

Permitting Decisions- Variation

We have decided to grant the variation for Stanlow Manufacturing Complex operated by Essar Oil (UK) Limited.

The variation number is EPR/FP3139FN/V017

This is a decision document, which accompanies a draft permit.

It explains how we have considered the Applicant's Application, and why we have included the specific conditions in the permit we have decided to issue to the Applicant. It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Applicant's proposals.

This variation grants a time-limited derogation (until 31/10/2025) from Best Available Techniques ("BAT") Conclusion 52 ("BAT 52") of the [Refining of Mineral Oil and Gas BAT Conclusions \(2014/7/738/EU, 28/10/2014\)](#), subject to the conditions and controls specified in the permit.

BAT 52 specifies vapour recovery techniques to prevent or reduce volatile liquid hydrocarbon compounds emissions to air from loading and unloading operations via sea-going vessels, where annual throughput exceeds 1 million m³/year.

The relevant BAT Associated Emission Levels ("BAT-AELs") are:

- Non-methane volatile organic compounds ("NMVOC") to air - 10 mg/Nm³
- Benzene to air of 1 mg/Nm³

We consider in reaching the decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how the main relevant factors have been taken into account
- shows how we have considered the [consultation responses](#)

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

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Overview of the site and installation

Stanlow Manufacturing Complex is situated south of the Mersey Estuary near Ellesmere Port and is operated by Essar Oil (UK) Limited ("the operator"). The Manchester Ship Canal is located to the north, with the villages of Ince and Elton to the northeast and the village of Thornton-le-Moors to the south.

Refinery activities (primary activity)

The installation processes crude oil in a refinery which includes crude distillation units (CDU-3 and CDU-4), a fluid catalytic cracker, alkylation unit, platformer and hydrodesulphurisation plant.

In general terms, crude oil is imported by ship into tankage at the Tranmere Oil Terminal some 15 miles away on the Mersey. The Tranmere Oil Terminal is subject to a separate permit (EPR/TP3301MD). Crude oil is transferred by pipeline to tankage at Stanlow. This is the main feedstock for crude distillation, which separates the crude oil into fuel gas, Liquefied Petroleum Gases ("LPGs"), naphtha, kerosene, gas oil and a residue for further processing.

The naphtha ("gasoline") fraction from distillation is the feed for the platformer which reforms it into high octane motor gasoline. The product from the platformer is fed to the Aromatics plant, which produces aromatic hydrocarbons such as Benzene, Toluene and Xylene. The kerosene and gas oil streams are treated to remove sulphur before sale.

The bottom product of the distillation, termed 'long residue' is the feed for the catalytic cracking unit and high viscosity index ("HVI") lubeoil complexes. The fluid catalytic cracker and its associated gas separation units produce fuel gas, LPG, High Octane Motor Gasoline, Gas Oil, and Fuel Oil. LPG streams from the cracker and distillation provide the feed for the Alkylation plant, which converts them into motor gasoline.

Other cracker LPG streams are feedstock for chemicals production both on and off-site. The fuel gas from the cracker and benzene from the Aromatics plant are the feedstocks for the production of ethyl benzene, which is exported for conversion to styrene.

The oil movements include receipt and storage of oil (and chemical) feedstocks, for the collection, storage, blending and internal distribution of products, and for those parts of ship and road loading of products and intermediates.

Finished products are exported by pipeline then transported either by road tanker from the loading terminal or by water via the Manchester Ship Canal.

The utilities plants supply cooling, fire and process water, steam, electricity, nitrogen and instrument air to most of the site. The utilities area also includes units for extracting hydrogen sulphide from refinery sour water and processing to produce elemental sulphur.

These activities fall under the following descriptions in Part 2 of Schedule 1 of the Environmental Permitting Regulations 2016 (“EPR 2016”):

- Section 1.2 Part A(1)(d) – Refining mineral oils (cracking, secondary processes and distillation).
- Section 1.2 Part A(1)(e) - The loading, unloading or other handling of, the storage of, or the physical, chemical or thermal treatment of crude oil (oil movements).

Other regulated activities carried out at the installation include:

- chemical activities
- incineration
- combustion
- recovery and/or disposal of waste
- carbon capture for geological storage.

Derogation methodology

The Industrial Emissions Directive (“IED”) enables a competent authority to allow derogations from Best Available Techniques Associated Emission Levels (“BAT-AELs”) stated in BAT Conclusions under specific circumstances as detailed under Article 15(4):

By way of derogation from paragraph 3, and without prejudice to Article 18, the competent authority may, in specific cases, set less strict emission limit values. Such a derogation may apply only where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

- *the geographical location or the local environmental conditions of the installation concerned; or*
- *the technical characteristics of the installation concerned*

Cost Benefit Analysis

If a derogation is potentially applicable then Cost Benefit Analysis (“CBA”) is undertaken. The CBA allows calculation to indicate whether the costs of compliance are greater or less than the environmental benefits.

The CBA essentially groups all the costs on one side, with all the benefits, as far as possible, on the other side. It then includes the effect of time on the value of those costs and benefits in order to produce a Net Present Value (“NPV”).

This gives an indication of whether those costs are disproportionate or not, but there are many sensitivities in the analysis and many aspects of the environment that cannot yet be monetised so the actual decision on disproportionality rests with the regulator.

Where the NPV is positive, this indicates that the costs of compliance with the BAT-AEL(s) do not outweigh the environmental benefits.

Where the NPV is negative, this indicates that the costs of compliance with the BAT AEL(s) outweigh the environmental benefits.

The consolidated variation notice is being issued under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 (“EPR 2016”). 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 the consolidated variation notice 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.

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.

The scope of this variation application covers only a request for a derogation from the requirements of BAT 52, as identified in the Refining of Mineral Oil and Gas BAT Conclusions document. The way we assessed the operator’s request

for derogation and how we subsequently arrived at our conclusion is recorded in this document.

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.

