

Port of Milford Haven
LEISURE SAFETY DIGEST
2019



Port of Milford Haven

Introduction

The marine environment is a potentially dangerous one and one that all mariners, be it leisure or professional, should respect and take all relevant precautions to ensure the safety and integrity of their vessels, and all who sail on them.

One way we can all do this is by spending time reflecting on past experiences, for there is much to be learnt from our mistakes. We will never eliminate accidents, however by paying attention to your experiences and those of others, hopefully we can reduce them over time.

The MAIB (Marine Accident Investigation Branch) does a sterling job of investigating maritime incidents and accidents, and each year they publish a 'Digest' of pertinent incidents where lessons can be learnt. The purpose of the MAIB investigations is never to determine liability or, as far as possible, to apportion blame. The purpose is to enable the wider marine community to learn from others' experiences and to reduce the number of incidents.

Many of the incidents reported to the MAIB are not severe enough to warrant an investigation, however there are often lessons to be learnt from these 'smaller' incidents. Here at the Port of Milford Haven, we are obligated under the Port Marine Safety Code to report all incidents to the MAIB and to investigate them ourselves so that we can ascertain if there are lessons to be learnt for all parties, including commercial operators and the Port.

Over the years this process has highlighted some important issues. An example in recent years was a persistent failure of moorings - 19 compared to an average of 4 a year. When investigated, it transpired that many of these failures could be attributed to a shackle available from a major online retailer that was made so cheap that it was not fit for purpose. Having identified this, we bought one, then spread the word using the shackle as a practical demonstration. The following year mooring failures dropped to a more usual 3. Still too many, but a significant reduction.

As a major part of the Port's safety management and monitoring, we record all reported Port Incidents (PIRs) and all reported Near Misses (NMRs); these are a broad mix of commercial and leisure orientated incidents, with the occasional combination of both. In 2019 we recorded 129 NMRs and 58 PIRs. Of the 129 NMRs, 16 involved leisure vessels and of the 58 PIRs, 21 involved leisure vessels. The purpose of this Digest is to take a direct look at what is affecting mariners on the Milford Haven Waterway and to ascertain if there are lessons that can be learnt to make it safer for us all. In the spirit of learning lessons and avoiding blame, all incidents discussed in this will be anonymised to protect the individuals. We have also grouped incidents together as 'types' rather than focusing on numerous individual events.

Abbreviations

AIS	Automatic Identification System
BST	British Summer Time
COLREG	Collision Regulations (International Regulations for preventing collisions at sea)
CPA	Closest Point of Approach
EPIRB	Emergency Position Indicating Radio Beacon
EVDS	Electronic Visual Distress Signal
LNG	Liquefied Natural Gas
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coastguard Agency
MHCGOC	Milford Haven Coastguard Operations Centre
NMR	Near Miss Report
NtM	Notice to Mariners
PCC	Pembrokeshire County Council
PDFT	Pembroke Dock Ferry Terminal
PIR	Port Incident Report
PLB	Personal Locating Beacon
PMSC	Port Marine Safety Code
RHIB	Rigid Hull Inflatable Boat
SART	Search and Rescue Transponder
TCPA	Time to Closest Point of Approach
UTC	Universal Time Coordinated
VHF DSC	Very High Frequency Digital Select Calling
VLCC	Very Large Crude Carrier

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To cross, or not to cross, that is the question



Late April and a Very Large Crude Carrier (VLCC) was making its way out from the Port to sea with two pilots on board. The vessel reported a small yacht around 6 metres length near the West Channel entrance. The yacht was fine on the port bow and was heading in a westerly direction. The Pilot on board recorded in his report that *“It was a bright sunny day and there was a lot of glare on the water. This, combined with the sea conditions at the time, made it very difficult to see the small craft. At times it was impossible to see the hull of the boat even when looking directly at it, as it was disappearing into the troughs of the waves”*.

