



Great North Road Solar and Biodiversity Park

Statement of Common Ground with Norwell Solar Steering Group

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Revision History

Revision	Revision Date	Authorised By	Position	Comment
Issue 1	2/12/25	ES	Head of Planning	1 st draft for NSFSG review
Issue 2	9/12/25	PP	EIA Lead	2 nd draft for Deadline 1
Issue 3	23/12/25	PP	EIA Lead	3 rd draft for NSFSG review
Issue 4	TBC15/1/26	PP	EIA Lead	4 th draft for NSFSG review
Issue 5	27/01/26	PP	EIA Lead	5th draft for NSFSG review
Issue 6	02/02/26	PP	EIA Lead	6th draft for NSFSG review
Issue 7	12/02/26	PP	EIA Lead	7th draft for NSFSG review

1 INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

- 1.1.1 This Statement of Common Ground (SoCG) has been prepared to support an application (the Application) for a Development Consent Order (DCO) from the Secretary of State (SoS) for Energy Security and Net Zero under Section 37 of the Planning Act 2008 (PA 2008) for the proposed Great North Road Solar and Biodiversity Park Development (the Development). The Application has been submitted by Elements Green Trent Limited (the Applicant).
- 1.1.2 This SoCG has been produced to confirm to the Examining Authority (ExA) where agreement has been reached between the Parties, and where agreement has not (yet) been reached, in relation to the assessment of the effect of the Development on climate change.
- 1.1.3 SoCGs are an established means in the planning process of allowing all Parties to identify and focus on specific issues that may need to be addressed during the examination. This SoCG will be revised and updated as discussions between the Parties progress during the Examination.

1.2 PARTIES TO THIS STATEMENT OF COMMON GROUND

- 1.2.1 This SoCG has been prepared by (1) Elements Green Trent Limited as the Applicant and (2) Norwell Solar Farm Steering Group (collectively, ‘the Parties’).

1.3 TERMINOLOGY

- 1.3.1 In the [table tables](#) in the [Issues “Current Position”](#) section [\(2\)](#) of this SoCG:
- “Agreed” (Green) indicates where the issue has been resolved;
 - “Under discussion” (Amber) indicates where a matter is the subject of ongoing discussion; and
 - “Not Agreed” (Red) indicates a final position.
- 1.3.2 Where Norwell Solar Farm Steering Group expresses agreement, it does so only in so far as it has considered the issue and on the basis of the information provided by the Applicant. Agreement is offered without prejudice to the submissions of other interested Parties who may have greater knowledge of technical or site-specific issues.

1.4 RECORD OF RELEVANT CORRESPONDENCE

- 1.4.1 The Applicant has undertaken consultation and engagement with Norwell Solar Farm Steering Group at and following the statutory pre-application consultation process. This process afforded Norwell Solar Farm Steering Group the opportunity to provide responses to the information provided at the statutory consultation stage of the pre-application process.

1.4.2 Table 1-1 identifies the key meetings and consultation that has taken place between the Parties to date.

Table 1-1 Record of Correspondence

Date	Type (meeting, etc.)	Topic
09/12/2024	E-mail correspondence	Number of homes calculation by the Applicant
31/01/2025	Public consultation event, Carlton-on-Trent	Climate change assessment and the basis for the calculations of embodied carbon emissions and avoided carbon emissions savings
22/12/2025	Meeting	Greenhouse gas emission calculations
28/12/2025 – 30/01/2026	E-mail correspondence	Greenhouse gas emission calculations Number of homes calculations PVsyst model Replacement rates for BESS and solar PV

1.4.3 It is agreed that this is an accurate record of the key meetings and consultation undertaken between the Parties in relation to the issues addressed in this SoCG.

2 CURRENT POSITION OF THE APPLICANT AND NORWELL SOLAR FARM STEERING GROUP

2.1 PARAMETERS FOR ASSESSMENT

Table 2-2 Development Parameters for Assessment

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
2.1.1	Post-hearing submission	The export capacity of the grid connection	Is 800 MW (AC)	Agreed	Agreed
2.1.2	Post-hearing submission	The overplanting ratio (i.e., the sum of solar PV capacity (DC) divided by the grid export capacity)	Is 1.4	Agreed	Agreed
2.1.3	Post-hearing submission	The theoretical sum of capacity of the solar PV modules	Is 1,120 MWp (800 MW x 1.4)	Agreed if theoretical is added as in column 3.	Agreed
2.1.4	Post-hearing submission	Inclusion of BESS in proposals	The BESS is included in proposals, assumed in ES Chapter 15 to be 440 MW, 2-hour	It is agreed that the BESS is included in the proposals	Agreed
2.1.5		Inclusion of BESS in proposals	The Applicant believes the BESS is required for the project and that there is a demand for a BESS for grid support	The Group believe that that existing 52GWh of BESS under construction or with planning approval already far outweighs the national targets. Additionally, there are now 3 BESS under or awaiting	Under discussion



Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
				construction in the local area alone, including one for the GNR project.	

