## Appendix 3.02a Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 1))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 1)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Portal Exhaust** | Exhaust Outlets during Construction of Cavern | Overall Emission Rate (during construciton hours) | **1.276610E-01** | **1.505583E-02** | TSP Emission Rate | | *Overall Emission Rate for Heavy Construction, Loading, Screen and Crushing (With Enclosure and Dust Collector for dust suppression on Rock Crusher)* |
| | | Volume Source ($g/s\text{-}m^2$) | **6.068147E-02** | **7.124385E-03** | RSP Emission Rate | | *Emission Rate = (Construction Activities + Rock Loading + Rock Crushing + Screening) / Area of Exhaust* |
| | **Source ID: 1** | | **1.263393E-02** | **1.118443E-03** | FSP Emission Rate | | |
| | | | | | Area of Exhaust ($m^2$) (16m x 16m) | 256 | |
| | **Construction Activities inside Cavern** | Heavy Construction (g/s) | 3.067374E+01 | 3.834217E+00 | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*Construction Area*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | | Total Construction Area in Cavern ($m^2$) | 147781 | *from enginneer* |
| | | | 1.45087E+01 | 1.81358E+00 | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | RSP-to-TSP Ratio | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | 2.20851E+00 | 2.76064E-01 | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | FSP-to-TSP Ratio | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | **Rock Crusher inside Cavern** | Truck Unloading - Fragmented Stone (g/s) | 7.46667E-03 | 7.46667E-05 | Emission Rate = Emission Factor*1000*Loading Rate/3600*Size Mulitplier*(1-Dust Suppression%) | | |
| | | | | | RSP emission factor (kg/Mg) | 0.000008 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | TSP-to-RSP factor | 2.1 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Loading rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 3.55556E-03 | 3.55556E-05 | RSP emission factor (kg/Mg) | 0.000008 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 3.55556E-03 | 3.55556E-05 | FSP emisison factor (kg/Mg) | 0.000008 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | Tertiary Crushing (g/s) | 1.20000E+00 | 1.20000E-02 | Emission Rate = Emission Factor*Processing Rate*1000/3600*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (kg/Mg) | 0.0027 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Crushing rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 5.33333E-01 | 5.33333E-03 | RSP emission factor (kg/Mg) | 0.0012 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 5.33333E-01 | 5.33333E-03 | FSP emisison factor (kg/Mg) | 0.0012 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |

## Appendix 3.02a Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 1))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 1)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| | | Fines Screening (controlled (with wet suppression) (g/s) | 8.00000E-01 | 8.00000E-03 | Emission Rate = Emission Factor*Processing Rate*1000/3600*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (kg/Mg) | 0.0018 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Crushing rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure* |
| | | | | | | | *Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 4.88889E-01 | 4.88889E-03 | RSP emission factor (kg/Mg) | 0.0011 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure* |
| | | | | | | | *Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 4.88889E-01 | 4.88889E-03 | FSP emisison factor (kg/Mg) | 0.0011 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure* |
| | | | | | | | *Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| **Construction Sites at Main Portal** | **Construction Activities** **Source ID: 2 - 28** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| **Construction Sites at Secondary Portal** | **Construction Activities** **Source ID: 30 - 39** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02a Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 1))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 1)**

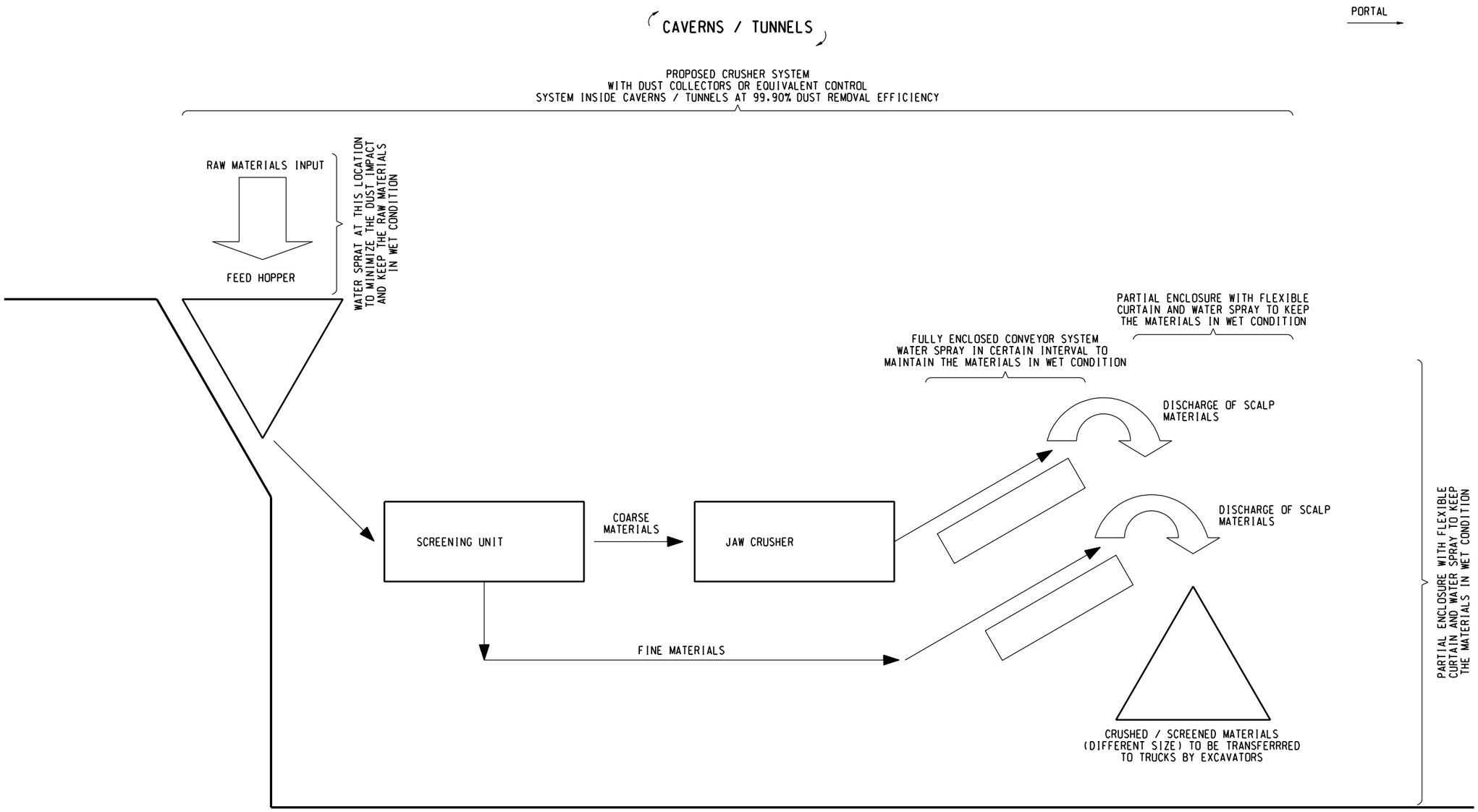
| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Construction Sites at Ah Kung Kok Shan Road Surface Magazine Site** | **Construction Activities** **Source ID: 40 - 69** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation Hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| **Haul Road Conneting Main Portal to Area 73** | **Unpaved Haul Road** (assumed as Heavy Construction as worst case) **Source ID: 70 - 82** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation Hour*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02a Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 1))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 1)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Area 73** | **Stockpile of Spoils from** | Heavy Construction | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation Hour*60*60)*(Percentage Active/100) | | |
| | **Cavern** | Area Source | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | (assumed as Heavy | ($g/m^2/s$) | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | Construction as worst case) | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | **Source ID: 83 - 113** | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | Area Source | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | ($g/m^2/s$) | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |




Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

Plot File by: PENGW 2016/2/20
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AECOM

**PROJECT**
項目

RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
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**ISSUE/REVISION**
修訂

| I/R 修訂 | DATE 日期 | DESCRIPTION 內容摘要 | CHK. 核對 |
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| A | JAN. 16 | EIA | |
| - | SEP. 15 | EIA (DRAFT) | |

**STATUS**
階段

**SCALE** 比例: N.T.S.
**DIMENSION UNIT** 尺寸單位: METRES

**KEY PLAN**
索引圖

**PROJECT NO.** 項目編號: 60334056
**CONTRACT NO.** 合約編號: CE 30/2014 (DS)

**SHEET TITLE**
圖紙名稱

SCHEMATIC FLOW DIAGRAM FOR THE PROPOSED CRUSHING PLANT

**SHEET NUMBER**
圖紙編號

60334056/EIA/3.38A

## Appendix 3.02b Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 2))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 2)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | *Remarks* |
|---|---|---|---|---|---|---|---|
| **Portal Exhaust** | Exhaust Outlets during Construction of Cavern | Overall Emission Rate (during construciton hours) | **3.180553E-02** | **3.073899E-03** | TSP Emission Rate | | *Overall Emission Rate for Heavy Construction, Loading, Screen and Crushing (With Enclosure and Dust Collector for dust suppression on Rock Crusher)* |
| | | Volume Source ($g/s-m^2$) | **1.534185E-02** | **1.456933E-03** | RSP Emission Rate | | *Emission Rate = (Construction Activities + Rock Loading + Rock Crushing + Screening) / Area of Exhaust* |
| | **Source ID: 1** | | **5.732342E-03** | **2.557442E-04** | FSP Emission Rate | | |
| | | | | | Area of Exhaust ($m^2$) (16m x 16m) | 256 | |
| | **Construction Activities inside Cavern** | Heavy Construction (g/s) | 6.134748E+00 | 7.668435E-01 | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*Construction Area*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 20 | *Worst case assumption, refer to Justification of Percentage Active Works Area for Caverns for Relocation of STSTW* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | | Total Construction Area in Cavern ($m^2$) | 147781 | *from enginneer* |
| | | | 2.90174E+00 | 3.62717E-01 | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | RSP-to-TSP Ratio | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | 4.41702E-01 | 5.52127E-02 | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | FSP-to-TSP Ratio | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | **Rock Crusher inside Cavern** | Truck Unloading - Fragmented Stone (g/s) | 7.46667E-03 | 7.46667E-05 | Emission Rate = Emission Factor*1000*Loading Rate/3600*Size Mulitplier*(1-Dust Suppression%) | | |
| | | | | | RSP emission factor (kg/Mg) | 0.000008 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | TSP-to-RSP factor | 2.1 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Loading rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 3.55556E-03 | 3.55556E-05 | RSP emission factor (kg/Mg) | 0.000008 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 3.55556E-03 | 3.55556E-05 | FSP emisison factor (kg/Mg) | 0.000008 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | Tertiary Crushing (g/s) | 1.20000E+00 | 1.20000E-02 | Emission Rate = Emission Factor*Processing Rate*1000/3600*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (kg/Mg) | 0.0027 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Crushing rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 5.33333E-01 | 5.33333E-03 | RSP emission factor (kg/Mg) | 0.0012 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 5.33333E-01 | 5.33333E-03 | FSP emisison factor (kg/Mg) | 0.0012 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |

## Appendix 3.02b Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 2))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 2)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| | | Fines Screening (controlled (with wet suppression) (g/s) | 8.00000E-01 | 8.00000E-03 | Emission Rate = Emission Factor*Processing Rate*1000/3600*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (kg/Mg) | 0.0018 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Crushing rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 4.88889E-01 | 4.88889E-03 | RSP emission factor (kg/Mg) | 0.0011 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 4.88889E-01 | 4.88889E-03 | FSP emisison factor (kg/Mg) | 0.0011 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| **Construction Sites at Main Portal** | **Construction Activities** **Source ID: 2 - 28** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| **Construction Sites at Secondary Portal** | **Construction Activities** **Source ID: 30 - 39** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02b Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 2))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 2)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Construction Sites at Ah Kung Kok Shan Road Surface Magazine Site** | **Construction Activities** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | **Source ID: 40 - 69** | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| **Haul Road Conneting Main Portal to Area 73** | **Unpaved Haul Road** (assumed as Heavy Construction as worst case) | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | **Source ID: 70 - 82** | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02b Construction of CSTW - Calculation of Dust Emission Source (Short-term Prediction (Tier 2))

**Construction of CSTW**

**Emission rates for Short-term Average Prediction (Tier 2)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Area 73** | **Stockpile of Spoils from Cavern** (assumed as Heavy Construction as worst case) **Source ID: 83 - 113** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-04** | **2.594522E-05** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2Test)* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-06** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

# Appendix 3.02b Construction of CSTW - Calculations of Construction Dust Emission Rates (Short-term Prediction (Tier 2))

**Justification of Percentage Active Works Area for Caverns for Relocation of STSTW**

**Construction Peak Year** = 2022

**Total Area of for Works Area for Caverns** = 122503.075 $m^2$

**A1860 -Cavern Excavation (Drill & Blast) - Excavation of Caverns W4**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 4 | 120 | 120 |
| Lorry | 100% | 2.4 | 10 | 4 | 96 | 96 |
| Dump Truck | 100% | 2.4 | 10 | 4 | 96 | 96 |
| Excavator | 100% | 3.2 | 8 | 4 | 102.4 | 102.4 |
| Air compressor | 100% | - | - | 4 | - | - |
| Water Pump | 100% | - | - | 4 | - | - |
| Generator | 100% | - | - | 4 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 4 | 102.4 | 102.4 |
| Ventilation Fan | 100% | - | - | 4 | - | - |
| | | | | | **Total:** | **516.8** |
| ***A1860*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.4%*** |

**A1861 -Cavern Excavation (Drill & Blast) - Excavation of Caverns W3**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 4 | 120 | 120 |
| Lorry | 100% | 2.4 | 10 | 4 | 96 | 96 |
| Dump Truck | 100% | 2.4 | 10 | 4 | 96 | 96 |
| Excavator | 100% | 3.2 | 8 | 4 | 102.4 | 102.4 |
| Air compressor | 100% | - | - | 4 | - | - |
| Water Pump | 100% | - | - | 4 | - | - |
| Generator | 100% | - | - | 4 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 4 | 102.4 | 102.4 |
| Ventilation Fan | 100% | - | - | 4 | - | - |
| | | | | | **Total:** | **516.8** |
| ***A1861*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.4%*** |

