Addendum to Update Sheet

Development Control Committee – 16 October 2019

Late representation from a resident

I would refer you to the carbon assessment, appendix 1.3 of the planning statement. Section 3.1.3 states that the grid offset calculations have been made with a displacement factor of 0.35 t CO2e/MWh, based on the displacement of gas-fired power stations. However, this displacement factor is four years out of date and grossly overestimates the grid offset.

From the DEFRA document "Energy recovery for residual waste A carbon based modelling approach" [1], which was last amended in February 2014, paragraph 68 states:

It is assumed that the source of energy being replaced would have been generated using a plant with the carbon intensity (emissions factor) of the marginal energy mix in line with HMT Green Book guidance on appraisal and evaluation. This is currently approximately equivalent to combined cycle gas turbine (CCGT) using natural gas so this has been taken as the baseline value. However, this „marginal energy" mix is expected to vary over time and is therefore one of the variable parameters in the model.

If we continue to the HMT Green Book and look at "Green Book supplementary guidance: valuation of energy use and greenhouse gas emissions for appraisal" [2], which was updated in April 2019. Section 2.3.1 states:

The calculations are based on the assumption that, until very recently, a Combined Cycle Gas Turbine (CCGT) plant was the long-run marginal electricity generation plant on the basis that it was both relatively cheap and quick to build. Therefore, the marginal emissions factor in 2010 reflects that of a typical CCGT plant (0.34 kgCO2e/kWh before taking into account distribution and transmission losses). However, going forward there are reasons to think that this may not remain the case, particularly given the policies in place to incentivise low carbon electricity generation.

Looking at the modelling data provided with this guidance [3] , a more suitable grid displacement factor would be 0.140772 kg CO2e / kWh. Based on this value, the CO2 offset by the proposed development is only 40.2% of the quoted value. This would mean the development would offset only 34,824 tonnes CO2e / year, and this is set to reduce over time. By these numbers a landfill with gas capture may result in less emissions.

I have previously submitted this finding in regards to application LCC/2019/0029 and the Planning Officer has been patiently dealing with my enquiries. As we are now in a climate emergency with the intention to achieve emissions-neutrality within the next few years, we must require applicants to submit the most accurate assessments

possible, and the council must consider how each application fits into our larger climate strategy.

[1] https://cached.offlinehbpl.hbpl.co.uk/NewsAttachments/NWE/A_carbon_based_modelling_apporach.pdf
[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794738/background-documentation-guidance-on-valuation-of-energy-use-and-greenhouse-gas-emissions.pdf
[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793634/toolkit-for-valuing-changes-greenhouse-gas-emissions-2018.xlsm