WRECK INSPECTION REPORT

SS Franklin (1880-1902)

Report – Department of Maritime Archaeology, WA Museum – No. 301

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Introduction

A diving inspection of the SS Franklin shipwreck was conducted on 11 February 2013 during the course of a Gabbie Kylie Foundation/ National Trust (WA) cultural heritage field school in the Eastern Recherche Archipelago between 6-15 February 2013.

Technical Data

Site Name: SS Franklin  Date lost: 1902

Date of Inspection: 11 February 2013

Personnel:
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Dr Holly Raudino (DEC)
Doc Reynolds (Esperance Area Traditional Owner, Director Gabbie Kylie Foundation)
Sydney Swierenga (University of Michigan, Gabbie Kylie Foundation field school participant)

Approximate Location: Point Malcolm, Esperance Area

GPS.  33°47.148 123°45.726 (WGS84)

Sailing Directions: The site lies one kilometer north of Point Malcolm. It can be approached by boat from Israelite Bay or Point Malcolm and lies in 4.0-5.0 m maximum depth. The collapsed bow structure lies just submerged 0.5m below the surface about 15-20m northwest of the exposed engine, and rudder post in about 1.0m a similar distance southeast of the engine, creating submerged hazards for vessels to beware of.

Site Photographs:
Digital - Above water and Underwater

Site Conditions on inspection
Sea and Swell: 0.5 – 1m swell
Surge: Yes
Visibility: 3-4m gloomy with suspended sediment, overcast day
Current: Light
Sea-bed coverage e.g. weed, sand: weed and loose rock with sand pockets on uneven limestone rock seabed.

**Chemical Measurements:**
Temperature N/A
Salinity N/A
Ph N/A
Dissolved O$_2$ N/A
Corrosion Potentials (Reading and location) N/A

**Biological Data:** Colonising fauna

**Site Condition and Integrity:**
The site has deteriorated to leave only the engine, propeller shaft, remnant iron hull plating from the engine room to stern section and bow triangle section. While much of the hull has collapsed and corroded away the engine is intact and retains a high degree of integrity.

**Management considerations:**

(i) **Natural Forces** e.g. Sea-bed composition, Depth of Burial of site, Seasonal site exposure, etc.
The site lies approximately 500m offshore on an uneven rocky bottom exposed to open ocean seas and swell, though is partially protected by Point Malcolm from the brunt of southerly and south-westerly swells.

(ii) **Present and future human forces**
No loose artefacts or evidence of interference were observed. The site is not regularly visited being in a remote location requiring boat access.

(iii) **Projected General site Stability** in view of the above
The site appears to be relatively stable in its current state with no immediate threats.
Sketch Map showing access to Site or Chart Excerpt:
(Specify chart used)

Figure 1: Location of SS *Franklin* site north of Point Malcolm (Google Maps)
Description of Site
(including Seabed Topography and form at Site)

The SS Franklin shipwreck lies a kilometre north of Point Malcolm, which marks the western extremity of the Great Australian Bight as Western Australia’s southern coastline begins to trend northwards. The southern side of Point Malcolm is a high energy exposed gneiss rock platform that meets the full force of the Southern Ocean swells. The protected, low energy northern side is dominated by seagrass-fringed sand flats (Short 2006: 78). Being in the lee of the protected northern side of Point Malcolm has resulted in the integrity of the engine and remaining hull. The wreck lies on an uneven rocky limestone bottom in 4.0 – 5.0 m depth, oriented with the bow facing north-northwest, with the hull heeled over approximately 40 degrees to starboard. The hull has broken up and is now in two main sections.

The bow triangle structure at the northern extent of the site is relatively intact and lying on its starboard side, with the starboard side hawse pipe and concrete-filled lower collision bulkhead visible. Between the bow and engine room amidships the hull has almost completely disintegrated, leaving an approximately 1m deep eroded depression in the limestone rock sea floor, caused by the hull working into the seabed. The boiler is no longer on the site having been salvaged a year after the wrecking event.

Between the engine room and sternpost the iron lower hull plating and frames stand up to 1.0-1.5 m off the seafloor. The engine and its supports have remained intact and created a swim-through amidships. The propeller shaft is visible as is the sternpost that has ground into the reef, and one blade of the propeller was noticed. The counter stern plating on the port side has collapsed and folded over. The rudderpost shows evidence of the steering gear having been cut away during contemporary salvage operations.

The engine is a twin compound type steam engine. It is intact and has heeled over on its bedplate to starboard with the ship. As the cylinder casing is above water it has not been covered in marine growth or concretion, and several diagnostic features are visible. These features include the low pressure and high pressure cylinder and valve casings, high pressure valve casing door and inspection port, low pressure cylinder tail rod, engine pumps, stuffing boxes, weigh shaft, starting valve and a possible emergency release valve, and what appears to be a low pressure balance piston dome (and piston) situated aft of the low pressure cylinder.
Figure 2: View of front and port side of SS Franklin twin compound steam engine cylinder casing looking southeast.

