### West Kowloon Cultural District

#### Barging Point

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: TE1-TE9, Te1-Te7, EB1-EB5</th>
<th>Percentage active area, p</th>
<th>Water suppression 12 times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigation efficiency</td>
<td>91.7</td>
<td>100%</td>
<td>Assume 100% works area for heavy construction</td>
</tr>
<tr>
<td>No. of working days per month, d</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of working hours per day, h</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emission Factor</td>
<td>2.69</td>
<td></td>
<td>AP42, Section 13.2.3</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>0.000394443</td>
<td>p/m²/yr (unmitigated)</td>
<td></td>
</tr>
<tr>
<td>1.987E-05</td>
<td>p/m²/yr (mitigated)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Wind Erosion

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: TE1-TE9, Te1-Te7, EB1-EB5</th>
<th>Percentage active area, p</th>
<th>AP42, Table 11.9-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>0.85</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Emission Rate</td>
<td>2.69533E-06</td>
<td>p/m³/yr</td>
<td></td>
</tr>
</tbody>
</table>

### West Kowloon Cultural District

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: HR7A3, HR7B, HR7C1, HR9A-B, HR9, HR10A-C, HR11, HR12A</th>
<th>Emission Rate</th>
<th>Emission Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average truck weight, W</td>
<td>16 tons</td>
<td>4.75E-14</td>
<td>0.85 Mg/hectare/year AP42, Table 11.9-4</td>
</tr>
<tr>
<td>Road surface silt loading, SL</td>
<td>8.2 g/KVT</td>
<td>9.49E-14</td>
<td>0.85<em>1000000/(10000</em>365<em>24</em>60*60)*p/100</td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>370.7 g/KVT</td>
<td>7.59E-14</td>
<td>AP-42, Section 13.2.1, 01/11 ed.</td>
</tr>
<tr>
<td>No. of truck trips per day</td>
<td>1,440 veh/day For road HR7A-C</td>
<td>5.70E-14</td>
<td>AP-42, Section 13.2.1, 01/11 ed.</td>
</tr>
<tr>
<td>1,800 veh/day For road HR9A-B</td>
<td></td>
<td>3.80E-14</td>
<td>AP-42, Section 13.2.1, 01/11 ed.</td>
</tr>
<tr>
<td>1,440 veh/day For road HR9</td>
<td></td>
<td>1.90E-14</td>
<td>AP-42, Section 13.2.1, 01/11 ed.</td>
</tr>
</tbody>
</table>

### West Kowloon Cultural District

#### Barging Point

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: EB1-EB5</th>
<th>No. of operation hour</th>
<th>% of dust suppression</th>
<th>Emission Rate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12 hr</td>
<td></td>
<td>97.5%</td>
<td>4.27E-03</td>
<td>g/m²/yr (mitigated)</td>
<td>Extract from EIA report of Express Rail Link (Appendix 12.1 p.3) assume 12 hours of operation</td>
</tr>
</tbody>
</table>

### West Kowloon Cultural District

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: For Laden Vehicle</th>
<th>Particle size multiplier, k</th>
<th>g/KVT</th>
<th>1.9878E-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road surface silt loading, SL</td>
<td>3.23</td>
<td>12 g/m²</td>
<td>1.9878E-05</td>
<td></td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>12 tons</td>
<td>36 g/KVT</td>
<td>1.9878E-05</td>
<td></td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>45 tons</td>
<td>45 g/KVT</td>
<td>1.9878E-05</td>
<td></td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
<td>30.8 g/KVT</td>
<td>1.9878E-05</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5 %</td>
<td>1505 g/VKT Cement Tanker</td>
<td>1.9878E-05</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5 %</td>
<td>1505 g/VKT Cement Tanker</td>
<td>1.9878E-05</td>
<td></td>
</tr>
<tr>
<td>Sum of Emission Rate</td>
<td>1023 g/KVT Concrete Mixer</td>
<td>1.9878E-05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### West Kowloon Cultural District

