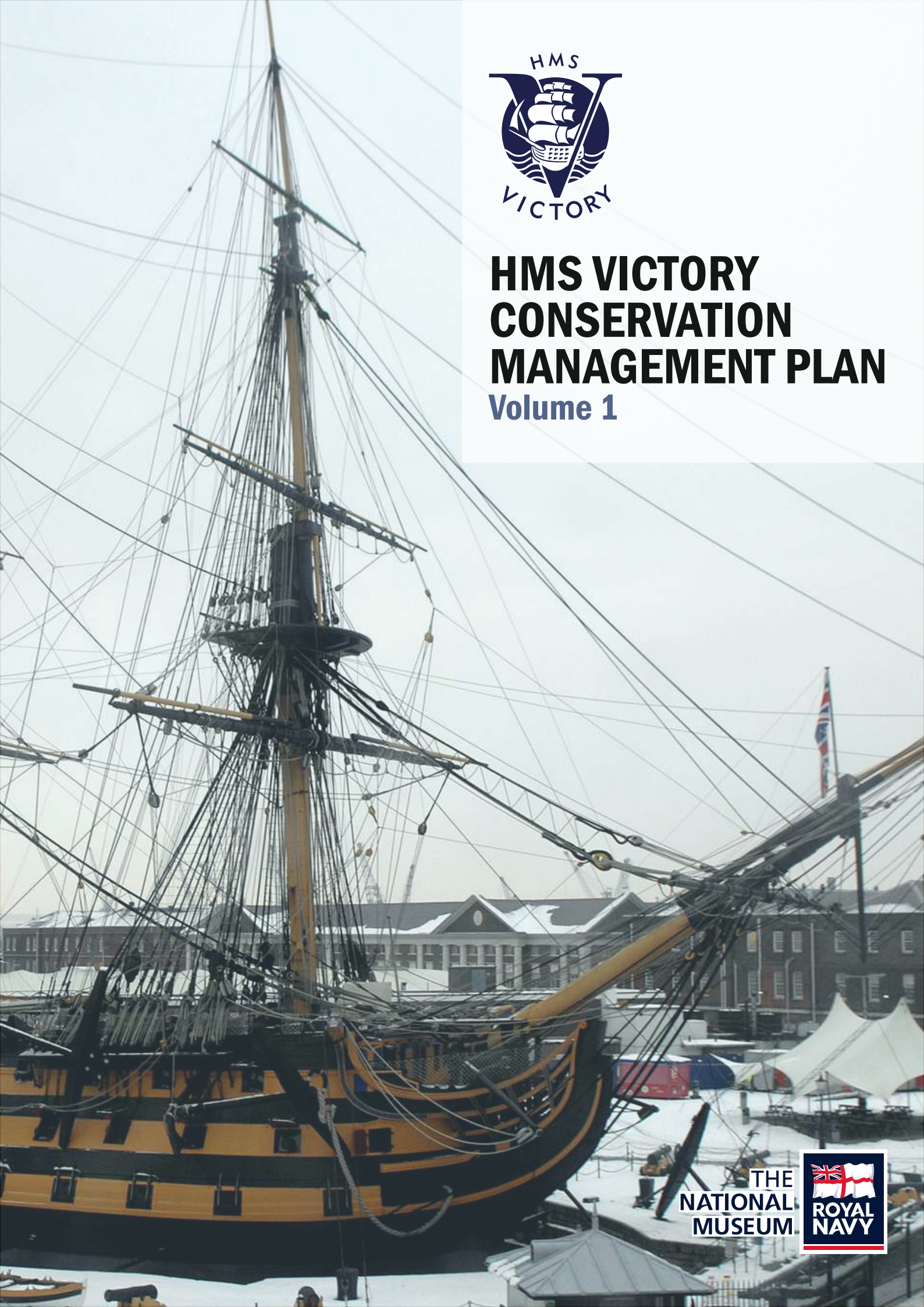


HMS VICTORY CONSERVATION MANAGEMENT PLAN

Volume 1

THE NATIONAL MUSEUM

ROYAL NAVY

CONTENTS

VOLUME 1
Part 1 Understanding the Asset

Part 2 Statement of Significance

Part 3 Issues and Policies

Part 4 Implementation Plan

VOLUME 2

PART 1 – UNDERSTANDING THE ASSET

1 INTRODUCTION

Project Background

Conservation is defined as:

> *The process of managing change to a significant place [or asset] in its setting, in ways that will best sustain its heritage values, while recognising opportunities to reveal or reinforce those values for present and future generations* (English Heritage 2008, 7)

In addition, the National Historic Ships guidance on *Conserving Historic Vessels* (2010) highlights the ten key conservation principles that drive any ship conservation project, the spirit of which is intended to drive this Conservation Management Plan (CMP); perhaps one of the most pioneering, complex and exciting conservation challenges based on internationally accepted standards yet to be undertaken for an historic ship of the stature and status of HMS *Victory* anywhere in the World.

HMS *Victory*, situated within Portsmouth Historic Dockyard (**Figure 1**), is a World Class Historic Vessel and an exemplar of a capital warship from the Age of Sail. In addition to being a unique historic asset, not only as an exemplar of a capital warship from the Age of Sail, but as a warship with a famous fighting career, HMS *Victory* continues to be a significant visitor attraction within the setting of No. 2 Dock and Portsmouth Historic Dockyard. Furthermore, HMS *Victory* continues to serve as a commissioned vessel, and is the Flagship of the First Sea Lord. It is also for these reasons that it is imperative to sustain its considerable heritage values for this and future generations.

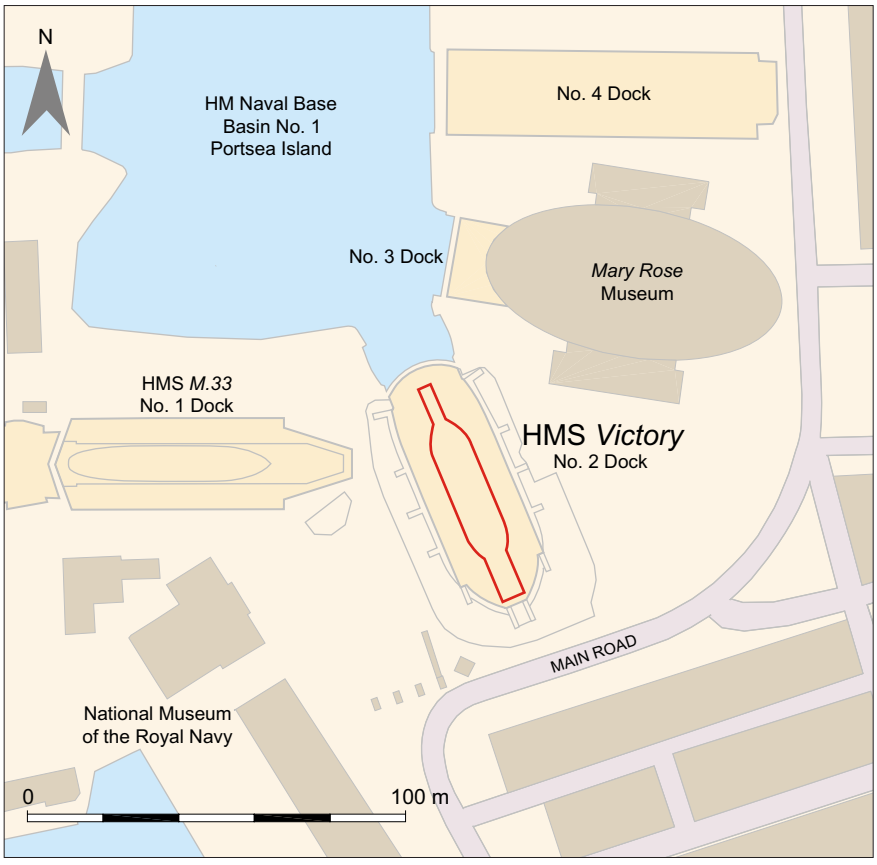


Figure 1. Location of the HMS *Victory* within the Portsmouth Historic Dockyard

When HMS *Victory* was transferred into No. 2 Dock in 1922, the principles that underpin conservation as we understand them today were still very much in their infancy, especially for a ship the size and age of *Victory*. The ensuing reconstruction and repair to the ship since 1922 employed a number of pioneering conservation measures, such as those to combat beetle and fungal infestation in the ship timbers, which ensured the ship's longevity well into the last century. Despite this, the structural integrity of the ship and the condition of its historic fabric have been of increasing concern over the last four decades, and the vessel has been subject to an ongoing programme of repair and maintenance works throughout this period. What we witness today in the structure of *Victory* is a palimpsest of materials and techniques that, in addition to the historic fabric, tell a long life story of the ship and the evolution in conservation principles and techniques developed over almost a century.

The Ministry of Defence donated HMS *Victory* in March 2012 to the National Museum of the Royal Navy (NMRN), and the ship is now in the ownership of the HMS *Victory* Preservation Trust, under the care of the HMS *Victory* Preservation Company (HMSVPCo). This change of ownership has provided the stimulus for a new approach to the vessel's conservation, supported by potential access to new funding streams for the future care of the ship.

The preparation of this Conservation Management Plan has therefore been commissioned by the NMRN on behalf of the HMSVPCo to guide the preparation of appropriate proposals for the future conservation and repair of the vessel and its setting which will sustain and enhance, or better reveal its considerable heritage values. The CMP will need to acknowledge the varied current functions of the vessel, and to resolve the potential conflicts arising from these functions which might have implications for the effective long-term conservation of the ship.

The collective 'Heritage Asset' which forms the subject of this CMP includes HMS *Victory* and associated collections, No. 2 Dock and its environs within the historic core (No. 1 Basin and associated docks, and the Georgian offices and storehouses) of Portsmouth Historic Dockyard (see **Figure 1**), and a store of timber taken from the ship over the last nine decades. For ease of reference, these elements will be collectively referred to as the 'Asset' throughout the plan, except where reference is to a specific element.

Key Sources

A vessel of the status of HMS *Victory* has naturally stimulated a considerable amount of study since its rise to fame following the Battle of Trafalgar. Contemporary artists and historians began recording the ship with greater fervour than before, but the first serious academic attempts to study the history of the ship were carried out in the late 19th century.

Since the mid-20th century, more academic and analytical studies have been made of the ship, stimulated by the realisation that the retention of significant aspects of the ship and its setting was becoming increasingly vulnerable. These studies were supported by research of primary documentation held in a number of nationally important archives including, most significantly, the National Maritime Museum, Greenwich and the National Archives, Kew. Material is also held in other nation's archives, such as the Danish National Archives which holds original draughts of the ship.

The ship is very well documented for certain periods of its history, including up to the present day, yet it is worth noting that key elements of the development of the ship are less well represented in the historical sources and represent gaps in our understanding. These gaps include the key periods of alteration to *Victory* during the great repairs of 1800–1803 and 1814–1816, and the use of the ship between 1814

and 1922, all of which are given fairly cursory coverage in most histories. Although many of the earlier sources have been individually referenced in the text, the key primary sources used to inform this Conservation Management Plan include both traditional documentary sources and modern survey schedules and reports. These principally include:

- Repair schedules and progress reports 1955–2009
- *Modelling and Structural Analysis of HMS* Victory (Fenton Holloway Ltd 2014).The report contains three key elements – Part A and B: stability; Part C: repair priorities; and Part D: support options
- *Internal Shipwright Survey of HMS* Victory (Nielsen & Co. 2012). The survey provided a detailed condition survey of the fabric of Victory
- *Technical Structural Appraisal of 2 Dock NBM013 at HM Naval Base Portsmouth* (BAE Systems Maritime Services Estates 2013). The report outlines the condition of No. 2 Dock
- Laser scan and 3-D digital model of the vessel, (Downland Partnership for Fenton Holloway Ltd, undertaken in 2013)
- 2-D deck plans, deckhead plans, sections and profiles produced from the laser scan (Downland Partnership for Fenton Holloway Ltd, undertaken in 2013)
- *Paint Analysis Report* (Crick-Smith 2014). The report outlines the results of the analysis of paint layers on a selection of fabric components located on the lower gundeck and the orlop
- *HMS* Victory: *A Survey of the Shipwright's Timber Marks* (Wessex Archaeology 2014). The report outlines the survey, analysis and interpretation of shipwright's timber marks located on the *in situ* and *ex situ* fabric components of *Victory*
- *Tree-ring Analysis of Selected Timbers from HMS* Victory (Nayling 2014). The dendrochronological analysis of a few selected timbers were undertaken to help inform the date or period to which key fabric elements belong.

Secondary sources of particular note include Bugler's 1966 seminal work on the construction, reconstruction and repair of the ship; Goodwin's book on the *Sailing Man of War* and his thesis on the technology and material procurement; Lavery's two volumes (1983; 1984) on the *Ship of the Line* and McGowan's 1999 book on the construction, career and reconstruction of the ship. Details of these sources can be found in the **Bibliography**.

Scope and Structure of the CMP

The requirements for the CMP were set out in a *Brief for the Preparation of a Conservation Management Plan for HMS* Victory prepared and issued by the HMS *Victory* Project Director. The methodology was further developed by Wessex Archaeology and presented as part of their tender proposal.

At the project inception stage, it was agreed that the parts of the CMP relating to the ship would focus attention on the fabric of the vessel itself, and that the lower masts and bowsprit would also be included as these elements were integral to the structure of the ship. The ship's rigging, the collections of furniture and artefacts on board, and the historic fore-topsail are given some attention within specific aspects of the CMP, and for example where discussion centres on the interpretation and display of the ship and associated collections.

The preparation, form and structure of the CMP are based on James Semple Kerr's seminal work *The Conservation Plan* (Kerr 1996) and the guidance provided by *Understanding Historic Vessels – Volume 3: Conserving Historic Vessels* (National Historic Ships 2010).

In accordance with the guidance, the CMP comprises four principal parts:

- Part 1: Understanding the Asset
- Part 2: Statement of Significance
- Part 3: Issues and Policies
- Part 4: Implementation and Action Plan.

In view of the wealth of previous works relating to the history of HMS *Victory*, every endeavour has been made to reduce the scope of narrative text within Part 1 of the CMP. To this end, the chronological development of the fabric and function of the ship and its present setting have been presented in the form of a 'timeline' which correlates the three principle strands of our understanding of the asset:

- History and Uses
- Build and Fabric History
- Technical Developments.

The key (summary) timeline is presented in **Figure 2**, while the detailed timeline is presented in **Appendix 1** in Volume 2 of the CMP.

The detailed understanding of the structure, areas and elements of the ship (**Plate 1**) as it currently survives are presented in the form of an illustrated Gazetteer in **Appendix 2** in Volume 2. This Gazetteer has been created by means of a Microsoft Access database which provides the CMP user with a readily available reference tool, and more importantly the basis of an interactive and iterative management platform. This will ensure that all aspects of the record contained within the database can be interrogated, added to, amended, and updated at any time during the implementation of the CMP. It is expected that the key policies and actions developed in the CMP will be embodied in the database and updated and reported on as the Action Plan progresses.

Plate 1. *Victory* in No. 2 Dock in 2013

The Gazetteer produced from the database presents a description, interpretation and assessment of significance for 44 individual group or spatial components in the following categories:

- Primary Structure – 13 entries
- Secondary Structure – 8 entries
- Tertiary structural or functional areas and components – 22 entries
- No. 2 Dock – 1 entry.

The Gazetteer entries provide not only a general description of the structural component or deck area to which it relates, but also provides descriptions of the individual elements of which a principal structural component comprises, or the fixtures and fittings which are located within the specified deck area (see **Figures 3** and **4**). The relative significance of the individual elements, based on their date of origin, function and associational value, is also provided. The Gazetteer data sheets are illustrated with a general view of the component or deck area, and photographs of the individual elements.

Part 2 of the CMP sets out the heritage values inherent in different aspects of the ship and its setting, and how these translate into an overall Statement of Significance. A discussion of the method of assessment utilised is presented in the Introduction to Part 2 of the CMP (see below, **Part 2 Statement of Significance**).

Guidance on the preparation of Conservation Management Plans, including that published by the Heritage Lottery Fund for applicants for HLF funding, generally provides for separate chapters in Part 3 of the CMP dealing with 'Issues and Vulnerabilities' and 'Conservation Policies'. However, our previous experience in the preparation of these documents has demonstrated that a more effective and 'user-friendly' document can be achieved if these two sections are combined and the 'issues' and 'policies' prepared to address them, are presented together under a series of 'themes'.

The final part of the CMP comprises a brief outline of the means by which the policies of the CMP should be implemented in relation to works of repair, refurbishment and maintenance over the 10-year period following completion of the CMP.

Methodology

In accordance with the *Tender Proposal Document*, the work in the preparation of the CMP was undertaken in five key stages; the first four of which correlate roughly with the four parts of the CMP, and which each culminate in the output of one part of the CMP.

Stage 1

Due to the wealth of secondary sources relating to the ship, which had themselves utilised primary documentary sources in their compilation (see above), no further primary documentary research was undertaken in the preparation of Part 1 of the CMP. While this is the case, it may become apparent through the course of the implementation of the CMP that areas of primary research may be beneficial to augment our understanding of areas or elements within the Asset.

A programme of detailed visual archaeological analysis of the ship's structure was undertaken in August 2013, and built upon the evidence base recorded for the earlier timber mark survey and analysis (Wessex Archaeology 2014). A detailed photographic record was made to support the analysis, and to illustrate the CMP. The first hand evidence recorded on site was combined with the collated

Plate 2. Rigging on the lower mast

documentary evidence (particularly the Progress Reports) detailed above, to provide both a comprehensive interpretation of the chronological development of the fabric and layout of the ship, and a detailed record of the ship and its setting as they currently exist (**Plate 2**).

The detailed representations of the fabric of the ship, provided by the two-dimensional plans and profiles produced from the laser scan were colour-coded to present a clear schematic and overview of our general understanding of the phase of origin of the fabric, and to make this understanding most readily accessible to users of the CMP following implementation.

Stage 2

The stage 2 work was wholly desk-based. Whilst it is acknowledged that there are a number of eminent specialists with a considerable knowledge of HMS *Victory*, and other important historic ships, the first draft of the Assessment of Significance was undertaken without the benefit of detailed consultation, in order to 'bring a fresh pair of eyes' to the assessment, with the hope of providing an independent and objective result. This draft was then issued for both peer review and formal consultation, the feedback from which informed subsequent versions of this document.

Stage 3

This stage comprised a consultation exercise carried out both through face-to-face meeting and by telephone and email and the collation of the results into the draft **Part 3 Issues and Policies** (see below). This was done by integrating the results into the list of 'Themes' to help contribute to the requisite discussion therein. The Issues and Policies section was then drafted and issued for both peer review and formal consultation.

2 HMS *VICTORY* TIMELINE

Introduction

This section provides a succinct narrative outlining the key phases of *Victory's* history and the pertinent aspects of that history that help to establish the basis upon which the vessel's heritage significance is assessed (see **Part 2 Statement of Significance**). The narrative aims to summarise the most pertinent detailed information established in the timeline; the key to which is presented in **Figure 2**, and in full in **Appendix 1**.

The history of the ship comprises five main phases:

Phase 1 Construction and pre-service 1759–1777
Phase 2 Service Career 1778–1812;
Phase 3 Service Afloat 1812–1921;
Phase 4a Reconstruction 1922–1965; and
Phase 4b Reconstruction 1966–2013

The timeline incorporates three key elements relating to the major themes of *Victory's* history as highlighted above. These themes include History and Use, Construction and Fabric History, and Technical Development relating specifically to *Victory*. The key timeline is presented in **Figure 2** and highlights the full phasing and key aspects. All technical terms given below in the following text are explained in the Volume 2 **Glossary**.

Phase 1 – Construction and Pre-service 1759–1777

HMS *Victory* was built as a consequence of the naval demands during the Seven Years' War (1756–1763) and was designed by the Surveyor to the Navy Board, Sir Thomas Slade. *Victory* was regarded as his 'masterpiece' and differed from the standard dimensions for ship components set out in the 1745 Establishment with an additional 8 feet in length and 11 inches in breadth, giving room for an additional pair of 42 pounder cannon on the lower gundeck (Winfield 2010).

While HMS *Victory* may not have been considered to be an iconic vessel at the time of conception, the ship did possess design characteristics introduced by Sir Thomas Slade which set it apart from contemporary vessels; primarily in the dimensions and sleeker form which were based on captured French vessels. Perhaps the only distinguishing aspect was the *Victory's* exceptional sailing qualities (perhaps key to *Victory's* long service) noted by many Admirals who raised their flag on *Victory* during the ship's service career. Political intervention was however to play a part in sowing the seeds for greatness through the very circumstances of the naming of the ship following the 'year of victories' in 1759. Some secondary sources suggest that the Prime Minister at the time, William Pitt, ordered the ship to be named *Victory* and attended both the keel laying ceremony and the launch in 1765 (Winfield 2010). Although the reliability of this claim cannot be substantiated with clear evidence at present it never the less alludes to the potential significance of *Victory* at conception. HMS *Victory* was immediately placed in ordinary (or reserve) following launch, as a result of the cessation of hostilities following the end of the Seven Years' War (**Plate 3**).

While visually, the general form of *Victory* is consistent with an 18th-century appearance, key fabric history relating to this phase, with the possible exception of a few elements (see Gazetteer), is not evident in the current fabric, the majority of which represents repair episodes dating from the early 19th century. A further evidential consideration is that key elements of the extant fabric are not consistent with 18th century building and repair techniques or the materials used; a direct result of the decision to restore *Victory* to its 1805 appearance and the deployment of techniques and materials used in the course of the ensuing repairs, particularly during Phase 4b.

