Holes in the Hull

The careful archaeological examination of the hundreds of Newport Ship hull timbers has revealed many interesting construction features. These allow us to better understand the ship and, in particular, those that built and looked after her. Continuous maintenance was necessary to keep wooden ships safe and efficient. The most obvious evidence of this maintenance can be seen in the numerous repair planks, known as tingles, placed on the outboard of the hull to patch over cracks in the planking. Other repairs or signs of maintenance are less recognizable, but interesting all the same as they still provide us with a great deal of information.

While the ship was in use in the mid-15th century, barnacles and seaweeds would have grown on the hull, increasing drag and causing it to sail more slowly. To counteract this, ships were periodically taken into shallow areas and carefully hauled over (careened) in order to scrape off the accumulated marine growth and possibly apply a fresh coat of tar to help preserve the timbers.

Sailors might also take this opportunity to clean out the inside of the ship, by flushing the bilges. As the ship was heeled over, the waste water would accumulate in the lowest points of the hold, away from the centreline pumps. In order to drain the ship, the carpenter would carefully drill a hole through the planking in order to let the water drain out. He would then craft a wooden plug and using iron fasteners would tack it in place and restore the watertight nature of the hull. We have found several of these holes with plugs on the Newport Ship, suggesting that the ship was occasionally cleaned out and then patched up.

A half-finished repair?

There is area of repair on the vessel that can be linked to the last part of the ship's life. When the ship was brought into Newport for repairs, it was placed in a large cradle structure composed of roughly hewn wooden logs or struts. It appears that the cradle structure collapsed and the ship heeled over onto its starboard side. We assume that the workers attempted to right the vessel. To aid them, they needed to make the vessel as light as possible. They removed the accumulated water, from rain and the tide, by carefully drilling holes in the lowest lying parts of the ship.

Evidence for this comes in the form of a series of seven consecutive holes found on planks S19_6 and S19_7 between the inter-frame space of F39/F40 and the inter-frame space of F46/F47. There were no associated fasteners (for caps or plugs for these holes), making it almost certain that they were bored when the ship was partially filled with water after it had heeled over, as this would have been one of the lowest points. The shipwrights could have just hacked a hole in this area to quickly drain it, but instead they chose to carefully drill the series of small holes, probably intending to repair them with plugs as soon as the ship was righted. The fact that they didn't plug the holes suggests they eventually abandoned repairs on the vessel and focused instead on salvaging it.

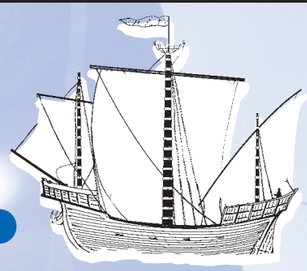
What happened to the wood around these holes is also quite interesting and provides insight into the building and use of the ship. First, it is necessary to briefly discuss the role of tar in shipbuilding. After careful examination, it appears that the ship was heavily tarred during its construction and use-life with wood tar, also known as Stockholm tar. This tar is produced from coniferous trees. It initially prevented the timbers from drying out and cracking or shrinking while the rest of the vessel was assembled, whilst during the use life, repeated applications of tar helped to preserve the timbers. This tar was clearly present on the lands and scarfs (areas of overlap) while cleaning the timbers and substantial amounts of tar remained in a pristine state under the protected overlapped areas. Additionally, a yellowish product was found mixed with the concretions on all the surfaces of the timbers. This is thought to be degraded tar. The overall good condition of the timbers suggests that they were well cared for and maintained.

During the post-excavation recording, archaeologists noticed that the wood surrounding these drain holes was severely degraded, much more so than any adjacent timbers. These planks appear to have been excessively rotted due to the unprotected end grain in the freshly bored holes. It appears that, as these holes were never repaired, no tar was applied in this area to protect the newly exposed wood. After the ship was buried in the river bank, the tar continued preserving the wood, while the few unprotected areas, where fresh end grain was present, were prone to rotting, thus accounting for the excessive degradation in the areas surrounding the drain holes.