**A1870 - Excavation of Driveway 4 (incl. A1, A2 & W1)**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 1 | 30 | 30 |
| Lorry | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Dump Truck | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Excavator | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Air compressor | 100% | - | - | 1 | - | - |
| Water Pump | 100% | - | - | 1 | - | - |
| Generator | 100% | - | - | 1 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Ventilation Fan | 100% | - | - | 2 | - | - |
| | | | | | **Total:** | **129.2** |
| ***A1870*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.5%*** |

**A1871 - Excavation of Driveway a (incl. A1, A3, A4, W1, S1, S2 & W5)**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 1 | 30 | 30 |
| Lorry | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Dump Truck | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Excavator | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Air compressor | 100% | - | - | 1 | - | - |
| Water Pump | 100% | - | - | 1 | - | - |
| Generator | 100% | - | - | 1 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Ventilation Fan | 100% | - | - | 2 | - | - |
| | | | | | **Total:** | **129.2** |
| ***A1871*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.1%*** |

# Appendix 3.02b Construction of CSTW - Calculations of Construction Dust Emission Rates (Short-term Prediction (Tier 2))

**Justification of Percentage Active Works Area for Caverns for Relocation of STSTW**

**A1880 - Excavation of W2 (2 nos.)**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 2 | 60 | 60 |
| Lorry | 100% | 2.4 | 10 | 2 | 48 | 48 |
| Dump Truck | 100% | 2.4 | 10 | 2 | 48 | 48 |
| Excavator | 100% | 3.2 | 8 | 2 | 51.2 | 51.2 |
| Air compressor | 100% | - | - | 2 | - | - |
| Water Pump | 100% | - | - | 2 | - | - |
| Generator | 100% | - | - | 2 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 2 | 51.2 | 51.2 |
| Ventilation Fan | 100% | - | - | 2 | - | - |
| | | | | | **Total:** | **258.4** |
| ***A1880*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.2%*** |

**A1890 - Excavation of Cavern W2 (2nos.) &A3A4A5**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 2 | 60 | 60 |
| Lorry | 100% | 2.4 | 10 | 2 | 48 | 48 |
| Dump Truck | 100% | 2.4 | 10 | 2 | 48 | 48 |
| Excavator | 100% | 3.2 | 8 | 2 | 51.2 | 51.2 |
| Air compressor | 100% | - | - | 2 | - | - |
| Water Pump | 100% | - | - | 2 | - | - |
| Generator | 100% | - | - | 2 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 2 | 51.2 | 51.2 |
| Ventilation Fan | 100% | - | - | 2 | - | - |
| | | | | | **Total:** | **258.4** |
| ***A1890*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.2%*** |

**A1900 Excavation of Secondary Access Tunnel inside Caverns**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 1 | 30 | 30 |
| Lorry | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Dump Truck | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Excavator | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Air compressor | 100% | - | - | 1 | - | - |
| Water Pump | 100% | - | - | 1 | - | - |
| Generator | 100% | - | - | 1 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Ventilation Fan | 100% | - | - | 2 | - | - |
| | | | | | **Total:** | **103.6** |
| ***A1900*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.1%*** |

**A1910 Excavation of Secondary Access Tunnel Outside Cavens (200m hard ground)**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 1 | 30 | 30 |
| Lorry | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Dump Truck | 100% | 2.4 | 10 | 1 | 24 | 24 |
| Excavator | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Air compressor | 100% | - | - | 1 | - | - |
| Water Pump | 100% | - | - | 1 | - | - |
| Generator | 100% | - | - | 1 | - | - |
| Cherry Picker | 100% | 3.2 | 8 | 1 | 25.6 | 25.6 |
| Ventilation Fan | 100% | - | - | 2 | - | - |
| | | | | | **Total:** | **78** |
| ***A1910*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.1%*** |

# Appendix 3.02b Construction of CSTW - Calculations of Construction Dust Emission Rates (Short-term Prediction (Tier 2))

**Justification of Percentage Active Works Area for Caverns for Relocation of STSTW**

**A1920 - Excavation of Secondary Access Tunnel Outside Caverns (40m soft ground)**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 2 | 60 | 60 |
| Lorry | 100% | 2.4 | 10 | 2 | 48 | 48 |
| Dump Truck | 100% | 2.4 | 10 | 2 | 48 | 48 |
| Excavator | 100% | 3.2 | 8 | 4 | 102.4 | 102.4 |
| Cherry Picker | 100% | 3.2 | 8 | 2 | 51.2 | 51.2 |
| | | | | | **Total:** | **309.6** |
| ***A1920*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.3%*** |

**A1930 - Remaining Excavation in Side Caverns**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Drilling Jumbo | 100% | 3 | 10 | 10 | 300 | 300 |
| Lorry | 100% | 2.4 | 10 | 10 | 240 | 240 |
| Dump Truck | 100% | 2.4 | 10 | 10 | 240 | 240 |
| Excavator | 100% | 3.2 | 8 | 20 | 512 | 512 |
| Cherry Picker | 100% | 3.2 | 8 | 5 | 128 | 128 |
| | | | | | **Total:** | **540** |
| ***A1930*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***0.4%*** |

**Manuvour and Handling of C&D material in Area 73**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Excavator | 100% | 3.2 | 8 | 25 | 640 | 640 |
| Lorry | 100% | 2.4 | 10 | 25 | 600 | 600 |
| Dump Truck | 100% | 2.4 | 10 | 50 | 1200 | 1200 |
| | | | | | **Total:** | **2440** |
| ***Activity 14*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***2.0%*** |

| **As a worst case assumption, all construction activities are assumed to be carried out at the same time** | |
|---|---|
| **Total Percentage of Usage Area to Works Area for CSTS** | **4.7%** |
| **Percentage adopted in Dust model for Short-term Assessment** | **20%** |
| **Percentage adopted in Dust model for Annual Assessment** | **10%** |

