

Restoring the water quality of Poole Harbour

Results of technical investigation and recommendations

April 2021

Poole Harbour remains a fantastic place for wildlife and people. It is a site of international importance for nature conservation - the site is designated as a Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and Ramsar site. Some bird species are doing well. But important parts of the marine ecology have degraded, noticeably the mudflats covered in green algae. Habitats such as sea grass and saltmarsh have also vanished. These changes have an impact on wetland birds and other wildlife.

The increase in nutrients entering the harbour waters over the last 50 years is the main cause of this deterioration. Nitrogen (N) and phosphorus (P) have had the biggest impact. The amount of nitrogen entering the harbour has more than doubled, from around 1,000 tonnes/year in the 1960s to around 2,300 tonnes/year now.



The Environment Agency (EA) and Natural England (NE) recently reviewed the water quality targets and measures outlined in the publication “Strategy for managing nitrogen across the Poole Harbour catchment to 2035” to see if these will achieve SPA objectives. The findings of this work are summarised in the EA and NE Poole Harbour Consent Order Technical Recommendations (PHCOTR) published on 11 February 2021. This work identified the need to tighten the water quality target to achieve the ecological objectives across the harbour. The new target was set in this report and identifies the need to reduce nitrogen discharges to the catchment to 1,500 tonnes/year N and phosphorus to 22 tonnes/year OP by 2030.

How will we achieve these targets?

Each sector emitting N and P to the catchment will need to reduce a proportion of their losses to meet this new target, as detailed below.

Agriculture contributes the largest source of N to the catchment and should reduce N and P emissions to 1,127 tonnes/year N and 2.7 tonnes/year OP. PHCOTR recommend farmers follow some minimum farm rules (MFR). To meet these, all land owners should:

- bring down their average nutrient loss to ≤ 18.1 kg/N ha/year
- deliver this target by 2030, following a glide path, if they are part of an EA approved scheme, demonstrating earned recognition and following recommendations of PHCOTR
- deliver this target within 6 months of publishing PHCOTR if NOT part of such a scheme
- ensure they are compliant with existing regulation and or are implementing an agreed plan to become compliant within EA agreed time frames. To demonstrate this, farmers must complete the nutrient and soil compliance tool annually
- calculate and report average N loss annually as part of nutrient planning (adjust nutrient plan and measures to meet targets)
- complete annual whole farm nutrient balance for implemented and proposed nutrient plans, ensuring targets are met and/or if part of agreed scheme nutrients are traded to achieve the glide path
- report the above information annually to EA for land owners outside any agreed scheme or report to independent third party for farmers in an EA approved scheme

Waste Water Treatment Works contribute the largest source of P emitted to the catchment and Wessex Water should reduce N and P emissions to 209 tonnes/year N and 16.5 tonnes/year P. Target reductions should be achieved by:

- reducing N and P discharges to the catchment and harbour to achieve their targets by 2030
- improving treatment at Poole STW to $\leq 5\text{mg/l N}$ and $\leq 0.25\text{ mg/l OP}$ or re-locate the discharge
- achieving these reductions through the Asset Management Planning process, with key measure agreed as part of Periodic Review 24 (PR24)
- local authorities reviewing their Supplementary Planning Document in light of these recommendations to maintain Habitats Regulation Compliance

Industrial/other discharges should be reduced to c38 tonnes/year N and c1.9 tonnes/year OP.

- EA to review N and P discharge loading from other discharges, notably those from other wastewater works, fish farms and watercress farms, and work with permit owners to reduce nutrient loading to meet fair share targets
- unsewered N loads to be reduced to c10 tonnes/year N by improved treatment, first time rural sewage development schemes as permit applications and planning proposals arise

Urban: Local authorities, water companies and public to reduce urban nutrient losses by for example:

- resolving foul and clean water misconnections
- reducing urban run-off by appropriate implementation of Sustainable Drainage (SUDS)

Atmospheric deposition will reduce as the Clean Air Strategy 2019 is implemented and agriculture, urban and industrial emissions are reduced. This will result in reduced aerial N loading across the catchment, benefiting water quality in Poole Harbour.

Strategic wetlands: provide an opportunity for large scale nutrient reduction. All sectors required to reduce N and P should work together strategically to identify wetland opportunities and to implement agreed schemes.

Monitoring and reviewing: progress in delivering these targets will be essential in ensuring each sector meet their obligations. The EA and NE will work with each sector to update progress annually with formal review in c 2024 and 2027.

Where can I find more information?

A copy of the consent order recommendations can be found in the Dorset pages of:

<https://defra.sharepoint.com/sites/WorkDelivery1411/SitePages/Home.aspx>

Poole Harbour Catchment Partnership can be found: www.pooleharbourcatchment.co.uk

Poole Harbour Nutrient Management Scheme can be found: www.pooleharbournitrates.org.uk

customer service line
03708 506 506

incident hotline
0800 80 70 60

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