Norwell Solar Farm Steering Group

Application by Elements Green Trent Limited for an Order Granting Development Consent for the Great North Road Solar and Biodiversity Park (GNR Project)– project ref. EN010162
Unique Number – [redacted] (Our ref NSG/4)

Deadline 1 Lifecycle Greenhouse Gas Evaluation- Late error correction

Executive Summary.

A previous report submitted by the Group (our ref NSG/1) adopted the Applicant's embodied carbon figure for paint used to coat containers and security fencing. The calculations have always been subject to a series of reviews and checks. Unfortunately, another error by the Applicant was not noticed prior to submission of NSG/1. The Applicant used an incorrect emissions factor for paint. This was not identified until after report NSG/1 had been signed off and submitted. This report corrects that error and this does slightly alter the headline emission figures.

1 Paint Emissions

1.1 Page 5 of 6.4.15.1 – Technical Appendix A15.1 Lifecycle Greenhouse Gas Evaluation -Rev 1 APP-285 attempts to calculate the embodied carbon associated with the paint required for security fencing. The initial calculation by the Applicant was incorrect as the wrong emissions factor for paint was used. In assessing the Group's revised paint emissions for calculations in our report NSG/1, emission totals for paint for fencing and the containers wrongly utilised the Applicant's incorrect emissions factor. Below are the revised calculations.

1.2 Page 5 of APP-285 states there were 2,112tCO_2 of paint related emissions because the factor was 3,760kgCO_2 per kg of paint. The ICEV4 inventory shows that it should have been per tonne, not per kg. **This reduces the Applicant's assessed paint emission totals by 2,110tCO_2.**

1.3 In report NSG/1, the Group revised the amount of paint required for fencing. At paragraph 8.10.6, the combined paint emissions for all security fencing is wrongly calculated to total 13,375tCO_2e. The recalculated figure using the correct factor means **that emissions reduce by 13,360tCO_2e.**

1.4 Regrettably, the Group relied upon the Applicant's factor for calculating the paint related emissions for coating steel containers. At paragraph 8.12.3 of report NSG/1, the total there should be 66tCO_2e. **This is a significant reduction of 65,854tCO_2e.**

1.5 The combined effect of these changes is that **production emissions reduce by 81,324tCO_2e.** This has a knock on effect for the calculations of net emission savings for the project as a whole.

1.6 Table 4 on page 54 of report NSG/1 shows the combined changes to production emissions for the project. **That figure is now revised to 239,282tCO_2e.**

2 Revised Totals

2.1 Chapter 12 of report NSG/1 attempts to consolidate all revised calculations for net emissions associated with the project. Below is the new adjusted Table 5 from page 57 of NSG/1

Revised Table 5. *("Revised Production Emissions")*

Applicant's Total (Appendix Page 2)	3,194,264tCO_2e
Revised Emissions Increase	239,282tCO_2e
Total Emissions	**3,433,546tCO_2e**

2.2 Clearly, this has an effect on the headline rates calculated in tables 6-8 in the report NSG/1. Below are the new corresponding totals. The first relates to the assessment based on the Applicant's highly unlikely premise that the gas intensity figures for the BESS remain at the 2026 figure for the next 40 years.

Emissions Saved	2,415,259tCO_2e
Emissions produced	3,433,546tCO_2e
Total net emissions savings	**-1,018,287tCO_2e**

2.3 The second calculation in Table 7 of NSG/1 was based on the more likely scenario where there is a reduction after 10 years in the gas intensity figures. That is now revised below.

Emissions Saved	1,273,338tCO_2e
Emissions produced	3,433,546tCO_2e
Total net emissions savings	**-2,160,208tCO_2e**

2.4 The final figures were based on the BESS savings founded on the DESNZ modelling. That revised third forecast is shown below.

Emissions Saved	795,858tCO_2e
Emissions produced	3,433,546tCO_2e
Total net emissions savings	**-2,637,688tCO_2e**

3 Conclusions

It is regrettable that this latest error by the Applicant was not identified earlier. What has become clear is that this is no simple process. If the Applicant was under time constraints for submission, it is understandable how errors could creep in. Reports NSG/2 and 3 to be submitted after this one are not affected. But it made sense for this report to be submitted out of sequence so that it can be read alongside the original NSG/1.

It is likely that these figures will change again in due course when (or if) new amended specifications for the project design are received, or when so far unquantified emissions are calculated by the Group.