## Appendix 3.02c Construction of CSTW - Calculation of Dust Emission Source (Annual Prediction)

**Construction of CSTW**

**Emission rates for Long-term Average Prediction (Annual)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | *Remarks* |
|---|---|---|---|---|---|---|---|
| **Portal Exhaust** | Exhaust Outlets during Construction of Cavern | Overall Emission Rate (during construciton hours) | **1.982360E-02** | **1.576158E-03** | TSP Emission Rate | | *Overall Emission Rate for Heavy Construction, Loading, Screen and Crushing (With Enclosure and Dust Collector for dust suppression on Rock Crusher)* |
| | | Volume Source (g/s) | **9.674397E-03** | **7.485010E-04** | RSP Emission Rate | | *Emission Rate = (Construction Activities + Rock Loading + Rock Crushing + Screening) / Area of Exhaust* |
| | **Source ID: 1** | | **4.869643E-03** | **1.479068E-04** | FSP Emission Rate | | |
| | | | | | Area of Exhaust ($m^2$) (16m x 16m) | 256 | |
| | **Construction Activities inside Cavern** | Heavy Construction (g/s) | 3.067374E+00 | 3.834217E-01 | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*Construction Area*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *Worst case assumption, refer to Justification of Percentage Active Works Area for Caverns for Relocation of STSTW* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | | Total Construction Area in Cavern ($m^2$) | 147781 | *from enginneer* |
| | | | 1.45087E+00 | 1.81358E-01 | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | RSP-to-TSP Ratio | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | 2.20851E-01 | 2.76064E-02 | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | FSP-to-TSP Ratio | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | **Rock Crusher inside Cavern** | Truck Unloading - Fragmented Stone (g/s) | 7.46667E-03 | 7.46667E-05 | Emission Rate = Emission Factor*1000*Loading Rate/3600*Size Mulitplier*(1-Dust Suppression%) | | |
| | | | | | RSP emission factor (kg/Mg) | 0.000008 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | TSP-to-RSP factor | 2.1 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Loading rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 3.55556E-03 | 3.55556E-05 | RSP emission factor (kg/Mg) | 0.000008 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 3.55556E-03 | 3.55556E-05 | FSP emisison factor (kg/Mg) | 0.000008 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | Tertiary Crushing (g/s) | 1.20000E+00 | 1.20000E-02 | Emission Rate = Emission Factor*Processing Rate*1000/3600*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (kg/Mg) | 0.0027 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Crushing rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 5.33333E-01 | 5.33333E-03 | RSP emission factor (kg/Mg) | 0.0012 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 5.33333E-01 | 5.33333E-03 | FSP emisison factor (kg/Mg) | 0.0012 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |

## Appendix 3.02c Construction of CSTW - Calculation of Dust Emission Source (Annual Prediction)

**Construction of CSTW**

**Emission rates for Long-term Average Prediction (Annual)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| | | Fines Screening (controlled (with wet suppression) (g/s) | 8.00000E-01 | 8.00000E-03 | Emission Rate = Emission Factor*Processing Rate*1000/3600*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (kg/Mg) | 0.0018 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | Crushing rate (ton/hr) | 1600 | *from engineer* |
| | | | | | no. of operation hour (hr) | 12 | *from engineer (from 0700 to 1900)* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure* |
| | | | | | | | *Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 4.88889E-01 | 4.88889E-03 | RSP emission factor (kg/Mg) | 0.0011 | *from EPA AP-42, 5th ed. 8/04 ed., S11.19.2 Table 11.19.2-1* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure* |
| | | | | | | | *Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| | | | 4.88889E-01 | 4.88889E-03 | FSP emisison factor (kg/Mg) | 0.0011 | *adopt RSP emission factor as upper limit* |
| | | | | | % of dust suppression | 99% | *for typical removal efficiency for Dust Collector inside Enclosure* |
| | | | | | | | *Control Techniques for Particulate Emission from Stationary Sources Vol.2, Section 9.7.1.2.2* |
| **Construction Sites at Main Portal** | **Construction Activities** **Source ID: 2 - 28** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-05** | **2.594522E-06** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-06** | **1.22721E-06** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-06** | **1.86806E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-07** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-07** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-08** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| **Construction Sites at Secondary Portal** | **Construction Activities** **Source ID: 30 - 39** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-05** | **2.594522E-06** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-06** | **1.22721E-06** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-06** | **1.86806E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-07** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-07** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-08** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02c Construction of CSTW - Calculation of Dust Emission Source (Annual Prediction)

**Construction of CSTW**

**Emission rates for Long-term Average Prediction (Annual)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Construction Sites at Ah Kung Kok Shan Road Surface Magazine Site** | **Construction Activities** **Source ID: 40 - 69** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-05** | **2.594522E-06** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-06** | **1.22721E-06** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-06** | **1.86806E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-07** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-07** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-08** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| **Haul Road Conneting Main Portal to Area 73** | **Unpaved Haul Road** (assumed as Heavy Construction as worst case) **Source ID: 70 - 82** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-05** | **2.594522E-06** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-06** | **1.22721E-06** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-06** | **1.86806E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-07** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-07** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-08** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02c Construction of CSTW - Calculation of Dust Emission Source (Annual Prediction)

**Construction of CSTW**

**Emission rates for Long-term Average Prediction (Annual)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Area 73** | **Stockpile of Spoils from Cavern** (assumed as Heavy Construction as worst case) **Source ID: 83 - 113** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-05** | **2.594522E-06** | Emission Rate = (Emission Factor*10^6/10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) | | |
| | | | | | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-06** | **1.22721E-06** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-06** | **1.86806E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-07** | Emission Rate = Emission Factor*10^6/(10000*365*24*60*60)*(Percentage Active/100) | | |
| | | | | | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-07** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-08** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02e Demolition of Existing STSTW - Calculation of Dust Emission Source

**Demolition of Existing STSTW**

**Emission rates for Short-term Average Prediction (Tier 1)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Construction Sites at Existing STSTW** | **Construction Activities** | Heavy Construction | **2.075617E-04** | **2.594522E-05** | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | Area Source | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | **Source ID: 1 - 83** | ($g/m^2/s$) | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion | | **2.695332E-06** | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | Area Source | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 1 Test)* |
| | | ($g/m^2/s$) | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, Appendix B.2 Table 2.2 Category 3* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

**Emission rates for Short-term Average Prediction (Tier 2)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | Remarks |
|---|---|---|---|---|---|---|---|
| **Construction Sites at Main Portal** | **Construction Activities** | Heavy Construction | **2.075617E-04** | **2.594522E-05** | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | Area Source | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | **Source ID: 1 - 83** | ($g/m^2/s$) | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-05** | **1.22721E-05** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-05** | **1.86806E-06** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion | | **2.695332E-06** | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | Area Source | | | Percentage area actively operating (%) | 100 | *Full strength (Tier 2 Test)* |
| | | ($g/m^2/s$) | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-06** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

## Appendix 3.02e Demolition of Existing STSTW - Calculation of Dust Emission Source

**Demolition of Existing STSTW**

**Emission rates for Long-term Average Prediction (Annual)**

| Location | Source | Emission Rates | (Unmitigated) | (Mitigated) | Parameters | | *Remarks* |
|---|---|---|---|---|---|---|---|
| **Construction Sites at Main Portal** | **Construction Activities** | Heavy Construction Area Source ($g/m^2/s$) | **2.075617E-05** | **2.594522E-06** | TSP emission factor (Mg/hectare/month of activity) | 2.69 | *from AP-42, S13.2.3, 1/95 ed.* |
| | | | | | Percentage area actively operating (%) | 10 | *Worst case assumption, refer to Justification of Percentage Active Works Area for Caverns for Relocation of STSTW* |
| | **Source ID: 1 - 83** | | | | % of dust suppression | 87.5 | *Assuming watering eight times a day, reference to Kai Tak Development EIA Report* |
| | | | | | no. of operation hour (hr) | 12 | *Assumed typical working hours of work site referenced in AP-42* |
| | | | | | Emission height (m) | 0.5 | |
| | | | **9.81767E-06** | **1.22721E-06** | RSP emission factor (Mg/hectare/month of activity) | 1.27237 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | **1.49444E-06** | **1.86806E-07** | FSP emission factor (Mg/hectare/month of activity) | 0.19368 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | Wind Erosion Area Source ($g/m^2/s$) | | **2.695332E-07** | TSP emission factor (Mg/hectare/yr) | 0.85 | *AP-42, 5th ed., Table 11.9.4* |
| | | | | | Percentage area actively operating (%) | 10 | *from enginneer* |
| | | | | | Emission height (m) | 0.5 | |
| | | | | **1.27489E-07** | RSP emission factor (Mg/hectare/month of activity) | 0.40205 | |
| | | | | | % fraction of TSP | 0.473 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |
| | | | | **1.94064E-08** | FSP emission factor (Mg/hectare/month of activity) | 0.0612 | |
| | | | | | % fraction of TSP | 0.072 | *from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4* |