2.2 ILLUSTRATIVE ELECTRICITY GENERATION

Table 2-3 Illustrative Electricity Generation

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
2.2.1	Post-hearing submission	The principle of quoting a number of homes is illustrative of the generation capacity of the Development	The principle of quoting a number of homes is illustrative of the generation capacity of the Development as opposed to suggesting where the electricity will be used.	Agreed	Agreed
2.2.2	Post-hearing submission	Calculation of the number of homes equivalent of electricity that would be	The Applicant has stated that the figure is approximately 400,000	The Group's calculations are likely to be amended now that at this late stage, it has been suggested	Under discussion

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
		<p>generated by the Development</p>	<p>homes. The calculation of the energy production of the Development is not yet agreed between the parties. See Appendix 1 for the energy yield model parameters.</p>	<p>bifacial panels will be used, contrary to what was suggested in Appendix A.15.1.</p> <p>Re-calculation cannot be completed unless the original PVsyst report is published, as has been requested. 2.7 The Applicant has always maintained that in its best year, the arrays would produce 1,112,147MWh arrived at by using the combined MWp panel ratings. To arrive at 400,000 homes, this annual figure was divided by the out of date 2.7MWh figure. The Group have always challenged the relevance of this MWp STC total for real world calculation. However, if the MWp is used, then given the Applicant's own figures, the number of homes on average that could be powered would be 327,102.</p> <p>The adoption of more up to date data sheds new light on the supposed public benefit of the development with the number of households on average that could</p>	

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
				be powered approaching half of what the Applicant states. It is strongly argued that more accuracy and a fairer comparison are achieved by using average domestic consumption as opposed to the TDCV middle range. The Group have now recalculated the best years generation adopting bifacial panels. In year 3, this would be 831,311MWh, enough to power 244,503 homes	
2.2.3	Post-hearing submission	The average annual figure to be used for domestic electricity use in the calculation	2.7 MWh/y AC, this being the figure previously published by Ofgem.	The Group believe the 2025 Department for Energy Security and Net Zero (DESNZ) publication "Review of the average annual domestic gas and electricity consumption levels". Should be the correct source with average domestic consumption being 3.4MWh	Under discussion

2.3 GREENHOUSE GAS ANALYSIS

Table 2-4 Greenhouse Gas Analysis

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
2.3.1	Post-hearing submission	Use of the carbon intensity to be used as the baseline comparator for export of solar PV-generated electricity	<p>It is agreed that the use of the grid carbon intensity at the 2024 figure (as shown in Tables A15.1.20 and A15.1.4) <u>should not</u> be used to inform the conclusions of the assessment for solar PV as it is not worst-case, and that the long-run marginal carbon intensity for generation (as shown in Tables A15.1.19 and A15.1.5) <u>should</u> be used to inform the assessment for solar PV.</p> <p>This is different to most previous solar DCO applications (e.g., Stonestreet, Tillbridge, Byers Gill, Gate Burton), which have used the CCGT carbon intensity as the baseline comparator, so the approach taken in the Development ES is a major departure from</p>	<p>The Group's previous answer related to Table 15.1.21 as that was in the original comment from the Applicant but changed after our response. The Group agree that figures in Tables A15.1.20 and A.15.1.4 should not be used and also agree that the long run carbon intensity figures in Tables A15.1.19 and A15.1.5 should be used.</p>	<p><u>Under discussion</u> <u>Agreed</u></p>

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
			<p>previous assessments. This was raised in the Secretary of State's decision letter on Gate Burton Solar Park (Planning Inspectorate project reference EN010131).</p>		
2.3.2	Post-hearing submission	Method for apportioning electricity export from the solar panels to the BESS	<p>For the purposes of assessing greenhouse gas emissions, the BESS is assumed to charge from 15% capacity to 100% capacity once each day, and then export that electricity to get back to 15%. That electrical energy is assumed to come out of the total generated by the solar PV modules. The remaining electrical energy generated by the solar PV modules is assumed to be discharged directly to the grid. This is a conservative approach; any import from the grid to the batteries would lead to</p>	<p>The Group do not agree that the BESS will only be charged once during any 24 hour period. The BESS charging figures in Table A15.1.19 point to there being a daily cycle throughout the year, discharging solar generated MWh's. The Group's belief is that there will also be a full morning cycle discharge from overnight charging. It agrees that there may initially be an emissions savings from using overnight grid charged battery energy at morning peak but given the national BESS pipeline and the number of BESS ahead of GNR in the queue, there will quickly be less need for gas peaker generation. This is very difficult to calculate as the 2030</p>	Under discussion