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: For Laden Vehicle</th>
<th>Particle size multiplier, k</th>
<th>g/KVT</th>
<th>6.35E-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road surface silt loading, SL</td>
<td>3.23</td>
<td>12 g/m²</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>12 tons</td>
<td>36 g/KVT</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>45 tons</td>
<td>45 g/KVT</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
<td>30.8 g/KVT</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5 %</td>
<td>1505 g/VKT Cement Tanker</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5 %</td>
<td>1505 g/VKT Cement Tanker</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>Sum of Emission Rate</td>
<td>1023 g/KVT Concrete Mixer</td>
<td>6.35E-05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### West Kowloon Cultural District

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Source ID: For Laden Vehicle</th>
<th>Particle size multiplier, k</th>
<th>g/KVT</th>
<th>6.35E-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road surface silt loading, SL</td>
<td>3.23</td>
<td>12 g/m²</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>12 tons</td>
<td>36 g/KVT</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>45 tons</td>
<td>45 g/KVT</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
<td>30.8 g/KVT</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5 %</td>
<td>1505 g/VKT Cement Tanker</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5 %</td>
<td>1505 g/VKT Cement Tanker</td>
<td>6.35E-05</td>
<td></td>
</tr>
<tr>
<td>Sum of Emission Rate</td>
<td>1023 g/KVT Concrete Mixer</td>
<td>6.35E-05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### West Kowloon Cultural District

#### Works Area Sources

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust extraction flow rate for each mixer</td>
<td>All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).</td>
</tr>
<tr>
<td>No. of mixer</td>
<td>1300 veh/hr</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>1.08E-02 g/s (mitigated)</td>
</tr>
<tr>
<td>Production rate</td>
<td>160 veh/hr</td>
</tr>
<tr>
<td>Emission Factor</td>
<td>2.60E-03 g/Mg</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>2.30E-04 g/s (mitigated)</td>
</tr>
</tbody>
</table>

#### Unloading aggregate (Unloading of raw materials)

<table>
<thead>
<tr>
<th>Source ID: EP9-EP10</th>
<th>Consumption Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>272000 kg/h</td>
<td>NET sv/veh</td>
</tr>
<tr>
<td>272 kg/h</td>
<td>For TSP, AP-42, section 13.2.4, 11/06 ed.</td>
</tr>
<tr>
<td>0.74 kg/h</td>
<td>For TSP, AP-42, section 13.2.1, 01/11 ed.</td>
</tr>
<tr>
<td>2%</td>
<td>For TSP, AP-42, section 13.2.1, 01/11 ed.</td>
</tr>
<tr>
<td>3.5 m/s</td>
<td>PATH year 2010 mean wind speed</td>
</tr>
<tr>
<td>0.002165163</td>
<td>E = k x (sL)^0.91 x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)</td>
</tr>
<tr>
<td>0.588924442</td>
<td>E = k x (sL)^0.91 x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)</td>
</tr>
</tbody>
</table>

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Source ID: EP2-EP20</th>
<th>Sum of Emission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP20</td>
<td>2.31E-05 g/m/s (mitigated)</td>
</tr>
<tr>
<td>EP19</td>
<td>5.44E-05 g/m/s (mitigated)</td>
</tr>
<tr>
<td>EP23</td>
<td>3.26E-06 g/m/s (mitigated)</td>
</tr>
<tr>
<td>EP21</td>
<td>2.73E-06 g/m/s (mitigated)</td>
</tr>
<tr>
<td>EP18</td>
<td>6.12E-05 g/m/s (mitigated)</td>
</tr>
</tbody>
</table>

#### Sources of Dust Emission

<table>
<thead>
<tr>
<th>Source ID</th>
<th>Sum of Emission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP3-EP4</td>
<td>Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.</td>
</tr>
<tr>
<td>EP10</td>
<td>Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.</td>
</tr>
</tbody>
</table>

#### Site Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFA weight</td>
<td>Extracted from Specified Processes License (checked on 13 Jan 2012)</td>
</tr>
<tr>
<td>Mixers</td>
<td>21 m, EP6-EP8: 22 m</td>
</tr>
</tbody>
</table>

#### Emission Factors

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>2.60E-03 g/Mg</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>2.30E-04 g/s (mitigated)</td>
</tr>
</tbody>
</table>

#### Dust Suppression

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigation efficiency</td>
<td>99%</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>1.64E-03 g/s (mitigated)</td>
</tr>
</tbody>
</table>

