Mapping Portsmouth’s Tudor Past
The entrance to Portsmouth Haven. Detail from UK Hydrographic Office Chart D623 (www.ukho.gov.uk)
Foreword

The art and science of map-making, technically known as ‘cartography’, blossomed during Henry VIII’s reign and reached new heights under Elizabeth I. The impetus came from war. With the Reformation, England became a pariah state and faced invasion first from the French and then the Spanish. The whole southern coastline was mapped, from the Wash to Milford Haven, and fortifications were built to guard possible landing points. The navy was also transformed, with bigger and better ships requiring deep-sea ports.

Portsmouth was one of the most important of these new royal naval bases and the Solent became, as it was to remain to the twentieth century, a key to England’s defences. The strategic significance of the Solent meant that some of the earliest accurate maps in the country are of this area. They include the 1545 map of Portsmouth, which is the earliest scale map of a town in England and one of the earliest in Europe. And the date of course is important too as it was the very year that the Mary Rose sank in the Solent while helping to defend England from a massive French invasion fleet.

The Mary Rose Museum has brought together a unique collection of these Tudor maps and charts to make this temporary exhibition. The maps say a great deal about the state of the nation’s defences. They show a sophistication that is impressive for any age. But they also have a beauty that makes them works of art as well as planning documents for war.

Dr David Starkey CBE
Trustee of the Mary Rose Trust

Trinity House

Trinity House dates back to the years when Mary Rose served as the King’s flagship. The first official record is the grant of a Royal Charter by Henry VIII in 1514 to a fraternity of mariners called the Guild of the Holy Trinity, “… so that they might regulate the pilotage of ships in the King’s streams”. At the time of inception, this charitable Guild owned a great hall and almshouses, close to the Naval Dockyard at Deptford on the River Thames.

The first Master of the Mary Rose, Thomas Spert, became the first Master of Trinity House in 1514. He was knighted in 1524 and died in 1541.

The Corporation of Trinity House of Deptford Strond is the official General Lighthouse Authority for England, Wales and other British territorial waters (with the exception of Scotland, the Isle of Man and Northern Ireland). It is responsible for the provision and maintenance of aids to navigation such as lighthouses, light vessels, buoys and maritime radio/satellite communication systems. Trinity House is also the official body providing expert navigators for ships trading in Northern European waters.

Trinity House has great pleasure in sponsoring this important exhibition of Tudor maps and charts, and is especially pleased to strengthen the links between The Mary Rose Trust and the Corporation at a time when both organisations are contemplating their 500 year old origins from Henry VIII.
Acknowledgements

Some months ago David Starkey, a trustee of the Mary Rose Trust, advised me to investigate further the Tudor maps of Portsmouth held by the British Library. The process of doing so has provided the enormous privilege of encountering the quality, beauty, fascination and sheer history of these maps. The trail then led to the Admiralty Library and the UK Hydrographic Office: the result is this unique exhibition of remarkable documents, all but one being original hand-drawn maps from our Tudor past.

The bringing together of these historic documents for the first time for public viewing has come about through the interest and enthusiasm of a number of individuals and organisations. The British Library exhibition Henry VIII, Man and Monarch reminded the nation of the extraordinary burgeoning of cartography during Henry’s reign, stressing the importance of fortifications and the defence of the realm. A number of key maps held by the library reflect the vital importance that Portsmouth played in this defence. and Peter Barber, Andrea Clarke, and Barbara O’Connor have provided much support and advice in facilitating the temporary loan of five important maps and charts. The Admiralty Library, within the Naval Historical Branch, has a splendid collection of early Tudor documents, and the librarian, Jenny Wraight, has played a strong role in helping to choose and interpret just three documents - a difficult choice because of space limitations in the exhibition. West Dean College undertook to help with the conservation and display aspects of the books. The assistance from the UK Hydrographic Office has been equally rewarding and generous, and Phillip Clayton-Gore and Guy Hannaford have facilitated the loan of their very remarkable earliest chart.

