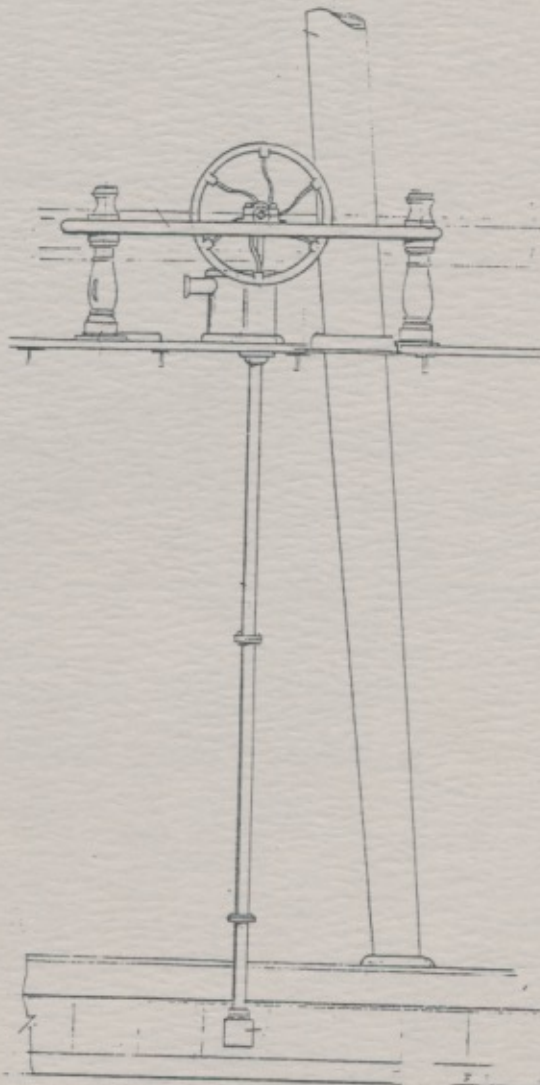


**MARITIME
ARCHAEOLOGICAL
ASSOCIATION
REPORTS
1990/92**



MARITIME ARCHAEOLOGICAL ASSOCIATION REPORTS 1990/92

Volume 5 : July 1990 - March 1992

Reports on projects of the Maritime Archaeological Association of Western
Australia

INTRODUCTION

This fifth volume of MAWA Reports is dedicated to the memory of Richard McKenna, a foundation member of the Association and its Treasurer for all the years that he was an active member.

Richard's death in March 1992 leaves the Association and maritime history in Western Australia the poorer for want of his extensive knowledge and deep interest in anything to do with ships and the sea.

He was a constant source of information for research into MAAWA projects and the fount of our knowledge and understanding of ships' structure and equipment.

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FRONT COVER

Detail from a drawing of a bilge pump similar to the one believed to be on the Sepia site. (See article page 12)

THE MIRA FLORES

By Mike Murphy

On October 24 1991 a dive was conducted on the Mira Flores site to obtain more detail of the cargo scattered around the northern end of the site.

The circular objects noted on a previous dive (Notes Volume 4) were examined but only one was clearly identifiable as a grindstone, which had been suggested by Pat Baker.

All the other circular objects are approximately the size and shape of a tyre, with a large hole through the centre. Scraping the surface of one with a knife revealed a black powdery substance.

All are heavy and many were at one time stacked in a row, side by side, the row now having collapsed sideways.

These are by far the most noticeable items on the wreck site and must have made up a substantial part of the cargo. They are mixed with many barrel-shaped objects which are presumably the solidified remains of the contents of wooden barrels.

One of these cylindrical objects was considerably larger than the others and is identified in the drawing as a "drum". It was about the size of a 44-gallon drum or perhaps slightly smaller.

"RAILWAY LINES"

The bulk of the circular objects lie to the south of the site next to a substantial area of what appear to be railway lines or some other metal strips laid in compact rows. Some larger hollow pipes, possibly sewer or water pipes, lie on top of this.

Other prominent features of this general area of the wreck site are indicated in the drawing.

The curved beam marked (A) may have been part of a lifeboat davitt.

The corrugated sheets are stacked one on top of the other but I was unable to work out how many there might be.

The mast joiner consists of metal bands around two cylindrical sections and the mast section marked (D) has protruding sections which would have been used to secure ropes.

The object marked (E) consists of a large plate with several holes in it. The smaller hole with the raised rim is about the size of a dinner plate and the bigger hole about twice that size.

The frame with the upright posts marked (B) appears to have been part of a substantial structure. It is well apart from the other materials and may be more related to the framework which is in the sand hole on the northern side of the site.

THE OMEO

Drawing a plan of the Omeo wreck has been one of the longest and most arduous projects ever undertaken by MAAWA members.

Tony Harbern and Don Alexander began work on the site on 1985.

By July 1986 it was reported : "Work is progressing steadily. However, the site is a very large one and there is much to do."

Their methodology was to grid the area and take detailed measurements within the grid frames. This involved many visits to the site over a long period of time until eventually the work ground to a halt.

In 1991 Ian Warne was asked by the MAAWA committee to revisit the project and see what could be done to finish it off.

He was able to piece together all the many drawings Don and Tony had made and produce an over-all map of the Omeo from which only a relatively small number of pieces were missing.

Col Cockram and John Morehall assisted with taking the remaining measurements and the complete map was eventually produced.

HISTORY

A project to research the history of the Omeo goes back even further than the mapping. In the MAAWA files there is a note to Mike McCarthy dated 23/4/80 and signed by the late Richard McKenna which reports information about the Omeo supplied by Denis Robinson and obtained from a Fremantle Port Authority newspaper scrap book. It refers to clippings from the West Australian and the Evening Mail dated 12/9/1905 in which "Omeo is reported having been blown ashore between Robb Jetty and Coogee after breaking moorings in a 60 m.p.h. gale and driven ashore yesterday".

Unsigned and undated notes in the MAAWA files state that the Omeo was an iron vessel built in 1858 by A.Leslie and Co in Newcastle, England.

It was 210 ft long, 30.3 ft across the beam and 16.3 ft deep, weighing 733 tons gross and 605 tons net.

Barque rigged with auxilliary steam power from a 120 h.p. engine the Omeo sailed for Melbourne in 1859 and was registered and listed in the Lloyds Register there until 1864, owned by McMeck'n & Co.

"In February 1872," the notes continue, "she was the supply ship for the Roper River Telegraphic Expedition during the laying of the overland telegraph line...There is a memorial of her at the Roper River site to this day : - "Steamship Omeo, 1,000 tons, ascended Roper River 100 miles with telegraphic expedition. February 1872".

"In 1881 she became one of the few ships that succeeded in ramming a lighthouse and surviving - unfortunately I can find no details of this incident in our records. In 1882 she reappears in Lloyds with the following modifications :-

Dimensions : - Length 213 ft x beam 30.5 ft x depth 16.7 ft. Quarter deck 90 ft. Forecastle 25 ft. Bar keel 7 ins.

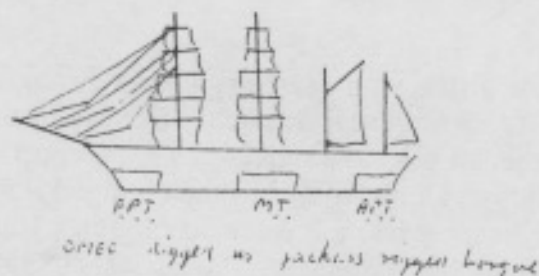
Tonnage : - 789 tons gross. 789 tons net. 710 tons underdeck.

