

## **Port of Bridgwater**

# **PORT OPERATIONS MANUAL**

(Compliance with the Port Marine Safety Code)

**Revision 6**

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# **Part 1 – Introduction**

## **1.1 Statutory Harbour Authority**

Sedgemoor District Council is the “Statutory Harbour Authority” for the Port of Bridgwater, under local legislation. (Detailed within section 2.1.2). It is answerable to its electorate via the councillors both in direct approaches and at the ballot box.

## **1.2 Competent Harbour Authority**

Sedgemoor District Council is also the “Competent Harbour Authority” for the Port of Bridgwater with duties and powers to manage the provision of a Pilotage service as empowered and detailed within The Pilotage Act 1987.

## **1.3 Duty Holder**

The Port Marine Safety Code states:-

“Each harbour authority must have a “duty holder” who is accountable for its compliance with the Code and its performance in ensuring safe marine operations in the harbour and its approaches. For most harbour authorities, the role of Duty Holder is undertaken by members of the harbour board who are (both collectively and individually) accountable for marine safety under the Code”.

Sedgemoor District Council’s executive is the Duty Holder for the Port of Bridgwater.

## **1.4 Designated Person**

The Port Marine Safety Code states:-

“Each harbour authority must appoint an individual as the designated person to provide independent assurance directly to the duty holder that the marine safety management system, for which the Duty Holder is responsible, is working effectively. Their main responsibility is to determine, through assessment and audit, the effectiveness of the marine safety management system in ensuring compliance with the code.”

Sedgemoor District Council have appointed Jerry Stanford, The Bristol Port Company’s Marine Director and Haven Master as designated person for the Port of Bridgwater.



## 1.5 Policies

**1.5.1 General Policy -** This policy applies to all business units and assets operated or contracted-out within the Harbour Limits of Bridgwater.

- a. Protect the environment and the health and safety of employees, contractors and others by integrating safety, health and environmental management into all business processes, with equal importance to other business considerations.
- b. Provide the resources, information, training and supervision necessary to implement this policy.
- c. Demonstrate commitment through leadership and participation at all levels. Actively involve and consult employees and contractors. Have an open culture where personnel take pride in working safely and protecting the environment.
- d. Comply with or exceed legislative requirements, and use best-proven industry practices.
- e. Assess risks to personnel and the environment from current and proposed activities. Manage hazards to ensure that risks are as low as reasonably practicable.
- f. Maintain contingency plans to minimise the consequences of reasonably foreseeable incidents and ensure a fast and effective response.
- g. Audit compliance with this policy and its associated management systems, monitor their effectiveness and take appropriate action.

**1.5.2 Marine Safety Policy -** The Council and its staff will ensure marine safety by:

- a. Providing a safe environment for navigation through assessment and management of risks, and the provision of aids to navigation.
- b. Operating a well-run and efficient pilotage service.
- c. Regulating activities within the port as required and empowered by statute.
- d. Strict application of the Port Marine Safety Code and its supporting Guide to Good Practice.

## **Part 2 – Management of the Port**

### **2.1 Local legislation and general description.**

#### **2.1.1 Geography**

The Port of Bridgwater lies on the North Coast of Somerset in the Bristol Channel.

The working wharves within the port, on the banks of the River Parrett, are all owned and operated by independent terminal operators.

The River Parrett is generally orientated north/south, with a meandering channel, which is only navigable during spring tide cycles. It is equipped with lights, marks and buoys as aids to navigation. The commercial wharves are situated at:-

Combwich –	Ro-Ro facility owned by and catering for, Hinkley Point Power Stations. In infrequent use, with planned refurbishment for significant use.
Bibby's Wharf -	Close to Dunball, owned by Clearwater Plc. Currently unused by commercial shipping.
Dunball Wharves General Berth -	Owned by Duncircle Ltd. Limited recent use by Passenger Trip Vessels
Aggregates Berth	Owned by Duncircle Ltd. Leased to Hanson UK In regular use.

#### **2.1.2 Local Acts**

The earliest extant legislation relating to the Port of Bridgwater is an 1845 Act for “improving the Navigation of the River and Bay leading to the Borough of Bridgwater”.

Subsequent Acts and Regulations of 1904, 1908, and 1923 make amendments, additions and revocation to sections of the 1845 Act.

### 2.1.3 Port Limits

The Port Limits are defined under Section “C1” of the 1845 Act under “interpretation” and state:- “The Word “Navigation” shall include so much of the Bay of Bridgwater and the River Parrett as is coloured Blue on a map of the said Bay and River authenticated by the signature of Henry Broadwood Esquire M.P. and deposited at the Office of the Town Clerk.”



Plan of the Port of Bridgwater

## 2.1.4 Tides and Tidal Ranges

Tides in the upper part of the Bristol Channel are reputed to be the second highest in the world.

Apart from river water, the course of the River Parrett dries out completely at low water from above Stockland Reach to the head of navigation at Bridgwater town. Ship arrivals and departures are only possible close to High Water during the Spring cycles.

Published Tidal Data:-

	MHWS	MHWN	MLWN	MLWS
Burnham on Sea	10.9 m	7.9 m	2.4 m	0.0 m
Bridgwater	4.6 m	1.7 m	0.0 m	0.0 m
Dunball (Calculated)	5.5 m	2.6 m	0.0 m	0.0 m

Navigation in the Port is only possible with tides of 3.0m or more on Bridgwater predictions.