The consolidated variation notice contains many conditions taken from our standard environmental permit template including the relevant annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the EPR 2016 and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the notice, we have considered the techniques identified by the operator for the operation of their installation and have accepted that the details are sufficient and satisfactory to make those standard conditions appropriate.

How we reached our decision

Receipt of application

The application was duly made on 08/08/2024. This means we considered it was in the correct form and contained sufficient information for us to begin our determination.

Commercial confidentiality

The applicant claimed that certain information was commercially confidential and should be withheld from the public register. We considered this request and determined that the information claimed as confidential was industrial information commercially sensitive in relation to the operator's commercial strategy and critical in their competitiveness.

We have determined that the following information included in the application and subsequent responses to requests for information, is confidential:

- Volumes of material imported/exported at the White Oil Docks
- Cost impact of limiting imports/exports at the White Oil Docks; cost impact of recovered VOCs at the White Oil Docks. As a consequence, the associated cost-benefit analysis spreadsheets submitted in support of the application are considered commercially confidential and excluded from the public register
- Details of the project being implemented to comply with BAT (Mogas Export Project), including costs of equipment.

We decided that the confidentiality of the information in the scope of the applicant's claim is provided by law to protect a legitimate economic interest and, taking account all circumstances, the public interest in maintaining the confidentiality outweighs the public interest in including it in the public register, in accordance with the criteria in Regulation 51(c)(i), (ii) and (iii) of EPR 2016.

The applicant provided edited versions of the documents containing confidential information to ensure that information included in the Public Register allows public understanding of the scope of the application, adequate technical inputs and details, full understanding of environmental risk assessment, results and outcomes of cost benefit analyses. All the information related to emissions has been included in the Public Register and the information withheld has been kept to a minimum.

Apart from the issues and information just described, we have not received any information in relation to the application that appears to be confidential in relation to any party.

Requests for further information

Although we were able to consider the application duly made, we did need more information in order to determine it. We requested this via emails to the operator on 04/12/2024 and 13/01/2025. A copy of the emails was placed on our public register, along with the additional documentation submitted by the operator in response to these notices, except in the cases when we determined that this information was commercially confidential (see above).

Consultation on the application

We have consulted on our minded to issue decision document and draft permit from 07/05/2025 to 05/06/2025. A summary of the consultation responses and how we have taken into account all relevant representations is given below.

Key Issues

This variation has been determined following an application by the operator for derogation from the requirements of BAT 52 of the BAT Conclusions document for the Refining of Mineral Oil and Gas:

BAT 52. In order to prevent or reduce VOC emissions to air from loading and unloading operations of volatile liquid hydrocarbon compounds, BAT is to use one or a combination of the techniques given below to achieve a recovery rate of at least 95 %.

Technique	Description	Applicability ⁽¹⁾
Vapour recovery by: (i) Condensation (ii) Absorption (iii) Adsorption (iv) Membrane separation (v) Hybrid systems	See Section 1.20.6	Generally applicable to loading/unloading operations where annual throughput is > 5 000 m ³ /yr. Not applicable to loading/unloading operations for sea-going vessels with an annual throughput < 1 million m ³ /yr

⁽¹⁾ A vapour destruction unit (e.g. by incineration) may be substituted for a vapour recovery unit, if vapour recovery is unsafe or technically impossible because of the volume of return vapour.

BAT-associated emission levels: See Table 16.

Table 16

BAT-associated emission levels for non-methane VOC and benzene emissions to air from loading and unloading operations of volatile liquid hydrocarbon compounds

Parameter	BAT-AEL (hourly average) ⁽¹⁾
NM VOC	0,15-10 g/Nm ³ ⁽²⁾ ⁽³⁾
Benzene ⁽³⁾	< 1 mg/Nm ³

⁽¹⁾ Hourly values in continuous operation expressed and measured according to European Parliament and Council Directive 94/63/EC (OJ L 365, 31.12.1994, p. 24).

⁽²⁾ Lower value achievable with two-stage hybrid systems. Upper value achievable with single-stage adsorption or membrane system.

⁽³⁾ Benzene monitoring may not be necessary where emissions of NM VOC are at the lower end of the range.

The operator was previously granted derogations from BAT 52 by variations EPR/FP3139FN/V009 and EPR/FP3139FN/V011. The current derogation expired on 31/08/2024. This application seeks an additional 14 months to achieve compliance with BAT.

First derogation

EPR/FP3139FN/V009, granted on 15/02/2018, valid until 31/12/2020

The White Oil Docks (also called Stanlow Island Berths) are located on the north bank of the Manchester Ship Canal (on Shell Island) opposite the Layby Berth. There are two berths; numbers 1 and 3, used for importing/exporting white oils and components including gas oil and fuel oil which are produced at the Stanlow Manufacturing Complex from the refining and conversion of crude oil imported via the Tranmere Oil Terminal.

Since ship loading/unloading of volatile liquid hydrocarbons at the White Oil Docks exceeds the applicability threshold of 1 million cubic metres per year (m³/y), BAT 52 is applicable at the White Oil Docks.

The operator was not able to meet the BAT-AELs, as stated in Table 16 of BAT 52, by the compliance date of 28/10/2018.

A time-limited derogation was subsequently granted to the operator in 2018 (variation EPR/FP3139FN/V009, valid until 31/12/2020). The derogation was granted with justification addressing the criteria set out in Article 15(4) *[that meeting the BAT-AEL would lead to disproportionately higher costs compared to the environmental benefits]* due to the technical characteristics of the installation and its current configuration; it was not possible to comply with the relevant BAT-AELs.

At that time there was no vapour recovery at the White Oil Docks - emissions of volatile organic compounds ("VOCs") arising from the loading of sea-going vessels at the White Oil Docks were emitted, unabated, through a high level (approx. 60m) vent stack, which used fans to disperse the vapour.

