

7. Ports, shipping and navigation

Who does what?

- The Department of Transport is responsible for:
 - policy development to promote high standards of safety in the shipping industry.
 - policy execution is conducted through:
 - * Marine Safety Agency
 - * Coastguard Agency
 - the Marine Pollution Control Unit (MPCU) is part of the Coastguard Agency and discharges the Department of Transport's Marine Counter-Pollution Policy. The MPCU maintains the National Contingency Plan, monitors oil spill reports, directs 'at sea' response operations and provides guidance to local authorities in shoreline operations.
 - the regulatory framework for the provision of aids to navigation. At the national level in England and Wales this responsibility is discharged through Trinity House. At the local level this is achieved through Local Lighthouse Authorities.
 - the provision of search and rescue facilities through the Coastguard Agency, the Royal Navy and the Royal Air Force. Voluntary search and rescue agencies operate as part of the formal UK search and rescue capability.
 - the provision of a statutory regulatory framework for ports and harbours.
- Almost all ports have responsibilities relating to:
 - navigation and mooring
 - safety of shipping and the public
 - right of access of vessels and the public
 - provision of pilotage services
 - maintenance of navigation channels.
- The Environment Agency is responsible for control of pollution from shore based activities.

Stated Government aims

- To take account of the importance of the shipping industry to the economy.
- To achieve and maintain a thriving ports industry.
- To protect the marine environment from ship-borne pollution.
- To ensure adequate compensation is available in the event of marine pollution.

Background

All the major towns and cities around the estuary were formed around ports which brought prosperity and employment to the region. Transporting goods by ship is by far the most energy efficient method and reduces road congestion. Ports and maritime transport have inherent environmental advantages compared with other modes of transport. The environmental costs associated with new port infrastructure, where it is needed, may be on a much smaller scale than those associated with the construction of a new road or motorway.

The Bristol Channel is an important shipping route with large ships from national and international destinations using the estuary's ports. The major ports are Bristol (Royal Portbury and Avonmouth), Cardiff, Newport and Barry with smaller ports at Sharpness, Gloucester, Bridgwater, Watchet, Minehead, Newport River and Bristol City Docks.

Table 7.1 below shows the extent of cargoes handled by some of these ports and changes between 1992 and 1995.

Table 7.1: Cargo handled by the Severn Estuary ports in thousands tonnes.

	1992		1995	
	All cargoes (000's tonnes)	Oil (000's tonnes)	All cargoes (000's tonnes)	Oil (000's tonnes)
Bridgwater	12	7	80	0
Bristol	4724	1404	7319	1694
Gloucester - Sharpness	335	7	398	0
Newport	3296	458	2523	296
Cardiff	2535	1532	2369	1322
Barry	920	224	424	0

The ports in the Severn Estuary have generally held their own through the recession by investment and adaptation to change. The figures for Bristol show a remarkable expansion with leading international companies such as Toyota, Cargill, Honda, Arkady,

Rover, Hunter Timber, Proton, Fiat and Bell lines having relocated there. This is partly due to the ability of Bristol to handle very large ships up to 130,000 tonnes dead-weight tonnage. The attraction of all these ports is the economic and environmentally advantageous distribution location with some 42 million people within 250 km of Bristol and very good access to motorways on both sides of the estuary. The Royal Portbury Dock is able to accept ships of up to 300 m length, 41.5m beam and 14.5m draft subject to tidal availability.

The ports at Barry, Newport and Cardiff are owned by Associated British Ports. Barry has a typical annual tonnage of 500,000 tonnes. Principal cargoes include containers, traditional commodities such as coal, materials for the construction industry, foodstuffs, general cargoes, chemicals and petroleum products. Barry has one of the largest tank storage facilities in Britain suitable for oil, chemicals and natural gas. The fresh produce trade more than doubled during 1995 with a total of 54,000 tonnes handled at the ports temperature controlled storage. The port is also licensed to handle explosives. Maximum size of vessel accepted is 23,000 tonnes dead-weight tonnage with limits of 178m length, 23.8m beam and 9.2m draught.

