

National Conservation Council

Minutes of the Special General Meeting held at the Government Administration Building, Elgin Avenue, George Town, Grand Cayman
26 October 2016, 10 am.

1. Call to Order

Notice having been duly given the meeting was called to order at 10:11am. A quorum was present (see Attendance Appendix, below) and no interests were declared. It was noted that the meeting had been called to consider time sensitive applications that could not wait for the next regular, scheduled, General Meeting.

2. Confirmation of Minutes

Noting that the Conservation Wardens section of the Law came in to force on August 15th, not 11th, the approval of the minutes of the meeting held on 26 August 2016 was moved by Davy Ebanks, seconded by McFarlane Conolly and passed unanimously.

3. MRCU / Oxitec application to vary the permit granted on 18 May 2016.

It was noted that the application was for permission to (a) use a second insectary to hold adult mosquitoes prior to release in addition to the unit previously approved for rearing larvae and (b) to provide consultative advice to The Department of Agriculture in relation to a proposed importation of an additional 1 kilogram of eggs (the Application). The letter of Application was accompanied by an Oxitec / MRCU interim report describing preliminary results of the trial release (Report).

A motion to approve the Application was moved by Christine Rose-Smyth and seconded by Gina Ebanks-Petrie.

In discussion it was noted that members of the Council: Christine Rose-Smyth, Davy Ebanks, Fred Burton, Colleen Stoetzel (on behalf of the Director of Planning); and John Bothwell (Secretary) had visited the MRCU compound on 12 Oct 2016 to view the dedicated Oxitec trailer insectary and the existing MRCU insectary, a separate, existing, single-purpose, building within the compound. Staff were observed in operation within the trailer. Both insectaries have double self-closing doors, and fixed inoperable or no windows, as recommended by the relevant Arthropod Containment Level 2 (ACL-2)¹ and the main doors are locked at all times when authorised staff are not present. The need for the additional storage space for maturing adults was explained by rearing and release schedules and the purpose of the request for additional eggs was to mitigate the loss of a shipment in the closure of transportation in Florida due to Hurricane Matthew.

Council members expressed the views that the Report and Application did not require any significant or unusual change of permission. It was noted that Oxitec has indicated that the 1 kg of additional eggs

¹ Arthropod Containment Guidelines (Version 3.1) The American Committee of Medical Entomology of the American Society of Tropical Medicine and Hygiene.

should be more than sufficient to finish the project, taking into account the possibility of any further unforeseeable events; it had been confirmed that the total number of adult mosquitoes to be released remained at 22 million and excess mosquitoes (at any stage of development from egg to adult) would be destroyed in accordance with the original permission; there would be an increase in the movement of adult mosquitoes at the facility that would entail heightened vigilance to reduce the chance of accidental release.

IT WAS RESOLVED that:

- a) the Application be approved, subject to the following condition:
that clear notices be posted on outer doors of both insectaries that only one door (outer or inner) should be open at a time; and
- b) notice of approval of the Application be provided to the applicants and to Department of Agriculture.

4. Section 41 consultation, construction of a 10 mile extension to East/West Arterial, between Newlands and Frank Sound Road.

It was noted that:

- a) The National Conservation Council had produced Guidance Notes to Government Entities on Complying with Section 41 of the National Conservation Law, 2013. (Notice Gazetted 2 March 2015)
- b) In any consultation pursuant to section 41 the Council may require an Environmental Impact Assessment and the Council had issued a Directive relating to the conduct of EIAs. (Gazetted on 29 June 2016)
- c) Activities meeting criteria, as laid out in the Directive, would be screened to determine if an EIA may be required.
- d) The requirement for an EIA is triggered by the type and characteristics of development, locational considerations and the characteristics of the potential impact.
- e) The assessment of proposals and preparation of Screening Opinions has been delegated by the Council to the Department of Environment (DoE) under section 3 (13).
- f) A proposal for the extension of the East-West Arterial was submitted to the Council by the Chief Officer, Ministry of Planning, Lands, Agriculture, Housing and Infrastructure (MPLAHI) on the 20th September 2016.
- g) The Guidance Notes prescribe that within 3 weeks of receiving a consultation in respect of the requirement for an EIA the DoE is required to issue a Screening Opinion for Council's consideration and Council shall issue its decision to the originating entity as soon as practicable thereafter.

Documents

- (i) Proposed East/West Arterial Extension - Report to the National Conservation Council, and accompanying map, submitted 20/22 September 2016 by MPLAHI.
- (ii) The Screening Opinion for Proposed East-West Arterial Extension – National Roads Authority, prepared by the Department of Environment for the National Conservation Council containing the recommendation that an EIA be carried out.
- (iii) The Directive for Environmental Impact Assessment.

A motion that the Screening Opinion be accepted and recommendation for an environmental impact assessment to be carried out of the Proposed East/West Arterial Extension be approved was moved by Christine Rose-Smyth and seconded by Christina Pineda.

