

IN THE GRAND COURT OF THE CAYMAN ISLANDS

CAUSE NO: GC 195 OF 2019

BETWEEN:

SHIRLEY ELIZABETH ROULSTONE

Plaintiffs

AND:

(1) THE CABINET OF THE CAYMAN ISLANDS  
(2) THE LEGISLATIVE ASSEMBLY OF THE CAYMAN ISLANDS

Defendants

AND:

THE NATIONAL TRUST OF THE CAYMAN ISLANDS

Intervening Party

---

FIRST AFFIDAVIT OF NADIA HARDIE

---

I, **NADIA HARDIE**, of 558A South Church Street, PO Box 31116, Grand Cayman, KY1-1205, **MAKE OATH** and **SAY** as follows:

**Introduction**

1. I am the Executive Director of the Intervening Party, the National Trust for the Cayman Islands (the **National Trust**). I was appointed to this position in April 2018.
2. The National Trust is a corporate body established pursuant to the National Trust Law (2010 Revision) (the **National Trust Law**). Pursuant to Section 3 of the National Trust Law, the National Trust can, inter alia, sue and be sued in its corporate name. As I will explain below, the National Trust is required under Section 4 of the National Trust Law to protect and preserve the historic, natural and maritime heritage of the Cayman Islands and the protection of the native flora and fauna.

3. I am duly authorised by the National Trust to make this affidavit. The facts and matters to which I depose herein are within my own knowledge save where I indicate otherwise. When those matters are within my own knowledge they are true and when they are derived from other sources they are true to the best of my knowledge and belief or derived from the sources indicated.
4. I make this affidavit in support of the National Trust's intervention in Ms Roulstone's Judicial Review in relation to the people-initiated referendum regarding the port (the **Referendum**) concerning the proposal by the First Respondent (**CIG**) to build a cruise berthing facility and cargo port (together the **Port Development Project**) in George Town harbour in collaboration with a consortium comprised of cruise companies and construction and engineering companies.
5. The National Trust is intervening in these proceedings having withdrawn its own application for leave to apply for judicial review on the basis that it could do so. The National Trust supports Ms Roulstone's application and wishes to make known its own case as to why the way in which CIG is campaigning against a "no" vote is unfair and contrary to its own environmental obligations under the Constitution and the National Conservation Law. Moreover, given the history of the Port Development Project, CIG has created an expectation that it would ensure that the environmental risks of the Port Development Project are fairly laid out (which has not been the case) and not misrepresented to the public in campaigning against a "no vote" (which, regrettably, has been the case).
6. There is now produced and shown to me a paginated bundle of documents marked as exhibit "**NH-1**" to which I shall refer. References to page numbers in this affidavit are to the page Exhibit "**NH-1**" unless otherwise stated.
7. I confirm that I have read the contents of the National Trust's statement and grounds and that the matters stated there are true to the best of my knowledge, information and belief.



## Summary of Case

8. The Referendum (People Initiated Referendum Regarding the Port) Law 2019 (the **Referendum Law**) was promulgated to determine whether the CIG should proceed with the Port Development Project which it has been promoting since 2015. If carried out, the project involves dredging parts of George Town Harbour. The area to be dredged involves the inevitable destruction of ancient, natural coral reefs which are unique in the Cayman Islands and the likely destruction of historic shipwrecks and their removal from their original site. What is proposed is one of the most significant deliberate destructions of a marine environment that has ever occurred.
9. The National Trust exists for the sole purposes set out in section 4 of the National Trust Law which includes the preservation of the historic, natural and maritime heritage of the Islands through preserving sites and objects of historic and cultural significance. The George Town shipwrecks and coral reefs are amongst the most significant and important sites in the Cayman Islands in these respects. The Port Development Project will destroy the coral reefs and is very likely to destroy the shipwrecks.
10. The Referendum Law provides in accordance with Section 4 that the “*outcome of the referendum shall be binding*” on CIG and the legislature. It is a matter for argument whether this is consistent with Section 70(3) of the Constitution of the Cayman Islands (the **Constitution**). The question was set by the Referendum (People Initiated Referendum Regarding the Port) (Referendum Question) Regulations 2019.
11. In 2015 CIG actively consulted with members of the public about the environmental cost and risks associated with the Port Development Project. It is, however, now clear that CIG at some point, possibly even earlier, made a firm policy decision to move forward. As a result there must be a high likelihood that if the outcome is other than “no” the CIG will not only consider itself “bound” by the Referendum but will pursue the Port Development Project with some vigour and rely on the outcome to justify every lawful decision.
12. The phrasing of the question for the Referendum was important because, as I understand the cabinet briefing paper from the Attorney General of 31 October 2019, the question was formulated to ensure that a majority of registered voters must vote “no” in answer to that

question to stop the Port Development Project. Otherwise, CIG considers that it will be entitled to proceed. In other words, even if there is no majority voting “yes” CIG considers that a failure by the “no” vote is all that is needed for the Port Development Project to proceed. Being “bound” by this outcome the CIG and the Legislature will exercise powers and discretions to carry on with the Port Development Project.

13. The Referendum is planned to take place without any further new independent information about environmental impact. CIG will not itself be in possession of an updated Environmental Impact Assessment (**EIA**) on the new redesigned Port decision let alone have provided that and other information to the public. CIG’s representatives told the Court at the leave hearing that a “scoping” exercise was to be completed in mid-December 2019 but apparently no further expenditure will be incurred until the outcome of the Referendum is known. In fact this work is being undertaken by Baird & Co, the authors of the Environmental Statement published in 2015 who are no longer independent but part of the consortium promoting the Port Development Project. Advice on coral relocation is to be obtained from Polaris Marine Inc (also retained by the consortium) who has no relevant tract record of carrying out any form of “coral relocation” of this scale.
14. I note that CIG maintained at the leave hearing that it was not going to respond to a positive outcome of the Referendum by going ahead with the Port Development Project at any cost. There were studies to be done, it was said, possibly even a new EIA, depending on the outcome of the scoping and there was detailed planning to be undertaken. Thus, so the argument went, if after all this work it was made clear that CIG should not carry on it would not do so. I do not believe it is remotely likely that CIG will in fact stop whatever the outcome of any new EIA. First, CIG announced in a press release on 16 October 2019 (see pages 1427-1429) that VIPP was responsible for doing this work which was to be undertaken by Baird (who is part of VIPP’s consortium) and advice on coral relocation was to be given by Polaris (also part of VIPP’s consortium). The work is not independent. Secondly, Baird or Polaris have already represented that coral relocation is feasible in 2015. They are part of the team that has re-designed the Port and, presumably, are responsible for CIG’s statements to the effect that the redesign will have “less: impact. Unless CIG has made up these statements Baird and Polaris must have already represented that the work can go ahead. Thirdly, the 2015 EIA already predicted that in terms of the marine environment the impact was dire. Whatever is now



produced could scarcely be much worse. Since the 2015 impact assessment did not cause CIG to alter its course, I am not sure how anything other than a “no” vote at the Referendum will change that in 2020. I do not believe that anything can come out which would halt the project.

15. CIG’s representatives also went on to say at the leave hearing that CIG would not act contrary to law and that this was not a referendum to change CIG’s environmental obligations. I am advised and believe that the CIG has a duty to take into account guidance from the National Conservation Council (the **NCC**) and to consult with the NCC pursuant to Section 41(3) of the National Conservation Law 2013 (the **NC Law**). I am also advised and believe that CIG has a duty under Section 41(1) *“to ensure its actions and undertakings are consistent with and do not jeopardise the protection and conservation of a protected area or any protected species or its critical habitat”*. I explain below that George Town Harbour reefs and the shipwrecks are part of a protected marine park and a home to internationally recognised endangered species of coral colonies, sponges and fish.
  
16. I was not entirely clear previously how CIG could ever hope that it was “consistent with” its obligations to protect and conserve protected coral reefs to allow cruise ships to be used in that area. It now seems to me that CIG is expecting to remove the protected designation of the George Town harbour area or to require the legislature to amend the NC Law. I have recently seen a Cayman news article with a revised Marine Protection Plan (see page 1) which CIG claimed to have approved. The CIG is in the process of preparing the regulations. We were not told that under the guise of enhancing the marine park, CIG’s plan was to remove current protection of the area in George Town. As can be seen from the proposed plan (see pages 1439-1440), the area where the berthing facility is to be located is now to be excluded from the marine park and labelled “Port Anchorage Zone”. While there is currently some strictly defined anchoring with precise coordinates, no anchoring takes place over the inshore coral reefs, and it is closely monitored and controlled by the Port Authority. What disturbs me is that an area which is presently designated as protected under the NC Law will not be and if CIG secures the outcome to the Referendum which it seeks the legislature will also be bound to pass laws to allow the Port Development to take place.

