



Stephan M Funk PhD MSc Msc

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Mike Haden
Scrutiny Office
States Greffe
e-mail: m.haden@gov.je

Dear Mike

Re: Environmental Impact Statement “Energy from Waste and Bulky Waste Facilities”

I am writing with regard to the Environmental Impact Statement (EIS) “Energy from Waste and Bulky Waste Facilities” of January 2007, prepared by Babtie Fichtner Limited for the States of Jersey.

I am writing as the director of Nature Heritage, an environmental consultancy, which I have established recently in Jersey. My credentials are as follows: I am an academic and applied biologist specializing in conservation biology and conservation science. I have published widely more than 50 scientific articles. I hold a degree in biology (PhD and MSc) and in Applied Ecology and Management of Natural Resources (MSc). Academic appointments have included research fellowships, honorary research fellowships (University College of London, UCL, and Cambridge University) and visiting professorships (Chile and Puerto Rico).

May I respectfully draw your attention to several issues regarding the likely environmental impacts on the RAMSAR site adjacent to the proposed Energy from Waste (EfW) facility and the Bulky Waste Facility (BWF). An Environmental Impact Assessment (EIA) can be defined as “a systematic process to identify, predict and evaluate the environmental effects of proposed actions and projects.”¹ Long term objectives of EIA are to:

- avoid irreversible changes and serious damage to the environment;
- safeguard valuable resources, natural areas and ecosystem components;
- enhance the social aspects of proposals; and
- protect human health and safety.”²

The Babtie Fichtner EIS explicitly excludes relevant and highly significant topics, omits significant environmental effects and interprets some relevant environmental risk without any supporting scientific data. May I respectfully draw attention to the following examples:

- Babtie Fichtner commissioned Ambios Environmental Consultants to carry out a baseline ecological assessment of land at the La Collette reclamation site (Chapter 10.2.2). The report³ does not include any survey or scientific data on the RAMSAR site and did not assess any risk of the proposed project on the RAMSAR site. Yet, the report claims on page 6 “*There will be no impact on the adjacent RAMSAR site.*” This conclusion is not backed-up and justifiable by the report.
- The Babtie Fichtner EIS assesses air quality solely with respect to risk to humans (Chapter 1.4 Assessment of Environmental Impacts, 1.4.1 Air Quality – Flue Chimney Emissions, Odour and Traffic). It is a well established fact that levels of toxicity of chemicals is not identical for all organism and varies greatly. What might pose no risk for humans might be highly toxic to other organisms and vice versa. Thus, the conclusions for human health can not be extrapolated for the RAMSAR site. It states “*The only potential impact on the RAMSAR site would be water pollution risk from the construction and operation of the new facility*” (Chapter 10.3.2). Thus, the EIS only addresses water pollution risk and does not include airborne pollution (Chapter 1.4.4 The South East Coast of Jersey RAMSAR Site).
- The Babtie Fichtner EIS states “*Cooling water from the boilers would be discharged to sea via the existing outfall to the east of the power station which discharges into the RAMSAR site. The outfall would continue to operate under existing discharge conditions which have been previously assessed as having no significant adverse impact on the marine environment*” (Chapter 4.6.5). “*It is therefore expected that any impact on coastal habitat would continue as currently i.e. extremely localised and of minor significance*” (Chapter 1.4.4). However, the EIS fails to present data. The “previous assessment” is not cited nor are data cited (the report contains the word “cooling” 21 times yet no underpinning data). Thus, the Babtie Fichtner EIS did not conduct an independent impact assessment on this issue. The conclusion of no or minor impact is therefore not substantiated.
- The EIS acknowledges that the current system employed in Jersey with regard to the burning of electrical equipment results in excessively high burdens of heavy metals (Chapter 7.8.1). Yet, the report fails to address whether the proposed project will efficiently deal with the problem by deferring to the project proponent and assuming everything will be all right. “*It is much less common in Europe to burn electrical equipment, which is generally separated in the waste collection process, and either recycled or sent to landfill. However, in Jersey all electrical and electronic waste is shredded and burnt in the existing Energy from Waste facility, providing a high loading of heavy metals. The project proponent is currently tackling this problem by expanding the separation of electronic and electrical items. Once this is done, it should be possible to greatly increase the re-use of the bottom ash*” (Chapter 7.8.1). In other words, no environmental risk assessment was conducted.
- The Babtie Fichtner EIS fails to qualify and quantify potential risk to the RAMSAR site throughout. For example, the disposal of hazardous waste just lists the procedure without any further information on associated risk. This is especially important as materials designed to contain waste can deteriorate over time and might pose significant risk in the future except if mitigated. However, whether this is the case or not can not be assessed as the EIS does not give data. Without assessing the risk, no mitigation can be put in place. “*The new Energy from Waste facility would also produce flue gas treatment residue, at a rate of about 5% of the input waste. This is classified as a hazardous*

