

Permitting Decisions- Variation

We have decided to grant the variation for Smart Aluminium Extrusions operated by Smart Systems Limited.

The variation number is EPR/KP3434FE/V003.

The variation is to:

- Add a scheduled activity (effluent treatment)
- Extend the permit boundary
- Add 5 excluded medium combustion plant (MCP)
- Add a second vertical powder costing line, a panel coating line, and replace the horizontal coating lines.

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

Emissions to water

The existing permit allowed a discharge of treated trade effluent to sewer under the terms of a trade effluent consent. It was permitted as a Directly Associated Activity (DAA) to the main installation activity. The variation is adding two more treatment plants, increasing overall capacity and putting it above threshold to make it a scheduled activity in its own right:

- S5.4 Part A(1) (a) (ii) - Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment

The applicant originally identified the following chemicals as being present in the discharge; arsenic, boron, cadmium, chromium (VI), cobalt, copper, iron, lead, silver, vanadium and zinc. We asked for further information on this.

It was clarified by the applicant that:

- the discharge would not contain any of these chemicals other than at trace values
- none of the raw materials used in the process contain these substances in anything other than trace values. The site has a strict no cadmium or chromium policy.
- the effluent treatment process itself does not use any of these chemicals.
- the trade effluent discharge is routinely sampled.
- the operator uses suspended solids, pH, COD, BOD and aluminium to monitor efficiency and effectiveness of the effluent treatment process and cleanliness of the effluent. If these parameters are within limits there is little chance of heavy metals being above drinking water standards (there is always a trace mainly due to evaporation through the process slightly concentrating the feed mains water and very slight wear of the anodes, cathodes and associated metal components in the tanks. Other feed water is harvested roof top water which makes up approximately 30% of total feed). The system shuts off and alarms if the parameters are outside of limits, and is password protected by senior staff to allow resumption.

We are therefore satisfied the treated process effluent discharged to foul sewer can be screened out as insignificant as the substances will be less than the relevant Environmental Quality Standards, the appropriate screening test for discharges to estuarial waters. We have included monitoring for pH, flow, chemical oxygen demand (COD) and trace metals in the permit.

Emissions to air

A methodology for risk assessment of point source emissions to air is set out in our guidance on www.gov.uk *Air emissions risk assessment for your environmental permit* and has the following steps:

- Describe emissions and receptors
- Calculate process contributions
- Screen out insignificant emissions that do not warrant further investigation using the Environment Agency's screening tool
- Decide if detailed air modelling is needed
- Assess emissions against relevant standards
- Summarise the effects of emissions.

We use this methodology to assess the impacts on air quality in the determination of applications.

The methodology uses a concept of "process contribution (PC)", which is the estimated concentration of emitted substances after dispersion into the receiving environmental media at the point where the magnitude of the concentration is greatest. The methodology provides a simple method of calculating PC, primarily for screening purposes, and for estimating process contributions where environmental consequences are relatively low. It is based on using dispersion factors. These factors assume worst case dispersion conditions with no allowance made for thermal or momentum plume rise and so the process contributions calculated are likely to be an overestimate of the actual maximum concentrations. More accurate calculation of process contributions can be achieved by mathematical dispersion models, which take into account relevant parameters of the release and surrounding conditions, including local meteorology.

Air dispersion modelling enables the PC to be predicted at any environmental receptor that might be impacted by the emissions from a plant. Once short-term and long-term PCs have been calculated in this way, they are compared with Environmental Standards (ES).

PCs are considered insignificant if:

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

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

Where an emission is screened out in this way, we would normally consider that the applicant's proposals for the prevention and control of the emission to be acceptable. However, where an emission cannot be screened out as insignificant, it does not mean it will necessarily be significant.

For those pollutants which do not screen out as insignificant, we determine whether exceedances of the relevant ES are likely. This is done through detailed audit and review of the applicant's air dispersion modelling, taking background concentrations and modelling uncertainties into account.

Where the PC is greater than these thresholds, the assessment must continue to determine the impact by considering the predicted environmental concentration (PEC). The PEC is the combination of the PC substance to air and the background concentration of the substance which is already present in the environment.

The PECs can be considered 'not significant' if the assessment has shown that both the following apply:

- proposed emissions comply with associated emission levels (AELs) or the equivalent requirements where there is no AEL; and
- the resulting PECs won't exceed 100% of the environmental standards.

The variation is adding 5 excluded medium combustion plant (MCP). The applicant also has a significant number of small emission sources from aging, curing and drying ovens. The fuel used is natural gas. The applicant's model looks at the impacts from oxides of nitrogen, which is the key pollutant within the combustion gas that require consideration.