Dominic Fontana, of the University of Portsmouth, has put much thought and energy into the interpretation of these maps, and his contribution to the exhibition and this book has been fundamental. His special interest has been to link the maps to the ‘Cowdray’ engraving which depicts the scene of Portsmouth and the sinking of the Mary Rose in 1545. Kester Keighley has kindly given this Trust the use of his copy of the engraving, which is used in this publication and which is one of only two coloured versions of which the Trust is aware. The other is owned by Leon Reis, of Artist’s Harbour, and he too has generously provided our museum with fine copies.

The Mary Rose Trust is most grateful to the Corporation of Trinity House for the sponsorship of this exhibition. We share a remarkable royal heritage of 500 years, the Mary Rose being the first true warship of this nation’s standing navy and the Corporation being one of the world’s first maritime organisations. This exhibition gives us the opportunity to celebrate this joint pedigree. Finally, Terry Doyle, a long-term supporter of the Mary Rose project, has stepped in wonderfully to help finance the setting up of this booklet.

The Mary Rose Trust is indebted to them all.

John Lippiett
Chief Executive, Mary Rose Trust, 2010
Henry VIII, the Tudors and their maps

Henry VIII was an enthusiastic map user, and during his reign he had many specially made. He could use these maps as a means of understanding and controlling events such as the defence of the kingdom and the building of fortifications, the process of government and the implementation of the law. Maps made it possible for him to do this even when he was not present personally, thereby greatly extending his sphere of direct influence, often bypassing the authority of the local gentry. Maps gave Henry greater knowledge and control of his kingdom, and they also fired his imagination, by showing him a picture of the world beyond its boundaries.

In 1509, when Henry came to the throne, maps were still relatively rare in England. They were often used as a means of displaying encyclopaedic and historical information, but were not greatly consulted for practical purposes. However, Peter Barber of the British Library suggests that, around 1525, there was a sudden realisation within Henry’s court that maps could be extremely useful for planning purposes and military activities. Consequently, these new uses for maps, combined with advances in printing technology, ensured that by the end of the 16th century maps had become a familiar part of everyday life. P.D.A. Harvey has suggested that the English developed a “map-consciousness” and that through this they began to visualize the landscape in cartographic terms, enabling them to read and understand maps. These developments were in no short measure due to Henry’s active encouragement of the art and science of cartography. By the 1540s English mapmakers had begun to draw maps to a consistent scale, creating accurate plans from carefully measured and well constructed surveys. This was a significant advance, and the 1545 plan of Portsmouth included in this exhibition is the earliest example of such mapping in England.

The Tudor period was one of religious and international conflict across Europe but also of exploration and discovery of the world, in particular seeking new trading routes to the Far East in search of spices and luxury goods. This spirit of adventure and enterprise led to the discovery of the New World by Christopher Columbus in 1492 and the American continent by Amerigo Vespucci, who sailed the eastern seaboard between 1499 and 1502. Throughout the 16th century, expeditions set off to far distant lands, where they surveyed previously unknown coastlines, and on their return these findings were eagerly compiled into new maps presenting state-of-the-art knowledge of the known world to rulers of the European kingdoms. Improved geographical knowledge conferred great economic, military and trading advantage to a nation, and consequently maps were highly valued and often treated as state secrets.

On the national scale, the defence of Portsmouth was most important to the security of England as it offered the best natural harbour along the south coast. It was the ideal invasion point for a large enemy fleet, providing sheltered anchorage for many substantial ships, and deepwater quaysides on which to speedily disembark tens of thousands of soldiers. In 1538, when Henry VIII and England faced great threat of invasion from French and Spanish enemies, immediate steps were taken to fortify the whole of the South Coast and in particular the Solent. Surveys were undertaken, maps were made, plans developed and the building of forts ordered right along the coast. This was an enormous investment in manpower and money, but it has left us with a legacy of Tudor fortifications, and, in some cases, the maps and plans that were used for their planning and construction. Portsmouth itself was mapped both for Henry and his heirs. During the reigns of Edward VI and his half sister Elizabeth I, threats from abroad continued, further maps were made and plans drawn up for the repair and re-fortification of the defences. It is some of these hand drawn maps, works of art in their own right, which are presented in this exhibition together with other maps, which provide us with an insight into the Tudors’ view of their world.