17. For all these reasons the public vote on the Referendum is therefore likely to have a profound impact on the future of the Cayman Islands whatever its outcome. CIG is very likely to do whatever it can to bring about the Port Development if the outcome is not affirmatively “no”. In that event, I fear CIG’s policy will inflict a heavy environmental cost. If the Referendum is to be a meaningful opportunity to change that course it is essential that the public are properly informed and that consultation is as full as possible about environmental risks. Unfortunately, I believe that in its efforts to undermine opposition to the Port Development Project, there has been obscuring the environmental costs and risks and, regrettable, mislead the public about these.

### **Cruise Port Referendum Cayman**

18. Cruise Port Referendum Cayman (**CPR Cayman**) is a non-profit organization established for the purpose of promoting and partnering with organisations concerned with community awareness and constitutional rights. CPR Cayman began a petition to start a people-initiated referendum on whether the Cayman Islands should move forward with the proposed Cruise Berthing Facility (the **Petition**).
19. Section 70 of The Cayman Islands Constitution states that a referendum shall be held on a matter of national importance if a petition signed by not less than 25 percent of persons registered as electors is presented to Cabinet. Cabinet must then settle the wording of the referendum question within a reasonable time period, as prescribed by law, and determine the date of the referendum in a manner prescribed by law. A referendum under section 70 is binding on the CIG if assented to by more than 50 percent of persons registered as electors.
20. On 12 June 2019 CPR Cayman presented the Petition to the Elections Office, signed by over 25 percent of persons registered as electors. The CIG directed that a verification process of the signatures must take place which was concluded in September 2019.
21. Before the people initiated referendum was triggered, CIG had in fact been asked to call a government referendum by the opposition which it refused to do. CIG had the opportunity to consult the public even before the people initiated referendum was triggered and declined



22. On 3 October 2019 the CIG Gazetted a Bill For A Law To Provide For The Holding Of A People-Initiated Referendum On The Issue Of Whether the Islands Should Continue To Move Forward With The Building Of The Cruise Berthing And Enhanced Cargo Port Facility; And For Incidental and Connected Purposes (the **Referendum Bill**). The Referendum Bill provided for the holding of a referendum under Section 70 of the Constitution of the Cayman Islands. The Referendum Law, 2019 was Gazetted on 31 October.
23. The date of the Referendum is important. Section 3 of the Referendum Law allows Cabinet by Notice to fix the date for the Referendum. That date was fixed by a Cabinet Notice issued on 31 October 2019 for the Referendum to be held on 19 December 2019. The shortness of time allowed CIG to stifle informed debate on environmental issues and campaign aggressively on these. I believe it has done so in a manner which is contrary to what I am advised and believe are its environmental obligations.

### **The George Town Harbour Reefs**

24. The inshore reefs in George Town are ancient, formed over thousands of years. They are considered to be unique in the Cayman Islands because of their form and shape. They are home to an abundance of vibrant marine life including a number of critically endangered species many of which are currently protected under our NC Law. Several of the corals such as Elkhorn (and Staghorn (both critically endangered) are listed on the IUCN Red List.
25. The basic facts about George Town harbour can be summarised as follows:
  - a) The coral reefs sit in shallow water which has a depth of between 5 to 25ft.<sup>1</sup>

---

<sup>1</sup> See TOR p4

- b) A number of unique coral reef structures are situated in and around the George Town harbour area and form part of a connected reef system that extends north to Seven Mile Beach and south well beyond Eden Rock.
- c) A large section of coral reef in George Town Harbour is directly in the projected area to be dredged during the construction of the Port Development Project.
- d) In addition, a shipwreck, the Wreck of the Balboa, is also directly in the projected area to be dredged during the construction of the Port Development Project. The Balboa is itself a functioning reef.
- e) Another wreck, the Cali, which like the Balboa has become part of a coral reef structure is also in its original resting place in George Town Harbour and is adjacent to the area to be dredged.
- f) There are a number of other reefs within the harbour such as Eden Rock and Devils Grotto, which are very close to the site which would be dredged. Eden Rock and Devil's Grotto consist of a reef of twisting tunnels and caves. During the summer months, millions of dwarf herring, also known as silversides and fries come there to spawn, filling the tunnels and creating a unique experience for divers.
- g) The George Town Harbour reefs are in an area which is designated as "protected" under the NC Law.
- h) All the coral in the reef is "protected" as are sponges having been designated under Part 1 of Schedule 1 of the NC Law. The reefs include large coral colonies of Elkhorn and Staghorn coral which, as mentioned earlier, are internationally recognised as critically endangered species.
- i) All the reefs in George Town Harbour are home to marine life including lobster, turtles and fish such as tilefish, jewfish and angelfish which are themselves designated under Part 1 of Schedule 1 of the NC Law as endangered species.



- j) The Balboa Reef, Soto's Reef, Eden Rock and Devils Grotto are internationally renowned diving sites and the reef structure is unique in the Cayman Islands.
26. I am told by Professor Carrie Manfrino (the director of an independent long-established local research facility, the Central Caribbean Marine Institute (**CCMI**)) that there are believed to be at least 60 species of coral in the reef in George Town Harbour. Many of these are internationally recognised as endangered species and all coral and sponges are "protected" under the NC Law. They are used as essential shelter by fish, sponges, lobster and turtles. 25% of the world's marine life depends on coral reefs as a habitat even though coral reefs are only a small part of the ocean. Because of the diversity of life found in a well-established coral reef they are sometimes likened to rainforests.
27. Coral needs clear water which allows light to permeate. This stems from its symbiotic relationship with algae. The coral polyp allows photosynthesis of the algae which produces food for the coral. This is why coral is not normally found in deep water. Colonies of coral form best in shallow tropical waters as in George Town Harbour. The need for sunlight is also the reason why sedimentation suspended in water or settling on the coral results in high mortality of coral: it disrupts the photosynthesis and starves the coral of food. For this reason, the sedimentation from months of dredging work and then re-animation from the daily operation of the propellers and thrusters of cruise ships is likely to kill coral some distance away from the actual berths. I discuss below the example of the dredging in the Port of Miami which adversely affected coral more than two miles away from the dredging site.
28. There are many millions of coral polyps in George Town Harbour in the area which will be dredged and affected by sedimentation. Care is needed in looking at references in the literature of CIG or its consultants to the quantity or numbers of coral to be found in the reefs in George Town Harbour. First, what is normally referenced is a colony. The "coral" itself is an animal in the form of a polyp with tentacles mostly 1-3mm in diameter, although some single polyps can grow up to 25cm. We normally see coral only in larger colonies but they also exist in solitary form. Colonies can be vast in size and George Town Harbour has some which are very large. Secondly, the benthic study carried out by CSA Ocean Science Inc (**CSA**) in August 2015 (the **CSA Study**) involved an ecological and geophysical study only of the reef which was "*projected to be directly impacted*" which

appears to be a reference to the area which it was then proposed to be dredged. It does not describe the adjacent reef which would be affected from the sedimentation (see pages 2-5).

## I. 2015 CONSULTATION

### Chronology of Relevant Events

29. There was a great deal of consultation between 2013 and 2015 which is explained in the Terms of Reference and Review of the Environmental Assessment Board (**EAB**). On 28 October 2015 CIG announced a decision to construct what was then solely a Cruise Berthing Facility in Cayman. The decision was, at that time, based on a 2015 scheme which had been submitted for an EIA. The Environmental Statement was more or less complete by September 2015 (the **2015 ES**) and was published on the Department of Environment's website.
30. On 29 June 2016 the NCC published by gazetting its Directive for EIAs mandating public consultation before any decision can be taken on an applicable project which would be likely to have an adverse effect on the environment generally or on any natural resource, or a protected area of the critical habitat of a protected species (the **EIA Directive**).
31. There was very little news about what was then the proposed Cruise Berthing Facility until June 2018 when an article was published in the Cayman News Service. It was reported that Department of Environment Director, Gina Ebanks-Petrie, had been informed that the steering committee for the Cruise Berthing Facility was being refreshed and that the Department of Environment was not to be represented on it. I found this astonishing as the Department of Environment is responsible for conservation issues.
32. On 28 September 2018 a "public forum" was held by the Minister of Tourism, Moses Kirkconnell, along with two cruise line representatives (from Carnival and Royal Caribbean Cruise Lines) and members of the CIG procurement team. At that time the "preferred bidder" had not been identified at least to the public. Both Carnival and Royal Caribbean Cruise Lines turned out to be part of the successful consortium. A picture was published



of a new design, but no further reports or information was given after this meeting. There were no further public pronouncements by CIG until 2019.

