Agreement No. CE18/2012(CE)

Development of Anderson Road Quarry - Investigation

Title: Justifications for the Percentage of Active Works Areas

| | | | | | Active | Working Working | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---|----------------|--------------|-------------------|-----------------|------------|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|------------|-------|-------|--------|-------|-------|-------|-------|---|-------|-------|-------|
| Project Type | Work Contract | t Heavy Construction Activities (Main Dust Generation) | From | То | Area | | | | | | 20 | 016 | | | | | | | | | | | 20 | 017 | | | | | |
| | | | | | (m ²) | Jan | Feb | Mar | Apr | Mav | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | Mav | Jun | Jul | Aua | Sep | Oct | Nov | Dec |
| On a summer I Provide at | WC01 PL5 | Pedestrian Connectivity - PL5A (SMP Estate to Kwun Tong MTR) | - | | / | | | | | | | | 13 | 1 | | | | | | | | | | | 1.1-3 | | | | |
| Concurrent Project | WC01_PL | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | | | | | | | | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Concurrent Project | WC01 PL5 | Pedestrian Connectivity - PL5B (SMP Estate to Kwun Tong MTR) | | • | • | | | | • | | | • | | | | | | | | | | | • | | | | | | |
| Concurrent Project | WC01_PL | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | | | | | | | | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Concurrent Project | WC02_PL | , Pedestrian Connectivity _ PL7 (Po Tat Estate To BBI at Tsueng Kwan O Tunnel Road) | | • | • | | | | • | | | • | | | | | | | | | | | • | | | | | | |
| Concurrent Project | WCUZ_FL | ^ Earthwork (Excavation) | Sep-17 | May-18 | 200 | | | | | | | | | | | | | | | | | | | | | 200 | 200 | 200 | 200 |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 1 area | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_PH | * Earthwork | | Dec-17 | | | | | | | | | | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | | 8000 |
| | | * Roadworks | Mar-17 | Oct-18 | 2000 | | | | | | | | | | | | | | | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| The ARQ Project | WC03 PL | Access Road to Po Lam Road (Connection between Main Site and Po Lam Road) | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THE ARQ Ploject | WC03_FL | * Earthwork | Sep-16 | Feb-18 | 2000 | | | | | | | | | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| | | Access Road to Road L1/L2/L3 (Connection between Main Site and DAR) | | • | • | | | | • | | | • | | | | | | | | | | | • | | | | | | |
| The ARQ Project | WC03_DAR | * Retaining Walls | Mar-18 | Nov-18 | 1000 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Roadwork | Mar-18 | Oct-18 | 1000 | | | 1 | | | | | 1 | 1 | | | | | | | | | | | | | | | |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 2 area | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC04 PH | * Earthwork (Excavation) | Jul-18 | Jul-20 | 8000 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Roadwork (Laying Utilities) | Apr-19 | Oct-20 | 2000 | | | | | | | | | | | | | | | | | | | | | | | | |
| | WC05 | Drainage Retention Tank | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | | * Earthwork | Jul-16 | Apr-17 | 500 | | | | | | | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | | | | | | | | |
| · · | | * Backfilling | | Jun-19 | | | | | | | | | | | | | | | | | | | | | | 200 20 8000 8000 80 2000 2000 20 2000 20 2000 20 2000 2000 20 2000 2000 | | | |
| | | Road Improvement Works - Area 2 (Lin Tak Road Widening) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC06 LTR | | Mar-17 | Jun-21 | 600 | | | | | | | | | | | | | | | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| | | * Roadwork (Laving Utilities) | | Nov-21 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Road Improvement Works - Area 3 (Clear Water Bay Road) | 1 3 3 7 3 | | | | | | ! | | | ! | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC07_A3 | * Earthwork | Mar-17 | Jul-20 | 500 | | | | | | | | | | | | | | | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| | 14/007 4 | Road Improvement Works - Area 4 (Shun Lee Tsuen Road) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC07_A | * Earthwork | Mar-17 | Jul-19 | 120 | | | | | | | | | | | | | | | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| O | 14/000 | Site formation for Cavern | | | | | | | | | | | | | | | | | | | | | | | | - | | | |
| Concurrent Project | WC08 | * Excavation | Jan-18 | Oct-19 | 150 | | | | | | | | | | | | | | | | | | | | | | | | |
| O | WC09 | Viewing Platform | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC09 | * Site Clearence | Jan-18 | Apr-18 | 150 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <u> </u> | | | | | | | • | • | | • | | | | | | | | | | | | | | | | | |
| | | | | | | | | _ | | | _ | | | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 44400 | 4.4400 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 | 40000 |
| | | | Total Are | ea in one m | nonth (m²) | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 900 | 10900 | 10900 | 10900 | 10900 | 10900 | 10900 | 14120 | 14120 | 13620 | 13620 | 13620 | 13620 | 13820 | 13820 | 13820 | 13820 |
| Percentage of Daily Active Operating Area (%) | | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | |
| | | Percentage of Max Da | aily Active Op | erating Are | rea (%) [1] | | 1.3 (<10%) | | | | | | | | | | | 1.7 (<10%) | | | | | | | | | | | |
| | | Percentage of Annu | ual Averaged | d Active Are | rea (%) [2] | | 0.4 (<10%) | | | | | | | | | | | 1.6 (<10%) | | | | | | | | | | | |

