Brookhurst Wood - Open Windrow Compost Facility

Environmental Permit Variation EPR/AB3700LS/V006 Duly Making Responses

Biffa Waste Services Ltd

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1. Report Context

1.1 Introduction

AECOM has been commissioned by Biffa Waste Services Limited ("the Operator" or Biffa) to prepare an application to develop a new Open Windrow Composting Facility (OWC) at Brookhurst Wood, Warnham, West Sussex. Given the locality of the new development on site, the new OWC will be added as an additional operation to the environmental permit (EPR/AB3700LS) for the Aggregate Treatment and Recycling Facility.

The new OWC facility is being developed to treat up to 60,000 tonnes per annum of green waste and 30,000 tonnes per annum of wood waste.

1.2 Proposed Facility

There are no changes proposed to the existing Aggregate Treatment and Recycling Facility (ATRF) processes although a new crushing operation will be included, and some additional waste codes will be added to the permitted waste list including mixtures of waste from the mechanical treatment of wastes that contain a high proportion of recoverable aggregate.

The proposed OWC facility will comprise new plant to facilitate the receipt, shredding and subsequent composting of green waste and shredding of wood waste. Waste types accepted at the facility will be defined according to their List of Waste (LoW) Code and will generally consist of:

- wood waste;
- green waste;
- leaves;
- grass clippings; and
- horticulture type waste

The facility will not receive or accept any waste covered by the Animal By-Product (Enforcement) (England) Regulations 2013 (ABPR).

The new plant will be designed to effectively shred the constituent parts of the incoming green waste, which is then transferred to open air windrows for composting and maturation. Green waste will be treated through the composting process while wood waste will only be shredded.

The intention is to produce a PAS 100 compliant compost from the inputs and as such it will be deemed to have reached end of waste criteria and has achieved product status. The product can be utilised for a wide range of beneficial after-uses including; community projects within West Sussex and for agriculture.

1.3 Scope of Response

The application for a permit variation was submitted October 2023 to the Environment Agency.

As a result of the determination process the Environment Agency has issued a request for additional information under the Environmental Permitting Regulations 2016, as amended.

This document addresses Duly Making requests in relation to the application to vary the existing permit to include the proposed OWC facility. It has been set out to address each question/request and signpost to the relevant application documents that have been provided or updated. The updated documents should supersede the previously submitted versions of the documents.

2. Responses to Duly Making Questions

2.1 Question 1 - WAMITAB

The current certificate covers physical waste treatment but is out of date. It also doesn't cover biowaste. Please provide us with evidence your TCM has the correct cover for the composting activity and updated waste treatment qualification. This should be both the original certificate and current continuing competency certificate.

Response

An updated certificate is attached in Appendix A. The CIWM Purpose Statement V3 for Level 4 Medium Risk Operator Competence for Open Windrow Composting (MROC3) https://ciwmquals.co.uk/wp-content/uploads/2023/11/CIWM-Purpose-Statement_V3_MROC3.pdf within the Hierarchy section of the document confirms what current and previous qualifications are applicable to the OWC activity, this includes Level 4 Diploma in Waste Management Operations: Managing Physical and Chemical Treatment, Hazardous Waste (4MPTH). As Lee Coulson already holds 4MPTH then this qualification is applicable to this activity, we have now also provided copy of the latest continuing competence certificate that Lee holds. Please note copies of original certificates and subsequent continuing competency certificates were provided previously when the variation application was submitted in October 2023.

2.2 Question 2 – BAT Assessment

Amend to provide more description to how the site monitors the composting side which meets BAT36. To include monitoring frequencies, trigger points and actions. As per the charging section below, if the waste wood shredding activity is an installation, the BAT assessment must be amended to also include this aspect under the waste treatment BREF. As the shredding is for both the waste wood and composting green wastes, BAT14d must be adhered to regarding enclosure of the shredding activity. Any deviation away must be fully justified and explained how processes on site provide the same protections against dust exiting the site boundary.

Response

Wood waste is not being processed and recovered as a pre-treatment stage to waste incineration or co-incinerations and as such is not an installation activity but will be operated as a separate operational waste activity.