# Appendix 3.02e Demolition ofExisting STSTW - Calculations of Construction Dust Emission Rates

**Justification of Percentage Active Works Area for Caverns for Relocation of STSTW**

**Construction Peak Year** = 2027

**Total Area of for Works Area for Caverns** = 280019 $m^2$

**A1450 Demolition of Existing STSTW**

| Plant | Percentage of Usage (%) | Plan Size | | | | Area in term of Time of Usage ($m^2$) |
|---|---|---|---|---|---|---|
| | | B (m) | L (m) | No. of Item | Area($m^2$) | |
| Excavator | 100% | 3.2 | 8 | 20 | 512 | 512 |
| Excavator with rock breakers | 100% | 3.2 | 8 | 40 | 1024 | 1024 |
| Dump Truck | 100% | 2.4 | 10 | 40 | 960 | 960 |
| Air compressor | 100% | - | - | 20 | - | - |
| Generator | 100% | - | - | 20 | - | - |
| Lorry | 100% | 2.4 | 10 | 20 | 480 | 480 |
| Mobile Crane | 100% | 2.6 | 10 | 10 | 260 | 260 |
| Cutter | 100% | - | - | 20 | - | - |
| Pneumatic Breaker | 100% | - | - | 40 | - | - |
| | | | | | **Total:** | **3236** |
| ***A1450*** | | | | ***Percentage of Usage Area to Works Area:*** | | ***1.2%*** |

**As a worst case assumption, all construction activities are assumed to be carried out at the same time**

| | |
|---|---|
| **Total Percentage of Usage Area to Works Area for CSTS** | **1.2%** |
| **Percentage adopted in Dust model for Short-term Assessment** | **20%** |
| **Percentage adopted in Dust model for Annual Assessment** | **10%** |

**Appendix 3.02e Demolition of Existing STSTW - Calculation of Dust Emission Source**

Dust Emission Source Listing in FDM

Demolition of STSTW (Unmitigated Scenario)

| | | | | | | | | | TSP Emission Rate ($g/m^2$-s) | | RSP Emission Rate ($g/m^2$-s) | | | | FSP Emission Rate ($g/m^2$-s) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Short-term Assessment (Tier 1) | | Short-term Assessment | | Annual Assessment | | Short-term Assessment | | Annual Assessment | |
| Source | Type | X1 | Y1 | X2 | Y2 | Height (m) | Width / Angle | Working Hour | Working hours | Non-working hours | Working hours | Non-working hours | Working hours | Non-working hours | Working hours | Non-working hours | Working hours | Non-working hours |
| 1 | Area | 840198.54 | 830056.88 | 12.06 | 7.62 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 2 | Area | 840226.99 | 830034.92 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 3 | Area | 840208.18 | 830051.38 | 7.51 | 14.12 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 4 | Area | 840187.05 | 830043.81 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 5 | Area | 840253.94 | 830011.26 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 6 | Area | 840172.04 | 830026.72 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 7 | Area | 840202.68 | 830017.95 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 8 | Area | 840113.25 | 830014.76 | 27.21 | 19.58 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 9 | Area | 840028.8 | 830011.58 | 17.95 | 15.79 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 10 | Area | 840157.02 | 830009.63 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 11 | Area | 840280.89 | 829987.6 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 12 | Area | 840127.97 | 830001.84 | 27.21 | 19.58 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 13 | Area | 840042.7 | 829998.69 | 25.32 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 14 | Area | 840013.15 | 829993.78 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 15 | Area | 840139.37 | 829991.86 | 27.25 | 10.72 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 16 | Area | 840061.6 | 829987.21 | 17.64 | 21.46 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 17 | Area | 840303.15 | 829967.79 | 7.2 | 23.72 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 18 | Area | 840240.25 | 829984.96 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 19 | Area | 840169.69 | 829980.38 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 20 | Area | 840024.87 | 829978.38 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 21 | Area | 840099.13 | 829975.79 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 22 | Area | 839993.74 | 829971.66 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 23 | Area | 840041.58 | 829959.53 | 50.38 | 27.9 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 24 | Area | 840005.91 | 829956.79 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 25 | Area | 839974.33 | 829949.54 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 26 | Area | 840324.9 | 829948.7 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 27 | Area | 840207.26 | 829947.39 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 28 | Area | 840136.7 | 829942.8 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 29 | Area | 839986.95 | 829935.2 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 30 | Area | 839954.87 | 829927.45 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 31 | Area | 840350.23 | 829926.45 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:00 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 32 | Area | 840008.95 | 829922.36 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:01 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 33 | Area | 839967.99 | 829913.61 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:02 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 34 | Area | 840174.27 | 829909.81 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:03 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 35 | Area | 839935.46 | 829905.33 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:04 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 36 | Area | 840375.57 | 829904.21 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:05 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 37 | Area | 840263.62 | 829897.9 | 150 | 100 | 0.5 | 48.72 | 07:00 - 19:06 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 38 | Area | 839949.04 | 829892.02 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:07 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 39 | Area | 839976.92 | 829885.89 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:08 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 40 | Area | 839916.04 | 829883.22 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:09 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 41 | Area | 840400.9 | 829881.97 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:10 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 42 | Area | 839930.08 | 829870.42 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:11 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 43 | Area | 840423.91 | 829861.77 | 7.2 | 27.52 | 0.5 | 48.72 | 07:00 - 19:12 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 44 | Area | 839896.62 | 829861.1 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:13 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 45 | Area | 839944.9 | 829849.41 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:14 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 46 | Area | 839911.12 | 829848.83 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:15 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 47 | Area | 839882.13 | 829844.6 | 14.49 | 15.88 | 0.5 | 48.72 | 07:00 - 19:16 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 48 | Area | 840341.79 | 829829.27 | 150 | 108.05 | 0.5 | 48.72 | 07:00 - 19:17 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 49 | Area | 839871.65 | 829828.14 | 24.06 | 9.91 | 0.5 | 48.72 | 07:00 - 19:18 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 50 | Area | 839892.16 | 829827.24 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:19 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 51 | Area | 839912.88 | 829812.94 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:20 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 52 | Area | 839873.2 | 829805.65 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:21 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 53 | Area | 839854.25 | 829784.06 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:22 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 54 | Area | 839880.85 | 829776.47 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:23 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 55 | Area | 839835.29 | 829762.46 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:24 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 56 | Area | 839816.33 | 829740.87 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:25 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 57 | Area | 839848.83 | 829739.99 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:26 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 58 | Area | 839797.37 | 829719.28 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:27 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 59 | Area | 839816.8 | 829703.52 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:28 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 60 | Area | 840074.73 | 829672.06 | 438.6 | 301.25 | 0.5 | 48.72 | 07:00 - 19:29 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 61 | Area | 839778.41 | 829697.69 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:30 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 62 | Area | 839759.46 | 829676.09 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:31 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 63 | Area | 839784.78 | 829667.04 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:32 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 64 | Area | 839743.97 | 829637.31 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:33 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 65 | Area | 839781.54 | 829604.32 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:34 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 66 | Area | 839710.98 | 829599.74 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:35 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 67 | Area | 839819.11 | 829571.33 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:36 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 68 | Area | 839748.57 | 829566.77 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:37 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 69 | Area | 839856.75 | 829538.41 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:38 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 70 | Area | 839786.14 | 829533.78 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:39 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 71 | Area | 839894.32 | 829505.42 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:40 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 72 | Area | 839823.76 | 829500.84 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:41 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 73 | Area | 839931.89 | 829472.43 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:42 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 74 | Area | 839861.35 | 829467.87 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:43 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 75 | Area | 839969.51 | 829439.49 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:44 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 76 | Area | 839898.92 | 829434.88 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:45 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 77 | Area | 839999.21 | 829413.39 | 49.91 | 29.09 | 0.5 | 48.72 | 07:00 - 19:46 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 78 | Area | 840028.74 | 829408.23 | 18.7 | 22.1 | 0.5 | 48.72 | 07:00 - 19:47 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 79 | Area | 839936.54 | 829401.94 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:48 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 80 | Area | 840013.09 | 829390.41 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:49 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 81 | Area | 839966.25 | 829375.85 | 49.94 | 29.09 | 0.5 | 48.72 | 07:00 - 19:50 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 82 | Area | 839994.13 | 829368.81 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:51 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 83 | Area | 839975.18 | 829347.22 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:52 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |
| 84 | Area | 839942.65 | 829787.9 | 438.68 | 50.23 | 0.5 | 48.73 | 07:00 - 19:53 | 2.076E-04 | 2.695E-06 | 9.818E-05 | 1.275E-06 | 9.818E-06 | 1.275E-07 | 1.494E-05 | 1.941E-07 | 1.494E-06 | 1.941E-08 |

