DEPARTMENT OF ENVIRONMENT
CAYMAN ISLANDS GOVERNMENT

Coastal Works Review

Evans Carson Rivers

Construction of a Floating Dock

Sand Hole Road, West Bay

Block: 1C **Parcel:** 169

Ref: DOE/CWK/392

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

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Authored by: Technical Review Committee - Department of Environment, on behalf of the Director, Department of Environment

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Project Proposal

The applicant – Evans Carson Rivers – is seeking permission to construct a 60 ft by 3 ft floating dock at Block 1C Parcel 169, at the end of Sand Hole Road (Figure 1). Although the cover letter states 35 to 40 ft, the plans indicate 60 feet and the Applicant has confirmed the length as 60 ft.

The Applicant intends to develop a tourism business which will bring 25 to 30 guests onto a private beach situated with an area zoned as low density residential and currently used as such. The Applicant intends to put out the floating dock two times per week, between 8 am to 1 pm. The Applicant is proposing to anchor the dock using six anchors, three on each side.

Although not forming part of the proposed dock for approval, the Applicant intends to include 15 umbrellas, 30 beach chairs, changing rooms and portable toilets. The Applicant has stated via email that he will remove the floating dock and store it on the side of his road in two parts, 50 feet away from the beach. He has also stated that there will be nothing 'stable' left on the beach after 2 pm. The umbrellas and beach chairs are proposed to be stored at Block 1C Parcel 45, in the Applicant's garage. However, the parcel owned by the Applicant is 30 feet wide as a maximum and therefore this is not possible (Figure 2 and 3). A great deal of physical labour would be required to remove the floating dock and the structures and storing it along the roadside (and therefore in front of the neighbours' property) is also challenging. It is very unlikely that portable toilets would be moved daily.

The dock itself will comprise plastic floating pontoons which are each 500 mm x 500 mm x 400 mm (1.6 ft x 1.6 ft x 1.3 ft). They are solid and no light can pass through to the seabed below. The dock will be 2 units wide (3.2 ft wide). Based on a length of 60 ft, the dock would extend 38 units and the Applicant would require a total of 76 floating pontoon units. The proforma invoice included with the Applicant indicates the Applicant is intending to purchase 160 units which would be far more than required, even including some as spares. A stainless steel ladder is proposed at the end of the dock, and there are bollards and marine rope proposed on the dock for safety.