The Director, DoE was invited to review the proposal and the DoE's recommendations to Council. The Director noted: given the lack of a pre-project strategic EIA for the East-West Arterial DoE was proposing that a project level EIA now be carried out on the current proposal to minimise impacts of the Gazetted roadway; DoE has previously (2014) informed the MPLAHI of the need for an EIA for this project; the vital national ecosystem services provided by the Central Mangrove Wetland (CMW) which the road will skirt, impact, and effectively delimit. The Director drew attention to the factors described in paragraphs numbered 1 - 3 supporting the recommendation of an EIA of the proposed road and the comments made in response to the MPLAHI suggestions that an EIA might not be required.

The National Trust noted that areas other than the Mastic Trail and Botanic Park have national biological and other values and supported the need for an EIA.

It was noted that the construction and therefore the EIA included off-site impacts, including: climate change impacts if peat was to be excavated to create the roadway; aggregate source sites and stockpiling areas; a key function of the EIA would be to assess potential impacts from the road on the hydrology and drainage of the area, not only on the CMW but, importantly, also on the properties, residential and otherwise, south of the road; the CMW is very flat and at a certain water level an immense sheet flow occurs from the higher surrounding land through the CMW and in to Little Sound, if the road acts as a dam, interrupting this sheet flow and backing the water up could adversely alter the drainage and hydrology of a very large area of wetlands and dry, developed, land.

In response to query of the timeline for construction it was noted that no timeline was currently known to the DoE. The length of time to conduct the EIA was also questioned and it was proposed that a reasonable timeframe would be established by the Environmental Advisory Board (EAB), to be appointed, and the parties during the development of the Scoping Opinion and Terms of Reference. It was understood that NRA had already undertaken some geotechnical assessments and that the Water Authority, MRCU and other agencies could also have additional information of use.

It was noted that in a 4 March 2014 Cayman Compass article covering the Government press briefing on the Ironwood Development the Premier had been reported as stating that a rigorous EIA would be conducted on the East-West Arterial before the project was undertaken.

It was noted that the North Sound Marine Park Replenishment Zone was a Protected Area and could be adversely affected.

Council noted that the separation of the proponent and authorising entity(ies) was unclear. It appeared that the proponents were CIG/NRA/Ironwood Development Group and that MPLAHI should be requested to confirm its role.

IT WAS RESOLVED that:

- a) the Screening Opinion and recommendation for an environmental impact assessment to be carried out on the Proposed East/West Arterial Extension be accepted and approved;

- b) pursuant to section 43 (1) the Council requires an environmental impact assessment to be carried out of the Proposed East/West Arterial Extension;
- c) the decision of the Council be communicated to MPLAHI for further communication to the Proponents (CIG/NRA/Ironwood Development Group) who shall within 28 days confirm that they wish to proceed with the EIA or withdraw the proposal;

Appointment of Environmental Advisory Board for the EIA

On a motion made by Christine Rose-Smyth, seconded by Lisa Hurlston-McKenzie, it was noted that: the NRA would have input in to the EIA process, but as an entity involved in the design and execution of project there would be an appearance of conflict of interest if they were also a member of the EAB; the EAB would be expected to solicit information from groups, e.g., MRCU hydrology records of the area, potentially useful to the Assessment process; The members of the Aggregate Advisory Committee were already proposed to be part of the EAB or will be involved in the project; engineering review support, if available and needed, would be solicited from PWD or other relevant groups.

IT WAS RESOLVED that:

- a) on an affirmative response from the Proponents, an Environmental Assessment Board be empanelled as an Advisory Committee to the Council to manage the EIA process in accordance with the Directive;
- b) the members to be appointed to the Board, in addition to the standing members of an EAB, being the Director, DoE, the Deputy Director Research and Assessment, DoE and the Director, Planning, shall include the Water Authority and such other relevant advisors as the Council may appoint in due course.

It was further noted that in accordance with the Directive:

- a) The EAB shall liaise with the Proponents to arrange submission of any additional information required to produce a Scoping Opinion.
- b) The Scoping Opinion shall (a) identify the impacts of the proposed road scheme likely to be significant to biodiversity and natural resources and assess the direct and indirect impacts affecting the natural and built environment of the area; (b) indicate the range of technical competencies needed to carry out the EIA.
- c) The EAB and the Proponents shall select consultant(s);
- d) The Proponents shall incur the costs of the EIA;
- e) The result of the Scoping Opinion process shall be Terms of Reference to be the subject of public consultation.
- f) The EIA shall follow the requirement of the Law and the Directive throughout the process.

Council deferred consideration of reaction to hypothetical rejection of the EIA requirement.

