

# SA NAVY SUBMARINE MUSEUM PROJECT PROPOSAL



## INTRODUCTION

1. The South African Navy successfully operated three French built Daphné Class submarines during the 70s, 80s and part of the 90s. These were replaced by three German built Type 209 submarines in the early 2000s. Two of the original Daphné submarines were disposed of as scrap metal whilst Ministerial approval was granted



- to retain the 3<sup>rd</sup> submarine (*SAS Assegaai* at the time) as a museum. This submarine museum was successfully operated from 2008 to 2015 with the boat lying alongside the outer wall of the Simon's Town harbour. After 2015, the boat required external maintenance and was kept on the synchro lift inside the harbour.
2. The South African Navy has since decided to retain the submarine as a static museum item, under the ownership of the SA Navy Museum but managed and operated as part of the Naval Heritage Trust (NHT). The task of preparing the boat and placing it in a suitable "out of water" exhibition position was given to a volunteer group acting as a sub-committee of the NHT.
  3. All plans, designs and budgetary requirements have now been compiled by this committee. The plan is to construct suitable foundations on the grounds allocated for the display (Cole Point Parking Area next to the current NSRI Station 10 building). The boat will then be moved from the synchro lift to the display position and placed on the newly built foundations. The external renovation will take place there and suitable entry and exit doors will be installed on the side of the boat to provide easy access for visitors.
  4. The static submarine museum will be managed and operated by the combined efforts of the Naval Heritage Trust, the local non-profit Facility Management Company (STADCO), and the South African Navy Museum. As in the past, guided tours will be conducted by volunteers and ex-submariners. The submarine will also be available for a variety of other activities such as company functions, school learning opportunities and even evening functions. Fees derived from these activities will be used to cover all maintenance and running costs (the museum operates on a non-profit basis).

5. All planning and design activities have been concluded. Still to be concluded is sourcing funding to sponsor the restoration and move of the submarine. The South African Navy has a limited mandate and a severely restricted budget and will not be able to assist except for the provision of the submarine (as is) as well as the grounds where the submarine will be placed. The Naval Heritage Trust will fund all studies and design work from funding previously obtained during the operation of the submarine museum alongside. The vision is to obtain sponsorship sources to fund the budget delta. This could originate from several sponsors in the form of funding or other suitable resources. Such sponsors would obviously benefit in a variety of ways as indicated in this proposal.

## AIM

6. The vision is to preserve the submarine as a museum to achieve the following objectives:
- To preserve the SA Navy's rich submarine heritage.
  - To illustrate the innovative, world leading SA technologies applied onboard.
  - To educate the youth in the application of science in practical settings and to promote science and technology.**
  - To enhance the image of the SAN as a "peoples navy", open and transparent.
  - To support tourism *and local* economy.



7. **The aim of this proposal is to inform on the SA Navy Submarine Museum project and to obtain the required assistance to realise it.**

## HISTORY

### OPERATIONAL HISTORY

8. South Africa announced on 26 May 1965 that it would acquire submarines and become the only navy in sub-Saharan Africa to operate submarines. In April 1967, the acquisition of 3 *Daphné* Class submarines from *Dubigeon-Normandie* SA in Nantes, France was announced and by March 1968, the keel for the 1<sup>st</sup> submarine was laid down. The 3<sup>rd</sup> *Daphné* Class submarine (*SAS Johanna van der Merwe*) was launched in July 1970 and arrived in Simon's Town in June 1972.





9. The submarine spent much of her operational life conducting patrols and intelligence gathering operations along the Southern African coast. In addition, the submarine (Pennant Number S99) took part in approximately ten clandestine special operations along neighbouring coastlines. The details of most of these operations can be found in the book *Iron Fist from the Sea; South Africa's Seaborne Raiders 1978 to 1988* (Douw Steyn; Arné Söderlund).



10. During her service life, the S99 underwent 4 refits in the local naval dockyard. This included increasing the volume of her fuel tanks by converting external ballast tanks, installation of the locally designed and produced Project *Raka* integrated combat suite and the replacement of the plotting table in the operations room.



11. The submarine S99 was renamed *SAS Assegai* on 19 May 1999.



12. During her final refit, the submarine received the locally designed and produced Project *Nickles* fully integrated software-based combat suite incorporating electronic charting and two state of the art locally designed and built periscopes.