The yacht then made a course alteration that would take it across the channel towards St Ann's Head, directly across the bows of the VLCC. The Patrol Launch was tasked to intercept the yacht and give instructions for a safe course. The yacht, however, had realised his miscalculation and made a tack south, taking him to safer ground. The VLCC subsequently made a bold alteration to starboard as she was clearing the West Channel, so leaving the yacht down his port side with around 100 metres clearance.



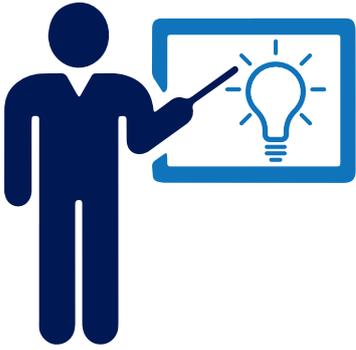
Mid June and the Isle of Inishmore (IOI) ferry was making her regular transit out of the Haven bound for Ireland. On passing the eastern end of Puma Energy, a 9 metre yacht hove into view approximately 50 metres into the channel from the north, at the west end of South Hook LNG. The yacht made a course alteration to south on spotting the ferry. The IOI sounded 'five short blasts' at this point as the yacht's intentions were not clear to the Master. With his current course and speed, the Master assessed there existed a risk of collision in a narrow channel. The yacht held its course and the ferry took measures to increase the CPA, subsequently passing the yacht approximately 50 metres on the port side.



Sunday racing in December, multiple yachts were competing en route back to Neyland from Wear Spit and the IOI was inbound for PDFT on her regular schedule. The ferry was concerned that three of the yachts represented a collision risk, further exacerbated by the very narrow channel and the need for the IOI to maintain a minimum of 8 knots in the wind and tide conditions. Two of the yachts responded to the IOI sounding 'five short blasts' and made their intentions clear by a significant change to their course. One however remained oblivious, requiring the IOI to sound 'five short blasts' a further four times before action was taken. This amounted to a change of course to the north towards the edge of the channel, then a further alteration at the stern of the IOI to resume the original course. The CPA was under 20 metres.



In addition to these three NMRs, there were a further three NMRs investigated involving close quarter situations and/or crossing situations where large commercial vessels were impeded in the narrow channel by small leisure vessels. As part of all of these investigations the persons in charge of the vessels were contacted with a request that they assist the Port in recalling the situations from their perspective, asking what their thought process was, if they would do anything differently, did they think the other vessel could have done anything differently etc. Overwhelmingly the response was positive, with the helms reflecting on events and often coming up with their own lessons learnt.



1. Local knowledge

In more than one of these incidents the commercial vessel impeded was on a regular schedule, therefore local knowledge should have informed the passage plan of the leisure vessel. All but one of the vessels involved were local.

2. Communication

In each of these incidents the commercial vessel and Port Control were unable to contact the leisure vessel via VHF. All vessels are required to maintain a listening watch on Channel 12 while in the Haven. This way you will be aware of what is moving and where, as well as hearing the pre-movement warnings broadcast for specified vessels (generally VLCC and LNG ships).

3. Situational awareness

Leisure vessels often underestimate the speed a commercial vessel is making. An estimated speed of 5 knots versus an actual speed of 10 knots means the distance is closed in half the anticipated time. The commercial tankers and vessels like the IOI need to maintain between 6 and 10 knots depending on conditions to maintain steerage.

4. Collision regulations

Rule 9 (Narrow Channels) states:

- (b) A vessel of less than 20 metres in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway.
- (d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.

5. Bad decisions

In at least one of these incidents decision making was impaired following a long and fraught passage involving food poisoning and sleep deprivation. There are significant bodies of research that compares 17 hours without sleep equivalent to being over the legal drink drive limit.

6. How does your vessel stand out?

Radar is a great aid onboard ships, however often leisure craft do not show up very well either due to vessel construction or sea conditions. Fitting AIS 'B' to your vessel is a relatively cost-effective way of giving you a better chance of being seen. Another solution is the fitting of an 'Active See Me' radar target enhancer, so increasing your vessel's radar cross section.

