

The Amazon (1863) Shipwreck Project

25 November - 5 December 2018

Compiled by Madeline McAllister

January 2019



Project Report

Photo credit

View looking East over Site A—John Nauman, Flinders University.

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25 November - 5 December 2018

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Abbreviations

MAAV	Maritime Archaeology Association of Victoria
RTK	Real-Time Kinematics
GPS	Global Positioning System
AIMA	Australasian Institute of Maritime Archaeology
DEM	Digital Elevation Models
GIS	Geographic Information System
WGS	World Geodetic System

Summary

In July 2018, Heritage Victoria was notified by concerned residents of Inverloch about the erosion of their beach and uncovering of the *Amazon* shipwreck at the intertidal zone. On 25 July 2018, Maddy McAllister, Peter Harvey and Des Williams from the Maritime Archaeology Association of Victoria (MAAV) inspected the site to determine the amount of degradation. The initial site inspection showed that the coast was indeed heavily eroded, with 20–30m of sand dunes gone. A partial timber and some planking with visible at the high tide mark near the site.

In addition to the environmental concerns, we increasingly received reports of human interference with the site (e.g. pulling out and taking copper alloy bolts from the wreck). The site was exposed and there was evidence of both environmental and human degradation to the remaining timber structure.

Consequently, the maritime archaeology team at Heritage Victoria identified the *Amazon* as the number one in a list of the top 20 at risk, significant historic shipwrecks in Victoria. Due to the position of the site and within a dynamic surf zone, the feasibility of reburying the wreck was deemed too costly and unlikely to succeed. *Amazon* became a priority, however, for Heritage Victoria to record the current site before the archaeological record degrades further (McAllister 2018).

Heritage Victoria reached out to the Flinders University Maritime Archaeology Program to see if they were interested in running a field school or practicum to properly locate, record and identify the remaining wreck site. Flinders accepted, and the Advanced Practicum for Maritime Archaeology ran as part of the project (**Appendix A**—project timeline).

As the *Amazon* shipwreck site is situated within the Bunurong Marine National Park, any scientific research requires a permit under Parks Victoria policy. The permit for this research is ‘The Amazon Historic Shipwreck Project—management and recording’, permit number: 10008939).



Figure 1: Aerial image of the *Amazon* excavation — Site B.

1. Introduction

1.1 Objectives

To survey the surrounding beach at Inverloch and determine the extent of the *Amazon* shipwreck. The primary focus is on the underwater site and determining the degradation level there, then working on the structure that is further up the beach in the tidal zone. Once the area is surveyed anomalies were investigated with test excavations to identify any features. The known section (Site A) was excavated to determine what part of the ship it could be and assess the condition of features below the current surface level.

In addition, an aim was to ensure that the practicum students apply their knowledge and skills in a 'real-world' situation and gain experience in methods, techniques and requirements for maritime archaeology practitioners in Victoria. Consequently, we designed the surveying, excavating and recording approach to be as complete as possible and provide a full experience for the students. The project included the following:

- Walking visual survey
- Metal detector survey
- Aerial (drone) survey
- Real-Time Kinematics (RTK) positioning
- Global Positioning System (GPS) position fixing
- Photography: drone, context, site (working), features, survey and artefacts.
- Manual measurement and mapping of sites
- Artefact drawing and photographing
- Photogrammetry for digital 3d modelling
- Hand tool excavation of metal detector anomalies and the known section on the beach.
- Timber sampling for identification
- Copper alloy fastening sampling for composition analysis
- Community outreach

1.2 Data storage

The following data will be located on the Heritage Victoria server (G Drive) in the Amazon shipwreck folder under <Amazon Practicum 2018>:

- All survey results: pedestrian, metal detector and drone
- Real-time Kinematics (RTK) positioning data for the survey areas and found features
- GPS positioning data for the Amazon site and related features
- Photographs – Drone, site (working), features and photogrammetry
- Site plans
- Artefact catalogues: information, drawings and photography
- Timber identification results
- Copper alloy sample composition analysis results — to be completed by Wendy van Duivenvoorde and returned to Heritage Victoria when completed.
- Community photographs and information about the site

A selection of the artefacts was accessioned into the Heritage Victoria collection as samples from *Amazon* for future research and exhibition (**Appendix C** — full artefact catalogues). They are currently under conservation assessment for long term storage:

- 23.00001 — wood deadeye (wet)
- 23.00005 — wooden fairlead (dry)
- 23.00006 — rope fragment with leather binding (dry)
- 23.000011 — copper sheathing (dry)

1.3 Legislative requirements and practice guidelines

The project work was completed observing the legal requirements of the Victorian *Heritage Act 2017* and the Commonwealth *Historic Shipwrecks Act 1976*. In addition, the research, excavation, recording and management components followed the Australasian Institute of Maritime Archaeology (AIMA) Code of Ethics, the principles outlined in the Australia ICOMOS *Charter for the Conservation of Places of Cultural Significance (Burra Charter)* guidelines (1999) and Annex to the 2001 UNESCO *Convention on the Underwater Cultural Heritage*.

1.4 Study area

The site is located at the intertidal zone on the Inverloch surf beach. Inverloch is a small, coastal town located within the state of Victoria, approximately 115km south east of Melbourne (**Figure 2**). Inverloch is a small coastal town with most residents comprising of retirees and young families. There is a large tourist component to the population which reflects the early history of the town as a place for holidays and relaxation.



Figure 2: Inverloch's location within Australia

Source: Google earth — accessed 24 December 2018

The wreck site lies approximately 150m west of the mouth of Wreck Creek (**Figure 3**). *Amazon* is situated between the high and low water marks. Coastal erosion in this area recently increased and is remediation of the most degraded foreshore areas is focus of the Shire and Parks Victoria. Given the known extensive level of erosion, the wreck site is at risk of further degradation due to its location in the intertidal zone on a surf beach.



Figure 3: Amazon site location

Credit: Google earth — accessed 24 December 2018

1.5 Coastal geography

Located on the Southwest Gippsland, the Inverloch coastal environment is dynamic. Cold fronts from the Southern Ocean are channelled through Bass Strait and create intense winter swell and wave action along the shore (Agriculture Victoria 2017). Although the foreshore accumulates sand during the summer months, from 2012 the Inverloch Surf Beach faced continuous erosion of sediment and sand dunes with up to 10m loss per year (Parks Victoria, 2018). The surf beach stretches from the eastern side of Cape Paterson to Anderson Inlet, within the wider Venus Bay.

The Amazon wreck site lies approximately 150m west of the mouth of Wreck Creek, toward the western end of the beach. The exact delineation of the site was unknown, although previous site inspections determined an approximate position and a visual marker (large timber) indicated at least one part of the site (Mitchell 2015).

1.6 Land-use history

A brief outline of the local area history provides background to the environment and habitation at the time of the wrecking event

1.6.1 Inverloch local history

The South Gippsland area was occupied by the Bunurong people of the Kulin nation before the arrival of Europeans. Specifically, the Lowandjeri Bulluk (approximately 200 people) inhabited what would become Inverloch. While the boundaries of their territory are open to conjecture, due to a lost oral history, their low numbers and apparent territory meant that they enjoyed ample food supply and good relations with surrounding groups, with whom they held reciprocal marriage agreements. Their shell middens remain under modern developments in Inverloch, and around Screw Creek (approximately 4 kms north of Anderson's bay). Diseases, alcohol and firearms that accompanied the European settlers brought about a rapid decline in customs and population with the last of the Lowandjeri moving west towards modern Melbourne. Today, the Bunurong people are represented by the Bunurong Land Council Aboriginal Corporation acknowledged as Traditional Owners.

The *Land Act* 1969, paved the way for land selection and clearing. A large part of Inverloch current town is built on subdivisions of selections taken up in 1874 and 1883 (Bass Coast Shire, 2012). From 1900, Inverloch grew as a seaport with ships transporting black coal from Powlett River coalfields to Melbourne, until the railway line was extended through to Wonthaggi in 1910. Bullock teams and a steam traction engine brought the coal from Wonthaggi mines to steam traders at Inverloch jetty, and from there it was shipped to Melbourne.

Inverloch also has a long history as a coastal leisure town with records of bath houses and a swimming area used from the 1880s. From 1930, the Pine Lodge Private Hotel was opened in 1930 with accommodation, entertainment and sporting activities including a nine-hole golf course, two tennis courts and horse riding. Designed as a country club it continued to run until 1981 attracting the social elite from Melbourne before being demolished in 1985 (Inverloch Historical Society 2018; Bass Coast Shire 2012).

1.6.2 The *Amazon* (1863)

Amazon was a 402-ton barque built in 1855 by Frederick Charles Clarke of Jersey in the Channel Islands, UK. Clarke's well-known n built 62 ships and occupied an expanse of coast just outside the main harbour at West Park, St Helier (see **Figure 4**, Lithograph of St Helier). *Amazon* was registered to Jersey from 1855 until it wrecked in 1863. The entry for the Jersey Archives Register states that *Amazon* was owned by the merchant John Carrel and other shareholders (Abraham Ogier (merchant and captain), John Mallet (gentleman) and William George Aubin (gentleman). When registered *Amazon* is described as a 3-masted barque, with 1 and $\frac{1}{4}$ decks, a round stern, wooden frames, carvel build and having a 'full woman' figurehead. The last entry for the barque in Lloyd's Register of British and Foreign shipping notes that it was 131.5ft long, 25.5ft wide and 16.2ft deep. Currently any further information about the vessel could not be found, although we are awaiting confirmation from the Jersey Heritage Archives.



Figure 4: 1870 lithograph of St Helier, Jersey Island.

Note: Clarke's shipbuilding yard in the right-hand corner.

Source: Felix Benoit, 1870.

