

flash

W I N T E R 2 0 1 3 I S S U E 2 0

A Ships' Opera!



*Trinity Lightship (LV95) performs
in the 2013 Thames Festival*

RESILIENT PNT

Beating the jammers

SKOKHOLM SALE

Purchase by the Wildlife Trust of South and West Wales



Trinity House

The Corporation of Trinity House

editor's note

Master – Her Royal Highness The Princess Royal KG KT GCVO

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Jon Price Esq, (*Secretary*)


This winter issue of *Flash* is now combined with our sister magazine *Horizon* to allow us to provide all readers of Trinity House publications with more in-depth features on a greater variety of subjects pertinent to this complex organisation.

As always, I am very keen to hear your views, receive your feedback, suggestions and contributions. If you would like them considered for publication in the next issue, I will require them by 14th February 2014.

Thank you. I wish you all a Happy Christmas and New Year.

For updates between issues please visit our website www.trinityhouse.co.uk

or  @trinityhouse_uk

or  www.facebook.com/trinityhouseuk

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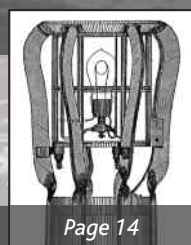
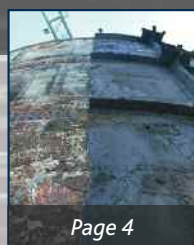
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Cover image: A Ships' Opera event which took place on the River Thames on 14 September, featuring the former Trinity House lightvessel LV95. See our main story on page 2.

Photo credit: Vickie Flores/LNP



We have a proud record created over many years of reducing costs, embracing technology, and making savings for the user. At the same time we have ensured the safety needs of the world's mariners using our waters and I am happy to report at the year's end that our ability to reduce costs and modernise without any loss of efficiency is clearly down to our competent and loyal staff. Standing back to gain a better view it is clear that sustained savings over recent years have demonstrated the effectiveness of the General Lighthouse Authorities and our ability to work together with our partners in Ireland and Scotland to achieve economic good sense and operational efficiency.

Since our last edition the economic climate continues to dominate our affairs, and is expected to do so for the foreseeable future whilst we strive to maintain standards of navigational safety at sea. This is not easy but I am confident that with the workforce mentioned above we will achieve our goal.

At the same time the financial health of our charities continues to be vital for our maritime welfare support. In our role as a contributing charity, last year we gave grants of nearly £5million in furtherance of our objectives and of this figure more than £3million was by way of grants to other maritime charities. It has to be remembered that the funding of the Lighthouse Service has no connection with the funding of our charities.

Before I leave the charitable activities it is a pleasure to report that our provision of funding for cadetships continues to enable many young men and women to go to sea and embark on a worthwhile career in the Merchant Navy.

Once again I am happy to report that the Annual Visiting Committee of Inspection was successfully carried out, this time in two phases, in May and September in the West and South-west respectively. There is no doubt that the VC is a valuable operation for it enables the Lighthouse Board to be assured that the aids to navigation provided under our statutory undertaking are performing as required. Importantly, the inspection ensures that the mariner sees an aid to navigation from his bridge exactly, and true to character, as it is indicated on his chart.

Wherever the team travelled there were clear signs of the excellent husbandry applied at our stations and once again this reflects upon the professionalism of our dedicated teams without which we would fail the mariner who has come to accept our exceptionally high



standards. Furthermore, where there are shortcomings found on inspection, these are addressed by the relevant department.

This is the last time I will be able to address you before we enter our five hundredth year of 2014 when we will commemorate the granting of our charter of incorporation by Henry VIII in 1514. I wish you well for the various events proposed. There is a busy year ahead and I believe that Trinity House, with its range of maritime activities, its well-managed resources and exemplary staff, is well placed to meet future demands.

May I take this opportunity of wishing you and your families all the best for the forthcoming festive season and 2014.

Van McNaught

a review of the last six



A SHIPS' OPERA

On 14th September an astonishing waterborne performance on the Thames took place in the Pool of London when an armada of historic vessels from the ages of sail, steam and diesel performed a moving operatic concerto of ships' steam whistles, bells, horns, hooters, sirens and cannon as the centrepiece of this year's Thames Festival. Organised by Richard Wilson and Zatorski + Zatorski the event commemorated the petition of the mariners of 1513 who sought regulation of pilotage from Henry VIII, "protecting the secrets of the King's streams..."

Proceedings opened at the mouth of the Thames and the flotilla grew as it manoeuvred up stream. At Trinity Buoy Wharf at Blackwall LV95 (built in 1939 and our first light vessel to be automated, in 1981) in the tow of two modern diesel tugs proceeded up stream and through Tower Bridge. As the light vessel entered the Pool beneath the open bascules of the bridge, her navigation light was switched on to illuminate old and new architecture, from the Shard to the Tower of London.

TRINITY HOUSE MERCHANT NAVY SCHOLARSHIP SCHEME – PYB SCHEME

There are currently 85 cadets in the scheme: 59 Deck, 25 Engineering and one ETO. Moreover, 17 cadets have qualified or have passed their oral examination and awaiting their Certificate of Competency. For the September 2013 intake, 13 were offered cadetships and six Irish cadets commenced their cadetship in July. One recently qualified cadet started in September to achieve a full honours degree at Warsash Maritime Academy; this involved an eleven week academic period at the college and a dissertation to be completed at sea.

Regarding the Professional Yachtsman Bursary Scheme 2012 intake, all four Trinity House sponsored cadets completed their shore based training at the United Kingdom Sailing Academy (UKSA) earlier in the year then went to sea in various yachts gaining their sea time. The 2013 intake selection process followed and its associated interview board to select six potential starters to start at UKSA in October 2013.

Captain Nigel Hope with the latest intake of the Professional Yachtsmen Bursary Scheme. Photo: © Nautilus International Telegraph



MERCHANT NAVY MEDAL

MERCHANT NAVY DAY AND WREATH LAYING 8TH SEPTEMBER.

Stephen Hammond, the UK Shipping Minister announced early in September that HM The Queen had approved the Merchant Navy Medal as part of the honours system. It is understood that this medal will be awarded for meritorious service by merchant seafarers and the feeling in the maritime community is that it is hugely honoured that Her Majesty has granted the Merchant Navy its own national award and in doing so has reinforced the importance of the Merchant Navy in all our lives. A figure often quoted is that 95% of the total volume of UK import and export trade arrives by sea.

This award was announced on Merchant Navy Day, 3rd September when the nation remembered the sacrifices of the seafarers of the past, showed appreciation to British shipping and looked ahead to the future of the maritime nation.

To commemorate Merchant Navy Day this year a ceremony was held at the Merchant Navy War Memorial on Tower Hill on 8th September when Captain Ian McNaught laid the Corporation's wreath.

He is seen here, extreme left, with to the right Admiral the Lord West, and taking the salute of the Pipe Band, Admiral Sir George Zambellas, First Sea Lord.

Photo: John Rix, MNA©.

months at TRINITY HOUSE

Removal of outer panels completed.



NAB TOWER PROGRESS

In recent months work at Nab Tower has included some significant demolition by the contractor, BAM Nuttall. Removal of the corroded outer cylinder has been completed and the pre-cast edging installed to facilitate the formwork ready to cast the new concrete deck. At the time of writing, the inner core at Nab Tower was being removed with the aid of the central tower crane and a suspended man-cage. The electrical/mechanical fit-out of the new aids to navigation was completed in August and set up for commissioning at Swansea Depot before transport to Southampton for collection by THV *Galatea* and delivered to the newly remodelled tower. In the summer contractors suffered delay due to sea state preventing safe access. At the time of writing works are expected to be completed early in December.

Open House 22nd September

More than 600 guests visited Trinity House on 21st September and were shown around by our regular Guide Geoff Boyd and his team of three as part of the Corporation's contribution to the annual Open House weekend in London. Visitors were able to appreciate the decorative features of the Main Entrance, the Grand Staircase leading to the Quarter-deck, Court Room, Luncheon Room, Reading Room and Library. Cards explaining each of the paintings, were available to help guests and a folder created by Zoë Richards explained the many roles of Trinity House, as well introducing our Thames Waterman cutter *Trinity Tide*, THV *Patricia* and *Patricia Voyages*.



RUSSIAN DELEGATION

In the summer R&RNAV hosted a delegation of representatives from the Russian Internavigation RTC to discuss the long range navigation systems eLoran and eChayka and the benefits for Russia and UK in collaborating towards their improvement to advantage.



Captain Ian McNaught, Executive Chairman, left, with delegates from the Russian Federation who visited Trinity House for discussions on UK/Russian co-operation on the long range radionavigation systems of eLoran and eChayka and their possible use through joint navigation chains.

At the top of the stroke near Kew Bridge.

Photo: © Stephen Bartlett.



GREAT RIVER RACE

On the 7 September our Thames Waterman cutter *Trinity Tide* entered the Great River Race, rowing 21 miles from London's Docklands to Ham, Surrey. Of the 331 boats that took part, *Trinity Tide* was third in her class in which there were 27 cutters. She was also the second City of London-based boat, the second Services Boat, the 15th Thames-based boat and the 20th fastest boat overall.

Flatholm Lighthouse on Phase 1 of this year's Annual Visiting Committee of Inspection.

Photo: Captain Roger Barker ©



VISITING COMMITTEE

As part of its statutory responsibilities to the mariner, Trinity House carries out an annual audit of its major aids to navigation such as including light-houses, light vessels, beacons and buoys. Due to operational commitments this year's inspection was split in to two phases. Phase 1 took place in May with the second phase taking place from 11th to 16th September.

September October

Coastwise from...

Work has been undertaken at **Longstone** to consider project requirements regarding listed building obligations for the forthcoming modernisation here. Roof loadings have been evaluated and found acceptable for the proposed solar system.

At **Whitby** painting was completed at the lighthouse and cottages.

A new access platform has been installed on the DGPS mast at **Flamborough** to allow safe access to the receiving antennas.



Above: Part of the electrical/ mechanical fit of new aids to navigation at Nab.

In mid-summer de-commissioning commenced at **Orfordness** with the removal of modern aids to navigation equipment.

At the time of writing, the inner core at **Nab Tower** was being removed with the aid of the central tower crane and a suspended man-cage.

The electrical/mechanical fit-out of the new aids to navigation was completed in August and, also at the time of writing, was being commissioned in Swansea Depot. The aids to navigation housing and solar frame will then be transported to Southampton for collection by THV *Galatea* and delivered to the



Above: Before and after at Nab.



Longstone to St Bees via Nab Tower, and Casquets, the Isles of Scilly, and Lundy...

newly remodelled tower.

Nab Tower will feature on the BBC *Coast* programme in 2014 following a filming visit in August, where a model was demonstrated showing how the Nab Tower was floated from the mainland and positioned on the seabed.

BAM Nuttall has suffered some significant delay due to sea state, preventing safe access by their staff over the summer months. As a result, works

are expected to complete early December.

Consideration is to be given to replacement of some of the sea defence structure at **Longships**. AIS installation has taken place and helideck painting completed.

At **Round Island** investigations have taken place in connection with building conditioning, water storage, filtration and power generation. Painting took place here this year.

At **Peninnis Head** in the Isles of Scilly a new navigation light system incorporating a standby light has been installed.

Casquets is now fully operational in all areas following electrical and commissioning work as part of the modernisation programme for the station.

Further west, at **Eddystone**, staff have attended on a design visit for the installation of enhanced water storage capacity. Studies are, at the time of writing, about to commence regarding wave loading on the lighthouse structure in order to assess the long term structural integrity of rock towers.

Lundy South has seen remedial works to the water system.

At **Bardsey** the electrical design for the modernisation progress has been completed.

There has been a main light fault at **St Bees** and investigation is continuing.

Afloat

With regard to buoys creation of the lightweight aluminium superstructure is progressing in an effort to create common, interchangeable parts.

On beacons MV *Mair* worked during July. A steel foundation ring and concreting of the base was completed in the summer at **Crow Point**. On the **Woolpack** beacon a steel foundation ring was installed in challenging conditions where foundations are only accessible at low water springs. New superstructures will be installed in 2014.

With reference to **Light Vessel No 09**, this was dry docked in Hull and prepared for station in September. As for radionavigation all Trinity House **Differential GPS** stations are now operating on a new system by Babcock and delivering good accuracy.



Above: MV *Mair*. Photograph by Captain Roger Barker.

Top left: Flamborough Head.

Middle: Storm-lashed Longships lighthouse, photo by Tim Stevens.

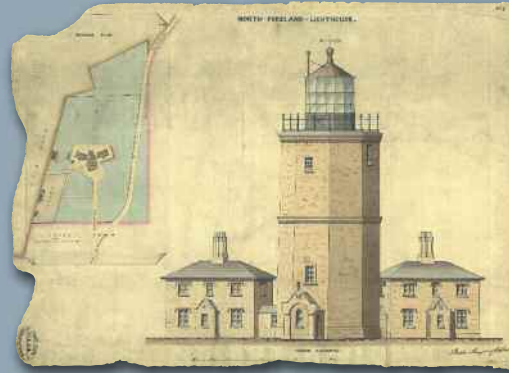
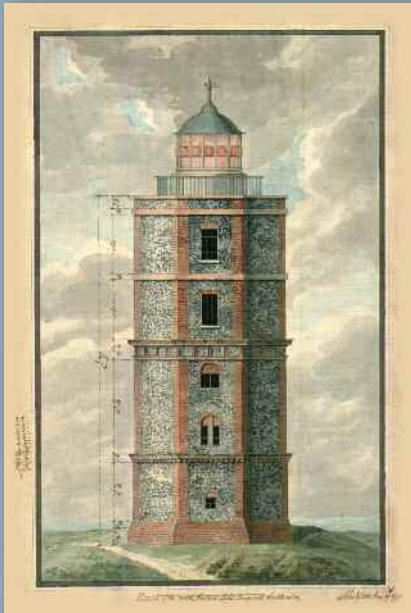
Lower: Casquets resupplied by Trinity House helicopter.

Main double spread image: Whitby lighthouse.

THE LONG-TERM CONSERVATION OF NORTH FORELAND LIGHTHOUSE: TOWARDS A SUSTAINABLE FUTURE FOR AN HISTORIC STRUCTURE

North Foreland Conservation

North Foreland Lighthouse is a grade II listed building located 1.2 miles north of Broadstairs in Kent and marks the southerly entrance to the River Thames. Like many lighthouses and coastal buildings, North Foreland is exposed to the harsh conditions of a coastal environment – constantly exposed to soluble salt (a principal agent of decay in porous building materials), whether precipitated directly, borne on the wind, or carried in rainwater and sea spray. This hostile environment has impacted on the North Foreland tower for over 320 years, causing material damage and decay. As the extent of damage sustained is influenced by the construction, materials and building usage, it is important to fully understand how the building has evolved over time, before its conservation can be addressed.



Historic drawings of North Foreland Lighthouse. Following the tower extension in 1793 (left) and the construction of the two adjacent cottages in 1860 (above). The drawing of the rendered tower (below left) is undated.

Main picture:
North Foreland
Lighthouse, Broadstairs,
Kent, present day.



Historic Development of the North Foreland structure

The North Foreland tower, standing since 1691, has undergone a number of alterations over the last 300 years, driven by both the requirements of the mariner and technological development.

These alterations have radically changed the structure in regards to its height, internal arrangements, window piercing and materials used.

The original structure consisted of a 12 metre octagonal tower constructed with brick and lime mortar quoin/piers and backing to flint panels, with a timber intermediate floor and ladders leading to a stone gallery, where a coal-fired basket was used as the light. In 1793, the tower was extended to 26 metres using the same construction method and materials, and a temporary lantern added to enclose the coal fire. The first exterior render was applied prior to the construction of two adjacent cottages in 1860, possibly following the transfer of ownership to Trinity House in 1832 (see left).

The tower was gutted in 1890 and an inner circular core of brickwork inserted to support the cantilever stone staircase, in what was now an open tower, leading to the service room directly below the lantern. This led to the insertion of new window openings on the stair landings and the blocking of existing windows. The walls of this new 'double' tower were approximately one metre thick. The tower was rendered both inside and out with what is assumed to be lime render (although Roman cement was available at the time). It is not known if the tower was then lime-washed or painted with an oil-based alkyd, or left natural as a fare-faced render. The coal-fired lantern was replaced by an oil-burning light at this time.

Most of the original render was removed in 1980, exposing the historic material beneath, and replaced using a strong, Portland-rich, cementitious render.

Finally in 1998, the lighthouse, which had remained manned throughout its existence, became the last of the Trinity House lighthouses to be automated.

¹ Professor of Analytical Chemistry, School of Chemistry, University of Lincoln
² Postgraduate Research Student, School of Life Sciences, University of Lincoln
³ Former Principal Civil Engineer, Trinity House.

Building Fabric Condition

Centuries of exposure to a coastal environment, and inappropriate remedial repairs to the lighthouse during the last thirty years, have resulted in the ingress, and subsequent trapping (impervious cementitious render), of moisture (and soluble salt) in the mass masonry walls. It is believed that this source of moisture has impacted on the internal environmental conditions within the tower, driving salt-induced decay of interior surfaces (Fig.1-3).

Current Research

A collaborative research project between Trinity House and the University of Lincoln has been on-going since 2009. The aim of the research is to determine the driving force behind the observed decay of the building fabric and to develop a strategy for mitigation.

The scope of the research was two-fold:

- Material investigation involving core sampling (Fig.4), moisture profiling and salt profiling; and

- Long-term monitoring of temperature, relative humidity, air flow (Fig.5), moisture content of mass masonry (0.1-1m depth), and debris.

Although it was clear that the damage to interior surfaces was due to the crystallisation of soluble salts just beneath the surface, the environmental conditions, which usually drive these processes, were unusual, with steady-state never being achieved. Furthermore, the damage was clearly being exacerbated by severe condensation occurring during the period October-January (during each of the three years studied).

The purpose of a building envelope (other than to keep the roof up) is to protect the interior from the weather and external conditions. Unfortunately, the buffering capacity of the North Foreland tower was poor, with the internal environment being very similar to the external conditions – on average, it was only 0.2-0.3°C warmer inside the tower than outside, with an air flow of around 2 m/s (Force 2) at the top of the tower staircase. This was considered too high.