waste, because the residue contains significant amounts of free lime, which is an irritant. The disposal of the flue gas treatment residue would be to sealed pits at La Collette, as is currently carried out with the fly ash from Bellozanne. The pits will be lined, and when filled, sealed with a plastic membrane. (Chapter 7.8.1). In other words, no assessment of the long-term environmental risk was conducted for the procedure.

- A recent paper analysing the level and quality of the emissions assessments of 61 waste incinerator environmental statements (ESs) in the UK concludes “*that the ES has not always provided interested stakeholders with the best available information upon which to determine the tolerability of the health risks posed by waste incinerator emissions.*”⁴ The Bابتie Fichtner EIS does not report experience on environmental impact of incinerators in the UK or elsewhere (Chapter 19.3), despite that ample literature has been published and is in the public domain ^{e.g.4,5,6}.

These examples highlight significant shortcomings of the Bابتie Fichtner EIS with regard to the RAMSAR site. Thus, two main long term objectives of any EIA might not be fulfilled, namely:

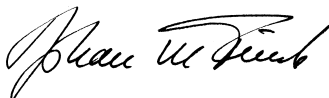
- to avoid irreversible changes and serious damage to the environment, and
- to safeguard valuable resources, natural areas and ecosystem components.

Moreover, the lack of underpinning data does not facilitate a broad understanding of the wider factors underpinning the environmental risks of the proposed project. Thus, it appears unsuitable to award public and professional anxieties an appropriate weight, which is an essential cornerstone for planning⁷.

I suggest to open up the EIS to scrutiny and, if applicable, the subsequent collection of more relevant data prior the final decision. Any EIA is an iterative process and typically contains many feedback loops to allow the development proposal to be continually refined¹. In particular, it normally involves public involvement after the preparation of the EIS, which in turn feeds back to the impact analysis and the decision making. Thus, I propose that the Bابتie Fichtner EIS is opened up to scrutiny by the States of Jersey.

It is my deepest desire to assist Jersey to make the most informed decision. Such a decision must be based on scientific evidence through which it is possible to balance the complex issues of pros and cons.

Yours sincerely



Stephan M Funk PhD MSc Msc

- ¹ Sadler, B., Fuller, K., et al (2002), *UNEP Environmental Impact Assessment Training Resource Manual*, 2nd Edition, UNEP, Geneva.
- ² Based on <http://www.iema.net/> and Fuller, K. et al (2004), *Guidelines for Environmental Impact Assessment*, IEMA, Lincoln
- ³ Ambios Environmental Consultants. Baseline Ecological Assessment: Land at La Collette Reclamation Site, Havre Des Pas, Jersey. February 2006
- ⁴ Snary, C. 2002. Health risk assessment for planned waste incinerators: Getting the right science and the science right. *Risk Analysis* 22, 1095-1105.
- ⁵ Pai, T. Y., Chiou, R. J. and Wen, H. H. 2008. Evaluating impact level of different factors in environmental impact assessment for incinerator plants using GM (1, N) model. *Waste Management* 28, 1915-1922.
- ⁶ Morselli, L., Luzi, J., De Robertis, C., Vassura, I., Carrillo, V. and Passarini, F. 2007. Assessment and comparison of the environmental performances of a regional incinerator network. *Waste Management* 27, S85-S91.
- ⁷ Snary, C. 2004. Understanding risk: The planning officers' perspective. *Urban Studies* 41, 33-55.