

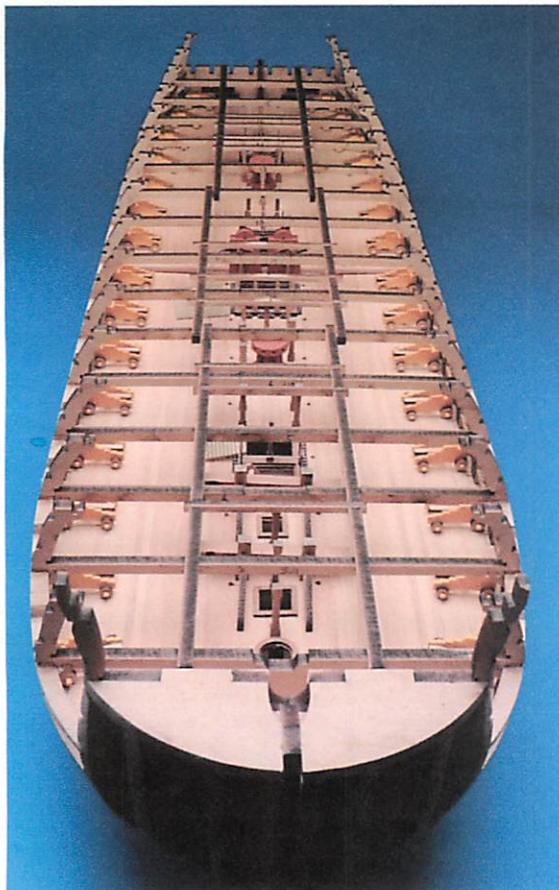
A few aspects of researching a 1:64th scale HMS Victory kit for the retail market

By Chris watton

My first wooden kit was bought in 1992, and after making a couple of them, I realised just how relaxing and rewarding this hobby can be. Coupled with this is the research. I realised quite early on that the kits I bought did not relate to the real thing in many ways. If you wanted a historically accurate model from a kit, then you had to put in the time for your own research and be prepared to change a lot of the parts. I found that research was almost as much fun as building the model itself.

I now design and develop new kits, and I will go through some aspects of the research involved and the decisions made when confronted with conflicting sources.

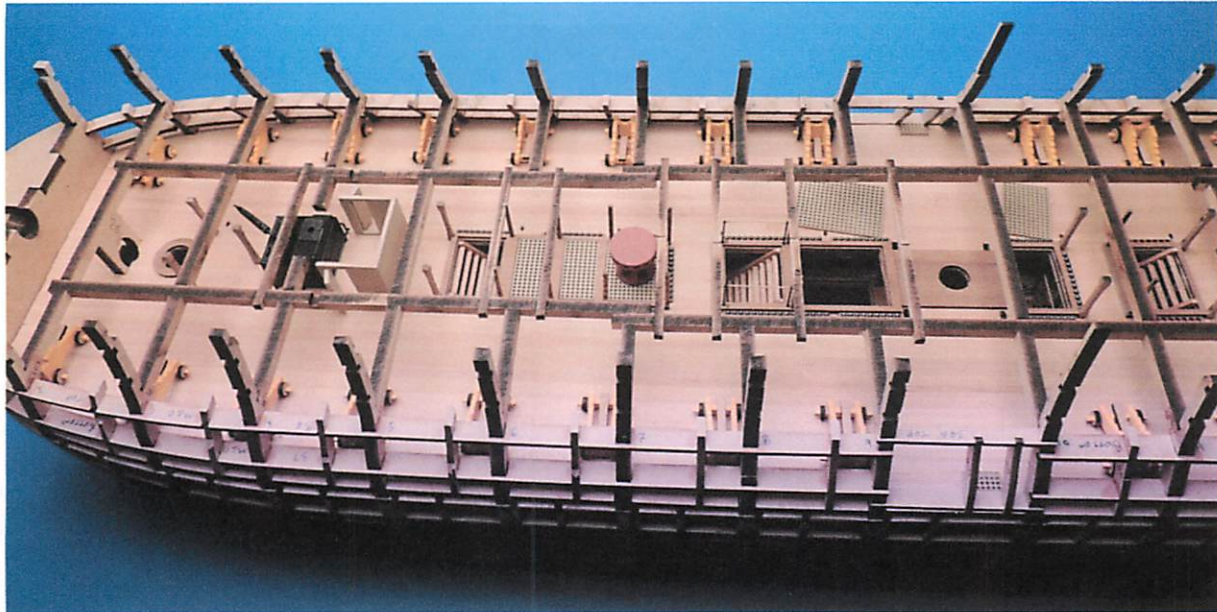
The latest model kit under development for Amati (victory Models) is HMS Victory at a scale of 1:64. The first job to do when starting a new development is to gather as much documentation as possible that relate to the subject. For Victory there is an almost embarrassing amount, so what lines shall I use and where do I start?