Amazon left Melbourne bound for Mauritius on 12 December 1863 with a cargo of salted meats. The vessel cleared Port Phillip Heads at 8pm that same evening and turned to starboard to head west towards the Indian Ocean. By 2am on the 13 December the wind had picked up and by 4am the Captain reported the gale had turned into a hurricane. 14 miles off Cape Otway, the wind tore off some of *Amazon*'s sails. By the 14 December, *Amazon* attempted to return to the Heads and the relative safety of Port Phillip but by noon on the 15th, the Captain realised they weren't going to make it and turned his attention to keeping his vessel away from the shore.

Amazon continued to drift east as the storm still raged through into the next day and at 6am, there were breakers off the port bow and rocks ahead. *Amazon* struck the beach near what is now the Inverloch surf beach at 10am and Captain Ogier kept the vessel on course to drive the ship as far up the beach as possible. After being on deck for 48 hours straight, the crew were exhausted, and it wasn't until 3pm in the afternoon that everyone made it to shore.

They set up tents on the beach the next day and searched the nearby area for signs of inhabitants. There was no sign of anyone until the 21st December when Mr Heales who was passing close by on his way to Melbourne to visit family for Christmas saw a distress flag flying. He escorted Captain Ogier to Melbourne who raised the alarm.

The crew were rescued by H.M.C.S *Victoria* (which happened to be the first vessel of the Victorian Colonial Navy). *Victoria*'s captain reported that the wreck was lying broadside onto the beach but embedded into the sand about three metres. The ship was high enough up the beach that it was dry at low tide. He also reported that sixty feet of the main keel and forefoot was broken off and lying on the beach at the high-water mark.

The vessel sold at auction on 31 December 1863, with no information available on the new owner, although reports indicate that 100 casks of ships provisions were salvaged and sold separately (**Appendix B**) (The South Australian Register, 1864).

1.7 Significance

Amazon is historically significant as an example of a mid-19th century wooden international trading vessel that contributed to Victoria's economy in the 1800s. Built in 1855 in Jersey, one of the Channel Islands of the United Kingdom, the ship may provide insights into the shipbuilding tradition of that era. In addition, the preservation of timbers and rigging material indicate that further research would reveal a significant amount of information about Jersey shipbuilding and trade. There are indications that, although British, the Jersey shipbuilders imported timber for shipbuilding from other countries to avoid taxes.

The social significance of *Amazon* can be identified through numerous local 'echoes' such as its location near the entrance to Wreck Creek (named for the wreck). When *Amazon* ran aground on the beach, this area of coastline was deserted, and the crew were lucky Mr Heales passed by on his way to Melbourne. Due to the limited exposure of the wreck since 1863, the local community did not appear to have embraced the wreck site until the recent exposure. This has drastically changed over the past five years, however, as the site is more visible to the public — community respect and 'ownership' is growing. Due to its current exposure, *Amazon* has current interpretive significance, particularly for the local community. This can be further explored through signage and images and a potential display at the Inverloch Community Hub. *Amazon* may have interpretive potential after further archaeological study.

The archaeological potential of the wreck is still to be determined. The exposed frames and ballast mound at the low tide mark is jumbled and much of the context may not be in its original form. The fact that the wreckage does not appear to have been exposed often since 1863 and the ship was said to be beached into the sand up to 3 metres indicates there may well be parts of the vessel still intact under the sand. If any of the salted meat cargo remain, further archaeological work could contribute to studies around the practice of importing and exporting food into and out of the Australian colonies. Previous work in this subject matter in Victoria includes research into the salted meat cargo of the William Salthouse that was being imported from Canada. The archaeology also has the potential to highlight 19th-century New Jersey shipbuilding techniques that are poorly represented in the Victorian resource. Timber samples taken during this project will be used to identify the timber species and confirm the shipwreck's identity. In addition, copper-alloy fastener and sheathing samples will be analysed, which may provide insight into copper alloy processes at the time and specifications for maritime use.

The Victorian shipwreck resource contains numerous examples of international iron and steel trading ships, but the wreck of the *Amazon* is an example of well-preserved mid-19th century wooden international cargo carrier. The wreck is also the only known example in the Victorian wreck resource that was built in Jersey, one of the Channel Islands in the United Kingdom. The erosion that occurred during the Autumn storms in April 2015, exposed rare and delicate organic artefacts such as a deadeye with a knot still tied at one end indicating a rare level of preservation of the upper structures and associated materials.

2. Methodology

This section outlines the methodological approach adopted by Heritage Victoria and Flinders University to survey the area and conduct test excavations at the Inverloch surf beach in the Bunurong Marine National park.

2.1 Surveys

The initial phase of fieldwork involved survey of the visible surface area to determine any obvious signs of the site. This included a walking visual survey that covered the known wooden structure at the high tide mark and moved west for approximately 150-200m. This survey aimed to cover the entire beach area and as far into the water as possible to safely walk. In addition, a drone survey was completed to create detailed and high-resolution imagery of the area.

After the visual surveys were completed, a metal detecting survey aimed to identify any large ferrous features buried below the surface. A J W Fisher Plus 8X and Minelab Excalibur 1000 — both capable of operating in intertidal areas were employed for this work. The survey area was plotted out and concentrated on the area from the exposed timber to the wreck site (approximately 110m west). An additional 30m x 50m section was detected, stretching directly to the east of the primary survey zone to ensure that any potential buried remains were identified. Each transit line was 2m apart so that average swathe of metal detector operators covered as much ground as possible. Any targets were flagged and inspected via test digging by a following team. Any potential, relevant features were marked with GPS and RTK positions. If targets were deeper than approximately 20cm their position was recorded and noted as to deep to identify.

Aerial imagery was taken using the DJI Phantom 3 and DJI Mavic 2 Pro. The drone data generated during the aerial surveys was utilised to create orthomosaics and digital elevation models (DEM) of the excavation sites and surrounding area

2.2 Geospatial recording

All relevant features, survey boundaries and finds were positioned using a two-system method. A Garmin Global Positioning System (GPS) GPSMAP 64S and Real-time Kinematic Trimble TSC3 Unit 2 (RTK) with a R10 Head Windows operating system using Telstra connection were used in conjunction to locate the project datum point and record all required features. The handheld Garmin has a three-meter error on average, while the RTK Trimble is integrated with Global Navigation Satellite System reference stations and satellite with a 10-centimetre error. The recorded points were used to create all maps, plans and geo-reference imagery within Geographic Information System (GIS) software (ArcMAP 10.6). The data was placed over a world imagery World Geodetic System (WGS) 84 base map.

2.3 Excavations

Investigation of the known timber structure and an anomaly located during the metal detector survey were examined by excavation. Excavations were opened in test squares to delineate features, then the excavation followed the length of features to uncover as much as possible at low tide. Excavation could only begin as the tide began to recede and due to the water table level and a requirement to only use hand tools, a depth of only 0.5m could be reached at Site A and 0.7m at Site B.

At the end of each day, the trenches were back filled (or covered over once again by the tide). As the beach was open to the public, and a notably popular walk, it was essential to recover the features and reduce risk of anybody tripping.

A total of 21 samples were taken of timbers and copper alloy material for identification and analysis. Timber identification was completed by Dr Jugo Illic of 'Know your Wood' and the results are outlined below. Copper alloy analysis is to be completed by Wendy van Duivenvoorde (**Appendices E and F**).

All excavation was accompanied by extensive recording in the form of hand drawn illustrations, scaled plans, measurement of scantlings and fasteners, drone and manual photography, photogrammetry and geospatial positioning.

2.4 Community outreach

A major aim of this project was to meet the needs and requests of the local public at Inverloch, particularly those who had expressed concern about the site and monitored the erosion for Heritage Victoria (sending in pictures and updates over the past three years). Within the capacity of Heritage Victoria and Flinders University, the excavation and recording aimed to recover as much archaeological knowledge about the site as possible before it degrades any further. Reburial or complete excavation is currently not possible due to limited funding and the predicted success of any reburial method.

As the site is located close to a popular local beach and experiences high pedestrian traffic, it was vital that everyone within the project team were briefed on how to manage public interest and questions.

This report will be provided to the local council, the Inverloch Historical Society and Parks Victoria. In addition, there are plans to have a small exhibition at the Inverloch community Hub in late 2019 to display the plans, imagery and results.

3. Results

The following section outlines the preliminary results from the excavation. It outlines the methods used to survey the site, excavate to areas, record features and take samples. In addition, some site interpretation and discussion are included throughout.

3.1 Surveys

3.1.1 Walking visual survey

Each team member walked transects approximately three metres apart, and in the direction from the beach head towards the water line (**Figure 6**). With all 11 members, the line moved westward from the exposed timber 150 metres along the beach (in line with the shore). Once this was completed, the group extended the survey an additional 33 metres into the water line. Altogether, the line survey covered 4,900 square metres with the initial 150m length represented in pink and the additional 33m tidal zone survey area represented in white (**Figure 7**). As the group moved along, they flagged objects that they deemed as of potential cultural significance. Several artefacts were located including glass and iron fragments — while the position of these items was recorded, they were deemed modern or too minor to be of relevance (**Figure 5 and Table 1**).



Figure 5: Example of surface find.



Figure 6: Students conducting the walking visual survey.

The final transit line — deepest into the water — located the main wreck site in the southwest corner of the survey area. At this time, we took a simple length measurement of the site (28.5m) and a GPS point (**Figure 8**). Although the lack of visibility limited our understanding of the overall site remains (and unexpected depth of the site even at low tide) — students could identify ballast stones and wooden frames on the site.



Figure 7: Extent of walking visual survey.

