APPLICATION FOR AN ENVIRONMENTAL PERMIT UNDER THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2016 (AS AMENDED)

NON-TECHNICAL SUMMARY

ECO-POWER ENVIRONMENTAL (HULL) LIMITED,
GIBSON LANE, MELTON, HULL, HU14 3HH

Ref: Eco 09.03.2020/EPTR
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ACRONYMS / TERMS USED IN THIS REPORT

AMP	**Accident Management Plan**
AQA	**Air Quality Assessment**
ASCR	**Application Site Condition Report**
BAT	**Best Available Techniques**
BREF	**BAT Reference Document**
CCA	**Climate Change Agreement**
CCTV	**Closed Circuit Television**
EA	**Environment Agency**
Eco-Power	**Eco-Power Environmental (Hull) Limited**
EMP	**Emissions Management Plan**
EMS	**Environmental Management System**
EP	**Environmental Permit**
ERA	**Environmental Risk Assessment**
FPP	**Fire Prevention Plan**
IED	**Industrial Emissions Directive**
NGR	**National Grid Reference**
NMP	**Noise Management Plan**
NTS	**Non-Technical Summary**
OMP	**Odour Management Plan**
OS	**Ordnance Survey**
RDF	**Refuse Derived Fuel**
SRF	**Solid Recovered Fuel**
The Installation	**Eco-Power Bespoke Waste Treatment Installation**
Transwaste	**Transwaste Recycling and Aggregates Limited**
WAMITAB	**Waste Management Industry Training and Advisory Board**
WYG	**White Young Green**

1. INTRODUCTION

1.1. Eco-Power Environmental (Hull) Limited ("Eco-Power") has prepared an Environmental Permit application for a bespoke waste treatment Installation, hereafter referred to as "the Installation" located within Melton Waste Park which is operated by Transwaste Recycling and Aggregates Limited ("Transwaste") located on Gibson Lane, Melton, Hull, HU14 3HH.

1.2. Eco-Power wish to accept and process 250,000 tonnes of wastes from waste management facilities per annum to produce Solid Recovered Fuel ("SRF") and Refuse Derived Fuel ("RDF") to be sent off site for use as a fuel at an appropriately licenced Energy from Waste site, therefore, diverting a signification amount of waste from landfill.

1.3. The Installation is located in Gibson Lane, Melton, Hull, East Yorkshire, HU14 3HH and is centred on Ordinance Survey ("OS") National Grid Reference ("NGR") 496792 425410. The Installation will occupy an area of approximately 0.94Ha.

1.4. The indicative site location including the proposed Environmental Permit boundary (green outline) in the context of the Melton Waste Park (red outline) is provided in Figure 1.

Figure 1: Indicative Site Location

1.5. In addition to this Non-Technical Summary ("NTS"), the following documents have been produced to support this Environmental Permit application:

- the relevant Application Forms and supporting appendices;
- supporting drawings;
- Application Site Condition Report – Eco 09.03.2020/ASCR;
- Environmental Risk Assessment – Eco 09.03.2020/ERA;
- Environmental Permitting Technical Requirements Report - Eco 09.03.2020/EPTR – the technical information required for the Environmental Permit application;
- Planned Preventative Maintenance Regime – Eco 09.03.2020/PPMR
- Environmental Management System Forms and Checklists;
- Fire Prevention Plan – Eco 09.03.2020/FPP;
- Air Quality Assessment and Odour Assessment –A115848;
- Emissions Management Plan – Eco 09.03.2020/EMP;
- Odour Management Plan – Eco 09.03.2020/OMP;
- Noise Management Plan – Eco 09.03.2020/NMP;
- Pest Management Plan – Eco 09.03.2020/PMP;
- Flood Management Plan – Eco 09.03.2020/FMP; and
- Accident Management Plan – Eco 09.03.2020/AMP.

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2. LISTED ACTIVITIES

2.1. The proposed Schedule 1 Activity under the Environmental Permitting (England and Wales) Regulations 2016 as amended ("EP Regulations") is detailed in Table 1.

Table 1: Proposed Schedule 1 Activities

Activity Reference	Activity listed in Schedule 1 of the EP Regulations	Description of Specified Activity	Limits of Specified Activity
A1	Section 5.4 A(1)(b)(ii)	Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving one or more of the following activities, and excluding activities covered by Council Directive 91/271/EEC – (ii)pre-treatment of waste for incineration or co-incineration.	From material entering site to final dispatch offsite.