#### Additional Information

- All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).
- For TSP, AP-42, section 13.2.4, 11/06 ed.
- For TSP, AP-42, section 13.2.1, 01/11 ed.
- Extracted from Specified Processes License (checked on 13 Jan 2012)
- Extracted from Specified Processes License (checked on 13 Jan 2012)
- Extracted from SP License of Express Rail Link (Appendix C).
### Concurrent Projects - Year 2015

#### West Kowloon Highway Scheme HIJ

<table>
<thead>
<tr>
<th>Description</th>
<th>Sources</th>
<th>Parameter</th>
<th>Emission Rate</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Erosion</td>
<td>Source ID: AA9-12</td>
<td>--</td>
<td>2.69533E-06 / m²/s</td>
<td>Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.2), assume 100% active area</td>
</tr>
</tbody>
</table>

#### West Kowloon Highway Scheme Q (Interim)

<table>
<thead>
<tr>
<th>Description</th>
<th>Sources</th>
<th>Parameter</th>
<th>Emission Rate</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Erosion</td>
<td>Source ID: FF1-FF9</td>
<td>--</td>
<td>2.69533E-06 / m²/s</td>
<td>Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area</td>
</tr>
</tbody>
</table>

---

### Notes

- Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.2), assume 100% active area.
## West Kowloon Cultural District

### Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Heavy construction Source ID: TF1-TF6, TF16-21, T16-T12, FB1-FB5</td>
<td>Percentage active area, p</td>
<td>Assume 100% works area for heavy construction work.</td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Water suppression Mitigation efficiency 12 times a day</td>
<td>No. of working days per month, d</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Dust suppression Emotion Factor 26 days</td>
<td>No. of working hours per day, h</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Dust suppression Emission Rate 12 hour</td>
<td>2.69 Mg/ha/month of activity</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Dust suppression Emission Rate 0.000239494 g/m³ (unmitigated)</td>
<td>1.987E-06 g/m³ (mitigated)</td>
<td></td>
</tr>
</tbody>
</table>

### Barging Point (Construction Site)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Wind Erosion Source ID: TF1-TF6, TF16-21, FB1-FB5</td>
<td>Percentage active area, p</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Wind Erosion Source ID: TF1-TF6, TF16-21, FB1-FB5</td>
<td>Emission Factor</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Wind Erosion Source ID: TF1-TF6, TF16-21, FB1-FB5</td>
<td>Emission Rate</td>
<td></td>
</tr>
</tbody>
</table>

### Terminus Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>Particle size multiplier, k</td>
<td>All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).</td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>Road surface silt loading, SL</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>Average truck weight, W</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>No. of truck trips per day</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>Source ID:</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>Emission Rate</td>
<td></td>
</tr>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant For Laden Vehicle</td>
<td>Source ID: BP4-7</td>
<td>Extract from SP License of Express Rail Link (Appendix C).</td>
</tr>
</tbody>
</table>

## Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2016

<table>
<thead>
<tr>
<th>Source ID</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR7A-C</td>
<td>4.75E-14 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>HR8A-B</td>
<td>9.48E-14 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>HR9</td>
<td>7.56E-14 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>HR10A-C</td>
<td>5.70E-14 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>HR11</td>
<td>3.80E-14 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>HR12A</td>
<td>1.90E-14 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>EP17</td>
<td>8.52E-06 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>EP16</td>
<td>1.70E-05 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>EP15</td>
<td>4.00E-05 g/m²/s (mitigated)</td>
</tr>
<tr>
<td>EP14</td>
<td>8.36E-06 g/m²/s (mitigated)</td>
</tr>
</tbody>
</table>

## Source of Emission Rate

### Calculation of Emission Rate

\[
\text{Emission Rate} = \frac{E \times (sL) \times W}{1000 \times 365 \times 24 \times 60 \times 60} \times P \times 100
\]

Where:
- **E** is the emission rate (g/m²/s)
- **sL** is the road surface silt loading (g/m²)
- **W** is the average truck weight (tons)
- **P** is the percentage active area
- **h** is the number of working hours per day
- **d** is the number of working days per month
- **HR** is the emission rate in relation to the number of truck trips per day

