Determination of an Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2016

Decision document recording our decision-making process

The Application Number is: EPR/ZP3307SD/A001
The Applicant is: Graythorp Energy Limited
The Application is for an Installation located at: Graythorp Energy Centre, Tofts Road West, Hartlepool, TS25 2BQ.

What this document is about

This is a refusal decision document.

It explains how we have considered the Applicant's Application. It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Applicant's proposals.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future. A lot of technical terms and acronyms are inevitable in a document of this nature: we provide a glossary of acronyms near the front of the document, for ease of reference.

Preliminary information and use of terms

We gave the application the reference number EPR/ZP3307SD/A001. We refer to the application as "the **Application**" in this document in order to be consistent.

The Application was duly made on 24/03/2023.

The applicant is Graythorp Energy Limited. We refer to Graythorp Energy Limited as "the **Applicant**" in this document.

Graythorp Energy Limited's proposed facility is located at Graythorp Energy Centre, Tofts Road West, Hartlepool, TS25 2BQ. We refer to this as "the **Installation**" in this document.

Summary of the decision

We have decided to refuse the Application.

The reason for refusal is that based on the information that has been provided to us by the applicant, we consider that the predicted air emissions from the proposed activity are likely to damage the features of interest within the Teesmouth and Cleveland Coast SSSI. In reaching our decision we have sought views of Natural England as the appropriate nature conservation body. We also do not consider that the supplementary information provided by the Applicant during permit determination is sufficient justification to conclude that the activity is not likely to damage this designated site.

We consider that in reaching our decision, we have taken into account all relevant considerations and legal requirements.

How this document is structured

Contents

Glossary of acronyms used in this document

(Please note that this glossary is standard for our decision documents and therefore not all these acronyms are necessarily used in this document.)

AAD	Ambient Air Directive (2008/50/EC)
APC	Air Pollution Control
AQS	Air Quality Strategy
BAT	Best Available Technique(s)
BAT-AEL	BAT Associated Emission Level
BREF	Best Available Techniques (BAT) Reference Documents for Waste Incineration
BAT C	BAT conclusions
CHP	Combined heat and power
CROW	Countryside and rights of way Act 2000
DAA	Directly associated activity – Additional activities necessary to be carried out to allow the principal activity to be carried out
DD	Decision document
EAL	Environmental assessment level
EIAD	Environmental Impact Assessment Directive (85/337/EEC)
ELV	Emission limit value
EMAS	EU Eco Management and Audit Scheme
EMS	Environmental Management System
EPR	Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No. 1154) as amended
EQS	Environmental Quality Standard
ES	Environmental standard
EWC	European waste catalogue
FGC	Flue gas cleaning
FPP	Fire prevention plan
FSA	Food Standards Agency
GWP	Global Warming Potential
HHRAP	Human Health Risk Assessment Protocol
HPA	Health Protection Agency (now UKHSA – UK Health Security Agency)
HRA	Human Rights Act 1998
HW	Hazardous waste
HWI	Hazardous waste incinerator
IBA	Incinerator Bottom Ash

IED	Industrial Emissions Directive (2010/75/EU)
I-TEF	Toxic Equivalent Factors set out in Annex VI Part 2 of IED
I-TEQ	Toxic Equivalent Quotient calculated using I-TEF
LCV	Lower calorific value – also termed net calorific value
LfD	Landfill Directive (1999/31/EC)
LADPH	Local Authority Director(s) of Public Health
LOI	Loss on Ignition
MBT	Mechanical biological treatment
MSW	Municipal Solid Waste
MWI	Municipal waste incinerator
NOx	Oxides of nitrogen (NO plus NO_2 expressed as NO_2)
OTNOC	Other than normal operating conditions
PAH	Polycyclic aromatic hydrocarbons
PC	Process Contribution
PCB	Polychlorinated biphenyls
PEC	Predicted Environmental Concentration
PHE	Public Health England (now UKHSA – UK Health Security Agency)
POP(s)	Persistent organic pollutant(s)
PPS	Public participation statement
PR	Public register
PXDD	Poly-halogenated di-benzo-p-dioxins
PXB	Poly-halogenated biphenyls
PXDF	Poly-halogenated di-benzo furans
RDF	Refuse derived fuel
RGN	Regulatory Guidance Note
SAC	Special Area of Conservation
SCR	Selective catalytic reduction
SNCR	Selective non-catalytic reduction
SPA(s)	Special Protection Area(s)
SS	Sewage sludge
SSSI(s)	Site(s) of Special Scientific Interest
SWMA	Specified waste management activity
TDI	Tolerable daily intake

TEF	Toxic Equivalent Factors
TGN	Technical guidance note
TOC	Total Organic Carbon
UN_ECE	United Nations Environmental Commission for Europe
US EPA	United States Environmental Protection Agency
WFD	Waste Framework Directive (2008/98/EC)
WHO	World Health Organisation
WID	Waste Incineration Directive (2000/76/EC) – now superseded by IED

Section 1: Administrative issues

1.1 Application history

The Installation is subject to the EPR (as defined above) because it carries out an activity listed in Part 1 of Schedule 1 to the EPR:

- Section 5.1 Part A(1)(b) – incineration of non-hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity of 3 tonnes or more per hour.

The IED definition of "waste incineration plants" and "waste co-incineration plants" says that it includes:

> *"all incineration lines or co-incineration lines, waste reception, storage, on-site pre-treatment facilities, waste, fuel and air supply systems, boilers, facilities for the treatment of waste gases, on-site facilities for treatment or storage of residues and waste water, stacks, devices for controlling incineration or co-incineration operations, recording and monitoring incineration or co-incineration conditions."*

Many activities which would normally be categorised as "directly associated activities" (DAA) for EPR purposes, such as air pollution control plant, (including storage of treatment chemicals), and the ash storage bunker, are therefore included in the listed activity description.

An installation may also comprise "directly associated activities", which at this Installation includes the generation of electricity using a steam turbine and a backup electricity generator for emergencies. These activities comprise one installation, because the incineration plant and the steam turbine are successive steps in an integrated activity.

Together, these listed activities and directly associated activities comprise the Installation.

1.2 Receipt of Application

The Application was duly made on 24/03/2023. This means we considered it was in the correct form and contained sufficient information for us to begin our determination but not that it necessarily contained all the information we would need to complete that determination: see section 2.3 below.

The Applicant made no claim for commercial confidentiality. We have not received any information in relation to the Application that appears to be confidential in relation to any party.

1.3 Consultation on the Application

We carried out consultation on the Application in accordance with the EPR, our statutory Public Participation Statement (PPS) and our own internal guidance RGN 6 for Determinations involving Sites of High Public Interest. RGN 6 was withdrawn as external guidance, but it is still relevant as Environment Agency internal guidance.

We consider that this process satisfies, and frequently goes beyond, the requirements of the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which are directly incorporated into the IED, which applies to the Installation and the Application. We have also taken into account our obligations under the Local Democracy, Economic Development and Construction Act 2009 (particularly Section 23). This requires us, where we consider it appropriate, to take such steps as we consider appropriate to secure the involvement of representatives of interested persons in the exercise of our functions, by providing them with information, consulting them or involving them in any other way. In this case, we consider that our consultation already satisfies the requirements of the 2009 Act.

We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application. We also placed an advertisement in the Hartlepool Mail on 23/06/23 that contained the same information.

We made a copy of the Application and all other documents relevant to our determination available to view on our Public Register. Anyone wishing to see these documents could do so and arrange for copies to be made.

We sent copies of the Application to the following bodies, which includes those with whom we have “Working Together Agreements”:

- Local Authority – Planning
- Local Authority – Environmental Health
- Food Standards Agency
- Health and Safety Executive
- Director of Public Health & UK Health and Safety Agency
- Local Fire Service
- National Grid

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly. Note; under our Working Together Agreement with Natural England, we only inform Natural England of the results of our assessment of the impact of the installation on designated Habitats sites.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 4. We have taken all relevant representations into consideration in reaching our determination.

