Department for Environment, Food & Rural Affairs

Department of Agriculture, Environment and Rural Affairs
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Llywodraeth Cymru
Welsh Government

UK Best Available Techniques for preventing or minimising impacts on the environment from industry

March 2026

We are responsible for improving and protecting the environment. We aim to grow a green economy and sustain thriving rural communities. We also support our world-leading food, farming and fishing industries.

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Any enquiries regarding this publication should be sent to us at consultation.coordinator@defra.gov.uk

About this consultation

This consultation invites feedback on the Best Available Techniques (BAT), BAT Associated Emission Levels (BAT-AELs) and Environmental Performance Levels (BAT-AEPLs) for various sectors, including ferrous metals processing (forming and galvanizing), textiles and common waste gas management and treatment in the chemicals industry across the UK.

These standards were developed through a collaborative process by Technical Working Groups (TWGs), which brought together expertise from all relevant sectors. The TWGs have reached consensus on these recommendations and now we are seeking public input to ensure they reflect the needs and views of all stakeholders.

This consultation will be particularly relevant to manufacturers, plant operators and industry representative groups within the affected sectors. However, it is open to any individual or organisation with an interest in these industries.

Geographical extent

Following the UK's exit from the European Union, the power for defining BAT Conclusions (BATC) transferred to each government independently. The UK Government (acting for England), the Scottish Government, the Welsh Government and the Northern Ireland Executive have agreed to a UK-wide approach to develop BAT for UK industry. This consultation is being undertaken jointly by all four administrations.

How to respond to this consultation

This consultation runs for 8 weeks. It opens on 19th March and will close on 14th May.

We encourage responses via an online survey on Citizen Space, an online consultation tool. This is the department's preferred method of receiving responses. Consultations receive a high level of interest across many sectors and using the online tool assists our analysis of responses, enabling more efficient and effective consideration of issues.

The consultation can be completed online via Citizen Space.

However, responses submitted by email to Control.Pollution@defra.gov.uk or by post to the address below will be accepted.

Air Quality & Industrial Emissions Policy Team,
Defra Ground Floor,
Seacole Building,
2 Marsham Street,
London,
SW1P4DF.

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome. If responding by email or post, please include the following information:

- your name
- your email address
- your organisation (if applicable)
- whether you would like your response to be confidential (if yes, please state your reasons)

Please note, any responses sent by email or post must have arrived by the closing date of the consultation to be counted. Any responses received after this date will not be analysed. To ensure your response is included in the analysis, please consider responding online via Citizen Space.

After the consultation

When this consultation ends, we will keep copies securely. Members of the public may ask for a copy of responses under freedom of information legislation. If you do not want your response - including your name, contact details and any other personal information – to be publicly available, please say so clearly in writing when you send your response to the consultation. Please note, if your computer automatically includes a confidentiality disclaimer, that won't count as a confidentiality request. Please explain why you need to keep details confidential. We will take your reasons into account if someone asks for this information under freedom of information legislation. But, because of the law, we cannot promise that we will always be able to keep those details confidential.

We will summarise all responses and place this summary on our website at www.gov.uk/defra. This summary will include a list of names of organisations that responded but not people's personal names, addresses or other contact details. Please give us 24 hours' notice if you wish to see consultation responses and summaries. There is a charge for photocopying and postage.

If you have any comments or complaints about the consultation process, please address them to: consultation.coordinator@defra.gov.uk.

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Introduction

Industrial installations undertaking specific types of activity are required to use Best Available Techniques (BAT) to prevent and reduce emissions to air, water and land. BAT refers to the most effective and advanced techniques which are economically and technically viable for the industry sector and are the best for preventing or minimising emissions and impacts on the environment as a whole.

'Techniques' include both the technology used and the way the installation is designed, built, maintained, operated and decommissioned. BAT is used to determine the types of abatement technologies and methods operators should put in place, as well as establishing associated emission levels. These are then used to determine individual emission limit values within each installation's environmental permit.

