

MEMO

Date: 21 April 2023
 To: Pre-Application Service
 From: Jennifer Stringer
 Pages: 2 inc. this page
 Regarding: Riccall Wood Treatment Facility

6-7 Lovers Walk
 Brighton, East Sussex BN1 6AH
 T +44 1273 546 800

Riccall Wood Treatment Facility – Pre-Application Request

The Riccall Wood Treatment Facility is currently operated as an exempt activity (T6 - Treating waste wood and waste plant matter by chipping, shredding, cutting or pulverising) and receives waste wood which is then sorted, and suitable materials shredded for use as animal bedding or supplying heat through burning the chipped material. The operator has a number of poultry sites in the area which have small waste co-incineration plant (SWCP) and therefore the operator is looking to increase the throughput and waste types of the currently exempt facility beyond the quantities covered by the exemption and therefore requires a permit to operate.

All storage and treatment of waste will take place on impermeable surface with sealed drainage. The annual throughput will be no more than 74,999 tonnes.

The main activity undertaken at the site will be the separation, storage and treatment (grinding/shredding) of grade C and D waste wood, although there will also be the option to accept grade A and B waste wood. The proposed wastes to be accepted are set out in the table below.

Table 1: Permitted Waste Types

EWC Code	Description
02 01 03	Plant-tissue waste
02 01 07	Wastes from forestry
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03 01	Waste bark and wood
15 01 03	Wooden packaging
15 02 02*	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances
17 02 01	Wood
17 02 04*	Wood containing or contaminated with hazardous substances
19 02 09*	Solid combustible wastes containing hazardous substances

MEMO

Date: 21 April 2023
Regarding: Riccall Wood Treatment Facility

19 02 10	Combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 05 03	Off-specification compost
19 12 07	Wood other than that mentioned in 19 12 06
20 01 37*	Wood containing hazardous substances
20 01 38	wood other than that mentioned in 20 01 37

Treatment will be undertaken in discreet batches with only one grade of wood being treated at a time. Hazardous and non-hazardous wastes will be stored and treated separately. Treatment consists of 2 stages, shredding and then grinding with each stage reducing the size of the wood.

Untreated wood is loaded into the shredder using the 360° grab. The stockpile of treated wood is then moved onto the grinding process using a bucket loader and finally into the building using the bucket loader

The stage 1 shredder allows processing of up to 60 tonnes/hour of waste wood and up to 25 tonnes/hour of railways sleepers whilst the stage 2 grinder allows processing of up to 60 tonnes/hour of waste wood and up to 25 tonnes/hour of railways sleepers. The grinder and shredder both contain blockage monitoring which automatically stops the machines and alerts the operator should a blockage be detected.

The wood processing area is located in the open air and comprises material stockpiles and mobile plant. The whole external storage and processing area will be laid to concrete to provide an impermeable surface with sealed drainage so as to prevent release of polluting substances into ground. It is proposed that the site drainage system will collect rainwater and runoff from the processing areas on an impermeable concrete surface which drains to a below ground storage tank. In order to accommodate 1 month's rainfall, the storage volume in the tank is calculated as 337m³.

Once processed, wood will be moved into the building where it will be stored on impermeable surface. The building is mainly enclosed with a partial opening at the front to allow access.

Based on the above requirements, the proposed activities are captured under the following activities:

- Section 5.3 Part A (1) (a) (ii) . Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment.
- Section 5.4 Part A (1) (a) (ii) . Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment.
- Section 5.6 Part A (1) (a) (i) - Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in sections 5.1, 5.2, 5.3 and paragraph (b) of this section.

In addition to the main activity, the following directly associated activities (DAAs) are carried out at the site:

- storage and handling of raw materials
- diesel generator for chipper
- diesel generator shredder machines

We do not consider the proposed activities constitute a 5.4 A(1) a) (ii) regarding disposal or recovery of non-hazardous waste by physico-chemical treatment activity. The following guidance on whether a facility falls under this activity is provided in Regulatory Guidance Note 2.

