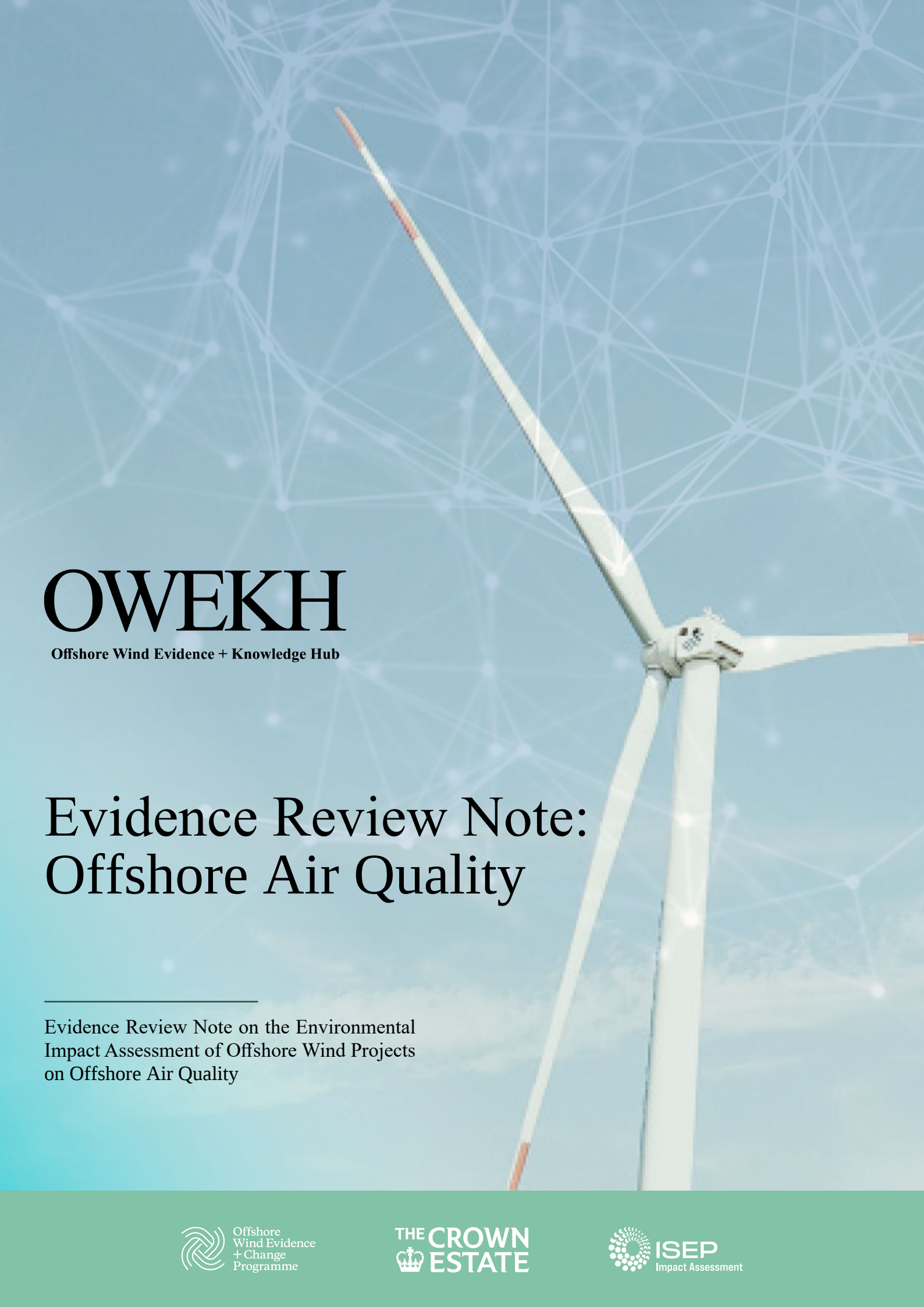


The background of the entire page is a photograph of a white wind turbine against a clear blue sky. A semi-transparent network of white lines and dots is overlaid on the image, creating a digital or interconnected feel. The turbine's blades are visible, with one blade pointing towards the top left and another towards the right.

