Sustainable Cayman

Memorandum

To: Jennifer Ahearn, Chief Officer
Troy Jacobs, Acting Deputy Chief Officer
Beach Task Force @ Ministry of Sustainability and Climate Resiliency

Cc: Ms Emily Decou - Amplify Cayman
Ms Laura Egglishaw- Save Barkers
Mr Billy Adam - Cayman Beach Watch

Date: 31 December 2021

RE: P21-1317 BLOCK 15E PARCEL 95
20,305 SQ. FT. 4-STOREY APARTMENT; POOL; GENERATOR; ELEVATOR; (2) SIGNS ATTACHED TO THE BUILDING/WALL; AND RETAINING WALL
Comments due by 7th Jan 2022

Subject: Construction over active beach zone

The purpose of this memo is to discuss and outline concerns regarding the proposed application in a South Sound beach zone in the hope that these concerns can be brought to the attention of the Planning Authority.

All too often, developers wish to position their properties as close as possible to the water, without significant enough regard for seasonal beach changes, or the infrequent, and catastrophic hurricanes, which are expected to become stronger and more frequent over time. Beaches are among the most dynamic systems in nature, showing visible changes over hours, days, months and years. They also represent one of the most important natural and economic resources of small island states. It is for this reason, that by statute, it is the duty of the CPA to ensure that the open character of scenic shoreline land is preserved, in particular that of beaches, and also to safeguard the public's right to use the beaches and to gain access to them.

One of the dominant characteristics of beaches is their constant changes in form, shape and sometimes the very material of which they are composed. The best way to conserve beaches is to allow them the space to move - in a seaward direction

when sand is building up (accretion) and in a landward direction during erosion phases. The prudent use of coastal development setbacks, or establishing a safe distance between buildings and the active beach zone, can ensure that space is provided for a beach to move naturally, both during normal events and infrequent hurricanes, thereby ensuring the beach is conserved for all to enjoy and that coastal infrastructure remains intact.

Forward planning through the use of coastal development setbacks can assist in ensuring that such vistas are not replaced by ugly rock revetments, groynes and narrow beach strips due to poor planning. A healthy beach, without encroachments, is able to change and adapt to various conditions, to be enjoyed by the public, and foster a biodiverse environment

With the newly formed Beach Task Force focused on assessing resolutions for our coastline and planning for coastline change, we strongly request that appropriate preservation directives are implemented in the immediate interim for all existing beach zones. Such a directive, for example, would be to suspend the granting of setback variances until the taskforce have determined appropriate remedies. Proactivity is key - conservation and preservation are cheaper than remediation.

We support development setback requirements that take into account the rate of sea level rise, so as to allow any new structures to withstand damage from hurricanes or flood events without the use of shoreline armoring or other ecologically destructive development. This directive is enshrined in the 1997 Development Plan Strategy 1.3(d) "to preserve the natural assets of the Island for their value in protection from the elements and their natural beauty" and in respect to wildlife habitat Strategy 1.3(h) "to protect areas of environmental significance".

Coastal management policies should work towards managed landward retreat of existing structures from eroding shorelines where replacement applications are sought. Any beach access improvements should also account for projected sea level rise.

Proposed Apartment Development on BLOCK 15E PARCEL 95

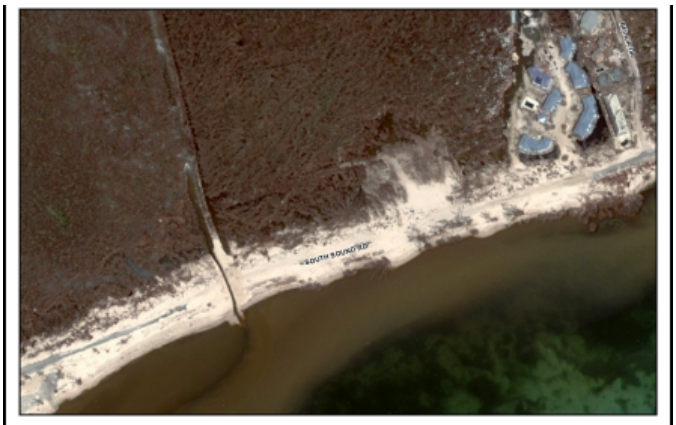
Zoning

The Developer is proposing a 4-storey duplex with roof deck for 8 apartments on 0.41 acre of land in a beach resort/ residential zone nestled between the old Crowe's Nest property and the Hurlston(e) Family Estate and Carey's Black Coral.

