receptor, approximately 140 m north;
- Al-Badia Halal Meat & Poultry, industrial and commercial receptor, approximately 140 m north;
- Enterprise Rent-a-Car, industrial and commercial receptors, approximately 150 m north;
- G&G Powder Coatings, industrial and commercial receptor, approximately 170 m north;
- SPAR/TEXACO Barking, industrial and commercial receptor, approximately 180 m north;
- Screwfix, industrial and commercial receptor, approximately 180 m northeast;
- F1 Tyres & MOT, industrial and commercial receptor, approximately 245 m northwest;
- Wivenhoe Road, residential receptors, approximately 250 m southwest;
- Arriva Bus Garage Barking, industrial and commercial receptor, approximately 280 m northwest;
- Krithia Road, Marne Road, Reginald Ellingworth Street, Maplestead Road, Kemmel Road residential receptors, approximately 300 m north-northwest;
- Goresbrook Road, residential receptors, approximately 440 m north;
- Monteagle Primary School, approximately 420 m north;
- Castle Green Children's Nursery, approximately 450 m northeast;
- Newlands Park, community receptor, approximately 480 m southwest; and
- Castle Green Leisure Centre, community receptor, approximately 490 m northeast.

2.0 DUST SOURCES AND PATHWAYS

2.1 Potential Sources of Dust

The following activities associated with the proposed Site are potential generating sources:

- Movement of full and empty HGVs in and around the Site, with wheels raising dust from hard surfaces;
- Tipping of granular waste materials from HGVs into loading bays;
- Movement of granular waste materials by Site mobile plant (e.g. loading shovels) to manage materials stored within loading bays;
- Raising of dust by the wind from dry stockpile surfaces; and
- Movement of waste by Site mobile plant by excavating from loading bays and tipping into rail wagons.

The primary source of potential dust emissions from the Site is considered to be from unloading and reloading granular waste materials.

HGVs will also carry locked sea containers containing baled RDF. No RDF shall be stored in loose stockpiles or directly in bays. Containers may be opened by the Site Manager and his staff for inspection purposes but shall be locked at all other times. RDF will provide no source of dust and is not considered further.

2.2 Dust Pathways

The risks of potential dust emissions associated with the Site being transported off-site are largely determined by the local atmospheric conditions surrounding the Site and distance from the source.

The conditions considered in the assessment include:

- Wind speed, to determine the likely occurrence of particles travelling beyond the site boundary;
- Wind direction, to identify the areas over which particles are likely to travel; and
- The location of receptors in relation to the Site.

Weather conditions have the potential to affect the impact of dust emissions from the Site on receptors, e.g. the impacts of dust at receptors located down-wind of the Site are likely to be more than those located in cross- or up-wind directions

The closest meteorological station is located at London City Airport, located approximately 5.5 km southwest of the application Site. A 1-year windrose for 2018 is presented in **Figure DMP1**. The prevailing wind direction is from the west southwest, with a large portion of mid wind speeds (5-7 m/s) and some higher wind speeds (> 7 m/s).

