

Coastal Works Review

**South Sound – Construction of a Private Residential Dock
Block: 21E Parcel: 148**



PREPARED FOR: MINISTRY OF HEALTH, ENVIRONMENT, CULTURE AND HOUSING

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South Sound – Construction of a Private Residential Dock Block: 21E Parcel: 148

Previous Application

On the 27th of December 2018, coastal works approval was granted to the applicants- Laura and Peter Cockhill- for a dock on this parcel (DOE/CWK/347). The previous permit was paid for and was issued on the 7th January of 2017 and coastal works notices were issued for works to be undertaken starting on 16th of January. However, the notices expired before construction of the dock was started and the original applicants sold the property to the new applicants who wish to re-apply for a permit for a dock with a different layout and footprint than that previously approved.

Project Proposal

The applicants- 800 BARCO Ltd.- are seeking permission for the construction of a private residential dock located at 800 South Sound Road, as shown in Figure 1 below. The dock is intended for the personal use of owners and guests of the property and for the mooring of boats with 2.5ft draft or less.

The works will affect approximately 1,343 square feet of Crown property. The shore perpendicular dock walkway shall measure 6ft wide by 143ft 10in long with an arched bridge with 7ft clearance above beach grade level at the shore terminal end connecting the dock to the property seawall edge in order to allow pedestrian access along the beach below. The L-shaped end section shall measure 18ft 2in wide by 23ft 10in long and shall have a shingle roof wooden framed cabana and with a retractable ladder down to the water. The shore perpendicular dock walkway and the end platform shall be 4ft above mean sea level with side skirting boards, the base of which shall be above high tide level. The dock end section shall also have a lower platform 1ft 3in above mean sea level around its edge with steps down from the higher dock platform. The dock will also have a 10ft wide by 10ft 10in long platform halfway along and centred over the shore perpendicular walkway. See figure 2 below for an extract of the submitted plans showing the dock layout and dimensions.



FIGURE 1: IMAGERY SHOWING PROPOSED LOCATION OF DOCK (SOURCE: DOE 2019, LIS 2013)

The dock will be supported by 10 inch diameter concrete reinforced PVC piles that will be inserted into the seabed by water jetting in the nearshore area and drilling from a shallow draft barge in deeper water where there is sufficient water depth for the draft of the barge. The decking will comprise 5 ½ inch pressure treated lumber decking with ½ inch spacing between boards. Silt screens will be put in place and maintained for the entire duration of the works in order to contain any turbidity caused by the works.

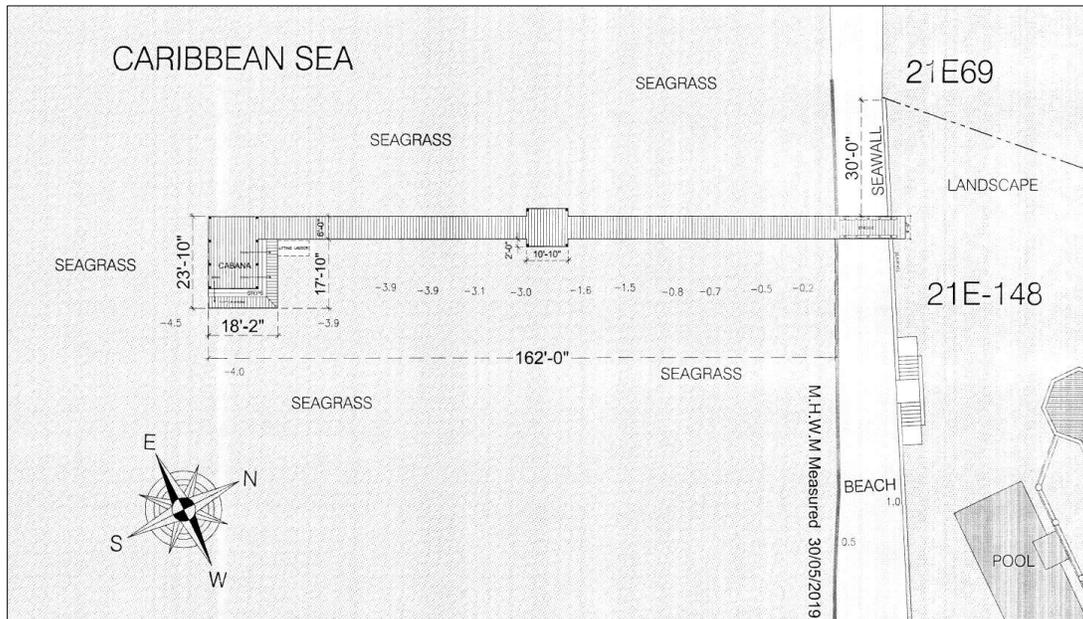


FIGURE 2: A PLAN EXTRACT SHOWING THE PROPOSED DOCK (SOURCE: ARCO 2019)