Rig : 4-masted jackass rigged barque.

The auxiliary engine has been removed.

Water ballast in tank vis : - Aft peak tank (removed 1893); Midships tank 65ft long 500 tons; fore peak tank."

The following sketch appears in the notes showing the location of the tanks and the Omeo rigged as a jackass rigged barque.



"Her new owners were W.H.Smith and Sons, and her Captain, one Captain Campbell.

"In early October 1895 she was sailing from Melbourne to Hamelin Bay with a cargo of livestock when she ran into severe weather off Cape Leeuwin and lost a lot of her cargo washed overboard.

"Later, on the 31st October 1895, she ran aground at Hamelin Jetty after having loaded 500 tons of jarrah when a gale caught her while loading. This caused her to bump heavily against the jetty, breaking down some 50 yards of it and finally, the gale increasing in strength, she dragged completely away

from her moorings and ran hard ashore and as it was thought she would never be refloated again, she was written off by Lloyds as a total wreck.

"However, on 9th March 1898 she appears in the Fremantle Harbour shipping index as being towed in to be converted into a hulk." (See 'Letter To The Editor' below).

"At 5.30 p.m. on 11 September 1905 she broke her moorings in a gale and once again blew ashore opposite Ocean Street and was finally abandoned.

"She now serves as a support for the effluent pipe from the Coogee Meat Works."

LETTER TO THE EDITOR

In the West Australian of June 29 1946 there was a letter to the Editor from a Jack Nelson of Mosman Park:

"Sir - it was with great interest that I read the information about the Omeo in the West Australian. I was at Hamelin Bay as a boy in 1895 and for some time was driving horses on the jetty there. When we arrived there the old Omeo was just a stone's throw from the jetty and from the beach. Mr J. Paddon was there at the time and he had been a member of the crew. Some time after we arrived there the Omeo was lightened up a bit and a successful attempt was made to bring her into deeper water. My father drove a donkey engine which was used to refloat her. If my memory serves me right there was a donkey engine on the Omeo which was also employed. Mr Jim Donovan floated her off together with the pilot, Mr Johnny Delfs, who died just recently at Bunbury."

MORE DETAILS

More details about the history of the Omeo appear in articles by Malcom Uren in the West Australian of August 2 1947 and by Chris Halls in the Port of Fremantle Magazine, winter 1979.

Mr Uren reports that the original voyage from England had for cargo the materials for the telegraphic cable to be layed to Tasmania and immediately after that she was placed on the New Zealand run taking miners to the new diggings at Hokitika.

The Roper River expedition is recalled, with a rider that the Omeo also carried prospectors up the river to new goldfields. After that she returned to the New Zealand run until W.H. Smith and Co took out the engine and ran her as collier.

Mr Uren has more details on the incident involving a lighthouse, which he identifies as the Swanspit lighthouse in the west channel of Port Philip Bay in

Victoria. Apparently the lighthouse was wrecked and two men saved their lives by jumping from it onto the deck of the ship which was holed above the waterline.

Oddly he makes no reference to the beaching at Hamelin Bay before she became a hulk at Fremantle.

Mr Halls' article is the most detailed.

He gives considerable details about the thickness and strength of the bottom plates and how they were riveted and braced.

The screw could be lifted clear of the water when not in use and it was the only iron steamer on the Australian coast which had the saloon placed amidships.

A full list of her cargo on arrival in Australia was reported in the Melbourne newspaper, the Argus, of July 9, 1859.

Before going on the New Zealand run, Mr Halls says, she was completely overhauled and refitted with no expense being spared to make the passengers comfortable. Her captain at the time was Captain J. McLean.

Mr Halls also appears to have been ignorant of the beaching at Hamelin Bay, assuming the Omeo was taken direct to Fremantle from Victoria for hulking.

POPULAR WRECK

Being very visible on the beach the Omeo has been a popular wreck for people to visit over the years. Several photographs have been taken at different times and from newspaper clippings and prints in the Battye Library it is possible to see how she gradually broke up.

In The West Australian of May 8 1965 there is a photograph reputedly taken 50 years previously which shows the hull intact with the four masts still in place and some form of deck housing structure.

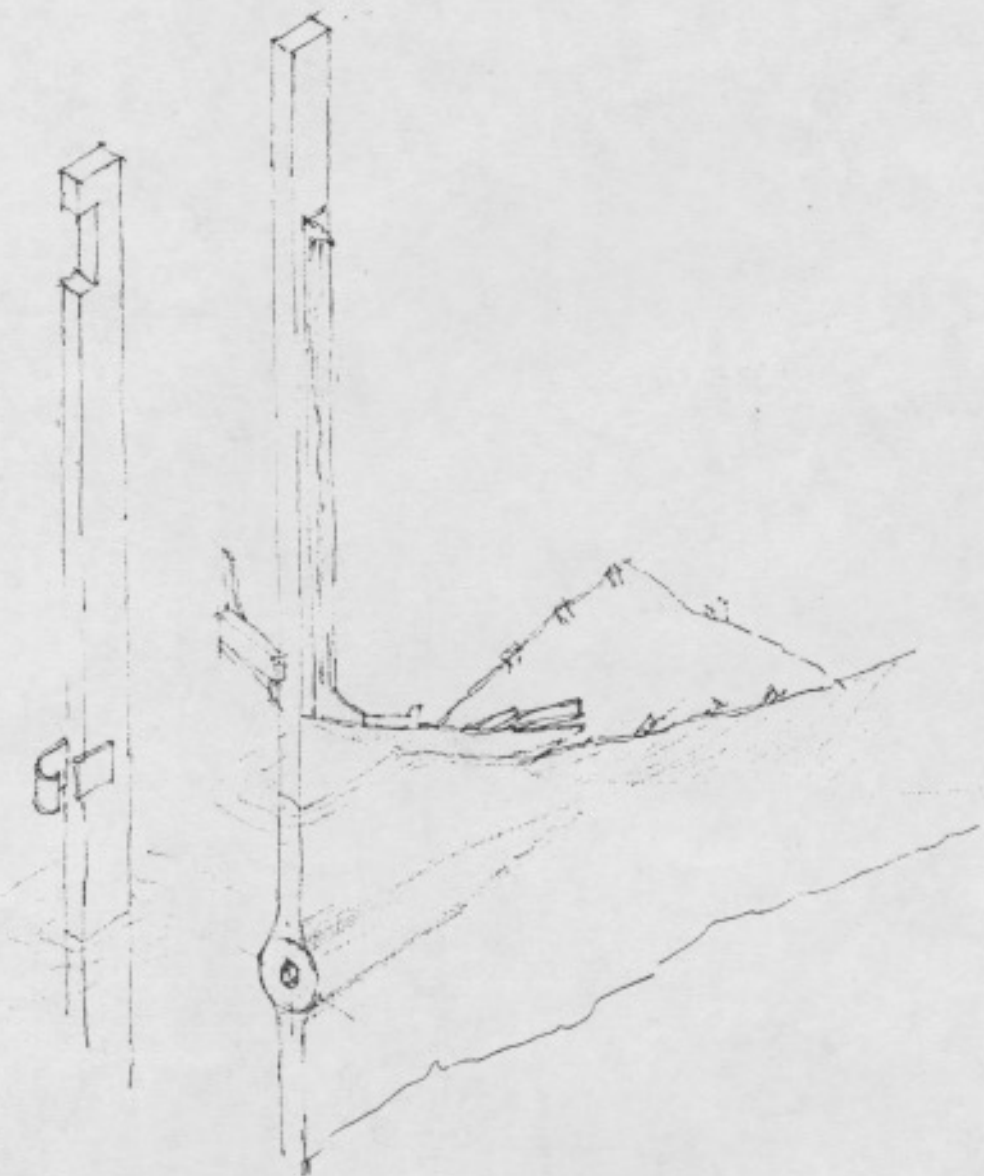
Later pictures show the masts gone, the superstructure collapsing but the hull largely intact, and later still gaping holes in the side of the hull as the process of disintegration continued.