1.4 Requests for Further Information

Although we were able to consider the Application duly made, we did in fact need more information in order to determine it, and issued information notices on 17/08/23 and 19/10/23. A copy of each information notice was placed on our public register. Responses to the notices were received on 15/09/23 and 30/10/23 respectively, and copies of this information were placed on our public register.

In addition to our information notices, we received the additional information during the determination from the Applicant via email:

- On 23/06/23 – Details regarding the proposed emergency generator.
- On 01/09/23 – Confirmation of applicable supporting documents, and relevant sections, in relation to queries raised by the Applicant in a meeting on 16/08/24.
- On 28/09/23 – Details of additional information to be provided, which was formalised via the Schedule 5 notice issued on 19/10/23.
- On 26/06/24 – Updated Air Quality Assessment (and model input files) and Ecology Technical Note.

We made copies of this information available to the public in the same way as the responses to our information notices.

1.5 The legal framework

The Application has been refused. This decision has been made in accordance with the requirements set out in the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* and a *waste incineration plant* as described by the IED;
- an *operation* covered by the WFD, and
- subject to aspects of other relevant legislation which also have to be addressed.

We address some of the major legal requirements directly, where relevant, in the body of this document. Other requirements are covered in section 5 towards the end of this document.

Section 2: Process Description

2.1 Overview of the proposed facility

The Applicant has described the facility as Energy from Waste. Our view is that for the purposes of IED (in particular Chapter IV) and EPR, the proposed installation would be considered a waste incineration plant because:

Notwithstanding the fact that energy will be recovered from the process; the process is nevertheless 'incineration' because it is considered that its main purpose would be the thermal treatment of waste.

The facility would comprise two incineration lines. This would include waste reception, waste storage and handling facilities, two-line grate furnaces, energy recovery processes, facilities for flue gas treatment, on-site facilities for residue storage, and control systems for operation of the incinerator.

The key features of the original proposed Installation are summarised in the table below.

Waste throughput, Tonnes/line	Expected: 280,000 t/annum Maximum: 325,000 t/annum	Expected: 34.37 t/hour Maximum: 39.9 t/hour
Waste processed	Refuse Derived Fuel (RDF), Municipal Solid Waste (MSW) and Commercial and Industrial Waste (Non-hazardous waste only)	
Number of lines	2	
Furnace technology	Moving grate	
Auxiliary Fuel	Gas Oil	
Acid gas abatement	Dry	Lime
NOx abatement	SNCR	Aqueous ammonia solution
Reagent consumption	Auxiliary Fuel: 600 m^3/annum Ammonia: 4,000 t/annum Lime: 9,000 t/annum Activated carbon: 400 t/annum Process water: 100,000 t/annum	
Flue gas recirculation	No	
Dioxin abatement	Activated carbon	
Stack	Grid Reference 451476.5, 527679 and 451479.5, 527681.5	
	Height, 90 m	Diameter, 2.36 m
Flue gas	Flow, 62.25 Nm^3/s	Velocity, 20 m/s
	Temperature 140°C	
Electricity generated	56.1 MWe	
Electricity exported	49.5 MWe	
Steam conditions	Temperature, 400°C	Pressure, 40 bar/MPa

Waste heat use	Heating condensate from the air-cooled condenser and the feedwater in the deaerator, and preheating combustion air.

The Installation would have been designed to thermally treat refuse derived fuels (RDF) and other non-hazardous fuels derived from municipal solid waste (MSW) and similar non-hazardous commercial and industrial wastes by incineration. Energy would be recovered from the incineration process in the form of electricity, which would have been exported to the National Grid.

The Installation would have consisted of two incineration lines, each with a maximum operating capacity of 325,000 tonnes per year. The total capacity of the site would have been 650,000 tonnes per year. It was proposed to be a twin stream plant comprising of two identical boilers and air pollution control (APC) process streams linked to common storage, waste feeding, ash discharge and a power generation plant. The Installation would have been designed to operate on a continuous basis for on average 8,000 hours per year.

Waste would be delivered by road and deposited in the storage bunker. The feedstock bunker and tipping hall would both be enclosed within a building maintained under negative pressure to prevent odours and airborne particulates from leaving the facility building. Pre-acceptance checks would be in place and the deposited waste would be stored and mixed in the feedstock bunker, prior to being combusted in the moving grate incinerator plants.

Heat from the combustion process would be used to raise steam in the boilers. The steam would then pass to the steam turbine generator to generate electricity. The generator would export up to 49.5MW of electricity. The plant would also be designed to allow for export of up to 20MW of heat, subject to the development of district heating networks.

Emissions from the combustion process would be discharged to atmosphere via two 90m stacks. A combination of techniques would be utilised in order to prevent and minimise the impact of emissions. These include:

- Minimisation of carbon monoxide (CO) and volatile organic compound (VOC) emissions would be achieved through combustion control.
- Selective Non-Catalytic Reduction (SNCR), with ammonia as the reagent, to minimise nitrogen oxide (NOx) emissions.
- Dry scrubbing with hydrated lime and powdered activated carbon to control emissions of acid gases, metals and dioxins and furans.
- Bag filters to control particulate emissions.

The incineration process would have resulted in solid residues of incinerator bottom ash (IBA), boiler fly ash and APC residues. Majority of the APC residues would be recirculated back to the reactor tower to supplement the reagent and improve abatement efficiency, but a proportion would be continuously removed for storage prior to removal off-site for disposal. IBA would be stored in the IBA storage bunker and removed off-site in covered vehicles for further treatment and recovery, including metal recovery.

Suitability of the boiler fly ash for co-disposal with the IBA would have been demonstrated by testing during commissioning and, if it was shown to be unsuitable then it would be combined with the APC residues.

There would not be any process emissions to water or sewer from the facility under normal operations. Wastewater produced by the facility would be re-used within the process, for example, for bottom ash quenching. Process effluents would comprise boiler blowdown and backwash/regeneration from the water treatment plant. Dirty water from cleaning processes would be collected in storage tanks prior to removal off-site.

A sustainable drainage system (SuDS) was proposed for surface waters for the facility, with a discharge point to the existing small drainage ditch on the southern boundary of the Installation (ultimately discharging into the River Tees). The SUDS system would include rainwater harvesting, attenuation ponds with a restricted outfall, penstock valve and petrol/oil interceptor. Any surface water run-off from hardstanding areas susceptible to pollution (e.g., car park and roads) would be captured by drains that would flow through a petrol/oil interceptor before discharging into the surface water drainage system.

Following submission of amended air dispersion modelling on 26/06/24, a number of revised assumptions were made to aspects of the proposed facility. These are summarised below:

- The maximum total annual throughput reduced to 618,800 tonnes.
- Updated stack data:
    - Diameter = 2.16m.
    - Flow = 54.18 Nm^3/s.

2.2 **The proposed site setting**

The site for the proposed Installation is located approximately 1km from the southern edge of Seaton Carew and 4.5 km south of the town centre of Hartlepool. The site is centred at approximate National Grid Reference NZ 51275 27973. The site occupies an area of approximately 6.7 ha and is roughly rectangular in shape.

The area surrounding the site is largely industrial/commercial, other than a number of fields to the west. To the south of the site is Graythorp Industrial Estate, and approximately 150m to the south-west of the site is an intensive poultry farm, (which is also the nearest residential receptor). To the north of the site is Biopower Hartlepool and then Hartlepool Pipe Mill, beyond this is largely residential areas. Hartlepool Power Station is located to the south-east of the site.

There are a number of habitats sites in the vicinity, with Brenda Road Sewage Works Grassland (LWS) adjacent to the lower south-eastern edge of the Installation boundary. Approximately 900m to the east of the site is

Teesmouth and Cleveland Coast SPA, Ramsar and SSSI, and Seaton Dunes and Common SSSI (LNR).