2.2. There are no proposed listed Directly Associated Activities at the Installation. However, there are four proposed non-listed as detailed in Table 2.

Table 2: Non-Listed Directly Associated Activities

Activity Reference	Description of Specified Activity	Limits of Specified Activity
D1	Air drying of SRF	Air drying via 41 no. biomass boilers
D2	Storage of SRF/RDF prior to dispatch R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).	Point of production to transfer off site
D3	Bulking of recyclable wastes: R4: Recycling/reclamation of metals and metal compounds. R5: Recycling/reclamation of other inorganic substances. R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).	Incidental part of the production of SRF and RDF.
D4	Raw Material Storage	Storage of raw materials, including lubrication oils and diesel. From the receipt of raw materials to dispatch for use within the Installation.

2.3. In order to reduce the moisture content of waste outputs, Eco-Power are proposing to carry out drying operations by passing warm air through the waste materials to produce higher quality SRF.

2.4. This will be achieved through the operation of 41 Angus Orland Super 130kW biomass boilers inside Boiler House 1. The boilers will consume a maximum of 7,000 tonnes of virgin wood material per annum. Each boiler has a thermal input of 0.91MW and although the boilers are linked, it is anticipated that all 41 boilers will not run at one time.

3. MANAGEMENT TECHNIQUES

3.1.1. Under the EP Regulations, the activities at the Installation are classified as specified waste management activities, and, accordingly, a Technically Competent Manager will be required. Ben Wise will fulfil this role; and a copy of his Waste Management Industry Training and Advisory Board ("WAMITAB") Letter of Registration has been submitted as part of the application.

3.1.2. Eco-Power will operate an Environmental Management System ("EMS") which addresses environmental aspects of the activities at the Installation. The EMS will be based on the requirements of the international EMS standard BS EN ISO 14001 adopting the Standard's Plan, Do, Check, Act approach.

3.1.3. Eco-Power's Directors have overall responsibility for the site. Responsibility for environmental matters at the Installation rests with the Compliance Director.

3.1.4. Eco-Power will establish a documented EMS which:

- ensures compliance with all relevant legislation;
- ensures compliance with the conditions of the Installation's Environmental Permit;
- identifies, assesses and minimises the risks of pollution arising from the Installation's activities;
- comprises a range of written procedures that cover all aspects of the Installation's activities;
- identifies, sets, monitors and reviews environmental objectives and key performance indicators; and
- includes a requirement to report annually on environmental performance, objectives, targets and future planned improvements.

4. OPERATING TECHNIQUES

4.1. Technical Standards

4.1.1. **European Legislation -** The following European Legislation will be used to inform the application:

- the Industrial Emissions Directive ("IED") is intended to be a single legislative instrument for permitting, compliance and enforcement of environmental legislation across all member states. The requirement of the IED will therefore be considered relevant at this time; and
- the Waste Treatment Industries Best Available Techniques Reference Document ("BREF") (October 2018) will be considered as it covers installations associated with a number of waste treatments, including recovery and disposal of waste.

