

Decision Document

Review of an Environmental Permit for an Installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2016 (as amended)

Decision document recording our decision-making process following review of a permit

The Permit number is: EPR/A2/001

The Operator is: Hoppings Softwood Products Limited

The Installation is: Hoppings Softwood Products Limited

This Variation Notice number is: WK/202441319

What this document is about

The Environmental Permitting Regulations (2016) requires Epping Forest District Council to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards. We are required to ensure this is completed within four years of the publication of updated decisions on BAT conclusions. We will use BAT conclusions published by the European Commission for conclusions published before the UK leaves the EU, or UK BAT conclusions after the UK leaves the EU. The Environmental Permitting Regulations (2016) enables the objectives of the Industrial Emissions Directive (IED) to be met.

We have reviewed the permit for this installation against the revised BAT Conclusions for surface treatment using organic solvents (STS) including preservation of wood and wood products with chemicals industry sector (WPC) published on 9th December 2020. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the Operator in the operation and control of the plant and activities of the installation. This review has been undertaken with reference to European Commission establishing best available techniques (BAT) conclusions ('BAT Conclusions') commission implementing decision (EU) 2020/2009, notified under document C(2020) 4050) establishing best available techniques (BAT) conclusions (BATc) for Surface treatment using organic solvents including preservation of wood and wood products with chemicals industry sector (STS). It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position.

As well as considering the review of the operating techniques used by the Operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

How this document is structured

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Glossary of acronyms used in this document

APC	Air Pollution Control
BAT	Best Available Technique(s)
BAT-AEEL	BAT Associated Energy Efficiency Level
BAT-AEL	BAT Associated Emission Level
BATc	BAT conclusion
BREF	Best available techniques reference document
CEM	Continuous emissions monitor
DLN	Dry Low NOx burners
ELV	Emission limit value derived under BAT or an emission limit value set out in IED
EMS	Environmental Management System
EPR	Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No. 1154)
IC	Improvement Condition
IED	Industrial Emissions Directive (2010/75/EU)
IPPCD	Integrated Pollution Prevention and Control Directive (2008/1/EC) – now superseded by IED
NOx	Oxides of nitrogen (NO plus NO ₂ expressed as NO ₂)
SGN	Sector guidance note
TGN	Technical guidance note

1 Our decision

We have decided to issue the Variation Notice to the Operator. This will allow it to continue to operate the Installation, subject to the conditions in the Consolidated Variation Notice that updates the whole permit.

We consider that, in reaching our decision, we have taken into account all relevant considerations and legal requirements and that the varied permit will ensure that a high level of protection is provided for the environment and human health.

2 How we reached our decision

2.1 Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 27/10/2022 requiring the Operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Notice required that where the revised standards are not currently met, the operator should provide information that

- Describes the techniques that will be implemented before 9/12/2024, which will then ensure that operations meet the revised standard, or
- justifies why standards will not be met by 9/12/2024, and confirmation of the date when the operation of those processes will cease within the installation or an explanation of why the revised BAT standard is not applicable to those processes, or
- Justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard described in the BAT Conclusions.

Where the Operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT AEL) described in the BAT Conclusions Document, the Regulation 61 Notice required that the Operator make a formal request for derogation from compliance with that AEL. In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 61 Notice initial response from the Operator was received on 21/11/2023.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review but not that it necessarily contained all the information we would need to complete that determination.

We asked the Operator to confirm the following:

- **BAT 1 and BAT 30** the Environmental Management System provided required some additional information in order to meet all sections identified in the BAT conclusion document
- **BAT 36, 37, 45, 48, 49, 50, 51 & 52** had not been detailed in the review. We asked for further written clarification as to why it was considered that these BATs were not relevant to this installation.
- **BAT 34.** We asked for clarification as to why only point “f” was considered to be relevant to this installation.
- **BAT 44.** We clarified that all future monitoring of groundwater must meet the standard in BAT 44.
- **BAT 46.** We asked for further information with regards to the construction of the tank & bunded area, and also the treatment & monitoring system so as to enable a determination with regards to BAT to established.

Further information has been provided which addresses all of the points raised, however during a subsequent inspection of the installation, a concern with regards to Tank 3 was identified.

Tank 3 is located outside of the main bunded area and therefore is served by a separate bund. This tank is not covered by a roof and therefore the bund would ordinarily be susceptible to rainwater ingress. In order to prevent rainwater from filling the bund, a “bund roof” had been constructed over the opening. This “roof”, consisting of a slanted piece of timber covered in roofing felt, rested on the tank sides and diverted rainwater outside of the bund. As a result there were concerns that should a leak develop in the tank above this “roof height”, which was approximately half way down the side of the tank, then the resulting chemical would be directed outside of the bund also. A discussion was held with the operator regarding the re-design of the “bund roof” which would incorporate an opening next to the tank itself and therefore enable any leak to enter the bund in the event of tank failure. The operator was also asked to undertake an integrity test of the tank in order to determine if such failure was likely in the near future.

The integrity testing was undertaken on 4th December 2024. Whilst the report from this testing has not been completed at the time of writing this document, the following information was obtained from a discussion with the consultants on the day of testing: The integrity of the tank appears to be compromised in at least one area, as the contents are currently seeping into the bund. There are also a number of other areas where the structure is showing signs of corrosion. The bund appears to be robust.

There is therefore an urgent need for the tank to be either replaced, removed, or made water tight, however as the bund appears to be robust at present, alternative methods for ensuring the prevention of the contamination of soil and groundwater have been agreed in the short term. Conditions have been included in the permit in order to provide compliance in the long term.

The operator has confirmed that daily checks of the level of liquid in the bund to Tank 3 are, and will continue to be undertaken by the plant operator. Where there is liquid in the tank, it will be removed and placed in the main bunded area. At the time of writing this document, there is no direct method of undertaking this. The operator has confirmed that they will use a submersible pump attached to a pipe that takes the liquid directly into the main bund. The operator is awaiting delivery of a bespoke pipe that has been fabricated to join onto the bund outlet and take any contents (via gravity) into the main bund. This is to be fitted in the coming weeks.

The Operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 61 Notice response that appears to be confidential in relation to any party.

2.2 Review of our own information in respect to the capability of the installation to meet revised standards included in the BAT Conclusions document

Based on our records and previous experience in the regulation of the installation we consider that the operator will be able to comply with the techniques and standards described in the BAT Conclusions other than for those techniques and requirements described in BAT Conclusion 46 (in respect of Tank 3 only). In relation to this BAT Conclusion, we have agreed how groundwater resources can be protected in the short term however further actions need to be taken. We have therefore included Improvement Conditions IC1, IC2, IC3 and IC4 in the Consolidated Variation Notice to ensure that the requirements of the BAT Conclusion are fully delivered in a timely manner..

