Permitting Decisions- Bespoke Permit

We have decided to grant the permit for Sawston Pilot Scale Production Facility operated by Immaterial Limited.

The permit number is DP3721SD.

The permit was granted on 13/11/2025.

The application is for a new bespoke Environmental Permit for an Installation to operate a Schedule 1 Part 2 Section 4.1 Part A(1) (a) activity ‘Producing organic chemicals such as – (vii) organometallic compounds. The processes to be undertaken at site all involve the reaction of metal salts with organic materials and in some cases metal hydroxides in the presence of a solvent (either an organic solvent or water depending on the process) and additives to generate densified metal-organic framework (MOF) product materials with subsequent recovery and purification processes.

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 to show how the main relevant factors have been taken into account.

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

Read the permitting decisions in conjunction with the environmental permit.

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/Environmental Protection department
- Health and Safety Executive
- UK Health Security Agency
- Local sewerage undertaker and/or local water undertaker

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

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.

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’.

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

The site

The operator has provided plans which we consider to be satisfactory. These show the extent of the site of the facility including the emission points. 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.

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 have consulted the Habitats Assessment Team and prepared an Appendix 4 assessment for the SSSI sites within the relevant screening distance – which concludes that the proposed permission is not likely to damage any of the flora, fauna or geological or physiological features which are of special interest.

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

We have not consulted Natural England.

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 not significant.

AQMAU confirmed that the EALs used by the consultant for methanol and acetic acid match our guidance and are therefore applicable. AQMAU also noted that ethanol EALs were withdrawn and as such ethanol didn’t need to be assessed. Regardless, comparing to previous ethanol EALs and also methanol EALs was acceptable, and showed no exceedances.

Long term and short term process contributions (PCs) for acetic acid, ethanol and methanol were mostly below the relevant criteria (1% and 10% of the relevant environmental standard for long term and short term, respectively) and were therefore screened out as insignificant.

The long term PC for methanol is 1.2% of the long term environmental standard. However, the predicted environmental contribution for methanol was below 70% of the environmental standard and so is screened out as not significant.

The applicant submitted a revised air emissions risk assessment and addendum during determination, following a change in decision to vent local exhaust from inside the building to atmosphere. The expected emissions from this emission point (A8) are similar to those already assessed (A1-A7). AQMAU reviewed the updated air emissions risk assessment and addendum report, and concluded that there were no changes to the previous conclusions. We did not re-consult on this application because we did not consider this change to result in an increased environmental risk.

AQMAU confirmed that a NIA/NMP was not required for this application. During Duly Making, the applicant resubmitted an updated NIA where they had moved some of the equipment inside the building. As the risk was not increasing and conclusions were not changing, we did not reconsult on this document.

General operating techniques

The applicant submitted a BAT conclusion compliance assessment document, and assessed against the following:

- EPR 4.02 - Speciality Organic Chemicals guidance note
- Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector (CWW)
- Common Waste Gas Management and Treatment Systems in the Chemical Sector (WGC)

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.

‘Common Waste Water’ (CWW) BAT Conclusions

BATc No	Summary of BAT Conclusion requirement for Common Waste Water and Waste Gas Treatment/ Management Systems in the Chemical Sector	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	BAT Conclusions that may not be applicable to this installation	**NA**	BAT 3-4 – no process water emissions BAT 6 – no odorous materials BAT 8-12 - no process water emissions BAT 14 - no process water emissions BAT 16 – integrated approach not suitable BAT 17-18 – no flaring BAT 20-21 – no odorous materials
	General BAT Conclusions for all CWW Installations. NB There are BAT-AELs.		NA =not applicable, CC = currently compliant, FC = future compliant, NC = not compliant
1	To improve overall environmental performance implement and adhere to an EMS incorporating all the described features.	**FC**	Pre-operational condition added for future compliance
2	To facilitate reduction of emissions to water and air and water usage, establish and maintain an inventory of waste water and waste gas streams as part of BAT1 EMS incorporating the described features.	**FC**	
5	Periodically monitor diffuse VOC emissions to air from	**FC**	Pre-operational condition added for future compliance

