DEVELOPMENT CONTROL BOARD

MINUTES

Minutes for a meeting of the Development Control Board held on Thursday, 14th December 2023 at 9:00 AM at the District Administration Conference Room, District Administration Building, Cayman Brac.

16th Meeting of the Year **DCB/16/23**

Present		
Capt. Ashton Bodden	-	Chairman
Mr. Delano Lazzari	-	Deputy Chair
Ms. Carol Busby	-	Member
Ms. Elsie Kynes	-	Member
Mr. Jason McLaughlin	-	Member
Mr. Haroon Pandohie (10:30am)	-	Director of Planning
Ms. Andrea Stevens	-	Planning Officer/ Executive Secretary
Apologies for Absence:		
Mrs. Zanda McLean	-	Member
Mr. Miguel Martin	-	Member (Ex Officio)

INDIVIDUALS APPEARING BEFORE THE DEVELOPMENT CONTROL BOARD

NAME	REASONS	TIME	ITEM	PAGE
Mr. Brian Essi	Boat ramp	9:30am		27
Dr. Kathleen Mulligan	Boat Ramp	9:30 am		27
Mr. Will Steward	High School	11:00am		11
Ms. Luiza Dawson	High School	11:00 am		11
Mr. Clive Baker	High School	11:00 am		11
Mr. Wayne Riley	High School	11:00am		11
Mark Reed	High School	11:00 am		11
Schmarrah McCarthy	High School	11:00 am		11

Members opened the meeting with The Lord's prayer.

1.0 CONFIRMATION OF MINUTES

1.01 Minutes DCB/15/23

A Motion was made by Mrs. Elsie Kynes and seconded by Ms. Carol Busby to approve the Minutes of DCB/15/23 as submitted. The Minutes of DCB/15/23 were approved.

2.0 ROUTINE MATTER

2.01 RHODIAN & TRICIA BODDEN, CBC BLOCK 101B PARCEL 54 (CB-P23-0074) ($370,000)

Application for a house, carport & gazebo.

Facts:

Location:	Driftwood Drive
Parcel Size:	.47 ac (20,473 sqft)
Proposed Use:	Residential
Building Size:	2,216 sq ft
Bldg Footprint:	2,216 sq ft
Site Coverage:	10.8%
Required Parking Spaces:	2
Proposed Parking Spaces:	2

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Agency Comments:

Department of Environment:
"This review is provided by the Director of the Department of Environment under delegated authority from the National Conservation Council (section 3 (13) of the National Conservation Act, 2013).

As seen in Figure 1 above, the application site consists of old regrowth from the 1970s. Old regrowth can be ecologically valuable as it may contain endemic and ecologically important species.

Figure 1. The application site with the parcel boundary highlighted in red (Aerial Imagery Source: UKHO, 2021).

We recommend that the applicant incorporates as much native coastal vegetation as possible into the landscaping scheme, particularly within the coastal setback. Native coastal vegetation contains a variety of salt and wind-tolerant flora and is becoming rarer as development on the coast increases. In addition to biodiversity, coastal vegetation also provides ecosystem services because it stabilizes the shoreline and reduces erosion. Once vegetation has been cleared, it often results

in wind-borne erosion of the land and general coastal erosion. Coastal vegetation is therefore important for the integrity of the beach.

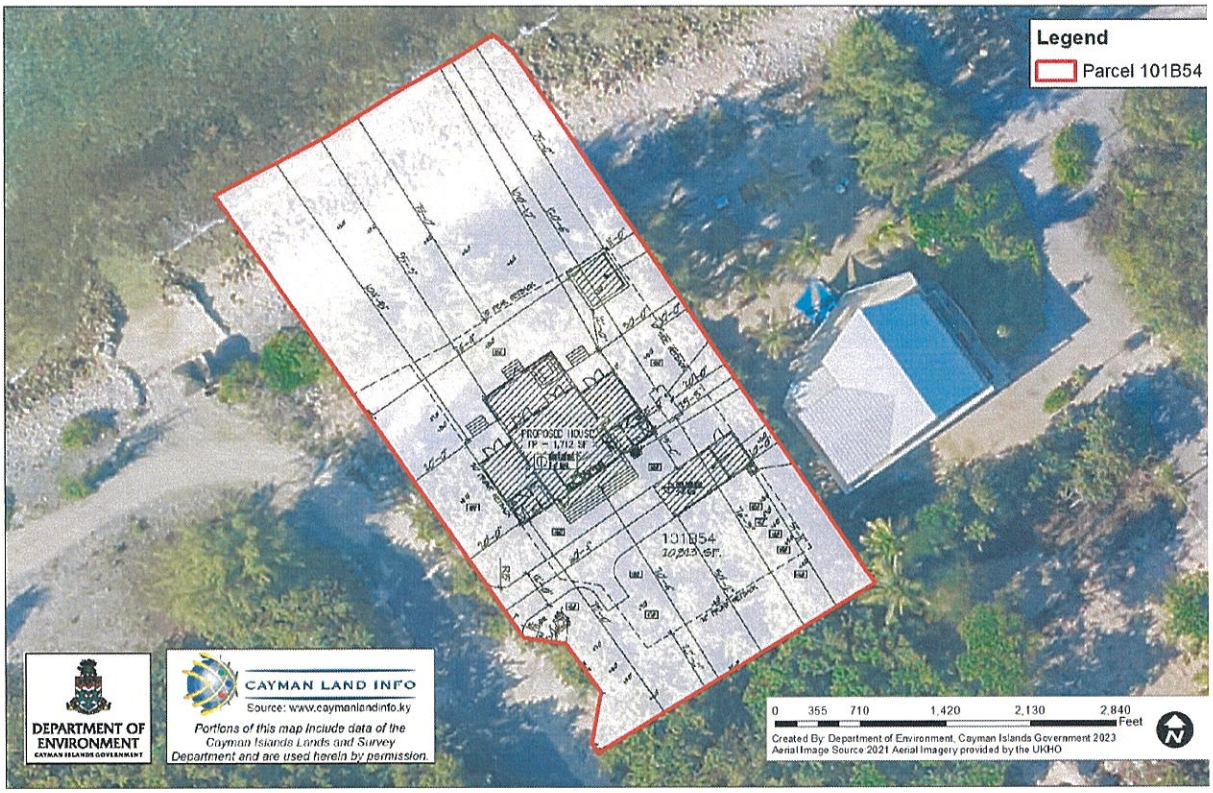

Figure 2. The application site with parcel boundary highlighted in red and an overlay of the proposed development plans (Aerial Imagery Source: UKHO, 2021 & Development Plans Source: George Manderson Jr., 2023).

It is likely that beach-quality sand will be excavated for the construction of the proposed development. Loss of sand from the beach system reduces the volume of sand available to replenish the beach naturally. It disrupts the delicate equilibrium of sediment transport along the coast, ultimately contributing to the erosion of the beach and the loss of valuable coastal ecosystems and infrastructure. As a limited and precious resource, the sand should stay within its natural beach system. However, if the sand is proposed to leave the site and be lost from the beach system here, the Development Control Board should retain appropriate development control over where the beach sand will be placed.

Best management practices should be adhered to during construction to reduce impacts on the environment. In particular control measures should be put in place to address pollution from expanded polystyrene (EPS) beads on construction sites, for example those used in insulating concrete forms (ICF). Polystyrene is

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not biodegradable, and the EPS beads can be consumed by wildlife when it enters the food chain. These beads are very difficult to remove once they enter the environment and they do not naturally break down.

If the Development Control Board or Planning Department is minded to grant planning permission for the proposed development, we recommend the inclusion of the following conditions in the approval:

1. *Any beach quality sand excavated during construction shall be retained on-site and placed along the active beach profile. If there is an excessive quantity of sand that cannot be accommodated on-site, and the applicant would like to move sand off-site, it should be the subject of a separate consultation with the Planning Department and National Conservation Council.*

2. *All construction materials shall be stockpiled at a minimum of 75 feet from the Mean High Water Mark (MHWM) to reduce the possibility of run-off washing material and debris into the adjacent marine environment and impacting water quality.*

3. *If the construction uses insulating concrete forms (ICFs) or other polystyrene materials, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas or pollute the adjacent marine environment.*

Planning Analysis:

Application is for a 1,712 sq ft, two (2) bedroom house, a 360 sq ft carport and 144 sq ft gazebo. All typical requirements are met.

Decision: It was resolved to grant planning permission subject to the following conditions:

Conditions (1-5) must be completed prior to the start of construction:

1) The applicant shall obtain approval of construction details from the Building Control Unit.

2) The applicant shall obtain plumbing approval from the Building Control Unit.

3) The applicant's Electrician shall obtain electrical approval from the Building Control Unit.

4) The applicant shall obtain approval of mechanical plans from the Building Control Unit.

5) The applicant shall obtain a liquefied gas permit from the Building Control Unit.

6) The confirmation of the Planning Office must be obtained, in writing, verifying compliance with the conditions described above prior to the start of construction.

The applicant will be reminded that all inspections shall be conducted and approved prior to occupancy of the buildings.

Any beach quality sand excavated during construction shall be retained on-site and placed along the active beach profile. If there is an excessive quantity of sand that cannot be accommodated on-site, and the applicant would like to move sand off-site, it shall be the subject of a separate application to the Planning Department.

All construction materials shall be stockpiled at a minimum of 75 feet from the Mean High Water Mark (MHWM) to reduce the possibility of run-off washing material and debris into the adjacent marine environment and impacting water quality.

If the construction is using insulating concrete forms (ICFs), measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste, or polystyrene debris is completely captured on-site and does not impact the surrounding areas or pollute the turtle nesting beach and the environment.

Prior to undertaking any sanding or breaking down of polystyrene as part of the construction process, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas.

The applicant will be advised that this approval is in effect for five (5) years only and will expire if a building permit is not issued during this time. If the applicant wishes to reinstate the approval after this period, a new application must be submitted to the Planning Department along with required fees.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

2.02 MICHAEL WOLF, CBC BLOCK 103D PARCEL 73 (CB-P23-0092) ($275,000)

Application for a house.

Facts:

Location:	Brig St
Parcel Size:	.4731 ac (20,608 sqft)
Proposed Use:	Residential
Building Size:	1,650 sq ft
Bldg Footprint:	1,650 sq ft
Site Coverage:	8%
Required Parking Spaces:	2
Proposed Parking Spaces:	2

Agency Comments:

Department of Environment:
"This review is provided by the Director of the Department of Environment (DoE) under delegated authority from the National Conservation Council (section 3 (13) of the National Conservation Act, 2013).

Site Overview

The site is man-modified with regrowth.

Advice to the Applicant

We note that the proposed development exceeds the minimum required setbacks in the Development and Planning Regulations We support this practice as adhering to the minimum setbacks is a proactive measure that enhances the resilience of coastal structures by providing a natural and regulatory-based defense against the impacts of storm surges, flooding, erosion and other environmental challenges. It can help to promote sustainable development and helps to ensure the long-term viability of structures in what would otherwise be vulnerable areas.

Retaining and planting native vegetation even in a predominantly man-modified area can still provide benefits to the property owner and the surrounding area. For example, retaining vegetation can:

- *Provide habitat and food for wildlife such as birds and butterflies, promoting biodiversity and providing valuable ecosystem services,*
- *Provide sound and privacy buffers from the road and neighbouring properties/developments,*
- *Provide mature vegetation which can enhance landscaping and immediately offer shade,*
- *Assist with the management of run-off and drainage, and*
- *Reduce carbon emissions by leaving the habitat to act as a carbon sink through avoiding its destruction and allowing natural processes to occur which assist with the removal of carbon dioxide in the atmospherethe amount of greenhouse gas emissions.*

Therefore, we recommend that the applicant only clears and fill the development footprint. For the avoidance of doubt and in line with the Building Research Establishment (BRE) Group definition of development footprint, this contains the development, landscaped area and amenity spaces.

We also recommend that native plants are incorporated into the landscaping scheme. Native plants are best suited for the conditions of the site, including the temperature and amount of rainfall. They are climate-appropriate and require less maintenance and irrigation. Landscaping with native vegetation also provides ecological benefits by creating habitat and food for native fauna such as birds and butterflies, promoting biodiversity and providing valuable ecosystem services.

We recommend that the applicant incorporates Sustainable Drainage Systems (SuDS) into the stormwater management plan for the site. SuDs are drainage solutions that provide an alternative to the direct channeling of surface water through pipes and deep wells. By mimicking natural drainage regimes, SuDS aim to reduce surface water flooding, improve water quality and enhance the amenity and biodiversity value of the environment. SuDS achieve this by lowering flow rates, increasing water storage capacity, and reducing the transport of pollution to the water environment. Measures could include permeable and sustainable materials within the parking area. The applicant may also wish to consider leaving some areas of landscaping at the existing grade and using porous or permeable surfaces in areas of hardstanding such as drive ways to allow for rainwater infiltration and assist with stormwater management.

Advice to the Development Control Board

Best management practices should be adhered to during construction to reduce impacts on the environment. In particular, control measures should be put in place to address pollution from expanded polystyrene (EPS) beads on construction sites, for example, those used in insulating concrete forms (ICF).

Polystyrene is not biodegradable, and the EPS beads can be consumed by wildlife when it enters the food chain. These beads are very difficult to remove once they enter the environment and they do not naturally break down.

If the Development Control Board or Planning Department is minded to grant planning permission for the proposed development, the DoE recommends the inclusion of the following condition in any planning permission:

1. *If the construction uses insulating concrete forms (ICF) or other polystyrene materials, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris are completely captured on-site and does not enter the nearby water bodies or impact the surrounding areas."*

Planning Analysis:

Application is for a 1,650 sq ft, two (2) bedroom house at Brig St. All typical requirements are met.

Decision: It was resolved to grant planning permission subject to the following:

Conditions (1-5) must be completed prior to the start of construction:

1) The applicant shall obtain approval of construction details from the Building Control Unit.

2) The applicant shall obtain plumbing approval from the Building Control Unit.

3) The applicant's Electrician shall obtain electrical approval from the Building Control Unit.

4) The applicant shall obtain approval of mechanical plans from the Building Control Unit.

5) The applicant shall obtain a liquefied gas permit from the Building Control Unit.

6) The confirmation of the Planning Office must be obtained, in writing, verifying compliance with the conditions described above prior to the start of construction.

The applicant will be reminded that all inspections shall be conducted and approved prior to occupancy of the buildings.

If the construction is using insulating concrete forms (ICFs), measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste, or polystyrene debris is completely captured on-

site and does not impact the surrounding areas or pollute the turtle nesting beach and the environment.

Prior to undertaking any sanding or breaking down of polystyrene as part of the construction process, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas.

The applicant will be advised that this approval is in effect for five (5) years only and will expire if a building permit is not issued during this time. If the applicant wishes to reinstate the approval after this period, a new application must be submitted to the Planning Department along with required fee.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

3.0 MATTERS ARISING

3.01 MINISTRY OF EDUCATION, CBE BLOCK 107A PARCELS 32 & 111 (CB-P23-0051)

Application for two (2) workers' accommodation buildings, high school with gymnasium, sports courts, fencing (6 ft- 8 ft).

Facts:

Location:	Major Donald Drive & Sunshine Drive
Parcel Size:	59 acres & 18.13 acres
Proposed Use:	Institutional
Building Size:	
Workers' Accommodations	14,106 sq ft
Gym	22,492 sq ft
School	55,123 sq ft
Building Footprint (Total):	65,995 sq ft
Building Height:	
Workers' Accommodation	17 ft 1 in
Gym	28 ft
School	32 ft

Proposed Parking Spaces:	
Workers' Accommodations	61 spaces
School & Gym	5 bus slips, 4 handicap, 68 standard parking spaces
Notices & Newspaper Ads:	No written objections received

Background:

At DCB/11/23 (11th September 2023) it was resolved to adjourn the application to invite the applicant to the next meeting.

At DCB/13/23 (25th September 2023) was resolved to adjourn the application to seek input from the Department of Agriculture and additional input from the National Roads Authority. Furthermore, after reviewing the proposal in light of Section 41(3) of the National Conservation Act (2014) (NCA), it was resolved to invite the applicant to address the Board regarding potential adverse effects of the proposal, as defined in Section 2 (a-l) of the NCA.

Agency Comments:

Department of Agriculture:

The Department of Agriculture marked the application approved.

National Roads Authority:

"Road Capacity Issues

The traffic demand to be generated by the Proposed New Cayman Brac High School of 51,889 sq. ft. has been assessed in accordance with ITE Code 530 High School. Thus, the assumed average trip rates provided by ITE for estimating the daily, AM and PM peak hour trips are 12.89, 3.06 and 0.97 respectively.

