

2016

Milford Haven Waterway

5 Year Recreation Management Plan



Port of Milford Haven



Foreword by the Harbourmaster

The Port of Milford Haven aims to ensure that the diverse interests of all users are balanced in a way that promotes a safe, efficient and enjoyable environment.

Having undergone several new developments in recent years, the Waterway has gained status as one of the largest oil and gas ports in Northern Europe, and whilst we are proud of the Port's reputation as the UK's Energy Capital, we are always keen to demonstrate how an increasing number of leisure users happily co-exist with the commercial traffic on the Waterway. Indeed, the majority of the 23 miles for which we are responsible, is devoted entirely to recreational use.

The Milford Haven Waterway is famed for its sheltered, tidal waters, its diverse coastline and unique environmental qualities. Part of the only coastal national park in the UK, it is the largest estuary in Wales and recognised as a Special Area of Conservation (SAC). It is also a Waterway that has become a valuable resource for leisure enthusiasts.

Focusing on this aspect of the Waterway, this document is the result of a collaborative approach to planning, monitoring and managing the Haven's recreational opportunities. It offers clear guidance as to how the Port of Milford Haven actively engages with the Waterway's community stakeholders and partner organisations in the delivery of a sustainable approach to safe and enjoyable water-borne recreation.



W.C. Hirst
Harbourmaster, Port of Milford Haven





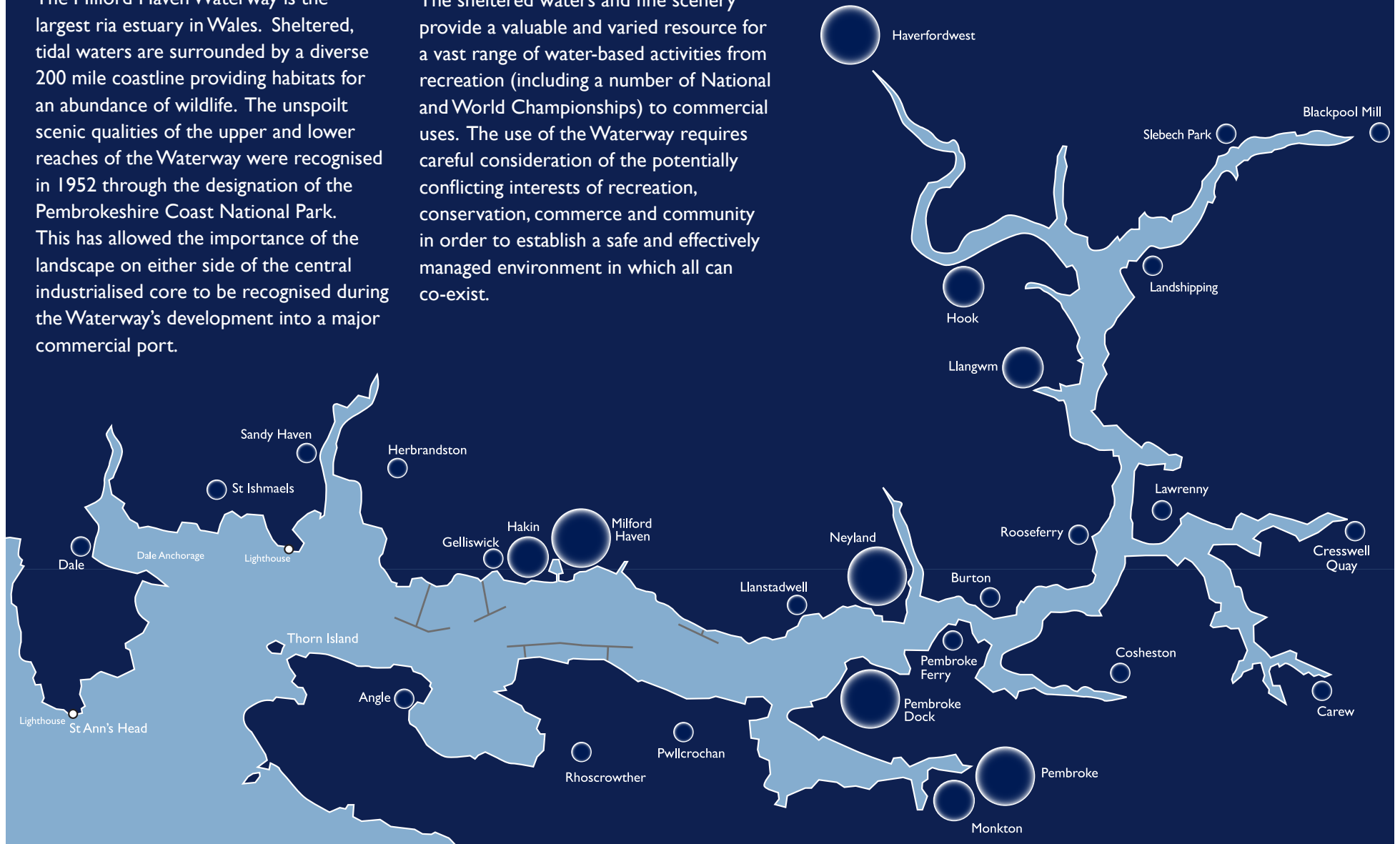
Contents

1. Introduction	6	5. Current Waterway Recreation Management	22	Appendices of Background Information	31
2. Vision and Aims	7	5.1 Management Tools, Policing and Enforcement	22	APPENDIX 1 Overview by Area	32
2.1 Vision	7	5.1.1 Bye-laws	22	APPENDIX 2 The Role and Function of Organisations and Partnerships within the MHWRWG	44
2.2 Aims	7	5.1.2 General Directions	23	APPENDIX 3 Landscape and Nature Conservation Designations	50
3. Milford Haven Waterway Recreation Working Group	8	5.1.3 Special Directions	23	APPENDIX 4 Selected Bye-laws	54
4. Waterbased Recreation	10	5.1.4 Notice to Mariners	23	APPENDIX 5 Weather	55
4.1 Overview of Demand	10	5.1.5 Policing	23	APPENDIX 6 Tides	56
4.2 Activities	11	5.1.6 Enforcement of Bye-laws and Directions	23	APPENDIX 7 Geology	57
4.2.1 Sailing	11	5.2 Water Ranger Service	24	APPENDIX 8 Water Quality	57
4.2.2 Powered Craft	11	5.3 Information	24	APPENDIX 9 Fisheries	58
4.2.3 Water-Skiing	11	5.3.1 Milford Haven Waterway Leisure User Guide	24	Abbreviations	60
4.2.4 Personal Watercraft	12	5.3.2 Waterway Information Signage	25	Consultees	61
4.2.5 Diving	12	5.3.3 Port Website	25	Contacts	62
4.2.6 Windsurfing and Kitesurfing	12	6. Future Waterway Recreation Management	26		
4.2.7 Paddle Sports	13	6.1 Key Objectives	26		
4.2.8 Rowing	13	6.2 Action Plan	26		
4.2.9 Swimming	13	6.2.1 Safety	26		
4.2.10 Angling	13	6.2.2 Environment	27		
4.2.11 Watersports Training Providers and Trip Operators	14	6.2.3 Management	28		
4.2.12 Traditional Maritime Activities	15	6.2.4 Education	28		
4.3 Facilities	16	6.2.5 Development	29		
4.3.1 Moorings	16	6.3 Summary	29		
4.3.2 Marinas and Commercial Moorings	17				
4.3.3 Slipways	19				
4.3.4 Pontoons	21				

Introduction

The Milford Haven Waterway is the largest ria estuary in Wales. Sheltered, tidal waters are surrounded by a diverse 200 mile coastline providing habitats for an abundance of wildlife. The unspoilt scenic qualities of the upper and lower reaches of the Waterway were recognised in 1952 through the designation of the Pembrokeshire Coast National Park. This has allowed the importance of the landscape on either side of the central industrialised core to be recognised during the Waterway's development into a major commercial port.

The sheltered waters and fine scenery provide a valuable and varied resource for a vast range of water-based activities from recreation (including a number of National and World Championships) to commercial uses. The use of the Waterway requires careful consideration of the potentially conflicting interests of recreation, conservation, commerce and community in order to establish a safe and effectively managed environment in which all can co-exist.



2. Vision and Aims

2.1 Vision

Our vision is one of continued support and enhancement for the leisure use of the Haven. An encouragement of recreational activities will be underpinned by clear environmental responsibilities and the promotion of a sustainable approach.

The Port of Milford Haven, with the support of partner agencies, is committed to ensuring the safe and effective co-existence of commerce and leisure.

“The Port of Milford Haven, with the support of partner agencies, is committed to ensuring the safe and effective co-existence of commerce and leisure.”

2.2 Aims

As a working document for the management of recreational activities along the Waterway, this plan contains the clear aims of the partnership group.

- Whilst the Waterway continues to gain international acclaim as a centre of UK energy production, the Haven's recreational qualities will remain a key priority
- The plan is a formal, advisory document that provides information as to the process of management decision making
- The scope of the plan is focused on the activities taking place on the Waterway itself, but makes reference to further activity along the shoreline which is directly related to them
- The plan outlines policies for areas that are popular for recreational use, paying attention to environmental responsibility and commercial navigation through the promotion and enforcement of a zoning scheme for particular activities
- The plan is aimed at informing, educating and engaging communities around the

Haven, together with all users and associated interest groups

- The plan aims to further enhance public understanding and appreciation of both the Haven Waterway as a valuable leisure resource, and the responsibility of the Port of Milford Haven in fostering a safe and efficient environment
- The plan outlines the actions that will be driven by the Port of Milford Haven with the support of its partners in ensuring that appropriate opportunities and facilities are available for those wishing to enjoy the Haven



The Milford Haven Waterway Recreation Working Group

After the publication of the 2000 Recreation Plan, the Milford Haven Waterway Recreation Working Group (MHWRWG) in its current form was established. The group provides a forum for discussion on marine recreational and any other appropriate matters between relevant organisations to improve communication, coordination and information exchange and thereby enhancing the safety of the Waterway for users whilst maximising recreational opportunities. The group reviews and makes recommendations on the marine operations and environmental concerns associated with leisure use within the Waterway. The group are also responsible for developing the information contained within the Milford Haven Waterway Leisure User Guide (See 5.3.1) and for planning and developing the objectives and actions contained within this document.

The group is chaired by the Port of Milford Haven and comprises representatives from the following:-

Port of Milford Haven
 Natural Resources Wales (NRW)
 Maritime Volunteer Service (MVS)
 Milford Harbour Users Association (MHUA)
 Pembrokeshire County Council (PCC)
 Pembrokeshire Coastal Forum (PCF)
 Pembrokeshire Coast National Park Authority (PCNPA)
 Pembrokeshire Marine Special Area of Conservation (PMSAC)
 Commercial leisure operator representatives

TERMS OF REFERENCE

1. To provide a forum for discussion of pertinent marine recreational matters to improve communication, co-ordination and information exchange, thereby enhancing safety within the Haven.
2. To review and make recommendations on the marine operations associated with the Haven's leisure activities, utilising whatever means available to the group by all parties.
3. To identify and review the current recreational use and trends and to plan the objectives and action plan to input into the production of the Milford Haven Waterway Leisure User Guide.
4. To consider any other matter that the group feel appropriate.
5. To form sub-groups as required.
6. Review Terms of Reference on an annual basis.

SCOPE

The group is to consider information arising from relevant sources (e.g. spatial plans) or from incidents/near misses which impact or could impact upon the Haven within their area of jurisdiction. In particular the group will act as a forum for discussion among members on issues relevant to the recreational activities of the Haven.

Meetings are held on a biannual basis, before and after the season. In addition to the regular members listed above, other organisations or individuals may attend at the request of the group. More details on the role and function of each can be found in Appendix 2.



Water based Recreation

4.1 Overview of Demand

In general, UK recreational participation in watersports activities has stayed at a relatively level position since 2002 of around 13.1 million adults. Of that, around 3.5 million are participating in boating activities. These are then split down further with the 16-34 age range mainly participating in manual boating activities such as canoeing/kayaking and the 35-54 age range dominating the powered boating activities. Yacht activities prove the most popular amongst 55 year olds and this has seen the greatest increase since 2002 with a volume increase of 66%.

Boat ownership has also stayed at a similar level. However the type of craft has changed with a shift from other vessels to canoes and kayaks, the ownership now sitting around 1.21% up from 0.85%. This is in contrast to motor boat ownership falling from 0.38% to 0.30% (Statistics from BMF Watersports Participation Report 2014).

These national figures broadly mirror what we are seeing on the Waterway with less powered craft and more kayaks, in particular the sit-on-top type, along with yachts.



4.2 Activities

A wide range of water-based recreational activities take place on the Waterway throughout the year. Most of the activity is seasonal, building from April to August and then declining in September. In addition, a number of local, regional and national race events take place on the Waterway, many organised by local clubs.



4.2.1 Sailing

Sailing, be it in yachts or dinghies, is by far the most abundant activity on the Waterway much of which is associated with the six yacht clubs. Most activity takes place between the Cleddau

Bridge and the lower reaches of the Waterway, with some yachts going out to the islands and beyond and a small number exploring the upper reaches of the Daugleddau and its tributaries. Dinghy sailing tends to take place as organised racing events in the waters in proximity to the organising club.



Yachts produce minimal wake and virtually no noise. A yacht will rarely travel above a speed of 6 knots and consequently will produce minimal wake. Unless fitted with a bilge keel most cruising yachts cannot enter shallow waters and will rarely encroach on sensitive areas such as saltmarshes or intertidal mudflats.

4.2.2 Powered Craft

Large power driven craft, such as motor cruisers, tend to use the Waterway to make their way downstream to places like Dale, Watwick Bay and out to the islands. A smaller number will navigate upstream as far as Lawrenny and Llangwm, but very few will venture further. As with yachts, motor cruisers will not encroach on intertidal

habitats due to the lack of depth. Excessive wash from these larger vessels can impact on the environment and other users in these narrow channels and should be navigated with care. Small high-powered craft tend to be used for water-skiing, towing activities and general recreation. Small cabin cruisers are used for a variety of purposes all over the Haven, for example, indulging in the quieter activities such as fishing.

Power driven craft are permitted in all areas of the Waterway provided they abide by the zoning restrictions outlined in the Milford Haven Waterway Leisure User Guide. Those craft towing inflatables such as donuts, ringos and bananas are required to tow with caution and only in the designated ski areas.

4.2.3 Water-Skiing

Water-skiing tends to involve the use of smaller high-powered craft. This activity takes place principally between the Cleddau Bridge and the waters adjacent to the entrance to Lawrenny Quay. Water-skiing occasionally takes place in the other designated areas, such as the area outside Angle Bay, beyond the Dead Slow Minimum Wake (DSMW) buoys in Dale Bay and on Milford Shelf. Water-skiers are required to abide by the zoning scheme.

4.2.4 Personal Watercraft

A Personal Water Craft (PWC) is defined as a small recreational watercraft propelled by a directionally controlled jet of water. A PWC (also known as a jet-ski or wet bike) may use any area of the Waterway for normal navigation purposes, and is subject to the same Bye-laws and zoning as any other craft. Very few of these craft go beyond the upper limit of the main water-ski area due to these restrictions. Advances in design mean that these craft are much quieter, more stable and can carry up to 4 persons in safety.



The designated aquabatics area is rarely used by PWC riders. The aquabatics undertaken by the stand-on style PWCs are not achievable by the larger machines. In many cases these are now used as an alternative to powerboats to entertain families, more often being used to transit the Waterway or for towing inflatables and skiers. Numbers observed on the Waterway are relatively low compared to adjacent coastal areas i.e. no more than 8 seen at any one time. The use of these machines fluctuates although it is not anticipated that the level of general PWC will increase significantly in coming years.