Although ventilation is generally considered a

good thing in historic buildings, there have been a number of cases reported where good ventilation has proved detrimental. This is due to 'warm front condensation', which is known to affect unoccupied buildings, particularly church towers, from late summer to February (in the UK). By allowing large volumes of relatively warm, water-laden air into an unoccupied (and cold) building, the effects of warm-front condensation can be accelerated.

Proposed Mitigation

Although the fabric decay occurring within the tower is clearly complex, the excessive condensation needs to be controlled before any further conservation strategies can be developed. In order to achieve this, the internal environment needs to be changed. There are three main options:

- Reduce the rate of ventilation
- Dry the air entering the building
- Increase / introduce heating (not usually considered a viable or economic option in large open structures)

The rate of ventilation has already been reduced (to approx. 0.2 m/s at the top of the tower) by replacing the external louvred door. Further intervention may be possible by controlling and partially drying the air entering the cellar, and introducing dry air into the dayroom above. This would then be drawn passively through the tower. By reducing the absolute humidity of the air in the tower, particularly during the October-January period, the dew-point temperature would be reduced, along with the probability of condensation.

This research is on-going.



Examples of soluble salt damage to the interior surfaces of North Foreland Lighthouse resulting in spalling of paint and plaster from the walls. **Figure 1:** Mezzanine; **Figure 2:** Day room; **Figure 3:** Service room.

Figure 4: Core sampling to a depth of one metre in the dayroom.

Figure 5: Air-flow monitoring at the top of the tower staircase.

Visiting Committee September 2013

As part of its statutory responsibilities to the mariner, Trinity House carries out an annual audit of the major aids to navigation under our jurisdiction including lighthouses, lightvessels, beacons and buoys. A secondary role is the financial governance of the estate (the senior Board members agree the financial statement for each station).

VC Composition

The audit team is called the Visiting Committee (VC) and is comprised of the Executive Chairman (Captain Ian McNaught), the Director of Navigational Requirements (Captain Roger Barker) and the Director of Operations (Commodore Jim Scorer).

To ensure a balanced audit of the estate is undertaken the core team invite members of the Corporate Board, Non Executive Directors (NED), Navigation Examiners and Trinity House Elder Brethren to supplement the committee.

Additionally, members of the Trinity House management team are asked to attend to provide specialist advice. Advisors at this VC were Jerry Wedge (Director of Finance and Support Services), Jon Price (Legal and Risk Manager), Captain Nigel Palmer (NED and Elder Brother), Professor Peter Mathews (NED), Dawn Johnson (NED), Captain Tony Wright (Marine Superintendent), Steve Keddie (Project Engineer) and myself.

As Lighthouse Manager the VC effectively audits my performance as the senior maintainer of lighthouses. On this occasion I was invited to attend VC to represent the Operations Department, my chief task was to present a daily brief on the present technical standing of each lighthouse and any proposed future engineering project.

The Programme

Due to operational commitments this year's VC was split in to two phases. Phase 1 took place in May with the second phase taking place 11-16 September.

To maximise time and efficiency the VC join one of the Trinity House tenders for the duration of the visit, the ship provides the perfect base for briefings, daily operations (either by ship's launch or helicopter) and also for daily catering. The typical

daily routine was a committee briefing at 0645, breakfast at 0710, launch motorboat at 0730. Travel to station takes between 20 mins and two hours depending on the site and mode of transport. An inspection takes approximately two hours, stopping for a packed lunch and then travelling to another lighthouse to repeat the process. The working day normally finished with a debrief of the day's activities at 1730.

Audit Sheets

Each station has a dedicated audit check sheet

The programme for the VC was as follows:	
11 September	Visiting Committee joins THV <i>Patricia</i> at Plymouth.
12 September	Party 1 Inspect Berry Head and Start Point Party 2 Inspect Godrevy, Longships and Eddystone (delayed due to bad weather)
13 September	Party 1 Pendeen, Tater Du and St Just Depot Party 2 St Anthony's, Lizard lighthouse and Lizard Heritage Centre
14 September	Party 1 Wolf Rock, Round Island, Peninnis and Sevenstones lightvessel Party 2 Longships, Bishop Rock and Eddystone
15 September	Party 1&2 Trevose Head and Hartland Point
16 September	Party 1 Smalls and South Bishop

covering the following areas:

- General
- Batteries
- Power generation
- Health and safety and environment
- Aids to navigation
- Communication and telemetry
- Condition of premises

Each topic has guidance notes for the auditors which ensures consistent, real and accurate feedback is provided to the technical teams.

To ensure that relevant information is relayed the auditors are provided with cameras and are asked to provide images of any issues they come across, the old adage "a picture paints a thousand words" is absolutely correct in this case.

Once completed, I was responsible for uploading the data electronically and forwarding this to Louise Harper (Performance Administrator) who then consolidates the information and raises any Work Orders required on the Maintenance Management System, which then stimulates the Technical Teams to rectify any issues.

Conclusion

As much as the Visiting Committee was a success we were unable to complete audits on all the stations outlined, we lost all flying on Thursday due to fog which resulted in a rescheduled plan on Saturday. The revised Saturday plan was further complicated due to an unforeseen issue with Eddystone lighthouse. Additional time had to be allocated to prevent an outage occurring which resulted in Godrevy having to be postponed. On Sunday a severe gale Force 9 rolled in from the Atlantic with over two metres swell; this also resulted in the planned visit to Hartland being postponed.

I left for VC to a chorus of "enjoy your holiday". However, this was far from the case; the days were long, many close to 18 hours, however the company was excellent and I thank the Deputy Master for inviting me to attend Visiting Committee. This was an excellent opportunity to watch and assist the master mariners, board members and senior managers undertake a thorough and regimented audit of the south coast lighthouse estate.





Main Picture: Paint damage on Flatholm Lighthouse.



CLOCKWISE FROM TOP LEFT:

MVMair.

Peninnis Light. This steel tower was established on St Mary's, Isles of Scilly in 1911. Originally acetylene powered the light was electrified in 1992. Today's LED light source has a range of nine nautical miles.

Round Island. In the northern part of the Scillonian archipelago, this light was constructed in 1887 during the golden age of lighthouse building. Automated in 1987.

St Anthony. Built in 1835 at the east side of the Fal Estuary. A large fog bell was in use here from 1865 until electrification in 1954. The station was automated in 1987 and further modernised in 2000.

Strumble Head. On St Michael's Island, west of Fishguard on Cardigan Bay, the lighthouse was built in 1908, electrified in 1965 and automated in 1980.

Monkstone. Built in 1839 near Flatholm Island in the Bristol Channel the structure was lighted in 1925. Modernisation took place in 1993 and the light was converted to solar operation.

Wolf Rock. Ten miles SSW of Land's End the present tower here replaced a daymark established in 1795 and was completed in 1869 by James Walker. Automated in 1988.

A Rock and a Hard Place

STORMS, DEATH AND MADNESS AT THE SMALLS LIGHTHOUSE

One of the more popular requests we receive at our enquiries@thls.org helpdesk is for background information on the near-mythical death of a lighthouse keeper on the offshore Smalls Lighthouse in 1801. Another very enduring enquiry relates to how there came to be three lighthouse keepers per station instead of three. As it happens, they are one and the same question. The lighthouse that sits atop one of two tiny clusters of rocks lying close together in the Irish Sea, 21 miles off St. David's Head in Wales, was built by a private interest in 1776; that lighthouse had both an unusual design and a history of bringing misery to its inhabitants. To understand a bit about the misfortunes suffered by its residents, one should first look at the origins and design of the original lighthouse.

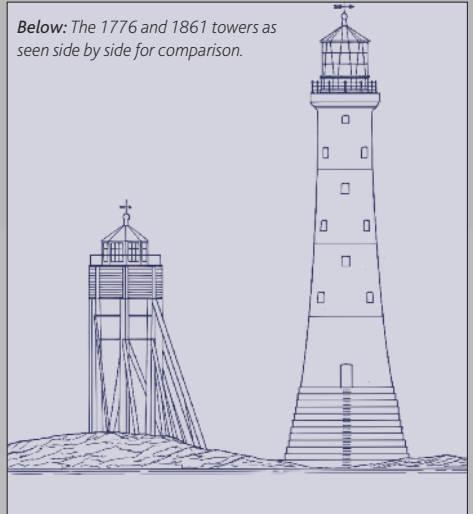
Because of the rising toll on shipping lost to the coastal rocks of Pembrokeshire, steps were taken by private interests in the early 1770s to put a permanent light in that channel. John Phillips, a Liverpool dockmaster, obtained a lease and went with the lighthouse design sent him by a 26-year-old Henry Whiteside, a distinguished maker of musical instruments. Trinity House were not involved with the design or the construction of this lighthouse, it may be worth nothing.

During the winter of 1775-1776, Whiteside erected the whole structure temporarily at Solva, a

small Welsh haven over 25 miles from the Smalls. This was a fortunate decision as the iron legs proved to be faulty and had to be replaced by wood. Before work was resumed, iron rings were fixed to the rock to which the workmen tied themselves. In the Spring of 1776, and thanks to the preliminary assembly when the parts were carefully fitted together, work proceeded so well that by September the oil lamps were lit. Before leaving the rock, the workmen excavated a hole 10 x 6 x 6ft. to hold coals, and fresh water in a wooden tank.

By December it was obvious that the structure was

incapable of withstanding the sea forces and in January 1777 Whiteside and his blacksmith proceeded to Smalls to repair and strengthen it. They encountered a period of severe storms. In February a letter in a cask, one of three which had been tossed into the sea by Whiteside, was picked up on the beach of a neighbouring Welsh coast. It begged "immediate assistance to fetch us off the Smalls before the next Spring or we fear we shall all perish, our water near all gone, our fire quite gone and our house in a most melancholy manner."



Below: The 1776 and 1861 towers as seen side by side for comparison.



Above: Whiteside's structure of 1776 lasted 85 years.



Above: The Trinity House helicopter working with a district tender prepares to deliver oil in a pillow tank to Smalls. Photo: Mike Yaxley.

To Mr. Williams.
Smalls, February 1, 1777

Sir,
Being now in a most dangerous and distressed condition upon the Smalls, do hereby trust Providence will bring to your hand this, which prayeth for your immediate assistance to fetch us off the Smalls before the next spring or we fear we shall all perish; our water near all gone, our fire quite gone, and our house in a most melancholy manner. I doubt not but you will fetch us from here as fast as possible; we can be got off at some part of the tide almost any weather. I need say no more, but remain your distressed Humble Servant,
Hy. Whiteside,

We were distressed in a gale of wind upon the 13th of January, since which have not been able to keep any light; but we could not have kept any light above sixteen nights longer for want of oil and candles, which makes us murmur and think we are forgotten.

Ed. Edwards
Geo. Adams
Jno. Price

We doubt not but that whoever takes up this will be so merciful as to cause it to be sent to Thos. Williams, Esq., Tredekin, near St. David's, Wales.

Interestingly, one of the other casks was found in Ireland at Galway Bay.

Drastic repairs and alterations became necessary after the storms of December, 1777, which Whiteside and his men survived, but Phillips had no funds to carry them out. He discharged the keepers and extinguished the light and made over his interest to a Committee of Liverpool Traders. They induced Trinity House to obtain an Act of Parliament in 1778 which authorised the Brethren to repair, rebuild and maintain the lighthouse and to collect and levy reasonable dues. In view of Phillips' services and his financial losses, they granted him a lease on 3 June, 1778 for 99 years at a rent of £5.

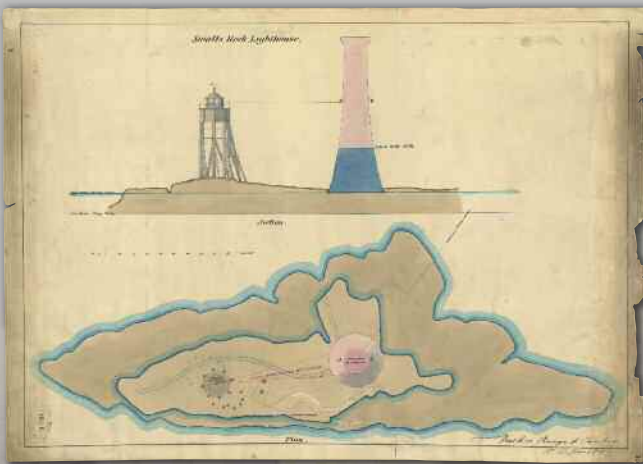
One very interesting account of the lighthouse and its cast of characters comes from Ivor Emlyn, written in 1858:

"To give a correct description of the Light-house, it should be stated that it is an octagonal building, resting on eight strong oak pillars at the angles, and one in the centre; the pillars at the north and north-east angles are supported by diagonal stays, the lower ends of which are fixed in the rock, to resist the violence of the waves. It was first built with eight pillars only, and it was not until many years afterwards that the centre one was added. Most of the stays were fixed at a subsequent date by Mr Whiteside; while two or three of them were put in their positions by some of the gentle-

men who succeeded him in the Agency. It is only three of the original stays that now exist, the others were renewed either to cover accidents or the effect of time.

"To enable the Light-keepers to ascend and descend, a strong rope-ladder reaching and fastened to the rock, is securely fixed beneath the floor; where also is the trap-door, through which ingress and egress are made. A heavy fine is incurred by the one, who shall, even for a moment, leave this door unclosed, as its remaining open, is not only dangerous to the occupants, but necessarily infringes on the already-scanty walking space of their dwelling apartment. Communication is effected from this room with the light-room. The south-west angles of the dwelling apartment are partitioned off as a room for storing oil, coal, provisions, and other necessaries, and as extra berths for the accommodation of the mechanics who attend annually to the repair of the edifice. A door – inserted in the north-east angle – leads out to a small platform, through which, by means of a crane fixed in the north pillar, all the heavy stores are conveyed from the rock; from this platform a ladder leads to the gallery surrounding the lantern, and which in fine weather forms a delightful promenade. On this gallery, the lifeless bodies of birds are very often found, whose deaths have been caused by striking themselves with great violence against the lantern in their nocturnal flights."

(The Smalls: A Sketch Of The Old Light-House Its Projector, and Builder. Ivor Emlyn 1858). ➤ Continued on page 16.



Above: Adjacent to Whiteside's structure this plan shows work in progress on today's masonry tower designed by James Walker and constructed by James Douglass and first exhibited in 1861.



Above: A model of Whiteside's structure of 1776, made from one of its timbers was in recent times exhibited in the Science Museum, South Kensington, London.

A Rock and a Hard Place

STORMS, DEATH AND MADNESS AT THE SMALLS LIGHTHOUSE

continued from page 15.

Recognition and vindication for Whiteside's design would not only be apparent in the lighthouse's 85-year life span, but in Douglas Hague's excellent survey of lighthouse architecture, written in 1975:

"In this his judgement was vindicated by the fact that it stood for eighty-five years, after which it was removed on completion of a new tower. It consisted originally of eight massive oak posts over 15.25m long set in a 6.4m diameter circle around a central post; these were about 0.6m in diameter. On top a small wooden cabin of two floors was devised, the lower providing living quarters, the upper the oil lantern. Over the years posts were replaced or doubled up and many raking posts or struts were added. The unusual construction made it necessary to excavate a coal cellar and store in the rock, which have now been greatly extended during the alterations connected with the electrification of the station. An irregular-shaped helicopter pad now occupies the site of the old tower, but the weathered stubs of two original posts survive, together with eleven post-holes of the raking struts, some with their posts, of which a number are paired." (Hague, Douglas Bland, and

Rosemary Christie. 1975. *Lighthouses: their architecture, history and archaeology*. Llandysul: Gomer Press.)

At this time, the job of tending the Smalls Lighthouse was not an especially arduous one, aside from the physical circumstances. As Ivor Emlyn described the station in 1858

"the Light-keepers had little to do in lamp cleaning, and the "ancient mariners" were content with paying for a dim light, as at this time only 4 lamps with glass reflectors, were used; in 1817, the number was increased to 8; and again to 16, with silver reflectors, patented by a Mr John Wilkinson, of London.