The strategy proposed by the operator to achieve compliance relied on the reduction of throughput at the White Oil Docks to below the applicability threshold of 1 million m³/y by 31/12/2020. This was dependent on the completion of the operator's separate project to transfer most of the loading and unloading operations from the White Oil Docks to the Tranmere Oil Terminal (referred in the following as the 'Mogas Export Project'), where a vapour recovery unit ("VRU") would be installed, thus complying with BAT 52.

The Mogas Export Project, was explained by the operator to be an independent project driven by commercial / business needs that would be implemented regardless of the BAT requirements for the White Oil Docks set out in BAT 52. The project would enable cargo packet sizes for gasoline exports to be increased, sales of gasoline to a wider market and the reduction of shipping costs per parcel.

The operator did not meet the derogation deadline, for the reasons described below, and applied for a further derogation.

Second derogation

EPR/FP3139FN/V011, granted on 12/05/2022, valid until 31/08/2024

There was no change to the operator's proposals or strategy for achieving compliance with BAT 52, over those approved for the first derogation. The second derogation was granted to provide additional time for the operator to complete delivery of the Mogas Export Project.

The operator provided evidence of the progress they had made with the Mogas Export Project but cited disruption caused by the COVID-19 pandemic on the availability of engineering personnel and its effects on global market conditions for oil refining with a negative impact on the operator's business as the cause of not meeting the derogation deadline.

Current derogation request

The operator has requested a further derogation from the requirements of BAT 52 until 31/10/2025.

There is again no change to the operator's proposals or strategy for achieving compliance with BAT 52, over those approved for the first and second derogations.

In accordance with the requirements of improvement conditions IC54 to IC58, which were included in the permit following variation EPR/FP3139FN/V011, the operator has provided six-monthly progress reports on the delivery of the Mogas Export Project. Submissions for IC54 to IC57 indicated that the project was on track to be commissioned by 31/08/2024.

However, the IC58 submission (received 30/05/2024) reported that, in February 2024, the operator became aware that the company that was due to supply a critical piece of equipment (a marine loading arm) at Tranmere Oil Terminal had entered into administration. The operator has consequently had to restart the process of obtaining a replacement loading arm from an alternative supplier, causing unavoidable delays, which are outside of their control, to the project commissioning date.

Construction of all aspects of the Mogas Export Project, other than the marine loading arm, has continued in line with an earlier completion date. The additional time requested is solely to enable the operator to source a replacement loading arm to enable completion of the Mogas Export Project.

The marine loading arm is used to load volatile liquid hydrocarbons from the terminal linework onto a ship. The operator explained that, due to the quality requirements for gasoline, diesel and crude (the products to be loaded at Tranmere Oil Terminal) it is not possible to use an existing crude or diesel loading facility for the loading of gasoline. Marine loading arms are best practice equipment for loading volatile liquids onto a ship to ensure safe operation and to minimise the risk of releases. At Tranmere Oil Terminal, the marine loading arms are designed for the particular weather conditions and tidal ranges experienced at the location. It is for this reason that a marine loading arm must be used to load gasoline at Tranmere Oil Terminal.

The operator's revised project timeline takes account of delivery and installation of the new marine loading arm with commissioning of the overall project by 31/10/2025.

In parallel, an application to vary the Tranmere Oil Terminal permit (EPR/TP3301MD/V004) to enable the transfer of loading and unloading operations from the White Oil Docks is currently in determination by the Environment Agency. The application details the installation of a VRU at the Tranmere Oil Terminal.

Emission Limit Values ("ELVs")

The operator has proposed that no ELVs are applied to the emission point in the scope of the derogation application (White Oil Docks stack) until 31/10/2025.

After this date, the operator has proposed that the loading/unloading throughput at the White Oil Docks is reduced to approximately 35% of the current rate by the effect of moving the majority of the loading/unloading operations to the Tranmere Oil Terminal where new infrastructure, including abatement of emissions (Vapour Recovery Unit), will be installed and regulated under a separate environmental permit.

As the reduced throughput at the White Oil Docks will correspond to less than 1 million m³/y after implementing the proposed changes, the requirement of BAT 52 and the associated BAT-AELs will no longer apply to the White Oil Docks and the associated emission point.

The current position, the BAT-AEL values and the operator's proposed position is set out below.

Emission Limit Value (ELV) comparison table			
Averaging period	Current (mg/Nm³)	BAT-AELs (mg/Nm³)	Operator Proposed (mg/Nm³)
Hourly average	No limit set	NMVOC: 0.15 -10 g/Nm ³ Benzene: 1 mg/Nm ³	No limit proposed
Correction factors	Not applicable	Dry gas, temperature of 273,15 K, pressure of 101,3 kPa	Not applicable

As for the previous derogations, there is no abatement of emissions and therefore no means to limit, reduce or control emissions. Emissions are solely dependent on the equilibrium distribution of volatile species among the liquid and gaseous phases at the given temperature and the loading rates of the operations. The operator has therefore proposed that no ELVs are specified during the time-limited derogation period.

The air dispersion modelling and assessment of current (unabated) emissions from the White Oils Docks vent stack submitted with the application (Dispersion modelling of emissions of all VOCs, Essar Stanlow Refinery, Final report, reference FM1336/B3/21, dated 25th November 2021) is the same as previously assessed for the second, similar time-limited derogation from BAT 52 (EPR/FP3139FN/V011) granted on 12/05/2022.

The conclusion of the assessment was that for all NMVOCs emitted from the White Oil Docks, long and short-term impacts at sensitive receptors were considered not to be significant. The Environment Agency was satisfied that the allowing the proposed derogation would have not caused any significant pollution or prevented a high level of protection of the environment as a whole to be achieved.

The operator confirmed that they are not aware of any factors that would change the impact of these emissions during the period of the proposed derogation.

We are satisfied that the assessment and its conclusions are still representative of emissions from the White Oils Docks and we have not reassessed it for this derogation application. We still consider the allowing the proposed derogation will not cause any significant pollution or prevent a high level of protection of the environment as a whole to be achieved.