7. Notice to Mariners

Each year the Port issues NtMs to notify users of the waterway of events, surveys or significant occurrences. 23 of these are annual standing NtMs and many are specifically for the leisure community. You can subscribe for free alerts at www.mhpa.co.uk/subscribe

Mystery Vessel



Late May and Milford Haven Coastguard reported a yacht drifting near Hobbs Point. It was assumed that it had broken from its mooring. The vessel was recovered by other leisure users and attached to a vacant mooring for safety. On investigation, the vessel could not be found on any Port database, nor with any of the commercial mooring areas or marinas. The next day a local search was conducted for the vessel, however it was nowhere to be found. The incident was closed out shortly after as there was no way of identifying an owner.



Fast forward to late July and another yacht was reported drifting off Neyland Point. The Water Ranger was tasked to investigate, took the vessel under tow and secured it to the pontoon for safety, then continued to investigate. The vessel name was very similar to the one reported late May. It was established as being the same vessel, but when the name was passed in May it had gone through several interpretations of spelling making the name slightly different. This established, further database searches were conducted to no avail - it was a mystery vessel. As a result of this the Duty Harbourmaster made the decision for the yacht to be taken to a place of safety in case an owner could not be found, therefore the yacht was taken to Milford Marina under tow.

Several days later, contact was made with the Port by the vessel owner. After meeting with him it transpired that he had made no checks to identify the regulations within the Haven. He had talked to some other boat owners and had picked up a vacant mooring, then left his vessel to return home several hundred miles away. He had visited the vessel, gone cruising once more, then returned it to another vacant mooring within the Haven and again left for home. Some time later he discovered his vessel missing and contacted the MCA who advised him of the Port's involvement.

Having established the facts, and on settlement of his account, the owner was put in touch with a mooring officer who subsequently organised a mooring licence for the owner.

Lessons



1. Communication

In the initial report, the spelling of the vessel was assumed. Verification from the parties involved would have established a clearer picture and perhaps a quicker resolution.

2. Ports are busy places, often with multiple moorings in many different areas

It is a vessel owner's responsibility to ensure the legality and safety of their vessel. This could have been a very serious incident had the vessel come loose in the dark and drifted into the main channel.

Fail to prepare, prepare to fail



Boats break down. It's a fact of life and can happen to the most prepared or the least prepared. Statistically however, it is the least prepared who will find breakdowns occur more frequently. In this section we can look at both sides.



Early June and a dive RHIB was off the Dakotian Buoy and called a 'PanPan' as they had experienced engine failure en route. They called in on Ch16 and MHCGOC tasked the Police RHIB M10 to assist as they were the nearest asset. The RHIB crew deployed two anchors to prevent grounding due to their drift. All were wearing dry suits and life jackets and had flares ready to deploy if required. The engine had 300 hours run time and had just been serviced. On investigation, the piston conrod had failed and punched a hole through the engine block.



Late June and a powerboat was reported as needing assistance due to a breakdown near the South Hook LNG jetty. The vessel drifted under the jetty and was pulled out by a safety boat before being taken in tow by the Water Ranger Patrol to Neyland. The powerboat got a secondary engine running, however due to the wind and tide conditions the tow was a quicker and safer option. On investigation, it transpired to be an electrical connection failure. The vessel had no VHF or flares and would have had to rely on a mobile phone in the event of problems.



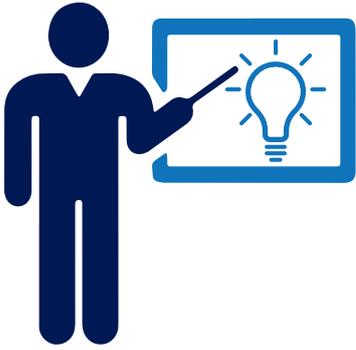
A yacht on passage from Swansea suffered an engine failure in the channel off Milford Marina. They called to Pier Head for assistance and were advised to contact the coastguard or Port Control. As the vessel and crew were not in any danger the decision was made to task a pilot cutter to assist in towing to the Mackerel Stage. Due to the yacht position, a tanker due to depart Valero had to be delayed until the yacht was clear.