5. Invasive Species – report from DoE

Following on from the delegation to DoE of development of a draft directive to enable the Council, pursuant to section 3(12)(h) to issue “procedures for regulating and controlling wild populations and the import, introduction, possession, transportation and release of alien or genetically altered specimens”

and in exercise of its functions under section 6(2)(k) “develop criteria for determining whether wild populations or proposed introductions of alien or genetically altered species might cause harm to any of the natural resources of the Islands and procedures for regulating and controlling such populations and introductions” Mr Burton, on behalf of DoE reported that work had commenced; that the remit covers a very broad array of issues and that they considered that any proposals would need to be discussed in depth with the Department of Agriculture, in particular to incorporate the ideas put forward by the previous plant committee; DoE proposed a goal is a holistic process involving a variety of approaches and levels of review and decision control, including external risk assessments for the most extreme cases; possession and transport controls would also need to be included for completeness; a draft proposal might be available for Council review at the next scheduled General Meeting (30 November 2016); proposed that Genetically Modified Organisms be treated as alien : i.e. regulate the organism rather than the methodology of its origin or modification.

6. Any Other Business

- a) **Importation of goats to Cayman Brac.** A large number of goats were reported to be arriving on that island soon. Concern was expressed over the lack of environmental consideration around the project, and that there appeared to have been no consultation with the Council. It was noted that other countries, including islands in the Caribbean, are facing great expense rehabilitating natural areas impacted by feral domestic animals, especially goats. DoE was asked to contact DoA regarding the goats on the Brac. It was noted that the Cayman Islands are in a unique position of being able to protect and conserve areas of primary natural habitat whereas other are faced with the far more expensive solution of rehabilitation of degraded land.
- b) **DoA Attendance at Council.** Whilst it was noted that DoA are currently hosting Caribbean Agriculture Week, explaining the Director DoA’s absence at the present meeting, it was requested that DoA & Ministry of PLAHI be contacted requesting active and ongoing DoA participation in the Council.

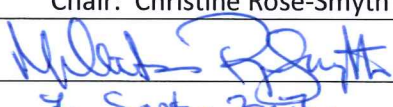
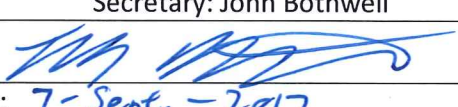
There being no other business, the meeting adjourned at 11:42am.

Attendance Appendix

Council Member	26 October 2016	Representation
Christine Rose-Smyth	Present	Chairperson; Bodden Town, Plants, Terrestrial & Marine Biodiversity
Davy Ebanks	Present	West Bay and Marine Conservation
Lisa Hurlston-McKenzie	Present	George Town and Sustainable Development & Climate Change
McFarlane Conolly	Present	East End and Sustainable Development
		North Side
Wallace Platts	Apologies	Sister Islands and Terrestrial Biodiversity
Christina Pineda	Present	National Trust for the Cayman Islands
Patricia Bradley	Apologies	Avifauna & Biodiversity
Fred Burton	Present	Terrestrial Biodiversity
Adrian Estwick	Absent	Director of Agriculture
Haroon Pandohie	-	Director of Planning
Colleen Stoetzel	Present	Planning Officer, representing the Director of Planning
Gina Ebanks-Petrie	Present	Director of Environment
Timothy Austin	Apologies	DoE Deputy, Research
John Bothwell	Present	Secretary

- Wallace Platts' flight from Cayman Brac was delayed and instead of arriving in time for the meeting he arrived on Grand Cayman after the meeting concluded.
- Patricia Bradley, & Timothy Austin were off-island.

Minutes approved at the meeting held on 30 November 2016.

Chair: Christine Rose-Smyth	Secretary: John Bothwell
	
Date: 7 Sept - 2017.	Date: 7-Sept. - 2017

National Conservation Council

NOTICE OF SPECIAL GENERAL MEETING

26 October 2016

10am – 12noon

Rm 2112 Government Administration Building
Elgin Avenue, George Town

AGENDA

1. Call to Order
 - a. Attendees, Apologies, Quorum
 - b. Declaration of Interests
2. MRCU Oxitec, Application for Permit Variance
3. National Road Authority consultation East-West Arterial Extension
4. Delegation of developing criteria and Procedures for the Importation & Release of Alien or Genetically Modified Organisms
5. Any Other Business
6. Adjournment
 - a. Next meeting scheduled for 30 November 2016

Persons planning to attend the meeting should note that the change of location within the GAB and that, in accordance with GAB security procedures, they will have to sign in at the GAB Reception Desk in order to access the meeting room.



Mosquito Research and Control Unit
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Grand Cayman KY1-1106
Cayman Islands
B.W.I.
Tel: (345) 949-2557
Fax: (345) 949-8912

To National Conservation Council
Department of Environment
Environmental Centre
580 North Sound road
P.O. Box 10202GT
George Town, KY1-1106
Grand Cayman
Cayman Islands



October 19, 2016

Request to Vary Permission

Variation of Location Where Adults Will Be Kept Prior to Release

The current permit issued to MRCU dated June 8th, 2016 for the permission to import and release *Aedes aegypti* strain OX513A, specifies that they will be hatched and processed within a dedicated ACL-2 production facility situated in MRCU compounds, 99 Red Gate Road, George Town, Grand Cayman. Based on results to date there is a need for additional rearing space to increase the production and release rate for the duration of the permit. To facilitate this, it is proposed that in the latter phase of the production process, OX513A pupae contained within sealed release devices will be transferred from the Oxitec dedicated facility and kept in an MRCU insectary prior to release. This stage of the production entails placing closed release devices containing OX513A pupae aliquots onto secure shelving in a temperature controlled MRCU insectary to allow hatching of the pupae to adults, and does not involve opening of the release devices. The insectary is situated near the production facility in the MRCU compound, 99 Red Gate Road, George Town, Grand Cayman.