## HISTORY AS MUSEUM

13. In 2005 the SA Naval Board (now Naval Command Council) approved the retention of *SAS Assegai* for preservation as a museum vessel and annex of the Naval Museum. This was to be at no cost to the SA National Defence Force and carried out by volunteers who would raise funds to place it ashore where it could be used as an educational tool to promote the sciences amongst the youth as well as function as a museum exhibit. An *Assegai* Preservation Team consisting of volunteers under the auspices of the Naval Heritage Trust was formed for this purpose.

14. In 2008 during the Navy Festival, volunteers opened the boat to visitors to take some pressure off the boats in commission and raise donations. Due to the success of this effort, approval was given to open the boat whilst afloat and in the Dockyard as a temporary measure until sufficient funds were raised to place her ashore.



15. This was achieved in late 2010 when she was placed alongside a pontoon on the outer wall of the Dockyard and accessible by boat. An arrangement was made with the Simon's Town Boat Company to provide a ferry for visitors and the first visitors were received on 23 December 2010.

16. From then on, the boat was open for visitors seven days a week and 363 days a year (closed on Good Friday and Christmas) and manned by a team of volunteers. It soon became obvious that the use of a ferry was not the answer as it was highly dependent on the weather and subject to cancellations. At the same time a small passenger transport company opened an office in Simon's Town and an agreement was reached with them to bring visitors to the boat by minibus and through the Dockyard security.



17. On 01 March 2011 the submarine museum was formally opened by Chief of the Navy, Vice Admiral Mudimu. The museum soon established itself as an educational visit with numerous schools from as far as Limpopo, the Eastern Cape, Namibia and the Northern Cape sending classes on a regular basis. However, in 2015 it became apparent that *Assegaai* needed hull maintenance and the boat was closed to visitors on 02 August 2015 for a planned docking for repainting and some re-plating of the outer hull. The Navy then decided not to place the submarine back in the water until a suitable plan for housing the museum ashore was in place.





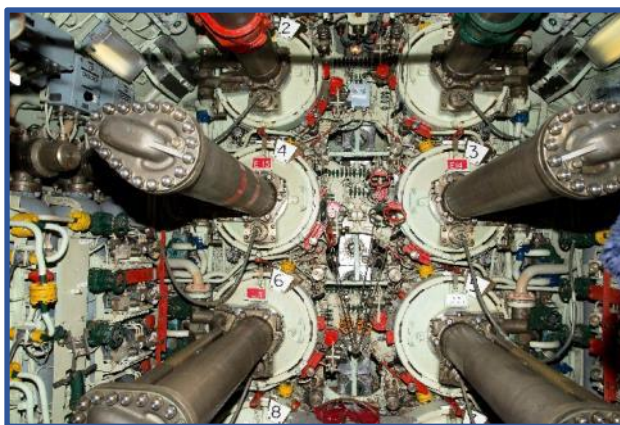
18. By the time it was closed after four and a half years, the submarine had received over 56 000 visitors from 110 countries or dependencies, more than 16 000 of whom had commented positively in the visitor's book. This was despite the difficulties in accessing the boat due to security restrictions. It should be noted that Trip Advisor rated the *Assegaai* Museum as a 4.5 out of 5 with 28 giving it 5 stars (excellent) and 18 giving 4 stars (very good). A 3-star (average) rating was based on security delays at the Dockyard while both 1 stars (terrible) merely stated that the museum was closed rather than an assessment.



19. There are some 124 preserved naval submarines in the world of which only six are in the southern hemisphere, *Assegaai* having been the only one in Africa.

## **PRESENT STATUS**

20. **Physical State.** The submarine is presently on the synchro lift in the Simon's Town naval harbour. Internally, the submarine and all original equipment are in an excellent condition. The inner pressure hull also remains in a good condition. The external hull (mostly 5mm steel plating) is in poor condition. Some steel plates require repair whilst the