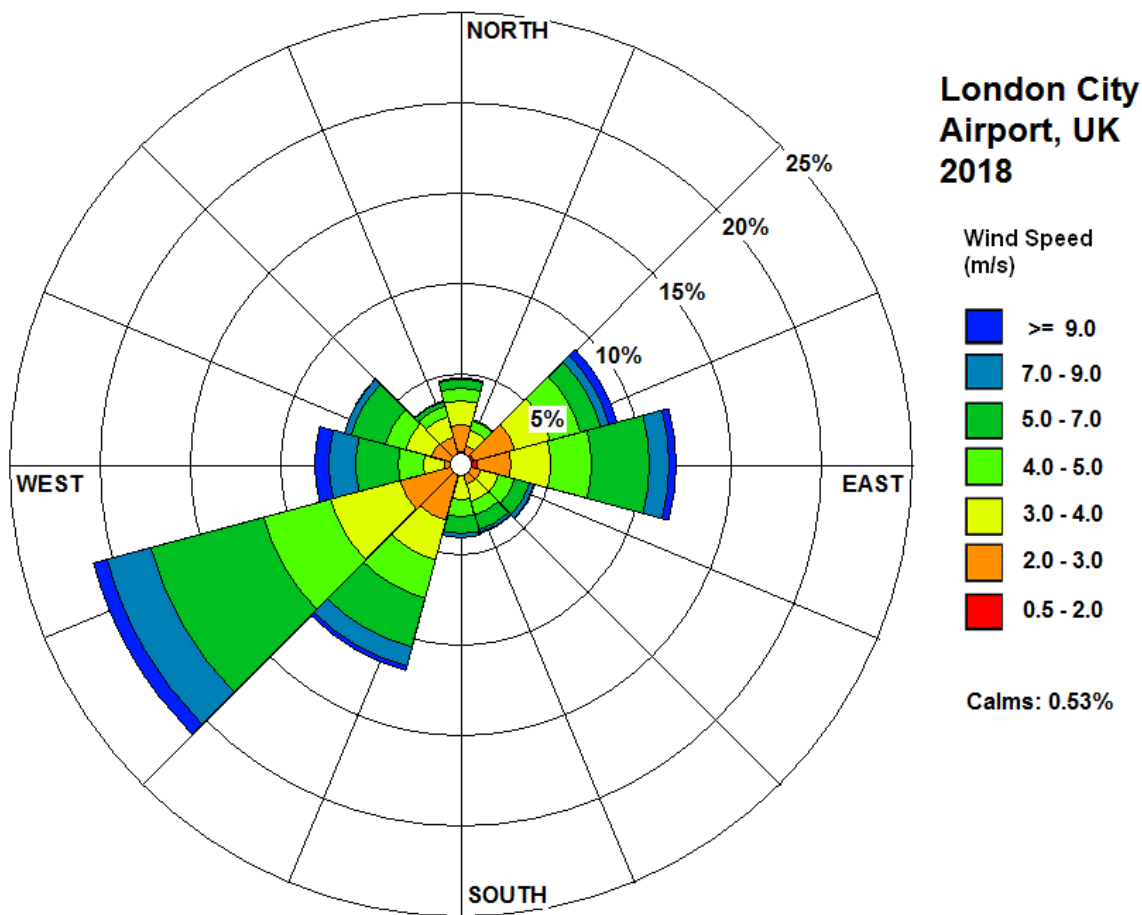


Figure DMP1: London City Airport Windrose 2018

Receptors, with their associated distance and direction, located within 500 m of the Site and are shown in **Table DMP1**. The relative risk of dust impact has been categorised as either Very High, High, Medium, Low or Very Low for each receptor. The relative risk has been determined based on the distance from the Site, and the direction taking into account the prevailing wind direction across the Site.

Table DMP1: Receptors within 500 m of the Site

Receptor	Distance at Closest Point (m)	Direction	Receptor Sensitivity	Relative Risk of Dust Impact
Ukrani Cash & Carry	5	N	Low	Medium
BK Automotives	5	E	Low	Medium
The Deli Café	10	N	Low	Medium
Gima UK Ltd	10	N	Low	Medium
Capital Karts	20	N	Low	Medium
Alba Beds	20	N	Low	Medium
A13 Steel	40	N	Low	Medium
Time Cash & Carry	40	W	Low	Medium
Global Engines & Gearboxes	50	W	Low	Medium
Just Hire Catering Equipment & Furniture	50	W	Low	Medium
Global Reconditioning UK	50	W	Low	Medium
Global Engines & Gearboxes	50	W	Low	Medium
Shearforce Security Services UK Ltd	60	NW	Low	Medium
Uneek Forwarding	70	NW	Low	Medium
RJ Coachworks	90	N	Low	Medium
Buildbase Barking	90	N-NW	Low	Medium
Replacement Engines	100	N	Low	Medium
Amber Bakery	100	N	Medium	Medium
USB International	110	N	Low	Medium
The Ship and Shovel pub	120	NW	Medium	Low
Safestore Self Storage	120	N	Low	Low
Crouch Avenue	130	S-SW	High	Low
Stern Close	130	S	High	Low
QP Online	130	N	Low	Low
Luggage Travel Bags	140	N	Low	Low
SBS Eclipse	149	N	Low	Low
Baboo Wholesale Meats Ltd	140	N	Medium	Low
Al-Badia Halal Meat & Poultry	140	N	Medium	Low