Dr Dominic Fontana FRGS
Department of Geography, University of Portsmouth
Plan of Portsmouth, 1545
British Library Cotton Augustus I.i.81

This map is of the greatest importance to the history of cartography because it was the first of any town in Britain to be drawn entirely to scale. It was made to show the proposals for improvements to the defences of Portsmouth after the French invasion attempt of July 1545, when the Mary Rose sank. There is a note written on the right-hand side of the map which reads "This plat is in every inch C foote", meaning that the map has been made at an intended scale of 1 inch to 100 foot. The map has been very carefully drawn and the circular lines defining the bastions of the town's wall have been made using a compass. Indeed, the hole in the paper made by the compass point is still clearly evident.

The map presents a remarkably modern style of plan with each building being described by the position of its walls rather than a "bird's-eye" pictorial image, as was more normally the case at the time. Interestingly, the map even shows the positions of the doorways opening onto the street as well as the interior ones. The doorposts are marked as small circles on the ends of the lines, representing the doorframes and walls, leaving a small gap to denote the doorway itself. This is a tremendous level of detail and it must have taken the surveyors a considerable time to gather the information. This raises the question of why it was necessary to collect such seemingly inconsequential detail for a map primarily concerned with the planning of new large defensive structures. Perhaps it may have been an attempt to assess the available accommodation for billeting troops within the town, although it must be recognised that the town was quite small, having a normal peacetime population comprising only around 85 families, and would not have been able to house a large number of additional soldiers.
When compared with the 1552 map of Portsmouth, made just seven years later, the 1545 map looks rather plain and unremarkable. The later one contains pictorial drawings of the buildings and, at first sight looks more attractive; however, there is considerable coincidence of information between the two maps and this adds to our confidence in their accurate representation of the town. For example, in the eastern sector there is a cluster of four similar buildings grouped around a pond. These are shown in plan on the 1545 map and as isometric (“bird’s-eye”) views on the 1552 map. These are the four brewhouses established in 1515 by Henry VIII to provide beer for his ships. Named Dragon, Lion, White Hart and The Rose, they produced considerable quantities of beer and are recorded as each making 500 barrels per day in 1515. The pond was most probably a freshwater spring supplying the large quantities of water essential for brewing. The breweries are also clearly shown in the Cowdray engraving (see page 7), which depicts them as timber framed buildings located above a pond.

Other features clearly visible in the map are the church of St Thomas, the former mediaeval hospice Domus Dei in the south-eastern quadrant of the town, complete with its precinct wall, and the town’s two bakeries, the Swane near the Camber, and the Anker to the north of St Thomas’s Church. Again, considerable care has been taken by the surveyors to gather detailed information, and plan representations of the bread ovens have been drawn into these buildings - the Swane has two ovens and the Anker four. Interestingly, although the hospice of the Domus Dei had been closed as an ecclesiastical site by 1540 and was now being used as an armoury, the survey recorded two bread ovens within one of its smaller buildings, giving the town of Portsmouth a total of eight available bread ovens in 1545.

This attention to detail suggests a significant interest in the logistics of defence and the ability of the town to provide for the defending army encamped on Southsea Common. During the July 1545 defence of Portsmouth, Henry VIII had around 12,000 troops mustered on the Common and the problem of feeding them would have been quite acute. Even if only half a loaf of bread were provided per man, this would require 6000 loaves to be baked every day, using some 3 tonnes of flour. It is possible that the experience gained from this crisis gave impetus to the development of maps and plans, which would assist with the detailed logistic planning of future events.

The map also shows the important defensive structures of the town, including the Round Tower at the entrance to Portsmouth Harbour, the Square Tower and its adjacent gun platform, and the town walls themselves, including a number of bastions.
Plan of Portsmouth, 1552
British Library Cotton Augustus I.ii.15

This map shows both the old town of Portsmouth itself, as well as the settlement of Gosport on the western side of Portsmouth Harbour. Clearly shown is the narrow harbour entrance, complete with the defensive structures of the Square Tower and the Round Tower on the Portsmouth side and Fort Blockhouse on the Gosport side. There is also a second, larger fort shown on the Gosport peninsula consisting of a circular keep within a circular perimeter wall, which may be intended to represent Lynden’s Bulwark. The map has been partly drawn in plan and partly in bird’s-eye view and includes much illustrative detail of the buildings and fortifications within Portsmouth town itself, although there is not very much shown on the Gosport side. There are no text annotations to the map, which is unusual and may suggest that the map was intended to provide illustrative support for discussions between people who knew Portsmouth well and who would not have required labels or annotations naming the particular locations.