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
			additional carbon savings, because of the greater carbon intensity of the grid at times of peak demand compared to non-peak demand.	action plan for some reason sets targets in GW as opposed to GWh.	
2.3.3		Usage of the BESS	The BESS is expected to be used approximately 1.5 times per day on average ("1.5 cycles"). This would include charging both from the solar PV modules during the day, and from the grid at night.	The Group are awaiting clarification from the Applicant on this, having been told this during Statutory Consultation. Making certain assumptions on maintenance downtime, and adopting an 85% DoD, and the Applicant's annual charged to BESS figures the Group calculate that there has to approximately 680 cycles per annum with 330 sourced from solar generation.	
2.3.4	Post-hearing submission	Uncertainty in the future baseline	The carbon intensity of electricity generation in the absence of the Development (that would be avoided by the operation of the Development), particularly from the batteries, is the largest element of	Agreed.	Agreed

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
			uncertainty in the assessment of savings in greenhouse gas emissions.		
2.3.5	Post-hearing submission	The baseline carbon emissions from electricity supplying future peak electricity demand periods	In the absence of any official predictions of future grid peak-time carbon intensity, Chapter 15 and TA A15.1 use displaced CCGT as the emission saving arising from export from the BESS, as this is what happens currently. Previous Secretary of State decisions for solar projects do not comment on peak-time carbon intensity.	NSFSG argue that this leads to unrealistically high carbon intensity over the 40 year operational period, and propose two alternative scenarios for decreasing carbon intensity at peak times over that period. -The view of the Group is that the approach of using pegged carbon intensity is inconsistent with the judgement by Mr Justice Sullivan in 'Rochdale' and paragraph 4.2.12 of NPS EN-1.	Under discussion
2.3.6	Post-hearing submission	Calculations of the savings of emissions of greenhouse gases as set out in ES TA A15.1 (APP-285), Table A15.1.19	The following are the major items not yet agreed: <ul style="list-style-type: none"> • Calculation of the energy production of the Development (as per 2.2.2). See Appendix 1. • Operational life of 		Agreed

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
			<p>key components of the Development: solar PV modules and batteries</p> <ul style="list-style-type: none"> Use of concrete/foundation material and its carbon footprint 		
2.3.7	Post-hearing submission	Calculations of the embodied emissions of greenhouse gases as set out in ES TA A15.1 (APP-285REP2-075) – solar PV	<p>The carbon emissions associated with the production of the solar PV modules is based on a peer-reviewed journal publication, which included in its calculations the embodied emissions from the mounting structures and inverters. The ES assessment included calculations of the embodied emissions of the mounting structures and inverters in addition to the solar PV modules, because of variability in types of mounting structure and inverter, and hence uncertainty in whether the</p>	<p>There needs to be further discussion about the embodied carbon for the mounting structures. Having checked with other sources on embodied carbon for the panels, the Group would not accept there has been a substantial over-estimate though the panel production emissions factor of 701kgCO₂/kWp chosen by the Applicant is slightly higher than the research recently examined by the Group. A review of the EPDs for 9 (mainly Chinese) major panel manufacturers over 5 recent years would suggest that 670kgCO₂/kWp is a more up-to-date figure. This would represent a 4% reduction in emissions which is not substantial. The Group would agree however</p>	<p>Under discussion Agreed</p>

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
			<p>values in the peer reviewed journal would be appropriate for the Development. The calculated embodied emissions from the mounting structures and inverters was c. 583 kteCO2e (more than 15% of the total embodied emissions). The estimate of emissions associated with the production of the solar PV modules is therefore likely to be appropriate for a substantial over-estimate, but in the absence of more specific (and yet worst-case) data, has been used in the conservative approach to the assessment.</p>	<p>that there has to be some degree of uncertainty.</p>	
2.3.8	Post-hearing submission	Calculations of the embodied emissions of greenhouse gases as set out in ES TA A15.1 (APP-285) – component	Carbon emissions associated with the production and transportation of replacement components,	The Group would accept that if global decarbonisation does actually take place then that will affect some production emissions. The major production emissions	Under discussion

Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
		replacement	<p>expected to be more than 15 years after the start of the Development's operational phase, may be substantially less than the emissions associated with the components used in the construction phase, due to global decarbonisation. The extent of this is not well predicted in literature, and hence the assessment in the ES assumes emissions for replacement (which represents c. 800 kteCO₂e, i.e., c. 25% of the total embodied emissions) would be the same (per component) as at construction, which will be a substantial over-estimate of emissions, but in the absence of more specific (and yet worst-case) data, has been used in the assessment.</p>	<p>are in the supply chains abroad and China, from where the major transportation emissions also stem. Unlike UK decarbonisation reduced emissions modelling by the DESNZ, there is far less certainty about how this will move globally or in the foreign supply chains. There is significant doubt about the anticipated progress in decarbonisation in developing countries which source many of the raw materials required for this project. The Group agree that in the absence of any reliable data, embodied carbon figures used might be a worse case but it is impossible to tell. This course of action would be 'Rochdale compliant'.</p>	
2.3.9	Post-hearing	Calculations of the	The assessment of	Further discussions required. There	Under



Ref	Relevant Documents	Description of Matter	Applicant's Position	Norwell Solar Farm Steering Group's Position	Status
	submission	embodied emissions of greenhouse gases as set out in ES TA A15.1 (APP-285)— other REP2-075, to be updated again at <u>Deadline 3</u>) – all parameters <u>except electrical energy production, emissions savings from operation of the BESS, and component replacement rates</u>	emissions from other parameters (i.e., excluding those listed in 2.3.5, above) is agreed to within c. 10% (or less) as being appropriate for the <u>assessment of the total carbon emission effects</u> of the Development. I.e., to within c. 300,000 tCO₂e on climate change.	<u>is a strong likelihood of significant agreement on revised embodied GHG being submitted for Deadline 3 by the Applicant. It is anticipated there will be significant differences in that version compared to the original APP-285. The Group will review the Deadline 3 version once published.</u>	discussion

2.4 APPLICANT'S SUMMARY OF THE POSITION AS AT 2ND FEBRUARY 2026

- 2.4.1 As set out within ES Volume 2, Chapter 15: Climate Change [EN010162/APP/6.2.15A] [REP2-030], a Lifecycle GHG Evaluation has been undertaken based on the information available at the time of assessment. The Evaluation draws on appropriate industry benchmarks and applies conservative assumptions regarding materials, design, assembly, earthworks and component use. This approach provides a robust and realistic assessment of the likely GHG emissions associated with the Development.
- 2.4.2 The trajectory towards net zero by 2050 will inevitably influence the eventual carbon intensity of grid electricity, transport, construction practices and other factors. These future changes cannot be predicted with precision and become increasingly uncertain over longer timescales. The assessment therefore reflects the information reasonably available now, consistent with the requirements of the EIA Regulations.
- 2.4.3 The approach set out in ES Volume 2, Chapter 15 is further supported by ES Volume 4, Appendix A15.1: Lifecycle Greenhouse Gas Evaluation [EN010162/APP/6.4.15.1A] [REP2-075]. As with all EIAs, the assessment identifies the likely significant effects rather than attempting to define absolute outcomes. The use of reasonable, transparent, and clearly defined assumptions is necessary to undertake such evaluations.
- 2.4.4 Extensive discussions have taken place between the Applicant and NSFSG regarding the assumptions informing the carbon and generation assessments. A number of points have been agreed as a result of the discussions. In the Applicant's view, agreement on the remaining points is now unlikely, as the outstanding issues concern the extent to which solar should be regarded as low carbon, and the exact generation assumptions that can be stated with certainty at this stage.
- 2.4.5 It remains the Applicant's position that these outstanding matters would result in, at most, only a marginal reduction in the carbon savings reported in paragraphs 73–74 of ES Volume 2, Chapter 15, which conclude that the Development delivers a major beneficial significant effect.
- 2.4.6 The outstanding issues raised by NSFSG can be summarised as follows:
- NSFSG consider that the carbon savings presented in the ES may be overstated and request more detailed assumptions and supporting evidence.
 - NSFSG dispute the energy generation figures and have requested that these be recalculated using an alternative methodology, which would reduce the illustrative estimate of the number of homes the Development could supply.