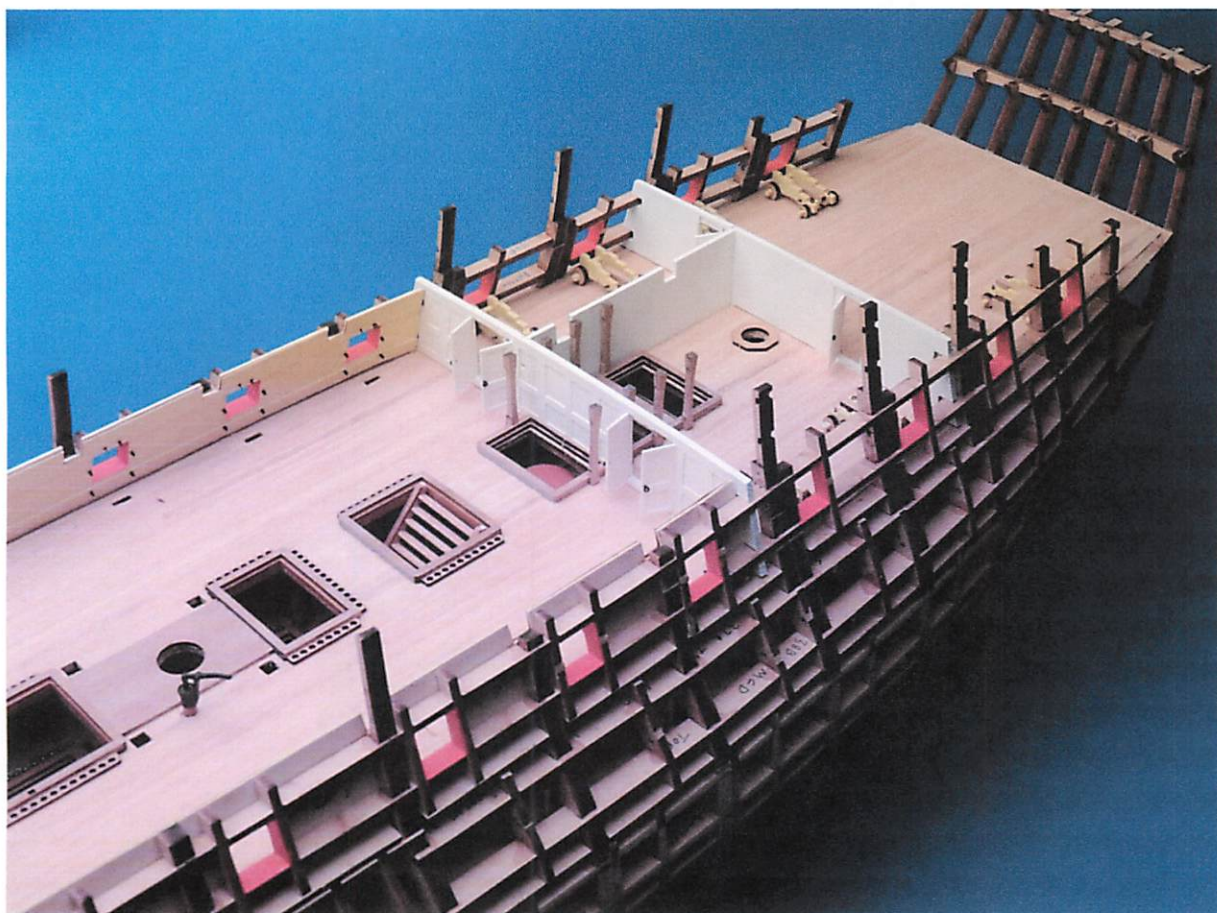
I ordered a set of original scanned plans of Victory as built from the national Maritime Museum, lines, profile and deck plans. These were then scanned and resized in a CAD programme. I then scanned and added lines and profiles from two other sources that purport to show Victory in her Trafalgar condition: Anatomy of the Ship – Victory by John McKay, HMS Victory: Her Construction, Career and Restoration by Alan McGowan and of course, the full size vessel. These were my primary sources for the overall look and shape of the Victory hull.

From these, the keel, bulkheads and decks were drawn along with all deck openings and gun port positions. With the main hull parts drawn, I came across a conflict with my sources.

Lower gun deck and middle gun deck beams/supports in place.



Middle gun deck complete with stove

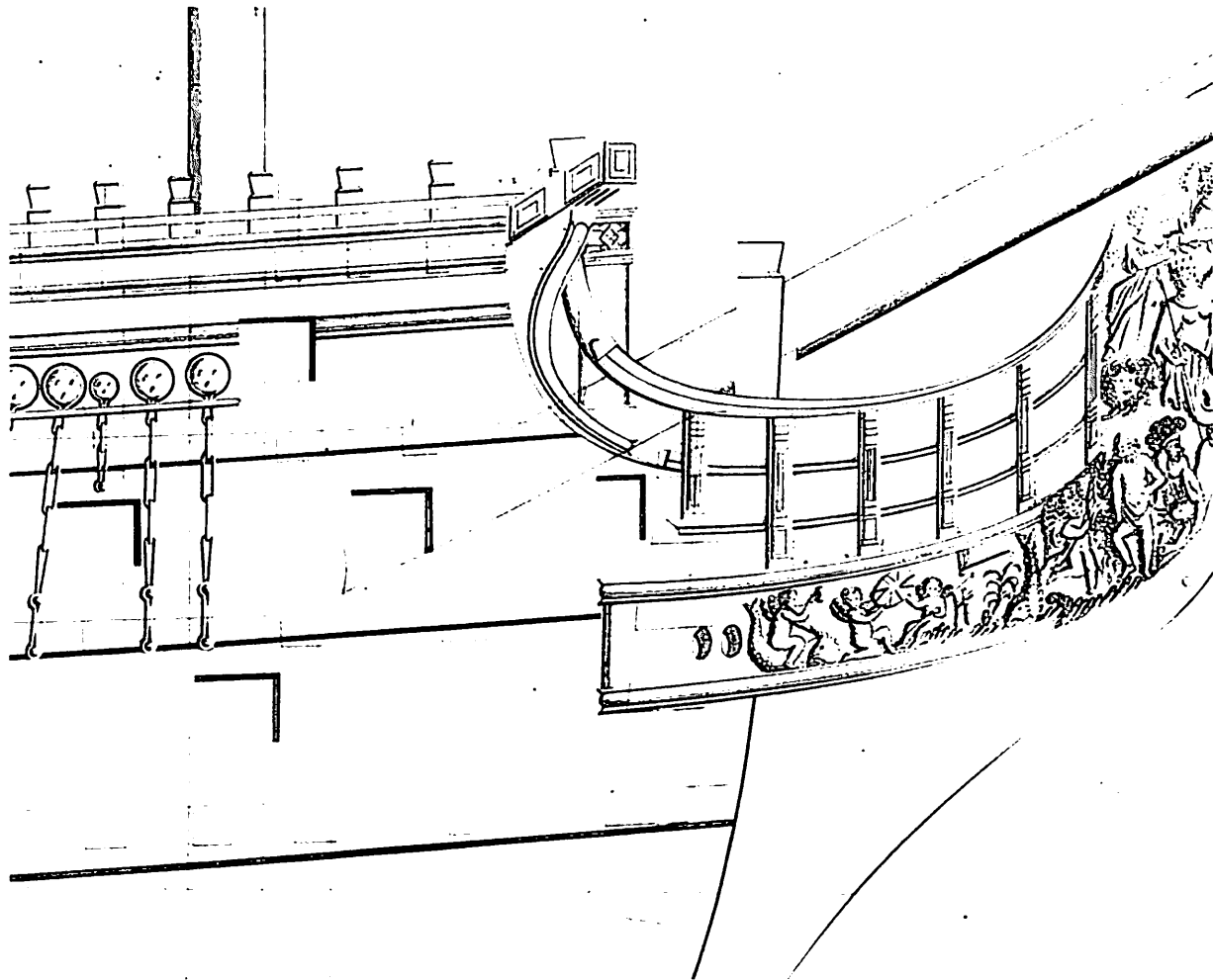


Upper gun deck in progress. The bulkhead screens were added and will be optional. They are shown in the book – HMS Victory: Her Construction, Career and restoration by Alan McGowan

Beakhead deck height

The original Admiralty plans show the beak head deck/bow platform at the same level as the upper gun deck. The drawings in 'The Anatomy of the Ship – Victory' by John McKay and 'HMS Victory – Her Construction, Career and Restoration' by Alan McGowan also show the beak head deck at upper gun deck level. However, on the full size Victory, this is shown as raised by about two feet up from the upper gun deck. Was it added in the 1803 refit, or later? After studying many books relating to Victory, I still have no definitive answer. Could this raised beakhead platform have appeared soon after Trafalgar, when Robert Seppings oversaw the repairs that were started in 1806 and recommissioned in 1808 at Chatham. According to Peter Goodwin(1), it was while inspecting the immense damage to her flat vulnerable beakhead bulkhead that Seppings conceived the notion of a 'round bow', which was eventually fitted to Victory in her 1814-15 'Great Repair'.