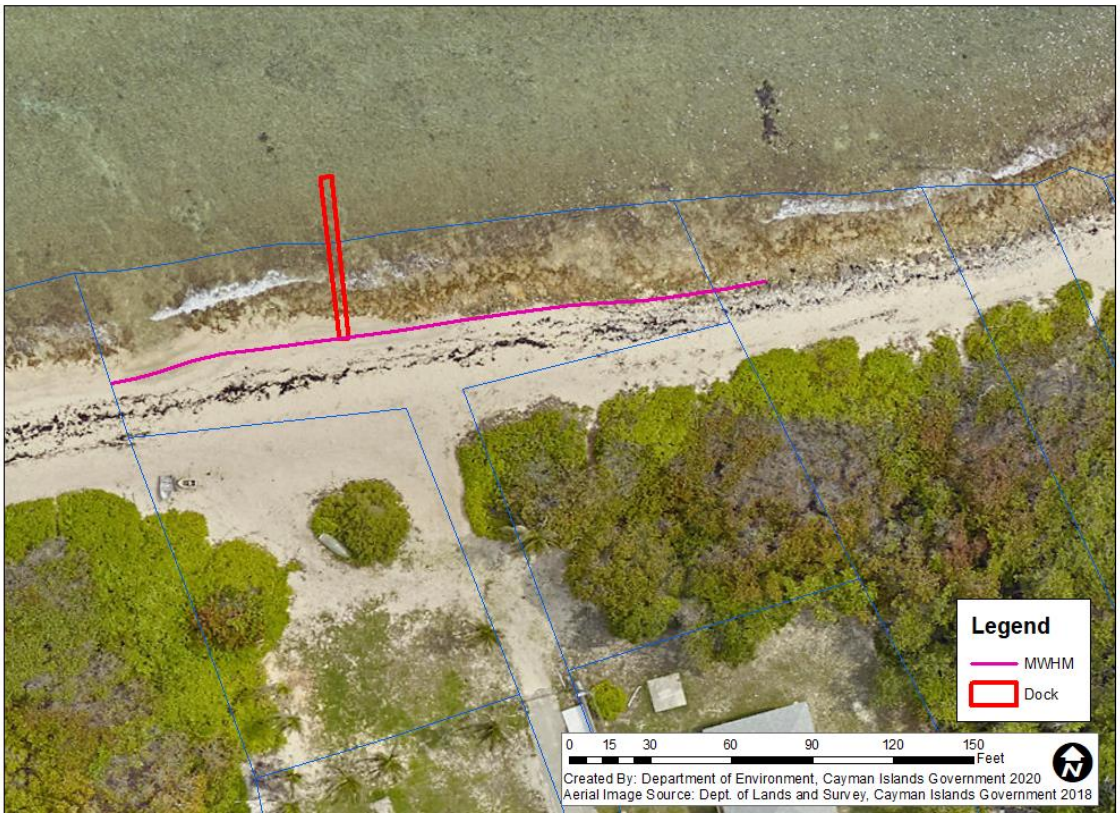

Figure 1. Site plan showing the Mean High Water Mark (pink) and the proposed floating dock (red).

Background

The beach at Sand Hole Road is a small perched beach in West Bay located on a high energy coastline (see Figures 2 and 3). The beach here is a very active turtle nesting site and there have been hundreds of nests at Sand Hole Road since monitoring began. Based on over 20 years of DoE turtle nesting monitoring data, the beach on this site is identified as critical turtle nesting habitat in the National Conservation Council's Interim Directive for the designation of Critical Habitat of Green turtles (*Chelonia mydas*), Loggerhead turtles (*Caretta caretta*), Hawksbill turtles (*Eretmochelys imbricata*), Leatherback turtles (*Dermochelys coriacea*) and all other species that may occur in Cayman waters including Kemp's Ridley turtles (*Lepidochelys kempii*) (issued under Section 17 (7) of the National Conservation Law (2013)).

The site itself (and the inland parcel behind it, Block 1C Parcel 54) has supported approximately 50 nests. Sand Hole Road is one of the most important beaches in the Cayman Islands for sea turtle nesting.

Figure 2. The beach at the site is a small perched beach.

Figure 3.The Applicants beachfront parcel is narrow. The security installation in the left of the picture is on the inland neighbours' property, and the Applicant's land is seaward of the security system. The Applicant's land is a maximum of 30 feet wide.

Environmental Impacts

Loss of Benthic Habitat

The habitat cover of the footprint of the proposed works is hard bottom with some soft corals. No light penetration is possible and the proposed dock will cause shading for as long as it is in the water. If the dock is removed as intended at 2 pm, and is only present two days per week, then there will not be long-term shading impacts. However, if the dock is put in more frequently or left in the water for longer periods then there will be shading impacts. Removing the dock at the end of each day will be an intense physical task and may result in leaving the dock in for longer than proposed.

Operation Impacts

There will be repeated impacts to the seabed from the Applicant deploying anchors to secure the dock. The Department met with the Applicant twice in September 2019 to discuss the proposals. At that time and again in September 2020, we recommended that the Applicant consider embedded pins to support the structure, but the Applicant has not pursued this. A floating structure which is 3 ft wide and 60 ft long will be very unstable. As the seabed is rock, there is little to no sand for the anchor to embed into and there is a risk that the anchors will drag along the bottom and cause environmental damage.

The site is an exposed coastline and is often subject to intense wave activity. A floating dock would not be compatible with slight adverse weather conditions at the site. The Department requested additional information in August 2020 from the Applicant on how many anchors and how the dock would be secured. The Applicant has indicated that 6 anchors in total will be used (3 on each side). Considering two on the seaward end and two on the beachside end, there will only be one anchor on each side in the middle at the 30 feet mark.

The plans for the structure indicate that 'beach stabilisers' will be used. The Department enquired twice in August/September 2020 about these stabilisers. The Applicant has not clarified what these are, but said that the dock would start in the water and not on the beach. It is therefore not clear how the visitors are meant to walk over the ironshore to first step on the dock (see Figure 4). Given that the sections of floating dock are 1.3 ft deep, the Applicant will either have a gap between the sand and the start of the dock, or a steep level change if the dock is put on the ironshore. The main purpose of the proposed dock was to provide access for visitors over the ironshore so the interface of the dock with the beach is a fundamental part of the design.