33. At some point CIG commenced a procurement process to find an appropriate company to build the Cruise Berthing Facility and on 29 July 2019 Cabinet announced that Verdant Isle Port Partners (**VIPP**), a consortium which consists of four businesses in partnership – McAlpine Ltd, Carnival Corporation, Royal Caribbean Cruises Ltd and Orion Marine Construction Inc., was selected as the preferred bidder (see pages 6-11<sup>2</sup>). This was based on a new design for the Cruise Berthing Facility which had been submitted by VIPP. The proposals now included an enhanced Cargo Port and together these are part of the current the Port Development Project.
  
34. To date none of the new plans for the Port Development Project have been submitted to the EAB to enable the process to commence for an updated EIA. Indeed, the plans for the Port Development Project have not been published. The existing 2015 ES did not cover any enhanced Cargo Port.
  
35. Set out below are the most relevant developments that culminated with the issuance of the Notice and the sending of the National Trust’s letter before action. Shown to me now are the relevant documents contained in my exhibit to which, where appropriate, I will refer in the chronology.

<u>Dates</u>	<u>Events</u>	<u>Exhibit NH-1 Reference</u>
2013	Multiple stakeholder consultations held as summarized in Environmental Statement “Appendix 1: Stakeholder Engagement & Public Consultation May 2015” of the 2015 ES document, the Environmental Statement. The terms of engagement were debated.	Pages 13-72
October 2013	Outline Business Case ( <b>OBC</b> ) by PricewaterhouseCooper ( <b>PwC</b> ) completed and referred to Cabinet for Approval.	Pages 73-149
April 2014	Baird & Associates appointed after tender process to carry out EIA	Pages 150-242

<sup>2</sup> Press Release: “Preferred Bidder Selected for Cruise Berthing Facility” dated 29 July 2019

<u>Dates</u>	<u>Events</u>	<u>Exhibit NH-1 Reference</u>
June 2015	The draft 2015 ES is put out for public comment over 23 days and Environmental Assessment Board (EAB) review. Copies of all documents are made available. Over 70% of those responding opposed the Port development.	Pages 243-265
9 July 2015	A Public meeting is held at Mary Miller Hall to discuss the EIA and the Non-Technical Summary.	
11 August 2015	EAB Review of Consultation draft 2015 ES, technical appendices and non-technical summary	Pages 150-242
15 August 2015	CSA complete the Benthic Habitat Characterisation Study	Pages 266-269
15 September 2015	The final Environmental Statement and Non-Technical Summary released by Baird`	Pages 270-330 (Non-technical summary)  Pages 331-733 (Environmental statement)  Pages 374-797 (Appendix)
30 September 2015	The National Trust issues a statement questioning Cruise Port.	Page 798
30 September 2015	Gina Ebanks-Petrie, Director for the DoE urges extreme caution before moving forward with the Cruise Port. This article was released to the press and posted on <a href="http://www.visitcaymanislands.com">www.visitcaymanislands.com</a> website.	Pages 799-801
September 2015	PwC issues addendum to the OBC (Environmental Economic Appraisal)	
29 June 2016	The EIA Directive was gazetted	Pages 802-821
August 2017	Honourable Premier states that the Conservation Law was "ridiculous" and announced a review of the requirement for EIAs.. <i>"We are in the process of having a review of the conservation law, especially around this area and... my view is we need to swiftly make the necessary amendments to these sorts of impediments to continue the proper development of these islands."</i>	
June 2018	After the Baird Report was published the Department of Environment had been critical of the Port Development Project. The DOE Director Gina Ebanks-Petrie was informed in June 2018 that she was being removed from the steering committee for the cruise port development.	Page 822 (Cayman News Service article dated 3 September 2018)



<u>Dates</u>	<u>Events</u>	<u>Exhibit NH-1 Reference</u>
28 September 2018	A public forum was held by the Minister of Tourism, Moses Kirkconnell along with two cruise line representatives from Carnival Corporation and Royal Caribbean Cruise Lines (before the "preferred bidder" had even been announced) and members of the CIG procurement team. A picture was published of a new design, but no further reports or information was given after this meeting.	
19 October 2018	The National Trust issues a second statement on its concerns re the Cruise Port	Page 826-827
October 2018	A people-initiated referendum campaign started.	
12 April 2019	In the 2020/2021 Strategic Policy Statement on "Delivering Government's Priorities" the Premier comments on building the port. The Premier stated - <i>"[t]he new cruise and enhanced cargo port when built – and it will be built - will secure our vital cruise industry for decades and create jobs and business opportunities for Caymanians. "</i>  The Petition at this point was fully underway and no geotechnical survey or updated EIA had been carried out. No work on updating the areas of concern that were indicated in the EAB had taken place either.	Pages 828-943
7 May 2019	The National Conservation Law Review Committee holds its first meeting chaired by the Premier. The Trust has a position on this Committee. It is clear that the CIG wants to weaken the NCC and the EIA provisions under this law. Members are told by the CIG that the NCC has too much power over major projects. The final meeting of the Review Committee is held in June and we are told it will reconvene in August, but nothing happens thereafter.	Pages 1438
12 June 2019	CPR Cayman submit the Petition.	
29 July 2019	The CIG issues a press release confirming the approval of VIPP as the preferred bidder.	Pages 6-11
20 September 2019	Notice of application for coastal works permit sent to the National Trust for the purpose of performing bore hole testing in the sea bed, to collect data for the engineering of the anticipated construction of the Cruise Berthing Facility.	Page 12
30 September 2019	The National Trust hears that VIPP are holding stakeholder meetings but had not been contacted. I reached out (see email) to request a meeting as a concerned adjacent landowner as well as the body mandated to protect and preserve environmental and historical places of significance.	Page 944

<u>Dates</u>	<u>Events</u>	<u>Exhibit NH-1 Reference</u>
1 October 2019	I and the National Trust's Deputy chairman, Peter Davey attended a meeting at the Ritz Carlton with VIPP representatives. None of the CIG's officials were present.	
3 October 2019	The Referendum date is set by Government	
16 October 2019	The National Trust's Council and other invited guests meet with VIPP and some of their technical partners such as Dr David Vaughan.	
17 October 2019	New designs for the Port Development Project are uploaded to <a href="https://supportourtourism.com">https://supportourtourism.com</a> in a document entitled " <i>The Cruise Berthing Facility and Cargo Port Redevelopment Project</i> ". To date there has been no new EIA or an updated EIA for this new design.	Pages 945-988
29 October 2019	I attended a meeting as a guest of Central Caribbean Marine Institute (CCMI) with Department of Environment and VIPP's coral relocation team. (This meeting was at the request of CCMI).	
31 October 2019	The National Trust issues a third press release once again calling for an updated EIA and expressing concerns re the environmental impacts.	Pages 989-991
31 October 2019	Notice issued fixing Referendum date.	Pages 992-994
12 November 2019	The National Trust sends a letter before action to the CIG.	Pages 995-998
November 2019	First of the "Be Informed" Public Meetings are held at Mary Miller Hall. Further meetings held all though November and December. (See schedule published) Meetings are held per voting districts.	
20 November 2019	The CIG replies to the National Trust's letter before action.	Pages 999-1003
21 November 2019	The National Trust is sent copy of CIG's reply to CPR Cayman's letter before action together with a copy of the Cabinet Minutes for 31 October 2019.	Pages 1004-1017
19 December 2019	Referendum Date.	

### **CIG's Undertaking to Consult**

36. On 26 September 2001, Leader of Government Business Mr McKeeva Bush, on behalf of the Cayman Islands, and the UK Minister for the Overseas Territories, Ms Valerie Amos, on behalf of the United Kingdom, signed the "**Environment Charter**" setting out the guiding principles for the UK government, for the government of the Cayman Islands and for the people of the Cayman Islands (see pages 1018-1028). The basis of the Environment Charter as a legally binding instrument is to be found in the 1999 White Paper "Partnership for Progress and Prosperity" which set out the rationale for the UK's



negotiations of matters concerning the environment with each of the UK Overseas Territories.

37. In the Environment Charter CIG agreed to protect the environment and our natural resources. Principle number 4 of the Environment Charter imposes a contractual obligation on the CIG to seek expert advice and consult openly with interested parties on decisions affecting the environment. The specific commitments which the Cayman Islands signed up to by executing the Environment Charter include:

- a) Ensuring that environmental impact assessments are undertaken before approving major projects and while developing our growth management strategy<sup>3</sup>;
- b) Commit to open and consultative decision-making on development and plans which may affect the environment; ensure that environmental impact assessments include consultation with stakeholders<sup>4</sup>;
- c) Abide by the principles set out in the Rio Declaration on Environment and Development and work towards meeting International Development Targets on the Environment<sup>5</sup>;
- d) Bring together government departments representatives of local industry and commerce, environment and heritage organisations, the Governor's office, individual environmental champions and other community representatives in a forum to formulate a detailed strategy for action (see Annex 1)<sup>6</sup>.

38. Part I of the Constitution (enacted in 2009) which in general guarantees rights and sets out the obligations of government and legislature includes in Section 18 a specific duty on the part of the CIG to foster and protect the environment and requires it to adopt reasonable measures to limit ecological degradation, promote conservation and secure ecologically sustainable development.