Dating of this map is not exact, as it could have been produced at any time between 1545, when works on the defensive walls began, and 1563, by which time the configuration of the Town Quay in the Camber had been significantly altered. However, it seems likely that the map was produced in 1552, because in that year John Rogers was ordered to survey the town, and it was also visited by Edward VI on the 9th August 1552, when he expressed some dissatisfaction at the state of the defences.
The Round Tower is shown as being connected to the town by a palisade along the centre of the peninsula surrounding The Camber. At the eastern end of this palisade is a second one, which crosses the peninsula laterally and is fitted with what appear to be gates giving access from the town to either side of the longitudinal palisade. This is located at the site of what later became King James’s gate and is situated just behind the Swane bakery, which is also clearly shown on the 1545 map of Portsmouth.

Both the Round Tower and St Thomas’s Church are shown with signal braziers mounted on their roofs, and the one on the church tower is also clearly visible in the Cowdray engraving.

The four Tudor brewhouses are shown on this map located around a pond in the eastern part of the town, and these too are also drawn in the Cowdray picture as well as the 1545 map of Portsmouth.

The Town Gate Bastion is shown in some detail at the northeastern end of the High Street and it is possible to see the arrangements for controlled access into the town. This is achieved through an entrance on the western side of the bastion and what appears to be an enclosed courtyard which was probably fitted with gates at either end.
This map shows Portsmouth, the Solent and the Isle of Wight and dates from 1585. The date appears in the bottom right. The map has been made at a scale of 1 inch to the mile and there is a scale bar indicating this, accompanied by the statement "This scall is of on inche to a meylle."

It is likely that this map was prepared to assist with the planning of defences, assessing the potential landing sites at which an attacking force could disembark, assemble and launch a direct attack on Portsmouth. Each of these beaches has been clearly marked, including those close to the entrance of Portsmouth Harbour on both the Gosport and Portsea Island sides, as well as the beaches adjoining the entrance to Langstone Harbour. Interestingly, the beaches from Southsea Castle eastward to Eastney have not been marked in this fashion, possibly because the large sandbank (Horse and Dean Sand) to the south would make an approach with large ships impracticable here.

The map has had two names "Westburhunt" and "Chichest" added at a later stage. These were probably written by William Cecil Lord Burghley, Secretary of State to Elizabeth I.
There are two structures recorded along the shoreline between Southsea Castle and Eastney, the most easterly of which is labelled "Chatterton’s Forte" and the other marked as "Wache hous" (Watch House), which appears to be on the site of the later Lumps Fort. The Cowdray engraving depicts a fort on this site in 1545, equipped with five guns mounted on carriages, suggesting that it is a more substantial defence than just a Watch House.

The map also shows three beacons (signal braziers) on the crest of Portsdown Hill, labelled ‘Portesdowne’. These were used to alert the countryside of an imminent invasion threat. In the 1552 map of Portsmouth there are signal braziers shown on the roof of both the Round Tower and St Thomas’s Church within Portsmouth town, and similar devices are shown in the Cowdray engraving of the 1545 battle scene, where one is positioned on St Thomas’s Church roof and another as a very substantial timber structure located just to the north of Southsea Castle. Within this map, also shown on the top of Portsdown Hill, are red windmill symbols named "westmyll" and "estmill", with two further windmills on the low-lying land of Portsea Island itself. These would have been elevated locations in the remarkably flat landscape of Portsea Island, and could serve as vantage points from which to observe opposing forces and possibly signal to elements of the defending army.
This is a very attractive manuscript map and shows Portsmouth, the Isle of Wight and the coast of southern Hampshire. The island is labelled ‘Vecta’ which was its Roman name. By the mid-16th century the Solent had become one of the most heavily defended places in Northern Europe because of the need to defend Portsmouth Harbour from attack by the French or Spanish. Many of the castles and other defensive structures are recorded on this map, some of which are shown in recognisable architectural form. Southsea Castle is prominently marked on the southern extent of Portsea Island, complete with its rectangular main section and triangular bastions on either side. Hasleworth Castle on the Gosport peninsula is also clearly shown with its circular keep and concentric outer wall. It has been labelled “Hasslforde Castle”. The only other known record of the fort being named as “Haselford” is in the journal of Edward VI (aged just 14), recording his visit there on the 9th August 1552. The map records positions for Fort Blockhouse and Lymden’s Bulwark located on the Gosport side of Portsmouth Harbour’s entrance, although these are not named.

