

# Watch many hands

# make lights work...

## life at sea



Sights for sore eyes: navigation skills put into practice onboard Patricia

ALL PHOTOGRAPHS: FRANCES HOWARTH

Trinity House now offers cruises with a difference — making voyages aboard their flagship, Patricia, available to the paying public. NUMAST member Captain Michael Howarth joined the vessel for a 'busman's holiday'...

**CALL** me lazy if you want, but I love watching people work. It's an art form that I have perfected since the late 1960s when I first went to sea as a deck cadet, but it was not until my voyage aboard the Trinity Lighthouse tender Patricia for a week that I realised I had graduated as a bachelor of the art.

Since it became possible for passengers to book passages aboard Patricia, an increasing number of seafarers have enjoyed her accommodation and hospitality as she undertakes her work around the coast.

These voyages offer a fascinating insight into the seamanship and navigation skills her small crew possess as they go about their daily tasks.

Around the coast of England, Wales and the Channel Islands there are 427 buoys, 20 beacons, 11 light vessels and 72 light-houses, all under the general control of the Trinity House Corporation.

It is a fair bet to suggest that all seafarers do, or have, used the major navigation marks as way points when they plan or execute a voyage from A to B. But as we sail past these signposts in the sea, who of us has ever given thought to those who service and maintain them?

The Corporation of Trinity House was constituted under a Royal charter granted by King Henry VIII in 1514. Its duties include the maintenance of navigation buoys, attendance and refuelling of offshore lighthouses and dealing with emergencies within coastal waters, including wrecks.

To complete this task they use three specially designed tenders — one of which is stationed on the east coast, the other on the west and with the smaller third vessel looking after buoyage in more sheltered waters.

The easterly and southern coasts of England are looked after by the Corporation's flagship THV Patricia. The ship offers accommodation for up to 12 people in six double-bedded luxury staterooms, each with en suite facilities. There is ample room onboard to relax, with a dedicated passenger lounge that opens up to a promenade and viewing deck below. A separate

passenger dining saloon offers panoramic views from right astern to well forward of the beam. The vessel's role as a working ship is what makes her special for passengers, and in that she is unique. Passengers are able to view the day-to-day activities she undertakes whilst working, coast sailing in a wide variety of different environments.

Currently, buoys are inspected on an annual basis and with over 400 of them in service this is a significant workload for the tenders. Since the withdrawal from service of the Britannia, Patricia is also frequently employed by the Royal family for ceremonial and private functions involving yachting.

Typically, the tenders work each day lifting buoys, inspecting chains and sinkers for wear and changing shackles and ground tackle when the officers see fit. The buoys are pressure-washed and the solar panels, lanterns and batteries are checked on a pre-planned maintenance programme.

Inevitably there are occasions when lights are reported out and buoys off-station and these necessitate a special call for non-scheduled visits to rectify and remedy.

The flagship tender has to handle many different types of buoy. Her single arm derrick or speed crane has a SWL of 20 tons and can swing the largest of buoys onto her specially designed work deck for inspection and maintenance.

In the days before solar power, the fleet of tenders was larger and the visits more frequent but now even the lighthouses rely on solar energy and many of the light-houses that guard our shores are switching over to the same power source. But buoys and lightships are anchored with cables and sinkers to the bottom and no amount of modern technology is going to stop the need for seafarers to use their mark one eyeball to inspect chains and sinkers for wear and abrasion — and so the manned inspection programme will continue for some time.

The very first buoy to benefit from the wash and brush up facilities offered on our voyage was Prince Consort Buoy — a North Cardinal mark off the port of

Cowes in the busy Solent. This, and the sister buoy at Gunard off Egypt point, were lifted in quick succession.

The buoy is lifted aboard the tender using the ship's speed crane and firstly cleaned of barnacles and weed using hand scrapers followed by high-pressure water jets. Solar panels are checked for damage, light bulbs are all changed over and tested to ensure the light operates in the hours of darkness and then extinguishes as dawn breaks.

The chain is checked for wear and the sinker is lifted from the sea bed for inspection. Both Gurnard and Prince Consort have a 3-ton sinker of cast iron and after five years of service the 39mm chain on Gurnard was found to have worn to the point of needing replacement. Chain wears the thrash — those links of the chain that rise and fall to the bottom with the tide and motion of the buoy.

Most familiar with the Solent will probably agree that the area around the Bridge buoy off the Needles lighthouse is notoriously rougher than the water a mile or so either side of it. Clearly this is because of the Isle of Wight and the channel that separates it from the mainland — and the shingles bank frequently adds to the confusion.

So, at slack water in the early morning, we approached the unsuspecting buoy and snatched it from its position, cleaned it, painted it and repositioned it before it had even noticed our arrival.

The tender sent away a wash party to attend mid-Shingles buoy, whose lantern had been damaged by a passing cruiser to be flashing even during the bright sunshine. Because this can severely drain back-up batteries it is essential that the sensor unit is changed out and the two-man maintenance crew climb onto the buoy to undertake the task.

The fairway buoy or seamark guarding the entrance to the Needles channel is one of the largest buoys to be serviced by Trinity House. It, and those that mark the 'central' reservoirs of the traffic separation zones in the English Channel, are class one buoys, each weighing 15 tons.