One of these, showing people on the beach near the wreck, appeared in The West Australian of May 18 1946 and another in the same paper on August 2 1947.

The detailed map of the Omeo site

OMEO





Detail of the stern of the Omeo drawn by Col Cockram.

THE SEPIA

By Mike Murphy

A history and drawings of the Sepia have appeared in earlier editions of MAAWA Reports and a more detailed history is being prepared as a separate publication.

One of the drawings was a reconstruction of a bilge pump from large wheels and what appeared to be a crank shaft found on the wreck site.

This was subsequently identified as a Downton Pump and more details have been obtained which indicate our original construction was not entirely correct.

While we were right in making the assumption it was a pump we were misled into thinking there was only one crank driving one piston. It seems certain that the crank shaft on the wreck site is a broken piece of a longer shaft which would have been used to drive two pistons.

This was confirmed by Ross Shardlow, a marine artist who provided drawings of a Downton Pump from his files.

Mr Shardlow said he could find no examples of a single barrel flywheel bilge pump and it would be unusual as the filter on the uptake of the suction pipe needs to sit low down in the floors of the bilge either side of the keelson.

"A single barrel pump would sit either above the keelson (if on the centre line) or on one side of the keelson (if off centred). Both arrangements would be inefficient for a large sailing vessel.

"I have enclosed a sketch of the typical bilge pump which I would expect to see on a vessel like the Sepia.

"The flywheels on this arrangement would be 4ft in diameter (1200 mm).

"Your sketch shows straight spokes. This is unusual for a bilge pump. The rim of the wheel was usually cast with socketed lugs to take the spokes (usually 6 spokes). The spokes were only about three quarters of an inch in diameter (20 mm) and were squiggled. The sockets on the hub do not align with the sockets on the rim.

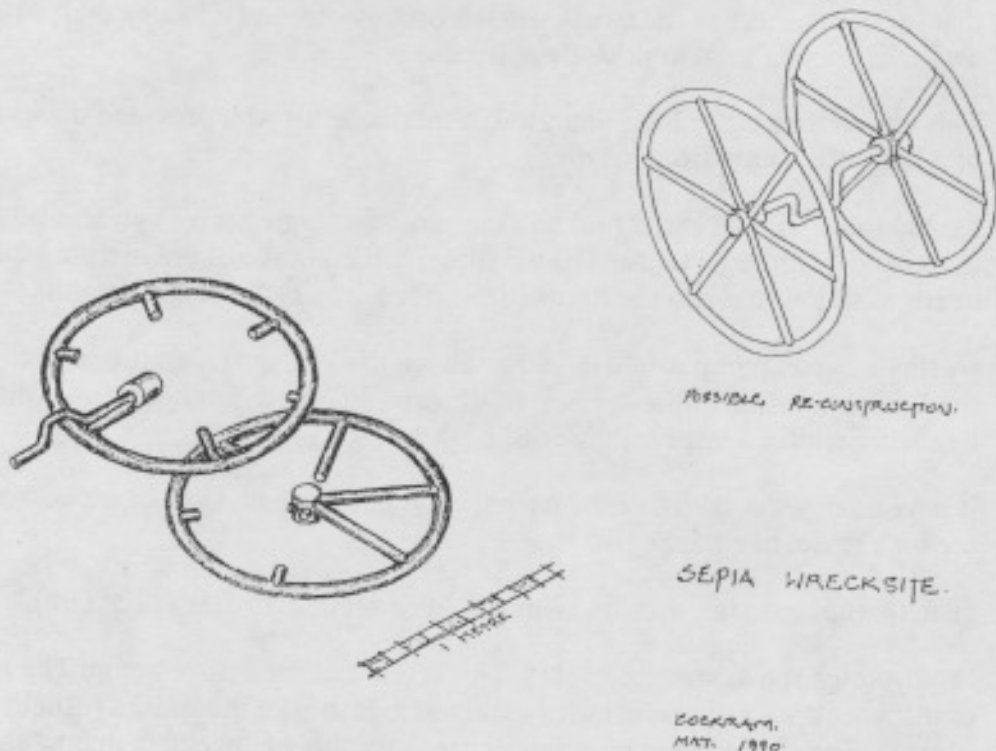
"As you have not found any iron support stands for the flywheels (these would be more massive than the flywheels), I would assume the flywheels to be supported on the timber five-rails as shown in the sketch. This is a common arrangement.

"The pump houses are significant iron structures. I have shown two types in the sketch. Please note that the 'alternative' pumps look similar to bollards."

On the basis of these drawings it is intended to make a search for more parts of the pump on a future dive on the wreck site.

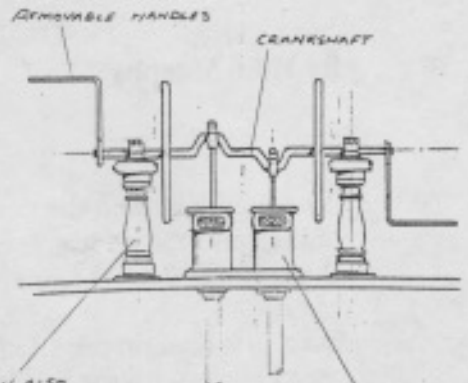
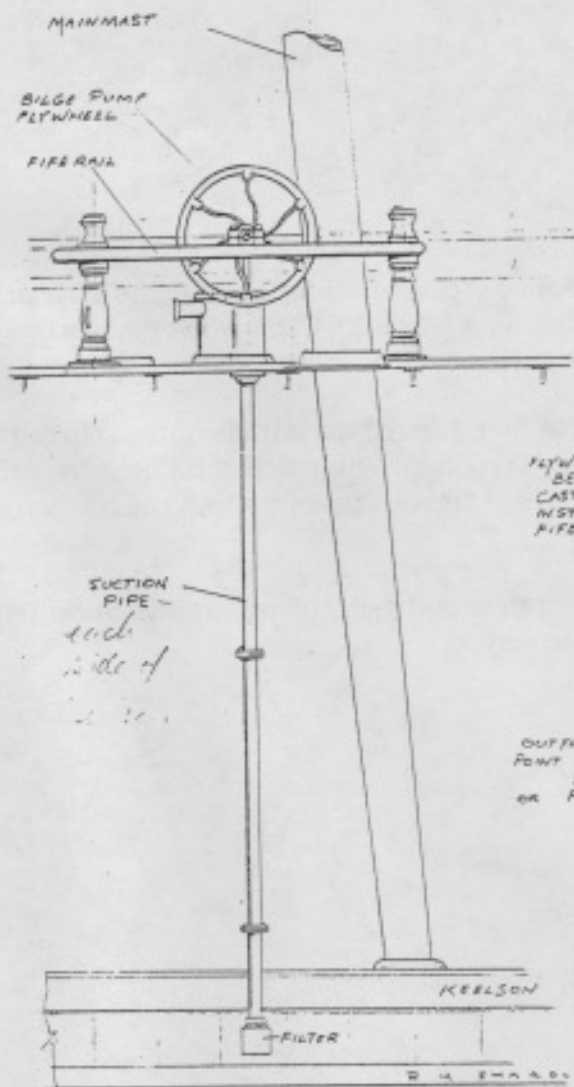
We will also be re-examining the wheels to see whether the spokes are squig-gled or straight as we had originally imagined them. Several were broken and the entire structure is heavily concreted which could make positive confirmation of the shape difficult.

