



moffatt & nichol



CATTEWATER
HARBOUR
COMMISSIONERS

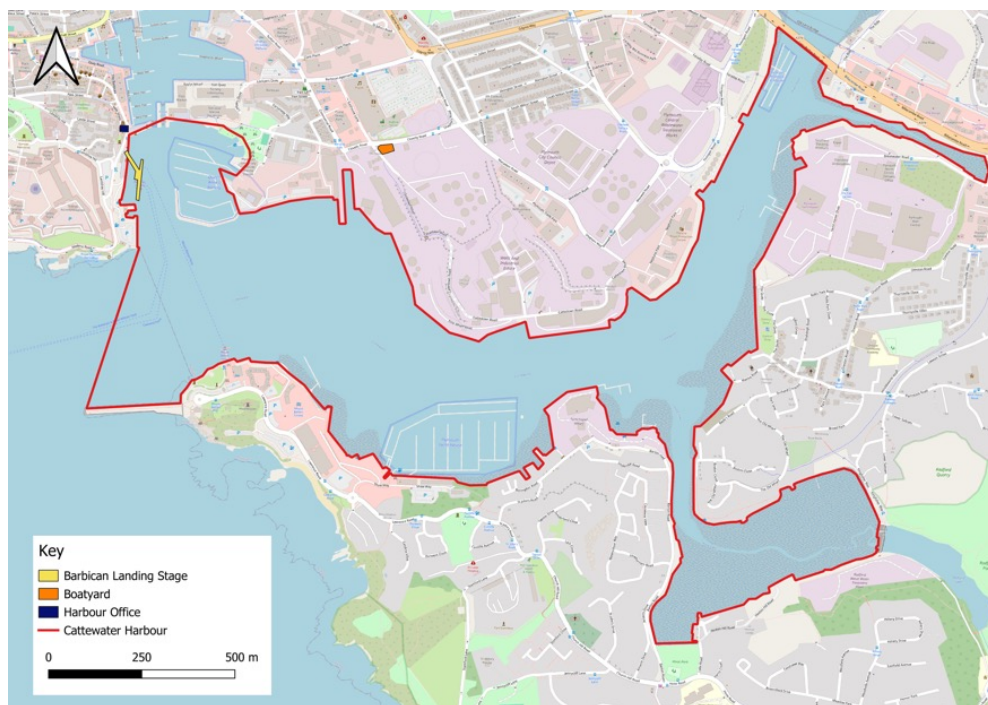
May 2025

Greenhouse Gas Emissions 2023/24

Introduction

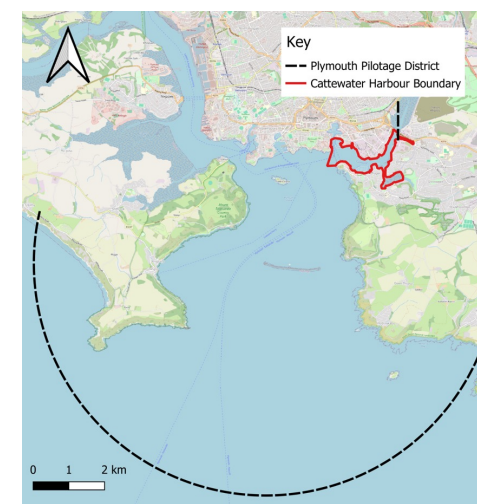
Cattewater Harbour (CH) was first established in 1874 and covers an area of approximately 108ha (Figure 1) within Plymouth Sound, from Laira Bridge in the east to Mount Batten Breakwater to the west. Governed by a Board of Commissioners, the Harbour has the responsibility of maintaining safe navigation for all craft by:

- Surveying and dredging channels
- Maintaining 'Aids to Navigation' (AtoN)
- Providing traffic regulation and pilotage within the Harbour.



Pilotage

CH have responsibility for pilotage within Plymouth Pilotage District (Figure 2), acting as pilotage authority on behalf of Cattewater Harbour, ABP Millbay and Sutton Harbour.



▲ Figure 2: Plymouth Pilotage District

◀ Figure 1: Cattewater Harbour Boundary

Policy Context

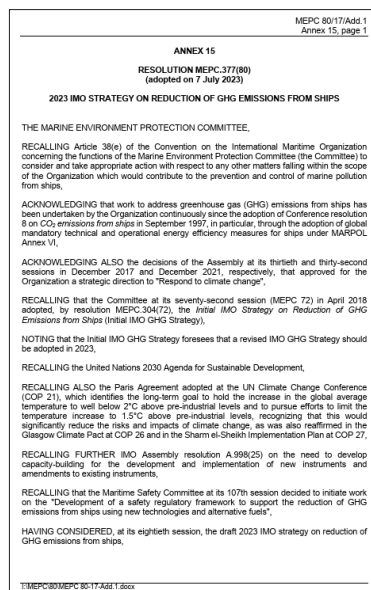
International

The UN Sustainable Development Goals (UN SDG) have been adopted by all member states in 2015, and provide a framework for sustainable development for all countries.