We have added a summary table of parameters, monitoring frequency, trigger values and actions in relation to BAT36. The updated BAT Assessment is attached in Appendix B.

2.3 Question 3 – Fire Prevention Plan

As the waste piles of wood exceed the guidance, the FPP must include additional measures, particular in monitoring, to reduce the risk of self-combustion and heat spots in the piles.

Response

In the event of hot dry weather, when incoming waste wood and treatment outputs may be at a greater risk of combustion, arrangements will be made to extend the temperature monitoring to include these stockpiles. Thermal imaging cameras will be used for this purpose. The wood stockpiles will be checked 4 times per day (start of the working day, midday, mid-afternoon and end of the working day). The cameras will trigger an alarm if the temperature reaches 260°F when monitoring the material. Suppression (bowser and/or mobile water cannons) will be used to reduce the temperature in the stockpile, similar to the management arrangements used when a hotspot is detected. The FPP section 7.4 has been updated.

CCTV will be installed across the site as part of the OWC development – this will be monitored out of hours from the MBT control room which is manned and monitored 24/7.

The updated Fire Prevention Plan is attached in Appendix C, detailing the additional measures to reduce the risk of self-combustion and heat spots in the waste piles of wood.

2.4 Question 4 – 19 12 12

My understanding is that this code will be used in the existing waste treatment activity. The fact that you have to describe this material (aggregate or glass?) as this waste code suggests that this waste will be contaminated because of where it's come from. Please confirm the origins of this waste type and:

a) It would be really helpful to provide a section in the technical plan just concentrating on this waste code. In it, please include the following:

b) Describe tonnages and whether it will be subject to further treatment when it arrives on site. If it is washed, describe what happens with these wash waters, what's added to them, how the washing process works, what wastes are produced during this process and how it's dealt with.

~~c)~~ If the aggregate you produce meets a quality protocol, confirm how adding a 19 12 12 waste will meet those requirements. As said above, the expectation is that this waste type is contaminated and is not a code used in the QP.

d) Show where this waste still be stored in a plan – both pre and post treatment

e) Show where aggregate mixed with this waste type is stored in a plan

f) Describe how surface water will not be contaminated with this waste type – where does the water go?

g) If waters which are discharged either to sewer or surface water comes into contact with 19 12 12 wastes, provide a H1 risk assessment. The water quality section of the new H1 is still unavailable, so please use the existing excel spreadsheet version and make any necessary adjustments if out of date

h) Describe how surface water from areas storing 19 12 12 wastes are prevented from entering the lagoons and any other water used to irrigate the compost. Any water coming into contact with 19 12 12 wastes could potentially but the compost's PAS100 status at risk.

i) Something to consider – if waters which have come into contact with 19 12 12 wastes enters the effluent treatment plant on the other site prior to discharge, then it is likely that the permit for that site will need to be varied accordingly.

Response

a) An updated copy of the Technical Plan is included in Appendix D which has an additional section (5) on 19 12 12 waste and how it will be processed and handled.

b) The 19 12 12 is a glass fines reject stream from Ford MRF which Biffa own and operate. The material has been analysed and confirmed as non-hazardous and is currently sent to landfill. In order to move this waste stream up the hierarchy, Biffa propose to accept the waste stream and process it in batches through the ATRF separately from the road sweepings with the intent to recycle the glass product to receive the Packaging Recovery Notes (PRNs) for this material. The waste will be subject to the normal ATRF wash processes and further detail on this is provided in the updated Technical Plan.

After processing the glass waste in the ATRF, the intention is to crush it and then combine it with the ATRF sand product prior to sale. It is anticipated the annual throughput of this waste stream will be circa 5000 tonnes which will be accepted as part of the current overall permitted ATRF throughput. There will be no change to the how the wash waters from the ATRF process are managed as a result of this new waste stream, they will be treated in the integral water treatment section of the ATRF and recycled for reuse.

c) The material will be batch processed separately to produce an output of 19 12 05 (glass) which will be stored separately. This material will be subject to testing in accordance with the Site's Factory Production Protocol and will be confirmed as meeting the standards to reach an end of waste classification. Only material which has met the relevant quality standards will be blended with sand product.