As can hopefully be seen from the small stories above, the full story of the construction, life and demise of the Newport Ship lies in the details!

Dr Toby Jones, Curator

S.O.S.



News from the
Friends of the Newport Ship

Message from the Chair

Welcome to this annual news update which has a whole variety of fascinating articles for your delight.

It's been a very busy year for the Friends, helping with the move to the new warehouse, the rationalisation of the tanks and the building of the new timber store. And then we took the decision that we could not accommodate the 3 or 4 open days per year in the new smaller site – and we bravely decided to open on a regular basis. Currently we open just 2 days per week (Friday and Saturday, 10.30am – 4.30pm) and the visitor numbers are growing steadily. If you haven't yet visited, then please come along and support us.

To sustain this regular opening we do need YOUR help. Not just to visit, but to recommend others to come along, and then we need extra volunteers to help us tell the story of the project – to inspire and enthuse visitors to join the Friends and create a whole virtuous circle of life!

I do hope to meet as many of you as can come to the AGM on 10th October at the Ship Centre, or to any other of our opening days.

Philip Cox, Chair
chair@newportship.org

Inside this edition:

No. 23 September 2015

£3.00 Free to Members

The views given in this newsletter are those of the contributors and do not necessarily represent the views of the Friends as an organisation.

Unit 20, Estuary Road
Queensway Meadows Industrial Estate
Newport NP19 4SP

Telephone: 01633 274167

Charity Number 1105449

www.newportship.org Find us on Facebook and Twitter @FONSNewportShip

FONS 2015 Annual Update

Wow! It has been a busy year at the ship project! There have been talks to groups across the country and even America via SKYPE, the annual expert panel meeting, timbers taken to York for freeze drying but the big event was, of course, the move. At the end of last year we transported the project to a smaller industrial unit in the Spytty area of Newport. Limited space meant that there was only room for three tanks; therefore the wax solution was filled right to the top, allowing us to put four tanks worth of timbers into just three. A specialist moving firm, Penybryn Engineering, coordinated the move of the artefactual material, with much help from Museum staff and volunteers from FONS.

In January 2015, Rob and Martin from the Transporter Bridge began work on the building of a large dried timber storage room within the industrial unit. Previously the dried timbers had been stored in shipping containers, but there simply wasn't enough space for these in our new home. We therefore took advantage of the very high ceilings in the new building and bought tall pallet racking, which we erected as a framework to build the room around. We insulated the space with Kingspan foam boards and used scaffolding pipework to tie it all together. The result is a large, impressive-looking, cost effective room that will safely and efficiently store the conserved timbers and artefacts. Visitors to the ship centre are able to see inside the store through a Perspex window.

The FONS have been working steadily over the past six months to prepare the new ship centre for opening to the public. Members and volunteers have helped clean and organise all the display boards, helping to create an outstanding visitor experience. Lots of painting, decorating and general cleaning has taken place, along with the construction of a very nice 'cabin' within the ship centre, which will serve as a gift shop and office for the FONS. Thanks to Rob, Martin, Tris (from the Museum) corporate sponsors and all the FONS volunteers for creating a great addition to the ship centre! A new kitchen has also been installed allowing us to offer refreshments to the public and building security has been improved with the addition of CCTV and steel security grills of the doors and windows.

On the archaeological research front, we have begun the selective re-documentation of the freeze-dried timbers. We are comparing the digital drawings of the timbers before and after conservation in order to quantify the amount of shrinkage that has taken place. These measurements are important as they will be necessary when we start to build an accurate cradle to support the ship when it is eventually re-assembled and put on display. We are also continuing to work on the publications and adding additional material to the free online archive. The talented Pat Tanner is also continuing work of his capital reconstruction drawings and digital models. Team members and FONS volunteers have been giving numerous talks and lectures, from archaeological meetings in Seattle, USA and Lelystad in the Netherlands to London and many more in and around South Wales. These talks are incredibly important as they raise the profile of the ship project and attract new members and volunteers, as well as raising money for the project. One talk usually leads to two or three more bookings, ensuring that the speakers have fewer and fewer free nights but it is worth it as you never know who might be in the audience…several volunteers have come forward after talks offering highly specialised skills!