Cardiff has a typical annual tonnage of 2,500,000 tonnes. Principal cargoes include petroleum products, steel products, timber, coal, sea dredged aggregates, grain and refrigerated food. It has specialised cold storage facilities. The port can accept vessels up to 35,000 tonnes dead-weight tonnage with limits of 198 m length, 26m beam and 10.37 m draught.

Newport has a typical annual tonnage slightly larger than Cardiff. The port can accept vessels of 40,000 tonnes at its deep water berths which are well connected to both road and rail. The variety of cargoes handled at Newport includes fresh produce, timber, general cargo, steel and various dry bulk commodities. Specialised facilities include animal feed stores, a temperature controlled fruit terminal, vehicle storage and dry dock facilities. Recent innovations include a £3 million terminal for animal feed imports and 10 acre site for scrap reprocessing. This is expected to lead to export of up to 200,000 tonnes of scrap metal export from the port each year. The limits on vessel size are 244 m length, 30 m beam and 10.5 m draught.

British Waterways are the statutory harbour authority at Sharpness and the cargo operations are the responsibility of Victoria Wharf Ltd. Approximate annual tonnage is 400,000 tonnes. Principal cargoes are dry bulks, grains and foodstuffs, hazardous cargoes, forest products and general cargo. In addition there are leisure facilities, including a yacht marina, and graving docks for shipbuilding and repair.

Royal Portbury and Avonmouth Docks at Bristol are run by the Bristol Port Company. This is a private company that took over from the Bristol City Council in 1991. Since then there has been significant investment in the port including a £100 million bulk handling terminal built in partnership with National Power plc. This handles all specifications of coal and coke to a stockyard and animal feedstuffs to an automated specialist storage facility. There has been a major expansion in forest products and in the handling of cars for export and import. Bristol has a 2,500 acre dock site which is zoned for industrial use and the developed area has expanded significantly over the last 6 years. The port has initiated and implemented a management plan for the major part of the estate resulting in large areas being designated as wildlife corridors. This has helped to

return barn owls to the area. The port also claim that their bulk terminal is the most environmentally advanced in the world at minimising dust emissions.

Within the Port of Bridgwater all commercial wharves are in private hands. ARC manages the aggregate import berth at Dunball Wharf. The other working berth at Dunball is managed by AG Watts Shipping, and cargoes mainly serve the agricultural and building industries. The Nuclear Electric roll-on roll-off berth at Combwich plays an important role in the transport of heavy loads for Hinkley Point Power Station. The port's trade increased by 10% during 1996 to 88,000 tonnes.

Navigation dredging

Maintenance dredging

Channel depths in the approaches to the docks need to be maintained to allow access of the largest ships capable of passing through the locks. Disposal of dredged materials are a matter of licensing by MAFF.

Port maintenance dredging takes place at Barry, Cardiff, Newport, Gloucester, Sharpness and Avonmouth (including Royal Portbury), Bristol and Watchet. In 1991, a reasonably typical year, the total tonnage of material dredged by the ports was less than 4.5 million tonnes, which is substantially below that which they are licensed to dredge.

The material dredged from the ports and navigation channels is almost entirely fine silt and is disposed of at designated disposal sites. The disposal sites show no signs of accumulation, indicating that the deposited material is quickly taken back into the estuary's fine sediment circulation system, where a calculated 25 million tonnes of fine silt is circulated by every fortnightly (neap-spring) tidal cycle.

Details of the dredging licences granted to dock companies are available on the public register for the Environmental Protection Act 1990. This data is however, given in terms of 'hopper' tonnes so requires careful interpretation, as the material can have an inconsistent density.

Capital dredging

When new areas require dredging for port expansion they will normally require individual environmental appraisals.

Emergency dredging

The estuary is a very dynamic system and sand banks in the main channels could potentially change such that emergency dredging is required to maintain access to the port. Such events are very rare.