### Calculation of Emission Factor

\[
\text{Emission Factor} = \frac{0.85 \times 10^6}{1000 \times 365 \times \text{activity period}}
\]

Where:
- **0.85** is the dust suppression efficiency
- **10^6** is the number of vehicle trips
- **365** is the number of days in a year
- **activity period** is the number of hours of activity

### Mitigation Efficiency

\[
\text{Mitigation efficiency} = \frac{100 - \% \text{ of dust suppression}}{97.5\%}
\]

**Assumptions:**
- All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).
- Uncontrolled total loading range from 4.2 to 18.9 g/m², for a mixture of sand and native soil, to 11.0 to 33.8 g/m² for native soil alone. Page 10 of Improved Activity Levels for National Emission Inventories of Dusty Roads.
- Average weight of the vehicles traveling the road, extracted from SP License.
- TSP emission factor, E = 370.7 g/VKT
- E = k x (sL)^0.91 x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)

### Particle Size Multiplier

- **k** = 3.23 g/VKT
- **k** = 1.1 g/VKT

### Road Surface Silt Loading

- **sL** = 12 g/m²
- **sL** = 3.8 g/m²

### Average Truck Weight

- **W** = 16 tons
- **W** = 36 tons

### Percentage Active Area

- **P** = 100%

### Number of Working Hours

- **h** = 12 hr
- **h** = 12 hr

### Number of Working Days

- **d** = 26 days
- **d** = 30 days

### Emission Rate

- **Emission Rate** = 0.000239494 g/m³ (unmitigated)
- **Emission Rate** = 1.987E-06 g/m³ (mitigated)

### Emission Factor

- **Emission Factor** = 2.69 Mg/hectare/month of activity
- **Emission Factor** = 0.85 Mg/hectare/year
## West Kowloon Cultural District

### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Paved haul road outside concrete batching plant</td>
<td>TSP emission factor, $E$</td>
<td>$E = k x (sL)^{0.91} x (W)^{1.02}$ (AP-42, section 13.2.1, 01/11 ed.)</td>
</tr>
<tr>
<td></td>
<td>For Unladen Vehicle</td>
<td>Average truck weight, $W$</td>
<td>14 tons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unladen weight of Concrete Mixer</td>
<td>12 tons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TSP emission factor, $E$</td>
<td>457 g/VKT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aggregate Tipper Truck</td>
<td>491 g/VKT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concrete Mixer</td>
<td>391 g/VKT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No. of operation hour</td>
<td>12 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% of dust suppression</td>
<td>97.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sum of Emission Rate</td>
<td>2.31E-06 g/s (mitigated)</td>
</tr>
</tbody>
</table>

### Concrete Batching Plant (Mixing Tower)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Mixer Source ID: EP1-EP2</td>
<td>TSP emission factor</td>
<td>40 mg/m³</td>
</tr>
</tbody>
</table>

### Site (Plant (Construction Plant))

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Concrete Batching Plant</td>
<td>Concrete Batching Plant</td>
<td>Concrete Batching Plant</td>
</tr>
<tr>
<td></td>
<td>Cultural District</td>
<td>Site)</td>
<td>Plant (Construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2016

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Unloading aggregate</td>
<td>Consumption Rate</td>
<td>272,000 kg/h</td>
</tr>
<tr>
<td></td>
<td>Unloading aggregate</td>
<td>Moisture content, $M$</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Unloading aggregate</td>
<td>Production rate</td>
<td>160 m³/hr</td>
</tr>
<tr>
<td></td>
<td>Unloading aggregate</td>
<td>Density</td>
<td>1.00E+00 kg/m³</td>
</tr>
<tr>
<td></td>
<td>Unloading aggregate</td>
<td>Emission Rate</td>
<td>2.60E-01 kg/hr</td>
</tr>
<tr>
<td></td>
<td>Unloading aggregate</td>
<td>Mitigation efficiency</td>
<td>99%</td>
</tr>
<tr>
<td></td>
<td>Unloading aggregate</td>
<td>Emission Rate</td>
<td>1.648E-07 g/s (mitigated)</td>
</tr>
</tbody>
</table>