The Accommodation Block of 14,106sq. ft. could not be accurately assessed as it is noted that the building would be utilized by the construction workers as the high school is being built. Once the high school is completed it would then be used as accommodation for visiting athletes. Therefore the traffic impact would be insignificant. The anticipated traffic to be added onto Sunshine Drive is as follows:

(See NRA comments in OPS)

Based on these estimates, the impact of the proposed development onto Sunshine Drive is considered to be minimal.

Access and Traffic Management Issues

One-way driveway aisles with diagonal parking shall be a minimum of twenty (20) ft wide.

Two-way driveway aisles shall be a minimum of twenty-two (22) ft. wide.

Entrance and exit curves shall have no less than fifteen (15) feet radius curves, and have a width of twenty-four (24) ft.

Tire stops (if used) shall be placed in parking spaces such that the length of the parking space is not reduced below the sixteen (16) feet minimum.

Stormwater Management Issues

The applicant is encouraged to implement state-of-the-art techniques that manage stormwater runoff within the subject parcel and retain existing drainage characteristics of the site as much as is feasible through innovative design and the use of alternative construction techniques. However, it is critical that the development be designed so that post-development stormwater runoff is no worse than pre-development runoff. To that effect, the following requirements should be observed:

- *The applicant shall demonstrate, prior to the issuance of any Building Permits, that the Stormwater Management system is designed to embrace storm water runoff produced from a rainfall intensity of 2 inches per hour for one hour of duration and ensure that surrounding properties and/or nearby roads are not subject to stormwater runoff from the subject site.*
- *The stormwater management plan shall include spot levels (existing and finished levels) with details of the overall runof scheme. Please have the applicant provide this information prior to the issuance of a building permit.*
- *Construct a gentle hump /exit (along the entire width of each driveway) in order to prevent stormwater runoff from and onto Sunshine Drive. Suggested - 4 inches. Trench drains often are not desirable.*
- *Curbing is required for the parking areas to control stormwater runoff.*
- *Roof water runoff should not drain freely over the parking area or onto the surrounding property. Note that unconnected downspouts are not acceptable. We recommend piped connection to catch basins or alternative stormwater detention devices. Catch basins are to be networked, please have the applicant provide locations of such wells along with details of depth and diameter prior to the issuance of any Building Permits.*
- *Sidewalk detail needs to be provided as per NRA specifications. See (https://www.caymanroads.com/upload/files/3/Sidewalk%20&%20Curbing%20Details.p df)*

At the inspection stage for obtaining a Certificate of Occupancy, the applicant shall demonstrate that the installed system will perform to the standard given. The National Roads Authority wishes to bring to the attention of the Planning Department that non-compliance with the above-noted stormwater requirements would cause a road encroachment under Section 16 (g) of The Roads Act (2005

Revision). For the purpose of this Act, Section 16(g) defines encroachment on a road as

"any artificial canal, conduit, pipe or raised structure from which any water or other liquid escapes on to any road which would not but for the existence of such canal, conduit, pipe or raised structure have done so, whether or not such canal, conduit, pipe or raised structure adjoins the said road;" Failure in meeting these requirements will require immediate remedial measures from the applicant."

Additional Comments Received from National Roads Authority:

See attachment.

Water Authority:

"Wastewater Treatment and Disposal
"The developer, or their agent, shall submit an Onsite Wastewater Treatment Proposal, per the attached Form, which meets the following requirements. Water Authority review and approval of the proposed system is a condition for obtaining a Building Permit.

- *The proposed development* ***requires Aerobic Treatment Unit(s) with NSF/ANSI Standard 40 (or equivalent) certification*** *that, when operated and maintained per manufacturer's guidelines, the system achieves effluent quality of 30 mg/L Biochemical Oxygen Demand and 30 mg/L Total Suspended Solids.* ***The proposed system shall have a treatment capacity of at least 26,300 US gallons per day (gpd),*** *based on the following calculations.*

- *The Water Authority approves this application to discharge the effluent from the (26,300) US gallon treatment plant to an effluent disposal trench. The disposal trench shall be constructed per the attached specifications, i.e., either the standard minimum design or the modified design which allows for uptake of the effluent and its nutrients by appropriate plantings.*

The developer is advised that if the trench creates a nuisance or proves inadequate to meet the basic objectives of disposing effluent below the ground surface to prevent contact with sewage, it shall be replaced with a standard effluent disposal well.

Decommission Existing Septic Tank
The drawing proposes that the existing 8,000 gallon septic tank is to remain. The developer is advised that the Water Authority policy graduates the requirement

for achieving "30/30" limits by applying it to larger developments, defined as those where calculated flows exceed 1,800 gallons per day (GPD) on a given parcel. The policy also applies to existing developments when there is a change of use or expansion of the development. Therefore, approval for the proposed development requires that all wastewater generated on the parcel; i.e., both proposed and existing structures, shall be treated in an onsite aerobic wastewater treatment system(s).

The existing septic tank shall be decommissioned as per the Water Authority's Best Management Practices (BMP's) below and the wastewater flows re-plumbed towards the Aerobic Treatment System.

http://www.waterauthority.ky/upimages/download/BMPs_abandoned_WW_systems1_1423220782.pdf

Grease Interceptor Required
A grease interceptor with a minimum capacity of 4,000 (2 x 2000 in series) US gallons is required to pre-treat flows from kitchen fixtures and equipment with grease-laden waste; e.g., pot sinks, pre-rinse sinks; dishwashers, soup kettles or similar devices; and floor drains. The outlet of the grease interceptor shall be plumbed to the sanitary sewage line leading to the ATU / septic tank / WBBSS. Where two tanks are used to achieve the required capacity, they shall be installed in series with the larger tank first (600 US gallon minimum).

Lint Interceptor Required - Commercial, Institutional & Coin-op Laundries
An approved lint interceptor is required for commercial, institutional and coin-operated laundries. The developer is required to submit specifications for all laundry (washer) equipment to the Water Authority for determination of the required capacity of interceptor. Specifications can be sent via email to development.control@waterauthority.ky

Generator and Fuel Storage Tank(s) Installation
In the event underground fuel storage tanks (USTs) are used the Authority requires the developer to install monitoring wells for the USTs. The exact number and location(s) of the monitoring wells will be determined by the Authority upon receipt of a detailed site plan showing location of the UST(s) and associated piping. The monitoring wells shall comply with the standard detail of the Water Authority linked below. All monitoring wells shall be accessible for inspection by the Authority. In the event above ground fuel storage tanks (ASTs) are used, monitoring wells will not be required.

Water Supply
Please be advised that the proposed development site is outside the area served by public water supply. The developer will be required to utilize an alternate water source; i.e., cistern or well."

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Department of Environmental Health:

"Solid Waste Facility:

• The High School requires (2) 8 cubic yard container with twice per week servicing.

• The Accommodations requires (1) 8 cubic yard container with twice per week servicing.

NOTE: The drain for the enclosure must be plumbed to a garbage enclosure disposal well as per the Water Authority's specifications. Contact development.control@waterauthority.ky for deep well details.

Kitchen: This application is recommended for approval with the conditions that the following be submitted at the BCU stage for review for the kitchen within the high school:

1. The approved BCU hood details.

2. Specifications for the hot water heater.

3. Equipment schedule.

4. Specifications for all kitchen equipment."

Fire Service:

The Fire Service has marked the application approved for planning purposes only.

Department of Environment:

"The site is partially man-modified and primary habitat, forming dry shrubland and xeromorphic semi-deciduous forest. Primary habitat is mature habitat in its natural state, otherwise uninfluenced by human activity where ecological processes are not significantly disturbed. These habitats are often very old, existing long before humans and may consist of many endemic and ecologically important species. Primary habitat is in severe decline and becoming a scarce and highly threatened resource as a result of land conversion for human activities.

The accommodation block has been set within a man-modified area that appears to have been mostly cleared and is of limited ecological value. The new school is within a partially man-modified area with extensive regrowth (see Figures 1 and

2). It is vital that construction is undertaken sensitively so that only the development footprint is impacted by construction activities.

The proposed new school is set within an area which is known to be important Cayman Brac Parrot (Amazona leucocephala hesterna) habitat. The Cayman Brac Parrot is a subspecies of parrot which is found nowhere else in the world. It is distinct from the Grand Cayman Parrot (Amazona leucocephala caymanensis) and is a Part 1 Schedule 1 Protected Species under the National Conservation Act (2013), meaning that it is protected at all times. The Cayman Brac Parrot is frugivorous but also forages on young leaves and flowers. It is a cavity nester and breeds only in mature dry forests (such as the primary forest that covers much of the site). They require large, hollowed-out spaces in trees to nest. This means they are dependent on a limited supply of existing cavities in forest trees to make their nests. Wholescale clearing of sites removes the possibility of any vegetation providing continued parrot habitat, nesting sites and food. These parrots are an important part of Cayman Brac's natural and cultural history, and together with the Grand Cayman Parrot, these birds serve as a symbol of national pride and natural resource conservation.

Parrots are a resilient species, but their small habitat range combined with climate change pressures and the increasing conversion of land for human uses means that the long-term future of these birds depends on the ability to preserve these old-growth forests and build sustainably. This further reiterates the importance of reserving land clearing until development is imminent.

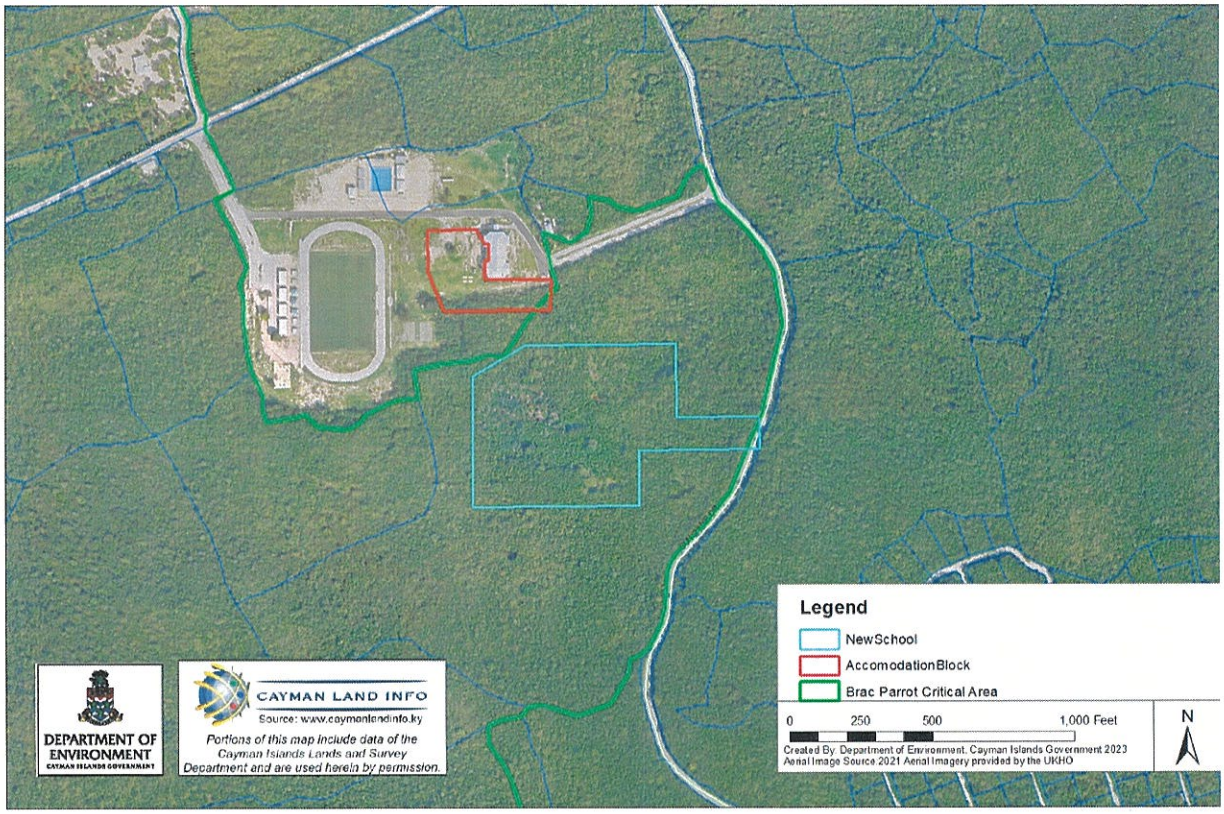

Figure 1. The accommodation block (red) and the new school (blue) (Aerial Imagery Source: UKHO, 2021)

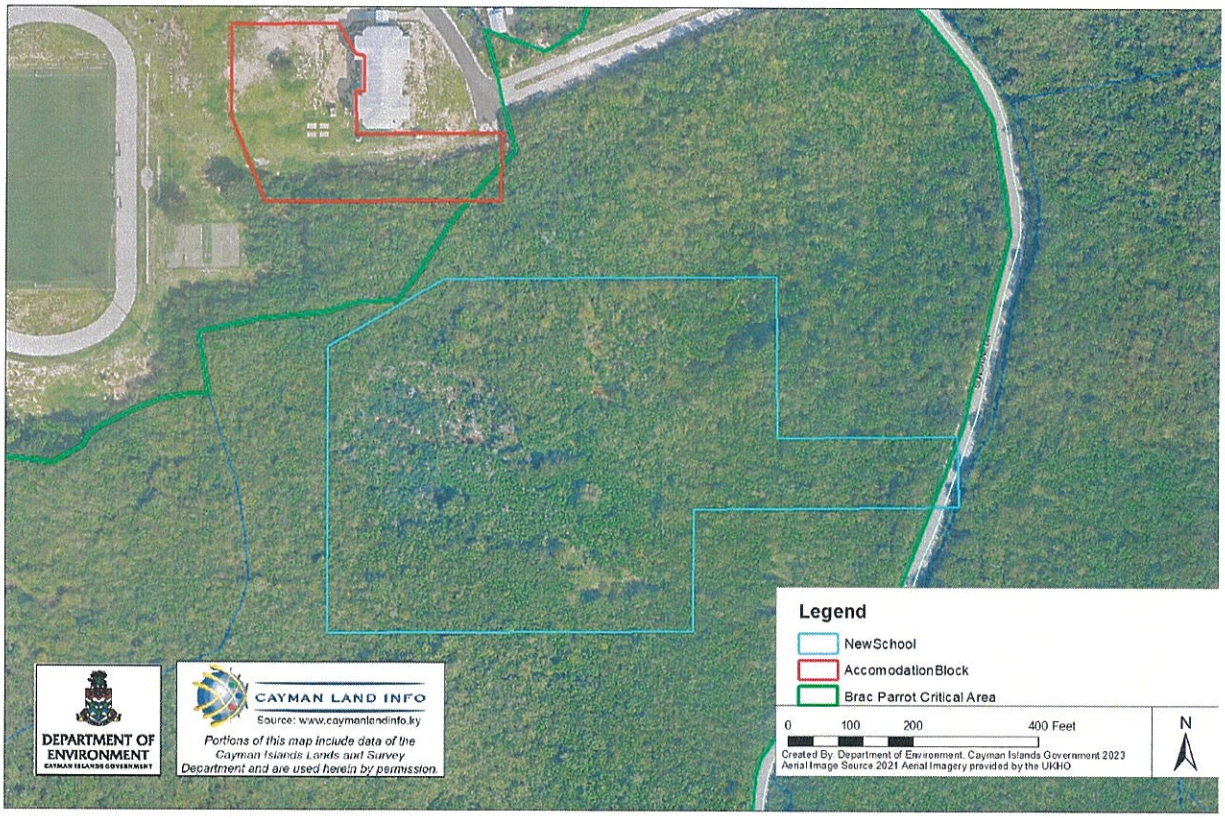

Figure 2. The accommodation block (red) and the new school (blue) with the environmental impacts on the area visible in the aerial imagery (Aerial Imagery Source: UKHO, 2021).

The applicant should retain as much native vegetation as possible and incorporate it into the landscaping scheme. Primary habitat and native vegetation can be retained and used in a variety of ways on a property:

- *It can be retained along parcel boundaries and between buildings to serve as privacy, noise and sound buffers and screening.*
- *It can be incorporated into the landscaping schemes for low-maintenance low-cost landscaping. Native plants are best suited for the conditions of the site, including the temperature and amount of rainfall. They are climate-appropriate and require less maintenance and irrigation.*
- *It can serve as an amenity, providing green space and shade for those who live nearby or on the property.*
- *Shade provided by retaining mature vegetation can also help to lower cooling demand and utility costs.*
- *It can remain as a habitat for endemic wildlife such as anoles, birds and butterflies. This habitat helps to contribute to the conservation of our local species.*

- *It can assist with drainage, directly by breaking the momentum of rain, anchoring soil, and taking up water and indirectly by keeping the existing grade and permeable surfaces.*
- *It can help reduce carbon emissions by leaving the habitat to act as a carbon sink and allow natural processes to remove carbon dioxide from the atmosphere. Destroying native vegetation releases carbon stored in the plant material, soil and peat.*
- *When located in an area of wider primary habitat, wildlife corridors can be created connecting areas of a habitat that would have otherwise been isolated through development, allowing for the movement of animals and the continuation of viable populations.*

Especially for a school, it is important to retain native vegetation so that students have an opportunity to learn about their native species and their natural and cultural heritage. It can be a teaching tool for education.

