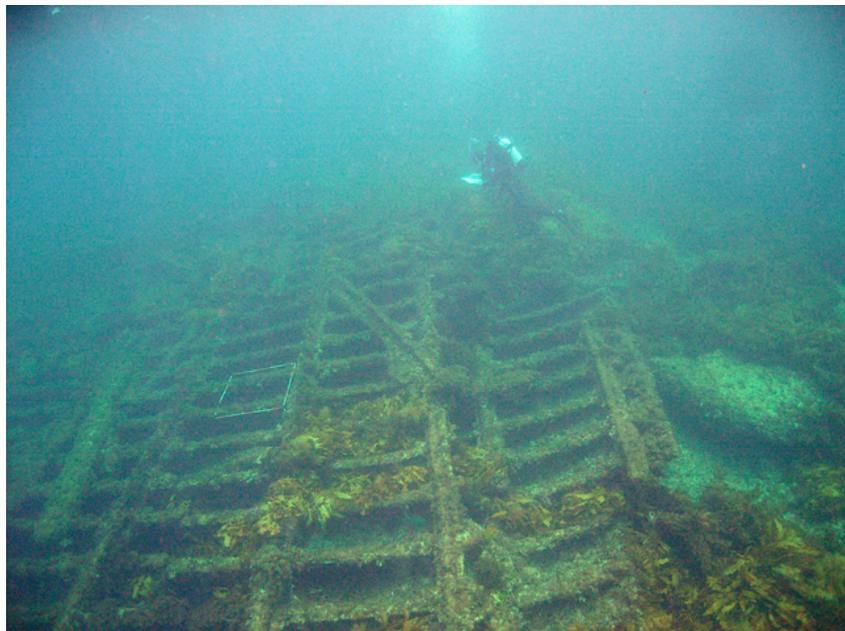
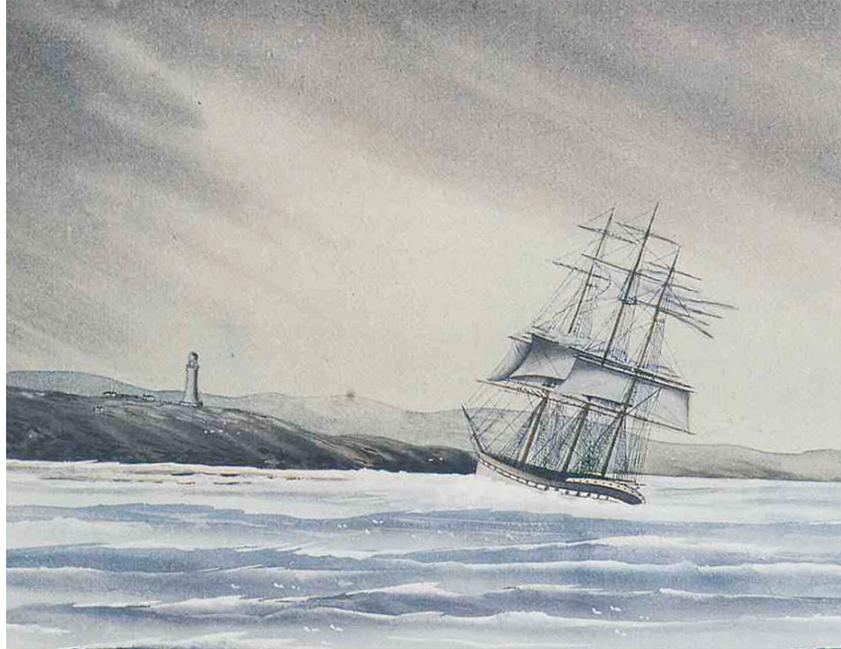


Wreck inspection report

City of York (1861 - 1899)



Ross Anderson and Matthew Carter

**Report—Department of Maritime Archaeology, Western Australian
Museum, No. 263**

2010

Cover images:

The wreck of the *City of York* off Rottneest Island (Painting George W.R. Bourne/ WA Museum)

Matt Carter recording large section of floors in 4.5m depth. (Patrick Baker/ WA Museum)

Technical Data

Site Name: *City of York*

Date lost 12/07/1899

Date of Inspection: 8/2/2010

Personnel:

Ross Anderson OIC: (Department of Maritime Archaeology, WA Museum)

Patrick Baker (DMA, WA Museum)

Marie-Armande Coignard (Dept Materials Conservation intern WA Museum)

Matthew Carter (DMA intern WA Museum)

Approximate Location

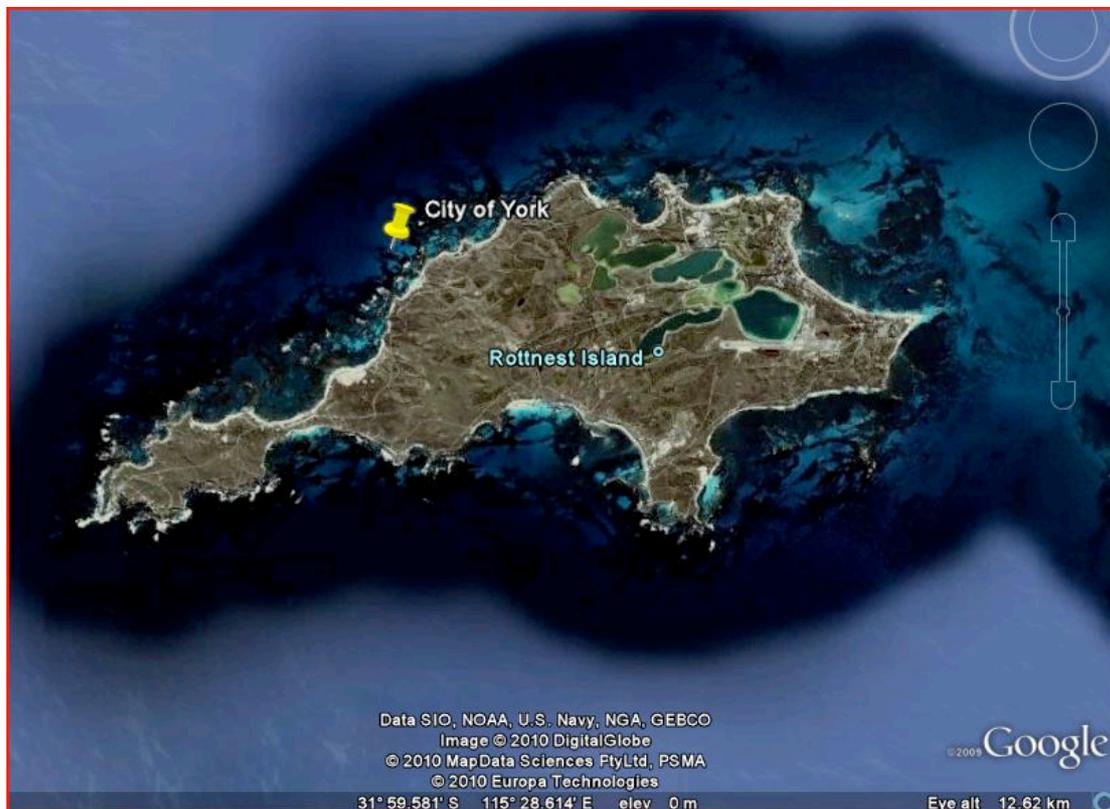
200 metres offshore, north-west of City of York Bay, Rottneest Island