Derogation criteria

As for the previous derogations, the operator referenced [DEFRA guidance note 'Industrial emissions directive Guidance on Part A installations'](#) to justify that the costs of BAT 52 compliance at the White Oil Docks would be higher than normally encountered due to the geographical location. In addition, the technical characteristics are such that the intended remaining operational lifetime of a VRU installed at the White Oil Docks would be limited.

With regard to geographical location, the Department for Environment Food and Rural Affairs ("DEFRA") note states:

The geographical location of the installation may have a bearing on costs: for example, construction of energy supply costs may be higher than would normally be encountered if the installation is in a remote location.'

The geographical location and configuration of the White Oil Docks means it is more technically difficult to install a VRU and would significantly increase construction costs.

The White Oil Docks are located on Stanlow Island which is not connected by land to the rest of the Stanlow site. In order to install a VRU at this location, floating cranes would be required to transport the abatement equipment and all

other materials for construction. This significantly increases the cost of the project compared with the proposed derogation scenario (moving the majority of loading/unloading operations to the Tranmere Oil Terminal and installation of a VRU at Tranmere Oil Terminal).

We agree that the geographic location of the installation is likely to have an impact on the cost to install the equipment needed to achieve compliance with the techniques described by BAT 52 and the associated emission levels BAT-AELs.

With regard to technical characteristics, the DEFRA note states:

Technical characteristics which may be particularly relevant include:

- *The configuration of the plant on a given site, making it more difficult and costly to comply*
- *The intended remaining operational lifetime of the installation as a whole or of the part of it giving rise to the emission of the pollutant(s), where the operator is prepared to commit to a timetable for closure.'*

The operator states that the intended remaining operational lifetime of equipment newly installed at the White Oil Docks to comply with BAT 52 would be limited, because it is their intention to implement the Mogas Export Project regardless of the BAT requirements for the White Oil Docks.

We agree that the technical configuration of the plant, as a result of its geographic location described above, is likely to make it more difficult and costly to comply with BAT 52 and the BAT-AELs.

We note that the geographic and technical criteria partially overlap, and we consider that the technical characteristics criterion is more appropriate to describe this element of the derogation request. We have therefore decided to take forward the technical criterion as the basis of this derogation request.

Based on the information provided by the operator, we also agree, as a second argument based on the technical characteristics of the installation, that the requirement for new abatement equipment to be installed at the White Oil Docks to comply with BAT 52, and the BAT-AELs, could be time-limited in nature, given the operator's intention to implement the Mogas Export Project, the effect of which will be to reduce the throughput at the White Oil Docks will to below the 1 million m³/y BAT 52 applicability threshold. At that point, BAT 52 will no longer apply to the White Oil Docks and a VRU will not be required.

The Environment Agency had previously accepted these two grounds for derogation based on the technical characteristics of the installation, as part of the derogation granted to the operator on 26/09/2018 (variation EPR/FP3139FN/V009) and on 12/05/2022 (variation EPR/FP3139FN/V011).

Review of options for BAT Compliance

The operator considered four options for either achieving compliance with the BAT-AELs or for modifying operations such that BAT 52 no longer applies (i.e. by reducing throughput at the White Oil Docks to less than 1 million m³/y).

Two options would potentially make the installation immediately compliant with BAT 52; another option could achieve compliance by the end of October 2026, whereas the proposed derogation option will achieve compliance by the end of October 2025:

- **Option 1 - Proposed derogation** – loading/unloading operations are continued at current rates at White Oil Docks, without a VRU, until October 2025. From November 2025, approximately 65% of loading/unloading operations are transferred to Tranmere Oil Terminal. At that point, throughput at White Oil Docks is reduced to below 1 million m³/y. BAT 52 is no longer applicable at the White Oil Docks. **Compliance by 31/10/2025.**
- **Option 2 - BAT-AEL (limit loading/unloading)** – loading/unloading is reduced at White Oil Docks to less than 1 million m³/y. BAT 52 is no longer applicable at the White Oil Docks. **Immediate compliance.**
- **Option 3 - Install VRU at White Oil Docks** – loading/unloading operations is continued at current rates, unabated, at White Oil Docks until a VRU is installed. The operator reports that the earliest that a ‘fast-tracked’ project to install a VRU at White Oil Docks could be completed is 31/10/2026. **Compliance by 31/10/2026.**
- **Option 4 - Limit loading/unloading until transfer to Tranmere** – loading/ unloading is reduced at White Oil Docks to less than 1 million m³/y until the end of October 2025. From November 2025, the majority of loading/unloading operations are transferred to Tranmere Oil Terminal. At that point, throughput at White Oil Docks is reduced to below 1 million m³/y. BAT 52 is no longer applicable at the White Oil Docks. **Immediate compliance.**

The operator provided a CBA of the four options using the Environment Agency’s CBA tool. As the time period/duration of the derogation is the only change, assessment has been made for the renewed period of not complying with BAT-AELs.

The operator referred to the BAT Reference Document for the Refining of Mineral Oil and Gas to derive appropriate cost data for the installation of a VRU and electricity usage. The cost of capping imports and exports was determined by the operator’s economist. Air pollutant emissions (tonnes/year NMVOCs) have

been calculated based on current NMVOC emission rates from the White Oil Docks vent.

We audited the CBA submitted with the variation application by the operator. We are satisfied that the operator has assessed an adequate range of technically viable options to achieve compliance with BAT 52 and the BAT-AELs. We are satisfied with the operator's approach and justification for the data input for each of the options. We identified errors in the CBA, including that the operator had used an out-of-date version of the tool (the current version v6.25 contains updated cost data, which is based on HM Treasury's Green Book guidance). The operator subsequently submitted a revised CBA using the current version of the tool on 21/01/2025.