The insectary has safeguards equivalent to the production facility's Arthropod Containment Level 2 (ACL-2) standards to minimise unintentional escapees from the unit. Particularly for the keeping of adults, it has a double entry door which will secure access and egress. The staff has been trained to wear personal protective equipment adequately and follow standard operating procedures for production, cleaning, waste disposal, emergency procedures under ACL-2 standards. Only authorised

personnel will be allowed in the facility and visitors will always be accompanied by an authorised member of staff.

Mosquito life stages not used for the release or other procedures will continue to be frozen at -15°C or colder for more than 12 hours and all biological material disposed of as under current operating procedures. All current, standard, stipulated and permitted health and safety and biosecurity measures will be observed.

The increase in the production capacity will impact the number of eggs required to be imported to produce the adult OX513A males for release. Moreover, the latest shipment of eggs had been delayed due to the disruption in flight services due to hurricane Matthew causing the quality of these eggs to be compromised and not providing the expected yield of OX513A adult males. Consequently, an additional unplanned egg shipment has been shipped from UK to cover for the loss. We are hereby also requesting a variance in the import permit issued by the Department of Agriculture dated June 20, 2016 to increase the quantity of eggs to be imported by an additional 1kg, for a total of 2.65kg for the whole project instead of 1.65kg.

The restriction on overall number of adult OX513A released (22 million for the duration of the permit) will not be exceeded as a result of this variance.

A handwritten signature in dark ink, appearing to read 'W.D. Petrie', is written over a horizontal line.

Dr. William D. Petrie

Director, MRCU

Interim report MRCU/Oxitec - October 18 2016
Friendly *Aedes aegypti* project in West Bay



Introduction

The project was announced on May 5th 2016 and was followed by a variety of community engagement activities that ensured the majority support of the Caymanians. The first release was conducted on July 28th in the Public Health Clinic of West Bay in presence of the Timothy McLaughlin, the Public Health surveillance officer. The production and releases were ramped up and OX513A males started to be distributed in the treatment area mid-August. In parallel, the monitoring in the treatment and comparator areas, started in 2015, continued in order to evaluate the suppression of the *Aedes aegypti* and enable dynamic adaptive management of the programme.

Community engagement

Every Friendly *Aedes aegypti* project starts with an initial intense community engagement period adapted to the local conditions and culture, generally in collaboration with public services. In Cayman Islands, the Mosquito Research and Control Unit and the Public Health Department provided resources to help spread information and reply to questions about the project.



A number of activities were conducted including door-to-door visits in the release area, information booths and distribution of leaflets in several locations on Grand Cayman, a public meeting, radio and television talk shows as well as public service messages in the newspaper and on the radio.

A public opinion survey conducted in July revealed that 80% of the population of Grand Cayman had heard about the project and that 69% supported the Friendly *Aedes aegypti* project, validating the strategy followed. Activities to reach out to the community have continued since the beginning of the releases and will continue throughout the project.

Releases

The first release of OX513A males was conducted on July 28th 2016. The production was ramped up to operational schedule, three batches per week, from the beginning of August 2016. Consequently, full operational releases effectively started in mid-August at the average level of circa 300,000 OX513A males per week (from week 33 to 41, figure 1). The quality of the males released was confirmed by the quality control processes conducted in the production facility ensuring that the OX513A males were in optimal conditions to find and mate with the wild *Aedes aegypti* females.

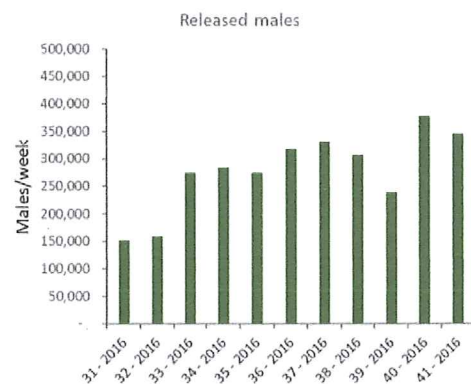


Figure 1: Number OX513A males released per week in the treatment area of West Bay.

Monitoring

Monitoring in the treatment and comparator areas started in 2015. Ovitrap traps that mimic the breeding sites and are used to collect eggs laid by the females, are used to follow both presence (Ovitrap Index: proportion of positive traps) and abundance (average number of eggs per trap) of the local population of *Aedes aegypti*. Through regular monitoring of the population in both the treatment and control areas, a sharp seasonal population increase of *Aedes aegypti* in early June 2016 was detected (Figure 2, after Week 23 - 2016) that has been maintained since that date although there have been some natural variations in the wild population.