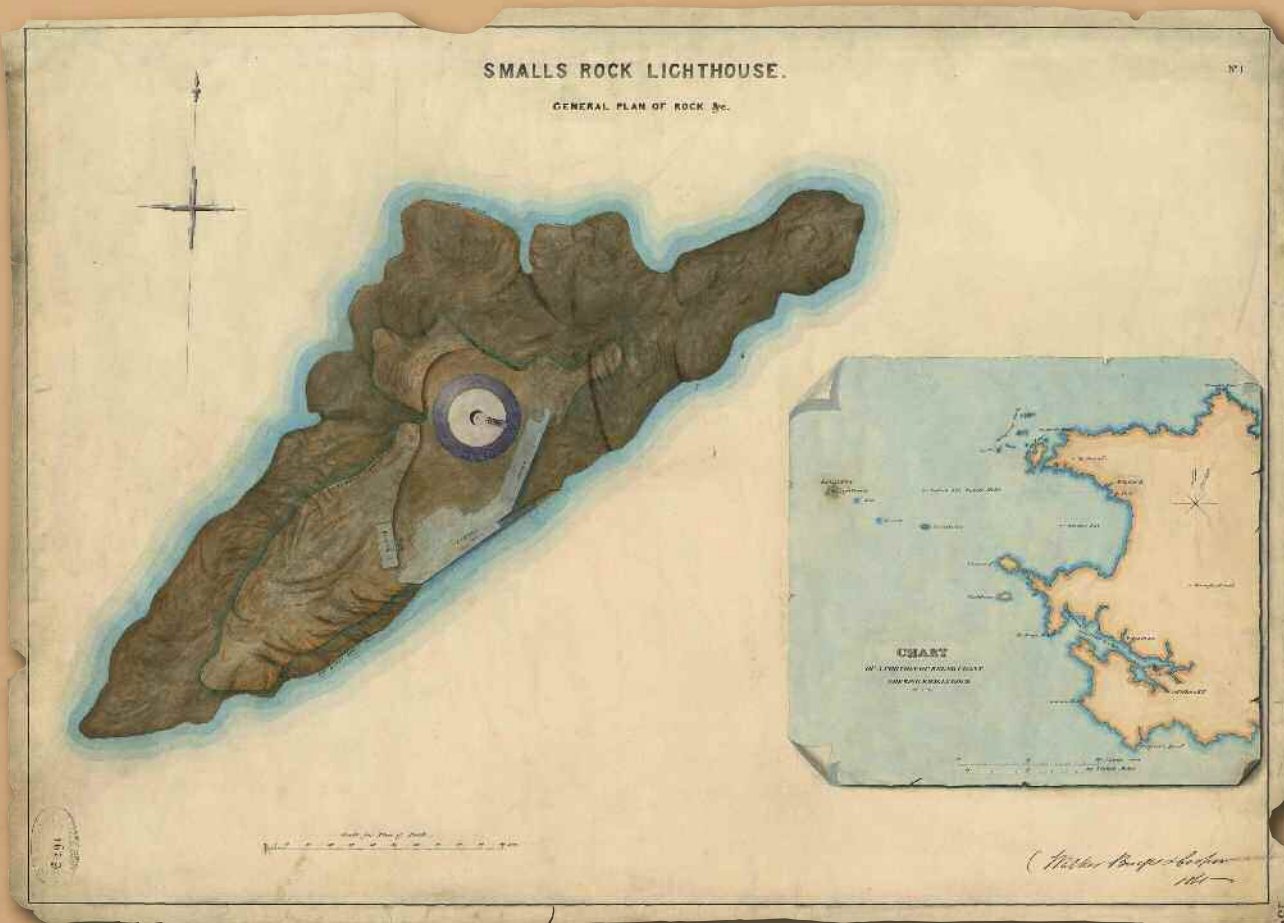
Fifty years ago, the annual consumption of oil did not exceed 200 gallons – now [1858] there is seven-and-a-half times that quantity burned, viz: 1500 gallons"

So now that the scene is laid out, we can finally present Mr Emlyn's account of the death of Thomas Griffith and the suffering of Thomas Howell:

"About twenty-five years after the event of 1777, a painful circumstance occurred in connection with the Smalls. From its establishment until that time, two Light-keepers only inhabited the place together; and

the two on duty at the period were Thomas Howell, of Kingheriot, and Thomas Griffith, of Solva. The former was a Cooper by trade, and the latter, previous to his appointment, was a labourer; both were married and had families;

For four months it was found impossible to land the rock. Many attempts were made, but all to no purpose. A storm had set in, and in the course of a week or two, a signal of distress appeared hoisted at the Light-house. At that time there was no code of signals – no system of super-marine communication established by which the exact position and wishes of the distress could be made known. The many vessels that passed the place, reported at the ports they got to, that a signal of distress was out on the Smalls – but what that distress could be, none of them could tell. The Custom-houses at Milford, Bristol, and Liverpool had it told them weekly – "that the signal was still flying." Vessels with strong boats and hardy crews were sent to the locality to try, if possible, to land, or if unable to land, to get within hailing distance, and learn the nature of the disaster. They could only get near enough to see the dim outline of one of the men



Left: Detail of a chart from 1861 showing location of Smalls Lighthouse off the Welsh coast.

Facing page top: Smalls Rock drawn by Walker, Burges & Cooper of which James Walker was a partner, in 1854 and showing a section at top right of the proposed floors in Douglass's tower.

Facing page lower: Henry Whiteside's oak post structure on Smalls, commenced in 1776.

standing on the gallery of the Light-house. Whether he spoke, they could not tell. They would return to their harbour; but the bearers of no intelligence! Again and again would the same attempt be made, and unfortunately with the same result.

The anxiety of Mr Whiteside, and the relatives of Howell and Griffith, all this time was intense. Night after night saw some of them on the cliffs, watching the lights – fearful of something having befallen the both. The non-appearance of a light would have been direct proof that such was the case; but as regularly as they watched, the light burned with its usual brightness, and gave no indication of the suffering of the poor sick and imprisoned Light-keepers!

A day or two before the signal was hoisted, Griffith complained of being unwell, and the means employed by his companion of affording relief proved ineffectual, recourse was had to draw the attention of those passing the Channel, who could either render assistance themselves, or make the emergency known at the proper quarters. No help came! After weeks of extreme suffering poor Griffiths breathed his last; and then

perhaps, commenced the worst chapter in the surviving Light-keeper's experience of that sad time. Decomposition would quickly follow; and the "body of death" would vitiate the atmosphere of the too confined apartment. The body could not be thrown, to find its grave, into the sea; suspicion with her thousand tongues would point at Howell as the author of foul play – that to hide a lesser fault he had committed the greater one of murder! The world is too apt to condemn ere it judges!

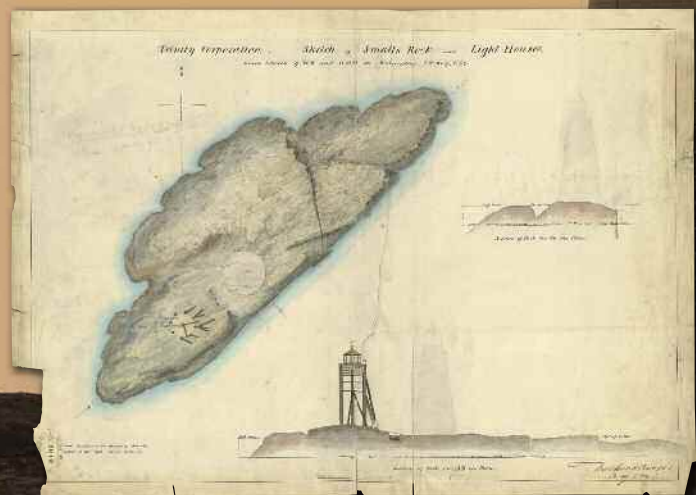
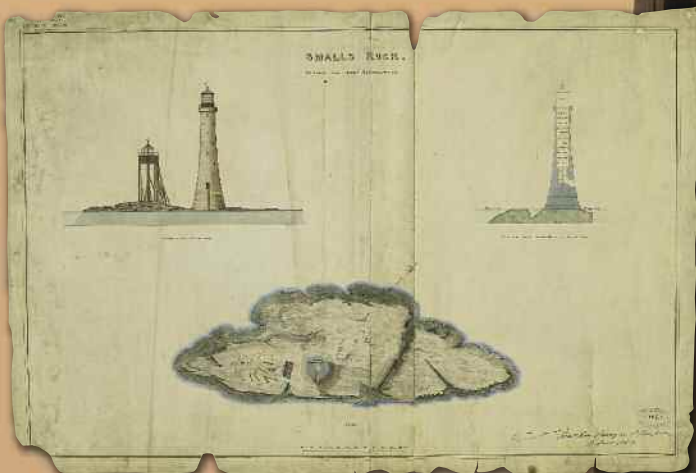
Howell's skill as a cooper, enabled him to make a coffin for his dead companion, out of boards obtained from a bulk-head in the dwelling apartment. After a great deal of labour the body was carried to the platform and firmly secured to the railing. For three weeks – weeks apparently as long as months – it occupied this position, before the weather moderated. A Milford boat at last landed two Light-keepers, and brought away Howell and the body of his companion; but the wind not being fair for Solva, they made Milford. Howell's attenuated form demonstrated the sufferings, both mental and physical, he had undergone; his friends, in some instances, failed to recognize him on his return home. Four months in such a place, and under such circumstances, what would it not effect?

Mr Whiteside from this calamity, wisely determined that three Light-keepers should inhabit the structure at the same time; and three continue to be the number employed hitherto."

Like any good story as old as this one, the particulars of the story vary from account to account. Whether or not this event was the actual reason (or simply one of many sound recommendations at that time) for taking a third keeper on at lighthouses is not readily known.

What is known is that the lighthouse remained in the private ownership until 1836, when an Act of Parliament handed responsibility of all remaining privately-owned lighthouses in England and Wales to Trinity House. The lighthouse was purchased from the Reverend A Buchannan (John Phillips' grandson) and Thomas P Clarke, for the colossal sum of £170,468.

Work on constructing the new tower began in 1858 and was completed in 1861; it is noted as being one of the finest achievements of the famed lighthouse engineer James Walker, and the tallest of the Welsh lighthouses.



Photograph of Smalls Lighthouse by Ian Cowie.

The First Electric Lighted Buoys

The first channel marked by lighted buoys was in the approaches to St Petersburg, Russia, in 1877. These were gas buoys produced by the German Pintsch engineering company who had developed a gas lighting system for railway carriages that was widely used around the world. This lighted channel proved such a success that Julius Pintsch was presented with the Order of St. Stanislaus by the Tsar. Trinity House trialled these Pintsch gas buoys in 1879 and they were soon in use in the Thames estuary. The American service carried out some trials with the Pintsch buoys but did not proceed with their general use and instead decided to adopt what were then newly emerging technologies and used electric lighted buoys for their first lighted buoy channel.

The Gedney Channel

The Gedney Channel was an important part of the approaches to New York harbour and the ability to identify and transit this channel at night would increase the safety of sailing into the harbour and save the considerable time wasted waiting for daylight to enter or leave the harbour.

The buoys had filament lamps powered from

electric cables laid on the seabed. Six buoys were first lighted on 7th November 1888, interconnected with no less than six miles of power cable. The buoys were solid wood spar buoys, 13.7 metres long each carrying a single Swan carbon filament lamp. This was only a few years after the filament lamp had been invented and also was one of the first installations of underwater power cables.

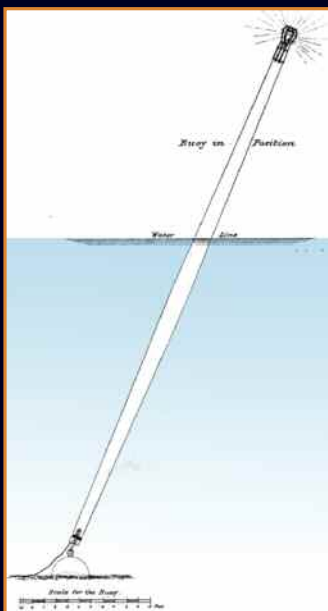
Red coloured filters were then installed in 1889 to identify buoys on one side of the channel. The lamps burned continuously when the power was switched on. The US authorities were aware of the use of gas buoys in Europe but their initial trials had identified several problems and they considered that electric filament lamps would be more reliable than gas lights.

Their trials with iron buoys, of a design we would recognise as a conventional buoy, had also suffered some failures. They decided that spar buoys, a type of buoy with which they had considerable experience, would be more secure on the exposed Gedney Channel stations that were subject to ice in the winter. The spars were directly shackled to the sinkers (This would now be called an articulated beacon) and this arrangement had the advantage of preventing the rotation of the power cable around the spar or the mooring.

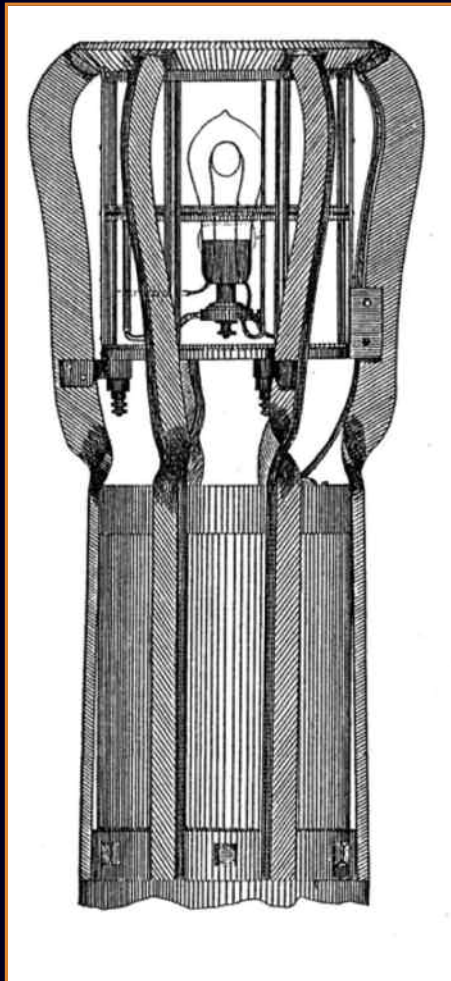
Initially, a 100 volt direct current supply was used. This was generated at a shore station with two steam engines driving dynamos. The voltage



Above: Servicing underway on one of the Gedney Channel, New York harbour buoys. Possibly one of the first photographs showing a buoy being serviced on station.



Gedney's Channel spar buoy (right) and lantern (middle).



NOTICE TO MARINERS.
(No. 804 of the year 1888.)
UNITED STATES—NEW YORK.
NEW YORK APPROACH.
Light-Buoys in Gedney Channel.

THE United States Government has given notice, that as soon as practicable, probably about the end of September, 1888, an attempt would be made to light Gedney Channel, approach to New York from the southward, by six 100-candle power incandescent electric lamps; inclosed in lanterns supported by spar buoys:—

The buoys are placed seaward of, and close to, the can and nun buoys which mark the channel, and are coloured, lettered, and numbered like those buoys. The lights of buoys, G. 1, G. 4, and G. 5 are red, and those of buoys G. 2, G. 3, and G. 6, are white.

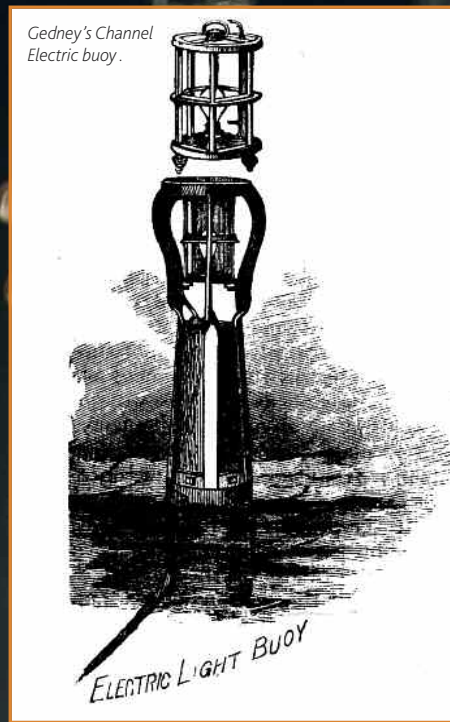
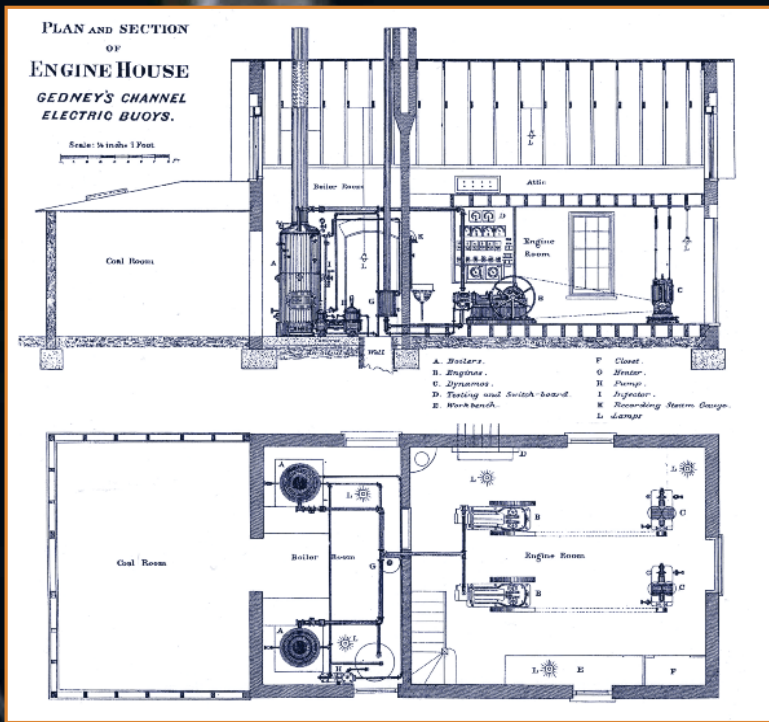
Owing to the uncertainty of incandescent lamps, some of the lights may at times be extinguished, but it is thought that any three of them will furnish a sufficient guide through the channel, and that the arrangement of colours is such that, if any three are lighted, it will be easy to determine which they are.

By command of their Lordships,
W. J. L. Wharton, Hydrographer.
Hydrographic Office, Admiralty, London,
27th September, 1888.

This Notice affects the following Admiralty Chart:—Approaches to New York, No. 2491. Also, Sailing Directions for the principal Ports of the United States, 1882, pages 132, 133.

Above: Notice to Mariners, The London Gazette 5th October 1888.





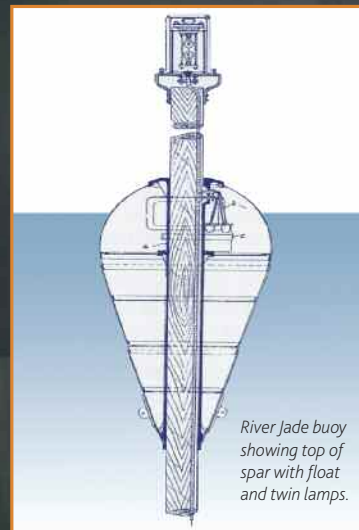
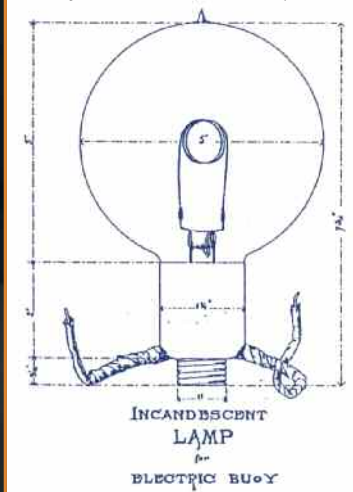
loss in over six miles of underwater cable that delivered the electrical power to the buoys must have caused serious problems, however the white lights were found to have a range of five nautical miles and the red, two and a half miles. The system was changed to alternating current in 1895 and extended to eleven buoys. These new buoys were 15 metres long. The power supply was 1000 volt transformed down to 100 volt on the buoy.

A channel of thirteen similar electrically lighted buoys was installed in the harbour approaches at the Chicago Fair in 1893. This was a temporary installation with over thirteen miles of sea bed cabling. Initial trials of an alternating current system were unsuccessful and the system operated on the same 100 volt direct current supply system as the Gedney Channel.