Credit: J. Leach and M. Khoiru

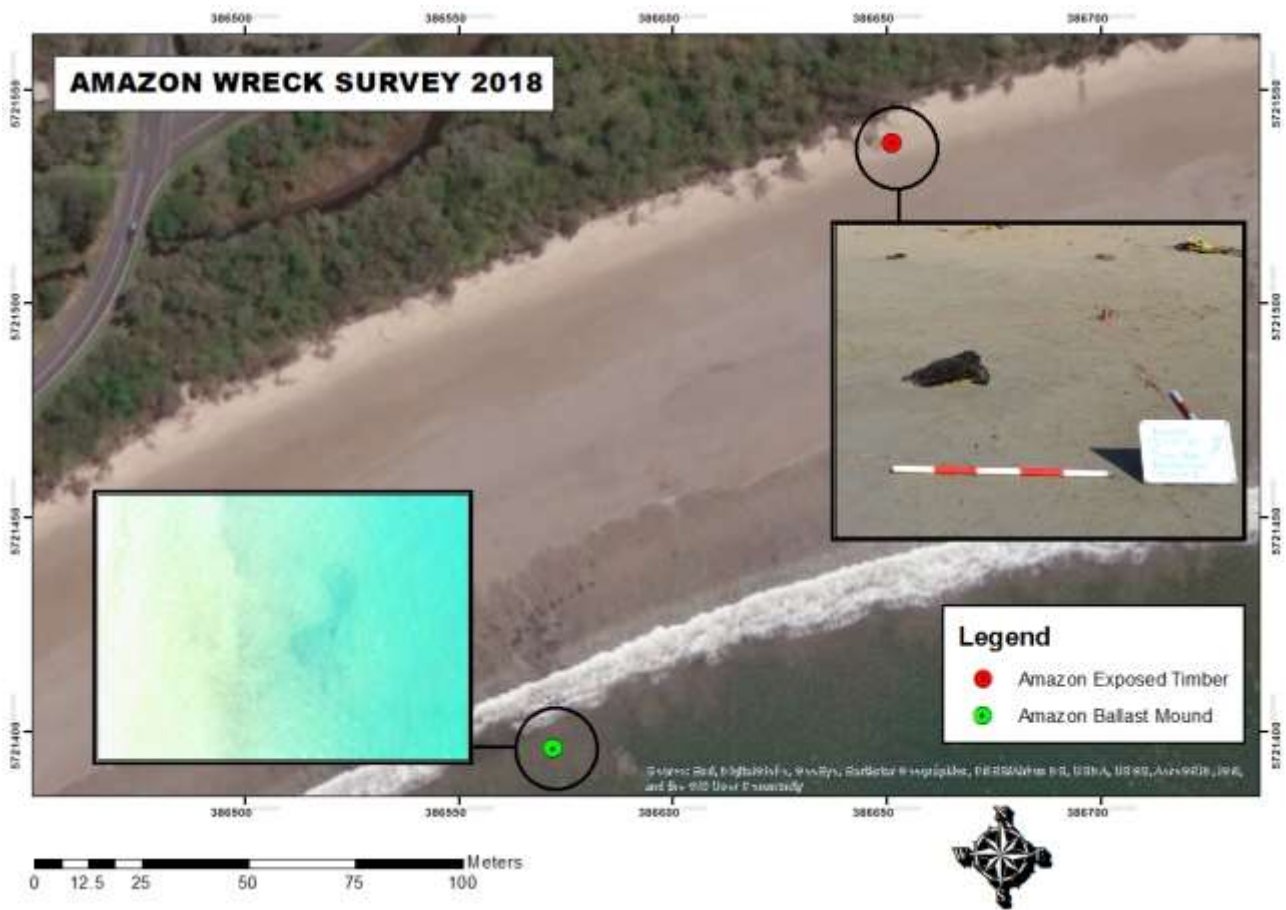


Figure 8: Location of two visible site features.

Enlarged image inserts show the main wreck site and potential bow section.

Credit: J. Leach and M. Khoiru.

Table 1: Walking visual survey anomaly results.

Name	Object	Colour	Photo Log	Dimensions	Location	GPS	
Anomaly 1	Iron Fragment	Rust colour	DSC_0003	3cm by 3cm	Beach surface	S 38.64777	E 145.69765
Anomaly 2	Modern Glass	Beer bottle brown	DSC_0004	5cm long and 2cm wide	Beach Surface	S 38.647887	E 145.69664
Anomaly 3	Iron Fragment	Rust colour	DSC_0005	3.5cm length and 1cm width	Beach Surface	S 38.64779	E 145.69652
Anomaly 4	Modern Glass	Beer bottle brown	DSC_0006	3cm long and 1.5cm wide	Beach Surface	S 38.648000	E 145.69614
Anomaly 5	Modern Glass	Beer bottle brown	-	-	Beach Surface	S 38.64788	E 145.69809
Anomaly 6	Modern Glass	Beer bottle brown	-	-	Beach Surface	S 38.64788	E 145.69809
Anomaly 7	Modern Glass	Beer bottle brown	-	-	Beach Surface	S 38.64813	E 145.69702
Anomaly 8	Modern Glass	Beer bottle brown	-	-	Beach Surface	S 38.69814	E 145.69682
Anomaly 9	Metal	Rust	-	-	Beach Surface	S 38.64821	E 145.69670
Wreck 1	Submerged Shipwreck	Multiple	-	Approx. 28.5m	Intertidal zone. 1m below water. Distance from bow piece to wreck is 160.5m.	S 38.64874	E 145.69653

3.1.2 Metal detector survey

The initial survey area measured to about 112 metres (West) x 32 metres (South). The transect was extended 30 metres to the east and 18 metres towards the waterline. The total survey area was 142 metres x 50 metres. Two-meter transect lines were drawn from beach head to the waterline from the 0-metre mark to the 50-metre mark. The metal detecting survey was carried out by sweeping the metal detector roughly 1-metre on each side as close to the ground as possible without hitting the sand along every transect line (**Figure 9**). Flags were used to mark the locations where the metal detectors encountered anomalies. Anomalies were double checked with the other metal detector to verify the findings. GPS points of the anomalies were taken using GPS equipment. They were then dug up until the groundwater level by hand or trowels to investigate each anomaly (**Figures 10 and 11**). Material excavated from the anomalies and the area where the anomalies were found were photographed and measured (**Table 2**).



Figure 9: Metal detector survey and grid



Figure 10: Investigating and recording anomalies

Table 2: Metal detector survey anomaly results.

Metal detector survey anomaly results							
Name	Object	Colour	Dimensions	Location	Depth	GPS	
Target 1	Timber with shackle	Brown and rust	6cm by 10cm base of shackle	Transect line 1- baseline	15cm under sand	S 38.64765	E 145.69652
Target 2	Lost	-	-	-	-	S 38.64790	E 145.69655
Target 3	n/a	n/a	n/a	Dug 72cm	9cm	S 38.69655	E 145.69667
Target 4	n/a	n/a	n/a	Dug 51cm	9cm	S 38.64787	E 145.69670
Target 5	n/a	n/a	n/a	Dug 51cm	9cm	S 38.64786	E 145.69672
Target 6	n/a	n/a	n/a	n/a	n/a	S 38.64786	E 145.69675
Target 7	n/a	n/a	n/a	n/a	n/a	S 38.64785	E 145.69676
Target 8	n/a	n/a	n/a	n/a	n/a	S 38.64784	E 145.69678
Target 9	Can Ring Pull	Metallic	n/a	Before 30m	n/a	n/a	n/a
Target 10	n/a	n/a	61cm x 62cm hole	Transect line 16m	30cm depth	S 38.64764	E 145.69722
Target 11	n/a	n/a	64cm x 57cm hole	Transect line 16m	30cm depth	S 38.64766	E 145.64794
Target 12	Modern iron wire	Rust	n/a	Transect line 32m	20cm depth	S 38.64756	E 145.69676
Target 13	Modern iron	Rust	n/a	Transect line 6m	n/a	S 38.64756	E 145.69745
Target 14	Iron fragment	Rust	n/a	32A area	30cm depth	S 38.64786	E 145.69699
Target 15	n/a	n/a	Dug 10cm x 33cm	Transect line 36m	33cm depth	S 38.64793	E 145.69672
Target 16	Brass bullet shell	n/a	n/a	Transect line 36m	30cm Depth	S 38.64786	E 145.69707