---

<sup>3</sup> Commitment 4 of the Environment Charter

<sup>4</sup> Commitment 5 of the Environment Charter

<sup>5</sup> Commitment 11 of the Environment Charter and Annex 2 and Annex 3

<sup>6</sup> Commitment 1 of the Environment Charter

39. It is important to note that the NC Law section 41(3) imposes a general obligation on the CIG to consult with the NCC<sup>7</sup> and take into account any view of the NCC before taking any action which would be likely to have an adverse effect on the environment generally or on any natural resource. It is my understanding that, pursuant to section 41(3), the NCC may require an EIA to be carried out<sup>8</sup>. As can be seen from the chronology the CIG commissioned an initial EIA and so it cannot be an issue as between the parties that one was required in order for CIG properly to inform itself and conduct meaningful consultation.
40. The NC Law empowers NCC to publish Guidance Notes which set out procedures for consultation by entities for the carrying out of EIAs. CIG entities must comply pursuant to section 43(2)(c) with any directives of the NCC and the regulations made under the NC Law. Such a directive (the EIA Directive) was published by way of Departmental Notice Gazetted on 29 June 2016 (see pages 802-821). The EIA Directive makes it abundantly clear that before any decision on a proposal or project can be taken there are two stages of mandatory public consultation. The stages at which the consultation must take place are helpfully set out in the self-explanatory flow chart (see page 803). CIG voluntarily undertook an EIA in 2013-2015.
41. In voluntarily undertaking the EIA, I believe CIG simply adopted best practice. It is my understanding that the EIA Directive is inspired by various international treaties which create “*procedural environmental rights*” that require EIAs to be prepared, environmental statements to be published and consultation to take place. One such treaty is the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the **Aarhus Convention**). Another treaty is the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (see pages 1029-1068). A number of Caribbean countries such as Jamaica are signatories. These represent international standards of best practice in respect of public access to environmental information and consultation.

---

<sup>7</sup> Which the Intervening Party has a seat on

<sup>8</sup> Section 43(1) of the National Conservation Law, 2013.



42. The existing 2015 ES published on 15 September 2015, was produced in respect of the 2015 proposal for the Cruise Berthing Facility. In obtaining and publishing the 2015 ES CIG acknowledged that it was bound to obtain such a report for its own information. In making it available to the public CIG acknowledged that if there was to be fair consultation the public needed access to this type of information.
43. VIPP has now revised the design for the Port Development Project and CIG is claiming that the environmental impact will be reduced by the re-design parameters. I do not accept that this is the case. Despite this re-design having been in prospect for many months, no revised EIA was commissioned or undertaken by an independent consultant. No statement of any kind has been prepared. There can be no issue that revised EIA would have been fundamental to informing the public. The CIG previously commissioned an EIA and had extensive consultation with respect to the 2015 proposals. This needs to be updated now because the original was incomplete and because the proposal has changed substantially.
44. CIG's current position on EIAs seems to me to be inconsistent. On the one hand, CIG has accepted the need for an updated EIA. An EIA is only ever one step in a broader consultation with the public. It is in use because the general public and interested parties such as the National Trust and the NCC all have input into the final Environmental Statement. Consultation with the public is necessary so that CIG can reflect on representations and form an opinion. On the other hand, since CIG's position is that if the referendum does not vote "no", it will be determined to go ahead I do not know on what basis any further public consultation is in any way capable of influencing CIG.
45. It is the National Trust's case that dealing "fairly" with members of the public would have required them to be put in possession of sufficient information about the environmental issues before voting in a Referendum and should not be misled into believing that there is no or minimal risk or that it can very likely be "mitigated". A balanced statement to the public would have pointed out the real and irreversible damage that will be caused by dredging and the limitations of the mitigating measures. That is not what happened after 2015.

## Deficiencies in Cruise Berthing Plans identified in the 2015 ES

46. As can be seen from the text, the authors of the 2015 ES, Baird & Associates, acknowledged a number of limitations and deficiencies which were largely identified during the public consultation in June/July 2015 and by the EAB in its Review Report of 11 August 2015. For the purpose of this affidavit I can summarise the more salient ones as follows:

- a) The 2015 ES noted the absence of a comprehensive subsurface investigation with respect to the size and type of dredge required<sup>9</sup>;
- b) More information was required to support an assessment of key design, construction and costs issues, including selection of dredging equipment;
- c) The absence of more detailed information meant that the extent of sedimentation plumes could not be assessed;
- d) The 2015 ES identified that the specific objectives, scope and cost of “relocating” coral from the area surrounding the new port had not been defined. It was recommended that the 2015 ES recommended that there should be a clear definition of the requirements for the protection of the natural environment within and around the project site. Those requirements could be incorporated in an Environmental Management Plan<sup>10</sup>. If such a document was produced it has never been published. Instead there has been no debate on the requirements. CIG has decided that over 80% of the coral will not be relocated on grounds of size irrespective of species. There is no attempt to relocate sponges, crustaceans or fish;
- e) The 2015 ES noted that the cost of “relocation of coral” depends on many factors and that programmes undertaken elsewhere have varied between US\$250 per square ft to US\$1800 per square foot.<sup>11</sup> Since the Port Development Project

---

<sup>9</sup> Page 12 of the Non-Technical Summary

<sup>10</sup> Page 43, Ibid

<sup>11</sup> Page 34, Ibid



involves several acres of coral those figures could be expressed more graphically as between US\$11m per acre and US\$78m per acre.

- f) The Wreck of the Balboa is located within the footprint of the proposed project and will be lost unless it is relocated. Further study was therefore recommended by the 2015 ES to map the wreck and assess its structural integrity in order to identify the best method for its relocation<sup>12</sup>. I would observe that since the Balboa is part of a massive reef structure, relocation focused on the Balboa as a wreck could destroy much of the coral.
- g) The 2015 ES also recommend further communication with stakeholders and the general public on cultural heritage assets, and the specific mitigation measures to be taken;<sup>13</sup>

47. The 2015 ES made it clear that due to the cultural and socio-economic significance of the sea to the Cayman Islands, and the potential for negative impacts, it was critical that alternative scenarios (with or without, alternate locations, etc.) be clearly presented to the public and stakeholders. Justification for the preferred option and mitigation strategies should also be presented<sup>14</sup>. Nobody had a right simply to assume that it can ever be right to destroy an important coral reef and historical sites.

### **The CSA Study**

48. The CSA Study was provided 5 August 2015 but it was not published by the Department of Environment. It is now on VIPP's website where it is mislabelled. I have already mentioned that it is based on a limited geophysical and ecological survey of the site. It recommends leaving colonies less than 10cm long. I have already commented in this.

49. It is also curious that despite not being apparently instructed to do more than a habitat study CSA devoted extensive discussion to coral relocation as a "mitigating" factor. This was not in the terms of reference for the benthic study. It appears that they were

---

<sup>12</sup> Page 36, Ibid

<sup>13</sup> Page 37, Ibid

<sup>14</sup> Page 48, Ibid

specifically instructed by someone promoting the Port Development Project without mentioning this. As coral relocation is such a controversial issue, I am concerned about how this came to be recommended by CIG's consultants without being in the published terms of reference. I note that CSA then put itself forward for carrying out the coral relocation work.

50. The CSA Study categorised the coral on the projected direct impact area by size. It states (see page 14) that "*the size of the coral colonies is an important consideration in coral translocation.... The majority of hard corals within the study area were less than 10 cm in diameter and therefore probably less than 5 years old*". It recommended "*...the exposed reef formation habitat, with 34.2% of hard corals greater than 10 cm, would facilitate more efficient and productive coral translocation efforts*".
  
51. I deal with coral relocation further below, but these comments reveal three basic flawed assumptions in the CSA Study. To begin with, as I have said some species of coral tend to form smaller colonies or even exist by themselves and by excluding colonies less than 10cm there would be an obvious selection bias against these. In particular, I am told by Professor Manfrino (see pages 1430-1432) that there are several coral species which represent significant parts of the biological diversity of a reef and which never form colonies larger than 10cm. The assumption that these colonies are all less than 5 years old is incorrect. Secondly, even if these colonies really were all under 5 years old, it is extraordinary to propose killing young coral colonies. This is effectively the next generation of coral. To allow this to happen radically decreases the biodiversity of the reefs. I am concerned that CSA did not understand the flaws in these assumptions. Thirdly, larger coral colonies cannot easily be moved when integrated with the coral reef. The hard-coral colonies are not free floating or solitary but envelope and are firmly attached to the reef. Removing coral even if sections of reef are cut out will result in high coral mortality.

