

## Permitting Decisions- Variation

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We have decided to grant the variation for Etex Building Performance operated by Etex Building Performance Limited.

The variation number is EPR/XP3036SZ/V008.

The variation permits the expansion of plasterboard operations at the operator's manufacturing facility in Bristol, introducing a second production line (referred to as BL4) that effectively doubles the production capacity. The installation boundary is extended to include the land on which the new production line is located, adjacent to the existing facility.

The new production line has generated a need for a ball mill accelerator product (BMA) used in the plasterboard manufacturing process. This requires a new workshop (the 'BMA workshop') and a replacement ball mill which grinds, blends and reduces lignosulphonate and BMA to finer particulates. The workshop and ball mill are located within the existing main warehouse and utilise existing storage infrastructure. This is the only change to the existing plasterboard manufacturing line (referred to as BL1/BL2) as a result of this variation. There are no new emission points associated with the BMA workshop and ball mill.

In addition to the variation applied for by the operator, we have incorporated Environment Agency initiated changes to modernise the permit in accordance with the current permit template and to correct errors in the permit with respect to waste operations on site.

During determination, we agreed to the operator's request to remove all waste codes from Table S2.2 (Permitted Wastes) except:

- 10 01 05 - calcium-based reaction wastes from flue-gas desulphurisation in solid form
- 10 01 07 - calcium-based reaction wastes from flue-gas desulphurisation in sludge form
- 19 12 12 - recovered gypsum that does not meet PAS109 classification.

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

## Purpose of this document

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

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

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

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

## Key issues of the decision

The new production line (BL4), and associated storage, is located within new dedicated buildings and will largely operate independently from the existing plasterboard production process. However there will be a degree of interconnection (storage of raw materials and finished products) with the existing plant, referred to as production line (BL1/BL2).

The new gypsum storage building directly receives gypsum deliveries from the port (Royal Portbury Docks, Bristol) via an extension from the existing conveyor belt that already serves production line BL1/BL2.

As is the case for production line BL1/BL2, production line BL4 is anticipated to operate 24 hours a day.

## BAT assessment

We have reviewed the measures proposed by the operator and compared them against the indicative Best Available Techniques (BAT) and Best Available Technology Not Entailing Excessive Costs (BATNEEC) which are primarily set out in Process Guidance Note 3/12(04) Secretary of State's guidance for Plaster Processes and emission limit values and standards for new plant as set out in our most recent permit template.

A summary of the key operating techniques is provided below. We are satisfied that these measures represent BAT for the installation.

The operator's environmental management system meets the ISO14001 standard and will be updated to include the new production line and includes staff training, planned and reactive maintenance and record keeping.

A Supervisory Control and Data Acquisition (SCADA) software system will be installed at production line BL4, with individual plant operated automatically with supervision from the control centre via an on-line system. The SCADA software will operate continuously, gathering and analysing real time data, communicating any faults (via alarms) to dedicated personnel. These personnel will follow relevant operational or emergency management procedures to investigate and rectify the faults.

In summary, the process comprises the following principal stages:

- Delivery, offloading and storage of raw materials
- Transfer and initial crushing of gypsum
- Ball mill and BMA workshop (BMA is 90% ground gypsum and 10% calcium lignosulfonate)
- Calcining and milling of gypsum
- Forming, drying and cutting of plaster products
- Product storage and dispatch to customers
- Waste management and recovery
- Truck wheel wash bay
- Utilities and ancillary operations.

Currently, gypsum rock (calcium sulphate dehydrate) and recovered plaster gypsum are imported by ship and road to Royal Portbury Dock, to the north of the site, and subsequently transported to the existing gypsum store via covered conveyor. This process will continue, although the conveyor will be reconfigured to additionally service a new gypsum store, which is an enclosed facility.

The gypsum is crushed, milled and heated, or fed into a calciner and heated, to produce dried gypsum plaster (stucco). The stucco is combined with water and other additives to produce a slurry which is extruded, cut and dried to form plasterboard and coving. The products are stored on-site prior to dispatch. Waste plasterboard generated during production will be recycled back into the process.

The new production line has generated the need for a ball mill accelerator product (BMA) used in the plasterboard manufacturing process. This requires a new workshop (the 'BMA workshop') and a replacement ball mill which grinds, blends and reduces lignosulphonate and BMA to finer particulates. The workshop and ball mill are located within the existing main warehouse and utilises existing storage infrastructure. There are no new emission points associated with the new workshop.