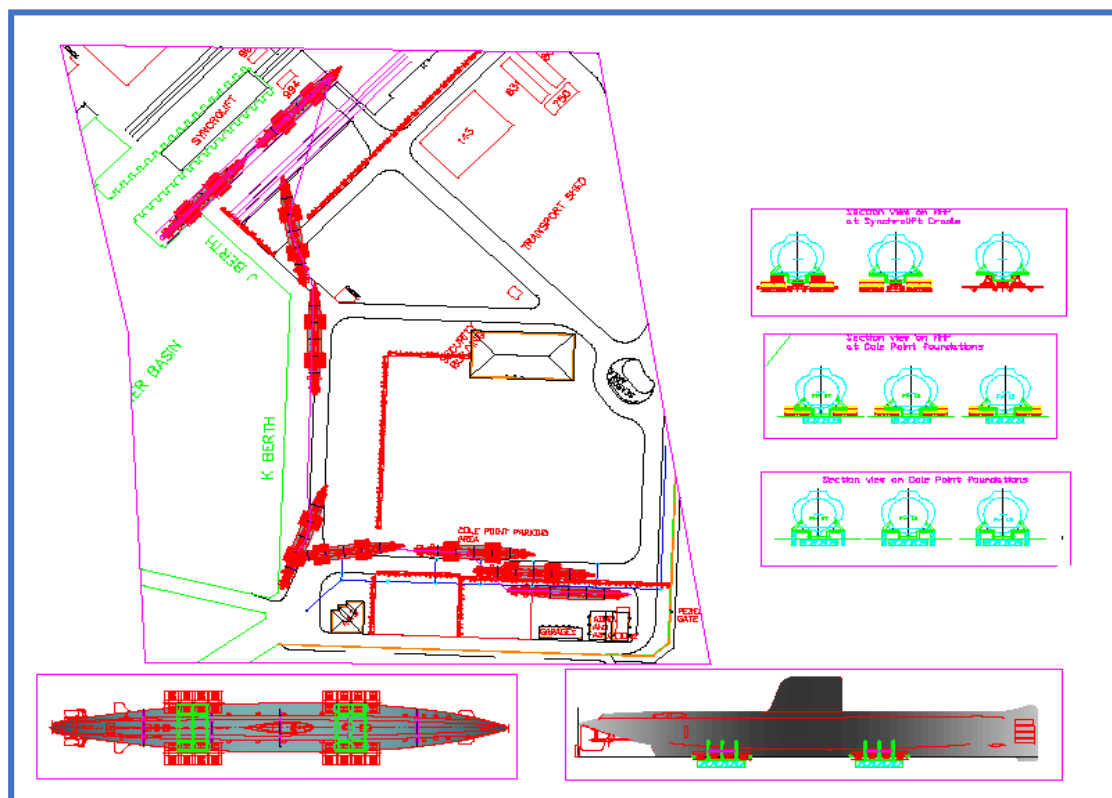
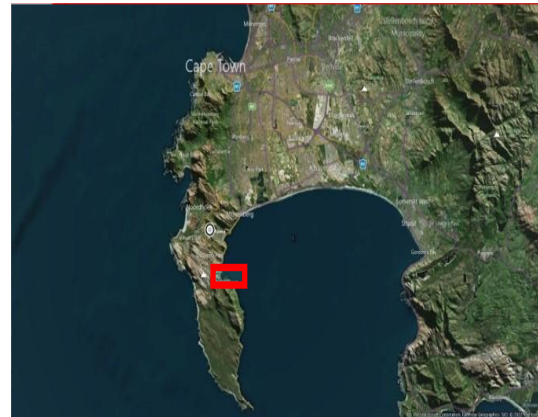
entire outer hull will need a good coat of paint. The casing (at the top of the pressure hull) will also require attention (fibreglass rework, strengthening and paint). In addition, it is planned to cut doorways at the front and rear of the boat (on the Starboard side) to provide easy access to the inside of the submarine (the existing hatches can be daunting to some visitors). All the above work forms part of the Work Breakdown Structure (WBS) and the budget as indicated at Par 24 below.