GPS Lat: 31° 59.7200 ' S **Long:** 115° 29.2500 ' E (Datum GDA94)

Chart No: DMH 001

Map of area

Fig.1 Location of *City of York* shipwreck, Rottneest Island (Google Earth)



File No: MA 661-71

File Name: Wreck: *City of York*

Sailing Directions:

Arriving at the north coast of Rottnest Island from the east, head further west past City of York Bay to approach from the north-west towards a noticeable scar in the hill side in the next bay south; With the lighthouse over the western side of the scar, reef will be passed to port. Continue until the hut near the west end bears 230° magnetic. Anchor on sand bottom.

Visual Transits:(Specify direction looking towards, e.g. NE

1. N/A

Photo

2.

Photo:

Site Photographs:

Colour: Patrick Baker (WA Maritime Museum)

Transit Photos : N/A

Video: Patrick Baker (WA Maritime Museum)

2004 photographs courtesy of Maritime Archaeology Association of Western Australia (MAAWA)

Site Conditions on inspection

Sea and Swell: Calm 0.5 m

Surge: slight

Visibility: 20 m

Current: Nil

Sea-bed coverage e.g. weed, sand: The wreck lies on a sloping limestone reef rising from 9.0 m depth on a sandy seafloor to within 2 m of the surface. The reef is covered in considerable marine growth including kelp. Most of the wreck lies on a reef plateau between in 4.5 – 5.7m depth.

Chemical Measurements :

Temperature: 26°C

Salinity: Not recorded

Ph: Not recorded

Dissolved O₂: Not recorded

Corrosion Potentials (Reading and location): Not recorded

Biological Data :

Colonising fauna: Much of the reef and wreckage is covered in kelp and other marine growth.

Fig. 2 The curved stem of the City of York's broken and collapsed bow is still visible, though is flattened against the reef (Patrick Baker/ WA Museum)



Site Condition and Integrity :

The site lies on a shallow reef in an exposed location, and has been heavily broken up by natural physical forces, though substantial iron features are visible and identifiable. The cargo was salvaged at the time of wrecking. After the wrecking event the hull broke up and disintegrated with hull and rigging components collapsing to starboard down the slope of the reef to the seabed. Comparison with photographs taken in 2004 show that the port stern hull plating that was joined to the sternpost has since collapsed.

Overall the site appears to be relatively stable with concretion and marine growth covering the majority of visible features.

Management considerations :

(i) Natural Forces e.g. Sea-bed composition, Depth of Burial of site, Seasonal site exposure, etc.

(ii) Present and future Human forces e.g. Diver Accessibility, Attractive loose artefacts, Evidence of interference.

(iii) Projected General site Stability in view of the above

The site appears to be in a stable state, though corrosion and collapse of iron hull plating at the stern has been noticed.

Description of Site

The wreck of the *City of York* lies in between 4.5 and 9.0 metres of water, with the bow facing shoreward bearing 150° southeast. The site is 62 m in length and appears to have broken into three main sections. The bow is in 5.8 m depth, the main section of hull floors measures 20 x 8 m and lies on a reef plateau in 4.5 - 4.7 m depth, and the stern section is in 6.5 - 9.0 m depth. A number of structural features are evident at the stern including the rudder with associated steering gear, collar, rudder post and stern post.

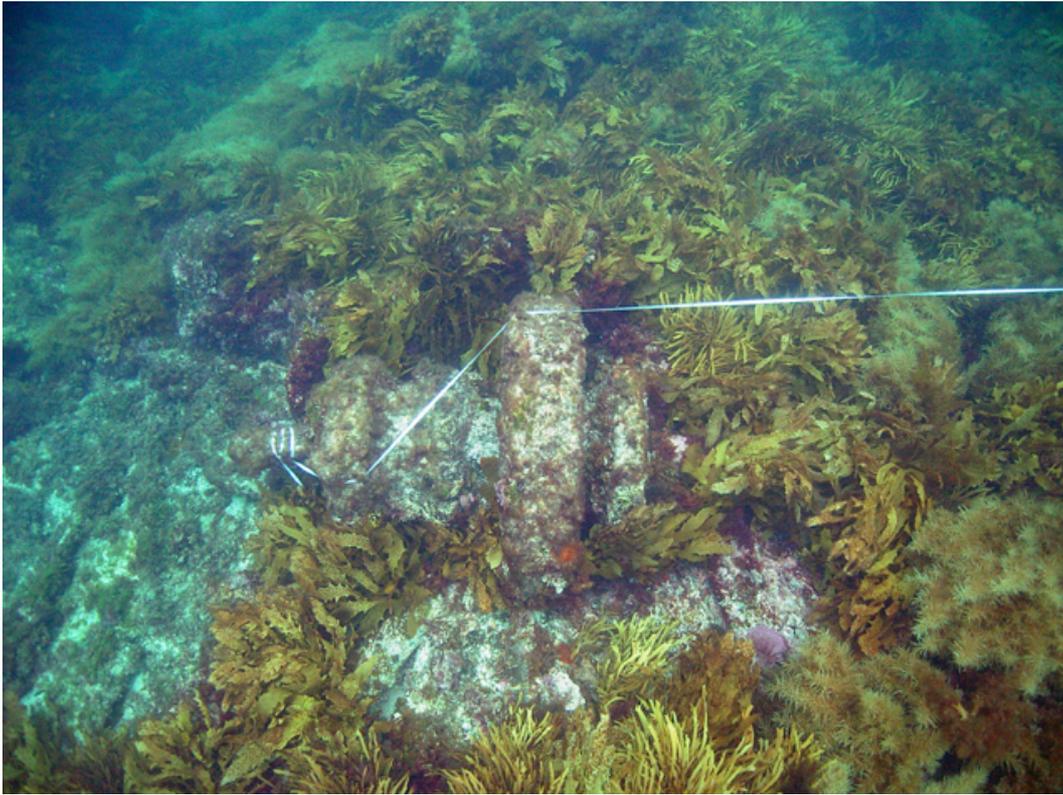
Fig. 3 Diver swimming between rudder post (left) and sternpost at northern end of site.
(MAAWA)



Moving south along the reef a mizzen mast partner bracket is evident amongst the weed as is a section of broken keel, and a large section (20 x 10 m) of floors on top of which can be found a deck winch. To the west of the floors a collapsed section of the starboard hull and deck with attached deck frames, beam shelf and bitts is also apparent. Further towards the bow a large windlass is concreted into the reef and a section of the bow hull plating reveals the curve of the bow structure.