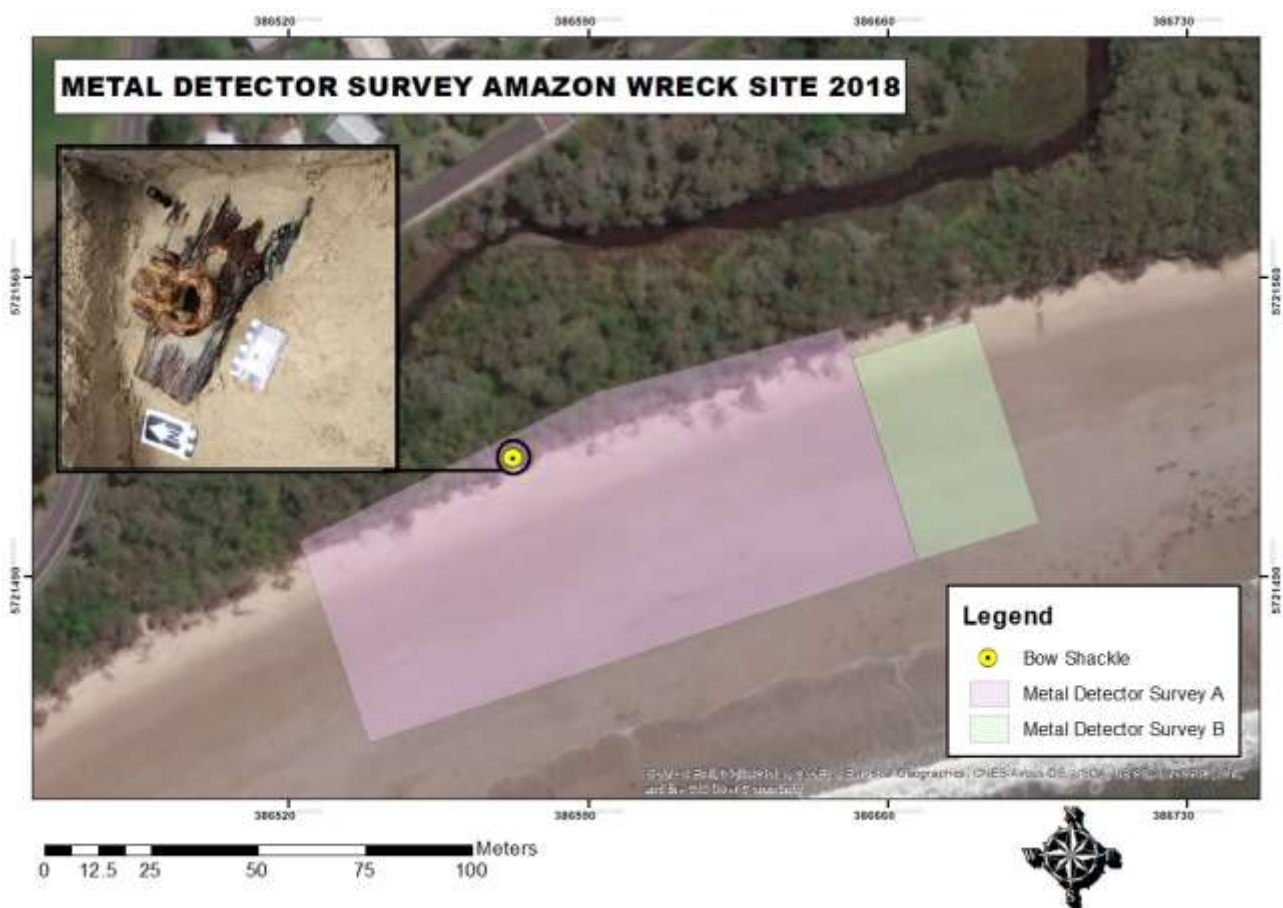


Figure 11: Extent of metal detector survey and main anomaly

Larger insert shows the ferrous d-shackle located during the survey

Credit: J. Leach and M. Khoiru

3.2 Excavations

Two separate sites were excavated over a 3-day period at the end of the project (**Figure 12**). Site A encompassed the visible section on shore—potentially the bow—and Site B was the D-shackle located

during the metal detection survey.



Figure 12: Location of excavation sites

Site A and Site B in comparison to each other.

Credit: J. Leach and M. Khoiru.

3.2.1 Site A

Excavation of Site A began with a 3m-by-4m area to a depth of approximately 700mm on the northern and western boundaries. The excavation revealed ship timbers that were interpreted as a section of deadwood, hull planking and framing. After the initial trench was uncovered, the timber features to the southwest (**Figures 13–15**) were uncovered. At this point the excavation approach changed as the tide was on its way back in, and knowledge of this site revealed that this area had uncovered extensively during the past winter season. Consequently, maintaining an exact excavation grid square was not necessary, instead, it was most important as much as possible of the wooden structure could be uncovered and recorded—hence the oblong shape of the southern end of the trench.

On the second day, two further 3m x 4m grids were excavated to the north and the west of the original grid (**Figure 16**). Water seepage was a constant problem during the excavation as Wreck Creek ran parallel to the shore directly behind the site. Consequently, water drains were dug out and maintained through the day to allow continual seepage of water out of the trench. Despite excavating approximately 200mm deeper than the previous day, the water table level could not be dug out any further with manual tools (a water dredge would be required in the future). Unfortunately, we could not expose the connecting point between the deadwood and hull planking. Extensive recording of the visible features and feeling by hand beneath the sludge at the bottom of the trench, however, enabled further understanding of the timbers (**Figures 17 and 18**).



Figure 13: Aerial image of Site A—end of context day 1

Note: the original square grid and then adapted excavation method to follow the timber structure.

Credit: J. Leach



Figure 14: Geospatial recording Site A—pre-excavation



Figure 15: Site A—grid excavation process



Figure 16: Aerial image of Site A—end of context day 2

Note: extended trenches and new features visible.

Credit: J. Leach



Figure 17: Close-up of construction features on deadwood



Figure 18: Close-up of planking construction

A total of 10 timber samples were taken from a range of features across both sites (**Table 3**). To understand the site and identify the material as most likely being from the *Amazon*, knowing the type of timber is valuable information in piecing together the puzzle. Six timber samples were taken from Site A and the results are promising, for example, the larger timbers such as the deadwood, frame timber and a treenail are white oak. A typical timber used for construction of these aspects in shipbuilding. Whereas the planking timbers are Baltic pine. Pine was regularly used as planking timber as it was softer and malleable.

Note: A range of copper alloy fasteners were sampled—currently under analysis—see Appendix E for full list.

Table 3: Timber identification results – Site A

Sample Number & Location	Description	Scientific name	Commercial or trade name + remarks
T12	Site A—hull plank 4	<i>Pinus sylvestris</i>	Baltic pine
T14	Site A—Frame timber	<i>Quercus ? robur</i>	White oak group
T15	Site A—Hull planking 2, treenail	<i>Quercus ? robur</i>	White oak group
T10	Site A—southern end	<i>Pinus sylvestris</i>	Baltic pine
T16	Site A—hull plank 6, inside	<i>Pinus sylvestris</i>	Baltic pine
T17	Site A—Dead wood	<i>Quercus ? robur</i>	White oak group

Note: “?” indicates that there are other similar species which cannot be differentiated on the basis of wood structure.

3.2.2 Site B

Site B was re-located during the metal detector survey. Although buried at the time, the shackle was clearly visible during previous site visits. Excavation of this site ran for two days and did not rely on a formal grid. The site is known to have uncovered and covered over the past few years, so sediment and stratigraphy recording was not essential. In addition, there was no apparent stratigraphy across the site—just beach sand. Instead, we followed the timbers as they were uncovered and maintained uniform trench walls around the structure (**Figures 19–20**).

The shackle is attached to a large timber (measuring 3.99m in length) with a mortise on the underside and notch on the exposed topside. The two larger ‘frame-like’ timbers are sturdy. Timber 1 measures 399cm in length and 28cm in thickness, timber 2 measures 430cm in length and 25cm in thickness (its eastern end appears to be broken). These two timbers sit parallel to each other and are joined together via a wide heavy timber (Timber 4) that is 44cm in width and 10cm in thickness (**Figures 23 and 25**).

The presence of the shackle and the way that it is fastened to the timbers indicates that the structure may be part of the deck structure, or at least related to rigging (**Figures 21 and 22**). This is part of current further historical research that aims to identify the structure and possibly what part of the *Amazon* it could be.

On the second day, two more timbers were uncovered to the north of the known structure. A total of four timbers were documented during the Site B excavation. Each timber contained a combination of copper alloy square nails, iron bolts, iron concretions, treenail holes, and treenails (**Figure 24 and Table 4**).



Figure 19: Site B—excavation underway on day 1



Figure 20: Site B—structure beneath the D-shackle



Figure 21: Plan view of D-shackle



Figure 22: Profile view of D-shackle



Figure 23: Site B—highlighting the way the timbers are stacked



Figure 24: Example of a square fastener on Timber 1

Table 4: Site B structure dimensions

Structure	Width	Length
Timber 1	25cm (average)	3.99m overall
Timber 2	28cm (average)	4.30m overall
Timber 3	14cm (average)	1.71m overall
Fasteners	Width	Length
Timber 1-iron bolt	4.0cm (average)	4 cm height
Timber 1-iron nail	1.0cm	Flush with beam
Timber 1-copper alloy nail	1.0cm	Flush with beam
Timber 1 iron shackle	6cm by 10cm	Height 9.5cm
Timber 1 treenail	4cm	3cm deep
Timber 1 iron concretion	8cm	14cm
Timber 2- iron bolt	2.5cm diameter	2cm height out of beam
Timber 2-iron nail	1cm square	Flat to surface
Timber 2-iron spike end	2cm square	19cm out of beam
Timber 2-cooper alloy nail	0.7cm square	Flush with beam surface
Timber 2-treenail hole	2cm diameter	3 cm depth
Timber 2-iron concretions	Ranges from 7-32cm diameter	Protrudes 4-6.5cm from beam
Timber 3-iron bolt	4 cm diameter shaft	12cm
Timber 3-iron nail	1cm square	5.5cm protrudes
Timber 3-copper alloy	1 cm square	Flush with beam
Timber 4	44cm	10cm
Other features	Width	Length
Timber 1-notch on top surface	22cm	17cm with 4.5 depth
Timber 1-notch under the top notch	9cm	17cm with 12cm depth
Timber 3-dip in wood	13cm	38cm with 8cm max depth
Timber 4	No obvious construction features	No obvious construction features

During the project we continually discussed with students the possibilities of what this structure could be. The timbers are large and sturdy—with no curvature in length or around any feature. At the time we debated that the structure could be completely unrelated to the *Amazon* shipwreck due to the way the timbers were fitted together and their form. Potential ideas involved part of a jetty structure that had washed up on the beach. The presence of copper alloy fasteners (one spike removed for sampling) on one of the larger timbers, however, suggests that it was part of the shipwreck.

Identification of the timber samples indicates that the timbers are the same as the known shipwreck material from Site A (**Table 5**). Currently, a possible conclusion is that the structure buried in Site B is part of the upper deck structure of *Amazon*.

Table 5: Site B timber sample identification results

Sample Number & Location	Description	Scientific name	Commercial or trade name + remarks
T02	Site B—Timber 2	<i>Quercus ? robur</i>	White oak group
T04	Site B—Timber 3	<i>Quercus ? robur</i>	White oak group
T06	Site B—Timber 4	<i>Quercus ? robur</i>	White oak group
T01	Site B—Timber 1	<i>Pinus sylvestris</i>	Baltic pine
T07	Site B—Timber 5	<i>Pinus sylvestris</i>	Baltic pine

Note: “?” indicates that there are other similar species which cannot be differentiated on the basis of wood structure.