Section 3: Reason for refusal

3.1 **Summary**

Damage to Sites of Special Scientific Interest (SSSI)

In line with the section 28G of the Wildlife and Countryside Act 1981, (as inserted by the Countryside and Rights of Way Act 2000) the Environment Agency has a legal obligation, as statutory undertaker, to assess potential impacts on SSSIs for any proposed permissions we are considering permitting. This includes applications made under the Environmental Permitting Regulations 2016, for which we are the regulator. These assessments are formally recorded in an 'Appendix 4' document.

Critical levels and loads[1] are set to protect the most vulnerable habitat types.

Critical levels are defined as "concentrations of pollutants in the atmosphere above which direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge". (Source: https://www.icpmapping.org/Definitions_and_abbreviations).

Critical Loads are defined as: " a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge" (Source: https://www.icpmapping.org/Definitions_and_abbreviations).

The critical load relates to the quantity of pollutant deposited from air to the ground, whereas the critical level is the gaseous concentration of a pollutant in the air.

Based on information provided to us by the Applicant – including modelling data and ecological reports, as well as local information from Natural England – we consider that the predicted air emissions from the proposed activity are likely to damage the features of interest within the Teesmouth and Cleveland Coast SSSI. We also do not consider that the supplementary information provided by the Applicant during permit determination is sufficient justification to conclude that the activity is not likely to damage this designated site.

[1] Critical loads and levels have been used by the United Nations Economic Commission for Europe (UNECE) to set targets for reductions in acid rain and the effects of nitrogen on sensitive ecosystems. The system used to work out critical loads has been agreed by the UNECE and is used by individual countries to calculate appropriate standards. Critical loads and levels provide the best available scientific information on the effects of pollutants on ecosystems.

The publicly available 'Air Pollution Information System' (APIS) indicates that Teesmouth and Cleveland Coast SSSI is currently subject to background nutrient nitrogen deposition above the critical load. At this level of deposition damage is likely to be occurring to the sensitive SSSI features. Although the background levels of pollution differ spatially over the SSSI, the background already exceeds the critical load at the location where significant effects (contribution from the proposed permission is >1% of the critical load) are predicted to occur from this proposed permission. This is the key aspect of concern associated with this proposal, process contributions of nutrient nitrogen deposition are significant on the sand dune habitats (grassland) within the Teesmouth and Cleveland Coast SSSI. The predicted process contributions (PCs) of nutrient nitrogen deposition at the sand dune habitat are 1.95% of a critical load of 10 kgN/ha/yr. As the nutrient nitrogen deposition background levels already exceed the critical load at the SSSI the predicted environmental concentration (PEC) which constitutes the contribution from the proposed permission added to the background levels exceeds 100% of the critical load. Approximately 27% of the relevant habitat is affected in this way. The addition of 0.195kgN/ha/yr from the proposed development would therefore act to prevent the restoration of background levels to below the relevant critical load. We are therefore unable to conclude 'not likely to damage' which is a stipulation in the Appendix 4 assessment for this proposal.

Impact on European Sites

A Habitats Regulations Assessment (HRA) was carried out for Teesmouth & Cleveland Coast SPA and Ramsar. We were unable to conclude 'no likely significant effect', and therefore carried out an appropriate assessment. The key concern raised was impacts on the bird species 'Sandwich Tern', which was at most risk of impact from nutrient nitrogen deposition since APIS data suggested they were reliant on dune habitat for breeding. Consultation with Natural England however, confirmed that the Sandwich Tern in this particular area were mostly breeding/roosting on the open beaches and thus were not dependent on the dune habitat potentially impacted by this permission. This meant that they would not be indirectly impacted by any damage or habitat loss on the dune habitats within the SSSI. We were satisfied with this advice provided by Natural England and were therefore able to conclude 'no adverse effect' whilst meeting our legal duties as a competent authority under the Habitats Regulations 2017.

3.2 **How we reached our decision**

3.2.1. Pathway

A geographical information system (GIS) screening was carried out to a distance of 10km from the proposed Installation to identify any relevant European sites in the vicinity of the activity, and to a distance of 2km to identify any relevant Sites of Special Scientific Interest (SSSI) in the vicinity. Teesmouth & Cleveland Coast Special Protection Area (SPA) and Ramsar as well as the overlaying Teesmouth & Cleveland Coast SSSI, were within these

screening distances and so were identified as sites that could be potentially damaged by this activity.

To meet our duty under the Habitat Regulations 2017, a Habitats Regulations Assessment (HRA) was carried out for Teesmouth & Cleveland Coast Special Protection Area (SPA) and Ramsar and, after consultation with Natural England we concluded 'no adverse effect'. To meet our duty under the Wildlife and Countryside Act 1981, an Appendix 4 assessment was carried out for Teesmouth & Cleveland Coast SSSI. The proposed activity included releases of emissions to air in the form of Nitrogen Oxide (NOx), Sulphur Dioxide (SO2), Ammonia (NH3), Hydrogen Fluoride (HF) and fugitive emissions (dust/noise), each potential pollutants was considered in the appendix 4, the conclusions of the assessment are discussed below.

3.2.2 Site condition and nutrient nitrogen deposition

The Teesmouth and Cleveland Coast SSSI units have undergone site condition assessments by Natural England and most are currently in an unfavourable condition (with only 0.77% of the entire site being in a favourable status).

Favourable	**Unfavourable - Recovering**	**Unfavourable – No change**	**Unfavourable - Declining**
0.77%	66.26%	3.36%	29.61%

The Applicant provided isopleths detailing the exact areas of the SSSI where modelling showed a nutrient nitrogen deposition PC above 1% of the critical load (1% is our screening threshold below which we regard impacts as insignificant). From this, we identified the following SSSI units at most risk where the PC is >1%:

Unit	**Status**	**Habitat type**	**Last condition assessment**
2	Unfavourable – Declining	Coastal Sand Dunes	01/03/2018
3	Unfavourable – No change	Coastal Sand Dunes	
4	Unfavourable – Recovering	Coastal and Flood Plain Grazing marsh	
5	Unfavourable – Recovering	Coastal and Flood Plain Grazing marsh	
6	Unfavourable – Declining	Coastal Sand Dunes	
8	Unfavourable – Declining	Coastal Sand Dunes	15/03/2018
11	Unfavourable – Recovering	Coastal and Flood Plain Grazing marsh	01/03/2018
18	Unfavourable – Recovering	Coastal and Flood Plain Grazing marsh	

The unfavourable conditions are due to a range of pressures including water pollution and coastal impacts. Various factors can contribute to water pollution, including nitrogen deposition.

Information from APIS states that nitrogen deposition levels are higher than the relevant critical loads. Using the grid average, the levels of nitrogen deposition surrounding the proposed permission are already between 11.4 – 11.6 kgN/ha/yr, where the critical load ranges between 5-10 kgN/ha/yr.

Nutrient nitrogen deposition can cause ecological impacts in the form of eutrophication, excess nitrogen promotes nitrogen tolerant plant species, increasing rates of succession and altering the natural species make-up of the habitat. This is particularly relevant for the dune habitats present within this SSSI where species richness is negatively affected by nitrogen inputs (APIS), and is true for most sand dune habitats as the plant species present are adapted to poor soil conditions ('Review and revision of empirical critical loads of nitrogen for Europe' Bobbink et al 2022).

Species reliant on this habitat can also be directly affected, for example bird species and invertebrates.

As a regulatory body, the Environment Agency has the following duties as per the Wildlife and Countryside Act 1981:
'…take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest.'

Considering that the designated site is already in an unfavourable condition, allowing an activity which would cause further damage or hinder the site from achieving its objectives would, in our view, be in conflict with our duties under the Wildlife and countryside Act 1981.