Mid July and a cabin cruiser reported into MHCGOC that they had broken down and secured to a navigation buoy. As a result, no commercial vessel could pass this position until the vessel was moved. The Water Ranger Patrol was tasked and took the vessel under tow to Neyland Marina. There were two persons on board with no lifejackets on and a vessel that looked to need maintenance.



Late September in near gale conditions. A 9 metre cabin cruiser exited Milford Marina and within 100 metres of the lock suddenly lost all engine power. The helm tried to restart but was unsuccessful, so called for assistance. On this occasion, a pilot cutter was available and was tasked to put the vessel alongside the Mackerel Stage. The vessel had just undergone significant works to its fuel and propulsion system.



1. Communication

The vessels that had working VHF radios were able to call for assistance quickly. The others had to rely on someone seeing them to raise the alarm or on a mobile phone that can fail when wet, will often have poor coverage at sea, and can only ring one number at a time (everyone in range will hear a VHF call). Lifeboats and helicopters cannot home into the signal of a mobile phone, but can with a VHF and will find you faster.

2. Distress signals

While none of the incidents mentioned were distress in nature, they could have been. There may have been no one around to raise the alarm, they could have been taken by the tide into a collision situation, they could have gone aground, any amount of 'could have' situations were possible, so a way of raising help in an emergency is essential. Pyrotechnic flares have been around for many years, however there are more modern and safer electronic options available such as EPIRB, PLB, VHF DSC, AIS and SART and a range of Electronic Visual Distress Signals (laser flares) that may be more appropriate and safer for small leisure craft, as long as they have another means of raising the alarm as EVDS are not listed as a distress alerting device in COLREG.

3. Back up means of propulsion

Breakdowns happen but with a backup it is more likely that you will self-recover with minimal fuss. Only one of these power-driven vessels had a backup. On this occasion it would have been a very slow return to safety, but they would have managed it.

4. Preventing escalation

Never underestimate how useful an anchor can be. By carrying and knowing how to deploy an anchor you can prevent drifting into a shipping lane or indeed going aground. All tankers entering the Haven must have their anchors 'cleared' ready to deploy as required.

5. Lifejackets

In observations around the Haven, relatively few leisure users wear lifejackets. Every year around 200 people drown in the coastal waters of the UK. Research has proven that wearing a lifejacket can increase your chances of survival by up to four times if you are immersed in cold water. Without a lifejacket, even the most competent swimmer will be unable to swim after around 30 minutes in cold water. If you are dressed to be in the water, such as wearing a wetsuit, then a buoyancy aid will suffice. Otherwise a lifejacket, preferably self-inflating, is the best choice.

6. Weather

Before venturing out on the water an up to date forecast is a must. When conditions are near gale and due to increase then decisions on where or if you go must be based on good forecasting, as well as obtaining the current prevailing conditions. MHCGOC broadcast the forecast on channel 62 around 07:50 and 19:50 (local time) each day. Port Control broadcast gale warnings on Channel 12 and 14 when they are received and are repeated on the routine navigation warnings broadcast at 03:00, 09:00, 15:00 and 21:00 (UTC).

All Tied Up (Or Not!)

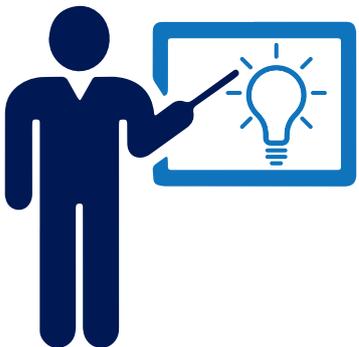


 Early February and a yacht was reported as aground on the shore opposite Black Tar. The weather conditions were strong gales with winds gusting to 45 knots (almost 52 mph). The vessel was undamaged and secured to the shore, it was then re-floated on the next suitable tide. On investigation, the pennant between the buoy and the yacht had failed.