3.2.3 Artefacts and conservation

A total of 27 artefacts were submitted by the public throughout the project, each artefact was recorded, photographed and catalogued (**Table 6**). All but 4 artefacts were returned to the custodians for safe keeping. Of the total artefacts, 37% of items were received from the Inverloch Historical Society while 63% were contributed by private individuals of the community. Private contributors resulted with more than half of the total archival donations. Many local individuals were actively interested in the preservation of shipwreck remains and aided in the recovery of significant archaeological items. Actual custodian names were omitted from this report for privacy purposes.

Table 6: Artefact list

Catalog #	Catalogued?	Drawn?	Photograph?	Sample ID	Artefact
23.00001	Yes	Yes	Yes		Deadeye
23.00002	Yes	No	Yes	C19	Copper sheathing
23.00003	Yes	Yes	Yes		Copper sheathing
23.00004	Yes	Yes	Yes	C18	Copper sheathing
23.00005	Yes	Yes	Yes		Fair lead
23.00006	Yes	Yes	Yes		Rope fragment
23.00007	Yes	Yes	Yes	C28	Metal Bolt
23.00008	Yes	Yes	Yes	C29	Metal Bolt
23.00009	Yes	No	Yes		Tacks
23.00010	Yes	Yes	Yes		Copper sheathing
23.00011	Yes	Yes	Yes	C20 and small tack C21	Copper sheathing
23.00012	Yes	Yes	Yes	F26 (felt sample)	Copper sheathing
23.00013	Yes	No	Yes		Copper sheathing
23.00014	Yes	No	Yes	C23 and felt sample C24	Copper sheathing
23.00015	Yes	Yes	Yes		Timber
23.00016	Yes	No	Yes		Copper sheathing
23.00017	Yes	No	Yes	C25	Copper sheathing
23.00018	Yes	No	Yes		Copper sheathing
23.00019	Yes	No	Yes		Copper sheathing
23.00020	Yes	No	Yes		Copper sheathing
23.00021	Yes	Yes	Yes		Timber

Catalog #	Catalogued?	Drawn?	Photograph?	Sample ID	Artefact
23.00022	Yes	No	Yes		Concretion with rope impression
23.00023	Yes	No	Yes		Copper sheathing
23.00024	Yes	No	Yes		Copper sheathing
23.00025	Yes	No	Yes		Copper sheathing
23.00026	Yes	No	Yes		Copper sheathing
23.00027	Yes	No	Yes		Copper sheathing

It is significant to note that there is a high number of copper sheathing pieces or fragments collected by locals over the past 10 years. Almost all of them said that the sheathing was located either in the sand dunes, pulled from the eroding dunes or collected on the side of the walkways down to the beach. This will be an important aspect in determining the site formation process along this dynamic coastline.

During the fieldwork it became apparent that there were a select number of items in the possession of community members were unique and well-preserved. Consequently, we decided to accession four artefacts: the large deadeye (23.00001), a well-preserved example of copper sheathing (23.00011), small fairlead (23.00005) and a rope fragment with a leather binding (23.00006). these artefacts were assessed by Heritage Victoria staff in December 2018 and are currently awaiting conservation treatment for long-term storage.



Figure 26: Artefact 23.00001—Deadeye.



Figure 27: Artefact 23.00011—Copper sheathing.



Figure 28: Artefact 23.00005—Fairlead.



Figure 29: Artefact 23.00006—Rope and leather binding.

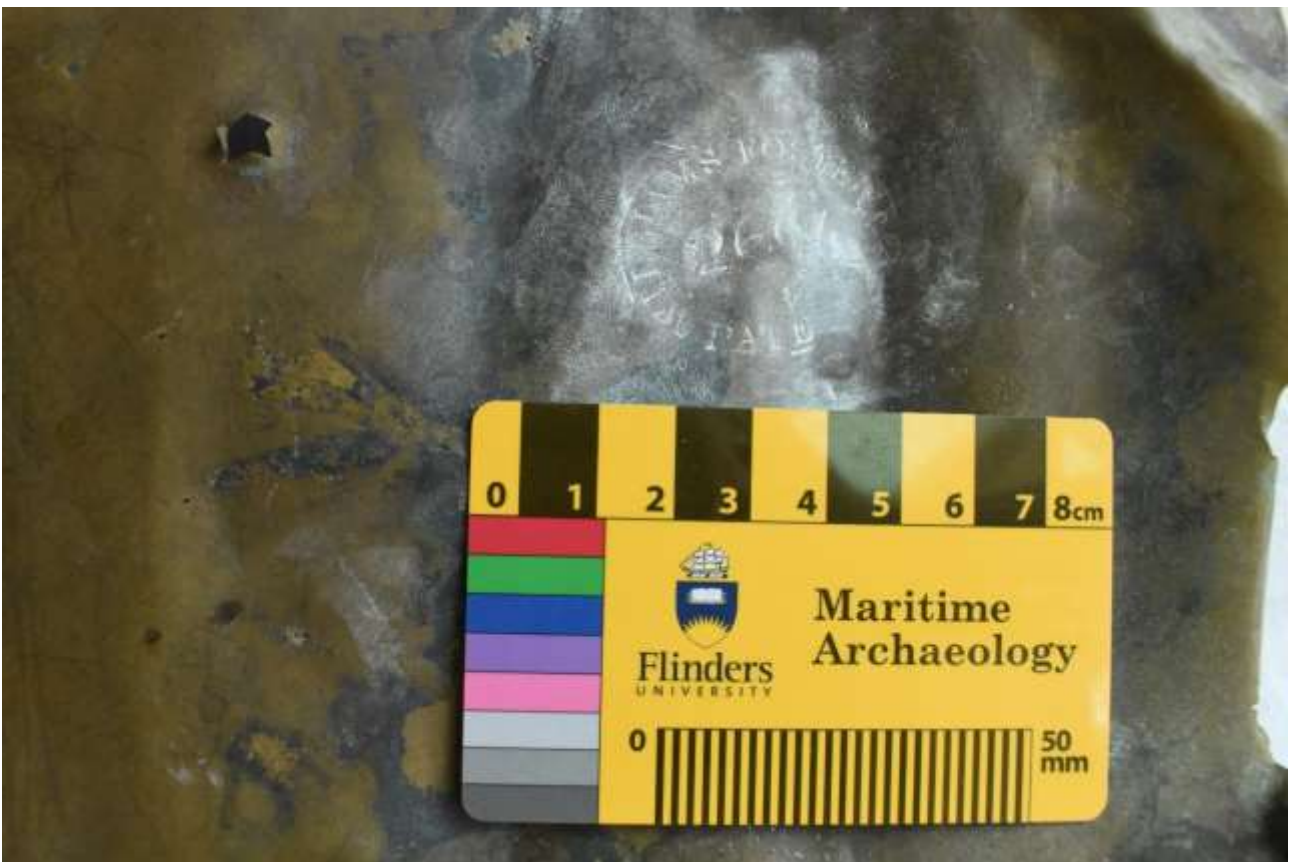


Figure 30: Makers stamp on copper sheathing.



Artefact 23.00011
Maker's Mark
Drawn by H. Boyle
Amazon 2018
1:1

Figure 31: Artefact 23.00011—Copper Sheathing: drawn representation of the Maker's Mark.

Credit: Drawn by Howard Boyle, December 2018.

4. Community outreach

Community outreach is an integral part of this project, from the beginning public interest and awareness started the investigations and continually increased as we became more invested and aware of the site. It was essential that community members involved from the start were kept updated and included in the project. Due to this, the visiting Flinders University practicum students were briefed at the start of the project and told of the importance of this aspects, each student was asked to engage with curious visitors (**Figure 32**). Throughout the project it was routine for the teams to have at least one member away from the trenches to engage with the interested passing public.



Figure 32: Site A—archaeologists, students and community all involved.

The *Amazon* shipwreck site is located on a popular dog beach and pedestrian traffic was heavy during the mornings and throughout the weekend. The surveys were partially influenced by public testimony (casual on-beach interactions) about artefact collection and an extensive range of photographic evidence provided by the community. Furthermore, detailed recording and photography of the artefacts was only possible due to the publicity, and word of mouth around the shipwreck and excavation. This manifested through many contacts coming forward with artefacts through the week of excavation to our rental house or to the site itself. Several unique artefacts were only recorded due to residents walking past us on the beach and returning with found objects.

Many passing beachgoers stopped to discuss the project with us or give anecdotes of their experience with the site (**Figure 33**). Two visitors even stopped to help move spoil from the trench and to participate in some of the digging under the supervision of the senior archaeologists.



Figure 33: AIMA NAS student and local Adrian Brewer

Adrian Brewer is an AIMA NAS part 2 student who also lives in the Wonthaggi area. Adrian provided an exceptional level of help to the project and joined us for the entire practicum. Despite having no tertiary background in maritime archaeology, Brewer proved an invaluable help to the project and contributed a great amount of effort and humour on site.

Overall, the push for community involvement in this project via media publication, social media, and work of mouth was a huge asset for this excavation. Most of the artefacts documented came from local residents who have interacted with the wreck for years. In addition, community members from Inverloch and the surrounding areas submitted photos and videos of the wreck.

5. Summary

5.1 Future research and management possibilities

Due to the location of the site—directly in the dynamic tidal zone—reburial would be an expensive project that may not work. Consequently, this recording project aimed to recover as much information as possible before the site degrades further. Despite our best efforts, recording of the main site could not be completed due to a higher than expected low tide level and poor weather conditions. Consequently, the following steps are recommended for future work:

- Complete, extensive recording of the main shipwreck site (planned for optimal low tides);
- Compilation of all analyses (timber identification, copper alloy analysis, ship construction etc);
- Return to give a lecture to the Inverloch community—results and project;
- Small exhibit at the Inverloch Community Hub;
- Continual monitoring of the site—Inverloch Surf Life Saving Club and locals. Return to record the main site when the right tides and conditions occur;
- Site signage in conjunction with Parks Victoria stressing the protection and significance of the shipwreck; and

- Baseline record for the beach erosion to monitor the site further.