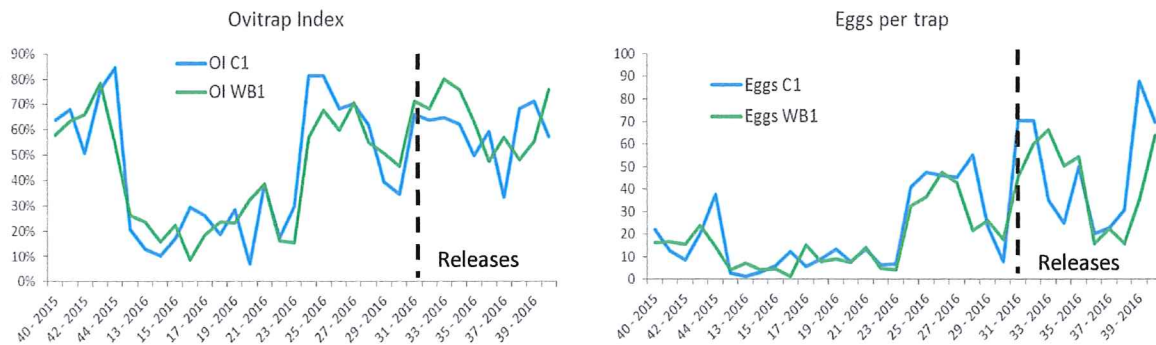


Figure 2. *Aedes aegypti* wild population monitoring results. (A) Ovitrap index: proportion of collected ovitraps that were positive for *Aedes aegypti*. (B) Eggs per trap: average number of eggs per ovitrap collected. The dotted line shows the start of the releases. C1: Comparator area; WB1: Treatment area.

Within the treated area, ovitraps can additionally be used to assess mating fraction (proportion of the wild females that are mated with OX513A males) by detecting the fluorescent marker in the larvae hatched from the eggs collected. This is a key metric that allows dynamic adaptive management of the releases to respond to the local population density thereby ensuring efficiency. For operational use, we target >50 % mating fraction for rapid suppression.

Following the first releases, fluorescent larvae were detected in the ovitraps in August. Due to the pre-mated females present before the start of the releases - females *Aedes aegypti* mate only once in a lifetime of 2 to 4 weeks - it is expected that the fluorescence will increase in the 4 weeks of initial releases before stabilising. The fluorescence observed in the ovitraps stayed below 10% until a sharp increase above 30% in October 2016 (figure 3). The absence of major rains in West Bay in September is likely to have caused a decrease in the wild population and resulted in an increase in the mating fraction as more OX513A males were able to compete for females. Though encouraging, the recent increase in mating fraction remains below our 50% target.

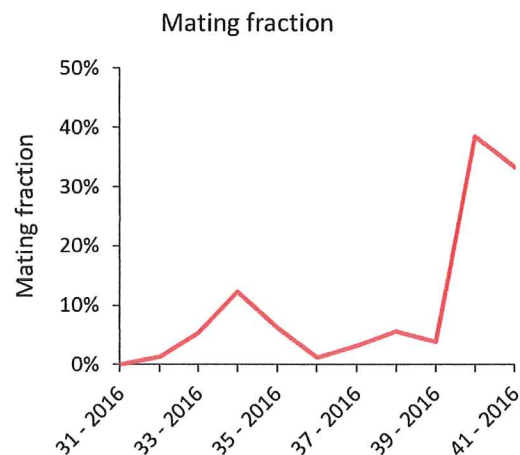


Figure 3: Mating fraction in the treatment area.

Conclusion/Recommendation

A key attribute of Oxitec technology is the fluorescent marker that facilitates adaptive release rates tailored to local population. Following 8 weeks of releases, production has been successfully established and sustained releases of 300,000 males/week have been conducted. Field collected samples show the released males are successfully mating with wild *Aedes aegypti*, but that the mating fraction is currently falling short of the targeted 50%. Population monitoring has shown high local population, expected at this time of year, and this is the most likely cause for not yet hitting 50% mating fraction. Routine quality assessment has shown no issues with male quality.

The optimal start for such a program is during the dry season when *Aedes aegypti* population is low, requiring lower release rates of OX513A males. Once control is achieved, it is possible to maintain and prevent seasonal increase with low release numbers. Indeed, this was the original plan for this project, but due to various administrative and judicial delays the releases were not initiated before the rains and corresponding increase in local mosquito population.

In order to achieve suppression of the population of *Aedes aegypti* with the shortest delay, an increase of the production levels is planned by using the entire existing mobile production facility described in the initial permit application for larval rearing and pupae sorting. The sorted males will be transferred to a separate insectarium built to ACL-2 standards where, using the existing processes, they will be put into release pots and fed until ready for release. This planned change should facilitate increasing the release rate above 500,000 OX513A males per week.