Receptor	Distance at Closest Point (m)	Direction	Receptor Sensitivity	Relative Risk of Dust Impact
Enterprise Rent-a-Car	150	N	Low	Low
G&G Powder Coatings	170	N	Low	Low
SPAR/TEXACO Barking	180	N	Low	Low
Screwfix	180	NE	Low	Medium
F1 Tyres & MOT	245	SW	Low	Low
Wivenhoe Road	250	SW	High	Low
Arriva Bus Garage Barking	280	NW	Low	Low
Krithia Road, Maplestead Road, Reginald Ellingworth Street, Marne Road, Kemmel Road	300	N-NW	High	Low
Goresbrook Road	440	N	High	Low
Monteagle Primary School	420	N	High	Low
Castle Green Childrens Nursery	450	NE	High	Low
Newlands Park	480	SW	Medium	Low
Castle Green Leisure Centre	490	NE	Medium	Low

The closest receptors to the Site are industrial, and therefore a minimal impact is expected. There are residential receptors located further away from the Site, which will have a higher sensitivity, however due to their location the overall impact is less likely.

3.0 DUST CONTROL MEASURES

3.1 General

The nature of the Site and the following proposed mitigation measures detailed in the following sections of this DMP suggest that the magnitude of any deposited dust effects will be negligible:

- Operational Controls;
- Action Plan and Routine Contingency Measures;
- Emergency Conditions; and
- Dust Monitoring Programme and Complaints Response.

3.2 Operational Controls

It is considered unlikely that the operations undertaken at the Site will result in dust beyond the Site boundary; however, Biffa will implement a number of measures to control and monitor dust at the Site as a matter of good practice:

- The whole Site and all vehicle routes within the Site will comprise either concrete or hardstanding;
- Stockpiles of granular waste will only be kept in storage bays to increase shelter from the wind;
- The railway will be developed with an embedded track to assist cleaning;
- A mechanical road sweeper will be used on Site to clean traffic routes, collect materials dropped outside of the storage bays, and collect materials over spilled from loading rail wagons;
- Access will be maintained behind the loading bays to enable the area to be manually swept; and
- A wheel wash will be in place for trucks leaving the Site, and mobile washing equipment will be available if further cleaning is required;

The nature of the Site and the proposed mitigation measures detailed above as operational controls suggest that the magnitude of any deposited dust effects will be negligible.

3.3 Action Plan and Routine Contingency Measures

Biffa will implement the following measures to control and monitor dust at the Site as a matter of good practice:

- Granular wastes will be delivered to the Site in covered trucks to prevent raising of dust during transport;
- Wherever possible, vehicles entering the Site will be fitted with upward pointing exhausts to minimise dust blow-up of stockpiled waste on Site;
- A speed limit of 5 mph will be implemented on Site;
- Transfer of granular wastes to the storage bays will be undertaken under supervision of Biffa to avoid excessive raising of materials;
- If required, concrete and hardstanding will be dampened down with water during periods of dry weather and between use of the mechanical road sweeper to reduce any potential dust emissions;
- The Site will be subject to housekeeping procedures to keep the Site maintained in a condition consistent with minimising the risk of the generation of significant quantities of dust and particulates;
- Daily Site inspections will be undertaken to identify any potential or actual dust emissions, and appropriate actions will be taken if necessary;
- A record of all daily Site inspections will be kept in the Site Diary/Log, including any instances where cleaning or suppression/dampening have been required;