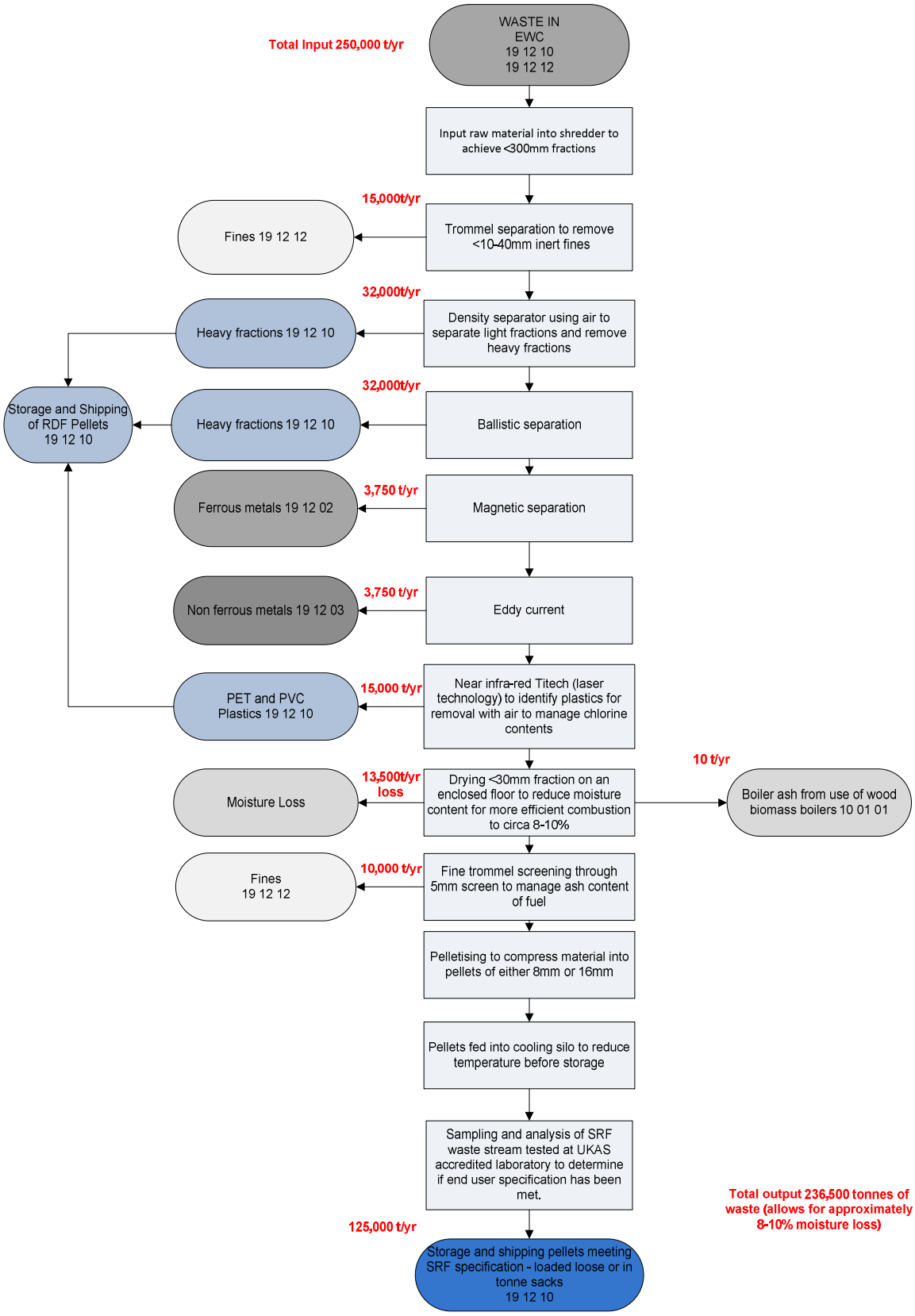
4.1.2. **National Legislation –** EA implement the requirements of the IED via the EP Regulations and have provided a number of guidance documents to assist in the preparation of permit applications and the ongoing management of permitted Installations. The EA guidance documents that will be used in the preparation of this variation application will be:

- All relevant EA online webpage guidance, such as '*Develop a management system: environmental permits*' (December 2019) and '*Control and monitor emissions for your environmental permit'* (February 2020); and
- EA Sector Guidance Note IPPC S5.06 '*Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste'* (Issue 5, Date 2013).

4.2. Proposed Activities

4.2.1. An overview of the activities is provided in Figure 1.

Figure 1: Process Flow Diagram



4.2.2. Waste treatment at the Installation will consists of:

- sorting and separating waste types mechanically;
- recycling 2no. waste types
- blending waste materials to produce useable products (e.g. fuels);
- drying waste to improve fuel quality reduce the moisture content of waste outputs. This will be carried out by passing warm air through/over waste materials; and
- pelletising of waste materials for export as fuels.

4.2.3. Waste processing equipment will comprise of the following items of plant; all shredders and trommels will be fitted with dust suppression systems:

- 1 x shredder;
- 2 x trommels;
- 1 x density separator;
- 1 x ballistic separator;
- 1 x magnetic separator;
- 1 x eddy current separator;
- 1 x near infra red titech laser
- 1 x Perry Belt Drier (drying floor); and
- 1 x pelletising machine.

4.2.4. As Eco-Power wish to focus on primarily producing RDF and SRF at the Installation, only 2 no. waste codes are proposed as part of this permit application. These are provided in Table 4.

Table 3: Proposed Wastes to be Accepted at the Installation

Waste Code	Description
19	**WASTES FROM WASTE MANAGEMENT FACILITIES, OFF SITE WASTE TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE**
19 12	**Waste from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11

4.2.5. Eco-Power will put in place a fully documented waste pre-acceptance procedure, the purpose of which will be to ensure that wastes are subject to appropriate technical appraisal prior to acceptance at the site. In turn, this will ensure that unsuitable wastes are not accepted. These checks will be carried out before any decision is made to accept a waste.