At a depth of around 8.5 - 9.0 m the reef meets a flat sandy bottom on which various hull and rigging components have collapsed down-slope. Immediately south-west of the stern, sections of iron mizzen lower masts are recognisable in the sand, as is a section of deck exhibiting the beam shelf, deck beams, stringers and bitts. Collapsed underneath this section is a portion of starboard hull plating with a scuttle. Broken glass and ceramic fragments can also be seen. Moving further south an 8.70 m section of the lower main mast lies flat on the sand while a 12.60 m long lower yard estimated to be 14 m length (one end is buried in sand and other end measured from centre of truss) has the truss and sling hoops intact, and straddles the reef and sandy bottom in a north/south direction.

Fig 4. Windlass in bow area in 5.8m depth (Patrick Baker/ WA Museum)



The lower mast sections exhibit features including the cheeks, mast heads, caps and truss hoops.

Throughout much of the site are strewn broken pieces of hull plating, hull frames, deck beams and stringers, including material in the crevices and caves to the east of the site. The fragmented nature of the site can be attributed to its exposed location on a shallow breaking reef. Normally the heavily triangulated structures of the bow and stern sections might be expected to have remained at least partially intact, though some remains of port hull plating attached to the sternpost have collapsed within the last 10 years. The anchors of the wooden stocked Pering's Improved anchor type were salvaged and are on display - one at Rottnest Island and the other at the Perth Flying Squadron Yacht Club in Dalkeith (McCarthy 1981).

Fig. 6 Section of collapsed yard on seabed in 2004, and observed in 2010 (MAAWA)

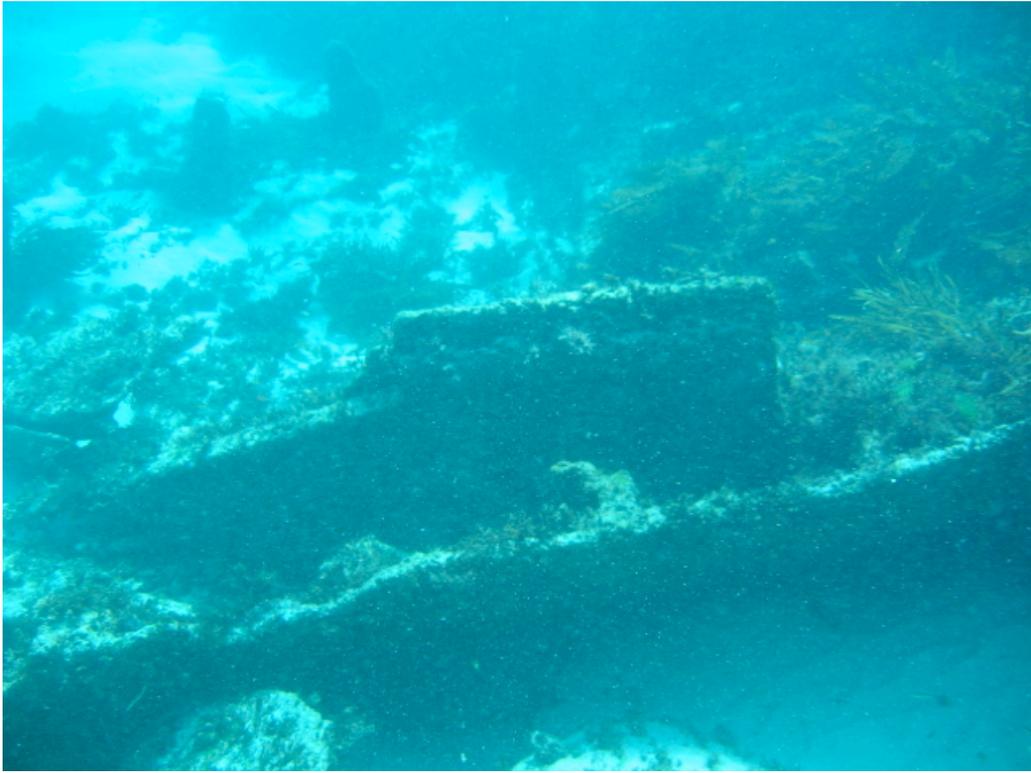
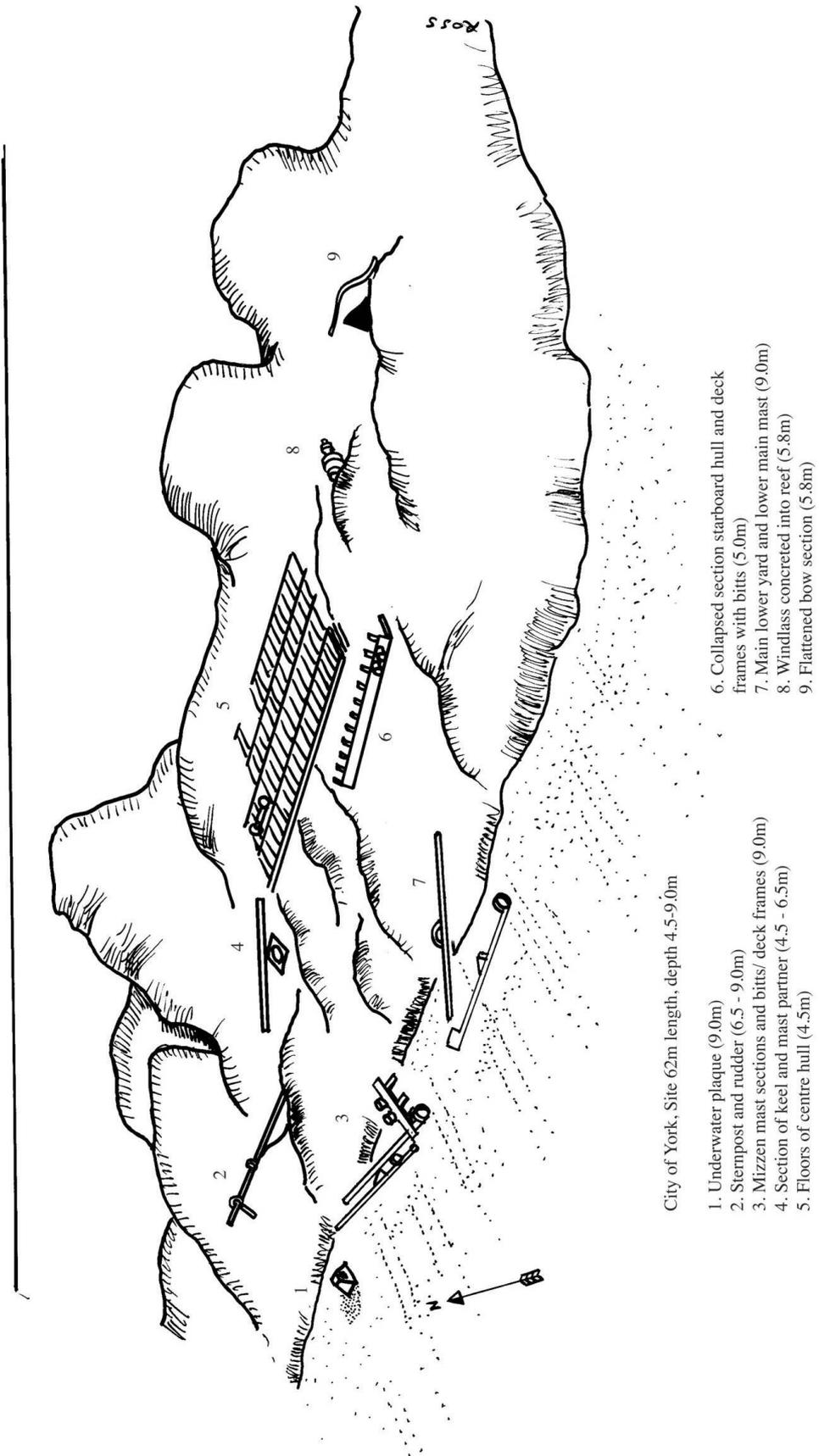