3.2.3 SSSI assessment based on original air quality modelling

In order to determine the level of nitrogen deposition from the proposed activity, an air quality assessment was carried out by the Applicant on Teesmouth & Cleveland Coast (revision 1, dated 04/05/23). This was reviewed by our internal specialist modelling team (Air Quality Monitoring Assessment Unit – AQMAU).

The process contributions (PC), meaning the impact from the proposed activity taken in isolation, were compared against the environmental standards outlined in our guidance to ascertain if the emissions were significant.
PCs are screened out as insignificant if:

- The long-term process contribution is less than 1% of the relevant Environmental standard; and
- The short-term process contribution is less than 10% of the relevant Environmental standard.

The long term 1% process contribution insignificance threshold is based on the judgements that:

- It is unlikely that an emission at this level will make a significant contribution to air quality;

- The threshold provides a substantial safety margin to protect health and the environment.

The short term 10% process contribution insignificance threshold is based on the judgements that:

- Spatial and temporal conditions mean that short term process contributions are transient and limited in comparison with long term process contributions;
- The threshold provides a substantial safety margin to protect health and the environment.

For those pollutants which do not screen out as insignificant, we determine whether exceedances of the relevant environmental standard are likely. This is done by adding the PC to the background concentration of each pollutant, to give a predicted environmental concentration (PEC). If the PEC is below 100% then in most circumstances, and in lieu of any other evidence to the contrary, we would not anticipate there to be any likely damage from the proposal.

If the PC is >1% and the PEC is >100% then it is likely that damage could occur. That decision is based on site specific considerations such as the presence and sensitivity of designated features, the background pollution and any measures in place to reduce emissions in the area, or measures to recover relevant features on the site, and not the extent by which 1% is exceeded.

The outcomes from the Applicant's report found that NOx, SO_2 and NH_3, were >1% of the insignificance criteria and therefore would have the potential for a significant effect on the SSSI (Hydrogen Floride screened out <1%). As outlined above, combining the process contributions with the background concentrations allowed us to understand if these process contributions are likely to lead to environmental damage at the designated sites as a result of a combined effect with existing contributions (PEC). The PECs for NOx, SO_2, NH_3 and HF fell below 100% of the critical levels and thus we were able to conclude no risk of toxic contamination from these pollutants. Risk from acidification was also screened out since PCs fell below the 1% insignificance threshold.

Change in nutrients, however, as a result of nitrogen deposition could not be screened out. The long-term process contributions (PC) were found to be above 1% of the critical load and PECs found to be above 100% of the significance threshold. This indicated that damage to the habitats, in particular the sand dune habitats, was likely.

It was noted that the critical loads and background concentrations used in the applicant's air quality assessment were out of date and thus no longer representative. The original report was issued 24/05/19 and since then, new critical loads and background data are now available as a result of a review of critical loads in 2023.

Natural England were contacted on 19/07/23 for clarification over the relevant critical load, and whether the upper limit of the critical load range could be used in assessment for specific habitat types. A response was received on 08/08/23, which advised the lower limit of the critical load range would be appropriate.

The modelling of air emissions to support the Application was undertaken before the May 2023 update of critical loads on APIS, at which time the most conservative value appeared to be 10 kg N/ha/year for the habitats present.

The remainder of Section 3 of this decision document will focus on the predicted impacts of nutrient nitrogen deposition on the Teesmouth and Cleveland Coast SSSI.

3.2.4 SSSI assessment based on version 2 of air quality modelling

A meeting was held on 16/08/2024 between the applicant and the Environment Agency. The applicant was given the opportunity to provide additional information and/or make changes to their proposed operations to enable us to conclude 'not likely to damage' at the SSSI.

This request was subsequently formalised via a further Schedule 5 notice, and the additional information was received on 30/10/2023. This additional information comprised of an air quality Technical Note (titled 'Air Quality Schedule 5 Response' dated 30/10/2023) and Ecology Report (titled 'Response to Schedule 5 Request' dated 30/10/2023). Within the technical note, reasons for the revised modelling were submitted – updated critical loads and background levels were used, as per the updated APIS information, and updated Priority Habitat Inventory (PHI) data was also used.

Figure 1 below shows the process contributions as a percentage of the critical load for nutrient nitrogen deposition. The relevant data for the Teesmouth and Cleveland Coast designated site is shown in the top row.

Table 4: Results – Nitrogen Deposition

Site	NCL Class	Deposition Velocity	Process Contribution			Predicted Environmental Concentration		
			PC N dep (kgN/ha/yr)	%Lower CL	%Upper CL	PEC N dep (kgN/ha/yr)	%Lower CL	%Upper CL
Teesmouth and Cleveland Coast	Low and medium altitude hay meadows	Grassland	0.577	**5.77%**	**2.89%**	14.68	**146.77%**	73.39%
	Coastal dune grasslands (grey dunes) - calcareous type (max in SAC)	Grassland	0.288	**2.88%**	**1.92%**	13.69	**136.88%**	91.25%
	Coastal dune grasslands (grey dunes) - calcareous type (max in SSSI)	Grassland	0.341	**3.41%**	**2.28%**	13.74	**137.41%**	91.61%
	Pioneer, low-mid, mid-upper saltmarshes	Grassland	0.108	**1.08%**	0.54%	14.11	**141.08%**	70.54%
Northumbria Coast	Coastal dune grasslands (grey dunes) - acid type	Grassland	0.021	0.42%	0.21%	12.68	253.62%	126.81%

Figure 1: Impact of nitrogen deposition at ecological sites – provided by the Applicant, as shown on page 2 of the Technical Note.

As shown in Figure 1, using the critical load of 10kgN/ha/year, the predicted PCs are still over 1% and the PECs are over 100% at the different habitat types. The highest impacted habitat is the 'low and medium altitude hay meadows'. The predicted PC is 5.77% of the critical load of 10kgN/ha/year.

Using a background contribution of 14kgN/ha/year and the critical load of 10kgN/ha/year, the PEC is 146.77% of the critical load.

For the ‘coastal dune grasslands (grey dunes) – calcareous type’ habitat the predicted PC for the SSSI is 3.41% of the critical load of 10kgN/ha/year. Using a background contribution of 14kgN/ha/year and the critical load of 10kgN/ha/year, the PEC is 137.41% of the critical load.

Whilst assessment of ‘pioneer, low-mid, mid-upper saltmarshes’ also showed a PC of above 1%, further assessment was not necessary for this habitat since publicly available Natural England mapping data demonstrated that this type of habitat was not present within the impact zones shown by the modelling (process contribution >1% of the critical load)

The Applicant provided an Ecology Report explaining why they believe the activity will not result in damage to the SSSI. Within the report the Applicant states significant emissions are predicted across much of the designated site including the entire North Tees dune system. The Applicant goes onto say the worst impacts are at the eastern part of SSSI Unit 3, which is managed as a golf course and as a result any minor increases in nitrogen deposition would have an insignificant influence on the habitat (compared to golf course maintenance and management activities). With regards to the other areas of dune closer to the coast there is only a 2.88% process contribution. The Applicant suggests, despite this significant contribution, that due to other sources making up the majority of nutrient inputs (such as agriculture) and as the PEC is predicted not to rise above the upper critical load range of 15kg N/ha/yr, they consider this would not lead to likely damage to the SSSI.

The draft outcome of the habitats assessment was ‘likely to damage’ based on the process contributions from the proposed facility, and the impact they will have on the features within the SSSI. The draft Appendix 4 document was sent to Natural England for consultation on 26/01/2024.

Background concentrations were confirmed on 09/02/2024 as between 13 – 14kgN/ha/year. The draft Appendix 4 document, version 2, was sent to Natural England on 13/02/24.

