

**James Neave**  
Principal Planner

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Camilla Fisher  
RPS Group Plc.

17 November 2022

*By email only*

Dear Ms. Fisher,

**Application Ref:** WSCC/015/18/NH (APP/P3800/W/18/3218965)

**Proposal:** Recycling, Recovery and Renewable Energy Facility and Ancillary Infrastructure

**Address:** Former Wealden Brickworks (Site HB), Langhurstwood Road, Horsham, West Sussex, RH12 4QD

**Condition(s):**

Thank you for your recent submission regarding the above. The Council has considered the information and I am now able to inform you that:

**Condition 24 – R1 Status (Stage 1)**

The submitted details for condition 24 (ref: Environment Agency Letter dated 16<sup>th</sup> November 2022 – EA/EPR/CB3308TD/V002, Environment Agency Assessment Spreadsheet – Doc No 438\_13 Version 1 - 16/11/22, Proforma for Determining Energy Efficiency Using R1 – EPR Permit Ref EPR/CB33008TD, Sankey Diagram for Wealden Works 3Rs Facility) are acceptable, and the pre-commencement element of condition 24 is now **discharged**.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J. Neave'.

James Neave

Britaniacrest Recycling Limited  
26 Reigate Road  
Hookwood  
Horley  
Surrey  
RH6 0HJ

**Our ref:** EA/EPR/CB3308TD/V002

**Date:** 16<sup>th</sup> November 2022

Dear Sir or Madam

**Classification as a recovery operation using the R1 Energy Efficiency Formula**

**Application reference:** EPR/CB3308TD/V002

**Operator:** Britaniacrest Recycling Limited

**Facility:** Wealden Works 3Rs Facility, Former Wealden Brickworks, Langhurstwood Road, Horsham, West Sussex, RH12 4QD

Thank you for your R1 application concerning the Britaniacrest Recycling Limited incinerator at Wealdon Works 3Rs Facility. Based on the information that you provided and presented in the attached spreadsheet, we have concluded it is capable of having an R1 energy efficiency factor equal to or above 0.65. This letter therefore preliminarily certifies that it is an R1 recovery operation under Annex II of Directive 2008/98/EC on Waste based on design data. We will indicate this status on our website. It will need to be validated when plant acceptance data is available.

We remind you:

- to contact us if the data used in the assessment changes which may reduce it below 0.65, eg as a result of plant modifications or arrangements to take the energy.
- to confirm the design data when plant acceptance data is available

If you have any questions please contact us at [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
Yours sincerely

**Principal Permitting Officer  
National Permitting Centre  
Environment Agency**

Encl: Final version of the spreadsheet

|                        |                                 |
|------------------------|---------------------------------|
| Name of Applicant:     | Britaniacrest Recycling Limited |
| Name of Installation:  | Wealdon Works 3Rs               |
| Application Ref No.:   | EA/EPR/CB3308TD/V002            |
| Applicant's R1 Factor: | 0.88                            |


|  |                              |
|--|------------------------------|
| <b>Date of Environment Agency Decision: 16/11/2022</b> |                              |
| In Scope   | Yes                          |
| R1 factor:   | 0.88                         |
| Name of officer  | Principal Permitting Officer |

### Environment Agency Assessment

| Ref: | Criteria                        | Guidance   | Comments                   | Decision       |
|------|---------------------------------|--|----------------------------|----------------|
| 1    | Is the proposed plant in scope? | <p>The following should be considered under this item:</p> <ul style="list-style-type: none"> <li>▪ The plant must be an incineration plant not a co-incineration plant (see guidance on web page for incineration applicants)</li> <li>▪ The R1 formula applies to those plants dedicated to the incineration of MSW, i.e. waste from households, as well as other waste which, because of its nature or composition, is similar to waste from households</li> <li>▪ Plants processing a mixture of MSW and other wastes are within the scope of the formula provided that the plant is principally designed to process MSW.</li> <li>▪ Where the proportion of other wastes is significant the applicant will need to demonstrate that the plant is not dedicated to incinerating non-MSW and is technically capable of incinerating MSW.</li> <li>▪ Plants processing only Solid Recovered Fuel (SRF), Refuse Derived Fuel (RDF) or similar pre-processed wastes will be considered within the scope of the formula when at least 50% of the waste being processed in the incineration plant is derived from MSW and the incineration plant is technically capable of incinerating mixed MSW.</li> <li>▪ The formula is only valid for plants using the steam or Rankin cycle. Advice should be taken from the OTS</li> </ul> | In scope – MSW incinerator | Meets criteria |

