Permitting Decisions - Variation

We have decided to grant the variation for Immingham Briquetting Works operated by CPL Products Limited.

The variation number is EPR/DP3134LK/V008.

The permit was issued on 28/10/2026.

The variation is to make the following changes:

- The addition of a new listed activity for the existing effluent treatment plant (ETP), to include pH adjustment and solids settling (AR10). All site effluent is directed to a main reception pit where a slurry pump continuously removes water and solids prior to transferring it to a dewatering screen. Screening involves the use of a hydrocyclone and high frequency vibration. The hydrocyclone outlet directs the effluent to Pit 2 for neutralisation, flocculation and coagulation and finally settlement. The settlement pit also uses a low shear transfer pump to direct flow into an additional settlement pit (Pit 1) to further increase residence time. Additional Chemical Oxygen Demand (COD) reduction techniques include air sparging on the CR2 scrubber, microbubble diffusion, increased residence time, with the potential option for use of advanced oxidation techniques if required. In addition, the operator will install a Dissolved Air Flotation (DAF) plant should this be required as contingency (this will be dependent upon the results arising from completion of IC10). The upgrading of the existing ETP is to cover the increase in water discharge limit to 1,200 m^3 per day to allow for potential future increase in rainfall only. The current discharge point of W1 remains.

- The addition of a new caustic wash and impregnation unit for reprocessing spent carbon (Directly Associated Activity (DAA) to AR4). This new unit is to process spent carbon from industrial processes (referred to as the ‘amber’ spent carbon wastes) and create material with increased absorbency for specific contaminants. A portion of incoming spent carbon waste (25%) will be directed into this new caustic wash and impregnation process, however there is no increase in throughput tonnages. This process utilises a new 950 kWth input boiler using natural gas as a fuel, and there are two new emissions to air associated with it (A10 for the boiler and A11 for the dryer exhaust). Caustic wash solution exiting the wash cycle, and pre and post-wash rinse water, is stored separately and

recirculated to the existing scrubbers. This stored waste liquid is treated for Chemical Oxygen Demand (COD) before being sent to the site's effluent treatment plant.

- The addition of a new waste code (07 05 10*) under the carbon regeneration activities (AR3 and AR4).

- Removal of A1 and A4 emission points to air as they are no longer in use.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It

- highlights key issues in the determination
- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account
- shows how we have considered the consultation responses

Unless the decision document specifies otherwise, we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

Application background

This variation was to originally change the following:

- Addition of a caustic wash and impregnation unit for amber spent activated carbon. There were two new emission points associated with this – A10 (serving the associated boiler) and A11 (serving the dryer unit for the impregnation plant).

- An increase in daily water discharge amounts from 500 m^3/day to 1,200 m^3/day via the existing W1 discharge point. This is to accommodate additional surface water created by a combination of increased yard footprint (although no increase in permitted site boundary), and increased future rainfall potential.

- Additional 17 05 10* waste code for the carbon regeneration activities.

- Changing the pilot plant activity into an activity in its own right.

Over time, the scope of this application has been amended. This application is now to change the following:

- Changing the existing water discharge DAA (AR10) to a new listed activity for the existing effluent treatment plant due to its capacity. The activity will be under Section 5.4 Part A(1)(a)(ii) of the EPR 2016. This is to cover the increase in water discharge limit to 1,200 m^3 per day to allow for potential future increase in rainfall using the current discharge point of W1. The activity reference in table S1.1 remains the same.

- The addition of a new caustic wash and impregnation unit for reprocessing spent carbon (Directly Associated Activity (DAA) to AR4). This new unit is to process spent carbon from industrial processes (referred to as the 'amber' spent carbon wastes) and create material with increased absorbency for specific contaminants. A portion of incoming spent carbon waste (25%) will be directed into this new caustic wash and impregnation process, however there is no increase in throughput tonnages. This process utilises a new 950 kWth input boiler using natural gas as a fuel, and there is one new emission to air associated with it (A10). Caustic wash solution exiting the wash cycle, and pre and post-wash rinse water, is stored separately and recirculated to the existing scrubbers. This stored waste liquid is treated for Chemical Oxygen Demand (COD) before being sent to the site's effluent treatment plant. There is no dryer emission point

associated with this activity.

- The addition of a new waste code (07 05 10*) under the carbon regeneration activities (AR3 and AR4).

- Removal of A1 and A4 emission points to air as they are no longer in use.

Assessment of air emissions impact on human health, nature conservation, landscape, heritage and protected species and habitat designations.