For the same reason it may prove impossible to confirm that the crank shaft is a broken piece of a longer shaft, unless we can find the other piece nearby.



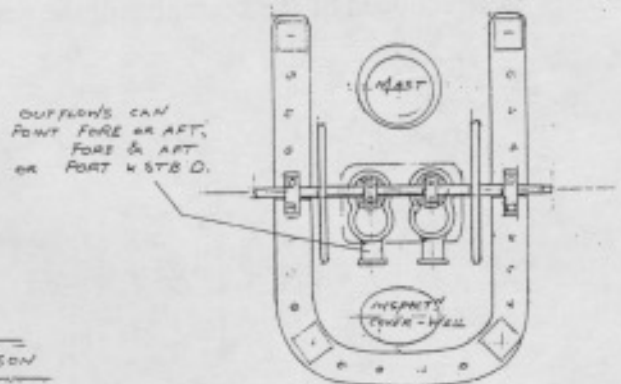
The original drawings of what the MAAWA team saw and reconstructed as a possible arrangement of the pump.

SCALE
 $\frac{1}{4}$ - FOOT

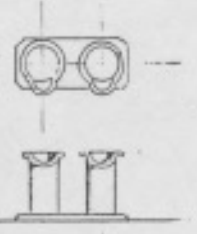


FLYWHEEL CAN ALSO BE MOUNTED ON CAST IRON SIDE STANDARDS INSTEAD OF TIMBER FIRE RAIL

DOUBLE PUMP HOUSING. 3 PUMPS CAN ALSO BE USED.



OUTLETS CAN POINT FORE OR AFT, FORE & AFT OR PORT & STB D.



ALTERNATIVE PUMP HOUSING

Bilge pump for an iron barge approx. 650 tons c. 1860 - 56.

Note similarity to ballards

The drawings of a Downton Pump sent to MAAWA by Ross Shardlow.

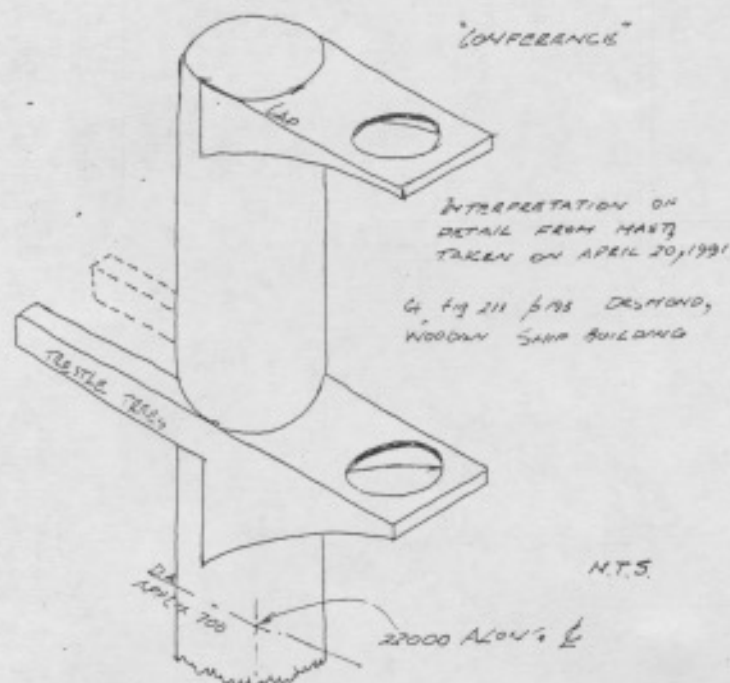
THE CONFERENCE

By Mike Murphy

A coal hulk named the Conference was scuttled off the coast in the early part of the century and was recently discovered by John Clark who operates the charter boat TAKO from Mindarrie Keys.

On a first dive on the site MAAWA divers found the outline of the ship can be seen clearly with the bow and stern sections prominent. A mast lies across the site about half way along and the wheel and capstan of a winch can be seen on the port side towards the bow.

Otherwise it is the usual tangle of frames and metal plates to which most ships are reduced by the pounding of the waves.

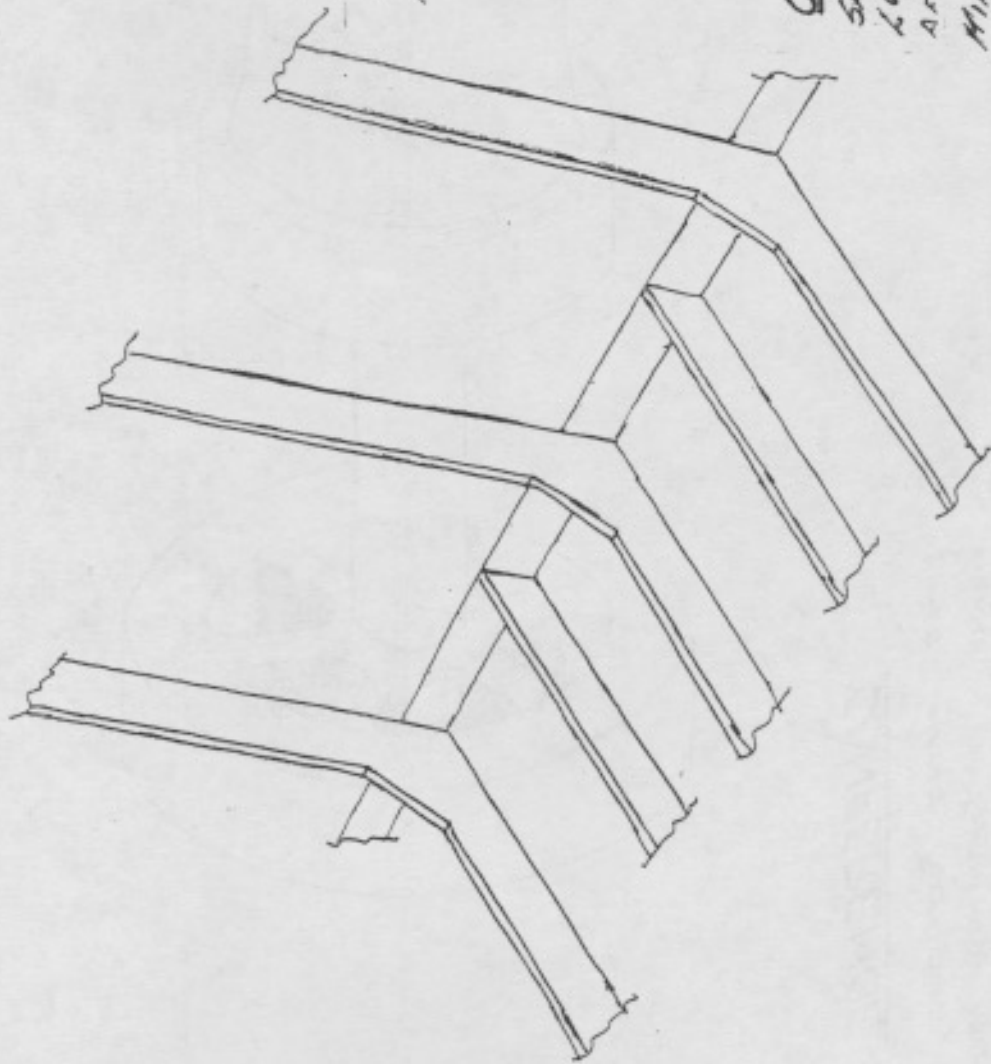


The top of the mast of the Conference, drawn by Milton Clark.