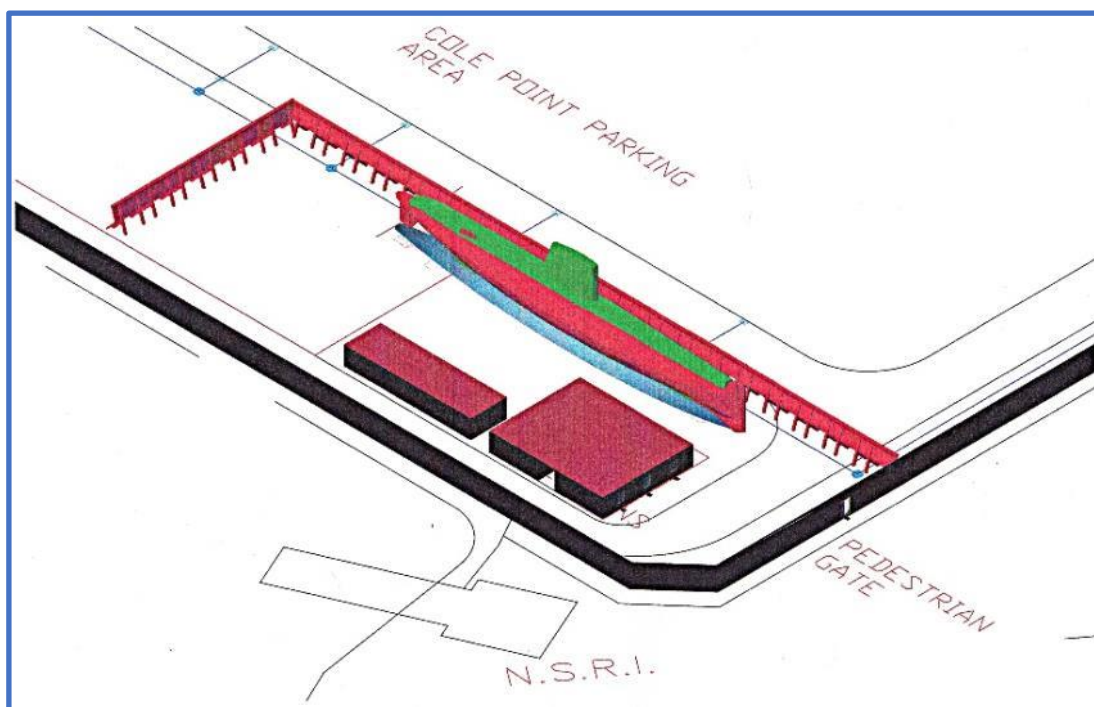
21. **Ownership.** The submarine is the property of the SA Navy. It is no longer in commission and has been removed from the registered navy list. Ministerial Authority was previously provided to transfer the submarine to the SA Naval Museum.

22. **Approvals.** Formal approvals have been provided to transfer the management and operation of the submarine to the Naval Heritage Trust (NHT), a non-profit organisation assisting with keeping the heritage of the SA Navy alive. The restoration, move, installation and operation of the submarine will be arranged, funded, and managed by the NHT. What we need now is support, funding and action.

## **CONCEPT PLAN**

23. **Options.** The main criteria are to provide for a sustainable solution with the submarine out of the water and easily accessible to the public whilst also providing security to the displays. Various options were investigated. These included placing the submarine next to the Simon's Town Jetty. The best option is for the submarine display to be located on SA Navy property, on the Western side of the current Cole Point parking area.





24. **Method.** All designs and plans are in place for this phase.

- a. **Construction of Foundations** (Completed)
  - i. Construction of the foundations that will match the chocks to be welded onto the submarine hull.
  - ii. Cast the foundations and clear the area plus access points.
- b. **Prepare Submarine for Move**
  - i. Welding on permanent chocks on which the submarine will rest once in place.
  - ii. Prepare the current submarine cradle for removal (Armcor Dockyard has committed doing so outside the budget).
- c. **Move Submarine**
  - i. Move the submarine from the present location on the synchro lift to the foundation by means of SPM Bogies.
  - ii. Bed the submarine onto the foundation.
  - iii. Finalize the support of the submarine in its final display position.
- d. **Renovate external Submarine**
  - i. Repair the external parts of the submarine. This involves replacing rusted plates, strengthening weakened sections of the casing and painting the boat.
  - ii. Future access door portals will be welded into the hull.
  - iii. Complete renovation and maintenance to make the submarine presentable.