We have checked the location of the site to assess if it is within the screening distances for nature conservation, landscape, heritage and protected species and habitat designations when it comes to air quality. Based on this review, the relevant designations to be considered in terms of air quality impacts are as follows:

- Humber Estuary SAC, SPA, Ramsar
- Humber Estuary SSSI (2000480)
- Homestead Park Pond LWS
- Rosper Road Pool LWS

The operator also identified relevant human receptors for assessment against air emission impacts appropriately which we considered.

It is noted that a later variation (V009) concerned the addition of a biochar operation was issued in 2024 (activity reference AR9). This was assessed before V008 was issued. The air emissions modelling report for V009 included the original new air emissions points which are subject to this V008 variation to present a worst-case scenario. During the V009 determination, we agreed with the conclusions from the operator's air quality modelling report that there are unlikely to be any exceedances of the Environmental Standard (ES) for any of the modelled pollutants at either human or ecological receptors.

As per our processes, we did not consult Natural England for V009 (although we did send them a notification for information only) regarding air quality impacts on relevant habitats. In terms of human health, we also agreed with the operator's modelling outcome that impacts on these receptors are all insignificant when assessed against the relevant ES.

It should be noted that the V009 air quality assessment remains relevant for V008. Indeed, the current iteration of the V008 application means that, due to the removal the HTC pilot plant operating full time as a listed activity, the dryer emission point and points A1 and A4, this represents a further improvement in the outcome of air quality impacts on relevant sensitive receptors. Therefore, no further assessment is required for V008. Please see the V009 Decision Document for more a more detailed explanation of the outcome of that assessment.

Impacts from emissions released to water

While the amount of effluent being discharged is increasing with this variation, the existing effluent generation process remains unchanged.

It is noted that previous permit versions did not include discharge limits. The operator went straight to modelling the water impacts because pollutants could not be screened out. The modelling report used is titled 'Immingham Docks Permit Variation – TUFLOW FV Hydrodynamic Modelling Report,' version 2.0, dated 10/02/2026.

Although the permit did not previously require monitoring beyond more general process parameters (pH, temperature, flow rate), the operator has been doing so and was able provide an appropriate pollutant inventory using sampling data to base their modelling report on. The modelling data cover all current activities (including the pilot plant and caustic wash – the latter currently being undertaken under a Local Enforcement Position agreement pending issue of this variation) so can be viewed as being representative.

The discharge is via the site's Effluent Treatment Plant (ETP) before proceeding into the Associated British Ports (ABP) drainage system via discharge point W1. From there, it enters the Humber Estuary. This is a working dock with regular movement of tankers and cargo ships.

The request to increase the water discharge limit from 500 m^3/day to 1,200 m^3/day is to cover an increased footprint of the site surface area, plus future-proofing for potential increased rainfall. The increase is not associated with diluting pollutants. There are no new point source discharges associated with this variation.

Screening tests – Priority hazardous substances

Screening tests were based on estuaries and coastal waters guidance to determine whether detailed modelling is required. The operator already had access to actual data from the site's discharge available and this was used in the modelling exercise.

The following hazardous priority substances were identified in the discharge analysis –

- Ammonia – NH_3
- Arsenic – As
- Cadmium – Cd
- Chromium – Cr

- Copper – Cu
- Mercury – Hg
- Nickel – Ni
- Lead – Pb
- Zinc – Zn
- Perfluorooctanesulfonic acid – PFOS (this was used in the model since it is the only PFAS chemical with a specified EQS).

Screening Test 1 is applied to check whether the level of pollutants in the discharge exceeds the Environmental Quality Standards (EQS) for both annual average and maximum allowable concentrations (where applicable). All the above substances identified in the sampling analysis exceeded the EQS so failed Screening Test 1.

Screening Test 2 checks whether the discharge is to the low water channel in the upper parts of the Estuary where the water is mostly fresh. As the discharge is not to the low water channel of the Humber Estuary, Screening Test 2 has failed so the assessment moved to Screening Test 3.

Screening Test 3 checks whether the discharge is to a location with restricted dilution/dispersion. As the discharge location is a commercial dock, it is restricted, so modelling is required.

The operator modelled using the TUFLOW-FV model to understand the worse-case plume distance when compared against the EQS. A conservative approach was taken to ensure:

- No dilution occurred prior to discharge from the outfall to the dock,
- Parameters are not modelled to decay,
- The impact of water temperature is included,
- The maximum discharge rate (1,200 m^3/day) of parameters is applied.