The response from Natural England was received on 11/03/2024. Natural England agreed with the draft conclusion which concluded that the proposed permission was likely to damage the SSSI. They advised that there are no site-specific reasons to use the upper critical load thresholds, and additionally did not agree that the golf course management provided adequate justification given much of the area covered by the golf course constitutes species-rich areas of dune habitat that do not receive intensive management and so aerial deposition of nutrients will likely result in a significant environmental impact.

3.2.5 SSSI assessment based on version 3 of air quality modelling

The Applicant was offered a further opportunity to provide new information, it was recommended that they consider making material changes to the

proposal to achieve process contributions of less than 1% of the critical load for nutrient nitrogen deposition.

A meeting was held on 12/06/2024, between the Applicant, Environment Agency and Natural England. The Applicant presented the outcome of additional modelling. The PCs had been reduced but were still above the 1% insignificance threshold. On 26/06/2024 the Applicant submitted additional information comprising of the updated Air Quality Assessment (and model input files), focusing on the sand dune habitat. An Ecology Technical Note was also provided.

No material changes were made to the proposed activity, but revised assumptions for a number of aspects of the input data were made. Section 2 of the Air Quality Report covers all of the amendments to the dispersion modelling inputs. These included:

- The maximum total annual throughput reduced to 618,800 tonnes.
- Updated stack data:
- Internal diameter = 2.16m.
- Flow = 54.18 Nm^3/s.
- Applying a lower emission limit for NOx of 100 mg/Nm^3.
- Applying a lower emission limit for ammonia of 8 mg/Nm^3 (as guaranteed by the EPC manufacturer).
- Basing the assessment on the average impact (as opposed to maximum impact) over five years of meteorological data.

Figure 2 below shows the process contributions as a percentage of the critical load for nitrogen deposition. The relevant data for the Teesmouth and Cleveland Coast designated site is shown in the first and only row.

Table 2: Nitrogen Deposition Results - Teesmouth and Cleveland Coast SSSI

Site/habitat	Maximum nitrogen deposition as % of lower Critical Load (10 kgN/ha/yr)	
	Original	Revised
Coastal dune grasslands (grey dunes) - calcareous type	3.41%	1.95%

Figure 2: Impact of nitrogen deposition at ecological sites – provided by the Applicant, as shown on page 2 of the Technical Note.

As shown in the table above, using the critical load of 10kgN/ha/year, the predicted PCs remain over 1% at the habitat type within the designated site. It is noted that it also shows higher predicted contributions at the boundary of the SSSI as shown in Figures 1 and 2 of the ecology Technical Note.

The ecology Technical Note provided by the Applicant covers the reduction in predicted PC demonstrated by the revised modelling (as shown in the figure above); the extent of the habitat that will still be impacted by a PC above 1% (it is stated that an additional 19.64ha would have a PC below 1%); and

background level trends. It is concluded that the maximum PC of 1.95% make it very unlikely that the proposed facility would damage the SSSI.

The updated air dispersion modelling was audited by our internal specialist modelling team (Air Quality Monitoring Assessment Unit (AQMAU)) and they agreed with the Applicant's predicted numerical PCs, which are up to 1.95% of a critical load of 10 kgN/ha/yr. It was noted that APIS was showing the critical load range for sand dunes as 5 – 15 kgN/ha/yr. Therefore, AQMAU considered the critical loads of 5 kgN/ha/yr (for coastal dune grasslands – acid type) and 10 kgN/ha/yr (for coastal dune grasslands – calcareous type). Nutrient nitrogen deposition background levels exceed both critical loads within the SSSI, so where the PC is already above 1%, the PEC also exceeds 100% of the critical load.

The Applicant used a critical load for coastal sand dunes of 10kgN/ha/year, as opposed to 5kgN/ha/year, we therefore sought confirmation from Natural England on 12/08/24, and the critical load for coastal sand dunes was confirmed to be 5kgN/ha/year unless good ecological evidence is given to use 10kgN/ha/year.

This additional information provided by the Applicant (the updated Air Quality Assessment and the ecology Technical Note) was shared with Natural England for their advice on 08/08/2024.

We received a response on 05/09/2024 advising that the predicted PC could damage the notified dune habitat of the SSSI over a significant area of the site.

Natural England stated that 90ha of the total 328ha sand dune habitats being potentially damaged by the PCs of this activity was not an insignificant or negligible proportion. This totals to approximately 27% of the designated site being exposed to process contributions above the 1% insignificance threshold. They also noted that there was an area of land within the SSSI that had not yet been assessed, and therefore there could be additional damage happening to unknown habitats and species.

Natural England commented on the current condition of the SSSI stating that all relevant units are in an unfavourable condition and that any level of exceedance above the 1% insignificance threshold, no matter how big or small, will contribute pollutants to the site and result in damage to the protected species and features.

With regards to some of the statements the Applicant has made about their proposal and potential damage, Natural England have responded:

- According to APIS data, there is no decline in the average nitrogen deposition. Data collected from 2003 (when APIS records begun) states the level of nitrogen deposition to be 14.759 kgN/ha/yr. In 2020 it was 13.439 kgN/ha/yr, this gives a reduction of 1.32 kgN/ha across 18 years – an average of 0.07 kgN/ha/yr. A similar pattern is present over

the last ten years with an average reduction of 0.086kgN/ha/yr. Therefore, an addition of 0.195kg/N/ha/yr which the applicant is proposing, would be the equivalent of preventing three additional years of this average reduction alone causing damage to the SSSI and the species and features within it.

- Whilst it is acknowledged that livestock, agricultural developments and transport are contributing to the pollution within the SSSI, these are being investigated and addressed under different regulatory frameworks; instead, the key point to note is that industrial pollution from activities such as this proposed permission is also a significant contributor to pollution upon the SSSI, with data from the National Atmospheric Emissions Inventory suggesting it has been steadily increasing since 2018.

3.3 Our conclusion

The PC is >1% and the PEC is >100% so it is likely that damage could occur unless there are site specific reasons to the contrary. The Applicant has not been able to show that this is the case for their proposals in any of their three modelled scenarios. The finalised air dispersion modelling report, with much of the conservative aspects that we would normally expect in a modelling report removed, predicts a maximum PC of 1.95% at the sand dune habitat within the SSSI. This addition equates to 0.195kgN/ha/yr, a level of deposition which is likely to delay background levels reducing to below the relevant critical load by 2-3 years, based on the average annual reduction in background within the area of impact. There have been no other mitigating arguments presented that have led the Environment Agency to conclude this addition is insignificant and/or is not likely to damage the SSSI.

Within the Applicant's ecology Technical Note, it is stated that the total area of the sand dune habitat within the SSSI can be estimated as 328.6ha and that at only 90.6ha of this the contribution of this proposed permission would exceed the 1% screening threshold. This equates to approximately 27% of the designated habitat, which we do not consider to be an insignificant percentage of the sand dunes habitat.

We have a duty under the Wildlife and Countryside Act 1981 (as amended by the CRoW Act) to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest. With the information provided to date allowing this activity to proceed would run contrary to this duty.

We have consulted Natural England as the primary conservation body, for their advice and have taken this into consideration during our determination.

We have given the Applicant adequate opportunity to provide us with additional information that shows the proposals are not likely to damage the SSSI, we have taken the information submitted into consideration, as well as the advice from Natural England; we conclude that insufficient evidence has

been provided to demonstrate that the proposed facility would not cause damage to the integrity of the sand dune habitat feature of interest associated with the SSSI. In addition to this, we believe allowing the proposal to proceed will hinder the restoration efforts at this SSSI.

Therefore, we have decided to refuse the Application.

Section 4: Issues still to be resolved

As is normal with applications for waste incineration plants, had a permit been issued it would have included a range of pre-operational conditions and improvement conditions. These conditions would have required the Operator to confirm that the details and measures proposed in the Application have been adopted or implemented prior to the operation of the Installation, and to provide the Environment Agency with details that need to be established or confirmed during and/or after commissioning.