The DoE recommends that, wherever possible, sustainable design and energy efficiency features are included in projects such as this one. We especially encourage renewable energy installations given that the Cayman Islands has a target of 70% of energy generation being renewably sourced by the year 2037 (Cayman Islands National Energy Policy 2017-2037). Photovoltaic solar panels in particular could be installed on suitable roof space or over the proposed parking spaces. The inclusion of renewable energy is likely to become government policy going forward based on the new National Energy Policy and therefore it is logical to begin to include it now.

Best management practices should be adhered to during construction to reduce impacts on the environment. Land clearing should be limited as much as possible to the development footprint and should not be undertaken until development is imminent to allow the habitat to function for as long as possible.

In addition, control measures should be put in place to address pollution from expanded polystyrene (EPS) beads on construction sites, for example, those used in insulating concrete forms (ICF). Polystyrene is not biodegradable, and the EPS beads can be consumed by wildlife when it enters the food chain. These beads are very difficult to remove once they enter the environment and they do not naturally break down.

If the Central Planning Authority or Planning Department is minded to grant planning permission for the proposed works, we recommend the inclusion of the following condition in the approval:

1. *If the construction uses insulating concrete forms (ICFs) or other polystyrene materials, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas or pollute the environment."*

Planning Analysis:

The application is for two (2) workers' accommodations buildings, high school, gym, fencing and sports courts.

The workers' accommodations buildings are to be constructed first followed by the remainder of the project. The workers' accommodations buildings will each have two (2) kitchenettes, 19 one bed units with private bathrooms, and a laundry room.

Access to the workers' accommodations buildings will be from the road that provides access to the existing multipurpose hall.

Entrance to the high school & gym will be from Sunshine Drive. The Planner recommends that Members visit this site specifically to see the entrance and exit at Sunshine Drive. The Planner is concerned about the safety of busses entering and exiting at Sunshine Drive due to the condition of the road.

The high school building will be two (2) storeys. The second floor will consist of classrooms, library, principal's office and staff rooms. The first floor will consist of classrooms, dining area, nurse's office, dental office, conference room, reception and security.

The gym will have a sports court, dance studio, locker rooms, and restrooms.

The gym and high school buildings will be connected by a covered walkway.

The site plan shows two (2) sports courts and a gardening area west of the gym.

Planner's Additional Comments:

A revised site plan has been submitted showing new 15 mph school zone with traffic beacon lights and signs and rumble strips north and south of the entrance to the high school site. The school zone will be designed to NRA & civil engineers' specifications.

The revised site plan also states that a full safety review of the junction between the existing road access to the multi-purpose hall and Sunshine Drive will be carried out by civil engineers and the NRA. The safety review will address concerns regarding visibility for exiting traffic due to grading of Sunshine Drive.

The revised site plan states "Junction improvement works to be completed before occupancy of the school is obtained."

Appearance at DCB/13/23 (25th September 2023)

Ms. Luiza Dawson, representative of Chalmers Gibbs Architects, Wayne Riley, PWD, Mark Reid, Reid Consulting, Mr. Wilbur Welcome, Chief Officer, Clive Baker, Ministry of Education.

The Chairman welcomed everyone to the meeting.

Ms. Luiza Dawson stated that she works for Chalmers Gibbs Architects, the lead consultants for the project. The project is a result of a business case. An assessment was done of existing buildings. She gave a brief description of the project. Unlike the existing high school, this will have an enclosed kitchen and dining area. This will allow for meal preparation onsite.

A SWOT analysis was conducted of 7 options. One option was to do nothing. Option #6 was to build a high school on a Crown parcel on the bluff.

Consultants have done a thorough review of elevations & EIA geotechnical surveys to see if there are caverns or weaknesses at the proposed site. Bearing in mind the budget, consultants wanted to find the best location.

The north part of the parcel is higher and rockier that the location on the site plan.

The desire is also to link the high school with the sports complex. The location of the access to the new high school was factored in when the sports complex is used in the future for sports tourism.

Mr. Clive Baker commented that there is a Master Plan for the sports complex that had to be considered.

Mr. Wayne Riley stated that surveys highlighted significant rock that would have to be broken to place the high school further north of the proposed location.

The Chairman asked what would be done with/to the large cavern in the middle of the cleared area. Ms. Dawson stated that the cavern would be fenced and retained for educational purposes.

The Chairman replied that there is a lot of good soil at the cleared site. Ms. Dawson stated that good soil can be harvested before laying of impervious surfaces.

A DCB member asked how dependable the surveys are if they didn't know this cavern existing until the area was cleared.

Another DCB member stated her concerns about access from Sunshine Drive which is very hilly and could be dangerous for a school bus.

Mr. Wilbur Welcome replied that a lane could be created for the school bus, so vehicles approaching from south would not be in the same lane as the bus.

A DCB member asked why the area east of the swimming pool is deemed unsuitable.
The area east of the swimming pool is earmarked for other facilities having to do with the sports complex.

Mr. Welcome stated that there are two (2) Master Plans. One Master Plan is for the high school and one Master Plan is for the sports complex.

A DCB member re-iterated the concerns about using Sunshine Drive for access to the high school site.

Mr. Welcome said he would contact the District Commissioner about Sunshine Drive because this is a road safety matter outside the scope of the high school application.

The use of lights and mirrors was mentioned.

Mr. Welcome stated that the soil can be made available to farmers and to members of the public perhaps through DOA.

Appearance at DCB/16/23 (14th December 2023)

Will Steward, Managing Director of Chalmers Gibbs Architects, Luiza Dawson, Project Manager for the Design Team at Chalmers Gibbs Architects, Clive Baker, Project Manager (Ministry of District Administration & Lands) Wayne Riley, Senior Project Manager (PWD), Mark Reed, AMR Consulting Engineers & Schmarrah McCarthy, AMR Consulting Engineers addressed the Board at 11:14 AM.

Each DCB Member acknowledged that he/she has no conflicts of interest in the proposed development.

Ms. Dawson reminded, for the public record, that the application is for a new high school, gym and two (2) workers' accommodations buildings. The development will be located adjacent to the Sports Complex on the bluff. The workers' accommodations buildings will have the same access as that currently used to access the existing, multi-purpose hall and the high school and gym will have

access from Sunshine Drive. These buildings may also be used as hurricane shelters. She acknowledged that the primary concerns of the DCB are access from Sunshine Drive and the agricultural potential of the parcels.

Ms. Dawson stated that a new site plan has been submitted showing a new merge lane onto Sunshine Drive.

Ms. Dawson stated that additional comments have been received from NRA and the Department of Agriculture. Comments from NRA have been addressed. Good quality soil will be removed from the site. Some soil will be retained to be used by the school for student projects.

She further stated that site lines will be maintained as recommended by NRA. Her engineers would like to work with NRA to come up with an acceptable site plan.

Environmental concerns of the Department of Environment have been addressed in Ms. Dawson's letter dated 13th December 2023 (see Attachment A).

The Director of Planning asked AMR Consulting Engineers representative Mr. Mark Reed if he wished to comment on the process to meet requirements of the National Conservation Act Sec 2 (A-1). Mr. Reed stated that he visited the site twice. He looked for any species/plant that might need to be preserved or transplanted.

Mr. Reed stated that he contacted the Department of Environment and was told that DOE was not aware of any protected species on the parcels. Mr. Reed stated that the building footprint for the high school and gym will be located over land that was previously used for farming; this is not a forested woodland area.

Mr. Reed found that the trees in the footprint area are of a maturity level that do not attract parrots.

Mr. Reed addressed requirements of Sec 2 of the National Conservation Act (attachment B).

Ms. Schmarrah McCarthy stated that AMR wants to engage NRA for a workshop to ensure safety as a priority.

The Director of Planning asked Ms. McCarthy to confirm that there are no concerns at this point that would delay the development.

Ms. McCarthy stated that AMR is "onboard" with the overall design; AMR just needs to engage NRA to work out small issues.

A Board Member asked if the pending issues will be addressed early in the construction phase because a lot of construction trucks will be going in and out of Sunshine Drive.

Mr. Baker stated that early works will be to start on the roadworks.

Mr. Wayne Riley stated that the project won't commence until the middle of 2024. This involves two (2) Ministries working together. Cabinet has approved the outline business case. A formal business case will be submitted next year [2024]. The infrastructure access road will come first.

Mr. Riley mentioned that the large cavern that was found will be fenced and retained.

A Member asked if the main access will remain where the road is already built. Mr. Riley confirmed this.

The Director of Planning asked that if the heavy works can be done outside of the nesting period. Mr. Riley stated, "yes."

Decision: It was resolved to grant planning permission subject to the following:

Conditions (1-3) listed below shall be met ***prior to the commencement of any site preparation works such as clearing, filling and grading*** and before permit drawings can be submitted to the Department of Planning.

1) The applicant shall provide proof that a Stormwater Management plan has been submitted to the National Roads Authority (NRA). **The applicant should liaise directly with the NRA in submitting the stormwater management plan. The Stormwater Management Plan shall be approved by the Development Control Board.**

2) The applicant shall submit a landscape plan with a focus on local vegetation which shall be subject to review and approval by the Development Control Board. *It is suggested that the landscape plan be prepared following the recommendations of the Draft Cayman Islands Landscape Guidelines, found on the Planning Department's website (www.planning.ky) under About/Draft Policies.*

3) The applicant shall submit a construction operations plan to the satisfaction of the Director of Planning and must be prepared in accordance with the Construction Operations Plan Guidelines - Template B *found on the Planning Department's website (www.planning.ky) under About/Draft Policies.*

4) The applicant shall submit a plan, developed in consultation with the NRA, for the improvement of Sunshine Drive to incorporate traffic calming and

improvements as outlined by the applicant during their appearance, for the Board's consideration. This plan must include a timeline for the completion of said works, which must be completed prior to the issuance of a Certificate of Occupancy or occupancy of the facility.

5) If not already shown on the site plan, the applicant shall submit a site plan that shows the **location, dimensions and size** of the wastewater treatment system including the disposal system in line with the Water Authority's specifications.

Conditions (1-5) must be completed prior to the start of construction:

1) The applicant is required to apply for a Permit from the Director of Planning. Construction shall not commence prior to the issuance of a Permit.

2) The applicant shall provide proof that the project footprint boundaries have been set out on the ground by a licensed land surveyor, and that the project footprint boundaries are enclosed by fencing to ensure all site activities are contained within the project footprint boundaries at all times.

3) The confirmation of the Planning Office must be obtained, in writing, verifying compliance with the conditions described above prior to the start of construction.

4) If during construction of the building insulating concrete forms (ICFs) are used, measures such as screens or other enclosures along with vacuuming shall be put in place to ensure that any shavings or foam waste is completely captured on site and does not impact the surrounding area.

4) Prior to undertaking any sanding or breaking down of polystyrene as part of the construction process, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas.

Unless specifically authorized otherwise in writing by the Development Control Board, the Development shall be carried out strictly in accordance with the approved plans.

The applicant shall obtain a Final Certificate (of Fitness for **Occupancy) prior to occupying the building(s)**.

The applicant is reminded that they must receive all relevant approvals from all required agencies.

Provision shall be made for the **removal of solid waste**, including **construction and demolition waste**, from the site on a regular basis during the construction period.

The applicant shall provide adequate number of **sanitary facilities during the construction stage.**

The applicant will be advised that this approval is in effect for five (5) years only and will expire if a building permit is not issued during this time. If the applicant wishes to reinstate the approval after this period, a new application must be submitted to the Planning Department along with required fees.

Reasons for the decision:

1) The Board considered all information contained in the agenda including agency comments, and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

3) The Board reviewed the proposal regarding potential adverse effects, as defined in Section 2 (a-l) of the NCA, inclusive of carrying out a detailed review of the comments provided by the DoE, the 3rd of June 2023 EIA Phase 1 Report – REVA and the 13th of December 2023 report by AMR Consulting Engineers. The Board determined that there would be no adverse effects that would warrant the refusal of the application. The Board noted the DoE's finding that the site of the accommodation block is within a man-modified area, that has been previously cleared and of limited ecological value. The Board also noted the DoE's recommendation that land clearing be reserved until development is imminent, as it relates to the portion of the proposed new school site that is adjacent, albeit separated by the road, Sunshine Drive, to the area that serves as a habitat for the Cayman Brac Parot. The Board accepts the advice of the DoE and determined that the strict imposition of conditions on the approval would be included, as per the DoE's guidance, to preclude any potential adverse effects. The Board was satisfied that there was no readily apparent potential for adverse effects that would warrant the refusal of the application.

4) The Board considered the current surrounding uses in the area and determined that the placement of the project within proximity to the existing facilitates natural lends to the achievement of synergies and efficiency gains between the various facilities.

5) The Board considered the supplementary comments of the NRA and determined that the strict imposition of conditions on the approval relating to road improvement works on Sunshine Dr. and internal revisions to improve circulation on site would be sufficient to address the technical points raised. The Board was satisfied that none of the technical points raised in the supplementary comments raised sufficient grounds to refuse the application.

6) The Board was satisfied after considering the comments of the Department of Agriculture, that the site was not suitable for commercial scale farming. The Board as satisfied that the applicant would undertake reasonable efforts to collect and reuse any topsoil collected during the construction process.

7) The Board was satisfied that there was no evidence before it of any demonstrable harm to a material planning interest that would warrant the refusal of the application.

8) The Board noted that there were no objections filed by adjacent property owners to the proposal.

3.02 BRIAN ESSI, LCE BLOCK 86A PARCEL 82 (LC-P23-0009) ($10,000)

Application for a boat ramp.

Facts:
Location: Guy Banks Road

Background:

At a meeting held on 18th July 2023 (DCB/08/23) it was resolved to adjourn the application for the following:

1) The applicant shall provide proof that a National Conservation Council Section 20 Permit has been issued or a written statement from the Department of Environment that a NCC Section 20 Permit is not required.

2) The applicant will be invited to address the Board about the project at a future meeting.

At a meeting held on 23rd August 2023 (DCB/10/23) the applicant addressed the Board via Zoom. It was resolved to adjourn the application for more information from the Department of Environment.

At meeting held on 21st November 2023 (DCB/14/23) it was resolved to adjourn the application to ask the applicant for an approximate date that the road was cut into the mangroves and by what means.

Agency Comments:

Department of Environment

"The majority of the site is man-modified habitat however it contains a significant amount of tidally flooded mangrove forest, as shown in Figure 1.