When background concentration of constituents is set to zero, the only pollutant to exceed the EQS is Cr. However, upon interrogation of the extent of the maximum plume, the area where Cr exceeds the EQS is limited to a single model grid square at the outfall location. When background concentrations within the Humber Estuary were included, NH_3 and Cr plumes exceeded the EQS. As the background concentration for ammonia in the Humber Estuary already exceeds the EQS by 36%, if further deterioration of upstream concentrations is limited to less than 3%, then as per our processes, the discharge may be permitted if it does not prevent the water body achieving good status. Once the plume of ammonia reaches outside the dock's jetty into the Humber, it is less than 3% for further deterioration.

Likewise, the average concentration of Cr in the Humber Estuary is 83% of the EQS, however the process contribution from the discharge plume only exceeds the EQS within the confines of Immingham Dock and does not exceed the EQS beyond the dock entrance.

When dock disturbance, seasonal temperature fluctuations and gate movements are all taken into account, we agree with the conclusion that wider impact in terms of NH_3 and Cr on the Humber designation is negligible.

Ecological receptors – water discharge

We have checked the location of the discharge to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. In terms of water impact, the application is within screening distances for the following designations:

- Humber Estuary Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA)

- Chalk rivers

Detailed modelling showed that while the ammonia (NH_3) concentration is above the Environmental Quality Standard (EQS), the deterioration is below 3% of the upstream concentration. The applicant has shown that this exceedance will not prevent the water body achieving good status when taking into account the effect of the dock gates and disturbance caused by naval activity. This means the exceedance is effectively contained within the dock, or just outside it. Therefore, we agree that the 3% deterioration limit test has been met and there is no likely significant effect.

As per the modelling report, the applicant used a conservative salinity concentration change of -0.61ppt when the dock gates open during winter conditions (based on a 23 ppt background). We agree that, in line with the modelling approach and assumptions contained therein, there is no likely significant effect.

Regarding the impact of the discharge temperature, the modelling report uses range changes of between 0.15 °C and 0.06 °C when assuming a maximum temperature of the receiving waters of 18.5 °C during the summer, and 5.7 °C in the winter. Therefore, as the modelling assumptions used are conservative, we consider there is no likely significant effect.

In terms of siltation and turbidity, Total Suspended Solids (TSS) are relevant and the 2026 modelling report did not include the levels of this substance within it. However, the operator confirmed by email on 29 April 2026, that TSS levels over a 3-year average were 450 mg/l so this is the figure we used to check impact. When taking the location into account (ship movements, tidal action and the effect of the dock gates), together with tidal dilution and dispersion potential, we agree that there is no likely significant effect using the concentration of 450 mg/l.

Toxic contamination was also assessed in terms of habitat impact. The monitoring and reporting of toxic contaminants described in the modelling report found all parameters were below the Waste Treatment BAT-AELs (Table 6.1 for direct discharges), and the EQS or the maximum allowable concentration EQS. Therefore, we conclude there is no likely significant effect.

In terms of the chalk rivers, while they were not assessed in the modelling exercise, we have conducted our own screening (supported with the information contained within the modelling) which demonstrates that there is no pathway for contaminants from the site's discharge to reach these designations. Therefore, we conclude that no further assessment is required. Based on our assessment of impacts on habitats for the water discharge, we have not consulted Natural England as per our processes.

Total Suspended Solids (TSS) and Chemical Oxygen Demand (COD)

The effluent treatment plant already exists on site, and as the flow rate is increasing, this triggered the need to assess any potential impact on the water environment. It is a requirement for this to become a listed activity due to its capacity, and therefore the Waste Treatment Best Available Techniques (BAT) limits apply for all contaminants present in the effluent.

On 29 April 2026, the operator confirmed that COD and TSS are present in their discharge, with a 3-year average of 450 mg/l for TSS and 350 mg/l for COD. The BAT-AELs for these substances are 60 mg/l for TSS and 300 mg/l for COD so both were being exceeded during existing operations and required improvement in order to become compliant.

As a result, the operator has upgraded the way they treat their wastewater (albeit using the same effluent treatment plant) to ensure the final effluent can meet BAT limits prior to discharge. The effluent treatment plant has been upgraded to ensure more robust separation, neutralisation, flocculation, coagulation and settlement. In addition, they also use air sparging on the CR2 scrubber to treat COD, as well as using microbubble diffusion and increased residence time in the settlement pits. With these changes, the figures provided during determination (gathered over a period of months) at the point of issue of this variation show the COD and TSS levels are consistently below the BAT-AEL limit. We have therefore taken a pragmatic approach given that the operator has provided commitments to continue adjusting their methods where needed based on continued sampling of the discharge to ensure BAT is strictly adhered to, and this has been written into Improvement Condition IC10. IC10 requires the operator to provide 9 months-worth of effluent sampling data to prove the efficiency of their water treatment processes and ensure the BAT-AELs are always met. The operator has stated they will also install a Dissolved Air Flotation (DAF) plant and use advanced oxidation techniques if required to ensure BAT compliance is guaranteed. Based on these commitments and progress made, we are confident that the operator will meet their permit conditions.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The comments and our responses are summarised in the consultation responses section.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Health and Safety Executive (HSE)
- UK Health Security Agency (UKHSA)
- Local Authority Environmental Protection
- Local Authority Planning

The comments and our responses are summarised in the consultation responses section.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 ‘Understanding the meaning of regulated facility’, Appendix 2 of RGN2 ‘Defining the scope of the installation’.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided plans which we consider to be satisfactory.