## **FUNDING REQUIREMENTS**

25. The high-level budgetary breakdown (in Rand April 2022) is as indicated in the Table below. (Reflects actual costs where item completed).

| <b>No</b> | <b>Action</b>                    | <b>Cost</b>       | <b>Comment</b>  |
|-----------|----------------------------------|-------------------|-----------------|
| 1         | <b>Phase 1 - Initiation</b>      |                   |                 |
| 1.1       | Planning study & MoAs            |                   | Completed       |
| 2         | <b>Phase 2 - Planning</b>        |                   |                 |
| 2.1       | SM shift detailed design         | R13 995           | Completed       |
| 3         | <b>Phase 3 - Preparation</b>     |                   |                 |
| 3.1       | Civil work on site               | R234 272          | Completed       |
| 3.2       | Modify SM for move               | R202 284          |                 |
| 3.3       | Lift and move to site            | R1 725 000        |                 |
| 3.4       | Repair SM exterior on site       | R3 036 313        |                 |
| 3.5       | Museum access modification       | R80 000           |                 |
| 3.6       | Office & facilities modification | R70 000           |                 |
|           | <b>Estimated Total</b>           | <b>R5 351 864</b> | (including VAT) |

26. Critical funding items are:

- a. Preparing the submarine and the site = R436 556
- b. Lifting and moving the submarine to the site = R1 725 000

## **FUTURE MANAGEMENT**

27. The vision is to provide a viable submarine museum that is sustainable and can be operated in the long term as a landmark item for the South African public.

28. The submarine remains an asset of the SA Navy Museum inventory (Ministerial approval in place). However, it will be operated and managed by the Naval Heritage Trust with the assistance of a Facility Management Company (STADCO).

29. All incoming funding (sponsorship and revenue) will be managed via the NHT Fund for auditing purposes.

30. Daily operation of the venture lies in the hands of the NHT and STADCO. This includes the use of voluntary submarine guides and future maintenance.

31. The submarine will be open for visits, tours, functions, and special events.

## SPONSORSHIP ARRANGEMENTS AND BENEFITS

32. The overriding cost implications lies in the initial cosmetic external restoration, the move of the boat to its final exhibition position and installing the submarine in an out of water position.

33. Once in place and operational, the submarine display will be financed by means of revenue generated through visits and tours.



34. Sponsorship can take many forms. Supporting companies or organisations would be able to contribute by means of **material** (steel plating, paint), **services** (where assistance can be provided directly in terms of the renovation and move of the submarine), and **financial** by means of bolstering the *Assegaai* Fund.

35. The benefits to the *Assegaai* project are obvious. The benefits to the supporting company or organisation can be wide ranging with the Naval Heritage Trust open to any proposals. This would include:

- i. Signage displayed at the entrance to the display area and the entrance to the actual submarine.
- ii. The use of the submarine for public relations and advertisement campaigns.
- iii. The use of the submarine for company / organisation visits and functions.

## CONCLUSION

36. The South African Navy Submarine Service has been in existence since the early 1970s. The original three Daphné class submarines have since been replaced with Type 209 submarines. One Daphné class submarine, the *Assegaai* remains and has since already had a successful career as a museum. However, it is not a sustainable solution for the submarine to remain in the water as a museum as the boat deteriorates in the seawater with associated high maintenance costs. In addition, despite huge public interest whilst alongside in Simon's Town, having the submarine ashore would make it considerably easier for the public to enter and exit.

37. The South African Navy (SA Navy) has provided authority for the *Assegaai* to be retained as part of the SA Navy Museum whilst being managed and operated by the Naval Heritage Trust (NHT) in conjunction with STADCO. In addition, permission has been provided for the *Assegaai* to be placed in a designated area (Cole Point Parking area) with easy access by the public.

38. The NHT will now arrange and manage the external renovation, move and installation of the submarine to the designated area. Thereafter, the NHT will manage the submarine display in terms of guides, maintenance, and finances.

39. **This then provides a unique and great opportunity for organisations to become involved in supporting the project.** The NHT is seeking partners to assist in various ways to realise this vision. Not only would supporting organisations assist in keeping our heritage alive but they can also benefit in unique ways for an extended period.

40. The members of the project team would be delighted to present our plans to you, answer any questions you may have and even conduct a tour of the submarine with you to demonstrate our vision. Please feel free to contact us via the E mail address in the heading or directly to any of the project members below:



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41. The Fund in support of this project is as indicated below:

**Bank: STANDARD BANK**  
**Account Holder: THE NAVAL HERITAGE TRUST**  
**ID/Reg No: 2770/1994**  
**Account Type: Current**  
**Account Number: 07 210 227 6**  
**Branch: Fish Hoek**  
**Branch Code: 051001**  
**SWIFT Code: SBZAZAJJ**  
**Date Opened: 14 June 2001**

**Mark Donations as: ASG + Name**