Figure 3: View of front and starboard side of engine cylinder casing looking south with Point Malcolm in the background. The relative sizes of the small high pressure (HP) cylinder and large low pressure (LP) cylinder are easily seen.
Figure 4: View of rear and port side of engine cylinder casing looking northeast – note fittings and associated machinery.

Figure 5: View of rear of engine cylinder casing looking northwest.
Figure 6: Illustration of a twin compound steam engine similar to the SS Franklin’s engine (Paasch 1890)
Figure 7: Diver alongside hull in starboard stern area.

Figure 8: Interior of wreck amidships showing hull plating and engine support.
Site Plan

Figure 9: Site sketch plan of SS Franklin site

SS Franklin (1882-1902) sketch site plan 8 February 2013
(Spot depths in metres)
History and site identification

The SS Franklin shipwreck has always been visible above water and is a well known historic landmark in the area.

The following historical information about the SS Franklin is from P. and J. Worsley:

The Franklin was built in Glasgow by D. and W. Henderson and Company for the Spencer’s Gulf Steamship Company, later to amalgamate with The Adelaide Steamship Company in December 1882. Launched in August of 1880, the vessel had one deck, an awning deck, seven bulkheads and was cemented. Although the 1887-88 edition of Lloyd’s Register states the power of the engine as 162 hp, other references report it as 280 hp. The Franklin may have been re-engined at some time during its working life. In July 1893 the Franklin struck an anchor in Townsville Harbour. The anchor pierced the ship’s bottom causing it to sink, but it was later raised and repaired. The ship had been thoroughly overhauled and fitted with a new boiler at Mort’s Dock, Sydney, only about twelve months before its loss at Point Malcolm.

Under the command of Captain Thomas West with a crew of 20, including John Syvert, first mate and Robert Innes, second mate, the ship departed Albany at 10.30 pm on 15 April 1902 for Israelite Bay via various small ports. On board was 20 tons of cargo and seven passengers – Mr and Mrs A. Byrne, Mr and Mrs W. Baird and infant, Mrs Smith and Mrs Walkington. These passengers must have disembarked at Esperance, as by the time the Franklin called at Point Malcolm, the only two passengers on board were Smith and Hackett, telegraph operators on their way to Israelite Bay.

The Franklin’s draught was stated as 11 ft (3.35 m) forward and 11 ft 6 inches (3.5 m) aft. The cargo on this voyage was valued at £500.

THE LOSS

At 5.00 p.m. on Friday 18 April 1902, the Franklin was heading slowly towards its normal anchorage at Point Malcolm when it lightly struck something. Although the contact was felt by those on board, little notice was taken and the ship dropped anchor, 30 fathoms (55 m) of cable being let go, just as the chief engineer, Alexander Brodie, emerged from the engine room and announced that the ship was flooding. He reported that the water had put out the fire in the middle boiler, and then returned immediately to the engine room to draw the fires on the two outside boilers and open the valves so as to prevent an explosion. To do this he had to work in water up to his neck. The ship quickly sank onto a rocky bottom in 14 feet (4.27 m) of water, having filled in just ten minutes. It was initially considered that the ship would be salvageable if the weather remained fair, but it was in a dangerous position in the event of rough weather.
INQUIRY
There were thought to be no projecting rocks in the area, and initial reports at
the time indicated that the Franklin most probably struck an old anchor,
possibly one abandoned by an early whaler, ‘a number of which are scattered
along the coast’ (Albany Advertiser, 22 April 1902: 3g). This, it was surmised,
started one or two of the hull plates. Clarrie Andrews, a crewman off the
schooner Grace Darling, suggested that the anchor was one which had been lost
off that vessel.

The Marine Board in Adelaide held an inquiry on 2 May 1902 into the loss of
the Franklin and found that:
in approaching the anchorage at Port Malcolm, owing to the incomplete nature
of the surveys, it would have been prudent to have shaped a course well outside
of known dangers, and it would have been advisable if the master had taken
cross-bearings when rounding Point Malcolm to more accurately ascertain his
position. The board further were of the opinion that the vessel struck a rock
immediately after anchoring. There was no evidence that this danger was
charted or known (Advertiser, 3 May 1902: 7).

INITIAL SALVAGE
The passengers, mails and the cargo (which had been only slightly damaged)
were landed.