**Appendix 3.02e Demolition of Existing STSTW - Calculation of Dust Emission Source**

Dust Emission Source Listing in FDM

Demolition of STSTW (Mitigated Scenario)

| | | | | | | | | | TSP Emission Rate (g/m$^2$-s) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Short-term Assessment (Tier 1) | | Short-term Assessment (Tier 2) | |
| Source | Type | X1 | Y1 | X2 | Y2 | Height (m) | Width / Angle | Working Hour | Working hours | Non-working hours | Working hours | Non-working hours |
| 1 | Area | 840198.54 | 830056.88 | 12.06 | 7.62 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 2 | Area | 840226.99 | 830034.92 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 3 | Area | 840208.18 | 830051.38 | 7.51 | 14.12 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 4 | Area | 840187.05 | 830043.81 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 5 | Area | 840253.94 | 830011.26 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 6 | Area | 840172.04 | 830026.72 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 7 | Area | 840202.68 | 830017.95 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 8 | Area | 840113.25 | 830014.76 | 27.21 | 19.58 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 9 | Area | 840028.8 | 830011.58 | 17.95 | 15.79 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 10 | Area | 840157.02 | 830009.63 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 11 | Area | 840280.89 | 829987.6 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 12 | Area | 840127.97 | 830001.84 | 27.21 | 19.58 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 13 | Area | 840042.7 | 829998.69 | 25.32 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 14 | Area | 840013.15 | 829993.78 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 15 | Area | 840139.37 | 829991.86 | 27.25 | 10.72 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 16 | Area | 840061.6 | 829987.21 | 17.64 | 21.46 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 17 | Area | 840303.15 | 829967.79 | 7.2 | 23.72 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 18 | Area | 840240.25 | 829984.96 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 19 | Area | 840169.69 | 829980.38 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 20 | Area | 840024.87 | 829978.38 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 21 | Area | 840099.13 | 829975.79 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 22 | Area | 839993.74 | 829971.66 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 23 | Area | 840041.58 | 829959.53 | 50.38 | 27.9 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 24 | Area | 840005.91 | 829956.79 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 25 | Area | 839974.33 | 829949.54 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 26 | Area | 840324.9 | 829948.7 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 27 | Area | 840207.26 | 829947.39 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 28 | Area | 840136.7 | 829942.8 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 29 | Area | 839986.95 | 829935.2 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 30 | Area | 839954.87 | 829927.45 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 31 | Area | 840350.23 | 829926.45 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:00 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 32 | Area | 840008.95 | 829922.36 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:01 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 33 | Area | 839967.99 | 829913.61 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:02 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 34 | Area | 840174.27 | 829909.81 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:03 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 35 | Area | 839935.46 | 829905.33 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:04 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 36 | Area | 840375.57 | 829904.21 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:05 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 37 | Area | 840263.62 | 829897.9 | 150 | 100 | 0.5 | 48.72 | 07:00 - 19:06 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 38 | Area | 839949.04 | 829892.02 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:07 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 39 | Area | 839976.92 | 829885.89 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:08 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 40 | Area | 839916.04 | 829883.22 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:09 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 41 | Area | 840400.9 | 829881.97 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:10 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 42 | Area | 839930.08 | 829870.42 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:11 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 43 | Area | 840423.91 | 829861.77 | 7.2 | 27.52 | 0.5 | 48.72 | 07:00 - 19:12 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 44 | Area | 839896.62 | 829861.1 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:13 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 45 | Area | 839944.9 | 829849.41 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:14 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 46 | Area | 839911.12 | 829848.83 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:15 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 47 | Area | 839882.13 | 829844.6 | 14.49 | 15.88 | 0.5 | 48.72 | 07:00 - 19:16 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 48 | Area | 840341.79 | 829829.27 | 150 | 108.05 | 0.5 | 48.72 | 07:00 - 19:17 | 2.595E-05 | 2.695E-06 | 2.595E-05 | 2.695E-06 |
| 49 | Area | 839871.65 | 829828.14 | 24.06 | 9.91 | 0.5 | 48.72 | 07:00 - 19:18 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 50 | Area | 839892.16 | 829827.24 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:19 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 51 | Area | 839912.88 | 829812.94 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:20 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 52 | Area | 839873.2 | 829805.65 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:21 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 53 | Area | 839854.25 | 829784.06 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:22 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 54 | Area | 839880.85 | 829776.47 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:23 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 55 | Area | 839835.29 | 829762.46 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:24 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 56 | Area | 839816.33 | 829740.87 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:25 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 57 | Area | 839848.83 | 829739.99 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:26 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 58 | Area | 839797.37 | 829719.28 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:27 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 59 | Area | 839816.8 | 829703.52 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:28 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 60 | Area | 840074.73 | 829672.06 | 438.6 | 301.25 | 0.5 | 48.72 | 07:00 - 19:29 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 61 | Area | 839778.41 | 829697.69 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:30 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 62 | Area | 839759.46 | 829676.09 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:31 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 63 | Area | 839784.78 | 829667.04 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:32 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 64 | Area | 839743.97 | 829637.31 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:33 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 65 | Area | 839781.54 | 829604.32 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:34 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 66 | Area | 839710.98 | 829599.74 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:35 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 67 | Area | 839819.11 | 829571.33 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:36 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 68 | Area | 839748.57 | 829566.77 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:37 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 69 | Area | 839856.75 | 829538.41 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:38 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 70 | Area | 839786.14 | 829533.78 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:39 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 71 | Area | 839894.32 | 829505.42 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:40 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 72 | Area | 839823.76 | 829500.84 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:41 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 73 | Area | 839931.89 | 829472.43 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:42 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 74 | Area | 839861.35 | 829467.87 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:43 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 75 | Area | 839969.51 | 829439.49 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:44 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 76 | Area | 839898.92 | 829434.88 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:45 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 77 | Area | 839999.21 | 829413.39 | 49.91 | 29.09 | 0.5 | 48.72 | 07:00 - 19:46 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 78 | Area | 840028.74 | 829408.23 | 18.7 | 22.1 | 0.5 | 48.72 | 07:00 - 19:47 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 79 | Area | 839936.54 | 829401.94 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:48 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 80 | Area | 840013.09 | 829390.41 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:49 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 81 | Area | 839966.25 | 829375.85 | 49.94 | 29.09 | 0.5 | 48.72 | 07:00 - 19:50 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 82 | Area | 839994.13 | 829368.81 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:51 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 83 | Area | 839975.18 | 829347.22 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:52 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |
| 84 | Area | 839942.65 | 829787.9 | 438.68 | 50.23 | 0.5 | 48.73 | 07:00 - 19:53 | 2.595E-05 | 2.695E-06 | 0.000E+00 | 0.000E+00 |