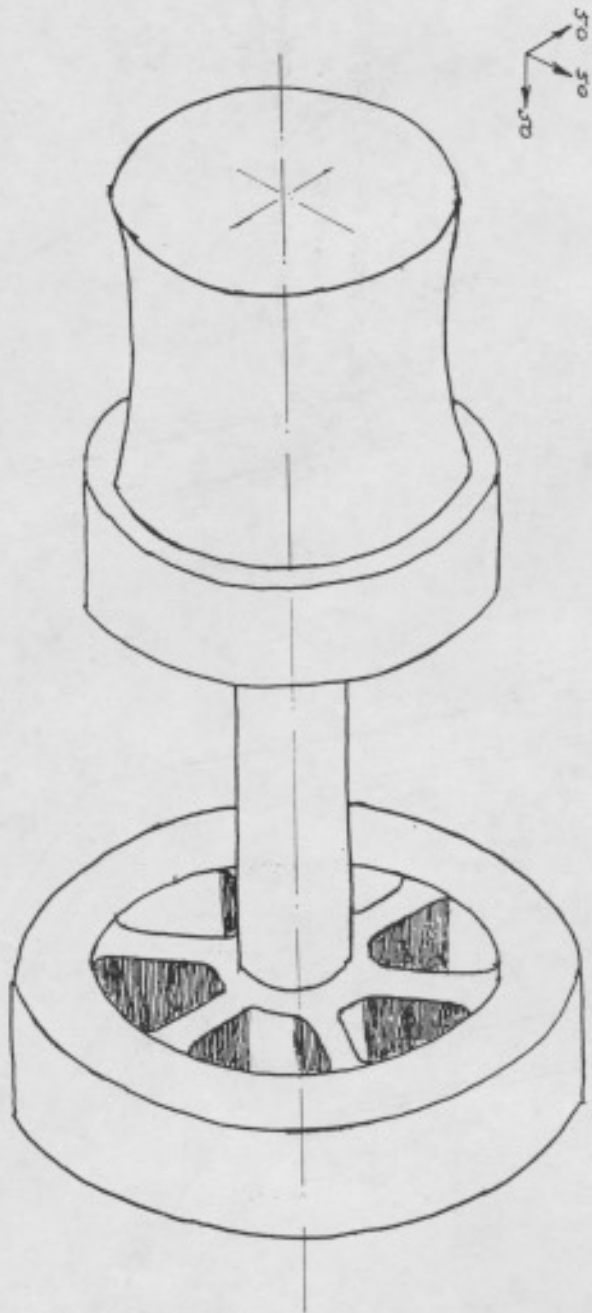
SOLO 10 MOULDED 200
SPACING 680
EXPOSED LENGTH \approx 1750

CONFERENCE

SKETCH OF 5 FRAMES --
LOCATED PORT SIDE
AFT OF MAIN MAST
MIRK MURPHY & WILTON CLARK
24.8.91



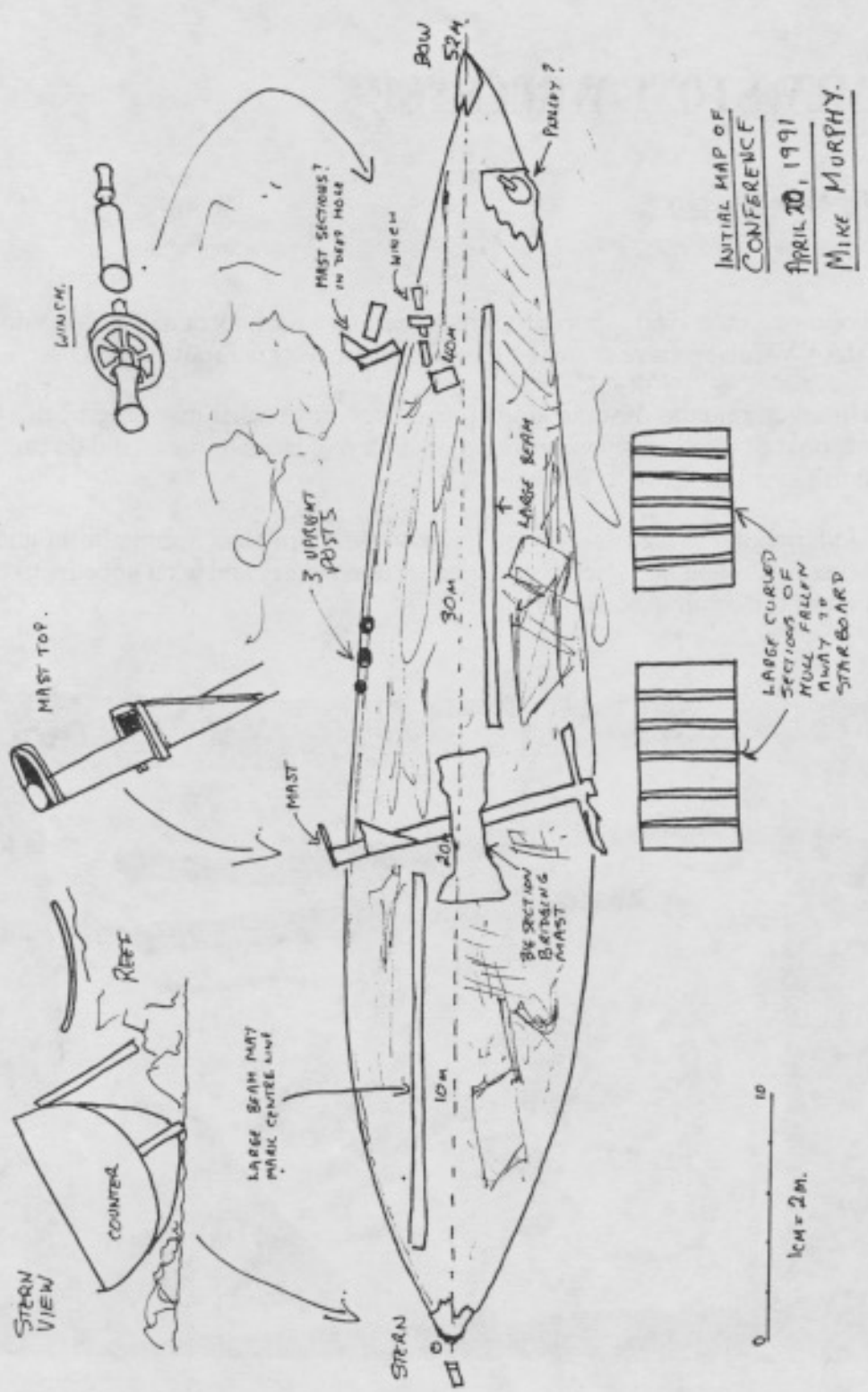
Framing on the port side.