I do not know for certain either way. With this in mind, I decided to leave the beakhead platform at upper gun deck level because it is much simpler for the modeller to raise the bow deck than it is to lower it, depending on which side of the fence they sit on regarding this contentious area. This is the only aspect of the model that I am not completely happy with, as my sources are seemingly split 50/50. I may include both options in with the kit; this is perhaps the best compromise.



Part of the copy of the original plan I purchased showing the bow platform as an extension of the upper gun deck. After much research, I am still no closer to finding out when this was raised 2 feet higher.

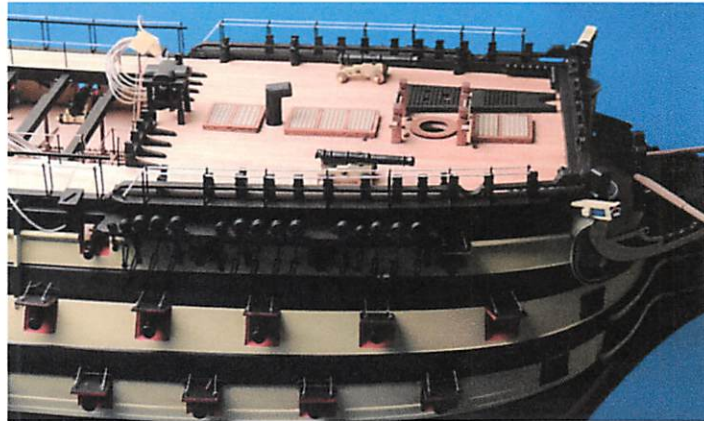
Solid forecastle bulwarks?

Another (albeit slightly less) contentious area that has arisen over the past decade is the forecastle bulwarks. Did Victory have them at the time of Trafalgar?

Again, I read and searched for evidence of solid bulwarks, and the only source I found relating to this was work by Peter Goodwin(2&3). I know that when I designed my first Victory kit over a decade ago, new evidence was coming to light that may suggest that she 'may' have had solid forecastle bulwarks.

However, over a decade on, I note that the built up bulwarks is still qualified with only a 'possibly' (3). This is not mentioned at all for the 'Great Repair' of 1801-03 and many drawings and

paintings do not show solid bulwarks. The sources that do show solid bulwarks seem to be paintings that were commissioned decades after the event, and show features contemporary to the artists at the time of painting and not 1805. For example, the famous Denis Dighton's "The fall of Nelson" painting, completed in 1825 depicts Victory with not only forecastle bulwarks, but with a round bow, too!



Victory designed with the classic timberhead forecastle as opposed to solid bulwarks.

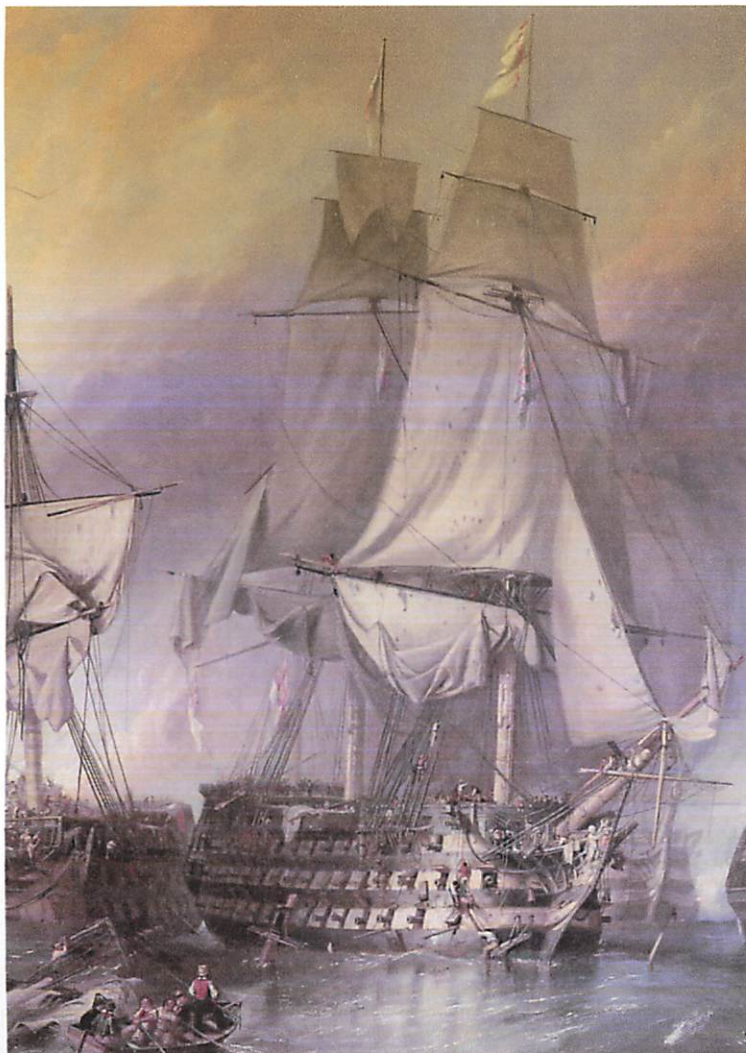
There is also the popular Clarkson Stanfield Trafalgar painting for the United Service Club (1833) which depicts Victory with solid bulwarks. Not only that, but the yellow bands are shown extended right up to the prow, a practice that didn't come into vogue until the later round bow vessels were built – it also seems to have five vertical bow timbers instead of four. I have learned that The Clarkson Stanfield painting was commissioned by the surviving officers of Trafalgar - including Sir Thomas M Hardy himself, and Stanfield utilized their input every step of the way and had all galley proofs approved by the supervising committee. I can fully understand veterans remembering certain aspect of the ship and battle, events that they never forget, for example, the yards protruding out of the lower gun ports to help push the ship away from their quarry, but as for mundane detail of the actual ship on which they served can be easily forgotten. Perhaps by this time, almost three decades after the event, they were so used to seeing ships as they appeared not long after the event, they had forgotten what Victory actually looked like at the time of Trafalgar, at least in some aspects of period detail?

I know that one kit manufacturer has depicted their model with forecastle bulwarks, but I simply do not believe there is enough hard evidence for this. The model that does show Victory with solid bulwarks on the sides neglects to add them on the beakhead bulkhead – not the best compromise considering the tactics implemented at the start of the battle.

