

Non-Technical Summary

This non-technical summary has been produced in order to support Coal Products Limited (CPL) with a variation application to their current Environmental Permit (EP) (reference: DP3134LK) at the Immingham Briquetting Works. The requirement to vary the existing EP has been prompted for the following reasons:

- Request to implement and operate a new Pyrolysis Plant used to process sustainable biomasses into a bio-stable char.
- The request to amend related activities, comprising of three new waste codes.

The site address is:

Coal Products Limited (trading as CPL Products)

Immingham Briquetting Works

Western Access Road

Immingham Docks

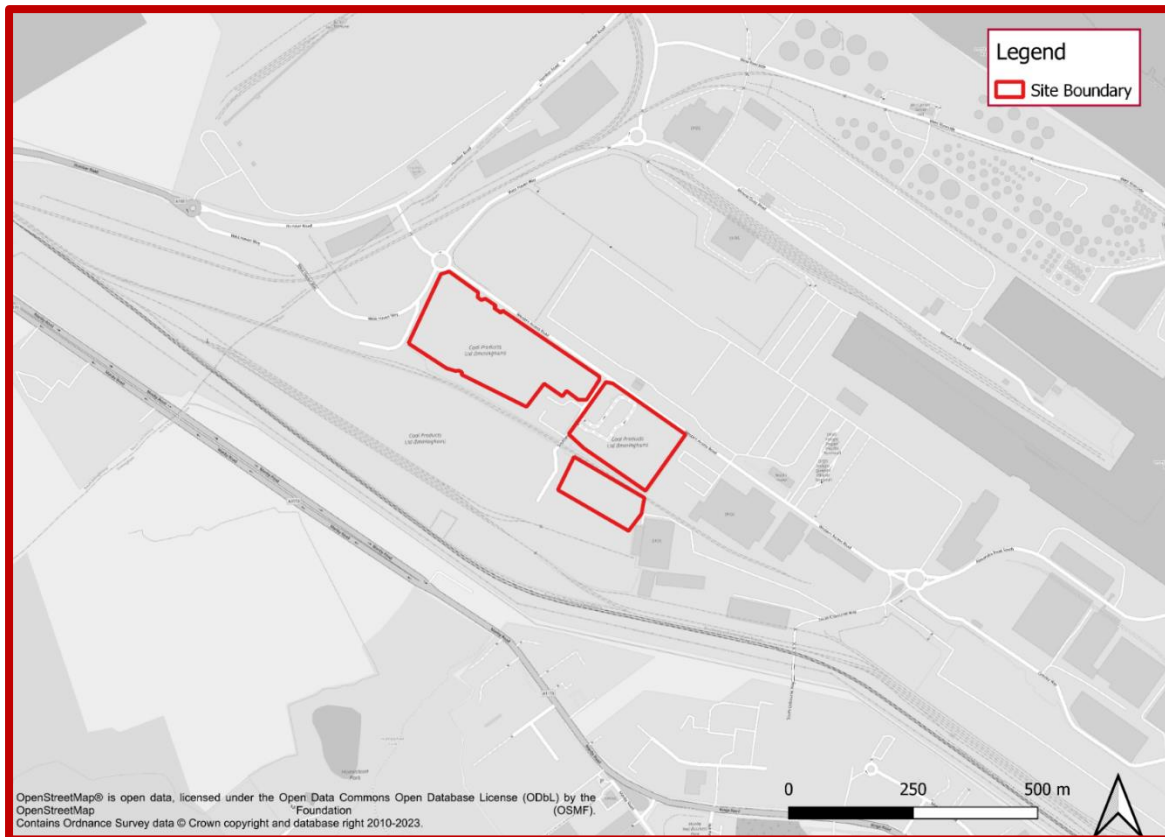
Immingham

Northeast Lincolnshire

DN40 2QR

The map in Figure NTS 1 shows the site location and its surrounds.