### Unloading aggregate (Plant (Unloading of raw materials))

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Concrete Batching Plant (Cement / PFA Silos)</td>
<td>Small Cementitious Material Silos</td>
<td>TSP emission factor</td>
</tr>
<tr>
<td></td>
<td>Source ID: EPS-EP2</td>
<td>No. of small cement silos</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Source ID: EPS-EP2</td>
<td>No. of small cement silos</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Source ID: EPS-EP2</td>
<td>No. of small cement silos</td>
<td>6</td>
</tr>
</tbody>
</table>

### Unloading aggregate (Plant (Unloading of raw materials))

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Concrete Batching Plant (Cement / PFA Silos)</td>
<td>Aggregate Silos</td>
<td>No. of aggregate silos</td>
</tr>
<tr>
<td></td>
<td>Source ID: EPS-EP2</td>
<td>Production rate</td>
<td>160 m³/hr</td>
</tr>
<tr>
<td></td>
<td>Source ID: EPS-EP2</td>
<td>Emission Rate</td>
<td>2.60E-01 kg/m³</td>
</tr>
</tbody>
</table>

### Unloading aggregate (Plant (Unloading of raw materials))

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Kowloon Cultural District</td>
<td>Concrete Batching Plant (Cement / PFA Silos)</td>
<td>Aggregate Silos</td>
<td>No. of aggregate silos</td>
</tr>
<tr>
<td></td>
<td>Source ID: EPS-EP2</td>
<td>Emission Rate</td>
<td>1.67E-07 g/s (mitigated)</td>
</tr>
</tbody>
</table>
# Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2017

## West Kowloon Cultural District

### Works Area

<table>
<thead>
<tr>
<th>Sources</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy construction</td>
<td>Percentage active area, p</td>
<td>100%</td>
</tr>
<tr>
<td>TH7, Th1 - Th9, HB1-HB5</td>
<td>Mitigation efficiency</td>
<td>91.7%</td>
</tr>
<tr>
<td>No. of working days per month, d</td>
<td>26 days</td>
<td></td>
</tr>
<tr>
<td>No. of working hours per day, h</td>
<td>12 hour</td>
<td></td>
</tr>
<tr>
<td>Emission Factor</td>
<td>2.69 Mg/hectare/month of activity</td>
<td></td>
</tr>
<tr>
<td>Emission Rate</td>
<td>0.000239494 g/m²/s (unmitigated)</td>
<td></td>
</tr>
</tbody>
</table>

### Wind Erosion

| Source ID: TH1-TH7, Th1 - Th9, HB1-HB5 | Percentage active area, p | 100% |
| Emission Factor | 0.85 Mg/hectare/year |
| Emission Rate | 2.69535E-06 g/m²/s |

### West Kowloon Cultural District

### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Paved haul road outside concrete batching plant - For Laden Vehicle</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size multiplier, k</td>
<td>3.22 g/VKT</td>
<td></td>
</tr>
<tr>
<td>Road surface silt loading, sL</td>
<td>12 g/m²</td>
<td></td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>36 tons</td>
<td></td>
</tr>
<tr>
<td>No. of truck trips per day</td>
<td>12 veh/hr</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.9%</td>
<td></td>
</tr>
<tr>
<td>Source ID: CBH1-CBH4</td>
<td>Sum of Emission Rate</td>
<td>1.63E-04 g/m²/s (mitigated)</td>
</tr>
</tbody>
</table>

### West Kowloon Terminus Concrete Batching Plant

<table>
<thead>
<tr>
<th>Paved haul road outside concrete batching plant - For Laden Vehicle</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size multiplier, k</td>
<td>3.22 g/VKT</td>
<td></td>
</tr>
<tr>
<td>Road surface silt loading, sL</td>
<td>12 g/m²</td>
<td></td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>36 tons</td>
<td></td>
</tr>
<tr>
<td>No. of truck trips per day</td>
<td>12 veh/hr</td>
<td></td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>99.0%</td>
<td></td>
</tr>
<tr>
<td>Emission Rate</td>
<td>0.00E+00 g/m²/s (mitigated)</td>
<td></td>
</tr>
</tbody>
</table>

### Parameters

- **West Kowloon Cultural District**: All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).
- **Concrete Batching Plant (Construction Site)**: All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).
### West Kowloon Cultural District