Efficient regulation of industrial emissions not only ensures environmental protection but also plays a crucial role in delivering sustainable economic growth, clean power and community health

This consultation seeks to gather your views and feedback on the proposed BATC, BAT-AELs and BAT-AEPLs that have been developed for the following sectors in the United Kingdom:

1. Ferrous metals processing (forming) (FMPF)
2. Ferrous metals processing (galvanizing) (FMPG)
3. Textiles (TXT)
4. Common waste gas management and treatment systems in the chemical sector (WGC)

These BATC were developed based on outputs from the EU Best Available Technique Reference Document (BREF) process, in which UK representatives participated until 31 January 2020. This process also included input from sector-specific Technical Working Groups (TWGs), which provided comments and evidence. The final UK BATC were produced using evidence from current industry practices, sector activities and regulatory submissions within the UK context.

Your input and perspectives on these proposed BATC are valuable and will contribute to the robustness and effectiveness of the UK's BAT regime framework aimed at minimising the environmental impact of these industrial sectors.

UK BAT Process

The provisional BAT Common Framework agreement was developed following the UK's exit from the European Union. This agreement forms a collaborative framework between the UK Government and devolved governments to regulate pollution, facilitate economic

growth through streamlined standards and establish a shared approach to using BAT across the UK. This Framework, outlined in a Concordat, sets out how they work together to establish, maintain and review BAT. It covers international obligations, resolving disputes, decision-making processes and focuses on setting BAT for the UK. The Framework seeks to ensure consistency for UK industry while also acknowledging that different parts of the UK may need to establish their own rules regarding BAT.

The UK BAT regime, established following consultation in 2021, is based on a transparent, collaborative data and evidence-led process where stakeholders including regulators and industry work together to set standards that safeguard and build on the high levels of environmental protection already in place.

The initial phase of sector reviews (referred to as 'tranche 1') include **ferrous metals processing** (divided into forming and galvanizing to better align with the UK's system of regulation), **textiles** and **common waste gas management and treatment in the chemicals industry**. These sectors were selected for review first as they were already undergoing review as part of the EU BREF process that the UK had been engaged in.

Sector specific TWGs were established, comprising industry experts, regulatory authorities and other interested parties with the required technical, environmental, economic or regulatory expertise to contribute actively. To inform the development of BAT, the TWGs:

- **Identify high-performing plants**: They identify plants that demonstrate excellent environmental performance within their respective sectors.
- **Collect data**: They collect comprehensive data on the pollution prevention and control techniques employed by these high-performing plants, including emission and consumption levels and other indicators of environmental performance (including EU-level data for tranche 1).
- **Determine BAT**: Based on the collected data, the TWGs determine the best available techniques for their respective sectors.
- **Set emission and performance levels**: The TWGs also determine the emission levels (BAT-AELs) and other environmental performance levels (BAT-AEPLs) associated with the identified BAT.

The BATC in this consultation reflect the outcome of detailed technical discussions within the TWGs. While the UK BAT Team facilitates and supports this process, it does not decide the BATC. TWG members contribute sector-specific knowledge and evidence through a series of meetings held over an extended period. These meetings provide a forum for open discussion, constructive challenge and the refinement of ideas. The conclusions are shaped collaboratively, with experts sharing their experience and insights to ensure the proposed techniques and emission levels are appropriate for industry, practical to implement and fit for purpose.

This consultation presents the 'tranche 1' BATC and the Interpretation Guidance and Supporting Information documents for comment. The BATC documents presented alongside this consultation consist of a brief description of BAT for each sector, along with their applicability and associated emission or consumption levels The BATC will be put

into effect using statutory instruments and will act as standards for determining emission limits and granting operating permits to relevant industrial sites in the UK.

Growth Mission

The central mission of the UK government is economic growth. Streamlined and efficient regulation of industrial sectors is essential to delivering sustained growth. Updated BATC help businesses use the latest techniques, reduce their environmental impact and become more productive and innovative. These BATC also make it easier for industries to follow clear and straightforward regulations, which supports sustainable investments and growth. A well-functioning permitting system enables growth by setting a clear, responsive and proportionate regulatory framework which supports investment into clean technologies, innovation and growth.