5.2 Conclusions

Overall, the *Amazon* shipwreck project highlighted the success of small-scale fieldwork to record and understand maritime cultural heritage sites within Victoria. The conduct of the students from Flinders University was impressive and provides confidence for the implementation of future partnership to achieve outcomes that would not previously have been possible with available resources.

Although the main shipwreck site could not be accessed due to high tide levels and swell, a new GPS location was recorded and the acquired aerial drone footage of the main site provides a baseline level of recording for management purposes. In addition, the excavation of Site A (potential bow) and Site B (potential deck structure) were successful and provided valuable data for future work. Timber and copper alloy samples are already enabling us to piece together the story of the shipwreck after the crew were rescued and will hopefully provide insight into the construction of international cargo vessels in the mid-nineteenth century.

Recording and accessioning of rigging material from *Amazon* is significant as the upper structure and material from shipwrecks often do not survive site formation processes, particularly in dynamic environments such as Inverloch Surf Beach. Although experienced maritime archaeologists (from both Heritage Victoria and Flinders University) were onsite, the identity of the wooden structures in Site B remained a mystery and the size, lack of curvature and composition initially lent us to believe it was not related to the *Amazon*, however the similarities in timber identification now suggest that it is. This could suggest that partial aspects of the upper deck of the shipwreck have survived and (until recently) remained buried in the sand dunes and protected. Once again, this is a rare aspect of a shipwreck site and further research into the remains may reveal interesting information about the construction, rigging and repairs to *Amazon*. It should also be noted that the students suggested that the structure in Site B could be related to the crew using washed up parts of the vessel to create a make-shift camp—an intriguing idea that also warrants further investigation.

From July to November it was visibly clear that the site was beginning to cover up once again. Although this is expected of most beaches during the summer months, it is hoped that this is part of a long-term change in this coast. The recent uncovering of the site at the high tide mark indicate that the remains may have been safely buried under dunes for a long time after the wrecking event in 1863. Perhaps the sand dunes were approximately at the location they currently are during the mid to late-nineteenth century. Ultimately, we hope that the erosion management strategies implemented by Parks Victoria and the Bass Coast Shire will help further sediment accretion and reburial of the *Amazon* shipwreck.

The level of community interest and awareness is one of the greatest aspects of the *Amazon* shipwreck site. Locals of Inverloch and Wonthaggi appear to be taking on the role of site custodians. Further knowledge of 'their' wreck and the significance of its archaeological remains will encourage community understanding of the site. The results of this research will be to be shared with the public at Inverloch to encourage further understanding and respect of the site as a unique and irreplaceable resource.

6. References

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Appendix A Project timeline

Table A1: Project timeline

Date	Location	Schedule
26 November	Melbourne/Adelaide–Inverloch	Travel day—personnel driving from Melbourne and flying/driving from Adelaide Un-pack and set-up base at Inverloch
27 November	Inverloch	Site Induction and survey
28 November	Inverloch	Metal detector survey
29 November	Inverloch	Metal detector survey—test excavation to identify Site B.
30 November	Inverloch	Excavations Sites A (bow section) and Site B.
1 December	Inverloch	Excavations Site A.
2 December	Inverloch	Write-up, reporting and data processing day
3 December	Inverloch	Western end of the Inverloch Surf Beach cultural heritage survey.
4 December	Inverloch–Melbourne/Adelaide	Travel day—return to Melbourne and Adelaide.

Appendix B Newspaper article of wrecking

Transcribed copy

The South Australian Register (Adelaide SA, 1839–1900)

Weds 13 Jan 1864, Page 2

Miscellaneous news

Wreck of the Barque Amazon—The Geelong Advertiser of the 1st instant publishes the following account of the wreck of this barque, which sailed from Port Adelaide for Melbourne on the 14th November last with part of her original cargo for Mauritius. The particulars are supplied by Captain Mathews (Lloyd's agent), who visited the scene of disaster, having gone and returned therefrom by the colonial steam-sloop Victoria:—The Victoria left Hobson's Bay at an early hour on Monday last, arrived at Cape Patterson at daylight on the following day, and having embarked the crew, who were in good health, left again at 10a.m., and arrived in Hobson's Bay at half-past 9 on Tuesday night. On arrival at the wreck, which was found to be about one mile south-west of Anderson's Inlet, and eight miles eastward of Cape Patterson, lying broadside on to the beach, with mizenmast and bowsprit standing, embedded about nine feet in the sand, the water inside her being level with the beams. At low water the ship is high and dry. About 60 feet of the keel, with portion of the fore foot, has been washed ashore on the beach, the decks are more or less started, the hull slightly hogged, the metal stripped off in several places, and the boats, two in number, lying on the beach stove. There were about 100 casks of provisions as cargo, all of which are submerged in the hold.

The following account is condensed from the ship's log-book:—

Left Hobson's Bay for Mauritius on the morning of the 12th of December. Cleared the Heads the same evening at 8 p.m.; the weather was dark, gloomy, and threatening; and the barometer began to fall so rapidly that sail was shortened to double-reefed topsails and reefed courses. On the 14th (nautical time) the wind still continued to blow hard from south, with dirty, rainy weather. At 2 a.m. the wind suddenly shifted to S.W., Cape Otway at the time bearing W.N.W. 14 miles. At 4 a.m. the gale increased to a hurricane. Hove the ship to, with head to the southward and eastward, under a close-reefed maintopsail. At 6 a.m. the storm increased still more, and the sea was frightfully high; the maintopsail was then taken in, and the ship kept under the storm staysail, coming up to S.S.E. and falling off to E.S.E. At 3 a.m. on the following day the storm continued with unabated violence, if anything increasing, and the weather becoming very thick the ship was kept away for Port Phillip Heads, steering a N.N.E. course. At 10 a.m. There was no alteration in the weather. At noon obtained soundings, and, finding only 15 fathoms, hauled the ship up to S.E.

At this time the breakers were distinctly audible, but no land could be seen. The dangerous proximity to the land made requisite the reefed fore and main courses being set, even at the risk of losing the masts or yards. At noon it was found that the water had deepened to 25 fathoms, and at the same time a glimpse of the land was obtained, and it was supposed to be near Cape Patten. It was only a momentary clear up, as the weather immediately after became as thick as ever. All hopes of making Port Phillip Heads were then given up, and the ship was kept on the same tack, but she was by the force of the gale drifting fast to leeward. The lead was kept going, and the soundings then obtained were 30 fathoms. At 3 p.m. there was no change for the better, the barometer continuing to fall, the soundings being then 40 fathoms, but at midnight they had again decreased to 36, and shoaling very fast.

On the 15th there was no abatement in either wind or weather. At 4 a.m. a heavy squall struck the ship, and split the fore course and maintopmast-staysail. At this time the ship was wore round with her head to the north-west, but the water again shallowing to 25 fathoms, she was at 5 a.m. wore round again to the southeast, the ship drifting bodily to leeward and shoaling the water fast. At 6a.m. there was only 20 fathoms, and that fearful cry, 'Breakers on the port bow, and rocks visible right ahead.' was given, and it was then seen by all that the vessel was embayed; the land at this juncture was also seen, but the weather was too

thick for it to be recognised. Then the dreadfully perilous situation was seen by all— that the vessel could not be saved, and the lives of all were hanging on the will of Divine Providence. All the crew were then called aft, and a consultation held as to what could best be done for the preservation of their lives; and it was decided to wear the ship round again, and endeavour to stand out on the other tack. In attempting it the ship took so long to pay off that before she got entirely round, she took the ground, and the sea made clean breaches over her, washing and carrying everything off the decks. The canvas was, however, kept on to harden her well on to the beach; and when it was found that she could get no further, the fore and main masts were cut away to prevent her going to pieces. The whole onboard had by this time been kept on deck in a constant state of suspense, and were so exhausted that although the ship grounded at 10 a.m. it was 3 p.m. before they all got safely ashore, and it was done at no small risk. On landing, it was soon ascertained that they were on an apparently barren coast, no habitation being visible.

On the 16th search was again made to seek a house or track, but none could be found. On the 21st they were rewarded by finding two uninhabited houses. This gave them some encouragement to persevere further, but without avail, as they were much afraid of being lost in the density of the scrub. On the 23rd the son of the Hon. Mr. Heales, a young man about 17 years of age, who is on a station near Cape Liptrap, saw what he supposed to be a ship's mast, and, as he was en route for Melbourne, went to ascertain what it could be; and having heard the particulars, persuaded Captain Ogier to accompany him, and, as he had a spare horse, placed it at his disposal. Great delay was caused on the journey, as sailors are not, generally speaking, good horsemen, but the old saying—" a good turn never loses its reward." Captain Mathews has requested us to state that when he applied to the Government for assistance to fetch up the crew of the ill-fated vessel, it was immediately granted, for which, on the part of the underwriters and himself, he begs to return thanks. Captain Ogier also requests to tender his thanks to Mr. Heales for the great kindness and attention he showed him during the journey overland.

Appendix C Artefact catalogues

Registration No.: 23.00001

Object Name: Deadeye

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Wooden deadeye, circular with three center holes. Exterior to the center are three concentric superficial lines for decoration. All three circular holes continue through to the other side via width. One of the faces is in good condition and shows the original circular shape whilst the other holes areas appear oblong due to wear. The face in poorer condition shows many scratches and cracks, due to dog bites as per custodians' description of acquisition. The width of the object has a smooth man-made indentation, half mooned. Has been submerged in a bucket of fresh water for preservation.