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paved haul road outside concrete batching plant</td>
<td>Particle size multiplier, k</td>
<td>3.29</td>
<td>g/VKT</td>
</tr>
<tr>
<td>For Unladen Vehicle</td>
<td>Road surface silt loading, sl</td>
<td>12</td>
<td>g/m²</td>
</tr>
<tr>
<td></td>
<td>Average truck weight, W</td>
<td>14</td>
<td>tons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td>tons</td>
</tr>
<tr>
<td></td>
<td>TSP emission factor, E</td>
<td>457</td>
<td>g/VKT</td>
</tr>
<tr>
<td></td>
<td>No. of operation hour</td>
<td>12</td>
<td>hr</td>
</tr>
<tr>
<td></td>
<td>% of dust suppression</td>
<td>97.5%</td>
<td></td>
</tr>
<tr>
<td>Source ID: CBX1-CBX4</td>
<td>Sum of Emission Rate</td>
<td>6.12E-06</td>
<td>g/m³ (mitigated)</td>
</tr>
</tbody>
</table>

#### Concrete Batching Plant (Construction Site) - Terminus

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paved haul road within concrete batching plant</td>
<td>Particle size multiplier, k</td>
<td>3.26</td>
<td>g/VKT</td>
</tr>
<tr>
<td>For Unladen Vehicle</td>
<td>Road surface silt loading, sl</td>
<td>12</td>
<td>g/m²</td>
</tr>
<tr>
<td></td>
<td>Average truck weight, W</td>
<td>14</td>
<td>tons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td>tons</td>
</tr>
<tr>
<td></td>
<td>TSP emission factor, E</td>
<td>457</td>
<td>g/VKT</td>
</tr>
<tr>
<td></td>
<td>Source ID: EP1-EP2</td>
<td>No. of small cement silos</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No. of operation hour</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>% of dust suppression</td>
<td>99.9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emission Rate</td>
<td>0.00E+00</td>
<td>g/m³ (mitigated)</td>
</tr>
<tr>
<td></td>
<td>Source ID: Sum of Emission Rate</td>
<td>2.73E-06</td>
<td>g/m³ (mitigated)</td>
</tr>
<tr>
<td></td>
<td>Source ID: EP21</td>
<td>Source ID: EP22</td>
<td>Source ID: EP23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Unloading aggregate Silos

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unloading aggregate Silos</td>
<td>Particle size multiplier, k</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moisture content, M</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean wind speed, U</td>
<td>3.5</td>
<td>m/s</td>
</tr>
<tr>
<td></td>
<td>Emission Factor, E</td>
<td>0.00206516</td>
<td>kg/Mg</td>
</tr>
<tr>
<td></td>
<td>Mitigation efficiency</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emission Rate</td>
<td>0.58899442</td>
<td>kg/hr</td>
</tr>
</tbody>
</table>

#### Concrete Batching Plant (Cement / PFA Silos)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Cementitious Material Silos</td>
<td>Dust extraction flow rate for each mixer</td>
<td>1300</td>
<td>m³/hr</td>
</tr>
<tr>
<td>Source ID: EPS-EP9</td>
<td>No. of operation hour</td>
<td>12</td>
<td>hr</td>
</tr>
<tr>
<td></td>
<td>No. of small cement silos</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emission height</td>
<td>21 or 22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emission Rate</td>
<td>1.08E-04</td>
<td>g/s (mitigated)</td>
</tr>
<tr>
<td>PFA weight Hopper</td>
<td>Production rate</td>
<td>160</td>
<td>m³/hr</td>
</tr>
<tr>
<td>Source ID: EPS-EP8</td>
<td>Density</td>
<td>0.001989</td>
<td>mg/m³</td>
</tr>
<tr>
<td></td>
<td>Emission Factor</td>
<td>2.60E-02</td>
<td>kg/Mg</td>
</tr>
<tr>
<td></td>
<td>Emission Rate</td>
<td>2.30E-04</td>
<td>g/s (mitigated)</td>
</tr>
</tbody>
</table>