## 2.1.5 Anchorages

The main waiting anchorage, for vessels inbound to Bridgwater, is at the Gore Buoy, outside port limits at location:-

Latitude 51° 14' N, Longitude 03° 10'W.

Vessels to lie 1 nautical mile, WSW of the buoy, in 7.3m of water at low water spring tides in a good but exposed anchorage.

Within the river, there are historic emergency anchorages off the Brue Beacon, in about 2.0m at low water spring tides, and at the west end of Stockland Reach which dries at low water spring tides. This means that vessels using them will take the bottom at low water. Neither anchorages have been used recently not least because ships have generally got larger and these anchorages are probably unsuitable for modern vessels. However they are options that could be considered in an emergency.

## 2.1.6 Ship Parameters

### 2.1.6.1 Vessels bound for Dunball

Dunball Wharf is able to take modern, manoeuvrable vessels up to 80m in length, with a draft that varies according to the predicted high water.

Entry is normally possible for ships with length to draft ratios as follows:

LOA	Maximum Draft	<b>Example</b> Predicted Tidal Height 4.0m Bridgwater
Less than 72.0m	Bridgwater Tide Table Depth	Max Draft 4.0m
72 – 74.9m	Bridgwater Tide Table Depth minus 0.3m	Max Draft 3.7m
75m or more	By prior arrangement with the Harbour Master, and then only vessels with a bow thrusters and a high lift rudder will be considered together with further draft restrictions:	

**Guidance** on draft restrictions for vessels over 75m

LOA	Maximum Draft	<b>Example</b> Predicted Tidal Height 4.0m Bridgwater
75 – 77.9m	Bridgwater Tide Table Depth minus 0.8m	Max Draft 3.2m
78 – 80m	Bridgwater Tide Table Depth minus 1.0m	Max Draft 3.0m

### 2.1.6.2 Vessels bound for Comwich Ro-Ro Berth

Entry to the Ro-Ro berth is normally possible for ships up a maximum of:

Length	100 metres
Beam	19 metres

Draught is restricted to: maximum draught = Height of tide (Bridgwater) + 1.0 metre.

If weather conditions cause tides to be significantly below prediction and / or high sandbanks have developed in the river, a reduced draft may be required.

**Note: At the time of this revision there are plans being developed for the refurbishment of the Comwich Ro Ro facility which will have a significant impact on limiting dimensions for Barges using Comwich.**

### 2.1.7 Pilotage

Because of the extreme tidal range, winding river and constantly changing channels, all vessels navigating in the tidal River Parrett south of an imaginary line drawn from Stert Point to the north bank of the confluence of the River Brue with the River Parrett, shall be subject to compulsory Pilotage with the following exceptions:-

- Those vessels excluded by virtue of Section 7(3) of the Pilotage Act 1987.
- Vessels not exceeding 30 metres length overall.
- Vessels under the pilotage of the holder of a "Pilotage Exemption Certificate" issued by the C.H.A. in accordance with Article 3 of this Direction.

Compulsory Pilotage was established by risk assessment subsequent to the Pilotage Act 1987. Regular reviews have confirmed the continued need for a compulsory service as both maximum and average vessel sizes have increased significantly since 1988.

A copy the Pilotage Direction No.1 1988 is attached as appendix 2

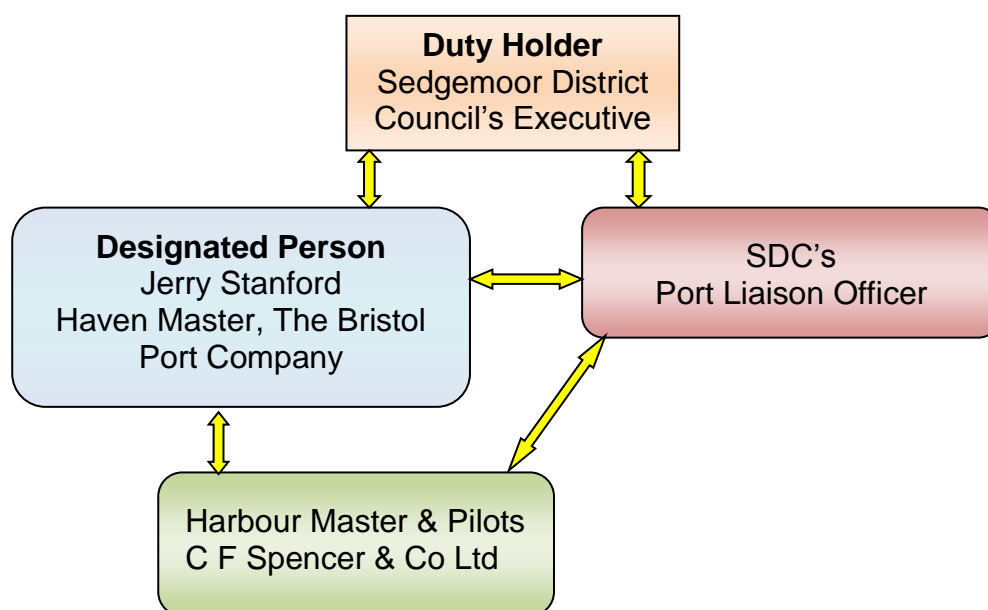
Pilots are required to visually survey river channels from Dunball to Marchants Reach at low water before each set of spring tides to note the variations in the sand banks and to determine the course of channel. Details of each visual survey are kept by the harbour Master.

