

11. Climatic Factors

Introduction

- 11.1 Chapter 15 'Climatic Factors' of the original ES (March 2014) summarised the governmental policy context for climate change, challenges to both the energy and waste sectors from a changing climate and other interactions of proposed development with a changing climate.
- 11.2 This Chapter also appended (at Appendix 15.1) a Waste and Resources Assessment Tool for the Environment (WRATE) assessment. This assessment was prepared to calculate the environmental performance of the proposed waste management facility and enabled comparisons to be made with the existing practice of directing the majority of our waste to landfill.
- 11.3 It is the purpose of this Chapter to revisit the WRATE assessment carried out by Mott MacDonald to account for the latest available software version of the WRATE tool and update any assumptions as necessary.
- 11.4 This Chapter also responds to a third party representation enclosing a report produced by United Kingdom Without Incineration Network entitled "Evaluation of the climate change impacts of waste incineration in the United Kingdom" (UKWIN, 2018). This report has been reviewed and considered by RPS as part of this Chapter.

WRATE Assessment

- 11.5 An updated WRATE assessment undertaken by Mott MacDonald is provided at Appendix 11.1.
- 11.6 WRATE allows the environmental impacts of the waste management systems to be assessed over the life-cycle of all of the material, collection, treatment technology and transport elements. By using a combination of the default data in the model's databases and project specific data an overall assessment of the net benefits of the proposed solution versus the 'baseline' of send to landfill can be established.
- 11.7 The WRATE assessment has been revisited as a newer software version has become available in the intervening period. With the exception of the opening year of the proposed development (updated to 2023), all other input parameters and assumptions have remained unchanged.
- 11.8 Previously, the WRATE assessment showed that by constructing the MBT and EfW facilities, this results in an overall net benefit of approximately 57,474 tonnes CO₂-Eq per annum, and an actual net benefit to the environment of 9,764 tonnes approximately per annum when compared against the baseline of sending the waste to landfill.
- 11.9 The updated results at Appendix 11.1 conclude that the net benefit remains the same and that across all other indicators there is an overall net benefit to the environment with the exception of eutrophication as before.

UKWIN Report Review

- 11.10 A review by RPS of the UKWIN 2018 report “Evaluation of the climate change impacts of waste incineration in the United Kingdom” is provided at Appendix 11.2.
- 11.11 The proposed development at Hightown Quarry differs from the EfW facilities referenced in the UKWIN document insofar as the proposed development incorporates front-end sorting of waste to extract and recycle plastics, card, paper and metals. The proposed development also includes a bottom ash treatment facility from which further metal can be recycled. These elements are not considered in the UKWIN report or calculations.
- 11.12 The UKWIN document implies that, with respect to climate change, the operation of an incinerator would be significantly worse than landfill. This goes against all UK and Northern Ireland waste management policy and in particular the waste hierarchy.
- 11.13 Whilst it is acknowledged that combusting residual waste does directly release GHG emissions, the report does not provide an objective assessment of the balance (or net effect) of GHG emissions from the proposals compared to what would happen otherwise. The relevant basis for assessment is to compare current waste management practices *and* to current electricity generation.
- 11.14 UKWIN is an action group opposed to incineration. Its approach is defined by that stance. The report contains material misstatements of fact and omits important matters from assessment. For the reasons outlined in full at Appendix 11.2, it cannot therefore be considered as an objective assessment of the climate change impacts of incineration.

Summary

- 11.1 The previous conclusions of the original ES remain valid insofar as the development of the proposed residual waste management facility at Hightown Quarry will strengthen the energy mix in Northern Ireland by generating electricity from the waste process and making an important contribution towards reducing dependence on fossil fuels
- 11.2 The updated WRATE assessment concludes as before that the proposed development will result in considerable environmental benefit across a range of critical indicators.
- 11.3 It is therefore considered that the proposed development will make a significant long-term beneficial contribution to climate change when compared to the current waste management practices.