At the same time, the steering committee has decided that it may conduct targeted larvicide and adulticide treatments in both treatment and comparator areas before the end of the rainy season in November and/or December to bring the wild population down and hence boost the mating success of the release OX513A males. Using chemicals in synergy with the releases of OX513A males has always been envisaged as an appropriate use of the Oxitec solution within Integrated Vector Management strategy, consistent with recommendation from the World Health Organization for *Aedes aegypti* control. The adulticide applications which may be used would not have a residual effect and will be timed to minimise their impact on the released males.

Given the level of the wild population in the area at the moment, these two adjustments to the program, increased releases and chemical applications, are expected to speed up the suppression of the *Aedes aegypti* population.



12 October 2016

Screening Opinion for Proposed East-West Arterial Extension – National Roads Authority

Prepared by the Department of Environment for the National Conservation Council

The ***National Conservation Council's (NCC) Directive for Environmental Impact Assessments*** issued under section 3(12)(j) and which has effect under section 43(2)(c) of the National Conservation Law (NCL), notes that all activities listed in Schedule 1 will be considered against the screening criteria outlined in sections 1 to 3 of Schedule 1 of the Directive to determine whether an EIA may be required. These screening criteria are: the type and characteristics of development, the location of the development and the characteristics of the potential impacts.

The **proposed project** is for a 10 mile extension of the EW Arterial which extends eastward from the Hirst Road intersection to just beyond the Frank Sound Road intersection at the Ironwood Village and Golf Club intersection (see attached Plan).

Having considered the proposal and accompanying justification as detailed in the Memorandum from the Chief Officer, Ministry of PLAHI dated 20th September 2016 against the screening criteria outlined above, the Department of Environment (DoE) is of the opinion that the proposed road extension requires an Environmental Impact Assessment (EIA) based on the following factors:

1. The proposal clearly falls within Section 5 (ii) of Schedule 1 of the EIA Directives i.e. *Transportation infrastructure, including planning or construction of new roads, and of road extensions.*
2. The proposed 10-mile roadway will traverse a substantial area of wetland habitat along the entire length of the southern perimeter of the Central Mangrove Wetland (CMW). As the ecological heart of Grand Cayman, the CMW is critical to many important natural processes which are vital to the long-term wellbeing of the residents of the Cayman Islands. It is part of a large scale water flow system, filtering and conditioning the surface water and shallow ground water which supports the mangrove communities and flows into North Sound. Other important functions include storm protection and flood mitigation; shoreline stabilization and erosion control; groundwater (freshwater lens) recharge; retention of sediments and pollutants; export of organic matter to the North Sound; stabilization of local climate conditions, particularly rainfall and temperature; carbon storage; provision of nursery grounds and habitat for a variety of marine and terrestrial biodiversity including species on Schedule 1 Part 1 of the NCL. The CMW has been designated as an Important Bird Area under the criteria established by Birdlife International as it supports at least 1,500 individuals or 83% of the Cayman Islands' population of the globally significant West Indian Whistling-duck, and the endemic Cayman Parrot, *Amazona leucocephala caymanensis*,

breeds in outer monospecific black, black/white and black/red mangrove zones (1,145 ha) of the southern CMW. (<http://www.birdlife.org/datazone/sitefactsheet.php?id=19723#FurtherInfo>).

The scope and characteristics of the potential significant effects of the proposed road scheme on this nationally important resource will require assessment of the direct and indirect impacts affecting the natural and built environment of the area including but not limited to:

- a. An assessment of the ecological function and value of the specific natural resources that will be affected by the construction and operation of the road (e.g. direct impacts from the footprint of the road and indirect impacts arising from lighting, noise etc.);
 - b. An assessment of the impacts associated with changes to the hydrology and drainage patterns of the area which could affect the CMW basin as a result of the road construction, and a flood risk assessment for the populated areas south of the road corridor, with identification of any potential measures to avoid, minimise or mitigate impacts;
 - c. An assessment of impacts to off-site natural resources due to the excavation and/or mining of the significant quantities of aggregate required for construction of the 10 miles of road;
 - d. An assessment of any onsite and off-site impacts associated with the de-mucking and disposal of significant quantities of peat overburden within the road corridor; and
3. Detailed Geotechnical investigations will have to be carried out along the entire path of the proposed road in order to identify any potential constraints on the proposed alignment and/or construction methodology;

Additionally, the EIA procedure prescribed in the NCC's gazetted Directives provides opportunities for public consultation at appropriate points in the process, including determining the scope of the EIA, prior to agreeing the Terms of Reference.

The DoE takes note of the points raised in the consultation Memorandum submitted by the Chief Officer PLAHI and offers the following comments in response to the specific points extracted and italicised below:

- *The corridor was included in the 1997 Development Plan that remains in effect today, and as such, the proposed route has been in the public domain for almost 20 years.*

The DoE can find no record of the EW Arterial Corridor in the 1997 Development Plan. As best we can determine the corridor was proposed as part of the 2003 Amendments to the 1997 Development Plan which were never adopted. Furthermore the accompanying text for the 2003 amendments advocates for the use of the Best Practicable Environmental Option approach when siting road corridors and provides the examples of avoiding wetland areas, which can make construction costly, affect regional drainage, fragment habitats and wildlife corridors, disrupt wildlife behavioural patterns etc. The text also notes that alternative road design and construction methodologies that minimise impact to wetlands should be researched and implemented where feasible.

