

South Brooks Solar Farm

Preliminary Environmental Information

Volume 2: Environmental Summary

Chapter 15: Air Quality

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Blue Planet Solar Limited



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15 Air Quality

15.1 What is 'air quality'

- 15.1.1 Air Quality is the term used to describe the concentration of pollutants present in the atmosphere and how these may affect people, habitats and the wider environment.
- 15.1.2 Air Quality in the Romney Marsh area is primarily influenced by emissions from road vehicles using the surrounding rural road network (such as the A259). Other localised sources include agricultural activities and commercial operations such as Lydd Airport and the Dungeness Power Station complex, although these sources do not material to air quality background concentrations as reported by the Department for Environment, Food and Rural Affairs (Defra). Additional contributions arise from transboundary pollution transported across the English Channel and from particulates associated with the coastal environment.
- 15.1.3 Poor Air Quality can pose risks to human health, particularly for vulnerable groups such as the elderly, children and those with medical conditions, and can also affect sensitive vegetation and ecosystems through both direct exposure and deposition of pollutants.
- 15.1.4 For effects on human health, the pollutants of greatest concern in the UK are nitrogen dioxide (NO₂) and Particulate Matter (PM). The particles in the air which will be considered in the assessment are PM₁₀ (particulate matter up to 10 micrometres in diameter) and PM_{2.5} (particulate matter up to 2.5 micrometres in diameter). In the context of large-scale solar farm construction, particulate matter is particularly relevant due to dust generated from earthworks and vehicle movements on unpaved surfaces. Another source of particulate matter (and NO₂) is the tailpipe emissions from construction traffic. Government threshold levels for these pollutants are set to protect human health, and the assessment will consider the potential for construction activities to temporarily increase concentrations, particularly at nearby sensitive receptors (such as residential properties, schools and healthcare facilities).
- 15.1.5 For ecological receptors, the key pollutants of concern are nitrogen oxides (NO_x) and ammonia (NH₃). These pollutants can directly affect vegetation and can alter the nutrient and acidity balance of ecosystems, influencing species composition and overall habitat condition. Within the wider Romney Marsh area, three nationally designated sites of importance for biodiversity are Rye Harbour Site of Special Scientific Interest (SSSI); Dungeness, Romney Marsh and Rye Bay SSSI; and Dungeness National Nature Reserve, which are sensitive to dust and nutrient deposition. Given the proximity and ecological sensitivity of these sites, the potential for construction-related dust emissions, NO_x emissions from construction traffic,

and changes in nitrogen deposition to affect designated habitats will be carefully assessed. Critical loads for nutrient nitrogen and acid deposition vary depending on habitat type, and these thresholds will guide the evaluation of potential ecological effects.

15.2 Key Terms

Table 15-1: Key Terms

Term	Definition
Receptors	Human beings, plants, or ecosystems which could be affected by pollution in the air.
Critical Level (CLe)	Concentrations of pollutants in the atmosphere above which ecological receptors could be negatively affected.
Critical Load (CLo)	An estimate of exposure to pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur.
Standards	A nationally defined set of concentrations for nine pollutants based on assessment of the effects of each pollutant on human health, including the effects on sensitive sub-groups.
Objectives	A nationally defined set of health-based concentrations for nine pollutants, seven of which are incorporated in Regulations (Air Quality (England) Regulations ¹³⁴ and the Air Quality (England) (Amendment) Regulations (2002) ¹³⁵), setting out the extent to which the standards should be achieved by a defined date.
Exceedance	A period of time when the concentration of a pollutant is greater than the appropriate Air Quality

¹³⁴ The Air Quality (England) Regulations, 2000, Statutory Instrument 928 (2000), HMSO, Available: <http://www.legislation.gov.uk/uksi/2000/928/contents/made>.

¹³⁵ The Air Quality (England) (Amendment) Regulations, 2002, Statutory Instrument 3043 (2002), HMSO, Available: <https://www.legislation.gov.uk/uksi/2002/3043/contents/made>.

