

**PORT OF
DOVER**

Port Air Quality Strategy Update



Our Air Quality 3 Years On...

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Executive Message

The Port of Dover is working hard to close the gap everyday between the UK and the world by connecting travel, visitors, and communities.

The update to our Port Air Quality Strategy demonstrates our steadfast commitment to environmental leadership and sustainable operations. By leveraging technology, collaboration, and innovation we aim to create a greener and healthier Port.

We have achieved significant progress since publishing our first Port Air quality strategy 3 years ago despite COVID-19 constraints. Our initiatives have reduced our emissions significantly so far and we will continue to implement initiatives and share knowledge industry wide.

Whilst the scope, methodology and actions were set out in our original Port Air Quality strategy submission, this document provides a progress update and further measures the Port of Dover are taking.

As we set out in our statement of intent 2019 and Port Air Quality Strategy 2020, the Port of Dover are fully committed to our drive for a sustainable future and continual improvement.

Introduction

The Port of Dover (PoD) is a cross-channel port situated in Dover, South-East England. PoD plays a vital part in maintaining supply of essential goods to the country. With £144bn of freight and 33% of all UK trade with the EU passing through, the Port is a critical park of the UK-European trade superhighway.

In 2019 the Clean Maritime Plan was released including technical guidance on producing a Port Air Quality Strategy. Delivering our first Port Air Quality Strategy in 2020 the PoD

We recognise the significance our activities have on local air quality and the wider industry move to create a greener planet for our future. Having set out our plan in 2020 we have continually worked with our stakeholders, local community and industry leads to deliver on our actions put forward 3 years ago.

Improving the Port's air quality not only benefits public health and the environment but contributes to a more sustainable and responsible maritime industry. In 2020 we published our first Port air quality strategy, providing a comprehensive assessment of the Port's air quality and our mitigation strategies alongside 23 listed port operators.

This document provides an update to the Port of Dover's 'Port Air Quality Strategy (PAQS) delivered in 2020. View our 2023 PAQS statement of intent [here](#).



The Quality of our Air

The Atmospheric Emission Inventory (AEI) developed in 2020 was used to establish an understanding of existing air emissions at the PoD. Emission sources included in the baseline AEI were Shipping, Road vehicles and Fuel consumption. These have been prevalent in delivering on the PoD air quality strategy and action plans. Due to the covid-19 pandemic comparison AEI data has shown no significant increases in the emissions produced from various emissions sources. PoD will continue to monitor its air quality via internal monitoring plans and look to invest in and enhance air quality monitoring technology.

Dover District Council (DDC) monitors the air quality in the District, there remains two 'Air Quality Management Areas (AQMA) in place within the Dover area, with the main sources of pollution linked with road transport.