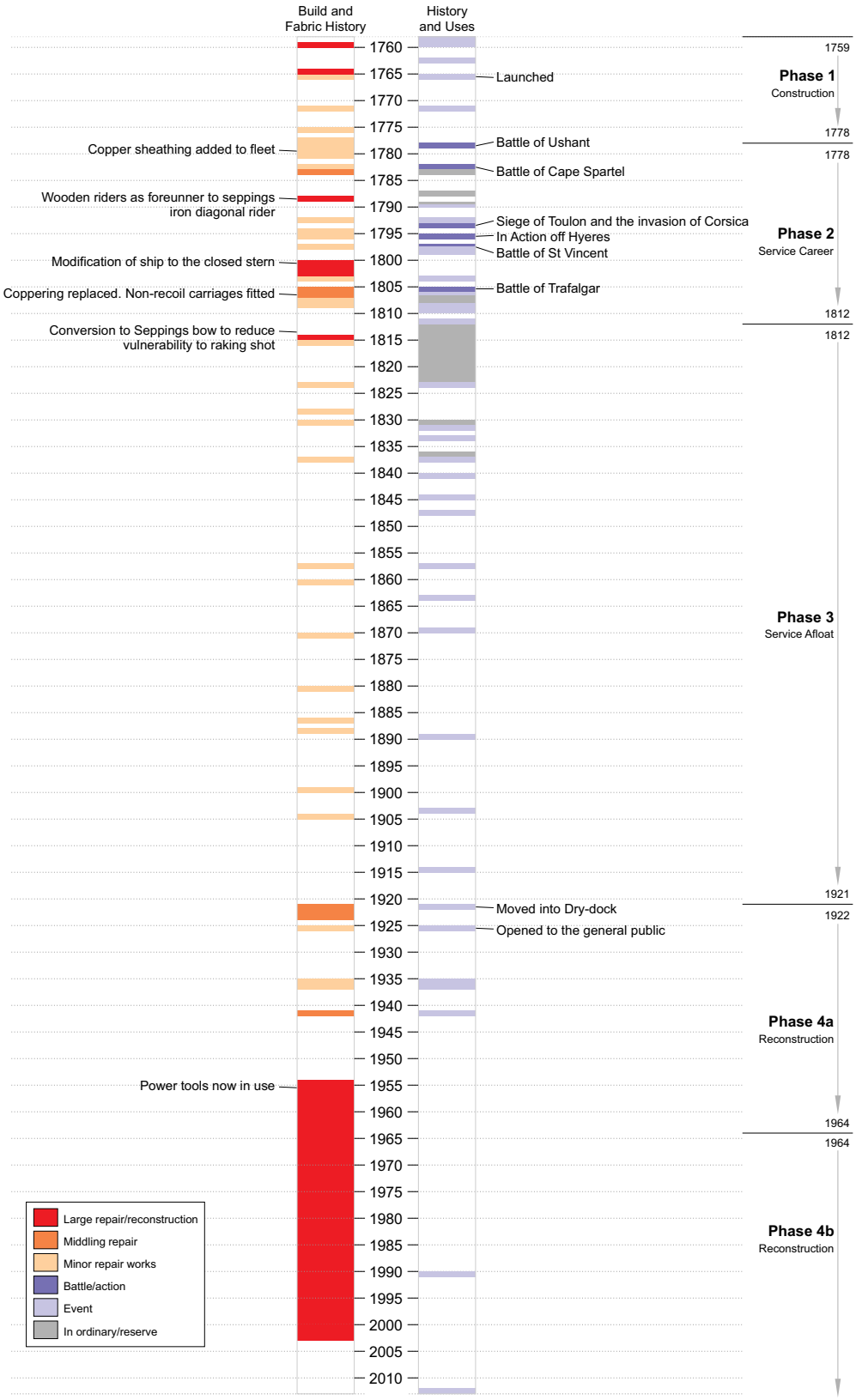


Figure 2. Key to the HMS *Victory* timeline

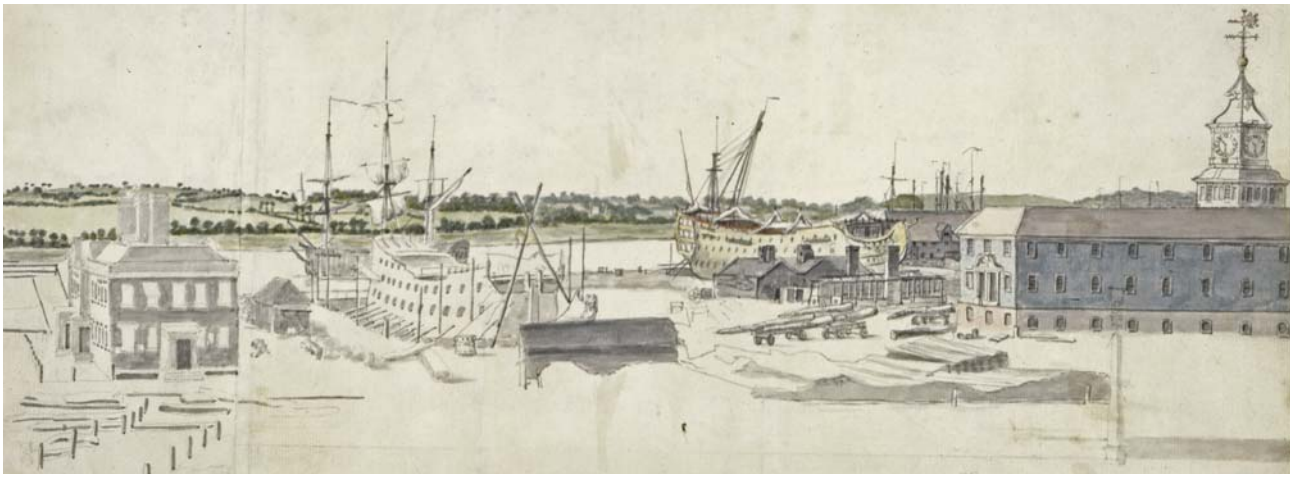


Plate 3. Watercolour of two vessels in dock at Chatham Dockyard around the middle of the 18th century. The vessel on the right is purported to be Victory under construction in No. 2 Dock the evidence for which has been deduced from cross-referencing this image with the historic dockyard plans and observations made during visits to Chatham in 2014 (British Museum).

In terms of construction the *Victory* followed the established techniques of the period and other than the variations in design dimensions, did not possess any demonstrable principal technical developments.

Phase 2 – Service Career 1778–1812

HMS *Victory* enjoyed a long service career with repeated periods of deployment to several theatres during a period of almost constant conflict with France and Spain in the latter half of the 18th and early 19th centuries (**Plate 4**). During this deployment *Victory* was involved in a number of actions and engagements under a number of key naval figures, such as Admirals Keppel, Howe, Hood and Jervis. Consequently this phase represents a key period of the history of *Victory* that culminated in iconic status following the Battle of Trafalgar and the association with Admiral Lord Nelson. Interspersed with the deployment of *Victory* were numerous periods in ordinary (or reserve) either on the River Medway or in Portsmouth Harbour (four in total); and several episodes of refit and repair, either through general maintenance or as a result of battle damage. In total there were 11 episodes of minor repairs or refits, two medium or middling repairs, and two large repairs – a not insignificant repair and refit record. Naturally, all these repairs and refits resulted in the continuous modification of the hull fabric, fastenings and fittings, and machinery, thus reducing the evidence for current surviving fabric in the ship from this phase. Pictorial evidence allows an insight into the nature of *Victory* during this phase, a result of key interest by prominent artists such as J. M. W. Turner and J. Constable, the former producing a priceless watercolour of the quarterdeck of *Victory* while at Chatham, probably prior to repairs carried out at the dockyard in 1806 (**Plate 5**).

Significantly, the *Victory's* association with Chatham (and later at Portsmouth) is an important one. Both dockyard communities built and maintained the ship at various periods of its service career; the latter association is not only evident in the current location in No. 2 dock at Portsmouth but also survives archaeologically with the suite of *in situ* timber marks which provide tangible links with the dockyard workforce. *Victory* continued sea service into the early 19th century and was re-deployed for a number of roles following Trafalgar, including service in the Baltic under Rear Admiral Saumarez. *Victory's* seagoing career ended in 1812 when the ship entered Portsmouth Harbour for the last time and was paid off and placed in ordinary.

This phase represents an interesting period in relation to *Victory's* fabric history as it is apparent from the paint analysis and dendrochronological study carried out in 2013 that some extant fabric still survives. While this evidence is limited *in situ*, there is the potential for fabric dating to this phase in the *ex situ* arisings taken during reconstruction and subject to archaeological investigation in 1998

Plate 4. *Victory* when first commissioned

(Atkinson 2007). One of the key evidential artefacts from this period is the *Victory* fore-topsail from Trafalgar which although not considered within this CMP still warrants a mention, particularly given the historic significance and extreme rarity of the artefact.

Key technical developments during this phase included the coppering of the fleet from the 1770s (*Victory* was coppered in 1779) (Bugler 1966); the introduction of the closed stern during the 1800–1803 large repair; the use of iron such as Roberts knees and use of chocks (as a result of timber shortages); and the introduction of innovations of Robert Seppings (Master Shipwright at Chatham and later Surveyor of the Navy) in the early 19th century (Goodwin 1987).

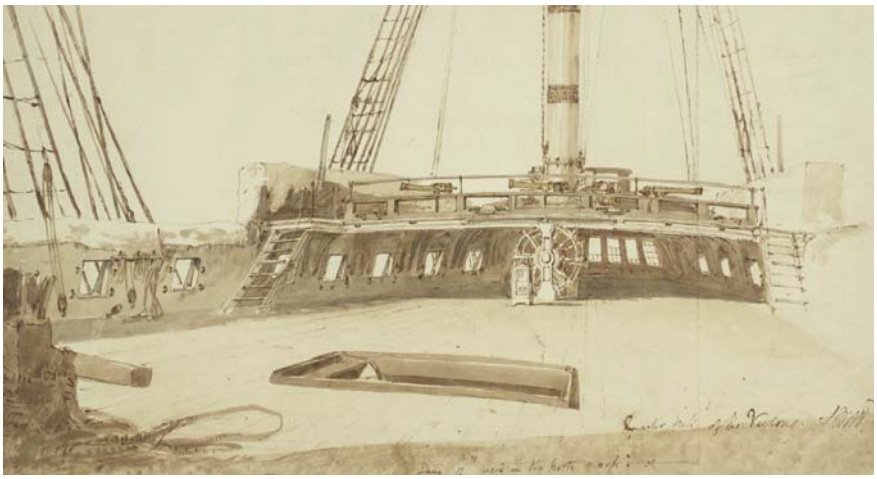


Plate 5. Watercolour by J. W. M. Turner of the quarterdeck of *Victory*. The image is likely to date to December 1805 when Victory was awaiting de-rigging prior to repairs at Chatham Dockyard. The rope wolding (put in place after Trafalgar) on the mizzen mast and damage to the fore brace bitts also help date the image

Phase 3 – Career Afloat 1812–1921

This phase introduces a marked period of change in the history of *Victory's* service life. The principal change of *Victory's* role was from one of sea service to harbour service and despite some ambiguity in the historical sources regarding the future of *Victory*, secondary sources state that *Victory* was to be 'paid off' following an Admiralty order in 1812. The decision was made to take *Victory* into No. 3 Dock for repairs which developed into a large repair carried out between 1814 and 1816

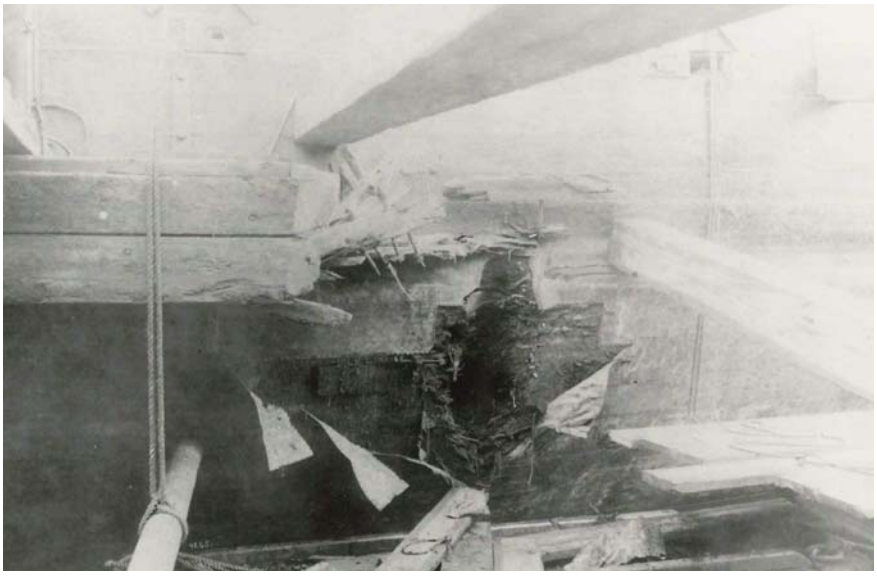


Plate 6. An image of *Victory* in dock showing the damage sustained to the hull following the ramming by HMS *Neptune* in 1903

(Bugler 1966, 32). Following this repair *Victory* was ordered to be 'housed over' which was completed by 1820 when it was placed in ordinary. In 1823 *Victory* began harbour service and was fitted as a guard-ship. From this point forward, with the exception of a short time in ordinary in 1836, *Victory* served a number of purposes; as Port Admiral's Flagship, residence of the Captain of the Ordinary, as flagship of the Admiral Superintendent, and as a training ship and visitor attraction (McGowan 1999).

What is clear is that *Victory* remained in service, quite possibly as a result of national sentimental motive, indicated in an article in the *Hampshire Telegraph* dated July 26 1830 which highlights the public concern over plans to reduce *Victory* to a Second Rate. This perhaps highlights the increasing presence of *Victory* in the public consciousness and begins the real shift from *Victory's* status as 'just another' First Rate warship, to a national icon and tangible memorial to Nelson and Trafalgar. This status was further augmented through key associations with important historic figures, including royalty, in particular the visits of Queen Victoria to the ship in 1833 and 1844 (McGowan 1999).

In addition to the functional aspects of *Victory* during this period of service, the ship retained its continued status as a memorial to Nelson. This association was comprehensively illustrated by:

- The plaque marking where Nelson fell on the quarterdeck;
- The memorial in the cockpit on the orlop deck where Nelson died;
- The famous signal to the fleet at Trafalgar, memorialised in the motif placed above the ship's wheel on the quarterdeck; and
- The location of Nelson's funeral barge situated under the poopdeck.

The unfortunate accidental ramming of *Victory* in 1903 by HMS *Neptune* necessitated urgent repairs, and it was during this episode that attempts were made to reconfigure the area of the cockpit on the orlop deck (where the principal damage was sustained during the ramming) where Nelson spent his last moments (**Plate 6**). This marks the beginning of a conscious effort to symbolise this event in restoring elements of the ship fabric to the perceived configuration of that at Trafalgar.

Phase 3 represents a key phase in the history of the ship's fabric, and most extant historic fabric from this period dates to the large repair of 1814–1816; evidence for which is seen in the numerous shipwright's timber marks (Wessex Archaeology 2014).

Phase 3 fabric is noted particularly in the *in situ* deck structures (see **Figure 9**) and other examples of fabric investigated in the *ex situ* arisings recorded in 1998 (Atkinson 2007). As with Phase 2 above, there may be some potential for the survival of evidence of earlier repair episodes, but the percentage is anticipated to be very small, especially in the light of observations during the recent archaeological survey of the ship. While some fabric elements are noted within *Victory* that date to the latter part of this phase (for example the pillar in the bread room bearing the date 1857), on the whole the modifications to the fabric of *Victory* during harbour service were largely removed during the early phase of reconstruction from 1922, and this has resulted in few evidential pointers for these features within the current fabric of the ship (see **Phases 4a** and **4b**, below).

Key technical developments during this phase include the introduction of the Sepping's round bow (introduced during the 1814–1816 large repair) and the introduction of the raised bulwarks which altered the aesthetic appearance of the ship during this phase. It is also during this phase that it is likely that the Roberts knees combined with the use of chocks to support the deck beams were introduced as part of the 1814–1816 large repair; supported by presence of shipwright's timber marks dating to this repair episode (Wessex Archaeology 2014).

Phase 4a – Reconstruction: 1922–1965

This phase represents the beginning of the reconstruction of *Victory* to its conjectured 1805 Trafalgar appearance, and highlights a fascinating episode in the development of early ship conservation (**Plate 7**). In addition to the general aim of restoring the ship to a specific key period, conservation approaches were instigated to retard the ongoing decay of timber fabric and the effects of the degradation of the timber through fungal attack and death watch beetle. These conservation approaches, which were essentially a traditional 'shipwright's' approach, are aptly illustrated through a campaign in the 1930s of the careful use of treatments against fungal and beetle attack of the *in situ* fabric (Bugler 1966).

It is perhaps of no little significance that at this point questions were raised with regard to the scope of removal of 'historic' fabric from the ship, and the potential loss to future (archaeological) study (McGowan 1999). In the course of the 1922–1928 reconstruction the *Victory* Advisory Technical Committee was formed by the Admiralty

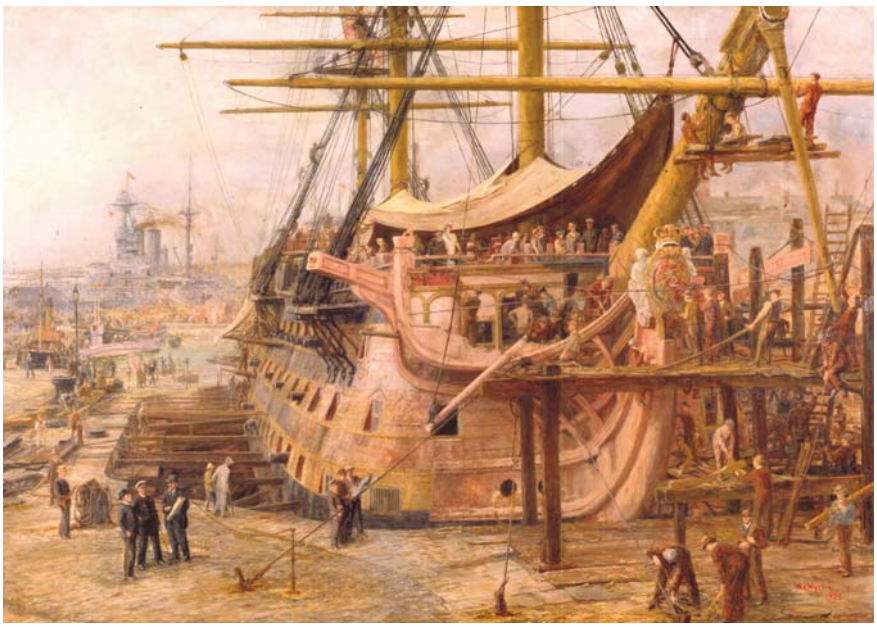


Plate 7. Oil painting by W. L. Wylie (1925) entitled *The Nelson Touch: Restoring HMS* Victory, *1805–1925*

Plate 8. Repairs from 1965 onwards resulted in the replacing of oak frames with teak and the use of laminated iroko planking

in conjunction with the Society for Nautical Research (SNR) to offer advice and opinions on technical questions and matters of accuracy relating to the ongoing research and reconstruction of the ship. Although the *Victory* Technical Committee was disbanded in 1938 the Admiralty established a new *Victory* Technical Advisory Committee in 1955 which remained in place until the transfer of the ownership of *Victory* to the NMRN in 2012.

Further developments during this phase included the decision to remove the on-board Museum and key exhibits from the ship to a shore-based museum in the dockyard, the Victory Gallery, opened in 1936, to ensure that the ship's appearance as a First Rate Warship was not compromised (Bugler 1966).

In the period between 1922 and the mid-1960s the workforce employed on *Victory* comprised a team of traditional shipwrights and craftsmen supplied by the Dockyard. It is also during this period that pneumatic drills and saws were introduced, but significantly, the use of traditional shipwright's tools, such as the adze, was still prevalent, and indeed, the skills to use them. In addition, this phase also sees the transition from the use of traditional materials such as oak, and the increasing use of tropical hardwoods such as teak; a move that was necessitated through the lack of longevity noted in the oak repair fabric inserted in to the ship during the early reconstruction phase.

The early phase of the reconstruction in the 1920s involved the removal of key fabric, notably features such as the octagonal skylight on the quarterdeck, the deck house on the poopdeck, the round bow and raised bulwarks, the fire engine pump house on the forecastle (and the forecastle accommodation) and a large percentage of the internal bulkheads and partitions associated with the ship's roles whilst in harbour service – the bulkheads in the aft hold were removed in the last few years. The internal layout as witnessed today forms the basis of the re-instatement of the Trafalgar configuration; particularly the spaces in the stern quarters of the quarterdeck, upper gundeck and middle gundeck; and the magazines, stores and cabins on the orlop deck (see **Figures 11** and **12**). Following an extensive structural survey of the condition of the ship fabric in the early 1950s (Bugler 1966), the repair of the hull began in earnest, the details of which are highlighted in the timeline in **Appendix 1**.

Phase 4b – Reconstruction: 1966–2013

As with Phase 4a, the key aspects of this final phase relates to the continued reconstruction and repair of *Victory*, which has resulted in the extensive introduction of new fabric into the ship (see **Appendix 1**). With regard to the manpower employed in the repairs, as with Phase 4a, the teams were small by comparison with the extensive labour employed during the 18th and 19th centuries. The nature of the work required that small areas of the hull were worked on at any one time, to ensure structural integrity of the ship as a whole as works progressed. This fact, and the small size of the teams, resulted in adaptations to the working practices employed in the repairs which resulted in small lengths or areas of fabric, such as the elements of hull frames or futtocks being replaced at any one time (McGowan 1999). While it was essential to maintain the integrity and form of the hull, this did have a negative effect on the authenticity of the structural components being replaced (particularly in the scantlings or dimensions of the replacement parts), as illustrative of 18th- and 19th-century shipbuilding practices; and also resulted in the widespread loss of potentially significant historic fabric, a concern alluded to in the 1920s.

It is also during this phase that we witness the introduction of adapted techniques with the fabrication of components using laminates, and the use of adhesives; including the use of iroko hardwood for the first time in the 1980s (McGowan 1999). The timeline (see **Appendix 1**) outlines the detail of the repairs during this period and illustrates quite clearly the extent of new fabric introduced into the ship (see **Figures 4–9**) during this phase (**Plate 8**).

Since March 2012, the custodianship of HMS *Victory* has been transferred from the Ministry of Defence to the HMS *Victory* Preservation Company (HMSVPCo), a charitable trust established as part of the National Museum of the Royal Navy. The ship now forms part of a dual role as a key visitor attraction within the historic dockyard, receiving in excess of 350,000 visitors per annum (**Plate 9**); and a commissioned naval warship and flagship to the First Sea Lord, providing a focus for high status ceremonial and diplomatic functions.

Plate 9. Visitors queuing at the dock side awaiting access to the ship in August 2013

3 DESCRIPTION AND CONDITION OF SURVIVAL

A detailed description of HMS *Victory*, in terms of its primary and secondary structure; its deck areas and sub-areas (**Figure 3**); its tertiary structural and functional components (**Figure 4**), and its setting within No. 2 dock and the historic dockyard is provided in the Gazetteer. The following section therefore provides only a summary of the detailed description presented there, and attempts to synthesise the comprehensive evidence into a succinct narrative, which draws attention to the factors of primary relevance to the CMP. For a description of the shipbuilding process in the Royal Dockyards in the 18th century see **Appendix 3** in Volume 2 of this CMP.