OWEKH

Offshore Wind Evidence + Knowledge Hub

Evidence Review Note: Offshore Air Quality

Evidence Review Note on the Environmental
Impact Assessment of Offshore Wind Projects
on Offshore Air Quality

Acknowledgements

This Evidence Review Note (ERN) has been developed by OWEKH's Impact Assessment Technical Topic Group (TTG), led by The Crown Estate and Rufus Howard of the Institute of Sustainability and Environmental Professionals (ISEP), with Secretariat support from AtkinsRéalis.

The document reflects the prevailing knowledge and evidence base at the time of publication, developed through open collaboration between practitioners, industry representatives, consultancies and technical experts. It reflects a shared understanding of current challenges and opportunities in relation to impact assessment for offshore wind.

We would like to particularly acknowledge contribution from Daniel Brutto at Neptune Environmental Consulting Ltd.

Author's note: Contributions to this document are made in a personal or professional capacity and do not imply endorsement of the entire document by the contributor or by the contributors' respective organisations.

About OWEKH

The Offshore Wind Evidence Knowledge Hub (OWEKH) is a centralised platform that supports evidence-based decision-making in the offshore wind sector. It brings together stakeholders to share best practice, access data, and apply learning and trusted knowledge. This helps inform development, proportionate impact assessment, policy and planning. Find out more at: owekh.com

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Executive Summary

This Evidence Review Note (ERN) provides an evidence-led assessment of the relevance and proportionality of offshore air quality within the Environmental Impact Assessment (EIA) of UK offshore wind farm (OWF) projects. Developed through the Offshore Wind Evidence and Knowledge Hub (OWEKH), the ERN draws on a structured review of 79 published UK offshore wind EIAs and associated scoping reports, alongside stakeholder input and relevant policy and guidance.

The review examined the treatment of offshore air quality across OWF projects spanning more than two decades. No recent standalone chapters titled 'Offshore Air Quality' were identified. Where air quality chapters were included, these predominantly addressed onshore construction-related effects, with offshore emissions either scoped out at the scoping stage or addressed briefly within broader air quality chapters.

Offshore air quality effects associated with construction, operation, maintenance and decommissioning activities were considered, including vessel and helicopter exhaust emissions, temporary offshore plant and generators, and minor operational turbine or platform-related emissions. These were consistently predicted to be negligible or minor, and not to give rise to likely significant effects. None of the OWF EIAs reviewed identified significant residual effects on offshore air quality following the application of standard controls and good practice. No mitigation specific to offshore air quality was required, and no significant cumulative effects were identified.

The review also confirms that relevant emissions from marine vessels are subject to established international and national regulatory controls. These include MARPOL Annex VI and associated emission standards, and provide an additional management framework for offshore emission sources.

The full evidence base demonstrates that offshore air quality can be successfully scoped out of project-level EIA for offshore wind developments, in the absence of unusual site-specific circumstances or material changes in emissions arising from project parameters. Continued inclusion of extended discussion in scoping reports does not appear proportionate to the level of risk identified.

Accordingly, this ERN recommends that offshore air quality should be scoped out of EIA for offshore wind projects. It should be supported by a concise, evidence-based justification at the scoping stage that explicitly references this ERN. This approach promotes proportionality, reduces unnecessary reporting, improves consistency across projects, and maintains alignment with statutory EIA requirements.

OWEKH ERNs are maintained as live documents and will be updated as new evidence, monitoring data, policy changes or sector learning emerge. This ensures our guidance remains robust, transparent and evidence-based.

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List of Abbreviations and Acronyms

Acronym/Name /Abbreviation	Description
AQMA	Air Quality Management Area
AQMP	Air Quality Management Plan
DAERA	Department of Agriculture, Environment and Rural Affairs
DECC	Department of Energy and Climate Change (now DESNZ)
Defra	Department of Environment, Food and Rural Affairs
DESNZ	Department of Energy Security and Net Zero
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMP	Environmental Management Plan
EOR	Environmental Outcome Report
ERN	OWEKH Evidence Review Note
ES	Environmental Statement
GIS	Geographic Information System
HRA	Habitat Regulations Assessment (<i>Appraisal in Scotland</i>)
IAQM	Institute for Air Quality Management
IEMA	Institute of Environmental Management and Assessment (now ISEP)
IEP	Industry Evidence Programme
ISEP	Institute of Sustainability and Environmental Professionals (formerly IEMA)
LPA	Local Planning Authority
MARPOL	International Convention for the Prevention of Pollution from Ships
MMO	Marine Management Organisation
MPS	Marine Policy Statement
NGO	Non-Governmental Organisation
NRW	Natural Resource Wales
OWF	Offshore Wind Farm
OWEC	Offshore Wind Evidence and Change
OWEIC	Offshore Wind Evidence Industry Council
OWEKH	Offshore Wind Evidence and Knowledge Hub
PEIR	Preliminary Environmental Information Report
SEA	Strategic Environmental Assessment
TTG	Technical Topic Group