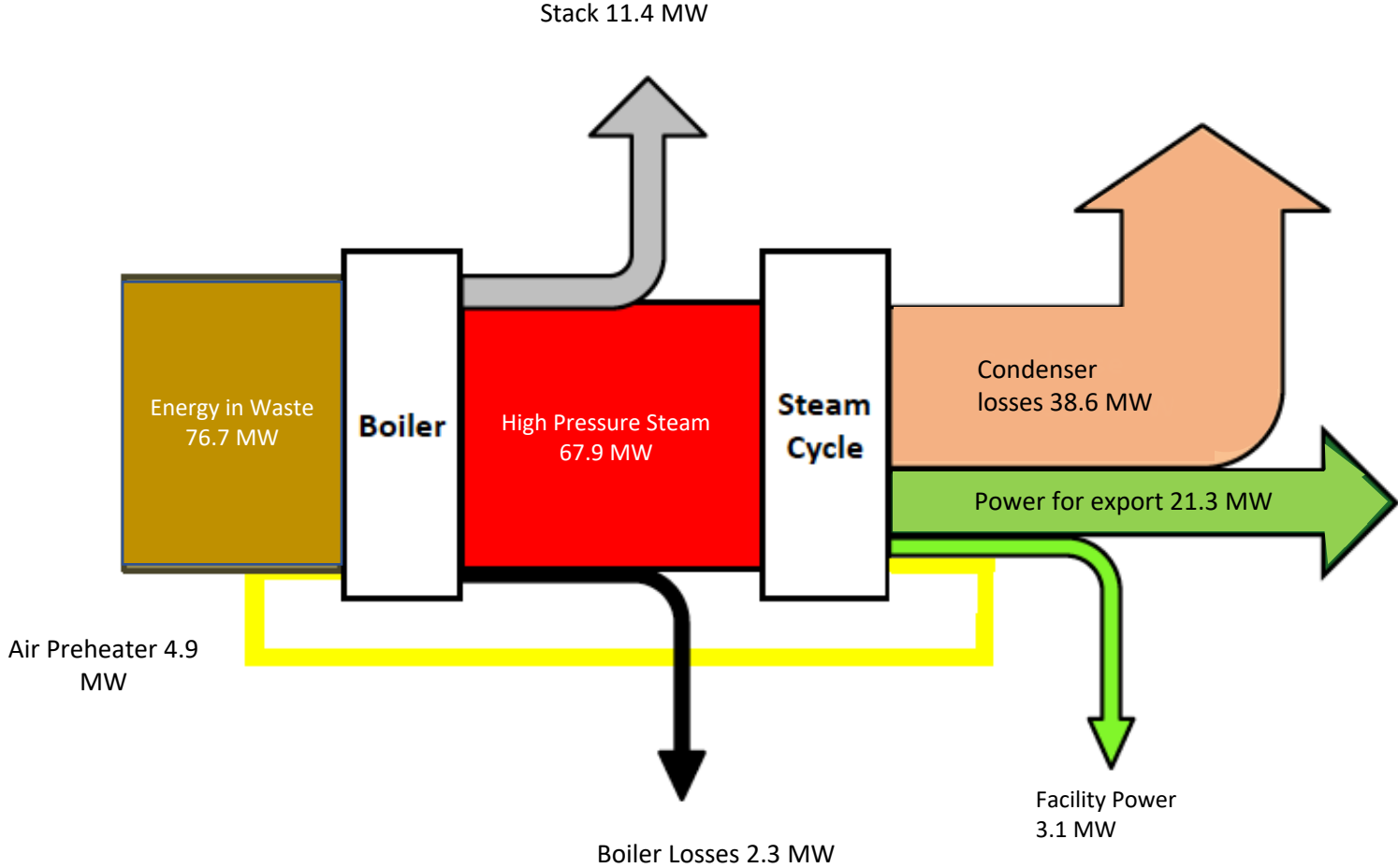
|   |   |   |               |                |
|---|---|---|---------------|----------------|
|   |   | lead for incineration for plants operating with gas engines or gas turbines.  |               |                |
| 2 | Have all the appropriate sections of the application spreadsheet been completed and is there sufficient supporting information provided with the application?                                     | As a minimum <ul style="list-style-type: none"> <li>• a Sankey diagram, heat and mass balance or equivalent that identifies the boundary of the installation used for R1 determination on which the data provided on the application form can be identified.</li> <li>• References for the physical properties presented on the application form</li> </ul> | Yes           | Meets criteria |
| 3 | Is the boundary of the installation proposed for the calculation consistent with the European Guidance and is it clear whether the application is for an individual line or the plant as a whole? | See section 2.3 of the commission guidance document <a href="http://ec.europa.eu/environment/waste/framework/pdf/guidance.pdf">http://ec.europa.eu/environment/waste/framework/pdf/guidance.pdf</a>   | Yes           | Meets criteria |
| 4 | Is the data provided within the R1 application consistent with the information on energy use provided within a permit application, IF there is one?   | It will be necessary to go back to the operator for clarification regarding inconsistencies, particularly if they will make a material difference to the R1 factor i.e. reduce the R1 factor to 0.65 or below   | Yes           | Meets criteria |
| 5 | Are all the proposed internal steam usages acceptable in terms of Annex 3a of the commission guidance?  | If any new steam uses are included in the yellow boxes on the template then please discuss their suitability with the operational technical advisor.<br>For example, claims can be made for boiler water de-aeration, steam soot blowing and steam atomisation for SNCR. But not for boiler blowdown.   | None proposed |                |