The map forms part of an atlas that belonged to William Cecil Lord Burghley, Elizabeth I’s Secretary of State. It has his distinctive handwriting on it under some of the villages, possibly naming the local squire. The map is thought to have been made by John Rudd, who was very interested in cartography and had been involved in making a “platt” (plan) of England in the 1550s. In 1561 Rudd travelled to map the country and it is likely that his apprentice Christopher Saxton accompanied him, thereby acquiring and developing his skills for surveying. Saxton published his own atlas depicting the counties of England and Wales in 1579, and his volume is considered a landmark in British cartography, providing the model for county mapping for the next 100 years.
Portsmouth town’s perimeter wall with its bastions, complete with the Round Tower and the Square Tower defending the approach to the Portsmouth Harbour entrance, are well described. The long curtain wall flanking the eastern side of the town is shown without an intermediate bastion or tower. This configuration concurs with its depiction in both the 1545 map of Portsmouth and the Cowdray engraving, which both illustrate the 1545 state of defensive development.

Intriguingly, Nettlestone Fort on the northeast of the Isle of Wight is shown as a circular fort. This fort has long since disappeared, but was referred to by Martin Du Bellay, a French nobleman who accompanied the French invasion fleet in July 1545. In his account of the battle in which the Mary Rose was sunk, he recalled that artillery fire from the fort was proving a nuisance to some of the French ships, and consequently a party of French soldiers was dispatched to capture the fort. They later chased off the English defenders, eventually killing them in a small wood to the south of the fort. The forts defending the western entrance to the Solent are also prominently marked and the trefoil shape of Hurst Castle is clearly delineated at Hurst Spit, as is the square shape of Yarmouth Castle opposite on the Isle of Wight.
This chart shows the Sea Coast of England between Wight and Dover “Beschrĳvinghe der Zee Custen van Engelandt tuschen Wicht ende Doveren”. It was engraved in 1583 and published in the “Die Spieghel der Zeevaerien” Mariner’s Mirror. It is contained within Waghenaer’s collection of charts, which was the world’s first sea atlas. Waghenaer was a Dutchman, born c1534-35. He went to sea as a young man and later began compiling a pilot book of western European coastal charts in 1582. His practical experience of navigation at sea gave him an understanding of the requirements of seamen matched by few other cartographers. He published the series from the Zuiderzee to Cadiz in 1584-85, and his sea atlas became known to all as a ‘waggoner’, thereby giving his name to subsequent sea atlases.

Although to modern eyes this map may not look all that accurate, it must be remembered that it was showing a “foreign” and possibly hostile shore and hence was probably not based upon a great deal of prior survey. The map’s depiction of the coastline is also deliberately distorted because it is designed as a coastal pilot. The entrances to harbours and rivers have been given far greater prominence than the overall shape of the coastline. The atlas was not intended for general navigation and therefore the metrical presentation of the coastline was of less importance than depicting the hazards which might be encountered during an approach. This would assist a mariner in making a reasonably safe entry for his vessel into a haven, and consequently the harbour and inlet approach features have been specifically portrayed on the map with this purpose in mind.

This chart is at a scale of approximately 1 to 470000 (around 7 or 8 miles to 1 inch), although it should be noted that the scale is not consistent throughout the map. The scale lines are provided in both Dutch and Spanish miles, as Spain ruled the Netherlands at this time.