Fig. 7 Collapsed section of deck structure showing beam shelf plating (with bitts still attached), deck beams and stringers in 2004, and observed in 2010 (MAAWA)



Site plan

Fig.8 3D sketch plan based on baseline-offset measurements, feature measurements and depths.



Material Raised

(Show location on plan)

N/A

Site Identification

The site has previously been positively identified as the *City of York*.

Historical précis

The *City of York* was sailing to Fremantle from San Francisco with a cargo of lumber, doors and rolls of paper when it arrived off Rottnest Island on the evening of 11 July 1899 at 4.30pm in thick weather and heavy seas. During the evening there followed a series of miscommunications using flares and rockets between the lighthouse and the ship, causing Captain Jones to head the ship for the lighthouse, thinking it was the pilot vessel. Approaching the source of the flares Captain Jones hove to thinking the pilot boat was ahead and the lead was cast three times, with five minutes between each cast indicating 24 metres (16 fathoms) and then 9 metres (5 fathoms). Soon after this, breakers were seen ahead. The vessel could not be steered away from the reef and *City of York* struck.

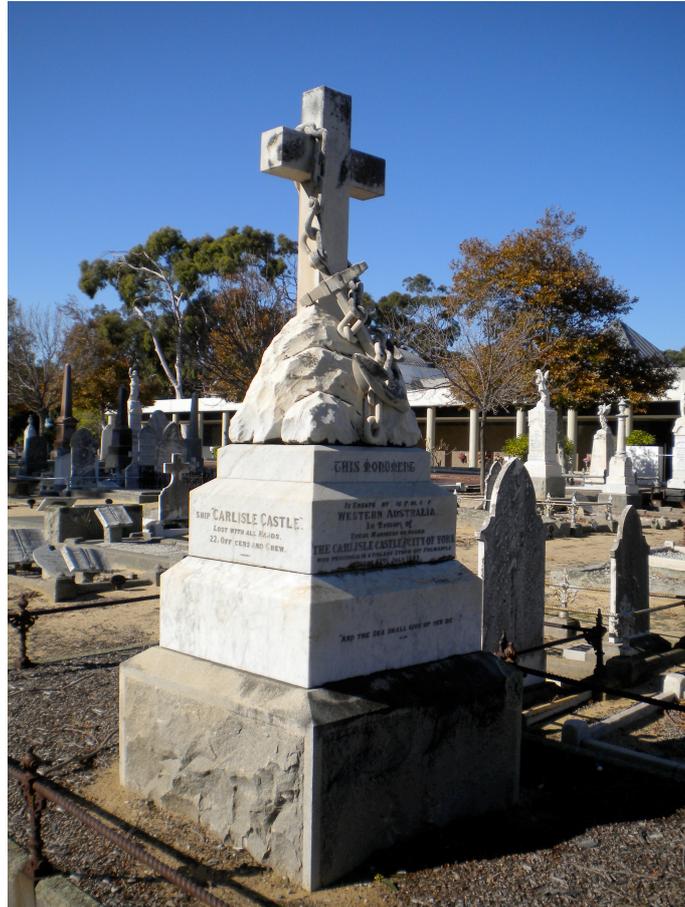
Heavy seas started breaking over the vessel with force. Jones, believing the vessel was in danger of breaking up ordered that the boats be got out. Before this could happen it appeared that the mast was going to fall. Orders were given for all crew to board the starboard boat but it was found to be too small. Other crew got into the port boat and this capsized almost immediately. Eleven crew including Captain Jones perished and eight men re-boarded the *City of York*. One man was picked up by the first mate's boat. The other lifeboat was also swamped soon after launching, but seven men were able to reach the shore after about four hours. Two men made their way to the lighthouse to raise the alarm.

On 13 July, the steam tender vessel *Penguin* left Fremantle for Thomson Bay, followed by Captain Douglas in the tug *Dunskey*. He took off eight survivors in three trips using his dinghy. The first newspaper accounts of the wrecking did not appear until 14 July and it was soon apparent that the same storm was responsible for the wreck of the *Carlisle Castle*, with no survivors.

The *City of York* and *Carlisle Castle* were both salvaged by a Perth syndicate. A Board of Inquiry found the *City of York*'s Captain Jones to have been negligent in wrecking his ship; however this finding was later overturned by a Select Committee set up as a result of the *City of York* wreck to investigate the running of port and harbor services. Lighthouse keeper Baird's actions in lighting flares normally lit by pilots to indicate safe water were found to be the cause of the wreck, and the *City of York*'s New York owners subsequently sued the WA government for their loss.

