

1. NON-TECHNICAL SUMMARY

Enva E-Waste England Ltd (hereinafter “Enva”) is the largest corporate Waste Electrical & Electronic Equipment (WEEE) recycling and reuse business in the UK and are proposing to develop a new WEEE recycling facility in Dartford, Kent, to add to their portfolio of locations. The proposed facility will include the development of a new WEEE treatment facility that has the ability to deconstruct Waste Temperature Exchange Equipment (WTEE), consisting of fridges and freezers only, their constituent parts for recycling, alongside the deconstruction of Small Mixed WEEE (SMW) . The development will be very similar in scale and nature to Enva’s Grantham site, which operates under an environmental permit and has done so since 2009, with a recent variation determined in 2024 (reference EPR/CP3899SD/V006).

Comprising of one large unit and associated external storage, the site is proposed to accept WEEE products that include fridges, freezers, cookers and small domestic appliances (SDA) for recycling. In order to process the WTEE, the initial stage involves degassing, which is known as stage 1 pre-destruction. This is followed by stage 2 destruction, entailing shredding and fraction segregation. For recycling of SMW, a manual dismantling process is required and the removal of components that contain hazardous substances, where necessary. Waste SDA then undergo shredding and separation into fractions for recovery.

The capacity of the proposed facility is 35,000 tonnes per annum of WTEE, with a smaller quantity of mixed WEEE waste (SMW) of approximately 40,000 tonnes.

As part of this environmental permit application, the following requirements have been considered:

- **Management systems:** Enva will operate the Dartford facility in accordance with an Environmental Management System (EMS), certified to ISO14001, as other of Enva’s sites are operated. All processes, procedures and management plans will be implemented in line with the EMS to ensure efficient operation. A summary of the EMS and its compliance with GOV.UK guidance is provided later on in this application supporting report.
- **Energy efficiency:** With electricity as the main source of energy for the site, energy use at the facility will be undertaken with the consideration of energy efficiency measures and the appropriate measures that relate to this aspect. Such measures are outlined within this application.
- **Raw materials and water:** Raw materials and fuels to be used at the facility include diesel, nitrogen and lubricating oil . Usage of raw materials is anticipated to be very similar to that at Enva’s Grantham site, due to the similarities in operations and scale. Water usage is expected to be much less at this facility, compared to Grantham, which carries out re-use activities, as well as recycling activities.
- **Waste Management:** Waste streams on site will consist of general mixed waste, metal waste, waste oil and drums/IBCs. All of these will be in relatively small volumes. Residual materials arising from recycling operations will be dispatched to relevant waste treatment facilities.
- **Emissions to air:** At the facility there will be a total of three point source emissions to as part of the recycling processes to be carried out on site. A H1 assessment for emissions to air was undertaken which demonstrated that the emissions were insignificant and required no further modelling.
- **Emissions to water:** Water will not be used within the activities to be carried out on site and so there will be no process effluent. On site drainage will divert surface water run-off into a holding tank via an oil interceptor. From here, the surface water run-off will be discharged to the ponds to the south and southwest of the site, which outfall into the River Thames via existing infrastructure.

- **Emissions to sewer:** There are no emissions to sewer.
- **Emissions of substances not controlled by emissions limits:** Fugitive emissions to water have been considered in relation to sub-surface structures and sumps, site surfacing, bunds / secondary containment and storage areas. All relevant requirements, in line with relevant appropriate measures, are to be implemented for environmental protection. Further to this, airborne dust particles could be released from recycling and loading processes, which has been considered within the design of the facility and the abatement measures that are to be in place as well as within the fugitive emissions management plan.
- **Odour:** The activities to be undertaken at the site are not inherently odorous, due to the types of waste being handled.
- **Noise and vibration:** The potential for noise emissions can be generated from a number of sources on site, including transportation of waste for treatment, but also the treatment processes themselves. The location of the main processing activities within the main building and the installation of a 4-metre-high acoustic fence bounding the site will be key in mitigating the potential for noise pollution.
- **Environmental risk assessment:** A risk assessment has been produced considering the new facility and its associated activities as well as the risk they pose to the environment, covering land and groundwater contamination, odour, noise, fugitive emissions, and accidents. The risk assessment concludes that risks associated with the proposed development are acceptable when considered in line with the intended risk management techniques, with only two hazards posing a medium-rated risk, and the rest rated low risk.
- **Site Condition Report (SCR):** As part of this environmental permit application, an SCR has been produced for the area of land upon which the WEEE recycling facility is to be developed. It details the historic information in relation to the site and surrounding areas, as well as considering the proposed use and the potential impacts that this may have.
- **Appropriate Measures and Best Available Techniques (BAT):** Throughout the application document, technical descriptions have been provided for all site aspects and operations, including equipment and infrastructure. A full review of operations against the relevant Appropriate Measures from the most recent guidance and the relevant BAT Conclusions from the most BREF for the Waste Treatment sector has been conducted.