4.2.5 Diving

Many recreational divers visit the Waterway and the nearby coastline and islands due to the wide variety of easily accessible dive sites, spectacular marine life and abundant wrecks. Divers are welcome to dive on the Skomer Marine Conservation Zone (MCZ) for which there is a diving code of conduct. Hardboats and Rigid Hull Inflatables (RHIBs) take groups throughout the year from the marinas and a number of access points around the Waterway. There are commercial operators providing dive services around the Waterway as well as a number of British Sub-Aqua Club (BSAC) and Professional Association of Diving Instructor (PADI) affiliated clubs.



4.2.6 Windsurfing and Kitesurfing

Most windsurfing on the Waterway takes place in Dale Bay. The overall popularity of the sport has waned and this is reflected by a reduction in observed numbers participating. However, the flat sheltered waters of Dale Bay make the area ideal for novices and during high winds provide flat water for more experienced enthusiasts. Kitesurfing activity is still limited within the Waterway and confined to Dale Bay and the adjacent waters of Dale Roads.



4.2.7 Paddle Sports

The popularity of paddle sports continues to increase throughout the Waterway. The 'sit on top' kayaks have seen the greatest increase in popularity used primarily for general recreation and fishing activities. Although paddle sports do occur throughout the Waterway the primary concentrations are found in the upper reaches and waters surrounding Dale Bay where individuals and groups are regularly seen. Paddle boarding being a relatively new sport has not seen significant activity in the Waterway with only sporadic observations. It is however likely that this may be an activity which will increase in coming years.



4.2.8 Rowing

Longboat rowing continues to be a sport attracting regular participation on the Waterway and throughout the county from adult and junior teams. The number of club teams using the Waterway for training has increased in recent years with a number of events being held each year. The majority of these organised events are

league races of up to 5 miles. Endurance races are also scheduled during the season, races such as the 'Return of the Cleddau' race from Haverfordwest to Neyland and the longer 22 nautical mile 'Milford Marathon'.

The local clubs regularly compete in the league events throughout Pembrokeshire and the neighbouring counties as well as nationally and internationally further expanding the coverage the sport receives. The Welsh Sea Rowing Association (WSRA) oversees the activities of the local clubs and is affiliated with the Welsh Amateur Rowing Association Ltd (WARA).



4.2.9 Swimming

Due to strong currents and extensive mudflats the Waterway is not ideal for swimmers. The only areas used by swimmers regularly are Dale, Watwick Bay and West Angle Bay. All of these are often sheltered from prevailing weather. Both Dale and Watwick Bay are regularly used by powered craft whereas boating activity in West Angle Bay is less

frequent. Elsewhere, most of the pontoons on the Waterway attract youngsters who use them for jumping and diving into the water; this can at times cause conflict with craft coming alongside and departing, as well as being dangerous due to the tidal regime of the Waterway.

4.2.10 Angling

Angling in groups with charter boats regularly takes place on the Waterway. (Angling from the shoreline is deemed to be outside the scope of this plan). There are a number of different commercial charter operators on the Waterway, offering anything from a 2 hour fishing trip to a 12 hour fishing expedition. Many other small private craft can be seen fishing with lines at many locations throughout the Waterway. There are restrictions to fishing activities in place in parts of the Waterway enforced by the Welsh Government's Marine and Fisheries Division (see Appendix 9).



4.2.11 Watersports Training Providers and Trip Operators

As watersports of all disciplines are popular throughout Pembrokeshire there are numerous training providers. Governing body recognised training providers located both on the Waterway and around the county make use of the Haven. Between them they offer tuition in sailing; powerboating; windsurfing; kayaking; canoeing; diving and kitesurfing as well as other watersport disciplines. Courses are offered to all levels of experience, from beginner to expert. Whilst novices remain in proximity to the shore and sheltered bays such as Dale, the more advanced courses utilise the opportunities offered in the rest of the Waterway and the coastal waters outside the Haven. Details of recognised training providers are usually available from the respective governing body and may also be found on their websites.

A number of commercial boat operators offer dive, fishing and sail charters as well as wildlife and historical cruises. Parties of divers, anglers and sailors are regularly taken out to sites both inside and outside the Waterway. During the season wildlife cruises take passengers out to the Pembrokeshire islands of Skomer, Skokholm and Grassholm. Puffins, razorbills, kittiwakes, shearwaters, gannets, harbour porpoise, common dolphin and grey seals are regularly seen on these trips.





4.2.12 Traditional Maritime Activities

Maritime heritage activities include seamanship, traditional ship building, the promotion of maritime heritage, sponsorship for voyage crew for tall ships and tall ship visits to Milford Haven. These activities are supported and promoted by local groups including Pembrokeshire Gig Association, West Wales Maritime Heritage Society and Pembrokeshire College's Maritime Technology Centre.

These groups and others participate in festivals of traditional sail which are held annually, the largest of which being the biennial 'Seafair' festival. The first Seafair event took place in June 2006 with subsequent events attracting significant interest and numbers of vessels totalling 192.

2014 saw a drop in numbers of smaller sail and oar vessels to 25; however this was supported by 6 larger keel boats and two tall ships. The Earl of Pembroke was utilised as a walk on visitor attraction and an educational facility for Pembrokeshire College as well as the Darwin and Beagle Trust, while the Pelican of London provided trips for 15 passengers each time down the Waterway and out beyond the heads.



4.3 Facilities

4.3.1 Moorings

All moorings in the Waterway require annual licensing by the Port and Crown Estate. The majority are privately licensed for use by a registered vessel. Of the 33 designated mooring areas, 20 are administered directly by the Port whilst 13 Voluntary Control Areas (VCA) are administered on behalf of the Port by Voluntary Control Bodies (VCB) such as local yacht clubs.

With the exception of the two commercial operations at Lawrenny Quay and Rudders Boatyard, a record of individual mooring holders and registered vessels are held centrally by the Port for use as required. All tackle associated with a licensed mooring is the property of the licensee and the responsibility to ensure it is appropriate for the registered vessel, and to ensure it's maintained, remains with them for the duration of the licence. Privately registered moorings should not be used by un-registered vessels as the suitability and condition cannot be assured.

In the 2014 season 963 mooring positions were licensed (Table 1) in comparison to 1160 in 2010. The identified downturn in moorings over the last 5 years is as a likely consequence of the economic climate and more proactive management regarding historically held but not used moorings. Within the VCAs the reduction in demand has been more noticeable since 2012.

Table 1

Voluntary Control Areas	No of Moorings
Dale	183
Sandy Haven	37
Angle	107
Gelliswick	2
Cunjic Bay	6
Castle Pill	62
Hazelbeach	25
Neyland	34
Hobbs Point	78
Burton	26
Rhooose Ferry	23
Llangwm	68
Landshipping Ferry	28

Each season the Water Ranger carries out a digital Global Positioning System(GPS) survey of the mooring areas on the Waterway. This process, which began in 2004, means that mapping occurs during annual inspections. This produces a series of Global Information System(GIS) maps showing the location of every mooring on the Waterway at the time of inspection. Individual maps are provided to each VCB once the information has been downloaded.

These chartlets are invaluable in the process of reorganising VCAs, where appropriate. It has also assisted with the development and reorganisation

of the Port administered areas where moorings are positioned according to specified latitude and longitudes.

Non Voluntary Control Areas	No of Moorings
Svitzer Marine	4
Milford Docks	32
Pennar Park	2
Pembroke Dock	4
Pembroke Reach	3
Barnlake	4
Barnlake Point	8
Burton Point	3
Warrior	7
Cosheston Point	3
Cosheston Reach	1
Rudders Boatyard (Commercial Operator)	60
Jenkins Point	14
Lawrenny	3
Lawrenny Quay (Commercial Operator)	100
Black Mixen	20
Landshipping Quay	8
Hook Reach	4
Little Milford	1
Musselwick	3

NB. All references to mooring areas and numbers are based on the 2014 registered mooring figures.

4.3.2 Marinas and Commercial Moorings

There are 2 marinas on the Milford Haven Waterway, Milford Marina and Neyland Yacht Haven, which provide a combined total of 748 marina berths. In addition there are 2 commercial mooring areas, Rudders Boatyard and Lawrenny Quay.

Milford Marina

There are now 328 berths in the marina, which is owned by the Port of Milford Haven. It provides services for both resident and visiting vessels. The marina offers the following facilities either directly or through businesses based on the marina site:

- Fully serviced boatyards
- Hoist lifts
- Chandlery
- Boat repairs
- Engine sales
- Diesel and bottled gas
- Waste disposal
- Showers and laundry
- Electricity and water
- Restaurants and bars
- Wi-Fi

In Milford Marina basin there is a speed limit of 4 knots. Access to the marina is through a set of lock gates. There is a 'freeflow' period (when all sets of lock gates are open and craft can enter and exit) for two hours before high water at Milford Haven. Additional access and exit locks are available either side of freeflow. New lock gates were installed in

2015 which facilitate more frequent locking times. Locking activities are co-ordinated by marina staff and permission must be obtained from Pier Head Control, which can be contacted on VHF channel 14. A list of all access and exit locks as well as freeflow times is available from the marina office or the marina website at www.milfordmarina.com



Neyland Yacht Haven

Neyland Yacht Haven is a marina situated in Westfield Pill. It is owned and operated by Yacht Havens Limited. The marina has 420 berths and can accommodate any vessel up to 25 metres in length and with a draught up to 2.5 metres. There are 2 basins separated by a tidal sill. The lower basin allows access at all states of the tide. Access to the upper basin is achievable up to 4 hours either side of high tide, depending on draught. Visitor berths and waiting pontoons are made available where possible.

Facilities at the marina and on Brunel Quay include:

- Fully serviced boatyards
- Hoist lifts
- Chandlery with bottled gas available
- Boat repairs
- Rigging and GRP specialists
- Petrol & diesel fuel berth
- Waste disposal
- Sailmakers
- Brokerage
- Training providers
- WiFi Broadband
- Showers and laundry
- Electricity and water on pontoons
- Restaurant and bar
- Café
- Free car parking for berth holders
- 24 hour CCTV coverage

In addition to the marina is a drystack boat storage facility operated by Dale Sailing offering storage, launch and recovery services for 96 vessels.

Rudders Boatyard

Rudders Boatyard is a family-run commercially operated boatyard and mooring facility at Burton in the upper reaches of the Waterway. It provides facilities for servicing both yachts and motor vessels, including visitors. The moorings and yard can be accessed at all states of tide.

Facilities include:

- 60 deep water moorings for vessels up to 15m
- Pontoon
- Quay wall, leaning posts and slipway
- Storage
- Chandlery
- Boat and engine repairs
- Hoist lift
- Training provider
- CCTV coverage
- Shower and toilet facilities

In addition to the moorings, trailer storage and launching services are provided.

Lawrenny Quay

Lawrenny Quay is a family-run and commercially operated boatyard and mooring facility at Lawrenny, 12nm east of St Ann's Head. It provides services for both yachts and motor vessels, including visitors. The moorings and yard can be accessed at all states of tide.

Facilities include:

- 100 deep water moorings for vessels up to 15m
- Pontoons
- Slipway
- Storage
- Chandlery
- Boat and engine repairs
- Hoist lift
- Water and electricity
- Shower and Toilet facilities
- CCTV coverage
- Café
- Public House
- Diesel and petrol fuel berth



4.3.3 Slipways

The Milford Haven Waterway has a number of launching and landing points; the public slipways are free to use and are open to all, unless otherwise stated. The main launch points for public use on the Waterway are detailed in table (right).

Location	Construction	Public/Private	Tidal access	Facilities	Fee
Angle Bay	Shingle/Sand	Public	Limited	1,2,4,5,6	No
West Angle	Concrete	Public	Limited	1,2,3,4,6	No
Dale	Concrete	Public	Limited	1,2,3,4,5	No
Gelliswick	Concrete	Public	Limited	2,3,4,5,8	No
Milford Marina	Concrete	Private	All	1,2,3,4,5,6,7,8	Yes
Milford Shelf	Concrete	Public	Limited	4,5,6,8	No
Front Street	Concrete	Public	Limited	2,4,5,6,8	No
Neyland	Concrete	Public	All	2,5,6,8	No
Burton	Concrete	Private	All	5,6	Members
Rudders	Concrete	Private	All		Members
Llanion	Concrete	Public	All	2,5,6,8	No
Lawrenny	Concrete	Private	Limited	1,2,4,5	Yes
Hobbs Point	Concrete	Public	All	2,4,5,6,8	No
Landshipping	Gravel	Public	Limited	4,5	No
Black Tar	Concrete	Public	Limited	4,6,8	No
Haverfordwest	Concrete	Public	Limited	1,2,3,4,8	No

Facilities key

- | | |
|------------------------|-------------------------------|
| 1. Restaurant/pub/café | 5. Vehicle launch |
| 2. Parking | 6. Restaurant/pub/café nearby |
| 3. Toilets | 7. Shops |
| 4. Hand launch | 8. Shops nearby |

Additional information on these can be found in the individual areas of Appendix I as well as www.boatlaunch.co.uk



4.3.4 Pontoons

Pontoons are situated throughout the Waterway from Lawrenny to Dale, providing links to shore-side facilities. Six of these structures are owned and operated by Pembrokeshire County Council (PCC) with the Port providing significant contribution to the annual maintenance, ensuring their continued presence in the Waterway. Of the six PCC pontoons, five are shore-connecting and deployed at key locations between 1st April and 1st October. These are typically composed of 6 sections, with the outermost section being a hammerhead. An outer pontoon is also provided at Dale, which is comprised of 2 sections and remains in location all year.

The PCC pontoons are for the use of recreational vessels and for the purpose of drop-off and pick-up of passengers and equipment. To facilitate access, boats using the pontoons should only use the hammerhead for pick-up and drop-off. The remaining areas of the pontoon (the sides) are quite different; these areas are for short stay. Boats can stay for a maximum of 12 hours and must not return within the following 24 hours.

Privately owned pontoons include the Fishermen's Pontoons, seasonal Mackerel Sage Pontoon and those of Rudders Boatyard and Lawrenny Quay. The Mackerel Stage, owned and operated by Milford Marina, is used as a holding pontoon by recreational vessels entering the dock. Public access is permitted to pick-up and drop-off passengers

and equipment. Please note, this pontoon may be closed during periods when visiting cruise liners have exclusive use.

The Fishermen's Pontoon, adjacent to Milford Marina lock entrance, is not for public use. The Fishermen's pontoon at the entrance to Neyland Marina has been leased to a local fishermen's association who are currently undertaking works to refurbish and improve the facility to a fully operational condition. Works to this pontoon are expected to be concluded by early 2017. Rudders Boatyard pontoon near to its slipway is for the use of clients only. Lawrenny has 2 pontoons; the westernmost one alongside Lawrenny Quay is for patrons only. The easternmost one adjacent to the Lawrenny Arms provides public access to the shore-side facilities.



5. Current Waterway Recreation Management

5.1 Management Tools, Policing and Enforcement

The Port is responsible for the navigation, safety and traffic regulation of all vessels navigating within the Haven. As such the Port of Milford Haven Act 2002 widened the regulatory powers of the Port by enabling the formulation of Directions in addition to the powers to create Bye-laws.

Through the use of Bye-laws, General Directions, Special Directions and Notices to Mariners, the Port is able to manage both commercial shipping and recreational craft. Recreational activity is also subject to national legislation. The International Regulations for the Preventing of Collisions at Sea 1972, commonly known as the COLREGS apply to craft operating in the Haven.

5.1.1 Bye-laws

Port Bye-laws applied to recreational and commercial vessels are specific to activity occurring within the area of the Port jurisdiction and are applicable to all areas defined in the Milford Haven Conservancy Act 1983.

The current Bye-laws came into operation in 1984 and 1987. Selected Bye-laws with particular relevance to recreational use are included in the Milford Haven Waterway Leisure Users Guide (see 5.3.1 and Appendix 4).





5.1.2 General Directions

The Port is empowered to make General Directions under Section 15 of the Port of Milford Haven Act 2002. General Directions support the Bye-laws and are orders made by the Harbourmaster to regulate the movement or navigation of all craft within the area of jurisdiction. The current General Directions came in to operation on 31st March 2016.