CONFERENCE

WINCH - LOCATED PORT SIDE,
 FORWARD OF THE MAIN MAST
 THE MURPHY & MASON LINE
 24.8.91

The winch on the port side near the bow



A map and drawings of the Conference site.

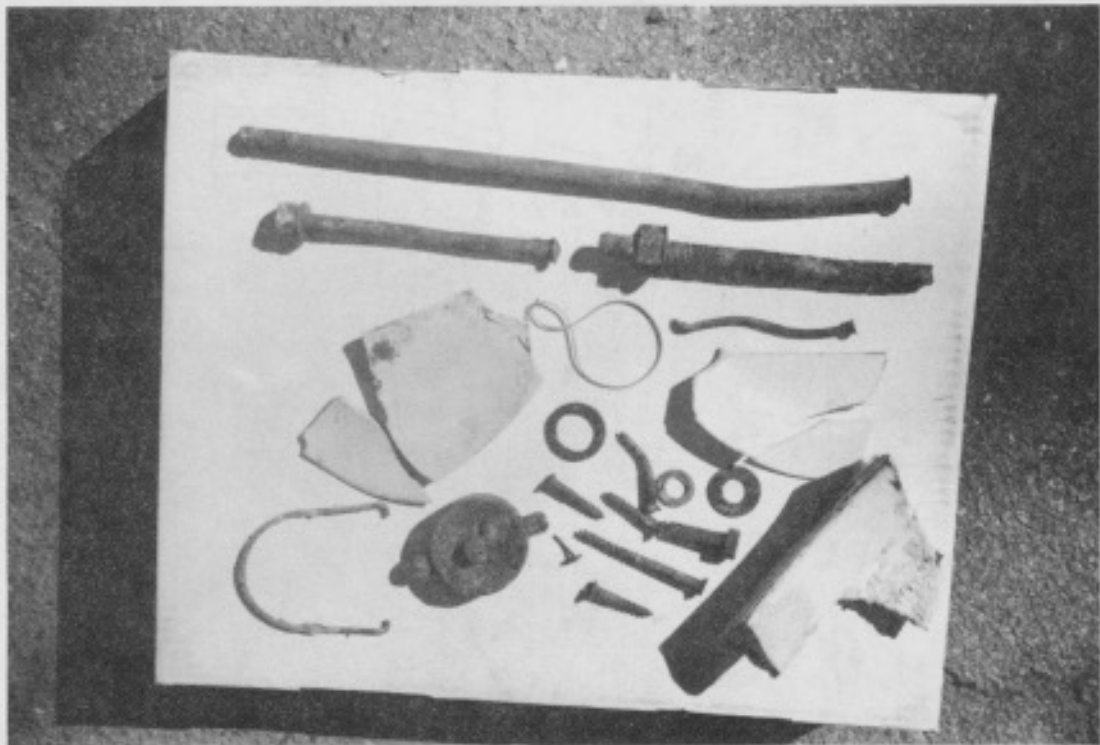
MEWSTONE WRECKAGE

By Mike Murphy

Following up a 1980 report of a wreck seen on a reef north of The Mewstone MAAWA divers have searched the area extensively without success.

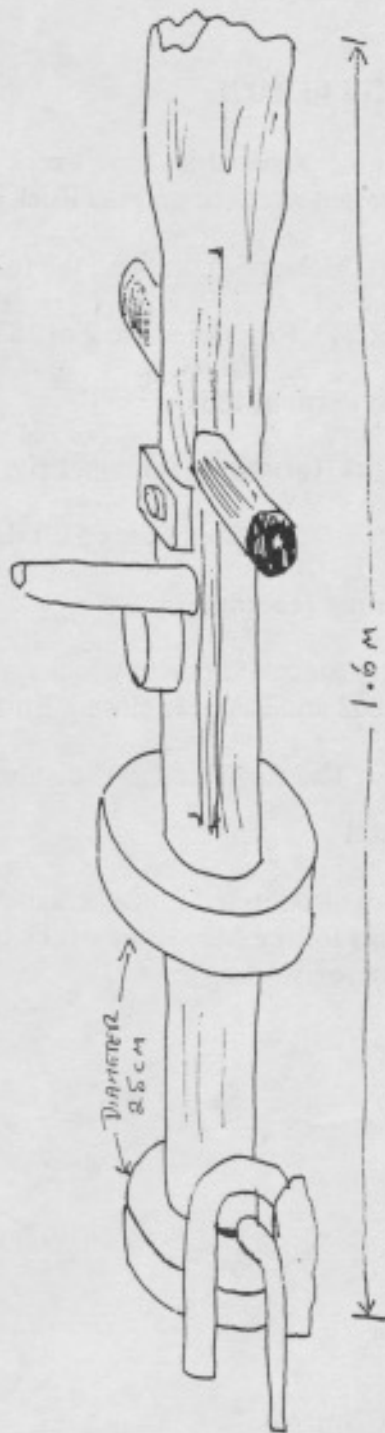
However, remains of some kind of machinery from what may have been a fishing boat or small vessel were found under a reef close to the island on the north east side.

Underneath the machinery were fragments of fibre glass, rubber hoses and several nuts and bolts, screws, fragments of crockery and what appears to be part of the ceramic bowl of a toilet.



The artefacts found with the piece of machinery. Photograph by Mike Murphy.

Machinery, possibly
wreck? in 507m
AT Mewstone
Mike Murphy & Noel Newitt
JANUARY 1991



The piece of machinery found wedged under a reef near the Mewstone.
Drawing by Mike Murphy.

THE FITZ GERALD

One of the possibilities for a wreck near the Mewstone is the sailing vessel Fitz Gerald wrecked on Fish Rock on July 19, 1862.

Richard McKenna compiled the following notes on the Fitz Gerald:

On/n 36543. Registered No 2 of 1861 at the Port of Fremantle on 10/4/1861.

Built at Perth in 1861.

One deck, two masts, schooner rig, square stern, carvel build, wood frames.

23.72 tons - 51.6 ft x 14.6ft x 5.2ft depth.

Owner not recorded.

Registry cancelled due to wreck on Fish Rock in Fremantle Harbour on 19/7/1862 and Register closed. Entry dated 29/12/1862.

