

Intermodal Logistics Park North Ltd

INTERMODAL LOGISTICS PARK NORTH (ILPN)

Intermodal Logistics Park North (ILPN) Strategic Rail Freight Interchange (SRFI)

Project reference TR510001

Preliminary Environmental Information Report (PEIR)

Appendix 8.1: Construction Phase Dust Assessment Methodology

October 2025

Planning Act 2008

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

This document forms a part of a Preliminary Environmental Information Report (PEIR) for the Intermodal Logistics Park North (ILPN) project.

A PEIR presents environmental information to assist consultees to form an informed view of the likely significant environmental effects of a proposed development and provide feedback.

This PEIR has been prepared by the project promoter, Intermodal Logistics Park North Ltd. The Proposed Development is described in Chapter 3 of the PEIR and is the subject of a public consultation.

Details of how to respond to the public consultation are provided at the end of Chapter 1 of the PEIR and on the project website:

<https://www.tritaxbigbox.co.uk/our-spaces/intermodal-logistics-park-north/>

This feedback will be taken into account by Intermodal Logistics Park North Ltd in the preparation of its application for a Development Consent Order for the project.

Appendix 8.1 ♦ Construction Phase Dust Assessment Methodology

INTRODUCTION

- 8.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'¹.
- 8.2 Activities on the proposed construction site have been divided into four types to reflect their different potential impacts. These are:
- demolition;
 - earthworks;
 - construction; and,
 - trackout.
- 8.3 The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:
- annoyance due to dust soiling (dust deposition, resulting in the soiling of surfaces);
 - harm to ecological receptors; and,
 - the risk of health effects due to a significant increase in exposure to particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀).
- 8.4 The assessment steps are detailed in the following Sections.

STEP 1 - SCREEN THE NEED FOR AN ASSESSMENT

- 8.5 Step 1 screened the requirement for a more detailed assessment. Should human receptors be identified within 250m from the DCO Site boundary or 50m from the construction vehicle route up to 250m from the DCO Site entrance, then the assessment proceeded to Step 2. Additionally, should ecological receptors be identified within 50m of the DCO Site or the construction vehicle route up to 250m from the DCO Site entrance, then the assessment also proceeded to Step 2.
- 8.6 Should sensitive receptors not be present within the relevant distances then **negligible**

¹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

impacts would be expected and further assessment would not be necessary.

STEP 2 - ASSESS THE RISK OF DUST IMPACTS

- 8.7 Step 2 assessed the risk of potential dust impacts. The site was allocated a risk category based on two factors:
- The scale and nature of the works, which determined the magnitude of dust arising as: small, medium or large (Step 2A); and,
 - The sensitivity of the area to dust impacts, which was defined as low, medium or high sensitivity (Step 2B).
- 8.8 The two factors were combined in Step 2C to determine the risk of dust impacts without mitigation applied.
- 8.9 Step 2A defined the potential magnitude of dust emission through the construction phase. The relevant criteria are summarised in Table 8.1.

Table 8.1 Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Demolition	Total building volume greater than 75,000m³ Potentially dusty construction material (e.g. concrete) On site crushing and screening Demolition activities greater than 12m above ground level
	Earthworks	Total site area greater than 110,000m² Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) More than 10 heavy earth moving vehicles active at any one time Formation of bunds greater than 6m in height
	Construction	Total building volume greater than 75,000m² On site concrete batching

Magnitude	Activity	Criteria
		Sandblasting
	Trackout	More than 50 Heavy Duty Vehicle (HDV) trips per day Potentially dusty surface material (e.g. high clay content) Unpaved road length greater than 100m
Medium	Demolition	Total building volume 12,000m ³ to 75,000m ³ Potentially dusty construction material Demolition activities 6m to 12m above ground level
	Earthworks	Total site area 18,000m ² to 110,000m ² Moderately dusty soil type (e.g. silt) 5 to 10 heavy earth moving vehicles active at any one time Formation of bunds 3m to 6m in height
	Construction	Total building volume 12,000m ³ to 75,000m ³ Potentially dusty construction material (e.g. concrete) On site concrete batching
	Trackout	20 to 50 HDV trips per day Moderately dusty surface material (e.g. high clay content) Unpaved road length 50m to 100m
Small	Demolition	Total building volume less than 12,000m ³ Construction material with low potential for dust release (e.g. metal cladding or timber) Demolition activities less than 6m above ground levels Demolition during wetter months

