The Great Grid Upgrade

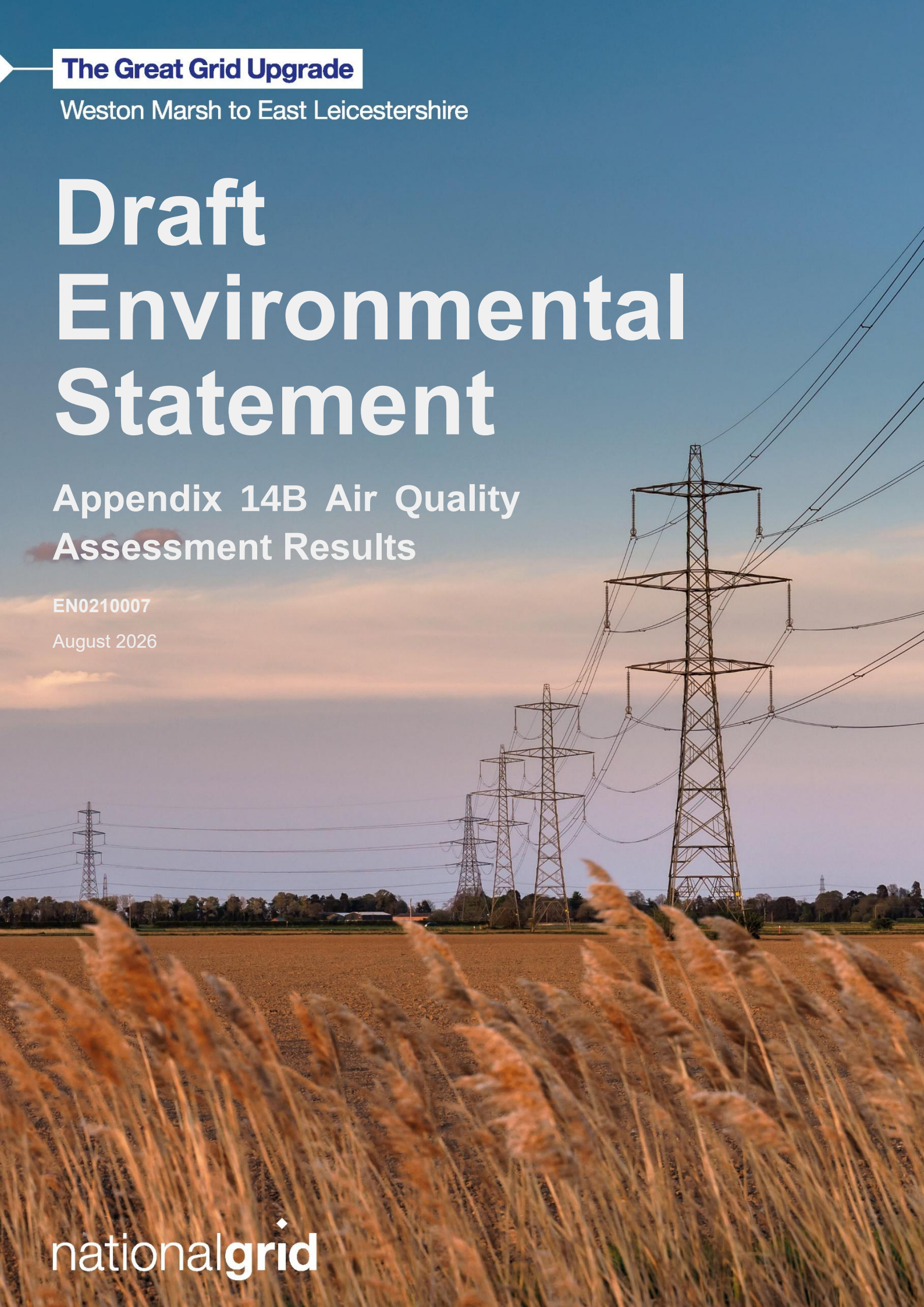
Weston Marsh to East Leicestershire

Draft Environmental Statement

Appendix 14B Air Quality Assessment Results

EN0210007

August 2026



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14.B Air Quality Assessment Results