Extent of the Changes

The updated BATC conclusions reflect changes in industrial practices, advances in technology and up-to-date evidence on environmental and health impacts. They introduce stricter and more specific requirements, raising the baseline for environmental performance across sectors. These changes aim to reduce emissions, improve resource efficiency and encourage more consistent environmental performance based on the latest available evidence**.**

Impact of the Changes on Businesses

A de minimis assessment (DMA) was conducted for each sector to estimate the equivalent annual net direct cost to businesses of complying with the updated BAT standards. This assessment considered costs over a 10-year period and confirmed that the total cost across all businesses within scope is expected to remain below £10 million per year.

The TWG thoroughly reviewed all BATC for each sector, identifying those with the greatest potential financial or operational impacts. The DMA focuses on the costs associated with these BATC and the techniques required to meet them. This consultation includes targeted questions on those key techniques. While the detailed cost analysis is limited to these key techniques, the DMA also considers the wider environmental and operational benefits of implementing the full set of updated BATC.

The DMA recognises that, under Article 15(4) of the Industrial Emissions Directive (IED), competent authorities may grant derogations in specific circumstances. This means that, in specific cases, less stringent emission limit values (ELVs) than those associated with BAT may be applied. Such derogations are permitted when meeting BAT-AELs would result in disproportionately high costs for businesses relative to the environmental benefits achieved.

This approach to assessing cost and benefits ensures that each DMA focuses on the techniques with the most significant potential burden while still reflecting the broader

benefits of the latest BAT. Many businesses already replace equipment and adopt new technologies as part of planned maintenance schedules and long-term investment strategies. This alignment with existing business planning means that implementing BAT often fits within anticipated upgrade cycles, helping to limit additional costs. In addition, many businesses already have the necessary equipment or standards in place to meet the updated emission limits, further reducing the need for significant new investment.

In addition to assessing costs, the analysis also considers predicted environmental benefits, focusing on reducing emissions of harmful pollutants and minimising waste. Adopting the latest BAT should not only result in better protection of the environment but can also improve the operational efficiency of businesses. By streamlining processes, optimising resource use and adopting more effective technologies, businesses can reduce their waste and energy consumption, leading to cost savings and improved productivity.

Overall, the cost-benefit analysis demonstrated that the substantial benefits outweigh the initial capital expenditures and ongoing operational costs associated with implementing the updated BATC. These benefits include significant reductions in harmful emissions and waste, as well as improvements in business efficiency.

Structure of the consultation document

This consultation seeks feedback on the four sectors below. For efficiency, we are consulting on multiple sectors together.

Completion of each section is optional, so you need only provide feedback for those relevant to yourself. This will help us ensure that your comments are accurately captured and considered.

- Section 1: About you
- Section 2: Ferrous metals processing (forming)
- Section 3: Ferrous metals processing (galvanizing)
- Section 4: Textiles
- Section 5: Common waste gas management and treatment in the chemical sector

The consultation is structured as follows for each sector:

a. **About you or your organisation:** General information

b. **Focused questions on specific techniques**: Questions about techniques the TWG consider represent the most significant changes for industry to implement BAT. (Optional: Answer only if relevant to you or if you have specific opinions).

c. **General questions on the overall BATC**: Given the length and technical complexity of the BATC documents, this section provides an opportunity to share additional comments or concerns on any aspect of the BATC.

Before providing feedback, please review the draft BATC and interpretation guidance and supplementary information documents for the sector(s) most relevant to your expertise or interest. The BATC documents are available here:

https://www.gov.uk/government/groups/uk-bat#current-status-of-uk-batc

Using and sharing your information

How we use your personal data is set out in the consultation and call for evidence exercise privacy notice which can be found here https://www.gov.uk/government/publications/defras-consultations-and-call-for-evidence-exercises-privacy-notice

Other information

This consultation is being conducted in line with the Cabinet Office “Consultation Principles” and be found at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/703564/Consultation_principles_.pdf

Questions

Section 1. About you

Q1. Would you like your response to be confidential?