## 2.2 Port Management

### 2.2.1 Provision of Harbour Master and Pilotage Services

Sedgemoor District Council have appointed C F Spencer & Co Ltd under contract to provide Harbour Master and Pilotage services for the Port of Bridgwater. A copy of the contract is held at the offices of both SDC and C F Spencer & Co Ltd.

### 2.2.2 Line of Authority



### 2.2.3 Byelaws

There are two sets of Byelaws that relate to activities within the Port limits.

**SDC Byelaws under the Public Health Acts Amend Act, 1907** relate to the “seashore” at Burnham on Sea, Berrow and Brea, and are concerned with activities on the beaches and intertidal areas when exposed at low water.

**SDC Byelaws under the Public Health Act, 1961** relate to use of “pleasure boats” on the seashore and to a distance of 200m from the low water mark at Burnham on Sea, Berrow and Brea, and amongst other considerations impose a speed limit of 8 knots through the water.

Under the terms of the contract between SDC and C F Spencer & Co. Ltd, management and enforcement of the Byelaws rests with Sedgemoor District Council.

### 2.2.4 Directions

One Pilotage direction is in force for the Port of Bridgwater. Pilotage Direction No.1 1988, attached in Appendix 2.

The Port of Bridgwater does not have powers to issue General Directions.

## **2.3 Port Users & Environment**

All freight and passenger facilities within the port are operated by third parties.

### **2.3.1 Freight**

#### **Dunball Wharf**

Hanson Aggregates Ltd discharge regular shipments of sea-dredged sand mainly in their own vessels, at their dedicated wharf at Dunball. Recent annual average is 40,000 tonnes.

The general cargo wharf is currently unused for freight.

#### **Combwich Ro-Ro Facility**

British Energy / EDF operate the Ro-Ro berth at Combwich, moving single heavy loads for the power stations at Hinkley Point. Movements are occasional but the berth remains fully operational. Cargoes handled in the past have not been hazardous.

**Note: At the time of this revision there are plans being developed for the refurbishment of the Combwich Ro-Ro with a view to bring in significant quantities of freight as part of the newbuild Hinkley Point C Power Station.**

#### **Bibby's Wharf**

Is currently unused for freight operations.

### **2.3.2 Passenger Ships (Trip Boats)**

The day-trip passenger vessel "Balmoral" occasionally uses the general wharf at Dunball to embark passengers for a Bristol Channel Cruise. The normal operation (1 to 2 occurrences per year) is for "Balmoral" to arrive at Dunball at HW Bridgwater minus 1 hour on a high morning spring tide, embark passengers and sail at HW Bridgwater minus 30 minutes. The passengers are then landed at other locations on the Bristol Channel later in the day, and return to Bridgwater by bus.

### **2.3.3 Leisure Use**

Leisure activity takes place from the beach at Burnham-on-Sea and there are leisure craft moorings at Combwich Pill and in the River Brue.

Leisure interests are communicated to the port operators through the Burnham Water Users' Forum, which meets twice a year.

### **2.3.4 Fishing Vessels**

There are no commercial Fishing Vessels based at the Port of Bridgwater.

### **2.3.5 Charter Boats**

At times Charter angling boats operate out of the River Brue. All such craft are required to comply with the applicable MCA Code for small commercial vessels.



## 2.3.6 Designated Nature Conservation Sites

Environmental Management is an important consideration when considering port activities, particularly in relation to works on infrastructure and in undertaking conservancy duties such as maintenance dredging or routine scouring.

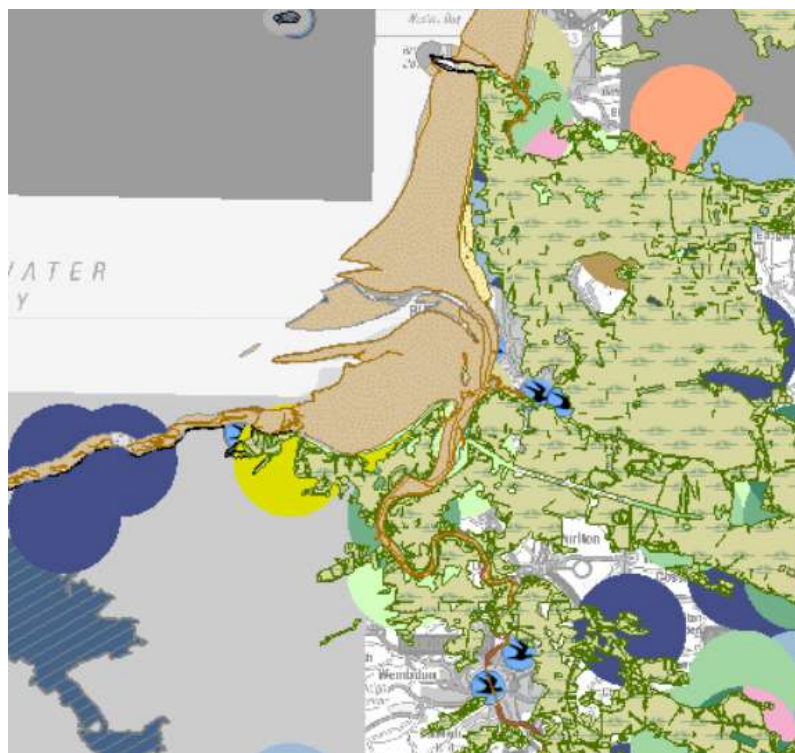
Much of the Port of Bridgwater is within nature conservancy sites:

Including the Bridgwater Bay **Site of Special Scientific Interest (SSSI)**, the Severn Estuary **RAMSAR Site** (Wetlands of International Importance) and **Special Protection Area (SPA)** under the 'Birds Directive'.