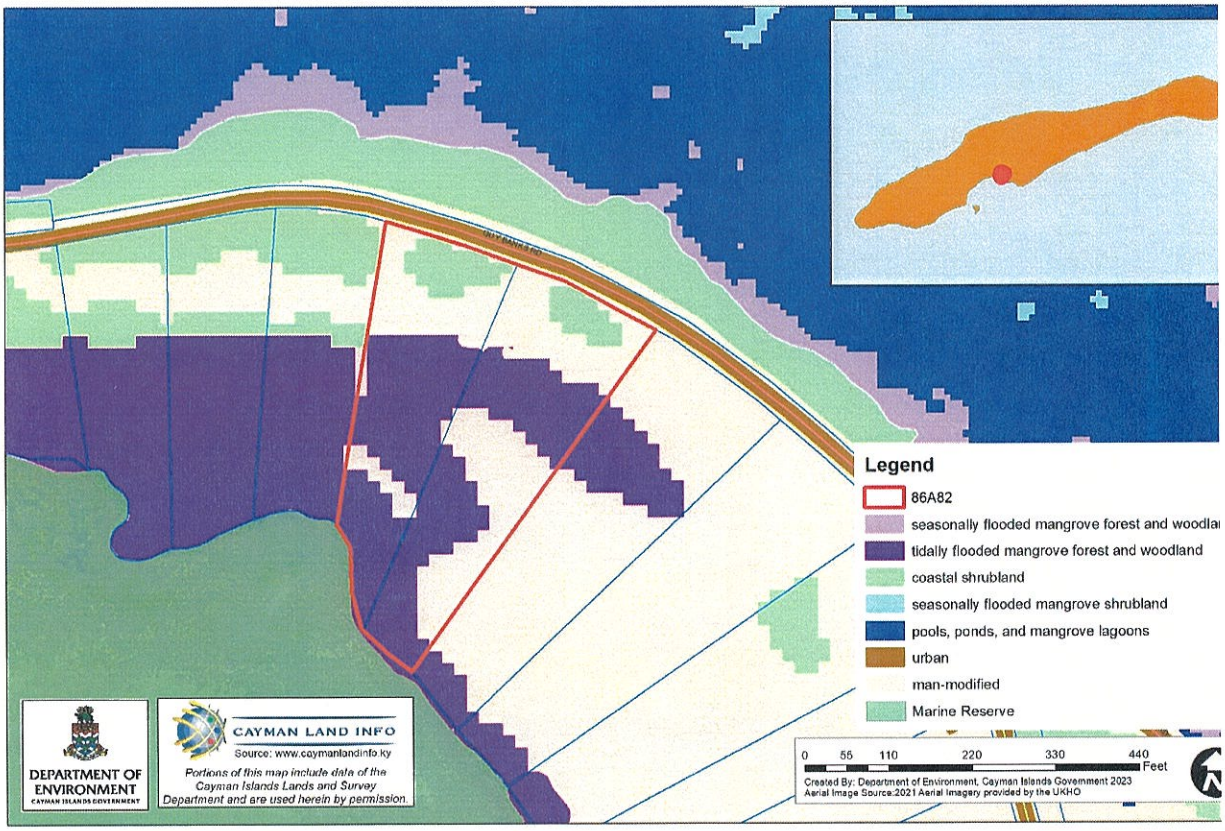

Figure 1: Land cover map of the subject parcel (Source: DoE, 2013)

Mangroves provide a nursery habitat for fish and other marine life and are vital in helping to maintain good water quality. Studies have demonstrated the importance of the presence of these fringing mangroves on the health of nearshore marine ecosystems.[1] *Mangroves are also important as a natural buffer to help mitigate coastal and storm-derived impacts such as flooding and shoreline erosion. Mangroves are Part 2 Schedule 1 protected species under the National Conservation Act (2013) with an adopted Mangrove Conservation Plan (2020). It is an offence to remove mangroves unless permission is explicitly sought to remove them either through a coastal works permit, planning permission or a National Conservation Council Section 20 permit. We appreciate that the applicant took the opportunity to consult with the DoE prior to submitting the application to reduce negative impacts to this important ecosystem. As per the applicant's calculations, the works will affect less than 9% of the total fringing mangrove on the property, with 91% being preserved.*

[1] Nagelkerken I, Grol MGG, Mumby PJ (2012) Effects of Marine Reserves versus Nursery Habitat Availability on Structure of Reef Fish Communities. PLoS ONE

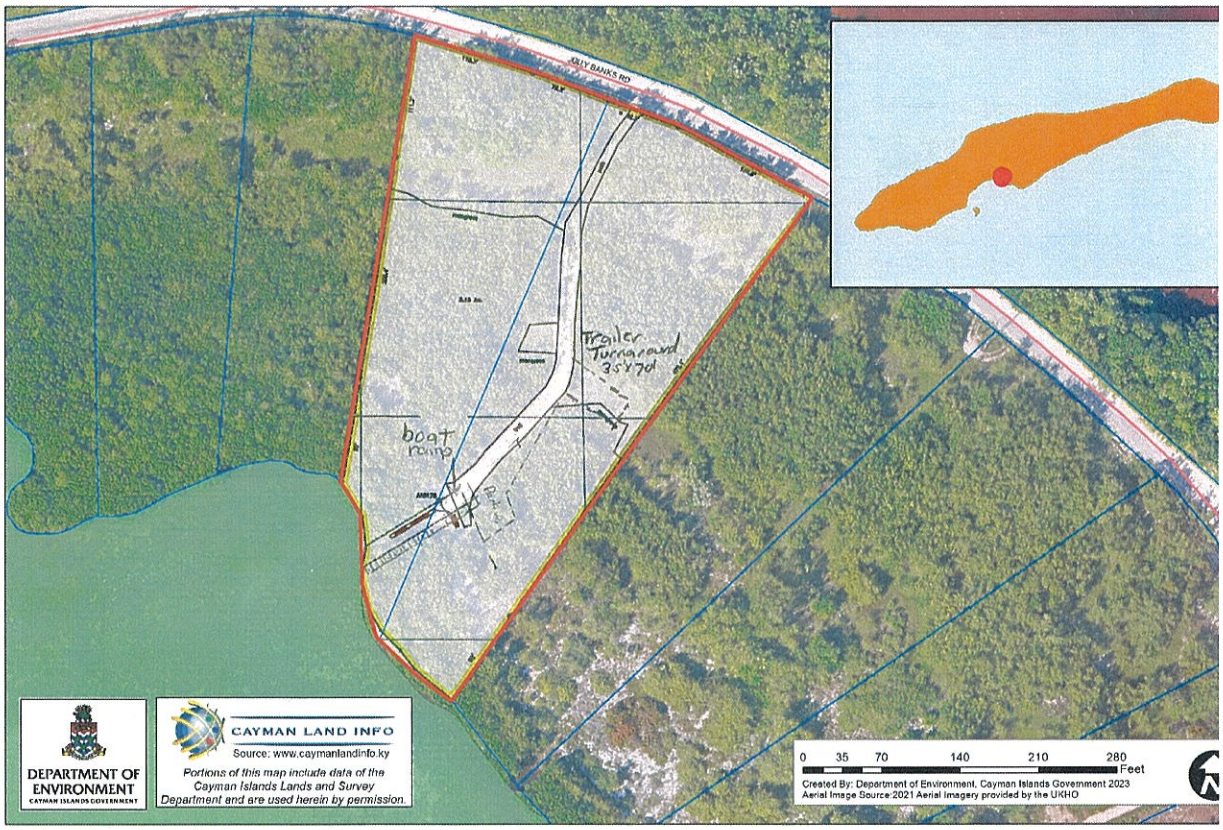

Figure 2: Proposed site plan (Source: Submitted Plans [1/6] / Aerial Imagery Source: UKHO, 2021)

While we do not support the practice of cutting through the mangrove fringe to access South Hole Sound, the DoE notes that the proposed boat ramp and access road are in line with a road that has already been constructed down to the water's edge, and a channel that has already been cut in the fringing mangroves. As such, the location has already been impacted and therefore the impact associated with the proposed boat ramp is lower than if a pristine location had been chosen.

Best management practices should be adhered to during construction to reduce impacts on the environment. Materials should be stockpiled away from the waters edge to avoid run-off into the canal. Control measures should be put in place to address pollution from expanded polystyrene (EPS) beads on construction sites. Polystyrene is not biodegradable, and the EPS beads can be consumed by wildlife when it enters the food chain. These beads are very difficult to remove once they enter the environment and they do not naturally break down.

In addition to this, the applicant has indicated that they intend to pour the concrete for the boat ramp in-situ, within the excavated channel. This will involve

placement of concrete within the water, and as such, extreme care will need to be taken that the adjacent Marine Protected Area is not negatively impacted by the washout of cementitious material and sand. The applicant has provided a construction methodology to the DoE that we believe would minimise these concerns if successfully implemented, although we do feel this will be hard to achieve. In addition to affecting the adjacent Marine Protected Area, washout also leads to inferior quality concrete and therefore a shorter lifespan and may require more frequent repairs, maintenance or reconstruction with associated environmental impacts such as greenhouse gas emissions, resource consumption, and generation of waste.

Care should also be taken during excavation of the channel for the boat ramp and placement of the rock fill for heavy equipment such that the extent of the impact to mangrove vegetation is limited to only that required for the construction of the boat ramp. The applicant indicates in their cover letter that they intend to keep the remainder of the property as natural as possible, including planting native vegetation. This is a practice that the DoE strongly supports.

DIRECTED CONDITIONS

The site is adjacent to a Marine Protected Area under the NCA. Without appropriate environmental management practices, storage of materials too close to the protected area and inadequate management of construction wastes and debris can result in adverse effects on that protected area through the run-off and escape of materials and debris. Storms, high waves, high tides, rainy weather, or construction practices can result in the material entering the Marine Protected Area.

Without appropriate environmental management practices during construction, there would or would be likely to be an adverse effect on the Marine Protected Area, namely:

- *Section 2(f) of the NCA: the discharge of pathogens, dissolved or suspended minerals or solids, waste materials, or other substances at levels that may be harmful to wildlife or the ecological or aesthetic value of the area.*

On the basis of the above information, in the exercise of powers which have been conferred through express delegation by the National Conservation Council, pursuant to section 3(13) of the National Conservation Act (2013) the Director of DoE, therefore, ***respectfully directs that the following conditions be imposed by the Development Control Board or Department of Planning,*** *as part of any agreed proposed action for planning approval:*

1. *All construction materials and debris shall be stockpiled at least 75 feet from the Mean High Water Mark to prevent material from entering the Marine Protected Area.*

2. *Turbidity resulting from construction activities (including demucking, placement of fill, and concrete works) shall be mitigated through the installation of silt screens with the skirt depth to be agreed in writing with the DoE prior to installation, to fully enclose the work area. Work shall not commence without such screens securely anchored. Screens must be maintained to the satisfaction of the DoE and remain in place through the construction until the water contained within the screen has cleared to the same appearance as the water immediately outside the screen.*

3. *Prior to undertaking any sanding or breaking down of polystyrene as part of the construction process, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas or pollute the adjacent Marine Protected Area offshore.*

4. *No work (including the operation of heavy equipment) is to take place seaward of the Mean High Water Mark. There shall be no placement of fill and no dredging of South Hole Sound.*

   These conditions are directed to prevent run-off and debris from entering the Marine Protected Area causing turbidity and impacting sensitive marine resources.

A person aggrieved by a decision of the National Conservation Council to impose a condition of approval may, within 21 days of the date on which the decision is received from the Central Planning Authority/Department of Planning, appeal against the decision of the Council to the Cabinet by serving on the Cabinet notice in writing of the intention to appeal and the grounds of the appeal (Section 39 of the National Conservation Act, 2013). We trust that this information will be relayed to the applicant in the Department of Planning's decision letter.

Recommended Conditions

If the Development Control Board or Planning Department is minded to grant planning permission for the proposed works, we recommend the inclusion of the following conditions in the approval:

a. *Clearing and filling of the site is to be limited only to the development footprint (the extent required for the access road, boat ramp and parking area). There shall be no clearing of mangrove vegetation outside of this footprint.*

Applicant's Letter:

"This cover letter responds to Action [EMAIL] generated by the Planning Department on June 25, 2023 requesting: "Please upload a cover letter detailing the development and also Land Register and Registry Map Extract." The Land Register and Registry Map Extract are being uploaded with this cover letter.
Details of Development:
Applicant seeks to construct a 15 foot wide concrete boat ramp with adjoining 4 foot wide by 100 foot long floating dock all inside the mangroves on the Applicant's property located near the South Hole Sound on Little Cayman (Lot 86A 82). Neither the boat Ramp nor the dock will be over waters at or seaward of the mean high water mark. All development and all work needed to accomplish the development will be inside the boundaries of Applicant's property. As such, no Costal Works Permit will be needed. Applicant also seeks to construct a gravel parking area near the boat ramp and a trailer turnaround area (35 feet by 70 feet) near the middle of the property – all as detailed in the Site Plan submitted via OPS with the original application. In addition to the details of the development provided in the original OPS application, Applicant provided further details of the development in response to two separate inquiries from the Department of Environment concerning the application as follow:

On May 18, 2023, Applicant provided the following details and explanations in response to requests from Matt Southgate | Environmental Management Officer II at DOE:

How will the concrete for the boat ramp be placed, particularly the in water portion?
We will dig down to the bedrock which testing has shown is will be approximately 4.5 feet below level of the end of the existing rock trail and approximately 3 feet below the water at low tide. Then we will form out the area required for the ramp—compacted rock/fill in 4" increments will be used as a base where necessary matching the grade of the ramp. Then we will pump the concrete under water.

Will basalt rebar also be used for the #8 dowel bars into bedrock?
We will use regular # 8 steel rebar in 12" concrete filled PVC posts that will be formed at their bases (we are investigating to determine in the #8 basalt rebar is strong enough to withstand pounding into the bedrock and if so, we will use #8 basalt rebar.

The description states that compact rock/fill is to be laid in 4" increments. Do you have an idea of the total build up? Not more that 36 inches and gradually less to the end of the ramp match the ramp grade Will any demucking of peat need to be carried out beforehand? Yes. Demucking will need to be carried out in the entire area of the boat ramp to prevent any undermining or erosion of the ramp. Testing

has shown that this area is mostly sand and there is little peat. Screening will be in place during all demucking. What is the extent of the rock fill for the footing of the excavator? Rock fill for footing of the excavator will be at least 25 feet from the South Hole Sound i.e. 25 feet inside the mangroves. Screening will be in place during all excavation. And will this need to extend out into South Hole Sound? No. Will any further excavation or dredging of South Hole Sound be required? No. The drawing provided does appear to show the boat ramp extending outwards from the property boundary. The boat ramp will end approximately 50 feet inside the mangroves and inside the property boundary i.e. 50 feet away from the South Hole Sound. The end of the floating dock will be 5 feet inside the mangroves and proper boundary, i.e. 5 feet from the South Hole Sound. I am not sure which of my drawings provides any confusion—please note that Sheet 3 of 6 of the Site Plan was prepared by Cayman Survey Associates under a previous plan that I withdrew and shows the width of a 15' access channel —it does not show the ramp or boat dock just the dimensions of the access channel under the previous plan. My apologies, I submitted Sheet 3 of 6 to show Cayman Survey Associates' findings that our property has 214 lineal feet of fringing mangroves bordering the South Hole Sound—thus, with the current plan the access channel and dock will total 19 feet wide and result in the elimination of less that 9% of the total fringing mangrove, i.e. 91% of the fringing mangroves will be preserved

On June 8, 2023, Applicant provided the following details and explanations in response to requests from Matt Southgate | Environmental Management Officer II at DOE:

As mentioned in my application, Mr. Robin Fite will be handling all concrete work for the boat ramp and construction of the dock. I have consulted with Mr. Fite to address your concerns. Mr. Fite indictates that he will be following the same procedures used when he constructed the other boat ramps on Little Cayman, including the government docks. We provide the following clarification and details to address your concerns:

The pumping of concrete will begin with a good 'prime' using sponge balls in the placing hose. Since we are pumping under water all placing line, which is below the surface, or susceptible to the water's pressure will "primed" in a manner by which no water is in contact with the concrete priming material prior to reaching the discharge end of the pumping system. The procedure for any water-filled line is to introduce two (2) sponge balls of appropriate diameter of the hose line, to the pipe line, just above the level of the water. When the pumping begins, the material will be pumped at a slow enough rate so not as to force any cement material past the sponges. When done correctly (as Mr. Fite has done on similar Little Cayman projects) any water in the line will be displaced by the concrete material without any contamination or co mingling of the two. After the priming process is complete, the two sponges will float to the top of the water, letting the crew know that priming has been successful. This avoids any contamination of the water. While pumping concrete under water we will not allow the discharge end

of the placing system/ hose to be raised above the level of the concrete being placed. In order to maintain the integrity of the concrete we will keep the water out of our concrete. The discharge of the concrete, once started, is only done inside the existing concrete. By keeping the discharge end of the placing system IN the concrete; we are keeping the water out. We will not ever allow any pumping boom to become overloaded at any time. Mr. Fite has indicated that since our deepest underwater finished concrete surface will be approximately 3 feet under water, finishing can be accomplished with one or two passes by the finisher to level the concrete---this will be successful since the water is very calm in the South Hole Sound and the screening used during the excavation phase will remain in place through the concrete pouring process and until all concrete has fully cured.

Please note I have thoroughly researched and considered with Mr. Fite pre-casting of the underwater sections using 2 feet by 15 feet planks and placing them with his crane, but Mr. Fite does not believe that this will be necessary in terms of time and expense given shallow and calm water associated with this project. On June 9, 2023, the Department of Environment provided its approval with conditions as follows:

DIRECTED CONDITIONS The site is adjacent to a Marine Protected Area under the NCA. Without appropriate environmental management pracons be imposed by the Development Control Board or Department of Planning, as part of any agreed proposed acons If the Development Control Board or Planning Department is minded to grant planning permission for the proposed works, we recommend the inclusion of the following conditions..."