I decided to leave the forecastle as it appears on the full size vessel. I am sure that if I had included them, I would have many people asking why I did this. I could point them to some sources that support the inclusion of solid bulwarks, but they could quite justifiably show me dozens more sources that do not show solid bulwarks.



(Above) Boomkins dry fitted before painting. Because I used sources that show the bow platform deck at upper gun deck height, and not raised, the lower rail ekeing has a sharper curve due to the lower position of the platform, compared to as she looks now.



(Left) The Victory as depicted in the Clarkson Stanfield Trafalgar painting for the United Service Club (1833)

Designing the stern and quarter galleries

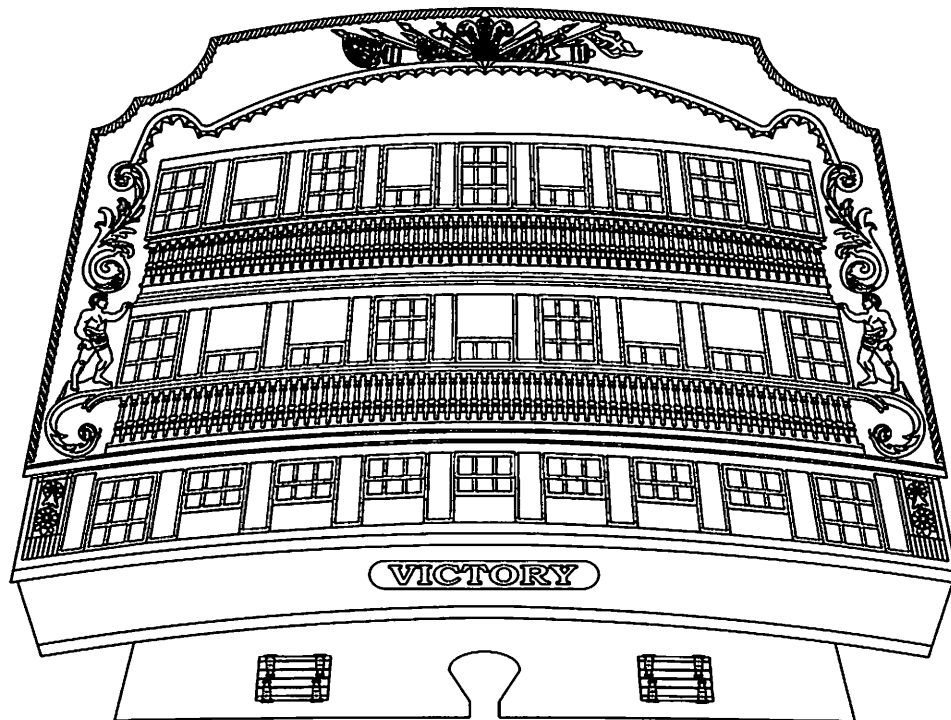
With most (but not all) commercial wooden kits of Victory, the stern and side galleries are produced to make them as easy as possible for the modeller, the downside being a

sacrifice in accuracy in some cases as certain aspects are too oversimplified. All of the sources are quite consistent regarding the stern and quarter galleries, so this was not a problem. The only decision to make was how best to design them in kit form and keep the detail intact.

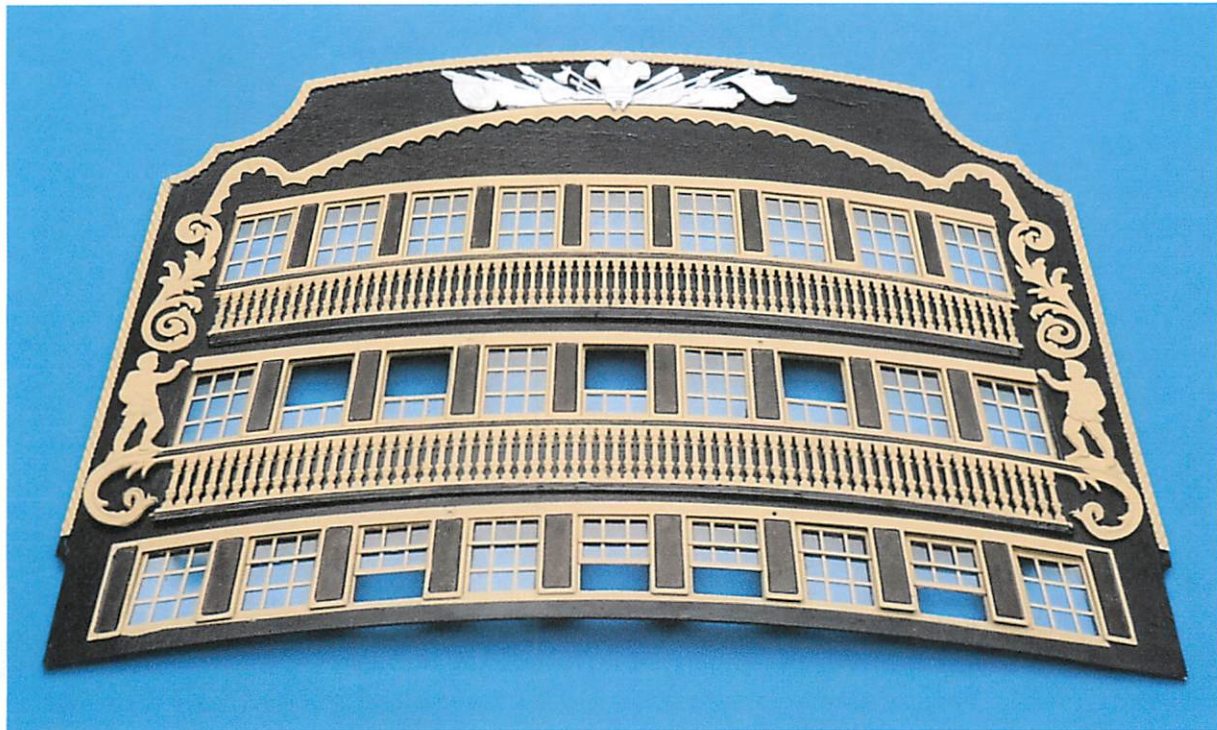
For this area, I decided on two materials, laser cut plywood for main stern and quarter galley patterns, and photo etched parts for everything else. From experience, I knew that the use of white metal castings for the decorative parts would be a mistake, as castings can shrink. Because they shrink when production parts are cast, the masters have to be made slightly oversize to compensate. The problem is that some parts may shrink more than others, and smaller parts may look like nothing more than a tiny 'blob' of shaped metal.

