Best Available Techniques
UK BAT

UK Best Available Techniques

Draft Interpretation Guidance and Supporting Information for the Textiles Sector

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Supporting Information and Interpretation Document

Following the review of the textiles sector the Technical Working Group (TWG) has reached consensus on BAT for the UK, with no alternate positions.

This document is a summary of the process followed to develop Best Available Technique Conclusions (BATC) in the UK for the textiles sector. It includes supporting information discussed by the Technical Working Group (TWG) and interpretation on a number of matters raised as the TWG members discussed and agreed the Formal BATC.

The agreed BATC are based on the outputs from the EU BREF process, which UK representatives participated in up to 31 January 2020, along with comments and evidence provided by the TWG members. This includes evidence available from current industry practice, sector activities and regulatory submissions within a UK context. Original comments made by the UK Shadow TWG were also reviewed and reconsidered as part of the development of BAT for the UK.

Outcomes from the UK BAT Process

Implementation of the BAT Conclusions for the textiles sector will ensure that the UK meets global climate and environmental challenges through driving environmental improvements whilst allowing sustainable business development and a level playing field.

The BAT Conclusions will introduce updated techniques through which emissions can be reduced or minimised. They will also introduce new evidence based BAT-AEL's, reducing emissions from the sector, as part of the continuous process of improvement through the development and review of BAT in the UK.

UK BAT Process

The process for developing BAT for the UK was set up in 2022. This involves the organisation of an information exchange between UK Government, Devolved Administrations, Regulators, industry and environmental non-governmental organisations on Best Available Techniques (BAT) used to control industrial pollution.

The process is mandated by the Environment and Wildlife (Legislative Functions) (EU Exit) Regulations 2019, specifically Part 3, with the power to make decisions on BAT Conclusions for the purposes of Directive 2010/75/EU as enabled by section 8(1) of, and paragraph 21(b) of Schedule 7 to, the European Union (Withdrawal) Act 2018(1).

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The BAT conclusions cover large-scale agro-industrial activities included in Annex I to the Industrial Emissions Directive (2010/75/EU). They comprise a short description of the best available techniques identified, their applicability and associated emission or consumption levels.

The definition of BAT in UK law remains unchanged following EU exit and it forms part of our retained EU law alongside all existing BATC that were developed at the EU level (largely on a sector-by-sector basis). The BAT regime operates on the same basis of a transparent, collaborative, flexible, evidence led process that safeguards and builds on the high levels of environmental protection already in place across the UK.

After publication as a Statutory Instrument in the UK, the BATC will provide the reference for setting emission limit values and issuing operating permits for in scope industrial installations in the UK.

The BATC associated with this paper are one of four carried out in tranche 1 of the UK BAT process.

Scope of review

The scope was based on the EU BREF review of which the UK was part. All the references to the relevant UK legislation, are set out in the Formal draft of the UK BAT Conclusions.

The UK textiles BAT Conclusions therefore include all the activities covered by the EU textiles scope.

It should be noted that BAT Conclusions apply without prejudice to other legislation, which may be relevant, for example on the registration, evaluation, authorisation and restriction of chemicals (REACH), or on the classification, labelling and packaging (CLP) Regulation.

Overview of Regulated Installations in the UK

Based on the scope of the review, in 2023, the textiles sector had 26 permitted installations in the UK. The industry includes carpet manufacture, dyehouses, wool scourers and speciality textiles.

The sites are shared across the UK in the following way:

Scotland – 2 permitted sites (1 has ceased operating).

Northern Ireland – 1 permitted site

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England – 23 permitted sites (2 have ceased operating).

Wales – No permitted sites.

All the above sites are regulated by the relevant national regulator.

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Key Environmental and Technical Issues

The key environmental impacts were discussed and agreed at part of the EU process to develop BAT which included representatives from the UK. The published EU BREF contains full details of the processes and techniques used to minimise pollution from the activities in scope of this review. The evidence collected as part of the EU Process was discussed in a UK context with additional data and information provided for specific issues in the subsequent development of BAT for the UK. A record of the main points is presented below to provide further context and interpretation guidance for the BAT conclusions agreed by the TWG.

These BAT conclusions concern all parts of the textiles sector. This includes dyehouses, carpet manufacture, wool scourers and specialty textiles.

The UK BAT conclusions for the textiles Sector will replace the EU Reference Document on Best Available Techniques in the Textiles Industry – July 2003.

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Interpretation and implementation

Climate change and circular economy

The outline draft UK BATC for Tranche 1 contained 3 examples of BAT to ensure operators of permitted installations were able to identify and operate in a manner which supported the move to a circular economy as well as adapting to and mitigating the effects of climate change. Following the review of the outline draft, these 3 draft BATC were removed.