The operator's results are presented in terms of NPV using central assumptions:

	Proposed derogation	BAT-AEL	Install VRU at White Oil Docks	Limit loading/unloading until transfer to Tranmere
NPV - central (£ millions)	0.00	-55.62	-3.78	-34.11

We are satisfied that the operator's CBA demonstrates that the costs of immediate compliance (options 2 and 4) outweigh the monetised environmental benefits in comparison with the proposed derogation (i.e. $NPV < 0$):

- **Option 2 - BAT-AEL (limit loading/unloading):** the CBA using central assumptions shows a negative NPV of £55.62 million and therefore the cost of compliance is disproportionate compared to the environmental benefit achieved.
- **Option 4 - Limit loading/unloading until transfer to Tranmere** - the CBA using central assumptions shows a negative NPV of £34.11 million and therefore the cost of compliance is disproportionate compared to the environmental benefit achieved.

We are satisfied that the operator has provided a credible argument that the increased costs linked to the technical characteristics of the White Oil Docks are disproportionate for achieving immediate compliance with the BAT-AEL.

Whilst the CBA using central assumptions also shows a negative NPV for Option 3 'Install VRU at White Oil Docks', the figures are less significant than for the other options considered (£3.78 million). This could suggest that this is also a potentially viable option, as an alternative to the proposed derogation. However, this option will not achieve compliance until 31/10/2026 at the earliest, one year after the requested derogation date.

In addition, the proposed derogation option is well progressed and approaching completion, as demonstrated by the progress reports submitted under

improvement conditions IC54 to IC57 and the duly made application to vary the Tranmere Oil Terminal permit. A complete change in compliance strategy at this stage, involving the installation of a VRU at White Oil Docks, would introduce new uncertainties in project delivery, potentially impacting on delivery even beyond the operator's 'fast tracked' estimated compliance date of 31/10/2026. For example, this compliance date stated by the operator does not consider the time it would take for the Environment Agency to determine a permit variation to install a VRU at White Oil Docks, which would likely add months to the timeline.

We are satisfied that the operator has justified that the proposed derogation scenario (Option 1) will achieve compliance with BAT 52 earlier than Option 3 - Install VRU at White Oil Docks.

Permit Conditions

Given that this is a third derogation we have imposed an improvement condition that restricts operations at the White Oil Docks in the event that the operator fails to provide evidence of sufficient progress towards meeting the October 2025 deadline for reducing throughput at White Oil Docks on which their application is predicated.

The operator must report progress on the delivery of the Mogas Export Project within two months of permit issue, in response to improvement condition IC66, and must obtain written approval from the Environment Agency to operate above the throughput applicability threshold of BAT 52 in the following period up to the time-limited derogation date of 31/10/2025 (throughput pro-rated as 104,110 m³ for the period 24/09/2025 to 31/10/2025). Should the Environment Agency not be satisfied with the progress reported by the operator, the limits of the activity specified in Table S1.1 of the permit will restrict operations during that period to a loading/unloading throughput of 104,110 m³. From 01/11/2025 the loading/unloading throughput is limited to <1 million m³/annum.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC66	<u>BAT Conclusion 52</u> The Operator shall submit a report setting out the progress made in delivering the Mogas Export Project relied upon to achieve compliance with BAT 52, for approval by the Environment Agency.	24/08/2025

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has been made.

We have accepted the claim for confidentiality. Refer to section 'How we reached our decision'.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations 2016 and our public participation statement.

On 07/05/2025 we publicised our 'minded to' draft decision on the GOV.UK website because the application contained a request for a derogation from BAT 52 of Best Available Techniques Conclusions Document for the Refining of Mineral Oil and Gas (2014/7/738/EU of 28/10/2014).

We consulted on our draft decision from 07/05/2025 to 05/06/2025.

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

Operating techniques

We have reviewed the techniques used by the operator, as relevant to the scope of this variation application, and compared these with the Refining of Mineral Oil and Gas BAT Conclusions document. This variation permits a derogation from BAT 52 and the associated BAT-AELs for emissions of NMVOC and benzene, granted in accordance with Article 15(4) of IED and our guidance.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. The derogation option proposed by the operator and accepted by us will result in reduced emissions of

NMVOC from November 2025. We do not consider that we need to include any additional conditions in this permit.

Reporting

At the request of the operator, we have amended the reporting due dates specified in condition 4.2.10 of the permit. This is solely to align with other permit reporting.

Improvement programme

Based on the information on the application, we consider that we need to include an improvement programme.

We have included an improvement programme to ensure that the operator complies with the proposed derogation option. Refer to the 'Permit Conditions' section above for further details.

We have also updated the status of previous improvement conditions according to their progress.

Emission limits

No emission limits have been added, amended or deleted as a result of this variation. Refer to the 'Key Issues' section for details on the derogation from the BAT-AELs for NMVOC and benzene granted by this variation.

Previous performance

The operator did not comply with the timetable proposed by them in 2022 to achieve compliance with BAT 52. However, we have considered the justification provided by the operator, which is explained in the 'Key Issues' section above. On balance, we have decided to grant the variation to the permit. We take compliance with our permits very seriously and we will continue to monitor the site. We have worded the limits of the activity subject to derogation to enable us to restrict the loading and unloading operations at the White Oil Docks to the applicability threshold set out in BAT 52, should we not be satisfied with the progress reported by the operator in response to improvement condition IC66 in the consolidated variation notice. See the 'Permit Conditions' section above for further details.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

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

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

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

Consultation Responses

Consultation Responses from Members of the Public

The following summarises the responses to our notice on GOV.UK for the public, and the way in which we have considered these in the determination process.

94 responses were received from individual members of the public during the consultation period. The responses received were wide ranging and a number of the issues raised were either outside the Environment Agency’s remit in reaching its permitting decisions or were outside of the scope of this derogation application. We have summarised and consolidated the consultation responses by topic addressed and area of concern below.

In addition, we received 17 further responses after the consultation had closed on 05/05/2025. We have read all of those responses, but the issues raised in those responses have not necessarily been included in this decision document. None of the issues raised affected our decision.

Brief summary of issues raised:	Environment Agency comment
Concerns about air emissions, air risk assessment and health	
Which specific pollutants would the derogation allow at higher levels?	The derogation relates to the parameters specified in BAT 52 of the Refining of Mineral Oil and Gas BAT Conclusions: non-methane volatile organic compounds (NMVOC) and benzene.