(Cairns & Henderson 1995: 312-319)

Fig. 9 Memorial to victims of the *City of York* and *Carlisle Castle* shipwrecks in Fremantle cemetery (Ross Anderson/ WA Museum)



Site History

(i) Contemporary Salvage

The *City of York*'s cargo was completely salvaged at the time with a Perth syndicate recovering 55,000 metres of sawn timber (Cairns and Henderson 1995: 317).

(ii) When found in modern times and by whom

Underwater Explorers' Club located the site in the 1950s.

(iii) Modern Salvage

The anchor on display at Rottnest Island anchor was raised in 1959 (Kenderdine 1995: 66).

(iv) Casual diver interference, if any.

The almost complete absence of portable artefacts such as scuttles, ceramics, glass and copper alloy artefacts indicates that scuba divers have removed a great deal of material from the site since its discovery.

(v) Modern diver use, if any.

The site is regularly visited as part of the Rottnest Island Historic shipwreck trail.

Assessment of Site Significance

(i) Archaeological

The *City of York*'s cargo was salvaged at the time, and subsequently by scuba divers souveniring remaining portable artefacts and ship's fittings since the 1950s. As a result there are very few artefacts visible, though the sandy seabed may contain artefacts that have collapsed down-slope. The *City of York* site provides archaeological information on post-depositional processes relating to site formation on iron shipwreck sites, and site salvage.

(ii) Technological

The *City of York* is representative of iron sailing ship construction in the mid- 19th century. The site is closely associated with the theme of communications technology on Rottnest Island.

(iii) Scientific

The *City of York* may be used to obtain comparative data for biological, physical and chemical corrosion studies into the degradation processes affecting underwater cultural heritage sites.

(iv) Educational

The remaining large structural features of the *City of York* can be easily interpreted to provide an understanding of the original size and layout of the ship, and sequence of its wrecking and disintegration. The site is part of the Rottnest Island Historic Shipwreck Trail.

(v) Recreational

The *City of York* is a spectacular dive with large structural features, and many objects of interest to explore among a limestone reef in clear waters. The reef to the east of the site contains large caves and swim throughs, some containing pieces of ship structure. It is an ideal shallow water second dive after a deep first dive. An underwater interpretive plinth has been placed on the site as part of the Rottnest Island Historic Shipwreck Trail.

(vi) Social

The *City of York* shipwreck has been memorialised in paintings by George Bourne and Aboriginal artist Jimmy Cudgeley. A monument to the twin tragedies of the *Carlisle Castle* and *City of York* shipwrecks was erected in the Fremantle Cemetery in late 1900, with part-proceeds of a fund set up to raise money for families of the victims of the shipwrecks (Fig. 9). Two anchors of the wooden stocked 'Pering's Improved' anchor type are on display, one at Rottnest Island and the other at the Perth Flying Squadron Yacht Club in Dalkeith.

(vii) Historic

The *City of York* has historic significance along with the *Carlisle Castle* as a catastrophic double tragedy that deeply affected social and maritime circles. Concern over a decision by a Board of Inquiry to blame the *City of York*'s deceased Captain Jones for the wreck, led to the establishment of a Select Committee to

investigate the running of port and harbour services, including lighthouses and pilots. The ensuing findings that the lighthouse keeper made the wrong flare signals that directly caused the wreck, led to ongoing legal battles being eventually settled out of court with the WA Government agreeing to pay the Ship City of York Company £5000 (Cairns & Henderson 1995: 317-318). It also led to an examination of the Rottneest Island communication systems, and systems were accordingly upgraded using more modern technology (Kenderdine 1995: 66).

Fig. 10 The *City of York* being salvaged in 1899. Painting by Aboriginal artist Jimmy Cudgely, who received painting lessons from Governor Bedford on Rottneest Island (WA Museum)



Management Proposals

- 1) The *City of York* site and its associated relics are protected under the Commonwealth *Historic Shipwrecks Act 1976*, and are the delegated responsibility of the WA Museum. The WA Museum manages historic shipwreck sites in accordance with accepted national and international guidelines including *Guidelines for the management of Australia's historic shipwrecks* (1992) the ICOMOS Burra Charter 1999 and the Annex to the UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001.
- 2) Given its recreational, social and historic values the *City of York* should be managed as a heritage, recreational and tourism asset in conjunction with the Rottneest Island Authority (RIA). The WA Museum should continue to liaise closely with the RIA on issues of site management, education, interpretation and display of artefacts in the Rottneest Island Museum and on Rottneest Island.
- 3) The anchor of the *City of York* on display outdoors at Rottneest Island, in its current state requires it to have its original display supports re-installed (Carpenter and Kimpton 2000). Raising the anchor from ground level is required to avoid corrosion that is being caused by contact with wet earth.

Recommendations

- 1) Further visits to monitor and record the various structural features on the *City of York* site are required;
- 2) That MAAWA continue to clean and maintain the *City of York* Underwater Historic Shipwreck Trail plinth on an annual or as needs basis;
- 3) That the WA Museum continues to liaise with the Rottnest Island Authority regarding management and interpretation of the site and artefacts;
- 4) That the outdoors display supports for the *City of York* anchor on Rottnest Island are re-installed to avoid further corrosion and damage;
- 5) That conservation recommendations from 2000 and 2005 (Carpenter and Kimpton 2000; Carpenter 2005) regarding the maintenance of the *City of York* and *Mira Flores* anchors on display at Rottnest Island are implemented;
- 6) That due to the highly saline and exposed conditions of the *City of York* and *Mira Flores* anchors on display at Rottnest Island, a regular inspection and maintenance program is established.

Fig. 11 *City of York* anchor on display at Rottnest Island in 2005
(Jon Carpenter/ WA Museum)



References

Cairns, L. And Henderson, G. 1995, *Unfinished voyages: Western Australian shipwrecks 1881-1900*, University of Western Australia Press, Nedlands.

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Kenderdine, S., 1995, *Shipwrecks 1656-1942: a guide to historic wreck sites of Perth*, WA Museum, Fremantle.