Most relevant to Cattewater Harbour's carbon emissions is Goal 13, which is to take urgent action to combat climate change and its impacts.

In 2023, the International Maritime Organisation (IMO) Member States (including the UK) agreed a strategy for reduction of Greenhouse Gas Emissions (GHG) from ships. This includes the following ambitions which are relevant to Cattewater Harbour:

- A 40% reduction in carbon intensity of international shipping by 2030 (relative to 2008 levels)
- Uptake of zero or near-zero emissions technologies, fuels and/or energy sources
- GHG emissions from international shipping to peak as soon as possible, and to reach net-zero by or around 2050.



▶ Figure 3: 2023 IMO Strategy on Reduction of GHG Emissions from Ships

National

The Maritime Decarbonisation Strategy was published in 2025 by the Department for Transport (DfT). This sets out goals to reduce GHG emissions from the UK maritime sector in line with the IMO strategy.

DfT are currently seeking evidence on emissions reductions for smaller vessels (below 400 gross tonnage), as well as the challenges and opportunities of decarbonisation at ports.

01

An **interim goal** for the fuel lifecycle greenhouse gas emissions from UK domestic maritime to be

REDUCED BY
30%
by 2030
compared to 2008

02

An **interim goal** for the fuel lifecycle greenhouse gas emissions from UK domestic maritime to be

REDUCED BY
80%
by 2040
compared to 2008

03

An **overarching goal** for the fuel lifecycle greenhouse gas emissions from UK domestic maritime to

REACH
ZERO EMISSIONS
by 2050

▲ Figure 4: Decarbonisation Goals for UK Domestic Maritime

Local

Plymouth City Council declared a Climate Emergency in 2019, and pledged to make Plymouth carbon neutral by 2030. The current Net Zero Action Plan (NZAP) for the City includes priority measures to engage organisations in the Net Zero mission.

Scope of Emissions

GHG emissions have been estimated for the 2023/24 financial year, to align with Cattewater Harbour accounting practices and the most recent year for which verifiable records are available.

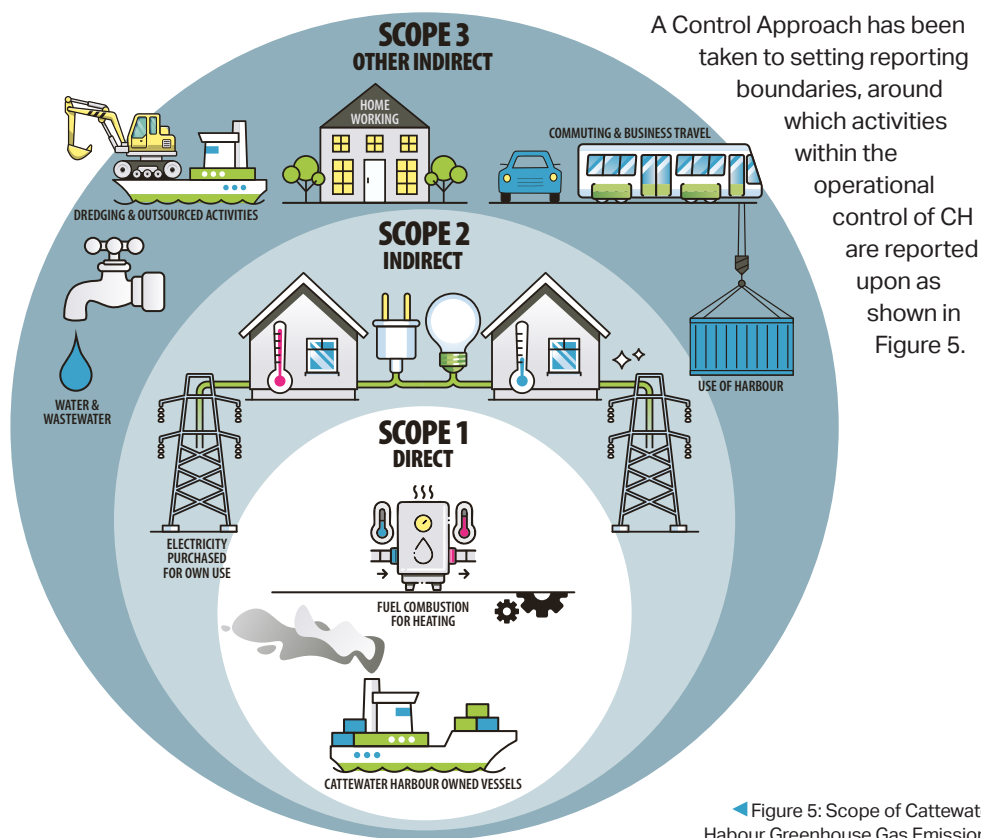


Figure 5: Scope of Cattewater Harbour Greenhouse Gas Emissions

In addition, CH have opted to voluntarily report on Scope 3 emissions from shipping utilising the harbour. These emissions are outside of the CH operational boundary, but are an area CH may seek to influence and relevant to broader IMO, DfT and PCC objectives for maritime decarbonisation.