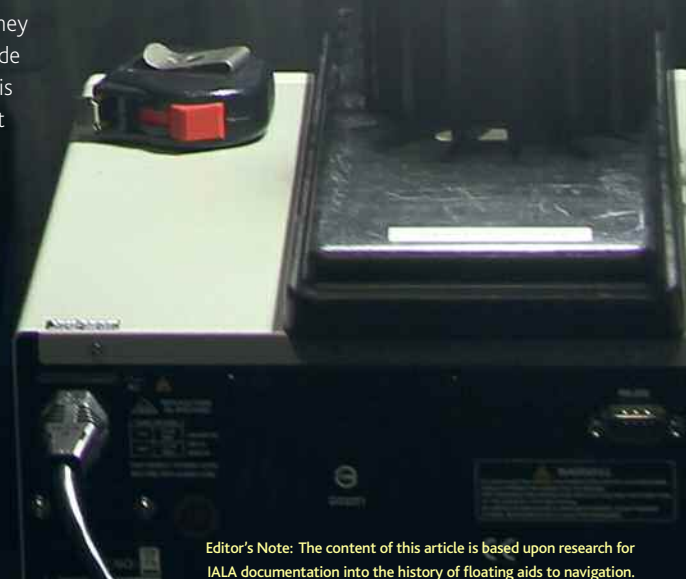
Although the lighted channel was considered a great success as vessels were able to transit safely at night, there were many outages. Ships fouled the power cables with anchors, ran aground on them, cut them with propellers and lamps failed due to collisions and general buoy motion. Extensive test procedures were developed for the lamps, to try and achieve a predictable service life however at times light failures averaged one per week per buoy. This unreliability had been anticipated as shown by the optimistic Notice to Mariners, picture on the left-facing page.

Despite all of the operating problems the Gedney Channel installation had demonstrated the considerable advantages that would be provided by lighted buoys and as the reliability of gas buoys became accepted the electric spar buoys were removed in 1905 and replaced with conventional steel gas buoys.

Gedney Channel carbon filament lamp 1891.



A system similar to the Gedney Channel was trialled on the River Jade in Germany from 1893 to 1896. This used a 500 volt alternating current underwater supply cable with power generated at the Frisia Wangerooge lighthouse. A transformer on each buoy supplied a lantern that had two lamps. The buoys were wooden spars with iron floats close to the water-line and the spar was directly shackled to the sinker. This was reported at the Paris Lighthouse Congress of 1900. This channel was lighted with gas buoys in 1901.



Editor's Note: The content of this article is based upon research for IALA documentation into the history of floating aids to navigation.



The Trinity House Charities

The last year has been quite a momentous one for the Trinity House Charities and perhaps, for those not so well acquainted with the Corporation's charity side, a quick word of explanation. Firstly, the Corporation of Trinity House, of which the Lighthouse Service and the Corporate Department are both sub-divisions, is itself a maritime charity. It has a very broad remit including all aspects of benevolence, welfare and heritage. However, its charitable income is derived from a relatively small portfolio of investments and the money it can earn through letting out the public rooms in the Headquarters on Tower Hill. In an average year this generates around £500,000, but last year by letting the House to the Austrian Olympic Committee, it managed to increase this to over £800,000 most of which is then allocated towards the charity's heritage obligations such as the maintenance of the House and grants towards maritime memorials and so forth. It also runs the register of Deep Sea Pilots, licensing around 30 each year.

The Charity's benevolence, welfare and training obligations are met through the Corporation's subsidiary charity, the Trinity House Maritime Charity (THMC). The THMC receives the majority of its income from a farm bought in 1660, on the South Bank of the Thames, which now is an estate of around 400 flats and houses whose rents fund the charity. In the last year, as part of the Quincentenary celebrations, the charity funded the build of a new accommodation and facilities building in "Mariners' Park", a village for mariners in need, on the banks of the Mersey at a cost of £2.1million. It has also begun a project in partnership with the Sailors' Children's Society and other maritime children's charities to reach out to the children of mariners who may not realise that there are organisations such as ourselves to help them.

Apart from Quincentenary projects, the charity continues to fund scholarship schemes for young people wishing to train as officers in the Merchant



Trinity House supports the Tall Ships Youth Trust who aim to help young people to realise their true potential through the crewing of their varied fleet of sailing vessels. They take over 3,000 people sailing every year and on average over 70% of these are disadvantaged or disabled.

Navy and has for the past two decades taken up to 30 cadets a year onto the scheme.

Then there are another 22 maritime charities which know they may expect a regular annual grant from the THMC to help them with their work. These range from Combat Stress and the Sea Cadets, to the Royal Institute of Navigation and the Tall Ships' Youth Trust through to the Fishermen's Mission and the

Shipwrecked Mariners' Society. Between them these charities benefit from grants totalling over one million pounds. In addition there are the *ad hoc* grants to those charities that find they have an unforeseen need during the year. Last year these totalled some £200,000 and supported a further 25 charities. If you would like to know more see the web site: www.trinityhouse.co.uk/th/about/charity.html

or get in touch with Michelle Tindall, our Charities Officer on 020 7481 6924.

Finally, and in fulfilment of the Corporation's original charitable purpose, the THMC runs a small estate of 18 almshouses clustered around formal gardens just outside Dover. Here some 25 mariners and their dependants in need of housing have, we hope, found a haven.

The Walmer estate of 18 almshouses clustered around formal gardens just outside Dover.



Above: The Henry Wood Hall, located in the beautiful conservation area of Trinity Church Square.



Top and inset: Annie Garton who represented the UK at the European Judo Championships in Barcelona in 2012. She received funding from the Sailors' Children's Society and additional grants enabled her to follow her dream.

In recent years seafarers have had to come to terms with the problems of having to comply with an ever-increasing stream of legislative requirements in the face of economic pressures which have made yet further inroads into already sparse manning levels. Wittingly or unwittingly they have been forced into a situation where they have to place, what many would regard as, an unhealthy degree of reliance on automated systems, such as GPS and ECDIS, not least because many ships no longer have a sextant on board.



Origins

Following development in the early 1970s and prompted by an insight into things to come, the Netherlands Association of Master Mariners convened two conferences the objectives of which were to form an international Federation in the cause of improving and promoting Safety at Sea, which would give Shipmasters an opportunity of bringing their views to bear on those who were ultimately responsible for safety at sea.

The International Federation of Shipmasters' Associations (IFSMA) was formally constituted on 1st January,

1974 by eight national shipmasters' associations, in Rotterdam and transferred in April of that year to HQS Wellington in London, on the premise that if IMO had its headquarters in London, so should IFSMA. In June, 1983, the office was moved to 202 Lambeth Road, London, SE1, where it is currently located in company with The Marine Society and Sea Cadets, and several other maritime organisations. It is a non-profit making, apolitical organisation dedicated solely to the interests of the serving shipmaster. Over 11,000 shipmasters from over 60 countries are affiliated to IFSMA, either through their national associations or as Individual Members.



Above: Captain John Dickie, Secretary General.

IFSMA -Unity for safety at sea

Members at the General Assembly in Copenhagen June 2012.



Members at the General Assembly in Melbourne June 2013.

The Port of Melbourne site of IFSMA 2103 General Assembly.



Upholding international standards

IFSMA is a Federation established to uphold international standards of professional competence for seafarers commensurate with the need to ensure safe operational practices, preservation from human injury, protection of the marine environment and safety of life and property at sea.

It was recognised that master mariners were frequently to be found sitting as advisers on the administration/industry benches within the IMO but it was felt important that shipmasters should be represented, in their own right by an international, professional body, just as shipowners, labour unions, pilots and other authorities were represented.

If they were to achieve this end, recognition within IMO would be essential, and it was primarily with this in mind that IFSMA, under its well-known motto "Unity for Safety at Sea," was born. Only such an international organisation could possibly bring the shipmasters' views relating to marine safety to the required level and, at the same time, forge a more exclusive and professional status for them; not based on out-dated owner/master relationships of the past, but based upon professional responsibility towards owner and society alike.

Consultative Status at IMO

IFSMA was granted Consultative Status at the then United Nations Inter-Governmental Maritime Consultative Organization (IMCO) in 1975 (known as IMO from 1982). This Consultative Status as a Non-Governmental Organisation (NGO) enables the Federation to represent the views and protect the interests of the serving shipmaster unfettered and unfiltered either by national governments or by shipping companies. In February 1993 IFSMA was placed on the International Labour Office's special list of Non-Governmental International Organisations, an important event for the future with the eventual Maritime Labour Convention negotiations.

Since then it has become more and more involved in the arena of legislative debate. Today IFSMA is represented by a team of willing professionals on all the main IMO Committees and Sub-Committees, and participates at Working Group level as and when required. Issues raised by member associations are submitted by the Secretariat to IMO for consideration by the appropriate committee. To date IFSMA has been involved in several major issues; these include the debates on Traffic Separation Zones, Standards of Training, Certification and Watchkeeping matters relating to certification and training, the International Collision Regulations, issues of safety under the SOLAS 1974 Convention and the anti-pollution regime introduced under MARPOL 73/78, Ro-Ro vessel safety.



Middle: 202 Lambeth Road, London SE1, home to IFSMA and Headquarters of The Marine Society and Sea Cadets.

Lower: President Captain Christer Lindvall welcoming IMO Secretary General, Koji Sekimizu as Honorary IFSMA Member.

Unjustified jailing of shipmasters

IFSMA is active in supporting shipmasters in these times of the increasing unjustified jailing of shipmasters. Unjustified in as much as how can a shipmaster be held responsible for drugs hidden in the cargo, as happened some years ago when it was discovered by customs officials that a vessel carrying a cargo of bananas had illegal drugs secreted in one box amongst a cargo of thousands of boxes, the Master was arrested and jailed along with other crew members and there were serious health and other consequences for those jailed pending trial. We are

achieving some success after a long process. In recent cases those accused are often put under house arrest rather than jailed.

The human element and fatigue is another important area of concern for IFSMA members. The recent entering into force of the Maritime Labour Convention (MLC) should go a long way to solving the debilitating effects of fatigue on shipmasters (and others) and the consequential knock-on effect on safety with the newly introduced hours of work restrictions. IFSMA played an important part in the negotiations for the working hour restrictions that were eventually agreed for the MLC. It is too early to say if they will achieve their purpose. One benefit might be to make it impossible for watchkeepers to work six hours on and six hours off while keeping navigation watches. Such excessive fatigue tends to manifest itself more frequently in the short-sea trades; we need to see an end to ships running aground due to the Officer of the Watch falling asleep. IFSMA has been working at reducing excessive fatigue for most of its existence, have we found a solution that works in the MLC?

Uniting the shipmasters of the world

From the foregoing it will be readily seen that IFSMA is not a trade union. It is a non-profit making, apolitical organisation whose sole aim is to unite the shipmasters of the world into one professional co-ordinated body, either through their own national associations or as individuals in cases where their country does not have a national association, or where the national association does not, for one reason or another, belong to the Federation. Individual membership thus bridges the gap for those Masters who might wish to associate themselves with IFSMA's ideals or contribute to international debate, but would otherwise be prevented from doing so.

IFSMA remains fully prepared to express the professional shipmaster's voice amongst the government and other interests at IMO.

Skokholm - *Dream Island*

In 1927 a young man in search of adventure took a 21 year lease of Skokholm Island for a very modest sum and went to live there in the ruins of the long abandoned farmstead. His dream was to live life close to nature and to have the opportunity of studying the seabirds and other wildlife in their natural elements. He collected rainwater and driftwood, grew vegetables, milked goats, harvested gulls' eggs and caught plentiful fish in the surrounding Irish Sea. Fortuitously he obtained enough coal to fuel his stove for several years from the shipwreck of a schooner, the *Alice Williams* which was wrecked on the island shortly after he moved there. He saved the ship's wheel and the figurehead of a beautiful sad-eyed young woman, the eponymous Alice, which to this day both remain on the island. He renovated the farm buildings with timber salvaged from the wreck.

He also planned to make a little money from the sale of rabbit meat and pelts of which there was no shortage. He soon discovered however that he enjoyed writing books about his castaway life and his wildlife studies more than hunting rabbits and could make a better living from it.

Dream Island

That young man was the pioneering naturalist Ronald Lockley and like a Welsh Thoreau he captured the public's imagination with his enjoyable first book

Dream Island (1930) in which he described the first years of his island life.

He wasn't entirely alone on the island for as well as his wife, Doris, and other guests he shared the island with Trinity House Lighthouse Keepers. The lighthouse was built in 1916 on land acquired in 1914 at the south-western end of the island. Lockley appears to have had a decent relationship with the lighthouse keepers and their colleagues on the neighbouring South Bishop and did them the favour of delivering their mail and newspapers occasionally as

well as enlisting them to play in island cricket matches on the rare occasions when enough people were on the island to play. In *Dream Island* he recalls landing on South Bishop in his small boat, the *Storm Petrel*, and being shown the immaculately kept lighthouse quarters and gleaming fog signal engine and machinery. He was struck by the clinging smell of paint and oil and the "appalling noise" of the fog signals.

Norse links

Skokholm was once the haunt of Vikings. In Old Norse it means "Wooded Isle" although today there are very few trees on it. Skokholm is unique and beautiful, situated about three miles off the coast of mainland Pembrokeshire. The sandstone cliffs are red ochre, sometimes almost vermilion at dawn and sunset, and are capped by verdant grasses and wildflowers including purple thrifts, heathers and mallows contrasting with white carpets of sea campion, sprays of bright yellow gorse and the rusty hue of dead bracken. Despite taking the full force of Atlantic gales there are places of extreme peacefulness and calm in the dells and hollows of Skokholm's gently rolling yet rock strewn plateau. The island is roughly a mile across and extends to approximately 247 acres. It is designated as a Site of Special



The lighthouse was built in 1916, it was automated in 1983 and converted to solar power in 1998.



Timbers and the wheel from the wrecked schooner *Alice Williams* are to be found in Ronald Lockley's dwelling.

Skokholm island is approximately a mile across and extends to nearly 250 acres. It is designated as a Site of Special Scientific Interest, Special Area of Conservation, Special Protection Area, and National Nature Reserve. It also forms part of the Pembrokeshire Coast National Park.

Scientific Interest, Special Area of Conservation, Special Protection Area, and National Nature Reserve. It also forms part of the Pembrokeshire Coast National Park.

It is one of the most important breeding sites for seabirds in Britain and is home to four in ten of the world's breeding Manx Shearwaters, which nest in burrows on the island, many of them originally excavated by rabbits who are forced out by the Shearwaters' sharp beaks and claws. Other abundant seabirds include storm petrel, guillemot, puffin and lesser black-backed gull. Many other rare birds breed on Skokholm including the elegant chough, short-eared owl, peregrine falcon, curlew and lapwing.

Lockley set up Britain's first bird observatory on Skokholm and devoted his academic life to the study of the wildlife found there, principally to the mercurial Manx Shearwaters. He eventually quit the island during the Second World War when he joined the Royal Navy. He continued to farm and study nature on the mainland after the war and his book *The Private Life of the Rabbit* (1964) is said to have inspired Richard Adams to write *Watership Down* (1972). The two authors became great friends and travelled widely together. Lockley was something of a polymath and remarkably he even won an Oscar for the documentary film *The Private Life of the Gannets* (1934) which he produced in association with director Julian Huxley.

Lockley became disillusioned with Britain and in particular with the intensification of agriculture, rapid expansion of the towns and cities and destruction of



Left: Skokholm Island is home to one of the most important sites for seabirds in Britain and is home to four in ten of the world's breeding Manx Shearwaters.

the countryside which followed the war. He also strongly opposed and later lamented the construction of the Milford Haven Oil Refinery and emigrated to New Zealand in search of unspoilt wildernesses in which to continue his beloved wildlife studies. Lockley died in 2000 aged 96.

The Wildlife Trust of South and West Wales

The bird observatory which he founded in 1933 ceased to exist in 1976 but is on the brink of being re-established by the Wildlife Trust of South and West Wales. The Trust has been responsible for the management of the island for over 50 years originally under a lease from the Dale Castle Estate from whom they purchased the freehold in 2006, the first time the island had changed hands since 1646.

On 23rd April 2012 Trinity House granted a 999 year lease of Skokholm Lighthouse and the surrounding land to the Wildlife Trust. The Wildlife Trust's purchase of the lease and the fundraising campaign which preceded it were featured in ITV Wales' television series *Dream Island* which was broadcast in

2012. Trinity House reserves rights under the lease to exhibit a light in the lantern room and to have access for inspection and maintenance purposes and emergency overnight accommodation. Trinity House also reserves boat and helicopter landing rights. The grant of the lease immediately followed a re-engineering project in which the historic 4th Order optic was removed and replaced with a flashing solar powered LED beacon with white and red sectors and a range of eight nautical miles.

The light continues to be exhibited

The long lease of the lighthouse to the Wildlife Trust will enable them to accommodate more volunteers on the island and to continue their conservation work in less Spartan surroundings. The lease also allows Trinity House to continue providing an important aid to navigation on this part of the coast but without the responsibility of maintaining the fabric of the Grade II Listed lighthouse buildings.

“Buying the lighthouse and land around it has completed the last piece of the jigsaw for us. The lighthouse now houses the wardens as well as researchers and volunteers, helping us to increase the number of people who can experience this special Island and expand the range of the research we can carry out”.

The Trust's Chief Executive Officer **Sarah Kessell**.



Author Ronald Lockley created a dwelling after renovation of farm buildings with timber salvaged from the wreck on the island.



Above: The Wildlife Trust of South and West Wales has been responsible for the management of the island for over 50 years.

Above left: Alice Williams's figurehead of a beautiful sad-eyed young woman is preserved here.



PORTFOLIO

We are always happy to receive photographs from readers with a view to creating a regular feature to take up the centrespread in future editions. We are prepared to feature material from several photographers. If you wish to submit work it will be helpful that photographs are submitted in JPEG format, scanned or sampled at 300 dpi or greater and sent to the editor attached to an e-mail and not embedded in any text or file. You will see details of how to contact the editor and the closing date on the inside front cover. Your caption should be as comprehensive as possible and not exceed 150 words.



Providing for our Fishermen and their Families

The Fishermen's Mission is a national charity that has been in existence for over 100 years. Throughout this time we have worked hard to provide a vital service to our fishermen and their families. We are the only charity that works solely with fishermen and their families.