On the morning of Sunday 20 April the owners of the Franklin, The Adelaide
Steamship Company, despatched the steam tug Euro (Captain W.T. Wills) from
Adelaide. On board were their marine superintendent, Captain Dingle, a diver
named W.J. McArthur, a carpenter and the necessary equipment to salvage the
stranded steamer. On arrival they found the Franklin to be lying on a hard, very
uneven, limestone bottom, with its bow pointing north-north-west. The ship had
a list to seaward with 11 feet (3.5m) of water on the port side and 14 feet (4.3
m) on the starboard. Although No. 1 hold was dry, the other three holds and the
engine room had water in them to the level of the sea outside. The ship was
grinding on the rocks in the swell and had buried its keel about a metre into the
limestone. Two of the propeller blades had also dug into the seabed, and as the
ship rocked these caused the engine to work. The diver was sent down to
ascertain where the damage had occurred. This proved to be impossible due to
the sea being milky from the crushed limestone caused by the working of the
stranded ship, and by the fact that the bottom was buried in the rock. It was
thought, however, that the leak was on the starboard side under the boiler, a
position impossible to reach and repair.

The salvage team used a 10-inch pump to try and empty hold numbers 2 and 3,
and also the stokehole in which was 200 tons of coal. Rising seas caused the
Franklin to heel over more, and shift its position. The work became too
dangerous and it was decided that the wreck should be abandoned. When the
weather moderated slightly a day or so later the crew again managed to get on
board. The engineers were then able to remove the steam steering gear and their
salvage pump.
An Albany newspaper reported:
*The fate of the steamer Franklin, which stranded off Point Malcolm on Friday, April 18, has now been sealed. A wire received from Israelite Bay, dated April 26, states: “The steamer Franklin has been abandoned as a total wreck.”* (Albany Advertiser, 26 April 1902: 3a).

The *Euro* left to return to Adelaide on 26 April bringing back from the wreck, as well as the crew of the *Franklin* and the salvaged steering gear, a large quantity of ship’s stores, two lifeboats and a dinghy.

The relatively new boiler was later removed from the wreck through a hole cut in the ship’s side. This boiler was then towed to Adelaide by the steamer *Ballarat*, and later used in the ship *Investigator*.

At an auction conducted by J.H. Weidenhofer in Adelaide on 2 May 1902 the wreck of the *Franklin* was sold to H.W. Thompson of Adelaide for £17.10.0; the price included everything remaining on board.


Figure 10: Illustration of salvage operations to cut away the hull and remove the boiler from the wreck of the SS *Franklin* in 1902 (Artist unknown, Department of Maritime History, WA Museum.)
Wreck site history

(i) Contemporary Salvage
The SS *Franklin* was subject to two salvage attempts, both using hard-hat equipped divers. The first attempt was concerned with removing portable equipment and refloating the ship. When this refloating attempt failed, as second attempt was made with the aim of recovering the boiler, which was almost new at the time of the wrecking. This was a major salvage effort that involved cutting away the hull plating, setting up sheer legs to remove the boiler and plugging all the boiler tubes with wooden plugs to make it watertight for the long tow to Adelaide. A report at the time gave a description of the preparations for the tow:

The Adelaide Steamship Company’s s.s. Bullarra, which left Fremantle on December 16, arrived at Port Adelaide on the 3rd inst., towing a 30 ton boiler that had been taken from the wrecked steamer Franklin at Point Malcolm (about 800 miles from Port Adelaide). The Adelaide S.S. Company’s diver (Mr. John Hughes), who carried out the difficult submarine part of the work of removing the boiler from the Franklin, returned to Fremantle by the steamer Marloo last week. He joined the Bullarra at Albany, and, with Captain Dingle, a marine superintendent, who had come from South Australia with two boiler-makers, a blacksmith, a striker, two riggers, and two carpenters, proceeded to the scene of the wreck, in order to remove the boiler (a new one), which, with its connections, weighed 35 tons. To make it fit for the sea trip, 200 tubes had to be carefully stopped with wooden plugs, and two days were occupied in carrying this work through. The boiler was filled with plank flanges, to prevent it revolving in the water, the furnace was built up, a great deal of caulking was done, and a double coating of canvas (well tarred) was placed over everything. Hawsers were then fixed so that the boiler would “yaw” as little as possible, and the Bullarra then commenced her strange tow’ *(Western Mail* 24/1/1903: 22c).

The site inspection showed that there were no anchors or chain, steering gear, deck winches, scuttles (portholes) or other loose artefacts on the site. The machinery and most of the ship’s fittings and cargo were most likely salvaged at the time, with any remaining artefacts being souvenired by divers in the more recent past.

(ii) When found in modern times and by whom (usually reporters)

(iii) Modern Salvage
Not known. However explosives have not been used to blow apart the engine to recover copper alloy metal parts as was common practice on iron steamship wrecks, resulting in the survival of the engine in an intact condition to this day.