d) Drawing BA236201 ATRF Layout and Storage Points has been updated and is attached in Appendix E. The site needs to maintain flexibility, therefore when the 19 12 12 material is being delivered, an aggregate/sand bay will be cleared to receive the incoming waste stream and a separate aggregate/sand cleared to receive the treated outputs.

e) An updated layout plan for the ATRF is attached in Appendix E as per the response to (d) above one of the aggregate/sand bays will be cleared so that the mixed sand/glass product can be stored prior to despatch.

f) The Technical Plan is updated to show there has been no change to the ATRF drainage. Process waters and potentially contaminated surface run off, are captured in a separate foul drainage system which flows into underground tanks. These tanks have pumps installed which is pumped back into the ATRF plant via the hydro-grade. Approximately every 6 months the process water in the system is changed and taken off site via tanker.

g) .Clean surface run off is captured in a separate surface water drainage system which passes through an interceptor before discharging to Boldings Brook.

h) There are no new changes to the ATRF drainage system (see response (f) above) and this drainage system is entirely separate from other drainage systems on the site. No new emission points are proposed to sewer at either the OWC or ATRF at this time but may be considered at a future date. The drainage arrangements for the OWC will involve surface run off from the OWC area being collected in its own separate drainage system stored for reuse in the process along with collected roof water from the OWC building. In the event of excess water being captured in the OWC drainage system and lagoons which cannot be reused as process water, the excess will be pumped to the two new storage water tanks and then tankered offsite. Potential future options for excess liquor from the OWC area and/or the ATRF area are to either:

   – Pump them to the adjacent Leachate Treatment Plant (LTP) for treatment. This is already permitted to accept incoming leachate and liquor but would require a further variation to the LTP permit for the compost liquor and ATRF process water.

   – Arrange for the compost liquor to be pumped and discharged to foul sewer without onsite treatment. This would require a variation to the permit and an application to the Sewerage Treatment Undertaker.

   If either option is pursued at a later date then the accompanying applications would be supported by the relevant H1 assessment at that time.

i) The ATRF and OWC have completely separate drainage systems – there is no mechanism for run off from 19 12 12 waste to enter the OWC drainage system.

j) The MBT drainage and water treatment systems are completely separate from the ATRF drainage system – there is no mechanism for run off from 19 12 12 waste to enter the MBT drainage system or the wider site lagoons.

2.5 Question 5 – Site Plan – Mobile Crusher

Make clear on one of the infrastructure drawings the areas where the mobile crusher will be placed. If it is to move to different parts of the site, then this should be shown clearly on a plan.

Response

The mobile crusher will not be moved around and will remain as shown in the current proposed layout plan and ATRF layout plans.

2.6 Question 6 – Site Plan Ref. BA236100

The surface water storage tanks to the north appear to be within the permit boundary of the landfill – please confirm if this is the case and describe how this is managed between the two permits in an amendment to the technical plan.

Response

It is recognised that the revised ATRF/OWC installation boundary overlaps with the landfill installation boundary and the tanks will be located within the overlapping area. The tanks will be situated on an area outside of the engineered landfill cells adjacent to the office/parking area, which is made ground from historic quarry overburden, but does not contain landfilled waste.

In terms of managing the permits, the Operator (Biffa Waste Services Ltd) is the same for both installations and both permits are managed by the same team and division within Biffa. Lee is the Site Manager/CoTC for both the ATRF and Landfill and splits his time between Redhill Landfill and Brookhurst Wood. There is also a Site Supervisor that reports to the Site Manager and is based in the main offices on site. He is responsible for the landfill LTP, landfill aftercare activities and day to day running of the ATRF/OWC. This arrangement is similar to that on other Biffa sites and works well.

2.7 Question 7 – Site Plan – Water

Provide a drawing which clearly shows where all water goes (clean roof water, contaminated yard water and process waters) – whether to lagoons, to surface water or discharged to the MBT. Please include the storage of 19 12 12 wastes so we can clearly see where run off which is in contact with this goes.