Environmental Impacts

The application site is located within a Marine Protected Area, the South Sound Replenishment Zone. The seabed habitat cover in this location is primarily dense seagrass beds, therefore the construction of a dock in this location will have potential impact on these. The environmental impacts of this project are identified as follows:

Replenishment Zone

The proposed works are located in a Replenishment Zone in a location with mostly dense sea grass cover, which is a specific marine area identified as needing protection. The Replenishment Zones were primarily created to protect the stocks for marine species such as lobster and conch, including their habitats, especially seagrass that are vital for their survival. Constructing the dock has the potential to impact these key habitats.

Loss of Benthic Habitats

The benthic habitat in this area is characterised as dense seagrass beds as can be seen from the aerial imagery (as shown in Figure 1 above). Long term shading of seagrass beds is a particular concern as the dock structure reduces vital light penetration required for seagrass growth and productivity. Therefore, environmental mitigation fees have been recommended accordingly.

Construction Impacts

Direct environmental impacts will also result from the construction of the dock, mainly through the placement of the PVC pipes into the seabed by water jetting and auger drilling. The fine silts, sediments and sands of the seabed in this area are easily disturbed and suspended in the process of installing pilings, thus resulting in detrimental sediment plumes which can impact surrounding seagrass communities and marine organisms that depend on good water quality. Therefore it will be important to limit the impacts of sediment plumes generated during construction of the

dock. The applicant has confirmed that silt screens will be used to contain the entire area of the works as part of their mitigation measures.

In addition, the barge has the potential to impact the seagrass beds outside of the dock footprint, especially when closer to shore working in shallower waters to install the pilings. It is recommended that the barge only operate in areas of water deep enough for its draft and to allow a 1ft clearance beneath to ensure that the seagrass beds are not impacted by the barge.

There is no mention of an excavator or heavy equipment working from shore in the application. Therefore no heavy equipment should be allowed in the water or a causeway built to allow the machinery to enter the sea to install pilings, and should be included in the conditions of the Permit.

Sargassum

The Department notes that during periods of high influxes of sargassum, docks that have side skirting tend to trap and hold sargassum in situ (as shown in figure 3 below), compared to those docks that have no skirting. When sargassum remains in shallow waters it presents negative impacts for property owners (unpleasant odours, minor respiratory issues, poor water quality) and for the marine environment. South Sound has experienced seagrass die off from prolonged periods of sargassum remaining in shallow nearshore environments. These impacts can be minimised by ensuring that the dock is positioned 4 feet above Mean Sea Level and ensuring that side planking is positioned as high above the water as possible.



FIGURE 3: A SITE VISIT PHOTO SHOWING A DOCK WITH SIDE SKIRTING TRAPPING SARGASSUM SEAWEED (SOURCE: DOE 2019)

Comments & Recommendations

Although the proposal will have an impact on the environmental characteristics of the South Sound Replenishment Zone (namely the seagrass beds within the footprint of the proposed dock), the mitigation measures to be taken and the provision of boat access to the property without the need for dredging do, on balance, extenuate the proposal. Therefore the Department again, as with the 2018 application, **recommends this application for approval** subject to conditions outlined below along with the standard licence conditions appended.

- The barge shall only be moved into position when and where water depth and tide height is sufficient to avoid grounding the vessel, and there shall be a minimum clearance of 1ft from the bottom of the construction barge and the seabed.
- If there is any damage to seagrass outside the footprint of the dock, resulting from the use of the floating platform, works shall immediately stop and shall not recommence until authorized by the DOE. The Licensee shall covenant that it will remedy such damage and/or be liable to incur penalties only operate during high tides to avoid impacts to the surrounding seagrass beds.
- No heavy machinery shall operate from shore nor shall a causeway be built out into the sea.
- Public access along the foreshore shall be retained and not blocked at any time.
- The side decking shall be positioned as high above mean Sea Level as possible in order to minimise the entrapment of sargassum against the dock and the dock shall be constructed 4ft above MSL.

In regards to the permit fees, it is the Department's view that fees should only be charged on the additional footprint, above and beyond what was previously permitted (a 459 sq ft increase). If Cabinet is minded to grant approval, the Department has outlined its recommended Permit fees (Royalty, Environmental Mitigation and Administration & Monitoring) below in Appendix 1.

Director of Environment
On behalf of the National Conservation Council