They were not part of the EU BAT conclusions, and their removal was a policy decision of the Standards Council. The Standards Council remains of the view that addressing circular economy and climate change are BAT and should be taken forward through the BAT system but accepted that these generic BAT proposals were not integrated into the evidence collection and subsequent BATC sufficiently and so instructed the TWG Chair to remove them from all Tranche 1 sectors BATC. The Standards Council will review the approach, consulting stakeholders with revised proposals for future tranches.

BAT 1: Environmental Management System (EMS)

The TWG discussed the role of the EMS and outlined that it would cover certain BATC requirements such as energy audits and water audits. As part of this the TWG expressed concern about external audits being compulsory and the difficulties of sectoral bench marking due to the very limited number of permitted sites and that significantly varying production processes.

The wording of the condition was updated to reflect improvements in the UK BAT template text and the experiences of the TWG. Clarification was also added for external audit requirements in the form of an applicability statement - "The level of detail and the degree of formalisation of the EMS will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have."

Sectoral benchmarking is important to ensure continuous improvement. Its application could be across other similar operations wider than UK or those that pose a similar level of pollution risk. The applicability statement as outlined above ensures that this is proportionate to the scale and operations within the sector.

BAT 2: Establish, Maintain and Regularly Review an Inventory of Inputs and Outputs

Concerns were expressed by the TWG about the apparent amount and frequency of monitoring required by the BATC. At the formal TWG meeting this condition was highlighted as a vital part of the EMS and is the foundation for identifying a number of key process parameters including water, energy and chemicals usage

and consumption; waste water and waste gas stream production and characterisation and waste generated by the process.

This condition is a fundamental requirement of the BATC, it is therefore essential that it is completed because the outcome of the review will influence the applicability of a number of other BATC, particularly monitoring. There may also be opportunities for process improvements and efficiency savings.

BAT 3: Chemicals Management Plan

This BATC was not discussed by the TWG at the formal meeting but has been included for clarity and consistency. Aspects of chemical use, storage and control may also be regulated by other legislation such as Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Control of Substances Hazardous to Health (COSHH) and Control of Major Accident Hazards (COMAH). However, the BATC has specific requirements relating to environmental assessment, control and minimisation of hazardous chemicals or substitution with less hazardous chemicals for the environment.

These aspects are included within BAT for the UK to ensure best practice is represented with regards to environmental protection. However, it is recognised that some aspects such as substitution for less hazardous chemicals and minimisation of chemical use can only take place where product specifications allow in the short term. The suitability and timeframe over which an exchange to the use of less harmful chemicals may be possible, and what this might mean for other operations of the site or product quality should be discussed between operator and regulator.

BAT 11: Monitor emissions to water

Some members of the TWG raised points about the monitoring requirements and emission levels for indirect discharges to water. Indirect emissions to water may have separate commercial controls placed on them by the receiving water company through a trade effluent discharge consent.

The implementation of such issues are presented by the UK National Regulators through their UK Cross-Cutting Interpretation Guidance and Permitting Advice on the Best Available Techniques (BAT) Conclusions published under the Industrial Emissions Directive (IED). The guidance includes details of the IED requirements on setting BAT-AELs for indirect emissions to water i.e. sewer. The relevant BAT-AELs within the BATC have applicability statements that are consistent with Article 15(1) of IED. These state that where there are BAT-AELs for indirect emissions, ELVs will be set within the BAT-AEL ranges, unless there is an applicability statement, and the Competent Authority has accepted the arguments put forward by the operator demonstrating that the applicability statement applies. In such cases the Competent Authority may decide not to set an ELV or to set an ELV that is higher than the BAT-AEL because it takes into

account any further treatment that may be provided by the wastewater treatment plant. In these circumstances, the operator does not require a derogation under Article 15(4) of IED.

Article 15(1) of the IED describes how the effect of a water treatment plant should be taken into account when determining ELVs for indirect discharges to water.

It will need to be demonstrated that the waste water treatment activity provides "an equivalent level of protection of the environment as a whole" and "does not lead to higher levels of pollution in the environment." Part of the demonstration will require sites to understand the type and amount of pollutants emitted from the site in line with BAT 2.

This BATC is intended to be interpreted as per the footnotes. For example, footnote 5 refers to an indirect discharge to a receiving water body allowing the frequency of monitoring to be reduced. An on-site Effluent Treatment Plant (ETP) may be analogous to a discharge to a sewage treatment works. The design basis for the ETP and its operational performance monitoring could provide evidence to the national regulator regarding the implementation of monitoring frequency or an alternative justified on evidence as per Article 15(3) of IED.

The implementation of this BATC (including the evidence required) is for the national regulator to determine in line with the guidance they provide.

