Permitting decisions

Variation

We have decided to grant the variation for SUEZ Suffolk Energy from Waste Facility operated by SUEZ Recycling and Recovery Suffolk Ltd.

The variation number is EPR/WP3438HZ/V007

We have also carried out an Environment Agency initiated variation to the permit.

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 summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

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 checklist to show how all relevant factors have been taken into account
- explains why we have also made an Environment Agency initiated variation
- summarises the engagement carried out because this is a site of high public interest
- 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.

The variation permits the following operational change to permit:

- Increase to the annual limit permitting the amount of waste able to be incinerated by the plant from a limit of 269,000 tonnes per annum to 295,000 tonnes per annum.

We have also amended a number of conditions in the permit to reflect the updated permit template for this sector. We have also included a pre-operational condition for future development.

Justification for the proposed increase is detailed in the application, in summary the existing throughput limit has been based on processing waste with a net calorific value (NCV) of 9.8MJ/kg. The facility however has been designed to process waste with a range of NCVs (7.8 to 12.5MJ/kg), allowing for the lower range of NCV of the waste the facility is capable of processing a higher tonnage per hour of waste than is currently permitted under the permit. The Operator has therefore requested an increase to the existing tonnage limit

based on the processing capacity of the lower range of NCV of the waste. We are satisfied that this is appropriate.

There are no proposed changes to emissions to controlled water or sewer. There are no changes to waste processing techniques. Waste types are unchanged and there will not be any changes to the quantity or arrangements for the storage of waste within the facility. There has been a small increase in the generation capacity (23.6MWe to 25.2MWe), this is due to the Facility being more efficient than originally anticipated and a larger turbine was installed which means that it generates more electricity than originally estimated.

Key issues of the decision

The key issue arising during this determination was emissions to air. We therefore describe how we determined this issue in more detail in this document.

Air quality

An Air Quality Risk assessment and Human Health Risk Assessment was carried out as part of the original permit determination. The assessments were updated for this variation application. The updated assessments concluded that levels of pollutants emitted to air following the proposed increase in throughput limit will not result in the exceedance of a relevant Environmental Standard (ES) and will not result in significant pollution of the environment or harm to human health.

The new assessments submitted with the Variation Application reflects the proposed operational change to annual throughput. The operational change results in variations to the flue gas flows, emission rates of pollutants and exit velocities of the gases, as compared to the original permit assessment. This means the original assessments are no longer valid and therefore a new updated assessments have been submitted.

The new air quality assessment assessed the Installation's potential emissions to air against the relevant air quality standards, and the potential impact upon human health and nearby conservation and habitat sites. The assessment predicts the potential effects on local air quality from the Installation's stack emissions using the ADMS 5.2 dispersion model, which is a commonly used computer model for regulatory dispersion modelling. The model used 5 years of meteorological data collected from the weather station at Wattisham Airfield weather station between 2014 and 2018. The impact of the terrain surrounding the site upon plume dispersion was considered in the dispersion modelling.

The air quality impact assessments, and the dispersion modelling upon which they were based, employed the following assumptions.

- First, they assumed that the Emission Limit Values (ELVs) in the Permit would be the maximum permitted by Article 46(2) and Annex VI of the Industrial Emission Directive (IED). These substances are:
    - Oxides of nitrogen (NO_x), expressed as NO_2
    - Total dust
    - Carbon monoxide (CO)
    - Sulphur dioxide (SO_2)
    - Hydrogen chloride (HCl)
    - Hydrogen fluoride (HF)
    - Metals (Cadmium, Thallium, Mercury, Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel and Vanadium)
    - Polychlorinated dibenzo-para-dioxins and polychlorinated dibenzo furans (referred to as dioxins and furans)
    - Gaseous and vaporous organic substances, expressed as Total Organic Carbon (TOC)
- Second, they assumed that the Installation operates continuously at the relevant long-term or short-term ELVs, i.e. the maximum permitted emission rate
- Third, the model also considered emissions of pollutants not covered by Annex VI of IED, specifically:

    - ammonia (NH_3) - emission rate based on emission of 10 mg/m^3
    - polycyclic aromatic hydrocarbons (PAH) – emission rate based on highest recorded concentration of Benzo(a)pyrene from the Environment Agency's public register.
    - Polychlorinated biphenyls (PCBs) - emission rates used in the modelling have been drawn from data in the Waste Incineration BREF.