The storage silos are fully contained structures equipped with dust filters to abate emissions of displaced air containing particulate matter during loading and unloading operations. Material from the silos is delivered to lorry using a fully enclosed telescopic chute, operated to the appropriate drop height for the

specific height and type of lorry. The chute is enclosed within a sleeve connected to dust abatement. All vehicles transporting materials from the silos will be fully enclosed. The silos are equipped with high-level alarms to prevent overflowing and loss of containment.

A number of direct fired natural gas dryers and burners operate continuously to provide the energy to dry and heat the raw materials. The aggregated thermal input of the new plant is approximately 51 MWth (plasterboard dryer: 32 MWth, calciner: 19 MWth). Natural gas arrives on site via underground pipework with no requirement for additional storage on site.

The principal emissions to air comprise:

- combustion gases venting through three main stacks (emission points A32, A52, A49, with emission point A51 being an emergency stack), and
- particulate matter from the processing of gypsum (emission points A33 – A50, which are each fitted with a fabric filter to abate emissions to less than 10 mg/m<sup>3</sup>, prior to discharge to atmosphere).

Existing emission points remain unchanged in Table S3.1 of the permit.

### **Point source emissions to air**

Point source emissions to air (combustion products from the new dryers and particulate matter emissions from gypsum processing) are minimised through process design (including measures such as low-NOx burners and fabric filter dust abatement), proactive maintenance and process optimisation via the automated SCADA control system.

In line with the Environment Agency's guidance, we require applicants to submit an air emissions risk assessment to assess the predicted impacts on human receptors and ecological sites, as appropriate.

As part of the variation application, the operator submitted detailed air dispersion modelling and impact assessment to assess the predicted impacts on human receptors (for example residential dwellings) and ecological sites, as appropriate.

A revised version of the assessment was subsequently received during determination, titled Air Quality Assessment for Environmental Permit: Etex Bristol Substantial Permit Variation, reference J10\_12012B\_10/1/F2 and dated 06 October 2023. The revisions to the modelling included the recalculation of emissions from the calciner and stucco cooler, which combine in the main stack (emission point A49) and the application of sector specific reference conditions, which do not align with combustion reference conditions (despite arising from combustion plant). This is because the hot gases are specifically used for drying, the result being that oxygen and moisture content of the exhaust gases are severely influenced by the drying process.

The operator considered the impacts from emissions of nitrogen dioxide (NO<sub>2</sub>) and particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) on human health and oxides of nitrogen (NO<sub>x</sub>) and nutrient nitrogen and acid deposition on ecological receptors.

The operator confirmed that although the raw materials used the process contain sulphur in the form of calcium sulphate dihydrate, and whilst this material undergoes a thermal drying process, the material does not undergo combustion which would result in conversion of the sulphate to sulphur dioxide. The thermal drying processes evaporate the water from the hydrate to leave calcium sulphate. The fuel used for the thermal drying processes is natural gas which has a negligible sulphur content. Emissions of sulphur oxides were therefore not considered further in the air quality impact assessment.

ADMS 5.2 and ADMS-Roads dispersion modelling software was used, together with five years of meteorological data (2017-2021) from the Bristol Lulsgate meteorological monitoring station.

As a worst-case scenario, it was assumed the site operated continuously (8760 hours per year) and emissions from the existing facility were included in the assessment for completeness, acknowledging that there will be some double-counting to the extent they are also included in background concentrations.

The following ecological receptors are within relevant screening distances: Avon Gorge Woodlands Special Area of Conservation (SAC), Severn Estuary SAC, Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and Ramsar (the 'Severn Estuary') as well as a number of local wildlife sites, nature reserves and ancient woodland.

We have reviewed the assessment and note that the operator did not assess impacts at all relevant local ecological receptors. Other than this, we are satisfied that the operator's assessment has taken into account all relevant ecological and human health receptors, that the model and its inputs are appropriate and that the assessment has been carried out in accordance with our guidance. In our audit of the modelling, we considered the impacts at all local sites within relevant screening distances.

