



## Technical Report

Report No. SYD/2022/08

At the request of the NSW Department of Planning, Industry & Environment – Crown Lands, the undersigned prepared this report from information gained from a review of a report prepared on the 16<sup>th</sup> August 2022 by McLennan’s Diving Service. This is following their underwater inspection carried out following several” High Sea” events in compliance of the Long-Term Monitoring and Management Plan. The inspection of the wreck Ex-HMAS Adelaide was carried out, on the 1<sup>st</sup> August 2022 where the vessel rests following it’s scuttling.

The vessel’s details are:

<b>Ship name:</b>	Ex-HMAS Adelaide
<b>Displacement Tonnage:</b>	2954.90 tonnes
<b>LBP:</b>	407ft
<b>Breadth Moulded:</b>	47ft

### 1. Introduction

Ex-HMAS Adelaide is a former guided missile armed frigate (FFG) de-commissioned from the Royal Australian Navy. The vessel was scuttled at a position off Avoca, New South Wales on 13<sup>th</sup> April 2011 to create an artificial reef for scuba diving.

An underwater inspection of the wreck is carried out annually as a requirement of the Long-Term Monitoring and Management Plan. The latest annual inspection was carried out as mentioned above, from April to June 2022, by McLennan’s Diving Service. However, following several” High Sea” events recently the site was inspected on the 1<sup>st</sup> August 2022.

Ex HMAS Adelaide has a steel hull which rises to the main deck. The accommodation decks 01, 02 and 03 levels are constructed of aluminium.

### 2. Report

From the diver’s report, the underwater inspection of the vessel found that, as with previous inspections, the steel hull structure was substantially unchanged. No corrosion, cracking or displacement of fittings was observed on the outside or inside of the steel hull. All entrance ways inspected were found clear.

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All the long-term monitoring points were again inspected, and it was reported that no deterioration was found since the last inspection. These points are in way of:

- the Missile launcher opening,
- the Forward screen,
- the Hangar frames, and
- the stern

The diver's report indicates that the hull is still fully supported by the sand. The report states the sand level was very similar to previous years with the sand being very close to the vessel's design waterline. This is as it was at the last annual inspection and similar to that reported in previous years. Whilst settling in 2012 the vessel developed a 4-degree list to port. The divers confirmed that this list remains unchanged.

As with previous reports, the diver's report states that the aluminium superstructure continues to suffer from deterioration. The divers did report that the hanger structure continues to deteriorate.

The bulkhead of centre line alleyway which runs the full length of the hanger from the entrance at the flight deck to a position in line with the vessel's funnel has separated along its connection to the main deck. This is over approximately 14 metres. It is reported by the divers that the supporting frames have also separated. The bulkhead is now moving with the swell surge about its upper connection. This bulkhead is on the opposite side of the companionway to the bulkhead that was cut away in April 2022.

The diver's report indicated that there is cracking in the forward aluminium plating of the superstructure below the wheelhouse. This cracking is reported to be over the full length of the plating. This is the first time it has been noted.

It is noted in the diver's report that the aluminium superstructure has reached a state of deterioration where additional panels would be expected break away with every sever swell event.

The hanger structure is aluminium and does not contribute to the structural strength of the vessel

During the inspection the divers took still photographs and a video of the damaged areas of the superstructure which were made available.

As with previous reports and as mentioned above, the aluminium structure is continuing deteriorate, but the main support structure is still largely intact.

### 3. Conclusion

As mentioned in my previous reports It is my opinion that, the vessel is still structurally sound, and the vessel is stable. However, as with my previous reports, the light aluminium structure in way of the accommodation and hanger decks is continuing to deteriorate. It is my opinion that this deterioration will continue as the plating continues to break away from its supports thus allowing it to move with the currents and the weather. It is also my opinion that the corrosion of the aluminium structure will continue as the light structure continues to work in the seaway.

Also as mentioned in previous reports, except for the helicopter hangars located at the after end of the superstructure, which are of quite light construction, the main structural components supporting the accommodation structure are considered structurally sound. The deterioration of the plating at the forward end of the superstructure indicates that all the light aluminium components as expected are deteriorating.

It is recommended that the damaged areas of the hanger bulkhead should be routinely monitored in line with Long-Term Monitoring and Management Plan and when they deteriorate further should be cut away to make the area safe for recreational divers.

I agree with the comments of Alan McLennan of McLennan Diving Services that the wreck be opened for recreational and scientific diving activities. Though as mentioned previously the Dive Masters should take precautions when taking divers near the damaged accommodation structure.

### 4. Disclaimer

The undersigned shall not be liable in any way to any person or company in respect to any claim for any kind, including claims for negligence, for loss occasioned to any person or company in consequence of any person or company acting or refraining from action as a result of material in this report.

Signed,



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for Shearforce Maritime Services Pty. Ltd.  
24<sup>th</sup> August 2022

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