- Notes:
 [1] 10% active operating area has been adopted for ARQ contracts (WC03 & WC04), while for other work contracts, 100% active operating area is adopted.
 [2] 10% annual averaged works area has been adopted.
 [3] Detail breakdown of construction activities are represented by an asterisk (*)

Title: Justifications for the Percentage of Active Works Areas

| | | | | | Active | Working Workin | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---|--------------|-------------|-------------------|--|-------------|------|------|------|--------|-------|-------|-------|-------|-------|------|-------------|------|------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| Project Type | Work Contract | Heavy Construction Activities (Main Dust Generation) | From | То | Area | | | | | | 20 | 18 | | | | | | | | | | | 20 | 019 | | | | | |
| | | | | | (m ²) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Concurrent Project | WC01 PL5A | Pedestrian Connectivity - PL5A (SMP Estate to Kwun Tong MTR) | • | | | | | | | - | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WCUI_PLSA | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | 200 | 200 | 200 | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC01 PL5B | Pedestrian Connectivity - PL5B (SMP Estate to Kwun Tong MTR) | - | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC01_FL3B | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | 200 | 200 | 200 | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC02 PL7 | Pedestrian Connectivity _ PL7 (Po Tat Estate To BBI at Tsueng Kwan O Tunnel Road) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC02_FL7 | * Earthwork (Excavation) | Sep-17 | May-18 | 200 | 200 | 200 | 200 | 200 | 200 | | | | | | | | | | | | | | | | | | | |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 1 area | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_PH1 | * Earthwork | | Dec-17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Roadworks | Mar-17 | Oct-18 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | | | | | | | | | | | | | | |
| The ARQ Project | WC03 PLR | Access Road to Po Lam Road (Connection between Main Site and Po Lam Road) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The Art Troject | W005_1 EIX | * Earthwork | Sep-16 | Feb-18 | 2000 | 2000 | 2000 | | | | | | | | | | | | | | | | | | | | | | |
| | | Access Road to Road L1/L2/L3 (Connection between Main Site and DAR) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_DAR | * Retaining Walls | | Nov-18 | | | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | | | | | | | |
| | | * Roadwork | Mar-18 | Oct-18 | 1000 | | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | | | | | | | | | | | | | | |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 2 area | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC04_PH2 | * Earthwork (Excavation) | Jul-18 | Jul-20 | 8000 | | | | | | | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 | 8000 |
| | | * Roadwork (Laying Utilities) | Apr-19 | Oct-20 | 2000 | | | | | | | | | | | | | | | | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| | | Drainage Retention Tank | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC05 | * Earthwork | Jul-16 | Apr-17 | 500 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Backfilling | Nov-18 | Jun-19 | 500 | | | | | | | | | | | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | | | | | | |
| | | Road Improvement Works - Area 2 (Lin Tak Road Widening) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC06 LTRW | * Earthwork (Excavation and Backfill) | Mar-17 | Jun-21 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | * Roadwork (Laving Utilities) | Sep-20 | Nov-21 | 600 | | | | | | | | | | | | | | | | | | | | | | | | |
| | WC07_A3 | Road Improvement Works - Area 3 (Clear Water Bay Road) | | - | - | | - | | | | | | - | - | | | | | | | | - | | - | - | | | | |
| Concurrent Project | | * Earthwork | Mar-17 | Jul-20 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| 0 .5 | 14/007 4 4 | Road Improvement Works - Area 4 (Shun Lee Tsuen Road) | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC07_A4 | * Earthwork | Mar-17 | Jul-19 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | | | | | |
| | 141000 | Site formation for Cavern | | | • | | | | - | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC08 | * Excavation | Jan-18 | Oct-19 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | | |
| On a surround Desired | WC09 | Viewing Platform | | | | | | | - | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC09 | * Site Clearence | Jan-18 | Apr-18 | 150 | 150 | 150 | 150 | 150 | | | | | | | | | | | | | | | | | | | | |
| | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Total Ar | ea in one r | month (m²) | 6120 | 6120 | 6120 | 5720 | 5570 | 5370 | 13370 | 13370 | 13370 | 13370 | 10870 | 9870 | 9870 | 9870 | 9870 | 11870 | 11870 | 11870 | 11370 | 11250 | 11250 | 11250 | 11100 | 11100 |
| | | Percentage of | Daily Active | Operating | Area (%) | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Percentage of Max Daily Active Operating Area (%) [1] | | | | | | | 1.6 (<10%) | | | | | | | | | | | 1.4 (<10%) | | | | | | | | | | | |
| | | Percentage of Ann | nual Average | d Active A | rea (%) [2] | | | | | | 1.1 (< | :10%) | | | | | | | | | | | 1.3 (- | <10%) | | | | | |
| | | | | | | | 1.1 (<10/0) | | | | | | | | | | | 1.5 ((1070) | | | | | | | | | | | |

- Notes:
 [1] 10% active operating area has been adopted for ARQ contracts (WC03 & WC04), while for other work contracts, 100% active operating area is adopted.
 [2] 10% annual averaged works area has been adopted.
 [3] Detail breakdown of construction activities are represented by an asterisk (*)