BATc No	Summary of BAT Conclusion requirement for Common Waste Water and Waste Gas Treatment/ Management Systems in the Chemical Sector	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	relevant sources using a combination (or for large amounts – all) of the described techniques.		
7	Reduce usage of water and the generation of waste water, by reducing the volume and/or pollutant load of waste water streams, enhancing the reuse of waste water within the production process and recovery and reuse of raw materials.	**FC**	
13	Prevent or, where this is not practicable, reduce the quantity of waste being sent for disposal by setting up and implementing a waste management plan as part of the environmental management system (see BAT 1) that, in order of priority, ensures that waste is prevented, prepared for reuse, recycled or otherwise recovered.	**FC**	
15	Facilitate the recovery of compounds and the reduction of emissions to air, by enclosing the emission sources and treating the emissions, where possible.	**FC**	
19	Prevent or, where that is not practicable, reduce diffuse VOC emissions to air, by using	**FC**	

BATc No	Summary of BAT Conclusion requirement for Common Waste Water and Waste Gas Treatment/ Management Systems in the Chemical Sector	Status NA/ CC / FC / NC	Assessment of the installation capability and any alternative techniques proposed by the operator to demonstrate compliance with the BAT Conclusion requirement
	a combination of the described techniques.		
22	Prevent or, where that is not practicable, reduce noise emissions, by setting up and implementing a noise management plan, as part of the environmental management system (see BAT 1), that includes all of the described elements:	**FC**	
23	Prevent or, where that is not practicable, reduce noise emissions, by using one or a combination of the described techniques.	**FC**	

Operating techniques for emissions that screen out as insignificant

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

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

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.

Pre-operational conditions

Based on the information in the application, we consider that we need to include pre-operational conditions.

Pre-operational conditions have been added in order for the operator to demonstrate compliance with BAT, prior to starting operations.

Emission Limits

For emission points A1-A7, the operator has stated that emissions of TVOCs at each vent will not exceed 100g C/h and that emissions of acetic acid, ethanol and methanol are not classed as CMR substances. The applicant has compared to WGC (BATc 11) and concluded that the BAT-AEL is not applicable to these emission points. We agree that ELVs for TVOCs are not required for emission points A1-A7.

Emissions of VOCs from emission point A8 (LEV Vent) are expected to be >100gC/hour. Emission Limit Values (ELVs) have therefore been added for emission point A8 in accordance with BAT-AELs (WGC BATc 11) for the following substances:

- Total VOCs

Monitoring

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.

These monitoring requirements have been included in order to assess emissions from the installation.

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

Reporting

We have specified reporting in the permit.

These reporting requirements have been included in order to assess emissions from the installation.

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.

We have checked our systems to ensure that all relevant convictions have been declared.

No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.

Financial competence

There is no known reason to consider that the operator will not be financially able to 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.

Paragraph 1.3 of the guidance says:

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

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

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

Consultation Responses

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

Responses from organisations listed in the consultation section:

Response received from **UKHSA.**

Brief summary of issues raised: *UKHSA has no significant concerns regarding the risk to the health of the local population from the installation*

Summary of actions taken: N/A

Response received from **Local Authority Department of Public Health.**

Brief summary of issues raised: *Concerns regarding the proximity of nearby receptors and associated air emissions, flammable materials storage (and reporting for compliance purposes), and clarification of methanol sensitivity test.*

Summary of actions taken: The air quality assessment has been assessed by the air quality modelling assessment unit (AQMAU). AQMAU concluded that the applicant's conclusions could be used for determination. A pre-operational condition has been added to the permit that requires the operator to produce an environmental management system and provide a summary to the Environment Agency. The EMS will include details and operating techniques relating to materials storage and emergency procedures.