



DEPARTMENT OF
ENVIRONMENT
CAYMAN ISLANDS GOVERNMENT

Coastal Works Review

Brian J French

Construction of a Private Dock

Blossom Village Drive, Little Cayman

Block: 80A Parcel: 58

Ref: DOE/CWK/393

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

May 7, 2020

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

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Block: 80A Parcel: 58

Project Proposal

The applicant – Brian J French – is seeking permission to construct a 100 foot by 10 foot dock on Crown property located adjacent to Block 80A Parcel 58 on Blossom Village Drive, Little Cayman. The section landward of the Mean High Water Mark is proposed to be 23 foot by 10 foot. The applicant is proposing the dock for the homeowner’s boat and for fishing. The boat is proposed to be 26 feet with a 30 inch draft.

The proposed dock will be secured into a concrete pad on the beach side. There will be a public bridge with steps so that public access can be maintained across the shoreline. The proposed dock will include 8 inch diameter steel-reinforced concrete-filled PVC-cased piles. The decking is proposed to be constructed of 6 inch ipe or pressure-treated pine decking with ½ inch spacing. The proposed height of the dock is 4 feet above the Mean High Water Mark. There are no structures proposed on the dock. There will be no side skirts to allow light to penetrate to the seabed beneath the dock.

The applicant is proposing to construct the dock using a posthole digger and shovels. A pump system would be used if the conditions do not permit the hand-digging of the holes but the applicant would prefer to manually dig the holes. Once the holes are dug, the pilings will be installed and 5/8th inch rebar will be drilled into the bedrock to a minimum depth of 24”. All drilling would be conducted from above the surface.

Silt screens will be installed and no dredging or excavation is proposed.

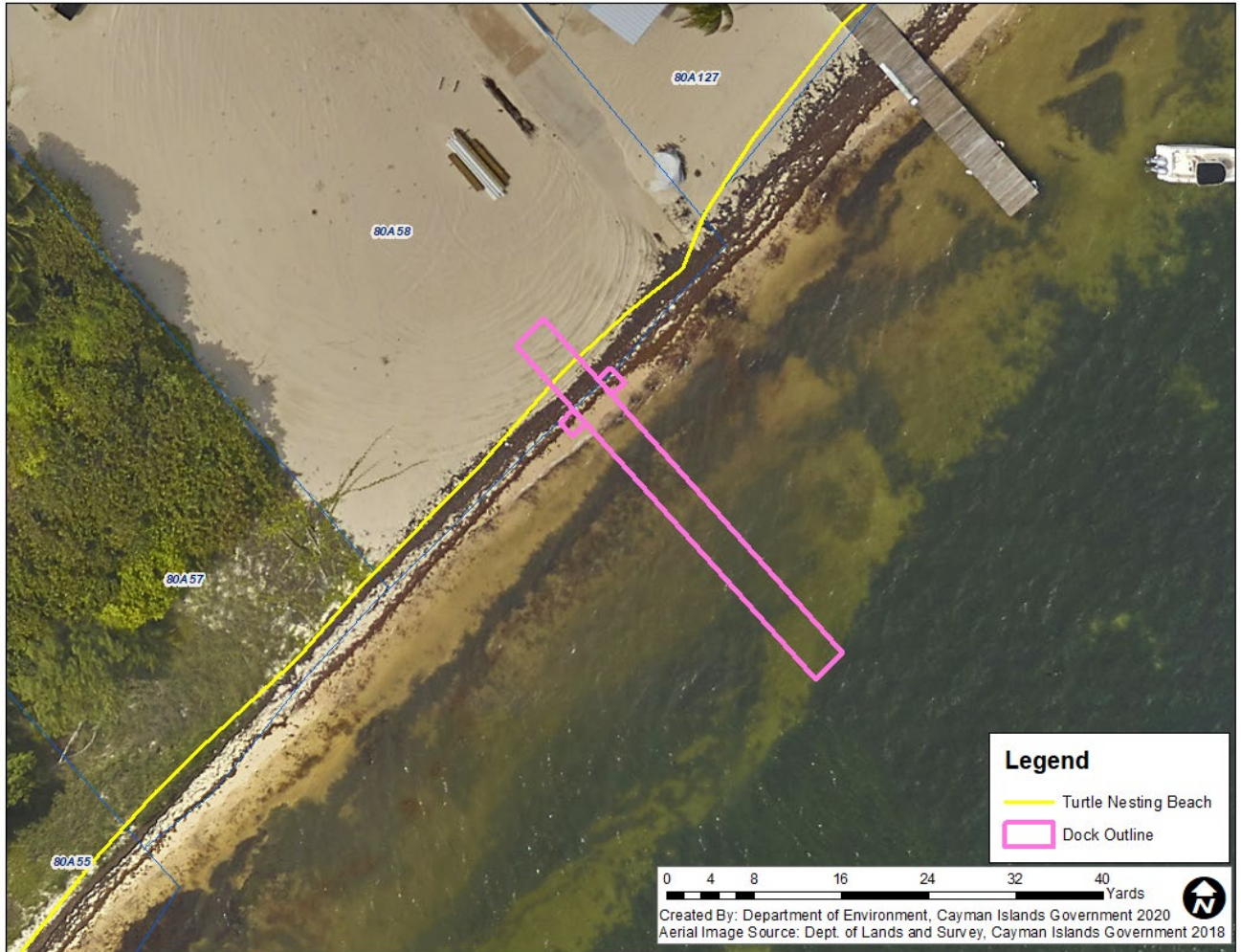


Figure 1: Site plan showing the location of the dock (pink)

Environmental Overview & Impacts

The application site not located within a Marine Protected Area. Based on 20 years of data collected by the DoE, the application site is located on a turtle nesting beach but not within the proposed area of critical habitat for sea turtles. The site has historically had loggerhead turtle (*Caretta caretta*) nesting.

Loss of Benthic Habitat

The habitat cover of the footprint of the proposed works is a mixture of seagrass, sand and rocks. Impacts to seagrass are a concern as the construction of the proposed dock will cause long-term shading which reduces vital light penetration required for seagrass growth and productivity. Seagrass is an important feature and contributor to the health of the marine ecosystem by providing living habitat, food and oxygen to marine fauna. Seagrass also plays a vital role in maintaining good water quality and providing some coastal buffering to mitigate the erosional effects of wave energy. The proposed dock is 4 feet above Mean Sea Level with half-inch spacing, in line with the Department’s dock guidance, in order to allow light penetration and for seagrass to grow.

Construction Impacts

Direct environmental impacts will result from the construction of the dock, mainly through the placement of the pilings into the seabed by drilling. The fine silts, sediments and sands of the seabed in this area are easily disturbed and suspended in process of installing the 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 the use of silt screens as part of their mitigation measures. No lighting is proposed on the dock as part of this application. However, should the applicant propose to install lighting at a later date, we would recommend that only turtle friendly lighting products are used.

Comments & Recommendations

Notwithstanding the above-mentioned impacts, the Department recommends this application for approval subject to the standard Permit conditions and recommended Permit fees (Royalty, Environmental Mitigation and Administration & Monitoring) outlined in Appendix 1.

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