Title: Justifications for the Percentage of Active Works Areas

| Project Type | | | _ | | Active Working | | | | | | | | | | Monthly | active area | for each h | neavy cons | struction a | ctivity (m ²) |) | | | | | | | | | | | | | |
|--|---|---|---|---------------|-------------------|-------|------------|-------|-------|-------|-------|-------|------|------|---------|-------------|------------|------------|-------------|---------------------------|------|------|------|------------|-----|-----|-------------------|-----|-----|--|--|--|--|--|
| Project Type | Work Contract | Heavy Construction Activities (Main Dust Generation) | From | То | Area | 0000 | | | | | | | | | | | | | | | | 2 | 2021 | | | | | | | | | | | |
| | | | | | (m ²) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aua | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | Mav | Jun | Jul | Aua | Sep | Oct | Nov | Dec | | | | | |
| On a supposed Breefe at | WC01_PL5A | Pedestrian Connectivity - PL5A (SMP Estate to Kwun Tong MTR) | | | . , | | | | | | | | 1 3 | | | | | | | | | , | | | | | | | | | | | | |
| Concurrent Project | WC01_PL5A | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | |
| Concurrent Project | WC01_PL5B | Pedestrian Connectivity - PL5B (SMP Estate to Kwun Tong MTR) | | • | • | | | | | | • | • | | | • | | • | | • | | | • | | • | • | | | | | | | | | |
| Concurrent Project | WC01_PL5B | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | | | | | | | | | | | | | | | | | | | | | | 7 | | | | | | | |
| Concurrent Project | WC02 PL7 | Pedestrian Connectivity _ PL7 (Po Tat Estate To BBI at Tsueng Kwan O Tunnel Road) | | • | • | | | | | | • | • | | | • | | • | | • | • | | • | | • | • | | | | - | | | | | |
| Concurrent Project | WCUZ_PL1 | * Earthwork (Excavation) | Sep-17 | May-18 | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 1 area | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_PH1 | * Earthwork | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Roadworks | Mar-17 | Oct-18 | 2000 | | | | | | | | | | | | | | | | | | | | | | ſ , | | | | | | | |
| The ARQ Project | WC03 PLR | Access Road to Po Lam Road (Connection between Main Site and Po Lam Road) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The Art Troject | W005_1 EIX | * Earthwork | Sep-16 | Feb-18 | 2000 | | | | | | | | | | | | | | | | | | | | | | ſ , | | | | | | | |
| | | Access Road to Road L1/L2/L3 (Connection between Main Site and DAR) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_DAR | * Retaining Walls | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Roadwork | Mar-18 | Oct-18 | 1000 | | | | | | | | | | | | | | | | | | | | | | 600 600 0.1 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC04_PH2 | * Earthwork (Excavation) | | | | | | | 8000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Roadwork (Laying Utilities) | Apr-19 | Oct-20 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | | | | | | | | | | | | 1 ' | 1 | | | | | | |