Glossary of Terms

Term	Meaning
Effect	The assessment of the consequence of an impact on a receptor. It should take the context into account, including the characteristics of the impact (i.e. duration, magnitude, reversibility, certainty, direct, indirect, cumulative, transboundary, etc.), the presence and nature of receptors (i.e. sensitivity, importance, rarity, legal protection, etc.) and any other factors or considerations (i.e. if the effect is beneficial or adverse for the receptor).
Impact	A potential change brought about by the proposals. An impact can be broad or specific. For example, it could be on a setting of a broad landscape, or a single tree. It can be adverse or beneficial.
Phase	The phase of a project lifecycle. Typically divided into construction, operation and decommissioning, to differentiate the changing impacts of a project across the phases.
Receptor	Something that is being impacted. It is a broad category that can include humans, species, receiving environments and resources, or specific entities, locations or assets.
Significance	A binary determination of whether an effect on a receptor is substantial and material, taking into account the context of the impact, receptor and effect(s) identified, based on a scale of impact and a threshold of significance.

1. Introduction

1.1 Overview of OWEKH

The Offshore Wind Evidence and Knowledge Hub (OWEKH) has a mission to facilitate and streamline the consenting process for the offshore wind sector through a comprehensive, sector-wide online portal: owekh.com. The portal offers a unified access point for critical data and information, including the latest guidance and best practice documents. Supported by a network of key stakeholders, including regulators, government departments, industry and practitioners, the portal fosters collaboration and data sharing across the offshore wind sector.

OWEKH is sponsored by The Crown Estate and supported by an Oversight Group made up of:

- Crown Estate Scotland.
- Department of Agriculture, Environment and Rural Affairs (DAERA) NI.
- Department for Energy Security and Net Zero (DESNZ).
- Department for Environment, Food & Rural Affairs (Defra).
- Institute of Sustainability and Environmental Professionals (ISEP).
- Joint Nature Conservation Committee (JNCC).
- Natural England.
- Natural Resources Wales (NRW).
- Marine Management Organisation (MMO).
- The Crown Estate.

Note: At this time, Scottish Government, NatureScot, Welsh Government and The Planning Inspectorate (PINS) have elected to be observers of the programme.

The portal's data component provides access to a diverse range of datasets from public, private, and non-governmental organisation (NGO) sources, all relevant to offshore wind farm (OWF) development. The knowledge component analyses this data to generate evidence-based insights and guidance.

By consulting with key stakeholders including regulators, industry and statutory bodies, OWEKH ensures that these insights are translated into high-quality and actionable Evidence Review Notes (ERNs). ERNs aim to bring consistency, efficiency and standardisation to the assessment, planning and development of OWF projects.

An evidence-led approach supports impact assessments and informs consenting decisions by offering clear and consistent guidance that can be easily and widely disseminated to interested parties. OWEKH aims to accelerate the sustainable growth of offshore wind energy, aligning with the UK Government's Clean Power Action Plan objectives¹. This may also link to emerging requirements of Environmental Outcome Reports (EOR).

This ERN is a referenceable best practice guide that distils key insights from a review of Environmental Statements (ES) or reports, submitted for OWF projects. It is intended to support strategic decision-making across the sector – by regulators, developers, consultants, and advisers – through the identification of common assessment practices, recurring challenges and evidence gaps.

The findings are designed to inform more consistent and effective environmental assessments and to guide future planning and engagement. This document should be used alongside project-specific evidence and expert input.

1.2 Introduction to the Offshore Air Quality ERN

This ERN provides the latest guidance for the impact assessment of OWF projects on offshore air quality.

Section 1: An introduction to OWEKH and the ERN concept.

Section 2: A summary of evidence informing the recommendations.

Section 3: Key recommendations and guidance for future projects.