5.1.3 Special Directions

In addition to the requirements of Port Bye-laws and General Directions, the Harbourmaster may also issue, amend or revoke Special Directions under section 17 of the Port of Milford Haven Act 2002, in relation to the Haven or specific craft within the Waterway. Special Directions can require craft to act in a particular manner or require certain actions to be carried out in relation to a craft.

5.1.4 Notice to Mariners

The Port also uses Notices to Mariners (NTM) to disseminate information to users. They are issued to advise of particular activities or situations which may impact on the safety of users or those carrying out activities. If appropriate a NTM may also contain requests for users to act in a particular manner in specified areas or at specified times.

5.1.5 Policing

The Port's Water Ranger is primarily responsible for policing recreational craft on the Waterway. Policing is conducted through Waterway patrols, which are carried out on a regular basis throughout the season. The Water Ranger regularly patrols areas which are perceived as 'hot spots' for Bye-law infringements, especially the dead slow minimum wake area upstream of the main water-ski area. Assistance with patrols is provided by the MVS and supported further by other Port of Milford Haven vessels if required. In addition to policing, the patrols provide water users with assistance and advice.

5.1.6 Enforcement of Bye-laws and Directions

When an infringement occurs the patrol will record details (which may include photographic and video evidence), explain the situation and hand out a Leisure User Guide. In many cases this is sufficient action. However, if a person commits offences, particularly on a persistent basis, details recorded of all infringements involving the individuals or their vessels are collated and a formal written approach is adopted.

The marinas, boatyards and training providers on the Waterway readily assist in supplying further information when required, which is then held on file. Bye-laws and Directions are legally enforceable and the ultimate sanction is prosecution through the courts where fines not exceeding level 4 on the standard scale may be placed on offenders.

The ethos of the Port of Milford Haven is that compliance will be achieved through education and persuasion. However, for those few persistent offenders or where the severity of an incident requires, recourse to the courts may be the only option.

5.2 Water Ranger Service

The 'Water Ranger Experiment', as the project was originally termed, was an initiative which began in 1992 by PCNPA, in partnership with the Port, South Pembrokeshire District Council, Preseli Pembrokeshire District Council, the Countryside Council for Wales and the National Rivers Authority. Trials carried out in the summer of 1991 to assess the potential scope for a water-borne Ranger were deemed a success. PCNPA provided the boat and main staff presence, with the other agencies contributing to costs, assisting with manpower and the Port providing the fuel and maintenance. From 2004 the Water Ranger staff were employed by the Port with a contribution to costs from PCNPA. However, in 2012 the provision of the Water Ranger service became the sole responsibility of the Port.

During the summer season the Water Ranger and Assistant Water Ranger regularly patrol the entire Waterway from the entrance to Blackpool Mill on the Eastern Cleddau and Haverfordwest on the Western Cleddau. Complementary Patrols are also carried out by the MVS, whose berthing and fuel are provided by the Port.

The responsibilities of the post include:

- Management of recreational craft moorings in the Haven
- Implementation of the Recreation Plan
- Patrols and enforcement of Bye-laws
- Policing of the zoning scheme
- Gathering of infringement data with a view to prosecution if necessary
- Providing assistance to craft on the water when required
- Liaison with a wide range of user and interest groups
- Provision of information and advice
- Education work with schools and groups
- Presentations as required on leisure, safety and environmental issues
- Project work set by the Harbourmaster

5.3 Information

The provision of clear, accurate and relevant information is fundamental to the implementation of the recreation plan and the role of the Water Ranger. This process is vital to the raising of awareness in terms of safety and environmental concerns, and appreciation of the potential for education and enjoyment for all.

5.3.1 Milford Haven Waterway Leisure User Guide

Hard copies of the Leisure Guide are produced and distributed annually. A PDF version is available to download on the Port of Milford Haven website www.mhpa.co.uk. The content is discussed and decided by the Milford Haven Waterway Recreation Working Group towards the end of each season. A new format was being trialled at the time of writing, combining the Leisure Guide with the tide table produced by the Port. Early signs indicate a positive reaction to continuing this format in future. The guide aims to be a concise publication that is easy for Waterway users to use and understand.

It contains a wide range of information including:

- Maps showing the zoning scheme and features of the haven
- Selected bye-laws
- Navigation and weather
- Water ranger service
- Conservation and wildlife
- Key contacts and emergency numbers
- Images of activities and views
- Tide times

Before the season, the guide is distributed to various organisations and locations around the Waterway including PCNPA, PCC, MCA, MVS, yacht clubs, training providers, chandleries, marinas, tourist information centres from St. Davids to Tenby, hotels and public houses, boatyards, caravan

parks, cafeterias and holiday accommodation. Copies are forwarded to all mooring holders and are also carried aboard patrol vessels and handed out to users afloat, on the pontoons or at the marinas. Further copies are distributed at events, talks and presentations throughout the year and will be sent to individuals or groups when requested.

5.3.2 Waterway Information Signage

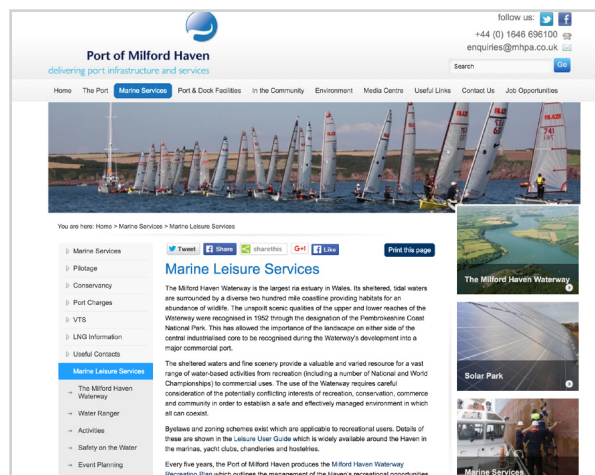
At present laminated A3 size posters are placed on notice boards before the season at over 30 locations around the Waterway. These locations include access points, pontoons, marinas and chandleries as well as others such as village notice boards, car parks, and toilets. Due to colour fade and vandalism, each sign at each location is checked annually and replaced if necessary. Alterations can be made to reflect changes in the Leisure Guide if appropriate. Essentially a distillation of the information provided in the Leisure Guide, the signs show a map of the whole Haven detailing the zoning scheme. They also include sections on selected Bye-laws, restricted activities, recreation and conservation.

Other signage is provided where necessary, such as the large yellow warning signs at Lawrenny Quay reminding users that they are within a Dead Slow Minimum Wake (DSMW) area. These are located on the main pontoon and by the slipway, to link in with the DSMW buoys in the main river. It is recommended that safety information signs are

placed on all pontoons in the Haven. The location of interpretation boards at key sites to give users better understanding of the wildlife, conservation and environmental issues is under consideration. It is hoped that with the number of organisations placing signage at points around the Waterway a format of integrated signage will be developed to incorporate all information required by the user in key locations.

5.3.3 Port Website

The Marine Leisure Services pages of the Port website (www.mhpa.co.uk) features a wealth of information about recreational activities on the Waterway including documents available to download such as the Tide Tables and Leisure User Guide, and safety information. The website attracts visitors from around the world such as the United States, Europe, India and Switzerland and is accessed by an average of 4000 people every week. The site is due to be redesigned in 2016 to further enhance the visitor experience.



Future Waterway Recreation Management

6.1 Key Objectives

In order to achieve the vision and aims of this plan, MHWRWG, having considered other strategies, policies, plans and the responses from the consultation document, have agreed five overarching objectives covering key areas as follows;

1. To ensure the ongoing **safety** of all recreational users within the Haven
2. To safeguard the natural **environment** of the Haven whilst continuing to promote its long-term sustainable use
3. To work in partnership with fellow agencies, **actively managing** the promotion and enforcement of current legislation
4. To pro-actively promote the key messages contained within the plan, advising and **educating** the Haven's broad-range of leisure users
5. To monitor and review the ongoing use of the Waterway, managing new **developments** and practices to ensure a consistent approach to recreational use

6.2 Action Plan

To achieve the objectives the plan aims to instigate both general and specific actions across the 5 key areas. It is possible that the actions proposed may address more than one objective. For simplicity actions are given under the main objective they aim to address.

6.2.1 Safety

- Details of all waterbased activities and events which may impact on other Waterway users are to be notified to the Port well in advance, including Risk assessments where applicable.
Port Action – yacht clubs, event organisers, other organisations and users groups are to be reminded annually of the responsibility to inform the Port and key stakeholders of their activity by direct contact or written correspondence with Port staff.
- Advise Waterway users of events which may impact on the safety of their activity.
Port Action – Where activities occurring on or adjacent to the Waterway may have an impact on the safety of other users, issue Notices to Mariners in written or verbal format as appropriate.

- Increase awareness and compliance with the Port's activity zoning scheme.
Port Action - Circulate leisure guides to users and outlets throughout the county annually in hard and electronic formats. Port patrols to stop and apprise users not complying with zone designation.
- Ensure leisure craft abide by exclusion and controlled zones surrounding prescribed vessels.
Port Action – Regularly circulate NTM 21 of 2015; provide information to users in appropriate formats to include Leisure guides, website, patrols and meetings.
- Inform recreational users of the meaning and importance of flags, shapes and symbols used by craft operating within the Waterway e.g. fishing vessels, divers and their support craft.
Port Action – Direct contact with users and groups and consideration to inclusion of such information in appropriate publications.
- Encourage best practice for the construction, maintenance and insurance of mooring tackle and buoys.
Port Action – Mooring holders to be instructed to lay and maintain properly constructed moorings on application and by letter at annual renewal. All mooring failures will be investigated and the recording of reduction in 'breakouts' is to be set annually as a leisure management key performance indicator.

- No new mooring areas to be allowed in the main ski area.
Port Action – Further moorings within existing mooring footprint areas to be considered subject to risk assessment.
- Raise awareness of water safety relevant to recreational activity in the Waterway.
Port Action – Direct contact with recreational users afloat. Promote national campaigns and provide safety information on the Port website.

6.2.2 Environment

- Manage recreational activity with regard to statutory environmental responsibilities.
All members (as applicable) Action
– Continue to implement recreation as agreed in the Pembrokeshire Marine SAC Management Scheme. Develop and introduce new management measures, as required, to safeguard in particular the features of the Pembrokeshire Marine Special Area of Conservation and the Milford Haven Waterway Site of Special Scientific Interest, and biodiversity action plan species and habitats.
- Ensure that all organisers of recreational events occurring within the Waterway are aware of the environmental needs of the area.
Port Action – The Port to provide event organisers with standard guidance notes

(including contact details of the MHWRWG/ conservation organisations) and encourage their early liaison. The Port to simultaneously inform MHWRWG of any events which may impact on the Waterway environment.

- Ensure that all participants of recreational activities occurring within the Waterway are aware of the environmental needs of the area.
Port Action – The Water Ranger to provide the leisure guide to recreational users of the Waterway, and where appropriate give further environmental information as required.
All members Action - Seek to enhance and promote the natural environment in relation to recreational use of the Waterway. Raise awareness of the Special Area of Conservation (its features and management needs) and other conservation designations of the Waterway. Include SAC information in key publications (leisure guides, codes of conduct, websites). Seek to incorporate appropriate specific environmental information into Waterway signage.
- Encourage recreational users and event organisers to adopt best practice by following codes of practice and conduct for activity within the Waterway.
All members (as applicable) Action - Raise awareness of codes of conduct and environmental codes of practice such as the sensitive habitat zones to protect subtidal seagrass and maerl within the Waterway, Pembrokeshire Marine Code, Pembrokeshire

Outdoor Charter, and RYA Green Blue through provision of written and electronic information in key publications and at key sites and also through direct contact with users.

All members (as applicable) Action
– Continue to work with local partners to ensure codes of conduct for wildlife and the environment are accurate and reasonable, and provide support to the Pembrokeshire Marine Code and Pembrokeshire Outdoor Charter Groups.

- Prevent pollution of the Waterway by litter, oils etc. by notification, education and monitoring.
Port Action - Annually issue a letter to mooring holders regarding their responsibility to take their waste home and where possible recycle. Investigate all reported pollutions and where necessary prosecute offenders.
All members (as applicable) Action – encourage best practice for maintenance activities and improved waste management.
- Ensure that the environment is not adversely damaged by new moorings within the Waterway.
Port Action – New moorings will only be allowed in the main upper reaches if risk and environmental assessments satisfy the Port, NRW, PCNPA that they will be safe for navigation and the environment. Consult with NRW, PCNPA and PCC as appropriate regarding applications for moorings outside designated mooring areas.

- Raise awareness of the voluntary restriction on anchoring/mooring within identified sensitive habitat zones.
PMSAC Action – liaise with users and representative groups in developing and monitoring the identified zones. Produce awareness raising material for circulation in electronic and hard formats.
All Member Action – Raise awareness of sensitive zones within member organisations. Encourage adherence to the voluntary agreement. Report any witnessed use of the sensitive zone for anchoring to the PMSAC officer.
- Make best use of resources to secure good quality environmental data.
Port Action – Record and share ad hoc data on any notable environmental species or activity observed during Waterway patrols. Encourage partnership working in order to add value where possible to time spent on the water.
PCNPA, Port Action – Continue to conduct regular bird surveys including the annual shelduck survey.
All member Action – Raise awareness of marine invasive non-native species amongst users through direct contact and provision of information in electronic and hardcopy formats. Encourage early reporting of non-native species, and raise awareness of preventative actions.

6.2.3 Management

- Liaise with VCBs, local Waterway users, clubs and societies to develop voluntary codes of conduct and self-regulation schemes for recreational activities.
MHWRWG Action – Consultation with appropriate groups to develop suitable schemes as and when appropriate.
- Review the requirement for vessel registration schemes.
MHWRWG/ All member action – Annual agenda item for MHWRWG meetings.
- Reorganise and improve use of existing mooring areas; identify and prioritise areas to meet future demand.
Port Action – using GIS mapping assist VCA areas to develop mooring plans as required. Identify areas that may be available to new applicants.
- Update and distribute digital mooring maps annually.
Port Action – Record GPS mapping of mooring areas created during annual inspection. Copies to be provided to VCBs and used to compare with previous years' occupancy.
- Periodic review of leisure user guide.
Port Action – monitor recreational use of Waterway and identify trends in use and areas of activity.
MHWRWG Action – Review content of Leisure Guide annually including periodic review of zoning scheme ensuring it remains appropriate for recreational use of the Waterway.

- Review requirements for introduction of speed limits within the Waterway.
MHWRWG All member action – Annual Agenda item for MHWRWG meetings.
- Regularly review legislation and other requirements which impact on Waterway leisure management.
MHWRWG Action – Advise partners of any changes that may require a change in policy and procedure affecting leisure users.

6.2.4 Education

- Develop and deliver a programme to inform schools, local groups and communities of commercial and recreational management responsibilities and operations for the Port of Milford Haven.
Port and PCNPA Action – Encourage inter-departmental authority working. Programme to be reviewed annually.
- Educate Waterway users to understand the zoning scheme and Bye-laws by introduction to the leisure guide and dialogue.
Port Action - Where recreation users are found in breach of the Port zoning scheme, Bye-laws, General Directions or other instructions issued by the Harbourmaster, Port staff to address the issue with the individual. In the case of repeat offenders seek prosecution under the Bye-laws.

- Educate Waterway users as to the importance of water safety and appropriate safety equipment when using the Waterway.

Port Action – During interactions with users afloat, provide information and advice to users afloat as to safe practice and appropriate equipment to carry within the Waterway. Promote national and local awareness raising campaigns and provide safety information on the Port's website.

- Publicise information on access to the Waterway and how to get involved in recreational activity.

MHWRWG Action – To ensure up to date and accurate information is available for Waterway activities, training providers and relevant clubs and organisations and that it is easily accessed.

6.2.5 Development

- Secure good quality relevant data on recreation to better inform Waterway management.

