

Technical Annex 12J Fishery Interest in the Vicinity of
Hayle Harbour

HAYLE HARBOUR DEVELOPMENT

**FISHERY INTERESTS IN THE VICINITY
OF HAYLE HARBOUR**

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1. Introduction

The fisheries of Hayle are an important consideration in any proposal to redevelop Hayle harbour. This report examines the fishery aspects, ie the exploitation or use of the fish resources. The ecology of fish found in the Hayle estuary and Hayle Harbour are considered in Annexes 12R and 12S to the Environmental Statement and in Chapter 12 of the Environmental Statement.

2. Commercial and Recreational Fisheries

Commercial fisheries

There are around 20 boats working out of Hayle in winter and about 30 (including handliners) in summer (pers. comm. Hayle Harbour Master). About 15 boats are operated on a full-time basis, the additional, smaller boats working from April to October. In 1996, Hayle ranked as the 6th most important fishing harbour in Cornwall in terms of the number of boats, being comparable to Padstow (24) and Newquay (17).

In 2001 the majority of the over 10 metre Cornish fleet was based in Newlyn (72 vessels). Other ports with significant numbers of over 10 metre vessels included Looe (18), Newquay (16), Hayle (13) and Padstow (13) (EKOS Consulting & Nautilus Consultants, 2003). The figure of 13 vessels over 10m based in Hayle is too high, and may be closer to 2-3.

In 2001 landings to Hayle, St Ives and Portreath combined were 1% of the total value of fish and shellfish landed at Cornish ports (EKOS Consulting & Nautilus Consultants, 2003). Fishing and related activities provide 3% of the employment in Hayle (EKOS Consulting & Nautilus Consultants, 2003).

Between May and November one boat from St Ives lands shellfish catches at Hayle to take advantage of the arrangements that exist for marketing and distribution which facilitates live transport (pers. comm. Hayle Harbour Master).

Most fishing boats based at Hayle are under 10m registered length; the range is 6-11m. A variety of fishing methods are used, the most common are potting, netting, potting and netting. There is also some handlining and a single trawler. Pots are used throughout most of the year for catching spider crab (March-July), and brown crab and lobster (April to October).

Smaller boats tend to work closer inshore and will be slipped by the end of October, whereas the larger boats work out to about 20 miles offshore but switching to more sheltered inshore waters in autumn and winter. Tangle nets are used by half a dozen or so boats. There was a gill net fishery for soles early in the season lasting 3-4 weeks, but in recent years this has declined to almost zero. Nets are set over wrecks for pollack and ling; tangle nets are set over rough ground for a variety of demersal fish including monkfish, rays, and turbot, together with lobster, crab and crawfish. The amount of gear used by the netters was about 6-8 km. (Gray, 1995), but this may have increased in recent years (pers. comm. Hayle Harbour Master).

Handlines are used for pollack, amongst other demersal fish, sometimes in preference to set nets as hand-line caught fish tend to fetch a better price. Gill netting was prohibited in St Ives Bay in order to protect salmon and sea trout that were caught as a by-catch, and subsequently handlining remains a method for catching sea bass. Some boats handline for mackerel any time between May and November.

There is one trawler operating from Hayle throughout the year. A bottom trawl is used for catching sandeels (March to October). Other species caught are typical demersal fish such as flounder, plaice, sole, brill and gurnards. The preferred trawling areas are flat grounds from Perranporth to Pendeen, at water depths of up to 30 m. Most trips are of about 24 hour duration, with a two person crew.

Hawkins Fish (Merchants) occupy premises on the East Quay at Hayle and maintain several concrete rectangular open tanks supplied with a re-circulating seawater system for holding shellfish (brown crabs, spider crabs, lobsters and crawfish). Water for the Hawkins' tanks is drawn from the deeper part of Hayle Harbour and is usually of very high quality. After heavy rain the lower salinity and more turbid water is above the depth at which they extract water (pers. comm. Harold Hawkins). Microbiological tests of the water show it to be of high quality (pers. comm. Harold Hawkins). The company secures the majority of its supplies from elsewhere in Cornwall and the Isles of Scilly and exports to elsewhere in the UK and to mainland Europe. Hawkins plan to relocate within Hayle harbour when the current premises become unavailable due to the redevelopment.

Hawkins is classed as a fish farm as it can hold and feed lobsters for long periods. Of particular interest is their practice of holding berried lobsters (females with eggs) and selling them to the lobster hatchery at Padstow. The Padstow hatchery receives berried lobsters from a variety of sources and releases about 17,000 juvenile lobsters each year, at a minimum size of 2.5 cm.