Brief summary of issues raised:	Environment Agency comment
	<p>There are no increases in emission concentrations over the existing emissions profile of the White Oil Docks vent, or indeed other activities undertaken by the installation, as a result of this derogation. Subject to Environment Agency approval (under improvement condition IC66), the current emission profile will continue for a period of time, limited by the deadline specified in the permit (31/10/2025), after which the permit specifies that the operator shall reduce the loading operations at the White Oil Docks, and the associated venting emissions, to comply with the requirements of the permit, in line with the threshold specified by BAT 52.</p>
<p>Some respondents expressed concern that VOC emissions are emitted to air unabated, at concentrations above the BAT and raised concerns over the potential health effects of pollutant emissions, asking questions/making comments such as:</p> <ul style="list-style-type: none"> - Has a health risk assessment been conducted to model the cumulative impact of increased emissions under the derogation, particularly for vulnerable groups like children, the elderly or asthma sufferers? - Air quality figures should be published. - How will resident testimonies about health impacts directly inform the Environment Agency's decision on the derogation? - What independent medical studies are being reviewed to evaluate the derogation's health risks? 	<p>Our process for assessing the impacts of emissions on sensitive (human health) receptors is described in our guidance Air emissions risk assessment for your environmental permit - GOV.UK. In accordance with our guidance, NMVOCs and benzene are not substances of concern for protected conservation areas.</p> <p>As described in the Key Issues section above, the operator provided dispersion modelling in accordance with our guidance of unabated emissions from the White Oils Docks. The modelling and assessment report submitted with this derogation application are the same as previously assessed for the second, similar time-limited derogation from BAT 52 (EPR/FP3139FN/V011) granted on 12/05/2022. The modelling and assessment report are available on our Public Register.</p> <p>We are satisfied that the assessment and its conclusions remain representative of emissions from the White Oils Docks.</p> <p>The conclusion of the assessment is that, for all NMVOCs (including benzene) emitted from the White Oil Docks, long and short-term impacts at sensitive (human) receptors are considered to be not significant when compared with the relevant Environmental Assessment Levels.</p>

Brief summary of issues raised:	Environment Agency comment
<ul style="list-style-type: none"> - Has the Environment Agency commissioned an independent cumulative health risk assessment that specifically models synergistic effects of multiple pollutants, rather than considering them in isolation? Given that NMVOCs and particulate matter interact in ways that exacerbate respiratory and cardiovascular conditions. 	<p>Our assessment of these emissions is recorded in the decision document for application EPR/FP3139FN/V011 granted on 12/05/2022, which is available on our Public Register. Since we consider there are no changes to the emission profile and to the conclusions of the assessment, we refer to that document for additional details.</p> <p>As part of that determination, we consulted with the UK Health Security Agency (UKHSA), who advised that they did not have concerns regarding the risk to the health of the local population from the VOC emissions from this activity at the installation.</p>
<p>How does the Environment Agency reconcile granting a derogation with its corporate air quality targets, given Stanlow's history of NMVOC releases?</p>	<p>There are no changes to emissions of particulate matter from the installation.</p> <p>The Environment Agency is satisfied that allowing the proposed derogation is unlikely to cause significant impacts on sensitive (human health) receptors.</p>
<p>Some respondents raised concerns relating to emissions of sulphur oxides, nitrogen oxides, carbon dioxide and particulate matter as well as black smoke (from flare stacks).</p>	<p>These emissions are outside of the scope of this derogation application. This derogation relates to compliance with BAT-AELs for NMVOCs and benzene at the White Oil Docks vent only.</p>
<p>Concerns regarding air emissions monitoring</p>	
<p>Some respondents queried whether monitoring at the site, for example for NMVOCs and particulate matter, will be increased or varied to detect breaches linked to the derogation. And whether daily emissions data will be made publicly accessible in real time.</p>	<p>As described above, we are satisfied that emissions from the White Oil Vent are unlikely to cause significant impacts on sensitive (human health) receptors. There is therefore no monitoring of emissions from the vent specified in the permit.</p> <p>We have included improvement condition IC66 to check that the operator is working within the terms of the derogation, i.e. that they are progressing the Mogas Export Project to attain compliance with the BAT-AELs by the derogation date (31/10/2025). Specifically, the operator is required to report progress within two months of permit issue and must obtain written approval from the Environment Agency before operating above</p>

Brief summary of issues raised:	Environment Agency comment
	<p>the throughput applicability threshold of BAT 52 in the following period, up to the derogation date of 31/10/2025 (throughput is pro-rated as 104,110 m³ for the period 24/09/2025 to 31/10/2025).</p> <p>Should the Environment Agency not be satisfied with the progress reported by the operator, the limits of the activity specified in Table S1.1 of the permit will restrict operations during that period to a loading/unloading throughput of 104,110 m³.</p> <p>From 01/11/2025 the loading/unloading throughput is limited to <1 million m³/annum, which is the applicability threshold of BAT 52. Particulate matter is not a relevant parameter for this derogation application. The derogation relates to compliance with BAT-AELs for NMVOCs and benzene only.</p>
<p>Some respondents queried what procedures are in place to manage air quality around the site, and which parameters are monitored?</p>	<p>As described above, we are satisfied that emissions from the White Oil Vent are unlikely to cause significant impacts on sensitive (human health) receptors and there is no emissions monitoring of the vent specified in the permit.</p> <p>Other aspects of air emissions monitoring at the site are outside of the scope of this derogation application. This derogation relates to compliance with BAT-AELs for NMVOCs and benzene at the White Oil Docks vent only.</p> <p>However, Tables S3.1(a), S3.1(a)(i), S3.1(b), S3.1(c) and S3.1(d) specify the relevant emission limit values and monitoring requirements for all point source emissions to air at the site.</p>
Concerns regarding compliance with the terms of the derogation	
<p>Respondents expressed concern that the operator does not comply with environmental regulations and that the site is not regulated enough, asking questions/making comments such as:</p>	<p>As described above, we have included improvement condition IC66 to confirm that the operator is working within the terms of the derogation, i.e. they are progressing the Mogas Export Project to attain compliance with the BAT-AELs by the derogation date (31/10/2025).</p>