3 The legal framework

The Consolidated Variation Notice will be issued, under Regulations 18 and 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED;

- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the Consolidated Variation Notice, it will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

Annex 1: Decision checklist regarding relevant BAT Conclusions

BAT Conclusions for Surface treatment using organic solvents including preservation of wood and wood products with chemicals industry sector, were published on 9th December 2020. There are 29 STS BAT Conclusions and 22 BATc for Preservation of Wood and Wood Products with Chemicals.

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Consolidated Variation Notice.

The conditions in the permit through which the relevant BAT Conclusions are implemented include but are not limited to the following:

BAT Conclusion requirement/topic	Permit condition(s)	Permit table(s)
BAT 1 & 30 - Environmental Management System	1.1.1, 2.3.3	S1.2
BAT 35 & 39 Energy efficiency	1.2 and 2.3.3	S4.3
BAT 31-34 Use of Raw Materials	1.3.1 and 2.3.3	S1.2 , S2.1
BAT 40 - Post treatment conditioning & interim storage	1.2	S1.2
BAT 41 - Avoidance, recovery and disposal of wastes produced by the activities	1.4, 2.3.4, 2.3.5	
Emissions	3.1.1 and 3.5.1	
BAT 43-45 Monitoring	2.3 and 3.3	S3.1, S3.2
BAT 50 Odour	3.4 and 2.3	S1.2
BAT 53 Noise	3.5	S1.2
Other operating techniques	2.3	S1.2

The overall status of compliance with the BAT conclusion is indicated in the table as

- NA Not Applicable
- CC Currently Compliant
- FC Compliant in the future (within 4 years of publication of BAT conclusions)
- NC Not Compliant

BAT Conclusion No	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	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 are not applicable to this installation	NA	<p>This installation undertakes wood preservation without the use of solvents based chemicals therefore BAT conclusions 2- 29 are not applicable</p> <p><i>Section 1.2 BAT conclusions for the coating of vehicles , BAT 24 , Tables 7 and 8</i></p> <p><i>Section 1.3 BAT conclusions for the coating of other metal and plastic surfaces Tables 9, 10 & 11</i></p> <p><i>Section 1.4 - BAT conclusions for the coating of ships and yachts BAT 25 & Table 12</i></p> <p><i>Section 1.5- BAT conclusions for the coating of aircraft BAT 26 & Table 13</i></p> <p><i>Section 1.6 BAT conclusions for coil coating and Tables 14 &15</i></p> <p><i>Section 1.7 BAT conclusions for the manufacturing of adhesive tapes Tables 16 &17</i></p> <p><i>Section 1.8 BAT conclusions for the coating of textiles, foils and paper Tables 18&19</i></p> <p><i>Section 1.9 BAT conclusions for the manufacturing of winding wire (BAT 27) Tables 20 & 21</i></p> <p><i>Section 1.10 BAT conclusions for the coating and printing of metal packaging Tables 22, 23 & 24</i></p> <p><i>Section 1.11 BAT conclusions for heatset web offset printing (BAT 28) tables 25, 26 &27</i></p>

BAT Conclusion No	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	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
			<p><i>Section 1.12 BAT conclusions for flexography and non-publication rotogravure printing Table 28, 29 &30</i></p> <p><i>Section 1.13 BAT conclusions for publication rotogravure printing (BAT 29) and Tables 31 & 32</i></p> <p><i>Section 1.14 BAT conclusions for the coating of wooden surfaces including Tables 33, 34 & 35</i></p>
	<p>BAT Conclusions where we accept the operator's Reg 61 notice response that they are currently compliant and no further explanation is required.</p>	<p>CC</p>	<p>BAT Conclusions for the preservation of wood and wood products with chemicals.</p>
	<p>BAT Conclusions where improvements will be undertaken on site within the 4 year period in order to achieve compliance with the narrative and/or BATAEL prior to the 4 year deadline</p>	<p>FC</p>	<p>IC1, IC2, IC3 and IC4 have been included in the Consolidated Permit in order to ensure the improvement and compliance with the BAT conclusion is met in respect of Tank 3.</p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
BAT 30	<p>In order to improve the overall environmental performance, BAT is to elaborate and implement an Environmental Management System (EMS) that incorporates all of the features (i) to (xx) of BAT 1 as well as the following specific features:</p> <ul style="list-style-type: none"> (i) Keeping up to date with the developments in biocidal products and in associated legislation (e.g. authorisation of products under the BPR) with a view to using the most environmentally friendly processes. (ii) Inclusion of a solvent mass balance for solvent-based and creosote treatment (see BAT 33 (c)). (iii) Identification and listing of all environmentally critical process and abatement equipment (whose failure could have an impact on the environment) (see BAT 46 (c)). The list of critical equipment is kept up to date. (iv) Inclusion of plans for the prevention and control of leaks and spillages, including waste management guidelines for dealing with waste arising from spillage control (see BAT 46). (v) Recording of accidental leakages and spillages, and improvement plans (countermeasures). <p><i>Note</i> Regulation (EC) No 1221/2009 establishes the European Union eco-management and audit scheme (EMAS), which is an example of an EMS consistent with this BAT.</p>	CC	<p>An EMS is in place which the Operator has confirmed is compliant with the requirements listed in BAT 30 (i) to (v).</p> <p>The document includes details of the company and site structure, operational procedures, equipment and raw materials used, maintenance and inspection, and what to do in case of an emergency.</p> <p>A review of treatment chemicals (BAT 32)</p> <p>The procedure for movement of treated timber (BAT 35,46,47)</p> <p>Details of environmental compliance (BAT 46)</p> <p>An incident response plan (BAT 1,30,47)</p>
BAT 1	<p>In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:</p> <ul style="list-style-type: none"> i) commitment, leadership, and accountability of the management, including senior management, for the implementation of an effective EMS;" ii) an analysis that includes the determination of the organisation's context, the identification of the needs and expectations of interested parties, the identification of characteristics of the installation that are associated with possible risks for the environment (or human health) as well as of the applicable legal requirements relating to the environment; 	CC	<p>An EMS is in place which the Operator has confirmed is compliant with the requirements listed in BAT 1 (i) to (xx).</p> <p>The EMS incorporates:</p> <p>Procedure for Movement of Treated Timber (BAT 35,46,47)</p> <p>Review of Treatment Chemicals (BAT 32)</p> <p>Waste and Emissions (BAT 41, 42)</p> <p>Raw Materials Usage (BAT 33)</p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	<ul style="list-style-type: none"> iii) development of an environmental policy that includes the continuous improvement of the environmental performance of the installation; iv) establishing objectives and performance indicators in relation to significant environmental aspects, including safeguarding compliance with applicable legal requirements; v) planning and implementing the necessary procedures and actions (including corrective and preventive actions where needed), to achieve the environmental objectives and avoid environmental risks; vi) determination of structures, roles and responsibilities in relation to environmental aspects and objectives and provision of the financial and human resources needed; vii) ensuring the necessary competence and awareness of staff whose work may affect the environmental performance of the installation (e.g. by providing information and training); viii) internal and external communication; ix) fostering employee involvement in good environmental management practices; x) Establishing and maintaining a management manual and written procedures to control activities with significant environmental impact as well as relevant records; xi) effective operational planning and process control; xii) implementation of appropriate maintenance programmes; xiii) emergency preparedness and response protocols, including the prevention and/or mitigation of the adverse (environmental) impacts of emergency situations; xiv) when (re)designing a (new) installation or a part thereof, consideration of its environmental impacts throughout its life, which includes construction, maintenance, operation and decommissioning; xv) implementation of a monitoring and measurement programme, if necessary, information can be found in the Reference Report on Monitoring of Emissions to Air and Water from IED Installations; xvi) application of sectoral benchmarking on a regular basis; xvii) periodic independent (as far as practicable) internal auditing and periodic independent external auditing in order to assess the environmental performance and to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained; 		<ul style="list-style-type: none"> Training Record (BAT1,30) Audit Report (BAT 1,30) Environmental Compliance (BAT 46) Noise (BAT 53) Incident Response Plan (BAT 1,30,47)

BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	<p>xviii) evaluation of causes of nonconformities, implementation of corrective actions in response to nonconformities, review of the effectiveness of corrective actions, and determination of whether similar nonconformities exist or could potentially occur;</p> <p>xix) periodic review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;</p> <p>xx) following and taking into account the development of cleaner techniques.</p>		
BAT 31	<p>In order to prevent or reduce emissions of PAHs and/or solvents, BAT is to use water-based preservatives.</p> <p><i>Description</i> Solvent-based preservatives or creosote are replaced by water-based preservatives. Water acts as the carrier for the biocides. <i>Applicability</i> The applicability may be restricted due to product quality requirements or specifications.</p>	CC	The operator has confirmed that only water based preservatives are used on site
BAT 32	<p>In order to reduce the environmental risk posed by the use of treatment chemicals, BAT is to substitute treatment chemicals currently in use with less hazardous ones based on a regular (e.g. once every year) check aiming at identifying potentially new available and safer alternatives.</p> <p><i>Applicability</i> Substitution may be restricted due to product quality requirements or specifications.</p>	CC	The operator has confirmed that: An annual review will be carried out with the suppliers of our preservatives to identify new and safer alternatives. Currently using Tanalith E 9000 (December 2024) which has Biocidal Products Regulations (BPR) approval.
BAT 33	<p>In order to increase resource efficiency and to reduce the environmental impact and risk associated with the use of treatment chemicals, BAT is to reduce their consumption by using all of the techniques given below.</p> <p>(a) Use of an efficient preservative application system Application systems where the wood is immersed in the preservative solution are more efficient than, for example, spraying. The application efficiency of vacuum processes (closed system) is close to 100 %. The selection of the</p>	CC	The operator has confirmed : (a) (b) and (d) are applicable: An effective, closed system, High Pressure Treatment Process is used on site controlled by The Auto-treater™ (A/T) system. This monitors uptake of solution and treats to a target retention which is

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	<p>application system takes into account the use class and the penetration level needed. Only applicable to new plants or major plant upgrades.</p> <p>(b) Control and optimisation of the consumption of the treatment chemicals for the specific end use Control and optimisation of the consumption of the treatment chemicals by: (a) weighing the wood/wood products before and after impregnation; or (b) determining the amount of preservative solution during and after impregnation. The consumption of the treatment chemicals follows suppliers' recommendations and does not lead to exceedances of the retention requirements (e.g. set in product quality standards). Generally applicable.</p> <p>(c) Solvent mass balance The compilation, at least once every year, of organic solvent inputs and outputs of a plant as defined in Part 7(2) of Annex VII to Directive 2010/75/EU. Only applicable to plants using solvent-based treatment chemicals or creosote.</p> <p>(d) Measurement and adjustment of wood moisture before treatment Wood moisture is measured prior to treatment (e.g. by measuring the electric resistance or by weighing) and adjusted if needed (e.g. by further seasoning of the wood) in order to optimise the impregnation process and ensure the required product quality. Only applicable if wood with a specific moisture content is needed.</p>		<p>based on the volume of wood being treated, timber species and Use Class. This optimises the consumption of preservatives and water. The A/T also provides production reports detailing amounts of chemicals & water used and volumes of timber treated. Moisture checks are not made unless requested. Rainwater is harvested for use through the mixing process and a water meter is fitted to the mains supply to the plant to enable a comparison between mains and rainwater used to be made. A report on Raw Materials usage is submitted to the council each year.</p> <p>(c) is not applicable to this installation as the process does not use solvents.</p>
BAT 34	<p>In order to reduce emissions from delivery, storage and handling of treatment chemicals, BAT is to use technique (a) or (b) and all of the techniques (c) to (f) given below.</p>	CC	<p>The operator has confirmed the following:</p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	<p>(a) Back-venting Also referred to as vapour balancing. Vapours of solvents or creosote which are displaced from the receiving tank during filling are collected and returned to the tank or truck from which the liquid is delivered.</p> <p>(b) Capture of displaced air Vapours of solvents or creosote which are displaced from the receiving tank during filling are collected and led to a treatment unit, e.g. an activated carbon filter or a thermal oxidation unit.</p> <p>(c) Techniques to reduce evaporation losses due to heating up of stored chemicals When exposure to sunlight may lead to evaporation of solvents and creosote stored in above-ground storage tanks, tanks are covered by a roof or coated with light-coloured paint to reduce the heating up of stored solvents and creosote.</p> <p>(d) Securing delivery connections Delivery connections to storage tanks located within the bunded/contained area are secured and shut off when not in use.</p> <p>(e) Techniques to prevent overflows during pumping This includes ensuring that: — the pumping operation is supervised; — for larger quantities, bulk storage tanks are fitted with acoustic and/or optical high-level alarms, with shut-off systems if necessary.</p> <p>(f) Closed storage containers Use of closed storage containers for treatment chemicals.</p>		<p>(a) (b) and (c) do not apply to this installation as the process does not use solvents.</p> <p>(d) and (e) do not apply as they refer to bulk deliveries and all chemicals are received in IBCs.</p> <p>(f) IBC'S are off-loaded and stored within the bunded area. These are connected to the automatic mixing system when required using a secure coupling attached to the outlet at the bottom of the IBC. When IBCs are empty they are washed out, with all washings recycled back through the treatment process. They are collected for recycling by Schutz.</p> <p>.</p>

BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
BAT 35	<p>In order to reduce the consumption of treatment chemicals and the consumption of energy and to reduce emissions of treatment chemicals, BAT is to optimise the wood charge of the vessel and to avoid trapping of treatment chemicals by using a combination of the techniques given below.</p> <ul style="list-style-type: none"> (a) Separation of wood in packs by spacers (b) Sloping of wood packs in traditional horizontal treatment vessels (c) Use of tilting pressure treatment vessels (d) Optimised positioning of shaped wood pieces (e) Securing wood packs (f) Maximisation of the wood load 	CC	<p>The operator has confirmed that the following techniques are used on site:</p> <ul style="list-style-type: none"> (a) Spacers are placed between pieces of wood (b) Sloping of packs where practical in the vessel is carried out to aid run off inside, (c) N/A as this is an existing plant and no major upgrades have taken place (d) Shaped pieces of wood are packed and spacers inserted to prevent trapping of chemicals (e) Straps or chains are used to secure packs inside the vessels to limit movement (f) Vessels are filled to capacity for every charge where practical.
BAT 36	<p>In order to prevent accidental leakage and emissions of treatment chemicals from non- pressure processes, BAT is to use one of the techniques given below.</p> <ul style="list-style-type: none"> (a) Double-walled treatment vessels with automatic leak detection devices (b) Single-walled treatment vessels with sufficiently large and wood-preserved-resistant containment, fender and automatic leak detection device 	NA	<p>This BAT techniques relates to non-pressure processes. As this installation uses a high pressure treatment process, it is not applicable.</p>
BAT 37	<p>In order to reduce emissions of aerosols from wood and wood products preservation using water-based treatment chemicals, BAT is to enclose spraying processes, collect overspray and reuse it in the preparation of wood preservation solution.</p>	NA	<p>This BAT technique relates to spraying processes. As this installation uses high pressure treatment and does not spray, it is not applicable.</p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
BAT 38	<p>In order to prevent or reduce emissions of treatment chemicals from pressure processes (autoclaves), BAT is to use all of the techniques given below.</p> <ul style="list-style-type: none"> (a) Process controls to prevent operation unless the treatment vessel door is locked and sealed (b) Process controls to prevent the treatment vessel from opening while it is pressurised and/or filled with preservative solution (c) Catch-lock for the treatment vessel door (d) Use and maintenance of safety relief valves (e) Control of emissions to air from the vacuum pump exhaust (f) Reduction of emissions to air when opening the treatment vessel (g) Application of a final vacuum to remove excess treatment chemicals from the surface of treated wood 	CC	<p>The operator has confirmed that all points (a) (b) (c) (d) (e) (f) & (g) are addressed:</p> <p>(a) An enclosed High Pressure Treatment Process is used on site. The A/T control system monitors all stages of the process which are displayed on the control screen. This includes vacuum & pressure readings, solution levels in vessel and storage tanks and it also indicates when charge has been completed and door is safe to open.</p> <p>(b) When a charge has been completed a vessel empty sensor checks the amount of preservative returned to the storage tank and gives a visual indication on the A/T screen showing the charge has finished and the door is safe to open.</p> <p>A schematic layout of the plant is shown on the screen so the operator knows, at any time where solution is, what valves are open, what pumps are operating and what stage of the process the plant is running. Limit switches fitted to the door also prevent the process, from being started until the door is fully closed.</p> <p>(c) The vessel door is fitted with a low level test cock which needs to be opened before</p>

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			<p>the door and would indicate visually if there was any pressure or solution left in the vessel before door is opened. A catch lock is also fitted to the vessel door.</p> <p>(d) Arxada carry out 6 monthly inspection of the plant which includes safety relief valves.</p> <p>(e) The plant is fitted with vacuum & pressure gauges which also give a visual indication if the vessel is under pressure or vacuum. A final vacuum is applied as part of the treatment process. Vacuum exhaust is vented into the storage tank.</p> <p>(f) & (g) At the end of a charge, after the final vacuum a final air vent and final drain occurs as part of the treatment process. This gives time for any mist in the vessel to settle, to reduce emissions, before opening the door.</p>
BAT 39	<p>In order to reduce energy consumption in pressure processes (autoclaves), BAT is to use variable pump control.</p> <p><i>Description</i> After reaching the required working pressure, the treatment system is switched to a pump with reduced power and energy consumption.</p> <p><i>Applicability</i> may be limited in the case of oscillating pressure processes.</p>	CC	<p>The operator has confirmed that variable pump control is in use:</p> <p>The A/T monitors the operation of both pressure and vacuum pumps giving variable pump control. Once full vacuum and pressure levels are reached the pumps stop and then re-start if the levels drop off to a pre-set level. For pressure this level is</p>

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			normally set at 10 bar and for vacuum 0.6 bar.
BAT 40	<p>In order to prevent or reduce the contamination of soil or groundwater from the interim storage of freshly treated wood, BAT is to allow sufficient dripping time after treatment and to remove the treated wood from the contained/bunded area only once it is deemed dry.</p> <p><i>Description</i> To allow the surplus treatment chemicals to drip back into the treatment vessel, treated wood/wood packs are held in the contained/bunded area (e.g. above the treatment vessel or over a dripping pad) for a sufficient time after the treatment and before transfer to the post-treatment drying area. Then, before leaving the post- treatment drying area, treated wood/wood packs are, for example, lifted by mechanical means and suspended for a minimum of 5 minutes. If no dripping of treatment solution occurs, the wood is deemed to be dry.</p>	CC	The operator has confirmed that : There is a requirement at this installation for the treated timber to be drip free before leaving the drying area..
BAT 41	<p>In order to reduce the quantity of waste sent for disposal, especially of hazardous waste, BAT is to use the techniques (a) and (b) and one or both of the techniques (c) and (d) given below.</p> <p>(a) Removal of debris prior to treatment (b) Recovery & reuse of waxes & oils (c) Bulk delivery of treatment chemicals (d) Use of reusable containers</p>	CC	The operator has confirmed the following: (a) Wood is checked to ensure it is free of debris prior to treatment. (b) not applicable to this installation as waxes and oils not used on this site. (c) not applicable to this installation as chemicals received in IBCs. (d) Preservatives and additives used on site are delivered in IBC's, which when empty are washed out with all washings recycled back through the treatment process and then collected for recycling by Schutz.

BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
BAT 42	In order to reduce the environmental risk related to waste management, BAT is to store waste in suitable containers or on sealed surfaces and to keep hazardous waste separately in a designated weather-protected and contained/bunded area.	CC	The operator has confirmed that : The treatment plant operates as an 'enclosed system' with all run-off recycled back through the treatment process. Should any waste be generated, it will be stored in a suitable container such as a drum or empty IBC within the bunded area. When a sufficient quantity is reached a licenced waste contractor will collect it for disposal. If the treatment vessel and storage tanks require cleaning, this would be undertaken by a licenced waste contractor. The necessary paperwork generated from the disposal of any waste would be kept on site for inspection. An annual E-PRTR report is made to the council.
BAT 43	BAT is to monitor pollutants in waste water and potentially contaminated surface run-off water prior to each batch discharge in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	NA	The operator has confirmed that: Nothing is discharged to water or sewer from this installation. It operates as an enclosed system with all run off from treated timber recycled back though the treatment process. The treatment operation is covered by a roof so there is no ingress of rainwater, any water used for cleaning is also recycled back through the treatment process.

BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc														
	<table border="1" data-bbox="322 341 1055 895"> <thead> <tr> <th data-bbox="322 341 633 395">Substance/Parameter</th> <th data-bbox="633 341 1055 395">Standard(s)</th> </tr> </thead> <tbody> <tr> <td data-bbox="322 395 633 491">Biocides (1)</td> <td data-bbox="633 395 1055 491">EN standards might be available depending on the composition of the biocidal products</td> </tr> <tr> <td data-bbox="322 491 633 587">Cu (2)</td> <td data-bbox="633 491 1055 587">Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)</td> </tr> <tr> <td data-bbox="322 587 633 683">Solvents (3)</td> <td data-bbox="633 587 1055 683">EN standards available for some solvents (e.g. EN ISO 15680)</td> </tr> <tr> <td data-bbox="322 683 633 778">PAHs (4)</td> <td data-bbox="633 683 1055 778">EN ISO 17993</td> </tr> <tr> <td data-bbox="322 778 633 874">Benzo[a]pyrene (4)</td> <td data-bbox="633 778 1055 874">EN ISO 17993</td> </tr> <tr> <td data-bbox="322 874 633 895">HOI</td> <td data-bbox="633 874 1055 895">EN ISO 9377-2</td> </tr> </tbody> </table> <p data-bbox="322 948 1211 1007">(1) Specific substances are monitored, depending on the composition of the biocidal products in use in the process.</p> <p data-bbox="322 1018 1234 1046">(2) The monitoring only applies if copper compounds are used in the process.</p> <p data-bbox="322 1058 1267 1145">(3) The monitoring only applies to plants using solvent-based treatment chemicals. Specific substances are monitored, depending on the solvents in use in the process.</p> <p data-bbox="322 1157 1104 1185">(4) The monitoring only applies to plants using creosote treatment.</p>	Substance/Parameter	Standard(s)	Biocides (1)	EN standards might be available depending on the composition of the biocidal products	Cu (2)	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)	Solvents (3)	EN standards available for some solvents (e.g. EN ISO 15680)	PAHs (4)	EN ISO 17993	Benzo[a]pyrene (4)	EN ISO 17993	HOI	EN ISO 9377-2		
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PAHs (4)	EN ISO 17993																
Benzo[a]pyrene (4)	EN ISO 17993																
HOI	EN ISO 9377-2																
BAT 44	BAT is to monitor pollutants in groundwater with a frequency of at least once every 6 months and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure	CC	The operator has confirmed that the following reports have been completed in respect of the baseline site report:														

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc																		
	<p>the provision of data of an equivalent scientific quality. The monitoring frequency may be reduced to once every 2 years based on a risk assessment or if pollutant levels are proven to be sufficiently stable (e.g. after a period of 4 years).</p> <table border="1" data-bbox="322 483 1294 1050"> <thead> <tr> <th data-bbox="322 483 555 549">Substance/Parameter (1)</th> <th data-bbox="555 483 1294 549">Standard(s)</th> </tr> </thead> <tbody> <tr> <td data-bbox="322 549 555 624">Biocides (2)</td> <td data-bbox="555 549 1294 624">EN standards might be available depending on the composition of the biocidal products</td> </tr> <tr> <td data-bbox="322 624 555 699">As</td> <td data-bbox="555 624 1294 699">Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)</td> </tr> <tr> <td data-bbox="322 699 555 774">Cu</td> <td data-bbox="555 699 1294 774">Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)</td> </tr> <tr> <td data-bbox="322 774 555 849">Cr</td> <td data-bbox="555 774 1294 849">Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)</td> </tr> <tr> <td data-bbox="322 849 555 924">Solvents (3)</td> <td data-bbox="555 849 1294 924">EN standards available for some solvents (e.g. EN ISO 15680)</td> </tr> <tr> <td data-bbox="322 924 555 967">PAHs</td> <td data-bbox="555 924 1294 967">EN ISO 17993</td> </tr> <tr> <td data-bbox="322 967 555 1010">Benzo[a]pyrene</td> <td data-bbox="555 967 1294 1010">EN ISO 17993</td> </tr> <tr> <td data-bbox="322 1010 555 1050">HOI</td> <td data-bbox="555 1010 1294 1050">EN ISO 9377-2</td> </tr> </tbody> </table> <p data-bbox="367 1062 1285 1305"> (1) The monitoring may not apply if the substance concerned is not used in the process and if the groundwater is proven not to be contaminated with this substance. (2) Specific substances are monitored, depending on the composition of biocidal products which are used or were previously used in the process. (3) The monitoring only applies to plants using solvent-based treatment chemicals. Specific substances are monitored, depending on the solvents in use in the process. </p>	Substance/Parameter (1)	Standard(s)	Biocides (2)	EN standards might be available depending on the composition of the biocidal products	As	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)	Cu	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)	Cr	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)	Solvents (3)	EN standards available for some solvents (e.g. EN ISO 15680)	PAHs	EN ISO 17993	Benzo[a]pyrene	EN ISO 17993	HOI	EN ISO 9377-2		<p>HESI (October 2014) Desktop Study and soil analysis only.</p> <p>HESI (November 2020) 3 Boreholes installed (SP1 – SP3), Soil & Water Assessments.</p> <p>Socotec (May 2023) Factual Baseline Groundwater Monitoring Report (Water samples taken from existing boreholes SP1 – SP3)</p> <p>Epping Forest District Council have confirmed that these reports together meet the requirements of the Baseline Report.</p> <p>Chemicals to be tested have been amended from those noted in the BAT conclusions as it is not necessary to test for chemicals not used on site. (see notes below this table)</p> <p>Chemicals to be tested are: <i>Biocides (Tebuconazole and Propiconazole and any other relevant hazardous substance)</i> <i>Copper</i> <i>2-Aminoethanol (as ethanol)</i> <i>Chemical Oxygen Demand and pH</i></p>
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BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc																				
BAT 45	<p>BAT is to monitor emissions in waste gases with a frequency of at least once every year and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p> <table border="1" data-bbox="318 560 1288 1002"> <thead> <tr> <th>Parameter</th> <th>Process</th> <th>Standard(s)</th> <th>Monitoring associated with</th> </tr> </thead> <tbody> <tr> <td>TVOC (1)</td> <td>Wood and wood products preservation using creosote and solvent-based treatment chemicals</td> <td>EN 12619</td> <td>BAT 49, BAT 51</td> </tr> <tr> <td>PAHs (1) (2)</td> <td>Wood and wood products preservation using creosote</td> <td>No EN standard available</td> <td>BAT 51</td> </tr> <tr> <td>NOX (3)</td> <td>Wood and wood products preservation using creosote and solvent-based treatment chemicals</td> <td>EN 14792</td> <td>BAT 52</td> </tr> <tr> <td>CO</td> <td></td> <td>EN 15058</td> <td></td> </tr> </tbody> </table> <p>(1) To the extent possible, the measurements are carried out at the highest expected emission state under normal operating conditions. (2) This includes: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd) pyrene, naphthalene, phenanthrene and pyrene. (3) The monitoring only applies to emissions from the thermal treatment of off-gases.</p>	Parameter	Process	Standard(s)	Monitoring associated with	TVOC (1)	Wood and wood products preservation using creosote and solvent-based treatment chemicals	EN 12619	BAT 49, BAT 51	PAHs (1) (2)	Wood and wood products preservation using creosote	No EN standard available	BAT 51	NOX (3)	Wood and wood products preservation using creosote and solvent-based treatment chemicals	EN 14792	BAT 52	CO		EN 15058		NA	<p>The operator has confirmed that : This installation uses a water based preservative and therefore this BAT technique is not applicable as it relates to those using Solvents and Creosote.</p>
Parameter	Process	Standard(s)	Monitoring associated with																				
TVOC (1)	Wood and wood products preservation using creosote and solvent-based treatment chemicals	EN 12619	BAT 49, BAT 51																				
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CO		EN 15058																					