Section 4: Calls for further research and evidence gaps.

Section 5: A summary of the key recommendations.

Section 6: Members of the Technical Topic Group who have contributed to the ERN.

Section 7: Key references and recommended further reading.

Annex A: OWF projects that have published EIAs.

This ERN should be read in conjunction with *Evidence Review Note: Environmental Impact Assessment*, which provides overarching guidance on the structure and principles of EIA assessment and reporting across all offshore wind aspects.

Based on the Industry Evidence Program (IEP²) pilot and discussions with key stakeholders across the sector, there is wide agreement that current EIA practices can be significantly improved. More strategic, coordinated efforts are necessary to advance the practice of EIA, ensuring it is effective and efficient. Translating these improvements into actionable steps requires robust evidence and thorough scrutiny to secure acceptance from all stakeholders and to produce recommendations that are widely endorsed.

This ERN serves as a platform to address these needs. It provides a standardised analysis of existing data and identifies key findings. It offers actionable insights by focusing on:

- Evidence-based practice.
- Proportionate scoping.
- Avoiding duplication of effort.
- Standardisation and consistency.
- Collaboration and consensus.
- Continuous improvement.

2. Review of Evidence

2.1 Methodology

The review of evidence to support this ERN consisted of three key elements:

1. A review of previous assessments and scoping reports for offshore air quality undertaken as part of the EIA process for UK OWF.
2. A review of any other key reports or research related to EIA of offshore air quality for OWF. For example: decision notices, monitoring reports, academic and industry research, government and stakeholder guidance.
3. Stakeholder engagement with leading experts, consultees and offshore wind regulators.

We aim for the majority of documents referenced to be available and accessible within OWEKH.

The Industry Evidence Programme (IEP) undertook a review of offshore wind impact assessment in 2018 to develop an evidence base to drive proportionate impact assessment in the sector. As part of this study, the ES of 50 different wind farms were reviewed.

As part of the evidence review for this ERN, in 2026, the IEP review was updated to include an additional 29 OWF. The EIA review looked at the identified impacts and proposed mitigation from the ES³ of 79 OWF EIAs completed in the UK addressing offshore air quality. The topic of offshore air quality was not included as a chapter in the additional 29 EIAs, therefore scoping reports were included instead, to understand the justifications for scoping out this topic. A full list of the OWF EIAs included in the review is in **Annex A**.

2.2 Assessment of Offshore Air Quality

EIA regulations are in force across all parts of the UK for major classes of development (including OWF) and require the identification and description of any likely significant effects of a development on certain factors. Air quality is one of these factors, and a potential area of concern for EIAs.

The predominant impacts on air quality for OWF projects are from vehicle and plant exhaust, dust emissions during construction and maintenance, and the significance of this on localised human and specific ecological receptors. While the level of effect on air quality depends on a variety of factors, a key differentiating factor is whether the activity is on land or at sea.

Generally, emissions resulting from offshore vessels are in an environment of greater air flow, lower baseline pollutant concentrations, with an absence of human receptors and fewer identified protected species and habitats sensitive to air quality⁴. Conversely, impacts onshore, for example from cable trenching, may have closer proximity to receptors such as housing, and greater potential for construction dust to affect these receptors.

³ Environmental Statement (ES) is the term used in Wales and England; the term 'EIA Report' is used in Scotland. Where this Evidence Review Note refers to an ES, this can also be taken to refer to EIA Reports for Scottish projects.

⁴ One potential ecological impact related to airborne emissions is nitrogen deposition and potential acidification of the sea and secondary effects on marine ecosystems. This topic has received limited coverage in offshore EIA due to the low emissions being considered below significant levels of magnitude to result in a significant effect. This topic is explored further in the ecological ERNs focused on marine ecology.

Due to the lack of impact and receptors for offshore air quality, for the majority of projects reviewed, the air quality assessment of impacts focuses on the emissions and dust from onshore construction and vehicle exhausts, particularly if there are local Air Quality Management Areas (AQMA). AQMAs are where local authorities have a duty to prioritise air quality. AQMAs are a defining factor in whether air quality will be scoped in or out. These assessments use baseline data supplied by Local Planning Authority (LPA) sources to measure variations in air quality during project phases.