Term	Definition
	objective. It applies to specific locations and receptors.
Nitrogen Oxides (NO _x)	A mixture of nitrogen dioxide (NO ₂) and nitric oxide (NO).
Particulate Matter (PM ₁₀)	Small airborne particles up to 10 micrometres in diameter.
Fine Particulate Matter (PM _{2.5})	Small airborne particles up to 2.5 micrometres in diameter.

15.3 Summary of Points Raised in EIA Scoping Opinion and Project Response

15.3.1 Comments provided by the Planning Inspectorate (PINS) relating to areas to be considered (scoped in) to the Air Quality Assessment are summarised in Table 15-2.

Table 15-2: PINS Scoping Opinion on Air Quality

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
The ES should include an assessment of impacts from dust generation during construction works, as the Project is located adjacent to, and overlaps with designated sites.	A construction dust risk assessment, including the risk of impacts on designated sites, will be included in the ES. This will set out appropriate dust mitigation measures proportionate to the assessed level of risk.	Dust impacts, along with the relevant mitigation required to ensure that likely significant effects do not occur, will be assessed within the Air Quality chapter of the ES, which will be submitted with the DCO application. This assessment will be undertaken once the Project boundary has been finalised.
The ES should provide an assessment of significant impacts from plant and vehicle emissions during construction, which should include details of the location and duration of construction activities and	A qualitative assessment of the impacts of on-site construction plant and vehicle emissions will be included in the ES. This will set out	Construction plant and vehicle emissions will be assessed within the Air Quality chapter of the ES, which will be submitted with the DCO application. This assessment will be

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
<p>plant emissions and the location and sensitivity of receptors in relation to these activities.</p>	<p>appropriate mitigation measures proportionate to the proximity and sensitivity of receptors.</p>	<p>undertaken once the Project boundary has been finalised and the Project is finalised.</p>
<p>The ES should include an assessment of impacts from construction traffic on sensitive ecological receptors.</p>	<p>An assessment of the impacts of construction vehicle emissions on sensitive ecological receptors will be included in the ES. This will set out appropriate mitigation measures where required.</p>	<p>Impacts of construction vehicle emissions on sensitive ecological receptors will be assessed within the Air Quality chapter of the ES, which will be submitted with the DCO application. This assessment will be undertaken once the Project boundary has been finalised. The methodology of the assessment will be determined once traffic data is available for screening.</p>
<p>The ES should provide an assessment of likely significant effects during decommissioning and detail proposed measures to reduce potential impacts and effects during decommissioning.</p>	<p>An assessment of the risk of impacts due to dust, on-site plant and road traffic emissions during decommissioning will be included in the ES. This will set out appropriate mitigation measures proportionate to the assessed level of risk.</p>	<p>Dust impacts, along with the relevant mitigation required to ensure that likely significant effects do not occur, will be assessed within the Air Quality chapter of the ES, which will be submitted with the DCO application. Assessment of on-site plant and vehicle emissions will also be included. These assessments will be undertaken once the Project boundary has been finalised.</p>

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
<p>The ES should clearly describe an appropriate study area for the entirety of the Project, including the cable corridors, and define the affected road network to determine the extent of potential emissions from vehicles serving the site for each phase of the development.</p>	<p>The study area will be clearly defined based on distances from the Site boundary, including the cable corridors, and from roads on which traffic flows are expected to change significantly.</p>	<p>The study area will be finalised once traffic data are available.</p>
<p>The ES should confirm the baseline environment for the identified study area, including Rother as well as Folkestone and Hythe Districts.</p>	<p>The ES will present the latest available baseline data for the study area, including any monitoring carried out by Rother District Council (RDC) and Folkestone and Hythe District Council (FHDC) if appropriate. Monitoring data will be taken from the most recent Air Quality Annual Status Reports (ASR's) published by the Councils. Baseline data for the ecological sites will be taken from the Air Pollution Information System (APIS) website.</p>	<p>Baseline data will be presented within the Air Quality chapter of the ES, which will be submitted with the DCO application. The chapter will be prepared once the Project boundary has been finalised and the final study area is confirmed.</p>
<p>The ES should clearly describe the sources of the baseline datasets used.</p>	<p>The ES will present the latest available baseline data for the study area. Background data will be taken from Defra's most recent background maps.</p>	<p>All sources of baseline data will be clearly cited within the Air Quality chapter of the ES, which will be submitted with the DCO application. The chapter will be prepared once the</p>