Harbour authorities

Statutory harbour authorities administer ports and often have responsibility within their harbour limits for moorings, controlling traffic, maintaining navigation aids and channel depth. The Bristol Port Company is the Authority for the eastern side of the Severn Estuary downstream of Avonmouth to the island of Steep Holm and up the Avon to Bristol. On the Welsh coast Newport Harbour Commissioners and Associated British Ports are the authorities at Newport. At Cardiff the area enclosed by the barrage will

become the responsibility of a new and, as yet unspecified, authority on completion of the scheme in 1998. Associated British Ports will retain responsibility seawards of the barrage. The Navigation Authority for the Gloucester-Sharpness Canal is British Waterways. Gloucester Harbour Trustees are the Statutory and the Competent Harbour Authority for the tidal River Severn downstream of the weirs at Maisemore and Llanthony to their seaward limit below the Second Severn Crossing.

Sedgemoor District Council is the Statutory and the Competent Harbour Authority for the Port of Bridgwater which includes an area of Bridgwater Bay extending into the River Parrett Estuary to Bridgwater, the tidal River Brue and a small southern part of the Axe Estuary.

There are a number of smaller harbours and wharfs along the coast most of which are included on **Map 7**.

Map 7 Ports and harbours

Small commercial boats using ports, harbours and marinas include survey vessels, angling charter boats, barges, dredgers and coastal cargo vessels. Recreational boating activity takes place from the small ports and from various foreshore launching sites.

Search and rescue

The RNLI have a lifeboat station at Barry and Inshore Lifeboats at Minehead, Weston-super-Mare, Penarth and Atlantic College (St Donats) and other voluntary organisations operate 'Inshore Rescue Boats' at Sharpness, Chepstow, Portishead and Burnham.

Recreational boating and sailing

Recreational boating and sailing is discussed in chapter 6 on tourism, recreation and access.

Many issues in this report are related to one another. Issues raised in this chapter have particular links with those in chapters 3, 12, and 15.

CONCERN ABOUT THE EFFECTS OF REGULATION ON PORTS, SHIPPING AND NAVIGATION

P1 Concern about the impact of the Proposed Special Area of Conservation (pSAC) on ports

There are three main areas of concern for the port companies:

1. The possible impact on existing operations and activities which will be the subject of the statutory management scheme.
2. The regulation of potential new development projects which will be the subject of an increasingly complex process.
3. The impact on existing operations which are not currently controlled by the planning process or other legislation.

These factors could all create uncertainty for potential investors with consequent risks on inward investment. Other ports in the UK or Europe may not have to operate within sites designated as pSAC. There is evidence that not all European Countries are adopting the same attitude towards their estuaries.

Who is involved: English Nature, Countryside Council for Wales, port companies, Relevant Authorities, Competent Authorities, Department of the Environment, Welsh Office, Department of Transport and MAFF.

What is happening: English Nature have recognised these concerns and are to include, within their LIFE study, an assessment of the impacts of European Union legislation on maritime activity and indicate paths towards resolution.

CONCERN ABOUT NAVIGATIONAL SAFETY

P2 Concern that some untrained recreational users affect navigational safety

Some people who use the estuary for navigation are concerned about the safety of navigation, especially with the numbers and size of ships using the Severn as a commercial waterway. Whilst many recreational users are well trained there is particular concern about untrained sailors on the estuary who do not understand seamanship.

Who is involved: Royal Yachting Association (RYA), statutory harbour authorities and recreational user groups, HM Coastguard, Royal National Lifeboat Institution (RNLI), Severn Auxiliary Rescue Association, Department of Transport, local authorities, Sports Council.

What is happening: Examples of existing training initiatives include: Barry Yacht Club's Youth Awareness Campaign; Burnham Yacht Club's programme to train RYA approved instructors for training cadets; Chepstow Boat Club's sail training programme for novices to RYA standard; and training initiatives at Penarth Motor Boat and Sailing Club and Sully Sailing Club. Sailing schools operate at Barry and Cardiff Bay.

Some suggestions: Recognised training initiatives could be promoted and information disseminated. Consideration could be given to providing advisory signs at access points. Consideration could be given to voluntary or statutory licensing of all tidal water boat owners.