No recent standalone chapters titled: 'Offshore Air Quality' were identified. In most cases, offshore emissions were either scoped out at the scoping stage or addressed briefly within broader air quality chapters. Where an air quality chapter was included, it predominantly focused on onshore impacts and was typically titled: 'Air Quality' or 'Onshore Air Quality'.

Within air quality chapters, assessments of offshore air quality generally take one of two broad approaches.

Approach 1: Brief statement that offshore air quality impacts were scoped out of the assessment in the scoping opinion.

Approach 2: Brief coverage of offshore air quality impacts, concluding that they are either classed as no impact or negligible.

In newer OWF, Approach 1 is typically followed. They usually provide a short statement on offshore air quality sources that is largely limited to offshore vessels. They predict no impact or negligible impact and cross reference the scoping opinion to confirm the issue was scoped out by regulators.

ES that follow Approach 2 typically briefly examine how marine vessels (and in some cases helicopters) affect pollutant levels and consider the distance from onshore receptors during project phases. These impacts are consistently reported as either 'no impact' or 'negligible impact'.

The fact that many ES have successfully argued for the scoping out of the topic indicates broad consensus that the topic can and should be scoped out. ES that include passing reference to offshore air quality consistently find that offshore air quality impacts are negligible and not significant. This provides an opportunity to find a common approach for the future that scopes out the assessment of offshore air quality.

2.3 Relevant Guidance and Legislation

In addition to EIA regulations, a range of legislation, policies and guidelines can be relevant to the assessment of the impacts of OWF on offshore air quality.

A full list of the references used in this ERN is in **Section 7**.

We aim to ensure the majority of referenced guidance and documents are available and accessible within OWEKH.

Legislation and Conventions

- International Convention for the Prevention of Pollution from Ships (MARPOL) (IMO, 1973, Annex VI, 1997).

National Policy

- Overarching National Policy Statement for Energy (NPS EN-1) (DESNZ, 2024a).
- National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (DESNZ, 2024b).
- National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (DESNZ, 2024c).
- The EU (Withdrawal Agreement) Act 2020 sets out arrangements for implementing the air quality limit values that are included in the European Parliament and Council Directives on Ambient Air Quality and Cleaner Air for Europe (2008/50/EC), included in air quality regulations (SI 2010 No. 1001) and as amended (SI 2016 No. 1184).
- National Emissions Ceiling Directive (European Parliament and Council, 2016).
- The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Defra, 2007).
- UK Marine Policy Statement (Defra, 2020).
- Cleaner Air for Scotland (CAFS2)(Scottish Government, 2021).
- The Clean Air Plan for Wales (Welsh Government, 2020).
- The Wildlife and Countryside Act (1981)

Guidance

- Air Quality Management and New Development (EPUK, 2011).
- Air Quality Management Technical Guidance Document Local Air Quality Management (Defra, 2009).
- Air Quality Pollutant Inventories for England, Scotland, Wales and Northern Ireland (Defra).
- CIEEM (2023) Advice on Ecological Assessment of Air Quality Impacts, Version 2. Chartered Institute of Ecology and Environmental Management. Winchester, UK.
- Offshore Energy Strategic Environmental Assessment 3 Appendix 1E: Air Quality (DECC, 2016).

- Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their significance (IAQM, 2012).
- Guiding Principles for Air Quality Assessment Components of Environmental Impact Assessments. (IAIA, 2017).
- Emissions of air pollutants in the UK, 1970 to 2015 (Defra, 2015).
- Relevant English, Scottish and Welsh LAQM Policy Guidance.

2.4 Scope of Review

This ERN is focused on the assessment of impacts on offshore air quality only. Its recommendations are in relation to the EIA element of offshore air quality as typically presented in an EIA Scoping Report, ES or subsequent consent conditions. Due to the high number of projects which successfully scoped out all impacts on offshore air quality, this ERN is primarily focused on providing guidance to address the topic within the scoping stage.

Impacts of these emissions on protected sites (SACs, SPAs, Ramsar Sites or SSSIs) may also require ecological assessment through a separate Habitats Regulations Assessment (in addition to the EIA). This is excluded from the scope of this document.

2.5 Review of Offshore Air Quality Assessments

The review considered the rationale for the scope of impacts on offshore air quality and proposed mitigation from Scoping Reports, and in some cases ES, from OWF EIAs completed in the UK. A full list of the OWF EIAs are in **Annex A**.