Most of the Hayle fleet land their shellfish catches to viviers (cages suspended from a raft) in open water in the harbour. This is a very convenient arrangement which enables fishermen easy access to their catches without undue risk of the shellfish being exposed to water of low salinity or low oxygen concentration. The viviers are in the flow of high salinity and well-oxygenated water flowing in and out of Carnsew Pool. These viviers will be retained at the same location in the redevelopment of Hayle Harbour.

It is possible that the proposed harbour development will encourage an increase in the number of fishing vessels using Hayle. The availability of harbour facilities such as fuel, water, ice and engineering services might attract beam trawlers working the grounds off Trevoze Head and into the Irish Sea which was the experience at Padstow (pers.comm. Hayle Harbour Master).

The Hayle Fishermen's Association, the Harbour Users' Association and independent fishermen are able to discuss issues relevant to the fishing community at quarterly meetings of the Hayle Harbour Advisory Committee.

Recreational Fishing

The main sources of information were representatives of Redruth Sea Angling Association and Camborne Angling Club, which have around 40 and 100 members, respectively, though the precise numbers visiting Hayle is unknown. Members of the Mount's Bay Angling Club are reported to visit the Hayle estuary as well.

Individual anglers and representatives of angling clubs and associations were consistent in the importance given to Carnsew Pool. It is not possible to gauge the level of angling activity other than by anecdotal information as, apart from the need for an Environment Agency rod licence, angling is unregulated. Carnsew Pool supports a diverse fish population including both fully marine and brackish water species which are easily accessible to anglers. It was reported that some anglers would fish at least three times a week, drawn for example, by specimen grey mullet and gilthead bream. Black sea bream, sea trout, sea bass and eels are also caught. The main angling takes place between April and the end of October.

Apart from a survey by the Environment Agency fisheries staff in August 2001 (Aquatic Environmental Consultants, 2001a) there is little documented information about the fish population in Carnsew. Surveys results for the August 2001 survey by the Environment Agency are summarised in Annexe 12R of the Environmental Statement.

The only previous attempt to sample Carnsew took place in 1982-83 as part of a survey of estuaries on the west coast of the UK to identify nursery areas for sea bass (Kelley,

1986). It was unsuccessful as the seine net used was designed for sampling small pools and creeks. Elsewhere in the Hayle estuary during that survey, in Copperhouse Pool, Lelant Channel and associated pools, 0-group bass and juveniles of a number of other species were caught, including grey mullet, sandsmelt, flounder, pollack, red mullet, sand goby and black goby.

The gilthead bream, *Sparus aurata*, is near the northern limit of its range in Carnsew Pool, although it has also been caught occasionally in the Fal, Helford and Fowey estuaries (pers.comm. Paul Gainey), and off the Lizard (pers.comm. Brett Phillips). In the Mediterranean, breeding takes place in winter in deeper offshore waters, and the young are found inshore in the spring. A wide range of sizes have been observed at Carnsew, from juveniles about the size of a 50p piece up to about 2.5 kg in weight.

Anglers who have visited Carnsew Pool over many years reported that the abundance and size of individual grey mullet has declined since one of the inlets was dammed. Water circulation and the level of flushing with each tidal cycle are obviously major considerations in maintaining the fishery populations in Carnsew. Retaining deeper pools (>2m) provides some protection against significant fluctuations in air temperature both in summer and winter.

It was also reported that gill nets are being used illegally to catch grey mullet, sea trout and sea bass from Carnsew Pool. It is not known how frequently this takes place, nor the resources available to prevent it.

Elsewhere in the estuary, e.g. Dynamite Quay at Lelant, towards the bar at the mouth of the estuary, and from the beaches of St Ives Bay, sea bass is probably the most important fish for anglers. The season runs from May to December but peaks from August to October. Baits used include sandeel, ragworm, lugworm and 'peeler' crab which can all be found in the estuary. Flounder are commonly caught near the bar from December to February. Data from fish surveys in October 2001 at various locations in Hayle Harbour, Copperhouse Pool and Lower Leland Water are contained in a report by Aquatic Environmental Consultants (2001b) and summarised in Annexe 12S.

Bait digging is prohibited within the Hayle Harbour premises except with permission of the harbour master (Byelaw 51 of the Hayle Harbour Byelaws, 1990), and in any case is restricted to a few small areas in the vicinity of the outlet from Carnsew Pool and Cackle Bank owing to the SSSI designated areas. A limited amount of non-mechanised seining for sandeel takes place in the estuary (either side of the 'Middle Weir') with authorization from the Environment Agency and the harbour company. It is thought that the catch is used privately rather than sold; the Agency issued four licences in 1999.

3. References

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