



The Sizewell C Project

6.7 Volume 6 Sizewell Link Road Chapter 5 Air Quality Appendix 5A Dust Risk Assessment for Sizewell Link Road

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1. Dust Risk Assessment for Sizewell Link Road

1.1 Initial screening

1.1.1 In accordance with the Institute of Air Quality Management (IAQM) guidance methodology (Ref. 1.1), the assessment of construction dust effects on sensitive receptors from the construction of the proposed development cannot be screened out due to the presence of human receptors within 350 metre (m) of the site and of trackout up to 500m of the site. Therefore, a dust risk assessment should be undertaken. Effects on ecological receptors are screened out as there are no sensitive habitats within 500m of the proposed development site.

1.2 Assessment of risks

1.2.1 The activities within each phase of construction of the proposed development that could potentially generate dust are:

- earthworks (including vegetation and site clearance and stockpiling of soils);
- construction (including construction of new road, signage and landscaping); and
- trackout (heavy duty vehicle (HDV)¹ movements on unpaved surfaces and mud transferred onto the highway, up to 500m from site exit).

1.2.2 The potential, uncontrolled, dust generation magnitude is defined based on the likely scale and frequency of activities and has been estimated with reference to the IAQM guidance methodology, as described in **Volume 1, Appendix 6H**.

1.2.3 Uncontrolled earthworks associated with the construction of the proposed development would likely have a large dust emission magnitude due to the size of the proposed development and the number of HDVs transporting spoil and preparing the site.

1.2.4 Uncontrolled construction activities associated with construction of the facility would likely result in the construction processes having a large emission of dust.

¹ The term heavy duty vehicles (HDV) is used as an extension of heavy good vehicles (HGVs) to include consideration of other heavy vehicles, for examples buses and/or coaches

1.2.5 Without mitigation, the HDV movements onto the highway from the site and their movements across unpaved surfaces during construction of the proposed development would likely result in medium dust emission levels from trackout.

1.3 Sensitivity of area

1.3.1 The sensitivity of the area is defined by considering the highest sensitivity receptors identified and their distance from the source for:

- dust soiling effects on people and amenity, including the number of affected receptors;
- human health effects of particulate matter (PM₁₀), including the number of affected receptors and consideration of existing background concentrations; and
- ecological effects of dust deposition.

1.3.2 All sensitive receptors near to the proposed development site are classified as being highly sensitive as they are all residential properties. The sensitivity of nearby receptors and their distance from the proposed development are shown in **Table 1.1**. The shortest distance from the source (construction site activities and trackout onto road) for each receptor has been used in the assessment.

Table 1.1: Sensitivity of receptors within screening distance of the proposed development.

Receptor	Sensitivity	Distance From Site Boundary (m).	Distance From Trackout (m).
SX1	High	Less than 100.	Less than 20.
YX4	High	Less than 20.	Less than 20.
YX5	High	Less than 20.	Less than 20.
YX7	High	Less than 100.	Less than 20.
YX9	High	Less than 100.	Less than 200.
LE4	High	Less than 200.	Less than 50.
LE5	High	Less than 350.	Less than 20.
LE6	High	Less than 350.	Less than 20.
LE27	High	Greater than 350.	Greater than 350.
LE28	High	Greater than 350.	Greater than 350.

1.3.3 The existing background PM₁₀ concentrations is 14.2 micrograms per cubic metre (µg/m³) to 16.0µg/m³, less than the lowest IAQM screening

category within the IAQM methodology ($24\mu\text{g}/\text{m}^3$), therefore representing the lowest baseline risk.

- 1.3.4 The sensitivity of the area to dust soiling effects at nearby sensitive receptors is classified as high based on the number of high sensitivity receptors within 20m of the potential dust sources. The sensitivity of the area to human health impacts is low based on the existing baseline PM_{10} level, the number of sensitive receptors and their distance from the dust sources.

Table 1.2: Area sensitivity to dust impacts.

Potential Impact.	Risk		
	Earthworks	Construction	Trackout
Dust Soiling.	High	High	High
Human Health.	Low	Low	Low
Ecological	Screened out.		

1.4 Risk of impacts

- 1.4.1 Based on the assumed large dust emission magnitude from activities associated with the proposed development (before mitigation is applied), and the high sensitivity of the area to dust soiling, the risk of unmitigated dust impacts would be high, which therefore describes the recommended level of risk mitigation.

Table 1.3: Risk of dust impacts from unmitigated activities.

Potential Impact.	Risk		
	Earthworks: Large Magnitude.	Construction: Large Magnitude.	Trackout: Medium Magnitude.
Dust Soiling.	High risk	High risk	Medium risk
Human Health.	Low risk	Low risk	Low risk
Ecological	Screened out.		

- 1.4.2 The control measures detailed in the Code of Construction Practice were determined assuming that the construction associated with the proposed development would have a high risk of dust impact on sensitive receptors. Therefore, with these embedded mitigation measures in place, it is considered that the resulting dust effects from the construction associated with the proposed development would be **not significant**.

References

- 1.1 Institute of Air Quality Management (2016). Assessment of dust from demolition and construction.