Most of the Port area is also included in the Severn Estuary **Special Area of Conservation (SAC)**, under the Habitats Regulations.

Part of Bridgwater Bay and the River Parrett make up the Bridgwater Bay National Nature Reserve.

The River Axe estuary is part of the Severn Estuary SSSI and Brean Down is also an SSSI.



Map taken from <http://magic.defra.gov.uk/MagicMap.aspx> on the Natural England Website showing the many and varied Environmental designations, within and adjacent to the Port of Bridgwater. Natural England and/or their website should be consulted for the latest information.

## **Marine Conservation Zones**

The Marine and Coastal Access Act (2009) created a new type of Marine Protected Area (MPA), called a Marine Conservation Zone (MCZ). MCZs will protect nationally important marine wildlife, habitats, geology and geomorphology. The Marine Conservation Zone Project concerned the selection of MCZs in English inshore waters and offshore waters next to England, Wales and Northern Ireland.

The closest MCZ to The Port of Bridgwater is at Lundy Island some 60 miles West of the Port limits.

## **2.4 Key Performance Indicators**

The Port of Bridgwater has set itself the following key performance indicators, all of which conform to the best practice requirements of the Port Marine Safety Code and the accompanying Guide to Good Practice.

### **2.4.1 Pilotage**

A pilot will be available at the correct time for every vessel requiring one.

Pilots will be fully trained and competent and meet National Occupational Standards for Marine Pilots.

Authorisations will be renewed annually, at which time pilots must satisfy the Authority of their ongoing knowledge and competence in the Port of Bridgwater navigation.

Authorised pilots will perform a minimum of 20 acts of Pilotage annually, trade levels permitting.

### **2.4.2 Pilot Boat**

The pilot boat will be maintained and operated to MCA standards for a craft of its type.

### **2.4.3 Navigation**

Operate the Pilotage service and regulate vessel movements to provide a 100% incident free, good and safe service to shipping.

### **2.4.4 Conservancy**

A target is set of 100% reliability of all aids to navigation. As an imperative minimum, International Association Lighthouse Authorities (IALA) reliability specifications must be achieved.

All lights are checked before each set of spring tides. Pilots monitor the aids during passages through the harbour. All defects and rectifications are recorded within the Trinity House PANAR database.

Local Notices to Mariners are issued as required.

Trinity House audit the lights and use of PANAR annually.

## **2.4.5 Hydrography**

The upper river channel between Dunball and Marchants Reach is visually surveyed by one of the Pilots at low water before each set of spring tides, and the results are discussed with all the pilots. The resultant sketch chartlets are distributed to all the Pilots and copies are provided to Piloted Vessels. The Harbour Master holds copies of all the low water visual surveys.

The remaining channel is surveyed periodically (approximately every six months as a minimum). The frequency of survey is increased if significant changes are suspected.

The approaches to Burnham on Sea in the area of the bar are periodically surveyed (approximately every five years) by commercial Hydrographic Surveyors. Results of these surveys are provided to the Hydrographic Office. The frequency of survey is increased if significant changes are suspected.

## **2.4.6 Emergencies**

Carry out emergency exercises from time to time.

Ensure ongoing training is maintained in all emergency procedures within the port.

## **2.4.7 Consultation**

Leisure users:            Biannual meetings. Burnham Water Users Forum

Commercial :            Harbour Master discusses Pilotage with visiting Masters.

Periodic meetings with working berth operators.

## **2.4.8 Audits and Continuous Assessment**

Ensure continuous assessment is carried out with periodic informal reviews of all port functions.

Carry out a formal audit of all port functions and report the results publicly at intervals no greater than three years.

Designated person to report formally to the duty holder, the Executive, either in person or writing, at least annually. Copies of the Audit will be held by the Harbour Master. Copies of Audits are attached as Appendix 7.

## **2.5 Safety Management System**

### **2.5.1 Introduction**

The Port Marine Safety Code requires that each port's powers, policies, plans, and procedures must be based on a formal assessment of hazards and risks. Harbour Authorities must have formal safety management systems.

To comply with this, the hazards within the Port of Bridgwater have been identified, the risks associated with each evaluated, and the element of the Safety Management System which applies to that risk described.

### **2.5.2 Functions to which the Code applies**

The Code is concerned with harbour authority responsibilities for port marine safety but does not purport to cover all the duties and responsibilities of harbour authorities, or even all their safety responsibilities. The Code does not, for example, relate to duties and responsibilities deriving from health and safety legislation, and (with some exceptions) those relating to the safety of vessels under the Merchant Shipping Acts.