- ☐ Yes
- ☐ No

If you answered yes, please give your reason (open text)

Q2. What is your name? (open text)

Q3. What is your email address? (open text)

Q4. Who are you responding as? (Select one option only)

- ☐ industry
- ☐ member of the public
- ☐ public body or local authority
- ☐ trade body
- ☐ academic body
- ☐ non-governmental organisation
- ☐ other (please state)

If you are responding on behalf of an organisation, please provide the name. (Open text)

Q5. In which part(s) of the United Kingdom are you based? (please tick all that apply)

- ☐ England
- ☐ Wales
- ☐ Scotland
- ☐ Northern Ireland
- ☐ other (please state)

Section 2. The ferrous metals processing (forming) sector

Background

The ferrous metals processing (forming) sector uses various manufacturing techniques including hot rolling, cold rolling and wire drawing. Information on the different manufacturing activities relevant to the UK are described in the Best Available Techniques Reference Document for the Ferrous Metals Processing Industry.

Products derived from these processes include rolled flat products such as strips and heavy plates, long products such as rails and bars, as well as tubes.

Overview of regulated installations in the UK

In 2023, the ferrous metals processing (forming) sector had 21 permitted installations in the UK. 13 located in England, 7 in Wales and 1 in Scotland.

The majority of the industry sector is covered by hot rolling mill activities, some of which are part of wider integrated iron and steel works. Other activities include wire drawing sites and cold rolling activities.

UK BATC for Ferrous metals processing (forming) industry

UK BATC Ferrous Metals Processing Industry (Forming) formal draft

UK BATC Ferrous Metals Processing Industry (Forming) formal draft interpretation guidance and supplementary information

Ferrous metals processing (forming) – specific questions

Based on a screening process involving input from TWG members, the BATC which could result in the most significant changes in emissions or costs to industry were identified. The BATC identified through this process are detailed below, along with specific questions on each of these.

Emissions to air from heating

BAT requires the use of techniques to prevent or reduce emissions to air from heating during processing, the monitoring of channelled emissions and compliance with BAT-associated emission levels (BAT-AELs).

- **BAT 35** covers techniques and BAT-AELs to reduce emissions of dust
- **BAT 37** covers techniques and BAT-AELs to reduce emissions of NO_x
- **BAT 6** covers the monitoring requirements

Q6. Are the techniques, BAT-AELs and monitoring requirements appropriate for the industry to reduce the following emissions to air from heating?

(a) Dust [YES / NO / NO VIEW]

(b) NOx [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Ferrous metals processing (forming) – general questions

Q7. Do the BATC reflect the most effective and advanced techniques in the ferrous metals forming sector? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q8. Are the techniques outlined in the BAT conclusions economically viable and technically feasible for businesses in the ferrous metals forming industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q9. If you have any technical evidence, data, cost considerations or feedback on any of the BAT for this sector that you believe Defra needs to consider, please provide it below.

If relevant, please include references to BAT numbers you are commenting on.

Section 3. The ferrous metals processing (galvanizing) sector

Background

Galvanizing is a key process in ferrous metals processing, involving the application of a protective zinc coating to steel to prevent rusting. This process is integral to many industries, including construction, transport, agriculture and power transmission making products last longer and reducing maintenance costs.

Overview of regulated installations in the UK

In 2023, the ferrous metals processing (galvanizing) sector had 47 permitted installations in the UK. 34 located in England, 4 in Wales, 4 in Scotland and 5 in Northern Ireland.