### **Baird's "Scoping of Possible Mitigating Measures"**

52. Baird produced a statement entitled Preliminary Scoping of Possible Mitigating Measures on 14 September 2015 but again it was not published by the Department of Environment. It is, however, now on VIPP's website. It appears to have been prepared on behalf of VIPP



at this stage. Baird did not consult the Department of Environment in recommending coral “translocation.”

53. It is clear that Baird was seeking to implement the recommendations in the ES and the CSA study of only translocating a certain quantity of coral and only coral colonies larger than 10cm long. It also recommended using mechanical dredging because it produces less sedimentation than hydraulic dredging. Mitigation measures such as turbidity barriers or silt curtains were evaluated as one possible option of addressing this indirect impact. I discuss below how turbidity barriers and silt curtains failed to work on the Miami Port project and in Jamaica.
54. Having recommended mitigation measures VIPP has asked Baird to carry out “scoping” work on the need for a further EIA and CIG, it seems, is relying on this work.

## II. ENVIRONMENTAL RISKS

55. For the reasons set out below the Port Development Project, if implemented, will exact a heavy environmental price. If CIG was presenting advantages and disadvantages fairly the environmental cost and risks would be made known to the public.

### Destruction of the Reef

56. Dredging impacts every ecological function of a coral reef from feeding to reproduction (see Cuning 1069-1083)<sup>15</sup>. The 2015 ES acknowledges that the dredging required will destroy actual reefs. As clearly stated in the EAB Review “*the project site is located within the Seven Mile Beach Marine Park and has coral reef habitat and marine resources which are of significant ecological and economic value*”.
57. The reef that will be removed by dredging is an ancient reef that has gradually grown naturally probably over thousands of years. As I have said these reefs are natural habitats to fish and other marine life. Some of these species will themselves be killed by the dredging.

---

<sup>15</sup> (Cuning, Silverstein, Barnes, & Baker, 2019)

## Sedimentation

58. Apart from coral which will be within the footprint of the dredging, as I have explained sedimentation is considered to be highly damaging to coral colonies because it reduces the light available to corals for photosynthesis and can literally smother reef organisms. It affects reproduction and the metabolism of coral organisms. Thus, excessive sedimentation can alter the biological and physical processes keeping a coral reef alive. In short, there is a substantial risk that sedimentation from dredging will destroy the reefs nearby or severely weaken their resilience to other land-based pollution, disease and climate-change related effects. Sediment is very likely to affect the reefs adjacent to the site but may well have adverse effects on coral reefs some way removed from the Port Development Project. This proved to be the case in the Port of Miami.
59. There is scientific data on the tolerance and resilience of approximately 89 different species of coral to dredging, with different species having different thresholds of tolerance to suspended sediments. Sedimentation can cause smothering and burial, tissue necrosis, and population explosions of bacteria in coral mucus. This is what may account for the current coral disease in the Port of Miami. Some individual species can tolerate short term exposure (days) to suspended sediment concentrations as high as 1000 mg per litre, while others show mortality after weeks of being exposed to lower concentrations of 30 mg per litre (see Eerfemeijer et al 2012 at pages 1441-1469).
60. It is especially difficult to predict the scale of sedimentation from dredging and measures to contain sediment, for example, by the use of curtains has been markedly unsuccessful. There are two recent examples which show the devastating effect of sedimentation on nearby coral.
61. The first example is the dredging on the Florida Reef Tract for the Port of Miami deepening project which took place between November 2013 and March 2015. This project was of a smaller size to the George Town project. A graphic comparison between what was predicted and what actually happened can be seen at pages 1398-1399. The US Army Corp that carried out the dredging was sued for contravening the Endangered Species Act (see pages 1433-1435)



- a) A private company (Dial Cordy and Associates) monitored the environmental impacts on behalf of the dredging company (Great Lakes Dredge and Dock Company) contracted by the U.S. Army Corps of Engineers. The predicted sediment plume was downplayed as the contractors were to use curtains to contain the sediment. Their internal monitoring program showed minimal effects of dredging. Initially the project was reported as having been an environmental success.
- b) However, state and federal agencies (Florida Department of Environmental Protection and the National Marine Fisheries Service) reported widespread, severe, and long-lasting impacts of dredging. A recent study by Cuning et al 2019 (see pages 1069-1083) found that the Port Miami dredging project input hundreds of kilograms of fine sediment into the water column, buried 25% of reef up to 3 km away from the dredge site, doubled coral partial mortality from 5-10 km away, and had potential impacts on coral 15 km away. The NOAA reported 95% mortality rate of coral within 700 metres of the dredging zone. Recent CIG reports suggests that 660ft is a safe zone for the Port Development Project.
- c) These impacts contradicted the EIA for the Miami Port which predicted “temporary, local, and insignificant impacts,” that were predicted to not exceed the 7.07 acres of coral habitat impact. The reality was that 2.5km away from the project site, significant impact was observed and even 10-15 km away impacts could still be seen. The project exceeded its predicted environmental impact and the predicted severity of coral mortality by several orders of magnitude.

62. Another well-known example is the damage that was caused by dredging for the cruise ship terminal in Falmouth Jamaica which was built in 2009/2010. The new terminal required access channels to be dredged. The area dredged was also in an environmentally sensitive area, albeit far less than the Port Development Project. The outcome was also much worse than predicted as can be seen from the 2015 Report by the Jamaica Environment Trust (see pages 1084-1097). Mitigation involved coral relocation and use of sediment containment measures such as curtains. The mitigation measures were almost entirely ineffectual. It has been widely reported that the coral was very badly affected by sediment.

63. The 2015 ES noted the indirect impacts of elevated turbidity and sedimentation levels would potentially affect an additional 15-20 acres of coral reefs and went on to state that a further 650 feet either side of the original footprint could be affected.
64. The National Trust understands that in the new year further modelling will be done to determine the extent of the predicted sediment plumes and the lethal and sub lethal impacts to the coral reefs. The National Trust is highly sceptical that the sedimentation can be accurately predicted or effectively contained. The reality is that dredging produces high level of sedimentation.

### **Operational Risk**

65. As the 2015 ES acknowledges the operation berthing of large cruise ships at the Port after it has been completed will also generate further sediment when propellers and thrusters are turned on and off as ships berth at the proposed facility. Any coral that survives the construction phase will be adversely affected by continuous churning of the sediment. Since it is not clear how ships will move off the berths when leaving the port or where they will turn, the propellers and thrusters may throw up sediment over a wider area.
66. Sediment is often brought in by rough weather and particularly north-western winds. This combined with sediment from operation is likely to mean that there will have to be regular dredging every year in the future for maintenance purposes.

### **Historical Sites under threat – Wrecks of the “Balboa” and the “Cali”**

67. The consultants classified the removal of the Wreck of the Balboa as a significant cultural loss. Even if it is successfully relocated, they still classified the loss as a **(- D) level impact (Significant Negative Impact)** (see EAB Review at pages 150-242). The fact is its historical and original resting place will be lost altogether.
68. The EAB Review cautioned in its conclusions that there was no guarantee that the Wreck of the Balboa, which is strewn in pieces across the ocean floor, could be successfully moved and suggested that before reaching a conclusion that it could a feasibility study



looking at the condition and integrity of the wreck was needed. Moving it and repositioning it now when it has been a functioning reef seems to me as impossible as moving other reef structures.

69. The site is itself of historic interest. In fact, the Balboa has also become a functioning ecosystem and by relocating it, there is no guarantee that any of this will survive any more than there is with the remainder of the reefs. At the moment what is proposed is moving the individual parts of the Balboa. VIPP have informed us that it will be moved one kilometer away but have provided no further details to the exact location. This will result in disintegration of the Balboa reef.
70. A key point regarding the Wreck of the Cali is that it was never included in the scope of the project. Although it is outside of the dredge footprint, it is impossible for CIG to say without further assessment, that this wonderful historic asset and dive site will not be impacted by sediment plumes during construction and episodic or chronic water clarity issues during ongoing operations. Again, no detailed studies show that it will not be at risk.

### **Carnival and Royal Caribbean Cruise Lines**

71. It is also particularly important in National Trust's view that the consortium members of VIPP should be trustworthy on environmental matters. As can be seen from Support our Tourism brochure, one of VIPP's dominant consortium members, is Princess Cruise Lines, which is part of the Carnival Corporation fleet (**Carnival**). Carnival has a poor environmental record. I refer to the conviction and plea agreement in the US in 2017 and the Department of Justice Statement of 3 June 2019 (see pages 1098-1178) which records a plea to a parole violation.
72. I am concerned that there has been no mention of Carnival's criminal record nor conviction and fines in any of the information about the proposed project provided to the public. The Premier and the Deputy Premier have been asked questions about their criminal conviction during the "Be Informed" sessions however have never been willing to respond to them. I would have expected at the very least that the CIG would have put in place stringent measures to prevent environmental breaches in relation to the proposed project.