As stated in the ES, assessment of impacts on offshore air quality are in accordance with the UK Marine Policy Statement (MPS). It states that emissions and dust from increased coastal activity could lead to adverse impacts on human health, biodiversity, or on the wider environment.

Industrialisation of the coast and parts of the North Sea has led to increased levels of pollutants in these areas which decrease further offshore. The accumulation of OWF projects in the North Sea and other coastal areas has led to increased marine vessels in transit during the construction and operation of the projects. The impacts from these vessels on the levels of pollutants are generally low-level, and most ES and some Scoping Reports only refer to onshore air quality. Even so, the most recent Air Quality Strategy for England, Scotland, Wales and Northern Ireland states that EIAs should include consideration of air quality impacts and take into account any relevant statutory air quality limits.

The key air quality limits are set out under the National Emissions reduction Commitments Directive (European Parliament and Council, 2016). It describes emission reduction commitments, for example from nitrous oxides (NOx), sulphur dioxide (SO₂), and particulate matter (PM). Emissions from marine vessels have the theoretical potential to cause a significant increase from baseline levels, and the reports assess likelihood of this. OWF projects in the North Sea will also be subjected to emission control areas, established by the International Maritime Organisation (IMO) following the adoption of MARPOL Annex VI in 1997. Since 2007, sulphur emission controls have been in place across the North Sea, and vessels must comply with national and international standards on the sulphur content of maritime fuels.

Potential impacts on offshore air quality may arise from the construction, operation and decommissioning of OWF. EIAs have identified four broad sources of potential impact:

- Exhaust emissions from construction, operation and maintenance vessels. Includes nitrogen oxides (NO_x), sulphur oxides (SO_x), particulate matter and greenhouse gases.
- Helicopter emissions associated with workforce transfer and maintenance activities. Includes combustion-related air pollutants and greenhouse gases.
- Emissions from temporary offshore plant and generators. Includes installation vessels, jack-up platforms and offshore substations during construction phases.
- Minor operational emissions from turbines or offshore platforms, typically associated with auxiliary systems, maintenance activities and backup power generation.

The review demonstrates that offshore air quality is rarely assessed as a standalone topic within EIA reports. Where referenced, it is typically addressed briefly within a wider air quality chapter. Often it simply confirms that the topic has been scoped out and is not predicted to give rise to likely significant effects.

Within EIAs that undertook an explicit assessment of offshore air quality, impacts were consistently determined to be 'no impact', 'negligible', or otherwise not significant in EIA terms. One project (Hornsea One) identified marine vessel exhaust emissions as a potential 'minor' impact. However, this was not deemed likely to result in significant effect, and appears to reflect a precautionary reporting approach rather than evidence of material impact.

Some projects also assessed the cumulative effects of marine vessel exhaust emissions alongside other marine activities, such as aggregate dredging. In all cases reviewed, no likely significant cumulative effects were identified.

2.6 Review of Offshore Air Quality Scoping

Most recent OWF projects successfully scoped out all impacts on offshore air quality, predicting that the effects from additional atmospheric emissions from vessel and helicopter movements will have limited impact on the surrounding offshore environment. This is primarily due to:

- The dispersive nature of offshore environments on pollutants (strong winds and flat topography).
- The distance of projects from human and ecological receptors onshore.
- The limited number of maritime vessels during construction and decommissioning.

Scoping reports also noted that relatively few vessels were used during construction, maintenance, and decommissioning of OWFs. These were insignificant compared to the total amount of active marine vessels within the shipping industry at any one time.

Cumulative effects were discussed when an OWF was in close proximity to other projects, but it was generally determined that transport emissions were likely to be low-level and sporadic. They would therefore have a negligible effect without the need for mitigation.

All mitigation techniques in relation to air quality described onshore techniques, such as developing Air Quality Management Plans (AQMP) in accordance with best practice. Throughout all EIAs reviewed there has been no requirement for mitigation measures for offshore air quality impacts.

Due to the lack of significant impacts, and that few EIAs reference offshore air quality, we propose that there should not normally be a requirement to assess offshore air quality. Reference to the topic at the scoping stage should be kept to a minimum, cross referencing to this ERN in the scoping report to support the case for scoping out this topic.