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
	<p>Monitoring data will be taken from the most recent Air Quality Annual Status Reports (ASR's) published by the Councils. Baseline data for the ecological sites will be taken from the Air Pollution Information System (APIS) website.</p>	<p>Project boundary has been finalised.</p>
<p>The ES should assess any significant effects where they are likely to occur to Air Quality from a fire incident at the BESS.</p>	<p>An assessment of the potential impacts of a fire incident at the BESS will be included within the ES. This will set out appropriate mitigation measures to minimise risk.</p>	<p>A fire incident at the BESS, along with mitigation required to ensure that significant effects do not occur, will be assessed within the outline Battery Safety Management plan (oBSMP) which will be submitted with the DCO application. This assessment will be undertaken once the Project boundary has been finalised.</p>
<p>The ES should explain how key sources of air pollution within the Project have been identified and how action has been taken to minimise emissions of PM_{2.5} or its precursors.</p>	<p>Key sources of air pollution are from activities relating to the construction phase of the Project. No routine operational emissions of air pollutants, including PM_{2.5} or its precursors, are anticipated from the Project.</p>	<p>The full Air Quality assessment will be presented in the ES which will be submitted with the DCO application.</p>

15.3.2 In addition to the PINS Scoping Opinion, engagement has been and continues to be undertaken with relevant stakeholders. A summary of ongoing consultation with consultees in relation to air quality is provided in Table 15-3.

Table 15-3: Summary of Ongoing Comments and Feedback With Consultees

Summary of Relevant Stakeholder Consultation Comments	Consultee	Discipline Feedback	Next Steps
Concerns about proximity to Battery Energy Storage System (BESS) units for residents in Lydd.	Community	A separation distance of 300m between the indicative BESS locations, and the nearest existing sensitive receptors has been incorporated into the design to minimise potential exposure to pollutants in the unlikely event of a fire. With regards to Lydd, the closest indicative BESS location is approximately 2.1km to the north within South Brooks C.	Emissions associated with a potential BESS fire incident will be assessed within the oBSMP. The results will inform the outline Battery Safety Management Plan which will ensure air quality criteria for human health is not exceed. This will be submitted alongside the DCO application.
An expectation of significant buffer zones (of at least 200m) around existing dwellinghouses, to include those within the site and adjoining it.	CPRE Kent	Separation distances between key infrastructure and the nearest existing sensitive receptors, have been incorporated into the design to minimise potential exposure to pollutants. This includes a distance of 300m from the indicative BESS and substation locations and	Preparation of the Air Quality chapter of the ES, which will present details on the separation distances and results of any air quality modelling undertaken. Predicted pollutant concentrations at relevant receptors will be reported in the Air Quality chapter of the ES, to be submitted as

Summary of Relevant Stakeholder Consultation Comments	Consultee	Discipline Feedback	Next Steps
		250m from construction compounds.	part of the DCO application.
The Project would sit adjacent to, and in places include, the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI), Special Protection Area, and Ramsar and the Dungeness Special Area of Conservation. Part of the Project would also sit immediately adjacent to the Midley Chapel Pasture, Hawthorn Corner Local Wildlife Site (LWS). The entire Project would fall within the Romney Marsh Important Invertebrate Area.	Kent Wildlife Trust	The ES will include an assessment of potential impacts on all relevant designated ecological sites, including potential effects associated with construction dust, traffic emissions and nitrogen deposition.	Preparation of the Air Quality chapter of the ES, which will report on the air quality concentrations at the designated ecological sites. This will be submitted as part of the DCO application.

15.3.3 **Appendix 1-2: Key Policy and Legislation** provides details on the legislation, policy and guidance that has informed the approach to the air quality assessment.