The operator assessed short-term (daily) impacts of NO<sub>x</sub> against the higher critical level of 200 µg/m<sup>3</sup> specified in our guidance. The operator justified the use of this level by assessing the ozone and sulphur dioxide (SO<sub>2</sub>) background concentrations at representative monitoring stations within 50 km of the site. The operator determined that ozone background concentrations are below the AOT40 (accumulated ozone exposure over a threshold of 40 ppb) critical level, and SO<sub>2</sub> background concentrations are below the SO<sub>2</sub> critical level. On this basis, the daily NO<sub>x</sub> critical level of 200 µg/m<sup>3</sup> was deemed suitable for use. As a result of our checks, we agree with the use of 200 µg/m<sup>3</sup> as the daily NO<sub>x</sub> critical level.

We agree that the reported predicted environmental concentrations (PECs) include a degree of potential double counting as the existing sources have been

operational for several years, and the process contributions (PCs) from the existing site are likely to be included both in the monitored and predicted backgrounds. We evaluated the potential double counting of the existing site in our checks.

### Human health impacts

In their air quality report, the operator concluded that *'there is negligible risk that any of the Air Quality Standards (AQS) for the protection of human health will be exceeded as a result of the facility at any relevant receptor. On this basis, the impacts are judged to be not significant'*.

We agree with the operator's conclusions for human health, which are based on predicted results at 21 human health receptors given in Tables 17 to 22 of the report. In summary:

- Long-term PCs for annual NO<sub>2</sub>, annual particulate matter ≤10 µm (PM<sub>10</sub>) and annual particulate matter ≤2.5 µm (PM<sub>2.5</sub>) at human health receptors are not less than 1% of the Environmental Standard (ES) and therefore cannot be considered insignificant. PCs at the most impacted receptor are: NO<sub>2</sub>: 4%, PM<sub>10</sub>: 1% and PM<sub>2.5</sub>: 2% of the ES. However, the PECs do not exceed the relevant ES and are therefore considered not significant. PECs at the most impacted receptor are: NO<sub>2</sub>: 92%, PM<sub>10</sub>: 41% and PM<sub>2.5</sub>: 52% of the ES.
- Short-term PCs for 1-hour 99.79th NO<sub>2</sub> and 24-hour 90.41st PM<sub>10</sub> at human health receptors are less than 10% of the relevant ES and are therefore considered to be insignificant. PCs at the most impacted receptor are: NO<sub>2</sub>: 6% and PM<sub>10</sub>: 4% of the ES.

We are satisfied that the operator's air dispersion modelling assessment is conservative and we agree with the operator's conclusions regarding human health. Based on the information reviewed, we consider that aerial emissions associated with operation of the varied installation will not cause exceedances of the relevant human health ES. No further assessment of human health impacts is required.

### Ecological impacts

In their air quality report, the operator concluded that *'there is one location within the Severn Estuary SAC where the AQS for annual mean NO<sub>x</sub> is exceeded with or without the PC from the installation'*. The operator reported that Natural England (NE) had previously commented that NO<sub>x</sub> impacts were deemed to be *'not significant'* due to the limited area of exceedance and low sensitivity of the receptor to air pollution due to daily tidal inundation of the saltmarsh habitat that covers the area of exceedance. However, during determination, the operator was unable to provide evidence of this communication. The operator also acknowledged exceedances of the critical load for nitrogen deposition at all

modelled receptors but asserted that the same factors that apply to consideration of NO<sub>x</sub> impacts would also apply to nitrogen deposition and that impacts of nitrogen deposition are therefore not considered to be significant.

The operator's conclusions for impacts of NO<sub>x</sub> emissions on ecological receptors are based on predicted results are given in Tables 23 and 24 of the report. In summary:

- Annual NO<sub>x</sub> PCs are above 1% of the relevant ES and are therefore not considered insignificant at several locations within the Severn Estuary (highest is 20% of the ES). The PEC exceeds the relevant critical level at one location where the existing background NO<sub>x</sub> concentration is already exceeding the ES (111% of the ES).
- The annual NO<sub>x</sub> PCs are insignificant at all other ecological receptor locations.
- Daily NO<sub>x</sub> PCs are not insignificant at two receptors within the Severn Estuary (highest is 13% of the ES). However, the PECs do not exceed the relevant critical level (highest is 39% of the ES).
- Daily NO<sub>x</sub> PCs are insignificant at all other ecological receptors.