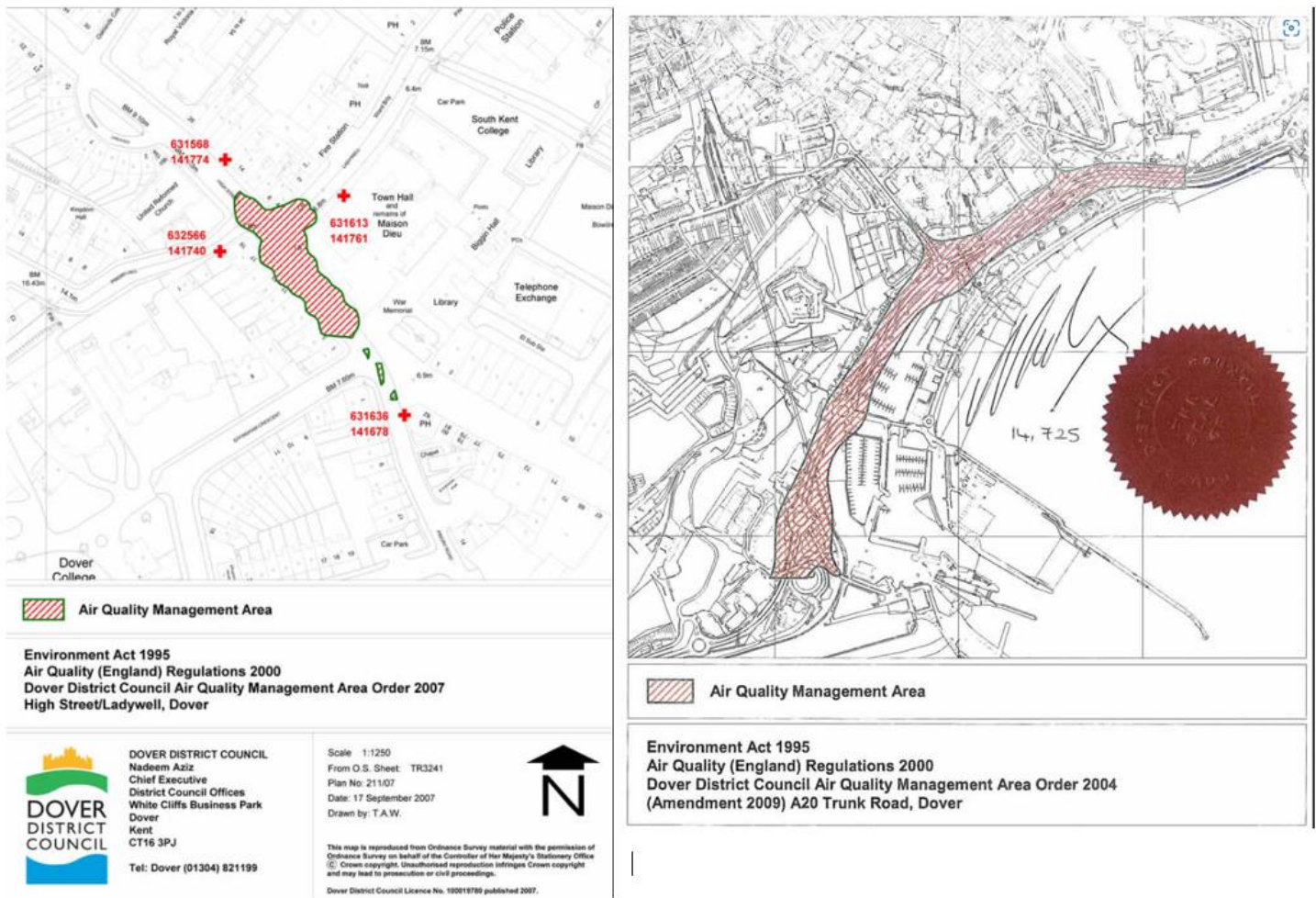
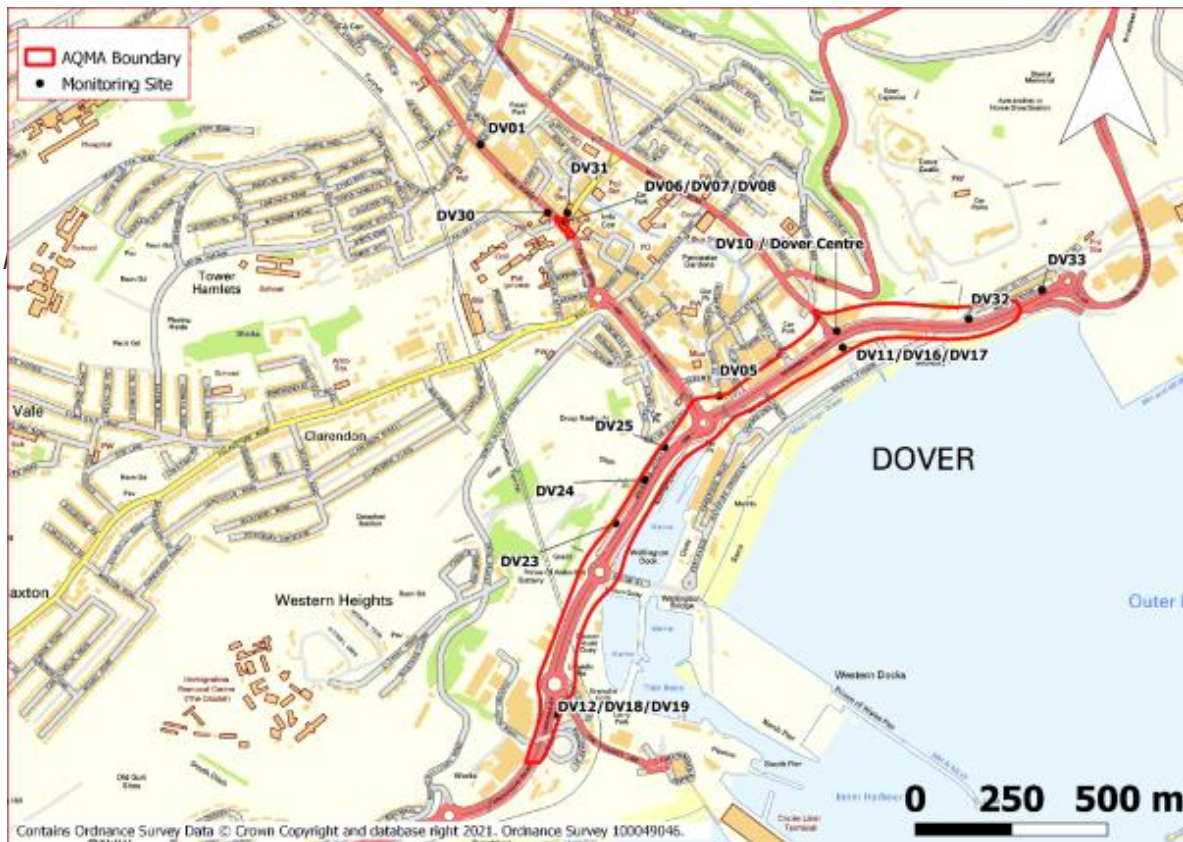