15.4 Ongoing Air Quality Work

Study Area

15.4.1 The assessment of dust and particulate emissions from construction activities is based on the Institute of Air Quality Management (IAQM) Guidance¹³⁶ which defines the study area as 250m radius of the Site boundary, or within 50m of roads used by construction vehicles within 250m of the Site boundary exit (the point at which the vehicles re-enter the public highway).

¹³⁶ IAQM (2024) Guidance on the assessment of dust from demolition and construction

15.4.2 The assessment of pollutant emissions from road traffic exhausts defines the study area based on criteria in the Design Manual for Roads and Bridges¹³⁷ (DMRB), which considers there is a potential for air quality road traffic impacts “*on sensitive receptors within 200m of a road.*” A distance of 200m is used as concentrations from road sources decrease rapidly with distance from the source and beyond this distance the road source contribution is not typically discernible.

15.4.3 Sensitive human health receptors will include residential properties, schools and healthcare facilities. Sensitive ecological receptors include the following designated sites:

- Dungeness Special Area of Conservation (SAC);
- Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA) and Ramsar site; and
- Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI).

15.4.4 The relevant study area is shown in : **Air Quality Study Area** .

Collection of Air Quality Data

15.4.5 Existing sources of emissions and baseline air quality conditions within the study area have been defined and identified using a number of approaches and sources:

- Any specific local sources have been identified through discussion with the host local authorities and through examination of their Air Quality Review and Assessment reports;
- Information on existing air quality obtained by collating the results of monitoring conducted by the local authorities, which is published in their air quality Annual Status Reports. These reports are submitted to the UK Government as part of the local authorities’ statutory responsibility to monitor and where necessary improve air quality conditions; and
- Background concentrations as defined using Defra’s background maps¹³⁸. These maps cover the whole of the UK on a 1x1 km grid and are based on air quality monitoring data, along with meteorological data for 2021. The background maps also predict concentrations up to the year 2040.

¹³⁷ National Highways (2024), Design Manual for Roads and Bridges LA105 – Air Quality (vertical barriers)

¹³⁸ Defra 2021-based background maps available here: <https://uk-air.defra.gov.uk/data/laqm-background-home>

Current Air Quality Results

15.4.6 Local authorities must regularly review air quality within their administrative boundaries and declare an Air Quality Management Area (AQMA) in areas where the air quality objectives have not been achieved, as well as produce an action plan to improve air quality in these areas. No AQMAs have been declared by FHDC or RDC, as there are no locations where air quality objectives are not being met or are predicted to be exceeded.

Local Air Quality Monitoring

15.4.7 FHDC and RDC monitor air quality across their administrative areas through a network of NO₂ diffusion tubes. The monitoring locations closest to the Project and most representative of conditions at the site are in FHDC and are shown in : **Air Quality Monitoring Locations**. The closest diffusion tubes in RDC are in Rye, approximately 5km away and in a more urban area than the area of the site. As such the results are not presented here. The measured annual mean NO₂ results for 2020 to 2024 are shown in Table 15-4.

Table 15-4: Summary of Annual Mean NO₂ Monitoring (2020-2024) (µg/m³)

Site No.	Site Type	Location	2020	2021	2022	2023	2024
DT10	Roadside	Martins Cottages	13.1	14.0	14.4	11.8	11.8
DT17	Roadside	St Andrews Road	9.9	9.6	9.8	8.9	9.0
DT18	Roadside	Littlestone Road	14.0	15.3	12.6	14.1	11.5
Objective			40				

15.4.8 As shown in Table 15-4, a clear downward trend in concentrations can be observed since 2020 and concentrations have remained well below the air quality objective in all years of reported data. DT10 is the closest to the site (approximately 600m away), but is located close to the A259 so is likely to measure higher concentrations than at the site. DT17 and DT18 are in New Romney so also likely to be higher than at the site.

15.4.9 FHDC does not undertake local monitoring of PM₁₀ or PM_{2.5}.

Existing Background Concentrations

15.4.10 Background concentrations for NO₂, PM₁₀ or PM_{2.5} in the study area in 2025 have been obtained from Defra's 2021-based background maps¹³⁸ and are presented in Table 15-5. Air quality in the local area is comparatively good, with pollutant concentrations well below the relevant national air quality objectives.