Response

The drainage section of the Technical Plan (Appendix D) has been updated to describe where the water goes from each facility. The drainage plan (Appendix E) has been updated and annotated to show the catchment areas for each area – the ATRF, OWC and MBT facilities each have their own separate drainage systems as described in the response to Question 4 above.

Although CCTV for the entire Brookhurst Wood site is monitored from the MBT control room which operates 24/7, it should be noted that the MBT facility is managed and operated by Biffa West Sussex Ltd under the contract with the local Authority and is entirely independent of the ATRF and the proposed OWCF. The MBT has a separate environmental permit with its own management and operational plans.

2.8 Question 8 – Process Flow Chart

Provide a process flow chart showing relationship between this site and the MBT next door (e.g.: in terms of water treatment and whether any wastes go from one to the other).

Response

Section 3.2.2 of the Technical Plan (Appendix D) has been updated to clarify there is no operational relationship between the ATRF/OWC and the adjacent MBT except for the MBT monitoring the CCTV across the site and being the main contact point for complaints as the control is manned and monitored 24/7. There are no waste streams or waste waters transferring between these operations and each have their own separate drainage systems as described in the response to Question 4 above.

2.9 Question 9 – Drainage

In the technical plan, describe why this site cannot treat the waters before they exit the site boundary en route to the MBT next door for further treatment. It looks like there are linked between the two sites so we are wanting to understand them better.

Response

The drainage section (Section 2.4) of the Technical Plan (Appendix D) has been updated to describe where the water goes from each facility with separate sections for the OWC (Section4.1) and the ATRF (Section 4.2). The drainage plan (Appendix E) has been updated and annotated to show the catchment areas for each ATRF/OWC area. The ATRF, OWC and MBT facilities each have their own separate drainage systems as described in the response to Question 4 above – no wastewater is transferred to the MBT for treatment.

2.10 Question 10 – Lagoons and New Water Storage

It looks like these are all new infrastructure proposals. Please confirm in the technical plan the standards used to which they will be constructed, and include details of how they will meet containment requirements under CIRIA.

Response

The Technical Plan Section 2.3.3 has been updated to show the new site infrastructure will be designed and constructed in line with CIRIA C736 standards and Biffa are aware that evidence will need to be provided in accordance with a pre-operational or improvement condition.

2.11 Additional Fees

We also need additional fees in order to duly make this application and the amount will depend on your answers to my email dated 12/09/2024 in relation to the waste wood shredding. The additional fee will include:

- *Waste wood storage and shredding – this will be a new activity, however the purpose behind the shredding will dictate how much is due. The C4 form does say that the site is treating up to 400 tpd waste wood for recovery. If that recovery is pre-treatment for incineration/co-incineration at over 75 tpd, then this will be an installation. So, this activity fee will either be:*
  - *5.4(a)(iii) and b(iii) – non-hazardous pre-treatment for incineration or co-incineration - £13,288 (1.16.2.3 of the charging guide), or*
  - *If the waste wood shredding remains a waste activity, then the fee to cover this is £7,930 under 1.16.12 physical treatment of non-hazardous waste. This is because it is entirely unconnected with existing activities and the proposed new activities so a full assessment of risk is required.*
- *In addition, due to the nature of 19 12 12 code, we will need to look more closely at this so a fee for a normal variation against the physical treatment of non-hazardous waste activity is required as a minimum. This will be £3,965 as per 1.16.12 of the charging guide.*

Details of how to pay are given in Part F of the application form.

Response

We can confirm that wood waste is not being processed and recovered as a pre-treatment stage to waste incineration or co-incineration and as such is not an installation activity but will be operated as a separate operational waste activity.

We will arrange for payment of the additional £7,930 for the wood waste operation and the £3,965 for the 19 12 12 by BACs transfer. The payment was set to be processed on the 06/11/2024 and has a payment reference of **PSCAPPINSTBIFFA049** which should allow tracking in your system.

An updated form F is attached in Appendix F.

Appendix A Certificates

Appendix B Updated BAT Assessment

Appendix C Updated Fire Prevention Plan

Appendix D Updated Technical Plan

Appendix E Updated Drawings and Plans

Appendix F Updated Application Form