"Our own special aim and object are well defined. Our mission is to aid the hardy, toilsome Deep Sea fishermen...and to do this by familiarising the public, for whom they ply their dangerous task, with their arduous, and monotonous labour... to bring, in simple realistic ways, the actual everyday life of a brave and worthy class – from whose toil we so greatly benefit as a nation, while we understand so little of its perils." The Editor *Toilers of the Deep*, 1886 – (Fishermen's Mission news)

In the earliest days of the Mission, then known as the Royal National Mission to Deep Sea Fisher-

men, our Mission Superintendents went out in boats, the Mission Hospital Steamers, known as Bethel ships, to meet the fishermen as they worked. Appalling conditions on board found the Mission Superintendents taking with them much needed medical supplies and food, as well as offering a pastoral and spiritual service to the men.

"Looking back over the years that are past, one is thrilled with gratitude for the way the Lord has led and blessed and sustained the Mission, which, beginning as but a 'very little thing', has grown without check, to such truly national importance and now caters for

our British fish-catchers both ashore and afloat..."
The Editor, *Toilers of the Deep*, January 1913.

Essential mobility for Superintendents

Nowadays the Mission Superintendents reach their beneficiaries, not in boats, but in vehicles kindly part funded by partner agencies. The ability to change and adapt our work has been the key to the continued success of the Fishermen's Mission; still delivering vital services whenever, wherever and however they are required.

As the work of the Fishermen's Mission increased and changed so did our services. Large Fishermen's Mission Centres were built to offer a safe place to stay when ashore. Canteens, beds, washing facilities, and a place for comradeship became a large part of our work. Nevertheless, always present, was the need for 'The Mission Man' to be there to

Below: A group of Superintendents, most likely of the 19th century.



offer compassion, spiritual guidance and help when dealing with emergencies and tragedies.

Skipper Joe White of the Mission Hospital Steamer, J & S Miles, writes in 1913 "On the 28th we were in the Tyne coaling at 7pm. The SS Alexrando came in, reporting the loss of her deck hand, who had fallen overboard that morning, no one seeing him go. I was able to accompany Miss Grace (Superintendent Lily Grace) on her very trying

mission of breaking the news to the mother. The scene that followed cannot be described by tongue or pen."

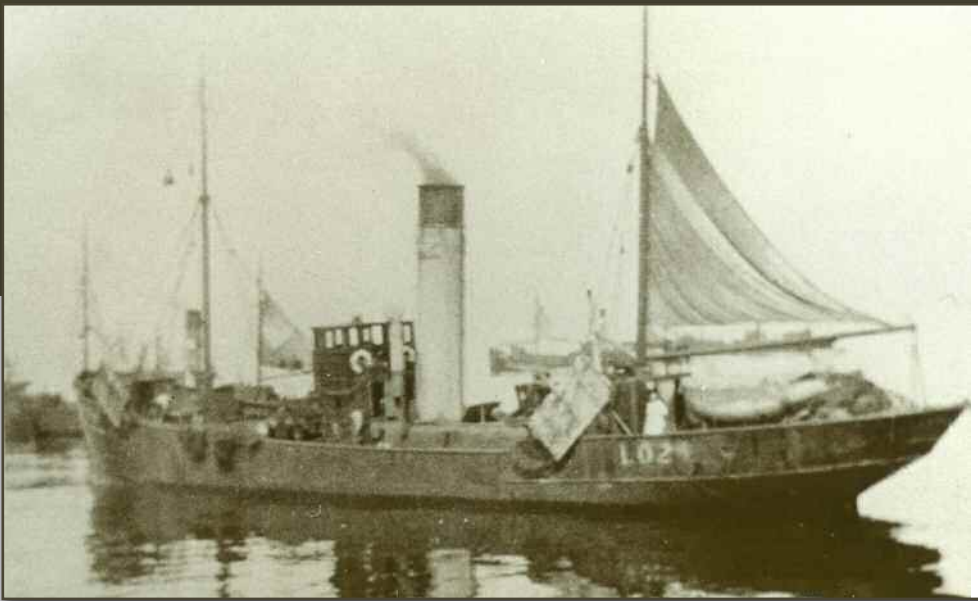
This year, a widow whose husband was lost to the sea in 2008 has written of her experiences, "A few hours after I had received the terrible news I returned home with my family to find Superintendent Tim Jenkins from the Fishermen's Mission waiting on my doorstep. Tim explained that the Charity would

do everything they could to support me. In my darkest hour the Fishermen's Mission were my lifeline, they were all I could hang on to."

Support from Trinity House

Further changes in the fishing have required us to be more flexible in our work. Now required to meet different needs, the Fishermen's Mission has closed and will continue to close, most of its large

➤ Continued on page 26.



Top left: An element of the fishing fleet served by the Mission from 1881.

Top right: Superintendent Keith Dickson from Newlyn wearing the new safety kit funded by Trinity House.

Lower: Large Fishermen's Mission Centres were built to offer a safe place to stay when ashore in days past. This example is of Grimsby.



Providing for our Fishermen and their Families (continued from page 25).

accommodation centres as fishermen either go home of a night or have accommodation on board. Instead the Mission is opening 'mini centres' that provide laundry and shower facilities, somewhere to make a cuppa and a place to sit and chat and rest. Annual funding provided by Trinity House helps to ensure that these vital services are continued to be provided.

Mission Superintendents (now both men and women) are still working across the British Isles,

many with smaller offices, some with mobile offices but all still providing welfare and support for active and retired fishermen and their families. Reaching out to find those who really need some help, be it financial or moral support; a hospital visit; or a cuppa and some advice to those who find themselves lonely and vulnerable. Last year alone, the Mission Port staff undertook more than 7,000 visits to provide welfare and practical support and the Mission distributed grants totalling £896,000

to fishermen and their families who found themselves needing some extra help.

Sadly, some aspects of the work never changes. Accidents and fatalities still occur and last year the Fishermen's Mission was involved in 88 incidents. In 2013 the Fishermen's Mission, working with many other maritime agencies, will be focussing on safety and wellbeing. Running Safety Roadshows aimed at encouraging fishermen to wear a personal flotation device (PFD) is a key project in 2013/2014. Successful applications for funding and by investing our own funds, the Fishermen's Mission has been able to work with fishing organisations and agencies to distribute hundreds of PFDs to our fishermen. Funding provided by Trinity House has enabled us to ensure that all our Mission Port staff have the required safety equipment to keep them safe whilst they go about their work.



Top left: A Northern Ireland fisherman wearing a new PFD.

Top right: One of the Mission's new cars

Lower left: Peter Shaw working with fishermen in Hasting.

Lower right: Jane Dolby, a fisherman's widow, and Senior Superintendent Tim Jenkins from the Fishermen's Mission. Inspired by the Military Wives, Mrs Dolby has formed a choir, The Fishwives Choir, to support other families of those lost at sea.

Work with the NHS

We are looking to continue to work with the NHS to provide health checks and advice for fishermen. We do this by providing a mobile service in fishing communities. This outreach approach now provides the mainstay of the Fishermen's Mission service. Partnership working with other agencies and charities is the way forward for the Fishermen's Mission and we will continue to seek out these new opportunities.

Looking to the future the Fishermen's Mission is investing in a significant digital and social media project aimed at engaging potential and existing beneficiaries using modern media and communication methods. We are also looking to provide digital and mobile equipment to our staff to negate the time-consuming and costly methods of completing paper forms. Ever changing and adapting the Mission will continue to be of service in the decades to come.

From 1881, meeting the needs of our fishermen and their families

The Fishermen's Mission, with your help, will continue to meet the needs of our brave fishermen and their families so that those who risk their lives every day will know that we will be there to help them and their families in times of tragedy or need from 1881 well into the future.

If you would like to know more about the work of the Fishermen's Mission or would like to offer them help you can find out more by going to their website: www.fishermensmission.org.uk or calling 01489 566910 or follow us on Facebook **The Fishermen's Mission** and Twitter **@thefishmish**.

Combat Stress helping Veterans since 1919

A BBC *Panorama* report recently demonstrated the scale of the mental health challenge facing Britain's serving and ex-Service personnel. Every suicide is one too many, but the 50 in one year referred to by the BBC is a desperately sad revelation. More than 200,000 UK Soldiers have served in Iraq or Afghanistan during the last decade. Combat Stress, the Veterans' mental health charity, expects that one in five will suffer from some form of mental illness, with around four per cent suffering from the more serious and life limiting Post-Traumatic Stress Disorder (PTSD). These heroes will need support but they must be able to access it quickly and easily.

Combat Stress has 94 years' experience in the field and is currently treating more than 5,200 ex-Service men and women nationally. The vast majority of the former sailors, soldiers, airmen and merchant sailors who are supported by the charity are suffering from PTSD and many have a connected anxiety, depression or alcohol dependency issue as well.

Numbers needing help to increase

Unfortunately, the number of Veterans needing the charity's help is expected to rise. In the 12 months

to the end of March 2013 Combat Stress received more than 1,700 new referrals – an increase of 10 per cent on the previous year. The charity's 24-hour Helpline receives 8,500 calls a year of which around 100 are from Veterans contemplating hurting themselves. Demand from Veterans seeking mental health support is increasing. The charity sector and the NHS must manage this challenge together.

The NHS has a crucial role to play in ensuring Soldiers and Veterans access the support they need. Eight in ten Veterans treated by Combat

➔ *Continued on page 28.*

To help Veterans rebuild their lives, a range of services are provided.



Combat Stress is supporting more Veterans than at any time in the charity's long history.

Combat Stress helping Veterans since 1919

continued from page 27.

Stress have tried to access NHS services but found them ineffective or lacking an understanding of their needs. If the country is to prevent a growing national tragedy, more must be done to ensure NHS clinicians are equipped to deal with Veterans' unique experience of battle trauma and Service life.

Education needed

Generally speaking, NHS and emergency services staff are the first to have contact with Veterans who are in deep emotional turmoil. Front line clinicians need be educated in, and have a greater awareness of, the issues surrounding Veterans' mental health. They should be able to identify Veterans and adjust their treatment accordingly.

Furthermore, developing NHS Veterans' mental health services are patchy and there is a need to assess what practices are effective and what are not. Best practice needs to spread nationally to provide knowledgeable and effective coverage. Combat Stress is working closely with the Ministry of Defence and Department of Health to develop these services now because the challenge will continue to increase post-conflict. This government and its predecessor must be commended for the

work they have undertaken in this area so far but there is much more that can be done.

The country must do better

Those who have sacrificed so much to protect our freedoms deserve our respect and support. Ultimately we are all in this together – families, GPs, community mental health practitioners, charities, NHS commissioners, opinion formers, everyone. As a country we can do better – and must do better.

Combat Stress is supporting more Veterans than at any time in its long history. This includes 396 Veterans who have served in Afghanistan and 724 who served in Iraq. The youngest Veteran is just 18 years old. The longer someone suffers without specialist treatment the more severe the impact these unseen injuries have on their lives.

On average it takes over 13 years from Service discharge for Veterans to make the first approach to Combat Stress for help. This is simply too long to struggle alone. Combat Stress offers a number of services that are free to Veterans. If you or a loved one think you might need their help please call the Combat Stress 24-hour Helpline on 0800 138 1619 or visit www.combatstress.org.uk

Combat Stress treats conditions such as Post Traumatic Stress Disorder (PTSD), depression and anxiety disorders. Their services are free of charge to Veterans. To help Veterans rebuild their lives, a range of services are provided:

- A 24-hour Helpline (tel: 0800 138 1619, text: 07537 404 719, or email: combat.stress@rethink.org). The Helpline provides free and confidential mental health advice and support. It is for current and ex-Service personnel, and their families and carers;
- Community and Outreach – delivered by a national network of teams of Regional Welfare Officers (providing practical support) and community-based clinicians. Our support is tailored to each Veteran's needs;
- Short-stay clinical treatment – with other Veterans – at one of our three specialist treatment centres in Ayrshire, Shropshire and Surrey. The treatment and care that we provide is tailored to each Veteran's needs;
- A specialist Reserve Forces Liaison Team;
- NHS Specialised Commissioned Veterans' Post Traumatic Stress Disorder programme. We are a centre of excellence for the treatment of PTSD.



The nation's heroes will need support but they must be able to access it quickly and easily.



Support from Combat Stress is tailored to each Veteran's needs.

The nation's heroes will need support but they must be able to access it quickly and easily.



Generous Means-tested Bursaries for Seafarers at the Royal Hospital School



An outstanding all round education

A near neighbour of Trinity House, Harwich is the **Royal Hospital School**, Holbrook occupying a magnificent site on the banks of the Stour in the Suffolk countryside a few miles south of Ipswich.

A leading independent co-educational boarding and day school RHS Holbrook has a roll of around 700 pupils aged 11 to 18, five hundred of whom are boarders with the rest being day pupils or day boarders. An outstanding all round education is provided and it is evident that academic standards are high to which are added the School's wide-ranging programme of sport, music and extra-curricular activities.

The main points of entry are at 11+ (mostly from primary schools), 13+ (mostly from prep schools) and 16+, although the School does admit pupils at all other ages. Ninety per cent of the School's departing Upper Sixth Form pupils progress on to higher education, and many of them secure places at the UK's leading universities, including Oxford, Cambridge, Bristol, Durham, Edinburgh and other Russell Group institutions.

Having just completed a five year programme of building development, which included the creation

of a new music school at a cost of £3.5million and a complete refurbishment of boarding accommodation, the Royal Hospital School now has outstanding facilities.

Pupils are encouraged to pursue a huge range of interests, shared experiences and activities and through them develop the life-long qualities of self-discipline, enthusiasm and commitment.

In the Senior School, the Combined Cadet Force (CCF), which is one of the largest in the country, promotes the benefits of responsibility, teamwork, leadership and endurance through a whole range of opportunities. Cadets can take part in activities as diverse as rock climbing, coastering, power-boating and flying while learning safety skills and self-reliance on expeditions and in camp. Many pupils also participate in the Duke of Edinburgh Award Scheme which encourages self-development.

Sailing Academy

Sailing is a particular strength and many pupils choose to continue sailing throughout their time at the School and pursue the sport competitively at school, national and international level. Sailing holidays are also popular, with weekend sailing

expeditions using the School's fleet of Cornish Shrimpers. The School is an RYA recognised training establishment and has a fleet of more than 40 dinghies including RS Terras, Fireflies, Toppers, Lasers, RS Fevas, RS 200, RS500 and 29ers.

Senior sailors also have the opportunity to gain the globally-recognised RYA dinghy instructor qualification, allowing them to work all over the world.

A generous offer to members of the Trinity House Service

Generous means-tested bursaries are offered by Royal Hospital School to children whose parents or grandparents are seafaring members or former members of Trinity House (depending on sea-going service). These can be up to 100% of the fees and are awarded by the School's parent charity, Greenwich Hospital.

To learn more or to apply for a means-tested bursary readers are invited to contact the Admissions Office, The Royal Hospital School, Holbrook, Ipswich, Suffolk, IP9 2RX

TELEPHONE: 01473 326210;

E-MAIL: admissions@royalhospitalschool.org

WEB: www.royalhospitalschool.org

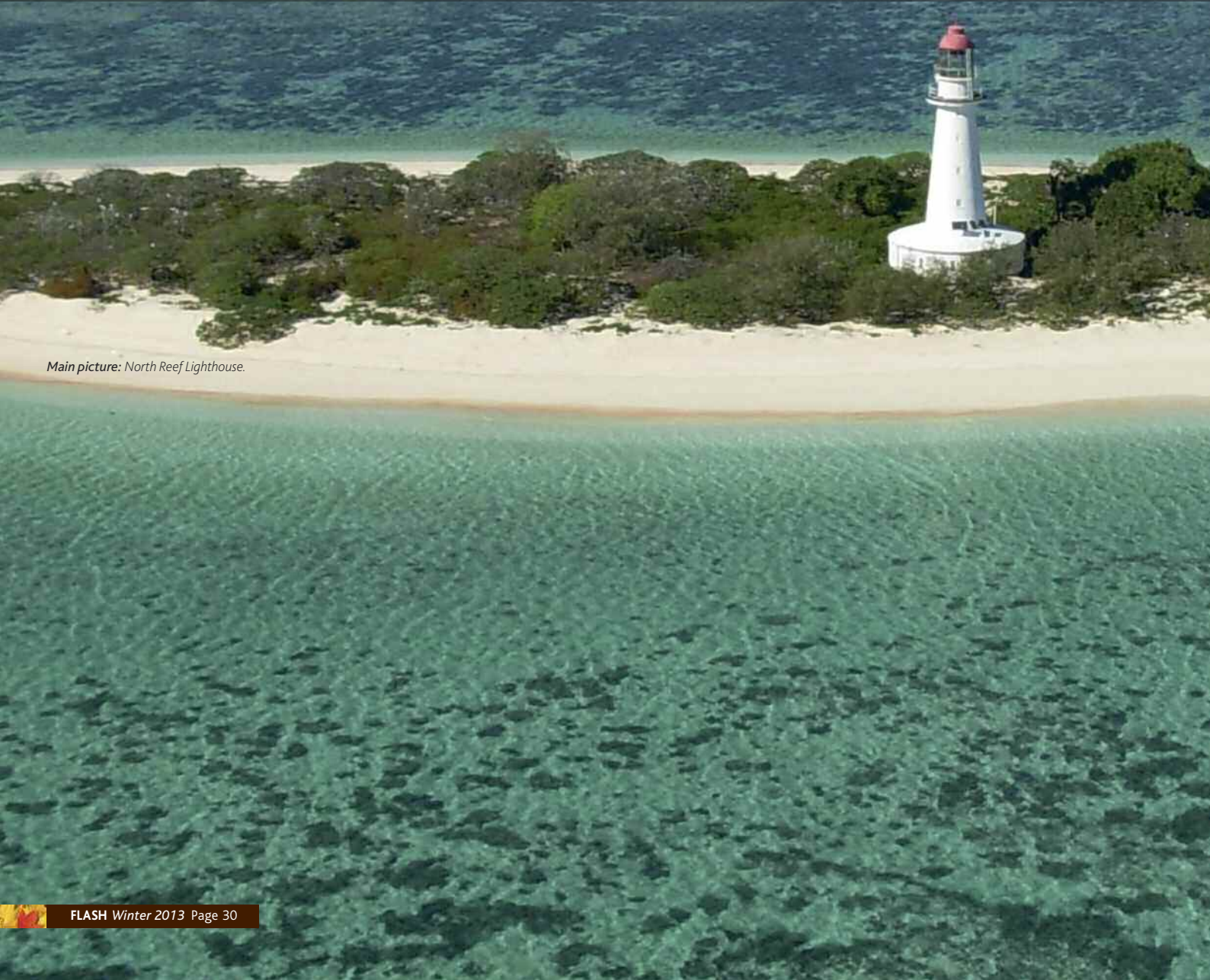


Australia's Plan to Manage Shipping in its Sensitive North East Region

On 2nd August 2013, the Australian Government released a plan for managing shipping traffic in the iconic and sensitive marine environments of Australia's north-east, a region covering the Great Barrier Reef (GBR), Torres Strait and Coral Sea. The plan, known as the North-East Shipping Management Plan (NESMP), outlines measures currently in place to manage the safety of shipping in the north east and proposes options to further minimise the environmental impact of these activities in the years to come.