MEMO

Date: 21 April 2023
Regarding: Riccall Wood Treatment Facility

Note 5.4.5: Where a waste treatment directly and intentionally improves the quality of the waste as a fuel by changing the composition of the waste in a way that changes one or more of the following 5 parameters:

- a) Calorific (or heating) value;
- b) Moisture content;
- c) Ash content;
- d) Chemical composition;
- e) Heavy metal content

Including for example, to fulfil contractual requirements or product standard requirements, then that process is pre-treatment for incineration or co-incineration. Where a waste treatment is carried out for some other purpose and only incidentally improves the quality of the waste as a fuel, then it is not a 5.4 A(1)(b)(ii) activity.

Note 5.4.6: Examples of waste activities which would be considered as pre-treatment for incineration or co-incineration include:

- Drying of waste wood, the residual waste from a materials recycling facility or the sludge from an effluent treatment plant explicitly in order to reduce its moisture content so as to facilitate combustion
- Separation processes to reduce the heavy metals or ash content of waste prior to combustion where that is done in order to improve the fuel quality
- Production of refuse derived fuels and other waste-derived fuels which are not captured by other Schedule 1 activities, where production beneficially changes one or more of the 5 parameters in above
- Treatment of the residual waste from a materials recycling facility to meet a contractual standard for the fuel where treatment beneficially changes one or more of the 5 parameters.

Note 5.4.7: Examples of waste activities which would not be considered to be pre-treatment for incineration or co-incineration even though they generate an output which goes for combustion, include:

- Mechanical biological treatment. This involves biological treatment and is described elsewhere as an installation activity
- Mechanical separation of waste in order to recover the recyclables
- Use of tallow as a fuel from the rendering of animal by-products. However if the tallow requires a further treatment step in order to make the tallow suitable for burning as fuel, then that step would be considered as pre-treatment for incineration or co-incineration
- Size reduction which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
- Baling which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
- Shredding or chipping which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
- Mixing and blending of hazardous waste which is covered as a section 5.3 activity (e.g. preparation of secondary liquid fuels for use in cement kilns)
- Preparation of material at the same location as the combustion process, (particularly where Chapter IV or IED (ex WID) applies), because this is considered part of the incineration process at those sites.

The treatment process simply modifies the size of the incoming waste wood for the purpose of ease of handling and feed into an offsite incineration or co-incineration plant. The size reduction does not alter the chemical properties or composition of the waste wood including its calorific value. The calorific value of a material is dependent on the carbon and hydrogen content and this will not be affected by the particle size of the waste wood.

The treatment process does not produce wood chip to an agreed specification and there are no contracts specifications in place as the chipped waste wood produced by the facility.

Further, RGN 2 specifically states that size reduction which may assist in the handling of the waste but it not primarily for the purpose of improving its combustion characteristics is not considered to be pre-treatment for incineration or co-incineration.

MEMO

Date: 21 April 2023
Regarding: Riccall Wood Treatment Facility

The treatment process can either be a disposal or recovery activity. As the shredded waste is sent for energy recovery (co-incineration) we are of a view that the facility should be a recovery operation. The SWIPs which will co-incinerate the waste will not qualify for R1 status in accordance with the EA R1 Scheme for two reasons:

1. The R1 scheme only applied to MSW incineration and doesn't extend to other wastes such as waste wood;
2. It does not apply to co-incineration plant.

However, the purpose of the R1 scheme is to allow those waste incineration plant that achieve a high energy recovery performance to be classified as recovery rather than disposal. The proposed SWIPs which will accept the waste wood are high efficiency plant. Energy produced at the SWIPs is supplied as heat to the adjacent intensive farming operations. The supply of heat means the SWIPs are not subject to the efficiency losses associated with electricity generation meaning high thermal efficiencies of circa 88% can be achieved.

On this basis we consider the primary purpose of the end uses are the recovery of energy and consequently the wood treatment facility activities should be considered recovery operations.

Jennifer Stringer
Technical Director
stringerj@rpsgroup.com
01273546829