All members (as applicable) Action – Maintain and expand the knowledge base of the scale, location and seasonality of recreational activities (shore and water based). Record and share ad hoc data on any effects of recreational activities observed.

Port Action - Organise and make budgetary provision to run leisure surveys (including slipway and pontoon usage) with the focus of identifying potential areas of growth.

Share data with the Wales activity mapping project run by the Pembrokeshire Coastal Forum.

- Ensure that recreational activity within the Waterway is carried out at sustainable levels.

All members (as applicable) Action

– Encourage the development of an integrated recreational strategy for the coast, that incorporates both the interests of the environment and industry.

- Seek to improve land-based facilities for recreational vessels at marinas and boatyards and promote their use.

All Member Action – Review the provision of adequate waste reception facilities (including recycling) including bins for non-hazardous sweepings and debris, and special points for the disposal of hazardous substances such as concentrated cleaning chemicals, oils, antifouling paints and contaminated scrapings. Investigate the provision of adequate onshore sewage waste reception facilities (holding tanks and pump-out facilities) for recreational users.

- Encourage and support the improvement of Waterway access and development of shoreside facilities.

PCC, PCNPA, Port Action – Ensure appropriate maintenance is applied to existing facilities and work with partners and developers in assisting potential development projects.

- Assess and, where appropriate, support projects that encourage increased Waterway usage.

Port Action – Work with partners to ensure proposed projects adhere to environmental and safety objectives. Work within the MHWRWG to develop and provide support for project development.

- Review current mooring charging system.

Port Action – Annually review the moorings system and charges and reconcile costs.

- Ensure that appropriate representation of interested parties is maintained within the MHWRWG.

MHWRWG Action – Review membership of the group annually.

6.3 Summary

Progress on the aforementioned action plan is to be presented to the MHWRWG at their biannual meetings to ensure that the 5-year set objectives are being best achieved.

During the 5-year life of this plan it is envisaged that the action plan will be subjected to changes to accommodate new developments, legislation and best practices.



APPENDICES OF BACKGROUND INFORMATION

APPENDIX 1 Overview by Area

APPENDIX 2 The Role and Function of Organisations
and Partnerships within the MHWRWG

APPENDIX 3 Landscape and Nature
Conservation Designations

APPENDIX 4 Selected Bye-laws

APPENDIX 5 Weather

APPENDIX 6 Tides

APPENDIX 7 Geology

APPENDIX 8 Water Quality

APPENDIX 9 Fisheries

APPENDIX I

Overview by Area

For the purposes of providing general background information the Milford Haven Waterway has been divided into four areas. The whole of the Waterway is designated within the Pembrokeshire Marine SAC and the majority of the foreshore has been designated as Sites of Special Scientific Interest (SSSI). Heritage coast designations also apply to the coast line from Dale to Marloes and Angle Bay to Tenby.



This area is defined as the area between St. Ann's Head and South Hook Jetty on the north shore and Sheep Island to Angle Bay (up to the Valero Jetty) on the south shore of the Waterway.

Area I (North shore)

The entrance to the Milford Haven Waterway is exposed to the prevailing south westerly winds and there is often significant swell. Two commercial shipping channels enter the Haven from seaward, the East and the West Channels. The West Channel has a minimum depth of 15.8 metres. The East Channel has a minimum depth of 9.9 metres, which restricts the turning of larger vessels into the main channel near Thorn Rock. The two channels merge into the main channel north of the Angle Buoy. The entire coastline of this area lies within the Pembrokeshire Coast National Park.

The Dale and South Marloes Coast was notified as a SSSI in 2002 for its nationally scarce green and red algal communities, rocky and sandy shore communities, grey seals and maritime grasslands, scarce plants as well as for lichens and the geology of the area.



Watwick and Castlebeach Bay

Leisure craft use the area to exit the Waterway to reach the Pembrokeshire islands and in some case beyond to the Irish Sea. North of St. Ann's Head are Watwick Bay and Castle Beach Bay. These bays are very popular anchorages for leisure craft due to the shelter offered in prevailing conditions. Watwick Bay has a sandy beach and the occupants of craft anchoring there often go ashore by tender. The beach has no vehicular access and the only other way to reach it is by the Pembrokeshire Coastal Path. These bays are also part of the Dale and South Marloes SSSI.

Dale

Dale Bay is one of the most popular areas for water-based recreation and part of the Milford Haven Waterway SSSI. The inner part of the bay is designated as a Dead Slow Minimum Wake (DSMW) area and is marked with seasonal buoys. Beyond the bay eastward is a designated water-ski area stretching to the eastern end of Lindsway Bay which is infrequently used.



Map 1: Area I Showing designated SSSI foreshore

Overlooking the bay is Dale Fort Field Centre run by the Field Studies Council, from where students regularly carry out field work at the Gann saltmarsh, and along the shore at West Dale and in Dale Bay. Commercial watersports centres operate in this bay offering training and courses on all aspects of sailing, windsurfing and powerboating. Fleets of novice sailors and windsurfers regularly use the inner part of the bay during the summer months. Dale Yacht Club (DYC) organises a wide range of sailing events and races throughout the year, and provides training at all levels. Organised boat trips to the Pembrokeshire islands are available as are fishing trips and a number of dive operators.

This beach has a gently sloping concrete slipway, which allows access when the water level is 1.7 metres above chart datum. The slipway is used by DYC as well as the various commercial operators for launching dinghies and canoes. The slip is especially popular with recreational users for launching vessels using a vehicle during peak season. This can cause congestion in the village due to the one way system and a single track access road.

In 2009 PCNPA passed their interest in the management of the slipway to DYC who now manage it. In addition, in response to NRW flood warnings for the area, flood gates may be closed at the top of this slipway preventing access or public access may be restricted

during major events. Information on any restrictions can be obtained from DYC and will be posted on their website.

Dale is very popular with divers as it affords easy access to popular dive sites, both inside and outside the Haven. Likewise sailing, canoeing, windsurfing and other activities take advantage of its sheltered location. The village offers the usual amenities of a small rural village. In close proximity to the slipway are toilets, pub, a seasonal café and shop, and restaurant/café/bar open to all at the yacht club.

Longoar Bay

Longoar Bay lies on the eastern shoreline of Great Castle Head. In good prevailing conditions it is used as an anchorage by some recreational vessels. The bay itself forms the western extremity of the extensive maerl and zostera (seagrass) beds which spread eastward to Gelliswick Bay. Both maerl and zostera are highly sensitive to damage. To protect these habitats the use of dredge fishing gear is prohibited and a voluntary agreement by the Special Area of Conservation Relevant Authorities Group (SACRAG) encourages all vessels not to anchor within the bay.

The driving force behind this voluntary agreement stems from the fact that the Milford Haven Waterway lies within the Pembrokeshire Marine Special Area of Conservation, part of the Natura 2000

network of sites across Europe under the Habitats Directive. The designation brings with it statutory responsibilities for organisations with a management/regulatory role for the area covered. Together, these organisations are known as 'relevant authorities'. The relevant authorities produced a management scheme which was published in April 2008 following a period of public consultation. The aim of the scheme is *'To secure and maintain the favourable conservation status of the Pembrokeshire Marine Special Area of Conservation by ensuring that human activity co-exists in harmony with the habitats and species of the site'*. In addition to its obligations under European law, the Port also acts under UK law to protect local biodiversity.

The Port of Milford Haven was specifically tasked with a number of actions including *'Improve management of recreational anchoring and mooring within the SAC, including specifically the introduction and implementation of no anchoring and no mooring zones to protect areas of zostera (seagrass) and maerl (chalky seaweed)'*. It was felt that this particular action could be addressed through the establishment of sensitive habitat zones within the Waterway. The areas concerned are Gelliswick to Lindsay Bay, Longoar Bay and Angle Point to Ellen's well.



In 2015 two day visitor buoys were deployed in Longoar Bay in order to facilitate recreational use without damaging the seagrass by anchoring. The buoys mark the western edge (and in the case of the northern buoy, also the northern edge) of the seagrass bed and sensitive habitat zone. The buoys are owned by SAC, insured by the Port and serve as a general facility for users to enjoy.

Sandy Haven Bay

To the east of Dale Bay is the inlet and bay of Sandy Haven. This inner bay is designated as a Dead Slow Minimum Wake (DSMW) area. Sandy Haven was notified as a Site of Special Scientific Interest (SSSI) in 2002 due in part to the intertidal habitats, horseshoe bats, otter and migratory waterfowl it supports as part of the Milford Haven Waterway SSSI.

In terms of recreation this is a relatively quiet area. Used primarily by visitors to the nearby caravan site, some of whom have craft moored in the inlet. Observations suggest that ad hoc recreational fishing activities occur around Stack Fort in the Stack anchorage further out in the bay. Sandy Haven is generally only accessed by smaller vessels as the inlet dries at low water.

Area I (South shore)

West Angle Bay

The Angle Peninsula coast was notified as a SSSI in 2003 due to its geology, intertidal habitats and communities and its population of roosting and feeding cough. This area also has a number of archaeologically important sites.

North of Sheep Island is West Angle Bay. This bay has an expanse of sand and extensive rocky shore habitats and is part of the Angle Peninsula Coast SSSI. West Angle is a popular beach for families and is also regularly used by Orielson Field Studies Centre for fieldwork. The inner part of West Angle Bay is designated as a Dead Slow Minimum Wake (DSMW) area and is marked with a seasonal buoy due to the bay being popular with swimmers.

West Angle has a public car park, café, toilet facilities and slipway which are popular with

visitors to the nearby caravan park. The slipway is a steeply shelving cobble construction, sections of which are covered in sand. The slipway is used for launching craft by hand or on smaller trailers at high tide and is mainly used by boat-owners who keep their craft at the caravan site close by. The slipway is not suitable for vehicle launch.

Few leisure craft use this bay, occasionally anchoring to fish, dive or shelter. Angle village is a short distance to the east and offers additional amenities of a shop, Pub/Restaurant and Café.

Angle Bay

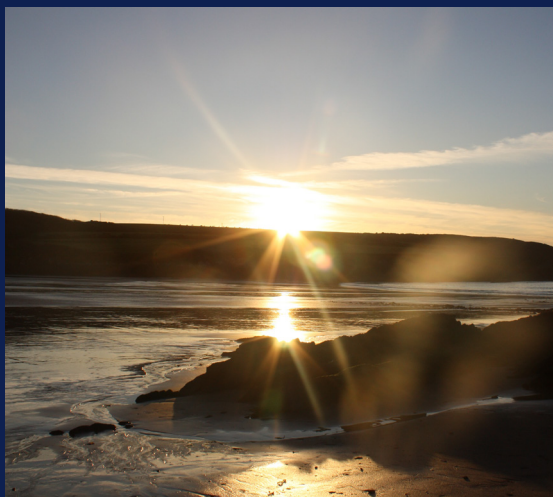
To the east of West Angle is Angle Bay. Power boating and sailing take place in the bay along with organised regattas. The bay is designated as a Dead Slow Minimum Wake (DSMW) area and was notified as a SSSI in 2002 due to its saltmarsh, intertidal communities and migratory waterfowl forming part of the Milford Haven Waterway SSSI.

The access in Angle Bay is mainly from the gently shelving foreshore below a public house located at the north west corner of the bay adjacent to a concrete landing wall maintained by the local boat owners association. The slipway consists of sand and shingle above the half-tide mark with soft mud at the lower extremity, offering half-tide access. A roughly surfaced road forming part of the coast path

Map 2: Area 2 Showing designated SSSI foreshore

and currently maintained by PCNPA leads from the village street to near the slipway and provides vehicular access, but much of this and the foreshore may be covered at high spring tide.

Outside the bay at Popton Point to the north-east there is a designated water-ski area that is infrequently used. The designated water-ski area to the west is used by local fishermen for storing keep pots and the numbers of floating lines can be a problem for all craft. In addition the RNLI inshore and offshore lifeboats are stationed to the west of the bay. On the north-west peninsula of the bay adjacent to the landing wall is a public house. Additional amenities including a pub/restaurant, shop and café are available in Angle village itself a short distance away.



Area 2 is defined as starting from the South Hook jetty on the north shore, and from the Valero jetty on the south shore upriver to the Cleddau Bridge. This is the most heavily populated and industrialised area on the Haven.

South Hook to the Cleddau Bridge (North Shore)

South Hook Jetty

The South Hook jetty was decommissioned by Esso in the late 1980s but has since been redeveloped to receive Liquid Natural Gas

(LNG) tankers to supply a regasification plant. Construction work was completed in 2008 and the first LNG carrier was received in March 2009. The small boat passage under the jetty was repositioned during the construction and reopened after the first cargo in 2009.

There are also extensive maerl and subtidal seagrass beds in this area which are highly sensitive to damage. To protect these habitats the use of dredge fishing gear is prohibited.

The small boat passages under the jetties are clearly marked by orange markers on selected piles and denote the only permitted route for recreational vessels.

Recreational craft regularly use this passage to avoid commercial traffic at the pinch point in the main channel. The speed limit for craft using the small boat passage is 8 knots.



Bye-law exclusion zones of 100m are in effect around terminals, berths and vessels secured to them and no unnecessary craft will be allowed to approach closer than the prescribed distance without the Harbourmaster's permission. In addition to these, moving controlled and exclusion zones will be in place around prescribed vessels which will include LNG tankers. Details of these exclusion zones can be found in the Leisure User Guide and on the Port of Milford Haven website.

Puma Energy Milford Haven Jetty

Originally commissioned in 1973 by Amoco UK, it was taken over by Murco in 2007. Murco announced their intention to sell the refinery in 2010. The site was sold to Puma Energy in 2015 and has been re-designated as a storage facility.

As with South Hook the Puma Energy jetty has a small boat passage indicated by orange markers on selected piles. The same 8 knot speed limit is applied to passage through the jetty. The same Bye-law exclusion zones of 100m are in effect around vessels and berths.

Gelliswick Bay

Gelliswick Bay is one of the main access points to the Waterway from the town of Milford

Haven and is used by Pembrokeshire Yacht Club for all types of sailing activity. The club is also a recognised RYA teaching centre and has hosted a number of national sailing events.

The bay is popular with small powered craft and divers. The slip is a gently shelving concrete slipway with a PCC toilet block across the road. PYC is situated at the top of the slip. The slip allows access when the water level is 1.65 metres above chart datum. At low water the foreshore is compact enough to be suitable for launching. The slipway is regularly used by craft from PYC and dive RHIBs and has space for parking and trailers to the west of the toilet block. The bay has also been used by barges to facilitate the transport of heavy lift equipment to and from adjacent terminals.

The bay forms part of the Littlewick to Brunel Quay section of the Milford Haven Waterway SSSI. The inner part of the bay is designated as a Dead Slow Minimum Wake (DSMW) area. To the east of the bay is the Port of Milford Haven jetty where a fleet of pilot cutters and pollution response vessels are berthed. Recreational vessels should ensure wide passing at this point.

Cunjic

There is no slipway at Cunjic, the nearest launch point being Gelliswick. The coastline forms part of the Littlewick to Brunel Quay section of the Milford Haven Waterway SSSI.

Milford Marina and Fish Docks

Milford Marina and Fish Docks are protected by a lock which allows entrance to vessels of maximum 130m length over all (LOA) for the main dock, and 19m beam at half tide. There are 4 commercial quays, as well as the Marina and other leisure amenities such as Phoenix Bowl. On the Hakin side are facilities for ship repair or dry dock. Regeneration of the dock has continued with a mix of commercial, leisure and residential developments and has received resolution to grant consent for further development. The dock area is also important for fish landing and processing with 3269 tonnes of demersal fish landed in 2015.

The Marina has two slipways, the first allowing access to the Marina basin at all states of the tide, free of charge to Marina customers with prior permission. The second is a short distance to the east of the Marina and allows direct access to the Waterway when the water level is 2.5 metres above chart datum. There is space for parking at the top of this slip

The water to the east, known as Milford Shelf, is also a designated water-ski area that is infrequently used.



