

Our ref: 445516-01-MS

16<sup>th</sup> February 2024

Jon Tait  
East Riding of Yorkshire Council

Sent by email to: jonathan.tait@eastriding.gov.uk

### **Request for Comments on the Proposed Air Quality Assessment for Peartree Hill Solar Farm**

Dear Mr Tait,

RSK Environment Ltd (RSK) has been commissioned to undertake an assessment of the potential air quality impacts associated with the proposed Peartree Hill 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 509955, 441244 (British National Grid). The proposed site location is shown in Appendix A, for reference.

The site is within the administrative area of East Riding of Yorkshire Council (ERYC). There are currently no Air Quality Management Areas (AQMA) 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 ERYC's 2023 Air Quality Annual Status Report (ASR), there was seven automatic monitoring stations and a network of 92 nitrogen dioxide (NO<sub>2</sub>) diffusion tubes across the district in 2022.

The nearest monitoring location is a NO<sub>2</sub> diffusion tube location (ERYC ref: S92) situated approximately 1.8km northwest from the site. The monitoring data from this site are reproduced in Table 1 below. No exceedances of the annual mean NO<sub>2</sub> Air Quality Standard (AQS) were recorded at this monitoring location. S92 NO<sub>2</sub> diffusion tube location was new for 2022. The measured annual average NO<sub>2</sub> concentration at this diffusion tube site was 20.8µg/m<sup>3</sup>, which was well below the annual mean NO<sub>2</sub> AQS.

**Table 1: Annual Mean NO<sub>2</sub> Concentrations at the Diffusion Tube Locations within 3km of the Proposed Development Site**

| Site ID | Location            | Site type | Approximate Distance from Site (km) | Annual Mean NO <sub>2</sub> Concentrations (µg/m <sup>3</sup> ) |      |      |      |      |
|---------|---------------------|-----------|-------------------------------------|---|------|------|------|------|
|         |                     |           |                                     | 2018  | 2019 | 2020 | 2021 | 2022 |
| S92     | Rycote House, Routh | Roadside  | 1.8                                 | -   | -    | -    | -    | 20.8 |

## 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<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> on a 1km<sup>2</sup> grid basis. Table 2 identifies estimated annual average background concentrations for the grid square containing the proposed development site for years from 2024 to 2026. No exceedances of the NO<sub>2</sub>, PM<sub>10</sub> or PM<sub>2.5</sub> 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<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> Concentrations at Proposed Development Site**

| Assessment Year | Estimated Annual Average Pollutant Concentrations Derived from the LAQM Website (µg/m <sup>3</sup> ) |                                 |                                  |
|-----------------|--|---------------------------------|----------------------------------|
|                 | Annual Average NO <sub>2</sub>   | Annual Average PM <sub>10</sub> | Annual Average PM <sub>2.5</sub> |
| 2024            | 6.5  | 14.4                            | 7.5                              |
| 2025            | 6.3  | 14.3                            | 7.4                              |
| 2026            | 6.2  | 14.3                            | 7.4                              |
| <b>AQS</b>      | <b>40</b>  | <b>40</b>                       | <b>20</b>                        |

Note: Presented concentrations for 1 km<sup>2</sup> grid centred on 509500, 441500; approximate centre of development site is 509955, 441244.

## 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 V2.2' 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. A preliminary environmental information report and an environmental statement will be produced for submission with the 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:



Phoebe Chan  
Senior Air Quality Consultant

Reviewed by:



Robert Clark  
Senior Air Quality Consultant

# Appendix A

Figure 1: Location of the Proposed Development Site