Survey Reports

A number of specialist surveys have been undertaken whose results will inform the future conservation of the ship (see also **Key Sources**, above) . Three reports are summarised where relevant within *The Setting of HMS* Victory, *No. 2 Dock* and *HMS* Victory: *Overall Stability* (below) in relation to the stability and condition of the ship fabric, and that of No. 2 Dock. The reports include:

- *Modelling and Structural Analysis of HMS* Victory (Fenton Holloway Ltd 2014) (**Plate 10b**). The report contains three key elements – Part A and B: stability; Part C: repair priorities; and Part D: support options
- *Internal Shipwright Survey of HMS* Victory (Nielsen & Co. 2012). The survey provided a detailed condition survey of the fabric of Victory
- *Technical Structural Appraisal of 2 Dock NBM013 at HM Naval Base Portsmouth* (BAE Systems Maritime Services Estates 2013). The report outlines the condition of No. 2 Dock.

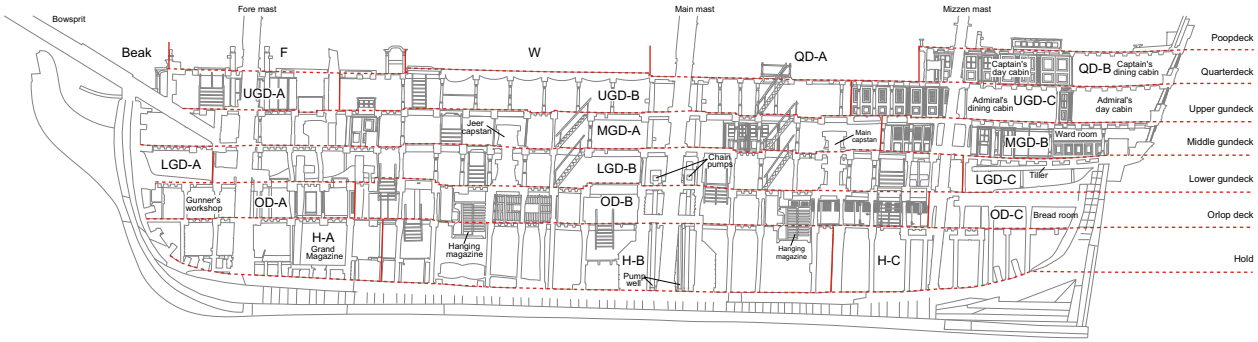


Figure 3. Deck areas and sub-areas

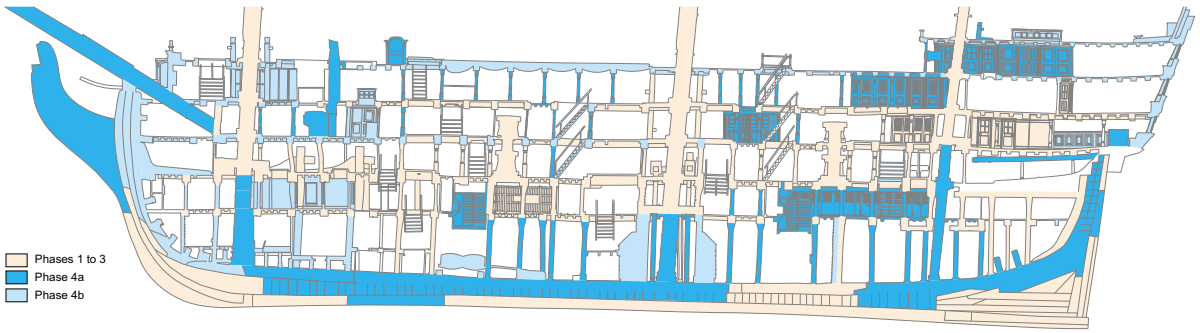


Figure 4. Tertiary and functional components

Plate 10. a) Paint layers; b) laser scan modelling of the hull; c) timber sample being taken for dendrochronological analysis

In addition to the reports highlighted above, three further specialist surveys were undertaken and reported upon. These include:

- *Paint analysis report* (Crick-Smith 2014). The report outlines the results of the analysis of paint layers (**Plate 10a**) on a selection of fabric components located on the lower gundeck and the orlop

- *HMS* Victory: *A survey of the shipwright's timber marks* (Wessex Archaeology 2014) The report outlines the survey, analysis and interpretation of shipwright's timber marks located on the *in situ* and *ex situ* fabric components of *Victory*

- *Tree-ring analysis of selected timbers from HMS Victory* (Nayling 2014).The dendrochronological analysis of a few selected timbers were undertaken to help inform the date or period to which key fabric elements relate (**Plate 10c**).

The results of the three survey reports outlined above have also been incorporated where relevant within the **Appendix 2 Gazetteer**. In addition the CMP endeavours to utilise the results of these surveys and incorporate the key detail into the relevant aspects as the CMP process progresses.

The Setting of HMS *Victory*

HMS *Victory* is maintained in a setting comprising dockyard structures and buildings dating to the 18th and early 19th century (**Plate 11**); when the British royal dockyards were the largest industrial complexes in the world. The Historic Dockyard at Portsmouth is now one of the best preserved of its type and period in an international context.

The setting of the ship is far more, however, than an aesthetically pleasing visual backdrop. The buildings are large, and mostly long and narrow with regular fenestration and carefully organised internal layouts, and represent the rational architectural solution to the scale and complexity of supporting the fleet in the late 18th-century redevelopment of the dockyard. Together with the docks themselves, they represent the built requirements for building, repairing and fitting out naval vessels over a period more or less parallel to HMS *Victory*'s construction and fighting

Plate 11. *Victory* in dock in Portsmouth Historic Dockyard

career. The historic dockyard is not 'heritage set apart' but, as a portion of the active Portsmouth Naval Base, its historic buildings, structures and ships are seen in the context of modern naval vessels coming and going, and naval traffic and pedestrians passing into areas that are still in operational use.

Aligned NNW–SSE HMS *Victory* backs onto the large stretch of water in No. 1 Basin (**Plate 12**). It faces a handsome range of Georgian buildings that demonstrate the pride dockyard officers felt for their surroundings. The western half of the range, distinguished by its prominent timber porches, was constructed between 1786 and 1789 as the main dockyard offices, overlooking the heart of the yard (**Plate 13b**). The eastern half of the range was begun in 1789 as a separate storehouse (Coad 2013). In order to maintain the architectural balance and with it the dignity of the centre of their dockyard, the officers insisted that it matched their new offices in size and external appearance rather than the larger storehouses to the south. As demands grew for more office space some half a century later, it was a simple matter to link the two buildings with the handsome archway block and to name the whole complex the South Office Block. To the south-west of *Victory* is a row of late 18th-century storehouses lining the wide roadway through the dockyard from the entrance at Victory Gate. Storehouses No. 10 and No. 11 were built in 1763 and 1782 respectively, and are now used as the Royal Naval Museum gallery, offices and library (**Plate 13c**). Storehouse No. 9, was built by the same contractors in 1782, and is now used for storage. All are Grade 1 listed buildings. The Victory Gallery of the NMRN, aligned with storehouse No. 11 is a sober, detached chapel-like building opened in 1936.

Plate 12. No. 1 Basin as viewed from the dock entrance at the stern of *Victory*

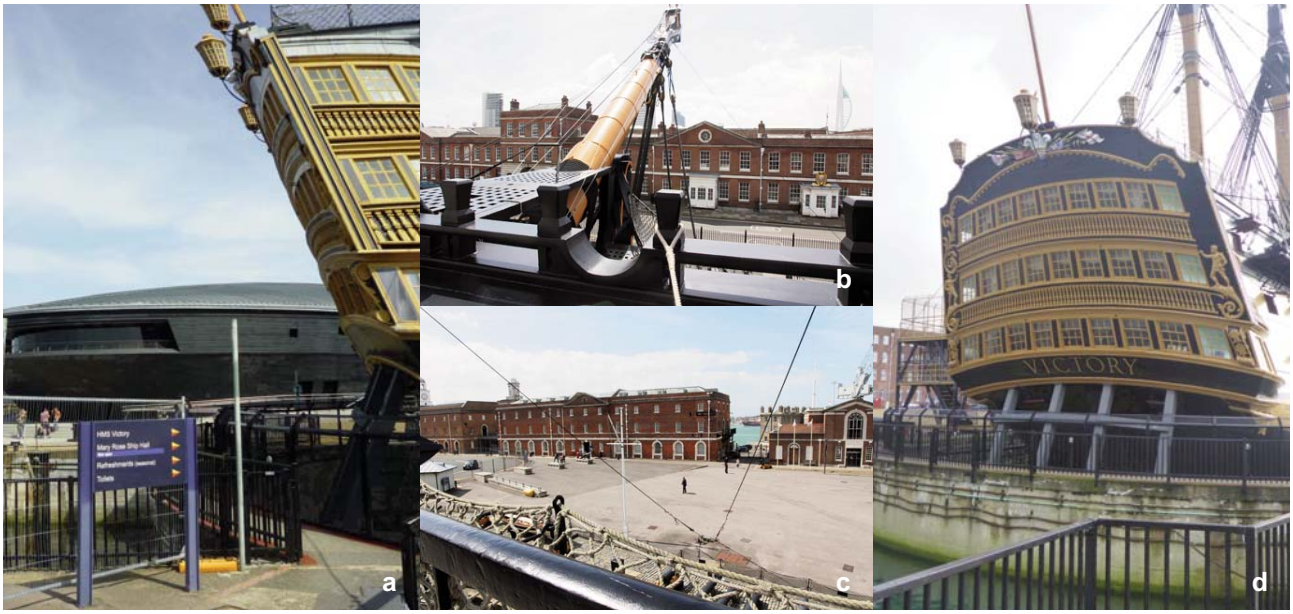


Plate 13. a) *Mary Rose* Museum; b) South Office Block and the starboard bow of *Victory*; c) Storehouse 10 & 11, and the *Victory* Gallery viewed from the quarterdeck of *Victory* (from left to right); d) dock gate walkway and *Victory*'s stern

Beyond the boundary of the historic dockyard, but highly visible from HMS *Victory* and to the north-east are No. 24 store, built in 1783 with later alterations, listed Grade 2 and No. 33 store, 1782, both part of a planned group intended to rationalise dockyard workshop activities. Visible across No. 1 Basin but also outside the historic dockyard boundary is Brunel's Block Mill, purpose built for Marc Brunel's innovatory block-making machinery, designed in 1801–1806, and a key early example of the factory principle applied to ship-building. This building is scheduled and listed Grade I.

Good views of the whole of the starboard side of the ship can be had from the open area between HMS *Victory* and the Victory Gallery where the ship is entered. The large open area to the north-east allows long views of the port side across an open space, used for gathering. This was re-landscaped by Camlin Lonsdale following the construction in 2013 of the new Mary Rose museum by Wilkinson Eyre Architects (**Plate 13a**). The sleek black museum, close to HMS *Victory*, has added a bold contemporary note to the historic dockyard, steering it away from a 'film-set' character. The landscaping of the open area is bonded gravel, contrasting with the robust granite setts used immediately around *Victory*, providing a display area, comprising the ship's boats and canon. HMS *Victory's* remarkable stern with its ribbons of small-pane windows can be seen in close-up from the route across the dock gate walkway that divides No. 2 dock from No. 1 Basin (**Plate 13d**). Views of the prow are short, constrained by the railed boundary between the operational and historic parts of the dockyard.

No. 2 Dock

No. 2 Dock is one of a group of docks off the 'Great Basin' or wet dock, now No. 1 Basin (see **Figure 1**). This was originally designed by Edmund Dummer, Surveyor to the Navy Board, as part of the dockyard expansion of the late 17th century. It is much altered: enlarged and then reduced in the 18th and 19th centuries, but still retains some Dummer fabric. Furthermore, *Victory's* association with other elements of the dock complex help accentuate the impact of the ship's setting; according to Bugler (1966, 32) the ship was located in the adjacent No. 3 Dock (where the Mary Rose museum is now located) during the large repair of 1814–1816, an episode for which there is a large percentage of evidential fabric extant in the ship and a clear and tangible association with the Portsmouth dockyard community – one that continues to the present.

Plate 14. Views of No. 2 Dock structure illustrating the scale of the monument and impressive construction detail

No. 2 Dock (**Plate 14**) was completed in 1805 and with the exception of the modern concrete caisson replacing the timber dock gates, and some later concrete steps and repairs, appears to comprise a great deal of the original fabric. However, where the original fabric has failed, the quality of the repairs varies considerably, from replacement granite blocks, to extensive areas of cement repair, particularly in the area of the 1941 bomb damage.

The *Technical Structural Appraisal of 2 Dock* (BAE Systems Maritime Services Estates 2013) suggested that the Dock was generally in a fair condition, though it is apparent that there are problems with water ingress which will inevitably take its toll on the granite block structure of the dock if left un-resolved. Careful consideration will need to take account of how the monument is used and maintained in the future (discussed further in **Part 3 Issues and Policies**).

HMS *Victory*: Overall Stability

The overall stability of the hull of *Victory* was assessed and analysed by Fenton Holloway Ltd (see **Survey Reports**, above) to guide and inform the optimum approach to the long term stability of the ship; establish repair priorities, and identify appropriate methods of supporting the ship in the dock. The findings for the overall stability of the ship are summarised below.

The results of the modelling and structural analysis have been somewhat surprising given general concerns raised about areas of the ship structure that have clearly demonstrated loss of integrity in recent years. Despite this, the overall conclusion presented suggests that the ship in its present condition is structurally stable, and capable of resisting all foreseeable short and medium term loading. It was still suggested that only minor repairs and strengthening would be required in the short term. The main concern was the long term deflection of the hull under moderate stresses. The key findings highlighted that:

- There is deflection of the hull between the supporting cradles in the dock. This is causing moderate stressing for the planking between the cradles which has caused non-uniform loading in the internal structure of the ship. This indicates a cumulative and continuing settlement causing non-uniform loading in the internal structure which produced large displacements in unrelated areas of the ship

- The external hull planking above the waterline contributes significantly to the longitudinal stiffness of the hull. The continued deterioration and diminished longitudinal strength of the planking is exacerbating the deflection of the planking between the cradles and consequential displacements elsewhere. The analysis does show however that the reduced stiffness in the hull is capable of carrying the predicted loading
- Temporary removal of sections of planking during repair can accelerate deflection and therefore modelling of potential effects should be undertaken before any proposed remedial works
- The deflection of the hull between the cradles (and the general integrity and stability of the hull as a whole) can be arrested with the introduction of a suitable propping system. The report suggests a double support line of props and the removal of the current cradles.

The further consideration of the results of the analysis will be discussed later in the CMP in connection with the conservation **Issues and Policies** in Part 3 and the ensuing **Outline Action Plan** in Part 4.

HMS *Victory*: Primary Structure

While the ship's hull has maintained its 18th-century form and appearance, there are clearly several phases of fabric extant within the structure that preserve historic and archaeological evidence of differing levels of importance (see **Figures 4–9**). The keel assemblage (Gazetteer number 1.01) (**Plate 15a**), and elements of the longitudinal bow (1.03) (**Plate 15b**) and stern structure (1.02) represent considerable and even exceptional examples in this regard, as some of the oldest fabric in the ship. Indeed, it is evident that there may well be 18th- and early 19th-century fabric still extant in areas of the ship structure that are not currently visible. This also includes the surviving detail inherent on the surfaces of many of the components and the information they can provide in developing the overall understanding of *Victory's* complex life. For example, even minor details observed in the archaeology can give great insights into developments in technology, such as the remains of compounds and application techniques noted on the keel associated with the coppering of the ship from the late 18th century (see **Plate 34**).

Plate 15. a) Detail of the keel structure towards the stern; b) detail of the longitudinal bow structure

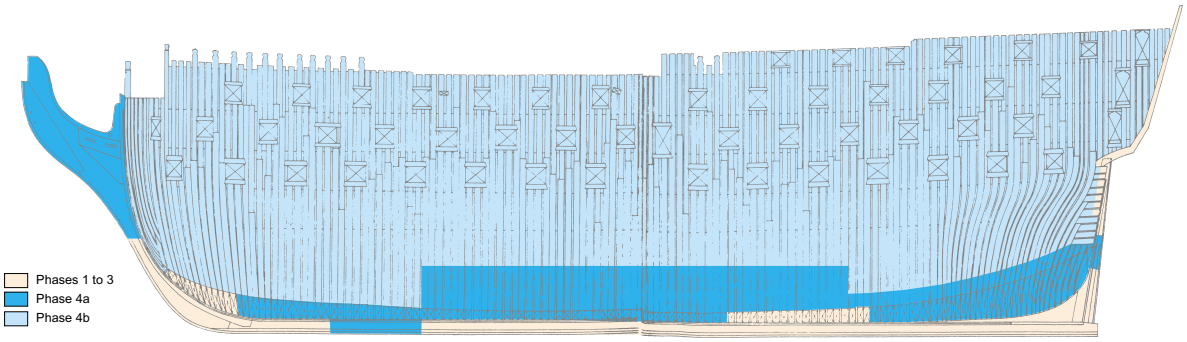


Figure 5. Port frame disposition with phasing

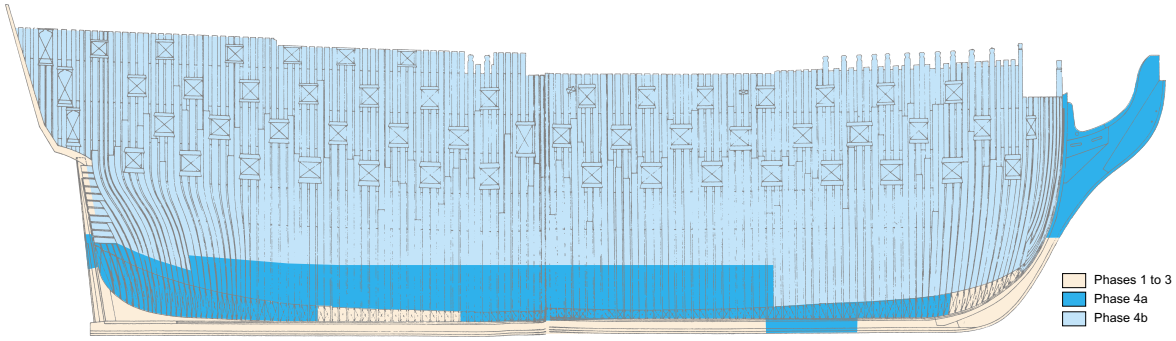


Figure 6. Starboard frame disposition with phasing

In relative contrast however, is the composition of the hull framing and associated structure such as the transom beams (1.04–1.09) which has undergone a significant change since *Victory's* early career in Phase 2, despite the maintenance of the ship's form. The extensive repairs since 1922, and particularly those undertaken from the 1950s to the early 2000s, have left a palimpsest of fabric and materials that demonstrate the development in the use of techniques and materials relating to the extensive history of the repair and reconstruction of the ship (**Figures 5** and **6**).

A common trend noted in the study of many wooden ships, is the relative survival of historic fabric towards the lower parts of a vessel. This is certainly true of *Victory*, particularly evident in the key elements of the hull structure. While the reduced percentage of historic fabric extant within the hull structure is evident, what remains in terms of repair fabric tells us a lot about which repair approaches have worked well, and what can be improved upon through the lessons learnt during the post-1922 reconstruction.

Plate 16. The use of iroko as a teak-substitute in the late 20th century, and the failure to prevent water entering the hull has resulted in extensive areas of rot, as shown in this image of a breast hook and beam end in the upper gundeck structure

The internal planking (1.10) of *Victory's* mid to upper hull is almost exclusively reconstruction and repair fabric dating from the 1970s (**Figures 7** and **8**). It demonstrates quite clearly the introduction of modern fabrication techniques such as lamination; the use of tropical hardwoods (such as teak and iroko) due to the scarcity of oak and its 'failure' to survive for long in enclosed spaces; and the use of modern fastenings and adhesives to join components together. Surviving historic fabric was noted in parts of the hold which may well relate to fabric repairs in Phase 3 while the ship was afloat in Portsmouth Harbour.

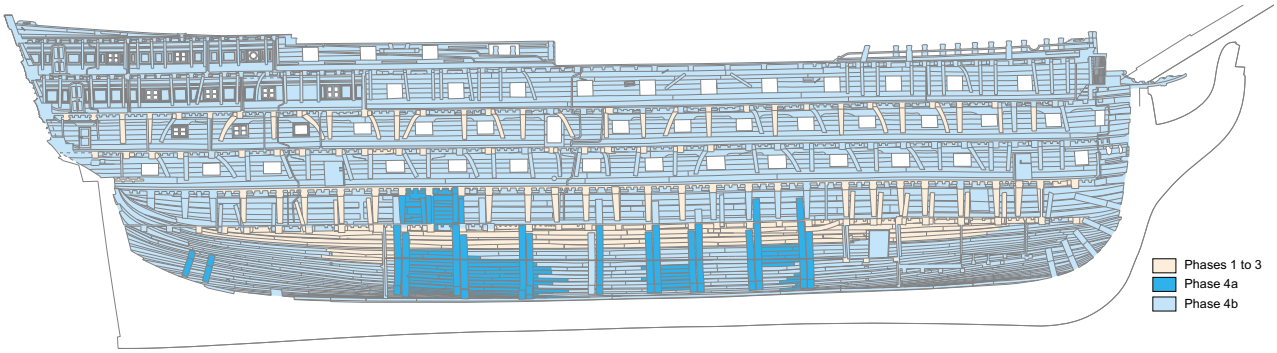


Figure 7. Port internal profile

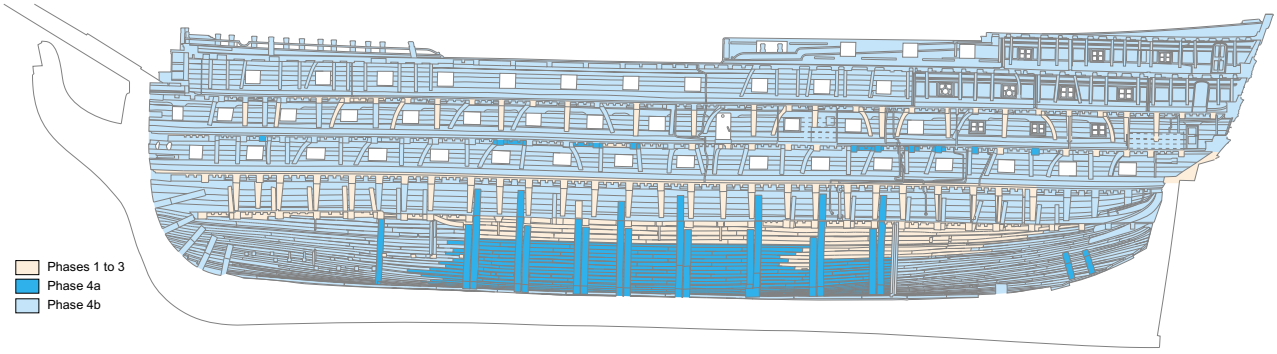


Figure 8. Starboard internal profile

The condition of the inner planking throughout the ship was assessed as part of the *Internal Shipwright Survey of HMS* Victory (Nielsen & Co. 2012). Areas of decay were noted in the timber comprising the inner planking at all deck levels, primarily from the effects of water ingress through the decks and the ship's side. On the upper and middle gundecks the areas identified as containing particular areas of rot are located around the foremast in the bow (**Plate 16**). Since the 2012 survey, the forecastle and quarterdeck have been re-caulked to arrest the ingress of water to the decks below. On the lower gundeck, the areas of decay were noted in the area around the bow, as on the decks above, but also in the area forward of the mizzen and main masts. It was suggested that the decay may well be caused by ingress of water through the ship's sides. The orlop deck observations were different again to those noted above. The port side of the ship revealed some decayed fabric between the main and mizzen masts; while on the starboard side more rotten fabric was noted between the fore and mizzen masts, likely to be as a result of this section of the ship facing the prevailing weather. In the hold the decay of fabric is similar to that noted on the orlop deck but caused more from insect attack rather than water ingress. Shrinkage of the inner planking was also noted throughout.