This sector includes batch galvanizing sites that fall within the scope of these BATC if either of the following thresholds are exceeded:

- an input of more than 2 tonnes of crude steel (feedstock) per hour, or
- the volume of the treatment vats exceeds 30 m^3

UK BATC for Ferrous metals processing (galvanizing) industry

UK BATC Ferrous Metals Processing Industry (Galvanising) formal draft

UK BATC Ferrous Metals Processing Industry (Galvanising) formal draft interpretation guidance and supplementary information

Ferrous metals processing (galvanizing) – specific questions

Based on a screening process involving input from TWG members, the BATC which could result in the most significant changes in emissions or costs to industry were identified. The BATC identified through this process are detailed below, along with specific questions on each of these.

Energy efficiency of heating

BAT require the use of techniques to increase energy efficiency in heating (including the heating / drying of workpieces as well as heating of baths and galvanizing kettles) and compliance with BAT-associated environmental performance levels (BAT-AEPLs).

- **BAT 9** covers techniques to increase energy efficiency and for BAT-AEPLs for specific energy consumption in batch galvanizing
- **BAT 7** covers the monitoring requirements for channelled emissions to air

Q10. Are the techniques, BAT-AEPLs and monitoring requirements to increase energy efficiency appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions to air from hot dipping

BAT require the use of techniques to reduce emissions to air of dust and zinc from hot dipping[1] after fluxing in batch galvanizing, the monitoring of channelled emissions and compliance with BAT-associated emission levels (BAT-AELs).

- **BAT 26** covers techniques to reduce emissions to air and BAT-AELs for channelled dust emissions to air
- **BAT 7** covers the monitoring requirements for channelled emissions to air

Q11. Are the techniques, BAT-AELs and monitoring requirements to reduce emissions to air from hot dipping in batch galvanizing appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Material efficiency in pickling

BAT outline the necessary measures to monitor and minimise the generation of spent pickling acid during the galvanizing process and the BAT-AELs for specific pickling acid consumption.

- **BAT 13** covers techniques and BAT-AELs to reduce the quantity of spent acid generated
- **BAT 7** covers the monitoring requirements for channelled emissions to air

Q12. Are the techniques, BAT-AELs and monitoring requirements to minimise spent acid appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

[1] immersion in molten zinc to obtain a coating

Material efficiency in spent acid recovery

To reduce the quantity of spent acids sent for disposal from pickling activities, BAT require that spent pickling acid[2] is recovered or used as a secondary raw material (for example to produce iron chloride or pigments).

- **BAT 17** covers the techniques for the recovery of pickling acids

Q13. Are the acid recovery techniques the most appropriate and effective methods for the sector to reduce the quantity of spent acid sent for disposal? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Ferrous metals processing (galvanizing) – general questions

Q14. Do the BATC reflect the most effective and advanced techniques in the ferrous metals galvanizing sector? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q15. Are the techniques outlined in the BAT conclusions economically viable and technically feasible for businesses in the ferrous metals galvanizing industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q16. If you have any technical evidence, data, cost considerations or feedback on any of the BAT for this sector that you believe Defra needs to consider, please provide it below.

If relevant, please include references to BAT numbers you are commenting on.

[2] pickling acid refers to a solution containing acid, such as hydrochloric acid or sulfuric acid, used to remove impurities, stains, rust, or scale from the surface of ferrous metals

Section 4. The textiles sector

Background

The textiles sector covers industrial processes such as pre-treatment, dyeing, coating, printing and finishing of textiles. These processes support the production of a wide range of goods including clothing, linen, carpets and other home textiles. In the UK, the sector mainly consists of dye houses, wool scourers and carpet manufacturers. Common processes within the sector include washing, bleaching, mercerisation and dyeing of fibres or finished textiles.

Overview of regulated installations in the UK

In 2023, the textiles sector had 26 permitted installations in the UK. 23 of these were located in England, 2 in Scotland and 1 in Northern Ireland. 3 of these sites are known to have ceased operating.

UK BATC for the textiles industry

UK BATC Textiles Industry formal draft

UK BATC Textiles Industry formal draft interpretation guidance and supplementary information

Textiles – specific questions

Based on a screening process involving input from TWG members, the BATC which could result in the most significant changes in emissions or costs to industry were identified. The BATC identified through this process are detailed below, along with specific questions on each of these.