4.2.6. Eco-Power will also put in place a fully documented incoming waste acceptance procedure at the Installation, the primary purpose of which is confirm that the characteristics of the incoming waste matches the information provided at the pre-acceptance stage.

4.2.7. Any non-conforming waste observed will be removed off site and sent back to the supplier as soon as practically possible. Such waste will only be stored in the designated quarantine area on site for a maximum of 5 working days.

4.2.8. Waste delivered to the Installation must be accompanied by a written description of the waste describing its composition and information specifying the original waste producer and process where required.

4.2.9. Eco-Power will develop a procedure containing clear and unambiguous criteria for the rejection of wastes, together with a written procedure for tracking and reporting such non-conformance.

4.2.10. Waste storage arrangements are described within the Installation's Fire Prevention Plan (Document Reference Eco 09.03.2020/FPP Issue 1) and illustrated on the Fire Prevention and Mitigation Plan (Drawing 04) contained in the FPP. Both documents are provided as part of this application submission.

4.2.11. The storage areas chosen are located away from sensitive receptors where possible and all storage areas are within the secured perimeter covered by Closed Circuit Television ("CCTV").

4.2.12. All waste received at the Installation will be treated within 3 months of receipt excluding specific requirements outlined in the EMS, such as constraints required for odour and pest management.

4.2.13. Waste processing and treatment at the Installation consists of mechanical means, incorporating the use of trommel/screening units, density, ballistic and magnetic separators, eddy current and near infra- red titech laser.

4.2.14. The processing will enable the light fractions to be sent for drying (subject to quality). The waste can be dried, blended and pelletised to produce SRF bales. If the quality protocol cannot be met, the waste will be sent offsite as RDF.

4.2.15. Eco-Power will set up and implement an output quality management system to ensure that the output of the waste treatment is in line with the expectations the SRF will be produced to British Standard BS EN 15359:2011. This management system will allow the performance of the waste treatment to be monitored and optimised.

4.2.16. Drying operations will be achieved via Boiler House 1 which contains a series of log fired boilers. These produce hot water, which is then circulated through pipework to heat exchangers. The heat exchangers blow air through the heat exchange pipework (transferring heat from water to air). The heated air travels through steel ducting to the drying floor. The passage of the heated air through the drying floor dries the waste which passes through. The heated air is discharged into the open air.

4.2.17. Following drying, SRF will be pelletised and stored in the internal dedicated bays as shown on the Site Layout Plan (Drawing 02).

4.2.18. Collection vehicles used to remove waste materials from the site will consist of HGVs and will be loaded using either loading shovels or a 360 grab handler.

4.2.19. Removal of waste materials from the site will be documented in accordance with Duty of Care requirements. All waste materials will be weighed prior to these being removed from the site. This will be carried out by the passage of vehicles carrying such waste over the weighbridge prior to departure.

4.2.20. A drop system will be implemented which will hold all the information generated during the pre-acceptance, acceptance, storage, treatment and removal off site.

4.3. Proposed Infrastructure and Drainage Arrangements

4.3.1. The Installation building is surrounded by concrete hardstanding and is located within the Transwaste Melton Park Waste Processing Facility (Permit Reference EPR/BP3792LD) which is located within a secure compound, completely enclosed by metal palisade fencing, brick walls and litter net fencing. Access to the Installation is via a security gate, which is served by the manned weighbridge. The entire site benefits from CCTV and the site is manned 24/7 365 days a year enabling constant surveillance.

4.3.2. All waste storage and processing will be undertaken within the site buildings which are isolated from the site drainage system.

4.3.3. There are no process contributions to the surface water drainage system. Only clean surface runoff (i.e. rainwater) will be discharged to the surface water drainage system.

4.3.4. Additionally, related to Eco-Power's proposed activities, there will be no process contributions to foul water. Only clean surface runoff (i.e. rainwater) from the Installation will be discharged to the foul water drainage system. The foul water drainage system services the amenities and toilet block. Transwaste hold the relevant Trade Effluent Consent for the emissions to sewer from Melton Waste Park.

5. EMISSIONS

5.1. Point Source Emissions to Air – Proposed Arrangements

5.1.1. Eco-Power propose 41 emission points, designated as A1-A41, associated with the operation of the biomass boilers. Additionally, there are 13 proposed emission points, designated as A42-A55, associated with the waste drying floor operations.