Emissions Factors

All emissions reported on within this report have been calculated utilising the UK Government Conversion Factors for GHG reporting for 2023 unless otherwise stated.

Figure 6: Commercial Shipping using Cattewater Harbour

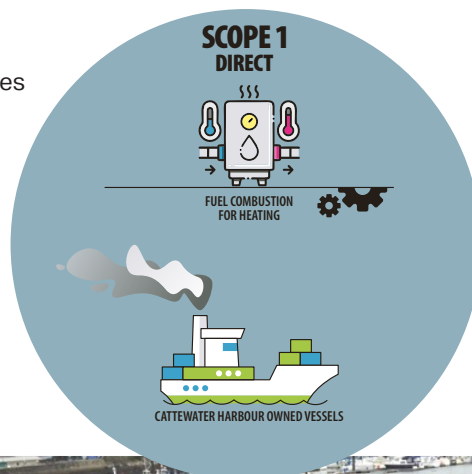


Scope 1

GHG emissions are those that occur from sources that are controlled or owned by CH including:

- Use of gas oil and petrol for the harbour fleet (Figure 7)
- Diesel for CH owned vehicles
- Gas for heating at CH buildings.

Refrigeration has not been included, as CH do not operate any refrigeration apart from small domestic appliances and emissions from these sources are negligible.

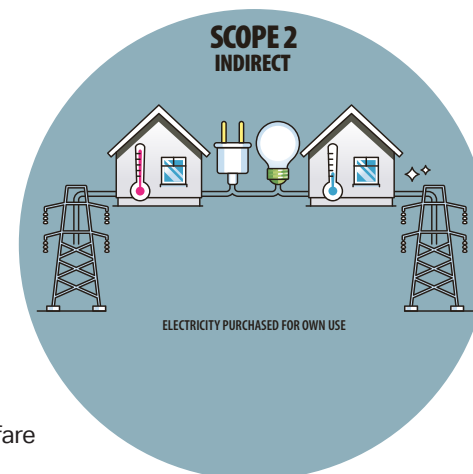


Scope 2

Scope 2 emissions are GHG emissions that CH cause indirectly, and come from the energy production sites from which CH purchases its energy requirements.

CH do not purchase steam, heat or cooling, so Scope 2 GHG emissions are limited to the purchase and use of electricity across their sites including:

- The Harbour Office
- Boatyard
- Barbican Landing Stage (and associated welfare facilities)
- Navigation lights.



The emissions calculated include 'well-to-tank' GHG emissions for generation. Transmissions and distribution losses for electricity have been included under Scope 3.



▲ Figure 7: Cattewater Harbour Fleet

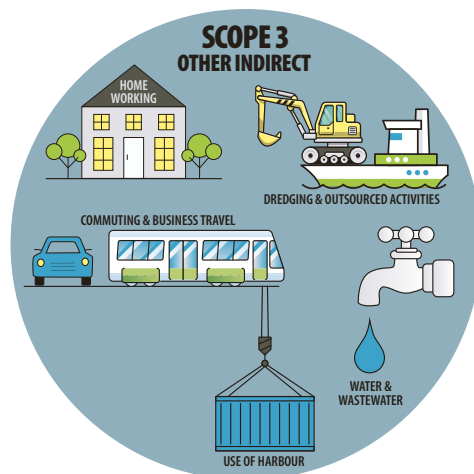


▲ Figure 8: Cattewater Harbour Fleet

Scope 3

Scope 3 GHG emissions are those that CH are indirectly responsible for up and down its value chain. For the purposes of this assessment and based on UK government guidance, the following have been accounted for:

- Electricity transmission and distribution
- Water supply, wastewater treatment and waste
- Commuting
- Homeworking
- Business travel
- Outsourced activities (e.g. dredging).