Brief summary of issues raised:	Environment Agency comment
<ul style="list-style-type: none"> - Does the derogation include a binding timeline to achieve full compliance with BAT-AELs, ensuring temporary relaxation doesn't become permanent? - What penalties will Essar face if derogation terms are violated, and how will this be enforced? - The permit should be granted for a short trial period of time to ensure they comply with tougher regulations. 	<p>Specifically, the operator is required to report progress within two months of permit issue and must obtain written approval from the Environment Agency before operating above the throughput applicability threshold of BAT 52 in the following period, up to the derogation date of 31/10/2025 (throughput is pro-rated as 104,110 m³ for the period 24/09/2025 to 31/10/2025).</p> <p>Should the Environment Agency not be satisfied with the progress reported by the operator, the limits of the activity specified in Table S1.1 of the permit will restrict operations during that period to a loading/unloading throughput of 104,110 m³.</p> <p>From 01/11/2025 the loading/unloading throughput is limited to <1 million m³/annum, which is the applicability threshold of BAT 52.</p> <p>Similar improvement conditions (IC54 to IC58) were included in the permit in 2022 for the second similar time-limited derogation request (EPR/FP3139FN/V011). The IC58 submission provided by the operator on 30/05/2024 notified the Environment Agency of delays in the delivery to the Mogas Export Project. Consequently the Environment Agency did not approve operation above the throughput applicability threshold of BAT 52 in the following period and ship loading activity has been restricted in accordance with the limits specified in Table S1.1 of the permit.</p>
Concerns regarding repeated delays in installing a VRU	
<p>This is the third derogation granted to Essar. The repeated delays in installing vapour recovery systems at White Oil Docks reflect corporate negligence, not technical infeasibility.</p>	<p>As described in more detail in the Key Issues section above, in accordance with the requirements of improvement conditions IC54 to IC58, the operator has provided six-monthly progress reports on the delivery of the Mogas Export Project. Submissions for IC54 to IC57 indicated that the project was on track to be commissioned by 31/08/2024.</p> <p>However, the IC58 submission reported that in February 2024 the operator became aware that the company that was due to supply a</p>

Brief summary of issues raised:	Environment Agency comment
	<p>critical piece of equipment (a marine loading arm) at Tranmere Oil Terminal had entered into administration. The operator has consequently had to restart the process of obtaining a replacement loading arm from an alternative supplier, causing unavoidable delays, which are outside of their control.</p> <p>The additional time requested is solely to enable the operator to source a replacement loading arm to enable completion of the Mogas Export Project.</p> <p>In the application, the operator considered four potential routes to compliance with BAT 52. Of the two options that do not incur disproportionate costs, the derogation proposal will achieve compliance in the shortest timeframe. See the cost-benefit analysis section below for more explanation.</p>
Concerns regarding cost-benefit analysis (CBA)	
<p>Essar's refusal to publish cost-benefit data under "commercial confidentiality" prevents public accountability. In the absence of transparent data, the public cannot be assured the Agency is fulfilling its duty to protect human health.</p>	<p>As described in more detail in the How We Reached Our Decision section above, we have assessed the operator's confidentiality claim and have decided that the confidentiality of the information in the scope of the applicant's claim is provided by law to protect a legitimate economic interest and, taking account all circumstances, the public interest in maintaining the confidentiality outweighs the public interest in including it in the public register, in accordance with the criteria in Regulation 51(c)(i), (ii) and (iii) of EPR 2016.</p> <p>We have audited the operator's CBA and we are satisfied that the operator has provided a credible argument that the increased costs linked to the technical characteristics of the White Oil Docks are disproportionate for achieving immediate compliance with the BAT-AEL.</p>
<p>This permit variation disproportionately benefits industry profits at the expense of public health, environmental integrity, and community wellbeing.</p>	<p>As described in more detail in the Derogation Methodology section above, the Industrial Emissions Directive allows derogations from BAT-AELs when an assessment shows that cost of complying with BAT-AELs is</p>

Brief summary of issues raised:	Environment Agency comment
<p>If the law states limits on pollution, why is the derogation order even allowed?</p>	<p>disproportionately higher than the environmental benefits achieved.</p> <p>The operator submitted a CBA that demonstrates that, due to the technical configuration of the plant, as a result of its geographic location, the cost of complying with BAT 52 at the White Oil Docks is disproportionately higher than the environmental benefits achieved.</p> <p>The operator's CBA considers four potential routes to compliance with BAT 52. Of the two options that do not incur disproportionate costs, the derogation proposal will achieve compliance in the shortest timeframe.</p>
Concerns regarding public consultation	
<p>Concern that the application was not advertised and therefore has not been consulted on.</p>	<p>Our public participation statement sets out when and how the Environment Agency consults on permit applications: Environmental permits: when and how we consult - GOV.UK</p> <p>Generally, we consult on applications for new activities, or where there is a substantial change to an activity. Our guidance reflects this. There are no new activities and no changes to existing activities as a result of this derogation.</p> <p>The derogation scenario is that emission concentrations, from the White Oil Docks vent, will continue as they have for many years for a limited period of time (until the deadline specified in the permit; 31/10/2025), after which the permit specifies that the operator shall reduce loading operations at the White Oil Docks, and the associated venting emissions, in line with the threshold specified in BAT 52.</p> <p>In accordance with our guidance, therefore, consultation at duly making stage was not required for this derogation application.</p> <p>We consulted the public at 'minded to' stage. The public consultation opened on 07/05/2025</p>