Australia relies heavily on shipping, with almost 99% of its trade conducted by sea. The export of bulk cargo in particular has grown considerably over the past decade, driven by high demand from Asia. This demand is expected to continue with the further development of coal and natural gas export facilities in north eastern Australia.

Australia's north east region is recognised for its unique physical, ecological and heritage values along with a rich marine biodiversity. As such, the



Main picture: North Reef Lighthouse.



Above: The Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS) Centre, located in Townsville, Queensland.

Both the GBR and Torres Strait have been declared Particularly Sensitive Sea Areas (PSSA) by the International Maritime Organization (IMO), with the Great Barrier Reef also being recognised as a World Heritage property by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

area is afforded special protection under various national and international laws. The GBR covers an area of 346,000 km² and comprises some 900 islands, 2900 reefs and extends 2300 kilometres along the Queensland coast. Likewise, the Torres Strait links the Coral Sea in the east to the Arafura

Continued on page 32.



An example of shipping in the Great Barrier Reef.

Australia's Plan to Manage Shipping in its Sensitive North East Region (continued from page 31).

Photo: Mike Sturley



Above left: Half-sunken wreck on the Reef.

Left: Wreck on Fraser Island foreshore.

Main picture: Chapman Reef Light.



Left: The crippled Chinese cargo vessel Shen Neng, which hit a sandbar off Great Keppel Island in Queensland, leaking oil from its fuel tank on April 4, 2010. Picture courtesy of: Queensland Maritime Safety.

Sea in the west and has more than 100 islands.

In 2002, the Australian Government proclaimed the Coral Sea Commonwealth Marine Reserve to protect the waters of the Coral Sea that fall within Australia's Exclusive Economic Zone.

Extensive ship management controls

Australia already has in place extensive ship management controls throughout the north east region. These include:

- high quality ship navigation charts and aids to navigation
- rigorous coastal pilotage requirements
- extensive vessel traffic services that monitor ship movements and intervene if ships move beyond defined shipping areas
- legislation to support the control of pollutants and emissions from ships
- emergency response arrangements including emergency towage assets and oil spill response equipment.

To obtain objective data to support the planning process, an assessment of the risk of shipping incidents was conducted in 2012 to evaluate the effectiveness of navigation and ship safety measures for current and forecast shipping levels to 2032. The assessment found that measures currently in place have had a significant effect in reducing the risk of

shipping incidents. However, while the forecast traffic densities will never approach those experienced in busy waterways such as the Malacca Strait and the English Channel, there are additional measures which can be implemented today and in the years ahead to further reduce the risk of incidents.

Future measures

Key future measures outlined in the NESMP include:

- consideration of additional coastal pilotage requirements as traffic levels warrant
- increased resources for Port State Control inspections
- further focus on areas related to navigational risk (i.e. fatigue management and passage planning)
- additional protection for the Coral Sea by seeking, through the IMO, categorisation as a Particularly Sensitive Sea Area
- using emerging ship tracking technology to improve awareness of shipping movements in the Coral Sea and to provide early alerting of ship breakdowns
- more active management of 'traffic organisation services' to minimise risk of collisions, particularly in areas such as Hydrographers Passage

- working with industry to introduce, ahead of international timelines, the need for ships to be equipped with Electronic Chart Display and Information Systems (ECDIS) and bunker oil tanks fitted in protective locations.

Management Group

The Australian Government has established a North-East Shipping Management Group to oversee implementation of the NESMP. The group comprises representatives from a range of government agencies and will ensure that the risks and impacts of shipping are regularly reviewed and the NESMP remains a long-term road map for minimising the impact of shipping in the region.

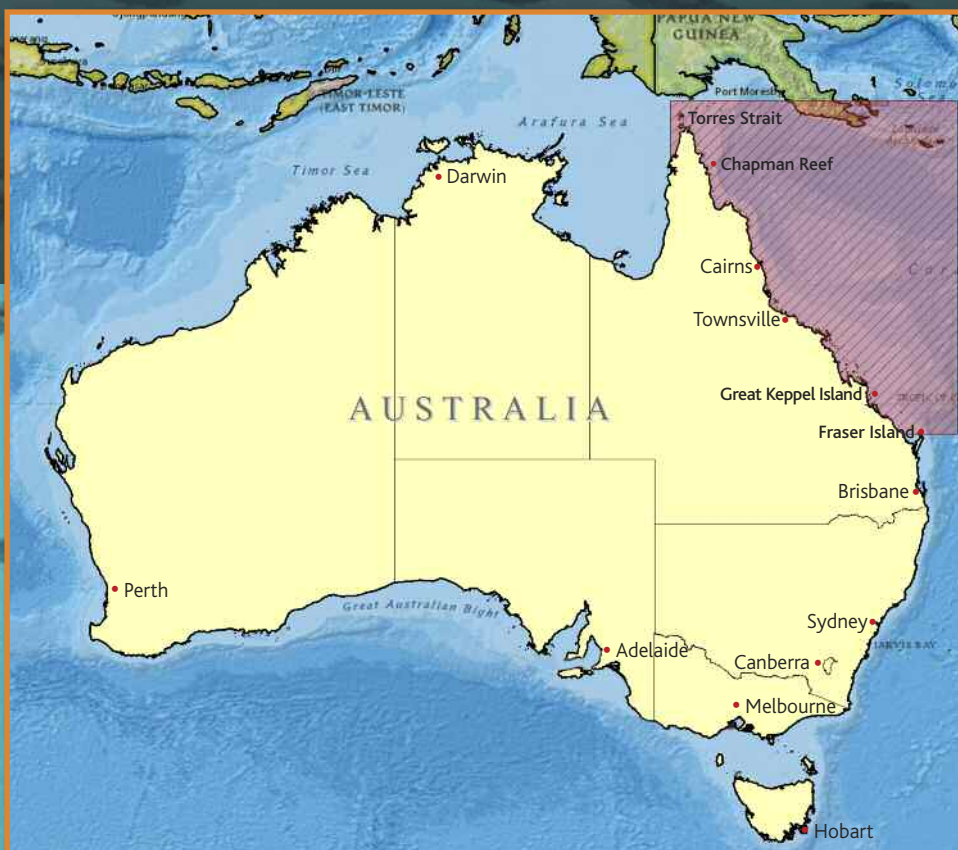
A full copy of the NESMP, including a summary work plan, can be found under the consultation section of the Australian Maritime Safety Authority's website at: www.amsa.gov.au

About AMSA

The Australian Maritime Safety Authority (AMSA) is Australia's national agency responsible for maritime safety, protection of the marine environment and maritime and aviation search and rescue. It is governed by the Australian Maritime Safety Authority Act 1990.

AMSA's principal functions are:

- promoting maritime safety and protection of the marine environment;
- preventing and combating ship-sourced pollution in the marine environment;
- providing infrastructure to support safety of navigation in Australian waters; and
- providing a national search and rescue service to the maritime and aviation sectors.



On map left: Australia's north east region, as shaded.

Background picture: Australia's Great Barrier Reef extends 2,300 kilometres along the north east coast of Queensland.

Resilient PNT - *beating the jammers*

The International Maritime Organization (IMO) is developing e-Navigation as the future approach to marine navigation in order to enhance maritime safety. The IMO state that positioning systems for e-Navigation “*should be resilient.... robust, reliable and dependable, particularly in relation to position fixing systems.*”¹ GPS has become the primary source of positioning for mariners; but Global Navigation Satellite System (GNSS) alone cannot provide resilient Positioning, Navigation and Timing (PNT). GNSS is vulnerable to deliberate, accidental or natural radio interference. A complementary system, compatible with GNSS but independent from it, is essential to achieving the resilient PNT required for e-Navigation; it is also essential for supporting a wide range of national and international critical infrastructure systems.

number of the bridge systems, including some which may be unexpected, for example the vessel’s radar, gyrocompass and clocks; all of which are affected when GPS is denied.

Achieving Resilient PNT

A number of methods can be considered to achieve resilient PNT, including introducing inertial systems and options to harden GNSS equipment.

Unfortunately, such approaches are either too expensive or restricted to military use, and as such the ACCSEAS project is considering three alternative radio navigation solutions:

- R-Mode
- eLoran and
- Absolute radar positioning

R-Mode, or Ranging Mode, is obtained by adding a navigation ranging signal to the signal broadcast by marine radiobeacon DGPS stations and AIS base stations. If the user receives data from three sites then they should be able to calculate their position. R-Mode does not exist currently and the project will investigate how it could be achieved.

eLoran is a system of low frequency broadcasts from terrestrial stations that provide PNT information, independent from and complementary to GNSS. Like R-Mode, if the user can receive data from three stations then they can calculate their position, however eLoran is more mature than R-Mode and is capable of providing additional data over the transmission link, using the Loran Data Channel.

Absolute radar positioning makes use of new technology radar and new radar beacons (Racons) which respond to a radar illumination by including their known position within the return. The radar can then use this to a relative offset to that known location.

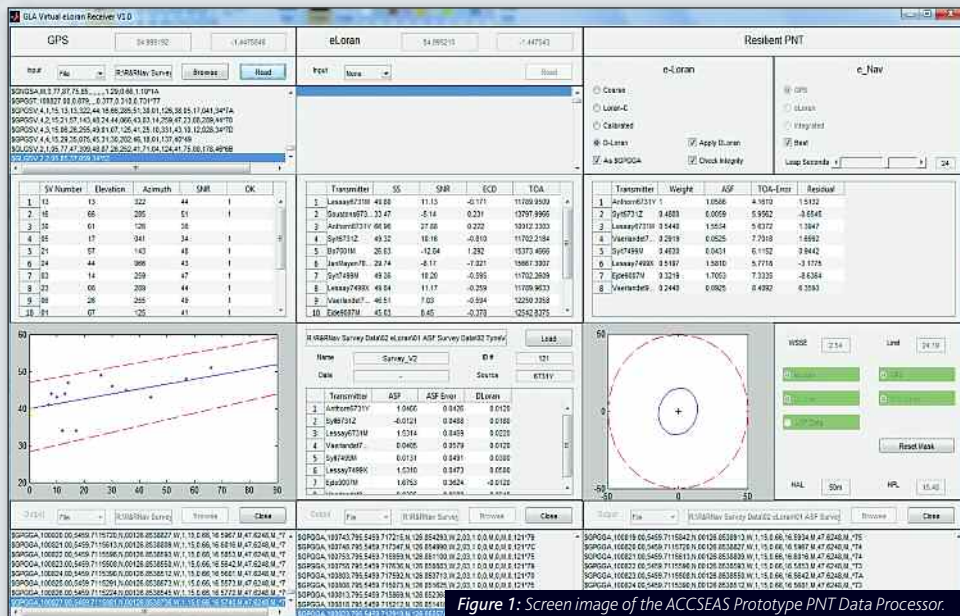


Figure 1: Screen image of the ACCSEAS Prototype PNT Data Processor.

The Accessibility for Shipping, Efficiency Advantages and Sustainability (ACCSEAS) project will consider resilient PNT as part of its overall aim of developing potential e-Navigation services that will enhance maritime safety and efficiency within the North Sea Region (NSR). The project aims to develop an e-Navigation test bed within the NSR which will be used to demonstrate potential e-Navigation services developed by the project. The General Lighthouse Authorities as part of a collaboration of 11 partners from across the NSR, made up of service providers, industry and academia².

The need for resilient PNT

Without Resilient PNT, users are vulnerable to GNSS system failures as well as intentional and unintentional interference³. The Sun caused natural interference in 2006 when a radio burst affected GPS reception over

the entire sunlit side of the Earth⁴. Man-made jamming also occurs, whether due to accidental use, or through intentional actions, as in the case of GPS jamming observed at Newark airport in 2010⁵, and that experienced by South Korea perpetrated by the North.

These problems are not limited to GPS; by design signals broadcast from GNSS satellites are low power and share a common frequency band to aid interoperability; it is therefore easier to affect more GNSS with a single jammer. In this case, ease of interoperability also leads to joint vulnerability.

GPS has become the normal method used for maritime PNT, primarily because it is freely available and usually provides excellent performance. As a result, the number of GPS receivers installed on the bridge is increasing and, depending on the nature of the vessel operations, GPS data can be fed to a large



THV Galatea.

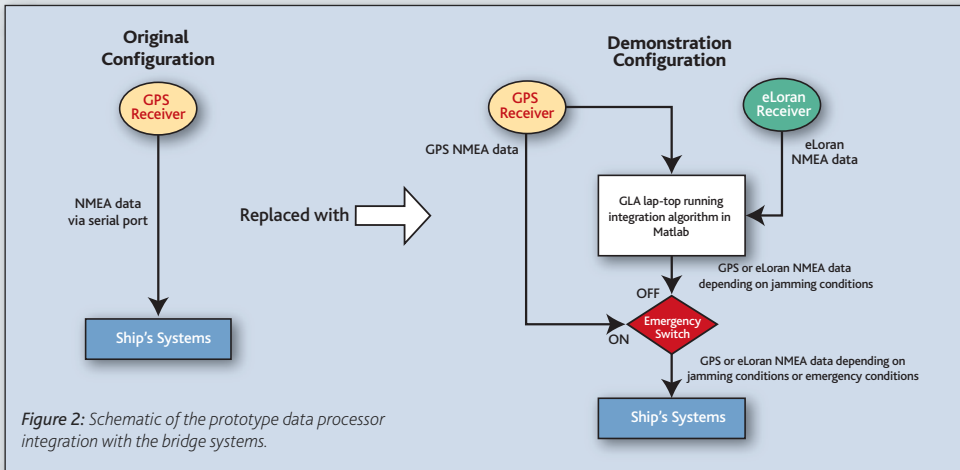


Figure 2: Schematic of the prototype data processor integration with the bridge systems.

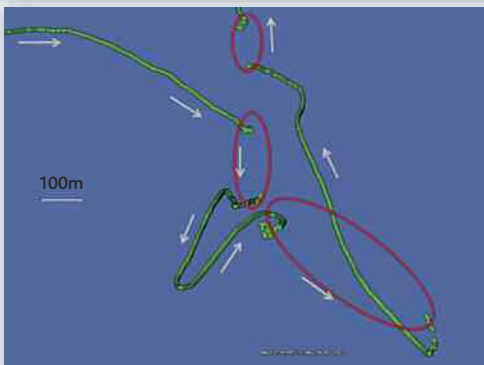


Figure 3: The reported track of the vessel as provided by the GPS receiver during the first day of the demonstrations.

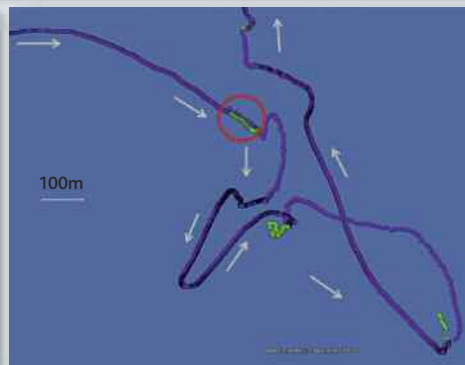


Figure 4: - The Resilient PNT output is overlaid with the GPS position alone.

the RPDP was installed on the bridge of THV Galatea. The ship's navigation systems are fed by two GPS, by replacing one of the GPS data feeds with the output from the RPDP was it possible to feed resilient PNT information to the bridge equipment (Figure 2). After seeking the necessary permissions, GPS was jammed in a designated demonstration area and an assembled audience were able to witness the effect of GPS jamming and then the benefit of having resilient PNT.

During the first scenario, with the RPDP disabled, the audience observed the many different bridge systems enter an alarm state, reporting the loss of position or timing information. During this second run the RPDP monitored the performance of GPS and identified the presence of jamming, before it had the chance to cause the ship's bridge systems to alarm,

and swapped to eLoran. This resulted in the quiet, seamless and automatic transfer from one source of PNT to another. For the first time, the vessel was able to operate on a resilient PNT solution and, in what is believed to be another first, reporting its position over AIS using eLoran derived PNT information.

Following the demonstrations, data recorded from the various GPS receivers were processed, including the output of the RPDP. Figure 3 shows the GPS position output from the first scenario while Figure 4 gives the resilient PNT output. The green trace in Figure 3 shows the reported GPS position and the gaps indicate where GPS was lost due to jamming, highlighted by the red ovals. The purple trace on Figure 4 is the resilient PNT position, when GPS was available the two traces overlap exactly. However it is clear to see that where GPS was prevented due to jamming,

eLoran derived positions are output instead and fill the gaps. It can be seen from the figure that the PNT source was swapped before GPS was lost completely, thus also preventing Hazardously Misleading Information (HMI), where the alarm does not sound but the position is still in error. Whilst outputting eLoran data, the RPDP continues to monitor the performance of GPS and once it is deemed usable again, the output is swapped back to GPS. A video of the demonstration is available from the project website ².

Conclusions

The ACCSEAS project has developed a prototype resilient PNT solution which has been successfully tested and demonstrated under live conditions on a typical ship's bridge. The demonstration clearly showed how alternative PNT data was provided when GPS was degraded because of jamming, thus providing much needed resilience, enabling the ship's crew to continue to navigate safely and efficiently and were not distracted by the many different alarms that would otherwise have sounded.

The GLA, and the ACCSEAS project, continue to support the use of multiple PNT sources in order to keep the mariner safe and avoid the presentation of Hazardously Misleading Information.