73. CIG has not explained why it trusts cruise operators like Carnival on environmental matters. I consider it inappropriate that CIG should be sharing a platform with VIPP on environmental matters or adopting VIPP's solutions without independent scrutiny, particularly as the Department of Environment has had no ongoing role on CIG's steering committee. I also do not believe that the CIG if acting fairly in the context of the Referendum should be sharing a platform with VIPP on environmental matters.

### **Coral Relocation and Restoration**

74. The 2015 ES discusses the possibility of "relocating" the coral reefs. The CSA Study actively recommended coral relocation and Baird's Preliminary Scoping of Possible Mitigation Measures recommended coral relocation. Coral "relocation" as a mitigation measure, is heavily relied upon by CIG in promoting the Port Development Project.
75. The loss of the ancient George Town reefs which form part of a continuous reef system would be permanent and these reefs are not capable of being replicated elsewhere. I understand "coral relocation" to be a reference to moving individual coral colonies. This does not mean a reef on which coral colonies have settled can be moved. It is important to understand that the reef structures themselves cannot themselves be picked up, moved or "relocated" without destroying most of the coral colonies. The reefs themselves are often fragile.
76. As I have said the reef structures themselves are very complex eco-systems with many interdependent and symbiotic organisms. These reefs are a home to fish and other marine life which establish ecological niches within these environs. Once repositioned and or out-planted, these complex relationships and ecological processes break down and cannot be easily or readily replicated. The very act of moving coral would be disruptive because the natural dispersion of coral is important to its ability to recruit larvae and regenerate (see pages 1179-1207). Studies have shown that the space between coral colonies appears to be non-random.
77. Fish, sponges and other marine life which inhabit the reefs are likely to be destroyed. The George Town Reefs are the habitat and a spawning ground for fish and for other marine



life. The destruction of coral is likely to cause the associated marine life to be adversely affected.

78. Coral “relocation” does not mean that there will be no destruction to coral. I have already explained that the selection of coral for relocation results in only a relatively small proportion of the affected coral being relocated because it is confined to the projected area which will be directly impacted by dredging. It will not be used to relocate coral in the area which is likely to be affected by sediment. The selection of coral under 10 cm in length also means that there will be a bias against a number of species. It is irrational to kill off a generation of young coral. The CSA Study quantifies this in its recommendation that 86% of hard coral colonies were to be left behind as being less than 10cm in length. Soft coral colonies less than 25cm were also to be left behind which would mean 81% of the soft coral. In other words, well over 80% of the coral on the reef is not to be relocated or rescued. I am unable to reconcile this with CIG’s claim elsewhere that 30% of coral will be rescued. I understood that there was a further selection process in terms of rare and other coral. The reference to 30% may to a further paring down of colonies that exceed the size minima.
79. In an announcement made in August 2018 by the Premier he said that VIPP’s bid had been accepted on the basis of a US\$10m budget for a coral relocation programme (see Cayman Compass Article of 8 August 2019 at pages 1208-1209). CIG omitted to mention that this was the cheapest of the relocation programmes suggested by Baird in their Preliminary Scoping of Possible Mitigation Measures (see pages 1210-1243). This reinforces my view that the CIG is not fairly explaining to the public what is happening.
80. It is not possible to know for many years what effect a selection bias for smaller coral would have on the reef as it would leave a generation gap. CIG plans a huge depletion of young coral colonies it will not be possible to see for many years if any of the relocated reef has generated properly. If similar selection is used by other companies that carry out coral relocation studies that examine the health of a colony after 5-10 years will not have been able to see the effect of a selection bias.
81. The EAB Review considered coral relocation and concluded that, while it offers a measure of mitigation, it will not achieve “no net loss of biodiversity”. The EAB clearly stated “this

destruction of coral reef habitat as being in the highest tier of negative impacts — a **Major negative change/impact (-E)** and even with mitigation (a proposed coral relocation programme) this impact is still classified as being a **Significant negative impact (-D)** after mitigation measures have been implemented”.

82. The CSA Study recommended coral relocation as “feasible” and then put CSA’s own credentials forward for this work. It also suggested building an artificial reef. I have already questioned the fact that CSA went beyond performing a benthic study but considered coral mitigation.
83. Coral relocation is controversial and there have been notable failures. There are numerous reported examples of failed attempts of coral relocation to make way for dredging and cruise ships. These include Falmouth, Jamaica in 2009-2010; the Port of Miami in 2013 and Bimini in the Bahamas. It is therefore of vital importance that a proper feasibility study is carried out on the relocation of the coral reefs and that the public are fully informed of the risks prior to voting in the referendum. Moreover, this should not be presented to the public as if it were a replacement of the reefs.
84. Concerns regarding the proposed coral relocation have also been set out by respected academics such as the report from the Central Caribbean Marine Institute, Inc., the letter from Terry Hughes of the James Cook University Australia (see pages 1437) and in an affidavit made by Dr Kelly Dunning at the Conservation Governance Lab at Auburn University (see pages 1424-1426). These concerns deserve to be taken into account as part of an updated EIA or at least require investigation and included in any public consultation.
85. CIG has claimed that “Polaris ... and [a] specialised team that has experience working on coral relocation and restoration will be overseeing the project.” Polaris is described as having had 89% success rate in Cayman on two damaged sites in 2016 and 2017. Polaris has not done “relocation” in Cayman but carried out work to repair coral damaged by illegal anchoring. Relocation and restoration are not the same thing. Polaris has not undertaken anything on the scale of what is being processed. I am told by Professor Manfrino that the coral restoration work was largely a failure. CIG must know this. Yet, Polaris (which



will have the benefit of a \$10m contract to carry out the relocation) has now been asked by VIPP to advise CIG on coral relocation.

### **Micro-Fragmentation and Dr Vaughan**

86. Micro-Fragmentation is an unaccredited method of culturing coral developed by Dr David Vaughan in laboratory tanks. Assuming it works at all, incubation in the laboratory does not save coral but is directed at growing new coral from a few samples. I am told by Dr Dunning that the laboratory work has not been written up in any peer reviewed scientific journal and that transplantation in the wild of any large quantity of coral is fantastical.
87. A VIPP social media online Facebook post of 8 November 2019 (see page 1244) contained a YouTube video about Dr. Vaughan and coral micro-fragmentation.

*“Our restoration work will be undertaken by Dr David Vaughan who will be initiating a landside coral nursery using the micro-fragmentation and out planting technique. You can read more about Dr Vaughan and his Plant a Million Corals program on his website - <http://plantamillioncorals.org/>.”*

88. I have myself watched a BBC video to which the Premier drew attention on 29 December 2019. A part of this was filmed when Dr Vaughan was still working at Mote Marine Laboratories & Aquarium (**Mote**). At minute 2:31 of the BBC video a statement is made that *“the team plan to plant 100,000 corals back in the ocean by 2019”*. I do not know whether that is a reference to colonies but if it is not then the quantity would be very low. There is no properly scientifically verified successful attempt of planting of 100,000 corals colonies anywhere let alone the incubation of endangered species of coral. The public needs to be given accurate information in plenty of time and not persuaded to buy into some unproven theory.
89. Mote disassociated themselves from Dr Vaughan (see pages 1245-1246) and disclaimed any suggestion that his work was based on their research or that his views represent those of Mote:

*“A past employee of Mote Marine Laboratory & Aquarium, Dr. David Vaughn, who retired from Mote in 2018, has had no affiliation with Mote since that time and does not represent the views of Mote in any*

*manner. His current activities in the Florida Keys, Cayman Islands, or elsewhere are not endorsed, supported or affiliated with Mote, nor are they a reflection of Mote coral reef research, restoration and conservation activities.”*

90. In addition to Mote’s statement, I received a letter from one of the foremost coral experts in the world, Professor Terry Hughes, Director of the ARC Centre of Excellence for Coral Reef Studies who categorically refutes Dr Vaughan’s claims (see page 1247). He says that only small samples of cultured coral have survived in the wild.
91. I am concerned that CIG, which appears actively to be promoting Dr Vaughan’s work and which is regularly sharing a great deal of information about him on social media, has not taken the trouble to carry out any proper due diligence about the claims for coral restoration or verified Dr Vaughan’s claims, so as to allow the Cayman voters the opportunity to hear or ask questions of the local experts and government department in relation to the proposed restoration and relocation.

### **III. CIG’S POLITICAL CAMPAIGNING FOR THE PORT DEVELOPMENT**

#### **Information Meetings**

92. Following the announcement of the Referendum in April 2019, CIG has actively promoted the Port Development Project to the public and ministers have appeared on public platforms with representatives of the preferred bidder. It has held a number of “information meetings” at which statements are made by ministers, usually the Minister for Tourism and Deputy Premier and sometimes the Premier, as well as representatives of VIPP and their experts. The public is invited to attend these meetings and to submit written questions to the panel, which may or may not be selected for response. The public are not permitted to engage or ask follow-up questions.
93. These meetings represented an opportunity for the public to be “informed” about the significance of the reefs in George Town and their likely destruction which will result from the developing of the Cruise Berthing Port as set out in Appendices J1 and J2 of the 2015 ES. Unfortunately, the public have been given incorrect information in heavily biased statements.