Plate 17. Riders located in the hold

Allied with the internal planking is the internal stiffening (1.11) of the hull with a number of key structural components. Key examples include the large riders crossing the keelson in the hold (**Plate 17**) and the breasthooks and crutches noted in the bow and stern respectively. All of these large elements relate to the modern repairs in Phase 4a and 4b, with the potential for a small percentage of historic fabric surviving, such as the heads of the riders (**Figures 7** and **8**). It is of note that many of these timbers bear the signs of significant splitting or 'shakes', the result of the use of unseasoned timber and the continued movement of the ship over time, also noted in Nielsen & Co.'s survey report (2012).

Plate 18. External planking along the starboard side

The external planking (1.13) on *Victory* is almost entirely representative of the ongoing repairs since the 1960s; with the exception of a few segments of earlier historic planking noted along the lower hull on the port side (possibly belonging to Phase 3) (**Plate 18**). Similarly to the internal planking, the external hull skin, while maintaining the ship's form and presenting a relatively uniform outward appearance, actually comprises a mixture of fabrication techniques, including the use of laminates, the use of tropical hardwoods and the employment of modern adhesives and fastenings. Observations made during the site visit identified potential planking (noted as replicating the anchor stock technique) dating to Phase 4a located approximately mid-ships on the starboard side below the main wale.

It is perhaps significant that observations made of the condition of the external planking, particular in the upper parts of the ship, that have employed the laminate technique are now seen to be in an advanced stage of decay. The effects of this on the deflection of the lower hull between the cradles has been exacerbated by the reduced structural integrity of these elements and their ability to provide longitudinal stiffening to the ship – as highlighted in the structural analysis report undertaken by Fenton Holloway Ltd.

Plate 19. Evidence of former structures located in the aft hold in the bread room

HMS *Victory*: Secondary Structure

General observations in the secondary structure are similar to those highlighted above for the primary structure where, once again, a mixture of historic and repair fabric was noted.

The decks (2.01–2.06) form one of the key elements of the secondary structure and provides some of the most visually informative evidence for the basic nature of the techniques employed in the construction of an 18th-century capital warship. While the deck structure comprises an 'authentic' configuration, many of the hatches and companionways have either been rendered redundant or re-configured to replicate as far as possible the Trafalgar appearance. In addition, the lower decks also highlight the former position of internal structure that has since been removed; noted as 'ghost' outlines and redundant checks and rebates cut into the timbers. An example was observed on the orlop deck structure above the bread room in the hold which showed the position of rooms and spaces, since removed (**Plate 19**). This is key to helping ascertain the layout of particular areas of the ship during particular phases as evidenced in the archaeology.

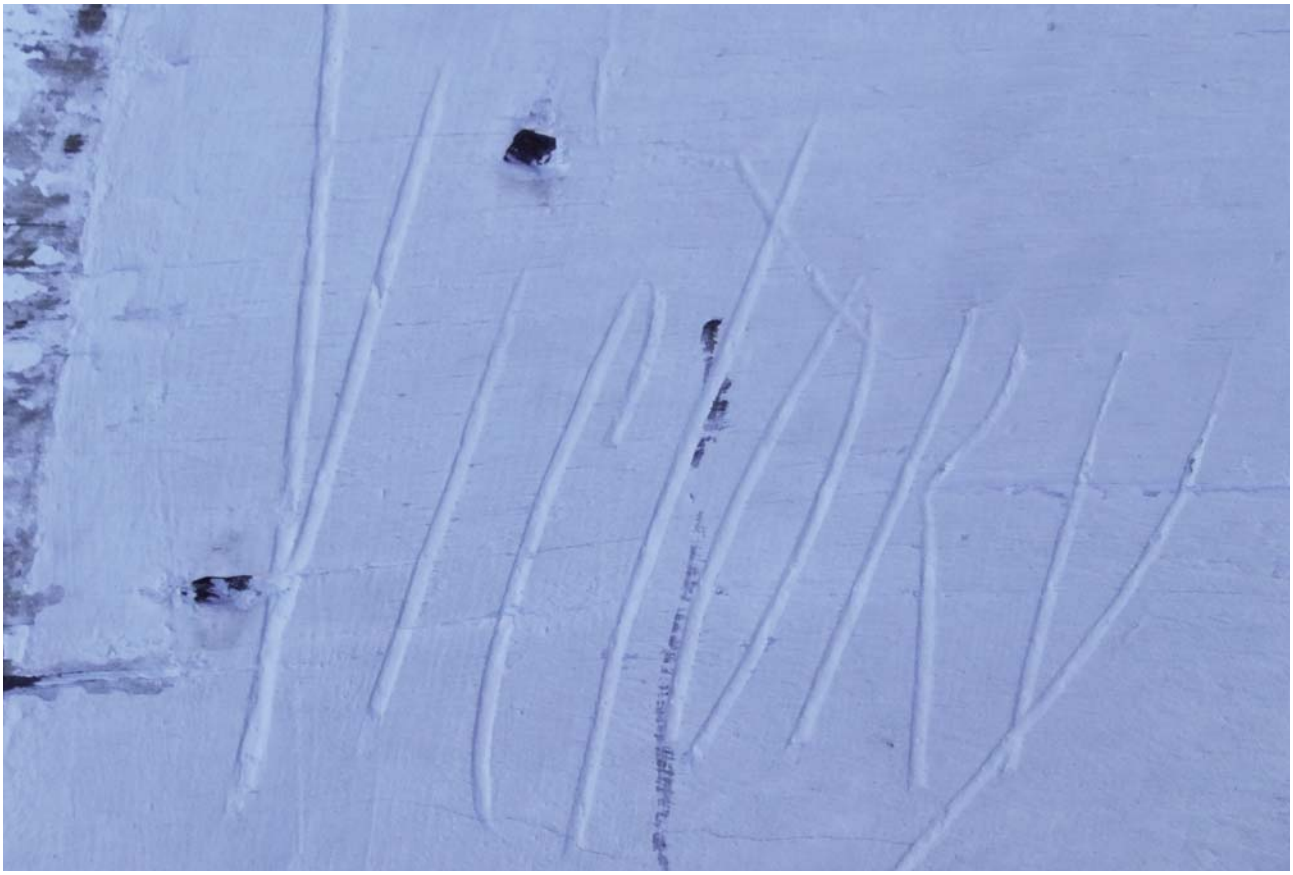


Plate 20. Detail of timber marks

Plate 21. Phase 2 historic fabric illustrating a compound deck beam from the lower gundeck with a straight or 'snaped' scarph

What is also clear is the continued trend for the more historic fabric to be present on the lower decks, and of importance, the archaeological detail inherent both in the composite construction but also the surface details present on many of the elements (**Figure 9**). A key example is the presence of shipwright's timber marks (**Plate 20**) on a large percentage of the timbers of the lower decks which give a tantalising insight into the dockyard working practices and timber management of the Royal Dockyards in general and Portsmouth in particular (**Figure 10**). In understanding the timber marks it is possible to understand the nature of the earlier repair history of the ship and how that translates into later discussions on significance and the conservation thereof.

The contrast between the lighter structures of the upper decks, such as the poopdeck, with the much larger scantlings of the lower decks, such as the lower gundeck, illustrates the structural requirements of the decks and the primary role in which they serve – primarily to bear the weight of guns and provide structural integrity to the ship. The detail in the fabrication of the deck components is consistent with the techniques of the 18th and 19th centuries, the main differences being the modern techniques used in the case of the repair fabric, for example the use of laminated fabrication, and the use of non-traditional materials such as tropical hardwoods. It is also interesting to observe the nature of the way in which the compound elements of the deck beams, for example, are joined together. It is evident that all the principal scarph joints are simple straight scarphs, not consistent with the snaped, or tabled scarphs employed on ships for sea service (**Plate 21**). The major repair of 1814–1816 resulted in the historic deck structures extant in the ship today; and gives potential insight into the decision to employ *Victory* in harbour service during Phase 3. An alternative explanation for the use of straight scarphs may be evidence for the early 19th-century developments in the methods used to join elements of compound beams. Observations on the 46 gun frigate HMS *Unicorn*

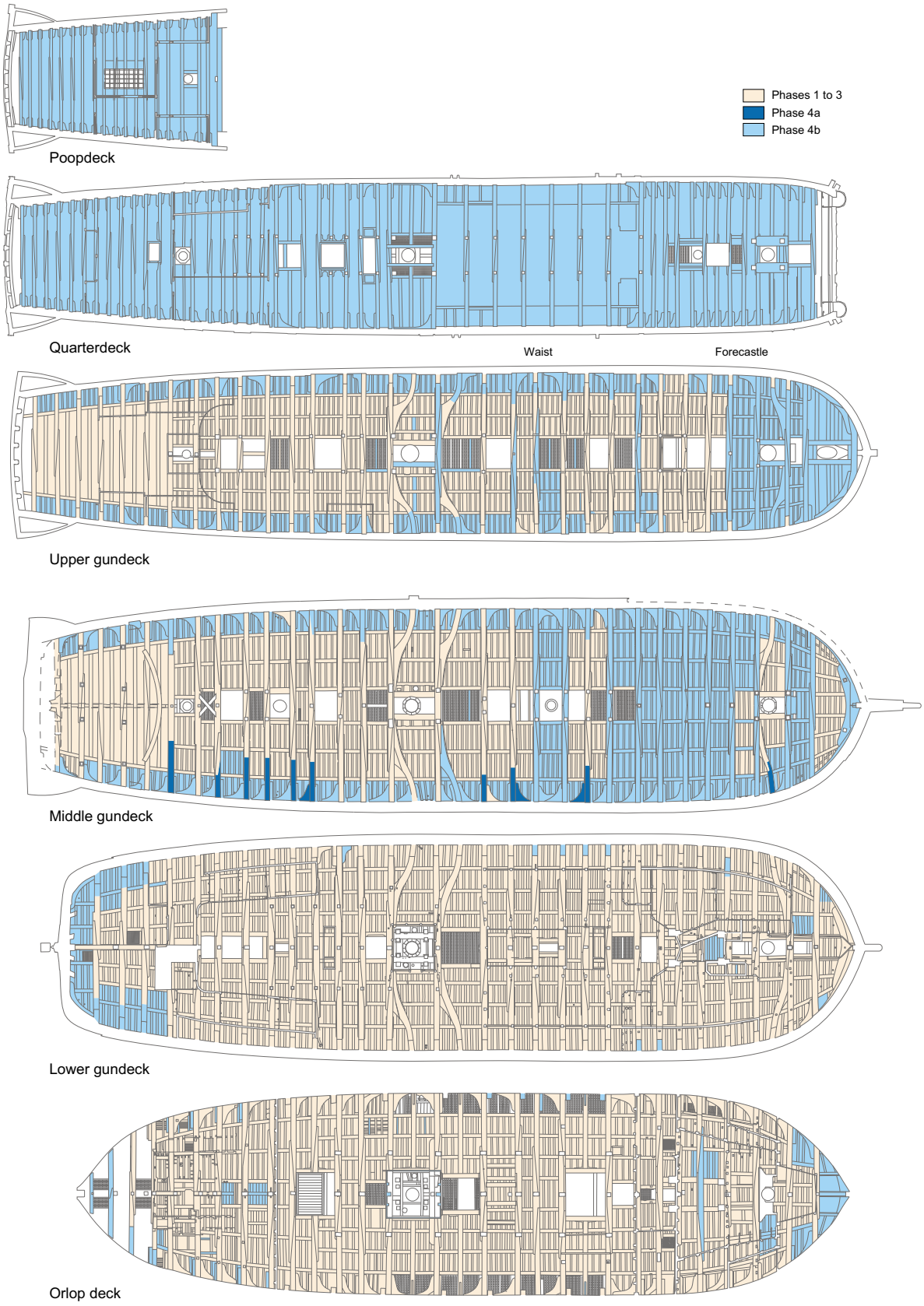


Figure 9. Deck plans indicating the distribution of phased structural elements

Figure 10. Location of timber marks

Plate 22. Middle gundeck deck planking showing modern insertions along the deck margin

highlight a similar technique, and as *Unicorn* was destined for sea-service at the time of launch in 1824 may indicate innovations in construction methods introduced by Seppings from *c.* 1813 onwards. This observation is fundamentally important and an understanding of this phase of refit through further research would be beneficial.

It is certainly clear that the modern repair fabric is varied both in quality and surface finish; the latter evident on deck beams that may be finished with a scallop using an adze on the one hand, or simply cut to size and the band-saw marks left on the fayed surfaces. Another example is the presence of a variety of moulded margins on deck components in close proximity to one another. This is in contrast to the historic deck fabric where care has been taken to provide a 'cleaner' finish, particularly on the upper decks.

The deck planking also comprises a mixture of historic and modern repair fabric (**Plate 22**). On the whole, the traditional form of deck planking common to the traditional techniques is employed throughout. In some cases however modern adaptations to problems such as water ingress have resulted in innovative replication of a deck's appearance using modern materials; for example the marine plywood lining of the poopdeck above the Captain's cabin which has been scored to imitate deck planking when viewed from below. Perhaps the most evidential element of the deck planking in the ship is that of the lower gundeck which is clearly of some age (**Plate 23**).

The general condition of the deck structures throughout the ship varies. The principal issue beyond the problem of water ingress and ensuing rot problems, particularly in beam ends, is the lack of adequate fastenings. In many cases knees and the beams to which they are attached were seen to be inadequately fastened to the ship's sides; and in many cases show no apparent attachment at all. This observation was also noted in areas of deck, such as the middle gundeck, where carlings and ledges have not been fastened to the structure above. Allied to this is the general movement of the deck structure and the gaps and cracks highlighted in the Nielsen & Co.'s survey. It has been suggested that this movement is caused by the raking of the masts and the subsequent force displaced through the deck structure, resulting in a general movement aft. A further observation is the undulation of the decks in many areas, perhaps perpetuated by the lack of pillars in some areas of the decks (removed during the reconstruction and not replaced) used to support the decks from below.

Plate 23. Lower gundeck planking purported to be the oldest deck planking on the ship

Plate 24. The port quarter galleries and transom stern highlighting the most elaborate carved decorative work on the ship

One of the most complicated elements of the ship is the stern structure and associated quarter galleries (2.07). While providing an impressive outward appearance, particularly with the decorative features, the external planking hides the complicated nature of the composite structure. The structural components comprise a mixture of historic fabric and modern repair; a visual inspection of some of the vertical stern timbers suggest that key elements are potentially illustrative of the conversion of the structure to a 'closed stern' in the large repair between 1800 and 1803 (Phase 2). Furthermore, some of the surface detail both on the stern timbers and a gunport lid at upper gundeck level revealed a suite of shipwright's timber marks, the presence of which would certainly suggest the assemblage and particular elements are of at least 19th-century date (late Phase 2 or Phase 3). The quarter galleries also provide a particularly elegant look to the stern of *Victory* and comprise fabric relating to the major repair to the stern area in the 1970s (**Plates 24** and **39**).

Plate 25. The bow and beakhead

Like the stern, the beakhead (2.08) presents a particularly elegant appearance, and an iconic visual representation of the bow of an 18th-century Ship of the Line (**Plate 25**). Whilst visually appealing, the structure is entirely replicated and restored to its 1805 Trafalgar appearance. The beakhead maintains the authentic 18th-century form but is fabricated in teak baulks as are all the remaining components. This also includes the beakhead bulkhead and roundhouses at the fore end of the upper gundeck which were introduced during the reconstruction.

HMS *Victory* Tertiary Structure: Poopdeck

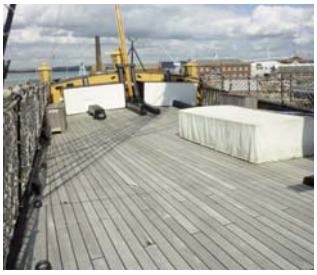


Plate 26. The poopdeck looking aft

Plate 27. The Captain's cabin looking aft

The poopdeck (**Figure 11**) as a distinct area comprises the highest part of the ship and gives a commanding view over the quarterdeck, waist and forecastle (**Plate 26**). The features noted are all modern repairs and replication, although the impression is authentic to Trafalgar and provides a particularly aesthetic contribution to the outward appearance of the ship as a whole.

The quarterdeck (**Figure 11**) is one of the key areas in the ship, not only due to its function, but also as the place where Nelson fell during the Battle of Trafalgar. This association helps to form an appreciation of the area which gives a good view of the ship in context (3.02), and of the Captain's accommodation in the stern (3.03).This area is also an authentic representation of the Trafalgar appearance and is accentuated by the period features, furniture and artefacts; in addition to the impact of the stern windows looking aft (**Plate 27**). While it has been suggested that some of the hull and deck structure represent historic fabric the current research and archaeological study undertaken as part of the CMP believes the fabric relates to the repairs and reconstruction phases. The overall experience is one of a clear if not an entirely authentic representation of how the space might have looked during the Trafalgar period – this is apparent in the desire to varnish the interior bulkhead panelling during reconstruction work in 1984; which perhaps indicates taste rather than true Georgian authenticity. The area is particularly evocative of the connection with Nelson and for this reason represents one of the key areas of the ship.

The space occupied by the waist (3.04) comprises the covered area over the boom-deck and adjacent gangways. The area has a distinct modern look due to the fibreglass and tarpaulin covering necessitated to keep out the weather. At present these intrusions detract from the overall impression of the 'open waist', but as the area has undergone a number of changes in the past, does not penalise the overall impression of the deck as a whole. It is clear that the most suitable options and alternatives to the current display require further consideration.

The forecastle (3.05) is similar to the quarterdeck in that it provides a commanding position from which to appreciate the open space and the context of the ship in the dockyard. It is also an authentic representation of the area as it would have been seen during the Trafalgar period. In addition, the beak (3.06) is one of the most illustratively and aesthetically striking areas of the ship, particularly when viewed from the forecastle, and from the edge of the dock below. This area comprises structure that relates to the modifications to the bow in the 1920s and the removal of the previous round bow, and the subsequent repairs carried out in the 1980s.

HMS *Victory* Tertiary Structure: Upper Gundeck

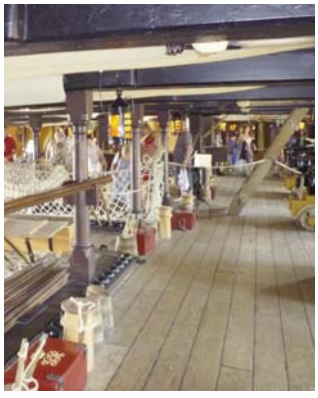


Plate 28. The upper gundeck looking aft

The upper gundeck (**Figure 11**) is the uppermost of the main decks and compared with the decks below is a light space which is visually appealing and aesthetically pleasing to the eye. Similar to the quarterdeck above, a large percentage of the hull fabric relates to the repairs and reconstruction phases, while the deck structure displays a high percentage of historic fabric relating to early Phase 3.The overall experience on the deck is one of a fairly authentic representation of how the space would have looked during the Trafalgar period. This includes the sick bay area forward (3.07) and the main deck with the covered waist (3.08) (**Plate 28**). The aft area of the deck comprises the Great Cabin and the Admiral's accommodation. This area gives the visitor a fair representation of the Trafalgar appearance and is accentuated by the period features, furniture and artefacts; in addition to the impact of the stern windows looking aft. Similar to the Captain's cabins above however, some questions arise as to the decision to varnish the bulkhead panelling in this area. In general, the area is particularly evocative of the connection with Nelson and for this reason represents one of the key areas of the ship.