Acknowledgements

This work was conducted as part of the ACCSEAS project which is part funded by the INTERREG IVB North Sea Region programme, and the authors would like to thank the project participants along with the crew of THV Galatea for their assistance and professionalism when conducting these trials.

The ACCSEAS partners are General Lighthouse Authorities, UK & Ireland; Chalmers University of Technology (Sweden); Danish Maritime Authority; Federal Waterways & Shipping Administration (Germany); Rijkswaterstaat, Ministerie Infrastructuur en Milieu (The Netherlands); Swedish Maritime Administration; Norwegian Coastal Administration; SSPA Sweden AB; Flensburg University of Applied Science (Germany); NHL Hogeschool, Leeuwarden, Maritiem Instituut Willem Barentsz (The Netherlands) and World Maritime University (Sweden).

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- [4] Grant, A., Shaw, G., & Ward, N., "A Review of Space Weather Events and the Potential Impact on Maritime AtoN Services," ION GNSS, Nashville, 2012.
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Nelson, Navy, Nation AND Turner & the Sea

Two major exhibitions are reported at the National Maritime Museum, Greenwich, each concerns a national hero, one a naval officer and the other a sea painter. They opened in recent weeks to loud acclaim and are expected to be well supported. *Nelson, Navy, Nation* opened on the anniversary of the Battle of Trafalgar, 21st October. This is in a new, permanent gallery dedicated to Nelson's Navy and 18th century seafaring in Britain. Hundreds of objects tell the story of life at sea and on land, from the Glorious Revolution of 1688 to the defeat of Napoleon in 1815.

Highlights of the exhibition include Nelson's Trafalgar uniform and works by the painters Hogarth and Devis. Furthermore, *Nelson, Navy, Nation* looks at how the Royal Navy shaped individual lives and the course of British history over the tumultuous 18th century – a period when the Navy became a greater focus of public life than ever before and

seafaring heroes were national celebrities. From the bustling dockyards which were the greatest industrial enterprises of the age, to the ferocious sea battles where so many made the ultimate sacrifice – the gallery looks at every aspect of the naval story from joining up to the surgeon's table and everything in between.

Here, the gallery also examines the rich, complex and creative relationship between Royal Navy and British people, considering the navy's place in the popular imagination as defender of the nation and her interests and as the protector of the British way of life.

Finally, the gallery provides a setting for the museum's unrivalled collections relating to Admiral Lord Nelson, considering his rise to fame, sudden death and the personal and national grief that was left in his wake. The opening of the gallery in October commenced a season devoted to traditional maritime music events co-curated with the English Folk Dance and Song Society and featuring the Fishwives Ensemble, the Cecil Sharp House Choir, the New Scorpion Band and shanty crew Kimber's Men. Other events include a series of talks on all things naval.

Admission to the permanent galleries, of which *Nelson, Navy, Nation* is part, is free of charge.



Above: Rear-Admiral Sir Horatio Nelson, 1758-1805, by Lemuel Francis Abbott, 1799. A half-length portrait depicting Horatio Nelson when a Rear-Admiral, facing forward with his head turned to the left. He wears rear-admiral's undress of 1795-1812 pattern, with gold epaulettes, the Nile decorations, and in his hat the distinctive diamond chelengk given to him by the Sultan of Turkey. On his jacket he wears the star of a KB, granted to him on 27th September 1797, together with the Neapolitan Order of St Ferdinand and of Merit, and the Turkish Order of the Crescent. His empty right sleeve is pinned across the front of his coat by the star of his KB, a reminder that he lost his right arm at Santa Cruz, in July 1797.



Above: The Royal George at Deptford showing the launch of the Cambridge, by John Cleveley, the Elder, 1757. This picture is a composite of two events, set at Deptford, combining the launch of Cambridge, on 21st October 1755 with a view of Royal George, 100 guns, which was in reality launched a year later at Woolwich Dockyard. The painting shows considerable shipping detail and activities on the quayside, with a variety of small open craft, some clearly bearing official parties. To the left the artist has included a Dutch coastal vessel and there is a gaff-rigged royal yacht moored in the centre. A ceremonial barge with trumpeters moves astern of Royal George and a Thames lighter, laden with kegs, can be seen to the right, propelled by two watermen standing up and dragging long sweeps through the water.

Around the Organisations

Turner & the Sea

This exhibition opened on 22nd November 2013 and runs to 21st April 2014 and is the first full-scale examination of J.M.W. Turner's lifelong fascination with the sea. Dramatic, contemplative, violent, beautiful, dangerous and sublime – the sea was the perfect subject to showcase Turner's singular talents, and the 120 pieces on display include some of the most celebrated paintings of the artist's long career.

In the words of Dr. Kevin Fewster, Director of Royal Museums Greenwich, "J.M.W. Turner is one of the most influential painters in the history of British art. He was also the 19th century's greatest and most prolific marine artist and one for whom naval and maritime Greenwich provided a rich source of inspiration, making the National Maritime Museum an especially appropriate venue for this exhibition. So obvious is Turner's fascination with the sea, I was surprised to discover that a major exhibition devoted to this theme in his work had not been previously staged. I am glad that this omission has allowed us to put together this wonderful exhibition which I hope will be an inspiration for art lovers and lovers of the sea alike."

The extraordinary quality of the works gathered together for *Turner & the Sea* confirms his status as the pre-eminent painter of water and demonstrates his unique ability to represent the elemental power of the sea. The exhibition features items on loan from some of the world's most prestigious artistic institutions including: National Gallery, Tate, Yale Center for British Art, British Museum, Metropolitan Museum of Art, Royal Collection, Calouste Gulbenkian Foundation, Lisbon and National Gallery of Art, Washington.

From his transformative Royal Academy paintings of the late 1790s and early 1800s to the unfinished, experimental seascapes he produced towards the end of his life, more than half of Turner's artistic output depicted maritime subjects. It should come as no surprise that a man who spent much of his life along the coasts of Britain and Europe, who spent days fishing the Thames, and who reportedly had himself lashed to the mast of a ship to better paint a storm at sea, captured this subject so often and with such evocative mastery. Nonetheless, the sheer volume of material Turner created in his quest to depict the sea is remarkable.

Encompassing oils, watercolours, prints and sketches, the exhibition follows Turner's progression from newly-elected Royal Academician to one of the country's most celebrated artists. While his style changed considerably, his virtuoso showmanship remained a dazzling constant. *Turner & the Sea* examines the artist's new and often unexpected response to the prestigious history of European marine painting, as well as the relish with which he competed with other artists of his generation, ultimately leaving them in his wake as he took his work in a new, uninhibited and innovative direction.

Information for visitors:

The museum is open every day, from 10.00 to 17.00, except for public holidays, Christmas, Boxing Day and New Year's Day. The museum is open late on Thursdays.

For further enquiries readers are invited to telephone: 020 8312 6565 or to visit the Museum's website at: www.rmg.co.uk
Charges apply for entry to temporary exhibitions such as *Turner and the Sea*.



Clockwise from top left:

The Shipwreck by J.M.W. Turner, oil on canvas, exhibited at Turner's gallery in 1805. © Tate.

Keelmen heaving in Coal by Moonlight by J.M.W. Turner, 1835, oil on canvas. © National Gallery of Art, Washington.

Rockets and Blue Lights (Close at Hand) to warn Steam-Boats of Shoal-Water by J.M.W. Turner, 1840, oil on canvas. © Sterling and Francine Clark Art Institute, Williamstown, Massachusetts, USA (photo by Michael Agee).

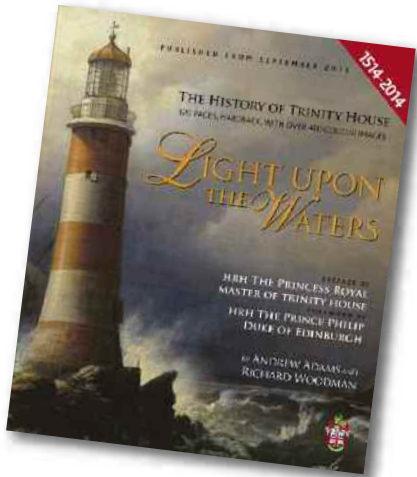
Off the Nore: Wind and Water by J.M.W. Turner, c. 1840-45, oil on paper, laid on canvas. © Yale Center for British Art, Paul Mellon Collection.

NEW BOOKS

Light upon the Waters;

THE HISTORY OF TRINITY HOUSE 1514 TO 2014.

By Andrew Adams & Richard Woodman, published by Trinity House, London. 320 pages. ISBN 978 0 9575991 0 9 Price **£29.95**



Members of the Service past and present will be fully aware of the Trinity House role as the General Lighthouse Authority for England and Wales providing marine aids to navigation in these islands.

At Trinity House the development, engineering, field-maintenance, support and sea-staff uphold a long tradition of service to the mariner and this has grown over the last five centuries. Besides these undertakings, Trinity House licenses deep-sea pilots and supports cadetships for those wishing to follow a career at sea in merchant ships. These duties have been performed to a greater or lesser extent for five centuries and are work that continues to this day. All the while the Corporation of Trinity House, as a charity, has ministered to the wants of needy seafarers and their dependants, providing almshouses and making grants through other maritime charities.

To commemorate 500 years of its foundation the Corporation of Trinity House publishes its history in November written by well-known author and Elder Brother Captain Richard Woodman, (pictured right) and the pilotage expert Captain Andrew Adams, Younger Brother.



For further information, readers are invited to send their correspondence details to **Michelle Tindall**, who may be contacted at: michelle.tindall@thls.org www.trinityhouse.co.uk/th500/books

The Lifeboat; COURAGE ON OUR COASTS.

By Nigel Millard, Edited and written by Huw Lewis-Jones, published by Conway Publishing, London in association with the RNLI. 242 pages. ISBN 978 184486 217 Price **£25.00**



Here are over 450 stunning photographs in a tribute to the RNLI with a foreword by HRH Prince William, Duke of Cambridge, a former SAR pilot. The RNLI needs no introduction to our Service and our cordial relations go back far. This is an unprecedented photographic celebration of the everyday bravery, compassion, and outstanding commitment of the volunteers of this institution.

From the Cornish and Irish coasts to the Shetland Isles, the reader is with Torbay LB crewman and photographer Nigel Millard, and celebrated maritime author Dr Huw Lewis-Jones, as they travel the length of Britain and Ireland, living and working with lifeboat crews. Lifesavers and fundraisers are introduced and visits made to lifeboat stations and beaches in an effort for the reader to appreciate the acts of those awarded the charity's prestigious medals for gallantry and to see the record of their dramatic rescues.

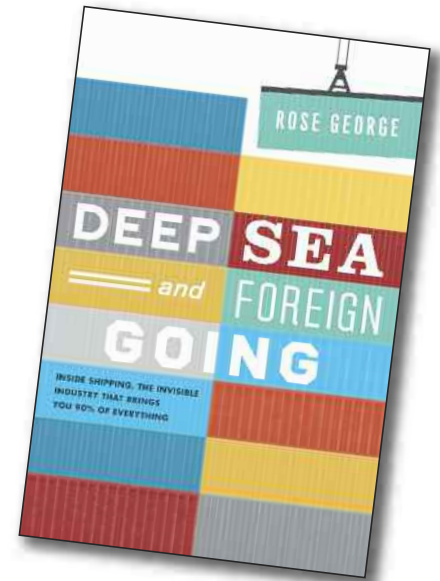
This book honours the dedication of hard-working people who generously give their time to those in danger and their families who wait for news while the lifeboats are out – a visual tribute to the sea and those who go to it. All around our coasts, and every day of the year, the men and women of the RNLI are on duty's call. At least £1.00 from the book's sale will be paid to the RNLI.

There are three fine reproductions of Bishop Rock, Beachy Head, and Needles Lighthouses here. Extent of the service which has saved 140,000 people since 1824 is spread over four chapters from Douglas to Berwick; Seahouses to Torbay; St Peter Port to Beaumaris and Moelfre to Douglas.

Deep Sea and Foreign Going;

INSIDE SHIPPING, THE INVISIBLE INDUSTRY THAT BRINGS YOU 90% OF EVERYTHING.

By Rose George, published by Portobello Books, London, 308 pages, paperback. ISBN 978 1 84627 263 9 Price **£14.99**



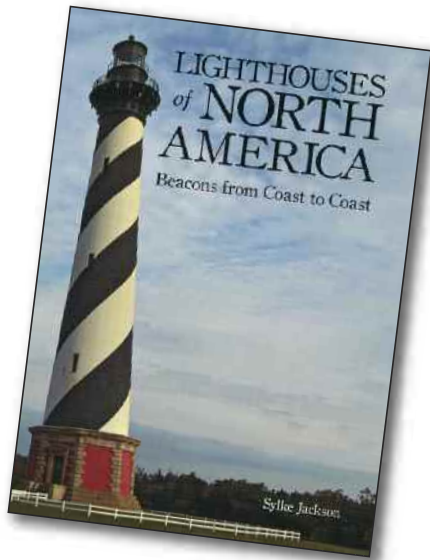
Author Rose George explores the hidden world of shipping which was once a major part of our national identity. The seafaring world is now obscure yet more than 100,000 vessels ply the high seas with 90% of world trade such that ships and seafarers probably are far more influential to our daily lives now than at any time in history or certainly since the Battle of the Atlantic. There is no doubt that the ship and its associated business brings us almost everything we eat, drive, listen to, sit in front of for recreation, wear and work with from across the globe.

The author joined a Maersk Line vessel taking passage from Felixstowe to Singapore by way of Suez and the Malacca Strait. She reports on the seafarers' lot, both good and bad, and recalls their experiences and difficulties with tales of piracy, pollution, wreck, rescue, navigation, international considerations, and more and jogs the memory of some the incidents that have been in our ken in recent years. It is refreshing to note that she has not overlooked the fact that the General Lighthouse Authorities are working at ensuring position fixing can be near perfect when potential jamming of GPS is encountered. A helpful introduction for the sea blind to all that goes to make up the business of shipping to satisfy world demand and where two ships are lost each week worldwide.

Lighthouses of North America;

BEACONS FROM COAST TO COAST.

By **Sylke Jackson**, published by Firefly Books (US), Buffalo, New York, 312 pages, hardback. Obtainable in the UK from Chris Lloyd, Sales and Marketing, PO Box 327, Poole, Dorset BH15 2RG. ISBN 978 177085 249 5 Price **£25.00**



This is a fine tribute to more than 60 lighthouses of the United States and Canada and covers the broad range of lighthouse architectural styles representing many regions of the continent. To open there is a brief history of lighthouses from the earliest days, tracing their use to what has become regarded as the golden age of lighthouse building, the 19th and 20th centuries.

Each station is provided with a box showing relevant details such as location, tower height, focal plane height, daymark description, light character, date site established and current use, be they active or not. Chapters concern the method of construction and each station is provided with an illustrated spread with a narrative taking account of those of conical and cylindrical construction, the square towers, the hexagonal and octagonal and the skeletal, in other words the screw-pile structure. Fine photography has been used showing exteriors and interiors and details are provided of the additional operational aspects for each station. Stations depicted are provided with some text describing other features of interest, keepers' activities and what the author considers to be the most recognised and unusual lights. One chapter concerns the future of lighthouses with their automation and introduction of GPS. Also listed are all North American lights and other sources of information, largely book titles, and lighthouse preservation societies' websites.

CORRECTION

Commodore Peter Melson CVO CBE Royal Navy

In the retirements section of *Around the Service* in *FLASH 19* published in the summer we wrote, "Peter Melson, Advisor, after 5 years' Service." This, of course, should have read, "Commodore Peter Melson, CVO, CBE, RN, stood down as a member of the Examination Committee in January 2013, after 17 years' service."

We are pleased to set the record straight and regret any misunderstanding.

The Merchant Navy Medal 2013

We send our congratulations to those listed below who have been awarded the Merchant Navy Medal, announced in October.

Captain Ian McNaught, Deputy Master, for services to the Corporation of Trinity House and the maritime industry.

Captain Nigel Palmer OBE, Elder Brother, Chairman, Maritime Skills Alliance, for services to seafarers' training and the maritime industry.

Captain Nigel Pryke MCIT, FNI, Elder Brother, Chairman of Great Yarmouth Port Authority, for services to the maritime industry, Trinity House, pilotage and Felixstowe Seafarers' Centre.

Captain Richard Woodman FRHistS, FNI, Elder Brother, for services to Trinity House and British merchant naval history.

As we went to press, the investiture was due to take place at Trinity House on 25th November.

COMPETITION TIME

Who was the first Master of the Corporation of Trinity House, London?

The closing date for entries is Friday 31 January 2014. All the correct answers will be entered in to a draw and one lucky winner will receive a copy of *Light Upon The Waters: The History of Trinity House 1514 – 2014* by Captain Andrew Adams and Captain Richard Woodman.

Entries can be posted to:

Vikki Gilson *FLASH*, Trinity House, Tower Hill, London EC3N 4DH.

Or emailed to her at vikki.gilson@trinityhouse.co.uk. Please include your name and full address within the entry. The winner will be notified by Friday 14 February.

Good luck!

2014 LIGHTHOUSE PHOTOGRAPHIC COMPETITION

Once again we are running a competition to find the best photographs of our lighthouses and entrants are invited to submit pictures of any of our lighthouses. The twelve winning photographs will be published in the 2015 Lighthouses Calendar. In addition, the photograph deemed the overall best entry will win a short break in one of the lighthouse holiday cottages.

This competition closes on 28th February 2014. Further details about the competition, including rules and an entry form can be obtained from the website:

www.trinityhouse.co.uk/photo_competition

or by contacting Paul Howe on telephone: 01255 245019

or e-mail: paul.howe@thls.org



Trwyn Du, by Malcolm Bray

Christmas Cards

The 2013 Trinity House Christmas Card is printed in full colour on gloss white card with border and an ivory paper insert. It features Start Point Lighthouse (see below) and contains the greeting *All Good Wishes for Christmas and the New Year*.