2.7 Analysis of EIA data and Reports

The Industry Evidence Programme (IEP) undertook a review of offshore wind impact assessment in 2018, to develop an evidence base to drive proportionate impact assessment in the sector. As part of this study, the ES of 50 different OWF were reviewed, and consultation held with key stakeholders in the industry. As part of the evidence review to support the development of this ERN, in 2026 the IEP review was updated to include an additional 29 OWF EIAs.

The methodology was based on a review of the original ES. It identified and aggregated the findings to establish trends in impact identification, mitigation and monitoring. Further work was undertaken to review Decision Notices and assess conditions and requirements imposed. Where possible, post-consent monitoring reports have been used to inform implementation of mitigations, requirements and conditions.

2.8 Additional Evidence

ERNs are designed to be live documents, with periodic and iterative updates as new information, data, research and good practice emerges. Therefore, in addition to EIAs, the ongoing review of evidence will consider any reports and data arising from the decision notices, published monitoring reports and monitoring reviews, academic research, government and non-governmental guidance (**Section 6**).

2.9 Expert Stakeholder Input

In addition to documentary sources, the review includes stakeholder feedback from individual and organisational submissions of evidence and expert opinion through the Impact Assessment Technical Topic Group (TTG).

3. Guidance

3.1 EIA Scoping of Offshore Air Quality

In line with the evidence considered within this ERN, offshore air quality should generally be considered unlikely to give rise to likely significant effects, as demonstrated by over 25 years of OWF impact assessment on air quality.

Despite this, many discussions on scoping out offshore air quality cover two to three pages within Scoping Reports. In other cases, offshore air quality is considered a non-issue and not discussed. These discrepancies are unhelpful and could benefit from consistency.

To address longstanding concerns about ineffective and overly precautionary scoping it is proposed that, in future OWF Scoping Reports include a single paragraph providing the evidence to scope out all offshore air quality impacts. Moving forward, this approach should be consistent, with future OWF projects involving minimal discussion on offshore air quality. This will save time, money and resource for all stakeholders by removing the discussion of non-significant effects. See **Section 5** for final recommendations and suggested scoping out text for future projects.

In line with the established evidence base and regulatory precedent, it is recommended that offshore air quality is scoped out of further assessment. This approach is consistent with established good practice for air quality assessment within EIA, which emphasises proportionate scoping, identification of relevant emission sources, and conservative assessment where required (IAIA, 2017).



4. Further Calls for Evidence and Research

This section identifies areas where deeper evidence, strategic analysis or future research would enhance the robustness, efficiency and proportionality of OWF EIA. These issues often extend beyond the remit of individual projects and require collaboration across government, industry and expert stakeholders.

4.1 Strategic Level Assessment for Foreseeable Significant Effects

Our review of previous offshore air quality assessments has found that all recent EIAs successfully scoped out offshore air quality assessments at an early stage. For older windfarms, offshore air quality was often assessed, but with no cases of significant impacts on air quality identified, nor any mitigations needed or proposed.

Defra processes for monitoring UK air pollutant emissions should provide an appropriate national-scale framework for air pollutant trends. The monitoring can include a watching brief by the EIA TTG on any evidence or research relating to impacts on marine habitats and species from airborne pollution and deposition. This could be changes in fuels or technologies that might introduce new pollutants or pathways, such as ammonia or hydrogen. This ERN will be maintained as a live document throughout OWEKH processes, incorporating new evidence and stakeholder learning as the sector evolves.

At present, unless evidence of negative outcomes or significant policy changes emerges over time, this topic can safely be scoped out of EIA. Any associated impacts are not likely to result in a significant effects.

5. Summary of Recommendations

Building on the overarching recommendations in *OWEKH Evidence Review Note: Environmental Impact Assessment*, **Sections 3 and 4** of this ERN set out the rationale for recommendations to improve the practice of assessment and management of the impacts of OWF projects on offshore air quality.

This section consolidates all the recommendations in the ERN for ease of reference.

5.1 Scoping Out Offshore Air Quality impacts

Scope out all offshore air quality impact assessments from future OWF EIAs.

Use the following text as supporting evidence:

Evidence from 79 UK offshore wind EIAs demonstrates that offshore air quality effects arising from construction, operation, maintenance and decommissioning activities - including vessel and helicopter emissions, temporary offshore plant and generators, and minor operational turbine or platform-related emissions - have not been predicted to give rise to significant effects. No standalone offshore air quality assessments have concluded likely significant effects.