Castle Pill

East of Milford Shelf is the inlet of Castle Pill which dries at low water and the most notable nature conservation feature is the ancient woodland surrounding the pill. There has been some small scale residential development on the eastern edge of the pill and at the time of writing the land adjacent is being considered for industrial development. This Pill is excluded from the Pembrokeshire Marine SAC.

Blackbridge

At the time of writing the area has been sold to a Biomass company who propose a biomass plant and complimentary businesses utilising the waste heat for "aquaculture" and other processes.

Dragon LNG and SemLogistics

East of Castle Pill, opposite Pwllcrochan flats, are the Dragon LNG and SemLogistics jetties. The capacity of the SemLogistics storage facility totals over 15 cu. metres. The construction of the LNG berth at Dragon LNG was completed in early 2009 with the first cargo arriving shortly after.

Bye-law exclusion zones of 100m are in effect around the vessels and berths as are the additional controlled and exclusion zones for prescribed vessels. Details of these can be found in the Leisure Guide and on the Port of Milford Haven website. Unlike the other petroleum jetties in the Waterway there is no small boat passage and recreational vessels are required to pass to the south.



Hazelbeach

Hazelbeach has two small slipways and a pontoon during the season which provides access to a pub. Access for launching and recovery is very limited here with both slips drying out. One slipway is only available to members of the local boat-owners club to access the hard storage area.

Hazelbeach has a shingle spit which is of ornithological importance. It is used by dunlin and shelduck during the winter months, and mute swans throughout the year.

Neyland

Neyland Yacht Club (NYC) has good vehicular access and consequently this is a very popular launch point for RHIBs and dinghies. Situated in front of NYC, this wide slipway is made up of concrete blocks, which are broken up in some places. The slip allows access when the water level is 2.4 metres above chart datum. The slip can accommodate almost any craft that can be placed on a trailer. Regularly used by the yacht club, this slip is also very popular with the public in the summer, although parking is limited.

There are regular yacht club dinghy races held in the area between Hobbs Point and Wear Spit. A series of races for cruising yachts are held throughout the year in conjunction with

Pembroke Haven Yacht Club (PHYC.) based at Hobbs Point. The start/finish line lies between the two clubs.

During sailing races the section of water between NYC and PHYC often becomes congested. The racing yachts usually progress downstream past the refinery jetties. All sailors here need to be aware of commercial shipping movements and avoid close quarter situations with these vessels. This section of channel is used by the Irish ferry and leisure craft leaving from and returning to Neyland Marina. The races are usually scheduled to avoid ferry movements. Craft should proceed with caution in this area.

A PCC toilet block is situated just off the road at the top. Neyland offers the usual facilities expected of a small rural town. In addition, Brunel Quay to the east has a number of chandleries, bar, café, restaurant, and storage and repair facilities.

Westfield Pill Entrance

This area between Neyland Spit and Barnlake Point is the site of Neyland Yacht Haven. As such it can be very busy with craft entering and leaving the marina. Larger powered craft can cause problems with their wake as they increase and decrease in speed in this location. Smaller craft need to be aware of the situation at all times.

Brunel Quay (the area of land to the west) has a concentration of marine based businesses including chandleries, brokers, sailmakers, petrol and diesel fuelling facility, café and a bar/restaurant. Access from the water to these can be difficult as the pontoons at the entrance are for vessels being serviced by or fuelling from the adjoining business property. The Marina welcomes visitors and has a holding pontoon which can be used on agreement with the marina office.

Angle Bay to the Cleddau Bridge (South Shore)

Valero Oil Jetty

The Valero refinery is situated on the south side of the Haven opposite the Puma Energy jetties, the Port of Milford Haven and Milford Dock. Valero is the largest refinery on the Haven, covering some 450 acres of a 1275 acre site and offering 8 berths. Opened in 1964 the plant has a capacity of 220,000 barrels of crude oil per day and 50,000 barrels a day of other feedstocks. Crude oil is delivered by vessels of up to 275,000dwt from fields as far as the Arabian Gulf, Kazakhstan, and the North Sea, and is distributed mainly by sea. The 3 main processes undertaken at the plant are distillation, conversion and special treatment to produce petrol, kerosene, diesel, heating and fuel oils as required. The tank farm comprises some 140 tanks, 11 of which are for crude.

The 'pinch point' for commercial and recreational vessels occurs at the western end of the Valero terminal where there is an overlap with the Puma Energy terminal on the northern shoreline. Recreational users are required to keep well clear of all commercial vessels moving on and off the jetties, particularly in this area. As with the South Hook and Puma Energy jetties there is a designated small boat passage marked by orange piles which allows small recreational craft to pass behind the jetty.

Bye-law exclusion zones of 100m are in effect around the vessels and berths, and no unnecessary craft will be allowed to approach closer than the prescribed distance.

Pwllcrochan Flats

This area, most of which dries out at low water, is very rarely used for recreation. There are no recreational moorings, no facilities and access from the land is very poor. The area is currently designated as the PWC aquabatics area although it is rarely used by PWCs. The flats form part of the south section of the Milford Haven Waterway SSSI and are important for many species. In addition to the SSSI status the entire area of the flats south of a line drawn from the eastern end of the Valero terminal, through the Pennar Beacon to the foreshore at Llanreath, forms part of a fisheries nursery area and as such fishing activity is restricted during the season (see Appendix 8).

Pennar Gut and the Pembroke River

Opening out into the Waterway at the eastern edge of Pwllcrochan Flats the entire area encompassed by Pennar Gut and the Pembroke River is designated as a Dead Slow Minimum Wake (DSMW) area. The river leads all the way to the Castle Pond barrage at Pembroke. A series of 20 cans mark the channel, which becomes increasingly tortuous, especially in the upper reaches. The barrage provides access to the Castle Pond where there are 5 moorings and a small wall for berthing. Access is by prior arrangement with PCC as they manage this facility. Each season a number of flotillas of recreational craft navigate upstream to anchor in Castle Pond, often led by the Water Ranger and MVS.

The Pembroke River was designated as a SSSI in 2002 forming part of the Milford Haven Waterway SSSI, and supports saltmarsh habitats, nationally rare and scarce plants of special interest and migratory birds including shelduck, widgeon and curlew. The area beyond the mouth is very rarely used for recreation as it requires careful navigation. As with Pwllcrochan Flats, fishing within the season is restricted within the entire area of Pennar gut and the Pembroke River (see Appendix 9).

To the west of the Pembroke River entrance lies Pembroke Power Station, overlooking Pennar Gut. This is built on the site of the former Oil

fired power station and is a combined cycle gas turbine (CCGT) plant which began full commercial operation in September 2012. The station is capable of generating over 2000MW, enough to power around 4 million homes - more than twice the number of households in Wales. The state-of-the-art CCGT technology means that Pembroke is one of the largest and most efficient plants of its kind in Europe and produces less than half the CO2 emissions of a coal-fired power station. Flexible technology means that Pembroke is able to respond quickly to the market to provide highly flexible and reliable power to meet the nation's demand.

Pembroke Port

This port has three quays which are available at all states of the tide and a purpose built roll on - roll off ferry terminal used by Irish Ferries. The ferry sails to Rosslare twice a day, carrying commercial traffic and freight, as well as cars and passengers. The terminal has hosted other vessels throughout the years. These include the 'Stena Europe' and other ferries should they require an alternative berth to their own. In addition military vessels carrying vehicles and personnel to exercises at Castlemartin Range have utilised the Port facilities. Pembroke Port itself has 5ha of open storage and 1,500 sq.m of warehousing and handles general cargo and aggregate such as rock salt, timber and sand, together with certain oil rig supply support



AP. I

vessels and cruise ships. The site also holds one of the few remaining boat building businesses in the county. Vessels based at Pembroke Port include the Svitzer tugs which assist in the movement of the larger commercial vessels, the fleet of MOD range safety craft and the Dyfed-Powys Police marine unit.

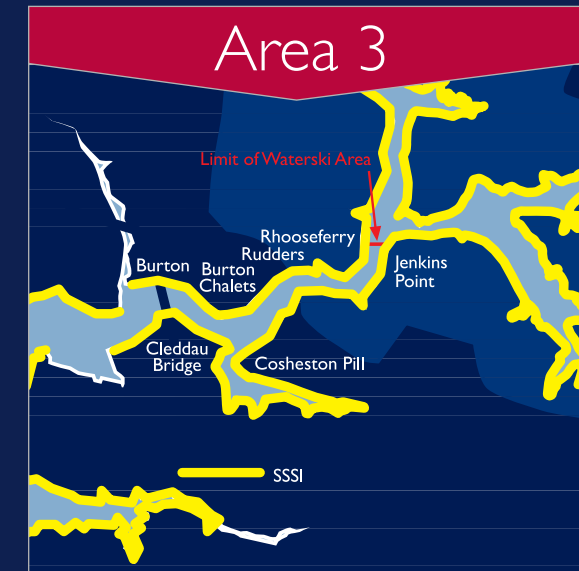
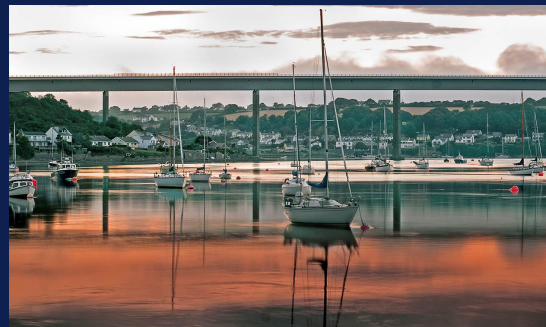
Pembroke Dock

Between Hobbs Point and the Ferry Terminal is Pembroke Dock. The Martello Quays Project, which looks to develop a marina complex, has received planning permission. The project looks to create a vibrant commercial leisure-based town centre waterfront area for Pembroke Dock. The proposed development would include approximately 300 berths alongside high quality waterside residential developments, retail outlets, bars and restaurants. Front Street has 3 concrete slipways. The westernmost by the Martello Tower is accessed from Front Street itself allowing access approximately 2hrs either side of high water. This slip does silt up and as a result is rarely used. A second slip by a small boat storage yard in the middle of Front Street and the other to the east accessed from the Western Way car park. The area the two eastern slips access dries out at low water and only affords access one hour either side of high water.

Hobbs Point

Located on the south side of the Waterway adjacent to the Cleddau Bridge. Pembroke Haven Yacht Club is situated at the head of the slipway. This is a steep concrete slip which allows access when the water is 1.92 metres above chart datum. It is used for launching and recovering small boats and small yachts. It should be noted that there is a vertical drop off at the end of the slip and caution should be used. Parking is also limited.

The PHYC building also hosts the Pembrokeshire Cruiser Racing Club. At the site there is also a PCC toilet block and limited car parking. Anglers regularly use the quay and seasonal pontoon, and boat-owners need to be aware of their lines and give them sufficient time to recover gear when coming alongside. Hobbs point is also a popular viewing point from which to observe the ferry. Pembroke Dock is a short distance offering the usual amenities of a medium sized town. The area is also part of the Milford haven Waterway SSSI.



Area 3 lies between the Cleddau Bridge to the point at which Lawrenny Reach merges with the Daugleddau. The boundary is indicated by yellow warning buoys marked 'Dead Slow Minimum Wake' situated downstream of the entrance to Lawrenny Quay adjacent to Jenkins Point. The entirety of Area 3 is designated as a water-ski area. This area is by far the most popular of the 5 water-ski areas on the Waterway. The warning buoys are deployed in the season. There are access points at Burton, Rudders and Cosheston Pill. All craft have the right of navigation through the area but should ensure a good lookout is maintained. There are no significant commercial shipping movements in this area, though limited commercial traffic navigates up to Waterloo Quay. There are some restrictions to fishing activity in the water upstream of the Cleddau Bridge. (see Appendix 9).

East Llanion and Cosheston Pill

Cosheston slip is used by the public as a launch point, the slipway is owned by PCC. The entrance to the Pill is highlighted in the leisure guide as an area used by sailing schools for teaching beginners, where additional caution is required. The East Llanion slipway with its 3 concrete ramps provide access throughout the tidal cycle. The slipway is popular for launching powered boats, canoes and PWCs, and has a large car park at the top, though caution is required as it is adjacent the main water-ski area.

There is a limited amount of commercial traffic to Waterloo Quay, which services a light industrial development situated in Cosheston Pill. East Llanion Marine boatyard is located next to Waterloo Quay, and has a slipway, pontoon, storage for 180 vessels and a holding mooring for its clients.

Cosheston Pill was notified as a SSSI in 2002 due to its saltmarsh, intertidal communities, nationally scarce plants, migratory birds, otters, curlew as well as greater and lesser horseshoe bats. Cosheston Pill from the northern extremity of the PCC slipway is designated as Dead Slow Minimum Wake (DSMW) area.

Burton

Burton Watersports Club has a private slipway for use by members. The slip allows access approximately 5hrs either side of high water.

The majority of the foreshore from Burton to Rhooseferry and Jenkins Point is included in the Daugleddau section of the Milford Haven Waterway SSSI.

Cosheston Reach

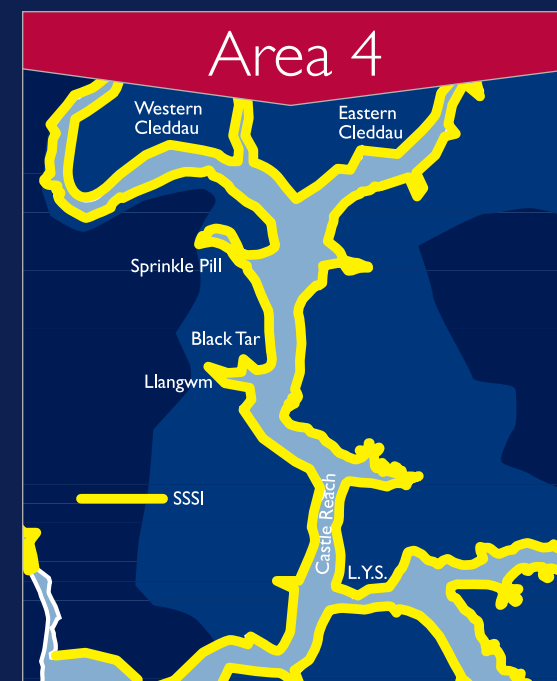
Rudders Boatyard, which has a private slipway for use by its clients, is located on the western shore. Public access is permitted by agreement. Users of this slip are required to use boatyard staff and vehicles and a charge is levied on both launch and recovery.

Rudders Boatyard facilities include boat storage, a pontoon and slipway.

Rhooseferry and Jenkins Point

The Rhooseferry VCA extends along the west shore of the Waterway, from the waters north of Mill Bay to beyond the boundary of the main water-ski area. This area is managed by the VCA on behalf of the Port. The Jenkins Point moorings extend along the east shore of the Waterway from Mill Bay to the entrance to Lawrenny Quay.

These moorings were repositioned in 2008 to provide a clear area of water for waterskiing. It is also hoped that this will address concerns raised by NRW in relation to a drop in benthic organisms.



Area 4 is defined as the area upriver of the point at which Lawrenny Reach merges with the Daugleddau (denoted by the yellow Dead Slow Minimum Wake buoys during the season), to the limit of tidal influence on the Eastern and Western Cleddau. The area includes Garron Pill and the Carew and Cresswell Rivers. The entire area lies within the Pembrokeshire Coast National Park.

Map 4: Area 4 Showing designated SSSI foreshore

Lawrenny Reach

Lawrenny Quay is situated on the northern shore of Lawrenny Reach and is a privately owned commercial operation, comprising moorings, slipway, chandlery, boat storage facilities, caravan site, self catering accommodation, café and a public house. Lawrenny Quay has a private concrete slipway for use by its patrons and residents of the caravan park and chalets. Public access is by agreement and a small fee is levied for use. There are also informal access points for launching small craft at Jenkins Point. Lawrenny Quay provides diesel and petrol for vessels. The area upstream of the Lawrenny Quay moorings opens into the confluence of the Cresswell and Carew Rivers. Lawrenny Yacht Club based in the nearby village has become more active in recent years and is developing delivery of dinghy sailing and powerboating in the area.