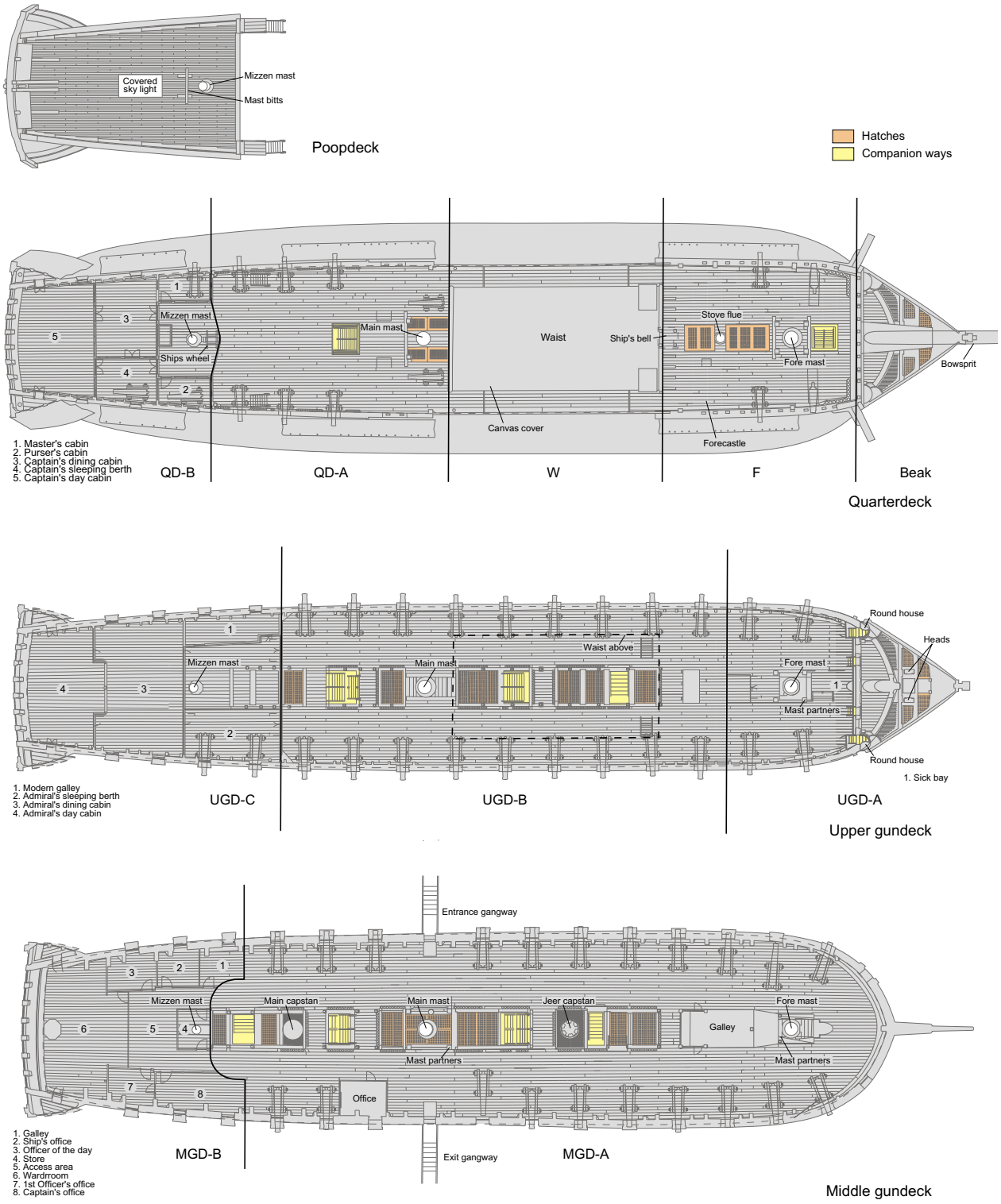


Figure 11. Tertiary structure

HMS *Victory* Tertiary Structure: Middle Gundeck

Plate 29. The middle gundeck looking forward

The middle gundeck is one of the key decks in terms of its illustrative qualities and is a composition of historic and repair structure, machinery, and fixtures and fittings (**Figure 11**). The forward end of the deck describes the structure of the bow and the stepping of the bowsprit. The replica galley also offers a good understanding of the challenges of feeding the crew. The mixture of the replica guns and artefacts, the masts, and the machinery such as the capstans, offers a good impression of the configuration of the deck during the Trafalgar period (**Plate 29**). As with the upper gundeck, the location of numerous modern intrusions such as electrical wiring and appliances, and firefighting apparatus does tend to detract from the experience. The Quartermaster's office near the starboard entry port also provides evidence of the modern day use of the ship as a commissioned naval warship and serves as a reminder as to the modern role of *Victory* as flagship to the Fist Sea Lord. The aft area of the middle gundeck comprises the offices, and the wardroom. This space is partitioned with authentic panelled bulkheads, some of which date to the Victorian period in Phase 3; although portions of certain areas were restored more recently such as the forward, curved entry bulkhead and the bulkhead separating the wardroom with the vestibule area. There is a large percentage of historic fabric noted in this area which at present is partly compromised by the 'modern' use of the space.

HMS Victory Tertiary Structure: Lower Gundeck

Plate 30. The lower gundeck looking forward

The lower gundeck is perhaps the most striking deck on the ship in relation to the purpose of the ship and its workings, and the lives of the crew who served on board; the majority of whom would have lived and slept on this deck (**Figure 12**). The forward area and the manger (3.12) provide an appreciation of one of the working areas of the deck. The main area of the deck (3.13) is impressive in the scale of structural elements such as the riding bitts, and the machinery such as the jeer capstan and pumps (**Plate 30**). Despite the presence of repair fabric there is still a large percentage of historic fabric throughout the deck, particularly the deck planking, which gives a real impression of the age of the ship. Some elements detract from the overall experience, including the forward fire exit and the main exit, both located on the port side by way of gunport locations. The aft area of the deck (3.14) is segregated by a canvas screen and represents the gunroom. The impressive tiller, gunports and deck structure give an overall understanding of the function of the space, although this is compromised by the current use of the space for storage and an area for disabled visitors to view information on Victory via DVD.

HMS *Victory* Tertiary Structure: Orlop Deck

Plate 31. Orlop deck stores and cabins in the bow

The orlop, like the lower gundeck, is also a particularly atmospheric deck on the ship given the lack of natural light and softly lit spaces. It is particularly evocative in relation to the function of this space, and as the place where Nelson died (**Figure 12**) (**Plate 31**). The forward area of the deck (3.15) comprises the replication of the numerous stores and cabins traditionally located in this area of the deck. However, appreciation and experience of this characterful space by the visitor is currently not possible. The main area of the deck (3.16) is fairly expansive and provides a good understanding of key structural elements and spaces located in this area; the most obvious being the cable tiers, hanging magazines, sail room, and port and starboard Carpenter's Walk. The aft area of the deck (3.17) comprises a suite of cabins and stores surrounding the surgeon's station set out to replicate the use of the area during battle. The aft-most space comprises the slop store and the bread room which are currently inaccessible to the public.

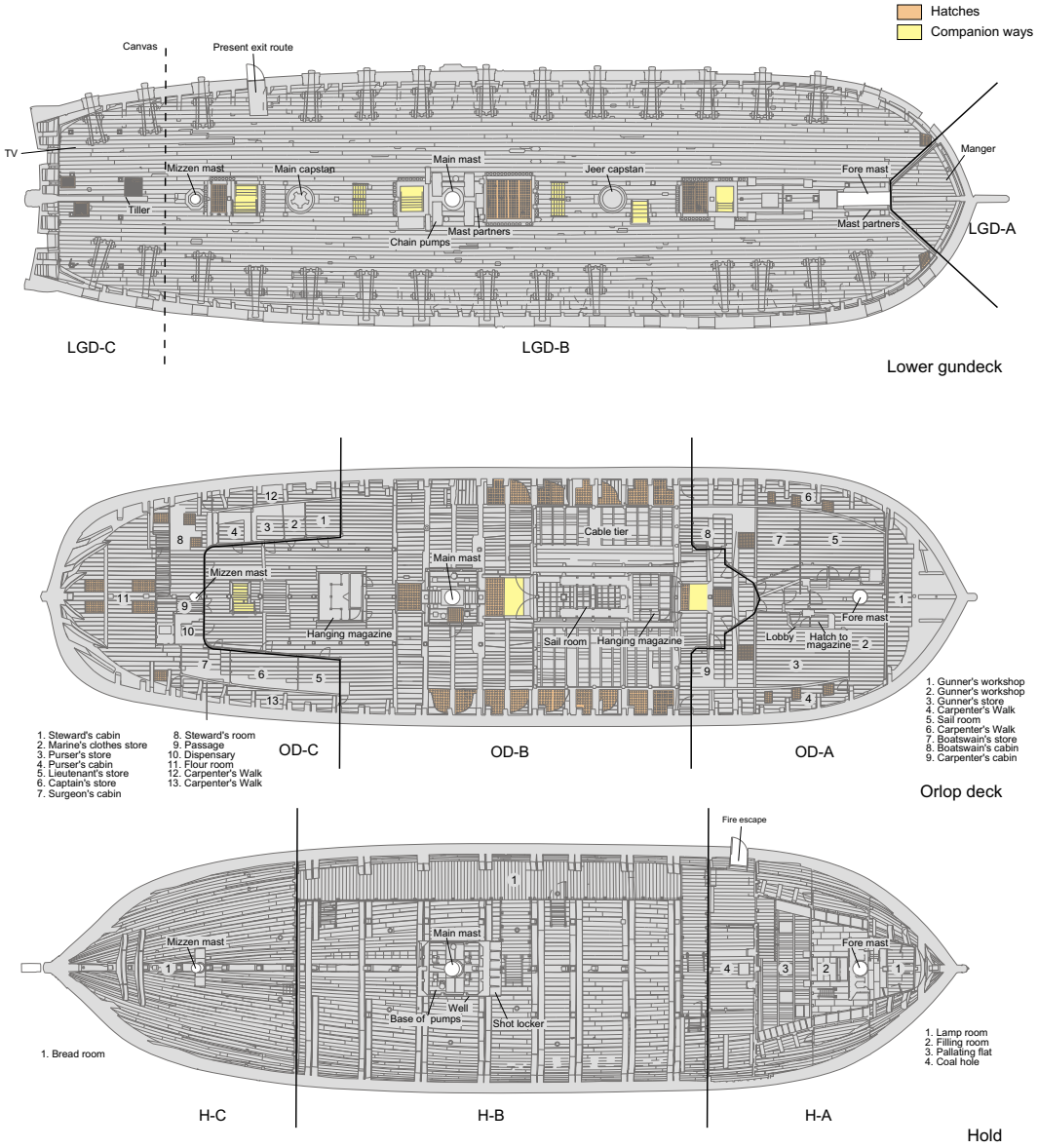


Figure 12. Tertiary structure

HMS *Victory* Tertiary Structure: Hold

Plate 32. The hold

The hold comprises a number of different spaces and gives a good impression of the scale of some of the fabric elements of the lower hull (**Figure 12**). The forward area of the hold (3.18) comprises the replicated elements of the Grand Magazine (and the coal store behind) which whilst providing the visitor with a representation of what the space may have looked like, does constitute something of a visual intrusion. The main hold (3.19) is atmospheric and gives a good understanding of what the space was used for and the sheer scale of the space, including the pump well and the cutaway showing the interior. The extent of historic fabric, particularly in the orlop deck structure above, is also particularly striking (**Plate 32**). The extent of the modern intrusions and fire precautions does detract from the full appreciation of this area however. The after hold in the bread room (3.20) provides an equally striking representation of the ship's structure but is not accessible to the public and is missing all of the key features associated with the area.

Plate 33. *Victory* on Trafalgar Day in 2013 illustrating the starboard hull and lower masts and bowsprit

HMS *Victory* Tertiary Structure: Lower Masts

The lower masts (3.22) on HMS *Victory* form a visual focal point when viewing the ship from the dockside and where the masts pass through each deck into the hold (**Plate 33**). At first glance the masts appear to fit quite well within the illustrative aspects of *Victory* as a capital warship from the Age of Sail. Indeed, unlike the replication bowsprit, upper masts, yards and rigging, the provenance of the lower masts to that of HMS *Shah* hold exceptional historical and archaeological significance in their own right as exemplars of their type, but the evidential value is diminished by the metal fabric in their construction and the presence of such in a wooden warship. Whilst the condition of the masts themselves appears to be good, it has been suggested in Neilsen & Co.'s (2012) report, and through further discussion and observations on site, that the masts, particularly the main mast, have been subject to an element of movement. This is considered to have had an effect on the adjacent deck structures which, from observations on board, suggests that the deck structure is being forced aft.

HMS *Victory* Tertiary Structure: Upper Masts, Yards and Rigging

The upper masts, yards and associated rigging, like the lower masts, add significantly to the visual and aesthetic impression of *Victory* as how the ship would probably have looked during its sailing career. Whilst elements of detail may not be an entirely true representation of the Trafalgar period, for example, they do still offer an illustrative and relatively authentic replication of the character of the upper masts, yards, and rigging of a First Rate sailing warship. It is important to point out however that despite the illustrative and aesthetic value inherent in the different elements, they hold no evidential value as an archaeological resource. This is due to the fact that these elements have been replaced periodically over the past few decades using modern fabrication materials such as fibreglass and synthetic fabrics. Considerations, particularly in relation to the Issues and Policies in Part 3 will need to address the potential effects of the upper masts, yards and rigging on the structural integrity of the hull below; primarily as transmitted through the extra weight placed on the lower masts and supporting stays and anchor points placed around the ship on the dock side.

4 STATUS, POLICY AND GUIDANCE CONTEXT

Statutory Protection

Historic vessels are a somewhat neglected anomaly within the framework of UK legislation, and national, regional and local planning policy. While a limited number of 'ancient monuments' were given protection under the *Ancient Monuments Act* as long ago as 1882, and historic buildings have been protected by legislation since the *Town and Country Planning Act* 1947, under present UK legislation 'extant' historic vessels have no protection against neglect or deliberate demolition other than under legislation for historic buildings. Only one vessel, the *Cutty Sark* (listed at Grade I, 1973), is protected in this way. In their *Introduction to Heritage Assets: Ships and Boats*, English Heritage (now Historic England) specifically note that the reason for non-designation of HMS *Victory* is due to the ship's status as the flagship of the Second Sea Lord (English Heritage 2012).

HMS *Victory* is, however, located within No. 2 Dock which is statutorily listed at Grade I as 'a Building (or structure) of special architectural or historic interest'. Its Grade I listing puts the dock structure in the top 2.5% of all listed buildings, in a category of buildings of 'exceptional interest, sometimes considered to be internationally important' (Historic England website).

The listed dock is itself situated within *The Docks* area of Portsmouth Historic Dockyard (List entry number 1001852, National Heritage List for England). Hence, although the vessel itself has no statutory protection in UK legislation, its location within a listed and scheduled dock provides it with an element of protection under heritage legislation provided by the *Ancient Monuments and Archaeological Areas Act* 1979. Scheduled Monument consent would not, however, be required for works affecting only the interior and exterior of the ship itself, if they implied no impact on the fabric or setting of the scheduled monument.

Similarly, only works affecting the fabric of the dock itself, or works to the ship or its supports which would have a physical or visual impact on the listed dock or its setting, would require listed building consent under the provisions of the *Planning (Listed Buildings and Conservation Areas) Act* 1990. It is worth pointing out that Scheduled Monument status takes precedence over Listed Building status, and as such Scheduled Monument consent would be the main requirement for any proposed alterations either to the exterior of the ship or the dock.

National Historic Fleet

National Historic Ships UK is a government funded, independent organisation with a wide remit to provide objective advice on all matters relating to historic vessels in the UK. This includes advice in relation to:

> *the support infrastructure for historic ships, their potential for contribution in the wider, economic, social and community context, and maintaining a watch list of vessels abroad with potential UK significance.*

HMS *Victory* is included within a list of around 200 vessels that comprise the National Historic Fleet and which are considered to be of prime national and regional heritage significance. All vessels on the list are subject to a scoring system based around criteria that demonstrate the relevant areas of significance attributed to a particular vessel; these details of significance are also logged in a Statement of Significance. HMS *Victory* was was given a score of 42 in 1996 and an additional score of 13 in 2003. These details will be subject to further scoring as part of a revised methodology due to be implemented following an initial consultation period which began in March 2014.

Plate 34. A copper fish-plate and bolts bracing the joint between the keel and the base of the sternpost

The legislation relating to the export of 'works of art' as laid down in the 'Waverley Rules' relates to all vessels from the National Register of Historic Vessels and the National Historic Fleet. While this legislation is not currently relevant to HMS *Victory*, as a static vessel that can only be removed from the dock through deconstruction or demolition, it is eligible for listed status; accentuated by the fact that the ship is also in a dock protected as a Scheduled Monument and Listed structure. While this status may not necessarily be sought, it never the less offers peace of mind to *Victory's* long term future.

Relevant Guidance

The most comprehensive guidance relating to the understanding, care and management of historic vessels is that provided by the three volumes of *Understanding Historic Vessels* published by National Historic Ships:

Volume 1: Recording Historic Vessels (2007)

Volume 2: Deconstructing Historic Vessels (2007)

Volume 3: Conserving Historic Vessels (2010)

Of these, volume 3 provides clear guidance on the decision-making process at the heart of all projects to conserve historic vessels, and on the preparation of a suitable Conservation Management Plan to guide the necessary works; largely based on the process and structure advocated by Kerr in his seminal work *The Conservation Plan* (Kerr 1996).

PART 2 – STATEMENT OF SIGNIFICANCE

5 INTRODUCTION

Assessing Significance

In order to establish significance the combination of the sum of the the relevant cultural values of a vessel are established. These values, such as the historic, aesthetic, scientific, political, cultural, social or spiritual aspects of a vessel's life are embodied in the vessel itself; as a combination of its fabric, purpose, use, associations, meanings, records, related vessels and places (National Historic Ships 2010).

In terms of conservation management planning an assessment of significance identifies how particular elements of a place [or vessel] and different periods in its development contribute to, or detract from, each identified strand of cultural heritage value (English Heritage 2008).

The assessment of No. 2 Dock has been undertaken in accordance with the English Heritage *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment* (English Heritage 2008), while the assessment of the ship itself has been undertaken in accordance with *Understanding Historic Vessels – Volume 3: Conserving Historic Vessels* (National Historic Ships 2010). The NHS guidance poses three key questions:

- What is the vessel's ability to demonstrate history in its physical fabric?
- What are the vessel's associational links for which there is no physical evidence?
- How does the vessel's shape or form combine and contribute to function?

The assessment of significance of the individual structural components and sub-areas of the ship is presented in the Gazetteer, in accordance with the numerical index as follows:

5 Exceptional and/or international significance
4 Considerable significance
3 Some significance
2 Little or no significance
1 Negative or intrusive elements

6 SIGNIFICANCE OF NO. 2 DOCK

Evidential Value

No. 2 Dock, within which *Victory* is now located, is one of the oldest dry docks in the world still in use. It is a very fine example of a Georgian dock, added to the late 17th-century Basin No. 1, which together comprise exemplars of their type. Their elevated status is reflected in the Grade I Listing of the structures, and their inclusion within the wider scheduled monument. As such, No. 2 dock has exceptional evidential significance due largely to the rarity of its type (**Plate 35**).

The dock structure has been subject to considerably less study than the ship. A *Technical Structural Appraisal of 2 Dock* (BAE Systems Maritime Services Estates 2013) provides a reasonable description of the construction and condition of the dock structure, but makes assumptions such as that the timber grillage on which the dock is founded is supported on driven timber piles. The evidential value could potentially be further enhanced by a more thorough understanding of its structure.

Historical Value

The dock is understood to still essentially comprise the structure designed by Sir Samuel Bentham, Inspector-General of Naval Works from 1795, and to incorporate some of his structural innovations. It is part of the Grade I listed Basin No. 1 complex, and contributes to the chronology of the group of dock structures serving this basin, giving it considerable historical illustrative value.

Bentham was a great innovator in the royal dockyards, as well as in civilian engineering, and No. 2 Dock therefore derives some historical associational significance through association with Bentham.

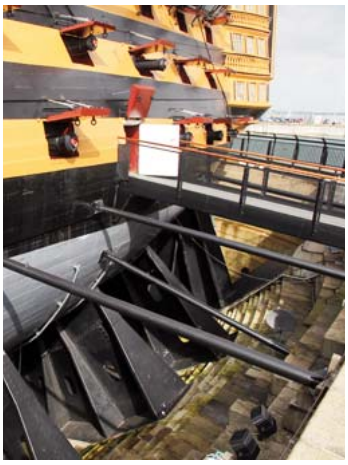


Plate 35. Port side stern quarter of *Victory* showing the access gantry to the lower deck and the support system for the ship in No. 2 Dock

Aesthetic Value

The potential aesthetic value of No. 2 dock is currently significantly compromised by the volume of structures supporting the ship. The massive cradles and numerous props give a cluttered appearance and prevent appreciation of the form and structure of the dock, and the concrete caisson at the mouth of the dock is of entirely utilitarian design. The dock currently only has some aesthetic value, but has potential to have considerable aesthetic value.

Communal Value

The dock is of neutral communal value at present due to the lack of public access, lack of interpretation, and the difficulty of appreciating its form due to the volume of ship support structures and services.

7 SIGNIFICANCE OF HMS *VICTORY*

The Vessel's Ability to Demonstrate History in its Physical Fabric – (Evidential Value)

Victory:

> *represents the embodiment of British Naval history at its absolute height, when Britain's supremacy over all her actual or potential enemies was unchallenged and the Royal Navy enjoyed supreme command of the world's oceans* (National Historic Ships website).

Although now a 'museum ship', *Victory* is a significant component of the National Historic Fleet, and holds an important position in the chronology of surviving timber warships in both the national and international context. The potential to study changes in form, design and fitting out enhances their value as a group, and the various repair or reconstruction treatments they have been subject to, allow a comprehensive study of changing attitudes to ship conservation, both chronologically and internationally. The ship's contribution to the group value of surviving warships is of exceptional significance.

HMS *Victory* is a unique and extremely complex archaeological artefact whose fabric retains evidence of its construction, modification, repair and conservation between 1759 and the present day (**Plate 36**). Despite the high proportion of loss of historic fabric since 1922, its unique survival gives it exceptional significance as an archaeological artefact.

Plate 36. Detail of the stern at middle gundeck level

Plate 37. Detail of a copper staple or 'dog' located on the false keel used to join this component with the with the keel above (note the stamped Admiralty 'broad arrow' and remnants of copper nails used to attach copper sheathing)

Dendrochronological dating of timbers and a programme of paint analysis have added to the evidence of the shipwright's timber marks to indicate the extent of extant fabric which dates to the vessel's service career. The surviving Phase 2 fabric is of exceptional significance.

A survey of the shipwright timber marks on *Victory's* fabric recorded a total of 831 marks – 673 *in situ* on the vessel, and a further 158 recorded on material removed from the ship and retained in store. This represents by far the greatest single concentration of timber marks on a ship from the Age of Sail currently known anywhere in the world. This body of evidence, combined with the analytical survey results provide an archaeological dataset of exceptional significance. It is also noted that, although not part of the survey, inscribed marks were noted on a number of metal fastenings and fittings throughout the ship (**Plate 37**).

The detailed archaeological study of the shipwright's marks on historic timbers surviving in the ship has not only provided evidential value about the fabric of the ship itself, but has provided important evidential value for the understanding of the wider subject of naval timber procurement and management within the Royal Dockyards during the 18th and 19th centuries. This contribution to wider academic study is of considerable significance.