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
BAT 46	<p>In order to prevent or reduce emissions to soil and groundwater, BAT is to use all of the techniques given below.</p> <ul style="list-style-type: none"> (a) Plant and equipment containment or bund (b) Impermeable floors (c) Warning systems for equipment identified as 'critical' 'Critical' equipment (see BAT 30) is equipped with warning systems to indicate malfunctions. (d) Prevention and detection of leaks from underground storage and ductwork for harmful/hazardous substances and record-keeping (e) Regular inspection and maintenance of plant and equipment (f) Techniques to prevent cross-contamination 	FC	<p>The operator has confirmed that all points (a) (b) (c) (d) (e) and (f) are met :</p> <p>(a) Treatment plant & storage tanks are positioned above ground so no requirement for storage tanks to be double skinned. This makes them accessible for inspection and they are located within an impermeable bund of sufficient capacity to contain a spillage. All associated pipework is again above ground so accessible for inspection. Bund capacity is sufficient to contain 110% of the largest storage tank on site. The drying area is designed to slope back towards the plant bund to collect run-off from treated timber for re-use through the treatment process. In addition a small drain connected to pipework to recover and direct run-off back to the bund for reuse is located within the treatment building, near the operator's office and is inspected as part of our weekly checks.</p> <p>REGULATOR COMMENT: <i>The above relates to the main installation area. Tank 3 is outside of the main bund and has its own above ground metal bund. This tank arrangement requires improvement. Current techniques to prevent contamination of</i></p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
			<p><i>groundwater are temporary and have been agreed with the regulator alongside Improvement Conditions to ensure full compliance with BAT as soon as practicable. Daily visual checks of the bund to Tank 3 as detailed in the EMS are critical to ensure bund capacity remains available should failure of the tank occur. Where liquid is found in this bund it is to be removed to the main bund.</i></p> <p>(b) Drying area for storage of treated timber is an impermeable floor and within a building to prevent ingress of rainwater. All run off from treated timber is directed back to the bund area for reuse through the treatment process.</p> <p>(c) The whole treatment & mixing process is controlled by A/T which monitors every aspect of the operation. The A/T control system has sensors fitted to the plant which monitor vacuum & pressure levels, flow and tank levels. An alarm would sound if any issues were detected during the operation of the treatment plant or mixing process such as lack of flow, a drop in tank levels or a tank level too high and if vacuum and pressure levels weren't being reached. This would give an early indication if there are</p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
			<p>any leaks in pipework, valves, vessel, IBC's or storage tanks.</p> <p>(d) In addition the storage tanks are fitted with high level alarms to prevent overfilling. A/T also displays on the control screen solution levels in vessel, storage and concentrate tank and indicates when charge has been completed and door can be opened. The A/T treats timber to a target retention and the amount used is recorded on the charge sheet for each batch of timber.</p> <p>The operator can also check start and finish levels in each of the storage tanks on the A/T screen or from the relevant charge sheet to confirm amount of solution used per charge. Any discrepancy could be picked up from these readings. Treatment plant & drying area is roofed over so ingress of rainwater is prevented, all run off from treated timber is recycled back through the treatment process.</p> <p>(e) Our preservative supplier Arxada carries out two services per year on the plants and any faults/repairs would be recorded and a schedule agreed to carry out the necessary repairs. Records of services are held on</p>

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc				
			<p>site. Arxada also have remote access to the A/T System so can dial in to assist plant operators with any issues, faults or alarms indicated on the control screen. Regular inspections of the plant and critical process equipment are carried out by the operator and management, daily, weekly and monthly.</p> <p>(f) A dedicated forklift truck is used in the drying area and a procedure for cleaning the wheels, should it be required to leave the area for maintenance is included in the EMS.</p>				
BAT 47	<p>In order to prevent or, where that is not practicable, to reduce emissions to water and to reduce water consumption, BAT is to use all of the techniques given below:</p> <table border="1" data-bbox="322 986 1234 1034"> <thead> <tr> <th data-bbox="322 986 667 1034">Technique</th> <th data-bbox="667 986 1234 1034">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="322 1034 667 1345"></td> <td data-bbox="667 1034 1234 1345"></td> </tr> </tbody> </table>	Technique	Description			CC	<p>The operator has confirmed that all parts (a) (b) (c) (d) and (e) have been met:</p> <p>The whole treatment process, bunds and drying area are roofed over so not affected by rainwater. All run-off from treated timber is recycled back through the treatment process which operates as an enclosed system. Any water used to clean equipment is also recycled back through the process. In the unlikely event that run off cannot be used through the treatment process then a licenced waste contractor would be used for disposal.</p>
Technique	Description						