- *The route of the corridor was also gazetted under Section 26 Roads Law in 2005, this being the legal mechanism for the NRA to declare its long term roads planning intent to the public.*

The gazetted route was not informed by any ecological or environmental assessment, contrary to best practice and legal obligations in North America, Europe and most countries in our region. Further, in the intervening 11 years circumstances may have changed e.g. laws, regulations, the environmental sensitivity or rarity of natural resources (e.g. availability of aggregate, abundance of ecological resources or specific habitat types which could have been depleted due to other developments) which require a revised approach. As noted in the consultation request, the alignment was changed to reflect changes in National Trust land ownership – this is one such example of a circumstantial change which required a review of the road corridor. Good practice in Forward Planning dictates that plans for development are reviewed on a regular basis in order to ensure that they remain current, necessary and appropriate.

- *Proposed public roads do not require planning consent under the Planning & Development Law & Regulations. The NRA has never previously undertaken an EIA for a public road; however, a public consultation exercise on the proposed route of the road is intended.*

What took place in the past should not be considered as justification for continuing the practice if it is demonstrably flawed. The construction of a 10 mile stretch of a major arterial road through an environmentally important wetland area would trigger the requirement globally for an EIA, and now does so in Cayman. Most jurisdictions require the planning of road schemes to begin with a Strategic Environmental Assessment to be followed by an EIA once the need for the road has been established, alternative routes have been evaluated and the preferred route identified.

- *The corridor hugs the northern boundary of development as close as possible and minimizes disturbance to the undeveloped interior of Grand Cayman. There is no alternative new route to the eastern districts without going through the interior wetlands. As such, only localized areas are understood to be of possible concern (eg near the Botanic Park & Mastic Trail).*

It is common practice for a road alignment to go through a series of iterations prior to an EIA being carried out on the preferred alignment option. Features such as the Mastic Trail and other National Trust land holdings are obvious features to avoid; however the EIA will likely result in further iterations of the layout as baseline data is acquired regarding issues such as drainage patterns, habitat type, presence of protected species, geotechnical investigations etc. Not only is this information important in order to minimize environmental impacts, but also to ensure that robust costings for the project can be established prior to committing to a project of this scale and magnitude.

- *However, the National Trust for the Cayman Islands, which owns a large section of land in the local area, has no objections and has agreed to the proposed route.*

We recognise the effort to avoid the National Trust's protected areas but note that agreement was only in respect of their property which comprises a small part of the overall route/alignment.

- *The NRA has already undertaken a geotechnical/site investigation for most of the proposed route. To the best of our knowledge, no significant environmental features and/or concerns were identified.*

The DoE welcomes confirmation that geotechnical / site investigations have been undertaken. As part of the EIA scoping exercise this, and any other relevant reports and data, will form part of the baseline information required for the assessment of impacts.

- *The proposed draft construction & funding Agreement between CIG, NRA and IOG that is under negotiation provides a mitigation commitment to alleviate any environmental matters.*

The DoE notes that an EIA is the proper method for comprehensively and transparently assessing impacts and identifying, quantifying and costing mitigation measures to avoid, minimise or mitigate significant environmental effects. The DoE would strongly recommend that no legal commitments are made without the benefit of robust assessment of the likely significant effects of the project.

- *The economic benefits and national good of the project are considered very significant:*

It is vital for the sustainability of the Ironwood Village development

It facilitates access to multiple other land Parcels for potential development.

The opening up of substantial parcels of land along a 10 mile stretch of road on the perimeter of an ecologically important area raises a number of environmental and socio-economic issues, which should be the subject of appropriate analysis and consideration. This would normally come forward through a long-range planning process articulated in the form of a national development plan, which would take account of the projected need for social infrastructure (eg schools, health care), support services, physical infrastructure (eg utilities) etc.

Job creation as a result of both road construction and new economic activity that will arise along the road corridor as part of the longstanding Go East initiative

The inherent benefit of the Road itself will alleviate severe commuter traffic congestion

International Considerations:

As well as all the considerations outlined above, the NCL gives effect to relevant provisions of a number of multilateral environmental agreements to which Cayman is a contracting party through the UK. The Convention on Wetlands of International Importance (RAMSAR) is one such agreement and commits Contracting Parties to formulate and implement their planning so as to promote the conservation and wise use of all wetlands in their territory, through means such as conducting environmental impact assessments before transformations of wetlands (Article 3). Also, the Environment Charter signed by the Cayman Islands Government in 2001 commits the Cayman Islands to “undertake environmental impact assessments before approving major projects and while developing our growth management strategy” (Commitment 4). It is worth noting that the Bermuda Court of Appeal recently found that the Charter is a legally binding document on the government.