A significant number of boats moored on the Lawrenny Quay moorings are powered boats, and the area is popular with skiers due to its proximity to the main water-ski area. The entirety of Lawrenny Reach and the Carew and Cresswell Rivers fall within the Dead Slow Minimum Wake (DSMW) area. There is also an advisory speed limit of 4 knots in Lawrenny Reach as the moorings are compact particularly at low water. In addition, to the eastern end of the moorings is the Black Mixen, a large rock outcrop possibly remnants

of ballast from vessels involved in shipping coal and limestone from Cresswell Quay. This outcrop covers at high water.

Carew and Cresswell Rivers

The Carew and Cresswell Rivers were notified as a SSSI in 2002 due to the saltmarsh, intertidal communities and migratory birds, including wigeon and shelduck, and form part of the Milford Haven Waterway SSSI and Pembrokeshire Marine SAC. The rivers support over-wintering birds between September and March and breeding population of shelduck during the summer months. The area is also important for flora. A huge variety of plants have been recorded in the area. Some of these are scarce in West Wales such as yellow-wort, autumn gentian and the marsh mallow.

The West Williamston nature reserve is situated on the headland between the Carew and Cresswell Rivers. Many of the tidal creeks which were excavated in the 18th century to enable loading of limestone are now reverting to saltmarsh which is a highly sensitive indicator habitat.

The Cresswell Arms is situated at the top of the Cresswell River approximately 2 nautical miles east of Lawrenny Quay. Although a popular public house it is only accessible to vessels on spring tides. At the head of the

Carew River is Carew Castle with its mill pond. Carew Mill is the only tidal mill remaining intact in Wales. Navigation in the area is difficult as the two rivers are shallow and the mudflats are exposed at low tide leaving only a narrow channel unsuitable for even the smallest vessel. These waters are only navigable on spring tides and local knowledge is essential. This area is also within the PCNP designation.

Also included within the Milford Haven Waterway SSSI is Lawrenny Wood which was notified as a SSSI in 2002 because of the sessile oak *quercus petraea* woodland supporting lichens, mosses and liverworts. Greater and lesser horseshoe bats use the site.

Castle Reach to Picton Point including Garron Pill and Llangwm

This entire area forms part of the Daugleddau section of the Milford Haven Waterway SSSI. The entire Waterway upstream of the buoys near Lawrenny Quay is designated as a Dead Slow Minimum Wake (DSMW) area. Road access to the foreshore in this area is poor. The only public slipway is at Black Tar to the north of Llangwm. Although there are informal launch sites at Rhooseferry and Llangwm Ferry, these areas are not recommended due to tides and a lack of space.

Garron Pill, important for resident and migratory birds is an area of tidal mud flats situated to the north east of the popular anchorage of Castle Reach. The northern shore line of the Pill was once used for quarrying.

Llangwm is a thriving village with a history set in the fishing industry. Although fishing is no longer a key part of the village it is still thriving and has all the associated facilities expected of a small rural village. Parking and trailer storage is limited to a small carpark and a small area of foreshore at the top of the slipway. There are also areas of salt marsh reclamation to the south of the slipway which should be avoided.

Black Tar has a concrete slipway which allows access approximately 3 hours either side of the high tide. Being quite narrow and crooked it favours small hand launched vessels. There is very limited parking situated close-by with shops and pub situated in the village a short walk away.

The waters upstream of the Llangwm moorings cannot be navigated easily at all states of the tide. Craft are advised to keep to the main channel as there are expanses of mud flats off Sprinkle Pill and Fowborough point. Local knowledge is essential and consequently few visiting craft proceed further than Picton Point. These mud flats, together with areas of the lower Western Cleddau, also form part of the wildfowl refuge created under the Wild Bird (Cleddau Sanctuary) Order 1970.

Western Cleddau

This entire area is of national importance for many species of wildfowl and wading birds, in particular a large winter population of shelduck. As such the area also carries SSSI designation. The area from Uzmaston to Sprinkle Pill is also designated as a wildfowl refuge under the 1970 order.

On the Western Cleddau there are limited facilities to access the river from the foreshore and what facilities exist are used infrequently and primarily by local residents. There is a slipway at the quay in Haverfordwest which is only used during organised events such as the 'Return of the Cleddau' longboat rowing race and the 'Beating of the Bounds' ceremony when the carpark is closed. Outside these times usage is generally confined to the occasional canoeist as there is little water at high tide and what water there is will ebb rapidly. Limited access across the foreshore at Underwood for hand launched vessels such as canoes provides access to Hook Reach. It is not suitable for trailered vessels.

Mooring numbers in the upper reaches are limited as part of local management plans to maintain the unspoilt natural beauty, protect the SSSIs and to maintain a clear navigable channel.

Eastern Cleddau

The Eastern Cleddau area is popular with anglers, smaller recreational craft and canoeists. The river is navigable with local knowledge. Access to the water here is limited due to tidal restrictions and the availability of parking. Facilities in the area are limited.

The developments of Slebech Park conference centre and the Bluestone Resort have, as yet, had little noticeable effect on the recreational use of this quiet and unspoilt area of the Waterway.

APPENDIX 2

The Role and Function of Organisations and Partnerships within the Milford Haven Waterway Recreation Working Group (MHWRWG)

The role and function of organisations within the MHWRWG is described below.

MHWRWG Member organisations

Port of Milford Haven

The Port is the lead body of the MHWRWG, with meetings chaired by the Assistant Harbourmaster. The Port is responsible for the safe navigation and conservancy within the 200 sq mile Waterway, is the largest port in Wales and the UK's largest energy port. The Port also has statutory jurisdiction over the Waterway up to the mean high water mark. Upriver this is taken to be at Canaston Bridge on the Eastern Cleddau and at the weir in Haverfordwest. The seaward limit is effectively 4 miles seaward of St. Ann's Head.

The Port offers a range of marine services as well as owning and operating Pembroke Port and Milford Dock. Activities such as cargo handling, ferry operations, fish landing and cruise calls, as well as a first class marina, are spread across the two sites. In 2015, the Port handled 37.8 million tonnes of cargo with a total of 2083 vessels using the port.

Pembrokeshire Coast National Park Authority (PCNPA)

National Parks in England and Wales were created by the 1949 National Parks & Access to the Countryside Act. The PCNP was designated in 1952 and PCNPA became a free-standing Local Authority in 1996. The Authority's purposes were laid out in the Environment Act 1995:

- to conserve and enhance the natural beauty, wildlife and cultural heritage of the National Park
- to promote opportunities for public enjoyment and understanding of the special qualities of the National Park

with a further duty:

- to foster the economic and social well-being of communities living within the National Park

The PCNPA includes both the lower reaches of the Waterway and the Daugleddau above Burton. It is the only National Park in the UK to be designated primarily because of its coast.

However, National Parks are not in public ownership. Most of the land - over 95 per cent in the case of PCNP - is privately owned and must be respected as such.

The PCNPA is the statutory planning authority for the National Park area. This means that the Authority has the power to grant planning permission as well as setting out policies and guidelines for any new developments. In addition the PCNPA carry out conservation work, manage public access such as the Pembrokeshire Coast Path National Trail and provide programmes of education and outreach work.

All National Parks in England and Wales operate under the "Sandford principle". This principle was recommended by the Sandford Committee, who reviewed the 1949 legislation during the 1970s. The principle states that where the conflict between conservation and recreation could not be resolved, conservation should prevail.

Pembrokeshire County Council (PCC)

Pembrokeshire County Council is the local planning authority for areas outside the National Park designation. It provides the framework for detailed local plans and is the regulatory body for developments requiring planning permission.

PCC must actively promote the development and management of water-based recreation in the county to provide employment opportunities and to contribute to local economic development.

The organisation also has powers to introduce Bye-laws extending beyond low water to regulate recreational activities in the interests of public safety.

Natural Resources Wales (NRW)

This agency has wide responsibilities for protecting and managing the environment

- **Adviser:** principal adviser to Welsh Government, and adviser to industry and the wider public and voluntary sector, and communicator about issues relating to the environment and its natural resources

- **Regulator:** protecting people and the environment including the regulation of marine work, forestry, water discharges and waste industries, and prosecuting those who breach the regulations that NRW are responsible for
- **Designator:** for Sites of Special Scientific Interest – areas of particular value for their wildlife or geology. Areas of Outstanding Natural Beauty (AONBs), and National Parks, as well as declaring National Nature Reserves
- **Responder:** to some 9,000 reported environmental incidents a year as a Category 1 emergency responder
- **Statutory consultee:** to some 9,000 planning applications a year
- **Manager/Operator:** managing seven per cent of Wales' land area including woodlands, National Nature Reserves, water and flood defences, and operating visitor centres, recreation facilities, fish hatcheries and a laboratory
- **Partner, Educator and Enabler:** key collaborator with the public, private and voluntary sectors, providing grant aid, and helping a wide range of people use the environment as a learning resource; acting as a catalyst for others' work
- **Evidence gatherer:** monitoring the environment, commissioning and undertaking research, developing knowledge, and being a public records body

The Maritime Volunteer Service (MVS)

The MVS is a national organisation of men and women, aged mainly between 18 and 65 for active duties, who are interested in learning about seamanship and acquiring skills which will be of benefit to the local maritime community. Membership is drawn from all walks of life and maritime experience is not essential but willingness to learn and a commitment to the Service are essential. Training is given in basic seamanship, marine engineering and Marine shore support skills. Nationally, units work closely with their local Port Authority providing personnel for duties afloat and ashore, thereby relieving highly trained staff to concentrate on key areas in times of emergency.

The local unit, based in Milford Haven, actively supports the Water Ranger by providing trained crews who man and maintain a patrol craft that is funded by the Port of Milford Haven. The Patrols support the work of the Water Ranger by providing advice and assistance to other Waterway users and can be seen on the Haven most weekends and some evenings, providing safety and support craft too many of the events held on the Haven.

Milford Harbour Users Association (MHUA)

Since 1976 the MHUA has represented the interests of all small craft users throughout the Milford Haven Waterway. Membership is not open to individuals, but to all clubs, associations and commercial organisations that are concerned with small craft usage. It comprises of yachting and boating clubs, delegated mooring agencies, waterfront community groups, fish and shellfish farms, leisure tourism interests, boatyards, marinas and chandlers. The association does not pursue particular policy, but seeks to provide a single, convenient, co-ordinating channel of communication and representation between its member organisations and all statutory and non-statutory authorities and agencies with Waterway responsibilities and interests.

Pembrokeshire Coastal Forum (PCF)

The PCF is a hub of information about the management of the local coast and Waterway. The team concentrates on developing a range of projects and gathering information about coastal life – from residents, those who work on the coast, or visitors.

It works mainly behind the scenes to promote knowledge and share ideas to help coastal management both now and in the future. This is helped through individuals getting involved

and there are approximately 1000 members in the organisation from the public, private and voluntary sector.

PCF is free to join and all members are asked to contribute their views, as well as being kept up to date with what is happening on the coast and Waterway. PCF is dedicated to promoting a sustainable approach to the planning, management and use of the coast and actively encourages people to both express their views and gain balanced understanding of the issues concerned.

Pembrokeshire Marine SAC RAG

The relevant authorities for the Pembrokeshire Marine SAC have formed the Relevant Authorities Group (RAG), a voluntary partnership. The Group's main objective is to jointly develop and implement a management scheme for this marine site of European importance. In so doing, each relevant authority is able to meet its duties under the Habitats Regulations (The Conservation (Natural Habitats, &c.) Regulations, Statutory Instrument No. 2716. SI 1994/2716, HMSO, London) and more effectively achieve the aims of the Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna. (OJ No L 206, 22.7.92) in relation to the site. This group has no additional powers but serves to ensure that all relevant authorities contribute to the development and implementation of the scheme.

There are seven relevant authorities for the Pembrokeshire Marine SAC. These authorities are equal members of the Pembrokeshire Marine SAC Relevant Authorities Group (RAG) and are as follows:

- **Natural Resources Wales**
- **Dŵr Cymru Welsh Water**
- **Port of Milford Haven**
- **Pembrokeshire Coast National Park Authority**
- **Pembrokeshire County Council**
- **Trinity House Lighthouse Service**
- **Welsh Government**

Since 2000 a RAG officer has been employed to co-ordinate the work involved in developing the scheme, gather information to better inform the management, enhance stakeholder involvement and raise awareness of the site's wildlife and management needs. This officer is hosted by the Port of Milford Haven and works closely with the Water Ranger to ensure that the conservation needs of the SAC are addressed within the recreation plan for the Waterway.

Interested and Partnership organisations

The MCA, Crown Estates Commission, and other organisations listed below do not sit on the MHWRWG, but they are discussed as they have an interest in the Milford Haven Waterway.

Maritime and Coastguard Agency (MCA)

The MCA is responsible throughout the UK for implementing the Government's maritime safety policy. That includes co-ordinating search and rescue at sea through HM Coastguard, and checking that ships meet UK and international safety rules.

HM Coastguard is situated in the MCA building alongside the Port of Milford Haven's premises in Milford Haven. Part of the MCA, HM Coastguard is responsible for the initiation and co-ordination of all civil maritime search and rescue with the United Kingdom search and rescue region. This includes the mobilisation, organisation and tasking of adequate resources to respond to persons at risk of injury or death on the cliffs or shoreline of the United Kingdom.

As such it has been agreed by the West Wales Search and Rescue Committee that the inshore limits of HM Coastguard's responsibility will be the area inclusive of port limits within the Milford Haven Waterway up to:

West Cleddau - weir at

Haverfordwest

East Cleddau - Blackpool Mill

Cresswell - Cresswell Quay

Carew - Carew Castle

Pembroke - Pembroke Castle

The operations room is manned 24 hours a day with staff dedicated to a listening watch on VHF marine radio (channel 16) as well as MF radio, Digital Selective Calling (DSC) and the 999 emergency telephone system. At the first sign of trouble the staff are available to respond, calling upon and co-ordinating the activities of a vast range of waterborne, land and air SAR (search and rescue) facilities. Additionally, the staff are able to provide safety advice and general maritime information as well as tidal and weather information at any time throughout the day.

The Crown Estate

The Crown Estate is one of the United Kingdom's largest estates. It is divided into a number of smaller estates, one of which is the Marine Estate. This Estate owns:

- 55% of the foreshore (the area between mean high and mean low water mark) in the UK.
- Approximately 50% of all estuarine and tidal river beds in the UK.
- The seabed out to the 12 mile territorial limit.
- The exploration and exploitation right to the natural resources of the UK continental shelf.

The Crown Estate does not own the water column, the natural resources of the sea bed

and does not control public rights of navigation and fisheries in tidal waters.

The Crown Estate owns most of the Milford Haven Waterway foreshore managing the use of its land through licence or lease. Where the foreshore falls within the boundaries of the National Park, the foreshore between mean high water and mean low water is leased to the PCNPA. As such PCNPA is responsible for the day to day management of this foreshore. Outside the Park's boundaries the other areas of foreshore are leased by PCC or in private ownership.

Pembrokeshire Marine Code/ Pembrokeshire Outdoor Charter Groups

The Marine Code and Outdoor Charter groups were developed by local operators and other organisations working closely with the Pembrokeshire Coast National Park Authority and the National Trust. These organisations are all interested in the long-term management of the area and the development of high standards of practice. They recognise that sustainable use must be a key theme in marine recreational activities and education. The Marine Code and Outdoor Charter encourage groups and individuals to show respect and consideration for land owners, environment, wildlife and other users.