These show the extent of the site of the facility including the discharge points.

The plan is included in the permit.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We have not consulted Natural England. We sent our habitats assessment for information only. No issues were raised by Natural England.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator’s risk assessment is satisfactory.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that do not screen out as insignificant

Emissions of hazardous substances listed in Key Issues cannot be screened out as insignificant. We have assessed whether the proposed techniques are Best Available Techniques (BAT).

The proposed techniques/emission levels for emissions that do not screen out as insignificant are in line with the techniques and benchmark levels contained in the technical guidance and we consider them to represent appropriate techniques for the facility. The permit conditions enable compliance with relevant BAT reference documents (BREFs) and BAT Conclusions, and Emission Limit Values (ELVs deliver compliance with BAT- Associated Emission Levels (AELs).

Operating techniques for emissions that screen out as insignificant

Emissions of oxides of Nitrogen (NO_x) have been screened out as insignificant, and so we agree that the applicant's proposed techniques are Best Available Techniques (BAT) for the installation.

We consider that the emission limits included in the installation permit reflect the BAT for the sector.

Waste types

We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.

We are satisfied that the operator can accept these wastes for the following reasons:

- they are suitable for the proposed activities
- the proposed infrastructure is appropriate; and
- the environmental risk assessment is acceptable.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

We have included an improvement programme to ensure that the effluent treatment plant is effectively treating the waste water and the discharge meets BAT-AELs – see IC10 and Key Issues.

Emission limits

Emissions limits have been added as a result of this variation. It is considered that the numeric limits described below will prevent significant deterioration of receiving waters.

We have included these limits based on non-statutory Environmental Quality Standards (EQS).

We have included these limits based on the relevant aspects of ‘no deterioration’ policy.

We have amended a limit on the volume of the discharge to reflect that which was assessed – see Key Issues.

Monitoring

We have decided that monitoring should be added/amended for the following parameters, using the methods detailed and to the frequencies specified in tables S3.1 and S3.2.

Parameters to be removed in table S3.1 includes all monitoring for A1 and A4 as they are longer active.

Parameters to be added in table S3.1 includes the addition of A10 for oxides of nitrogen only.

Parameters to be added in table S3.2 include the following for W1:

- Arsenic (As)
- Cadium (Cd)
- Chromium (Cr)
- Copper (Cu)
- Lead (Pb)
- Mercury (Hg)
- Nickel (Ni)
- Zinc (Zn)
- Total Organic Carbon (TOC) or Chemical Oxygen Demand (COD)
- Total Suspended Solids (TSS)
- PFOA
- PFOS

These monitoring requirements have been included in order to ensure the effluent being discharged meets the BAT-AELs.

We made these decisions in accordance with Waste Treatment Best Available Techniques.

Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.

Reporting

We have removed reporting in the permit for the following parameters:

Removal of reporting for the monitoring of emission points A1 and A4 from table S4.1 since these emission points are no longer active.

Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

"The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation."

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

Consultation Responses

The following summarises the responses to consultation with other organisations, and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from UKHSA dated 18/10/2023.

Brief summary of issues raised: The main emissions of concern are emissions of products of combustion (oxides of nitrogen, oxides of sulphur and particulate matter). The outdoor storage of additional waste-activated carbon should be included in the emergency plan. The site's existing emergency plan should be updated to add mitigation of the off-site implications of fires and other such incidents and liaison with responders and public communications via multi-agency groups. Recommendations also made regarding the need to further characterise water discharge emissions from the pilot plant and provide detailed modelling of potential environmental impacts on the Humber Estuary.

Summary of actions taken: Impacts on air quality relevant to this application have been considered during the determination of a later variation (V009) – see Key Issues above. The only emissions to air relevant to this variation are oxides of nitrogen, the impact on human health of which we assessed as being insignificant. The operator has provided an updated emergency plan. Proposals to temporarily store up to 1,000 tonnes of waste-activated carbon outside has been removed from this application, as has the element of additional water discharge emissions from the pilot plant. Refer to Key Issues above regarding impacts arising from the water discharge.