



**ENVIRONMENTAL STATEMENT**  
**VOLUME 2**  
**APPENDIX 7.2 – IAQM CONSTRUCTION DUST**  
**METHODOLOGY**



## Appendix 7.2 – IAQM Construction Dust Methodology

The following tables have been taken from the IAQM guidance document ‘Guidance on the Assessment of Dust from Demolition and Construction’<sup>1</sup> and have been utilised to determine the sensitivity of the area and consider the risk of fugitive emissions as a result of construction activities.

The methodology of assessing construction dust impacts detailed within the IAQM document ‘Guidance on the Assessment of Dust from Demolition and Construction’<sup>1</sup> divides activities on a proposed construction site to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and
- Trackout

The Proposed Development does not require demolition activities as there are no existing buildings on Site and therefore potential impacts from construction specific activities have not been considered.

The magnitude of dust emission for each activity is classified as Small, Medium or Large and is determined on the basis of the guidance, indicative thresholds, information available relating to the project and expert judgement. Table A2-1 shows example definitions from the IAQM guidance<sup>1</sup> for determining the dust emission magnitude for the construction activities at the Proposed Development.

**Table A2-1: Dust Emission Magnitude**

| Activity     | Magnitude | Example Definitions  |
|--------------|-----------|--|
| Earthworks   | Large     | Total site area >10,000m <sup>2</sup>  |
|              | Medium    | Total site area between 2,500m <sup>2</sup> and 10,000m <sup>2</sup>         |
|              | Small     | Total site area <2,500m <sup>2</sup>   |
| Construction | Large     | Total building volume >100,000m <sup>3</sup>                                 |
|              | Medium    | Total building volume between 25,000m <sup>3</sup> and 100,000m <sup>3</sup> |
|              | Small     | Total building volume <25,000m <sup>3</sup>                                  |
| Trackout     | Large     | >50 HDV (>3.5 tonne) outward movements in any one day                        |
|              | Medium    | Between 10 and 50 HDV (>3.5 tonne) outward movements in any one day          |
|              | Small     | <10 HDV (>3.5 tonne) outward movements in any one day                        |

The risk of dust effects arising is based upon the relationship between the dust emission magnitude and the sensitivity of the area and the risk of impact is then used to determine the mitigation requirements.

Table A2-2 to Table A2-3 illustrate how the sensitivity of the area may be determined for dust soiling and human health, respectively. It should be noted that the highest level of sensitivity from each table should be considered, as recommended by the IAQM.

**Table A2-2: Sensitivity of the Area to Dust Soiling Effects on People and Property**

| Receptor Sensitivity | Number of Receptors | Distance from Source (m) |        |        |      |
|----------------------|---------------------|--------------------------|--------|--------|------|
|                      |                     | <20                      | <50    | <100   | <350 |
| High                 | >100                | High                     | High   | Medium | Low  |
|                      | 10 – 100            | High                     | Medium | Low    | Low  |
|                      | 1 – 10              | Medium                   | Low    | Low    | Low  |

|        |    |        |     |     |     |
|--------|----|--------|-----|-----|-----|
| Medium | >1 | Medium | Low | Low | Low |
| Low    | >1 | Low    | Low | Low | Low |

**Table A2-3: Sensitivity of the Area to Human Health Effects**

| Receptor Sensitivity | Annual Mean PM <sub>10</sub> Concentration | Number of Receptors | Distance from the Source (m) |        |        |        |      |
|----------------------|--|---------------------|------------------------------|--------|--------|--------|------|
|                      |  |                     | <20                          | <50    | <100   | <200   | <350 |
| High                 | >32µg/m <sup>3</sup>                       | >100                | High                         | High   | High   | Medium | Low  |
|                      |  | 10 – 100            | High                         | High   | Medium | Low    | Low  |
|                      |  | 1 – 10              | High                         | Medium | Low    | Low    | Low  |
|                      | 28 – 32µg/m <sup>3</sup>                   | >100                | High                         | High   | Medium | Low    | Low  |
|                      |  | 10 – 100            | High                         | Medium | Low    | Low    | Low  |
|                      |  | 1 – 10              | High                         | Medium | Low    | Low    | Low  |
|                      | 24 – 28µg/m <sup>3</sup>                   | >100                | High                         | Medium | Low    | Low    | Low  |
|                      |  | 10 – 100            | High                         | Medium | Low    | Low    | Low  |
|                      |  | 1 – 10              | Medium                       | Low    | Low    | Low    | Low  |
|                      | <24µg/m <sup>3</sup>                       | >100                | Medium                       | Low    | Low    | Low    | Low  |
|                      |  | 10 – 100            | Low                          | Low    | Low    | Low    | Low  |
|                      |  | 1 – 10              | Low                          | Low    | Low    | Low    | Low  |
| Medium               | >32µg/m <sup>3</sup>                       | >10                 | High                         | Medium | Low    | Low    | Low  |
|                      |  | 1 – 10              | Medium                       | Low    | Low    | Low    | Low  |
|                      | 28 – 32µg/m <sup>3</sup>                   | >10                 | Medium                       | Low    | Low    | Low    | Low  |
|                      |  | 1 – 10              | Low                          | Low    | Low    | Low    | Low  |
|                      | 24 – 28µg/m <sup>3</sup>                   | >10                 | Low                          | Low    | Low    | Low    | Low  |
|                      |  | 1 – 10              | Low                          | Low    | Low    | Low    | Low  |
|                      | <24µg/m <sup>3</sup>                       | >10                 | Low                          | Low    | Low    | Low    | Low  |
|                      |  | 1 – 10              | Low                          | Low    | Low    | Low    | Low  |
| Low                  | -  | 1                   | Low                          | Low    | Low    | Low    | Low  |

Table A2-4 to Table A2-6 illustrate how the dust emission magnitude should be combined with the sensitivity of the area to determine the risk of impacts with no mitigation measures applied.

**Table A2-4: Risk of Dust Impacts – Earthworks**

| Sensitivity of Area | Dust Emission Magnitude |             |            |
|---------------------|-------------------------|-------------|------------|
|                     | Large                   | Medium      | Small      |
| High                | High Risk               | Medium Risk | Low Risk   |
| Medium              | Medium Risk             | Medium Risk | Low Risk   |
| Low                 | Low Risk                | Low Risk    | Negligible |

**Table A2-5: Risk of Dust Impacts – Construction**

| Sensitivity of Area | Dust Emission Magnitude |             |          |
|---------------------|-------------------------|-------------|----------|
|                     | Large                   | Medium      | Small    |
| High                | High Risk               | Medium Risk | Low Risk |

| Sensitivity of Area | Dust Emission Magnitude |             |            |
|---------------------|-------------------------|-------------|------------|
|                     | Large                   | Medium      | Small      |
| Medium              | Medium Risk             | Medium Risk | Low Risk   |
| Low                 | Low Risk                | Low Risk    | Negligible |

**Table A2-6: Risk of Dust Impacts – Trackout**

| Sensitivity of Area | Dust Emission Magnitude |           |            |
|---------------------|-------------------------|-----------|------------|
|                     | Large                   | Medium    | Small      |
| High                | High                    | High Risk | Low Risk   |
| Medium              | Medium                  | Low Risk  | Negligible |
| Low                 | Low                     | Low Risk  | Negligible |

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i Institute of Air Quality Management (2016) Guidance on the assessment of dust from demolition and construction v1.1 –[online], Available: <http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>