Additional Comment from the DOE

"To clarify the DoE's comments for LC-P23-0009, a National Conservation Council Section 20 Permit would not be required if planning permission for the proposed works is granted. The applicant in this case has explicitly sought planning permission to remove mangroves in the footprint of the proposed boat ramp. The adopted species conservation plan for mangroves (attached for reference) states:

"Under authority given by NCL s.17 (3) (b) (iii) mangroves may not be taken, meaning they may not be killed, collected, destroyed, damaged, or harmed, except under the following conditions:

1. Planning Permission has been granted for a project impacting mangroves, by the Central Planning Authority or Development Control Board, and any conditions which must be met before this permission is valid or implementable, have been met

2. A Coastal Works Permit for a project impacting mangroves has been granted by Cabinet, any required conditions have been met and any fees due have been paid

3. A road is being constructed by the National Roads Authority or the Public Works Department on mangroves falling within a gazetted road corridor

4. A permit has been issued by the NCC under s.20 of the NCL and any conditions therein are being adhered to

5. Hand clearing only as strictly necessary for a licensed land surveyor to survey property boundaries, is permitted

6. Tree trimming of mangroves when in accordance with Appendix 1 to this Conservation Plan

7. Collection of mangrove seeds or fallen propagules for the purpose of growing mangroves in pots, and potted mangroves may be bought and sold

8. Restoration of mangroves in areas where they previously occurred, and restoration of mangroves in new habitat, may only be carried out with a permit under s.20 of the NCL, or to fulfil conditions attached to planning permission or a coastal works permit as per paragraphs 1 or 2 above

9. Maintenance of mosquito control dykes and canals by the Mosquito Research and Control Unit, is permitted"

Therefore, the granting of planning permission in this instance would satisfy this condition and a Section 20 Permit would not be required. In the absence of planning permission (even in instances where it would not be required), a Section 20 permit would be required in order to allow for the take of mangroves on private property."

Additional Information from the Applicant:

See Attachment K

Information submitted via email:

"I have chosen EZ Dock as my floating dock for the following reasons:

1. Environmentally friendly materials and (contains NO polystyrene):

a. Manufactured with high-performance, general-purpose, UV-stabilized, rotational molding grade resins. (These resins offer a balance of toughness,

*rigidity, environmental stress crack-resistance, and low-temperature impact performance.)**

*b. Suitable for processing by an approved recycling facility, or can be disposed of at any U.S. government-approved waste disposal facility.**

*c. Not listed by the EPA as a hazardous waste, nor is it formulated to contain materials that are listed hazardous wastes.**

d. Does not release contaminants when ignited, corroded or through chemical reactions as determined by the Toxicity Characteristic Leaching Procedure (TCLP).

e. Requires no foam filling. Many similar products are filled with foam which can escape if the product is punctured, creating an environmental hazard

f. Uses no wood products, which could be treated with copper, chromium or arsenic (CCA). (Products that contain CCA can no longer be placed where they are directly in contact with water)

g. Made from 90% pre/post consumer waste recycled rubber, our flexible connection coupler was designed in partnership with the Minnesota Pollution Control Agency to be an environmentally friendly product.

2. The EZ Dock 40" by 10 feet sections weigh about 100 pounds each and are easy to assembled and can be easily and quickly removed in case of approaching hurricanes and/or tropical storms. Applicant plans to remove the floating sections each spring (in late April or May) and reinstall them in late November after the hurricane season. Applicant will build a wooden storage rack on the high ground of the subject property 400 feet from the South Hole Sound that will allow the dock sections to be stacked and stored at 3 feet above the ground and attached to the rack to prevent the sections from moving or floating during storm surges.

3. The EZ Dock design with the Adjustable Piling Bracket (pictured below) has been designed for conditions such as Applicant's specific property conditions and will require only six (6) 8" pilings to be installed as anchors. As mentioned in the original application and information supplied by Applicant to the DOE, Robin Fite will secure the pilings to the bedrock with rebar driven into drilled holes and concrete filing the 8" pilings. So, when the EZ Dock floating sections are removed from the water and stacked on the rack, only the six (6) pilings will remain in the water and exposed to the storm and surges.

I hope that this email and attachments can be presented to the Board prior to the August 23, 2023 meeting and I plan to discuss them at that time and answer any additional questions Board members may have at that time."

Planning Analysis:

The applicant describes the project as, "15 foot wide concrete boat ramp with adjoining 4 foot wide 100 foot long floating dock all inside the mangroves."

Appearance on 23rd August 2023 (DCB/10/23)

Mr. Essi addressed the DCB via Zoom at 9:30 am.

Mr. Essi stated that he came up with his plans after meeting with DOE. DOE recommended placing the ramp at the existing road. There is no safe & reliable ramp on the south side of Little Cayman. Mr. Essi wants to have a safe, reliable boat ramp. Some portion will be cement with 100 ft floating dock inside mangroves. DOE requested a bathymetric survey which he completed. There is plenty of water depth to navigate his boat in and out of the mangroves. EZ dock recommends 8 in pilings drilled into bedrock. Six pilings will support the floating dock. The dock can be dismantled in 3 hours by 2 men with a pickup truck. Mr. Essi will remove the dock every spring when he leaves the island. A rack structure will be located by the road to store the rolled rack. The dock will stay several feet inside the mangrove.

Mr. Essi showed the Board a diagram of the dock.

There will be no wood involved other than the rack that will hold the rolled dock when it's not in use.

The Chairman asked what percentage of the mangrove would be removed. The DOE calculates that 9% of the mangroves on the property will be affected.

Appearance on 14th December 2023

Mr. Brian Essi and his wife, Dr. Kathleen Mulligan addressed the Board. Mr. Essi explained that he and his wife have vacationed in the Cayman Islands for decades. His wife is a licensed doctor in the Brac. They would like a boat ramp because there is not a safe boat ramp on the south side of Little Cayman. The bathymetric survey conducted by Cayman Survey Associates shows that there is a bout 5 1 /2 ft of depth where he wants to place the ramp. He has been mooring his 24 ft boat at Sam McCoy's. The proposed parking area will be large enough for 2-3 vehicles with adequate turning space. The turnaround area is currently barren with no mangrove that will be disturbed. He and his wife enjoy gardening. They've already planted coconut on the parking.

Decision: It was resolved to grant planning permission subject to the following:

Condition 1 shall be met prior to the commencement of construction.

1) The applicant shall obtain approval of construction details from the Building Control Unit.

2) All construction materials and debris shall be stockpiled at least 75 feet from the Mean High Water Mark to prevent material from entering the Marine Protected Area.

3) Turbidity resulting from construction activities (including demucking, placement of fill, and concrete works) shall be mitigated through the installation of silt screens with the skirt depth to be agreed in writing with the DoE prior to installation, to fully enclose the work area. Work shall not commence without such screens securely anchored. Screens must be maintained to the satisfaction of the DoE and remain in place through the construction until the water contained within the screen has cleared to the same appearance as the water immediately outside the screen.

4) Prior to undertaking any sanding or breaking down of polystyrene as part of the construction process, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas or pollute the adjacent Marine Protected Area offshore.

5) No work (including the operation of heavy equipment) is to take place seaward of the Mean High Water Mark. There shall be no placement of fill and no dredging of the sound.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

4.0 MINOR MATTERS

5.0 SUBDIVISIONS

5.01 PAUL SCOTT, LCE BLOCK 92A PARCEL 392 (LC-P23-0028) ($7200)

Application for a two (2) lot subdivision.

Mrs. Carol Busby declared her interest and left the room for this Agenda item.

Facts:

Location:	Glasgow St
Parcel Size:	8.8 ac
Existing Use:	Vacant
Notices:	No written objections have been received.

Agency Comments:

Department of Environment:

"This review is provided by the Director of the Department of Environment under delegated authority from the National Conservation Council (section 3 (13) of the National Conservation Act, 2013).

The application site consists of predominately primary dry forest and shrubland. Primary habitat is mature habitat in its natural state, otherwise uninfluenced by human activity where ecological processes are not significantly disturbed. These habitats are often very old, existing long before humans and may consist of many endemic and ecologically important species. Primary habitat is in severe decline and becoming a scarce and highly threatened resource as a result of land conversion for human activities.

We note that the application is for a subdivision, we would ***not*** *support the clearing of this site at this time. Land clearing should be reserved until the development of individual lots is imminent (through the granting of planning permission for development on those particular lots). This allows the opportunity for the individual lot owners to retain as much native vegetation as possible. Clearing the entire site prematurely removes the choice from the individual lot owners and removes the value the habitat could provide in the time between the preparation of a subdivision and the development of an individual lot.*

Primary habitat and native vegetation can be retained and used in a variety of ways on a property:

- *It can be retained along parcel boundaries and between buildings to serve as privacy, noise and sound buffers and screening.*
- *It can be incorporated into the landscaping schemes for low-maintenance low-cost landscaping. Native plants are best suited for the conditions of the site, including the temperature and amount of rainfall. They are climate-appropriate and require less maintenance and irrigation.*

- *It can serve as an amenity, providing green space and shade for those who live nearby or on the property.*
- *It can remain as a habitat for endemic wildlife such as anoles, birds and butterflies. This habitat helps to contribute to the conservation of our local species.*
- *It can assist with drainage, directly through breaking the momentum of rain, anchoring soil, and taking up of water and indirectly through keeping the existing grade and permeable surfaces.*
- *It can help reduce carbon emissions by leaving the habitat to act as a carbon sink and allow natural processes to remove carbon dioxide from the atmosphere. Destroying native vegetation releases carbon stored in the plant material, soil and peat.*
- *When located in an area of wider primary habitat, wildlife corridors can be created connecting areas of a habitat that would have otherwise been isolated through development, allowing for the movement of animals and the continuation of viable populations.*

If the Development Control Board or Planning Department is minded to grant planning permission for the proposed subdivision, the DoE recommends the inclusion of the following condition in any planning permission to minimise impacts to this valuable habitat:

There shall be no land clearing, excavation, filling or development of the resultant parcels without planning permission for such works being granted."

Planning Analysis:

The application is for a two (2) lot subdivision of an 8.8 acre parcel at Glasgow St. Lot A will be 4.32 acres in size. Lot B will be 4.45 acres in size.

Decision: It was resolved to grant planning permission subject to the following:

1) A surveyor's drawing shall be submitted to the Planning Office for final approval.

The applicant will be reminded that clearing by mechanical means requires planning permission.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

5.02 MELINDA EBANKS, CBC BLOCK 102A PARCEL 237 (CB-P23-0075) ($10,000)

Application for an eight (8) lot subdivision.

Facts:

Location:	Bluff West Road
Parcel Size:	2.401 ac (104,587 sq ft)
Existing Use:	Vacant
Notices:	No written objections have been received.

Agency Comments:

Department of Environment:

"This review is provided by the Director of the Department of Environment (DoE) under delegated authority from the National Conservation Council (section 3 (13) of the National Conservation Act, 2013).

Ecological Overview

The application site consists of a mixture of primary xeromorphic semi-deciduous forest and primary dry shrubland habitat, along with man-modified areas (refer to Figure 1). Primary habitat is mature habitat in its natural state, otherwise uninfluenced by human activity where ecological processes are not significantly disturbed. These habitats are often very old, existing long before humans and may consist of many endemic and ecologically important species.

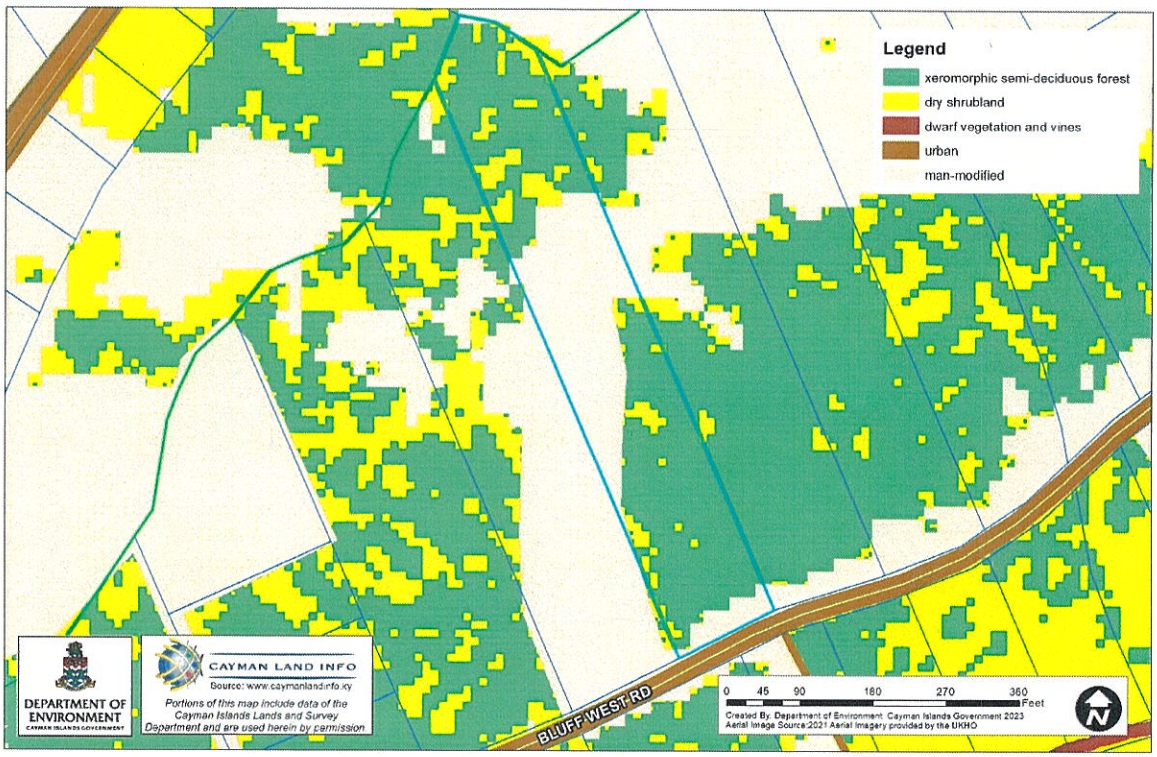

Figure 1: Landcover map for 102A237, outlined in blue (DoE, 2013)

Primary habitat is in severe decline and becoming a scarce and highly threatened resource as a result of land conversion for human uses. For this reason, the DoE does not support speculative or wholescale clearing of subdivision sites. In principle, land clearing should be reserved until the development of individual lots is imminent (through the granting of planning permission for development on those particular lots). This allows the opportunity for the individual lot owners to retain as much native vegetation as possible. Native vegetation is best suited for the habitat conditions of the site and requires less maintenance which makes it a very cost-effective choice.

Primary habitat can be retained and incorporated into subdivision plans to be utilised in a variety of ways. For example:

- *It can be retained along parcel boundaries and between buildings to serve as privacy buffers/screening.*
- *It can be incorporated into the landscaping schemes for low-maintenance low-cost landscaping.*
- *It can serve as an amenity, providing green space and shade for those who live nearby/on the property.*
- *It can assist with on-site stormwater management and drainage.*
- *It can remain as a habitat for endemic wildlife (helping contribute to the conservation of our local species).*

- *It can help cut back on carbon emissions by leaving the habitat to act as a carbon sink through avoiding its destruction and allowing natural processes to occur which assist with the removal of carbon dioxide in the atmosphere.*
- *When located in an area of wider primary habitat, wildlife corridors can be created connecting areas of a habitat that would have otherwise been isolated through development, allowing for the movement of animals and the continuation of viable populations.*

The proposed subdivision is also located directly adjacent to an area which is known to be important Cayman Brac Parrot (Amazona leucocephala hesterna) habitat. The Cayman Brac Parrot is a subspecies of parrot which is found nowhere else in the world. It is distinct from the Grand Cayman Parrot (Amazona leucocephala caymanensis) and is a Part 1 Schedule 1 Protected Species under the National Conservation Act (2013), meaning that it is protected at all times. The Cayman Brac Parrot is frugivorous (it eats fruits) but also forages on young leaves and flowers. It is a cavity nester and breeds only in mature dry forest (such as the primary forest that covers much of the site). They require large, hollowed-out spaces in trees to nest. This means they are dependent on a limited supply of existing cavities in forest trees to make their nests. Wholescale clearing of subdivision sites removes the possibility of any vegetation providing continued parrot habitat, nesting sites and food. These parrots are an important part of Cayman Brac's natural and cultural history, and together with the Grand Cayman Parrot, these birds serve as a symbol of national pride and natural resource conservation.

Parrots are a resilient species, but their small habitat range combined with climage change pressures and the increasing conversion of land for human uses mean that the long-term future of these birds depends on the ability to preserve these old growth forests and build sustainably. This further reiterates the importance of reserving land clearing until development of individual lots is imminent.

Strategic Overview

In the past the DoE has outlined in response to similar subdivision applications, that in the absence of a Development Plan providing a strategic framework for development, particularly large-scale proposals, the DoE strongly recommends that before determining this planning application, a comprehensive review of the 'need' for the subdivision of more parcels is undertaken.