For the purposes of the Port Marine Safety Code, the following general duties apply to all ports:

- **“Take reasonable care, so long as the harbour is open for the public use, that all who may choose to navigate in it may do so without danger to their lives or property.”**
- **“Conserve and promote the safe use of the harbour; and prevent loss or injury caused by the authority's negligence.”**
- **“Have regard to efficiency, economy and safety of operation as respects the services and facilities provided.”**
- **“Take such action that is necessary or desirable for the maintenance, operation, improvement or conservancy of the harbour.”**

“In addition, the duty holder must ensure that enough resources are available to discharge their marine safety obligations and set the level of dues accordingly.”

### **2.5.3 Structure of the Safety Management System**

The Safety Management System provides a framework for the operation of the port and is in two parts:

- 1) The main body of this operations manual giving information and policy.
- 2) Appendices attached to this manual such as Risk Assessments and documents relating to specific activities within the Port.

## **2.6 Operations Plan**

### **2.6.1 Overview of Port Movement Control**

All ship movements within the Port of Bridgwater are co-ordinated by the Harbour Master and Pilots. The Harbour Master is one of three currently authorised Pilots; communications within such a small group are simple and effective.

#### **2.6.1.1 Navigation Support**

The port provides three primary means of navigation support:-

1. Aids to navigation, buoys and lights.
2. Shore-based radar.
3. Pilotage.

Ships arriving from sea have to pass over the bar off Burnham on Sea to reach the Pilot boarding area between the town jetty and No.2 buoy. Masters are assisted in the passage over the bar by the Pilot initially based in the Pilot station on Burnham seafront which is equipped with radar, VHF communications and AIS. The pilot meeting an inbound ship will monitor its progress by radar from the time it passes the Gore buoy until it is at the No 2 buoy. (The one exception to this rule relates to the usual Masters and crew of the "Arco Dart" who regularly use the Port and are familiar with the approach over the bar.)

Advice can be given by VHF radio as necessary to enable the Master to keep his/her ship within the main channel. After a ship turns at the No 2 buoy from the leading lines it is heading south. At this point the pilot transfers from the pilot house (by car and then pilot boat) to the ship. This transfer normally requires about six minutes, during which time the inbound ship steams dead slow ahead and will cover the mile of distance from No 2 buoy to Brue Beacon, where the pilot will be waiting to board. The pilot remains in constant contact with the ship by portable VHF throughout the transfer.

Vessels using the Port are severely restricted by the tidal regime; appropriate timing of movements is therefore essential:-

**Inbound:** Arriving vessels must pass the Gore Buoy, inbound, between two and a half and two hours before high water. This gives sufficient time for the transit in order to arrive at Dunball at about half an hour before High Water.

**Outbound:** Outbound vessels come off the quay from around an hour before high water, depending on the tide height. Preference is for vessels to have one metre under keel clearance before letting go.

**Passing:** The preferred passing place is in Pawlett Ketch.

By strict adherence to timing and VHF contact, risks imposed by the tidal regime are minimised.

## **2.6.2 Communications**

Communications within the port are by VHF radio, using Channel 8.

When two ships are moving in the river, the pilots on each vessel maintain close contact on VHF radio and time their movements to ensure that vessels pass each other in safe sections, clear of bends.

## **2.6.3 Collision Regulations**

Vessel movements in the port are carried out in conformity with the provisions of the International Regulations for Preventing Collisions at Sea 1972, as amended.

## **2.6.4 Speed Limits**

There are no specific speed limits for Piloted vessels using the main navigable channel. The timings needed for safe passage dictate the speed required on the river from sea to Dunball. It is normal practice to reduce speed passing Pawlett Ketch prior to arriving at the difficult right-angled bend at Nine Streams. All ships approach Dunball Wharf as slowly as conditions permit.

Due consideration is given to interaction with: the river bed, river banks, and passing other vessels, and speed is adjusted accordingly.

## **2.6.5 Vessel Traffic Services (VTS)**

There is no Vessel Traffic Service (VTS) service operating within the Port. The Pilots use the radar and VHF, to assist vessels on their approach, but responsibility for the conduct of the vessel remains with the ship's Master.

## **2.6.6 Passage Planning**

Passage plans are prepared prior for each expected passage within the port using a generic plan adapted as required based upon information from the latest survey data. (Periodic hydrographic surveys and in-house river Low Water visual surveys). Whenever possible, the Passage Plan is sent to the vessel prior to arrival off the Port.

When it is not possible to send the passage plan ahead, it is given and explained to the captain when the Pilot boards, with any changes in the outer reaches advised to the captain by VHF radio when he arrives off the Gore buoy. These plans are deposited with the Harbour Master after each arrival and departure.

## **2.6.7 Pilotage**

### **2.6.7.1 General**

Pilotage in the River Parrett is compulsory, for all vessels over 30m in length.

Training for any new pilot is primarily on-the-job, and requires a minimum number of 20 trips before authorisation for an experienced ship-handler, with more required with anyone less familiar with ship-handling. Pilots train under the direct supervision of other authorised Pilots including the Harbour Master.

The minimum qualification for a trainee Pilot at Bridgwater is a Class 4 certificate with command endorsement. Pilots are required to meet National Occupational Standards for Marine Pilots.

Pilot authorisations are renewed annually and require a minimum of 20 acts per annum to be performed.