▲ Figure 9: Dredging (courtesy of Jenkins Marine)



▲ Figure 10: Cattewater Harbour

Shipping using the Harbour

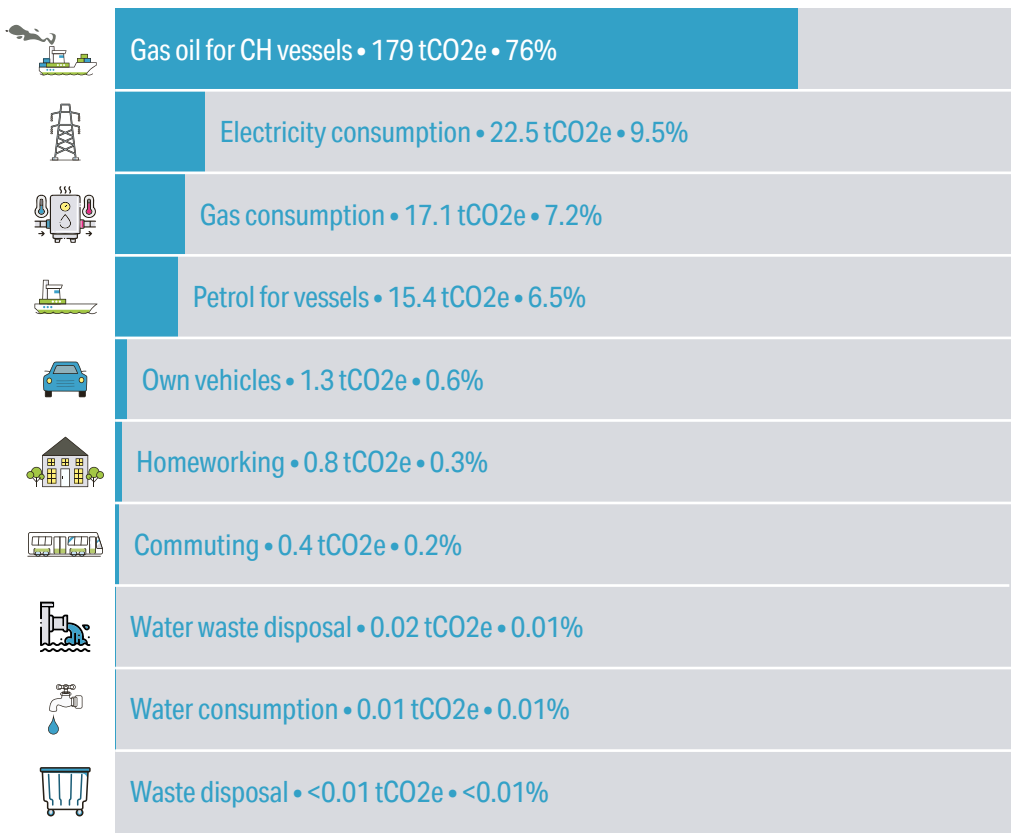
An estimate of GHG emissions from commercial shipping using the harbour has been made, based on statistics maintained by CH on vessel numbers and gross tonnage.

Using data and guidance from the IMO and the European Environment Agency (EEA)/ European Monitoring and Evaluation Programme (EMEP) Air Pollutant Emission Inventory Guidebook for 2023, emissions based on the fuel type have been calculated for ships transiting the port.

Summary

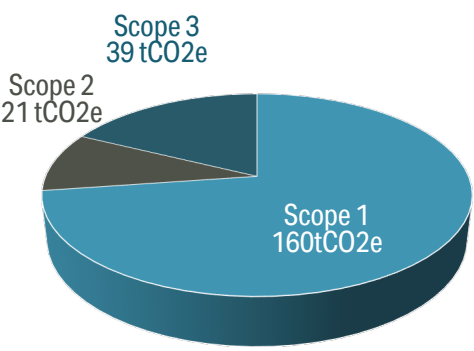
Cattewater Harbour’s GHG emissions within their operational control for the 2023/34 financial year were a total 220 tCO2e broken down as shown in Figure 11 and Figure 12.

▼ Figure 11: Cattewater Harbour GHG Emissions by Activity

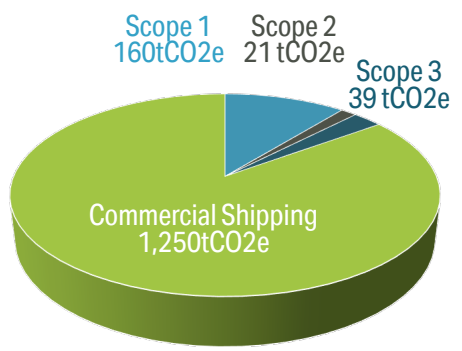


This increases by 1,250 tCO2e when considering commercial shipping utilising the harbour, the GHG emissions from which eclipse those of CHC (Figure 13).

▼ Figure 12: Cattewater Harbour GHG Emissions by Scope



▼ Figure 13: CH GHG Emissions Incl. Commercial Shipping



Relative to Plymouth’s GHG emission (Figure 14) the operation of the harbour, and the commercial shipping that utilises it are relatively small, making up less than 0.5% of the total.

▼ Figure 14: Cattewater Harbour GHG Emissions Relative to Plymouth



*most recent data available

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