5.1.2. White Young Green ("WYG") has been commissioned by Eco-Power to prepare a detailed air dispersion modelling assessment of emissions from the 41 proposed biomass boiler emission, as well as an odour assessment in relation to the emissions resulting from the waste drying floor.

5.1.3. The report (A115848, January 2020) is contained in this application submission.

5.2. Point Source Emissions to Water – Proposed Arrangements

5.2.1. There will be no point source emissions to water.

5.3. Point Source Emissions to Sewer – Proposed Arrangements

5.3.1. There will be no point source emissions to sewer.

5.4. Point Source Emissions to Land – Proposed Arrangements

5.4.1. There will be no emissions to land.

5.5. Fugitive Emissions to Air

5.5.1. The potential sources of fugitive emissions to air from the site include:

- movement of transport vehicles into and out of site;
- tipping of waste materials;
- storage of the waste materials prior to processing;
- the main operation and processing activities, including shredding, blending, drying and pelletising material;
- loading of finished product; and
- wind-blown litter from the waste piles.

5.5.2. An Emissions Management Plan ("EMP") has been prepared and will form part of Eco-Power's EMS. The EMP (Document Reference Eco 09.03.2020/EMP Issue 1) has been submitted as part of this application.

5.6. Fugitive Emissions to Surface Water, Sewer and Groundwater

5.6.1. All operational areas are surfaced with impermeable concrete and the site boundary to the north and west is enclosed by a containment concrete bund wall.

5.6.2. Waste storage and processing areas will be housed internally isolated from the drainage networks.

5.6.3. Fugitive releases to the groundwater will be prevented by conducting all operations, including the unloading of deliveries, storage of raw materials and product, processing and handling within buildings which benefit from concrete hardstanding, therefore, providing an impervious barrier to prevent a pathway for migration to ground.

5.6.4. Diesel will be consumed for plant and electrical generators on site. Diesel is stored in 3 x 20,000l tanks, each appropriately bunded to hold 110% of the capacity and lined with an impermeable liner which is impervious to diesel. All connection points and pipe work associated with all liquid storage areas will be within the confines of the bunds. Other potentially polluting chemicals stored on site in smaller quantities will be housed internally within the workshop building on appropriate bunding.

5.6.5. Tank and bunding integrity and maintenance checks will be undertaken as part of the Installation's Site EMS Day Diary Checks Form.

5.6.6. Any potentially polluting spillages at the Installation will be subject to the Installation's robust Accident Management Plan ("AMP") (Eco 09.03.2020/AMP) submitted as part of this application which will contain Eco-Power's spill management procedure.

6. GENERAL REQUIREMENTS

6.1.1. The Environmental Risk Assessment (Eco 09.03.2020/ERA) has demonstrated that the following reports are required as part of this application:

- Emissions Management Plan;
- Odour Management Plan;
- Noise Management Plan;
- Pest Management Plan; and
- Flood Management Plan.

6.1.2. As per the requirements of EA's '*Fire prevention plans: environmental permits*' online guidance (updated January 2020), a Fire Prevention Plan is required by operators that store any amount of combustible waste material including (but not limited to);

- plastics;
- scrap metals contaminated or mixed with other waste such as oils or plastics;
- RDF and SRF; and
- mixed waste containing combustible wastes.

6.1.3. Consequently, a Fire Prevention Plan ("FPP") (Eco 09.03.2020/FPP) has been prepared and is contained in Section 8 of this application submission. The FPP will form part of Eco-Power's EMS and will be reviewed and updated annually or if any of the following occur:

- a fire on site;
- a change or review of legislation;
- if the site is instructed to do so by EA; or
- if there are changes to the listed contractors.

7. APPLICATION SITE CONDITION REPORT

7.1. An Application Site Condition Report ("ASCR") has been prepared to form part of the Environmental Permit application. The ASCR (Document Reference Eco 09.03 .2020/ASCR Issue 1 is contained in Section 4 of this application submission.

8. MONITORING

8.1. Monitoring of Emissions to Air

8.1.1. No monitoring of emissions to air is proposed. Each boiler in operation within the Heater Building has a thermal input of 0.91MW. Therefore, the Medium Combustion Plant Directive is not applicable.

8.1.2. The individual units which are <1MW conform to the EcoDesign Directive (2009) and as such, the emissions to air have been assessed during product design.