The operator's conclusions for impacts of nutrient nitrogen deposition on ecological receptors are based on predicted results given in Table 25 of the report. In summary:

- Nutrient nitrogen deposition PCs are above 1% of the relevant critical load (CLo) at several locations within the Severn Estuary and are therefore not considered insignificant (highest is 6% of the CLo). We observe that the background deposition values used by the operator already exceed the CLo, therefore, the PECs also exceed the CLo at these locations (highest is 132% of the CLo).
- Nutrient nitrogen deposition PCs are insignificant at all other ecological receptors (highest is 1% of the CLo).

The operator's conclusions for impacts of acid deposition on ecological receptors are based on predicted results given in Table 26 of the report. In summary:

- The operator did not assess acid deposition PCs at the Severn Estuary, stating the site is '*not sensitive to acidity*'. The UK Air Pollution Information System (APIS) indicates that calcareous grassland is present within the Severn Estuary SSSI, which is sensitive to acidity. In our audit of the modelling we tested sensitivity for acid deposition against the relevant CLoS for calcareous grassland.
- Acid deposition PCs are less than 1% of the relevant CLo and are therefore considered insignificant at all other ecological receptors.

As a result of our checks, although we cannot exactly replicate the operator's numerical predictions, we agree with operator's conclusions regarding daily NOx and acid deposition impacts; contributions from the site are not likely to cause an exceedance of the relevant critical levels or critical loads at any of the ecological sites assessed.

With regard to the impacts of annual NOx and nutrient nitrogen deposition, in particular the potential for exceedances of the relevant ES at locations in the Severn Estuary where background concentrations are already exceeded, we completed a Habitats Regulation Assessment, Stage 2: Appropriate Assessment and a Countryside and Rights of Way Act (CRoW) Appendix 4 Assessment.

On 13/12/2023 we consulted NE and Natural Resources Wales (NRW). We sought to confirm that comments made by NE to the operator on 06/10/2020, as part of the operator's planning application, were still applicable: *'the proposal is unlikely to have a significant effect on any European site, either alone or in combination with other plans and projects'*.

We also invited comments on our draft conclusion that the impacts arising from the variation are unlikely to cause an adverse effect on the Severn Estuary SAC, SPA, Ramsar and unlikely to impact the features of the Severn Estuary SSSI, stating that we were minded to grant the permit on this basis.

No response was received from NE. NRW replied on 22/12/2023 to advise that they agree with the conclusions of the Appropriate Assessment that the plan or project will not adversely affect the integrity of the Severn Estuary SAC/SPA/Ramsar, either alone or in combination with any other plans or projects, and that it is unlikely to impact the special features of the Severn Estuary SSSI. NRW advised that the operation can go ahead.

The final conclusion of our assessments therefore was that the impacts arising as a result of the variation are unlikely to cause an adverse impact and are not likely to damage any qualifying species or features within the designated habitats sites in question.

The full detail of these assessments is given in the following documents:

- Stage 1 Habitats Regulations Assessment version 1 dated 12/12/2023
- Countryside and Rights of Way Act Appendix 4 Application for Permission – Formal Notice version 1 dated 13/12/2023

No further assessment of ecological impacts is required.



## **Fugitive emissions**

The operator has provided an assessment of emissions of dust in accordance with our web guidance, Risk assessments for your environmental permit. The overall risk with respect to dust is assessed to be very low.

Proposed measures to minimise fugitive emissions of dust from the site include:

- Enclosed gypsum conveyors, with extract ventilation to dust abatement. Belt scrapers ensure that the belt is kept free of material when not in use. These elevated conveyors will be designed and built to allow access for maintenance and will be fitted with automated alarms to detect any malfunctions such as belt misalignment.
- Enclosed storage (including silos) and processing areas with fast-acting roller shutter doors and extract ventilation to dust abatement. Silos are equipped with high level monitoring systems and audio or visual alarms to prevent overfilling. Transfer of materials from buildings to silos/lorry loading area is through sealed pipework.
- Good housekeeping and cleaning of process buildings, site roadways and access road, according to an established maintenance programme. Dedicated truck wheel wash.
- Dusty spillages are cleaned up promptly using wet handling methods if in an external location.
- Dusty wastes are stored within sealed containers prior to removal off-site.
- Fully enclosed or, as a minimum, sheeted vehicles transporting dusty raw materials or finished product.
- Minimised drop height for loading of dusty materials.
- Filter cake from fabric filters is discharged to sealed hoppers directly below the filter unit. The filter cake is loaded into enclosed collection vehicles using a sealed conveying system.
- All aboveground pipework infrastructure is constructed of stainless steel and will undergo pressure testing during dry commissioning to ensure it is fit for purpose.
- Routine visual inspections to identify fugitive releases caused by any damage to plant, pipework and infrastructure, and to instigate repairs as soon as practically possible.
- If the transfer of material generates any visible airborne dust the conveyors will be stopped, inspected and cleaned and, where necessary, repaired and/or dust suppression water/wetting agents activated.
- Any complaints regarding dust beyond the site boundary will be handled in accordance with the operator's complaints procedure and Incident Reporting System as described above.