Sustainable Practices:

- This property is part of an early settlement area of South Sound and a number of traditional single storey Cayman properties have been restored here to preserve the aesthetic appeal, character and cultural landscape in this much sought after area of South Sound.
- Coastlines, and beaches in particular, are dynamic fast-changing systems which are an important characteristic of our islands. The prudent use of coastal development setbacks, which establish a safe distance between the upper limit of wave action and new development, provides for beach preservation, reduction of erosion, as well as improved access, vistas and privacy for beach users and property owners.
- We have seen the impact of poor decisions in South Sound and we need to learn to let go of past mistakes. The establishment of a data-driven framework, such as the proposed assessment and establishment of purposeful mean high water marks, is much needed to facilitate sustainable coastal development and reduce beach erosion.
- There are serious ethical concerns around the responsibility of developments that are not sustainable or resilient in the long-term such as being placed too close to the water. These structures are being built and then sold on where future owners unsuspectingly inherit problems without real solutions.

Before 11 September 2004

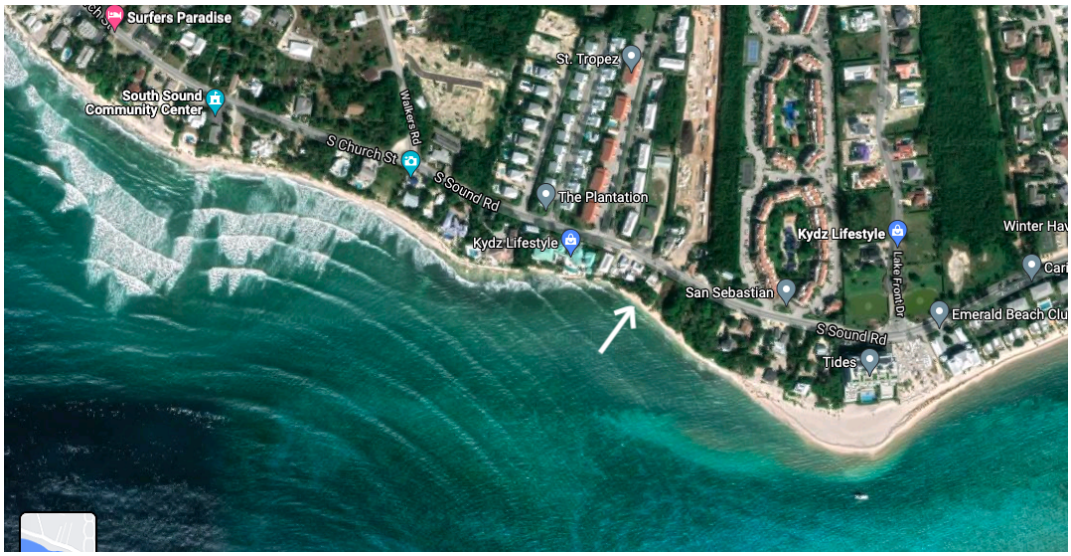


After Ivan

- Increasing coastal setback increases the resilience of properties against the inevitable effects of climate change such as coastal flooding, storm surge, and erosion, by ensuring that hard structures are located in a way that reduces their susceptibility to these hazards. An increased setback also allows the applicant to retain more sand reserves which aid in the beach's potential to recover after major storm events.

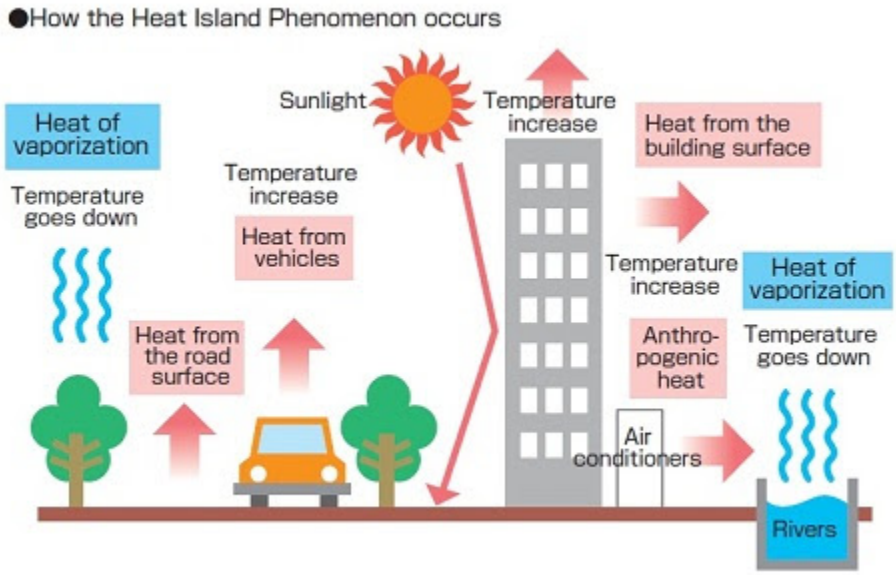
[aerial photo from 1958 when compared to current day shows the retreat of the beach due to developmental erosion and natural events]