Each card is approximately A5 in size and they are sold in packs of 10 with envelopes at a price of £9.50 per pack excluding post and packing which varies for UK, Europe and Rest of the World or they may be collected from Trinity House. Orders can be placed by telephone on 01255 245156 or on line at: www.trinityhouse.co.uk/shop



Start Point by Eiko Wenzel

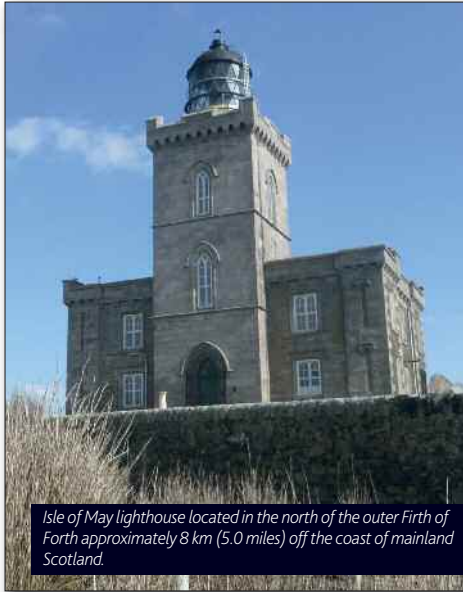
The 2014 Lighthouse Calendar once again captures some of our most famous lighthouses. Featured are 12 images compiled from entries to the annual Trinity House Photographic Competition, two of which are pictured above.

The calendar is approximately 295mm x 305mm in size and is available now at: www.trinityhouse.co.uk/shop Price **£8.50** per calendar (excluding p&p).

CONTACTING TRINITY HOUSE If you wish to make future contributions to *FLASH*, please forward your information, and a photograph if possible, to Vikki Gilson. Contact details are on the inside front cover of this edition. *To make the most of your images in print, they should be submitted as 300dpi jpegs – the larger the image file the better – please do not embed the image within a Microsoft Word file.*

Latest date for submissions: 14 February 2014.

Lighthouse gardens



Isle of May lighthouse located in the north of the outer Firth of Forth approximately 8 km (5.0 miles) off the coast of mainland Scotland.

I am a student (of Horticulture) at Royal Botanic Garden Edinburgh and Scottish Rural College, Edinburgh. A project involving the research of the history of the lighthouse gardens on the Isle of May, was offered to students on my course. I eagerly accepted this offer, which involves liaison with one of the Scottish Natural Heritage wardens, David Pickett, who is based on the Isle of May, during the season.

However, on contact with Lorna Hunter, NLB Information Officer, another tremendous idea arose, which is to gather information concerning other lighthouse gardens. I understand there were many well tended gardens over the years when the lights were manned by keepers and this could prove most interesting from a geographical point of view.

I plan to research varieties of vegetables and fruits grown in lighthouse gardens. Information on crop rotations, nutrients applied, sources of nutrients (e.g. use of seaweeds) and methods used to control pests (especially rabbits), would be greatly appreciated. I would especially love to hear about success stories regarding the produce from these gardens.

If you can assist in this interesting project I would be most grateful. I would prefer to be contacted by email at a.kerin@rbge.ac.uk however if you do not have access to email please contact Vikki Gilson, Editor *FLASH* (see inside front cover of this issue) and she can forward your details to me to make contact.

Sincere appreciations,

Anne Kerin.

SVS Reunion



The annual SVS Reunion was held at Portsmouth on 25th /26th June and attended by 20 former ship-mates and those closely associated with the SVS.

Our first reunion was held in 2006 and was originally planned to be repeated every two to five years; it was later decided to go for the two year option as after looking at the age profile of some of those attending, five years may have proved to be over ambitious.

The 2006 to 2011 Reunions were organised by Barrie Willoughby. The venue of Portsmouth originates from 2001 when THV *Mermaid's* refit was carried out in the Naval Dockyard. Officers attending that drydocking stayed in accommodation known as Rees Hall which accommodates students in term time, but which is open to the general public at other times. Portsmouth is also handily placed for travel from most parts of the UK.

Since 2011, I have taken over the organising and we have subsequently held the event annually and have happily found a suitable venue for our reunion where we can all sit down for an evening meal, where the wine list is expansive and where the staff are open to a certain amount of joviality.

This year's event was particularly memorable for the attendance of Bob Blackmore (86 years young). The recital of a poem by John Snape (all his own work) and a particularly poignant version of *All Things Bright and Beautiful* by Frank Davies remain in the mind.

It is refreshing that after all these years the comradeship of the SVS still flourishes.

Dave Comley.

Finnish visitors



On 1st August at Lizard Lighthouse we had a visit by a party from the Finnish Lighthouse Society. They were spending some time in the British Isles in order to call at as many lighthouses as they could in the time available while on holiday here and were happy to have their group photographed.

At Lizard we took three groups on our tours of the tower and they very much enjoyed their short stay with us. It was a pleasure to meet them and to further their knowledge of our station.

John Davies.

EDITOR'S NOTE: The Finnish Lighthouse Society, Suomen Majakkaseura, was founded in 2003 to promote the protection and maintenance of Finnish lighthouses and other marine aids to navigation as well as the cultural heritage they represent. The Society serves also as bond between lighthouse enthusiasts and represents Finland at an international level in lighthouse preservation matters. It co-operates closely with the Finnish Maritime Administration. www.majakkaseura.fi/eng/



The lighthouse on Märket, a skerry in western Finland's autonomous Åland Islands in the Baltic Sea between Sweden and Finland.

Battle of the Atlantic



I attended the unveiling ceremony for the Seafarers' Memorial Anchor at Barry in No 1 Dock on the Waterfront, Barry, in September. This memorial commemorates those seamen who lost their lives in the Atlantic Convoys in the Second World War. The MP, the MEP, the Mayor, Leader of the Vale of Glamorgan Council and other dignitaries attended.

The chaplain, in his address, mentioned the Merchant Navy Association's sincere gratitude to Trinity House for the anchor and the preparatory work carried out. Following the Service there was a reception at Barry Memorial Hall.

The anchor looked most impressive and the inscription on the plaque reads, "In memory of all Seafarers who sailed from Barry never to return."

Thanks again for the help of all concerned.

Peter Binding.

Longstone commemoration



Above: RNLI Crew member Kerensa Airey and the writer with the flowers that were about to be laid at the wreck site.

Reproduced by kind permission of Adrian Don, Press Officer, Tynemouth RNLI ©.



This year sees the 175th anniversary of the famous Grace Darling rescue. On 7th September I was fortunate to go out with the Seahouse Lifeboat to the Longstone Lighthouse where flowers were to be laid. An RNLI crew member and myself as the representative of Trinity House laid floral tributes at the lighthouse and also at the site of the wreck of the *Forfarshire*, Big Harcar Rock. The enclosed record shows myself and a lifeboat crew member taking part in the commemoration.

Dave Wilkinson.

EDITOR'S NOTE:

Grace was daughter of the keeper in charge at Longstone. In September 1838 the steamer *Forfarshire*, bound from Hull to Dundee, went aground on rocks about a mile from the lighthouse. No fewer than 43 were drowned, the stern portion of the vessel being detached and carried away in the storm. The forepart, to which clung the survivors, remained fast on the rocks. At daybreak William Darling and fishermen ashore saw the wreck but with the high seas they thought it impossible to attempt a rescue and even Darling hesitated.

He was finally persuaded to make the attempt by daughter Grace, with her as the second hand in the lighthouse's small boat. On reaching the wreck after a terrific struggle they brought back four men and one woman in their frail open craft. Later a further four survivors were rescued. All nine had to be accommodated and fed at the lighthouse for two days until the storm abated and they could be taken to the mainland.

This gallant action made Grace Darling and her father famous. The Royal Human Society voted them its Gold Medal, the Government made them a grant and a public subscription was organised. The light here was first exhibited in 1826. It was electrified in 1952 and automated in 1990.



Congratulations to...

The engagement was announced in September between **Stuart Turner** son of Mr and Mrs Bruce Turner of Johannesburg, South Africa, and **Zoë Richards**, Deputy Events Manager Trinity House, daughter of Captain and Mrs Derek Richards of Canterbury Kent.



BIRTHS

Luke Brand, Harwich-based OPC, and wife **Julie**, a daughter, **Hollie Mae** on 26 September. Hollie weighed 7lbs 8oz. (not pictured).



Melissa Goddard, Cook in THV *Patricia*, and partner **Scott Ravizza** a daughter, **Olivia Donna Ravizza**, on 18 June. Olivia weighed 6lb 12oz.



Dave Hayes, Harwich-based Operations Officer, and partner **Hannah**, a daughter, **Willow Janina**, on 16 July. Willow weighed 6lbs 15oz.



Shaun Phillips, Swansea-based Supplies Team Member, and wife **Lorna**, a son **Niall Shaun**, on 3 August. Niall weighed 7lb 12oz, and is pictured above with big sister Madison.



Phil Hawtin, Harwich-based Design Engineer, and partner **Hollie Hammans**, a daughter **Millie Rose** on 15 August 2013. Millie weighed 7lb 2oz. Millie is pictured here with big sister Poppy



Rupert Jones, SVS, and wife **Delyth**, a daughter, **Faith Rhianon**, on 20 February. Faith weighed 8lbs 1.5oz.



Charlotte Pryor, Harwich-based PA to the Director of Operations and the Director of Finance and Support Services, and husband **Lee**, a daughter **Poppy Rose**, on 28 August. Poppy weighed 7lbs 15.5oz. Poppy is pictured with big brother Freddie.

STARTERS AND LEAVERS

Welcome to the following new members of staff who have joined us between 1 May and 30 September 2013.

Harwich

Georgina Button, ACCSEAS Communications Officer (Fixed Term), on 20 May.

Joshua Eldridge, Buoy Yard Team Member, on 19 August.

Richard Thurlow, Buoy Yard Electrical Technician, on 30 September.

London

Captain Nigel Hope RD*, RNR, Examiner, on 1 May.

Captain Stephen Gobbi JP, MA, LLB, Examiner, on 8 May.

Captain David Snelson CB, FNI, Examiner, on 8 May.

Trevor Harris, Local Seamarks Auditor (Fixed Term), on 10 June.

Support Vessel Service

Haydn Clarke, Second Officer, on 1 May.

Paul Valley, Second Officer, on 12 June.

Richard Grieve, Second Officer, on 3 July 2013.

Phillip Howarth, Second Engineer – Auxiliary, on 3 July.

Timothy Iles, Second Engineer – Auxiliary, on 24 July.

James Watson, Second Officer, on 31 July.

Kristopher Askey, Second Officer (Fixed Term), on 21 August.

Paul Davis, Seaman, on 4 September.

Scott Sanderson, Seaman (Fixed Term), on 4 September.

Colin Clarkson, Seaman, on 25 September.

We bid farewell, extend our thanks for their service, and wish them well in their futures to:

Harwich

Joseph Tierney, former Electrical Design Engineer, after eight years service.

Roger Lewis, Principal Mechanical Engineer, after eight years service.

William Lartey, Mechanical Design Engineer, after eight years service.

London

Nigel Pryke MCIT, FNI, stood down as a member of the Examining Committee, after nine years service.

Adam Stratford, Local Seamarks Auditor, after four years service.

Max Gladwyn, Non-Executive Director, stood down as a member of the Examining Committee after six years service.

Captain Richard Woodman FRHistS, FNI, stood down as a member of the Examining Committee after six years service.

Support Vessel Service

Alexander Hart, Second Officer, after one years service.

Sinead Foy, Second Officer (Fixed Term), after less than one years service.

Michael McGurk, Engineering Officer, after two years service.

Paul Rushmere, Seaman, after less than one years service.

Brian Davenport, Engineering Officer, after three years service.

Abdul Chadli, Seaman – Auxiliary (FT), after less than one years service.

Andrew Gunn, Seaman, after less than one years service.

Samantha Larkin, Second Officer, after two years service.

Francis Uren, Second Officer, after 24 years service.

Clive Corder, Second Officer, after four years service.

David Smith, Third Engineer, after seven years service.

Stephen Hines, Captain, after 30 years service.

Swansea

Stephen Rees, Lighthouse Technician, after 26 years service.

David Reason, Lighthouse Technician, after 26 years service.

We also thank **Conor Dale**, **Lucy Summers**, **Nicola Metcalfe** and **James Tomkins**, for their assistance in Harwich during the summer.

OBITUARIES

It is with great sadness we report the deaths of:

Michael Stiens, former Senior Maintenance Operative – Swansea, on 24 March 2013, aged 52. He served 25 years.

David John Pargeter, former Electrician – Blackwall, on 25 March 2013, aged 72. He served seven years.

Peter Tindall, former Engineering Officer – *Alert*, on 26 July 2013, aged 47. He served nine years.

Edward Townsend, former Principal Keeper, on 19 August 2013, aged 72. He served 26 years.

Richard Ernest Kinver, former Assistant Keeper – LHS, on 20 August 2013, aged 62. He served 12 years.

Robert Trevor Davies, former Master – LVS, on 26 August 2013, aged 66. He served 13 years.

David Rowland Thomas, former DLF Paint Sprayer – Swansea, on 23 September 2013, aged 70. He served 14 years.

Harold Thomson Long

Born in Co. Antrim on 6th March 1958, Harry joined Trinity House as a Radio Mechanic at Blackwall on 18th February 1980. He was promoted to PTO Grade 4 at Blackwall on 26th August 1983. Whilst at Blackwall, Harry would maintain the C&N radio beacons throughout the service on lighthouses and light vessels.

He was promoted PTO Grade 3 at Tower Hill on 21st December 1984 and HPTO at Tower Hill on 28th July 1987. Harry was involved in rolling out the new cell phone networks to lighthouses and light vessels

On 3rd October 1988 he was relocated to East Cowes and regraded to Commissioning Engineer. Harry's role was to ensure that the design and installed project met the Engineering Directive standards.

After sixteen years at East Cowes Harry was again relocated, this time to Harwich on 1st September 2005 as Project Engineer. He gained further promotion on 1st May 2007 to Senior Project Engineer (this post was renamed Senior Design Engineer in 2008). Harry was involved with redesign of electrical systems on the light vessels, Class 1&2 Buoys and Bardsey Lighthouse modernisation.

Harry was a knowledgeable chap, appreciated by all with his tangible and intangible thoughts on technical matters and the workings of Trinity House; he always had a story to tell which inevitably had a humorous side to the point of being mischievous, he will be sadly missed.

Harry's late father Walter and twin brother Richard both served Trinity House as Lighthouse Keepers; Walter from 1954 to 1992 and Richard from 1978 to 1995.



Quincentenary celebrations

On 20 May 1514 Henry VIII granted a Royal Charter that established the Corporation of Trinity House. Very few organisations can boast such longevity; fewer still can lay claim to being as relevant today as then. The welfare and safety of the mariner is our primary concern today as it was 500 years ago.

To mark our 500th anniversary a whole variety of events and activities will be taking place. They

range from a year of fundraising to benefit and include the communities in which we live and work, to the production of the definitive history book (*see review on page 38*) and some small tokens of thank you to our staff, current and retired.

We are organising some inter-industry fundraising, which includes boat races, cycling, cricket and abseiling, as well as some more genteel (but as equally competitive) activities such as cake baking

(well, what's a birthday without cake?), quizzing and card design (we've looked but you can't find 'Happy 500' in high street card shops).

Our anniversary is also a great opportunity for us to raise awareness of Trinity House among the general public so we are planning a few press activities to meet this. But we have already attracted a lot of interest from external communities including artists and film makers and we look forward to seeing what we have inspired in them over the coming months.

And as all birthdays should have, there is a surprise or two in store. Whatever you do in 2014 to mark the quincentenary we must always hold in our thoughts those that have gone before, in centuries past or recent hours. Without them, and the support of our hard working staff today, we could not have reached this amazing milestone. Let us remember, commemorate and celebrate.



Book Launch

On the evening of 5th November we commenced the Quincentenary celebrations with the launch in The Court Room at Trinity House of *Light Upon the Waters*, the history of Trinity House from 1514 to 2014 by Captain Andrew Adams and Captain Richard Woodman.

Our main picture here shows Richard Woodman with Henry VIII (played by Alan Myatt) and, inset above, Captain Ian McNaught, Executive Chairman, centre, and the Tudor monarch.

At our ceremony Richard Woodman delivered the 1513 appeal from the mariners of the day to His Majesty drawing attention to the secrets of our waters being snatched from us by foreigners. In other words, pilotage was in need of regulation.

King Henry, in person, duly granted a charter to the *Corporation of Trinity House of Deptford Strond in the County of Kent*, or, as we now know it, *Trinity House* and from then we have continued to have the needs of seafarers at heart.





PROFILE JIM VEALL

Age: 45

Where are you based? Swansea Depot.

What is your role? West Coast Technical Manager — I look after all the lighthouses on the West Coast from St Bees in Cumbria, around Wales to Hartland Point in North Devon.

How long have you worked at Trinity House? 14.5 years.

What is the best bit of your job? The spectacular locations of many of our lighthouses. They're in places that I'd have little other reason to visit, and in some cases, couldn't get to.

And what is the worst bit of your job? Too much time in the office!

How did you get in to this career? Do you need specialist qualifications? I started as an agricultural mechanic, then gained a degree in mechanical engineering. I was looking for somewhere to use it when a vacancy for a design engineer at East Cowes came up. I thought 'That looks interesting' and applied. 14 years later, I think I was right.

What do you enjoy doing outside of work? I like to be outside — I'm a Scout Leader, and the whole family enjoy camping and hiking. I also seem to spend a lot of time tinkering with motorbikes and Land Rovers.

How do you get to work?

Motorbike, unless it's snowy, when the Land Rover comes out to play.

Describe yourself in three words Short, quiet, stubborn.

What's your favourite...

- | | |
|-------------------------|--|
| ... Colour | Blue |
| ... Film | 'On Any Sunday' always cheers me up. |
| ... TV programme | I hardly watch any |
| ... Book | Too many to list |
| ... Meal | A good curry, reasonably hot, but plenty of flavour |
| ... Biscuit | Ginger nuts |
| ... Holiday destination | Pyrenees |
| ... Joke | What's the difference between a duck?
One of its legs is both the same. |

If you were a superhero what power would you have and why?

Teleportation. Sometimes you want to enjoy the journey, but sometimes you just want to get somewhere instantly.

What should we know about you that many people don't?

My family are all musical, but I have no musical talent whatsoever.

What's the most embarrassing record in your collection? Spice Girls.

If money were no object, what would you buy?

A vintage biplane and flying lessons.

What really winds you up? Poor manners.

If you could go back in time when would you travel to and why?

The mid 1920s, when there was still lots of the world to explore and technology was just allowing it to be explored.



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