Evidence of regulatory acceptance across multiple previous projects demonstrates that this topic can be successfully scoped out, on the basis of limited offshore human and ecological receptors, high atmospheric dispersion, the temporary and mobile nature of emission sources, and compliance with MARPOL Annex VI and other applicable emission standards. In line with this established evidence base and regulatory precedent, offshore air quality is proposed to be scoped out of further assessment. This approach is supported by the OWEKH Evidence Review Note: Offshore Air Quality (2026), which consolidates sector-wide evidence underpinning this position.

5.2 Maintain and Evolve Guidance Through Collaborative Learning

OWEKH ERNs are maintained as live guidance documents, subject to periodic review and revision based on new evidence, monitoring outcomes, policy changes and stakeholder feedback. All stakeholders across government, industry, academia and civil society are encouraged to contribute to this process through:

- Sharing monitoring data and research findings on offshore air quality.
- Reporting implementation lessons from real-world projects.
- Participating in Technical Topic Groups.
- Supporting open access to sector-wide knowledge.

This collaborative model will ensure that offshore wind EIA guidance remains relevant and evidence-based, and that it continues to align with evolving good practice.

6. Collaboration and Review

Through participation of the Impact Assessment TTG, representatives from the following organisations have contributed to this ERN.

Technical Topic Group Participants	
ABPmer	Neptune Environmental Consulting
EDF Power	Orsted
ERM	Ramboll
GoBe	RenewableUK
Haskoning	RSK
HiDef	Tetra Tech
ISEP	The Crown Estate
Jera Nex bp	WSP
Mott Macdonald	Xodus Group

Document update roadmap

The ERN is a dynamic document designed to evolve with advancements in knowledge, technology, and regulatory frameworks. The following update schedule is proposed:

- Launch ERN as pilot for use on projects.

Short-term updates (6-12 months):

- Incorporate user feedback from pilot and update ERN.
- Assess the adoption rate of key recommendations and adjust where uptake is low.
- Launch updated and formal ERN.

Long-term updates (1+ years):

- Bi-annual meetings of the Impact Assessment TTG to review evidence and feedback.
- After 12 months the TTG will conduct a review of the ERN's effectiveness, incorporating stakeholder surveys and case studies.
- The TTG will maintain the ERN as a live document, revising it on a regular and ad hoc basis to reflect new legislation, policy updates and stakeholder consensus.

7. Key References

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ANNEX A: Offshore Wind Farms

The following 79 OWF have undertaken EIAs and published information on the potential impacts in the ES and EIA reports. They have informed this ERN.

Atlantic Array	Kincardine
Awel y Môr	Lincs
Barrow	London Array I
Beatrice	Lynn
Beatrice Extension	Mona
Berwick Bank	Moray West
Blyth Offshore Demonstrator	Morecambe Offshore Windfarm Generation Assets
Burbo Bank	Morgan Offshore Wind Project
Burbo Bank Extension	Muir Mhor
Docking Shoal	Navitus Bay
Dogger Bank Creyke Beck	Nearr na Gaoithe
Dogger Bank South	Norfolk Boreas
Dogger Bank Teesside	Norfolk Vanguard East
Dogger Bank C	Norfolk Vanguard West
Dudgeon	North Falls
Dudgeon and Sheringham Shoal Extensions	North Hoyle
East Anglia One	Ormonde
East Anglia One North	Ossian
East Anglia Two	Outer Dowsing
East Anglia Three	Pentland
European Offshore Wind Deployment Centre (EOWDC)	Race Bank
Five Estuaries	Rampion
Forthwind	Rampion 2
Galloper	Rhyl Flats
Greater Gabbard	Robin Rigg
Green Volt	Salamander
Gunfleet Sands 1	Scroby Sands
Gunfleet Sands 3	Seagreen One A
Gunfleet Sands 3	Sheringham Shoal
Gwynt Y Môr	Teeside
Hornsea One	Thanet
Hornsea Two	Thanet Extension
Hornsea Three	Triton Knoll
Hornsea Four	Walney 1
Humber Gateway	Walney 2
Hywind	Walney 3
Inch Cape	West of Duddon Sands
Inner Dowsing	Westermest Rough
Kentish Flats	Whitecross
Kentish Flats 2 Extension	