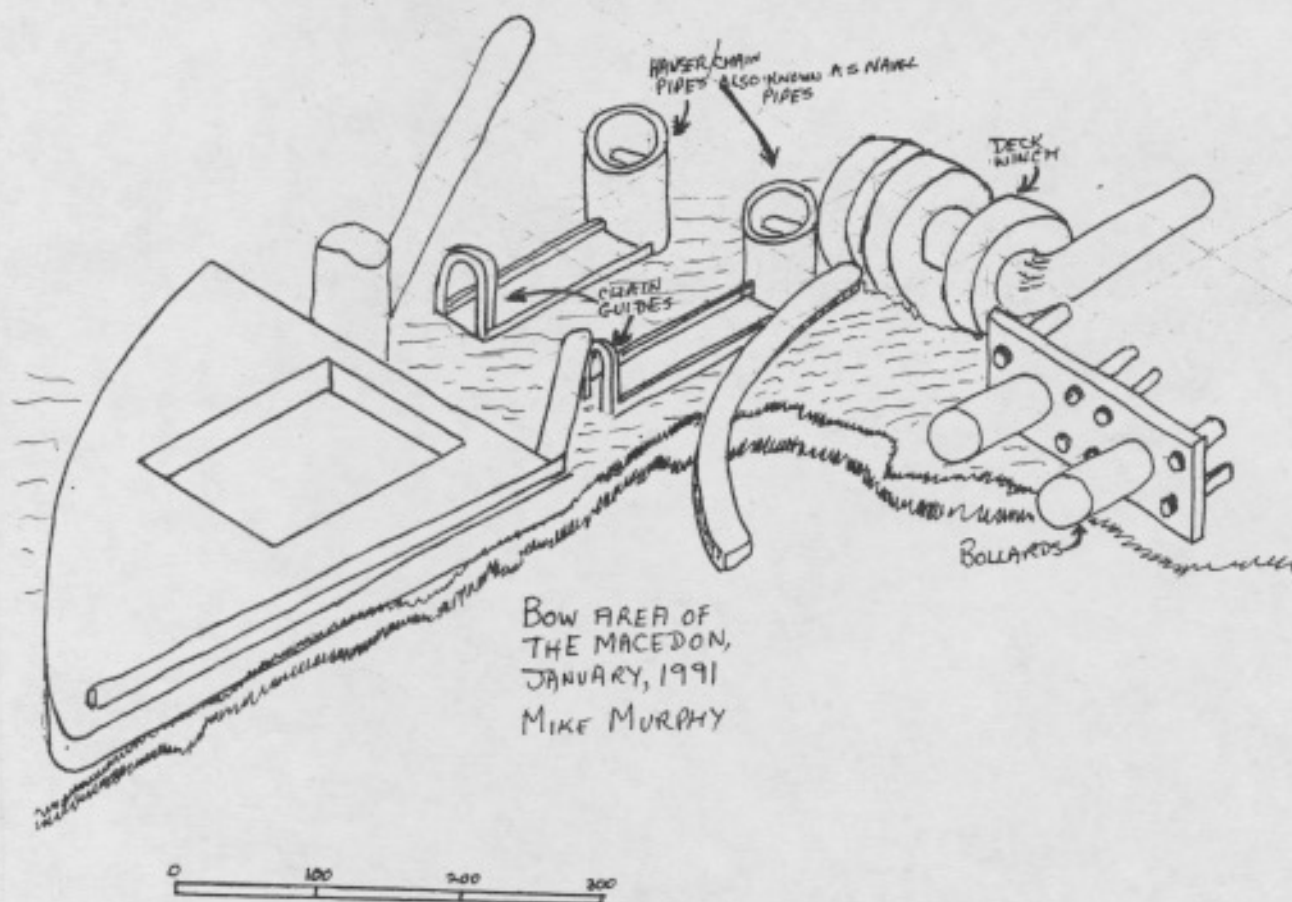
NOTE : The Register shows distinctly the vessel's name as two letters.

THE ADA

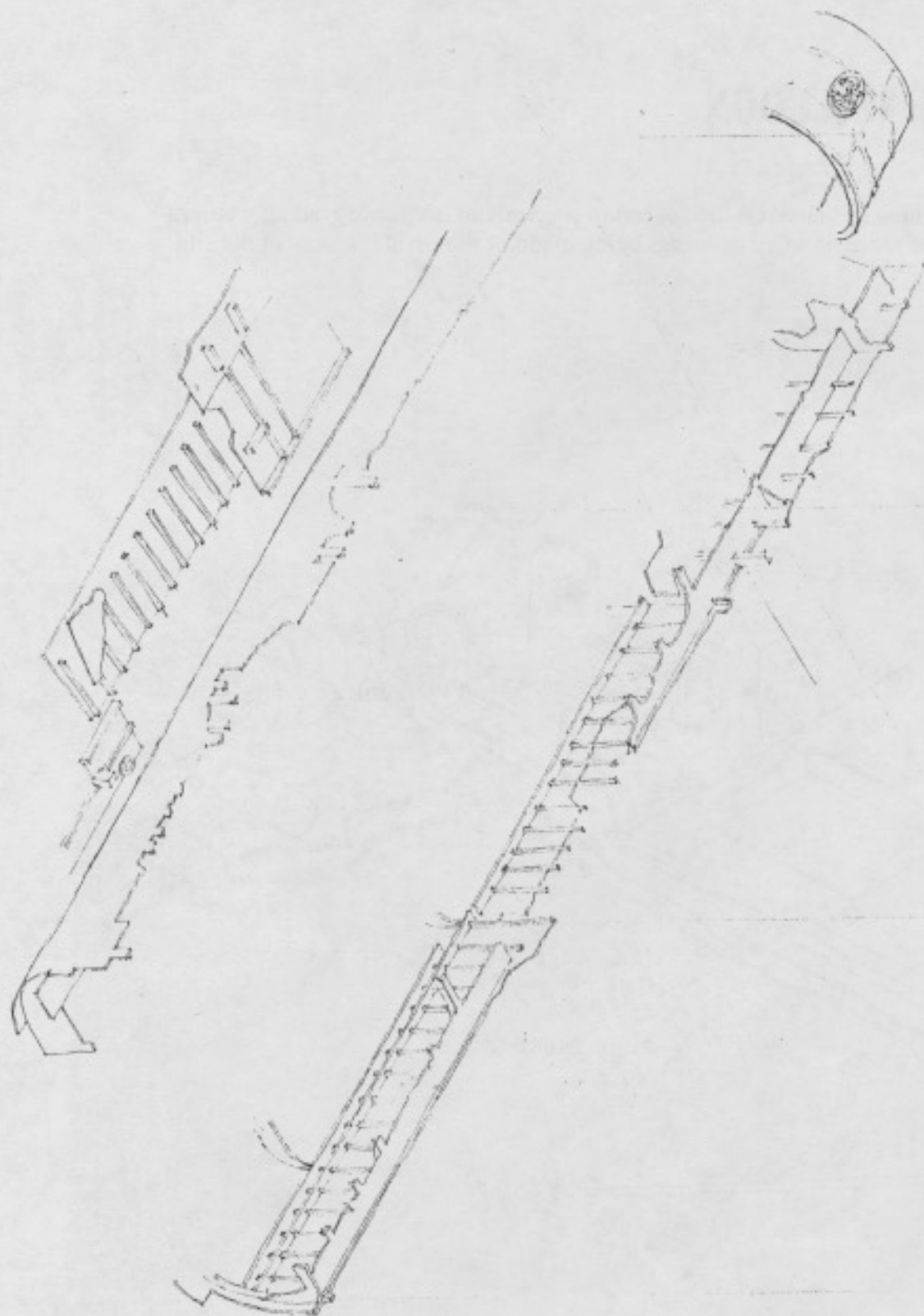
Richard also hunted for information about the lighter Ada which was another prospect for the Mewstone wreck but found nothing and concluded the vessel was not registered.

THE MACEDON

Work has continued on the Macedon site with an isometric gradually emerging and more detailed drawings being made of the main features of the site.



The bow area of the Macedon showing the winch, bollards and hawser pipes with chain guides. Drawing by Mike Murphy.



Isometric drawing of the sides of the Macedon at the centre of the site, also showing the position of a boiler. Drawing by Col Cockram.