Based on the measures put in place for the new plant, we anticipate the changes in risk will not be significant. We have retained our standard condition in the

variation notice, which allows us to ask for a detailed emissions management plan if we become aware of dust-related problems on site.

### **Emissions to surface water**

The variation introduces a new emission point (W2) for uncontaminated surface water run-off from the new plasterboard production line warehouse and surrounding area into existing surface water drains and ultimately discharging to the River Avon.

The surface water drainage system serving the extended area will be independent of the existing drainage system but, like the existing drainage system, will incorporate multiple oil interceptors serving roadways and parking areas.

### **Emissions to sewer**

The variation introduces a new emission point (S1) for discharge to sewer from the new truck wheel wash bay located in the south-west corner of the new production line warehouse, adjacent to the main access road.

All effluent from the wheel wash will pass through an oil interceptor, prior to discharging to the foul sewer feeding into the Portbury Wharf Sewage Treatment works and ultimately discharging into the Severn Estuary.

### **Noise**

The operator has provided an assessment of noise and vibration risk in accordance with our web guidance, Risk assessments for your environmental permit. The overall risk with respect to noise is assessed to be low.

The operator confirmed that, as with the existing production line, the new production line will operate continuously throughout the day and night and new noise sources will be introduced at the site as a result of the variation, such as a new ball mill.

The following measures are in place to reduce the potential for noise impacts outside of the site boundary:

- The new plasterboard production line and ball mill are both housed within buildings at an existing large industrial site. In addition the ball mill is located within an acoustic enclosure.
- All equipment is operated by qualified and experienced staff and maintained in accordance with the operators' planned preventative maintenance regime to ensure equipment remains fit for purpose and

operates within optimum conditions to minimise the likelihood of noise and/or vibration.

- The operator maintains and enforces a site speed limit and engines are switched off when not in use. Road surfaces are maintained in a good state of repair.
- Any noise complaints will be handled in accordance with the operator's complaints procedure and Incident Reporting System. In summary, the Plant Manager tracks and documents all complaints and instigates contact and discussion with the complainant; investigation and implementation of remedial actions, and escalation of notifications to the Environment Agency.

We have reviewed the requirement for a noise impact assessment using our qualitative noise screening criteria. Based on the nature of the installation and its location and the proposed noise mitigation measures, we anticipate that the risk of noise impacts will not be significant.

Consequently we have not required a noise management plan as part of this determination. However, we have retained our standard noise condition in the variation notice, which allows us to ask for a noise management plan if we become aware of noise-related problems on site.

## **Accident Management**

The operator's existing Accident Management Plan (AMP) forms part of the site EMS and is implemented via a series of Emergency Procedures, including:

- Spillages Procedure
- Siren Emergency Procedure
- Emergency Rescue Procedure
- Flood Event Procedure
- Fire Evacuation Procedure
- Fire Response Team Procedure
- Emergency Preparedness Process Flow Chart.

The procedures will incorporate the new production line. As the new activities mirror those already permitted at the existing manufacturing warehouse, it is not anticipated that the procedures will require any fundamental changes. High risk areas are designated 'Environmental Critical Areas' (ECAs) and are inspected weekly and benefit from additional signage and extra spill kits to ensure any accidents can be responded to promptly.

The SCADA system continuously monitors plant performance. In the event any abnormal conditions are detected, or critical alarms raised, staff are alerted immediately and action taken to either isolate and shut down the failed equipment or undertake immediate remedial measures to return the equipment to

optimum operating conditions. The system can also be manually shutdown if required.