Pembrokeshire Biodiversity Partnership

Biodiversity is, literally, life on earth. It is all living plants and animals (including human-kind), their genetic variation and the ecosystems on which they (and we) depend. Biodiversity is everywhere: in gardens, fields, hedgerows, mountains, cliffs and in the sea. Biodiversity represents quality of life. It gives humans pleasure, interest and understanding of the environment. The value of biodiversity however, extends beyond human spiritual needs: wild species are of enormous economic importance, e.g. as new sources of food and medicines, as tropical rainforests continue to demonstrate.

In 1992 the United Kingdom signed the international Convention on the Conservation of Biodiversity at the Earth Summit in Rio. As part of the UK commitment to this convention, national strategies, plans and programmes needed to be put in place to ensure conservation and sustainable biodiversity.

In 1994 the UK Biodiversity Action Plan was published with the overall aim to conserve and enhance biological diversity within the UK, and to contribute to the conservation of global biodiversity through all appropriate mechanisms. Local Biodiversity Action Plans (LBAPs) are the principal mechanism by which the national strategy can be put into effect.

The Pembrokeshire Biodiversity Partnership was formed to publish and implement the Local Biodiversity Action Plan (LBAP) for the whole of Pembrokeshire, including the National Park. It outlines the biodiversity of Pembrokeshire along with the aims of the Pembrokeshire Biodiversity Partnership, which are to co-ordinate existing actions, and initiate and co-ordinate new actions to conserve and enhance biodiversity in Pembrokeshire, taking account of local and national priorities. It also lists all the species and habitats of local and national priority for which Biodiversity Action Plans have been or are being prepared.

The individual habitat and species action plans give a background on the ecology and the distribution in Pembrokeshire. It lists the threats to survival, what is currently being done and what can be done to help protect the species or habitat. Individual plans include a list of actions that have been identified for members of the partnership to implement to ensure these priority species and habitats are protected in the future.

Habitats listed as being of either local or UK biodiversity importance in the Milford Haven Waterway include mudflats, seagrass beds, saltmarsh, inlets and enclosed bays, saline lagoon, coastal vegetated shingle, intertidal open coast, and coastal flood plain and grazing marsh.

Species listed as being of local or UK biodiversity importance in the Milford Haven Waterway include European otter, commercial fish species, native oyster and in the lower reaches of the Waterway the cushion star. Pink sea fans are found at the entrance to the Haven.

All biodiversity, including local and national priority specials and habitats, can be affected by the recreational and commercial use of the Waterway. By following the Milford Haven Recreation Plan's policies, Bye-laws and guidelines users are helping to protect all biodiversity in the Milford Haven Waterway.

National Trust

The National Trust works to preserve and protect the coastline, countryside and buildings of England, Wales and Northern Ireland for which it is well known. It achieves this through practical caring and conservation, through learning and discovery, and through encouraging millions of people to visit and enjoy their national heritage at sites owned by the Trust. The Trust also invests heavily in the nation's environmental infrastructure and works with over thousands of companies and organisations throughout the country.

In addition to managing and maintaining well known properties, the Trust is responsible for or have interests in thousands of acres of land, over 600 miles of coast and thousands of

properties including farms, shops and gardens. Through some of these sites many long-term programmes are implemented to help educate people about the importance of the environment and of preserving our heritage for future generations.

Wildlife Trust South and West Wales

The Wildlife Trust of South and West Wales is one of 47 Wildlife Trusts across the UK. As the fourth largest by area, it covers the area from Cardiff and Caerphilly in the east, to Ceredigion and Pembrokeshire in the west. Within its 90 plus nature reserves are the islands of Skomer and Skokholm as well as West Williamston and Westfield Pill, above Neyland Marina. The Trust priorities are to manage these reserves for wildlife however another significant priority is to provide educational opportunities and serve local communities by providing them with wildlife opportunities in the locality.



APPENDIX 3

Landscape and Nature Conservation Designations

The Milford Haven Waterway is a busy Port providing both commercial and recreational opportunities. The area is also recognised for its importance to conservation. The entire Waterway is designated within the Pembrokeshire Marine SAC and the majority of the foreshore has been designated as SSSI. Other designations also exist within the Waterway supporting and promoting the national and international importance of the Waterway and bounding areas.

The entire landscape surrounding the Waterway has also been recorded in the Register of Landscapes of Historic Interest in Wales. Components that make up the landscape such as field boundary types, field shapes, buildings, settlement patterns, parks and gardens, roads and railways, industry, and archaeological sites are all taken into consideration when considering the landscape for registration.



Special Area of Conservation & Port of Milford Haven area of jurisdiction

In an attempt to preserve biodiversity across the entire European Union, the European Union Council Directive 92/43/EEC (known as the Habitats Directive) called for a 'coherent ecological network of sites' across the European Union, composed of SAC and Special Protection Areas (SPAs designated under the EU Birds Directive, for bird conservation). Individual sites are designated not only because of their individual conservation importance, but also for the contribution they make to conservation of species across the entire European Union.

The Milford Haven Waterway (including the Daugleddau Estuary and other tributaries) lies within the Pembrokeshire Marine SAC. The SAC also includes most of the waters surrounding the Pembrokeshire coastline and around the Pembrokeshire islands including Ramsey, Skomer, Skokholm, Grassholm and the Smalls. The landward boundary is mainly mean high water mark, but as this boundary is consistent with adjacent SSSIs, in some cases it can be as high as the highest astronomical tide.

The Pembrokeshire Marine site was first proposed in 1995 (then called Pembrokeshire

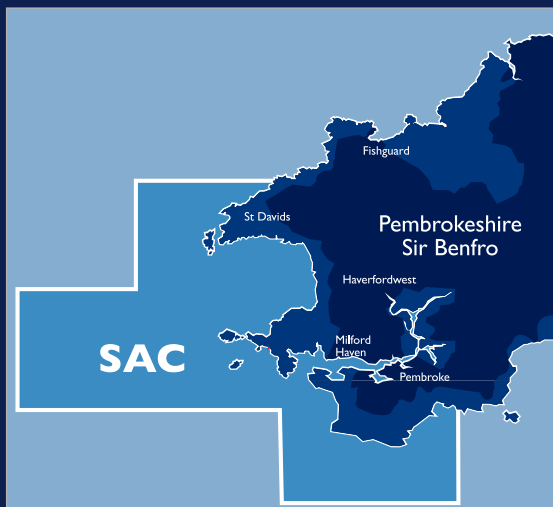
Islands) for its reefs, estuaries, shallow inlets and bays, and for its seal population. In 2000 the proposed boundary was extended and more habitats and species ('conservation features') were added to the list. The SAC is considered to be one of the finest areas in Europe for:

- Reefs
- Large shallow inlets and bays
- Estuaries
- Grey seals

And to support significant presence of:

- Coastal lagoons
- Mudflats and sandflats not covered by seawater at low tide
- Atlantic salt meadows
- Sandbanks which are slightly covered by seawater all the time
- Submerged or partially submerged sea caves
- Allis and twait shads (migratory fish)
- Sea and river lampreys (migratory fish)
- Otters
- Shore dock (maritime plant)





A management scheme for the SAC was published in 2008. This is currently undergoing a review. The SAC management scheme enables all users of the site to better understand how their activities may adversely impact the site's features and what actions they can take to minimise such impacts. The aim of the SAC management scheme is to help to fulfil statutory obligations under the EU Habitats Directive to protect the features of the SAC. The scheme and further information can be found on the SAC website www.pembrokeshiremarinesac.org.uk

Sites of Special Scientific Interest (SSSI)

Sites of special scientific interest (SSSI) are sites designated under the National Parks and

Access to the Countryside Act 1949, and the Wildlife and Countryside Act 1981 for their importance due to their 'flora, fauna, biological or physiographic importance'. A SSSI may extend up to the full extent of the tidal range and sometimes beyond.

For marine users the section of the Wildlife and Countryside Act, 1981 which is of most relevance is section 28. This states that it is an offence for anyone, including users of the marine environment, to intentionally or recklessly damage or destroy notified sites of interest or notified fauna, if they know that what they damage, destroy or disturb lies within a SSSI.

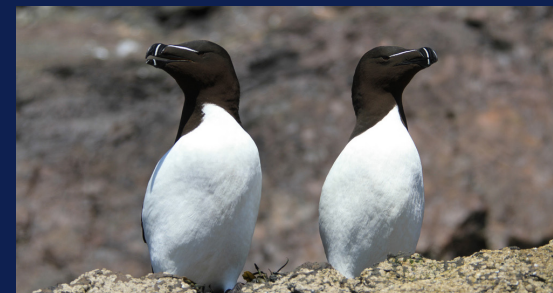
Natural Resources Wales (NRW) is responsible for selecting sites that meet these criteria.

With the exception of areas such as Milford Dock, Neyland Marina and Pembroke Port, the shoreline and many adjacent areas of the Milford Haven Waterway are designated as SSSIs with areas being recognised for different attributes from flora and fauna to geology. The maps in Appendix 1 show the sections of the Milford Haven Waterway which are designated as SSSI.

Wild Birds (Cleddau Sanctuary) Order

On the 19th January 1970, the Wild Birds

(Cleddau Sanctuary) Order came in to force and the Wildlife Refuge was declared. As a result protection was afforded for birds over a key section of the Waterway, extending over the Western Cleddau from Uzmaston to Sprinkle Pill, and also the lower reaches of the Eastern Cleddau.



Marine Conservation Zone (MCZ)

Although the Skomer Marine Conservation Zone (MCZ – formally a Marine Nature Reserve MNR) lies outside the Milford Haven Waterway, it is referred to here as many leisure craft often leave the Waterway on route to the island and anchor close to and within Skomer MCZ. MCZs are designated under the Wildlife and Countryside Act 1981 to conserve marine flora and fauna, geographical and physiological features of a specific area, as well as to provide study and research opportunities of that area. The managing agency must manage the MCZ for these purposes.

The managing agency has Bye-law making powers to:

- Prevent or restrict movement of people and vessels in the Reserve.
- Prevent the killing, destruction, molestation or disturbance of any wildlife or the seabed, except for sea fish or as a result of pursuing legitimate fishery.
- Prohibit or restrict the dumping of rubbish, which in any case is contrary to marine pollution legislation.

The Skomer MCZ is managed and regulated by NRW who set the Bye-laws and voluntary codes of conduct for the Reserve as well as undertaking research work. NRW use protection zones as a management tool. There is a general protection zone, a near shore protection zone and an inshore protection zone surrounding Skomer and the Marloes Peninsula. In these zones speed limits apply and certain types of fishing are prohibited through Sea Fishery Committee Bye-laws. At the time of writing further possible fishing restriction areas were being proposed. In addition there are anchorage areas in North and South Haven. The area is normally marked with no-anchoring buoys and day visitor moorings are provided during the main holiday season to reduce the necessity for anchoring. Enforcement of the Bye-laws is carried out by NRW through patrol craft, which patrol the MCZ and hand out information leaflets on the Bye-laws.





APPENDIX 4

Selected Bye-laws

Bye-laws and General Directions are regularly used to manage the conduct of craft within the Waterway. Although Bye-laws relate to many activities, those most relevant to recreational users, as given in the Milford Haven Waterway Leisure User Guide, are listed below. Full details of both the MHPA Bye-laws 1984; General Directions 2016 and Notices to Mariners are available on the Port of Milford Haven website www.mhpa.co.uk. Copies can also be requested from the Port of Milford Haven.

B/L 20 Vessels to be Navigated with Care:

A vessel shall not be navigated or manoeuvred within the Haven in such a manner or at such a speed as will or may

- Cause damage to any lock gate, sea wall, jetty or other property within the Haven;
- Cause damage, inconvenience or interruption to dredgers or other craft working within the Haven;
- Cause damage, danger or inconvenience to other users of the Haven.

B/L 22 As to Fairway:

No vessel (whether sailing or power-driven) which is not confined to the channel by reason of its draught, shall make use of the channel in such a way as to cause obstruction to any other vessel (whether sailing or power-driven) which is confined to the channel by reason of its draught.

B/L 24 Recognised Landing Place not to be Obstructed:

A master shall not place his vessel or allow it to be in such a situation as to obstruct or interfere with the access to any recognised landing place in the Haven.

B/L 27 Unauthorised Vessels not to Approach Petroleum Berth:

Except with the permission of the Harbourmaster no vessel other than a petroleum ship, a vessel engaged in the mooring, unmooring and berthing operations of a petroleum ship or vessel engaged in supplying or servicing a petroleum ship shall enter or navigate within 100 metres of a petroleum berth or petroleum ship.

B/L 29 Water-skiing and Aquaplaning

A person shall not without the permission of the Harbourmaster engage or take part in water-skiing or aquaplaning, para-kiting or any similar airborne activities in the Haven except in such areas as the Harbourmaster may designate and in accordance with such reasonable conditions as he may impose.

With regards to B/L 29, the Milford Haven Waterway Leisure User Guide contains a map showing the areas of the Waterway designated as water-ski zones and no-planing areas.

B/L 30 Navigating Whilst Drunk

A person shall not navigate any vessel within the Haven whilst under the influence of drink or drugs to such an extent as to be incapable of taking proper control of the vessel

B/L 56 Acts Affecting the Safety of Navigation

A person shall not do any act or thing injuriously affecting the safety of navigation within the Haven.

APPENDIX 5

Weather

West Wales has a climate that is affected primarily by the wide expanse of the Atlantic Ocean. The temperatures do not vary greatly from one season to another due to the temperature of the water, lowering summer temperatures and raising winter temperatures.

On the whole, Wales is cloudier than England because of the hilly nature of the terrain and the proximity to the Atlantic. However, coastal areas of Pembrokeshire average in excess of 1700 hours of sunshine per year, a figure that is similar to the bright areas on the south coast of England. Dale has been recorded as the

sunniest place in Wales with average annual sunshine of over 1800 hours.

It has also been recorded as one of the windiest, with wind speed topping 100mph.

Annual rainfall throughout the Pembrokeshire county varies greatly; as distance increases inland so does the amount of rainfall. Annual rainfall at Haverfordwest is greater than the rainfall in coastal towns. However, it is still approximately 25cm less than in Mynydd Preseli, less than 10 miles away. The annual rainfall in Milford Haven is approximately 100cm (40 inches). The number of thunderstorms on the west coast of Wales is significantly lower than in the rest of the UK. Many areas in the UK experience 15 to 20 thunderstorms per year. In Cardiff the number reduces to an average of 11 and in Pembrokeshire the average is around 8.

Local topography has a very close relationship with windspeed. Over land, the roughness of the ground causes a decrease in the mean wind speed. Similarly, major towns and cities reduce the overall wind speed. However, local funnelling may occur. The western peninsulas of Pembrokeshire have a very limited ability to reduce the speed of the wind and hence experience in excess of 30 days of gales per year. This figure is much higher than other Welsh coastal areas which achieve around 15 days of gales and inland areas are reduced further to 5 days or fewer.

For recreational users of the Waterway weather information can be obtained from links on the Port website www.mhpa.co.uk



APPENDIX 6

Tides

Tides in the Waterway are semi-diurnal; the period between two successive high and low waters is twelve hours and twenty five minutes. A tidal gauge is kept at the Port of Milford Haven to monitor tidal height which can have a range in excess of 7 metres during spring tides. Prediction by the Proudman Oceanographic Laboratory for the period 2005 to 2025 gives a highest astronomical tide height of 7.83 metres and a lowest astronomical tide height of -0.08 metres. When the barometer is reading above 1016 millibars, the water level is liable to drop below predicted heights.

A tidal stream study of Milford Haven was undertaken between January 1997 and October 1999. The aim of the study was to monitor current velocities within Milford Haven to provide a more comprehensive understanding of the nature of the prevailing tidal regime within the port limits. Data was recorded between the approaches to the Haven and Burton. A series of four tidal stream atlases have been produced incorporating this information.