To draw the stern decoration, I used a combination of line drawings and photographs I had taken during my visit to see the actual vessel. Once the outlines of each was drawn and correctly sized for the model, the details were added. For the coat of arms, the two figures at the ends of middle tier of windows, and the decoration immediately above, I planned to make them in 0.25mm photo etched brass, which would be layered. Each part sits on top of the other with different detail to give the correct depth of each 'carving'. I have used this method before and seem to work very well for two reasons: the first is that the made up parts have much more detail and definition, and the second reason is the fact that the size of the parts will never change.

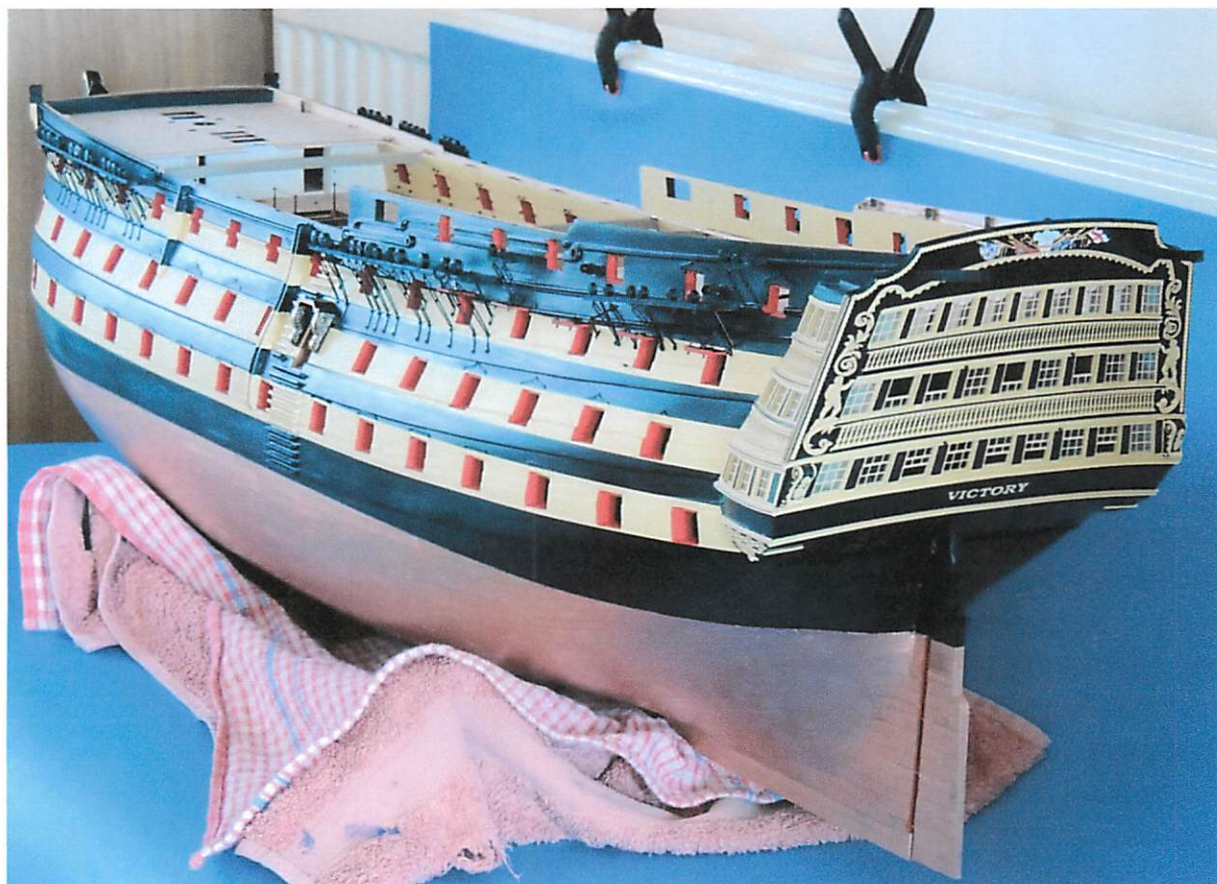
One problem I had to solve was the two tiers of stern balustrades. I had originally designed them for 0.9mm brass etch. However, because of gap tolerance issues – I cannot have any gap in-between each balustrade less than 0.9mm, I could only fit 67 per tier, when the real version has 69. This was pointed out to me when I posted a picture of the stern on a model ship forum. I decided to re draw the parts, but use 0.4mm photo etched brass, layering one on top of the other, which has allowed the full 69 balustrades per tier. This method ensured I have true scale accuracy.



The new and modified stern balustrades with 69 per tier as opposed to the original 67.



The main (pre-modified) parts of the kit stern dry fitted in place – nothing is glued at this time. After more research, I thought it would make for a more interesting model if the modeller had the option of having the stern windows open or closed.



The stern and quarter galleries in place on the prototype model (along with the 'questionable' stern davits).

The quarter gallery balustrades have 20 for each tier, but some pictures of the real ship sometimes show 20 on the lower and 21 on the upper tier. However, other photographs show 20 for each tier and this is what I have drawn for the kit.

I am aware that there is evidence suggesting that the stern davits were removed when she had her stern altered in 1801/03, but I have included them anyway. This is because there may be new evidence come to light in the future that suggests she kept them. (What seems accepted now may not necessarily be what's accepted in 10 years' time, as new evidence comes to light periodically, it seems). They are included only as an option, however, and anyone building the kit now would be wise to leave them off.

External bulkheads under poop



Victory poop bulkheads showing three windows and not two as shown on many other sources