Table 15-5: Estimated Annual Mean Background Pollutant Concentrations in 2025 ($\mu\text{g}/\text{m}^3$)

Year	NO ₂	PM ₁₀	PM _{2.5}
2025	6.0 – 7.0	8.0 – 10.9	5.0 – 5.4
Objective	40	40	20

Future Air Quality

Collection of Future Air Quality Data

- 15.4.11 No additional site-specific air quality monitoring is being undertaken, as it has been agreed with FHDC that publicly available monitoring data will be used (as presented in Table 15-3). The latest diffusion tube results and Defra-derived background pollutant concentrations will be applied in the air quality assessment to be submitted as part of the ES for the DCO application.
- 15.4.12 More broadly, air quality across much of the UK has been improving in recent years and is expected to continue to improve. This trend is largely due to the introduction of more stringent vehicle emissions standards, the growing uptake of cleaner and low-emission vehicles, and the implementation of local and national policies designed to reduce pollution, such as Clean Air Zones and targeted air quality management measures.
- 15.4.13 The existing air quality data, from monitoring and the Defra-derived background pollutant concentrations will be used and future year adjustment factors, as set out by Defra, will be used to determine the future air quality baseline.

Future Air Quality Background Concentrations

- 15.4.14 Background concentrations in the study area are very low, as shown in Table 15-4 and Table 15-5, and are predicted to reduce in future years. They are thus expected to remain well below the air quality objectives.

15.5 Important Receptors Identified

- 15.5.1 Sensitive receptors that could be affected by air quality impacts associated with the Project include residential properties, schools and healthcare facilities. For road traffic emissions these will be properties within or 200 m of affected roads (roads above the IAQM screening criteria as set out in Guidance¹³⁹). It is anticipated that affected roads will be A2070 South of Ashford, A259 at Brookland, A259 at South Brooks A, and A259 Southeast of Old Romney. This network will be confirmed at

¹³⁹ Moorcroft and Barrowcliffe. et al. (2017) Land-use Planning & Development Control: Planning for Air Quality. v1.2. Institute of Air Quality Management, London.

ES stage. For dust and particulates generated by site works, these will be properties within 250 m of the Site boundary.

15.5.2 Sensitive receptors for effects on ecological sites from road traffic emissions must meet the following criteria:

- nationally designated sites of importance for biodiversity (see Section 5: Biodiversity), and determined as sensitive to air quality by the Project Ecologist; and
- are within 200m of affected roads.

15.5.3 Sensitive receptors for effects on ecological sites from emissions of dust and particulates generated by site works are nationally designated sites within 50m of the Site boundary.

15.6 Considering Air Quality in Design

15.6.1 The design of the Project has been informed by the air quality baseline conditions and stakeholder consultation undertaken to date. Separation distances of 300m between key infrastructure, such as the substation and BESS indicative locations and the potential location of construction compounds, and existing sensitive receptors, have been incorporated to minimise potential exposure to pollutants during both construction and operation.

15.6.2 The air quality assessment to be prepared for the ES, submitted as part of the DCO application, will further inform the routing and management of construction traffic, with preferred routes selected to avoid sensitive receptors and designated ecological sites wherever practicable. Measures such as restricting vehicle movements near sensitive habitats and implementing best-practice dust control will be embedded into the design and secured through the outline Construction Environmental Management Plan (oCEMP), a draft of which forms part of the consultation documents. These design-led measures will ensure that construction activities are planned and managed to avoid or minimise air-quality-related impacts on both human and ecological receptors.

15.7 Preliminary Assessment of Likely Significant Effects

Approach

15.7.1 The approach used to determine the overall significance of potential air quality effects has been informed by the guidance published by EPUK and the IAQM¹³⁹. In accordance with this guidance, the determination of effect significance is based on professional judgement, taking account of factors including the magnitude, frequency and duration of predicted impacts, the sensitivity of affected receptors,

and the relationship of predicted pollutant concentrations to relevant air quality objectives and environmental standards.