14B.1 Introduction

14B.1.1 This appendix supports and should be read in conjunction with **Chapter 14 Air Quality Assessment** of the non-statutory Draft Environmental Statement (DES) (referred to in this document as "DES" and non-statutory DES") for Weston Marsh to East Leicestershire Project (the 'Project'). This appendix presents the results of the construction dust assessment as part of the DES.

14B.1.2 The Project has been sub-divided into five geographical sections for the purpose of reporting and reported/described consistently from east to west (for new overhead line from Weston Marsh to substation WMEL-B) then north to south (for reconductoring from WMEL-B to the existing substation at Grendon). These are shown on **Figure 1.1 Project Location Plan** and comprise:

- Section 1: South Holland District Council;
- Section 2: South Kesteven District Council;
- Section 3: Melton Borough Council;
- Section 4: Harborough District Council; and
- Section 5: Northamptonshire (including both North Northamptonshire Council and West Northamptonshire Council).

14B.2 Construction Dust Assessment

14B.2.1 This appendix provides the results of the assessment of construction-related activities on air quality. As described in **Chapter 4 Description of the Project**, the construction of the Project requires dust generating activities.

Magnitude of Impacts

14B.2.2 The construction dust assessment has been summarised to indicate potential risk and identify locations which pose the greatest risks to air quality.

14B.2.3 The magnitude of the dust generating activities during construction phase is summarised in **Table 14B.1.** Dust activities have not been broken down into activities across the five Sections. This level of detail is not known during the DES assessment, however, will be included in the Environmental Statement (ES).
The sensitivity of areas has been assessed for each of the five Sections individually. Details of the equipment and durations of use are not available for the DES. The DES as a reasonable worst-case assumes that generators would be present at all construction compounds.

Table 14B.1 Dust magnitude for dust generating activities

Activity	Dust emission magnitude	Reasoning
Removal of Existing Infrastructure (Demolition)	Small	Exact quantity not known, but presumed to be small scale due to known demolition activities would only take place at the substations
Earthworks	Large	Total site area for earthworks >110,000 m^2 >10 heavy earth moving vehicles moving at any one time
Construction	Large	Total building volume >75,000m^3 Potentially dusty construction material (e.g. concrete)
Trackout	Large	Presumed to be >50 Heavy-Duty Vehicles (HDV) trips in any one day, as a worst-case approach, as numbers not known Potentially dusty surface material

Sensitivity of receptors

14B.2.4 The sensitivity of the area is defined by determining the number of receptors using a set of distance criteria (20 m, 50 m, 100 m and 250 m) from the Institute of Air Quality Management (IAQM) dust guidance (Ref 14B.1). The sensitivity for each section of the Project is presented below.

Section 1 – Sensitive Receptors

14B.2.5 The sensitivity of the area for dust soiling is defined as 'high' due to the presence of between 10 to 100 high sensitivity human receptors within 20 m of Section 1.

14B.2.6 The annual average particulate matter (10 micrometres or less in diameter) (PM_{10}) concentration estimated by the Department for Environment, Food and Rural Affairs (Defra) (Ref 14B.2) for the grid squares within and around Section 1, in the baseline year of 2024, is 5.7 µg/m^3, which is lower than 24 µg/m^3, threshold specified in the IAQM guidance (Ref 14B.1). Therefore, the sensitivity of the area around Section 1 to human health impacts has been assigned as 'low'.

14B.2.7 There are no ecological sites within 50 m of Section 1. Therefore, the sensitivity of the area surrounding the draft Order Limits within Section 1 has not been considered further.