|   |   |   |                             |                       |
|---|---|---|-----------------------------|-----------------------|
| 6 | Are the properties used for the various inputs appropriate?   | <p>A number of default parameters have been entered into the spreadsheet, if the operator changes these outside of a known range the value will turn red, in this case the proposed values need to be justified by the applicant and checked with the Technical Advisor.</p> <p>Check the physical properties from each of the following (for advice on appropriate references please consult your technical advisor)</p> <ul style="list-style-type: none"> <li>• Primary and Secondary Combustion Air</li> <li>• Fuel inputs</li> <li>• One of the heat exports</li> <li>• Steam used for soot blowing and deaeration</li> <li>• Steam loss through venting (xx tonnes/tonne of makeup water) - check with the technical advisor if you have concerns regarding the amount proposed).</li> <li>• Superheated steam at boiler outlet</li> <li>• Boiler feed water</li> </ul> | Yes similar to other plants | Meets design criteria |
| 7 | Where heat exports are being used in the calculation, has the applicant provided appropriate supporting evidence? | <ul style="list-style-type: none"> <li>• See section 3.2.1 of the European Guidance, exported use can only be counted when accompanied by proof of commercial use in the form of valid agreements or contracts</li> </ul>   | No heat export proposed     | Not applicable        |

|    | A   | B   | C                                      | D                          | E              | F   | G                  | H  | I                                   |
|----|---|---|--|----------------------------|----------------|---|--------------------|--|-------------------------------------|
| 1  | <b>PROFORMA FOR DETERMINING ENERGY EFFICIENCY USING R1</b>                  |   |  |                            |                |   |                    |  |                                     |
| 2  | <b>Site name, address and grid reference</b>                                | Wealden Works JRS Facility, former Wealden Brickworks, Langhurstwood Road, Horsham, West Sussex RH12 4OD Grid | <b>EPR Permit reference (if known)</b> | EPR/CB3308TD               |                |  <b>Environment Agency</b> |                    |  |                                     |
| 3  | <b>Operator name</b>  | Britaniacrest Recycling Ltd   | <b>Application fee (£)</b>             | 0 - included in permit fee |                |   |                    |  |                                     |
| 4  | <b>Details of who to contact if we have any queries regarding this form</b> | Jennifer Stringer<br>stringerj@rpsgroup.com   |  |                            |                |   |                    |  |                                     |
| 5  | <b>What data has been used in the application?</b> →                        |   | Design data                            |                            |                |   |                    |  |                                     |
| 6  | Indicative R1 factor (subject to confirmation)                              | 0.88  | Quantity in reporting year             | Units                      | U <sub>c</sub> | Properties (Average over reporting year)  | Units              | Note which parameters that have been estimated | Reference to Supporting information |
| 7  | Climate change correction factor (optional)                                 | 1   |  |                            |                |   |                    |  |                                     |
| 8  | R1 after CCF adjustment   | 0.88  |  |                            |                |   |                    |  |                                     |
| 9  | 1. Gross electricity meter (Electricity produced at turbine)                |   | 195200                                 | MWh                        |                |   |                    | Estimated from design                          | Drawing 6 Sankey Diag               |
| 10 | 2. Electricity exported - Net input/output meter                            |   | 170400                                 | MWh                        |                |   |                    | Estimated from design                          | Drawing 6 Sankey Diag               |
| 11 | 3. Electricity imported - Net input/output meter                            |   | 130                                    | MWh                        |                |   |                    | Estimated import                               |                                     |
| 12 | 4. Other fuel inputs  |   |  |                            |                |   |                    |  |                                     |
| 13 |   | 4.1 Light fuel oil  |  | litres                     |                | 0.93  | kg/l               |  |                                     |
| 14 |   |   |  |                            |                | 42800   | kJ/kg              |  |                                     |
| 15 |   | 4.2 Natural gas   |  | Nm <sup>3</sup>            |                | 34200   | kJ/Nm <sup>3</sup> |  |                                     |
| 16 |   |   |  |                            |                |   |                    |  |                                     |
| 17 |   | 4.3 LPG   |  | Nm <sup>3</sup>            |                |   | kg/Nm <sup>3</sup> |  |                                     |
| 18 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 19 |   | 4.4 Other fuels similar to light fuel oil   | 234200                                 | litres                     |                | 0.853970965   | kg/l               |  |                                     |
| 20 |   |   |  |                            |                | 42570   | kJ/kg              | Estimated fuel consumption                     | Table 2-3 Supporting In             |
| 21 | 5. Primary combustion air (as supplied to furnace)                          |   | 599980408                              | m <sup>3</sup>             |                | 1.225   | kg/Nm <sup>3</sup> |  |                                     |
| 22 |   |   |  |                            |                | 145   | °C                 |  |                                     |
| 23 |   |   |  |                            |                | 121.2   | kJ/kg              | Based on typical design                        |                                     |
| 24 | 6. Secondary combustion air (as supplied to furnace)                        |   | 340386868                              | m <sup>3</sup>             |                | 0.834   | kg/Nm <sup>3</sup> |  |                                     |