The ship centre is now open regularly, on Fridays and Saturdays so it is imperative that you spread the word and tell all your friends and family to come down for a visit! It is well worth it!

Thank you for your ongoing support!

Dr Toby Jones, Curator

New Stock Item in our Retail Cabin

© V&A Museum

We are pleased to reveal that we have new stock of pendants made from Portuguese 50 escudo coin, but cut to highlight the image of the central design of a 3-masted caravel. The pendants have either a silver or gold finish, and retail at £33.00.

The Portuguese 50 escudo was issued up to the adoption of the Euro. It shows the design featured on the Malaga Bowl, which is a treasure in the V&A. The bowl was crafted by Moorish potters using an early tin glaze.

The sail bears the arms of Portugal and its assumed that this large ceramic would have been a table centre piece commissioned by a Portuguese Merchant celebrating his commercial success and wealth by depicting the instrument that created his fortune, one of his ships. Beneath the ship there are fish, showing, no doubt, the sea's bounty and on the field of the design are stylised decorative motives of Arabic origin.

The bowl was thrown in 1450 and the design is the World's earliest known depiction of a ship with three masts. It's interesting that fish are in the design; with the romance of exploration we tend to overlook one motivation to putting to sea – fishing; a lot of exploration being the result of blown off-course fishing trips.

The workhorse of exploration, the Portuguese Caravel was a development of the fishing Nao. It was said then that a hold full of fish would pay for the construction cost of the ship in one voyage.

From the 12th century, potters at the Islamic city of Málaga perfected the production of often large-scale ceramics covered with a white tin-glaze and decorated with golden lustre. In the 13th and 14th centuries, Málaga lustrewares were exported widely, from England to Egypt, and commissioned by royalty, nobility and the very wealthy.

Tin-glazed earthenware bowl decorated in lustre and cobalt blue with a ship. 1425–50, Málaga, Spain. © V&A Museum, this magnificent bowl is a caravel, in which Iberian merchants and explorers sailed the high seas in the 15th century.

England; Warwick arrived on 26th June and together the force marched inland and captured London.

Following a treacherous defeat at Northampton and betrayal by Lord Grey, Henry VI was captured and imprisoned. The Duke of York briefly established himself before he too was removed at the battle of Wakefield. His son Edward, the Earl of March now took the role of Yorkist figurehead. Winning victory at Mortimers Cross, he rallied the Yorkist cause and, with the support of the Earl of Warwick, eventually defeated the Lancastrians decisively in 1461 at the bloody battle of Towton. Edward was crowned king, and Henry VI was again imprisoned. After a series of mopping up campaigns in the north of England against the last Lancastrian die-hards, it seemed that the Wars of the Roses were finally over with the Yorkists victorious.

In 1462, Edward IV re-confirmed Warwick as Captain of Calais and Admiral of England. Warwick negotiated a truce with Scotland, and repulsed a French invasion led by Margaret of Anjou into Northumberland and generally quelled the northern uprisings.

In the following years, Warwick became increasingly disenchanted with Edward's regime. Unhappy with Edward's pro-Burgundian policy, inappropriate secret marriage and sheer jealousy that his role as king-maker had not been fully rewarded, he turned to rebellion.

It was in this period that the Newport Ship was trading between southern Iberia and southern Britain, and came to Newport for repairs or refit after the spring of 1468.