Figure 1. Dover District AQMA. High Street/Ladywell AQMA (Left). A20 AQMA (Right)

The councils monitoring plan consists of 8 diffusion tubes located within the A20 AQMA; specifically correlated to the transport sources utilising the PoD. In 2020 DDC observed no NO₂ exceedances but should be largely noted that due to Covid-19 pandemic the concentrations of NO₂ measured have shown significant reductions. Further monitoring as specified in their plan will allow for more representative air quality data now traffic levels have increased to pre-pandemic levels.

An Air Quality Action plan has been produced to outline the actions DDC will take to improve air quality between 2023-2028. The plan sets out 5 priority areas: 1. Transport 2. Public Health

3. Strategies and policy guidance 4. Planning and infrastructure 5. Air quality monitoring. This plan is currently out for consultation following approval and will be adopted late 2023.



What have PoD achieved to date...

GHG Emissions Reduction

We have been monitoring our carbon emissions since 2007.

To date we have reduced our carbon emissions by 95% since 2007. On our journey to becoming carbon net zero we have seen significant CO₂e throughout the business.

Targeting Our Sustainable Future

We are committed to reducing our carbon emissions, setting challenging targets in 2022 to achieve this.

Our ambitious targets include becoming 'Carbon net zero across scopes 1 and 2 by 2025', 'Carbon net zero across scope 1, 2 and 3 by 2030' and a 'Green Corridor beyond 2030'. All targets contributing to the wider decarbonisations of the maritime

industry and reducing relative carbon emissions at a local level.

Alongside our carbon targets we released 7 continual improvement targets towards zero harm from our activities; including 'Zero Air Quality Impact' where the Port of Dover will continually try to improve our activities efficiencies and sustainability.

Read more here: [Corporate - Sustainability Targets \(portofdover.com\)](https://www.portofdover.com/corporate-sustainability-targets)

The Big Switch to HVO

A wider focus to reduce our carbon footprint enabled a shift to hydro-treated vegetable oil (HVO) due to the significant reduction in CO₂e this presented.

2022 saw our big switch to HVO across the port. In Feb 2022 all landside plant, machinery, diesel vehicles and heating generators switched to HVO, followed by all port vessels in September 2023.

Since the switch we have seen a 69% CO₂e reduction between 2021 and 2022. The HVO supplied has the potential to reduce NO_x by up to 30% and up to 86% PM reduction. These reductions are conducive to our wider carbon net zero targets.

Cargo Terminal

Our new refrigerated cargo terminal has been operational for 4-years significantly contributing to the £144bn of trade moved through the port each year.

The new terminal generates more energy than it uses due to 1MW of Solar PV, creating a sustainable logistics hub for the Port of Dover and Businesses looking to operate in an environmental responsible manner.

EV Chargers

An in-depth feasibility study into the implementation of EV charging points across the PoD estate was completed in 2022.

The feasibility study proposed locations and design which will be followed by install in 2023 and beyond, creating an enabler for the port's fleet to transition to fully electric / hybrid vehicles.

Solar Generation

The Port of Dover's Solar to date has generated over 3300 MWh of energy.

Multi-Storey Car Park PV install (MSCP):

System Yield: 1028.26 MWh

Emissions benefit: 260,767.9 kg/CO₂

Refrigerated Cargo Terminal (RCT):

System Yield: 2364.04 MWh

Emissions benefit based on our consumption: 400,148.1 kg/ CO₂

We will continue to implement renewable energy sources in future development, increasing means of solar generation long-term.

Sustainable Procurement

Over the last 2 years PoD has looked to develop its sustainable business practices within the procurement process. Developing and implementing an essential sustainable procurement policy, has allowed employees involved in our supply chain to incorporate best practices in the initial stages of procurement, contributing to our targets for scope 3 emissions.

Clean Maritime Demonstration Competition 2: Green Corridor Short Straits Project

This project focuses on a feasibility study into establishing a Green Corridor between Port of Dover and Ports of Calais and Dunkirk. The consortium of partners includes research specialists, ferry operators and local energy suppliers.

The project aims to deliver a route map and plan for delivery of the corridor, including investigating potential scalable zero emission energy sources options and the direct/indirect impacts of GHG and air pollutant emissions

Cycle Schemes

In 2022 we launched our Cycle2Work scheme, encouraging employees to seek alternative modes of transportation.

With over a 20% uptake already, we are looking to improve facilities such as cycle routes, bike storage and other facilities.