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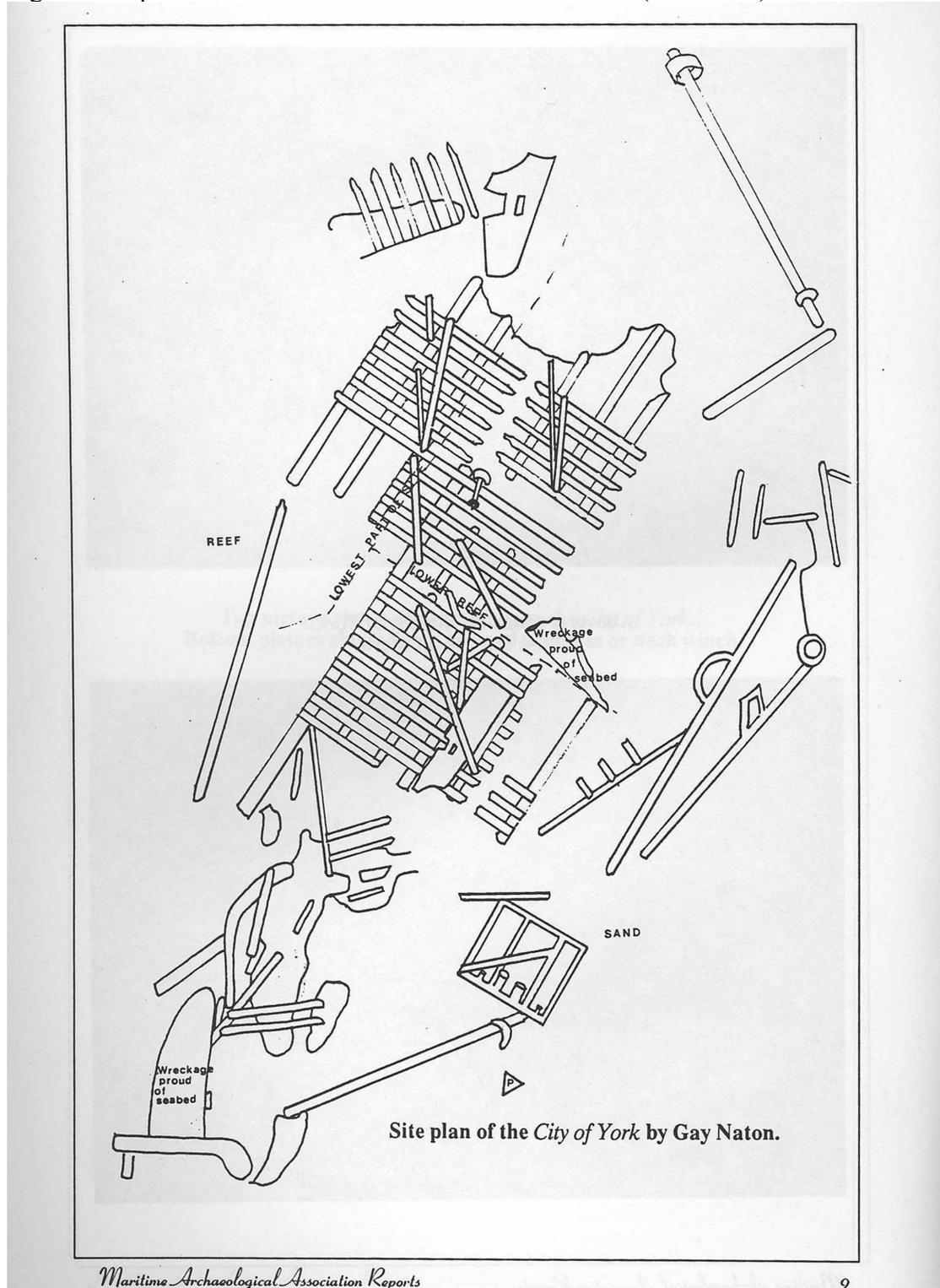
Paasch, Capt. H., 1890 (facsimile reprinted 1977), *Illustrated Marine Encyclopedia 1890*, Argus Books Limited, Watford.

UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001.

Appendices

Appendix A

Fig. 12 Site plan from 1990 - North and stern is at bottom (MAAWA).



Drawing: G. Naton

Appendix B

Rigging components visible on *City of York* wrecksite

Fig. 13 Diagram of square-rigged ships' standing rigging showing lower mast (5) and lower yard (9) (Paasch 1890 : Plate 92)

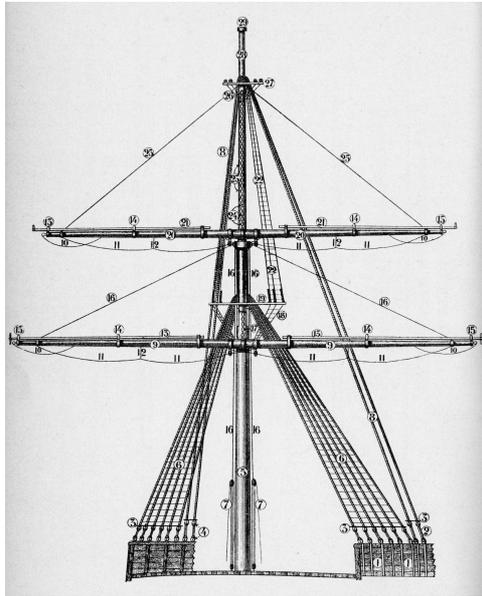


Fig. 14 Detail of lower mast, lower yard, mast cap and trestle trees (Paasch 1890: Plate 92)

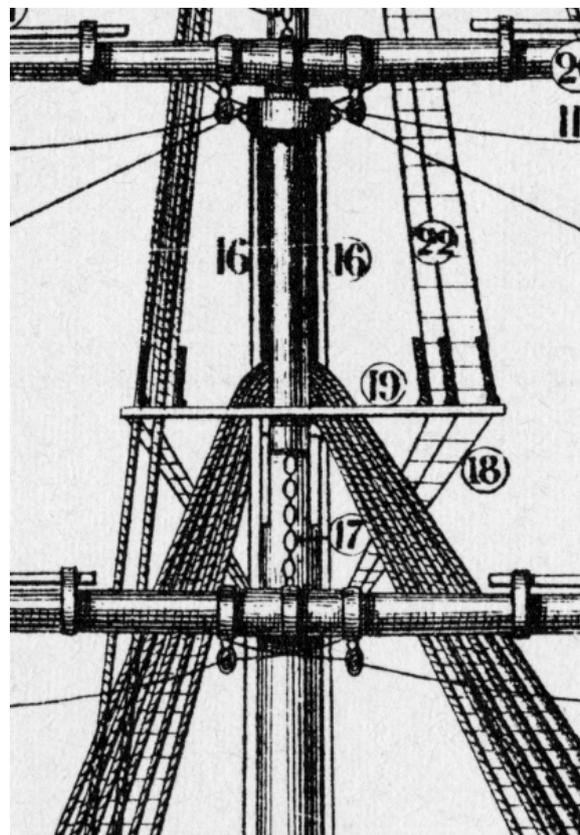


Fig. 15 Diagram of upper portion of an iron lower mast (C) showing cap (1), mast head (2), trestle tree (3), cheeks (4) and truss hoop (Paasch 1890: Plate 89)