The additional information provided by the Applicant has not provided comfort that the Applicant has carefully considered how the dock will be secured, from both a practical perspective of how the dock could be used and also from an environmental perspective. The proposed dock does not seem fit-for-purpose.

Figure 4. There is ironshore at the site and the Applicant has not provided any information as to how visitors would safely get on the dock.

Sea Turtle Nesting

Although the proposed dock itself when deployed will not impact turtle nesting significantly, the Applicant is also proposing to develop the beach with:

- 30 beach chairs;
- 15 umbrellas;
- Portable toilets; and
- Changing rooms.

The Applicant has said they will put the portable toilets and changing rooms more than 50 feet from the Mean High Water Mark, however the beach parcel is not 50 feet wide and therefore this is not possible. The Applicant's land is approximately 30 feet wide at the widest point on the beach. In addition to blocking nesting habitat directly on the Applicant's parcel, any structures left on the beach overnight could block the way of the turtles that use the vegetation on the inland parcels as a cue for nesting. Figure 5 shows the turtle nesting at Sand Hole Road beach. Although the Applicant has good intentions with respect to sea turtle nesting, the amount of physical labour required to move all the structures back forth may be underestimated. There will be a propensity to leave them on the beach. In addition, there may also be a temptation to use vehicles to load up and move the beach chairs and umbrellas. The use of vehicles on the beach could crush turtle nests and turtle hatchlings.

The Applicant will require planning permission for the additional structures but the parcel is not wide enough to meet minimum setbacks required under the Development and Planning Regulations. As far as the Department of Environment is aware, the Applicant has not applied for planning permission. The Applicant has not provided a plan showing the location or size or detail of these structures. The plans for the land-side development are vague, not accompanied by appropriate plans or drawings, and do not have planning permission. The Applicant's land is not wide enough to accommodate his proposals. Therefore, the risks to sea turtle nesting are great because of the lack of appropriate information.