#### Concrete Batching Plant (Mixing Tower)

<table>
<thead>
<tr>
<th>Works Area</th>
<th>Sources</th>
<th>Parameter</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixer</td>
<td>TSP emission factor</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Source ID: EP1-EP2</td>
<td>No. of operation hour</td>
<td>12</td>
<td>hr</td>
</tr>
<tr>
<td></td>
<td>No. of small cement silos</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emission height</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emission Rate</td>
<td>1.67E-03</td>
<td>g/s (mitigated)</td>
</tr>
</tbody>
</table>
### West Kowloon Cultural District

**Heavy construction, Source ID: T11-T17 IB3-IB5**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage active area, p</td>
<td>100%</td>
</tr>
<tr>
<td>Mitigation efficiency</td>
<td>91.7%</td>
</tr>
<tr>
<td>No. of working days per month, d</td>
<td>26</td>
</tr>
<tr>
<td>No. of working hours per day, h</td>
<td>12</td>
</tr>
<tr>
<td>Emission Factor</td>
<td>2.69 Mg/hectare/month of activity</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>0.0002298494 g/m²/s (unmitigated), 1.9878E-05 g/m²/s (mitigated)</td>
</tr>
</tbody>
</table>

#### Wind Erosion

**Source ID: T11-T17 IB3-IB5**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage active area, p</td>
<td>100%</td>
</tr>
<tr>
<td>Emission Factor</td>
<td>0.85 Mg/hectare/year</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>2.69533E-05 g/m²/s</td>
</tr>
</tbody>
</table>

All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).

---

### Concrete Batching Plant (Construction Site)

**Paved haul road outside concrete batching plant - For Laden Vehicle**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size multiplier, k</td>
<td>3.29 g/VKT</td>
</tr>
<tr>
<td>Road surface silt loading, sL</td>
<td>12 g/m²</td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>36 tons</td>
</tr>
<tr>
<td>No. of truck trips per day</td>
<td>10 veh/hr</td>
</tr>
<tr>
<td>% of dust suppression</td>
<td>97.5%</td>
</tr>
<tr>
<td>Source ID:</td>
<td>Sum of Emission Rate</td>
</tr>
<tr>
<td>CBH1-CBH4</td>
<td>1.63E-04 g/m²/s (mitigated)</td>
</tr>
</tbody>
</table>

All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).
### West Kowloon Cultural District

#### Concrete Batching Plant (Construction Site)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size multiplier, k</td>
<td>3.29 g/VKT</td>
</tr>
<tr>
<td>Road surface silt loading, SL</td>
<td>0 g/m²</td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>14 tons</td>
</tr>
<tr>
<td>Unladen weight of Aggregate Tipper Truck</td>
<td>10 tons</td>
</tr>
<tr>
<td>Unladen weight of Cement Tanker</td>
<td>8 tons</td>
</tr>
<tr>
<td>Unladen weight of Concrete Mixer</td>
<td>12 tons</td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>457 g/VKT</td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
</tr>
</tbody>
</table>

Source ID: CBX1-CBX4

#### Concrete Batching Plant (Mixing Tower)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size multiplier, k</td>
<td>3.26 g/VKT</td>
</tr>
<tr>
<td>Road surface silt loading, SL</td>
<td>12 g/m²</td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>14 tons</td>
</tr>
<tr>
<td>Unladen weight of Aggregate Tipper Truck</td>
<td>10 tons</td>
</tr>
<tr>
<td>Unladen weight of Cement Tanker</td>
<td>10 tons</td>
</tr>
<tr>
<td>Unladen weight of Concrete Mixer</td>
<td>12 tons</td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>457 g/VKT</td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
</tr>
</tbody>
</table>

Source ID: EP1, EP2

#### Cement / PFA Silos

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle size multiplier, k</td>
<td>493 g/VKT</td>
</tr>
<tr>
<td>Road surface silt loading, SL</td>
<td>391 g/VKT</td>
</tr>
<tr>
<td>Average truck weight, W</td>
<td>491 tons</td>
</tr>
<tr>
<td>Unladen weight of Cement Tanker</td>
<td>491 tons</td>
</tr>
<tr>
<td>Unladen weight of Concrete Mixer</td>
<td>491 tons</td>
</tr>
<tr>
<td>TSP emission factor, E</td>
<td>491 g/VKT</td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
</tr>
</tbody>
</table>