- The line of "permanent" vegetation is customarily used to determine a true baseline for measurement of the high water mark. This is the tree line or scrub line which can be easily identified on aerial photography. It shows only slight change apart from after the occurrence of tropical storms and hurricanes. Features such as the high water mark vary according to the tidal cycle and are very subjective especially when used by untrained observers. Markedly, the survey boundary for this parcel juts out an additional 50-75 feet in comparison to the neighbouring parcels on either side, whereas the vegetative line and the beach ridge/ sand and seaweed deposit line is much higher inward of the designated HWM.



[current google maps shows the natural vegetative beach ridge]

- In this area the beach ridge comprises primary coastal shrubland habitat made up of mature grape trees which are salt and wind tolerant providing excellent natural coastal protection. Coastal shrubland is high in ecological value, providing a biodiverse habitat for native wildlife in addition to stabilizing the shoreline and reducing erosion. Once vegetation is cleared, it often results in wind-borne erosion of the land and general coastal erosion which is proven to have a negative impact on the adjacent dynamic beach zone.
- A sustainable development plan is overdue, especially one which considers the overall heat index and climate warming. As high rise structures increase "Urban heat islands" occur where development replaces natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat. This effect increases energy costs (e.g. for air conditioning), air pollution levels, and heat-related illness and mortality. Mitigation strategies include: white roofs, green roofs, incorporating trees, and green parking lots.



- In a recent applicant's site plan in which the proposed pool and pool deck were located 50' from the High Water Mark, it was considered that hard structures on the sandy area of a nesting turtle beach decrease the size of the potential turtle nesting habitat and that a 75-foot setback was found to be more appropriate. A vegetated buffer with a minimum width of at least 10 feet is to be maintained (re-planted where necessary) to comprise appropriate native coastal vegetation and with no hard structures seaward of the buffer.

- Imposing conditions for Best Management Practices are only effective if these are enforced and have significant fines attached. There is a long list of continued bad practices with a reluctance of the planning authority to issue necessary directives - this is a significant failing of the regulations which are in place to protect our nation. There are presently illegal seawalls along the South Sound coastline with enforcement notices to remove the structures which are still in place years after the fact.