**Appendix 3.02e Demolition of Existing STSTW - Calculation of Dust Emission Source**

Dust Emission Source Listing in FDM

Demolition of STSTW (Mitigated Scenario)

| | | | | | | | | | RSP Emission Rate (g/m$^2$-s) | | | | FSP Emission Rate (g/m$^2$-s) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Short-term Assessment | | Annual Assessment | | Short-term Assessment | | Annual Assessment | |
| Source | Type | X1 | Y1 | X2 | Y2 | Height (m) | Width / Angle | Working Hour | Working hours | Non-working hours | Working hours | Non-working hours | Working hours | Non-working hours | Working hours | Non-working hours |
| 1 | Area | 840198.54 | 830056.88 | 12.06 | 7.62 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 2 | Area | 840226.99 | 830034.92 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 3 | Area | 840208.18 | 830051.38 | 7.51 | 14.12 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 4 | Area | 840187.05 | 830043.81 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 5 | Area | 840253.94 | 830011.26 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 6 | Area | 840172.04 | 830026.72 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 7 | Area | 840202.68 | 830017.95 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 8 | Area | 840113.25 | 830014.76 | 27.21 | 19.58 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 9 | Area | 840028.8 | 830011.58 | 17.95 | 15.79 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 10 | Area | 840157.02 | 830009.63 | 22.75 | 7.64 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 11 | Area | 840280.89 | 829987.6 | 7.59 | 35.87 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 12 | Area | 840127.97 | 830001.84 | 27.21 | 19.58 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 13 | Area | 840042.7 | 829998.69 | 25.32 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 14 | Area | 840013.15 | 829993.78 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 15 | Area | 840139.37 | 829991.86 | 27.25 | 10.72 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 16 | Area | 840061.6 | 829987.21 | 17.64 | 21.46 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 17 | Area | 840303.15 | 829967.79 | 7.2 | 23.72 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 18 | Area | 840240.25 | 829984.96 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 19 | Area | 840169.69 | 829980.38 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 20 | Area | 840024.87 | 829978.38 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 21 | Area | 840099.13 | 829975.79 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 22 | Area | 839993.74 | 829971.66 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 23 | Area | 840041.58 | 829959.53 | 50.38 | 27.9 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 24 | Area | 840005.91 | 829956.79 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 25 | Area | 839974.33 | 829949.54 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 26 | Area | 840324.9 | 829948.7 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 27 | Area | 840207.26 | 829947.39 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 28 | Area | 840136.7 | 829942.8 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 29 | Area | 839986.95 | 829935.2 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 30 | Area | 839954.87 | 829927.45 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 31 | Area | 840350.23 | 829926.45 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:00 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 32 | Area | 840008.95 | 829922.36 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:01 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 33 | Area | 839967.99 | 829913.61 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:02 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 34 | Area | 840174.27 | 829909.81 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:03 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 35 | Area | 839935.46 | 829905.33 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:04 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 36 | Area | 840375.57 | 829904.21 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:05 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 37 | Area | 840263.62 | 829897.9 | 150 | 100 | 0.5 | 48.72 | 07:00 - 19:06 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 38 | Area | 839949.04 | 829892.02 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:07 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 39 | Area | 839976.92 | 829885.89 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:08 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 40 | Area | 839916.04 | 829883.22 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:09 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 41 | Area | 840400.9 | 829881.97 | 7.2 | 33.71 | 0.5 | 48.72 | 07:00 - 19:10 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 42 | Area | 839930.08 | 829870.42 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:11 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 43 | Area | 840423.91 | 829861.77 | 7.2 | 27.52 | 0.5 | 48.72 | 07:00 - 19:12 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 44 | Area | 839896.62 | 829861.1 | 29.43 | 15.88 | 0.5 | 48.72 | 07:00 - 19:13 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 45 | Area | 839944.9 | 829849.41 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:14 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 46 | Area | 839911.12 | 829848.83 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:15 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 47 | Area | 839882.13 | 829844.6 | 14.49 | 15.88 | 0.5 | 48.72 | 07:00 - 19:16 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 48 | Area | 840341.79 | 829829.27 | 150 | 108.05 | 0.5 | 48.72 | 07:00 - 19:17 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 49 | Area | 839871.65 | 829828.14 | 24.06 | 9.91 | 0.5 | 48.72 | 07:00 - 19:18 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 50 | Area | 839892.16 | 829827.24 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:19 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 51 | Area | 839912.88 | 829812.94 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:20 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 52 | Area | 839873.2 | 829805.65 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:21 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 53 | Area | 839854.25 | 829784.06 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:22 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 54 | Area | 839880.85 | 829776.47 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:23 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 55 | Area | 839835.29 | 829762.46 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:24 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 56 | Area | 839816.33 | 829740.87 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:25 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 57 | Area | 839848.83 | 829739.99 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:26 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 58 | Area | 839797.37 | 829719.28 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:27 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 59 | Area | 839816.8 | 829703.52 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:28 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 60 | Area | 840074.73 | 829672.06 | 438.6 | 301.25 | 0.5 | 48.72 | 07:00 - 19:29 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 61 | Area | 839778.41 | 829697.69 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:30 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 62 | Area | 839759.46 | 829676.09 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:31 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 63 | Area | 839784.78 | 829667.04 | 48.54 | 27.9 | 0.5 | 48.72 | 07:00 - 19:32 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 64 | Area | 839743.97 | 829637.31 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:33 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 65 | Area | 839781.54 | 829604.32 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:34 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 66 | Area | 839710.98 | 829599.74 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:35 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 67 | Area | 839819.11 | 829571.33 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:36 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 68 | Area | 839748.57 | 829566.77 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:37 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 69 | Area | 839856.75 | 829538.41 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:38 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 70 | Area | 839786.14 | 829533.78 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:39 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 71 | Area | 839894.32 | 829505.42 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:40 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 72 | Area | 839823.76 | 829500.84 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:41 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 73 | Area | 839931.89 | 829472.43 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:42 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 74 | Area | 839861.35 | 829467.87 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:43 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 75 | Area | 839969.51 | 829439.49 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:44 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 76 | Area | 839898.92 | 829434.88 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:45 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 77 | Area | 839999.21 | 829413.39 | 49.91 | 29.09 | 0.5 | 48.72 | 07:00 - 19:46 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 78 | Area | 840028.74 | 829408.23 | 18.7 | 22.1 | 0.5 | 48.72 | 07:00 - 19:47 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 79 | Area | 839936.54 | 829401.94 | 50 | 50 | 0.5 | 48.72 | 07:00 - 19:48 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 80 | Area | 840013.09 | 829390.41 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:49 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 81 | Area | 839966.25 | 829375.85 | 49.94 | 29.09 | 0.5 | 48.72 | 07:00 - 19:50 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 82 | Area | 839994.13 | 829368.81 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:51 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 83 | Area | 839975.18 | 829347.22 | 28.73 | 22.1 | 0.5 | 48.72 | 07:00 - 19:52 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |
| 84 | Area | 839942.65 | 829787.9 | 438.68 | 50.23 | 0.5 | 48.73 | 07:00 - 19:53 | 1.227E-05 | 1.275E-06 | 1.227E-06 | 1.275E-07 | 1.868E-06 | 1.941E-07 | 1.868E-07 | 1.941E-08 |