We are in agreement with this approach. The assumptions underpinning the model have been checked and are precautionary.

The way in which the Operator used dispersion models, its selection of input data, use of background data and the assumptions it made have been reviewed by the Environment Agency's modelling specialists to establish the robustness of the Operator's air quality impact assessment. The output from the model has then been used to inform further assessment of health impacts and impact on habitats and conservation sites.

Our review of the Operator's assessment leads us to agree with the Operator's conclusions. We have also audited the human health impact assessment and similarly agree that the conclusions drawn in the report are acceptable.

The Operator's conclusions are summarised as follows:

Human impacts

The Operator's assessment concluded that there would be no predicted exceedances of any Environmental Standards (ES) at the point of maximum impact or at a human sensitive receptor resulting from the varied installation. In addition, all of the process contributions (PCs) resulting from the varied installation would be less than those predicted for the existing installation. This is due to the increase in flue gas exit velocity from the varied installation, causing greater dispersion of emissions and resulting in lower ground level impacts.

Note that the standard for dioxin has recently changed. The previous standard was tolerable daily intake (TDI) for dioxins is 2pg/kg bodyweight. This has been changed to a tolerable weekly intake (TWI) 2pg/kg bodyweight, in effect a 7 fold decrease. The Operator assessed against the previous standard in their application, however we have carried out own checks against the new TWI standard and we are satisfied that the PC is likely to be significantly lower than the threshold.

We are therefore satisfied that conclusions for the existing air quality assessment and human health risk assessment remain valid and the proposed change to throughput will not lead to significant pollution and no significant harm to human health.

Ecological impacts

There are a number of ecological receptors within the relevant screening distance of the installation. These are:

Habitat sites (i.e. Special Areas of Conservation (SAC), Special Protection Area (SPA) and Ramsar) sites located within 10km of the installation:

- Stour and Orwell Estuaries SPA, Ramsar and SSSI

The following Sites of Special Scientific Interest (SSSI) are located within 2Km of the installation:

- Great Blakenham Pit SSSI; Little Blakenham Pit SSSI; and Sandy Lane Pit SSSI

There are also 17 Local wildlife sites and 1 ancient Woodland within 2km of the installation.

The only potentially significant impact from the installation on these receptors is from emissions to air. In particular from oxides of nitrogen (NOx), ammonia, sulphur dioxide, hydrogen chloride, nutrient nitrogen, acid deposition. As discussed above the Operator has used air dispersion modelling to predict the impact on the ecological sites as a result of the proposed increase in throughput. The assessment showed:

At the habitat site and SSSIs the short-term (24-hour mean), PC of all pollutants is predicted to be <10% of the relevant critical level.

Long-term (annual mean) PCs are predicted to be <1% of all the relevant critical levels at the Habitat Site and SSSIs, with the exception of annual mean ammonia at the Little Blakenham Pit SSSI, which was

predicted to be 1.2% of the critical level from the existing installation however this is predicted to reduce to 1.0% of the critical level from the varied installation. Therefore the impact is reducing.

At all the locally designated sites, all short-term and long-term PCs are predicted to be below the relevant critical levels and loads.

We are therefore satisfied that the proposed increase in throughput will not lead to a significant increase in impact at any of the ecological receptors.

We have completed a Stage 1 Habitat Risk Assessment which has concluded 'no likely significant effect'; and an Appendix 4 CRoW Assessment which has conclude that the proposals are not likely to damage any of the flora, fauna or geological or physiological features which are of special interest of the SSSIs. Both assessment have been sent to Natural England for information only.

Odour

There are no proposed changes to operating techniques in relation to odour management. Waste types will remain unchanged and amount of waste stored on site at any one time will not increase. We are therefore satisfied the proposed increase in throughput will not result in a significant increase in the risk of odour pollution from the site.

Noise

We have reviewed the existing noise assessment and we are satisfied that the proposed increase in throughput will not result in significant increase in noise levels from the installation and therefore there will be no significant increase in the risk of noise pollution from the installation.

