Appendix 5.1

Air Quality Method Statement

Springwell Energyfarm Ltd
Cardinal Place
80 Victoria Street
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Our ref: 445336-01-MS

31st July 2023

Bohdan Dawyd
North Kesteven District Council

Sent by email to: bohdan_dawyd@n-kesteven.gov.uk

Request for Comments on the Proposed Air Quality Assessment for Springwell Solar Farm

Dear Mr Dawyd,

RSK Environment Ltd (RSK) has been commissioned to undertake an assessment of the potential air quality impacts associated with the proposed Springwell Solar Farm. The proposed development comprises the construction, operation and decommissioning of solar photovoltaic (PV) generating station, energy storage facilities, and grid connection infrastructure to allow export to the National Grid. The approximate grid reference of the centre of the site is 506382, 356551 (British National Grid). The proposed site location is shown in Appendix A, for reference.

The site is within the administrative area of North Kesteven District Council (NKDC). There are currently no Air Quality Management Areas (AQMAs) declared within the district. Therefore, the proposed development is not located within or close to an AQMA.

The following document outlines RSK's proposed approach to assessing potential air quality impacts associated with the proposed development. We would be grateful for your comments on our proposed assessment methodology.

1. Baseline Air Quality

According to the NKDC's 2022 Air Quality Annual Status Report (ASR), there was a network of 22 nitrogen dioxide (NO_2) diffusion tubes across the district in 2021 and no automatic monitoring station.

The nearest monitoring location is a NO_2 diffusion tube location (NKDC ref: Ruskington) situated approximately 4.3km away from the site. The monitoring data from this site are reproduced in Table 1 below. No exceedances of the annual mean NO_2 Air Quality Standard (AQS) were recorded at this monitoring location. The measured annual average NO_2 concentrations at this diffusion tube site, for years 2017 - 2021, ranged between 10.6µg/m^3 and 14.7µg/m^3, which were well below the annual mean NO_2 AQS.

Table 1: Annual Mean NO_2 Concentrations at the Diffusion Tube Locations within 4.5km of the Proposed Development Site

Site ID	Location	Site type	Approximate Distance from Site (km)	Annual Mean NO_2 Concentrations ($\mu g/m^3$)				
				2017	2018	2019	2020	2021
Ruskington	Winchelsea Road	Roadside	4.3	10.6	14.7	13.3	10.7	11.5

2. Estimated Background Data

In addition to the local monitoring data, estimated background air quality data available from the LAQM-Tools website, may also be used to establish likely background air quality conditions at the proposed development site.

This website provides estimated annual average background concentrations of NO_2, PM_{10} and $PM_{2.5}$ on a $1km^2$ grid basis. Table 2 identifies estimated annual average background concentrations for the grid square containing the proposed development site for years from 2023 to 2025. No exceedances of the NO_2, PM_{10} or $PM_{2.5}$ annual mean AQSs are predicted. As background concentrations are predicted to fall with time, background concentrations in future years would not be expected to exceed their respective annual mean standards.

Table 2: Estimated Background Annual Average NO_2, PM_{10} and $PM_{2.5}$ Concentrations at Proposed Development Site

Assessment Year	Estimated Annual Average Pollutant Concentrations Derived from the LAQM Website ($\mu g/m^3$)		
	Annual Average NO_2	Annual Average PM_{10}	Annual Average $PM_{2.5}$
2023	6.7	15.3	8.2
2024	6.5	15.1	8.0
2025	6.2	15.0	7.9
AQS	**40**	**40**	**20**

Note: Presented concentrations for 1 km^2 grid centred on 506500, 356500; approximate centre of development site is 506382, 356551.

3. Outline of Assessment Approach

The assessment will address potential impacts during both the construction, operational and decommissioning phases of the proposed development.

During construction and decommissioning, air quality impacts are likely to be local to the development and will be temporary in nature (i.e. during the construction and decommissioning phases only). A qualitative study, based on the Institute of Air Quality Management (IAQM) '*Guidance on the assessment of dust from demolition and construction'* document, will be undertaken to assess potential construction and

decommissioning phases impacts. The assessment will identify a range of mitigation measures aimed at minimising construction and decommissioning impacts (fugitive dust emissions).

A screening level qualitative assessment will be undertaken with reference to the Environmental Protection UK (EPUK) and IAQM guidance entitled '*Land-Use and Development Control: Planning for Air Quality*' to assess the potential impacts of construction and decommissioning phases traffic exhaust emissions.

Given the nature of the proposed development, no site activities resulting in significant emissions to air are anticipated during operation and there will only be limited movement of vehicles to the site for maintenance. Operational phase will be scoped out from the assessment.

4. Interpretation

The qualitative assessment results will be interpreted with reference to national and local legislation, policy and guidance including guidance provided by the IAQM, EPUK and the National Air Quality Strategy. An environmental statement will be produced for submission with the EIA planning application for the proposed development.

We would like to address any of your comments or concerns in the air quality assessment for the proposed development and would be grateful for your feedback. Please do not hesitate to contact the undersigned if you would like to discuss any aspects of the proposed methodology detailed above.

Yours sincerely,

For RSK Environment Ltd

Prepared by:	Reviewed by:
Phoebe Chan Senior Air Quality Consultant	Robert Clark Senior Air Quality Consultant

Appendix A

Figure 1: Location of the Proposed Development Site