 Late April and 'storm force' conditions, wind consistent at 41 knots and gusting over 50 knots. A 7 metre power driven vessel was reported as adrift in the Dale area, with no persons on board. The pilot cutter and other vessels were tasked to locate, but were unable to find it in the conditions. The next day the vessel was located foundered on the northern shoreline near Sandy Haven in multiple pieces. On investigation, the vessel was identified as having broken free from a Dale mooring with most of the mooring tackle still attached to the vessel.

 Late June, gale 8 conditions. There was a report of two vessels aground in Dale, a further aground near Neyland and a further vessel foundered on Neyland Pontoon sat in 5 metres of water. The first three vessels had suffered mooring failures and the fourth had been left alongside the pontoon with no fendering and light polypropylene rope to secure it. The three mooring failure owners were contacted and attended their vessels, securing them until being re-floated. One had suffered extensive damage to the stern so was removed from the waterway. We were unable to identify the owner of the foundered vessel. On high water the next day a grappling hook was dropped into the vessel and dragged into the drying ground where, once the tide dropped, it was winched above the tidal reach and secured.

Lessons



1. Mooring maintenance

The saltwater and brackish water we have in different areas of the waterway each have different effects on mooring tackle. What must be realised is that these conditions can best be described as hostile to anything laid within them. Couple this with the temptation to buy cheaper products to use as mooring tackle and you have a recipe for disaster. There is no substitute for a professional mooring inspection and maintenance routine, as well as spending an appropriate amount on the tackle to be used. In the event of a mooring failure and insurance claim, often the first questions asked by the insurance company are 'what is your maintenance program and who undertakes it?'

2. Weather forecast

We often have glorious conditions in Pembrokeshire for enjoying the outdoors, however we are also subject to storm conditions, even in the summer. Many of us are focussed on getting a forecast prior to heading out, but how many maintain a weather eye on the forecast to assess the safety of their vessel on its mooring? If you have a mooring registered on the waterway and have supplied the Port with an email address, you will receive weather warnings during the season when winds are predicted to be above gale force 8. If you want to ensure you receive this warning, please contact our Marine Administrator with your mooring number and email address at enquiries@mhpa.co.uk

3. Quality of rope

One of the most common failures regarding moorings is the pennant between the buoy and the vessel. Owners sometimes use scraps of rope, don't check for wear, don't have chafe protection at the crucial wear points and, more often than not, only have a single line taking all the stress. We always recommend that good quality ropes are used and checked regularly, are fitted with chafe protection and that there is a secondary line that goes from a different part of the mooring tackle to a different part of the boat. The likelihood of both failing at the same time is low.

4. Insurance

In the event that your vessel breaks free from your mooring you are liable for any damage that may be caused. To that end we recommend, in line with RYA recommendations, that a minimum of £3 million cover is taken out. Remember, if your vessel breaks out and drifts to the main channel it could cause untold damages to a vessel if they have to take avoiding action and their vessel is damaged as a result, or if your vessel sinks in the main channel, closing the Port.

5. Pontoons

Pontoons are for occasional use, they are provided by PCC and supported by the Port. Vessels are only to be left for a maximum of 12 hours, not tied up for the season and left unchecked. The weather conditions experienced through the season combined with the strong tides mean that any vessels left unattended are subject to considerable stresses and strains.

If the ducks are walking



Early March and a report from MHC GOC was received of a RHIB grounded on Pwllcrochan flats. The RHIB had been transported for a group of divers from Scotland. They had launched at Gelliswick, however on return they found they were unable to recover the boat due to the low tide of 0.4 metres. A decision was made to take the RHIB to Warrior Way for recovery at the slipway, however the helm was also the van driver. One of the divers held a Level 2 powerboat qualification so was tasked to take the RHIB upriver. This new helm was unfamiliar with the waterway, although they had been to Warrior Way before and were aware of the location. They were advised to stay in the middle of the waterway due to the tides, however off Pwllcrochan the middle of the waterway is drying ground. The helm did not notice the navigation marks as they were concentrating on the 'middle'. As soon as the vessel went aground the helm realised the mistake. Thankfully, a local safety boat was nearby and able to pull her clear as the tide rose.