## CIG's Brochure

94. Whereas the 2015 ES made it clear that the development would destroy unique coral reefs, CIG has been undermining that simple message most clearly in the Support our Tourism "brochure" (see pages 1248-1254) which has been handed out at all the public information meetings and which is clearly produced to lobby for a "yes" vote. The brochure is also delivered directly to people's home in a summary flyer (see pages 1422-1423). The brochure and flyer assert that there is very little that will be damaged and positively represents that the coral will simply be moved or "relocated". I consider this general message and other statements misleading in a number of respects.
95. In the brochure the environmental impact is not discussed until quite some time into the narrative and only after all the virtues of the project have been laid out.
- a) The section supposedly dealing with environmental impact does not mention the damage that will be caused by dredging to the coral although this will essentially destroy much of the Marine Park. Instead it asserts that there will be no damage to the beach.
  - b) The fact that there are endangered species of coral in the reefs or that the George Town Reefs represent an important habitat for endangered species of marine life is not mentioned.
  - c) Instead three pages are devoted to coral relocation (see pages 1250-1252). It contains a number of statements such as:
    - i. "Coral directly impacted from construction and dredging will be relocated to an area nearby which offers very similar conditions to the area where the coral was originally located. This increases the displaced coral's rate of survival." (see pages 1250)
    - ii. "Polaris ... and [a] specialised team that has experience working on coral relocation and restoration will be overseeing the project." Polaris is

described as having had 89% success rate in Cayman on two damaged sites in 2016 and 2017. Polaris has not done "relocation".

- iii. In addition to relocating coral, the developers plan "significantly" to increase the overall cover and diversity of corals through long-term partnership with Dr David Vaughan, described as a world-renowned coral reef scientist and the pioneer of coral reef restoration technique called micro fragmentation" which would grow "25 to 40" times faster than in nature.
- iv. It is suggested that there are several cases of successful relocation projects similar to George Town Harbour worldwide and by way of example that 1000 coral colonies were removed in Florida and have shown after three years a 97% success rate in terms of survival.
- d) No mention is made of the fact that an acre of reef is home to 500,000 to 1m coral polyps, not 1000. No mention is made of the fact that the reef which is unique will be destroyed and nobody has ever relocated coral reefs. Since there are several types of coral that are all endangered species, it would have been relevant to know whether Dr Vaughan has managed to grow any of these.
- e) The public are being invited to treat coral reef relocation as a viable option instead of explaining that (i) coral reef relocation is an unproven technique; (ii) experience in Florida has actually been very negative as has been the experience in Falmouth, Jamaica and Bimini in Bahamas and that (iii) Dr Vaughan's work has not been validated in any peer-reviewed publication (see Professor Dunning's affidavit). Indeed, it is being suggested there will be a substantial increase in coral as a result of relocation and micro-fragmentation.
- f) It is incorrectly stated that the development project will not impact any of the shore diving sites in Cayman. The port development project will not simply kill all the coral directly under its footprint but also nearby coral. At the very least it will jeopardise Eden Rock.



- g) It is also represented that the development will affect less than 1% of the coral reef habitats. What CIG should have told the public is that the reefs in George Town Harbour are unique in the Cayman Islands, they represent a famous diving site and cannot be replaced.
- h) The brochure also comments that in considering the location *“account must be taken of the damage that has already been done to the reef in George Town. Decades of dropping and dragging anchors have resulted in accidents and extensive damage to the coral reefs and seabed”*. It is true that cruise ships damaged coral near their current anchorage. However the anchorage damage is on back reefs which have been clearly designated as anchorage zones for decades. The inner, near shore reefs are very much alive.
- i) The Referendum Brochure undermines the 2015 Environmental Statement by suggesting that it has somehow been overtaken by a new design. The Public are told that *“the new design accomplishes Government’s commitment to minimise impact to the environment and when compared to the original design presented in 2015 will achieve a number of benefits.”*
- i. The *“wreck of the Balboa will be moved”* when nobody knows if it can be and it is now itself part of a reef and living ecosystem.
  - ii. The south pier is *“660ft away from Eden Rock”* but that ignores the fact that the berth is not 665 ft away and the dredging channel is well within that distance.
  - iii. Polaris has an *“89% success rate”* in relocating and that the work has not been a success. Polaris has not done a *“relocation”* project but tried to *“restore”* with only limited success.
  - iv. There would be a *“reduction in overall impact on coral”* when the quantity of sediment thrown up by dredging will kill off any coral many times over.

## Social Media

96. The statements in the Support our Tourism brochure have been repeated by CIG on social media and the Support Our Tourism Website and published on the online social media posts of VIPP, Dr Vaughan and other elected members of the legislative assembly who support the port:

- a) On 22 August 2019 Dr Vaughan answered a comment on his Facebook page (see page 1255): *“The situation in Grand Cayman is more about stopping the anchoring on the outer reef that has been going on for years. That large area looks like the craters of the moon. We have to stop anchoring in reef zones. With that said, the large ships should dock not anchor. The dock will destroy less reef area and coral growth than if they continue to anchor on it.”* (my emphasis). This is completely untrue and is at odds with the 2015 ES.
- b) I have already mentioned that A VIPP online Facebook post of 8 November 2019 (see page 1256) provided a link to YouTube video about Dr Vaughan and coral micro-fragmentation. It also touted coral relocation and “restoration” National Trust considers that it is inappropriate to recommend “micro-fragmentation”. In the video the Premier made the following comment:

*“Verdant Isle Port Partners is proud to have brought together a world-class management team of scientists who have over 100 years of coral relocation and restoration experience collectively and have attached tens of thousands of corals worldwide.*

*The team includes Polaris Applied Science, Sea Ventures and Dr Harold Hudson and other affiliated reef restoration experts from the Caribbean and Central America who have a long history working together on similar projects with good success.*

*Our restoration work will be undertaken by Dr David Vaughan who will be initiating a landside coral nursery using the micro-fragmentation and out planting technique. You can read more about Dr Vaughan and his Plant a Million Corals program on his website - <http://plantamillioncorals.org/>.”*



- c) On 12 November 2019, at 10:11am, "Support Our Tourism", a Website and Facebook page published by the CIG Ministry of Tourism, shared a post from VIPP's Facebook page with the following comment (see page 1256):

*"Coral restoration works! We hope everyone will watch this and look into the plans for the relocation and restoration around this project.*

*You can read more about Dr Vaughn and his Plant a Million Corals programme on his website – <http://plantamillioncorals.org/>"*

- d) On 14 November 2019, VIPP published a Facebook post (see page 4) sharing a link to Dr. Vaughan's own Facebook page with this quote from it:

*"It is so exciting to see that the growth of corals no longer needs to be measured in years and decades, but we can see measurable changes with our own eyes within a few months. These corals were clipped for the "frag and fly" practice of micro-fragmentation, one of a few techniques used for coral restoration. The polyps on the edges of the coral plugs are clipped off and used to start new coral plugs, and the clipped corals grow back over the original plug in a few months. This technology, along with other methods, is how we can restore our coral reefs within our lifetimes! To learn more, visit [https://buff.ly/2LSwRar!](https://buff.ly/2LSwRar)"* (emphasis added)

- e) On 28 November 2019 CIG republished on the "Support Our Tourism" Website and Facebook (see the article and a copy of the post at page 1400-1402) a claim made in the local newspaper, the Cayman Compass to the effect that there was very little coral and marine life left in the harbour:

*"This column in the #CaymanCompass provides great insight into the project.*

*"What we are witnessing is a uniquely beneficial deal for the Cayman Islands and frankly if it passes us by we may never see the likes of it again.*

*Based on the assessments we did back in 2010 the port area does not have anywhere near the amount of coral that some opposing the project have suggested. There is a difference between coral habitat which has no coral and habitat which has live coral.*

*The area dock footprint as currently proposed, has no more than five acres of live coral directly within the area to be dredged, which by the way, is substantially smaller than that proposed in 2010. The current plan also involves relocation of that live coral."*

f) A number of inaccurate statements were also made in a video presented by VIPP at the public meetings hosted and panelled by CIG and VIPP, previously made available online via YouTube and shared on Support Our Tourism's Facebook page on 16 November 2019 (see page 1403). During the program

(i) Greg Challenger, President Polaris Applied Science states:

*"I've seen some of the damage that anchors from four to six cruise ships do, per day, out there for years. There's a lot of severe anchor damage out there. And frankly, if that could be stopped in any way that would be a positive."*

(ii) David Anglin Principal and Senior Coastal Engineer, Baird and Associates (EIA Consultants) states:

*"That is a big negative with the current situation. The ships drop anchors and the chains drag and the anchors drag and they've destroyed acres of coral. There's a benefit there, particularly in the long term. If you're not anchoring then the coral has the opportunity to recover and regenerate over time but obviously it's not overnight. So there is a positive there with the project. With the project there is a number of positives."*

(iii) Then Greg Challenger, President Polaris Applied Science further states:

*"All the techniques are proven and survival has happened. A good survival. We've seen it right here in Grand Cayman. We can absolutely do it."*

g) On 22 November 2019 again on the "Support Our Tourism" website and Facebook page, the CIG's published a link to another Cayman Compass article about Dr. Vaughan (<https://www.caymancompass.com/2019/11/20/researcher-aims-to-regrow-coral/>) (see page 1404) with the following comment:

*"Dr. David Vaughn is part of the Verdant Isle team and is bringing his amazing technology to the cruise port project."*

*"A scientist whose methods have been heralded as a potential game-changer in the emerging field of growing corals has been recruited as part of the mitigation plan for the cruise port." "*



- h) On 26 November 2019 on the “Support Our Tourism” website and Facebook page CIG published the following statement (see the post and article at page 1259) which refers to Professor Manfrino. Since CIG has gone to some trouble to undermine Dr Manfrino I have included her response and the email of CCMI’s report to CIG of 25 November 2019 (see pages 1260-1267):

*“We hope everyone will read this article by Polaris who has worked on many coral restoration projects successfully in Cayman. Dr. Manfrino is incorrect in her inferences and lacks a basic understanding of what occurred and what was completed at the vessel-damaged sites. It is unfortunate that misinformation is being communicated to the public.*

*The team at Polaris Applied Sciences successfully attached all the corals that remained after the anchor and chain damage in the MV Tatoosh case. If we had more available corals that had not been crushed by the anchor and chain, we would have been able to have attached them successfully as well.*

*Read the full article here”*

*<https://www.caymancompass.com/.../polaris-we-expect-strong-s.../>*

- i) On 25 November 2019, CIG published a post on Support Our Tourism website and Facebook page giving the impression that the coral in the GTH area is negligible. They say: *“There are over 365 dive sites across the Cayman Islands. The Cruise Berthing Facility and Cargo Port Redevelopment Project will affect less than 1% of our coral reef habitats. However, the goal is to replace 10 times the amount of coral that is removed from the project area.”* (see page 1267).

- j) The “Real Alden McLaughlin” is the Premier’s own Facebook page. On 25 November 2019 he published the following post (see page 1405):

*“Dr. Vaughan talks about his experience of working with corals and his vision for planting a million corals.*

*He was awarded the prestigious 2017 Parker/Gentry Award, in recognition of his work which has made a significant impact on conservation and serves as a model for others.*

*His lifetime of expertise working with corals will support the cruise berthing and enhanced cargo port if the project goes ahead.”*

When challenged about Dr Vaughan's expertise, the Premier responded (see page 1406):

*"Dr. David Vaughan's Biography - Senior Scientist, Mote Elizabeth Moore International Center for Coral Reef Research & Restoration; Program Manager, Coral Reef Restoration Program. Dr. David E. Vaughan is an aquaculture researcher who has designed, built and operated many marine aquaculture projects, programs and businesses. He initiated the Harbor Branch Oceanographic Institution's Aquaculture Division in 1991 and built the Aquaculture Development Park, and ACTED, the Aquaculture Center for Training, Education and Demonstration. Dr. Vaughan built and developed the Center for Marine Ornamental Research (CMOR), which is now incorporated as Oceans, Reefs and Aquariums Inc (ORA), which he was president of until 2001. Dr. Vaughan was a Senior Scientist at the Mote's Elizabeth Moore International Center for Coral Reef Research & Restoration Center in the Florida Keys and Program Manager for the Coral Reef Restoration Program. He is now the President and Founder of Dr. David E. Vaughan Consulting LLC and the Plant a Million Corals Foundation (501(c)3). Here's a clip from the BBC Earth Blue Planet programme.*

<https://www.facebook.com/BBCOne/videos/472941726548661/?v=472941726548661>"

97. The Support our Tourism website continues to make incorrect and misleading representations about the reefs (see pages 1407-1421 <https://supportourtourism.com/faqs/#environment>). These are similar to the false statements I have already described. They underline the CIG's determination to campaign on environmental issues in a misleading and politicised manner.
98. The National Trust was made aware during their meeting on 16 October 2019 with Orion, part of the VIPP Consortium, that most of the technical investigations would not commence until March 2020 due to the time required to obtain necessary coastal permits, suitable weather to conduct in-water works and other factors.

### **Silencing the Department of the Environment (DoE)**

99. According to the DoE website its responsibility is stated as follows *"The Mission of the Department of Environment is to facilitate responsible management and sustainable use of the natural environment and the natural resources of the Cayman Islands; through*



*environmental protection and conservation, wise use, scientific research and public education".* The DoE are highly regarded by many internationally based on their Marine Protected Area network and the public consultation that went into it. We are fortunate to have such an experienced group of civil servants at the DoE working with various stakeholders to ensure the protection of our natural environment.

100. It was very unfortunate therefore that Gina Ebanks-Petrie, the Director of the DoE, has been removed from any public debate about the Port Development Project. She was taken off the CIG's Cruise Port Steering Committee so that her input cannot be sought at meetings with VIPP. That committee is now run by the minister for tourism. She has not accompanied ministers on any public events over the past six months. She is the one impartial voice to which CIG could turn to receive an objectively reasoned assessment. At CIG's information meetings members of the public have asked VIPP/CIG's representatives why the DOE was not at meetings in which claims were being made that there was no net loss. On 13 November 2019 it was reported that at one of these meetings it was said that "*it would be inappropriate for DoE to be present*" because VIPP was now preparing a scoping looking at whether there is any need for an EIA. The project is being overseen by CIG's "Major Project Office" and the Ministry of Tourism.
101. I believe that DoE has been side-lined as a direct result of her stance on the Cruise Port. Her advice to cabinet has I am sure contradicted everything that CIG has recently said. The director's own views can be seen from an article on the 30 September 2015 (page 799-801). Ms Gina Ebanks-Petrie noted "*Coral reefs all over the world are under serious threat on various fronts: coastal development, over-fishing, sedimentation, climate change, etc. Marine scientists are agreed that we need to take all possible steps to protect remaining reefs at the same time as taking corrective action to address the threats, both locally and globally*". She added "*The pro-port side seems to take comfort from these mitigation options, but what is being missed, or glossed over, is that the environmental study also assesses the effect of those measures, and the consultants judge that they will have little or no effect on reducing the severity of the impacts... The public and decision makers need to remember that "mitigation" of an impact does not equal complete removal of the impact, and they should focus on the severity of the predicted residual impact i.e. those impacts which remain even after the use of mitigation measures.*" I expect that Ms

Ebanks-Petrie had been giving CIG advice in these terms and that CIG does not wish for this advice to be known by the public.

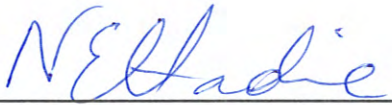
**Conclusion**

102. This is the first ever people-initiated referendum in the Cayman Islands and it has come about because this is clearly an issue of national importance and one which the electorate are very engaged with. It is therefore vitally important that the Referendum is not organised by CIG in such a way as to prevent the electorate from making an informed decision, including on the significant environmental impact, and can properly exercise their right to determine whether or not they want to support the construction of the Port Development Project. CIG had taken steps to organise the Referendum to give itself the best assurance of a victorious outcome. Part of that involves aggressive campaigning and giving out incorrect environmental information.

Sworn to at George Town, Grand Cayman )  
on this 11<sup>th</sup> day of December 2019 )  
before me )  
)



**NOTARY PUBLIC**

---

**NADIA HARDIE**



IN THE GRAND COURT OF THE CAYMAN ISLANDS

CAUSE NO: GC 195 OF 2019

BETWEEN:

SHIRLEY ELIZABETH ROULSTONE

Plaintiffs

AND:

(1) THE CABINET OF THE CAYMAN ISLANDS  
(2) THE LEGISLATIVE ASSEMBLY OF THE CAYMAN ISLANDS

Defendants

AND:

THE NATIONAL TRUST OF THE CAYMAN ISLANDS

Intervening Party

---

EXHIBIT "NH-1" TO THE  
FIRST AFFIDAVIT OF NADIA HARDIE

---

This is the Exhibit NH-1 to the First Affidavit of Nadia Hardie sworn on 11 December 2019.

Sworn to at George Town, Grand Cayman )  
on this 11<sup>th</sup> day of December 2019 )  
before me )



\_\_\_\_\_  
NOTARY PUBLIC

  
\_\_\_\_\_  
NADIA HARDIE