Monitor channelled emissions to air

BAT require the monitoring of channelled emissions released to air during certain processing activities, in accordance with the relevant EN or ISO standards[3].

- **BAT 22** covers the requirements and frequency of monitoring for channelled emissions to air.

[3] EN (European Norm) and ISO (International Organization for Standardization) standards are widely recognized guidelines that ensure quality, safety, and efficiency across industries

Q17. Are the requirements to monitor channelled emissions appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Reduce diffuse emissions to air

BAT require operators to reduce diffuse emissions to air (for example VOCs from the use of organic solvents) and to collect and send these waste gases to treatment.

- **BAT 48** details the requirement to collect and treat waste gases to reduce diffuse emission to air.

Q18. Is the requirement to collect and treat diffuse emissions to air appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions to air from singeing, thermal treatment, coating and lamination

BAT require the use of techniques to prevent or reduce channelled emissions of organic compounds to air from singeing, thermal treatment, coating and lamination processes, the monitoring of channelled emissions and compliance with BAT-associated emission levels (BAT-AELs).

- **BAT 51** covers techniques and BAT-AELs to reduce channelled emissions of organic compounds to air
- **BAT 22** covers the monitoring requirements for channelled emissions to air

Q19. Are the techniques, BAT-AELs and monitoring requirements to reduce emissions to air from singeing, thermal treatment, coating and lamination processes appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions to air from singeing and thermal treatments (excluding thermofixation and heatsetting).

BAT require the use of techniques to prevent or reduce channelled dust emissions to air from singeing and thermal treatment (except thermofixation and heatsetting). Monitoring of

channelled emissions and compliance with BAT-associated emission levels (BAT-AELs) is also required.

- **BAT 52** covers techniques and BAT-AELs to reduce channelled emissions of dust to air
- **BAT 22** covers the monitoring requirements for channelled emissions to air

Q20. Are the techniques, BAT-AELs and monitoring requirements to reduce dust emissions to air from singeing and thermal treatment appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions of ammonia from coating, printing and finishing (including thermal treatments)

BAT require the use of techniques to prevent or reduce channelled ammonia emissions to air from coating, printing and finishing processes, the monitoring of channelled emissions and compliance with BAT-associated emission levels (BAT-AELs).

- **BAT 53** covers techniques and BAT-AELs to reduce channelled emissions of ammonia to air
- **BAT 22** covers the monitoring requirements for channelled emissions to air

Q21. Are the techniques, BAT-AELs and monitoring requirements to reduce ammonia emissions to air from coating, printing and finishing appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Textiles – general questions

Q22. Do the BATC reflect the most effective and advanced techniques in the textiles sector? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q23. Are the techniques outlined in the BAT conclusions economically viable and technically feasible for businesses in the textiles industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q24. If you have any technical evidence, data, cost considerations or feedback on any of the BAT for this sector that you believe Defra needs to consider, please provide it below.

If relevant, please include references to BAT numbers you are commenting on.

Section 5. Common waste gas management and treatment in the chemical sector

Background

The UK BATC for Common Waste Gas Management and Treatment Systems in the Chemical Sector is aimed at the whole of the chemicals sector. Major sectors in the UK chemical industry include life sciences, science and technology, organic and inorganic chemicals and pharmaceuticals.

The BATC cover many chemical processes where emissions are to air, which are not otherwise covered by one or more of the following EU BAT conclusions, including: for the production of chlor-alkali (CAK), for common waste water and waste gas treatment/ management systems in the chemical sector (CWW), for the production of large volume organic chemicals (LVOC) and for the production of large volume inorganic chemicals (LVIC[4]).

Overview of regulated installations in the UK

In 2023, based on the scope of the review applying to all Part A installations in Scotland and Northern Ireland and all Part A(1) installations in England and Wales, the chemicals sector comprises approximately 460 permitted installations in the UK. This included 19 located in Scotland, 4 located in Northern Ireland, 418 in England and 19 located in Wales.