This rebellion started well for Warwick, Edward was ambushed at Edgecote Moor in July 1469 and captured. Warwick was briefly in a very strong position, however it quickly fell apart. He was forced to free Edward in September 1469 to use him as a figurehead to raise support against northern rebellions. Edward quickly outmanoeuvred Warwick and defeated his supporters at Losecoat Field in March 1470. Yet again Warwick was forced to flee. Shrewdly, Edward had pre-empted this move and promoted Lord Wenlock to the position of Captain of Calais.

Warwick and his ally Clarence first sailed to Southampton where they hoped to raid the port to enlarge their fleet. The warden of Southampton was Sir Anthony Woodville, the new Lord Rivers. He was not caught out like his father had been a decade earlier, and Southampton beat off the attacks. Warwick lost several ships in the abortive attack and several of Warwick's followers who were captured were publicly executed as traitors.

After this disaster, Warwick's remaining ships made their way to the supposed shelter of Calais where they were in for a nasty surprise. Wenlock, once Warwick's loyal supporter, now sided with Edward. As Warwick's fleet approached they came under fire from the port and were forced to retire. Warwick was now in trouble; he lacked a safe port in which to re-fit and re-supply. Edward now sent out an English fleet under Lord Howard to capture Warwick.

Despite his awkward strategic situation, Warwick continued to plunder shipping in the English Channel. In April he intercepted a fleet of Burgundian ships out of Flanders. Allegedly some 60 ships were captured and their crews thrown over the side to drown. The Burgundians were so enraged by this blatant act of piracy that a second fleet was prepared in Sluys to sail out and capture him.

Warwick was pushing his luck. Without a port and with the possibility of being caught by two opposing fleets his situation was becoming precarious. In a ferocious and rare sea battle with Lord Howard's fleet he suffered heavy casualties and lost several ships. Realising that the odds were against him, Warwick sought a rapprochement with Margaret of Anjou, the banished queen of the Lancastrian dynasty. It is quite possible that Warwick had attacked the Burgundian shipping in an attempt to curry favour with the French against their arch rivals.

Warwick's fleet landed in Harfleur in Normandy and through negotiations with the French King Louis XI, Warwick made an uneasy alliance with Margaret. He continued to attack Burgundian shipping but the Anglo-Burgundian fleets gathered at the mouth of the Seine estuary, blockading Warwick's ships. For a while, Warwick was trapped with no room to manoeuvre. The blockading forces attacked French coastal towns, placing strain on the fragile alliance Warwick had with the French.

Warwick's crews, impatient at the thought of booty, refused to go back to their ships until pay arrears had been sorted. He was forced to pawn everything he had to convince them to re-board. A chance storm scattered the Anglo-Burgundian fleet and Warwick's ships were able to slip out of the estuary. In September 1470, they landed at Plymouth unopposed and toppled Edward from power whilst he was distracted with rebellion in the north of England and reinstated Henry VI

In March 1471, Edward returned from France with a new army and renewed vigour. Warwick and the briefly returned Lancastrian regime were in turn destroyed. Warwick met his end on the misty battle of Barnet on 14 April 1471. Margaret of Anjou and her army were defeated a month later at Tewkesbury. The Kingmaker's death signalled the end of an infamous period of piracy in the English Channel.

Soon afterwards, it was reported that King Henry VI had also died in the Tower. With the direct Lancastrian line exterminated, Edward could reign safely until his death in 1483

Reproduced from 'Wargames Magazine' (Soldiers and Strategy) issue 56 with the permission of the editor.

Wars of the Roses – Warwick's Piracy

Within the Friends of Newport Ship, we are interested inmake capital of the involvement of the Earl of WWarwick who was, loosely based at nearby Raglan Castle. Warwick was known to be, trading through the port at Newport and, according to sources, at one point arranging arranged for the repairs of a vessel in Newporthere at about the same time that our own vessel was in that situation. Within this article, we see that at the time of the failed repairs to our Ship, his intervention into the monarchy was in a lull. , and indeed Hhe had the time to be involved with more legitimate trade – orhowever, was he still sponsoring piracy that could have brought our Ship into Newport rather than Bristol?