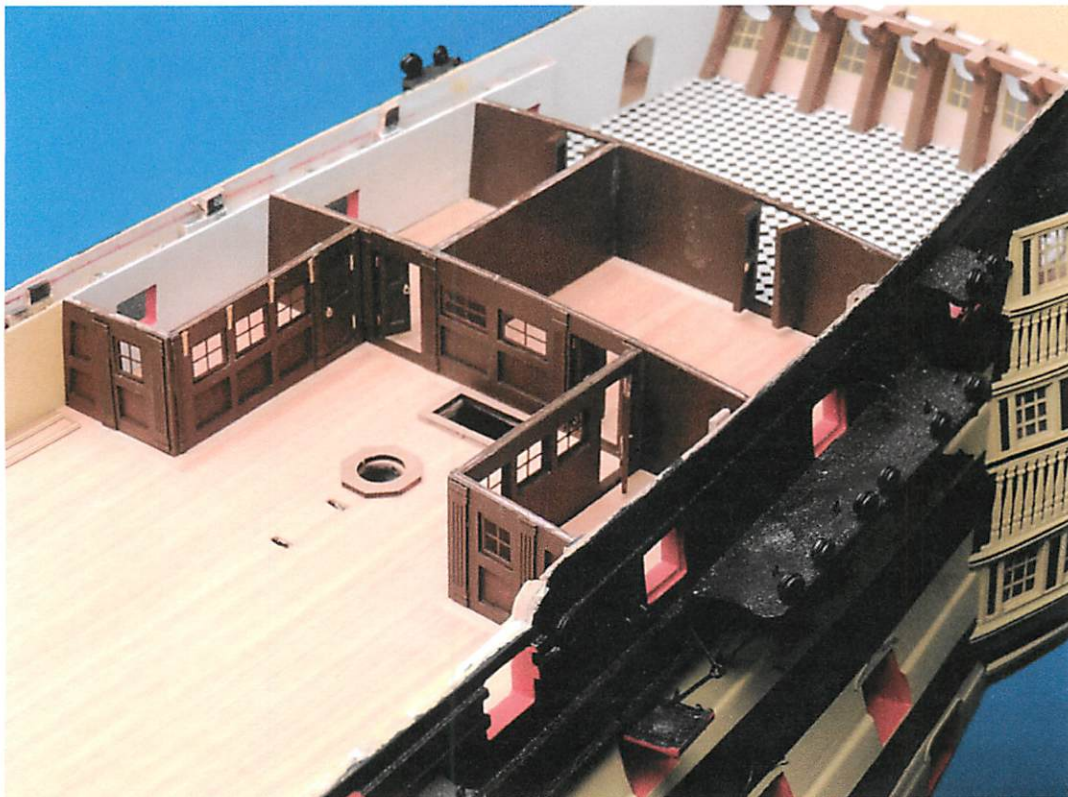
This was an area I was initially happy with, using three separate sources for the panelling and window positions. I made up the poop bulkheads from my designs, which included the captain's Sleeping cabin, Secretary's cabin, master's cabin, Captain's Dining and Day Cabin. Before committing to glue and fixing them all in place, I thought I would check with the photographs I had taken of the real Victory. They were/are completely different. For example, the drawings I worked from (4, 5&6) have two window frames for the main thwartships bulkhead, whereas the real Victory has three window frames, along with window frames in all of the external doors leading into the cabins. Which is correct?

I decided to re-design all parts so they match as closely as possible with what is fitted on the real Victory, although I cannot find any conclusive evidence for either style.

There was once detail I had missed and is never shown in either plans or books, and that is the hinges for the individual panels located at the top of the Secretary's and Master's cabin. These were shown quite clearly in the photographs I had taken when visiting the Victory, and I have now included them in brass photo etch form. The panels seem to have been folded upwards and secured to the underside of the poop when cleared for action.



Note the brass hinges at the top of the Master's cabin screen – and windows in the doors.



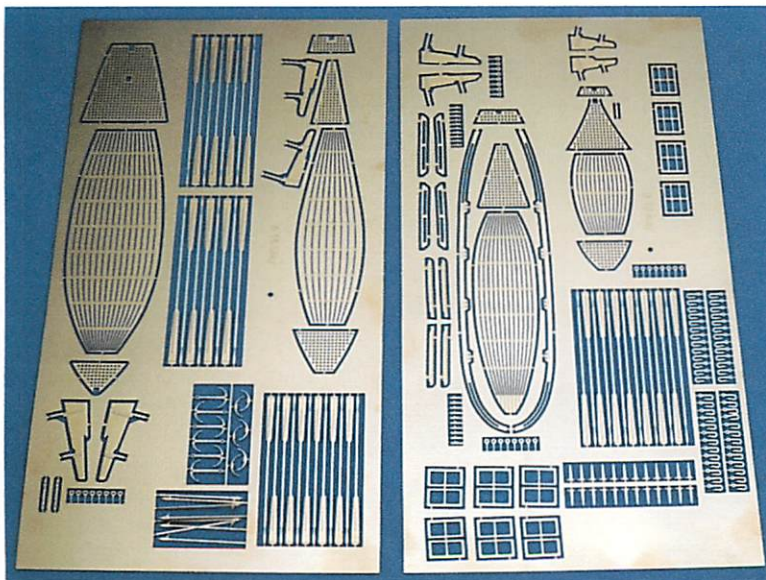
This is what I originally designed (the parts were dry-fitted, not glued). I have since re designed all outer screens and doors thus:



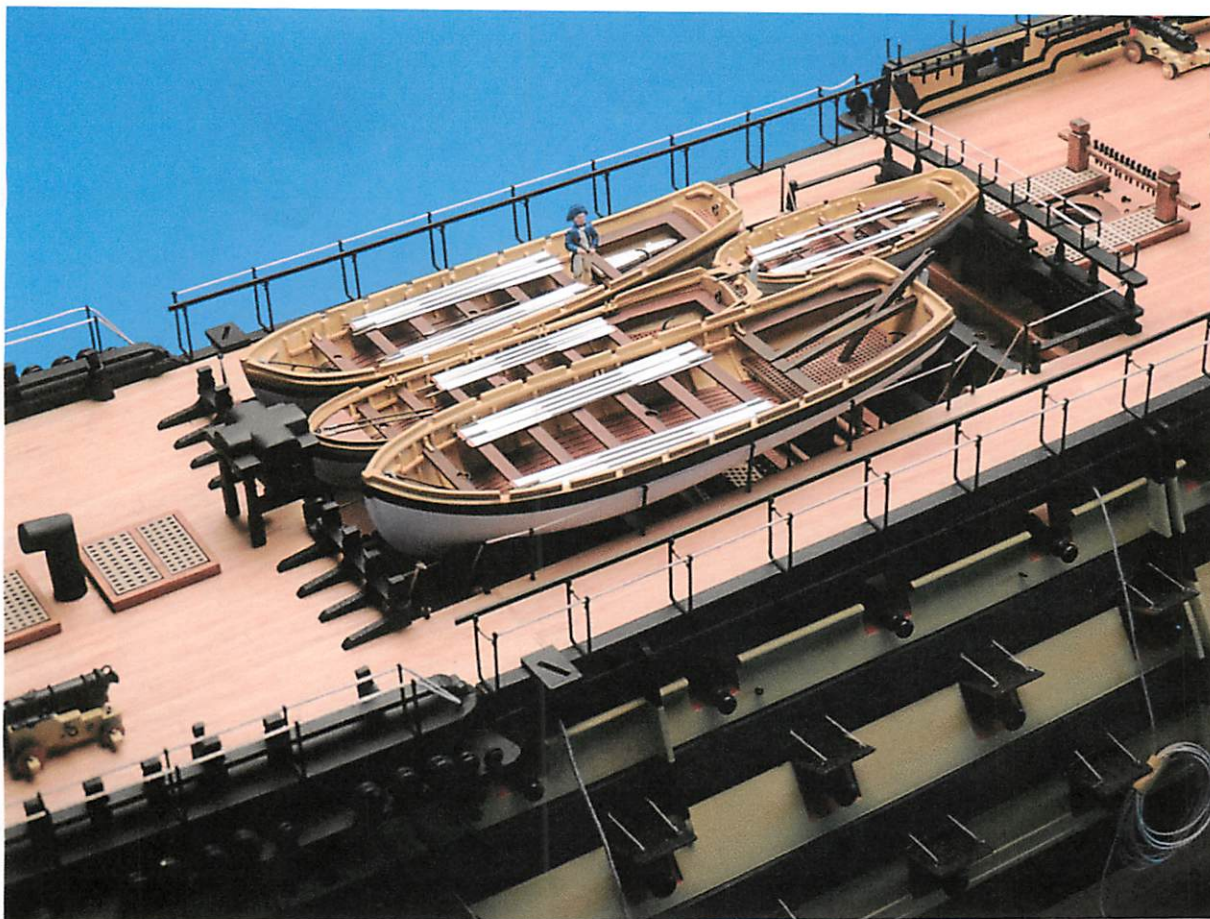
Boats

The four boats that sit on the skid beams in the waist were drawn using John McKay's drawings from his book: *Anatomy of the Ship – Victory*. Apart from lines, there wasn't much detail, so I used another two sources to help identify the deficiencies in detail: the *Boats of Men-of-War*, W E May and *HMS Victory, Her Construction, Career and Restoration*, the latter having some excellent isometric views of each boat and the details.

I had intended to add the extra two cutters, but according to the John McGowan book, there seems to be no hard evidence to the actual cutter sizes (7). Because this is more of a grey area than I initially thought, and because asking the modeller, who may well be an absolute novice to plank a small cutter in clinker style may put off more modellers than encourage, I deemed it wise to not include them.



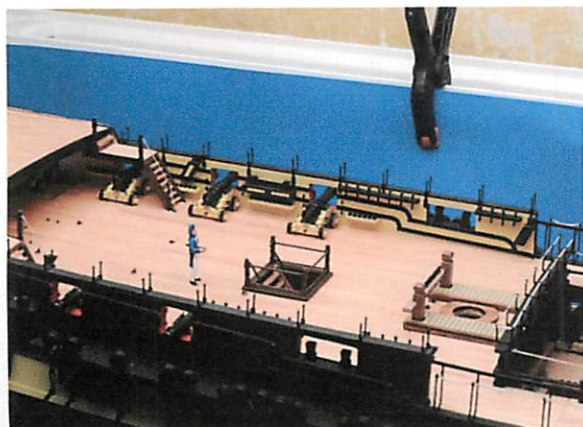
The photo etched parts for the four main ship's boats.



The ship's boats completed and dry-fitted in place. The rope for the fore topsail braces will have to be tied to the belaying pints on the forward-most skid beam and then through a single block located on the inner edge of the forecastle before the boats are fixed in place.

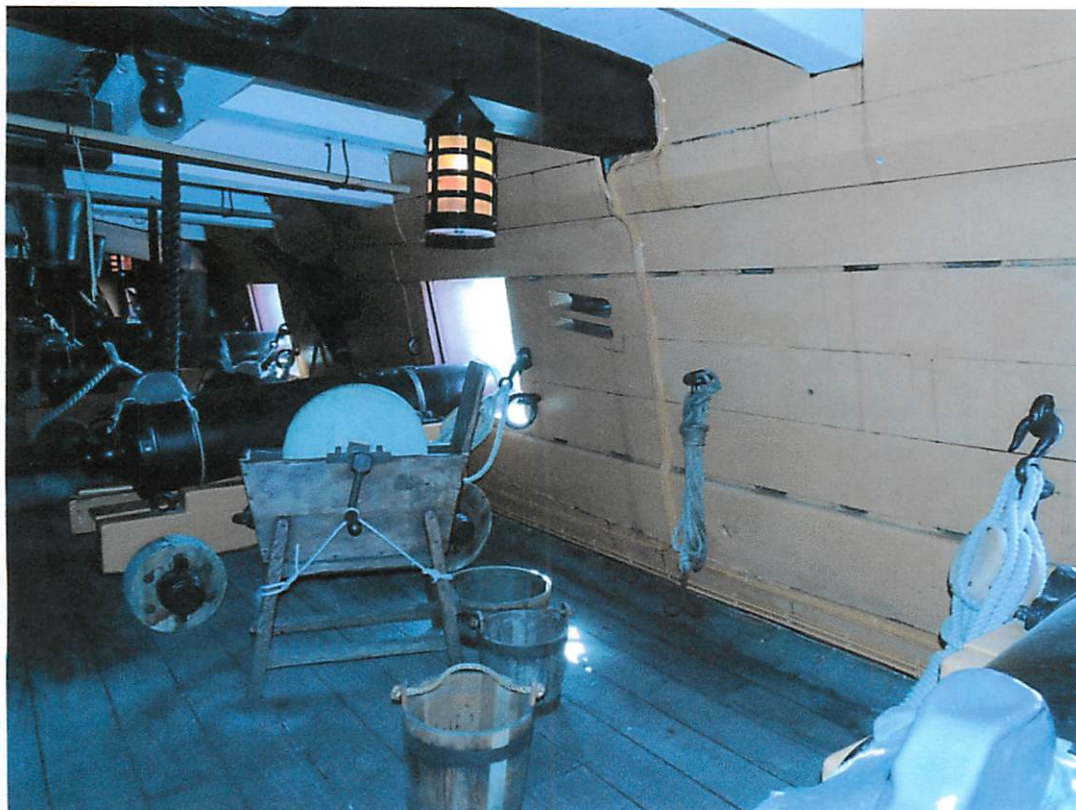
The Kit

The kit has been designed in 1:64th scale and full lower, middle and upper gun deck detail has been included. I wanted it to reflect as much as possible her appearance as she looked at Trafalgar, with the best primary source being the real thing at Portsmouth. I know that the people who work tirelessly of restoring Victory are some of the best in their respective fields, and I feel it would be quite remiss of me to deviate from the real thing too much on the basis of assumptions and/or conjecture.



Pictures of the real thing help immensely when positioning certain fittings correctly

Designing Victory (which is still on-going at the time of writing) has thus far taken longer than I planned. Part of this is due to the research involved and trying to overcome certain conflicts that arise – and re-designing certain parts if and when required. The research is one of the most rewarding and enlightening aspects of new kit developments, more so now because there an almost embarrassing amount of information available.