The impact of a further residential subdivision on existing infrastructure and the environment of the island should be properly considered and evaluated. As shown in Figure 2 below, there were approximately 3,314 undeveloped subdivision lots under 2 acres in size on Cayman Brac in November 2021. Given

the number of subdivision applications which have been approved since this figure was last updated, the number of undeveloped subdivision lots has likely only increased. Figure 3 shows the proposed subdivision in relation to the similar, yet undeveloped subdivisions that make up much of the surrounding area.

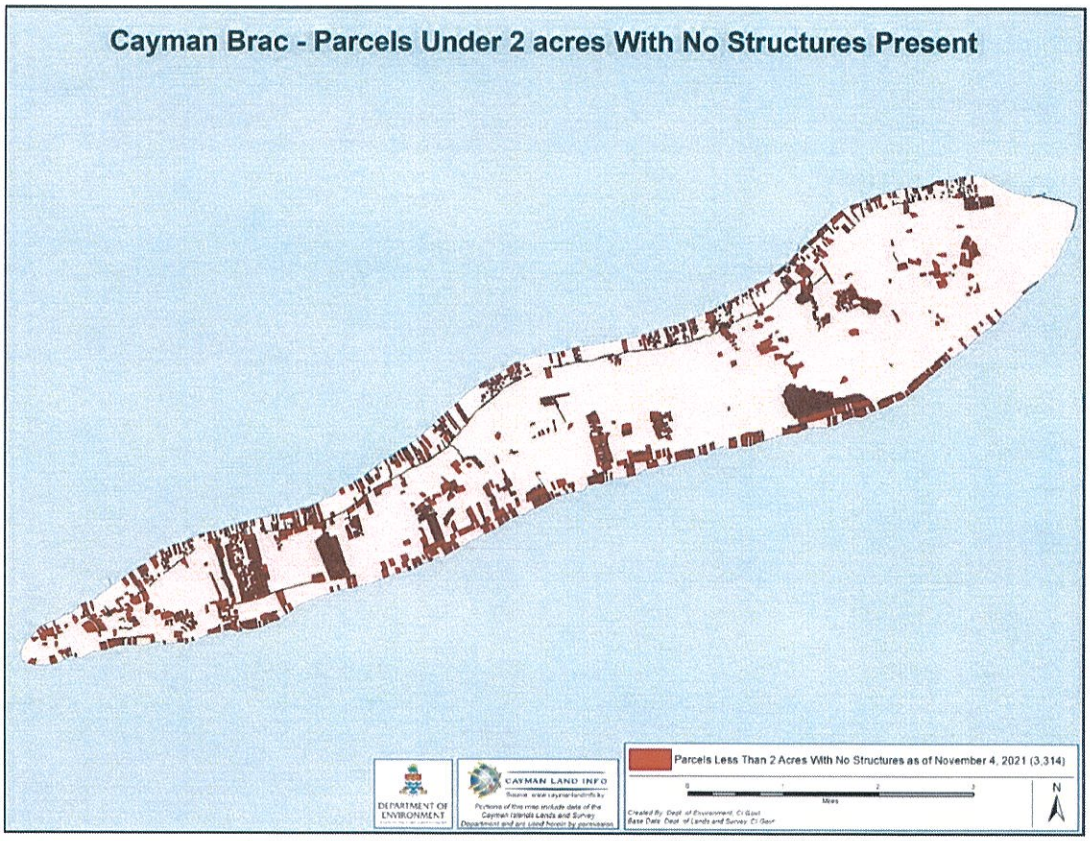

Figure 2: Parcels under 2 acres with no structures present as of 04 Nov. 2021 (DoE, 2021)

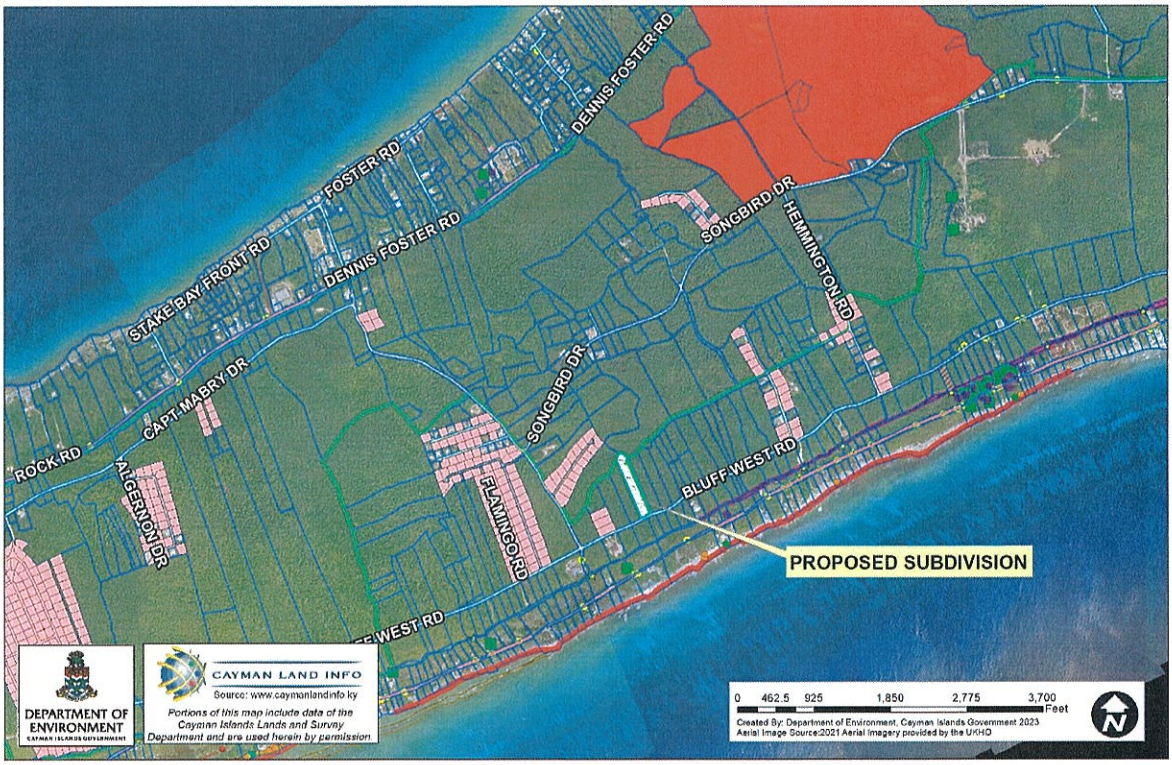

Figure 3: Location of the proposed subdivision in relation to surrounding, undeveloped subdivided parcels (as of 2021) highlighted in red. The green outline shows the location of known nesting habitat for the Brac Parrot, whereas the dark red area denotes land designated as a protected area under the National Conservation Act (DoE, 2023)

The overall impact on the infrastructure and population of Cayman Brac should be considered given the scale of the existing parcellation of the island. Hypothetically, should each of the 3,314 subdivision parcels be developed for housing, this could result in a population increase of 6,620+ people for Cayman Brac. This would more than triple the current combined population of the Sister Islands, taking the estimated population from 2,257[2], to 8,877+ people (working on an estimate of two persons per household). With nearly four times as many inhabitants, there would be significant pressure on the infrastructure and amenities on the island, which should be assessed within the context of a Development Plan for the island. Against this background, the need for further residential housing development lots should be robustly justified.

If there is no intention to develop these lots, then there is no social benefit or improved living environment for the people of Cayman Brac to set against the

[2] Source: Economics and Statistics Office (ESO), Population and Demographics 2021. Kindly note that the 2021 population statistics did not separate Little Cayman and Cayman Brac's populations but rather grouped them together. The population number referenced is for the two Sister Islands combined. In addition, the 2022 population for Cayman Brac or the Sister Islands was not available from the ESO website at the time of writing this review.

environmental harm occurring from habitat fragmentation and loss, as well as the resource implications that result from the construction of roads and development of infrastructure for these subdivisions. There are environmental consequences from the continued approval of these subdivisions:

- *The construction of the roads creates the direct loss of habitat by clearing and filling.*
- *The presence of the roads creates habitat fragmentation, which is a key driver of biodiversity loss because it makes natural areas smaller and more isolated from each other.*
- *The road provides easier access for invasive species such as rats, cats and dogs.*
- *There are 'edge effects' where the area directly next to the road is degraded by the presence of the roads. There are barriers to moving between fragments of habitat, changes to the community composition and changes to aspects such as climate, sunlight, nutrients, and microclimate.*
- *The development of the resultant lots increases the above effects and increases the direct loss of habitat, habitat fragmentation, presence of invasive species, and impacts to surrounding areas.*
- *Issues with resource use with partially-developed, sprawled subdivisions serving only a small number of people.*

DoE Recommended Conditions

For reasons highlighted throughout this review, the DoE does not support the approval of this application. Should the Development Control Board or Planning Department be minded to grant planning permission for the proposed subdivision, the DoE recommends the inclusion of the following conditions in the Planning approval to conserve primary habitat and its ecosystem services until development has been approved and is imminent:

- *There shall be no land clearing, excavation, filling or development of the resultant parcels without planning permission for such works being granted.*

- *Any future development, clearing, filling or excavation of the resultant subdivided parcels shall be the subject of a separate consultation with the Development Control Board and National Conservation Council."*

Planning Analysis:

The application is for an eight (8) lot subdivision at Bluff West Road. Seven (7) lots are for future development. The eighth lot will be a road. The lots for future development will be a minimum of 112.8 ft wide and 10,833 sq ft. The largest lot will be 14,556 sq ft.

Decision: It was resolved to grant planning permission subject to the following:

1) A surveyor's drawing shall be submitted to the Planning Office for final approval.

The applicant will be reminded that clearing by mechanical means requires planning permission.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

5.03 RONDA MILLER, CBC BLOCK 102A PARCELS 207, 277 REM 2 & 323 (CB-P23-0085) ($10,000)

Application for a combination/subdivision.

Facts:

Location:	Old Farm Road
Parcel Size:	Parcel 207, 5.6 ac Parcel 277 Rem 2, 1.535 ac Parcel 323, .6915 ac
Existing Use:	Vacant
Notices:	No written objections have been received.

Agency Comments:

Department of Environment:

"This review is provided by the Director of the Department of Environment under delegated authority from the National Conservation Council (section 3 (13) of the National Conservation Act, 2013).

Site Overview

The application site consists of primary and secondary xeromorphic semi-deciduous forest. The site is also partly located in an area which is known to be important Cayman Brac Parrot (Amazona leucocephala hesterna) habitat and is in close proximity to the Sister Island Rock Iguana plateux as shown in Figure 1.

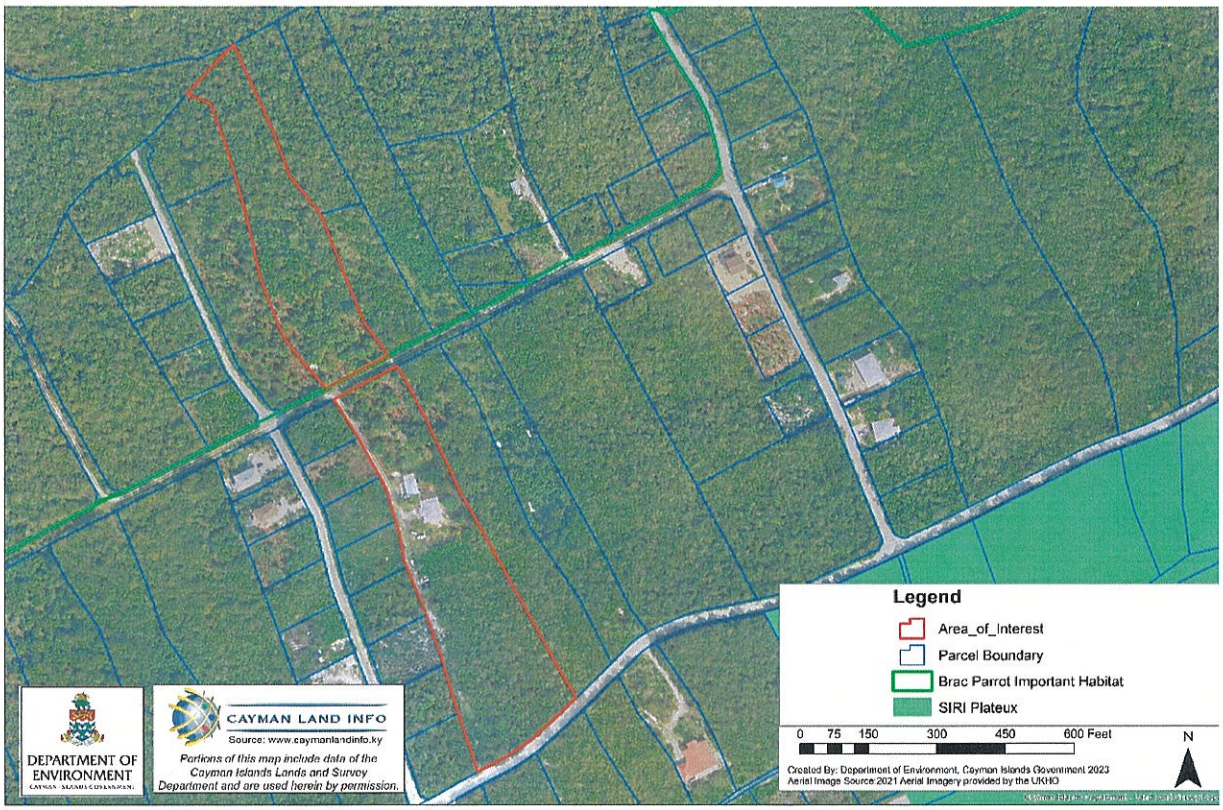

Figure 1: The application site outlined in red in relation to important habitat for Cayman Brac Parrot and the Sister Islands Rock Iguana plateux (Image Source: UKHO, 2021).

*We note that the application is for a subdivision, we would **not** support the clearing of this site at this time. Land clearing should be reserved until the development of individual lots is imminent (through the granting of planning permission for development on those particular lots). This allows the opportunity for the individual lot owners to retain as much native vegetation as possible. Clearing the entire site prematurely removes the choice from the individual lot owners and removes the value the habitat could provide in the time between the preparation of a subdivision and the development of an individual lot.*

SAB 045

Primary habitat and native vegetation can be retained and used in a variety of ways on a property:

- *It can be retained along parcel boundaries and between buildings to serve as privacy, noise and sound buffers and screening.*
- *It can be incorporated into the landscaping schemes for low-maintenance low-cost landscaping. Native plants are best suited for the conditions of the site, including the temperature and amount of rainfall. They are climate-appropriate and require less maintenance and irrigation.*
- *It can serve as an amenity, providing green space and shade for those who live nearby or on the property.*
- *It can remain as a habitat for endemic wildlife such as anoles, birds and butterflies. This habitat helps to contribute to the conservation of our local species.*
- *It can assist with drainage, directly through breaking the momentum of rain, anchoring soil, and taking up of water and indirectly through keeping the existing grade and permeable surfaces.*
- *It can help reduce carbon emissions by leaving the habitat to act as a carbon sink and allow natural processes to remove carbon dioxide from the atmosphere. Destroying native vegetation releases carbon stored in the plant material, soil and peat.*
- *When located in an area of wider primary habitat, wildlife corridors can be created connecting areas of a habitat that would have otherwise been isolated through development, allowing for the movement of animals and the continuation of viable populations.*

Sister Islands Rock Iguanas (SIRI)

The proposed subdivision is in close proximity to the Sister Islands Rock Iguana plateaux, which is an area of a high density of confirmed nests and retreats. The site may support and provide habitat for Sister Islands Rock Iguanas in this area. Sister Islands Rock Iguanas are listed in Part 1 of Schedule 1 to the National Conservation Act, 2013, as being 'protected at all times' and are also listed as ***critically endangered*** *on the IUCN Red List. They are only found on the Sister Islands and nowhere else in the world.*

Jackhammering and operating heavy machinery is not safe for nesting iguanas. Construction works not only disturb the physical iguana nesting habitat but heavy machinery and associated works can crush or bury iguanas and their nests. The DoE does not support the wholescale clearing of subdivision sites or speculative clearing. The clearing and filling of the site could bury iguanas or their nests. If the applicant decides to clear and fill any part of the site, it should be subject to a separate planning application and not take place between 1st May and 30th September each year.

Cayman Brac Parrot

The Cayman Brac Parrot is a subspecies of parrot which is found nowhere else in the world. It is distinct from the Grand Cayman Parrot (Amazona leucocephala caymanensis) and is a Part 1 Schedule 1 Protected Species under the National Conservation Act (2013), meaning that it is protected at all times. The Cayman Brac Parrot is frugivorous (meaning it eats fruits) but also forages on young leaves and flowers. It is a cavity nester and breeds only in mature dry forest habitat such as that on the site. They require large, hollowed-out spaces in trees to nest. This means they are dependent on a limited supply of existing cavities in forest trees to make their nests. Wholescale clearing of subdivision sites removes the possibility of any vegetation providing continued parrot habitat, nesting sites and food. These parrots are an important part of Cayman Brac's natural and cultural history, and together with the Grand Cayman Parrot, these birds serve as a symbol of national pride and natural resource conservation.