The halogen light each of

## life at sea

uses to display its characteristic flash can be seen for six miles. The buoys are held in position by 175m of 38mm chain weighing some 7 tons, which is attached to a cast iron sinker weighing 8 tons.

Mid-channel marks lie 65m of water and are fitted with a moon activated by passing vessels equipped with radar. These mid-channel markers have a back-up battery that offers up to 514 days of service and are changed over every 18 months or so.

These monstrous buoys are like icebergs, having their greater bulk below the surface. A huge tube-like cylinder fills with water to give the buoy stability and it is the displacement of air in this cylinder caused by wave move-

generators powered by diesel. It runs 24 hours a day under automatic control and the keeper's cottage remains unoccupied except when used by visiting technicians and engineers.

Of the nine light vessels looked after by Trinity House, just two have been converted to solar power. One of these is light vessel number 5, currently on station as the Greenwich light vessel, which sits astride the prime meridian mid channel. Large white letters on name boards at her stern proclaim her location. The light ship was originally built in 1948 and would have accommodated a crew of five.

Number 5 was converted to solar power in 2003, the year it



Cruising with a difference onboard the Trinity House flagship Patricia

ment that gives the buoy the mournful whistle that is the fog characteristic of these buoys.

It is not just the navigation buoys that receive the attention of the maintenance crews aboard Patricia. Lighthouses and lightships receive similar service. The famous Needles lighthouse at the western end of the Isle of Wight is fuelled and watered by a helicopter operating from the ship's deck.

Further south, the Casquets lighthouse stands sentinel over a group of 18 uninhabited islets. Closer to the coast of France and the Channel Islands than mainland Britain, this is one of 73 lighthouses operated by Trinity House and is one of their installations that uses conventional

took station at Greenwich — towed there by Patricia. This is the corporation's first visit since that time and the task for the crew is to heave up 400m of 44mm chain and inspect it and the 4-ton anchor for wear and corrosion.

The light vessel lies at anchor in 53m of water and it is a long hard job to raise the chain, inspecting and measuring the links with callipers. We board the light vessel using the workboat lowered by Patricia. Before we board, the automatic foghorn and the bird scarers are turned off to preserve the eardrums of those onboard. In years gone by the guano dropped by the seagulls caused the red lightships to turn white rather quickly, but Trinity

House has found that recordings of seagulls in distress played through the loudspeakers have a dramatic effect in the lengthening the time between repaints.

Climbing onboard is rather eerie — like boarding the Mary Celeste mid-channel! The life rafts are in their chocks, the fire plan is in place by the entrance, safety signs, flare containers and lifebuoys are also left in place and the mess table is devoid of all but polish. The former radio station now houses automatically operated equipment that sends meteorological data back to the Met Office in Bracknell.

The safety-conscious crew open up the accommodation spaces and use gas detectors to check the oxygen content of the air inside to ascertain that there has been no build up of dangerous gases since last opened up. Once inside, it is easy to imagine how cramped life onboard would have been during their one-month sojourn. Individual cabins have been sealed off, but the layout below remains clear to those privileged enough to look around. We climb to the top of the lantern tower to look out towards our mother ship, lying at anchor half a mile off.

Life aboard the lighthouse tender is not without its perks. In deep clear clean water the buoys are festooned with mussels which are keenly harvested by the chef who, once happy with their size and standard, quickly whips them off to the galley to simmer in white wine, later to be served as moules marinières. Inshore, the smaller buoys often snare pots laid out by lobstermen and, when raised, these give up their crustacean cargoes to grace the tables of the good ship with other seafood caught by the ever-present rods at her stern when at anchor.

Handling a ship of this size in such confined waters requires many skills of seamanship and navigation and whilst the ship is powered by a diesel-electric propulsion with bow thrusters, she does not have the sophistication of DP found on North Sea oil rig supply vessels. A new generation of tenders is on the drawing board that will feature such essential equipment.



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The crew aboard Patricia are often called to attend a buoy or light vessel after it has suffered a close encounter with another vessel. Often buoys are found to be festooned with mooring lines belonging to small craft — a clear indication that they have been used illegally as mooring buoys for fishermen or yachtsmen seeking an overnight stop.

Occasionally, yacht parts are found attached to the fabric of buoys and on one occasion a boom from a 50ft yacht was found entangled with the upper structure of a large buoy.

Light vessels have been found with large v-shaped indentations in their hulls, indicating evidence of collision. So great has damage been in the past that Trinity House has installed automatic tampering devices, which can radio back information to their Harwich control room.

However, not all tampering is malicious or accidental. When Patricia arrived on station to decommission the Little Hampton outfall buoy, crew were surprised to find a placard attached to the buoy signed by the Little Hampton sea scout division. Their message mourned the loss of the local navigation mark and wished it well in its new life.

On another occasion, the crew of a lighthouse tender were chased away by randy seals when they tried to inspect the moorings of the Goodwin Sands light vessel. Buoy will be buoys — but now, fully appreciating the work behind the scenes at Trinity House and the seamanship called upon to keep them in service, having enjoyed my week-long busman's holiday, I look upon these navigation marks with a renewed sense of admiration and respect.

☐ The Patricia has accommodation for up to 12 people with cabins costing from £2,800 per double cabin per week. For more details, contact: [contractual.services@thh.org](mailto:contractual.services@thh.org) or visit the website: [www.trinityhouse.biz](http://www.trinityhouse.biz)

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