Brief summary of issues raised:	Environment Agency comment
	<p>and closed on 05/06/2025. 111 consultation responses were received in total, 94 during the consultation timescale and a further 17 after the consultation had closed.</p> <p>Many of the issues raised were either outside the Environment Agency's remit in reaching its permitting decisions or were outside of the scope of this derogation application, relating instead to general operational and compliance issues at the site. The application specifically relates to a derogation from the BAT-AELs specified in BAT 52. We have considered all 111 responses and are satisfied that none of the issues raised affected our decision.</p> <p>We only advertise in newspapers for sites of high public interest (HPI) and then only if agreed as part of an engagement plan. At the outset of the determination, the site was not considered likely to be high public interest. Therefore, in accordance with our guidance, advertising was not required at duly making stage.</p> <p>A site can become HPI at any stage during the determination process and we keep this under continual review. Following the 'minded to' consultation, we do not consider that the application has become HPI. In accordance with our guidance advertising is not required.</p>
Concerns regarding expansion of activities at the site	
Some respondents expressed concern that activities should not be allowed to increase, including building of new plant on land near to residential villages.	This application relates to derogation from the BAT-AELs specified in BAT 52 only. There is no proposed increase in activity and no extension of the installation boundary proposed as a result of this variation.
Some respondents express concern regarding increased traffic.	Increase in off-site traffic is not regulated by the environmental permit, and, in any case, there are no activities, either new or increased.
Concerns regarding incidents at the site	
Several respondents expressed concerns over the operator's health and safety responsibilities with regard to environmental	This aspect is outside of the scope of the derogation application. These questions relate to environmental incident response during abnormal operations, which is not a relevant aspect of this derogation application.

Brief summary of issues raised:	Environment Agency comment
<p>incidents that have occurred in the past, asking questions such as:</p> <ul style="list-style-type: none"> - Will the public have access to daily emission data and alerts during incidents, given past delays in communication? - What emergency response plans are in place to protect residents if derogation-related emissions spike during malfunctions. - How does the derogation account for repeat incidents, such as the 2023 flammable NMVOC release from storage tanks or 2024 dust fallout, which exacerbated community health concerns? terms to prevent repeats of past incidents. 	<p>The derogation specifically relates to emissions of NMVOC (including benzene) from the White Oil Docks vent during normal ship loading/unloading operations.</p> <p>See also comments above regarding compliance with the terms of the derogation.</p>
Concerns regarding dust	
<p>Concerns relating to dust emissions (such as from flaring) affecting residents' property such as cars and washing.</p>	<p>Emissions of dust are outside of the scope of the derogation application. The derogation relates to compliance with BAT-AELs for NMVOCs and benzene only. The flare is not a subject of the derogation application.</p>
Concerns regarding odours	
<p>Several respondents raised concerns about impacts of odours from the site.</p>	<p>Whilst volatile organic compounds can be odorous, this derogation specifically relates to compliance with the BAT-AELs for NMVOCs and benzene.</p> <p>The permit includes our standard odour condition which enables us, through routine regulatory work, to ensure that the operator utilises appropriate measures to prevent or minimise odour from the permitted activities.</p>
Concerns regarding noise	
<p>Several respondents raised concerns about impacts of noise from the site.</p>	<p>This aspect is outside of the scope of this derogation application. This derogation specifically relates to compliance with the BAT-AELs for NMVOCs and benzene.</p>

Brief summary of issues raised:	Environment Agency comment
Concerns regarding light pollution	
Concerns regarding light pollution at night from lights and flaring at the site.	This aspect is outside of the scope of this derogation application. The derogation relates to compliance with BAT-AELs for NMVOCs and benzene only.
Concerns over lack of/poor response after complaint	
Respondents reported that the operator either did not respond to, or gave a poor response to complaints regarding, for example odours from the site.	This aspect is outside of the scope of this derogation application. The derogation relates to compliance with BAT-AELs for NMVOCs and benzene only.
Concerns regarding general operation of the site	
Some respondents expressed concerns regarding maintenance and inspection of plant and equipment at the site.	<p>This derogation application specifically relates to whether the operator is required to comply with BAT 52 (BAT-AELs for NMVOCs and benzene) at the White Oil Docks vent. The comments relate to day-to-day management and regulation of the site and are therefore outside of the scope of this derogation application.</p> <p>We regulate the site carrying out a continual assessment of plant operations and its environmental performance:</p> <ul style="list-style-type: none"> • The operator monitors emissions and reports the results to us. • We regularly inspect the site (both announced and unannounced at a frequency that we consider appropriate), review monitoring techniques and assess monitoring results to measure the performance of the plant. • We carry out on-site audits of operator monitoring. • The operator must inform us within 24 hours of any breach of the emission limits. • The operator's monitoring results are placed on the Public Register. <p>If there is a breach of the permit, depending on the seriousness of it, we will take appropriate enforcement action and/or prosecute.</p>
Some respondents claimed that emissions increase at night.	
Concerns regarding communication and engagement regarding the site.	
There should be a central hub set up to take calls from concerned residents.	

Brief summary of issues raised:	Environment Agency comment
	<p>The operator hosts a twice-yearly Community Liaison Panel. The meeting invitees include locally elected representatives (Parish Councillors, County Councillors and MPs) as well as the Environment Agency and the Lead Environmental Protection Officer from Chester West and Chester Council.</p>
Concerns regarding decarbonisation projects at the site	
<p>How will the operator's decarbonisation projects reduce hazardous pollutants, not just carbon dioxide?</p>	<p>This aspect is outside of the scope of the derogation application. Decarbonisation projects at the site are not the subject of this application.</p>
Concerns regarding financial impacts	
<p>Some respondents queried whether the operator is planning to compensate the local population, either financially or by investing in health initiatives, or compensation.</p>	<p>These comments are outside of the Environment Agency's remit in reaching its permitting decisions. We are only able to take into account issues that fall within the scope of the Environmental Permitting Regulations.</p>
Concerns regarding ownership of the refinery	
<p>This plant is no longer owned by Essar.</p>	<p>The permit holder (legal operator) is Essar Oil (UK) Limited.</p>