Parrots are a resilient species, but their small habitat range combined with climate change pressures and the increasing conversion of land for human uses mean that the long-term future of these birds depends on the ability to preserve these old growth forests and build sustainably. This further reiterates the importance of reserving land clearing until development of individual lots is imminent.

Conclusion

If the Development Control Board or Planning Department is minded to grant planning permission for the proposed subdivision, the DoE recommends the inclusion of the following condition in any planning permission to minimise impacts to this valuable habitat:

There shall be no land clearing, excavation, filling or development of the resultant parcels without planning permission for such works being granted."

Planning Analysis:

The application is to combine three parcels at Old Farm Road (approximately 830 ft west of Hemmington Rd.) and subdivide into five (5) parcels. Parcels A, B, C & D will be 1.161 acres each. The fifth parcel will be 3.730 acres in size.

Decision: It was resolved to grant planning permission subject to the following:

1) A surveyor's drawing shall be submitted to the Planning Office for final approval.

The applicant will be reminded that clearing by mechanical means requires planning permission.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

6.0 NEW APPLICATIONS

6.01 MILLIE BODDEN, CBE BLOCK 106A PARCEL 24 (CB-P23-0088) ($64,000)

Application for a house.

Facts:

Location:	Charlottes Rd
Parcel Size:	.67 ac (29,185 sqft)
Proposed Use:	Residential
Existing Bldg Size:	1,414 sq ft
Building Size:	373 sq ft
Existing Footprint:	1,145 sq ft
Bldg Footprint:	373 sq ft
Site Coverage:	5.2%
Required Parking Spaces:	6
Proposed Parking Spaces:	6
Notices:	No objections received.

Background:

At DCB/13/21 (9th November 2021) a two storey duplex (CB-P23-0060) was approved at the subject parcel.

Agency Comments:

Department of Environment:
"This review is provided by the Director of the Department of Environment (DoE) under delegated authority from the National Conservation Council (section 3 (13) of the National Conservation Act, 2013).

Site Overview

The site is partly man-modified with regrowth and partly consists of primary xeromorphic semi-deciduous forest habitat.

Advice to the Applicant

Retaining primary and native vegetation even in a predominantly man-modified area can still provide benefits to the property owner and the surrounding area. For example, retaining vegetation can:

- *Provide habitat and food for wildlife such as birds and butterflies, promoting biodiversity and providing valuable ecosystem services,*
- *Provide sound and privacy buffers from the road and neighbouring properties/developments,*
- *Provide mature vegetation which can enhance landscaping and immediately offer shade,*
- *Assist with the management of run-off and drainage, and*
- *Reduce carbon emissions by leaving the habitat to act as a carbon sink through avoiding its destruction and allowing natural processes to occur which assist with the removal of carbon dioxide in the atmospherethe amount of greenhouse gas emissions.*

Therefore, we recommend that the applicant only clears and fill the development footprint. For the avoidance of doubt and in line with the Building Research Establishment (BRE) Group definition of development footprint, this contains the development, landscaped area and amenity spaces.

We also recommend that native plants are incorporated into the landscaping scheme. Native plants are best suited for the conditions of the site, including the temperature and amount of rainfall. They are climate-appropriate and require less maintenance and irrigation. Landscaping with native vegetation also provides ecological benefits by creating habitat and food for native fauna such as birds and butterflies, promoting biodiversity and providing valuable ecosystem services.

We recommend that the applicant incorporates Sustainable Drainage Systems (SuDS) into the stormwater management plan for the site. SuDs are drainage

solutions that provide an alternative to the direct channeling of surface water through pipes and deep wells. By mimicking natural drainage regimes, SuDS aim to reduce surface water flooding, improve water quality and enhance the amenity and biodiversity value of the environment. SuDS achieve this by lowering flow rates, increasing water storage capacity, and reducing the transport of pollution to the water environment. Measures could include permeable and sustainable materials within the parking area.

The applicant may also wish to consider leaving some areas of landscaping at the existing grade and using porous or permeable surfaces in areas of hardstanding including driveways and parking areas. Keeping permeable surfaces will allow for rainwater infiltration and assist with stormwater management.

Advice to the Development Control Board

Best management practices should be adhered to during construction to reduce impacts on the environment. In particular, control measures should be put in place to address pollution from expanded polystyrene (EPS) beads on construction sites, for example, those used in insulating concrete forms (ICF). Polystyrene is not biodegradable, and the EPS beads can be consumed by wildlife when it enters the food chain. These beads are very difficult to remove once they enter the environment and they do not naturally break down.

If the Development Control Board or Planning Department is minded to grant planning permission for the proposed development, the DoE recommends the inclusion of the following condition in any planning permission:

> *If the construction uses insulating concrete forms (ICF) or other polystyrene materials, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris are completely captured on-site and does not enter the nearby water bodies or impact the surrounding areas."*

Planning Analysis:

Application is for a 373 sq ft, one (1) bedroom house. All typical setback requirements are met.

Decision: It was resolved to grant planning permission subject to the following:

Conditions (1-4) must be completed prior to the start of construction:

1) The applicant shall obtain approval of construction details from the Building Control Unit.

2) The applicant shall obtain plumbing approval from the Building Control Unit.

3) The applicant's Electrician shall obtain electrical approval from the Building Control Unit.

4) The applicant shall obtain a liquefied gas permit from the Building Control Unit (if applicable).

5) The confirmation of the Planning Office must be obtained, in writing, verifying compliance with the conditions described above prior to the start of construction.

The applicant will be reminded that all inspections shall be conducted and approved prior to occupancy of the buildings.

If during construction of the building insulating concrete forms (ICFs) are used, measures such as screens or other enclosures along with vacuuming shall be put in place to ensure that any shavings or foam waste is completely captured on site and does not impact the surrounding area.

Prior to undertaking any sanding or breaking down of polystyrene as part of the construction process, measures (such as screens or other enclosures along with vacuuming) shall be put in place to ensure that any shavings, foam waste or polystyrene debris is completely captured on-site and does not impact the surrounding areas.

The applicant will be advised that this approval is in effect for five (5) years only and will expire if a building permit is not issued during this time. If the applicant wishes to reinstate the approval after this period, a new application must be submitted to the Planning Department along with required fees.

Reasons for the decision:

1) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.

2) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

7.0 OTHER MATTERS

7.01 **TRICIA BODDEN, CBC BLOCK 101B PARCEL 54 (CB-P23-0035)**

Application for clearing.

Facts:

Location:	Driftwood Drive
Parcel Size:	.47 ac (20,473 sq ft)

Background:

At DCB/06/23 (3rd May 2023) it was resolved to adjourn the application until an application for construction, as referenced in the applicant's letter, is submitted.

Agency Comments:

Department of Environment:

"The application site is man-modified with regrowth of vegetation. The DoE notes that there is currently no permission for development on the site.

We recommend that applications for land clearing are presented along with the development proposal so that appropriate mitigation measures can be recommended, as there may be varying recommendations depending on the form and nature of the development being proposed. Clearing the site prematurely removes the choice to retain native vegetation for use in future development.

Once planning permission for development has been received, the DoE encourages applicants not to undertake land clearing until development is imminent to allow ecosystem services to continue to function until they are ready to begin construction. Premature clearing removes the value the habitat could provide in the time between the clearing and the actual development of the parcel. Retaining vegetation can provide benefits to the property owner and the surrounding area. For example, retaining vegetation can:

- *Provide habitat and food for wildlife;*
- *Provide sound and privacy buffers from the road and neighbouring properties/developments;*
- *Provide mature vegetation which can enhance landscaping and immediately offer shade;*
- *Assist with the management of run-off and drainage; and*
- *Reduce the amount of greenhouse gas emissions by avoiding the unnecessary clearing of land which releases carbon dioxide into the atmosphere.*

On the coast, in particular, vegetation can also assist in stabilizing the shoreline and reducing erosion. Once vegetation has been cleared, it often results in wind-borne erosion of the land and general coastal erosion. For this reason, it is in the applicant's best interest to retain as much native vegetation as possible and incorporate it into the landscaping scheme. The applicant has noted that there are sea grapes on the site which are a native species. Native species are best suited for the conditions of the site, including the temperature and amount of rainfall. They are climate-appropriate and require less maintenance and irrigation. For example, coastal vegetation is salt and wind-tolerant. Landscaping with native vegetation also provides habitat and food for native fauna such as birds and butterflies, promoting biodiversity and providing valuable ecosystem services.

The DoE recommends that the application is refused or deferred until a proposal for the development or use of the land has been applied for and planning permission has been granted. *No clearing should take place until planning permission for land clearing, site works or development has been granted and those works are imminent."*

Applicant's Letter

"Having recently purchased the property (CYB 101B 54), and received Cayman Brac Stamp Duty Concession, plans to prepare the property to build a cottage are progressing. To build on the property will necessitate clearing the land using heavy equipment as trees are too large to use just a machete. The intention is to clear large Casuarina trees that would endanger the proposed cottage if felled, and overgrown grape trees that would inhibit the building of the cottage and landscaping of the property."

Planning Analysis:

The applicant proposes to remove mature Casuarina trees and sea grape trees from the referenced parcel.

Decision: It was resolved to grant planning permission.

Reasons for the decision:

1) Planning permission has been granted for a house on the subject parcel.
2) The Board considered all information contained in the Agenda including agency comments, any objections and any other representations made pertaining to the application.
3) The proposed development complies with typical planning parameters required by the Development Control Board as guided by the Development and Planning Regulations (2021 Revision).

8.0 ENFORCEMENT

9.0 MATTERS FROM THE PLANNING DEPARTMENT

9.01 **Block 95B Parcel 128 Rem 1 & Parcel 129 Simmons Estate Subdivision-** Cayman Survey Associates has advised that the paving of the road for this subdivision has stopped at the beach ridge instead of the HWM. The "Hammerhead" will be located between Lots E & F. The Board had no objections.

10.0 DCB MEMBERS INFORMATION /DISCUSSION

The meeting adjourned at 1:15 PM. The next meeting is scheduled for Tuesday, 16th January at 9:00 am at the Annex Conference Room, Cayman Brac.

Chairman

Executive Secretary

Attachment for CB. P23-0051 p. 13

NATIONAL ROADS AUTHORITY

TO: **DIRECTOR OF PLANNING**
FROM: MANAGING DIRECTOR (MLP)
DATE: NOVEMBER 29TH 2023
OUR REF: RDS/DEV/107A **YOUR REF:CB-P23-0051**

SUBJECT: Proposed New Cayman Brac High School and Accomodation Block on Block 107A Parcel 32 & 111 – Sunshine Drive

As per your memo dated November 3rd 2023 the NRA has reviewed the above-mentioned planning proposal. Please find below our comments and recommendations based on the site plan provided.

General Issues

- Please have the applicant provide a southbound turning lane approximately 100ft in length on Sunshine Drive;
- What will be the nature of the access from Major Donald Drive?;
- Will the applicant be providing an internal road access between the proposed and existing sight; and
- Please have the applicant comply with the below sight line specifications as per NRA Subdivision guidelines at both intersections, in particular the existing one at Coach Jerry Harper Blvd.

4.6.3 SIGHT DISTANCE:

The minimum intersection sight distances as measured from a point 15 feet back along the centreline of the minor road and three and one half feet (3 1/2') above the road surface shall be one-hundred and fifty feet (150') and, two-hundred and thirty feet (230') for major road speed limits of 25 MPH and 30 MPH respectively, as measured along the near edge of the running carriageway. Vertical stopping sight visibility shall be a minimum of 200', with an observer height of 3.5' and an object height of 6", for design speeds of 25mph and 30mph.

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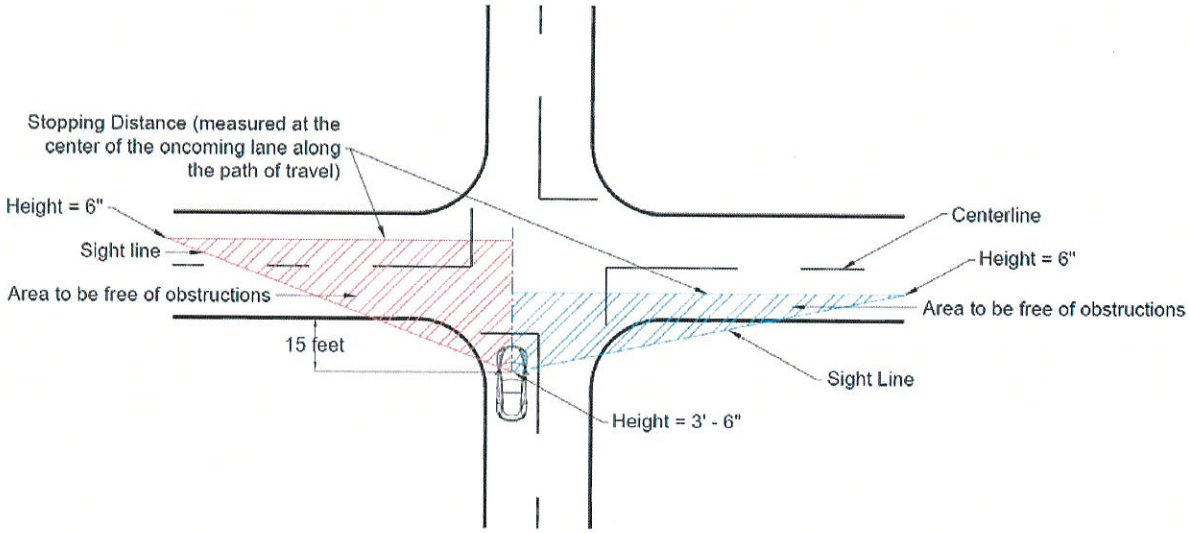

Road Capacity Issues

The traffic demand to be generated by the Proposed New Cayman Brac High School of 51,889 sq. ft. has been assessed in accordance with ITE Code 530 – High School. Thus, the assumed average trip rates provided by ITE for estimating the daily, AM and PM peak hour trips are 12.89, 3.06 and 0.97 respectively.

The Accommodation Block of 14,106sq. ft. could not be accurately assessed as it is noted that the building would be utilized by the construction workers as the high school is being built. Once the high school is completed it would then be used as accommodation for visiting athletes. Therefore the traffic impact would be insignificant.The anticipated traffic to be added onto Sunshine Drive is as follows:

Expected Daily Trip	AM Peak Hour Total Traffic	AM Peak 71% In	AM Peak 29% Out	PM Peak Hour Total Traffic	PM Peak 54% In	PM Peak 46% Out
776	184	131	53	58	32	27

Based on these estimates, the impact of the proposed development onto Sunshine Drive is considered to be minimal.

Access and Traffic Management Issues

One-way driveway aisles with diagonal parking shall be a minimum of twenty (20) ft wide.

Two-way driveway aisles shall be a minimum of twenty-two (22) ft. wide.

Entrance and exit curves shall have no less than fifteen (15) feet radius curves, and have a width of twenty-four (24) ft.

Tire stops (if used) shall be placed in parking spaces such that the length of the parking space is not reduced below the sixteen (16) feet minimum.

Stormwater Management Issues

The applicant is encouraged to implement state-of-the-art techniques that manage stormwater runoff **within the subject parcel** and retain existing drainage characteristics of the site as much as is feasible through innovative design and the use of alternative construction techniques. However, it is critical that the development be designed so that post-development stormwater runoff **is no worse than** pre-development runoff. To that effect, the following requirements should be observed:

- The applicant shall demonstrate, prior to the issuance of any Building Permits, that the Stormwater Management system is designed to embrace storm water runoff produced from a rainfall intensity of 2 inches per hour for one hour of duration and ensure that surrounding properties and/or nearby roads are not subject to stormwater runoff from the subject site.
- The stormwater management plan shall include spot levels (existing and finished levels) with details of the overall runof scheme. Please have the applicant provide this information prior to the issuance of a building permit.
- Construct a gentle 'hump' at the entrance/exit (along the entire width of each driveway) in order to prevent stormwater runoff from and onto Sunshine Drive. Suggested dimensions of the 'hump' would be a width of 6 feet and a height of 2-4 inches. Trench drains often are not desirable.
- Curbing is required for the parking areas to control stormwater runoff.
- Roof water runoff should not drain freely over the parking area or onto the surrounding property. Note that unconnected downspouts are not acceptable. We recommend piped connection to catch basins or alternative stormwater detention devices. Catch basins are to be networked, please have the applicant provide locations of such wells along with details of depth and diameter prior to the issuance of any Building Permits.
- Sidewalk detail needs to be provided as per NRA specifications. See (https://www.caymanroads.com/upload/files/3/Sidewalk%20&%20Curbing%20Details.pdf)

At the inspection stage for obtaining a Certificate of Occupancy, the applicant shall demonstrate that the installed system will perform to the standard given. The National Roads Authority wishes to bring to the attention of the Planning Department that non-compliance with the above-noted stormwater requirements would cause a road encroachment under Section 16 (g) of The Roads Act (2005 Revision). For the purpose of this Act, Section 16(g) defines encroachment on a road as

> *"any artificial canal, conduit, pipe or raised structure from which any water or other liquid escapes on to any road which would not but for the existence of such canal, conduit, pipe or raised structure have done so, whether or not such canal, conduit, pipe or raised structure adjoins the said road;"*

Failure in meeting these requirements will require immediate remedial measures from the applicant.