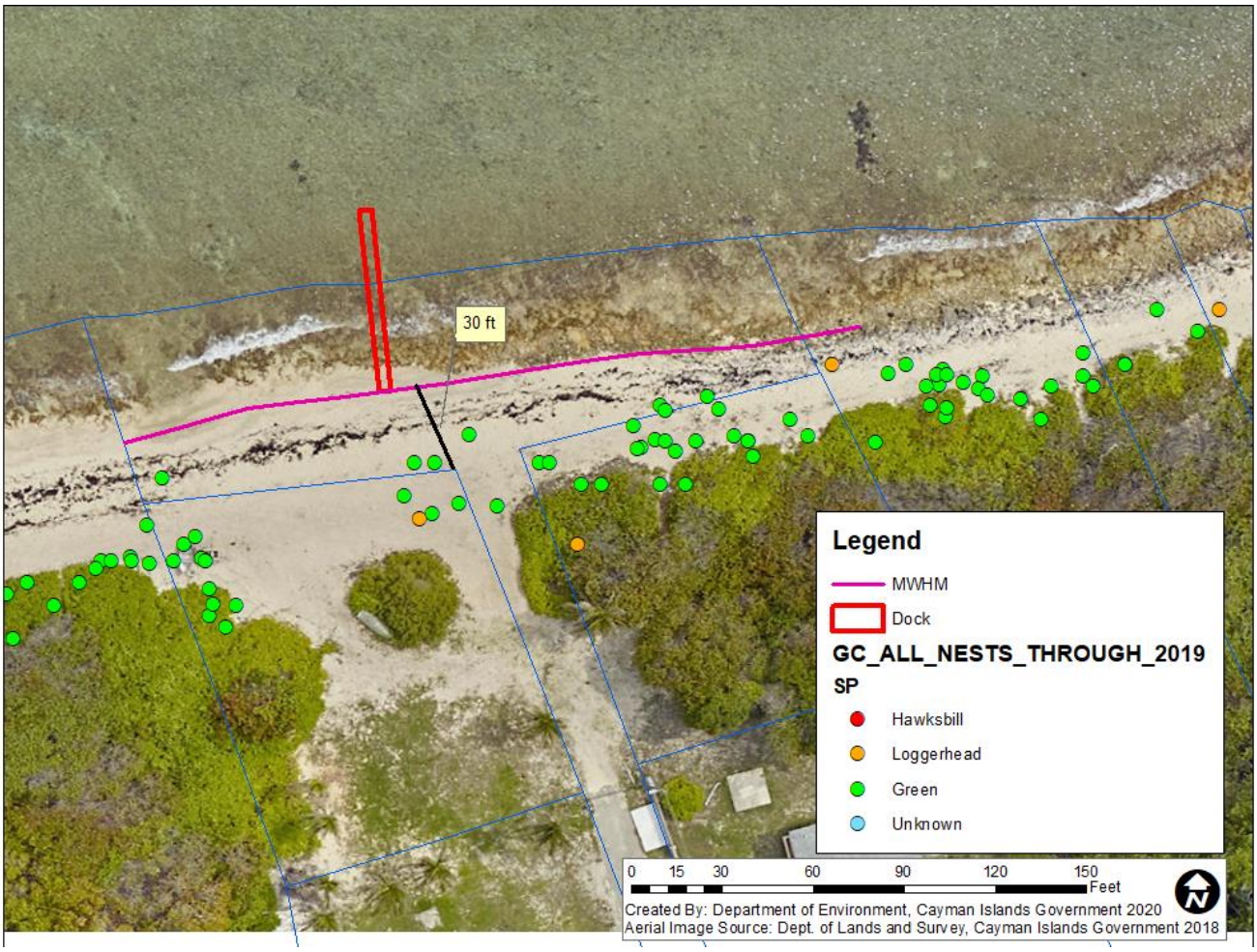

Figure 5. Green (green circles) and Loggerhead (orange circles) sea turtle nesting at the site, which occurs partially on the site but also at the vegetation line of the inland parcels. Any structures left on the beach at night could block turtles from nesting.

Other Impacts

Sand Hole Road is under very strong development pressure. In addition to this proposed floating dock and associated tourism business, there have been approved and proposed planning applications for a total of 54 condominiums at this beach. The nature of Sand Hole Road is changing from a secluded and private area with abundant sea turtle nesting, to a place with much higher foot traffic and disturbance to turtles. This cumulative impact should be considered by Cabinet.

In addition, Sand Hole Road is a residential community based around a family's subdivision. Due to the current procedure which involves notifying adjacent owners on a linear basis along the coast, the other people who own property along Sand Hole Road (i.e. landward of Mr. Rivers' land and therefore not in a linear direction along the coastline) have not been formally notified directly of the consultation on this process. Sand Hole Road is narrow, and there is a tight bend on the road which is unlikely to accommodate tour buses. The Applicant is proposing to store the floating dock along the roadside, potentially impacting the neighbours. In addition, this site is zoned as low-density residential which is incompatible with high-level tourist activity. The neighbours will be impacted by the proposals. The Department believes a deviation from the normal procedure to notify the other owners along Sand Hole Road could be considered by the Ministry in order to give them an opportunity to comment on the proposals.

We are not aware of whether the Applicant has consulted with the Public Lands Commission or whether he has a Trade and Business Licence for the operation. It is recommended that the Applicant consults with the Public Lands Commission on these proposals.

Comments & Recommendations

The Department recommends this application is refused on the grounds that:

- The Applicant has not provided sufficient information to provide comfort that the dock will be secured properly (both for a visitor experience and an environmental perspective). There are numerous contradictions in the plans regarding the length and size of the dock and how it will be secured to the beach. The proposed dock is not fit-for-purpose, and will be unstable.
- The dock is proposed to support a commercial activity on beach within a low-density residential zone and the Applicant has not yet applied for planning permission for the coastal structures including portable toilets, changing rooms and cabanas. Planning permission is required to permit the change of use from low-density residential to hotel/tourism. Planning permission is also required to address parking and the width of the road. The Applicant's land is not wide enough to meet the minimum setbacks required in the Development and Planning Regulations. The Coastal Works Permit for the dock should not be granted until planning permission has been obtained.
- The structures on the beach will impact turtle nesting on one of the most important turtle nesting beaches in the Cayman Islands and is designated as Critical Habitat under the National Conservation Council's Interim Directive.

We provided verbal advice during two pre-application meetings and written pre-application advice to the Applicant on 19 September 2019 outlining the above concerns. However the proposals remain fundamentally unchanged from those we comments on in 2019. The Applicant does not appear to have given further consideration to our feedback on either the practicalities or environmental impact in the intervening period of time.

Technical Review Committee – Department of Environment
On behalf of the Director, Department of Environment