Mid-June and it was cruiser racing night. Three yachts were vying for position and took the choice of transiting over Carr Rocks. The tide was approximately 2 metres above datum, ebbing tide with low water approximately 1.5 hours away. The first yacht, shallowest draft, took a more southerly tack and cleared through. The second yacht with 1.5 metres draft took a more northerly tack and cleared through. The third yacht ran between the two, also with a 1.5 metre draft and went aground. Angle Lifeboat was tasked, however could not get close so deployed the 'Y' boat carried in the stern to give assistance. The yacht was re-floated as the tide rose several hours later and on checking the integrity of the hull was left on its mooring overnight. The next day the yacht was lifted out and while still aloft the keel, keel bolts and hull were all inspected for damage.



Late August and a 10-metre sailing vessel was cruising towards the Cleddau Bridge with a plan to turn there and return down river. The helm got distracted due to a sheet jam which the crew were dealing with, but the helm was also giving advice. As a result, they went aground on Neyland Spit. Tide was 2.7 metres above datum and flooding. The yacht was of substantial fibreglass construction with a long, formed keel. With assistance from a local safety boat, they were floated off on the rising tide and resumed sailing.

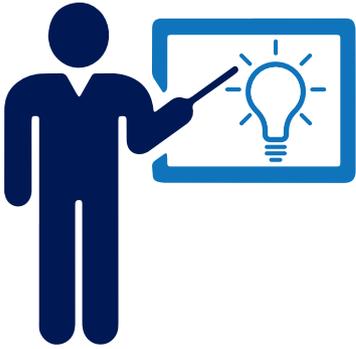
As part of these investigations, the helms of each vessel made the following comments:

"I did not notice the navigation marks as I was concentrating on the 'middle'."

"I re-checked my tide calculation and realised that I had misinterpreted the time when I thought LW was, I was out by an hour. Where I also got it wrong was, I didn't monitor the depth gauge once I'd made the decision to cross the Spit."

"The grounding occurred because of a distraction to the helm while attempting to resolve a sheet jam in the whisker pole. We had decided to turn around at the bridge and return to Milford Marina. I was on the helm and my son was dealing with the jam. I was giving advice to him for a few moments and failed to helm over in time."

Lessons



1. Local knowledge

The waterway looks like a big expanse of water; however although we are one of the deepest natural ports in the UK we have our shallow areas which, combined with low water springs of 0.4 metres, can catch the unwary. Do your research, check the charts for your intended voyage and take the tides into consideration.

2. Look where you are going

It's easy to be distracted and think you know where you are, but there is no substitute for a visual inspection for determining if you are sticking to your passage plan. If you don't know the waterway very well then do your research and if you are unsure, please don't undertake the passage or have someone with you that does know the waterway.

3. Learn chart work

There are courses available through the various training establishments on the Haven that will help you understand charts, for example the Day Skipper Shore Based certificate. This is an invaluable way of learning how the different features are marked on charts.

4. Check your tide tables and check them again

Make sure you have the correct day and tide and look to see if you must account for BST. The Port issues its combined tide tables and leisure guide each year which also has snippets of information, hints, tips and regulations to help you stay safe.

5. Inspect your keel

In 2014 the sad loss of all on board the yacht Cheeki Rafiki while on passage across the Atlantic to the UK was reported. The subsequent MAIB investigation determined the keel had become detached from the yacht causing it to capsize, therefore the crew did not get a chance to deploy the life raft. One of the causes of the keel failure was determined as the repeated groundings over its lifespan. In any grounding situation the Port always recommends that the yacht is lifted from the water; and while suspended, the keel bolts, keel and where the keel joins the yacht are all inspected closely, with any repairs carried out professionally.