The Application has been refused, however, the following issues remain unresolved and would also need to be addressed before a permit could be granted for this site in the future. These are issues where we would require to see information provided prior to the issue of a permit, rather than addressed through pre-operational conditions. As we have decided to refuse the Application it seemed unreasonable to put the Applicant to the expense of trying to resolve the issues at this time.

4.1 Emergency generator

Within the original 'Supporting Information Report' (dated 28/09/22) submitted with the Application, it was stated that an emergency generator would be installed and would be likely to be less than 3 MWe. It would only be used during emergencies and for short periods of testing, which was expected to be less than 50 hours per annum.

We requested the Applicant to confirm what the thermal input capacity (in MWth) of the emergency generator would be (email sent 21/06/23), and their response on 23/06/23 stated it would equate to a thermal input capacity of 5 MWth.

As part of the Schedule 5 Notice for information issued on 17/08/23, we asked for Question 7 (including appendix 1 question 13) of Application Form Part B3 to be completed to provide further details on the proposed emergency generator as it would fall under the Medium Combustion Plant Directive (MCPD).

The updated Application Form Part B3 included responses that the thermal input of the proposed emergency generator would be between 1 – 20 MWth and would be confirmed during the detailed design stage. As such, no MCP specific identifier was provided at this stage. A declaration for exemption under Article 6(8) was not provided; this section of the application form was not completed and a separate declaration was not provided.

We would require further details on the emergency generator before we could issue a permit.

4.2 **Waste codes**

We would have sought further clarification on the proposed waste types. In particular we would have queried the inclusion of waste coded under 20 01 36 which is for discarded electrical equipment.

5 Other considerations

5.1 Other legal requirements

In this section we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

5.1.1 The EPR 2016 and related Directives

The EPR delivers the requirements of a number of European and national laws.

5.1.1.1 Schedules 1 and 7 to the EPR 2016 – **IED Directive**

We address the requirements of the IED in the body of this document above and the specific requirements of Chapter IV in Annex 1 of this document.

There is one requirement not addressed above, which is that contained in Article 5(3) IED. Article 5(3) requires that "In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EC (now Directive 2011/92/EU) (the EIA Directive) applies, any relevant information obtained or conclusion arrived at pursuant to articles 5, 6 and 7 of that Directive shall be examined and used for the purposes of granting the permit."

- Article 5 of EIA Directive relates to the obligation on developers to supply the information set out in Annex IV of the Directive when making an application for development consent.
- Article 6(1) requires Member States to ensure that the authorities likely to be concerned by a development by reason of their specific environmental responsibilities are consulted on the Environmental Statement and the request for development consent.
- Article 6(2)-6(6) makes provision for public consultation on applications for development consent.
- Article 7 relates to projects with transboundary effects and consequential obligations to consult with affected Member States.

The grant or refusal of development consent is a matter for the relevant local planning authority. The Environment Agency's obligation is therefore to examine and use any relevant information obtained or conclusion arrived at by the local planning authorities pursuant to those EIA Directive articles.

In determining the Application we have considered the following documents: -

- The Environmental Statement submitted with the planning application (which also formed part of the Environmental Permit Application).
- The decision of the Hartlepool Borough Council to grant planning permission on 10/07/20.
- The report and decision notice of the local planning authority accompanying the grant of planning permission.
- The response of the Environment Agency to the local planning authority in its role as consultee to the planning process.

The Environment Agency has also carried out its own consultation on the Environmental Permitting Application which includes the Environmental Statement submitted to the local planning authority. The results of our consultation are described elsewhere in this decision document.

5.1.1.2 Schedule 9 to the EPR 2016 – **Waste Framework Directive**

As the Installation involves the treatment of waste, it is carrying out a *waste operation* for the purposes of the EPR 2016, and the requirements of Schedule 9 therefore apply. This means that we must exercise our functions so as to ensure implementation of certain articles of the WFD.

We must exercise our relevant functions for the purposes of ensuring that the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste and that any waste generated is treated in accordance with Article 4 of the Waste Framework Directive. (See also section 4.3.9)

The conditions of the permit would have ensured compliance with Article 4.

We must also exercise our relevant functions for the purposes of implementing Article 13 of the Waste Framework Directive; ensuring that the requirements in the second paragraph of Article 23(1) of the Waste Framework Directive are met; and ensuring compliance with Articles 18(2)(b), 18(2)(c), 23(3), 23(4) and 35(1) of the Waste Framework Directive.

Article 13 relates to the protection of human health and the environment.

Article 23(1) requires the permit to specify:

(a) the types and quantities of waste that may be treated;
(b) for each type of operation permitted, the technical and any other requirements relevant to the site concerned;
(c) the safety and precautionary measures to be taken;
(d) the method to be used for each type of operation;
(e) such monitoring and control operations as may be necessary;
(f) such closure and after-care provisions as may be necessary.

Article 23(4) relates to energy efficiency.

Article 35(1) relates to record keeping and its requirements are delivered through permit conditions.

Had we issued a permit, it would have ensured the other requirements referred to above would have been met.

5.1.1.3 Schedule 22 to the EPR 2016 – **Water Framework and Groundwater Directives**

To the extent that it might lead to a discharge of pollutants to groundwater (a "groundwater activity" under the EPR 2016), the Permit would have been subject to the requirements of Schedule 22, which delivers the requirements of EU Directives relating to pollution of groundwater. The Permit would have required the taking of all necessary measures to prevent the input of any hazardous substances to groundwater, and to limit the input of non-hazardous pollutants into groundwater so as to ensure such pollutants do not cause pollution, and satisfies the requirements of Schedule 22.

Had we issued a permit, it would have ensured the requirements referred to above would have been met.

5.1.1.4 Directive 2003/35/EC – **The Public Participation Directive**

Regulation 60 of the EPR 2016 requires the Environment Agency to prepare and publish a statement of its policies for complying with its public participation duties. We have published our public participation statement.

This Application has been consulted upon in line with this statement, as well as with our guidance RGS6 on Sites of High Public Interest, which addresses specifically extended consultation arrangements for determinations where public interest is particularly high. This satisfies the requirements of the Public Participation Directive.

A summary of the responses received to our consultations and our consideration of them is set out in Annex 1.

5.1.2 National primary legislation

5.1.2.1 **Environment Act 1995**

(i) Section 4 (Pursuit of Sustainable Development)

We are required to contribute towards achieving sustainable development, as considered appropriate by Ministers and set out in guidance issued to us. The Secretary of State for Environment, Food and Rural Affairs has issued *The Environment Agency's Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002)*. This document:

> "*provides guidance to the Agency on such matters as the formulation of approaches that the Agency should take to its work, decisions about priorities for the Agency and the allocation of resources. It is not directly applicable to individual regulatory decisions of the Agency*".

The Environment Agency considers that it has pursued the objectives set out in the Government's guidance, where relevant, and that our decision takes into account of the Section 4 duty.

(ii) Section 5 (Preventing or Minimising Effects of Pollution of the Environment)

We are satisfied that our pollution control powers have been exercised for the purpose of preventing or minimising, remedying or mitigating the effects of pollution.

(v) Section 7 (General Environmental Duties)

This places a duty on us, when considering any proposal relating to our functions, to have regard amongst other things to any effect which the proposals would have on sites of archaeological, architectural, or historic interest; the economic and social well-being of local communities in rural areas; and to take into account any effect which the proposals would have on the beauty or amenity of any rural or urban area or on any such flora, fauna, features, buildings, sites or objects.

The Environment Agency considers that our decision takes into account this duty.

(vi) Section 39 (Costs and Benefits)

We have a duty to take into account the likely costs and benefits of our decisions on the applications ('costs' being defined as including costs to the environment as well as any person). This duty, however, does not affect our obligation to discharge any duties imposed upon us in other legislative provisions.

We consider our decision is reasonable and necessary to prevent damage the features of interest within the Teesmouth and Cleveland Coast SSSI.