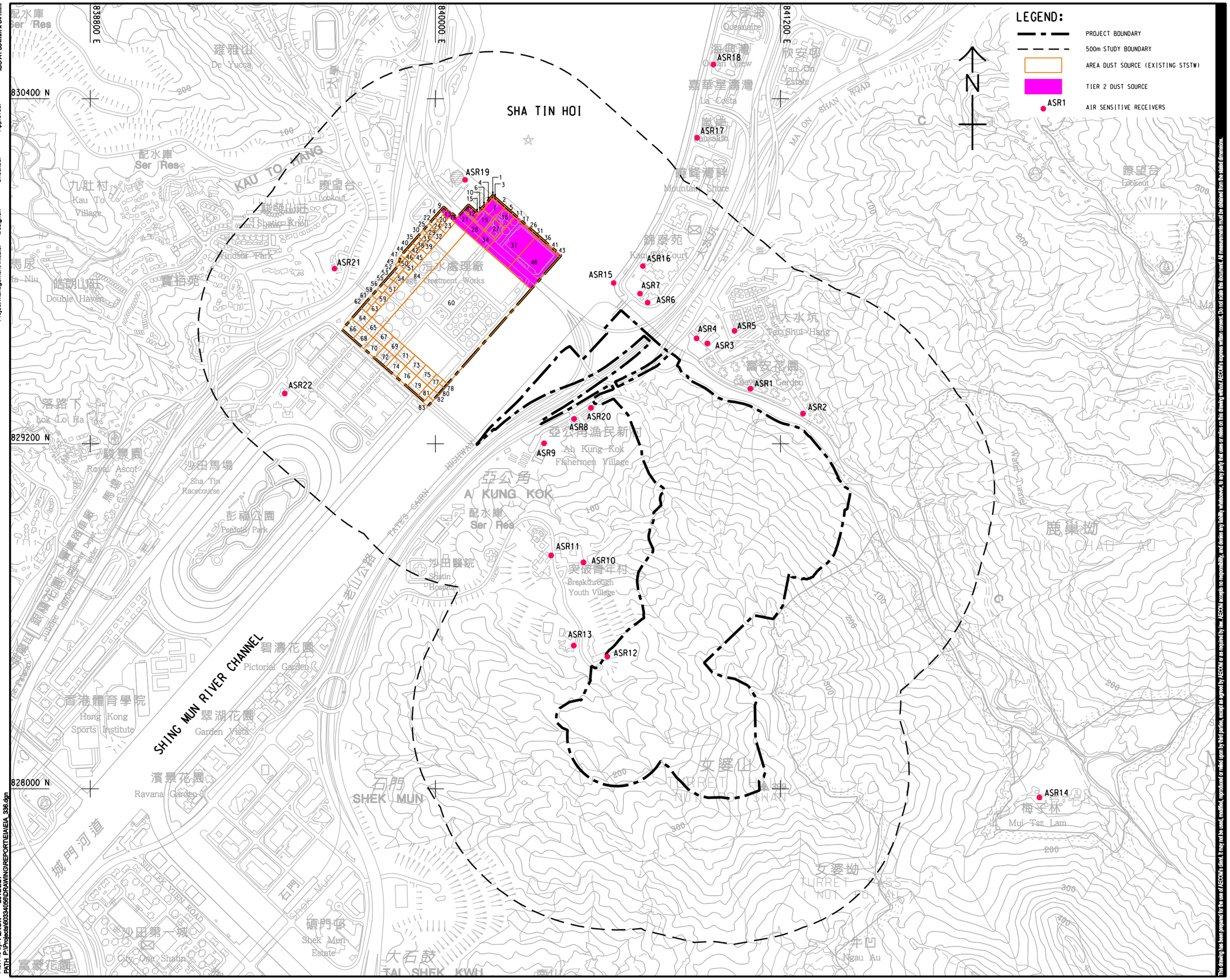
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initiials:






AECOM

**PROJECT**
項目

RELOCATION OF SHA TIN SEWAGE TREATMENT WORKS TO CAVERNS: CAVERNS AND SEWAGE TREATMENT WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

**CLIENT**
業主

渠務署
Drainage Services Department

**CONSULTANT**
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

**SUB-CONSULTANTS**
分判工程顧問公司

**ISSUE/REVISION**
修訂

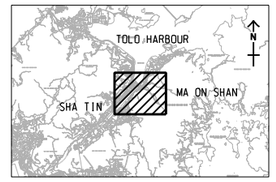
| I/R 修訂 | DATE 日期 | DESCRIPTION 內容摘要 | CHK. 核對 |
|---|---|---|---|
| A | JAN. 16 | EIA | |
| - | SEP. 15 | EIA (DRAFT) | |

**STATUS**
階段

**SCALE** 比例
A3 1 : 12000

**DIMENSION UNIT** 尺寸單位
METRES

**KEY PLAN**
索引圖




**PROJECT NO.** 項目編號
60334056

**CONTRACT NO.** 合約編號
CE 30/2014 (DS)

**SHEET TITLE**
圖紙名稱

LOCATION OF CONSTRUCTION DUST EMISSION SOURCE (DEMOLITION OF EXISTING STSTW)

**SHEET NUMBER**
圖紙編號

60334056/EIA/3.36A

Plot File by: PENGW 2016/2/21
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