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.		Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	<p>a. To prevent contamination of rain and surface run-off water.</p>	<p>Rain and surface run-off water are kept separated from areas where treatment chemicals are stored or handled, from areas where freshly treated wood is stored and from contaminated water. This is achieved by using at least the following techniques:</p> <ul style="list-style-type: none"> • drainage channels and/or an outer kerb bund around the plant; • roofing with roof guttering of areas where treatment chemicals are stored or handled (i.e. treatment chemicals' storage area, treatment, post-treatment conditioning and interim storage areas; pipes and ductwork for treatment chemicals; creosote (re)conditioning facilities); • weather protection (e.g. roofing, tarpaulins) for the storage of treated wood in the event that it is required in the BPR authorisation for the wood preservative used for the treatment. 		
	<p>b. Collection of potentially contaminated surface run-off water</p>	<p>Surface run-off water from areas that are potentially contaminated with treatment chemicals is collected separately. Collected waste water is discharged only after appropriate measures are taken (e.g. monitor (see BAT 43), treat (see BAT 47(e)),</p>		

BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.		Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	c. Use of potentially contaminated surface run-off water	After its collection, potentially contaminated surface run-off water is used for the preparation of water-based wood preservative solutions.		
	d. Reuse of cleaning water	Water used to wash equipment and containers is recovered and reused in the preparation of water-based wood preservative solutions.		
	e. Treatment of waste water	Where contamination in the collected surface runoff water and/or cleaning water is detected or can be expected, and where the use of the water is not feasible, the waste water is treated in an adequate waste water treatment plant (on or off site).		
	f. Disposal as hazardous waste	Where contamination in the collected surface runoff water and/or cleaning water is detected or can be expected, and where the treatment or use of the water is not feasible, the collected surface run-off water and/or cleaning water is disposed of as hazardous waste.		
BAT 48	In order to reduce emissions to water from wood and wood products preservation using creosote, BAT is to collect the condensates from the depressurisation and vacuum operation of the treatment vessel and from		NA	The operator has confirmed that

BAT no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc				
	creosote (re)conditioning and either treat them on site using an activated carbon or sand filter or dispose of them as hazardous waste.		No Creosote is used at this installation, therefore this BAT technique does not apply to this installation.				
BAT 49	In order to reduce emissions of VOCs to air from wood and wood products preservation using solvent-based treatment chemicals, BAT is to enclose the emitting equipment or processes, extract the off-gases and send them to a treatment system (see techniques in BAT 51).	NA	The operator has confirmed that No Solvent is used at this installation, therefore this BAT technique does not apply to this installation.				
BAT 50	In order to reduce emissions of organic compounds and odour to air from wood and wood products preservation using creosote, BAT is to use low-volatility impregnating oils, i.e. Grade C creosote instead of Grade B. <i>Applicability</i> Grade C creosote may not be applicable in the case of cold climatic conditions.	NA	The operator has confirmed that No Creosote is used at this installation, therefore this BAT technique does not apply to this installation.				
BAT 51	<p>In order to reduce emissions of organic compounds to air from wood and wood products preservation using creosote, BAT is to enclose emitting equipment or processes (e.g. storage and impregnation tanks, depressurisation, creosote reconditioning), extract the off-gases and use one or a combination of the treatment techniques given below.</p> <table border="1" data-bbox="322 971 1234 1212"> <thead> <tr> <th data-bbox="322 971 667 1018">Technique</th> <th data-bbox="667 971 1234 1018">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="322 1018 667 1212">g. Thermal oxidation</td> <td data-bbox="667 1018 1234 1212">See BAT 15 (i). Exhaust heat can be recovered by means of heat exchangers.</td> </tr> </tbody> </table>	Technique	Description	g. Thermal oxidation	See BAT 15 (i). Exhaust heat can be recovered by means of heat exchangers.	NA	The operator has confirmed that No creosote and/or solvent-based treatment chemicals are used. There are no emissions to air and therefore this BAT technique does not apply to this installation.
Technique	Description						
g. Thermal oxidation	See BAT 15 (i). Exhaust heat can be recovered by means of heat exchangers.						

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.		Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	h. Sending off-gases to a combustion plant	Part or all of the off-gases are sent as combustion air and supplementary fuel to a combustion plant (including CHP (combined heat and power) plants) used for steam and/or electricity production.		
	i. Adsorption using activated carbon	Organic compounds are adsorbed on the surface of activated carbon. Adsorbed compounds may be subsequently desorbed, e.g. with steam (often on site) for reuse or disposal and the adsorbent is re-used.		
	j. Absorption using a suitable liquid	Use of a suitable liquid to remove pollutants from the off-gases by absorption, in particular soluble compounds.		
	k. Condensation	A technique for removing organic compounds by reducing the temperature below their dew points so that the vapours liquefy. Depending on the operating temperature range required, different refrigerants are used, e.g. cooling water, chilled water (temperature typically around 5 °C), ammonia or propane. Condensation is used in combination with another abatement technique.		
	<i>Table 36</i>			

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc												
	<p>BAT-associated emission levels (BAT-AELs) for TVOC and PAH emissions in waste gases from wood and wood products preservation using creosote and/or solvent-based treatment chemicals</p> <table border="1" data-bbox="315 464 1290 732"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>Process</th> <th>BAT-AEL(Average over the sampling)</th> </tr> </thead> <tbody> <tr> <td>TVOC</td> <td>mg C/Nm³</td> <td>Creosote and solvent-based treatment</td> <td>< 4–20</td> </tr> <tr> <td>PAHs</td> <td>mg/Nm³</td> <td>Creosote treatment</td> <td>< 1 ⁽¹⁾</td> </tr> </tbody> </table> <p>⁽¹⁾ The BAT-AEL refers to the sum of the following PAH compounds: acenaphthene, acenaphthylene, anthracene, benzo(a) anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h) anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene. The associated monitoring is given in BAT 45.</p>	Parameter	Unit	Process	BAT-AEL(Average over the sampling)	TVOC	mg C/Nm ³	Creosote and solvent-based treatment	< 4–20	PAHs	mg/Nm ³	Creosote treatment	< 1 ⁽¹⁾		
Parameter	Unit	Process	BAT-AEL(Average over the sampling)												
TVOC	mg C/Nm ³	Creosote and solvent-based treatment	< 4–20												
PAHs	mg/Nm ³	Creosote treatment	< 1 ⁽¹⁾												
BAT 52	<p>In order to reduce NOX emissions in waste gases while limiting CO emissions from the thermal treatment of off-gases in wood and wood products preservation using creosote and/or solvent- based treatment chemicals, BAT is to use technique (a) or both of the techniques given below.</p> <p>(a) Optimisation of thermal treatment conditions (design and operation) See BAT 17 (a). Design applicability may be restricted for existing plants.</p> <p>(b) Use of low-NOX burners See BAT 17 (b). Applicability may be restricted at existing plants by design and/or operational constraints.</p> <p><i>Table 37</i></p>	NA	The operator has confirmed that Thermal treatment of off-gases in wood and wood products preservation does not take place at this installation..												