Section 1 – Risk Categorisation of Dust Impacts

14B.2.8 Considering the magnitude of dust emissions and the sensitivity of the area, Section 1 has been classified as high risk to dust soiling prior to mitigation, low risk to human health and ecological effects from demolition, earthworks, construction and trackout as summarised in **Table 14B.2.**

Table 14B.2 Summary dust risk table prior to mitigation – Section 1

Activity	Dust soiling	Human health	Ecological
Demolition	Medium Risk	Negligible	n/a
Earthworks	High Risk	Low Risk	n/a
Construction	High Risk	Low Risk	n/a
Trackout	High Risk	Low Risk	n/a

Note: n/a – no ecological receptors within 50 m of Section 1

Section 2 – Sensitive Receptors

14B.2.9 The sensitivity of the area for dust soiling is defined as 'high' due to the presence of between 10 to 100 high sensitivity human receptors within 20 m of Section 2.

14B.2.10 The annual average PM_{10} concentration estimated by the Defra for the grid squares within and around Section 2, in the baseline year of 2024, is 5.4 µg/m^3, which is lower than 24 µg/m^3. Therefore, the sensitivity of the area around Section 2 to human health impacts has been assigned as 'low'.

14B.2.11 There is one medium sensitivity site, Sites of Special Scientific Interest (SSSI) (Dunsby Wood) and six low sensitivity AW ecological sites within 20 m of Section 2. Therefore, the sensitivity of the area surrounding the draft Order Limits within Section 2 has been assigned as 'medium'.

Section 2 – Risk Categorisation of Dust Impacts

14B.2.12 Considering the magnitude of dust emissions and the sensitivity of the area, Section 2 has been classified as high risk to dust soiling prior to mitigation, low risk to human health and ecological effects from demolition, earthworks, construction and trackout as summarised in **Table 14B.3**.

Table 14B.3 Summary dust risk table prior to mitigation – Section 2

Activity	Dust soiling	Human health	Ecological
Demolition	Medium Risk	Negligible	Low Risk
Earthworks	High Risk	Low Risk	Medium Risk
Construction	High Risk	Low Risk	Medium Risk
Trackout	High Risk	Low Risk	Medium Risk

Section 3 – Sensitive Receptors

14B.2.13 The sensitivity of the area for dust soiling is defined as 'high' due to the presence of more than 100 high sensitivity human receptors within 20 m of Section 3.

14B.2.14 The annual average PM_{10} concentration estimated by the Defra for the grid squares within and around Section 1, in the baseline year of 2024, is 5.7 µg/m^3, which is lower than 24 µg/m^3. Therefore, the sensitivity of the area around Section 3 to human health impacts has been assigned as 'medium'.

14B.2.15 There is one low sensitivity AW (Freeby Wood) ecological sites within 50 m of Section 3. Therefore, the sensitivity of the area surrounding the draft Order Limits within Section 3 has been assigned as 'low'.

Section 3 – Risk Categorisation of Dust Impacts

14B.2.16 Considering the magnitude of dust emissions and the sensitivity of the area, Section 3 has been classified as high risk to dust soiling prior to mitigation, medium risk to human health and low risk to ecological effects from demolition, earthworks, construction and trackout as summarised in **Table 14B.4.**

Table 14B.4 Summary dust risk table prior to mitigation – Section 3

Activity	Dust soiling	Human health	Ecological
Demolition	High Risk	Low Risk	Negligible
Earthworks	High Risk	Medium Risk	Low Risk
Construction	High Risk	Medium Risk	Low Risk
Trackout	High Risk	Medium Risk	Low Risk

Section 4 – Sensitive Receptors

14B.2.17 The sensitivity of the area for dust soiling is defined as 'high' due to the presence of between 10 to 100 high sensitivity human receptors within 20 m of Section 4.