After the Yorkist victory at the first battle of St Albans in 1455, Sir Richard Neville, Earl of Warwick was richly rewarded by the Duke of York for his loyal service. He was given captaincy of Calais, the last significant English port in France. Calais was an expensive but critical strategic position. It had the only English standing army of the period, and along with the castles surrounding it often had as many as 1,000 men stationed there. The cost of the wages to this huge garrison, and the upkeep of the defences were considerable. Sometimes they might amount to as much as one quarter of the royal budget alone!

As the new Captain of Calais, Warwick's first role was to pay the arrears for the garrison troops. In 1456 the sum of £25,000 was raised from trading companies to pay the troops to restore their own flagging trade.

In early 1457, a French raiding fleet attacked Sandwich harbour in Kent, highlighting England's inability to defend her shores. This strengthened Warwick's position as he was generally regarded as a man of action who could neutralise the French threat. Warwick was promoted to Admiral.

Queen Margaret and the Lancastrians in Court were keen to restrict Warwick's naval power by limiting his funding through the Royal Exchequer. Despite being one of the richest landowners, Warwick couldn't fund the burden of Calais with his own money for long. He had to look elsewhere.

His solution was to create a sideline in piracy. He built up a small fleet of some 10 ships and in May 1458 used them to successfully attack a Spanish fleet, capturing six Spanish ships. Shortly afterwards, Warwick's fleet plundered the annual Hanseatic fleet convoy.

Whilst these piratical actions won him huge popularity with his crews and with the English population starved of glorious foreign victories after the defeat in the Hundred Years War, Queen Margaret was not pleased. Warwick was summoned to London, but following a scuffle between his retinue and the Royal bodyguard, he fled back to his ship on the Thames, ignoring the orders for his arrest, and returned to the sanctuary of Calais.

These events precipitated a new outbreak of hostilities in 1459. Despite a victory at Blore Heath, the Yorkist cause suffered a terrible defeat at Ludford Bridge. The Duke of York was forced to flee to Ireland whilst Warwick returned to Calais. This last defeat dealt a double blow for Warwick as the Calais garrison troops who had accompanied him on the campaign, defected to the Lancastrians.

In 1460, the new Duke of Somerset, Henry Beaufort, was appointed as Captain of Calais. Warwick was now a renegade on the run, but was not willing to give up his claim of the captaincy without a struggle. Somerset was slow to prepare for his assault on Calais and Warwick was well prepared. The Lancastrians were forced to retire and some of the previous defectors were blown back into Calais and forced to surrender.

Somerset rethought his strategy and landed further down the coast by the castle at Guines. He accessed the castle by paying the pay arrears the troops were owed. Repeated attacks on Calais were repulsed as Somerset was unable to blockade the busy harbour – the siege continued.

To assist Somerset, a large force of troops and new ships was assembled at Sandwich, but Warwick made a pre-emptive strike capturing the Lancastrian commander, Lord Rivers, along with his wife and son, Sir Anthony Woodville whilst still in bed!

Warwick was able to escape from Calais and meet up with the Duke of York in Ireland. Somerset failed to capitalise on Warwick's departure; short of money and having only limited re-enforcements from King Henry, the siege of Calais continued. A further attempt to capture Calais by Somerset's men was defeated at Newnham Bridge.

On his return from Ireland, the Duke of Exeter, Henry Holland attempted to intercept Warwick's small fleet. Holland had built up a strong fleet of 14 ships including Warwick's old flagship the Grace Dieu. Although outnumbered, Warwick's fleet had the wind behind them and the Lancastrians fled back to the safety of Dartmouth.