- 2.4.7 The Applicant has sought to address these concerns constructively. However, the level of information now being requested goes beyond what is considered necessary or reasonable in the context of an NSIP application. EN 1 is explicit in its support for solar energy, stating that “wind and solar are the lowest cost ways of generating electricity... providing a clean and secure source of electricity supply” and that a net zero consistent system in 2050 “is likely to be composed predominantly of wind and solar” (§3.3.23).
- 2.4.8 EN 1 also establishes the requirements for assessing GHG emissions. Paragraph 5.3.8 states that the Secretary of State must be satisfied that the applicant has assessed the GHG emissions of all stages of the development as far as possible. The Applicant’s assessment provides an appropriate and proportionate level of detail to meet this test.
- 2.4.9 The Development benefits from clear, up to date and authoritative policy support. National policy identifies an urgent need for new low carbon generation and highlights solar as a key component of the UK’s strategy for cost effective decarbonisation. The Development is also fully consistent with the National Planning Policy Framework and other relevant planning policies.
- 2.4.10 NPS EN 1 further designates low carbon infrastructure, including renewable electricity generation, as a Critical National Priority (CNP). This confers a strengthened basis for policy support, given the urgent national need for such infrastructure and the legal obligation to achieve net zero.
- 2.4.11 There is no ambiguity in national policy: solar energy is a low carbon technology and plays an essential role in meeting legally binding carbon budgets. While some uncertainty regarding precise carbon savings or the exact number of homes supported is inevitable at project stage, such uncertainties have no bearing on the acceptability of the Development. To suggest otherwise would be inconsistent with the policy framework and the role of solar within the Government’s net zero strategy.

3 SIGNATURES

3.1.1 The above SoCG is agreed between the Applicant and Norwell Solar Farm Steering Group, as specified below.

Duly authorised for and on behalf of Elements Green Trent Limited	Name
	Job Title
	Date
	Signature

Duly authorised for and on behalf of Norwell Solar Farm Steering Group	Name
	Job Title <u>Position</u>
	Date
	Signature

4 APPENDIX 1: ENERGY YIELD MODEL PARAMETERS

4.1 INTRODUCTION

4.1.1 This appendix summarises the key parameter values in the PVSyst model for the Great North Road Solar and Biodiversity Park (the Development) used by the Applicant to inform the assumptions made in the Environmental Statement (ES) **Volume 2, Chapter 15: Climate Change [EN010162/APP/6.2.15] [APP-058]**.

4.2 SCOPE AND CONTENT

4.2.1 The Applicant has several PVSyst models that are used for internal verification purposes. There is no single, fixed model for the Development, because the design isn't fixed at this pre-consent stage. The full model is not provided; it is commercially confidential, as it references specific components and the publication of this could prejudice subsequent procurement processes to the commercial detriment of the Applicant.

4.2.2 The parameters presented in this appendix are the principal determinants of the electrical energy yield as referred to in **Volume 2, Chapter 15: Climate Change [EN010162/APP/6.2.15] [APP-058]** and in **ES Volume 4, Appendix 15.1: Lifecycle Greenhouse Gas Evaluation [EN010162/APP/6.4.15.1] [APP-285]**. The parameter values presented in this document are consistent across the Applicant's models, with only minor variations in response to alternative PV module choices, etc.

4.3 PARAMETER VALUES

4.3.1 Key parameters and their values are set out in Table 4-1.

Table 4-1 Greenhouse Gas Analysis

Parameter	Value
Latitude	53.15°(N)
Longitude	-0.88°(W)
Altitude	16 m
Weather data	Norwell Woodhouse PVGIS api TMY
Grid connected system	Unlimited sheds
Tilt	20°
Azimuth	0°
PV Array	
Nb. of modules	1,513,512 units
Pnom total	1,120 MWp
Inverters	

Parameter	Value
Nb. of units	117 units
Total power	804,258 kWac
Grid power limit (limit applied at the inverter level)	800.0 MWac
Grid lim. Pnom ratio	1.4
Perf. Ratio PR	87.80%
Bifacial perf. ratio	84.64%
Bifacial model geometry	
Sheds spacing	8.00 m
Sheds width	4.74m
Limit profile angle	24.4°
GCR Bifacial	59.20%
Height above ground	0.8 m
Bifacial model definitions	
Ground albedo	0.2
Bifaciality factor	85%
Rear shading factor	5%
Rear mismatch loss	10%
Shed transparent fraction	0%
System Production	
Produced Energy (P50)	1140.0 GWh/year
Specific production (P50)	1018 kWh/kWp/year
Perf. Ratio PR	87.80%