



Environmental Assessment Board

Review of the

Final Environmental Statement for ReGen Waste Management Facility

19 March 2024

1. Introduction

This document represents the Environmental Assessment Board's (EAB) review of the Environmental Statement for the Integrated Solid Waste Management System (ISWMS), now ReGen, prepared by GHD and dated 21 February 2024.

The EAB is a sub-committee of the National Conservation Council (NCC) and members have been appointed by the NCC based on the likely significant effects of the project. The EAB includes only those Government agencies or departments that are normally part of the approval or regulatory processes for the subject project. The EAB for the proposed ISWMS comprises representatives from the Department of Environment (DoE), the Department of Planning (DoP), Department of Environmental Health (DEH), National Roads Authority (NRA) and Water Authority Cayman (WAC).

2. Overall Comments on the Environmental Statement

The Environmental Impact Assessment (EIA) for the proposed ReGen project (the Integrated Solid Waste Management System) was generally conducted in accordance with the Terms of Reference. The Final Environmental Statement (ES) is considered to be an adequate representation of the environmental effects and the Non-Technical Summary should be referred to for a summary of the significant environmental effects identified as part of the EIA.

The EAB recognises that the proponent will not be able to commit to submit the final Environmental Management Plan (EMP) until financial closure of the project has been reached. Given this limitation, the EAB accepts the draft EMP appended to the ES as a high level review of the implementation of the mitigation measures of the environmental effects. The EAB recommends that it is involved in further reviews to finalise the EMP.

Areas of Concern

The EAB has had minimal connection or interaction with any ongoing contract negotiations between the parties, and therefore it is noted that these issues may have been considered and resolved elsewhere. However, given the environmental implications, the EAB wishes to highlight matters of concern which have arisen over the course of the EIA as follows:

(i) Lack of Legislative Framework

At this time, there is a lack of legislative framework to support the project and ancillary elements, for example, air quality standards.

We understand that the facility and project will be managed via the Project Agreement. However, this may not be the most appropriate long-term solution for the lifetime of this project or for a country moving towards a higher population and more urbanisation. Although this particular issue has been raised by members of the EAB as far back as 2012/13 during the EIA for the Dart proposal for a new landfill in Breakers, a Meeting Note dated 12 Feb 2020 shows that this issue was raised again 4 years ago by the EAB in the context of this current project. At that time the approach from the government's major project office was to tie the need to meet the appropriate international standards for air quality etc. into the main project contract, with penalties for non-performance specified in the contract. The EAB stressed that legislation would be a better approach as it is not best practice to have matters as important as emissions standards tied to a contractual agreement rather than legislation, particularly given the length of the project, and that it is extremely likely that parties involved (e.g. staff in each department) will change over the next 25 years. Further, it can be difficult to refer back to a contract if the details of the contract are never made publicly available or sit within a single team.

The EAB therefore continues to be of the view that legislation ought to be promulgated which will govern air quality emissions from the Energy Recovery Facility as well as the water quality and other required monitoring which will come forward under the Environmental Management Plan (EMP). In addition, the legislation could extend to existing and/or future emissions from other sources (e.g. CUC or other industrial emissions). Consideration should be given to the gaps in existing environmental health and/or public health legislation and how a more robust regime can be implemented.

(ii) Lack of Clarity Regarding Governmental Permitting and Oversight

In accordance with the EIA Directive (2016), the EIA has resulted in the development of a draft Environmental Management Plan (EMP), which includes mitigation measures that must be implemented to avoid, reduce or offset the environmental effects of ReGen. It is our understanding that an exemption from the requirement to apply for planning permission has been granted for ReGen. We are concerned that there will be no way to tie the provision of the EMP to any enforceable permit. We understand that the project will require Building Permits; however the EMP does not fit well into that process. Some of the monitoring requirements are long-term and go into the operational phase of the project.

It is our understanding that the current version of the Project Agreement contains a section on Planning and EIA and there is a Performance Framework which will outline what happens if the obligations are not met. As we have not seen this section, we are not able to comment on whether the section will appropriately cover the EMP and the ongoing commitments (e.g. monitoring and reporting) arising from it. The EAB has concerns regarding continuity as the project moves out of the EIA phase into the construction and long-term operation. Contracts can be amended or revised (in either direction) and it may be difficult to refer to and enforce contractual terms over the 25+ years of the ReGen project.