14B.2.18 The annual average PM_{10} concentration estimated by the Defra for the grid squares within and around Section 4, in the baseline year of 2024, is 5.5 µg/m^3, which is lower than 24 µg/m^3. Therefore, the sensitivity of the area around Section 4 to human health impacts has been assigned as 'low'.

14B.2.19 There is one low sensitivity AW (Stonton Wood) ecological sites within 50 m of Section 4. Therefore, the sensitivity of the area surrounding the draft Order Limits within Section A has been assigned as 'low'.

Section 4 – Risk Categorisation of Dust Impacts

14B.2.20 Considering the magnitude of dust emissions and the sensitivity of the area, Section 1 has been classified as high risk to dust soiling prior to mitigation, low risk to human health and low risk to ecological effects from demolition, earthworks, construction and trackout as summarised in **Table 14B.5.**

Table 14B.5 Summary dust risk table prior to mitigation – Section 4

Activity	Dust soiling	Human health	Ecological
Demolition	High Risk	Negligible	Negligible
Earthworks	High Risk	Low Risk	Low Risk
Construction	High Risk	Low Risk	Low Risk
Trackout	High Risk	Low Risk	Low Risk

Section 5 – Sensitive Receptors

14B.2.21 The sensitivity of the area for dust soiling is defined as 'high' due to the presence of between 10 to 100 high sensitivity human receptors within 20 m of Section 5.

14B.2.22 The annual average PM_{10} concentration estimated by the Defra for the grid squares within and around Section 5, in the baseline year of 2024, is 6.4 µg/m^3, which is lower than 24 µg/m^3. Therefore, the sensitivity of the area around Section 5 to human health impacts has been assigned as 'low'.

14B.2.23 There are two high sensitivity sites; one Special Protection Area (SPA) (Upper Nene Valley Gravel Pits) and one Ramsar (Upper Nene Valley Gravel Pits), two medium sensitivity sites of SSSI (Upper Nene Valley Gravel Pits SSSI and Birch Spinney and Mawsley Marsh SSSI), and one low sensitivity AW (Cransley Wood) ecological sites within 20 m of Section 5. Therefore, the sensitivity of the area surrounding the Draft Order Limits within Section A has been assigned as 'high'.

Section 5 – Risk Categorisation of Dust Impacts

14B.2.24 Considering the magnitude of dust emissions and the sensitivity of the area, Section 5 has been classified as high risk to dust soiling prior to mitigation, and ecological effects, and low risk to human health from demolition, earthworks, construction and trackout as summarised in **Table 14B.6**.

Table 14B.6 Summary dust risk table prior to mitigation – Section 5

Activity	Dust soiling	Human health	Ecological
Demolition	High Risk	Negligible	Medium Risk
Earthworks	High Risk	Low Risk	High Risk
Construction	High Risk	Low Risk	High Risk
Trackout	High Risk	Low Risk	High Risk

Significance of effects

14B.2.25 Without dust controls, there would be a high risk of impact to sensitive receptors. Therefore, high risk dust management measures are to be implemented as part of standard mitigation for the Project (see **Appendix 4A Draft Outline Code of Construction Practice** (**CoCP**)). Such measures are expected to reduce the risk of

impact to a negligible level. Therefore, the effect of dust emissions during the construction phase would be negligible and not significant.

14B.3 Summary

14B.3.1 The assessment has examined the potential impacts on air quality from dust during construction of the Project.

14B.3.2 Appropriate mitigation methods applicable to the Study area for construction dust have been included in **Appendix 4A Outline CoCP** to minimise impacts from air quality. Therefore, the Project is not likely to result in any significant adverse effects that would require further mitigation.

References

Ref 14B.1 Institute of Air Quality Management (2024). Guidance on the Assessment of Dust from Demolition and Construction [online]. Available at: https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf [Accessed March 2026].

Ref 14B.2 Department for Environment, Food and Rural Affairs (2024). Background Mapping data for local authorities - 2021 [online]. Available at: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021 [Accessed 16 December 2025].

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com