These maps were in use by the English ships that fought the Spanish Armada in 1588 and it is quite likely that they were also employed by the Spanish too. The Marques of Santa Cruz arranged for good charts and pilotage instructions for the Spanish fleet, and in September 1587, acquired a “... careful relation of all the coasts of England with a note of the depth and size of their harbours ...” which was probably a copy of Waghenaer’s atlas of charts and pilot instructions.
These maps of England and Ireland are from a small volume of coloured charts of the coastlines of European countries with a nautical calendar and tables. Within the book, these maps are presented with south to the top of the page rather than the modern convention of a north orientation, so it is displayed here upside down. This almanac dates from the mid 16th century and is the work of Guillaume Brouscon. The details of the charts reflect their use by sailors as only coastal detail is noted; places inland are not named. Names of important ports such as Portsmouth are written in red ink. London is noted at the top of the Thames. The map is relatively accurate: the indentation of the Bay of Cardigan, which only begins to appear on English maps after c.1550, is shown, although the Lleyn Peninsula is missing. Charts like these were invaluable to a sailor, as it was important to avoid a harbour at the times of the day when it was made inaccessible by low water levels. This information allowed a sailor, once he had made allowances for the age of the moon and the known daily retardation, to estimate the optimum time at which to enter the port. Tidal diagrams date back to the medieval period but it was the author of this chart, the Breton G. Brouscon, who was the first to publish such charts in an almanac. This manuscript almanac by Brouscon is one of three known to exist. Printed versions followed, and these allowed pilots to take them to sea as pocket-sized practical almanacs. By using charts and compass roses, they allowed seamen of all nations to use them, even if they were illiterate. A tide calculator, such as that recovered from the Mary Rose, could be used to count the points of the compass.

To find the time of high water in a particular port, one tracks the line from that port to the compass rose. That will show the bearing of the new or full moon at high water. The time of high or low water on other days can then be calculated using eight circular tables found elsewhere in the almanac.

A 1528 translation of the first printed pilot book, the French ‘Le Routier de la mer’ gives an example of how this would work: “At the Nedles of the isle of wyght without the moone at the south east and a poynite of south full see”, that is at the Needles, off the Isle of Wight, a full moon bearing south east by south, full sea (high tide).
This is a large, attractive and extremely well produced manuscript map of the entrance to Portsmouth Harbour is the earliest known chart in the UK Hydrographic Office’s archive. It shows the deep-water areas and mudflats within the harbour as well as the settlements and defensive features of the surrounding landscape. It has been accurately surveyed, and, most notably for such an early map, includes a realistic representation of the seabed topography covering the approach to Portsmouth Harbour’s entrance, noting the presence of the Swashway channel across Spitbank (marked “The Swach”). This channel is still used today as the main route across to the island for the Isle of Wight ferries although not at low tide. The seabed topography is a very important feature of the defence of Portsmouth, as it tightly constrains the route and timing of a potential sea-borne attack on the town and harbour.

The map is oriented with West South West to the top and is intended to be viewed in a landscape position, as the majority of the labels have been written with this viewpoint in mind. The map has annotations marking the beaches along the shoreline, and prominently displays all the defensive positions as well as the offshore water depths. It is possible that this combination of features on the map was intended to provide a map suitable for planning defensive operations around Portsmouth Harbour. The map’s orientation encourages the viewer to consider potential shipping approaches towards the harbour entrance and makes the positions of the defensive fortifications and the locations of the potential landing beaches remarkably clear. After the French invasion attempt of 1545 in which the Mary Rose was lost, the next serious invasion threat was from the Spanish Armada in 1588.
The date of this map is difficult to determine and there have been a number of suggestions made, including as late as 1665 by Hodson and around 1620 by the National Maritime Museum. Internal evidence from the map itself however provides some indication of an earlier date. The walls of Portsmouth town are drawn in their later Elizabethan configuration, with the Four Houses Bulwark (named after the nearby four brewhouses) shown in the centre of the long curtain wall on the eastern side of the town. This structure was built around 1584 to 1586 when Portsmouth’s defences were remodelled by Popinjay and Pearse. This was the first bastion to be built on the site. Further evidence for an earlier date is suggested by Hasleworth Castle, which is shown as being still extant on the Gosport peninsula. Hasleworth was said to have been destroyed on the order of King Philip, and there is a story that when he sailed into Southampton in 1554 to marry Queen Mary at Winchester, all of the forts fired salutes except Hasleworth, which was demolished as a consequence. Hasleworth Castle is shown as an architectural representation in the Burghley atlas map of the Isle of Wight (Royal 18 D iii, f. 18) (which is also displayed in this exhibition. See page. 10.) and has been dated to around 1570. Interestingly, on Daniel Favreau de la Fabvolliere’s 1665 Portsmouth map (B.L. Add. MS. 16371 a.) Hasleworth Castle is marked that it had been “beaten downe by King Philip”. Norden’s 1595 county map of Hampshire records “Riames ofy Haselworth Castle” (Remains of Hasleworth Castle) for this location. The evidence suggests that this map dates from around 1620 at the latest, and it is quite possible that it may be as early as the mid 1580s.