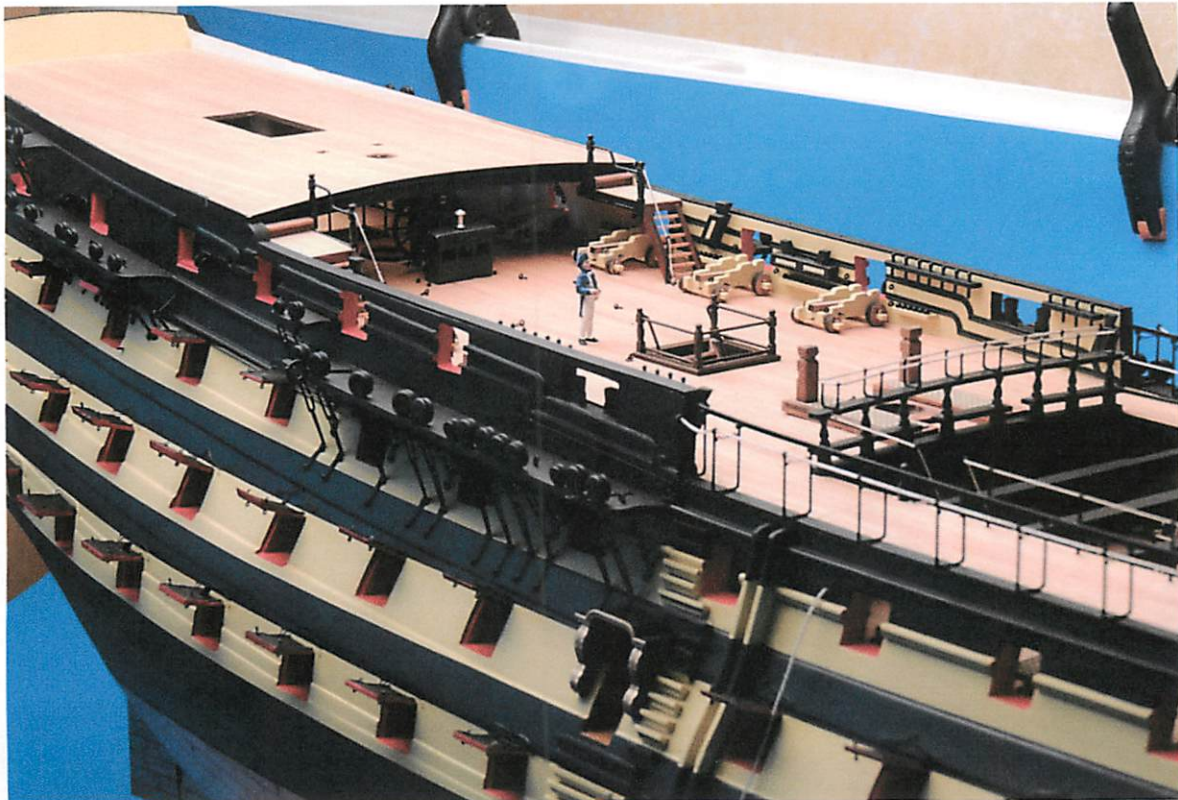
Picture taken of the upper gun deck with the large cleat for the sheets/tacks clearly visible



The John Livesay picture of the Victory stern as she looked in 1806



When looking at the real Victory, I noted that the lower inside edges of the gun port openings did not have a sill/inner lining, but just the sides and top. I presume this is due to the tumblehome and the bevel required on the outer edge of each lid.



Quarterdeck almost fitted out – but at the time of writing, I am still waiting for the modified poop bulkheads to arrive.



The main advantage of visiting the vessel herself is that you can take the pictures you need to for detail.



Bibliography:

- (1) Nelson's Ships: A History of the Vessels in Which he Served 1771-1805 – Peter Goodwin.
(Conway Maritime Press 2002)

Page 262, Chapter 25 – The 100 Gun Ship Victory

- (2) Nelson's Ships: A History of the Vessels in Which he Served 1771-1805 – Peter Goodwin.
(Conway Maritime Press 2002)

Page 249, Chapter 25 – The 100 Gun Ship Victory

- (3) HMS Victory – 1765-1812 (First rate ship of the line) – Owner's Workshop Manual published by Haynes. (2012)

Chapter 2 – Page 31

- (4) Anatomy of the Ship: the 100 gun Ship Victory – John McKay (Conway Maritime Press 1999)

This book was used for the majority of both major and minor hull and fittings

- (5) The Anatomy of Nelson's Ships – C Nepean Longridge – (Naval Institute Press 1994)

- (6) HMS Victory – her Construction, Career and restoration – Alan McGowan (Chatham Publishing 1999)

- (7) HMS Victory – her Construction, Career and restoration – Alan McGowan (Chatham Publishing 1999) Page 79 – Aspects of restoration: 1. Boats

"There seems to be no hard evidence as to which boats Victory actually carried at Trafalgar. It has always been assumed, for no other reason that it would have been the norm, that she carried the carvel-built boats as listed above [on the skid beams], but there is conflicting evidence about the cutters. Without giving his source, Bulger asserts that two 30' cutters were fitted 'one on each quarter'. He merely quotes the navy Board Standing Order of 18 November 1798, which permitted the use of eight-oared cutters instead of barges"

Other sources used for visual reference and double checking particular parts are:

- (A) HMS Victory - First-Rate - Jonathan Eastland & Iain Ballantyne (Seaforth Publishing 2011))

This is an invaluable visual reference for most aspects of Victory with excellent high quality colour photographs throughout.

- (B) The Arming and Fitting of English Ships of war 1600-1815 – Brian Lavery (Conway Maritime Press 1987)

Excellent source for general reference to ship's fittings and time lines for each aspect of the ship that changed.

- (C) The Construction and Fitting of the Sailing Man of war 1650-1850 – Peter Goodwin (Conway Maritime Press 1987)

Another excellent source, especially for Victory as many pictures, texts and drawings relate directly to this vessel. Used mainly for confirmation of shapes and sizes of smaller fittings, like the hammock cranes.

(D) The Masting and Rigging of English Ships of war 1625-1860 – James Lees (Conway Maritime Press 1984)

Although I already had a wealth of information relating to the masting and rigging of Victory, I always turn to this invaluable book for confirmation of certain areas that may not be too clear in the primary sources. I believe that, if in doubt, turn to this source for the possible answer.

Original scanned plans of the Victory as built from the National Maritime Museum

Due to the huge changes to Victory during her 1801-03 refit, these plans were of relatively little use and I could have done without them at all.

Finally, having the original vessel to see for myself and wander around it was hugely beneficial. Sometimes, a simple drawing isn't quite enough to picture a certain part, or how it was attached/fixed into place. Seeing the fittings first hand on the real thing puts pay to any doubts. For example, the upper gun deck bulwark cleats for the sheets and tacks: C Nepean Longridge shows stag horn cleats in his book and model, but other sources show simple (albeit larger than usual) cleats. On the real vessel, they are shown as cleats, so this was changed.