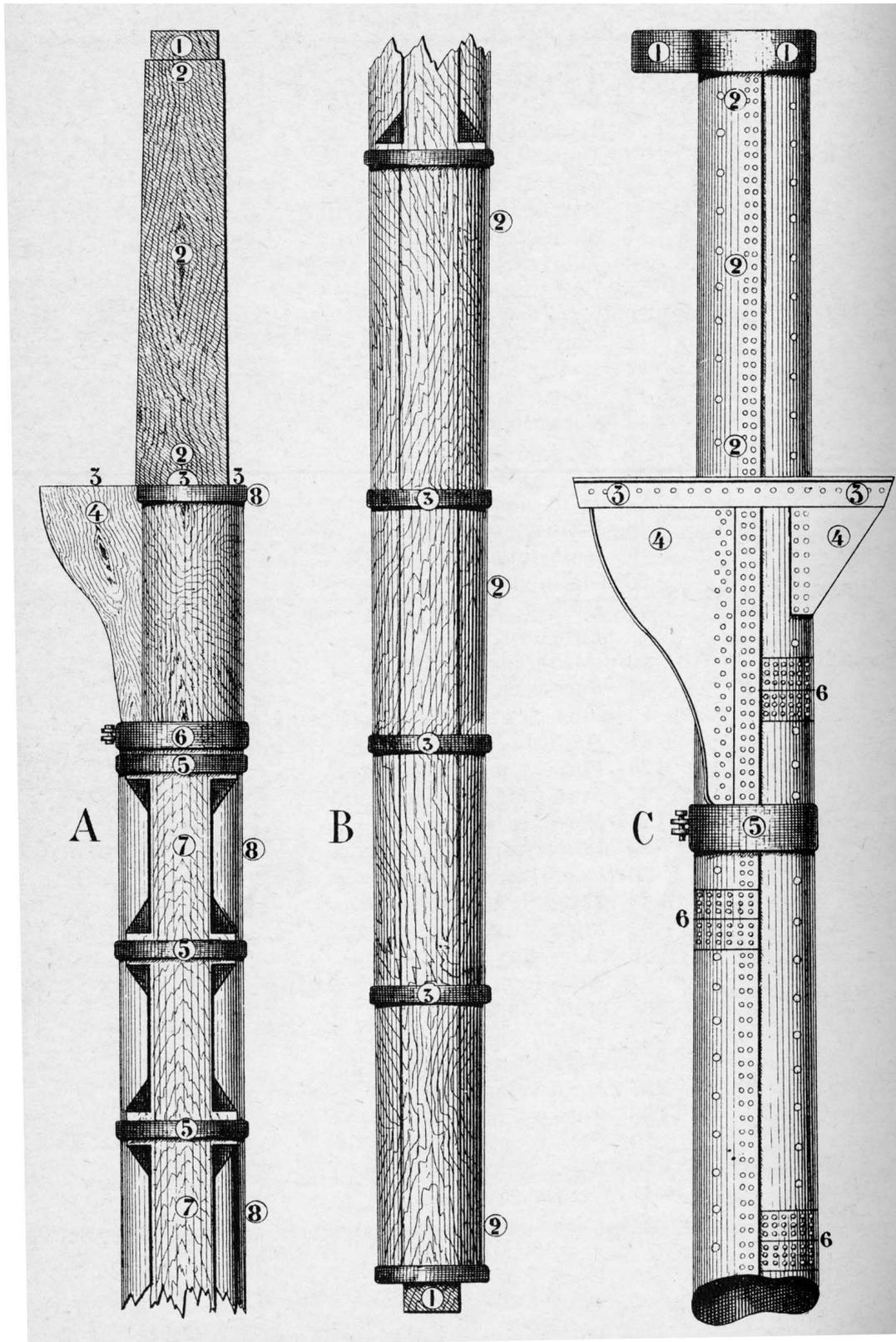


Fig. 16 Diagram of lower yard ('H' at top) (Paasch 1890: Plate 90)