### **2.6.7.2 Boarding and Landing**

The Port of Bridgwater operates one pilot boat, the “Ben Lee”. This vessel complies with the MCA Code of Practice for ‘The Safety of Small Workboats and Pilot Boats’ in its construction, manning and operation.

The crew hold appropriate licences and first aid certificates and there is an on-going programme of training to ensure that both existing crew and any new recruits are kept up to date with their knowledge, qualifications and skills.

The pilot boarding position is off the seafront at Burnham on Sea between the Brue Beacon and No. 2 buoy, within category D waters, and in sheltered water. This means that the hazards associated with pilot transfer are minimised and are accorded a low-risk status in the port’s operations plan.

### **2.6.7.3 Pilotage Exemption Certificates**

Pilotage Direction No.1 1988, makes provision for the issue of Pilotage exemption certificates to the bona fide master or mate of a vessel which makes 10 inward and 10 outward passages of the River Parrett within a 12 months period. To date no applications have been made for PEC’s.

## **2.6.8 Training and Qualifications**

The Port Marine Safety Code requires “trained, qualified and experienced” people in positions of responsibility for safety of navigation.

The Port of Bridgwater will ensure that suitably qualified and experienced persons are appointed to marine operational roles, taking into account the size and nature of the port, and will seek external advice where required.



## 2.6.9 Dangerous Vessels

The Dangerous Vessels Act of 1985 defines a dangerous vessel as:

- 1) one which poses a grave and imminent danger to the safety of any person or property within the port.
- 2) one which may, by sinking or foundering in the harbour, prevent or seriously prejudice the use of the harbour by other vessels.

Harbour Masters have powers to deal with such vessels and may give orders to the owner, master, or any other person, including a salvor, who may be in charge of such a vessel.

Directions under Section 1 of the Act do not apply to “any vessel which is a pleasure boat of 24 metres or less in length”.

## 2.6.10 Wrecks

Port authorities have a duty to ensure that their harbours are safe for navigation and, equally, to warn craft using the harbour of any hazards within its port. Wrecks are an important consideration within this duty.

In the first instance, any person having control of a wreck has a duty to remove it.

Harbour Masters have powers to direct removal, these powers enable them to:-

- take possession of, and raise, remove, or destroy the whole or any part of the vessel and any other property to which the power extends.
- light or buoy the vessel or part of the vessel and such other property until it is raised, removed or destroyed.

Beyond this, the Secretary of State has general superintendence throughout the United Kingdom of all matters relating to wreck. He has appointed a special representative (SOSREP) to exercise those powers on his behalf.

SOSREP has a particular brief to prevent or control pollution and is most likely to take charge when pollution may be involved, but his derogated powers are not limited solely to this area.

The Port of Bridgwater is unlikely to be considered a safe option as a port of refuge due to the very severe tidal limitations and depth of water available.

## **2.6.11 Conservancy**

The Gore Buoy, a safe water mark situated just beyond the 5m contour in the approaches to Burnham on Sea, is owned and maintained by Trinity House.

The Gore Buoy primarily advises passing vessels of the presence of shallow water in Bridgwater Bay. Used in conjunction with the Western end of Brean Down it effectively marks the line of shallow water. It also provides vessels bound for Bridgwater with a useful reference for their approach over the sands.

The approaches to the Port of Bridgwater are initially marked by No.1 Buoy a Port hand mark at the seaward end of the Bar. The route over the bar is marked by a sectored light situated in the Low lighthouse on the Northern end of the intertidal section of Burnham Beach. No.2 Buoy marks the inshore edge of the Bar where vessels turn onto the only transit within the harbour consisting of a day mark and fixed red light as the front mark and the right hand edge of the church tower, also fitted with a fixed red light as the back mark.

The main channel, running parallel with Burnham seafront, is marked with beacons fitted with flashing red lights to port, and starboard hand buoys with flashing green lights to starboard.

The first leg of the river passage is marked with a directional flashing white light at Black Rock used as a heading mark.

On the river passage the banks are marked by further lighted beacons to port and one to starboard opposite the berths at Dunball.

All of the berths at Comwich and Bibby's/Dunball are fitted with appropriate lights.

A full list of navigation marks with characteristics is given in Appendix 3.

### **2.6.11.1 Channel and berth maintenance**

The deep water channel between Burnham on Sea and the Wharves at Dunball is generally self scouring with established seasonal variances. If dredging of the channel becomes necessary in the future, any relevant assessments and licences would be obtained prior to work commencing.

All berths on the river are NAABSA berths (Not Always Afloat But Safely Aground); that means any vessel using the berths will take the ground over the Low Water period. All the berths, (Dunball, Bibby's and Comwich) are in private ownership and responsibility for maintaining the layerage ( i.e. the bed on which a ship will sit over Low Water) rests with the berth owners/operators.

### **2.6.12 Dangerous Goods**

Any dangerous goods passing through the Port would be managed under the requirements of the Dangerous Goods in Harbour Areas Regulations 1987, (as amended and revised).

No dangerous goods have passed through the Port of Bridgwater for more than 5 years.

### **2.6.13 Waste Management**

All ship generated waste is managed in accordance with the MCA approved waste management plan attached as Appendix 6.

### **2.6.14 Tugs**

There are no Tugs or Workboats based in the Port. Therefore, no craft are immediately available to assist vessels in manoeuvring.