Early evening in late May and a 4 metre sailing vessel was reported in difficulty off Hazelbeach. Angle lifeboat was out training so were tasked to investigate. It transpired that the small dinghy with two on board had suffered a rigging failure and could only use the gib sail. Angle lifeboat towed them to Warrior Way as they were barely making 2 knots against an ebbing tide and it was starting to get dark. The helm later reported as part of the investigation that a shroud had snapped causing them to capsize. When they righted the dinghy they realised the mainsail had been ripped so they stowed it and endeavoured to return to Warrior Way with just the gib. They were making slow progress and were glad of the lifeboat assistance. The helm further reported that they normally carry a handheld VHF radio but had forgotten it and admitted that they do not usually carry flares.

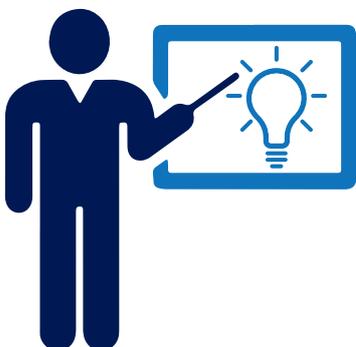


Late May and a yacht was moored alongside the Dale outer pontoon. The owner was preparing to depart due to strengthening winds as there would be a possibility of damage to his vessel from the pontoon. In the process of letting his lines go, his auto furl system on his gib sail failed and the wind pulled it out leaving him with just his bow line in hand and no lines attached to the pontoon. He tried to retain hold of his yacht, however the strength of the wind pulled him into the water. The owner was wearing a good quality auto inflate lifejacket which functioned correctly and he also had a waterproof VHF in his pocket so was able to raise a mayday on Channel 16. A local vessel responded and was on scene very quickly and recovered the owner from the water. The yacht was blown across the bay to Musselwick which was observed by a local who got into his own RHIB and reached the yacht just as it grounded. He was able to quickly get a line on and towed it out, placing it on his own deep water mooring for safety. The following day the yacht was lifted out and the keel inspected as per recommendations.



Mid-June and a call from a Svitzer tug reported a capsized canoe off Carr Spit in the main channel. They launched their MOB boat to assess but no casualty was visible. The call was relayed to MHCGOC and Angle lifeboat was tasked. Port Control looked to the CCTV and the casualty was sighted. The Svitzer man overboard boat (MOB) was directed to the casualty and the crew recovered a male from the water and returned him to Carr Jetty. The casualty was hypothermic and required medical attention, therefore a land ambulance attended at Carr Jetty to receive the casualty. MHCGOC later advised the casualty was in ambulance care and had been transferred to hospital. The casualty had been in the water for around 45 minutes in shorts and a t-shirt with a very old, manual inflation lifejacket that had no inherent buoyancy. Thankfully the casualty survived his ordeal.

Lessons



1. Shouting for help

In only one of these incidents was a VHF radio carried and used to raise the alarm. The two persons onboard the dinghy had done everything correctly, they just didn't have the means to raise the alarm had they not been so fortunate. The last one was lucky to have survived; if the Svitzer tug hadn't been as vigilant there is a high chance the incident would have resulted in a fatality.

2. Wear a Lifejacket

It's already been said, but it is worth repeating. In observations around the Haven, relatively few leisure users wear lifejackets. Every year around 200 people drown in the coastal waters of the UK. Research has proven that wearing a lifejacket can increase your chances of survival by up to four times if you are immersed in cold water. Without a lifejacket, even the most competent swimmer will be unable to swim after around 30 minutes in cold water. If you are dressed to be in the water, such as wearing a wetsuit, then a buoyancy aid will suffice. If, however, you are dressed in normal clothing then a lifejacket, preferably self-inflating, is the best choice.

3. Stay vigilant

In all of these incidents there was assistance given by passers-by or vessels. When out and about on the shore or on the water, remain vigilant to what is happening around you and be ready to render assistance to anyone who may need it. But remember, do not ever place yourself in danger to try and save someone else. Raise the alarm first, then look at what you can safely do to help.