Our Air Quality Action Plan Updates

In our 2020 submission we highlighted principles we would adopt to work towards reducing emissions associated with port activities. The proposed measures were expressed as short term (0-3yrs), medium (3-10yrs) and long term (10+yrs). Tables 1 provides a status update to key actions raised in our 2020 plan based on our short – medium term measures. Table 2 provides insight into the current progress of our long-term measures.

The PoD is committed to continuing to minimise its environmental impact from port related activities, these actions combined with our net zero carbon targets will contribute to the wider decarbonisation of the maritime industry. Future initiatives will be included in our PAQS updates.

	2020 Proposed Action	Status
Vessel Operations	Review the criteria for the Safety, Environment and Awareness (SEA) award for cruise vessels to include recognition of lower emission vessels.	Achieved
	Transition port owned vessels (tugs, dredgers, and pilot boats) to alternative fuels where possible	Achieved
	Analyse the findings of electric and hybrid vessels implementations to inform vessel replacement program.	Achieved
Road Traffic	Explore alternative travel to work options and develop a green travel policy for port workers.	Achieved
	No Idling graphic for buffer zone and restricted area lanes	Achieved
	Conduct a study of traffic routes and flows to optimise free flow and lower emissions.	Achieved
Shoreside Operations	Set up a task group to review red diesel use around the port estate and plan to replace with low emission alternatives where possible.	Achieved
	Conduct and use a feasibility study for electric vehicle charging points for port stakeholder vehicles.	Achieved
	Replace Cargo Terminal in the Eastern Docks with new energy efficient terminal.	Achieved
Commercial and Corporate	Introduce a sustainable procurement policy	Achieved
	Review of remote working options with the introduction of a flexible working policy and procedure	Achieved

	2020 proposed action	Status/ updates
Vessel Operations	Working with stakeholders to identify potential for introducing variable charging scheme based upon vessel emission performance in-Port	Ongoing – continued involvement with DDC air quality action plan
	Analysis and implementation of electric and hybrid vessels for vessels replacement programme	Ongoing
Road Traffic	Continue to work with National Highways to reduce queuing traffic and interconnect with highways / investigating opportunities for modal shift from freight traffic to rail	Ongoing
	Optimising free traffic flow and lower emissions	PoD has started a Knowledge Transfer Partnership with the University of Kent
Shoreside Operations	Review and consider the introduction and/or increase in renewable energy production (wind/solar/PV/ hydrogen/ biomass/ wave /heat pumps).	To increase solar generation onsite building strategies will review the feasibility of installing Solar PV. Majority of projects are in the early phases but are amongst the main priorities for the future
	Develop a port vehicle replacement plan to low emission alternatives.	In Progress.
	Switch to lower-emission fuels for heating where possible.	PoD is working with industry leaders and research institutions to conduct further feasibility studies
	Conduct a review on provision of alternative fuel facilities for vessels	In progress; GCSS project
Commercial and Corporate	New booths for outbound traffic to include more efficient lighting	Future implementation into Outbound Controls Project starting 2024

The Future of Our Air

	2023 New Actions	How will this be beneficial
Short Term (0-3yrs)	Air monitoring sensors	<p>Multi-gas detection and mapping system with real-time data transmission</p> <p>Allowing us to monitor our air quality around the Port through internally mounted NO, NO2, PM2.5&10, SO₂, CO sensing modules and externally mounted CO₂ sensing modules</p>
Medium Term (3-10yrs)	Conduct a feasibility study for ferry charging	<p>The Dover Clean Ferry Power Project will provide a roadmap to implementing clean maritime technologies at PoD, the main theme centred around becoming a 'Green Corridor'.</p> <p>Impacts of these demonstrator projects have associated improvements in air quality by quantifying the reduction of emissions by providing Port/ shoreside solutions to low/ zero emission shoreside power</p>

Port Air Quality Strategy Update Summary

Acknowledging the need for action, the Port of Dover has dedicated extensive research and resources to continually improve its Air Quality Strategy, by implementing these strategies, we are committed to improving air quality, protecting public health, mitigating environmental impacts, encouraging collaborative efforts and development of proactive ideas.

The Port of Dover will continue to evaluate further improvements in the future to ensure the importance of air quality is reflected appropriately with stakeholders in projects and initiatives are considered.

This document presents the PAQS update 3 years on for the Port of Dover in accordance with the request from DfT in the governments clean maritime plan.

The PAQS will continue to be reviewed and republished in consideration of DfT's intended three-year cycle driving towards a sustainable future.

Here's How to Contact Us:

Feel free to contact us and let us know your views / ideas on improving our air quality

Email: SHEQ@portofdover.com

OR

Continue to follow our progress online at [Port Of Dover | Official Website Of The Dover Harbour Board](#)