The operator's Planned Preventative Maintenance programme includes regular checks on all process and abatement equipment to ensure operation within optimum conditions.

Other risk management measures include:

- Deliveries are supervised and spill kits are available for absorbing and containing minor spills with staff trained in their use and in the spill clean-up procedures. Larger spills can be contained within the surface water drainage system, prior to clean up and remediation.
- Newly constructed conveyor belts are fire resistant. Localised firefighting equipment is provided and maintained. Smoking is only permitted within designated areas.
- Drains are regularly inspected to ensure they are kept free of debris to minimise surface flood risk. Any potentially polluting substances are stored in secure containers with secondary containment.
- The site's perimeter fencing prevents unauthorised access. Access is via the gatehouse entrance only. The site is staffed continuously 24 hours a day.

## **Energy efficiency**

The main measures that optimise energy efficiency at the new production line are:

- pre-heating the dryer combustion air using heat exchange against the dryer flue gases.
- automatic process control system.
- pro-active maintenance to ensure that burners are maintained and operating at optimal performance.
- sub-metering of major plant to monitor energy consumption.
- insulation of plant ducting systems.
- installation of appropriately sized high-efficiency motors, and where appropriate, with variable speed drive, and
- installation of energy efficient lighting.

In considering the requirements of Article 14 of the Energy Efficiency Directive, the operator confirmed that the use of dryer flue gas heat to pre-heat combustion air results in waste heat which is not at a useful temperature for steam or hot water production. We accept the operator's justification; whilst the application is for combustion plant with an aggregated net thermal input of >20 MWth, the plant is used to generate heat used in the drying process, rather than energy production and any residual waste heat is low grade and unsuitable for use off-site.

## **Extension of installation boundary**

As a result of the variation the installation boundary is increased to include the land on which the new production line is located, adjacent to the existing facility. The installation boundary also includes two new spur conveyors, used to transfer raw materials from port to site, that are owned and operated by Etex.

The installation boundary is shown marked in red on the plan included at Schedule 7 of the permit. Details of the existing condition of the site can be found in the Site Condition Report supplied with the application, which we have reviewed and consider satisfactory.

All process areas are located on impervious hardstanding and potentially polluting substances are stored in accordance with requirements of CIRIA C736 Containment systems for the prevention of pollution, in enclosed and/or bunded areas and in vessels provided with impermeable secondary containment with capacities of greater than 110% of the largest single vessel or 25% of the total vessel capacity within the bund.

## **Decision considerations**

### **Confidential information**

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

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

### **Identifying confidential information**

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

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

### **Consultation**

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

The comments and our responses are summarised in the [consultation responses](#) section.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

Local Authority Environmental Health (North Somerset Council)

Health and Safety Executive

UK Health Security Agency

Director of Public Health

Natural England

Natural Resources Wales.

Comments received, and our responses, are summarised in the [consultation responses](#) section.

### **The regulated facility**

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2

'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1'.

## **The site**

The operator has provided a plan which we consider to be satisfactory. This shows the extent of the site of the facility. The plans show the location of the part of the installation to which this permit applies on that site. The plan is included in the permit.

## **Site condition report**

The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

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

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

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

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

We have consulted Natural England and Natural Resources Wales on our Habitats Regulation and SSSI assessments and taken their comments into account in the permitting decision.

The decision was taken in accordance with our guidance.

## **Environmental risk**

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

## **General operating techniques**

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

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

## **Operating techniques for emissions that do not screen out as insignificant**

Emissions of oxides of nitrogen cannot be screened out as insignificant. We have assessed whether the proposed techniques are Best Available Techniques (BAT).

The proposed techniques/ emission levels for emissions that do not screen out as insignificant are in line with the techniques and benchmark levels contained in the technical guidance and we consider them to represent appropriate techniques for the facility. The permit conditions enable compliance with relevant technical guidance.

## **Operating techniques for emissions that screen out as insignificant**

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

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

## **National Air Pollution Control Programme**

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

## **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.



## **Pre-operational conditions**

Based on the information in the application, we consider that we need to include pre-operational condition PO1, which requires the operator to submit a commissioning plan for the new plasterboard line, which considers the expected emissions and actions to be taken to protect the environment. Commissioning shall be carried out in accordance with the commissioning plan as approved by the Environment Agency.