The extensive period of the ship's conservation provides evidence of changing attitudes and approaches to timber ship conservation from the early 19th century to the present day. Evidence of the 19th-century re-fit using traditional materials and methods; the major remodelling of 1805 configuration in the 1920s, and the evolution of approach in the later 20th century illustrate the history of timber ship conservation and are of considerable significance.

As well as being an immensely powerful fighting ship, a three-decker ship of the line was usually a floating headquarters for an admiral and his staff and was therefore also an illustration of the prestige of the state (Lavery 1983). The function of HMS *Victory* in this respect is clearly legible in the demarcation of the ship into areas of higher and lower status reflected in the quality of their fitting out and finishes. This is exemplified by the contrast between the quarters of the crew on the low, ill-lit mess and gundecks, and the domestic luxury of the Great Cabin, which is as well-lit as any 18th-century parlour. The continued legibility of the ship's hierarchy of status is of considerable significance.

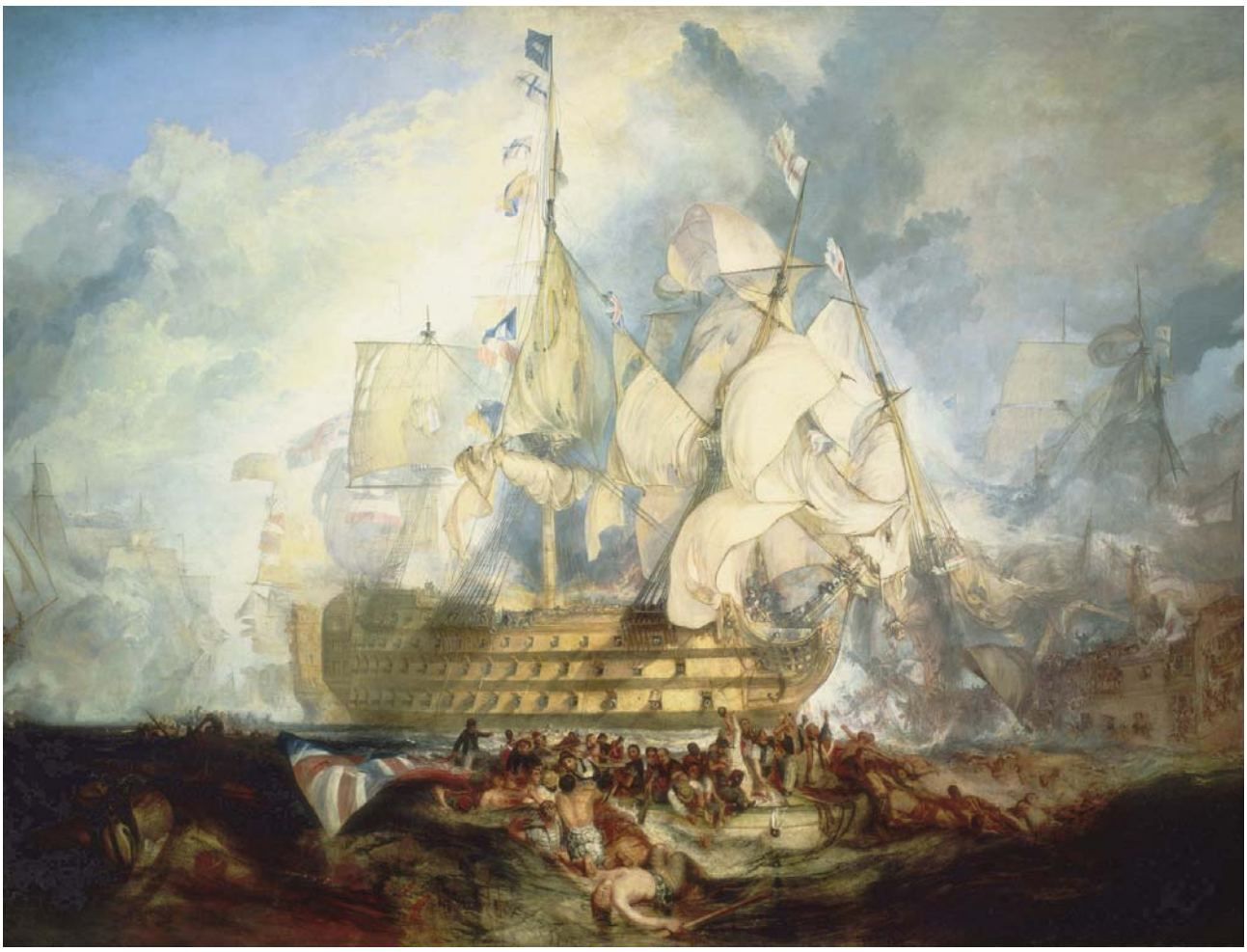
Although HMS *Victory* was the first, First Rate British ship to be constructed in accordance with the Slade design, which gave better sailing qualities while accommodating additional armament, the initial display of technological innovation was modest and of only some significance. Similarly, the developments introduced during *Victory*'s career were common to many ships. Some, such as the Robert's knees, remain extant in the ship, others, like the Sepping's round bow, have since been removed. Overall, the ship's display of technological development is of some significance.

The wrought-iron lower masts currently *in situ* on HMS *Victory* were originally manufactured for use on HMS *Shah*, a 19th-century frigate built at Portsmouth dockyard in the early 1870s. They were installed on *Victory* in 1893, and although not of authentic timber construction, are important artefacts in their own right. The masts have considerable intrinsic evidential value.

The upper masts, yards and rigging are comprehensively reconstructions. Although they are illustrative of the historic forms which they replaced, they are of neutral intrinsic evidential value.

HMS *Victory*'s fore-topsail, which was *in situ* at the Battle of Trafalgar (**Plate 38**), and bears the evidence of battle damage, is of exceptional evidential value. However, its intrinsic importance means that it is subject to its own Conservation Management Plan and will not be considered further in **Part 3** below.

Plate 38. *The Battle of Trafalgar* by J. M. W. Turner (1822)



Factors compromising evidential value

- Loss of 18th-century fabric and evidence of 18th-century shipbuilding techniques
- Replacement of oak with other timber species has reduced potential for dendrochronology
- Evidence of construction for active duty as a capital warship reduced by repairs appropriate for harbour service or as a museum ship.

The Vessel's Associational Links for which there is no Physical Evidence

It is difficult to overestimate the importance of the ship's association with Admiral Lord Nelson and the Battle of Trafalgar. This would almost certainly be the single most important fact that mention of HMS *Victory* would bring to mind in the majority of the British public and the ship has become a national and international icon, and a highly significant memorial to Admiral Lord Nelson. The ship's association with Nelson and Trafalgar is therefore of exceptional significance.

HMS *Victory* is the longest-serving commissioned ship of the Royal Navy, and the oldest commissioned naval vessel in the world. As the Flagship of the First Sea Lord, the ship's primary role within the navy is now largely ceremonial, symbolised by the display of his ceremonial sword in the Great Cabin. The ship also provides an impressive venue for high status naval and private functions, and the role as a commissioned vessel of the Royal Navy is of considerable significance. The ship also has a rich association with other key naval figures; particularly Admirals who raised their flag such as Keppel, Hood, Howe, Jervis, and Saumarez.

The ship has an association with key artists of national repute, such as J. M. W. Turner and John Constable, who endeavoured to provide evidence of *Victory's* appearance on the one hand, and impressions of key historic moments of the ship's service life such as Trafalgar and the death of Nelson, on the other. The ship's ability to inspire artistic endeavour and reporting is of considerable significance (**Plate 39**).

Plate 39. The stern viewed from the dock below offers an appreciation of the aesthetic qualities inherent in the form of the hull

Plate 40. *Victory* in dock prior to the removal of the topmasts and rigging

The ship is the embodiment of a service career as a sailing warship which included five campaigns against French and Spanish fleets, under five different Admirals. The *Victory* has also spent time as a hospital ship, a troop ship, and four periods in ordinary, and was later used as the School for Signalling and for Courts Martial. Taken as a whole, therefore, the ship's service career is of some significance.

Some phases of *Victory's* life, including periods of repair, are fairly well documented, and this enhances the intrinsic value of the fabric of the ship itself. The wealth of contemporary and near contemporary illustrations of the ship, both in battle and in harbour, provide considerable illustrative evidence of the appearance of the ship in earlier phases, and provide important historical evidence of elements of form and fabric no longer extant in the present ship. Although not fully catalogued at present, the survival of a large body of associated artefactual and documentary evidence is of considerable significance, as it provides additional archaeological evidence to that surviving *in situ*.

Victory's rare survival is illustrative of the various organisations responsible for the construction, refit, and repair of naval vessels from the Age of Sail; which together represented one of the largest and most complex industries in the world at the time.

There is considerable national pride in HMS *Victory*, and the ship has long been a national icon. The association with Admiral Lord Nelson and the Battle of Trafalgar has led to the ship having considerable commemorative and symbolic value, and the ship's early and continuing role in the celebrations of Trafalgar Day was an expression of this value.

As a unique survival of a ship of the line, reconstructed to the famous 1805 configuration, HMS *Victory* provides an educational resource of exceptional significance. This is further enhanced by the close physical association with the *Mary Rose* and HMS *Warrior* which together demonstrate the developments in ship design and function over a period of some 350 years. The wider understanding of shipbuilding and the British Navy over the past 500 years is provided in the setting of the vessels among the buildings and structures of the historic dockyard, and the museum and its associated collections (**Plate 40**).

The ship currently has in the order of 350,000 visitors per year from both Britain and abroad, and is one of the key attractions within the Historic Dockyard. The ship's role as a memorial to Nelson is a key focus for visitors, all of whom are keenly interested in the human story associated with the ship. The ship's value to the national and international community is considerable.

For the people of Portsmouth the historic dockyard is a source of pride, both as the driving historic force behind the development of the city and as an internationally renowned attraction and major contributor to its economy. Given the large numbers employed in the dockyard in the past, the dockyard has a place in many local (and non-local) family histories, and is therefore of considerable communal value to the people of Portsmouth. The ship itself is also of some communal value to the people of Chatham, many of whose forebears were employed in the Royal Dockyards in which it was built and repaired.

How the Vessel's Shape or Form Combine and Contribute to its Function

The distinctive form of the ship has largely survived, despite the loss of early historic fabric. In most cases the repair has seen replacement on a like-for-like basis (in form if not timber species) and therefore the overall form of the ship survives (apart from specific modifications at the stern and bow discussed in **Part 1**). Thus the vessel continues to provide evidence of the design and fitting out of an 18th-century warship, despite the loss of authentic 18th-century fabric.

In its day, the Ship of the Line was one of the most complex artefacts ever produced. These powerful ships, of which *Victory* is an example providing three decks of gun power, were designed specifically for deployment in the 'line of battle' naval tactic, which had become widely favoured by the late 17th century. The ship of the line is the ultimate expression of this naval tactic in which each ship in linear formation could fire broadside without fear of hitting a 'friendly' ship (**Plate 41**). The broad, stable form of the Ship of the Line was built to accommodate optimum gun power, but also to provide speed, seaworthiness and strength and is therefore illustrative of the unity between form and function necessary to an effective, fighting sailing ship. HMS *Victory* was a First Rate Ship of the Line, and now exists as the single surviving example of this once numerous, sophisticated type of fighting machine, which gives it exceptional significance.

The aesthetic qualities of the ship are highly evocative of the days of historic maritime warfare, demonstrated through the elegant curves and pronounced tumblehome common to 18th-century warships. Linked to this is the impressive array of masts, yards and rigging that have potential to add considerably to its visual character and aesthetic value. Although currently compromised by a number of factors identified below, the aesthetic value of the ship is currently considerable, and has the potential to be exceptional.

The historic dockyard connects HMS *Victory* with a context of international significance. Although not built in Portsmouth, the 18th- and early 19th-century buildings and structures around the ship, place it in a built context that is near-

Plate 41. Firing a broadside during Trafalgar Day 2005

contemporary with it's construction and career as a fighting ship. The six docks that fan off No. 1 Basin are a complete complex of late 18th- and early 19th-century shipbuilding and repairing docks, considered to be '*the finest surviving group of such eighteenth century structures in Europe*' (Coad 1989, 97). The presence of *Victory* at the heart of the dockyard, explains something of the character of the docks in the early 19th century, and gives exceptional significance to both ship and setting.

HMS *Victory's* scale, form and wealth of detail are an important visual foil to the formally planned groups and rows of brick and slate buildings that surround her. The sober design and the grand scale of the surrounding naval stores and offices is the context for the curving form of the ship. *Victory's* striking colours and exuberant stern decoration contrast sharply with the elegant monochrome simplicity of the 2013 Mary Rose Museum. The aesthetic relationship between ship and setting is of exceptional significance.

Factors currently compromising aesthetic value

- Fire escape tower
- Ongoing programmes of repair
- Method of support within dry dock
- Removal of upper mast sections and rigging
- Surface mounted services and cable runs through interiors
- Fixtures relating to Health and Safety Regulations
- Visitor signage.


MAL·Y·PENSE
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PART 3 – ISSUES AND POLICIES

8 INTRODUCTION

The successful conservation of heritage assets requires the identification of issues both currently affecting, and with potential to adversely affect the asset in the future which, if not addressed, would result in the partial or complete loss of the asset's heritage significance.

In the case of an asset of such exceptional significance and complexity as HMS *Victory* and its setting, it is almost inevitable that, if considered and addressed in isolation, actions to protect one aspect of the asset's heritage would likely have an adverse impact on another aspect. The key role of the CMP is therefore to identify all of these issues; to resolve the potential conflicts between their effects; and to prepare a series of policies by which the individual issues can be addressed in such a way that holistically protects significance.

Some of the ways in which the asset is vulnerable to loss of significance are relevant to all components of the asset – the historic ship, the listed No. 2 dock and their setting within Portsmouth Historic Dockyard (**Plate 42**). Conservation Policies related to these general issues will provide a Conservation Framework to guide future collaboration, management and decision-making. Issues and policies relating directly to the conservation of the historic ship are set out separately in section 10, **The Ship**.

Throughout Part 3, the issues and policies have been grouped into a number of 'themes', and wherever possible, individual issues and the conservation policy set out to address them are presented consecutively. A full list of the Policies outlined below is presented in **Appendix 4 List of Policies**.

Plate 42. The upper stern showing detail of the carved decorative work

9 CONSERVATION FRAMEWORK

Vision for the HMS *Victory* Project

The overriding aim of the HMS *Victory* Project is to undertake a programme of conservation to deliver a fully conserved HMS *Victory*, in an open environment, and in a condition to survive for 50 years without major work beyond a programme of planned maintenance. In order to achieve this vision in a timely and cost-effective manner, it is imperative that the ongoing uses of the ship are managed in such a way that implementation of the conservation works is not compromised.

> ***Policy 1*** *– In formally adopting the Conservation Management Plan, and the guidance and policies presented herein, the key stakeholders make a commitment to prioritise the works to achieve the key aim of the HMS* Victory *Project in all decision-making and in cognisance with the National Historic Ships Guiding Principles*

The NHS-UK guidance *Conserving Historic Vessels* (NHS 2010, 20–1) presents 10 guiding principles for the appropriate and successful conservation of historic vessels. These guiding principles are:

- Historic ships and boats should be conserved according to their significance
- The aim of conservation is to retain the significance and pass it on to future generations
- All aspects of significance should be dealt with in a considered and thoughtful way
- Rigorous maintenance is a key to good conservation practice for all vessels
- Make and keep records throughout including recording all changes to the vessel and what happened to any material removed
- When in doubt, do the absolute minimum. Conservation demands a cautious approach to change
- Replace like for like wherever possible and practicable
- Conjecture should be avoided in all conservation projects. If uncertain don't do it.
- The best knowledge skills, techniques and types of management available and affordable should be employed in all types of conservation
- Do things in a logical order.

This guidance sets the parameters for best conservation practice in the national and international context, and will underpin the bespoke conservation policies for HMS *Victory*.

> ***Policy 2*** *– Should an issue arise which is not dealt with by a bespoke policy within the CMP, the NHS-UK guiding principles will be used to guide the decision-making process.*

Conservation Philosophy for HMS *Victory*

The 'Conservation Gateway' for the ship, which was effectively selected in 1922, was that it was to be conserved principally for the fabric, rather than for operational use. However, the balance between the potential Conservation Processes adopted, have changed considerably since the ship's removal to dry dock. The four conservation processes are:

- Preservation: keeping part or all of a vessel's fabric as far as possible in its existing state and retarding deterioration
- Restoration: returning the existing fabric or part of the fabric of a vessel to a known earlier state by removing additions or re-assembling existing components

with the minimum introduction of new material

- Reconstruction: returning all of the fabric or part of the fabric of a vessel to a known earlier state but is distinguished from reconstruction by the introduction of significant new material into the fabric
- Adaptation: modifying a vessel to suit a proposed new use.

Early approaches to conservation, as discussed in Part 1, focused primarily on a combination of Restoration and Reconstruction, with a lesser component of Adaptation to the ship's new role as a static 'museum ship'. (The effects of the earlier approaches to the conservation of the fabric will be discussed further below, **Past Approaches to the Conservation of the Ship**).

The HMSVPCo's stated imperative in the preparation of a new conservation regime, is that the principal process will be that of Preservation, with only minimal elements of reconstruction and adaptation as necessary to achieve the successful implementation of the Interpretation Strategy. This will ensure that the exceptional evidential value demonstrated by the surviving fabric will be protected, and the ship will continue to demonstrate its evolution and development.

Policy 3 *– All programmes of conservation and repair to the fabric of the ship and No. 2 Dock will be designed to maximise Preservation of historic fabric; minimise reconstruction; and restrict works of adaptation to those necessary for compliance with SHE and DDA requirements.*

Key Conservation Issues

The two key issues currently affecting the ship, which pose the greatest risk to its long term survival, are those of structural stability and water ingress. Resolution of these two issues will constitute the top priority of the conservation project (**Plate 43**).

Policy 4 *– In formally adopting the Conservation Management Plan, the key stakeholders accept that implementation of the works to achieve the long-term structural stability and water-tightness of the ship will take priority over all other uses of the ship.*

Plate 43. The current support arrangements for the hull

Victory's Status as a 'Museum Ship' in an Open Environment

Having established that the philosophical approach to the ship's conservation sets preservation of its historic fabric as the overriding priority, the most effective way of achieving optimum preservation would be to enclose the ship in a controlled environment.

The considered decision by the HMSVPCo not to enclose the ship and dock within (or under) a protective structure makes it vulnerable to the elements of wind and salt-laden water. Whilst this preserves the ship's exceptional aesthetic value, and the contribution it makes to the character and aesthetics of the historic dockyard, it presents considerable problems relating to water ingress, and makes regular maintenance of the 'envelope' vital (**Plate 44**).

Although the decision to retain the ship in open air increases her vulnerability to loss of evidential value through the threat of potential ongoing damage to the fabric, it is considered that it is absolutely the correct decision at this time. However, in consideration of the ongoing changes in the UK climate, in which extreme weather events are becoming more frequent, and coastal areas are increasingly vulnerable, it is considered prudent that the decision to retain the ship in an open environment is reviewed on a 10-yearly basis.

Policy 5 *– The HMSVPCo, in consultation with their specialist advisers, will review the decision to retain the ship in an open environment on a 10-yearly basis.*

Plate 44. Maintenance to the outer hull planking

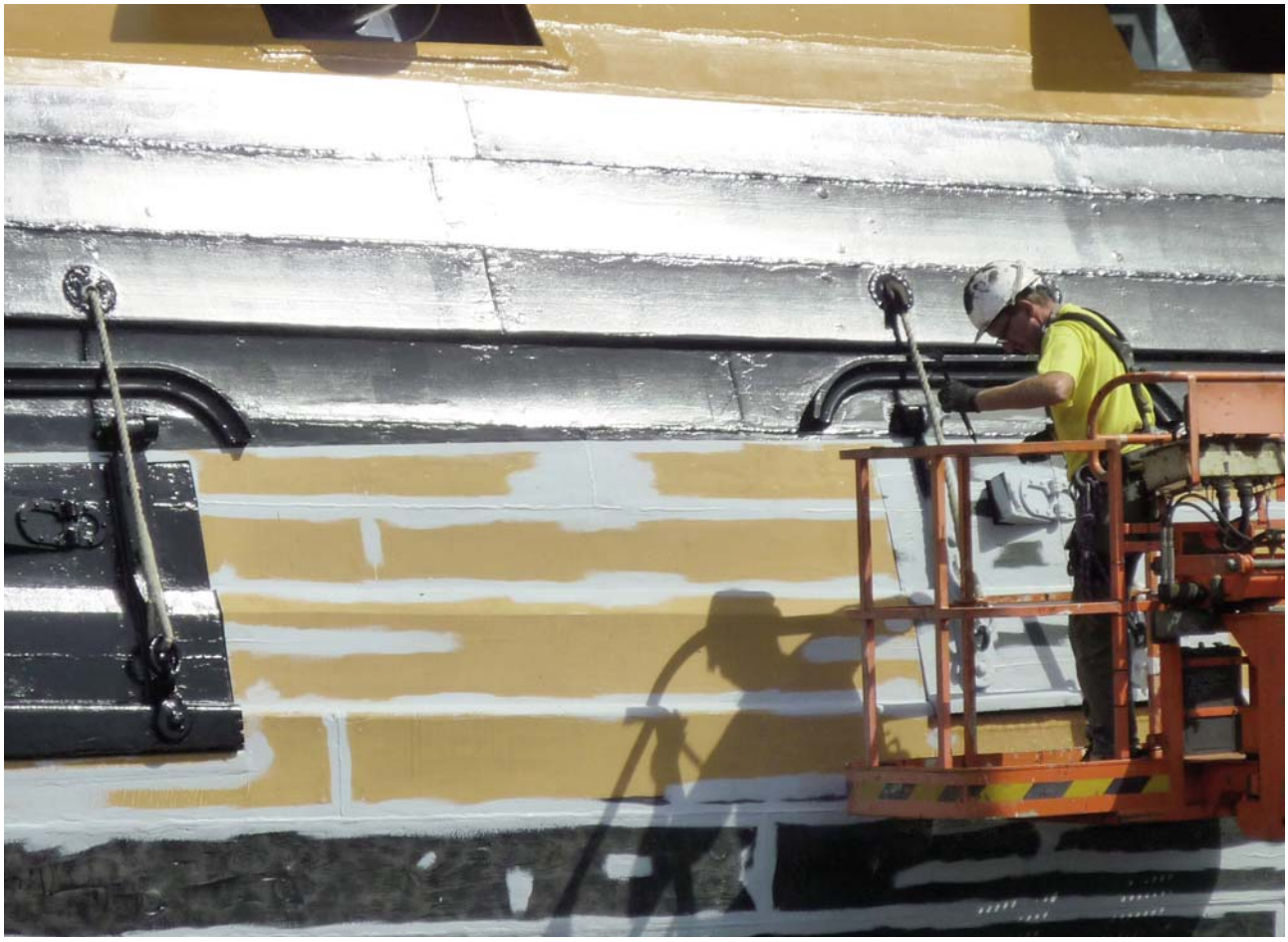

Plate 45. No. 1 Basin viewed from the poopdeck

Status and Statutory Controls

No. 2 Dock enjoys protection as part of the Grade I listed No. 1 Basin complex, and is set within the Portsmouth Historic Dockyard Scheduled Monument. Works carried out to the ship, dock or setting of the ship, which would physically impact upon the designated assets, or affect their historic character would therefore be unlawful if carried out without the appropriate consents (**Plate 45**).