Material: Wood

Condition: Good- Fair

Object Dimensions

Length [mm]:

Width [mm]:

Thickness [mm]:

Photograph(s)

File Name(s)

LMP_0754→ LMP_0777

Details

Top, back

Profile #1, #2

Photographer

Robin Galloso,

Catherine King

Illustration(s)

Type: Scale Drawing (1:2)

Title: Redeye Drawing

Artist: Liam Phillips

Custodian: Private

Catalogued By: Katherine Laczko, Shekinah Landicho

Registration No.: 23.00002

Object Name: Copper sheathing

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Large rectangular sheet of copper sheathing. Square-copper tack marks approximately 6-8mm diameter, 35mm approximate distance from one hole to another. About 5mm distance from edge to perforated outline of tack marks. Slightly crumpled with multiple indentations. Tack marks aligned on a diagonal axis within tacked bordering.

Material: Metal, copper

Condition: Good - Fair

Object Dimensions

Length [mm]: 1205mm

Width [mm]: 355mm

Thickness [mm]: 2mm

Photograph(s)

File Name(s)

LMP_0393→ LMP_0450

Details

Top, back

Photographer

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Private

Catalogued By: Katherine Laczko, Shekinah Landicho

Registration No.: 23.0003
Object Name: Copper Sheathing Fragment

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Fragment of metal sheathing. Square perforation, approx. 5mm diameter, along edge. Bent. Very corroded. Large areas of patina visible.

Material: Metal, Copper

Condition: Fair

Object Dimensions

Length [mm]: 115

Width [mm]: 70

Thickness [mm]: 2

Photograph(s)

File Name(s)

LMP_0333→ LMP_0355

Details

Top, back

Photographer

Robin Galloso,
Catherine King

Illustration(s)

Type: Scale Drawing (1:1)

Title: Corroded Copper Fragment

Artist: Robin Galloso

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00004
Object Name: Small Copper Fragment #2

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Copper sheathing fragment of irregular shaping. Bent. One side folded. Patina largely present on one side.

Material: Metal, copper alloy

Condition: Acceptable

Object Dimensions

Length [mm]: 230

Width [mm]: 120

Thickness [mm]: 0.75- 1.0

Photograph(s)

File Name(s)

LMP_0357→ LMP_0377

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Type: Scale Drawing (1:1)

Title: Copper Sheathing Fragment

Artist: Robin Galloso

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00005
Object Name: Fairlead

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Wooden fairlead with various cracks. Broken barrier between two large holes within face. Grooved indentation along height. Rigid indentation along center circumference extending from one end of groove to other groove end.

Material: Wood
Condition: Fair

Object Dimensions
Length [mm]: 85
Width [mm]: 85
Thickness [mm]: 85

Photograph(s)
File Name(s)

Details

Photographer(s)

LMP_0582→ LMP_0604

Top, back
Profile #1
Profile #2

Robin Galloso,
Catherine King

Illustration(s)

Type: Scale Drawing (1:1)
Title: My Fairlead

Artist: Robin Galloso

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00006
Object Name: Large Rope Section

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Piece of large rope part of standing rigging. Section has been wormed, seized and parcelled. One end heavily frayed. Broken leather parcelling.

Material: Rope- unknown fiber. Leather parcelling.
Condition: Fragile. Most parts missing

Object Dimensions

Length [mm]: 170

Width [mm]: 70

Thickness [mm]: 70

Photograph(s)

File Name(s)

Details

Photographer(s)

LMP_0605→ LMP_0616

Top, back
Profile #1
Profile #2

Robin Galloso,
Catherine King

Illustration(s)

Type: Sketch Drawing
Title: Thread Lightly

Artist: Robin Galloso

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00007
Object Name: Copper Bolt #1

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Long copper bolt with head. Slight bend. Patina presence.

Material: Metal, copper alloy

Condition: Excellent, intact

Object Dimensions

Length [mm]: 385

Head Diameter [mm]: 35, max.

Diameter [mm]: 20

Photograph(s)

File Name(s)

LMP_0535→ LMP_0543

Details

Profile #1

Photographer(s)

Robine Galloso,
Catherine King

Illustration(s)

Type: Scale Drawing (1:1)

Title: Intact Bolt

Artist: Madhumathy Chandrasekaran

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00008
Object Name: Copper Bolt #2

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Long copper bolt, bent. Patina present. Two bends-- Exposed bolt opening on crack near base, and smoothed curvature towards head.

Material: Metal, copper alloy

Condition: Good

Object Dimensions

Length [mm]

Unbent: 399

Bent: 410

Diameter[mm]: 25

Circumference [mm]: 85

Photograph(s)

File Name(s)

LMP_0560→ LMP_0577

Details

Profile

Photographer(s)

Robin Galloso,

Catherine King

Illustration(s)

Type: Scale Drawing (1:1)

Title: Bent Bolt

Artist: Katherine Laczko

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00009

Object Name: Copper Tacks (3)

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Three small bent copper tacks. All bent at base head and tip. Two tacks sharply bent at tip, one with U-bend visible.

Material: Metal, copper alloy

Condition: Great-- intact.

Object Dimensions

Tack 1

Length [mm]: 28

Head Width [mm]: 4.5

Head Circumference [mm]: 30

Head Diameter, max [mm]: 6

Shaft Width [mm]: 21

Tack 3

Length [mm]: 25

Head Width [mm]: 3

Head Circumference [mm]: 30

Head Diameter, max [mm]: 4

Shaft Width [mm]: 1

Tack 2

Length [mm]: 24

Head Width [mm]: 5

Head Circumference [mm]: 32

Head Diameter, max [mm]: 5

Shaft Width [mm]: 19

Photograph(s)

File Name(s)

LMP_0617→ LMP_0623

Details

Profile, top

Photographer

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00010

Object Name: Small Copper Strip

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Corroded copper metal strip with jagged, square perforations. One length displays clean straight-lined edge. Other side length is corroded and jagged. Fragmented.

Material: Metal, copper alloy

Condition: Fair

Object Dimensions

Length [mm]: 296

Width [mm]: 31

Height [mm]: 1

Tack Hole Diameter [mm]: 7

Photograph(s)

File Name(s)

LMP_0624→ LMP_0627

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Type: Scale Drawing (1:1)

Title: Small Copper Strip

Artist: Robin Galloso

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00011

Object Name: Copper Sheet Fragment #1

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Large metal copper sheet with hole perforations alongside edge and middle. Corroded. Patine present. Displays jagged edges.

Material: Metal, copper alloy

Condition: Fair

Object Dimensions

Length [mm]: 843, bent

Length, max [mm]: 868, bent

Width [mm]: 359

Height [mm]: 2

Hole Diameter, max [mm]: 12

Photograph(s)

File Name(s)

LMP_0779→ LMP_0788

Details

Back, front

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Type: Sketch (1:1)

Title: Maker's Mark

Artist: Howard Boyle

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00012

Object Name: Copper Sheet with Tack

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Segment of large metal copper sheet. Hole perforations alongside edges. Diagonally- spaced perforations present within face. Severely crumpled on single edge width. Tack included. Corroded; patina present. Maker's mark, "Williams Foster," present.

Material: Metal, copper alloy
Good

Condition:

Object Dimensions

Length [mm]: 611

Width [mm]: 349

Thickness [mm]: 2

Photograph(s)

File Name(s)

Photographer(s)

Details

LMP_0451→ LMP_0534

Top, back

Robin Galloso,
Catherine King

Illustration(s)

Type: Scale Drawing (1:1)

Title: 23.00012

Artist: Catherine King

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00013

Object Name: Copper Sheet Fragment #2

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Section of copper sheet. Straightened edges on both lengths and one width. Other width is jagged. Large crack formed near middle of section. Hole perforations alongside edging. Diagonal- lining perforations on face. Corroded, visible patina.

Material: Metal, copper alloy

Condition: Acceptable

Object Dimensions

Length [mm]: 769

Width [mm]: 355

Height [mm]: 2

Photograph(s)

File Name(s)

LMP_0628→ LMP_0633

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s) : Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00014

Object Name: Large Copper Sheathing

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Large metal sheet with straight-lined, intact edges. Perforations alongside edges and within face in a diagonally-lined manner. Gold surface coloring. Various dents along face. Single jagged corner edge. Minor cracks on face.

Material: Metal, copper alloy

Condition: Excellent

Object Dimensions

Length [mm]: 1210

Width [mm]: 355

Height [mm]: 2

Photograph(s)

File Name(s)

LMP_0635→ LMP_0658

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s) : Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00015
Object Name: Timber Frame

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Wooden frame chunk, timber. Trunnell and spike hole present. Very heavily massacred by teredo worms.

Material: Wooden, timber

Condition: Poor

Object Dimensions

Length [mm]: 488
Width [mm]: 202
Height [mm]: 172
Circumference [mm]: 532

Photograph(s)

File Name(s)

LMP_0659→ LMP_0687

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Type: Sketch Drawing
Title: Shipworm Timber

Artist: Madhumathy Chandrasekaran

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00016

Object Name: Full Copper Sheet, Folded

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Full copper sheet that has been sharply folded to various degrees. Corroded. Perforations alongside edge and face.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 1124

Width [mm]: 356

Thickness [mm]: 310

Photograph(s)

File Name(s)

LMP_0688→ LMP_0698

Details

Top, back

Profile #1

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00017

Object Name: Copper Sheet Fragment #3

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Fragment metal sheathing. Various hole perforations on face. Jagged edges. Crumpled piece. Folded.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 528

Width [mm]: 167

Thickness [mm]: 53

Photograph(s)

File Name(s)

LMP_0699→ LMP_0707

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00018

Object Name: Copper Sheet Fragment #4

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Folded metal copper sheet section. Jagged edges. Perforations alongside one edge and face. Sharply bent. Torn fragment.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 380

Width [mm]: 167

Height [mm]: 53

Photograph(s)

File Name(s)

LMP_0708→ LMP_0710

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00019

Object Name: Copper Sheet Fragment #5

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Fragment copper piece. Bent. Jagged sharp edges. Small, and torn. Corrosion, patina present.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 301

Width [mm]: 129

Height [mm]: 29

Photograph(s)

File Name(s)

LMP_0711→ LMP_0713

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00020

Object Name: Small Copper Strip #2

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Small, corroded copper strip. Perforations alongside one edge. Straight-lined edging on single length- side and width- side. Other length and width edge jagged. Patina present.