It is estimated that the WGC UK BAT conclusions will be the main or primary set of BAT conclusions at approximately 300 of these 460 chemicals installations.

UK BAT for Common waste gas management and treatment in the chemical sector

UK BATC Common Waste Gas Management and Treatment Systems in the Chemical Sector formal draft

UK BATC Common Waste Gas Management and Treatment Systems in the Chemical Sector formal draft interpretation guidance and supplementary information

[4] The UK BATC for LVIC is currently under development https://www.gov.uk/government/groups/uk-bat#current-status-of-uk-batc

Common waste gas management and treatment in the chemical sector – specific questions

Based on a screening process involving input from TWG members, the BATC which could result in the most significant changes in emissions or costs to industry were identified. The BATC identified through this process are detailed below, along with specific questions on each of these.

Emissions of organic chemicals to air

BAT require the use of techniques to prevent or reduce emissions of organic compounds to air, the monitoring of channelled emissions and compliance with BAT-associated emission levels (BAT-AELs)

- **BAT 11** covers techniques to reduce emissions to air and BAT-AELs for channelled emissions to air
- **BAT 8** covers the monitoring requirements for channelled emissions to air

Q25. Are the techniques, BAT-AELs and monitoring requirements to reduce emissions of organic chemicals to air appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions of inorganic chemicals to air

BAT require the use of techniques to reduce emissions to air of inorganic compounds (carbon monoxide, NO_X and SO_X) from thermal treatment, the monitoring of channelled emissions and compliance with BAT-associated emission levels (BAT-AELs).

- **BAT 16** covers techniques to reduce emissions to air and BAT-AELs for channelled dust emissions to air from thermal treatment
- **BAT 8** covers the monitoring requirements for channelled emissions to air

Q26. Are the techniques, BAT-AELs and monitoring requirements to reduce emissions to air from thermal treatment appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Monitoring of diffuse VOC emissions

BAT require the monitoring of diffuse VOC emissions to the air during specific processing activities, in accordance with relevant EN or ISO standards. BAT is applicable when the estimated annual quantity of diffuse VOC emissions from the plant exceeds the values specified in the BAT guidelines

- **BAT 22** covers the requirements and frequency of monitoring for diffuse VOC emissions to air.

Q27. Are the requirements to monitor diffuse VOC emissions appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Prevention or reduction of diffuse VOC emissions

BAT require the use of a combination of techniques to prevent or reduce diffuse VOC emissions to air, the monitoring of emissions and compliance with BAT-associated emission levels (BAT-AELs) from the use of solvents or the reuse of recovered solvents.

- **BAT 23** details the techniques to reduce diffuse VOC emissions to air in order of priority
- **BAT 20**, **BAT 21** and **BAT 22** cover the monitoring requirements

Q28. Are the techniques, BAT-AELs and monitoring requirements to reduce diffuse VOC emissions to air appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions to air from process furnaces/heaters

BAT applies when process furnaces/heaters with a total rated thermal input equal to or greater than 1 MW are used in the production processes included in the scope of the BATC for Common Waste Gas Management and Treatment Systems in the Chemical Sector.

BAT require the use of optimised combustion plus other techniques to prevent or reduce channelled emissions to air of carbon monoxide (CO), dust, NO_X and SO_X. Additionally, BAT sets associated emission levels (BAT-AEL) for channelled NOX emissions to air and indicative emission levels for channelled carbon monoxide (CO) emissions to air.

- **BAT 24** details the techniques to reduce channelled emissions to air from process furnaces/heaters
- **BAT 8** covers the monitoring requirements for channelled emissions to air

Q29. Are the techniques, BAT-AELs and monitoring requirements to reduce emissions to air from process furnaces/heaters appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Emissions to air from the production of viscose.

BAT require the use of techniques to reduce emissions to air of carbon disulphide (CS_2) and hydrogen sulphide (H_2S). Additionally, BAT sets associated emission levels (BAT-AEL) for channelled emissions to air of CS_2 and H_2S from the production of viscose using CS_2 and from the production of staple fibres and casing expressed as specific emission loads.