(viii) Section 81 (National Air Quality Strategy)

We have had regard to the National Air Quality Strategy and consider that our decision complies with the Strategy.

We have also had regard to the clean air strategy 2019 and consider that our decision complies with the Strategy.

We have had regard to the National Air Pollution Control Programme (set under the National Emissions Ceiling Regulations 2018) and consider that our decision complies with the Strategy.

5.1.2.2 **Section 108 Deregulation Act 2015 – Growth duty**

We 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.

Paragraph 1.3 of the statutory guidance issued by the Department of Business, Energy and Industrial Strategy in March 2017 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 our decision is reasonable and necessary to prevent damage the features of interest within the Teesmouth and Cleveland Coast SSSI.

5.1.2.3 **Human Rights Act 1998**

We have considered potential interference with rights addressed by the European Convention on Human Rights in reaching our decision and consider that our decision is compatible with our duties under the Human Rights Act 1998. In particular, we have considered the right to life (Article 2), the right to a fair trial (Article 6), the right to respect for private and family life (Article 8) and the right to protection of property (Article 1, First Protocol). We do not believe that Convention rights are engaged in relation to this determination.

5.1.2.4 **Countryside and Rights of Way Act 2000 (CROW 2000)**

Section 85 of this Act imposes a duty on Environment Agency to have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty (AONB). There is no AONB which could be affected by the proposed Installation.

5.1.2.5 **Wildlife and Countryside Act 1981**

Under section 28G of the Wildlife and Countryside Act 1981 the Environment Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest. Under section 28I the Environment Agency has a duty to consult Natural England in relation to any permit that is likely to damage SSSIs.

We assessed the Application and concluded that the proposed Installation is likely to damage the special features of the Teesmouth and Cleveland Coast SSSI. This was recorded on a CROW Appendix 4 form.

We have consulted Natural England and taken their advice into consideration.

We conclude that insufficient evidence has been provided to demonstrate that the proposed facility would not cause damage to the integrity of the sand dune habitat feature of interest associated with the SSSI. In addition to this, we believe allowing the proposal to proceed will hinder the restoration efforts at this SSSI. Therefore we have refused the Application. Our decision takes into account our duty under the Wildlife and Countryside Act 1981.

The Wildlife and Countryside Act (CRoW) assessment is summarised in greater detail in section 3 of this document. A copy of the full Appendix 4 Assessment can be found on the public register.

5.1.2.6 **Natural Environment and Rural Communities Act 2006**

Section 40 of the Natural Environment and Rural Communities Act 2006 has been amended with effect from 1 January 2023 to require consideration of the general biodiversity objective, which is to further the conservation and enhancement of biodiversity through the exercise of our functions.

The Environment Agency considers that our decision takes into account this duty.

5.1.2.7 Countryside Act 1968

Section 11 imposes a duty on the Environment Agency to exercise its functions relating to any land, having regard to the desirability of conserving the natural beauty and amenity of the countryside including wildlife.

The Environment Agency considers that our decision takes into account this duty.

5.1.2.8 National Parks and Access to the Countryside Act 1949

Section 11A and section 5(1) imposes a duty on the Environment Agency when exercising its functions in relation to land in a National Park, to have regard to the purposes of conserving and enhancing the natural beauty, wildlife and cultural heritage of the areas, and of promoting opportunities for the understanding and enjoyment of National Parks by the public.

There is no National Park which could be affected by the proposed Installation.

5.1.3 National secondary legislation

5.1.3.1 **Conservation of Habitats and Species Regulations 2017**

We assessed the Application in accordance with our guidance and concluded that for the purposes of the Habitats Regulations there will be likely significant effects on any European Site and undertook an Appropriate Assessment (Habitats Regulations Assessment Stage 2) of those effects.

An appropriate assessment was carried out for Teesmouth & Cleveland Coast SPA and Ramsar. We consulted Natural England, and they provided site-specific advice. We were satisfied with this advice and were therefore able to conclude 'no adverse effect' whilst meeting our legal duties as a competent authority under the Habitats Regulations 2017.

The Habitats Regulations Assessment is summarised in section 3 of this document. A copy of the Habitats Regulations Assessment can be found on the public register.

We have also considered our general duties under Regulation 9(3) to have regard to the requirements of the Habitats Directive in the exercise of our powers and under Regulation 10 in relation to wild bird habitat to take such steps in the exercise of their functions as they consider appropriate so far as lies within our powers to secure preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds.

5.1.3.3 **The Persistent Organic Pollutants Regulations 2007**

Had we issued a permit our approach would have taken these Regulations, which give effect to the Stockholm Convention on POPs and the EU's POPs Regulation, into consideration.

5.1.4 Other relevant legal requirements

5.1.4.1 Duty to Involve

Section 23 of the Local Democracy, Economic Development and Construction Act 2009 require us where we consider it appropriate to take such steps as we consider appropriate to secure the involvement of interested persons in the exercise of our functions by providing them with information, consulting them or involving them in any other way. Section 24 requires us to have regard to any Secretary of State guidance as to how we should do that.

The way in which the Environment Agency has consulted with the public and other interested parties is set out in section 1.3 of this document. The way in which we have taken account of the representations we have received is set out in Annex 1. Our public consultation duties are also set out in the EP Regulations, and our statutory Public Participation Statement, which implement the requirements of the Public Participation Directive. In addition to meeting our consultation responsibilities, we have also taken account of our guidance in Environment Agency Guidance Note RGS6.

Annexes

Annex 1: Consultation responses

A) Advertising and consultation on the Application

The Application has been advertised and consulted upon in accordance with the Environment Agency's Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies of consultation responses have been placed on the Environment Agency public register.

The Application was advertised on the Environment Agency website from 23/06/23 to 21/07/23 and in the Hartlepool Mail on 23/06/23. The Application was made available to view at the Environment Public Register.

The following statutory and non-statutory bodies were consulted: -

- Local Authority – Planning
- Local Authority – Environmental Health
- Food Standards Agency
- Health and Safety Executive
- UK Health and Safety Agency
- Local Fire Service

1) Consultation responses from Statutory and Non-Statutory Bodies

Response received from
Hartlepool Borough Council – Environmental Protection on 27/06/23
Brief summary of issues raised
The Environmental Protection section is not aware of any current noise or other amenity issues at the site, and have no current enforcement action that the Environment Agency may need to be aware of.
Summary of actions taken or show how this has been covered
None required.

Response received from
Northern Gas on 27/06/23
Brief summary of issues raised

No concerns raised in relation to the environmental permit application.
Summary of actions taken or show how this has been covered
None required.

Response received from
National Grid on 28/06/23
Brief summary of issues raised
No concerns raised in relation to the environmental permit application.
Summary of actions taken or show how this has been covered
None required.

Response received from
Cleveland Fire Brigade on 30/06/23
Brief summary of issues raised
Overall, the proposed development would not be expected to have a large impact on Cleveland Fire Brigade (CFB) on a day-to-day basis. Advised consideration of vehicle movements, having a dedicated Responsible Person or Persons (RP), undertaking familiarisation visits, and risk of arson. Comments relating to the storage of ammonium hydroxide on site; should be stored away from any sources of heat to prevent becoming an issue should a fire occur.
Summary of actions taken or show how this has been covered
None required as the Application has been refused. Had a permit been issued, consideration would have been given to appropriate storage of raw materials and ensuring an approved Fire Prevention Plan would be implemented.