The Yorkist situation was further strengthened by Lords Wenlock and Falconburg launching another attack on Sandwich. This was then the launch-pad for the invasion of

Working on a Figurehead

Making the most of the equipment here at the Newport Ship Centre, one of our former project officers, Erica McCarthy, has been working on a Ship's figurehead from Newport Museum. Using the Faro arm and scanner, Erica has created a full 3D solid image of the figurehead for further analysis.

This figurehead is from a brigantine called the Ellen Sutton. It was commissioned by George Sutton of County Cork (presumably a relative). He was a coal merchant and used the ship for the Cork Coastal trade. She was built in 1868 on Prince Edward Island, Nova Scotia and was 181 net tons. She was condemned in 1894 and the figurehead acquired by a member of the Newport Harbour Commissioners who donated it to Newport Museum. (Many thanks to Bob Trett for the info about the figurehead)

Erica McCarthy was previously part of the Newport Ship team but is now studying for a PhD.

My Research – I am in the third year of my PhD. I'm studying ships figureheads as part of a collaborative doctoral award which is funded by the Arts and Humanities Research Council, the National Maritime Museum, Greenwich and the University of Hull. My research examines the production, use life and display of ships' figureheads in Britain from the mid eighteenth century to the present day.

Figureheads on Display - Figureheads have been retained, maintained and displayed in museums, as standalone objects for decades, in some cases, for longer than they were attached to ships. The enduring display of figureheads in both temporary and permanent exhibitions is significant; it is indicative of the value placed on them, as aesthetically pleasing sculpture, maritime relics, memorials to lost crews and even as vessels for the 'soul' of the ship. Although displayed as such, figureheads were not created for these reasons; their purpose was to decorate ships.

Laser Scanning Figureheads - By laser scanning the figurehead from the Newport Museum collection, I created an extremely accurate record of this specific bow carving, a digital replica of the object. With the help of the Newport Museum staff and Toby Jones, the curator of the Newport Medieval Ship, I scanned the figurehead to explore the possibility of reuniting a figurehead with a ship digitally. The laser scanner allows me to create a 3d digital replica of the figurehead which can then be reconnected to the bow of a computer animated ship. This will allow the figurehead to be viewed as was originally intended – as an integral part of the ship.

Due to their size ships' figureheads often remain in museum stores, which are difficult for researchers and the public to access. By creating digital models of museum objects, collections become more accessible to those wishing to study the artefacts. Once a laser scan of a figurehead is completed there is also the option of making a physical 3d model of the object from the scan. This is done through a process called laser sintering. This process, which was used to make the physical model pieces for the Newport Medieval Ship, enables researchers, conservators and curators to handle scaled down replicas of objects. Scaled down physical models are particularly useful when researching ships' figureheads as they are generally large, cumbersome and therefore difficult to move.

Erica McCarthy and Bob Trett

Cutty Sark –
the story of a survivor

When *Cutty Sark* was built, she had a design life of just 30 years. Her noteworthy career and subsequent fame ensured the survival of this iconic ship and now, 145 years on from her launch, the world-famous clipper ship - fully conserved and regenerated - lives on to tell her story.

Cutty Sark was built in 1869 in Dumbarton, Scotland, by a young company called Scott & Linton. Her owner John Willis, known as 'White Hat' Willis for the distinctive headgear he wore around the city, took the inspiration for the ship's name from a poem by Robert Burns, *Tam O'Shanter*. The poem recounts the story of a farmer who meets a coven of witches, and one of them is the beautiful Nannie (depicted as the ship's figurehead), who wears a 'cutty sark'—a Lowland Scots term for a short shirt or slip. And yet after *Cutty Sark* was rigged, the vessel was never to return to Scotland; London was the home port of Registry for the entire period she sailed under Red Ensign.