- **BAT 36** details the techniques to reduce channelled emissions to air from the production of viscose using carbon disulphide.
- **BAT 34** covers the monitoring requirements

Q30. Are the techniques, BAT-AELs and monitoring requirements to reduce emissions to air from process involved in the production of viscose appropriate for the industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here.

Common waste gas management and treatment in the chemical sector – general questions

Q31. Do the BATC reflect the most effective and advanced techniques in the waste gas management and treatment in the chemicals sector? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q32. Are the techniques outlined in the BAT conclusions economically viable and technically feasible for businesses in the waste gas management and treatment in the chemicals industry? [YES / NO / NO VIEW]

Please add any further information or evidence in support of your response here, including reference to relevant BAT numbers.

Q33. If you have any technical evidence, data, cost considerations or feedback on any of the BAT for this sector that you believe Defra needs to consider, please provide it below.

If relevant, please include references to BAT numbers you are commenting on.

What next

The responses to these consultation questions will be reviewed and analysed to inform the views of Ministers, regulators and the TWGs as appropriate. This will be followed by a legislative process.

There is a 4-year implementation period for existing industries to comply with the appropriate BATC. New businesses will be required to comply with the most recent BATC following the date of their implementation, which will be formally incorporated into the conditions of their permit.

Glossary

This section provides definitions of key terms and acronyms used throughout this document.

BAT – Best Available Techniques. The most effective and advanced methods for preventing or reducing emissions and environmental impacts, which are economically and technically viable.

BAT-AEL – BAT Associated Emission Level. Emission levels associated with BAT, used to set limits in environmental permits.

BAT-AEPL – BAT Associated Environmental Performance Level. Performance levels (for example energy or material efficiency) linked to BAT, used to assess environmental impact beyond emissions.

BATC – BAT Conclusions. Formal conclusions on BAT, including descriptions, applicability and associated levels. These form the basis for regulatory standards.

BREF – BAT Reference Document. EU documents that describe BAT for specific sectors, used as a reference in developing UK BAT Conclusions.

CAK – Chlor-Alkali

CO – Carbon Monoxide

CS_2 – Carbon Disulphide

CWW – Common Waste Water and Waste Gas Treatment/Management Systems

DMA – De Minimis Assessment. A self-certification confirming that a regulatory measure imposes negligible cost to business and does not require a full Impact Assessment.

ELV – Emission Limit Value. Legally binding limits on emissions from industrial installations, often based on BAT-AELs.

EN – European Norm. European standards that define best practices for monitoring and quality assurance.

FMPF – Ferrous Metals Processing – Forming. Sector covering rolling and drawing of steel products.

FMPG – Ferrous Metals Processing – Galvanizing. Sector covering zinc coating of steel to prevent corrosion.

H_2S – Hydrogen Sulphide

IED – Industrial Emissions Directive. EU legislation that sets rules for industrial emissions.

ISO – International Organization for Standardization. International standards that define best practices for monitoring and quality assurance.

LVIC – Large Volume Inorganic Chemicals. Industrial activities involving the large-scale production of inorganic substances such as sulphuric acid, ammonia and chlorine.

LVOC – Large Volume Organic Chemicals. Industrial manufacture of high-volume organic compounds like ethylene, benzene, and methanol

MW – Megawatt

NH_3 – Ammonia

NOx – Nitrogen Oxides

SOx – Sulphur Oxides

TWG – Technical Working Group. Groups of experts from industry, regulators and other stakeholders who develop BATC using evidence-based methods.

TXT – Textiles. Sector covering industrial textile processing such as dyeing and finishing.

UK BAT – United Kingdom Best Available Techniques. The UK's framework for setting and applying BAT following EU exit.

VOC – Volatile Organic Compounds. Organic chemicals that easily vaporise and contribute to air pollution.

WGC – Waste Gas Chemicals. Sector covering common waste gas management and treatment in the chemical industry.

For information on sector-specific technical terms, refer to the definitions section of each draft BATC document available here