P3 Adequacy of aids to navigation and advice to seafarers

There are concerns amongst navigational users of the estuary about the safety of navigation on the estuary and the availability of advice. In particular this is associated with the provision of aids to navigation, removal of staff from lighthouses, and reductions in Coastguard Service manpower.

Who is involved: Port and harbour authorities, Trinity House, HM Coastguard.

Some suggestions: Consideration could be given to whether yachtsmen can fund safety initiatives for recreational boat users.

P4 Adequacy of search and rescue organisation in the estuary

Seafarers want reassurance that reductions in coastguard services will not affect the search and rescue organisation in the estuary. The Bristol Channel Marine Emergency Plan is a voluntary scheme which provides the command, control and communication structure to co-ordinate marine emergencies. Statutory agencies and voluntary bodies work within that framework to ensure effective responses to incidents.

Who is involved: HM Coastguard, Royal National Lifeboat Institution, Severn Auxiliary Rescue Association.

What is happening: Severn Auxiliary Rescue Association are extending a new rescue boat station on the old pierhead at Sharpness and fund-raising for phase II of the Chepstow station development. The Burnham Rescue Boat organisation is progressing towards 'declared facility' status and has purchased a second smaller boat during 1996 for use around low water periods.

Some suggestions: The Bristol Channel Emergency Plan could be further promoted to ensure that navigational users are aware of the support available to them.

P5 Concern about the safety of canal craft using the estuary below Sharpness

There is some concern amongst navigators that some of the canal craft which use the estuary are not designed for such waters and are therefore unsafe.

Who is involved: Navigation authorities and canal boat user groups.

What is happening: There is a safety guidance leaflet and a safety check list which can be given to canal boat owners who contemplate this passage. Little more can be done under present law than to ensure that these documents reach the right people.

CONCERN ABOUT THE EFFECTS OF PORTS AND SHIPPING ON OTHER USERS

P6 Impact of port development on conservation

Some conservationists have expressed concern that port development may affect wildlife habitats. In particular they are concerned about the effects on the areas used by waterfowl for feeding, roosting and breeding and about the effects on resident species which are already scarce in the developed areas.

The proportion of the estuary directly affected by port developments is very small. Established planning processes such as environmental assessments are required for large developments. There does seem to be some common ground between the ports and conservation bodies that the present planning process is cumbersome and requires a review.

Who is involved: English Nature, Countryside Council for Wales, Severn Estuary Conservation Group, ports, planning authorities, Environment Agency.

What is happening: The Bristol Port Company have initiated a management plan for large areas of their site which identifies wildlife corridors. They have already had some success in creating habitats for barn owls. They have also recently embarked on an experiment to create a shoreline habitat for waterfowl along part of their Avonmouth frontage. Associated British Ports have pioneered Waste Management Plans for their ports to formalise long established arrangements for the reception of ships' wastes under the MARPOL regulations to minimise impacts of waste arising from their sites. The Port of Bridgwater, the harbour authority and all berth operators in Bridgwater have jointly implemented a Waste Management Plan.

Some suggestions: Good practice such as the Bristol Port Company's scheme could be promoted more widely. Operational agreements for wildlife management could form part of the SAC management scheme.

P7 Concern about the impacts of maintenance dredging for navigation on the estuary

The estuary is an important part of the strategic transport network of the region and the port approaches have been dredged for many years to maintain the commercial waterway. It is generally considered that dredging to maintain navigation channels has much less of an impact than large scale dredging for aggregates and there is already some scientific evidence that it has little effect on the estuarial fine sediment regime.

Who is involved: The harbour authorities who dredge in the estuary, Department of the Environment, MAFF and the Welsh Office.

What is happening: The Welsh Office has commissioned a project entitled the "Bristol Channel Marine Aggregates: Resources and Constraints Study" which is concentrating on aggregate extraction from the estuary but will also consider navigation dredging. This should give some confirmation of the extent of effects of maintenance dredging.

Some suggestions: Consideration could be given to undertaking further local scientific studies to determine the short and long term effects of dredging.

CONCERN ABOUT RECREATIONAL ACCESS AND FACILITIES

See issues in chapter 6 on tourism, recreation and access.