The applicant undertook a comprehensive survey of emission sources and provided an Air Quality Assessment (AQA) for the site. The assessment showed 39 sources of emissions to air, many of which are small and existing. An emission monitoring report was submitted with the AQA which provides emission concentrations. The 5 sources classed as MCP were modelled using MCP emission limit values. Otherwise monitoring survey results were used. The model was conservative in its assumptions. The results predicted:

For human health

- The annual NO₂ PCs are not insignificant at human health receptor locations. However, the PECs are not predicted to exceed the environmental standard, and there is plenty of headroom remaining meaning they can be considered “not significant”
- The 1-hour 99.79th percentile NO₂ PCs are insignificant at all human health receptor locations

For habitats

- The annual NO_x PCs at habitat sites are not insignificant. However, the PECs are not predicted to exceed the environmental standard, and there is plenty of headroom remaining meaning they can be considered “not significant”
- The daily mean NO_x PCs at habitat sites are insignificant
- The nutrient nitrogen and acid deposition PCs are insignificant
- The report did not assess nutrient nitrogen and acid deposition PCs at the closest habitat site, Biddle Street, noting that there are no comparable critical loads on APIS. However, we have assessed nutrient nitrogen and acid deposition PCs using the predicted annual NO_x PCs and found the PCs would be insignificant even against the most stringent critical loads available.

We are satisfied with the applicant’s conclusions with regard to air emissions.

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 application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local authority – Environmental Health
- HSE
- Sewerage Authority
- UKHSA

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

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation' and Appendix 1 of RGN 2 'Interpretation of Schedule 1 permits'. The application included the addition of two effluent treatment plants which on discussion with the applicant put the treatment capacity above threshold, meaning the effluent treatment Directly Associated Activity (DAA) is now a scheduled activity in its' own right (S5.4 Part A(1) (a) (ii)).

The site

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

These show 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 an updated description of the site condition, to take into account the extension to the permit boundary, which we consider is satisfactory. This did not include ground investigation of the new phase, and the applicant has been advised they may wish to consider this in terms of informing any future permit surrender. 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.

The following sites have been identified:

- Mendip Limestone Grasslands SAC
- Severn Estuary SAC/SPA/Ramsar
- Biddle Street; Tickenham, Nailsea and Kenn Moors and Puxton Moor SSSIs.

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.

Please see the Key Issues section for more information how air and water emissions have been considered.

We have not consulted Natural England. The decision was taken in accordance with our guidance.

Environmental risk

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

The operator's risk assessment is satisfactory.

The assessment shows that, applying the conservative criteria in our guidance on environmental risk assessment, all emissions may be screened out as environmentally insignificant/not significant.

Please see Key Issues section for more information on how air and water emissions have been considered.

Operating techniques

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

General operating techniques

The operator provided a BAT assessment against Reference Document on Best Available Techniques for the Surface Treatment of Metals and Plastics dated August 2006. They have also considered our technical guidance note “How to comply: The Surface Treatment of Metals and Plastics by Electrolytic and Chemical Processes EPR 2.07.

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

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

Operating techniques for combustion plant

We have specified the operating techniques and the operator must use the operating techniques specified in table S1.2.

Operating techniques for emissions that screen out

Air emissions of NO_x have been screened out as insignificant/not significant, and so we agree that the applicant’s proposed techniques are Best Available Techniques (BAT) for the installation.

Water emissions have screened out as insignificant, and so we agree that the applicant’s proposed techniques are Best Available Techniques (BAT) for the installation.

Please see [Key Issues](#) section for more details on emissions from the site.

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.

Emission limits

The medium combustion plant are excluded from the requirements of the Medium Combustion Plant Directive under Article 2, as they are used for direct heating and drying only. Therefore no MCP emission limits have been set.

We made this decision in accordance with the MCP directive.

Monitoring

We have decided that monitoring should be added for the following parameters in the effluent discharge using the methods detailed and to the frequencies specified:

- pH
- flow
- chemical oxygen demand (COD)
- trace metals

This is to ensure the effluent treatment plants is performing satisfactorily.

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.

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.

Previous performance

We have assessed operator competence. There is no known reason to consider the applicant will not comply with the permit conditions.

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, 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 UKHSA.

Brief summary of issues raised: potential impact of combustion gases from combustion plant, fugitive emissions and LEVs serving powder coating lines.

Summary of actions taken: UKHSA were provided with an updated Air Quality Assessment and Risk Assessment submitted by the applicant. No further comments received.

Response received from North Somerset Council – Environmental Health.

Brief summary of issues raised: consideration should be given to amenity issues, air quality, land quality and environmental management system (EMS).

Summary of actions taken: these aspects have been considered in the determination process and in the permit conditions.

Response received from Wessex Water: Did not raise any issues but confirmed Kingston Seymour WRC treats Smart Systems Limited wastewater and the final

discharge goes to the Severn Estuary and is classed as an estuary discharge.
Location is Seven Pill, ST 3840068660.