Regulations

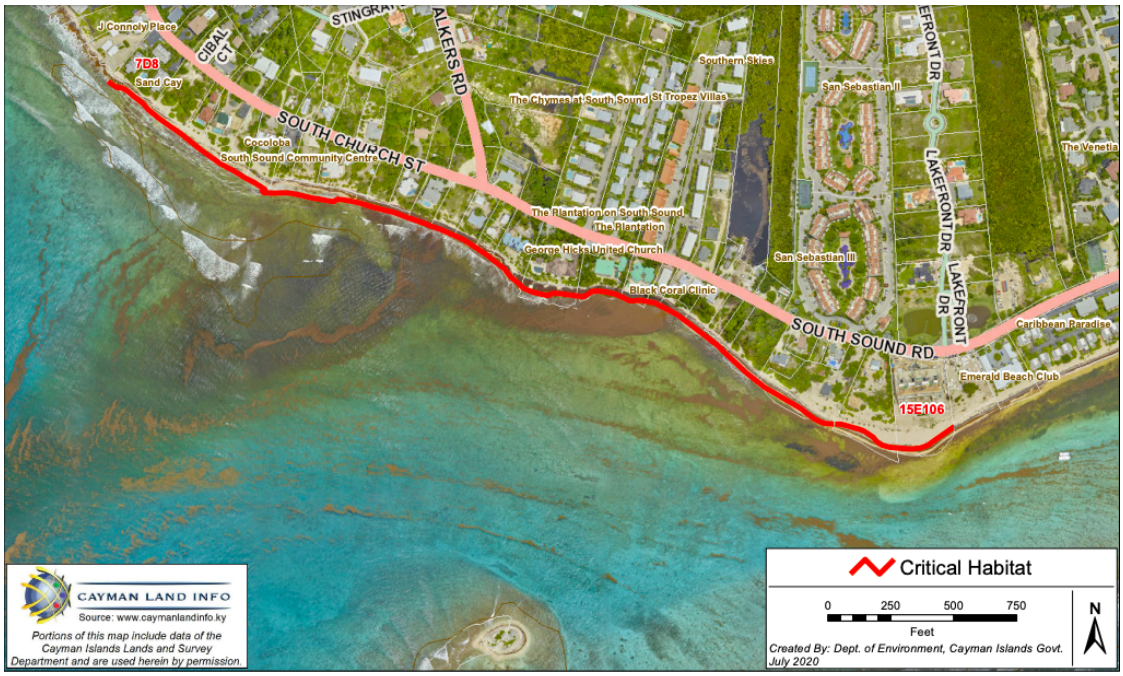
🚩 The subject site has a sandy beachfront and therefore is subject to a 75' High Watermark ('HWM') setback (Regulation 8(10)(f)). From the plans it appears that the retaining wall, pool and deck are proposed at 50' with the building footprint set at 75'.

🚩 The adjoining properties have very different HWM surveys, inward of some 50-75', compared to the proposed development. A comprehensive site analysis report may be required to determine the potential impact to the beach.

🚩 The site is 0.41 acres. Regulation 15(4)(a)(iii) states that for an apartment development there shall be a minimum lot size of no less than 0.5 of an acre.

🚩 Aside from a slip of hedging there is no treescaping sited within the application whereas currently a variety of mature local plants such as silver thatch, grape tree and breadfruit are providing natural vegetation and screening around the existing single-story cottage.

🚩 The beach on this site is designated a critical turtle nesting habitat under the National Conservation Law. This designation of critical habitat means that adverse impacts to the habitat either <u>have to be avoided</u> or <u>able to be mitigated</u>. Coastal vegetation is an integral part in the preservation of nesting areas.



The Urban Land Institute (panelled by NOAA as well as various expert contributors) has produced timely and relevant reports for the industry and how to prepare for climate change. In their 10 Principles for Coastal Development they talk of "Establishing Accountability"; *In the conventional policy environment on the coast, many decisions are made, approvals given, and projects implemented even as hazards are ignored, inappropriate development is allowed, or natural processes are disturbed. Yet when disaster strikes and property and lives are lost or hazards worsened, no one is held accountable. Consequently, the costs of protection of infrastructure are borne by the tax- payer rather than those directly benefiting from the development. The balance needs to be altered so that the true cost of any development is taken into account, including any long-term protection needs".*
https://uli.org/wp-content/uploads/ULI-Documents/Ten-Principles-for-Coastal-Development.pdf

We are thankful for the collaboration of the various departments in forming the Task Force to ensure that this valuable national asset of our coastline and beaches is preserved both for the people who live here and the visitors who come here.

As captured in our national song, the beckoning and bewonderment of our emerald seas, soft fresh breezes, verdant trees, moonbeam caresses and to escape the glamorous worldly care is what makes our shores the 'Beloved Isle Cayman'.

With kind regards,

Protect our Paradise

References:

The impact of Hurricane Ivan in the Cayman Islands:
https://reliefweb.int/sites/reliefweb.int/files/resources/D64700DEE1C8E669C1256F8C003AE286-govtcay-cay-10jan.pdf

Interim Directive for the designation of Critical Habitat of Green turtles:
https://conservation.ky/wp-content/uploads/2020/11/Interim-Directive-for-Sea-Turtle-Critical-Habitat.pdf

Development & Planning Regulations (2021 Revision)
https://www.planning.ky/wp-content/uploads/docs/Development-and-Planning-Regulations-2021-Revision.pdf

How to cool a warming world | The Economist

PLANNING FOR COASTLINE CHANGE - Nevis

1 Site Plan

1 Rear Elevation

1 Front Elevation