Should you have any questions, please do not hesitate to contact the undersigned.

National Roads Authority
1:41 pm, Nov 29 2023
Transportation Planning Unit
MLP

Transportation Planning Unit
For Managing Director

Attachment A

CHALMERS GIBBS

13th December 2023

Planning Department
Cayman Islands Government
Po Box 235
Cayman Brac KY2-2101
Cayman Islands
1(345) 244-4422

Re: Two (2) Workers' Accommodation Bldgs, High School & Gymnasium, CBE Block 107A Parcels 32 & 111 (CB-P23-0051)

Dear Andrea Stevens,

Further to discussions had at the meeting held on the 25th of September and your subsequent letter of ref: *DCB/13/23 CB-P23-0051 Ministry of Education high school (adjourn)* we can respond to each of the points made within the letter as below:

1. Where it relates to the matters raised by the DCB seeking input from the department of Agriculture:

   Response: The Department of Agriculture plan review approval was received on the 22nd of November.
   Comments note that the area would only be suitable for limited traditional small-scale production.
   Further to the comments received at meeting held on the 25th of September regarding the red mole that is present on the site we can confirm that the project will harvest and stockpile any material prior to any excavation works.
   The red mole that is harvested is scheduled to be re-used within the proposed agricultural area and across the proposed landscaping areas that forms part of the exterior works for the school project.
   Any surplus is to be stockpiled and made available as designated by the property owner.

2. Where it relates to the matters raised by the DCB seeking input from the National Road Authority:
   We confirm receipt of signed comments letter from NRA ref: RDS/DEV/107A received on the 2nd of December.

   See outlined below our responses to the points listed under General issues:

   - ***Southbound turning lane:***

     Response: We acknowledge receipt of the NRA comments and recommendations regarding a 'southbound turning lane' and confirm agreement to incorporate recommendations made within a revised site plan to be developed in direct consultation with the National Roads Authority.

   - ***Nature of access from Major Donald Drive:***

     Response: There is no proposed change in nature of travel from the Major Donald Dr, all existing access roads are retained and the accommodation blocks within proposals are in line with original masterplan proposals.

   - ***Internal access road between the proposed and existing site:***

     Response: The project proposal incorporates a pedestrian access only between the New School and GYM site and the existing Cayman Brac Multi Sports hall.

   - ***Site line specifications:***

     Response: Further to the recommendations received by NRA we can confirm agreement to incorporate the sight line specifications as per NRA subdivision guidelines.

   Stormwater Management Issues:
   The Stormwater management plan for the project has been developed and will be further detailed as part of the Stage 4 Technical Design package. This package encompasses all the details related to the Stormwater Management plan, indicating spot levels and run-offs, capturing of roof water runoff, curbing and sidewalk details as outlined.

3. Section 41 (3) of the National Conservation Law

> (3) Every entity shall, in accordance with any guidance notes issued by the Council, consult with the Council and take into account any views of the Council before taking any action including the grant of any permit or licence and the making of any decision or the giving of any undertaking or approval that would or would be likely to have an adverse effect on the environment generally or on any natural resource.

Response: AMR Consulting Engineers carried out a Stage 1 Environmental Impact Assessment (attached for reference) for the proposed new Cayman Brac High School with a view to identify any environmental factors that may have an impact on the proposed preferred site for the NCBHS Site. As part of the preparations for this report AMR contacted the Department of the Environment of the Cayman Islands and the following comments were included in the EIA. Refer to items 5.2, 5.3, 5.4 and 5.5 of the consultants EIA.

This confirms that the NCBHS is not located within a protected area, and the DOE are not aware of any Part 1 protected species at the site.

4. Section 2 (a - l) of the National Conservation Law:

Please refer to the attached report from AMR file name CB-P23-0051 DCB NCL LETTER

We trust this answers the items identified in your letter.

Kind Regards,

Luiza Dawson

Attachment: *EIA PHASE 1 REPORT - Rev A.pdf*
CB-P23-0051 DCB NCL LETTER.pdf

Dist: Mr Wayne Riley (MPO - PWD), Mr. Haroon Pandohie (CPA)

Attachment B

CB-P23-0051 DCB NCL LETTER

AMR CONSULTING ENGINEERS
Unit 219, Cannon Place
North Sound Road
P.O. Box 10962
Grand Cayman KY1-1007
Cayman Islands
Telephone: (345) 949-2716

Date: 13th December 2023
Project #: AMR 13940

PROJECT: **NEW CAYMAN BRAC HIGH SCHOOL ON CAYMAN BRAC**
CB-P23-0051 NATIONAL CONSERVATION LAW SECTION 2 (A-1)
CAYMAN BRAC, GRAND CAYMAN, CAYMAN ISLANDS
BLOCK: 107A PARCEL: 32 & 111

1. BACKGROUND

1.1. As outlined in the attached *CB-P23-0051 Ministry of Education HS (adjourn)* letter the Cayman Brac Development Control Board (hereafter 'DCB') *"resolved to invite the applicant to address the Board regarding potential adverse effects of the proposal, as defined in Section 2 (a-1) of the NCA (National Conservation Act)."*

1.2. The DCB adjourned the Planning Review for the proposed New Cayman Brac High School and Accommodation Block (hereafter 'NCBHS') pending applicant responses.

2. SECTION 2 (A-L) OF THE NATIONAL CONSERVATION ACT (2013)

2.1. In this Law — "adverse effect" means an effect that may result in the physical destruction or detrimental alteration of a protected area, a conservation area, an area of critical habitat or the environment generally and includes —

a) alterations that may impair the capacity of the area to function as a habitat beneficial to wildlife.
b) development that may increase the potential for damage to the area from floods, hurricanes or storms.
c) alterations of salinity levels, nutrient balance, oxygen concentration or temperature that may be harmful to wildlife or the ecological or aesthetic value of the area.
d) alterations of hydrology, water flow, circulation patterns, water levels or surface drainage that may be harmful to wildlife or the ecological or aesthetic value of the area or that may exacerbate erosion.
e) alterations that may interfere with the public use and enjoyment of the area.
f) the discharge of pathogens, dissolved or suspended minerals or solids, waste materials or other substances at levels that may be harmful to wildlife or the ecological or aesthetic value of the area.
g) changes in littoral or sediment transport processes that may alter the supply of sediment available for those processes or that may otherwise exacerbate erosion.
h) alterations that may increase losses of the area from a rise in the sea level with respect to the surface of the land, whether caused by an actual sea level rise or land surface

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subsidence.

i) emissions of air pollutants at levels that may impair the air quality of the area.
j) alterations that may hinder or impede the movement or migration of wildlife.
k) alterations that may impair the capacity of a beach ridge to function as a protective barrier and as a reserve of sand for beach nourishment during storms; and
l) alterations that may impair the capacity of the area to act as a sink or reservoir of greenhouse gases or enhance its potential as a source of greenhouse gases.

3. **SECTION 2 (A-L) OF THE NATIONAL CONSERVATION ACT (2013): REVIEW & MITIGATION MEASURES**

3.1. See below for AMR responses.

a) NCA Section 2 Point a: alterations that may impair the capacity of the area to function as a habitat beneficial to wildlife.
3.1.a.1. **AMR Risk Assessment:** Medium
3.1.a.2. **AMR Response:** As outlined within the *2023-07-31_ CB-P23-0051_Final DoE NCC Planning Review* letter the *"accommodation block has been set within a man-modified area that appears to have been mostly cleared and is of limited ecological value. The new school is within a partially man-modified area with extensive regrowth."*

Additionally, the proposed NCBHS development is set *"within an area know to be important to the Cayman Brac Parrot, a Part 1 Schedule 1 protected Species under the National Conservation Act (2013)."*

To mitigate the effects of the proposed development on the Cayman Brac Parrot it is the intention of the client to limit the clearing works to the proposed infrastructure footprint. Additionally, it is the intention of the client to retain the mature trees, where possible, to provide nesting cavities for the Cayman Brac Parrot.

As outlined within the *20230603 AMR13940 NLSHS Environmental Assessment Rev A* Report *Section 6 Ecological Site Survey: Notable Flora*, subsection *6.4*, this practice recommended the following flora for removal and transplant due to the flora species uniqueness to the Cayman Islands, or rare field identification for Cayman Brac:

1. Agave (A. caymanensis) – Mature
2. Pingwing (Bromelia Pinguin) – Rare for Cayman Brac
3. Silver Thatch Palm (C. proctorii) – Young Tree

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b) NCA Section 2 Point b: development that may increase the potential for damage to the area from floods, hurricanes, or storms.
3.1.b.1. **AMR Risk Assessment:** Low
3.1.b.2. **AMR Response**: The proposed NCBHS development site is located on the eastern side of Cayman Brac, atop the Cayman Brac Bluff Formation. The proposed NCBHS development site is shown below on Figure 1.

Figure 1 - Site Location on Google Earth Pro 2022 Aerial Imagery

With site elevations ranging from approximately +75ft. AMSL in the north to +69ft. AMSL in the south, coupled with the inland location of the proposed site, it is the opinion of this practice that the risk of flooding on the site is minimal and the proposed development will not increase the potential for damage to the area during storm events.

Moreover, due to the site's elevation and location, the proposed NCBHS development has been structurally designed, and will be utilized as, a hurricane shelter during hurricanes and storm events.

As typical with any site all loose materials, debris, installations should be secured ahead of storm events.

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c) NCA Section 2 Point c: alterations of salinity levels, nutrient balance, oxygen concentration or temperature that may be harmful to wildlife or the ecological or aesthetic value of the area.
3.1.c.1. **AMR Risk Assessment:** Low
3.1.c.2. **AMR Response:** Due to the karsts and cavities characteristic of the Cayman Brac Bluff Formation Limestone it is assumed that site ground water levels are the same as the coastal sea levels. It is expected that the site ground water levels are tidally influenced.

As outlined in section 3.1.b.2 site levels are approximately +75ft. AMSL in the north to +69ft. AMSL.to the south. As such site ground water levels will not be affected by surface construction works and associated construction runoff.

d) NCA Section 2 Point d: alterations of hydrology, water flow, circulation patterns, water levels or surface drainage that may be harmful to wildlife or the ecological or aesthetic value of the area or that may exacerbate erosion.
3.1.d.1. **AMR Risk Assessment:** Low
3.1.d.2. **AMR Response:** Currently the existing site is only subject to surface drainage due to stormwater from rainfall events. Once constructed the NCBHS will also only be subject to surface drainage due to stormwater from rainfall events.

As such deep wells, constructed to Cayman Islands National Roads Authority standards, will be installed throughout the site to direct the stormwater into the ground and contain all runoff within the site.

The installed deep wells will not adversely affect the subsurface water flow or circulation patters.

e) NCA Section 2 Point e: alterations that may interfere with the public use and enjoyment of the area.
3.1.e.1. **AMR Risk Assessment:** Low
3.1.e.2. **AMR Response:** The proposed site is currently undeveloped, although portions have been cleared historically and used as farmland. As such the site is not currently accessed by the public for general use.

It is the opinion of this practice that the construction of access roads throughout the site, and the construction of recreational facilities to be used by the students will enhance public use and enjoyment of the area.

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f) NCA Section 2 Point f: the discharge of pathogens, dissolved or suspended minerals or solids, waste materials or other substances at levels that may be harmful to wildlife or the ecological or aesthetic value of the area.
3.1.f.1. **AMR Risk Assessment:** Low
3.1.f.2. AMR Response: To mitigate the discharge of pathogens, dissolved or suspended minerals or solids, waste materials or other substances into the environment the following construction standards will be followed:
1. Proposed septic tanks and wastewater treatment facilities will be designed and constructed to Cayman Islands Water Authority Standards.
2. Discharge wells connected to the septic tanks and wastewater treatment facilities will be design and constructed to Cayman Islands Water Authority Standards.
3. All storm water deep wells will be designed and constructed to Cayman Islands National Roads Authority standards.
4. All garbage enclosure deep wells (i.e. effluent deep wells) to be constructed to Department of Environmental Health Standards.

g) NCA Section 2 Point g: changes in littoral or sediment transport processes that may alter the supply of sediment available for those processes or that may otherwise exacerbate erosion.
3.1.g.1. **AMR Risk Assessment:** Low
3.1.g.2. **AMR Response:** Littoral erosion is a specific type of coastal erosion that occurs along the shoreline and coast. Since the proposed NCBHS development is not a located on the coastline the proposed development will not impact coastal erosion processes.

h) NCA Section 2 Point h: alterations that may increase losses of the area from a rise in the sea level with respect to the surface of the land, whether caused by an actual sea level rise or land surface subsidence.
3.1.h.1. **AMR Risk Assessment:** Low
3.1.h.2. **AMR Response:** As previously stated, the site's elevation ranges from approximately +75ft. AMSL in the north to +69ft. in the south. As such the site is not susceptible to dangers associated with sea level raise.

The upper surface of the site is rocky and includes small knolls, ridges, swales, pockets, and caves. Natural subsurface voids, within the proposed building footprint have been identified and will be filled during construction to mitigate the possibility of land surface subsidence.

It is understood that the proposed NCBHS development is not located atop a water lens

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nor an aquifer. Therefore, the possibility of land surface subsidence due to draining of the natural ground water.
As such the rocky upper surface of the site is not susceptible to land surface subsidence.

i) NCA Section 2 Point i: emissions of air pollutants at levels that may impair the air quality of the area.
3.1.i.1. **AMR Risk Assessment:** Low
3.1.i.2. **AMR Response:** Emissions of air pollutants will differ depending on the stage of the works. For the purposes of mitigation measure implementation this practice has split the mitigation measures to be implemented into the following 2No. categories:
1. During Construction
2. Post Construction

During construction the effects of dust and debris generated from the construction works will be mitigated by wetting the aggregate surfaces prior to construction works likely to generate dust particles (i.e. jackhammering etc.)

It is the opinion of this practice that post-construction the primary source of air pollution emissions is limited to the diesel generator. To mitigate these possible emissions the applicant has selected a double walled generator set inside a containment area. It is expected that the emissions from the selected generator will be minimal.

j) NCA Section 2 Point j: alterations that may hinder or impede the movement or migration of wildlife.
3.1.j.1. **AMR Risk Assessment:** Low
3.1.j.2. **AMR Response:** As outlined in point 3.1.a.2 the proposed NCBHS development is set within are area known to be important to the Cayman Brac Parrot, a Part 1 Schedule 1 protected Species under the National Conservation Act (2013). Since the parrot is a bird, and as such it can fly, this practice does not expect the proposed development to impact the movement or migration patterns of the Cayman Brac Parrot.

k) NCA Section 2 Point k: alterations that may impair the capacity of a beach ridge to function as a protective barrier and as a reserve of sand for beach nourishment during storms.
3.1.k.1. **AMR Risk Assessment:** Low
3.1.k.2. **AMR Response:** The proposed development location is inland and not along the coastline. Due to the inland location of the site the proposed development will not impact the function of the beach ridge or any coastal processes.

l) NCA Section 2 Point l: alterations that may impair the capacity of the area to act as a sink or reservoir of greenhouse gases or enhance its potential as a source of greenhouse gases.
3.1.l.1. **AMR Risk Assessment:** Low

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3.1.I.2. AMR Response: While the proposed NCBHS development is not carbon neutral several measures have been implemented to minimize the development's potential as a source of greenhouse gas emissions:

1. Vegetation and trees to be planted around the site within kerbed areas and in between walkways were possible.
2. Building insulation to exceed building code requirements to reduce the amount of energy required for cooling.
3. Roofs sheathing to be white and/or of a light colour in order to reflect the sun and reduce the required cooling loads.
4. Both the NCBHS accommodation block and High School roof structures have been designed to support future PV solar panels for "clean" energy generation.

REPORT BY:

Schmarrah McCarthy, PE, MSCE

Civil/Structural Engineer
PE (California) Cert No. C 87069
For and on behalf of
AMR Consulting Engineers