Magnitude	Activity	Criteria
	Earthworks	Total site area less than 18,000m² Soil type with large grain size (e.g. sand) Less than 5 heavy earth moving vehicles active at any one time Formation of bunds less than 3m in height
	Construction	Total building volume less than 12,000m³ Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	Less than 20 HDV trips per day Surface material with low potential for dust release Unpaved road length less than 50m

8.10 Step 2B defined the sensitivity of the area around the DCO Site to potential dust impacts. The sensitivities of specific receptors are shown in Table 8.2.

Table 8.2 Construction Dust - Sensitivities of People and Ecological Receptors

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
High	Users expect high levels of amenity High aesthetic or value property People expected to be present continuously for extended periods of time Locations where members of the public are exposed over a time period relevant to the Air Quality Objective (AQO) for PM₁₀. e.g. residential properties, hospitals, schools and residential care	Internationally or nationally designated site e.g. Special Area of Conservation

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
	homes	
Medium	Users would expect to enjoy a reasonable level of amenity Aesthetics or value of their property could be diminished by soiling People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work	Nationally designated site e.g. Sites of Special Scientific Interest (SSSI)
Low	Enjoyment of amenity would not reasonably be expected Property would not be expected to be diminished in appearance Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads	Locally designated site e.g. Local Nature Reserve

8.11 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 8.3.

Table 8.3 Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	More than 100	High	High	Medium	Low

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

8.12 Table 8.4 outlines the criteria for determining the sensitivity of the area to human health impacts.

Table 8.4 Construction Dust - Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	Greater than 32µg/m ³	More than 100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28-32µg/m ³	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24-28µg/m ³	More than 100	High	Medium	Low	Low

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)				
			Less than 20	Less than 50	Less than 100	Less than 250	
		10 - 100	High	Medium	Low	Low	
		1 - 10	Medium	Low	Low	Low	
	Less than 24µg/m³	More than 100	Medium	Low	Low	Low	
		10 - 100	Low	Low	Low	Low	
		1 - 10	Low	Low	Low	Low	
	Medium	Greater than 32µg/m³	More than 10	High	Medium	Low	Low
1 - 10			Medium	Low	Low	Low	
28-32µg/m³		More than 10	Medium	Low	Low	Low	
		1 - 10	Low	Low	Low	Low	
24-28µg/m³		More than 10	Low	Low	Low	Low	
		1 - 10	Low	Low	Low	Low	
Less than 24µg/m³		More than 10	Low	Low	Low	Low	
		1 - 10	Low	Low	Low	Low	
Low		-	More than 1	Low	Low	Low	Low

8.13 Table 8.5 outlines the criteria for determining the sensitivity of the area to ecological impacts.

Table 8.5 Construction Dust - Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

8.14 Step 2C combined the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated effects.

8.15 Table 8.6 outlines the risk category from demolition activities.

Table 8.6 Construction Dust - Dust Risk Category from Demolition Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Medium
Medium	High	Medium	Low
Low	Medium	Low	Negligible

8.16 Table 8.7 outlines the risk category from earthworks, construction and trackout activities.

Table 8.7 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

STEP 3 - SITE-SPECIFIC MITIGATION

- 8.17 Step 3 required the identification of site-specific mitigation measures within the IAQM guidance² to reduce potential dust effects based upon the relevant risk categories identified in Step 2.

STEP 4 - DETERMINE SIGNIFICANT EFFECTS

- 8.18 Once the risk of dust effect was determined and the appropriate mitigation measures identified, the final step was to determine the significance of any residual effects. The IAQM guidance indicates that effective control of emissions can be achieved through implementation of the mitigation outlined in the guidance. As such, the residual effect is normally **negligible** and **not significant** unless site specific factors influence the decision of the assessor.

² Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.