## **Improvement programme**

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

Improvement condition IC11 is included to verify that continuous monitoring sampling locations installed by the operator for the new plasterboard line meet the requirements of the relevant monitoring standard BS EN 15259.

## **Emission limits**

Emission Limit Values (ELVs) have been added for the following substances:

A32, A49, A52: Oxides of Nitrogen (NO and NO<sub>2</sub> expressed as NO<sub>2</sub>) 100 mg/Nm<sup>3</sup>

A33 – A50: Particulates 10 mg/Nm<sup>3</sup>

We made these decisions in accordance with the Secretary of State's Guidance for Plaster Processes Process Guidance Note 3/12(04) and our sector permit template.

## **Monitoring**

We have decided that monitoring of particulates and oxides of nitrogen should be added for the production line BL4 using the methods detailed and to the frequencies specified in Table S3.1.

Emission point A49 is a combined stack, taking emissions from both the calciner (NO<sub>x</sub> and particulates) and the stucco cooler (particulates). We require periodic monitoring (spot sampling) of NO<sub>x</sub> but continuous monitoring of particulates. Because the emission of NO<sub>x</sub> will effectively be diluted when mixed with stucco cooling air in the combined stack we have included footnote Note 1 to Table S1.1, which requires that monitoring of NO<sub>x</sub> shall take place on the flue line from the calciner but before the emission is introduced into the combined stack. The continuous monitor for particulates will be installed in the combined stack above the mixing point of emissions from both the calciner and the stucco cooler. We have included improvement condition IC11 to ensure that the location meets the requirements of BS EN 17389.

The volumetric flowrates at emission points A33 to A48 are all below 10,000 Nm<sup>3</sup>/h and the environmental risk is consequently considered to be low. We are satisfied that continual maintenance of the fabric filters should ensure that particulate emissions remain below 10 mg/Nm<sup>3</sup>; the maintenance management programme will be checked during routine compliance audits undertaken by the Environment Agency. We have therefore set emission limit values for particulates of 10 mg/Nm<sup>3</sup> at these emission points but have not required continuous monitoring and routine reporting at these emission points and have instead referenced the maintenance management system. Any exceedance of these limits must be reported to the Environment Agency using the notification form at Schedule 5 of the consolidated variation notice within 24 hours of detection of the breach.

The volumetric flowrate at emission point A50 (dividing saw/calcination area) is above the 10,000 Nm<sup>3</sup>/h threshold. Consequently we have required quarterly extractive monitoring. However the monitoring frequency may be reduced by prior written agreement of the Environment Agency if emission levels are proven to be sufficiently stable.

These monitoring requirements have been included in order to ensure the emissions from the process are in accordance with the ELVs assigned to protect the environment.

In addition, with the agreement of the operator we have amended the monitoring standard for continuous particulate monitoring for the existing plasterboard manufacturing line (emission points A2, A3, A6 and A13) in line with the requirements of the modern sector template.

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

We made these decisions in accordance with the Secretary of State's Guidance for Plaster Processes Process Guidance Note 3/12(04) and our sector permit template.

## **Reporting**

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

A32, A49, A52: Oxides of Nitrogen (NO and NO<sub>2</sub> expressed as NO<sub>2</sub>) 100 mg/Nm<sup>3</sup>

A49, A50: Particulates: 10 mg/Nm<sup>3</sup>

We made these decisions in accordance with the Secretary of State's Guidance for Plaster Processes Process Guidance Note 3/12(04) and our sector permit template.

## **Management system**

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

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

## **Changes to the permit conditions due to an Environment Agency initiated variation**

We have varied the permit as stated in the variation notice.

## **Permitted activities**

Not all DAAs carried out on site were previously stated in the existing permit. Table S1.1 has therefore been updated in accordance with the modern permit template to also include the following DAAs :

AR3 Storage and handling of wastes (generated on site)

AR4 Reuse/recycling of waste gypsum (generated on site)

AR5 Finished product handling and storage, including bagging

AR6 Operation of systems for the supply of utilities and services

AR7 Discharge to foul sewer

AR8 Surface water drainage

AR9 Import, storage and handling of wastes from off-site prior to use as a raw material

## **Raw materials**

We have specified limits and controls on the use of raw materials. In Table S2.1 we have included quality protocol compliant (PAS 109) gypsum recovered products and flue gas desulphurisation residues that are deemed to be non-waste.