Material: Metal, copper alloy

Condition: Acceptable

Object Dimensions

Length [mm]: 254

Width [mm]: 61

Height [mm]: 25

Photograph(s)

File Name(s)

LMP_0715→ LMP_0719

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s) **Not Available**

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00021

Object Name: Large Wet Timber with Treenails

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Large wet timber with tree nails.

Material: Wood

Condition: Poor

Object Dimensions

Length [mm]: 1210

Width [mm]: 127

Thickness [mm]: 148

Photograph(s)

File Name(s)

LMP_0793→ LMP_0816

Details

Photographer(s)

Profile #1, 2, 3, 4 Robin Galloso,
Catherine King

Illustration(s)

Type: Detailed Sketch

Title: Timber

Artist(s): Liam Phillips,
Pornnatcha “Jo” Sankhaprasit,
Muslim “Dimas” Khoiru

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00022

Object Name: Iron Rigging Concretion

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Heavy iron rigging concretion with rope imprint. Much corrosion. Orange discoloration on surface. Triangular shape.

Material: Metal, copper alloy

Condition: Acceptable

Object Dimensions

Edge- to- Edge Lengths [mm]: 392, 295, 330

Height [mm]: 100

Diameter [mm]: 342

Photograph(s)

File Name(s)

LMP_0720→ LMP_0727

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00023

Object Name: Copper Sheet Fragment #6

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Copper metal fragment, bent in triangle formation. Perforations along single edge. Sharp, jagged exterior edging on others. Heavy corrosion.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 290

Width [mm]: 184

Thickness [mm]: 2

Photograph(s)

File Name(s)

LMP_0728→ LMP_0732

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00024

Object Name: Copper Sheet Fragment #7

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Fragmented copper metal piece from sheet. Hole perforations alongside interior or single edge. Other edges display sharpened, jagged tearing. Crumpled middle. Hole perforations present on face. Heavily corroded; visible patina.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 336

Width [mm]: 236

Width [mm]: 26

Photograph(s)

File Name(s)

LMP_0733→ LMP_0741

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s) **Not Available**

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00025

Object Name: Copper Sheet Fragment #8

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Small, fragmented piece of copper sheathing. Heavy corrosion; large patina visible on surface. Crumpled.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 160

Width [mm]: 64

Thickness [mm]: 1

Photograph(s)

File Name(s)

LMP_0737→ LMP_0741

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Private

Catalogued By: Shekinah Landicho

Registration No.: 23.00026
Object Name: Copper Sheet

Site Name: Amazon
Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Full metal copper sheet, bent and folded with multiple hole perforations. Perforations punctured within edging of sheet and on face. Corroded; patina present.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 1173

Width [mm]: 365

Thickness [mm]: 2

Photograph(s)

File Name(s)

LMP_0751→ LMP_0757

Details

All sides

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s) **Not Available**

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Registration No.: 23.00027

Object Name: Copper Sheet Fragment #9

Site Name: Amazon

Site Type: Wreck

Local Government Authority: Heritage Victoria



Description: Bent metal copper fragmented section with hole perforations alongside interior edges and face. Heavily corroded; patine visible on surface.

Material: Metal, copper alloy

Condition: Poor

Object Dimensions

Length [mm]: 860

Width [mm]: 351

Thickness [mm]: 2

Photograph(s)

File Name(s)

LMP_0758→ LMP_0760

Details

Top, back

Photographer(s)

Robin Galloso,
Catherine King

Illustration(s)

Not Available

Custodian: Inverloch Historical Society

Catalogued By: Shekinah Landicho

Appendix D Timber identification results

KNOW YOUR WOOD

19 Benambra Street, South Oakleigh,
Victoria 3167, AUSTRALIA
Phone: 03 95127523
Mobile: 0499 300 208
Email: knowyourwood1@gmail.com
Provider of wood identification services.

6th December, 2018

WOOD IDENTIFICATION RESULTS

Dr Wendy van Duivenvoorde
Associate Professor in Maritime Archaeology
Flinders University
GPO Box 2100
Adelaide SA 5001

Dear Wendy,

Re: Identification of two wood samples from the Cervantes shipwreck; Your request – 10th August, 2018.

Following microscopic examination, in my opinion the structure of the wood specimens is consistent with¹:

Sample Number & Location	Description	Scientific name	Commercial or Trade name + Remarks
T 12	Hull plank 4	<i>Pinus sylvestris</i>	BALTIC PINE
T 02	Site B	<i>Quercus ? ² robur</i>	WHITE OAK GROUP
T 14	Frame timber	<i>Quercus ? ² robur</i>	WHITE OAK GROUP
T15	Hull planking 2, Treenail	<i>Quercus ? ² robur</i>	WHITE OAK GROUP
T 04	Site B	<i>Quercus ? ² robur</i>	WHITE OAK GROUP
# 10 SW end	Hull plank	<i>Pinus sylvestris</i>	BALTIC PINE
T 06	Site B	<i>Quercus ? ² robur</i>	WHITE OAK GROUP
T 01	Site B	<i>Pinus sylvestris</i>	BALTIC PINE
T 07	Site B	<i>Pinus sylvestris</i>	BALTIC PINE
T16	Hull plank 6, Inside	<i>Pinus sylvestris</i>	BALTIC PINE
T 17	Dead wood	<i>Quercus ? ² robur</i>	WHITE OAK GROUP

I hope the information will help with your research and evaluation process.

Best regards,

Jugo Ilic

Jugo Ilic MSc, Dr(Forest)Sc, FIAWSc

¹ *Disclaimer:* The content of this letter is provided in good faith and whilst Dr Jugo Ilic has endeavoured to ensure that the information contained in it is correct and accurate at the time of preparation, he does not accept any liability arising from its use whether provided directly by the above-named client or indirectly from the client providing it to a third party in this or any other format.

² "?" indicates that there are other similar species which cannot be differentiated on the basis of wood structure.

Appendix E Timber and copper sample list

Field #	Sample #	Description	Location	Sample type	Date	Send to
S-1:AMZN	T01	Timber 1	Site B, Beach Inverloch, VIC	Wood	29-11-2018	Jugo Illic
S-2:AMZN	T02	Timber 2	Site B, Beach Inverloch, VIC	Wood	29-11-2018	Jugo Illic
S-3:AMZN	T03	Timber 2	Site B, Beach Inverloch, VIC	Wood	29-11-2018	--
S-4:AMZN	T04	Timber 3	Site B, Beach Inverloch, VIC	Wood	29-11-2018	Jugo Illic
S-5:AMZN	S05	Stone	Site B, Beach Inverloch, VIC	Stone	29-11-2018	--
S-6:AMZN	T06	Timber 4	Site B, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-7:AMZN	T07	Timber 5	Site B, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-8:AMZN	C08	Metal fastener from Timber 4	Site B, Beach Inverloch, VIC	Copper alloy	30-11-2018	Wendy van Duivenvoorde
S-10:AMZN	T10	Hull planking, sw end (nr. 1)	Site A, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-11:AMZN	C11	Hull planking, third one from sw end, tack from yellow metal sheathing	Site A, Beach Inverloch, VIC	Copper alloy	30-11-2018	Wendy van Duivenvoorde
S-12:AMZN	T12	Hull planking, fourth one from sw end	Site A, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-13:AMZN	C13	Hull planking, fourth one from sw end, tack from yellow metal sheathing	Site A, Beach Inverloch, VIC	Copper alloy	30-11-2018	Wendy van Duivenvoorde
S-14:AMZN	T14	Frame timber	Site A, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-15:AMZN	T15	Treenail, hull planking, second one from sw end	Site A, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-16:AMZN	T16	Hull planking, sixth one from sw end (inner face)	Site A, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-17:AMZN	T17	Deadwood? Timber from stem assembly	Site A, Beach Inverloch, VIC	Wood	30-11-2018	Jugo Illic
S-18:AMZN	C18	Fragment of yellow metal sheathing (w/ Williams Foster & Co. Patent, 26OZ stamp)	HV Database Nr. 23.00004, Adrian Brewer, Beach Inverloch, VIC	Copper alloy	30-11-2018	Wendy van Duivenvoorde

Field #	Sample #	Description	Location	Sample type	Date	Send to
S-19:AMZN	C19	Fragment of yellow metal sheathing (w/ Williams Foster & Co. Patent, 26OZ stamp)	HV Database Nr. 23.00002, Trilby Parise, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-20:AMZN	C20	Fragment of yellow metal sheathing (w/ Williams Foster & Co. Patent, 26OZ stamp)	HV Database Nr. 23.00011, Peter and Grant, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-21:AMZN	C21	Fragment of yellow metal sheathing (w/ Williams Foster & Co. Patent, 26OZ stamp)	HV Database Nr. 23.00012, Peter and Grant, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-22:AMZN	C22	Tack from yellow metal sheathing	HV Database Nr. 23.00011, Peter and Grant, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-23:AMZN	C23	Fragment of yellow metal sheathing (w/ Williams Foster & Co. Patent, 26OZ stamp)	HV Database Nr. 23.00014, Historical Society, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-24:AMZN	C24	Felt from yellow metal sheathing	HV Database Nr. 23.00014, Historical Society, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-25:AMZN	C25	Fragment of yellow metal sheathing (no stamp)	HV Database Nr. 23.00017, [NAME], Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S-26:AMZN	F26	Felt from hull plank, fifth from sw end, tack from yellow metal sheathing	HV Database Nr. 23.00012, Peter and Grant, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S27:AMZN	C27	Copper alloy nail fragment	Site B, Beach, Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S28:AMZN	C28	Copper alloy bolt	HV Database Nr. 23.00007, Daryl, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde
S29:AMZN	C29	Copper alloy bolt	HV Database Nr. 23.00008, Daryl, Beach Inverloch, VIC	Copper alloy	02-12-2018	Wendy van Duivenvoorde