Cutty Sark is the best surviving example of a composite ship, a favoured method of ship construction from 1860 to 1870 in which the vessel has a wrought iron frame onto which wooden hull planks are fixed. The ship is also the last surviving example of an extreme clipper – a ship designed for speed. Clipper ships like *Cutty Sark* were defined by their long narrow hull, sharp bow, raking masts and a huge sail area. Her owner, John Willis, commissioned the builders with designing the fastest vessel afloat, specifically to meet the demand for the new season's tea from China.

Her maiden voyage in 1870 marked the start of a short

career in the tea trade, rushing back with over 10,000 tea chests from Shanghai or Hankou to get this precious cargo onto the market as quickly as possible. Competition from the steamships however meant *Cutty Sark* was driven out of the tea trade by 1878 but she later went on to find success in the Australian wool trade in the 1880s-1890s. She quickly established herself as the fastest of the wool clippers, her best passage being just 73 days from Sydney to London.

Cutty Sark carried cargo through to 1922, the second half of her working life as a Portuguese trader named *Ferreira*. Over her entire career she has visited ports across the world and carried cargoes of every type - from books to beer, pianos to pitch pine, coal to cocoa beans. The ship then returned to Britain in 1922 and was used as a training ship in Falmouth and later Greenhithe before arriving in her final resting place in Greenwich in 1954, to be opened to the public as a museum ship and a memorial to the great days of sail and all those who served in the merchant service.

16m visitors and 50 years later the structure was in a serious need of attention. *Cutty Sark*'s frames were rusting away, the main deck was leaking badly and the weight of the ship was crushing her keel. Her shape – the very reason for her remarkable career – was in danger of being lost.

In 2006, work began to halt the deterioration of the frames, to strengthen the ship and make sure her shape was preserved. The vessel was completely documented and dismantled to allow treatment of the separate elements of *Cutty Sark*'s composite construction. However, the conservation project suffered a major setback when a serious fire broke out on board in May 2007 and threatened the ship's very existence.

Fortunately, much of the original structure was in storage at the time of the fire. Also, although iron frames buckled and hull planks were scorched, very little original material on site was lost – less than 5% - and the project was able to continue as intended. The original hull planks were consolidated and rehung onto the ship's frame and her iron framework was treated to remove the rust and halt the corrosion. This project also presented us with a unique opportunity for a detailed examination of the structure. During the project works we learnt more about the ship's structural history, including the discovery of original stamps in the ship's frames which identified the ironworks which fashioned the structure back in 1869.

In order to preserve her shape and to allow visitors to truly appreciate *Cutty Sark*'s elegant lines, she has been lifted over three metres from the bottom of the dock in which she previously rested. Now, lifted, the pressure on the keel has been relieved and *Cutty Sark* is supported by new steelwork. Much later than originally planned and at a higher expense, the conservation project was finally completed in 2012 and the ship re-opened by HM The Queen on 25 April that year.

Visitors can now closely examine the original structure, the very planks and frames which sailed thousands of nautical miles across the world, crossing the South China Seas and rounding Cape Horn. The original framework is painted white and the new steelwork supporting the ship's fragile frame is painted grey to identify new intrusions and also help visitors to distinguish the original fabric. New exhibitions in the hold printed onto tea chests tell the story of *Cutty Sark*'s career and on the Main Deck, visitors are invited to put themselves in the shoes of the crew and perhaps climb in a bunk, steer the ship at the helm or just enjoy the views up the towering masts or across the Thames. And now, in the Dock, visitors have the unique opportunity to walk underneath a three-masted ship and view the innovative hull design which was the secret to *Cutty Sark*'s success.

The 2006-2012 Conservation Project has not only preserved *Cutty Sark*'s original structure, it has also created a sustainable future for the vessel. This has been achieved by reinvigorating the visitor offer, by creating new opportunities for income generation such as catering, evening functions and theatre performances and by documenting the structure to inform the future maintenance – all helping us to safeguard *Cutty Sark*'s future and ensure she lives on to tell her story.

Jessica Lewis, Curator, *Cutty Sark*
See www.rmg.co.uk/cuttysark for more details.