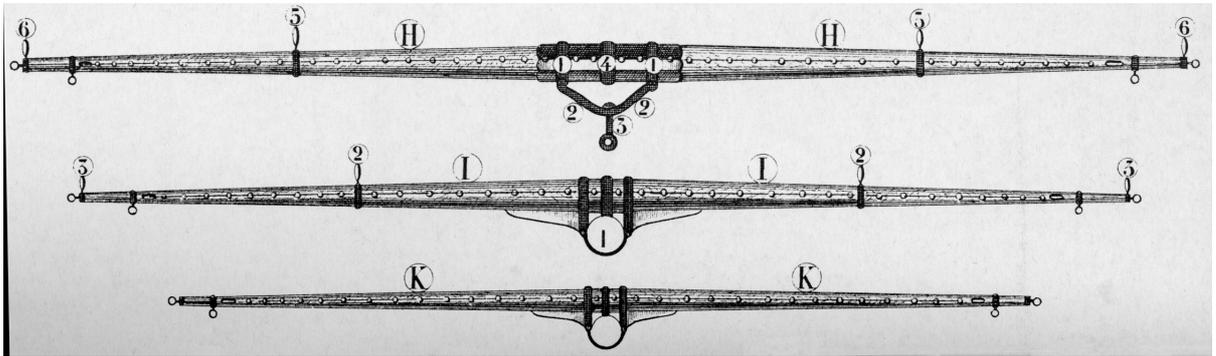
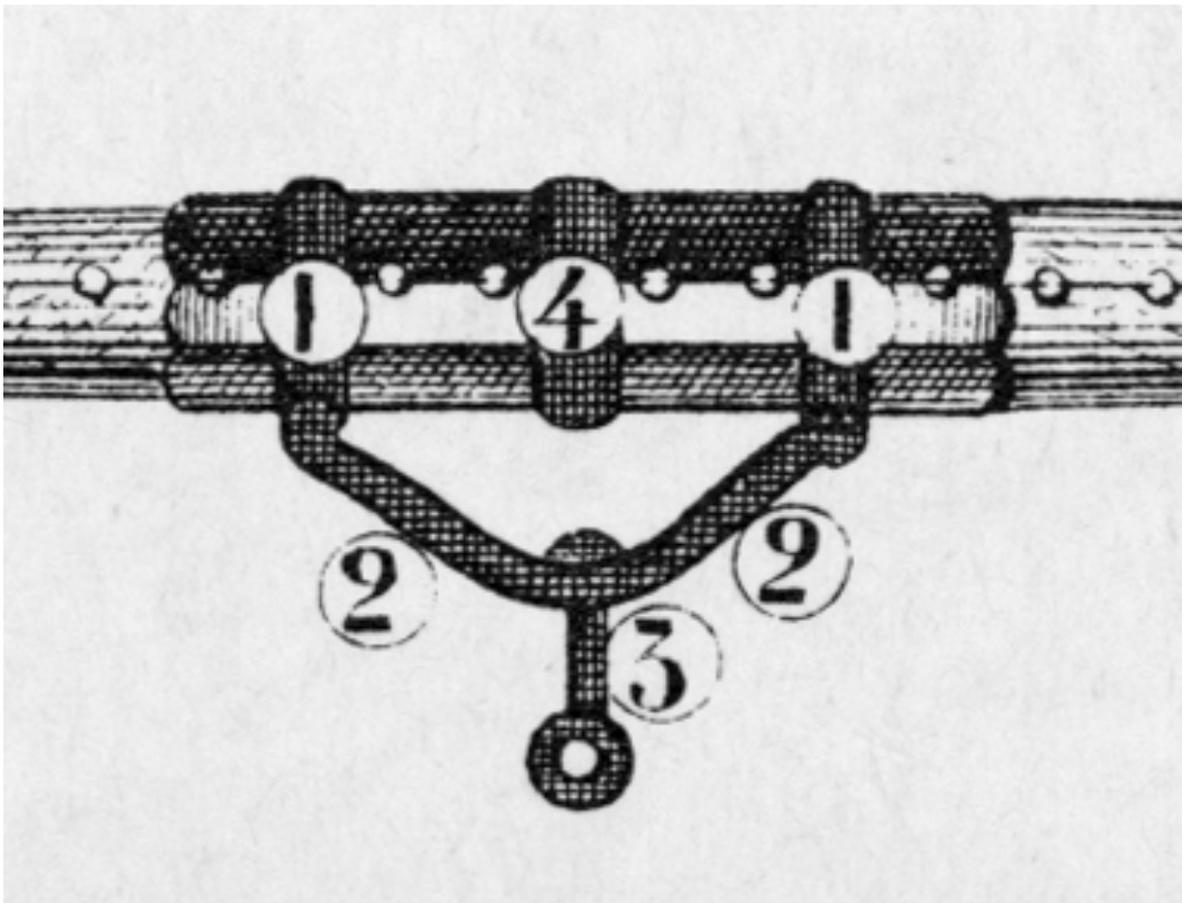
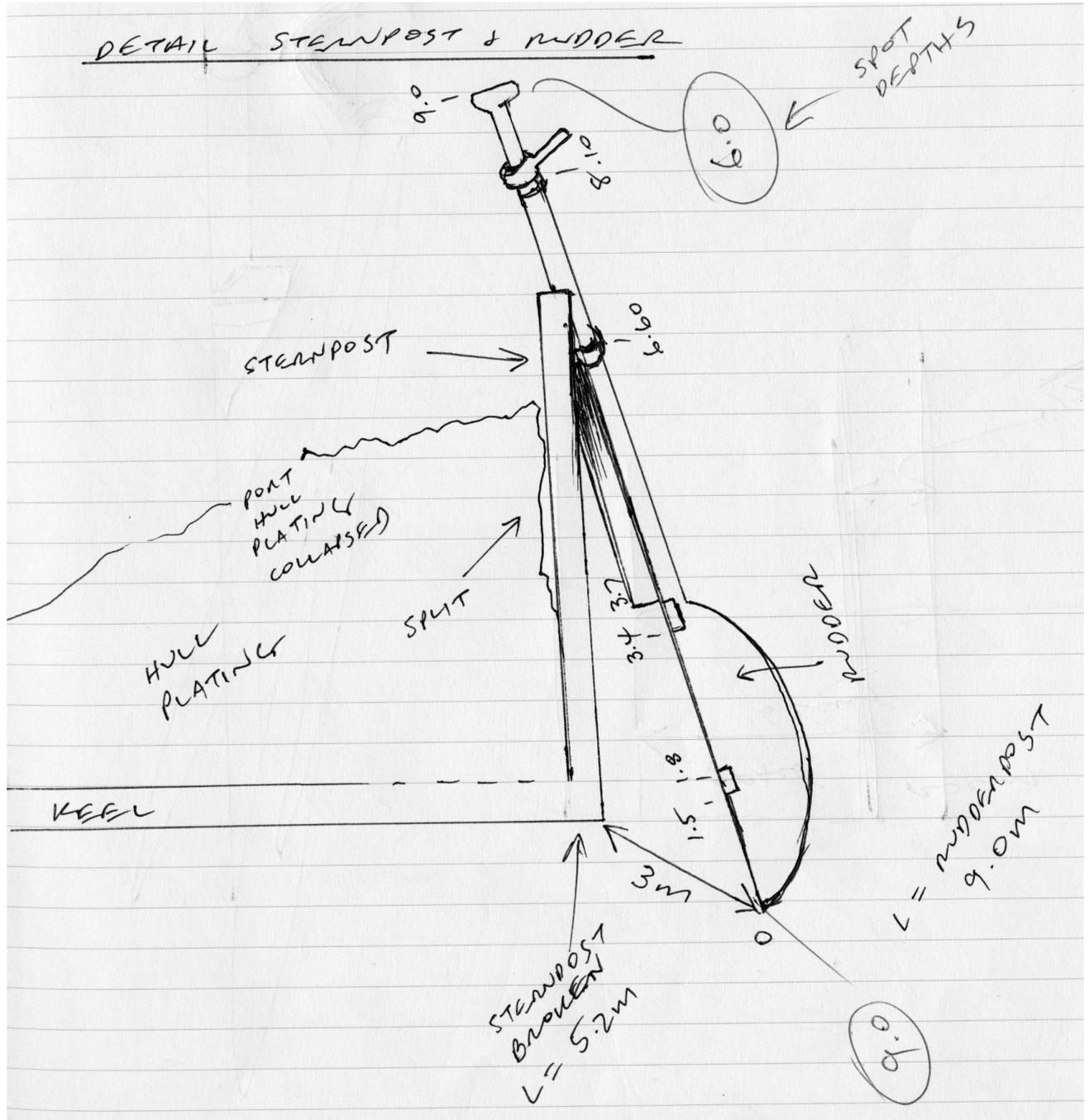


Fig. 17 Detail of lower yard showing truss hoops (1) and truss (2) (Paasch 1890: Plate 90)



Appendix C

Fig. 18 Measurements and layout of sternpost and rudder based on field sketches and notes in Day Book.



Drawing: R. Anderson