The compass rose outside the harbour mouth has a pencil line running north and extending through the Tower of St Thomas’s Church. This is not a navigation mark, in that to follow it when steering a ship, would run the ship aground on the shallow water of the Spit. Intriguingly, the fleur-de-lys of the compass rose lies immediately on top of the wreck site of the Mary Rose. Is this an intentional feature of this chart, perhaps providing a means of locating the wreck or is it merely a coincidence?
Portolan charts are navigational maps based on realistic descriptions of harbours and coasts. One of the earliest examples, originating from Italy, dates to the second half of the 13th century and is amongst the earliest Western navigation maps. It displays the coastline of all the Mediterranean in considerable detail. The style developed over the succeeding centuries through Italy, Spain and Portugal.

The word portolan comes from the Italian adjective portolano, meaning "related to ports or harbours." The charts are covered in rhumb lines (from an old French word rumb meaning compass point), which preceded the compass rose on later charts. Rhumb lines allowed navigators to plot a course between ports and calculate what point of the compass to steer. The term ‘sailing on a rhumb’ was frequently used in the 16th to 19th centuries to indicate a particular compass heading.

The distances between ports was well known from long experience, and this meant that the charts are remarkably accurate and give a recognisable and practical outline of the coastlines.

Portolans were hand-drawn on vellum, usually made from calfskin, or on parchment, often made from sheep or goatskins. Printed charts on paper, from makers such as the Dutch seaman and cartographer, Lucas Wagenaer, started to replace the manuscript versions from around the 1580s.

This is one of 6 manuscript maps on parchment in this collection dated 1579. They are drawn by Juan Martinez of Messina. The 32 rhumb lines are in black, red, and green. Major ports are in red, others in black.
Battista Agnese was a Genoese cartographer who settled in Venice, where his workshop specialised in producing beautifully decorated (and remarkably accurate) navigational or portolan atlases on vellum, intended less for practical use than for the libraries of the rich and powerful. Purchasers included abbots and admirals, Venetian merchants and the Holy Roman Emperor, Charles V. His maps were marked with the latest geographical discoveries, and normally included a scale of latitude. He followed the latest cartographical practices, rendering the coastlines of continents in blue and islands in green, and provided every map with a windrose in gold and coloured inks. The Red Sea lives up to its name, being hatched in red, and islands are coloured in red, green or pure gold leaf. An overlay of a modern map shows the degree of accuracy Agnese was able to achieve, although his knowledge of the British Isles left something to be desired: England and Scotland are separated by what appears to be a navigable strait.

This manuscript portolan came into the possession of the Admiralty when it was purchased by the first Hydrographer of the Navy, Alexander Dalrymple, on 21st December 1790 for the sum of one guinea, from the bookseller James Robson. Robson, born in 1733, had been apprenticed to the printer and bookseller John Brindley, who had a shop at 29 New Bond Street in London. After Brindley’s death, Robson took over the business. In 1788 he travelled to Venice with the Pall Mall bookseller James Edwards, where they bought the famous library of Maffeo Pinelli, the sale of which was to make London’s reputation as an international centre for book auctions. Robson also purchased the library of Giovanni Battista Paitoni (1703-1877), a Venetian physician and book collector. The sale of Paitoni’s library began on 22nd November 1790 and continued for 43 days: it is likely that it was from this sale that Dalrymple acquired the portolan.