The Cayman Islands Government (CIG) must ensure that the responsible agency is adequately empowered and resourced to fulfil the CIG obligations. It is expected that the Department of Environmental Health (DEH) would be required to take a lead role as the responsible agency. However, other EAB agencies such as the Water Authority Cayman and the Department of Environment will likely also have ongoing roles too. The ReGen project is a substantial operation that will require time and Cayman Islands Government resources and the EAB urges that arrangements for long-term environmental oversight of the project are specified and planned for.

3. Specific Comments on the Environmental Statement

(i) Geo-environmental Effects: Contamination Outside of the Main Mounds

The remediation strategy did not cover all areas of contamination. There could be ongoing sources of contamination outside of the area of the landfill that is proposed to be capped and covered. There are also known sources of contamination within the project site, such as the arsenic waste that was placed at the landfill after Hurricane Ivan and the waste oil storage and processing area. The Land Quality chapter of the ES did identify and recommend mitigation measures for addressing the contamination to facilitate the construction as follows: *“Appropriate mitigation measures for these potentially Significant Impacts have been recommended, many of which are predicated on the collection of sufficient site investigation data to allow the current levels and extent of any contamination to be ascertained and the ground gas regime characterised, or the pre-emptive excavation of heavily contaminated materials to the RWL.”*

At this time, there have not been detailed site investigations sufficient to fully characterise the geo-environmental and geotechnical aspects of the project. These works have been included as mitigation measures in the EIA, form part of the EMP and are to be conducted at a later stage of the project. Using the Residual Waste Landfill for existing contaminated material has disadvantages because it occupies space that could be used in the future. Ultimately, the contamination represents a liability to the Cayman Islands Government and has project implications.

While these aspects have been addressed suitably from an EIA perspective, there remain project risks associated with this approach.

(ii) Sister Islands Waste Management

Management of waste on the Sister Islands was excluded from the EIA. The EAB strongly recommends that the CIG develop waste management strategies and techniques to an equal or higher standard for the Sister Islands to bring them in line with the waste management standards and practices proposed for Grand Cayman.

(iii) Hydrology and Hydrogeology

ReGen proposes to use a groundwater cooling system for the Energy Recovery Facility that produces energy from waste. Using groundwater for cooling may impact the marine environment and existing major groundwater users, such as CUC, the Water Authority and several other projects that rely on groundwater for cooling. To determine the feasibility and impacts of the groundwater cooling system, pilot wells were drilled, rock samples were collected, the geology of the area was studied in detail and a hydrogeological study was undertaken. The EAB received the geological and hydrogeological studies by late July 2023. The Water Authority determined that the hydrogeological study, which was prepared by a consultant who was not affiliated with GHD, had a fundamental error, which rendered the predicted impacts questionable. Dart and GHD, in discussion with the EAB, agreed that GHD would independently review the report and subsequently the report was withdrawn. The GHD hydrogeology team carried out a new hydrogeological study which was submitted to the EAB on 16 February 2024. The new study, which has been accepted by the EAB, determined that the groundwater cooling is feasible without significant impacts on existing major groundwater users and the marine environment.

4. Aspects Outside of the EIA

While the aspects below are outside of the remit of the EIA, they arose at various points during the EIA process which commenced in 2017. In an effort to contribute to continuity, they have been raised again below, although it is possible that they have been addressed in that time.

(i) Nitrogen-Based Nutrient Loading into the Marine Environment

The remediation of the existing landfill was outside of the EIA because, in line with good practice, a risk-based approach was undertaken instead. The Detailed Quantitative Risk Assessment for the remediation of the landfill indicated that elevated levels of ammonia and related compounds may reach receptors in the North Sound, although the levels are predicted to fall off due to the capping of the unlined landfill mound and the accompanying reduction in the amount of leachate produced. The EAB is therefore concerned that there remains a risk of nutrient loading into the North Sound, and subsequent eutrophication (algal blooms) following remediation.

(ii) Unusual and Uncommon Wastes

When the EAB inquired as to how uncommon wastes such as contaminated soil, sewage sludge, radioactive waste, special hazardous wastes etc. were considered, we were informed that this was outside of the contract and therefore did not need to be assessed in the EIA. It was further clarified that they would need to have a special contract devised for them as they fell outside the contract with the ReGen facility. These wastes were not included in the ToR or EIA. Given that these wastes are uncommon but still exist and will eventually need to be managed, the EAB was concerned about this approach but conceded that the EIA could not be extended to include all possible future scenarios. Therefore, we wish to highlight that these elements were excluded from assessment and remain an important area of uncertainty and likely an ongoing liability for the Cayman Islands Government.