- 15.7.2 At this stage of the assessment, the preliminary evaluation of potential effects is based on professional judgement supported by the available baseline information. Existing air quality monitoring data indicate that pollutant concentrations within the study area are well below the relevant national air quality objectives. Furthermore, the nature of the Project, together with the anticipated scale and duration of construction, operation and maintenance and decommissioning activities, indicates that emissions are not expected to result in material changes in local air quality.
- 15.7.3 In addition, potential air quality impacts can be effectively managed through the implementation of standard best-practice mitigation measures, which will be secured through project management plans such as the oCEMP, a draft of which accompanies this consultation.
- 15.7.4 On this basis, the use of professional judgement to provide a preliminary evaluation of potential air quality effects at this stage is considered appropriate and proportionate. A detailed air quality assessment will be undertaken where necessary as part of the ES to accompany the DCO application, informed by the final design parameters and confirmed activities.

Preliminary Assessment

- 15.7.5 A summary of the preliminary assessment of likely significant effects on air quality associated with the Project is provided in Table 15-6. In summary, once the recommended mitigation measures are applied, no significant air quality effects are expected to occur at any stage of the Project's lifetime.

Table 15-6: Potential Likely Significant Air Quality Effects

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
Construction and Decommissioning	Dust Emissions	Human Health Ecological Designated Sites	The main pollutants of concern during the construction and decommissioning phases are dust and PM ₁₀ , arising from activities such as groundworks, soil handling, vehicle movements on unpaved surfaces, and the operation of construction plant. These emissions have the potential to affect human health and local amenity if not appropriately managed. As described above a separation distance of 250m between the indicative construction compounds, and the nearest existing sensitive receptors has been incorporated into the design to minimise potential exposure and nuisance from dust generation.	Effects are expected to be not significant.	Dust impacts, together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in full within the air quality chapter of the ES that will accompany the DCO submission. This assessment will be completed once the Project boundary has been finalised. The oCEMP will be updated to reflect the findings of the air quality assessment as well as feedback received during ongoing consultation. An oDEMP will also be submitted with the DCO application, setting out measures to avoid, minimise and control dust emissions in accordance with current guidance and legislation.

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			<p>Draft measures to avoid, minimise and control dust emissions arising from construction activities, are set out in the oCEMP, a draft of which forms part of the consultation documents. Equivalent measures for the decommissioning phase will be set out in an outline Decommissioning Environmental Management Plan (oDEMP), which will be submitted alongside the DCO application.</p> <p>In accordance with relevant guidance and subject to the implementation of these dust-control measures, the preliminary assessment indicates that no likely significant effects on air quality are expected in relation to human health, amenity, or ecological receptors as a result of dust</p>		

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			generated during construction or decommissioning.		
	Plant Emissions	Human Health	<p>Emissions from non-road mobile machinery used during construction are not expected to result in significant changes to local air quality. Construction plant typically operate intermittently and are distributed across the Site rather than concentrated at a single location.</p> <p>Furthermore, modern plant is required to comply with stringent emission standards, meaning contributions to local pollutant concentrations are expected to be very small.</p> <p>This is supported by the IAQM Guidance which states <i>“Experience of assessing the exhaust emissions from on-site plant (NRMM) and site traffic suggests that they are</i></p>	Effects are expected to be not significant.	<p>A proportionate qualitative assessment will be presented in the Air Quality chapter of the ES that will accompany the DCO submission. This assessment will be completed once the Project boundary has been finalised.</p> <p>Embedded controls will also be set out within the oCEMP and oDEMP (such as no-idling policy and emissions-compliant plant) to ensure emissions are controlled at the source.</p>

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			<i>unlikely to make a significant impact on local air quality</i> .		
		Ecological Designated Sites	Considering the distance between plant operating areas and designated habitats, together with the generally limited contribution of Non Road Mobile Machinery (NRMM) to ambient concentrations, material changes in NO _x or nitrogen deposition at designated sites are not anticipated.	Effects are expected to be not significant.	A qualitative appraisal to confirm there are no meaningful contributions to critical levels/loads will be included in the air quality chapter of the ES that will accompany the DCO submission. This assessment will be completed once the Project boundary has been finalised. Embedded controls will also be set out within the oCEMP and oDEMP (such as no-idling policy and emissions-compliant plant) to ensure emissions are controlled at the source.
	Traffic Emissions	Human Health	In line with EPUK/IAQM guidance, the expected change in vehicle flows will be compared with screening thresholds (100 Heavy Duty Vehicles or 500 Light Duty Vehicles). Traffic associated	Effects are expected to be not significant.	If construction traffic flows are above the screening criteria, an air quality computer dispersion model approved by Defra (known as ADMS-Roads) will be used to quantify the impacts that construction road traffic