BAT 32: Use resources efficiently as well as reduce water consumption and waste water generation

The TWG highlighted that UK wool has less recoverable woolgrease. This issue was also raised by the Shadow Technical Working Group during the EU process of developing BAT. The TWG suggested that a footnote or similar was used to explain that recovery rates for UK scourers processing coarse wool will have lower recovery/removal rates than those possible in other parts of Europe where they process fine wool. No evidence was however provided to support this.

It is noted that the table differentiates between coarse and fine wool removal rates. The title of the BAT-AEPL has been changed and the definitions of BAT-AEL and BAT AEPL have been added to the document to ensure clarity.

It should be noted that this is a BAT-AEPL so won't appear in permits as an ELV but as a target (yearly average). Operators are required to demonstrate they are following BAT if they are not achieving BAT-AEPL targets i.e. justification via change of materials processed.

BAT 40: Energy efficiency

Some members of the TWG were concerned that these BAT conclusions duplicated other legislative requirements such as Energy Savings and Opportunities Scheme (ESOS), Streamlined Energy and Carbon Reporting

(SECR), and UK Emission Trading Scheme (UKETS). The different requirements of these schemes were discussed. It was recognised that while there were some overlapping areas there were none of the other schemes which could completely replace the BAT conclusion. Also, energy efficiency measures one of the basic obligations of the operator in the IED.

The TWG discussed how it may be possible to demonstrate compliance with the energy efficiency parts of the BATC using outputs from other schemes such as ESOS, SECR or ETS, where these provide suitable evidence of how they are meet the BATC. As an implementation issue the operator and the regulator should discuss whether the output from these schemes aligned with the BATC requirements, whether this demonstrated full compliance and whether any additional information or actions were required to meet the BATC.

BAT 43: Energy efficiency for the pre-treatment of raw wool fibres by scouring

Concerns were expressed by the TWG about the requirement for scouring bowls and dryers to be directly heated in order to prevent heat losses that occur in the generation of steam. This is because the technique impact on the sites ability or indeed prevent the installation of equipment that would aid the move towards net zero carbon - for example a biomass boiler that would produce steam.

Initial confusion was caused by a typographical error in the first working draft BATC document which stated that this BATC was generally applicable. This has since been corrected so that it is only applicable to new plants or major plant upgrades.

Furthermore this BATC is about energy efficiency of scouring bowls and the intention/purpose is not to prevent the installation of equipment such as a biomass boiler, especially if contributing to net zero or improved efficiency.

BAT 47: Reduce emissions to water

BAT-associated emission levels (BAT-AELs) for indirect discharges

The TWG expressed concerns that many of the BAT-AELs for indirect discharges to a receiving water body are very low and a modern dyehouse regularly exceeds these for zinc - for example, because trace levels of zinc are found in many auxiliary chemicals used in dyeing as well as in dyestuffs.

BAT-AEL's are developed based on evidence from the sector. There is a requirement in BAT 2 to characterise inputs and outputs from the processes within the installation which will ensure the sources of different emissions are

understood. Appropriate techniques are then required to be implemented to reduce the levels in line with BAT.

It should be noted that this BATC is intended to be interpreted as per the footnotes which detail the range of possible limits and when a limit at the higher end of the range may be acceptable.

The implementation of this BATC is for the national regulator to determine in line with the guidance they provide.

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Consensus Agreement to the BATC

At the conclusion of the TWG, after a final review of the BATC text no alternate positions were submitted by TWG members and the BATC were agreed by consensus supported by this supplementary information and interpretation guidance.

Standards Council supplementary request

Following consensus agreement to the BATC, the Standards Council requested further information about Per- and polyfluoroalkyl substances (PFAS) and Perfluorooctane sulphonic acid and its derivatives (PFOS).

These were considered during the EU BATC process and accordingly the requirements have been incorporated into UK BAT Conclusions. BAT 2: Establish, Maintain and Regularly Review an Inventory of Inputs and Outputs requires installations covered by the UK BAT Conclusions to complete an inventory of inputs and outputs and when identified in the effluent stream, three monthly monitoring will be required.

BAT 3: Chemicals Management System and BAT 21: Improve the overall environmental performance, especially to prevent or reduce emissions to the environment and waste, of oil-, water- and soil-repellence finishing require the regular analysis of the potential for substitution.

BAT 14: Pretreat (separately collected) wastewater streams and pastes (e.g. printing and coating) and BAT 46: Improve the overall environmental performance of the handling of waste, especially to prevent or reduce emissions to the environment require the separate storage and collection of PFAS contaminated wastes.

Public consultation

This is a place holder.

[A summary of any responses and the subsequent outcomes will be made here. This will support operators and regulators when implementing the final BATC and in the work of any future TWG]

Formal adoption

This is a place holder.

[A statement will be made here in line with the final adoption and publication of the SI for these BATC.]

Draft text for the SC paper …for example, the SC members on behalf of the UK Government and Devolved Administrations support the adoption of these BATC for the FMPF sector as developed and agreed by the TWG.