| | | Drainage Retention Tank | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The ARQ Project | WC05 | * Earthwork | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | * Backfilling | Nov-18 | Jun-19 | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Road Improvement Works - Area 2 (Lin Tak Road Widening) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC06_LTRW | * Earthwork (Excavation and Backfill) | Mar-17 | Jun-21 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | | | | ſ , | | | | | | | |
| | | * Roadwork (Laying Utilities) | Sep-20 | Nov-21 | 600 | | | | | | | | | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | | | | | | |
| Concurrent Project | WC07 A3 | Road Improvement Works - Area 3 (Clear Water Bay Road) | • | • | | | • | • | | | • | | • | • | • | • | • | | • | • | | • | | • | | • | | | | | | | | |
| Concurrent Project | WCU7_A3 | * Earthwork | Mar-17 | Jul-20 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC07 A4 | Road Improvement Works - Area 4 (Shun Lee Tsuen Road) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Froject | WC07_A4 | * Earthwork | Mar-17 | Jul-19 | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC08 | Site formation for Cavern | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent i roject | WC00 | * Excavation | Jan-18 | Oct-19 | 150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent Project | WC09 | Viewing Platform | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Concurrent roject | W000 | * Site Clearence | Jan-18 | Apr-18 | 150 | | | | | | | | | | | | | | | | | | | | | | ' | | | | | | | |
| | | | an Connectively - PLAS (SMP Estate to Kourn Tong MTRT) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connectively - PLSS (SMP Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) on Connective to MTRS (Estate to Kourn Tong MTRS) Sep-18 [Peb-18] 2000 Sep-18 [Peb-18] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Total Ar | oo in one n | nanth (m²) | 11100 | 11100 | 11100 | 11100 | 11100 | 11100 | 11100 | 2600 | 3200 | 3200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 600 | 600 | 600 | 600 | 600 | 0 | | | | | |
| | | | Total Air | ea iii one ii | nonui (iii) | 11100 | 11100 | 11100 | 11100 | 11100 | 11100 | 11100 | 2000 | 3200 | 3200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 000 | 000 | 000 | 000 | 000 | | | | | | |
| Percentage of Daily Active Operating Area (%) | | | | | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 0.3 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | | | | | | |
| | Percentage of Max Daily Active Operating Area (%) [| | | | | | 1.3 (<10%) | | | | | | | | | | | 0.1 (<10%) | | | | | | | | | | | | | | | | |
| | Percentage of Annual Averaged Active Area (%) [2 | | | | | | 0.9 (<10%) | | | | | | | | | | | 0.1 (<10%) | | | | | | | | | | | | | | | | |
| Totolinage of Affilial Averaged Active Alea (79) [2] | | | | | | | U.9 (<1U%) | | | | | | | | | | | | | | | | 5.11 | 0.1 (<10%) | | | | | | | | | | |

