

Gate Burton Energy Park

Preliminary Environmental Information Report

Volume 3: Appendix 15-A: Dust Risk Assessment

June 2022

Gate Burton Energy Park Limited

Quality information

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1. Dust Risk Assessment

Step 1 – Screening

1a.	Is a human receptor site within:	
	50m of site boundary	Y
	50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s)	Y
1b.	Is an ecological receptor site within:	
	<ul style="list-style-type: none"> • 50m of the site boundary; and/or 	Y
	<ul style="list-style-type: none"> • 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s) 	Y

If answers to 1a or 1b are ‘yes’, complete 1c and complete the assessment.

1c.	<p>Provide a description of the proposed demolition and construction activities, their location and duration and any phasing of the development, including:</p> <ul style="list-style-type: none"> • The proximity and number of receptors; • The specific sensitivity of the receptor(s), e.g. a primary school or hospital; • The duration for which the sources of dust emissions may be close to the sensitive receptors; and • In the case of PM₁₀ the local background concentration. <p><i>The anticipated duration of the works is from December 2026 to June 2029, with peak construction occurring in February 2028; sources of dust emissions are likely to occur during this period. The greatest potential for dust effects is likely to occur during the excavation and earthworks phases, in addition to the substructure construction period.</i></p> <p><i>The Site is located in a populated rural area but close to a number of villages, and consequently there are a large number of receptors in proximity to the Site that may be affected by the works. This includes high sensitivity receptors such as residential properties, as well as medium sensitivity receptors such as commercial, office and warehouse units.</i></p> <p><i>Defra background maps indicate an average background PM₁₀ concentration of 15.1 µg/m³ across the study area in 2026. This is well below the annual average objective value.</i></p>
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Step 2 – Assess the Risk of Dust Impacts

Step 2a – Define the Potential Dust Emission Magnitude

DEMOLITION PHASE		
2a(i)	Is the volume of demolition:	
	<p>Large</p> <ul style="list-style-type: none"> • Total volume of building to be demolished (>50,000 m²); or • Potential dusty construction material (e.g. concrete); or • On-site crushing and screening; or • Demolition activities >20m above ground level. 	N/A
	<p>Medium</p> <ul style="list-style-type: none"> • Total volume of building to be demolished 20,000 m³ – 50,000m³; or • Potential dusty construction material; or • Demolition activities 10-20 m above ground level. 	N/A
	<p>Small</p> <ul style="list-style-type: none"> • Total volume of building to be demolished <20,000 m³; or • Construction material with low potential for dust release (e.g. metal cladding or timber); or • Demolition activities <10m above ground level and demolition during wetter months. 	N/A
EARTHWORKS PHASE		
2a(ii)	Is the scale of the earthworks:	
	<p>Large</p> <ul style="list-style-type: none"> • Total site area >10,000m²; or • Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size); or • >10 heavy earth moving vehicles active at any one time on-site; or • Formation of stockpile enclosures >8m in height; or • Total material moved >100,000 tonnes (where known). 	Y
	<p>Medium</p> <ul style="list-style-type: none"> • Total site area 2,500 m²-10,000 m²; or • Moderately dusty soil type (e.g. silt); or 	-

	<ul style="list-style-type: none"> • 5-10 heavy earth moving vehicles active at any one time on-site; or • Formation of stockpile enclosures 4-8m in height; or • Total material moved 20,000-100,000 tonnes (where known). 	
	<p>Small</p> <ul style="list-style-type: none"> • Total site area <2,500 m²; or • Soil type with large grain size (e.g. sand); or • <5 heavy earth moving vehicles active at any one time onsite; • Formation of stockpile enclosures <4m in height; or • Total material moved <10,000 tonnes (where known), or earthworks during wetter months. 	-

CONSTRUCTION PHASE

2a(iii)	Is the scale of the works:	
	<p>Large</p> <ul style="list-style-type: none"> • Total site area >100,000 m²; or • Piling; or • On-site concrete batching; or • Sandblasting. 	Y
	<p>Medium</p> <ul style="list-style-type: none"> • Total building volume 25,000 m³-100,000 m³; or • Potentially dusty construction material (e.g. concrete); or • On-site concrete batching. 	-
	<p>Small</p> <ul style="list-style-type: none"> • Total building volume <25,000 m³; or • Construction material with low potential for dust release (e.g. metal cladding or timber). 	-

TRACKOUT

2a(iii)	Only receptors within 50m of the route(s) used by vehicles on the public highway and up to 500m from the site entrance(s) are considered to be at risk from the effects of dust. Will the trackout be:	
	<p>Large</p> <ul style="list-style-type: none"> • >50 Heavy Duty Vehicle (HDV; >3,5t) outward movements in one day; 	-

	<ul style="list-style-type: none"> Potentially dusty surface material (e.g. high clay/silt content); or Unpaved road length >100m. 	
	<p>Medium</p> <ul style="list-style-type: none"> 10-50 HDV (>3.5t) outward movements in any one day; Moderately dusty surface material (e.g. high clay content); or Unpaved road length 50-100m (high clay content) 	Y
	<p>Small</p> <ul style="list-style-type: none"> <10 HDV (>3.5t) trips in any one day; Surface material with low potential for dust release; or Unpaved road length <50m. 	-

Step 2b – Define the Sensitivity of the Area

Define the Receptor Sensitivity

2b(i)	Sensitivity of People to Dust Soiling Effects	
	Is the location a:	
	<ul style="list-style-type: none"> High sensitivity receptor 	Y
	<ul style="list-style-type: none"> Medium sensitivity receptor 	-
	<ul style="list-style-type: none"> Low sensitivity receptor 	-
2b(ii)	Sensitivity of People to Health Effects of PM₁₀	
	Is the location a:	
	<ul style="list-style-type: none"> High sensitivity receptor 	Y
	<ul style="list-style-type: none"> Medium sensitivity receptor 	-
	<ul style="list-style-type: none"> Low sensitivity receptor 	-
2b(iii)	Sensitivity of Receptors to Ecological Effects	
	<p><i>No designated ecological sites have been identified within 50m of the DCO Site Boundary and within 500m from the site entrance on routes expected to be used by HGVs:</i></p> <p><i>Therefore, the risk of dust effects at Nationally or European designated ecological sites will not be considered further in this assessment.</i></p>	

Estimate the number of receptors and the distance from the Site Boundary:

There are over 100 residential dwellings within 20m of the DCO Site.

Following the sensitivity tables in the guidance (Error! Reference source not found.)

Combined Sensitivity of the area for Dust Soiling Effects (see Table 2 -Error! Reference source not found.): *HIGH. There are 10-100 high sensitivity receptors within 20m of the DCO Site boundary, resulting in a combined HIGH sensitivity for dust soiling effects.*

While the receptor sensitivity is high, taking into account the PM₁₀ concentrations and the number of sensitive receptors the Combined Sensitivity of the area to Human Health Impacts (see Table 3 -Error! Reference source not found.): *LOW. Annual mean PM₁₀ concentrations of <24 µg/m³ across the study area in conjunction with the presence of 10-100 sensitive receptors within 20m of the DCO Site result in a combined MEDIUM sensitivity for Human Health Impacts.*

Combined Sensitivity of the area to Ecological Impacts (see Table 3 -Error! Reference source not found.): *LOW. Nationally designated, potentially sensitive ecosystems are not situated within 350m of the Site boundary, thus a combined LOW sensitivity of the study area to Ecological Impacts.*