THE GEM

October 1991

The history of the Gem and how it came to be wrecked has been reported extensively by Neville Passmore and drawings of what are believed to be an additional section of Gem wreckage were included in an earlier volume of these notes. This is a report of a dive on the site on October 25 1991.

The main wreck site consists of the keelson with protruding frames and evidence of more extensive planking and timbers beneath the sand. Bronze bolts protrude from most of the timbers.

Following the line of the keel southwards, more wreckage appears. This is less cohesive, consisting mainly of separate timbers although some are of considerable thickness. One large section in particular is wedged beneath a low ledge of rock and appears to have been a substantial squared timber, possibly part of the keel and keelson assembly. Scattered around the reef nearby are scraps of wood attached to bronze bolts, very similar to the debris found on the RAVEN wreck site.



MAAWA Secretary Lynn Stephens cleaning weed and other growth from the plaque and plinth marking the GEM wreck site.



Planking seen between frames of the main GEM wreck site.



Framing on the GEM wreck site with a protruding bronze bolt. The diver's knife gives an indication of the dimensions.

THE LYGNERN

By Ross McGuffie

Official Swedish Registry Number 6320

Call sign KCPN

Registered at Gothenburg, Sweden

The S.S. Lygnern was a steel screw steamer, one deck built of steel, second deck built of steel. In the forward hold she had longitudinal framing and cruiser stern. She was fitted with wireless and electric light. She was built in Scotland by MC Millan and Son of Dumbarton and launched in July 1920. Her owners were Rederiaktieb Transatlantic (C. Carlsson) and managers Transatlantic Steamship Co.

Her dimensions were : length 400ft x breadth 52ft 7ins x depth 25ft 6 ins.

Internally measured from underneath deck to top of floors.

Draft 25ft 1ins, freeboard 3ft 7ins, moulded depth 28ft 3ins, gross tonnage 4896 tons, underdeck tonnage 4379 tons, net tonnage 2874 tons.

Registered as 100A1 at Lloyds including shelter deck and freeboard, was last surveyed in October 1927 with a machinery survey in February 1928. She was fitted for oil fuel at the date of building. She had a cellular double bottom for 346ft of her length and the spaces of the double bottom = 1118 tons. The tail shaft was last surveyed in November 1926. The bulkheads were cement and the collision bulkhead went to the shelter deck.

Her propulsion was by triple expansion (3 cylinders) 27", 44" and 73" with a 48" stroke producing 440 nominal horse power. She had three single boilers 180lb per square inch built by J.G. Kincaid and Co Ltd of Greenock, Scotland. The boilers were three corrugated furnaces with three doors under each boiler (9CF) and 185 square feet grate surface for each boiler and heating surface of 7436 square feet. She had five hatches.

The Lygnern arrived in Fremantle on her first voyage to this port (not maiden voyage) on Monday 17/09/28 at 5.30 a.m. under the command of Captain J.A.V Koch. Her agents were Elder Smith and Co and her cargo included 303 tons of general and 240 tons of Baltic pine for discharge in Fremantle. Her Adelaide cargo was 626 tons of general and 384 tons of Baltic pine, for Portland 436 tons of Baltic pine and for Melbourne 1042 tons of general and 3920 tons of pine - a total of 6951 tons of inward freight.

Her crew consisted of 46 officers and seamen who were returned to their homeland aboard the mail ship Orsova which departed Fremantle on 23/10/28 after it was announced the owners had abandoned the vessel to the underwriters following her stranding.

The vessel was berthed at "T" shed Victoria Quay on the Monday and at the time there was a national lumber workers strike across Australia over the question of Waterside Workers Federation members being the labour force to discharge and load cargo on the wharves. On Tuesday 18/09/28 it was decided to move the ship from Victoria Quay to Gage Roads while the strike was on to reduce the cost of the harbour fees. At 2.45 p.m. with Captain H.S. Steer as pilot, who was recognised as Fremantle's most experienced pilot at the time, she proceeded out of the harbour until North Mole light house was abeam and her helm was put to starboard in order to bring the vessel to anchor in a suitable position among other ships.

Chain was paid out to a length of 75 fathoms with the vessel heading in a southerly direction, the wind direction being in the west at force 2 with a nasty westerly swell running. The time of anchoring was 3.05 p.m. in supposedly 8 fathoms of water.

A crew member reported at 3.14 p.m. that he had felt the ship touch bottom and at 3.21 her engines failed in an attempt to move the ship. It was reported that the anchor had fouled an anchor lost by the Paloh some years earlier, causing the Lygnern to drag her anchor after trying to reanchor after the first touching of an obstruction.

The tug Uco was called to assist but was a long time arriving. The tug made two attempts to tow the ship off the obstruction, snapping lines on both occasions, and then returned to port for more lines. The master of the ship supplied another line which was successful until it also snapped.

The tug Wyda was called but because of the lightness of her lines and the choppy seas it was impossible to utilise the tug's power to any advantage.

There was then 12 ft of water in the number 2 hold. The obstruction had damaged the rudder and fouled the propellor. Soundings were taken and the

ship was at most in 25ft and least 20 ft of water, her draft being 20ft 6ins forward and 22ft 6ins aft.

There were conflicting stories between the master and the pilot with an investigation being held by the Fremantle Harbour Trust on 01/11/29. There could not be an official government inquiry because the law only provided for such inquiries to be held when a British-registered vessel ran aground and the Swedish consul did not want to commit his government's money to the cost of an inquiry.

The weather deteriorated until it was reported that Friday 21/09/29 was a most unpleasant winter's day and on 27/09/29 70 mph winds came in and sealed the fate of the Lygnern on Beagle Reef.

The cargo was discharged into lighters by labour that was initially paid 10 shillings an hour but later reduced to 2/11¹/₂ in addition to award rate of 5/10 per hour due to the dangerous nature of the work.

The findings of the Fremantle Harbour Trust investigation was that a detailed survey of the waters be taken to the westward of a line half a mile SSE of the southern side of the channel abreast the North Mole and that both the Beagle Reef marker buoy and the outer green channel light buoy were in the wrong position, although it was denied this had an effect on the stranding.

The vessel now lies with bow pointing to the south east. The lighter Rockingham, of wood construction and owned by the Swan River Shipping Co, was sunk on 02.08/45 at the Lygnern site after being used to transport the remains of the Samuel Plimsole from the inner harbour to the same location.

In the West Australian newspaper of 29/11/70 on page 12 it was reported a demolition team would be demolishing the wreck of the Lygnern. Naval and Special Air Service men were to explode small plastic charges in the wreck because it was too close to the South Mole and Fishing Boat Harbour for a big blast to be set off. The Navy spokesman said the wreck was a hazard to navigation.

Information for this report was gleaned from the Harbour and Light file 8467/37 ACC 1066 and an article in the 1975 Port of Fremantle Magazine Vol 5 No 6 October 1975 by Chris Halls. Thanks also to Denis Robinson and Richard McKenna for their assistance.

**THE MARITIME ARCHAEOLOGICAL
ASSOCIATION OF W.A.**

**New office bearers elected
October 1991**

**President : John Morhall
Vice President : Neville Passmore
Secretary : Lyn Stephens
Treasurer : Nola Farrell
(elected following
resignation of Richard McKenna)**

**Address for Correspondence
C/- The Secretary
96 Parklands Square
Riverton
WA 6148**

Tel : 457 4543

**Monthly meetings:
Third Tuesday of each month
7.30 p.m.
The Education Centre
WA Maritime Museum
Cliff Street
Fremantle**