#### Unloading aggregate (Unladen weight of raw materials)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption Rate</td>
<td>272000 kg/h</td>
</tr>
<tr>
<td>Particle size multiplier, k</td>
<td>0.002165163 kg/Mg</td>
</tr>
<tr>
<td>Moisture content, M</td>
<td>0.491 g/VKT</td>
</tr>
<tr>
<td>Mean wind speed, U</td>
<td>0.0016 g/m/s</td>
</tr>
<tr>
<td>Emission Factor, E</td>
<td>0.0016 g/m²</td>
</tr>
<tr>
<td>Mitigation efficiency</td>
<td>1.641 %</td>
</tr>
</tbody>
</table>

Source ID: EP9

#### Small Cementitious Material Silos

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust extraction flow rate for each mixer</td>
<td>99 %</td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
</tr>
<tr>
<td>No. of small cement silos</td>
<td>4</td>
</tr>
<tr>
<td>Emission height</td>
<td>21 or 22 ft</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>0.00E+00 g/m³</td>
</tr>
</tbody>
</table>


#### PFA weight Hopper

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production rate</td>
<td>160 t/hr</td>
</tr>
<tr>
<td>Density</td>
<td>0.001989 kg/m³</td>
</tr>
<tr>
<td>Emission Factor</td>
<td>2.69E-05 g/Mg</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>2.30E-04 g/s (mitigated)</td>
</tr>
</tbody>
</table>

Source ID: EP5-EP8

#### Mixer

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSP emission factor</td>
<td>415 g/VKT</td>
</tr>
<tr>
<td>No. of operation hour</td>
<td>12 hr</td>
</tr>
<tr>
<td>No. of small cement silos</td>
<td>3</td>
</tr>
<tr>
<td>Emission height</td>
<td>13 ft</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>1.67E-02 g/s (mitigated)</td>
</tr>
</tbody>
</table>

Source ID: EP1-EP2

---

**West Kowloon Terminus Concrete Batching Plant**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paved haul road within concrete batching plant -</td>
<td>6.12E-05 g/m/s (mitigated)</td>
</tr>
</tbody>
</table>


### Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2018

- **Extraction Site:** West Kowloon Cultural District
- **Concrete Batching Plant (Construction Site):**
  - Unladen vehicle
  - Aggregate tipper truck
  - Cement tanker
  - Concrete mixer

- **Concrete Batching Plant (Mixing Tower):**
  - Unladen vehicle
  - Aggregate tipper truck
  - Cement tanker
  - Concrete mixer

- **Concrete Batching Plant (Unloading of raw materials):**
  - Unladen vehicle
  - Aggregate tipper truck
  - Cement tanker
  - Concrete mixer

- **Normal Hour:** 7:00 to 19:00

- **No. of vehicle:**
  - Aggregate tipper truck: 0, 2, and 0 veh/hr respectively
  - Cement tanker: 0 veh/hr
  - Concrete mixer: 0 veh/hr

- **Production rate:**
  - Aggregate tipper truck: 2100 m³/hr
  - Concrete mixer: 1300 m³/hr
  - Cement tanker: 1200 m³/hr

- **TSP emission factor:**
  - Aggregate tipper truck: 30 mg/m³
  - Concrete mixer: 491 g/VKT
  - Cement tanker: 15 tons Unladen weight

- **Mitigation efficiency:**
  - 100%

- **Emission Rate:**
  - Aggregate tipper truck: 0.00E+00 g/m/s (mitigated)
  - Concrete mixer: 0.00E+00 g/m/s (mitigated)
  - Cement tankers: 0.00E+00 g/m/s (mitigated)

- **Emission Factor:**
  - Aggregate tipper truck: 2.30E-04 g/s (mitigated)
  - Concrete mixer: 1.67E-02 g/s (mitigated)
  - Cement tankers: 2.30E-04 g/s (mitigated)

- **TSP emission factor:**
  - Aggregate tipper truck: 2.30E-04 g/s (mitigated)
  - Concrete mixer: 1.67E-02 g/s (mitigated)
  - Cement tankers: 2.30E-04 g/s (mitigated)

- **Remarks:**
  - All calculations and assumptions are extracted from the SP License of the Express Rail Link (Appendix C).