Tugs do work within the Harbour, primarily as propulsion for sea going barges using the Ro-Ro facility at Comwich. These vessels will take the barge to Comwich, assist in manoeuvring into the berth, if required, and then immediately proceed back out to sea on the same tide.

### **2.6.15 Meteorology**

It is unusual for ship movements to be restricted by severe weather conditions at the Port of Bridgwater. There have been no recorded instances in modern time of the Port having to close for severe weather.

Fog has restricted movements at times.

In strong gales from the West to North quadrant, the waiting anchorage at the Gore buoy can be untenable and ships have to run further up the Bristol Channel for shelter, and in similar weather the breakers on the bar may be too heavy for safe crossing.

A high pressure system over the UK and/or an Easterly wind can cause the tide to 'cut', that is, fail to rise to its predicted height, with a consequent lack of water in the navigable channel which may be sufficient to affect safe navigation. This is a well known phenomenon and the pilots are aware of when it may happen.

Under these conditions, the tide gauges and buoys are monitored closely and decisions to move ships are only made when the duty pilot is satisfied that there will be sufficient water for the river passage to be accomplished safely. There are tide boards at various places along the River Parrett located at Comwich, Walpole and Bibby's Wharf, and buoys with live data available via the internet off Hinkley Point and Avonmouth.

At Comwich, there is an additional tide board that gives an advanced direct reading of the tide level at Dunball Wharf.

## 2.6.16 Event Management

Events are held in the Port of Bridgwater each year primarily in the water area off Burnham on Sea. The Port Authority requires all event organisers to undertake risk analysis and to demonstrate that the event can be safely managed.

Having received an appropriate assessment and suitable event management plan the Harbour Master or other nominated officer must be informed of:-

- ❖ Names of event organisers and officials
- ❖ List of participants
- ❖ List of authorities consulted
- ❖ Timetable and programme of events
- ❖ Arrangements for controlling the event, including any special communications.
- ❖ Any navigational constraints being requested such as restricted areas or partial port closures.
- ❖ Emergency arrangements
- ❖ Media arrangements

Any additional resources required will normally be at the expense of the event organiser.

Where a national body represents persons or craft taking part in an event, any guidance or code provided by that body should be adhered to.

Local Notices to Mariners are issued to cover events if required.

## **2.7 Formal Risk Assessment**

The Port Marine Safety Code requires all harbour authorities to ensure that all risks are formally assessed and are as low as reasonably practicable in accordance with good practice.

Risk Assessments for the Port of Bridgwater are conducted periodically the latest formal assessment is attached as Appendix 1.

## **2.8 Emergency Response**

### **Assigned Areas of Responsibility**

#### **2.8.1 In the harbour approaches**

The Maritime and Coastguard Agency (MCA) is the co-ordinating authority for incidents at sea, and will call in other services as necessary.

#### **2.8.2 Within the harbour**

The Harbour Master has powers of direction for vessels navigating within the port area but in the event of a casualty requiring search and rescue, the Maritime and Coastguard Agency (MCA) will be the co-ordinating authority utilising the services of RNLI, BARB or other emergency services. Should the necessity arise, the Port of Bridgwater staff will be expected to liaise and co-operate closely with the emergency authority in charge.

#### **2.8.3 Alongside in the harbour**

Craft alongside in the harbour come under the general shore emergency provisions. For small emergencies the relevant emergency service will take responsibility with assistance as required. For major emergencies the police have an over-riding authority to co-ordinate and control the emergency. Should the necessity arise, the Port of Bridgwater staff will be expected to liaise and co-operate with the emergency authority in charge.

## **2.9 Emergency Response Plan**

This section forms The Port of Bridgwater's emergency response plan.

### **2.9.1 General**

The Port of Bridgwater emergency response plan is under the overall command of the Harbour Master, reporting to the Designated Person/SHA.

The Port only has capacity to deal with minor incidents from its own resources. Whilst a major incident is not envisaged, this would call for significant resources and expertise from external services.

### **2.9.2 Harbour Oil Spill Contingency Plan**

Fuel spillage is considered to be low risk at the Port of Bridgwater. However as the Port operations fall under the remit of the Oil Pollution Response Convention it is a statutory requirement for the Port to hold an MCA approved Oil Spill Contingency Plan. The plan for the Port of Bridgwater is attached as Appendix 5.

### **2.9.3 Accessibility**

Berths within the Port of Bridgwater are generally accessible by road, ensuring easy access for emergency vehicles.

Vehicular access to the River Parrett by land is possible along much of the navigable length via Environment Agency flood banks, although the going may be soft and muddy at times.

### **2.9.4 Tug and Salvage Equipment Availability**

There are no tugs available at Bridgwater. The nearest accessible ones are in South Wales or at Avonmouth, some thirty-five miles away and therefore one tide away from assisting any casualty in the River Parrett.

Similarly, there is no salvage gear, lifting capacity, or diving assistance available locally, the nearest again being Avonmouth or alternatively in South Wales. As with tugs, there would be a delay in responding to any casualty, but ships may call for appropriate assistance.

## 2.9.5 Fire

The Fire Brigade would attend any ship fire within the Port.

Note : There is no fire-fighting provision on the wharf at Dunball.

### Action

- a. If alongside at Dunball Wharf or Combwich Wharf, call for the Fire Service. Tel. 999.
  