| 25 |   |   |  |                            |                | 150   | °C                 |  |                                     |
| 26 |   |   |  |                            |                | 126.25  | kJ/kg              | Based on typical design                        |                                     |
| 27 | 7. Recycled flue gas (as supplied to furnace)                               |   |  | m <sup>3</sup>             |                |   | kg/Nm <sup>3</sup> |  |                                     |
| 28 |   |   |  |                            |                |   | °C                 |  |                                     |
| 29 |   |   |  |                            |                |   | 0                  | kJ/kg  |                                     |
| 30 | 8. Heat exported outside R1 boundary  |   |  |                            |                |   |                    |  |                                     |
| 31 |   | 8.1 steam exported  |  | tonnes                     |                |   | °C                 |  |                                     |
| 32 |   |   |  |                            |                |   | kPa                |  |                                     |
| 33 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 34 |   | condensate returned   |  | tonnes                     |                |   | °C                 |  |                                     |
| 35 |   |   |  |                            |                |   | kPa                |  |                                     |
| 36 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 37 |   | 8.2 hot water exported  |  | tonnes                     |                |   | °C                 |  |                                     |
| 38 |   |   |  |                            |                |   | kPa                |  |                                     |
| 39 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 40 |   | hot water returned  |  | tonnes                     |                |   | °C                 |  |                                     |
| 41 |   |   |  |                            |                |   | kPa                |  |                                     |
| 42 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 43 |   |   |  |                            |                |   |                    |  |                                     |
| 44 | 9. Internal steam use   |   |  |                            |                |   |                    |  |                                     |
| 45 |   | 9.1 for soot blowing (no backflow)  |  | tonnes                     |                |   | °C                 |  |                                     |
| 46 |   |   |  |                            |                |   | kPa                |  |                                     |
| 47 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 48 |   | 9.2 for steam driven devices  |  | tonnes                     |                |   | °C                 |  |                                     |
| 49 |   |   |  |                            |                |   | kPa                |  |                                     |
| 50 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 51 |   | backflow as steam   |  | tonnes                     |                |   | °C                 |  |                                     |
| 52 |   |   |  |                            |                |   | kPa                |  |                                     |
| 53 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 54 |   | 9.3 for trace heating   |  | tonnes                     |                |   | °C                 |  |                                     |
| 55 |   |   |  |                            |                |   | kPa                |  |                                     |
| 56 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 57 |   | backflow as condensate  |  | tonnes                     |                |   | °C                 |  |                                     |
| 58 |   |   |  |                            |                |   | kPa                |  |                                     |
| 59 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 60 |   | 9.4 for re-heating flue gas   |  | tonnes                     |                |   | °C                 |  |                                     |
| 61 |   |   |  |                            |                |   | kPa                |  |                                     |
| 62 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 63 |   | backflow as condensate  |  | tonnes                     |                |   | °C                 |  |                                     |
| 64 |   |   |  |                            |                |   | kPa                |  |                                     |
| 65 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 66 |   | 9.5 for concentration processes   |  | tonnes                     |                |   | °C                 |  |                                     |
| 67 |   |   |  |                            |                |   | kPa                |  |                                     |
| 68 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 69 |   | backflow as condensate  |  | tonnes                     |                |   | °C                 |  |                                     |
| 70 |   |   |  |                            |                |   | kPa                |  |                                     |
| 71 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 72 |   | 9.6 for building, equipment, tank heating   |  | tonnes                     |                |   | °C                 |  |                                     |
| 73 |   |   |  |                            |                |   | kPa                |  |                                     |
| 74 |   |   |  |                            |                |   | kJ/kg              |  |                                     |
| 75 |   | backflow as condensate  |  | tonnes                     |                |   | °C                 |  |                                     |
| 76 |   |   |  |                            |                |   | kPa                |  |                                     |
| 77 |   |   |  |                            |                |   | kJ/kg              |  |                                     |



# Sankey Diagram for Wealden Works 3Rs Facility



All figures for 100% MCR in power generating mode