Raw material and residue generation

The proposed increase in waste throughput will result in a proportional increase in raw material usage (e.g. lime, carbon, urea and diesel). We have reviewed the Operator's techniques for the storage and handling of raw materials and we are satisfied that they remain appropriate and there will be no increased risk of pollution.

Also with regards to residue generation (i.e. incinerator bottom ash, air pollution residues) there will be a proportional increase, again we have reviewed the Operator's techniques for the storage and handling of residues and we are satisfied that they remain appropriate and there will be no increased risk of pollution.

Accident Risk

There will not be any changes to the quantity or arrangements for the storage of waste within the facility. We are therefore satisfied that that there will be no increased risk of accidents or fire at the facility.

Pre-operational condition

We have included a pre-operational condition for future development (Table S1.4). The existing permit allows the Operator to repackage and encapsulate waste and store outside in the current IBA treatment area in the event of a breakdown. Storing waste outside has the potential to increase the risk of fire, odour, noise pests and dust. As it stands the Operator has not had to store this waste outside. We have decided that it is appropriate for the Operator to submit for approval odour, noise, pest and dust management plans; and a fire prevention plan. This must be submitted and approved before the waste can be stored outside. We have also added a limit to activity AR4 in table S1.1, the limit reflects requirement of the pre-operational condition.

Update to permit conditions

We have updated a number the permit conditions as a part of this variation. They have mainly been updated to remove reference to 'WID' (Waste Incineration Directive), this directive has been superseded by the Industrial Emissions Directive. Other changes reflect the updated permit template for the Energy from waste sector and includes the inclusion of standard conditions cover pests; fire prevention; energy efficiency; reporting and notification; and periodic groundwater and soil monitoring.

Condition 3.5.5 has also been updated to include conditions relating to the 10-minute averaging period for carbon monoxide monitoring in table S3.1.

We have also removed all the pre-operational conditions that were set in the original permit. All these conditions are now satisfied.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
Consultation/Engagement	
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement. The application was publicised on the GOV.UK website. We consulted the following organisations: • Food Standards Agency • Health and Safety Executive • Public Health England • Director of Public Health • Environmental Department Babergh and Mid Suffolk Council, Suffolk County Council and Ipswich Borough Council. • Local Planning Authority. The comments and our responses are summarised in the consultation section.
The site	
Biodiversity, heritage, landscape and nature conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process. We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified. See 'Key issues' above for further details of our assessment.
Environmental risk assessment	
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. See 'Key Issues' section above for further details of our assessment.

Aspect considered	Decision
Operating techniques	
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.
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit(s).
Pre-operational conditions	We have included a pre-operational condition for future development See 'Key Issues' above for further details.
Emission limits	No emission limits have been added, amended or deleted as a result of this variation.
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – 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. 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

Aspect considered	Decision
	businesses in this sector and have been set to achieve the required legislative standards.

Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from
Suffolk County Council
Brief summary of issues raised
No significant concerns raised. A comment that any effects on air quality are fully considered given the impact particulate matter, especially PM2.5 and PM10, can have on the wider public health.
Summary of actions taken or show how this has been covered
As discussed in the 'Key Issues' section above the Operator has carried out an Air Quality Assessment and we are satisfied that the proposed change to the throughput limit will not cause an exceedance of an air quality standard, including $PM_{2.5}$ and PM_{10}.

Response received from
Public Health England
Brief summary of issues raised
Based on the information contained in the application supplied to us, Public Health England has no significant concerns regarding the risk to the health of the local population from the installation.
Summary of actions taken or show how this has been covered
None required.

Response received from
Ipswich Borough Council – Environment Health Officer
Brief summary of issues raised
Concern raised about where the additional waste will come from and how it will be transported to site, as this may cause a significant change in HDV/LDV flows on local roads with relevant receptors. The air quality assessment does not consider this.
Summary of actions taken or show how this has been covered
Where waste will be sourced from and movement of traffic to and from the Installation is outside the remit of the Environment Agency but will normally be an issue for the planning authority to consider. As such we would not require an air quality assessment submitted with an environmental permit application to consider emissions from traffic movements on local roads.