Response received from
UK Health Security Agency (UKHSA) on 20/07/23
Brief summary of issues raised
The main emissions of potential concern are the point source emissions arising from the combustion of waste materials. We note the atmospheric pollution control and abatement technologies proposed for the installation, as outlined in the application. We also note the conclusions of the air quality assessment, including the atmospheric dispersion modelling, and those of the human health risk assessment. We are satisfied that a robust approach has been used when undertaking these assessments and agree with the conclusions drawn that all potential air quality impacts would have an insignificant effect and that the emissions would not result in any appreciable health risk. UKHSA has reviewed research undertaken to examine the suggested links between emissions from municipal waste incinerators and effects on health (https://www.gov.uk/government/publications/municipal-waste-incinerators-emissions-impact-on-health). UKHSAs risk assessment is that modern, well run and regulated municipal waste incinerators are not a significant risk to public health. While it is not possible to rule out adverse health effects from these incinerators completely, any potential effect for people living close by is likely to be very small. This view is based on detailed assessments of the effects of air pollutants on health and on the fact that these incinerators make only a very small contribution to local concentrations of air pollutants. Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants and address inequalities (in exposure) and encourage their consideration during site design, operational management, and regulation. Based on the information contained in the application supplied to us, UKHSA has no significant concerns regarding the risk to the health of the local population from the installation. This consultation response is based on the assumption that the permit holder shall take all appropriate measures to prevent or control pollution, in accordance with the relevant sector guidance and industry best practice.
Summary of actions taken or show how this has been covered
None required.

Response received from
Food Standards Agency (FSA) on 21/07/23
Brief summary of issues raised
It was concluded that the operation of the proposed development will not result in appreciable health risks.
Summary of actions taken or show how this has been covered
None required.

2) <u>Consultation responses from Members of the Public and Community Organisations</u>

a) <u>Representations from Local MP, Councillors and Parish / Town / Community Councils</u>

No responses were received.

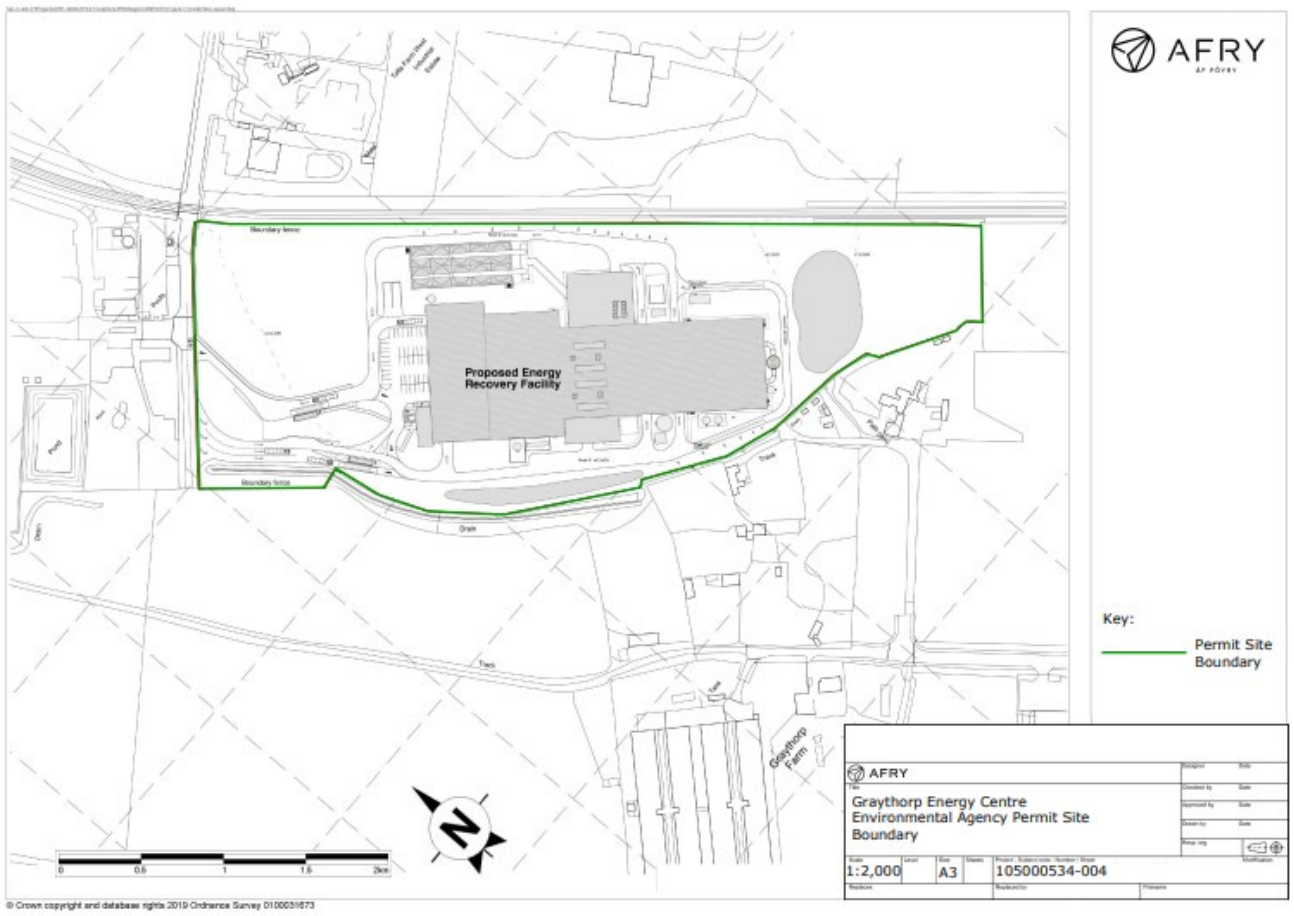
b) <u>Representations from Community and Other Organisations</u>

No responses were received.

c) <u>Representations from Individual Members of the Public</u>

A total of one response was received from individual members of the public. No concerns were raised in relation to the environmental permit application.

Annex 2: Site plan



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Annex 3: Application timeline

Within this section the Application timeline for key dates and an overview in relation to the SSSI assessment is covered.

October 2022

- 14th October 2022 – Application for a waste incineration plant submitted.

March 2023

- 24th March 2023 – Application duly made.

June 2023

- 23rd June 2023 – The Application was advertised on the Environment Agency website and in the Hartlepool Mail for external consultation and publicising.

July 2023

- 5th July 2023 – Applicant initially advised of habitats concerns via email.
- 19th July 2023 – Contacted Natural England for clarification over critical loads.
- 21st July 2023 – End of external consultation and publicising period.

August 2023

- 8th August 2023 – Natural England response received.
- 16th August 2023 – Meeting between the Applicant and the Environment Agency.

September 2023

- 13th September 2023 – Applicant provided opportunity to submit additional information prior to consultation with Natural England.

October 2023

- 19th October 2023 – Schedule 5 Notice issued.
- 30th October 2023 – Response to Schedule 5 Notice received. Comprising of an air quality Technical Note (titled ‘Air Quality Schedule 5 Response’ dated 30/10/2023) and Ecology Report (titled 'Response to Schedule 5 Request’ dated 30/10/2023).

January 2024

- 26th January – Draft Appendix 4 document sent to Natural England for consultation.

February 2024

- 13th February 2024 – Draft Appendix 4, version 2, sent to Natural England for consultation.

March 2024

- 11th March 2024 – Consultation response received from Natural England.
- 22nd March 2024 – Applicant provided opportunity to submit additional information by 22/04/24.

April 2024

- 15th April 2024 – Due to the Ministerial direction to temporarily pause the determination of environmental permits for new waste incineration facilities received 05/04/24, the deadline to provide the additional information was extended to 31/05/24.

May 2024

- 30th May 2024 – Applicant requested a deadline extension, and we confirmed agreement to extend to 30/06/24.

June 2024

- 12th June 2024 – Meeting with the Applicant, Natural England and Environment Agency.
- 26th June 2024 – Additional information received, comprising of updated Air Quality Assessment (and model input files) and Ecology Technical Note.

August 2024

- 8th August 2024 – Additional information shared with Natural England for their input.

September 2024

- 5th September 2024 – Response received from Natural England.