8.2. Monitoring of Groundwater

8.2.1. Fugitive releases to the groundwater will be prevented by conducting all operations, including the unloading of deliveries, storage of raw materials and product, processing and handling in areas sealed with an impervious barrier to prevent a pathway for migration to ground. Therefore, no monitoring of groundwater is proposed.

8.3. Monitoring of Surface Water

8.3.1. There will be no process contribution to surface water. All storage and processing areas will be housed internally isolated from the surface water drainage network. Only clean surface water run off (i.e. rainwater) will enter the surface water drains. Therefore, no monitoring of surface water is proposed.

8.4. Monitoring of Foul Water

8.4.1. There will be no process contribution to foul water. All storage and processing areas will be housed internally isolated from the foul water drainage network. Only clean surface run off (i.e. rainwater), as well as foul water from the amenities and toilet block will enter the foul water drains associated with the Installation. Therefore, no monitoring of foul water is proposed.

9. RESOURCE EFFICIENCY AND CLIMATE CHANGE

9.1.1. A number of energy efficiency measures will be implemented at the Eco-Power Installation and energy use will be monitored monthly to produce an energy balance record and any opportunities for energy efficiency improvement will be addressed as part of the EMS.

9.1.2. It is estimated that 3,240,000 kWh per annum of electricity will be consumed for general power on site, such as lighting and for use within the workshop.

9.1.3. It is also estimated that 936,000 litres of diesel will be consumed per annum for the operation of plant and electrical generators. Diesel is stored in 3 x 20,000l tanks, each appropriately bunded to hold 110% of the capacity and lined with an impermeable liner which is impervious to diesel.

9.1.4. The generators used on site consist of six 500kVA generators, each having a net thermal input of 1,900kW, giving a total of 11,400kW.

9.1.5. Virgin wood will be used as a fuel for the 41 boilers for drying operations. It is anticipated that a maximum of 7,000 tonnes per annum will be consumed by the site for this use. Virgin wood, free from chemicals or finishes, has been selected as the biomass fuel as it is a sustainable and renewable energy source. The virgin wood is sourced from suppliers of wood fuel who are registered on the Government's Biomass Suppliers List, thereby demonstrating that the fuel meets the Government's sustainability criteria.

9.1.6. The Installation's EMS will include a procedure for the annual review of new developments in raw materials and for the implementation of any suitable ones with an improved environmental profile.

9.1.7. A procedure will be incorporated into the site's EMS describing the quality assurance procedures for controlling the impurity content of the raw materials, i.e. a procedure to ensure only virgin wood is accepted at the Installation. If required, long-term studies will be undertaken into any less polluting options and material substitutions will be identified and then implemented accordingly.

9.1.8. The proposed process undertaken at Eco-Power is a waste avoidance and recovery process in its own right. Through the application of the waste hierarchy, all waste materials are delivered to the Installation with the aim of processing and recovery.

9.1.9. 125,000 tonnes per annum of SRF and 79,000 tonnes per annum of RDF will be processed and sent off site for use as a fuel at an appropriately licenced Energy from Waste site, therefore, diverting a signification amount of waste from landfill.

9.1.10. A waste minimisation audit will be done 12 months after the permit has been issued. This will allow Eco-Power to set a baseline against which improvement targets can be set to reduce the amount of waste generated as part of site operations. During the first 12 months of operation, all wastes which are generated as part of the process will be recorded. It is envisaged that only waste then cannot be recycled will be disposed of. Waste generated by the process will be assessed as a percentage of the RDF/SRF produced and recyclates removed from site.

10. COMPLIANCE WITH BAT CONCLUSIONS

10.1. It is considered that the techniques that will be in use at the proposed Installation will constitute Best Available Techniques ("BAT") and will be appropriate and proportionate for the scale of the activities at the Installation and the risks that are posed to the environment by these activities.

10.2. The BAT Requirements for the proposed Installation have been taken from the EA's Sector Guidance Note IPPC S5.06 '*Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste'* (Issue 5, Date 2013).

10.3. *The Waste Treatment Best Available Techniques Reference Document ("BREF")* October 2018), which includes the applicable BAT Conclusions, has also been taken into consideration in the preparation of this application.

10.4. In addition, where necessary, reference has been made to the EA's online webpage guidance, such as '*Develop a management system: environmental permits'* (Published February 2016, Updated December 2019) and '*Control and monitor emissions for your environmental permit'* (Published February 2016, Updated February 2020).