Table 4.A summarised version of the Milford Haven Waterway tidal streams

	Approaches		Entrance		Lower Reaches		Upper Reaches	
	Spring	Neap	Spring	Neap	Spring	Neap	Spring	Neap
Max Rate/ Knts	2.1	1.2	1.4	0.6	1.5	0.7	2.7	1.1
Time (hrs)	6<hw	1.5>hw	3<hw	1.5<hw	3>hw	2.5<	2.5<	2>hw
Direction/Place	WNE	ENE	S	S	E	W	W	SE
Min rate/ Knts	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Time (hrs)	3<hw	1.5<hw	6<hw	5.5<hw	6<hw	6<hw	6<hw	6<hw

Tidetable and tidal stream atlases are available free of charge from the Port of Milford Haven.



AP. 7

APPENDIX 7

Geology

Most of the rocks upon which Pembrokeshire is composed are in excess of 280 million years old. The North Pembrokeshire coastline is composed of igneous rock with Precambrian, Cambrian and Ordovician rock successions. The South Pembrokeshire coastline comprises Carboniferous limestone and Ordovician Shale. The south coastline is younger in geological terms than the north coastline.

The drowned river valley or ria of Milford Haven developed as a result of a complex

series of geological and geomorphological processes that have been occurring since the Devonian epoch approximately 395-345 million years ago. At the end of the most recent glaciation the pre-glacial drainage system was deepened by meltwater from a retreating ice sheet that had once covered the whole of the Irish Sea. Since then, rising sea levels drowned the river valleys to create the current Milford Haven shoreline about 3,000 years ago.

The rock type in the Haven is mainly old red sandstone although there is evidence of younger rocks in the form of millstone grit and silurian sedimentary rocks that were laid

during the Carboniferous and Silurian periods. In addition, there are outcrops of Precambrian igneous rocks and volcanic lavas. The youngest rocks in the Haven are the coal measures which run across the county from St. Brides Bay to Carmarthen.

Areas of particularly high geological importance within the Haven are recognised as SSSIs. More information can be found in Appendix 1.

AP. 8

APPENDIX 8

Water Quality

Pembrokeshire has some of the best beaches in Britain with one of the largest numbers of Blue Flag, Green Coast and Seaside awards.

The beaches in Wales are designated by the Welsh Government depending on their popularity and usage. Beaches which are designated as bathing waters are sampled and monitored by Natural Resources Wales. The non-designated beaches are sampled and

monitored by Pembrokeshire County Council. There are currently 29 designated and 13 non-designated bathing beaches in Pembrokeshire. This increases to 15 if Llanion and Pembroke Castle Pond are included as important water sports venues.

The bathing waters are monitored and assessed for compliance under the Bathing Water Directive (2006/EEC) which was revised in 2015. The revised Directive has more stringent standards than the old directive.

Bathing waters are now classed as Excellent, Good, Sufficient or Poor. Sufficient water quality is required for all bathing waters. Further information on this topic can be found on Natural Resources Wales website on the [Bathing Water page](#). For the latest Bathing Water ratings from Natural Resources Wales, please visit [Bathing Water Data Explorer](#).

APPENDIX 9

Fisheries

The waters within the Milford Haven Waterway provide numerous opportunities for both commercial and recreational fishing activities. As of April 2010 the Welsh Government (WG) assumed full responsibility for the management and development of sea fisheries in Wales from the Sea Fisheries Committees. The existing South Wales Sea Fisheries Committee Bye-laws remain in force for the Waterway until such time as they become statutory instruments through an ongoing legislative review by Welsh Government's Marine and Fisheries Division. In addition to enforcing local fishery Bye-laws and statutory instruments, Marine and Fisheries Enforcement Officers also enforce relevant aspects of National and European fisheries legislation relating to sea fish and migratory fish - a responsibility shared with the Natural Resources Wales (NRW) in relation to migratory species.

The recreational salmonid fisheries on the Cleddau are situated upriver of the Port of Milford Haven jurisdiction, upstream of the weir at Haverfordwest on the Western Cleddau and upstream of Canaston Bridge on the Eastern Cleddau. Migratory salmonids travel through the Port of Milford Haven area of jurisdiction both as adults to reach their

upstream spawning grounds and as juveniles (smolts) in order to reach their marine feeding areas. Throughout these migrations they are vulnerable to illegal (unlicensed) fishing activity.

Other than sea fish, migrating adult salmon and sea trout are the main quarry for net fisheries in Wales and these are restricted to coastal waters and estuaries. The number of fisheries and licences is closely controlled by Net Limitation Orders and Bye-laws which are designed to conserve stocks. The Cleddau compass net fishery operates within the Daugleddau primarily upstream of Hook village and six licences have been issued in the area. This traditional method of netting is the last surviving example of its form in England and Wales.

There is a locally important fishery for herring within the Haven situated in Beggars Reach and the population is harvested using bottom set nets from 15th January to 30th April. In addition to herring, netting takes place for a wide variety of species including bass, mullet, ray and cod. Occasionally pollock, plaice and flounder are caught as a by-catch.

Under WG Statutory Instruments and other legislation, fishing activity is restricted in some parts of the Waterway. Between 30th April and 1st November the taking of sea bass, from the 2 areas designated as bass nurseries, by any vessel is also prohibited by Statutory Instruments and the Bass Order 1999. These restrictions apply to all tidal waters

enclosed by a line drawn from the shore along the eastern side of the Valero Terminal approach jetty to the southern most part of the T jetty, along the southern side to the extremity of berth No 3. then along a line drawn from the extremity of Berth No 3, through the Pennar Beacon to the Llanreath foreshore. The second area is defined as the area eastward of a line drawn along the seaward side of the Cleddau Bridge. These restrictions are in place to protect juvenile fish.

Pacific oysters have been farmed in the past in Carew River and native oyster beds exist from Burton to Llangwm. There are no current permits to allow commercial oyster dredging. Cockles and mussels are present in the area although commercial exploitation of these species is limited.

South West Wales is an important shellfish fishery for vessels targeting species such as scallops, spider crab, crayfish, lobster, brown crab and whelks. There are a number of sites within the confines of Milford Haven used mostly for potting activities. In 2014, reported landings of shellfish into Milford Haven totalled 1160 tonnes with a reported value of £1.6 million.

The potential of the Milford Haven Waterway for further fisheries and aquaculture / mariculture development, particularly for shellfish, is considerable. The Waterway is part of the PMSAC designated under the EU's

Habitats and Species Directive. This means that any new fisheries or related development needs to take account of the special features of the site. The future scale and diversity of commercial fishing activity in the Milford Haven Waterway will depend on the decisions taken regarding potential impacts upon the SAC features.

Recreational activities on the Haven can conflict with some fisheries operations where nets, lines and buoys are not well marked. These can entangle with propellers, keels and rudders, causing damage to the fishing gear and causing a steering problem to the recreational vessel.



Abbreviations

ASPB	Assembly Sponsored Public Body
BMF	British Marine Federation
BSAC	British Sub-Aqua Club
NRW	Natural Resources Wales
DGPS	Digital Global Positioning System
DSC	Digital Selective Calling
DSMW	Dead Slow Minimum Wake
DYC	Dale Yacht Club
GIS	Global Information System
ICZM	Integrated Coastal Zone Management
LOA	Length Over All
LYC	Lawrenny Yacht Club
LQ	Lawrenny Quay
MCA	Maritime and Coastguard Agency
MHUA	Milford Harbour Users Association
MHW	Mean High Water
MHWRWG	Milford Haven Waterway Recreation Working Group
MLW	Mean Low Water
MCZ	Marine Conservation Zone
MVS	Maritime Volunteer Service
NTM	Notice to Mariners
NYC	Neyland Yacht Club
PADI	Professional Association of Diving Instructors

PCC	Pembrokeshire County Council
PCF	Pembrokeshire Coastal Forum
PCNPA	Pembrokeshire Coast National Park Authority
PCRC	Pembrokeshire Cruiser Racing Club
PHYC	Pembroke Haven Yacht Club
PMG	Pembrokeshire Marine Group
PMSAC	Pembrokeshire Marine Special Area of Conservation
PPDC	Preseli Pembrokeshire District Council
PWC	Personal Watercraft
PYC	Pembrokeshire Yacht Club
RHIB	Rigid Hulled Inflatable Boat
RUG	River User Group
RYA	Royal Yachting Association
SAC	Special Area of Conservation
SAR	Search and Rescue
SPA	Special Protection Area
SPDC	South Pembrokeshire District Council
SSSI	Site of Special Scientific Interest
SWSFC	South Wales Sea Fishery Committee
VCA	Voluntary Control Area
VCB	Voluntary Control Body
WG	Welsh Government
WARA	Welsh Amateur Rowing Association
WSRA	Welsh Sea Rowing Association

Consultees

Angle Boat Owners Society	Dyfed Powys Police Marine Unit	Llangwm Community Council	Pembroke Haven Yacht Club/ VCB	Rhooseferry Boat Owners/ VCB
Angle Community Council	East Llanion Marine	Maritime Coastguard Agency		Royal Yachting Association
Burton Area Control Body	Natural Resources Wales	Maritime Volunteer Service	Pembroke Port	Rudders Boatyard
Burton Community Council	FSC Dale Fort	Marloes and St. Brides Community Council	Pembroke Town Council	Sandy Haven Boat Owners/ VCB
Burton Boat Club	Haverfordwest Town Council	Milford Harbour Users Association	Pembrokeshire Performance Sailing Academy	SemLogistics
Canoe Wales	Hazelbeach Boating Club/ VCB	Milford Marina	Pembrokeshire Coast National Park Authority	Slebech Community Council
Carew Community Council	Herbrandston Community Council	Milford Town Council	Pembrokeshire Coastal Forum	South Hook LNG
Castle Pill Boating Club/ VCB	Hook Community Council	Puma Energy Ltd.	Pembrokeshire College	St. Ishmaels Community Council
Valero	Irish Ferries Ltd.	National Trust	Pembrokeshire County Council	The Crown Estate
Cory Brothers	Keep Wales Tidy / Clean Coasts	Neyland Yacht Haven	Pembrokeshire Cruising	Welsh Assembly Government
Cosheston Community Council	Landshipping Ferry Boat Owners Association	Neyland Town Council	Pembrokeshire Cruiser Racing Club	Welsh Assembly Government (inc Tourism Team and Fisheries Office)
Cunjic and Gelliswick VCB	Lawrenny Boat Owners Association	Neyland VCB	Pembrokeshire Dive Charters	Welsh Federation of Sea Anglers
Dale Community Council	Lawrenny Yacht Club	Neyland Yacht Club	Pembrokeshire Marine Group	Welsh Wildlife Trust of South and West Wales
Dale Sailing Co. Ltd.	Lawrenny Quay	Pembroke Dock Town Council	Pembrokeshire Marine SAC	West Wales Maritime Heritage Society
Dale VCB	Ledwood Construction Ltd.	Pembroke Dock VCB	Pembrokeshire Paddlers	West Wales Windsurf and Sail
Dale Yacht Club	Llanstadwell Community Council	Pembroke and District Angling Club	Pembrokeshire Rivers Trust	
DEFRA (Department for Environment Food and Rural Affairs)	Llangwm Boating club/ VCB	Pembroke Haven Motor Boat Angling Club/ VCB	Pembrokeshire Yacht Club	
Dragon LNG			PLANED	

Contacts

Port of Milford Haven

Gorsewood Drive
Milford Haven
Pembrokeshire
SA73 3EP

Tel: 01646 696100

Fax: 01646 696125

Website: www.mhpa.co.uk

E-mail: enquires@mhpa.co.uk

Pembrokeshire Coast National Park Authority

Llanion Park
Pembroke Dock
Pembrokeshire
SA72 6DY

Tel: 0845 345 7275

Fax: 01646 689076

Website: www.pembrokeshirecoast.org.uk

E-mail: info@Pembrokeshirecoast.org.uk

Pembrokeshire County Council

County Hall
Haverfordwest
Pembrokeshire
SA61 1TP

Tel: 01437 764551

Fax: 01437 775303

Website: www.pembrokeshire.gov.uk

E-mail: enquiries@Pembrokeshire.gov.uk

Natural Resources Wales

Llys Afon
Hawthorn Rise
Haverfordwest
Pembrokeshire
SA61 2BQ

Tel: 03000 653000

Website: www.naturalresourcewales.gov.uk

Maritime and Coastguard Agency - Milford Haven

HM Coastguard
Gorsewood Drive
Milford Haven
Pembrokeshire
SA73 3HB

Tel: 01646 690909

Website: www.mcga.gov.uk

The Crown Estate

16 New Burlington Place
London
W1S 2HY

Tel: 020 7851 5000

Website: www.thecrownestate.co.uk

Email: enquiries@thecrownestate.co.uk

Cooke & Arkwright (the Crown Estate Agents)

7-8 Windsor Place
Cardiff
CF10 3SX

Tel: 029 2036346

Website: www.coark.com

Pembrokeshire Coastal Forum

1st Floor, Pier House
Pembroke Dock
Pembrokeshire
SA72 6TR

Tel: 01646 405689

Website: <http://www.pembrokeshirecoastalforum.org.uk/>

Email: pcf@pembrokeshirecoastalforum.org.uk

Pembrokeshire Marine SAC

Pembrokeshire Marine Special Area of Conservation
Suite 5 Cedar Court
Milford Haven
Pembrokeshire
SA73 3LS

Tel: 01646 696108

Website: www.PembrokeshireMarineSAC.org.uk

E-mail: SACofficer@PembrokeshireMarineSAC.org.uk

Maritime Volunteer Service (MVS)

71, Church Road
Llanstadwell
Milford Haven
Pembrokeshire
SA73 1EA

Tel: 01646 601178

Website: www.mvs.org.uk

Royal Yachting Association (RYA)

Ensign Way
Hamble
Southampton
SO31 4YA

Tel: 0845 345 0400

Website: www.rya.org.uk

Fax: 0845 345 0329

E-mail: info@rya.org.uk

RYA Cymru
8 Llys Y Mor
Plas Menai
Caernarfon
Gwynedd
LL55 1UE

Tel: 01248 670738
Fax: 01248 671320
Website: www.welshsailing.org
E-mail: admin@welshsailing.org

Welsh Government Fisheries Office
Suite 3
Cedar Court
Havens Head business Park
Milford Haven
Pembrokeshire
SA73 3LS

Tel: 01646 693412 / 693466
Website: www.wales.gov.uk

National Trust
The National Trust
PO Box 574
Manvers
Rotherham
S63 3FH

Tel: 0844 800 1895 or 0344 800 1895
(local call rates apply)
Fax: 0844 800 4642
Email: enquiries@nationaltrust.org.uk

The Wildlife Trust of South and West Wales
The Nature Centre
Fountain Road
Tondur
Bridgend
CF32 0EH

Tel: 01656 724100
Website: www.welshwildlife.org
Email: info@welshwildlife.org

BSAC
Telford's Quay
South Pier Road
Ellesmere Port
Cheshire
CH65 4HL

Tel: 0151 350 6200
Website: www.bsac.com
Email: info@bsac.com

PADI
The Pavilions
Bridgwater Road
Bristol
BS13 8AE

Tel: 0117-300-7234
Website: www.padi.com
Email: general@padi.co.uk

British Canoe Union
British Canoeing
National Water Sports Centre
Adbolton Lane
Holme Pierrepont
Nottingham
NG12 2LU

Tel: 0845 370 9500 or 0300 0119 500
Fax: 0845 370 9501
Email: info@britishcanoeing.org.uk

Canoe Wales
The National White Water Centre
Frongoch
Bala
Gwynedd
LL23 7NU

Tel: 01678 521199
Website: www.canoewales.com
Email: admin@canoewales.com

Welsh Sea Rowing Association
Email: secretary@welshsearowing.org.uk

UK Windsurfing Association
UKWA
PO Box 703
Haywards Heath
RH16 9EE

Website: www.ukwindsurfing.com
Email: info@ukwindsurfing.com



Photography: Adrian Owens, Alex Brown, Martin Cavaney, Pembrokeshire Photography, Aurora Imaging, Ryan Chadd, Derek Phillips, David Barrett | **Design** by lisadevonald.co.uk