- Any repairs impacting the ability to manage and control dust will be undertaken within five working days, and if this is not possible the Site Manager will suspend operations in the affected area until the repairs are completed;
- In adverse meteorological conditions, the Site will implement water suppression and suspension of handling operations until meteorological conditions are consistent with the effective control of dust and particulates;
- Stockpiled waste will reach no higher than 0.5 m below the top of the bay walls. This height limit will be marked onto the bay walls to ensure compliance;
- Waste will not be stored within 1 m of the edge of any concrete surface, again this will be marked with painted lines to minimise spillage;
- Strict material management controls will be implemented to control the types of waste accepted onto the Site, unauthorised waste will be rejected, or if identified after tipping, it will be quarantined and removed from Site as soon as possible;
- Strict material management controls will be implemented to control the quantities of waste accepted onto Site. The quantity of waste accepted will be restricted to the quantity of waste which can be removed from the Site in that week. This will be monitored using material management spreadsheets covering one week of operation each; and
- No vehicles or plant will be left idling unnecessarily.

The nature of the Site and the proposed mitigation measures detailed above suggest that the magnitude of any deposited dust effects will be negligible.

3.4 Emergency Conditions

There is the potential for emergency conditions to occur which could lead to a dust release. Potential emergency conditions and ways in which they would be mitigated are as follows:

- Extreme adverse weather condition e.g. high winds after a very dry weather period.
Action: The Site Manager will monitor weather forecasts and make adjustments to housekeeping measures to prepare for extreme adverse weather conditions. This might include increasing the frequency of cleaning, or temporarily ceasing to accept susceptible wastes.

The nature of the Site and the proposed mitigation measures detailed above for emergency conditions suggest that the magnitude of any deposited dust effects will be negligible.

3.5 Dust Monitoring Programme and Complaints Response

The Biffa Site Manager is responsible for implementing an appropriate monitoring regime for deposited dust. All Site staff will carry out continual visual monitoring for significant emissions of dust and particulates while on Site and will implement appropriate corrective actions where necessary. All Site staff will be suitably trained to identify significant emissions of dust and particulates 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. The continuous visual monitoring and staff training will ensure that any potential dust emissions relating to the Site are dealt with as quickly as possible.

In the event that a complaint is received in respect of dust then immediate action will be taken to investigate the source of the dust and, if necessary, implement appropriate corrective actions. A record of any complaints received, and the corrective actions taken will be recorded in the Site Diary.

4.0 REPORTING

4.1 Dust Monitoring

Daily dust monitoring records are kept in the Site Diary/Log held by the Site Manager. Records will be made available to the Environment Agency upon request.

4.2 Review of Dust Management Plan

The DMP and the results of qualitative dust monitoring will be reviewed periodically and at least annually to facilitate the review and assessment of operational activities. The review will be carried out in conjunction with a review of meteorological data that are available and the Site operations that took place over the monitoring period, in conjunction with any complaints regarding dust emissions that may have been received. The review will inform changes in the documented procedures where necessary.

A copy of any additional procedures which are prepared further to the review will be appended to the DMP.

4.3 Environment Agency

The Environment Agency will be notified without delay following the detection of:

- Any malfunction, breakdown or failure of equipment or techniques, accident or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- The breach of a specified limit in the EP;
- Any significant adverse environmental effects.

The notification process, which includes controls and emissions relating to dust, will be made by the Biffa Site Manager (or appointed nominee) using the Notification Form expected to be presented in the EP. A record of the events leading to the submission of the notification, the information included in the notification, and the corrective actions taken will be included in the Site Diary.

Signature Page

Golder Associates (UK) Ltd



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Principal



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Date: 20 December 2019

SW/CM/JL/pw

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