> ***Policy 6*** *– The HMSVPCo will ensure that all necessary consents are in place before the commencement of any works likely to affect designated heritage assets.*

However, while the dock and the dockyard are statutorily designated, the ship itself enjoys no statutory protection through national designation, despite being part of the National Historic Fleet. However, the development of statutory protection policies by English Heritage (now Historic England) has led to a situation in which historic vessels which are permanently ashore or dry-docked, can be considered eligible for listing if they are deemed to be under threat.

The commitment of the HMSVPCo to treat the ship as an asset of the very highest order of heritage significance and to plan all works of repair, maintenance and presentation in accordance with very best conservation practice ameliorates the need for the ship to be considered for such protection.

> ***Policy 7*** *– The HMSVPCo will continue to approach the conservation of the ship by applying practises appropriate for an asset of the very highest level of national and international designation.*

Ownership and Management of HMS *Victory* Conservation Project

One of the key strengths of the HMS *Victory* Project is the commitment of the HMSVPCo; their Technical Committee, and Project Director to the successful implementation of the works to achieve their Vision for the vessel in its historical setting.

However, one of the key potential threats to the successful implementation of the conservation works in a timely fashion lies in the complexity of the organisational and decision-making structure currently in place. Those decisions which require discussion and approval at Board level need to be identified well in advance, as meetings are currently held only three times a year.

It is considered necessary to put a more streamlined decision-making structure in place, with delegated powers to make decisions on behalf of the Board in accordance with a set of pre-determined terms of reference. The exact constituency of this 'committee' will need discussion and agreement but should include representatives from the NMRN Director General's office, a member of the Strategic Development team, and should be chaired by the HMSV Project Director. A key factor in the selection of this executive team will be their ability to attend meetings on site in Portsmouth at least once a month.

> ***Policy 8*** *– The HMSVPCo will establish a project board, in accordance with NMRN project management principles, with a clearly defined role to manage the everyday running of the conservation project, and with delegated powers to make decisions in accordance with a pre-determined set of parameters.*

The project planning stage will include a number of crucial decisions relating to specific elements of the project such as the choice of materials, methods and order of work. Where necessary, the HMSVPCo will need to set up working groups of specialists to provide the necessary information and advice to inform their decision-making, which must be based on the professional advice provided.

> ***Policy 9*** *– The HMSVPCo will appoint specialist working groups of nationally recognised experts where necessary to facilitate timely and well-conceived decision-making.*

Ownership and Management within Portsmouth Historic Dockyard

Until recently, the components of the historic dockyard – buildings, docks, historic vessels – were in a number of different ownerships, with a complexity of legal agreements, leases and covenants governing the activities of the various owners. This situation had potential to render individual assets vulnerable due to the individual owners' lack of total control over developments affecting their assets. This situation has recently been considerably improved by the dissolution of Portsmouth Historic Dockyard Ltd, and the transfer of their ownership and responsibilities to the NMRN. While certain attractions within the dockyard remain in different ownership, however, it would appear that the systems of collaboration and communication between the various owners are currently working effectively, and while they continue to do so, the risk is small.

Policy 10 *– The HMSVPCo will continue to actively engage with other departments of the NMRN and other owners to ensure good working relationships and communication through which the dockyard and its various attractions can be developed to create one of the foremost visitor attractions in the country.*

HMS *Victory* derives considerable additional significance through its location within the near-contemporary, and functionally-related setting of the historic dockyard. Within this context, it is possible to appreciate something of the character and activity of an 18th- and 19th-century dockyard, and the survival of the ship, and its display within this context is of exceptional added value.

Similarly, the context of the ship within a group of historic vessels comprising the 16th-century *Mary Rose*, mid-18th-century *Victory*, the 19th-century warship HMS *Warrior* (1860) and the First World War monitor *M33*, gives it added significance through its role within the chronology of surviving warships. The group value of the collection of ships and their relationship with the dockyard buildings and structures is vulnerable to loss of significance through inappropriate development of any of the dockyard assets, or of the spaces between them, thus compromising the important setting of the assets, and the spatial and functional relationships between them.

The historic dockyard as a whole is of greater significance than the sum of its individual parts, and it is imperative that there is an overarching vision and framework for the conservation and presentation of the dockyard as a whole, into which the programmes of conservation of individual components fit. It is understood that a masterplan is being prepared for the dockyard, and it is imperative that the HMSVPCO continue to engage with its designers in order to promote the specific sensitivities and needs of HMS *Victory* within the wider framework.

Policy 11 *– Working with the NMRN and other owners, the HMSVPCo will actively support the conservation and sensitive future development of the historic dockyard as a whole, in order to:*

- *Enhance the relationship between the historic ships, museums and other dockyard components*
- *Ensure that the significance of the setting of HMS* Victory *is better understood and appreciated by visitors*
- *Ensure that good views of the ship are protected*
- *Ensure that the anticipated increased footfall in the dockyard takes the optimum capacity of* Victory *into account and considers the distribution of visitors between the ship, museum and other attractions on the site*
- *Ensure that there is sufficient appropriate space for* Victory's *conservation and for visitors to engage with same*
- *Ensure that the historic ships are presented as an important chronological group, and that any conflicts of interest between them are resolved as far as is possible.*

Plate 46. The White Ensign of the Royal Navy indicating the commissioned status of *Victory*

Role as a Commissioned Royal Navy Flagship

The transfer of ownership of *Victory* from the Ministry of Defence to the NMRN by way of the HMSVPCo, has not removed her status as a commissioned warship, and is now the flagship of the First Sea Lord. As such the ship has a hugely symbolic and ceremonial role within the RN which needs to be accommodated and provided for within any programme of works to the ship, in order that they do not conflict with the timely implementation of the conservation works programme. It is therefore vital that the HMSVPCo and RN liaise closely at early stages of project planning.

> ***Policy 12*** *– The HMSVPCo will continue to engage actively with the RN to ensure that the ship's dual roles as the Flagship of the First Sea Lord and a major visitor attraction continue to be viable and mutually beneficial.*

As a commissioned ship, the RN has a presence on board 24/7, and is responsible for the security of the ship when it is not open to the public. The RN retains office space for administrative functions on board, as well as catering facilities and a Senior Ratings Mess. It is imperative that there is close communication between the RN and the NMRN acting as the agent for the HMSVPCo to ensure that the areas of responsibility of each organisation with respect to the security, uses and condition of the ship, are clearly demarcated (**Plate 46**).

Royal Navy personnel currently occupy offices and cabins in the stern quarters of the middle gundeck, in the area of the ship which originally provided living quarters for *Victory's* officers. The presence of RN personnel results in both positive and negative issues. On the positive side, the ongoing occupation of this area means it was excluded from the early 20th-century reconstruction to its 1805 configuration. Another positive benefit for visitors is the presence of RN personnel, reinforcing the fact that the *Victory* is a commissioned vessel, and contributes to its naval character. On the downside, however, the occupation excludes this area of the ship from potential public access, where later uses of the ship could be best interpreted.

> ***Policy 13*** *– A collaborative review of the continued permanent presence of RN personnel on board will be undertaken by HMSVPCo and the RN every five years.*

Management of Visitors

By far the majority of the visitors to the ship are paying members of the public, or school groups. However, other groups who also use the ship include guests receiving hospitality from the RN, HMSVPCo or NMRN, guests of individuals who have hired the ship for private functions, and other RN staff. These visitor groups have certain competing requirements of the ship, and all have implications for wear and tear to the surviving historic fabric of the ship.

Visitor numbers to the dockyard increase year on year, and the aspirations of the NMRN and other Portsmouth Historic Dockyard stakeholders to increase visitor numbers to 1 million per annum have serious implications for the fabric of the ship and the quality of the visitor experience on board (**Plate 47**).

> ***Policy 14*** *– The HMSVPCo will continue to work closely with the NMRN to ensure appropriate management of increasing visitor numbers through the better spread of visitors between ships, other attractions, the museum and other exhibitions. An appropriate methodology will be developed through which the impact of visitors on the fabric of the ship can be monitored, and mitigation proposals agreed and implemented.*

Plate 47. Visitors navigating the middle gundeck

At present, the route of visitors through the ship is somewhat awkward, and results in bottlenecks and/or pressure to proceed rather than stop and appreciate, which compromises visitor experience and communal value.

At present, there is no visitor access into the dry dock. This is unfortunate, as it is from vantage points beneath the ship that its striking form, tumblehome profile and the authentic fabric of the keel can best be appreciated. While lack of access does not detract from the surviving evidential value of these important aspects of the ship, it does reduce their communal value, and compromises appreciation of aspects of the ship's exceptional aesthetic qualities (**Plate 48**).

The proposed alterations to circulation through the ship, as set out in the Interpretation Strategy undertaken by Maytom Associates and Erich Kadow in 2014, and the proposals for a new system of support for the vessel (Fenton Holloway Ltd 2014), provide a timely, yet urgent opportunity to reconsider this aspect of accessibility. If it is agreed that it is a long term aspiration of the HMSVPCO to facilitate access into the base of the dry dock, this will need to be addressed in the design of the new system of support, and also in the decision-making process for the repair and/or reconstruction of the fabric of the dock.

> ***Policy 15*** *– The Board of Trustees will, as a priority, give serious consideration to the potential for developing appreciation of the setting of the ship in the dry dock by facilitating visitor access into and around the dock in the medium to long term.*

Plate 48. *Victory* viewed from the dock illustrating the impressive scale and form of the outer hull

Safety, Health and Environment

The HMS *Victory* Project Director is responsible for ensuring that all aspects of the occupation and use of the ship and its immediate setting comply with current SHE regulations.

Policy 16 *– The fire detection and suppression system deployed in the vessel will be selected in consultation with the Fire Service and other appropriate agencies. The chosen system will take due account of the aesthetic impact on the presentation of the ship. The system will be regularly checked and, if considered necessary by the Fire Service, upgraded to ensure that protection remains 'state of the art'. The design of any new system to be introduced will be accompanied by a Heritage Impact Assessment.*

Policy 17 *– Protocols for any hot processes to be undertaken on, or near the ship, will be established and implemented.*

Policy 18 *– Protocols for all electrical equipment used on, or near the ship, will be developed and implemented to ensure the highest safety standards and minimise the risk from fire.*

The fire escape tower at the north-east corner of the ship has been identified as having a major negative impact on the setting of the ship and the listed dock, and of compromising the aesthetic value of the ship and the dockyard. While this additional means of escape is vital in view of the number of visitors on board the ship at any one time (a number which is set to rise further) the design of the feature is entirely functional, and is unsympathetic in such close proximity of a vessel of international significance. It would be hoped that a more sympathetic design could be achieved to provide the necessary escape function; possibly in tandem with another function (**Plate 49**).

Policy 19 *– The HMSVPCo and NMRN will commission an options appraisal and design for a new facility incorporating the escape route from the quarterdeck.*

Plate 49. The current fire escape which represents a considerable reduction in the aesthetic appreciation of *Victory* from the dock side

10 THE SHIP

Gaps in Our Understanding

Much of the received understanding of the history of the ship used in the compilation of the CMP comes from secondary sources whose reliability has not been empirically tested by reference back to primary sources. This makes it subject to the compounding of errors, and leading to legend passing for fact. While this level of academic research is beyond the scope of a CMP, the significance of the asset fully justifies the most rigorous of research.

A number of comprehensive studies of the history, function, structure, fabric and condition of the ship have been undertaken in the last five years, which have added significantly to our understanding of the ship. Most notably, a detailed survey of the rase marks on the timbers of the deck structures has demonstrated clearly the location of surviving historic fabric. A similarly comprehensive survey of the paint finishes throughout the ship has also been undertaken, which has added considerably to our understanding of the finishes throughout different areas of the ship, both functional and decorative, and provided additional information relating to the relative age of individual timbers. The information from these and earlier surveys and records currently exist in different locations and independent documents. It is important that this valuable primary information is collated and presented in a single digital timeline for the ship, rigorously cross-referenced to the primary source material. This will provide a single source of information for managers, contractors, students and, if published on the web, would be an extraordinary resource for the public. This could be conceived as an educational project using volunteers, and could identify valid subjects for PhD theses.

> ***Policy 20*** *– The HMSVPCo will aim to develop a digitised timeline of the primary source material (text and images) relating to the fabric and uses of HMS* Victory *against which the secondary sources can be reviewed and validated.*

New information from source material discovered through this process will be added to the intelligent model database for the ship along with fabric newly recorded during the project. While there remain significant gaps in our understanding of some periods in the ship's history, however, it is not considered that any of these result in our being unable to plan an appropriate forward programme of the re-support, repair and interpretation of the ship.

Past Approaches to the Conservation of the Ship

Past approaches to the conservation of the ship have resulted in the loss of a considerable quantity of historic fabric, but over the past 30 years the character of work has developed increasingly towards a more preservation-led approach. Interventions in the fabric since the late 1950s also provide some valuable lessons, both practical and theoretical, which can be used to guide the ship's current managers (**Plate 50**).

Past problems include:

- The justification for making changes and replacing elements was not always sufficiently rigorous in the light of significance
- Elements that were replaced were not always recorded or assessed for value to determine whether they should be retained or discarded
- Materials and techniques such as timber species and caulking material were used without sufficiently good empirical evidence of their performance in the context in which they were to be employed, leading to material failure
- Historic fabric was unnecessarily lost by applying a traditional shipwright's approach rather than a conservation approach to degraded timber

Plate 50. Sketch of *Victory* undergoing reconstruction in the late 20th century

- Measures to deal with infestation were compromised by time pressures meaning that treatments were partial and drying time inadequate
- Timber lamination was carried out *in situ* using inappropriate timber and ineffective adhesives and has failed prematurely. Point loads exerted by the additional props inserted to supplement the cradles has led to the displacement of hull planks
- Risks arising from works on the ship were not always adequately controlled eg, paint stripping which resulted in a fire.

Structural Support of the Ship

The survey and analysis of the present support system and structural integrity of the ship (Fenton Holloway Ltd 2014) '*showed the ship in its present condition to be stable and capable of resisting all foreseeable short and medium loadings without distress'... but that 'the main problem is long term deflection under moderate stresses*'.

The key findings of the survey were that:

- Deflection of the hull between the cradles ... is much larger than normal allowances for long term loading in timber and that this deflection caused non-uniform loading in the internal structure which produced displacements in apparently unrelated areas of the ship
- The hull planking above the waterline contributed significantly to the longitudinal stiffness of the hull, so that its current deterioration is exacerbating the excessive deflection between the cradles
- Temporary removal of sections of planking can accelerate the deflection between the cradles
- The deflection of the hull between the cradles can be arrested by the installation of a suitable propping system which supports the frames at close centres.

The report recommended the installation of two lines of props on each side of the hull and the removal of the support of the existing cradles. It also recommended that the system be equipped with load-monitoring sensors to allow adjustment of the support as the ship 'relaxes' and the plank and frame stresses are reduced.

Policy 21 *– The re-support of the ship will be the number one structural priority of the HMSV Project. HMSVPCo will rely on the specialist advice of Fenton Holloway Ltd with regard to the need to reinstate the section of removed hull planking before the re-support exercise.*

While 3-D modelling and analysis has allowed the optimum engineering solution to the re-propping of the ship to be identified, the potential impact of this system on the structure and fabric of the listed dock, on the potential for visitor access into the dock base, and on the exceptional aesthetic value of its underwater lines have yet to be analysed.

Policy 22 *– The potential heritage impact of the preferred engineering option for the re-support for the vessel will be rigorously assessed in terms of the evidential, historical, aesthetic and communal values of the ship and dock, in accordance with the guidance for the preparation of a Heritage Impact Assessment provided in Part 4 of the CMP.*

Intrinsic Structural Integrity of the Ship

The Internal Shipwright Survey (Nielsen & Co. 2012), identified numerous defects in the fabric and fixings of the ship which have potential to reduce the intrinsic structural integrity of the ship. In theory, and if left un-remedied, these could ultimately result in catastrophic failure of the ship's structure, and the major loss of evidential value. The most significant of these include the lack of fastenings between knees and hull framing, the incorrect sizing of replacement fastenings, and the deformation of deck structures to the aft of the mast positions.

However, in reality, the ship is over-engineered for its present static role by a magnitude of *c.* 6 (McNeeney pers comm.), given that it was designed to withstand rough seas and cannon fire. These defects were applied to the intelligent model by Fenton Holloway Ltd, and the intrinsic structural integrity of the ship was demonstrated to be under no imminent threat as a result. While these defects will require addressing in due course, they are of lesser priority than the resolution of the ship's structural support.

Policy 23 *– Rectifying the deficiencies in the fastening of the ship's structure and fabric identified in the Shipwright survey, will be timetabled appropriately within the Conservation Programme Plan currently being prepared by BAE Systems, according to their relative urgency.*

Heritage Impact Assessment (HIA)

It is imperative that the potential heritage impact of all proposed works to the ship (and dock) is fully assessed at the project planning stage, to allow time for alternative methods or proposals to be considered and selected without unacceptable time delay affecting the project programme. All works will need to be fully justified in terms of the ship's significance. Guidance on the content and structure of an HIA is provided in Part 4 of the CMP.

Policy 24 *– All preferred options for works of re-support, repair, servicing, and interpretation shall be subject to a rigorous heritage impact assessment, based on the assessment of significance presented in Part 2 of the CMP. Where the HIA concludes that the degree of negative impact is unacceptable, alternative proposals will be prepared and their impact further tested.*

Condition and Repair of the Ship's Fabric

The *Internal Shipwright Survey* (Nielsen & Co. 2012) identified four main issues affecting the ship which have potential to make it vulnerable to loss of heritage significance:

- Water ingress – due to lack of maintenance, especially caulking of weather decks, and through the hull planking
- Decay of timber – due to water ingress, poor choice of timber and poor workmanship and lamination
- Local movement of timber – caused by inadequate number, dimension and quality of fastenings (see Part 1, **HMS *Victory*: Overall Stability**)
- Overall movement of structure

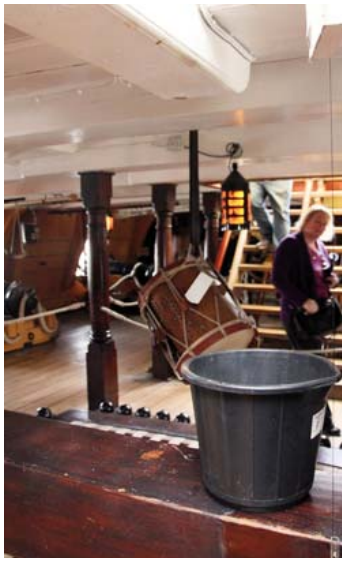

Plate 51. Remedial measures during episodes of water leakage through the deck above

The singular most critical issue relating to the long term preservation of the historic fabric of the ship is that of water ingress, and the ongoing waterlogging of the timbers, especially where in an enclosed context. These issues present the most urgent and greatest challenge to the ship's managers, exacerbated by the scale and complexity of the ship and the imperative to retain its role as the First Sea Lord's Flagship and a major visitor attraction viable throughout the conservation programme (**Plate 51**).

> ***Policy 25*** *– Major programmes of repair, and their constituent phases, will be timetabled in consultation with key stakeholders including the Royal Navy, and the NMRN Visitor Services, Resources and Heritage Directorate to ensure that the other uses of the ship do not delay or otherwise jeopardise the conservation works, and also to ensure that, wherever possible, the conservation works can be appropriately presented in order that they can provide an additional positive component of the visitor experience of the ship.*

Previous choices of timber species and methodology, particularly in respect of the hull planking, have been shown to have been inappropriate, and to have actually accelerated the deterioration of the ship's fabric. It is vital that all future decisions are based securely on clear evidence of suitability (**Plate 52**).

In order that the decision-making process with regard to the selection of materials is robust and transparent, a hierarchy will need to be established by which the relative sources of data used in the selection of each material can be suitably weighted. Guidance on this process is set out in Part 4. Each selection process will need to be fully documented, and these documents retained within the conservation archive for the ship.

> ***Policy 26*** *– In consultation with the appointed specialist consultants and contractors, and based on research, precedent and/or modelling, consideration will be given to the appropriate weight to be given to each source of data available to inform the selection of new material for use in the conservation project.*

> ***Policy 27*** *– A decision will be made at the earliest opportunity, and in accordance with Policy 26, regarding the choice of timber species for necessary replacement of the structure and planking of the ship, to facilitate the timely purchase and seasoning of suitable timber, if necessary.*

Plate 52. An indication of a 'sprung' layer of laminate on a plank of the outer hull towards the bow

Policy 28 *– In principle, timber species employed in the conservation and repair of the ship's structure will be:*

- *Known by experience, experiment or modelling to perform well in the location proposed*
- *Ethically sourced*
- *Visually appropriate for its location on the ship.*

Policy 29 *– Material to be removed will generally be replaced on a 'like-for-like' basis except where:*

- *The material to be replaced has proven to be defective and ineffective for its role*
- *The right quality of timber of the selected species is unavailable at an acceptable cost*
- *Past experience on* Victory *or comparable vessels has proven that an alternative would perform significantly better in terms of durability*
- *An alternative would bring particular benefits to the character and presentation of the ship.*

Policy 30 *– The appointed specialist consultants and contractors will use the 3-D Intelligent Model to analyse the effect of the removal of different surface-area sections of hull planking to ensure that the longitudinal stiffening of the hull is not compromised as a result of the work.*

Policy 31 *– HMSVPCo will consider developing a strategy for acquiring, managing and seasoning stocks of suitable timber species and quality as a legacy for the future maintenance and repair of the ship over the longer term.*

Policy 32 *– The uniqueness of HMS* Victory *and its value as an archaeological artefact of international significance dictates that every effort should be made to utilise traditional materials and methods for visible fastenings. A specialist assessment should be undertaken (following decisions regarding the timber species to be used) and recommendations made with regard to the appropriate fixings to be used at locations above and below the water line, and in exposed and concealed locations.*

Policy 33 *– The use of non-traditional materials and methods in the effort to create a watertight envelope will be acceptable provided that:*

- *It can be proven that they are more effective, either by experience elsewhere, or through off-ship experimentation/modelling*
- *Their impact on the ship's structure and appearance is acceptable.*

Masts, Spars and Rigging

The lower masts currently comprise the wrought iron masts surviving from the 19th-century HMS *Shah*. Although not authentic to *Victory* in terms of material or dimensions, the masts are of considerable intrinsic significance, and their location on board *Victory* provides them with an appropriate setting, while also providing an important functional and aesthetic element of the older ship.