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			<p>with the Project is anticipated to be well below these thresholds, meaning a significant air-quality impact is unlikely. Construction traffic will also be managed to minimise impacts through measures in the oCEMP, oDEMP and Construction Traffic Management Plan. Existing and future baseline concentrations across the site are well below air quality objectives, providing further confidence that additional traffic will not lead to exceedances.</p>		<p>emissions will have on air quality at existing receptor locations.</p> <p>The assessment will be based on the likely worst-case option with respect to traffic generation for the assessment of the impacts of the Project on existing local air quality (i.e. the year of construction or decommissioning predicted to generate the greatest number of additional vehicle trips). This will be assessed in full within the Air Quality chapter of the ES that will accompany the DCO submission. This assessment will be completed once the Project boundary has been finalised.</p>
		Ecological Designated Sites	As above, traffic associated with the Project is currently unknown. Traffic-related	Effects are expected to be not significant.	The air quality computer dispersion model ADMS-Roads will be used to quantify the

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			<p>emissions are expected to be very small and reduce rapidly with distance from road sources. No meaningful contribution to ecological critical levels or loads is anticipated.</p>		<p>impacts that road traffic emissions will have on ecological designated sites. The assessment will be based on the likely worst-case option with respect to traffic generation for the assessment of the impacts of the Project on existing local air quality (i.e. the year of construction or decommissioning predicted to generate the greatest number of additional vehicle trips). This will be assessed in full within the Air Quality chapter of the ES that will accompany the DCO submission. This assessment will be completed once the Project boundary has been finalised.</p>
Operation	BESS	Human Health	Operational BESS units do not emit air pollutants during		An air quality computer dispersion model approved by

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
		Ecological Designated Sites	<p>normal operation. A separation distance of 300m between the indicative BESS locations, and the nearest existing sensitive receptors has been incorporated into the design to minimise potential exposure to pollutants in the unlikely event of a fire. Furthermore, a number of safeguards will be included within the management of the BESS to prevent fires such as detection systems and suppression, compartmentation. Available evidence from modelling studies of comparable systems indicates that emissions from such incidents would be short-lived and highly diluted, and are unlikely to result in exceedances of relevant</p>	Effects are expected to be not significant.	<p>Defra (known as ADMS) will assess key pollutants (e.g., hydrogen fluoride) from a credible worst-case incident across a grid over the study area. This will quantify the maximum concentration as well as predict the potential location of a plume in the event of a fire. Results will be incorporated into the outline Battery Safety Management Plan that will accompany the DCO submission. This assessment will be completed once the Project boundary has been finalised.</p>

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			<p>health-based air quality objectives. Furthermore, no routine operational emissions would occur, and incident related emissions would disperse rapidly and remain well below ecological criteria at designated sites.</p>		