## Waste types

We have removed the majority of EWC codes from Table S2.2, which were previously included in the existing permit.

During determination an error in the existing permit was noted. The permit should have included an additional waste operation activity (in Table S1.1 Activities) to incorporate the processing of the wastes listed in Table S2.2.

On 12/03/2024 the operator confirmed by email that the site has not, for many years, received wastes and has no plans to do so in the future. This was later clarified by email (19/03/2024) to be all wastes listed in Table S2.2. of the existing permit except the three waste codes listed below.

- 10 01 05 - calcium-based reaction wastes from flue-gas desulphurisation in solid form
- 10 01 07 - calcium-based reaction wastes from flue-gas desulphurisation in sludge form
- 19 12 12 - recovered gypsum that does not meet PAS109 classification.

These wastes are ultimately treated in the same manner as raw materials and do not require any additional pre-processing or treatment. The operator confirmed by email (19/03/2024) *“these are all materials that can be used directly in the process as raw materials without any further treatment/pre-treatment. These wastes will simply be temporarily stored at site and then used as received in the process as a raw material”*.

These waste codes are retained to allow the continued receipt of materials that are comparable to raw materials received under table S2.1, but that are classed as waste for reasons such as their source of origin outside the UK.

We have agreed that retaining these waste codes should not require the need for a separate waste operation activity in table S1.1 of the permit.

We have therefore agreed to the operator’s request to revise Table S2.2 to include only these three waste codes. All other waste codes are removed from the permit.

## Monitoring

With the operator’s agreement we have updated Table S3.1 (Point source emissions to air) to include the current monitoring standards for continuous particulate monitoring, BS EN 17389. We have removed the interpretation text that preceded Table S3.1 (Point source emissions to air) in the existing permit because this is detailed in the standard.

## **Notification**

Schedule 5 (Notification), as referenced by condition 4.3, is amended in accordance with the modern permit template.

## **Interpretation**

In accordance with the modern permit template, we have updated Schedule 6 (Interpretation) of the permit.

## **Growth duty**

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

Paragraph 1.3 of the guidance says:

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

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

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

## **Consultation Responses**

The following summarises the responses to consultation with other organisations and 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 UK Health Security Agency (UKHSA)**

Brief summary of issues raised:

UKHSA highlighted the potential for dust generation from the manufacturing of plasterboard. UKHSA recommended that the Environment Agency satisfies itself that the operator had adequately considered the potential for fugitive dust emissions including scope for a dust management plan to include appropriate complaints procedures.

A further recommendation concerned the operator's accident management plan / Environmental Management System. UKHSA recommended that the Environment Agency satisfies itself that the updated plan and management systems are appropriate for the proposed expansion of the site.

Summary of actions taken:

Following the recommendations of UKHSA additional information on the operator's proposed dust control measures and complaints procedures was requested, received and forwarded to the UKHSA for review.

The operator's existing Accident Management Plan forms part of the site Environmental Management System and the operator confirmed this will be updated to incorporate the new production line. As the new activities mirror those already permitted at the existing manufacturing warehouse, the operator does not anticipate that the procedures will require any fundamental changes. We do not assess the operator's EMS in detail during application determination, instead requiring only a summary of the EMS. The EMS is scrutinised in more detail during routine regulatory work undertaken by the local area compliance team. The EMS summary, which is described in the application, and accident risk management measures were highlighted to UKHSA.

We confirmed to UKHSA our view that the measures in place at the site to minimise fugitive emissions of dust from the site represent BAT and that the change in risk of fugitive emissions will likely not be significant. Consequently, we have not required the submission of a dust management plan during the determination of the application. However, we have retained our standard condition in the variation notice, which allows us to ask for a detailed emissions management plan if we become aware of dust-related problems on site.

Following this exchange of information, UKHSA replied to confirm their reassurance and had no further comments to make.

### **Response received from Local Authority Environmental Health (North Somerset Council)**

Brief summary of issues raised:

The local authority commented that the planning permission associated with this development contains suitable conditions to address noise and air quality concerns from this activity, and these would apply to any variation to the permit.

Summary of actions taken: see the Key Issues section above for explanation of noise and air quality aspects of the determination.

### **Response received from Natural Resources Wales**

Refer to the Key Issues section above (Point source emissions to air/ecological impacts) for the outcome of consultation with Natural Resources Wales.