Due to their inadequate length for their current location, however, their re-use has necessitated the introduction of additional structure to support their base, thus introducing a point of weakness at the junction between the two components. Rotational movement of the main mast at this junction in January 2013 caused undue loading to be exerted on structure to the fore of the mast, and resulted in cracking of one of the timber mast partners. In response to this issue, anchor points were fixed to the dock side and adjustable tensioned guys installed to hold the masts in equilibrium. It is important that regular monitoring and adjustment of these anchor points continues, to prevent adverse loading of the ship's structure (**Plate 53**).

Plate 53. Evidence of movement of the main mast and the slipping of the mast chocks along the forward edge

Policy 34 *– A programme of regular monitoring and adjustment of the tension cables will continue at appropriate intervals to ensure that the lower masts impose no unacceptable loading on the deck structures. This work will be carried out by, or under the supervision of Fenton Holloway Ltd.*

The removal and continuing absence of the upper masts, spars and rigging has been identified in Part 2 of the CMP as having a negative effect on the ship's potential aesthetic value, both intrinsically, and in terms of its contribution to the character of the historic dockyard. However, these components add to both the dead weight of the ship, and more significantly to the live loading applied to the ship by the wind. While the partial, but temporary loss of aesthetic value is unfortunate, it is imperative that the more significant issues relating to the re-support and structural integrity of the ship are comprehensively resolved before these aesthetic components are reinstated.

Policy 35 *–The reinstatement of the upper masts, spars and rigging will not be considered until all conservation and repair works with potential to result in the temporary reduction in structural capacity of the ship, have been completed.*

The existing upper masts, spars and rigging are all replicas of their historic precedents and therefore have no intrinsic evidential value, although their illustrative and aesthetic values are considerable. The potential use of modern, lighter-weight and/or stronger materials in their replacement or repair would therefore not compromise their existing heritage significance.

Policy 36 *–The use of non-traditional materials in the repair or replacement of elements of the upper masts, spars and rigging will be acceptable provided that they do not negatively impact on the illustrative or aesthetic qualities of the ship.*

Archaeological Recording and Conservation Archive

HMS *Victory* has been shown to be a highly complex archaeological artefact of international significance. Any alterations to the fabric of the ship which are not archaeologically recorded could lead to significant loss of evidential value. Some periods of repair and refurbishment of the ship have been relatively well recorded in the past, while others have resulted in gaps to our understanding. A great deal of historic fabric has been lost without recording making the intrinsic value of the surviving fabric even greater through rarity.

The Intelligent Model of the ship created by means of a comprehensive laser scan (Downland Partnership for Fenton Holloway Ltd 2014) provides the means by which to gather together all known information about the fabric of the ship in an HMS *Victory* Conservation Archive. The database can be used to cross-reference to known hard copy information, and can be easily updated with information newly acquired through archaeological recording of works to the ship's fabric.

It is imperative that all future works affecting the fabric of the ship be subject to the appropriate conservation response; both for fabric that is to be retained and preserved in the ship and the archaeological recording of fabric earmarked for removal prior to the commencement of works. Archaeological monitoring and recording during works will also be considered where previously hidden fabric is newly exposed. The information deriving from this recording will be added to the HMS *Victory* Conservation Archive.

Policy 37 *– All proposed interventions into the fabric of the ship will be subject to a process of assessment with regards* in situ *historic fabric prior to the commencement of works. This process will establish:*

- *Where the historic fabric is located using the information provided in the Gazetteer in* ***Appendix 2****, and BIM intelligent model*
- *An assessment of the value and potential risk to historic fabric through HIA; and*
- *The development of appropriate solutions for the conservation of the identified fabric using the most appropriate up-to-date conservation practices through consultation between the HMSVPCo and conservation specialists for the Project.*

Policy 38 *– All proposed interventions into the fabric of the ship will be subject to archaeological recording prior to the commencement of works and, if appropriate, to archaeological monitoring and recording during fabric removal. The archaeological record will be deposited within the HMS* Victory *Conservation Archive.*

Policy 39 *– Historic fabric removed from the ship will be recorded, assessed for value, and all valuable material will be appropriately labelled, catalogued and stored in appropriate conditions.*

Policy 40 *– A disposal policy will be developed by HMSVPCo to ensure that material that is of no historic or archaeological interest can be disposed of.*

Services

Service runs through the ship, particularly wiring, and those connecting between the ship and dock are highly visually intrusive in the context of an 18th-century wooden warship. Throughout the ship the majority of wiring is surface mounted, and in many cases multiple cables and wires run in parallel along timber members (**Plate 54**).

These features adversely affect the evidential value of the ship by physically impacting on the timbers to which they attach, and in cases obscuring rase marks and other notable features of the timber structure. They also negatively impact on the aesthetic character of the interiors of the ship by introducing overtly modern features in an untidy configuration.

Plate 54. Evidence of wiring noted at the break of the poop on the quarterdeck

Plate 55. Intrusive firefighting apparatus and singage clearly evident in the hold

While it is accepted that features such as lighting, fire detection, fire suppression (when installed) are vital to the security of the ship and all persons on board, it is considered imperative that the plethora of incrementally installed cabling is rationalised to reduce its visual impact. It is recommended that a detailed survey of the servicing of the ship is undertaken, using data from the 3-D model (laser scan) and visual observation, with the aim to designing a less intrusive scheme. The idea of introducing conduits or hidden channels along elements of the deck head structures should be explored (**Plate 55**).

Similarly, the corporate hospitality on board requires the provision of catering facilities, water supply and drainage. This is particularly intrusive within the dry dock, and the consideration of visitor access into the dock, along with the design and method of the new propping system should consider how the water and drainage runs could be incorporated in, or alongside structural elements to make them less obtrusive.

> ***Policy 41*** *– The HMSVPCo will commission a survey of all the service runs throughout the ship and dock, together with recommendations as to how the necessary features could be better directed so as to reduce visual impact, and minimise physical impact.*

Maintenance Regime

The greatest threat to any built heritage asset is deterioration of its physical fabric through lack of regular conservation-led maintenance, and thereby loss of historic fabric and the evidential value it holds. Long term, gradual degradation can be more damaging than an isolated incident of damage, and therefore regular inspection, reporting and timely remedial action is imperative to maintaining the improved condition of the fabric in the long term (**Plate 56**).

Plate 56. Vegetation growth on the outer hull

Policy 42 *– An appropriate schedule of maintenance inspections and reporting will be drawn up by the appointed contractors and adopted by HMSVPCo. The frequency of inspections and the items to be inspected at different intervals will be agreed by the Board of Trustees. An adequate annual budget will be identified for the inspections and reporting, and a contingency made available for identified necessary remedial works. The inspections will be carried out by a suitably qualified surveyor, using a pro-forma recording sheet, and the reports appropriately filed.*

Review of the CMP and Action Plan

The CMP will require review throughout the life of the Conservation Project at such time as is deemed appropriate to ensure that the usefulness of the plan is cognisant with the developments of the Project and at such time that new information that furthers understanding, including developments in conservation approaches are maximised to help guide the safeguarding of the heritage significance of the ship and its setting to best effect.

Policy 43 *– The CMP will be reviewed by the HMSVPCo at appropriate junctures during the course of the Conservation Project as required, or as a minimum, on a five-yearly basis. In addition the HMSVPCo will review the Action Plan on a bi-annual basis to ensure that the actions are cognisant with the progress of the Conservation Programme Plan and Conservation Project.*

PART 4 – IMPLEMENTATION PLAN

11 IMPLEMENTATION

Introduction

The conservation of such a complex and internationally significant artefact as HMS *Victory* is infinitely more complicated than that of many buildings, sites and artefacts for which Conservation Management Plans are generally written. Part 3 of the CMP has therefore provided a 'Policy Framework' within which the conservation of the ship will be undertaken, rather than being prescriptive about the materials and methods through which it will be achieved. In many cases, these policies have been prepared to *guide* the decision-making process, rather than to prescribe their outcomes.

The scope of an Action Plan (see below, **Outline Action Plan**), as conceived in the guidance on their preparation, is not considered appropriate for HMS *Victory*, and a comprehensive Conservation Programme Plan is being prepared in its stead. This will provide the detailed specifications and methodologies for the conservation works which together comprise the HMS *Victory* Project

Part 4 of the CMP has therefore been prepared with a view to providing a framework for the decision-making processes implied by the conservation policies. It will also provide some guidance on best practice in the approach to decision-making; how different types of data/information are to be given hierarchical weighting in the decision-making process; and guidance on the preparation of the Heritage Impact Assessments necessary to test the potential impact of proposed works at appropriate stages of the programme.

Part 4 of the CMP is supported by a tabulated chronology of 'actions' in the form of further detailed 'studies' or informed 'decisions' required at appropriate stages in the conservation programme in order to satisfy the policy requirements of the CMP. This 'live' document will provide an ongoing management tool for use and updating by the Project Manager throughout the Conservation Project.

General Guidance on Implementation

The HMS *Victory* Programme Project Director will be responsible to the Board of the HMSVPCo. for the implementation of the CMP policies. It will be the Project Manager's responsibility at the outset of individual phases of conservation work, to identify which CMP policies are relevant to the works, and to advise all those involved in the project planning and execution of the works of these policy constraints.

Weighting of Datasets in the Decision-making Process

Every stage of this complex conservation project will involve important decisions with regard to such issues as:

- Choice of materials
- Selection of contractors
- Order of works
- Detailed methods of work
- Integration with other uses of the ship.

Many of these decisions, particularly with regard to choice of materials, order of work and methods, will be made as part of the preparation of the Conservation Programme Plan, while others will necessarily come about later in the process.

It is important that the decision-making process relating to such 'heritage-sensitive' issues as choice of materials, methods of construction and paint finishes, are sufficiently robust, both to bear peer scrutiny, and to ensure that the conservation of this internationally important ship is undertaken to the very highest conservation standards.

Decisions will need to be based on the very best information available, and where this is considered inadequate, new empirical research will need to be considered. Potential sources of information relating to decisions on the most appropriate materials to be used might include:

- Historical records relating to the original material
- Historical records relating to failures of the material
- Evidence of use in the conservation of other ships
- Manufacturer's published information
- British Standard information
- Evidence from specialists in the field
- Empirical testing of material under control conditions.

The appropriate relative weighting of information deriving from these and other sources will depend on matters such as:

- The perceived reliability of individual datasets
- The length of successful application in other conservation projects
- The scale and scope of experimentation from which the results derive.

As well as being imperative that all decisions are robust and supportable, it is also important that the decision-making process is well documented and transparent, and that the process documentation is included in the conservation archive for the ship. This will allow any decision to be retrospectively reviewed if necessary. It is also important that the relative weighting attributed to each dataset in the making of each decision is also clearly set out in the conservation record, in order to inform future decision-making, or that of other conservation projects.

Guidance for the Preparation of a Heritage Impact Assessment

Policy 24 in Part 3 of the CMP requires that a Heritage Impact Assessment (HIA) be prepared to assess the potential heritage impact of all key stages of proposed conservation works, prior to their implementation, to ensure that the work will not adversely affect the heritage significance of any component or aspect of the ship.

The scope and structure of the HIA will be commensurate with both the scope of conservation works proposed, and the relative significance of the components of the ship which they affect. The significance of individual components or areas of the ship will be derived from the Gazetteer, while more generic values of the ship will be derived from Part 2 of the CMP. The NMRN will be responsible for the undertaking of HIAs as required.

The recommended structure and content of the HIA is as follows:

- Introduction
- Origins and Significance
  - Of the structure, component, area or specific fabric (receptor) likely to be affected by the specific works to which the HIA relates
  - This will be derived from the Gazetteer entry for each of the relevant structural or area components of the ship which are likely to be affected by the works
  - Reference will also be made to the contribution that these potential receptors make to the overall significance of the ship, derived from Part 2 of the CMP
  - Where appropriate, a more detailed assessment of the relative significance of the affected fabric, components or areas will be prepared to supplement those above
- Vulnerability
  - Assessment of the ways in which the specific identified values and significance of the receptor is vulnerable to loss or negative impact – ie, their sensitivity to change
- Outline of Works
  - A very brief outline of the conservation works being proposed, sufficient to identify the main points of potential impact
- Assessment of Impact
  - Based on the relative intrinsic significance of the 'receptor', its contribution to the wider values of the ship, and its identified sensitivity to change, the potential impact of the proposed works will be calculated on a four point scale, as follows:
    1 – The works as proposed will have no negative impact on heritage significance
    2 – The works as proposed will have a negligible impact, or the magnitude of impact is considered acceptable in view of the scale of potential benefits of the work
    3 – The impact of works as proposed could be made acceptable through the implementation of specified mitigation measures
    4 – The magnitude of the proposed works is considered unacceptable and it will be necessary for alternative proposals to be identified.

12 COMPLIANCE

In order for the policies to provide an effective framework within which the conservation works are carried out, it is important that there is an effective mechanism in place through which compliance with the policies can be monitored and ensured. It is proposed that the Project Director, or a suitable person nominated by them, is responsible for ensuring compliance.

Compliance should be reviewed at the following stages:

- At the first stage of design of works
- When project design is complete and the HIA prepared
- During implementation of the specified works
- At completion of the works and archiving.

13 REVIEW

In order that the CMP remains a valid and useful management tool to guide the Conservation Project for HMS Victory, it should be reviewed on a five-yearly basis.

14 OUTLINE ACTION PLAN

Stage 1 – Understanding

Action Number	Action	Action Type	Issue	Policy Number(s)	Responsibility	Policy Compliance Outputs	Conservation Priority
01	Formal adoption of CMP based on the NHS-UK guiding principles	Decision	9.1	1, 2	All stakeholders	Meeting minutes recording adoption of CMP	Governance, Stabilisation, Fabric and Interpretation
02	Preparation of terms of reference for new project board	-	9.6.3	8	HMSVPCo	Archived document setting out terms of reference	Governance
03	Appointment of project board to manage project	Decision	9.6.1–9.6.3	8	HMSVPCo	Meeting minutes approving members of project board	Governance
04	Appointment of specialist working groups as necessary	Decision	9.6.4	9	HMSVPCo	Written	Governance
05	Prepare and agree proposals for making hull weather-tight prior to re-support works	Study/ decision	10.6.1	21	Prime Contractor/ HMSVPCo	Approved methodology and specification	Stabilisation
06	Prepare detailed proposals for re-support of ship	Study	10.3	21	Fenton Holloway Ltd	Written and illustrated proposal document	Stabilisation
07	Agree detailed proposals for support of ship with statutory consultees and obtain necessary consents	Decision	9.5, 9.7	6, 10	HMSVPCo, PCC, HE	Statutory consent documents	Stabilisation
08	Analyse effect of non-replacement of hull planking prior to re-supporting of ship	Study	10.3.1–10.3.3	21	Fenton Holloway Ltd	Analysis report	Stabilisation, Fabric
09	Make decision regarding long-term public access within dry dock	Decision	9.9.4, 9.9.5, 10.3.4	15, 22	HMSVPCo	Meeting minutes recording adoption of CMP	Fabric, Interpretation
10	Amend Interpretation Strategy to reflect decision above	Study	9.9.4–9.9.5	15	Petrichor	Revised Interpretation Report	Interpretation
11	Adoption of Interpretation Strategy	Decision	N/A	N/A	HMSVPCo	Meeting minutes recording adoption of revised Interpretation Strategy	Interpretation
12	Undertake survey of No. 2 dry dock with recommendations for replacement of earlier cement repairs if appropriate ref. **2** above	Survey/ decision		3, 6, 22	Specialist consultant, HMSVPCo, HE	Survey report and recommendations	Fabric
13	Prepare proposals for rectifying deficiencies in the fastenings throughout the ship	Study		23, 31	Specialist contractor	Proposal report	Fabric

Action Number	Action	Action Type	Issue	Policy Number(s)	Responsibility	Policy Compliance Outputs	Conservation Priority
14	Undertake study of appropriate timber species	Study	10.6.3	26–29	Specialist consultant/ HMSVPCo	Report and recommendations re timber	Fabric
15	Undertake study of appropriate materials and methods for fixings	Study	10.6.1	32	HMSVPCo	Report and recommendations re materials and methods	Fabric
16	Undertake study of appropriate new fastenings for use in ship	Study	10.6	32–33	Specialist contractor	Recommendation report	Fabric
17	Prepare strategy for acquiring and managing timber	Study	10.6.3	31	HMSVPCo & contractors	Approved strategy document	Fabric
18	Commission a survey of all service runs and cabling through the ship and dock	Survey	10.9	41	HMSVPCo/ specialist contractor	Report and survey drawings showing existing services	Fabric
19	Approve proposals for new fire suppressant system throughout ship	Decision	9.1	16	HMSVPCo	Meeting minutes recording approval	Fabric
20	Commission options appraisal for replacement fire escape	Study	9.10.2	19	HMSVPCo/ specialist contractor	Options report	Fabric, Interpretation
21	Undertake HIA as required for all proposed physical interventions to the ship and dock (re-support, repair, servicing, and interpretation); including the conservation and preservation of *in situ* historic fabric in concert with **39** below, and the effect of the works as a whole	Study	10.5.1, 10.6.1, 10.6.2, 10.6.3, 10.6.4	24–33	NMRN	HIA Report/s	Understanding, fabric, Conservation Management, Retention of Heritage Significance, interpretation
22	Incorporate existing archaeological information into BIM intelligent model	Study	10.8	N/A	NMRN	Enhanced BIM	Retention of Heritage Significance
23	Agree timetable presented in CPP with key stakeholders	Decision	10.6.2	25	All stakeholders	Meeting minutes recording approval	Governance
24	Prepare schedule, specifications and pro forma reporting requirements for maintenance inspections	Study	10.1	42	Prime Contractor	Maintenance schedule and pro forma	Fabric
25	Complete and adopt Conservation Programme Plan	Study/decision	N/A	N/A	Prime Contractor/ HMSVPCo	Approved CPP	Fabric

Stage 2 – Conservation Process

Action Number	Action	Action Type	Issue	Policy Number(s)	Responsibility	Policy Compliance Outputs	Conservation Priority
26	Prepare protocols for hot working practices in and around ship	Study	9.10.1	17	Prime Contractor	Approved protocol document	Fabric
27	Prepare protocols for use of electrical equipment in and around ship	Study	9.10.1	18	Prime Contractor	Approved protocol document	Fabric
28	Prepare strategy for the retention/discard of historic fabric for dissemination to all contractors	Study		39–40	HMSVPCo/ Prime Contractor	Strategy report disseminated to all contractors	Fabric, Retention of Heritage Significance
29	Implement major works to re-support the ship	Capital works	10.3	17–18, 21–22	Fenton Holloway Ltd and specialist contractor	Monitoring and compliance reports	Stabilisation, Fabric
30	Install new fire suppressant system throughout ship	Capital works	9.1	16	Specialist contractor	Monitoring and compliance reports	Fabric, Retention of Heritage Significance
31	Commence internal modifications required to implement Interpretation Strategy	Capital works	10.5, 10.8,	24, 37–40	Petrichor/ specialist contractor	Monitoring and compliance reports	Fabric, Interpretation
32	Commence replacement of hull planking	Capital works	9.3, 9.4, 9.5, 9.10, 10.5, 10.6, 10.8	3, 4, 7, 17, 18, 24, 25, 26–28, 29, 31, 32, 37–40	Prime Contractor/ specialist contractor	monitoring and compliance reports	Fabric
33	Undertake conservation of upper masts, spars and rigging prior to reinstatement	Capital works	10.7.2	36	Specialist contractor	Monitoring report	Fabric, Interpretation
34	Reinstate upper masts, spars and rigging	Capital works	10.7.1	35	Specialist contractor	Monitoring report	Fabric, Interpretation

Stage 3 – Ongoing/Maintenance

Action Number	Action	Action Type	Issue	Policy Number(s)	Responsibility	Policy Compliance Outputs	Conservation Priority
35	Undertake regular maintenance surveys, including the tension cables for the masts, in accordance with agreed schedule, and implement necessary repairs/actions	Survey/ capital works	10.7.2, 10.10.1	34–42	Prime Contractor/ specialist contractor	Survey pro formas and report	Stabilisation, Fabric
36	Develop a digitised time-line of primary source material for the vessel and verify secondary source information	Study	10.1	20	NMRN	Database	Retention of Heritage Significance
37	Review decision to retain ship in open environment	Review/ decision	9.4.3	5	HMSVPCo, PHD Ltd	Board of Trustees meeting minutes	Fabric, Interpretation
38	Maintain close liaison between HMSVPCo and RN during all stages of project planning; and review continued presence of Royal Navy personnel on board	Review/ decision	9.8.1, 9.8.2, 9.8.3	12, 13	HMSVPCo, RN	Meeting minutes	Retention of the status of the ship as a commissioned RN warship and Flagship to the First Sea Lord, Interpretation
39	Identify, source, and implement specialist studies to address key research aspects for the continued understanding and promotion of approaches that safeguard the conservation of the ship and site	Decision/ study	10.1	20	HMSVPCo, NMRN	Specialist reports	Understanding, conservation management, Retention of Heritage Significance
40	Review the CMP as required; and the Action Plan on a biannual basis to monitor progress	-	-	43	HMSVPCo & NMRN	Review	Governance, Stabilisation, Fabric & Interpretation
41	Receive regular updates from the NMRN Director General on the work of the Portsmouth Historic Dockyard Strategy Masterplan Working Group through the Operator Agreement between HMSVPCo and RNM(P)			11	HMSVPCo & RNM(P)	Regular updates	Governance, conservation management, Retention of Heritage Significance
42	Review implications of visitor numbers on the fabric of the ship and the quality of the visitor experience on board	Review/ decision	9.9.1, 9.9.2	14	HMSVPCo & NMRN	Review	Governance, conservation management, Fabric & Interpretation

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