- b. If in the river, call Swansea coastguard VHF Channel 16 or 70 and notify;
  1. Position.
  2. Whether the vessel is able to reach an access point and if so which one;-
    - FIRST - choice is Dunball Wharf.
    - SECOND - choice is anchor at Burnham-On-Sea, where Coastguard and RNLI can assist.
    - FINAL - choice would be Combwich Wharf under some situations.
  3. Estimated Time Arrival at the access point listed above.
  4. Scale of problem.
  5. Number of persons on board.
  6. Type of fire.
  7. Type of cargo.
  8. Type and nature of assistance required.
  
- c. Call the Harbour Master's Office on 01934 822666.

## 2.9.6 Persons in the Water

### Action

- a. Call the Coastguard on VHF Channel 16 or by telephone on 999.  
Give the following information:-
  1. Ship name.
  2. Inbound / outbound.
  3. State of tide.
  4. Speed of current.
  5. Location.
  6. Number of persons in the water.

The Coastguard will decide appropriate response and if necessary will implement Search and Rescue procedures.

## **2.10 Reporting and Assessment**

### **2.10.1 Investigating and Reporting**

The reporting of incidents within the port has to be made to appropriate authorities whenever called for. Any incident also triggers an immediate review of those aspects of plans, policies and procedures which are affected by it, to seek out and amend any deficiencies shown up by the event.

- (i) Incident reports by Pilots, Masters or Skippers to the Harbour Master to include:-

- Near miss
- Contact with the bottom
- Berthing and unberthing problems
- Dangerous Pilot Access
- Cutting Tides
- Changes to the channel
- Faults on navigation aids

- (ii) Status reports by Harbour Officer to Harbour Master:-

- Navigation Aids – before each set of Spring Tides
- Pilot Boat Defects
- Boat Crew availability

- (iii) Monthly reports by the Harbour Master to SDC :

- Aids to Navigation
- Reporting of incidents
- Operational difficulties
- Dangerous acts
- Port statistics
- Events within the harbour



## **2.11 Audit**

### **2.11.1 Introduction**

The Port Marine Safety Code requires every port to carry out a full-scale review and audit of its entire safety system at intervals no greater than three years.

### **2.11.2 Annual Review**

The Harbour Master should monitor the Port's workings at 12 monthly intervals, at which time all employees should be formally asked if they have any inputs to make, and the Duty Holder consulted.

The following should be addressed:

- i. Is the port being operated in accordance with the requirements of the Port Marine Safety Code and the Guide to Good Practice?
- ii. Are the policies, plans and procedures described herein being carried out?
  - If not, why not?
  - Does this manual require amendment or is there some deficiency in the managing and operating of the port?
- iii. Have there been any incidents in the previous twelve months which call for review of the Safety Management System?
- iv. Have the elements of the operations plan all functioned to the level expected of them? If not, what remedial action is being taken?
- v. Have emergency systems been tested?
- vi. Have appropriate notices been given?
- vii. Have any consultees affected by any activity in the last period been consulted, and with what results?
- viii. Are there any upcoming changes, events, or problems to be considered, and if so what action is being taken to prepare for them?
- ix. What training has been carried out in the period, and what is planned both for the next period and the next year?
- x. Any other relevant considerations.

## **2.11.3 External Reporting**

### **Reporting of Incidents, Accidents or Disasters**

Under the Merchant Shipping (Accident Reporting and Investigation) Regulations, duties are placed on Harbour Authorities to report accidents to the MAIB. These duties primarily relate to commercial vessels. However if one of the following occurs within The Port of Bridgwater it is a requirement to report it. If in doubt contact the local MRCC for advice:-

- ❖ explosion;
- ❖ fire;
- ❖ death;
- ❖ serious injury;
- ❖ capsizing of a power-driven craft or boat; or
- ❖ severe pollution.

Duties are also placed upon Pilots and Harbour Authorities to report sub-standard ships to the MCA, in accordance with the latest applicable Merchant Shipping Notice.

## **2.11.4 Internal Investigation and Reporting**

All incidents within the port must be investigated by the Harbour Master as soon as possible after the event. A record should be made of any investigation and whenever possible photographs should be taken. Photographs taken at the time are sometimes a most powerful way of dealing with questions after the event.

The object always is to ensure that there is sufficient evidence to be able to draw conclusions about the event, and to pass these on to other agencies if required.

Where it is not practicable to make contemporaneous notes, those involved should be debriefed by the Harbour Master as soon after the event as is possible. In all cases the record should be agreed and signed by all parties involved.

The Harbour Master should advise the SDC Ports Liaison officer of any incident within the Port.

## **2.11.5 Formal Audits**

The three year audit will be conducted by the either Sedgemoor District Council, C F Spencer and Co Ltd or another organisation if required by SDC.

— END —

# **APPENDIX 1**

## Marine Risk Assessments

# **APPENDIX 2**

Pilotage Direction  
No. 1 of 2010  
(Revised August 2014)

# **APPENDIX 3**

## List of Aids to Navigation

# **APPENDIX 4**

## Passage Plans

# **APPENDIX 5**

## **Oil Spill Contingency Plan**

# **APPENDIX 6**

## Waste Management Plans



# **APPENDIX 7**

## Audits

# **APPENDIX 8**

Risk Assessments under  
Health & Safety at Work Act