4. Cold water shock

We unfortunately hear of people drowning every year, however more and more it is being identified that cold water shock is the causal factor. Sudden immersion in water below 15°C causes the blood vessels in the skin to close, which increases the resistance of blood flow. Heart rate is also increased. As a result, the heart has to work harder and your blood pressure goes up. Cold water shock can therefore cause heart attacks, even in the relatively young and healthy. The sudden cooling of the skin by cold water also causes an involuntary gasp for breath. Breathing rates can change uncontrollably, sometimes increasing as much as tenfold. All these responses contribute to a feeling of panic, increasing the chance of inhaling water directly into the lungs. This can all happen very quickly: it only takes half a pint of sea water to enter the lungs for an adult to start drowning. You could die if you don't get medical care immediately. If you enter the water unexpectedly:

- Take a minute - the initial effects of cold-water pass in less than sixty seconds
- Relax and float on your back to catch your breath
- Keep calm and call for help or swim to safety if you can

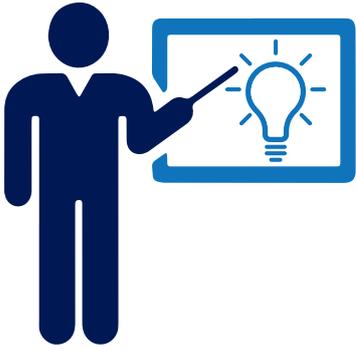
Mystery of the mast



Mid-April and near gale conditions. MHC GOC called Port Control concurrently to a VHF 'pan pan' by a yacht to advise they were in difficulty near to the Puma Energy jetty in the main channel. A pilot boat was en route to sea so was tasked to assist; the vessel was sighted by Port Control drifting towards Angle Bay moorings. Once alongside, the pilot boat began assisting and advised MHC GOC that there were no injuries to either of the two persons on board the yacht. The subsequent report from the yacht read:

"About ½ mile from East Angle mark (a little before midday), the mast started to fold 6ft from the base and came down bringing all the rigging and sails with it. I tried to motor out of the main channel with the aim to get into the lee of the land, but the wind in the collapsed sails was too strong and the outboard could not overcome this. As we were in the channel and the ferry was due, I put out a pan pan request for help and set about retrieving the mast and sails which we managed to tie to the boat. First on the scene, very quickly, was a Port Authority pilot boat, followed by a police launch and the yacht following us took down its sails and stood by. These helpers waited until the lifeboat was launched which then took us under tow and waited for the ferry to pass. We were towed to Milford Marina who were waiting for us and gave us pontoon space to sort ourselves out. We dismantled the rigging and sails stowing most aboard and tied the broken mast to the deck. We were then able to motor back to Neyland Marina and return to my berth. I took the broken parts to a local rigging company and asked them to give their opinion on the failure. All the stays and shrouds were fine and the mast had folded in an area they would not expect it to. They said there could only have been a defect in the mast section where it folded. The rigging should have easily coped with a fully reefed main on a run in a 2ft or so swell which we were going with. It was then I remembered that in March when I was taking the boat home for cleaning and antifouling, I had difficulty lowering the mast. It had twisted and I couldn't get the base pin out. I raised the mast 6ft but the pin came out rather too quickly and the mast fell onto the boat and over the side. Although I looked at the mast at the time and thought it was OK, I now believe I must have damaged the section that hit the boat which then folded when under pressure. This was my first sail after putting it back in the water."

Lessons



I. The helm did the right thing in this situation

The alarm was raised and recognition was given of their proximity to the main shipping channel. The vessel had all the right equipment and it worked, saving vital time in raising the alarm. Thankfully, no one was injured. The yacht crew worked well to help their own situation making it easier for attending vessels to assist. In theory this incident was avoidable, however even with a professional inspection it is unlikely the probable damage to the mast would have been picked up.

Useful Links

<https://rnli.org/safety/know-the-risks/cold-water-shock>

<https://www.metoffice.gov.uk/weather/forecast>

<https://rnli.org/safety/lifejackets>

<https://rnli.org/safety/how-to-call-for-help-at-sea>

<https://rnli.org/safety/respect-the-water>

<https://www.mhpa.co.uk/enjoy-the-waterway/>

<http://www.collisionregs.com/MSN1781.pdf>

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