Drawing number

Figure 15-1







Project/Location

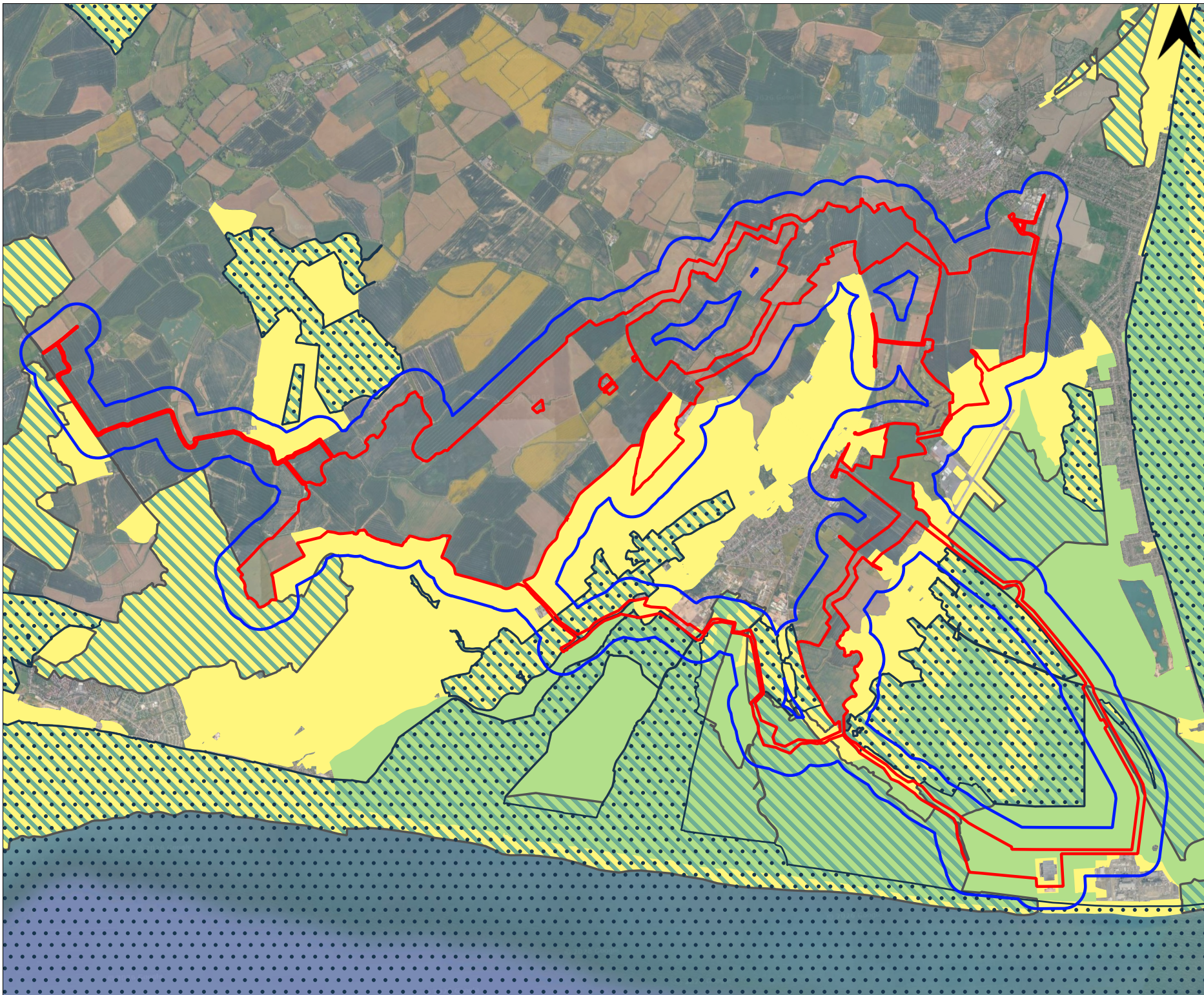
South Brooks Solar Farm

Drawing title

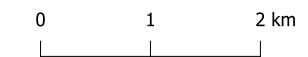
Air Quality Study Area

Legend

-  Site Boundary
-  250m Buffer from Site Boundary
- Designated Ecological Sites**
-  Special Protection Areas (SPA)
-  Ramsar
-  Special Areas of Conservation (SAC)
-  Sites of Special Scientific Interest (SSSI)



Drawing Notes: The site boundary is for indicative purposes only and requires confirmation on site.





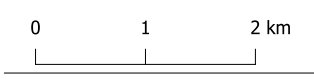
Drawing number
Figure 15-2

Project/Location
South Brooks Solar Farm

Drawing title
Air Quality Monitoring Locations

Legend

▲ Monitoring Locations



Drawing Notes: The site boundary is for indicative purposes only and requires confirmation on site.



www.southbrookssolarfarm.co.uk