After considering the Screening Opinion detailed above, the NCC is required to issue its decision to the originating entity on the requirement for an EIA, pursuant to Section 43 (1).

**Ministry of Planning, Lands, Agriculture, Housing &
Infrastructure**

MEMORANDUM

TO: National Conservation Council
Via Department of Environment

CC: MD, National Roads Authority

FROM: Chief Officer, PLAHI

DATE: 20th September 2016

**SUBJECT: PROPOSED EAST/WEST ARTERIAL EXTENSION- REPORT
TO THE NATIONAL CONSERVATION COUNCIL**

Dear Sirs,

For some time now the Ministry of Planning, Lands, Agriculture Housing and Infrastructure (PLAHI) has been negotiating with the Ironwood Development Group (IDG) to facilitate the construction of the East/West Arterial. The proposed extension is along the route previously gazetted by the Government (CIG) and the National Roads Authority (NRA), extending from Hirst Road to the Ironwood Development now underway.

The IDG development is off Frank Sound Road and will consist of private residences and a commercial village centred on a new Arnold Palmer-designed golf course. It is estimated to cost around \$360M to completely develop-out over the next 20 years. The Ironwood Group approached CIG and proposed the extension of the highway by way of a P3 project in order to enable its development scheme.

The purpose of this report is to consult with the National Conservation Council's as per Section 41 of the National Conservation Law, 2013, to ascertain the views of the Council prior to Cabinet's consideration of the project. To this end, we would respectfully suggest the below points be considered for guidance;

- The East West Arterial road corridor forms a principal part of the NRA long term development plan, and a Declaration of this was published in the Cayman Islands Gazette under Section 26 of The Roads Law (2004 Revision) on 3rd May 2005. The intent of the proposed highway is to construct a principal arterial road

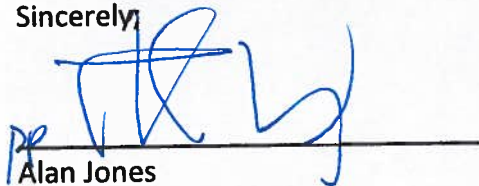
connector between the east and west ends of Grand Cayman along an inland route, which would be at least risk of sea damage in the event of storms.

- An initial 3.1 mile section of the East West Arterial Highway was constructed in 2006/7, as far east as the Hirst Road intersection. The proposed 10 mile extension in question runs from this intersection east to just beyond the Frank Sound Road intersection at the Ironwood Village & Golf Course Development.
- The corridor was included in the 1997 Development Plan that remains in effect today, and as such, the proposed route has been in the public domain for almost 20 years. The route of the corridor was also gazetted under Section 26 Roads Law in 2005, this being the legal mechanism for the NRA to declare its long term roads planning intent to the public.
- Proposed public roads do not require planning consent under the Planning & Development Law & Regulations. The NRA has never previously undertaken an EIA for a public road; however, a public consultation exercise on the proposed route of the road is intended.
- Considerable negotiations took place with the National Trust to mitigate the Trust's concerns regarding the Mastic Trailhead, other features and sensitive lands, and drainage. An acceptable revised route was agreed upon to the satisfaction of all parties.
- The corridor hugs the northern boundary of development as close as possible and minimizes disturbance to the undeveloped interior of Grand Cayman. There is no alternative new route to the eastern districts without going through the interior wetlands. As such, only localized areas are understood to be of possible concern (eg near the Botanic Park & Mastic Trail). However, the National Trust for the Cayman Islands, which owns a large section of land in the local area, has no objections and has agreed to the proposed route.
- The NRA has already undertaken a geotechnical/site investigation for most of the proposed route. To the best of our knowledge, no significant environmental features and/or concerns were identified.
- The Ironwood Group also intends to have an environmental consultant work in conjunction with the project crew to keep abreast of environmental concerns as construction proceeds along the proposed route.
- The proposed draft construction & funding Agreement between CIG, NRA and IDG that is under negotiation provides a mitigation commitment to alleviate any environmental matters.

- The economic benefits and national good of the project are considered very significant:
 - i. It is vital for the sustainability of the Ironwood Village development
 - ii. it facilitates access to multiple other land Parcels for potential development.
 - iii. Job creation as a result of both road construction and new economic activity that will arise along the road corridor as part of the longstanding Go East initiative
 - iv. The inherent benefit of the Road itself will alleviate severe commuter traffic congestion.
- The Government considers this a critical project to assist with the continued rejuvenation of the island's economy, enabling the Cayman Islands to be ever more competitive against the economies of competing jurisdictions.

The attached plan indicates the proposed route of the roadway. As Ministry is cognizant of the role the NCC and the importance of this consultation, we are happy to meet with the council to discuss and/or answer any questions that the council may have on the project. We look forward to hearing from you in the near future.

Sincerely,



Alan Jones
Chief Officer; PLAHI

Proposed Alignment for the Extension of the EWA to Frank Sound Road (per National Trust Agreement)