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc											
	<p>BAT-associated emission level (BAT-AEL) for NOX emissions in waste gases and indicative emission level for CO emissions in waste gases to air from the thermal treatment of off-gases in wood and wood products preservation using creosote and/or solvent-based treatment chemicals</p> <table border="1" data-bbox="322 512 1288 759"> <thead> <tr> <th>Parameter</th> <th>Unit</th> <th>BAT-AEL (1) (Average over the sampling period)</th> <th>Indicative emission level (1) (Average over the sampling period)</th> </tr> </thead> <tbody> <tr> <td>NOX</td> <td rowspan="2">mg/Nm3</td> <td>20–130</td> <td>No indicative level</td> </tr> <tr> <td>CO</td> <td>No BAT-AEL</td> <td>20–150</td> </tr> </tbody> </table> <p>(1) The BAT-AEL and indicative level do not apply where off-gases are sent to a combustion plant.</p> <p>The associated monitoring is given in BAT 45.</p>	Parameter	Unit	BAT-AEL (1) (Average over the sampling period)	Indicative emission level (1) (Average over the sampling period)	NOX	mg/Nm3	20–130	No indicative level	CO	No BAT-AEL	20–150		
Parameter	Unit	BAT-AEL (1) (Average over the sampling period)	Indicative emission level (1) (Average over the sampling period)											
NOX	mg/Nm3	20–130	No indicative level											
CO		No BAT-AEL	20–150											
BAT 53	<p>In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.</p> <p>Storage and handling of raw materials</p> <ul style="list-style-type: none"> (a) Installation of noise walls and utilisation/optimisation of the noise-absorbing effect of buildings (b) Enclosure or partial enclosure of noisy operations (c) Use of low-noise vehicles/transport systems (d) Noise management measures (e.g. improved inspection and maintenance of equipment, closing of doors and windows) 	CC	<p>The operator has confirmed that:</p> <p>Due to the location of the site, noise from the Treatment Operation is unlikely to be an issue to neighbouring receptors. In the event of a complaint about noise from the treatment plant a noise investigation report procedure is included in our EMS.</p>											

BATC no	Summary of BAT Conclusion requirement for Surface Treatment using Solvents.	Status NA/ CC/FC/ NC	Assessment proposed by the operator to demonstrate compliance with the BATc
	<p>Kiln drying (e) Noise reduction measures for fans</p> <p>The applicability is restricted to cases where a noise nuisance at sensitive receptors is expected and/or has been substantiated.</p>		

Key Issues

BAT 44 – The parameters agreed for groundwater testing differ to those stated in the BAT conclusion. It is not a requirement to test for chemicals that are not being used on site, The site currently uses Tanalith products which are water based. The chemicals listed in the column on the right hand side against BAT 44 are those chemicals associated with this product. Tables S3.1 and S3.2 of the permit also require testing of any other relevant hazardous substance.

Where relevant and appropriate, we have incorporated the techniques described by the Operator in their Regulation 61 Notice response as specific operating techniques required by the permit, through their inclusion in Table S1.2 of the Consolidated Variation Notice.

Annex 2: Review and assessment of changes that are not part of the BAT Conclusions derived permit review

Soil & groundwater risk assessment (baseline report)

The IED requires that the operator of any IED installation using, producing or releasing “relevant hazardous substances” (RHS) shall, having regarded the possibility that they might cause pollution of soil and groundwater, submit a “baseline report” with its permit application. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the regulated facility and at cessation of activities. It must enable a quantified comparison to be made between the baseline and the state of the site at surrender.

At the definitive cessation of activities, the operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site’s current or approved future use. To do this, the operator has to submit a surrender application to us, which we will not grant unless and until we are satisfied that these requirements have been met.

The operator submitted a site condition report undertaken by Herts and Essex Site Investigations, dated October 2014, reference CSG/12390 as part of the original application process, which was dated 5th February 2015. This site condition report did not contain any information with regards to the contamination status of groundwater on site. Subsequent monitoring of groundwater was undertaken and a baseline groundwater monitoring report has been established by reports from Herts and Essex Site Investigations, dated 25 November 2020, reference CSG/12390, and from SOCOTEC dated June 2024, reference STH3024-002.

These reports together are considered to adequately describe the condition of the soil and groundwater for the purposes of establishing a baseline for this site.

Annex 3: Improvement Conditions

Based on the information in the Operator's Regulation 61 Notice response and our own records of the capability and performance of the installation at this site, we consider that we need to set improvement conditions so that the outcome of the techniques detailed in the BAT Conclusions are achieved by this installation. These improvement conditions are set out below - justifications for them is provided at the relevant section of the decision document

Improvement Conditions to achieve Narrative BAT

IC1

The operator shall undertake an assessment of the integrity of Tank 3. The assessment must determine whether the product is adequately contained within the tank itself.

Where the assessment identifies that the integrity of the tank is compromised, it should recommend options for action that will ensure the product is fully contained, and that BAT 46(a) is met.

A written report detailing the findings of the assessment is to be produced and an electronic copy sent to the regulator by the compliance date (3.1.2025).

Refer to BAT Conclusions for a full description of the BAT requirement

Email for submission of report is

environmentalhealth@eppingforestdc.gov.uk

Compliance Date 3rd January 2025

IC2

The existing "bund roof" which touches the side of Tank 3 is to be removed on all four sides of the tank. If a replacement structure is to be erected (to reduce the ingress of rainwater), a clear access must be available on all four sides of the tank so that in the event of a failure of any part of the tank, the resulting leaked product has a clear pathway into the bund where it will be contained.

Compliance Date 3rd January 2025

IC3

Following the assessment of the integrity of Tank 3, written confirmation of the proposed chosen method of meeting the requirements of BAT 46(a) is to be provided in writing to the regulator by the compliance date (28/02/2025).

When confirming the proposed method of compliance, notification should be given if any lead times for the fabrication of plant or equipment required is such that the compliance date in IP4 is unlikely to be met.

Works to make changes to Tank 3 should not commence until the regulator has confirmed that the proposals are capable of meeting the requirements of BAT.

Compliance Date 28th February 2025

IC4

The operator shall undertake the works as agreed in IP3 above and implement all associated checks and maintenance in order to ensure that BAT is achieved.

These changes must be made by the compliance date (30/06/2025).

Compliance Date 30th June 2025