Figure NTS 1 – Site Location



The Coal Products Limited (CPL) Immingham Briquetting Works is currently permitted (Environment Agency ref DP3134LK) for “Coal Briquetting”, “Carbon Regeneration” and “Receipt, storage and size reduction of coal”, with the Directly Associated Activities comprising “Fines recovery and wastewater Treatment”, “Operation of acid washing plant” and “Operation of pilot plant”.

The Immingham Works currently has ten emission points to air and one emission point to water. The proposed changes introduced within this variation application consider one new emission point to air (A11). The existing emission points to air remain unchanged as a result of this variation.

Previous Permit Variation

CPL has an ongoing commitment to the replacement of coal-based fuels and activated carbons with biomass-based materials. Controlled under the existing EP, the site has a directly authorised activity associated with pilot scale equipment to thermally treat biomasses from various sources to progress the development of renewable replacements.

The previous EP variation’s purpose was to convert the existing HTC plant from a pilot plant, with operation limited to 30 days per year, to a fully operational plant. The variation also introduced the Caustic Wash Plant, this process is similar to the acid washing that was currently operational at this site, however, utilises caustic solution rather than acid, and is designed to process the ‘amber’ carbon which comes from industrial uses. The Impregnation Unit is also part of the previous permit variation which takes regenerated and/or washed carbon and adds a small amount of caustic solution to produce a product that has enhanced absorbency for specific contaminants.

It should be noted that at the time of writing this permit variation, the outcome of the above permit variation has not yet been determined.

Pyrolysis Plant

As part of this permit variation, CPL along with Nottingham University have been successful in winning the DESNZ (Department of Energy Security and Net Zero) sponsored project under the Green Gas Support scheme to build and operate a Pyrolysis Plant to process sustainable biomass

into a bio-stable char. The produced biochar has been demonstrated to be chemically stable over the long term when used as soil improver therefore sequestering the carbon back into the environment.

The process is divided into three sections agglomeration, drying and pyrolysis. Each process can be run independently from one another. Further details of the processes are provided within the process description in Section 3.1.1.

The process will introduce one new emission point to air.

The finished product will be made available for analysis and testing by CPL's academic partner Nottingham University to demonstrate stability, structure and chemical composition. CPL and the remaining partner will assess the commercial markets as well as seeking carbon credits. The remaining product will be used in our biomass fuel products and CPL's activated carbons business.

Raw Materials

The project is to establish the production of stable biochar from sustainable biomass sources to sequester carbon in the ground and increase the fertility of land. In addition to biomass, this variation application also covers the request to include additional waste codes for the use of absolutely non-hazardous biodegradable waste, non-hazardous biodegradable kitchen waste and other non-hazardous wastes from mechanical treatment wastes other than those covered in the previous permit variation. The site is familiar with the use of these materials which have been processed already on the site through a separate processing unit designated as a hydro carbonisation unit. The use of these materials were processed under the current site permit whereby as a pilot unit CPL were authorised by the local EA inspector. Overall, the unit will process a limited range of biomasses and non-hazardous biomass wastes. All materials will be processed in discrete batches to establish the viability for those materials. No materials will be mixed. At the end of the project the results for each material will be provided to the DESNZ and the wider scientific community.

Water Discharge

The previous permit variation included the additional water discharge associated with the HTC Plant due to the increased catchment area. This variation does not change the water discharge or emissions to water and has not been included within the variation.

Environmental Assessments

Emissions from the proposed installation have been assessed using the Environment Agency's guidance on 'Risk assessments for your environmental permit' pertaining to air. These assessments have demonstrated that:

- For emissions to air, under the anticipated operating profile of the plant, all concentrations in air at human receptors are projected to be below the relevant assessment level and no exceedances are predicted. For concentrations in air and deposition at ecological receptors, although exceedances have been predicted, these are due to the existing background levels and the process contribution from the site can be described as not significant.

The changes requested within this variation will be managed in accordance with the site's existing environmental management system, which is maintained in accordance with the installation's current EP.