(iv) Casual Diver interference, if any.
None observed.

(v) Modern diver use, if any.
Due to its remote location the site is not regularly visited.
Assessment of Site Significance

(i) Archaeological
The hull has deteriorated though there is up to 1.5m of side hull plating remaining on the port and starboard side between amidships and stern. No loose artefacts were observed and the rocky seafloor leaves little potential for buried objects. Only large heavy structural parts of the iron hull and engine have survived, and the site was extensively salvaged shortly after its wrecking. Nevertheless the engine has remained intact and as such is an archaeologically significant example of a twin compound steam engine.

(ii) Technological
The engine is an intact example of a late 19th century twin compound steam engine with many associated fittings and features intact. Technological advances from around the 1860-70s in developing higher pressure steam engines allowed the use of high pressure steam exhausted from the high pressure cylinder to run a low pressure cylinder, maximizing use of the steam and thereby increasing power, fuel efficiency and range. This allowed steamships to travel further and more efficiently and provided an increased level of safety and regularity in maritime communication and trade.

The parts of the engine exposed above water have not become concreted or obscured by marine growth, with several diagnostic features visible. There is a question about whether the SS Franklin was re-engined at some point in its career given differing reports of the engine’s stated horsepower, and the engine has potential for further technical study of its fittings. The marine salvage of the ship’s Scotch boiler towed to Adelaide one year after the Franklin’s wrecking was a notable engineering feat in this remote and exposed location.

(iii) Scientific
As an iron steamship wreck there is potential to use the Franklin site for comparison with similar iron and steam shipwreck sites for marine archaeological corrosion studies.

(iv) Historical
The Franklin is significant as part of a maritime archaeological resource of over 30 wrecks of steamships and wooden and iron sailing ship hulks once part of the Adelaide Steamship Company’s operations during its almost complete monopoly of Western Australian coastal passenger and mail steamship services in the late 19th and early 20th century. Other historic Adelaide Steamship Company steamship wrecks include the SS Perth (1887), SS Colac (1910), SS Kepler (1910) and SS Koombana (1912).

‘On 10 April 1899 the steamer La Serena was stranded at Adele Island in the Kimberley region of Western Australia. Declared a total constructive loss, the wreck was bought by The Adelaide Steamship Company Ltd in December and repaired sufficiently for it to be towed to Sydney for a complete refit. The vessel used to tow the wreck was the Franklin, and the tow of 5 500 km was the longest in Australian waters to that time. The repaired La Serena was re-named Moonta,
and also became well known on the Western Australian coast’ (Worsley, P. and J. 2013).

(v) Social
‘When the Franklin was wrecked the Western Australian Government had a telegraph operator tap into the line at Point Malcolm so that communications with the crew could be maintained. An Adelaide newspaper reported that:

*The West Australian Government earned the gratitude of all concerned by their courtesy in tapping the telegraph line, and keeping an operator at Point Malcolm for the convenience of the sailors (Advertiser, 30 April 1902: 6)*’.

(Worsley, P. and J. 2013)

At the time of its loss the SS Franklin was employed as the contract mail steamer between Albany and Esperance (Parsons, R. 1981: 81) stopping at small ports en route, and therefore played a significant part in the social, economic and communication links on Western Australia’s south coast.

(vi) Representative
The SS Franklin was used by the Adelaide Steamship Company on services throughout Australia, and is representative of the coastal passenger screw steamships that provided vital regular shipping services to regional ports along the coast of Western Australia, and Australia generally.

(v) Recreational
The SS Franklin site provides an interesting dive in good conditions with many features evident.

(vi) Educational
The site is a visible historical landmark lying offshore adjacent to the Nuytsland Nature Reserve and within the Recherche Archipelago Nature Reserve, in the vicinity of other historic sites including the Israelite Bay telegraph station, settlement and jetty ruins and Point Malcolm station ruins.

The SS Franklin engine is always visible above water and has potential to be included in any heritage trails or interpretation in the area to educate people on the important role of coastal passenger steamships in 19th and 20th century maritime trade and communication, and the risks faced by shipping in the development of Western Australia’s south coast.
Management recommendations

1) Historical information on the SS *Franklin* shipwreck should be incorporated into any heritage interpretation and/or heritage trails in the Israelite Bay/Point Malcolm area.

2) Further research should be undertaken into the layout and fittings of the engine of the SS *Franklin* to more accurately assess its level of intactness, representativeness and technological significance.

3) Copies of this report are provided to DEC Esperance Office, National Trust (WA) and Esperance Bay Historical Society.
References


SS *Franklin* file MA 53/95, WA Museum, Department of Maritime Archaeology