- Notes:
 [1] 10% active operating area has been adopted for ARQ contracts (WC03 & WC04), while for other work contracts, 100% active operating area is adopted.
 [2] 10% annual averaged works area has been adopted.
 [3] Detail breakdown of construction activities are represented by an asterisk (*)

| 5 | | | _ | _ | Active Working | ing Monthly active area for each neavy constituction activity (iii) | | | | | | | | | | | | |
|---------------------------------------|---------------|---|--------------|-------------|-------------------|--|-----|-----|-----|-----|-----|-------|-----|-----|-----|----------|-----|--|
| Project Type | Work Contract | Heavy Construction Activities (Main Dust Generation) | From | То | Area | | | | | | |)22 | | | | | | |
| | | | | | (m ²) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Concurrent Project | WC01 PL5A | Pedestrian Connectivity - PL5A (SMP Estate to Kwun Tong MTR) | | | | | | | | | | | | | | | | |
| | 11001_1 20/1 | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | | | | | | | | | | | | | |
| Concurrent Project | WC01 PL5B | Pedestrian Connectivity - PL5B (SMP Estate to Kwun Tong MTR) | | | | | | | | | | | | | | | | |
| - Contourion in Fojoot | | * Earthwork (Excavation and Backfill) | Aug-16 | Mar-18 | 200 | | | | | | | | | | | | | |
| Concurrent Project | WC02_PL7 | Pedestrian Connectivity _ PL7 (Po Tat Estate To BBI at Tsueng Kwan O Tunnel Road) | | | | | | | | | | | | | | | | |
| - Contourion in Fojoot | 11002_121 | * Earthwork (Excavation) | Sep-17 | May-18 | 200 | | | | | | | | | | | | | |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 1 area | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_PH1 | * Earthwork | Sep-16 | | 8000 | | | | | | | | | | | | | |
| | | * Roadworks | Mar-17 | Oct-18 | 2000 | | | | | | | | | | | | | |
| The ARQ Project | WC03 PLR | Access Road to Po Lam Road (Connection between Main Site and Po Lam Road) | | | | | | | | | | | | | | | | |
| The Arto Froject | W005_1 EIX | * Earthwork | Sep-16 | Feb-18 | 2000 | | | | | | | | | | | | | |
| | | Access Road to Road L1/L2/L3 (Connection between Main Site and DAR) | | | | | | | | | | | | | | | | |
| The ARQ Project | WC03_DAR | * Retaining Walls | Mar-18 | Nov-18 | 1000 | | | | | | | | | | | | | |
| | | * Roadwork | Mar-18 | Oct-18 | 1000 | | | | | | | | | | | | | |
| | | Site Formation and Engineering Infrastructure at Main Site - Phase 2 area | | | | | | | | | | | | | | | | |
| The ARQ Project | WC04_PH2 | * Earthwork (Excavation) | Jul-18 | Jul-20 | 8000 | | | | | | | | | | | | | |
| , | _ | * Roadwork (Laying Utilities) | Apr-19 | Oct-20 | 2000 | | | | | | | | | | | | | |
| | | Drainage Retention Tank | 1 - 4 | | | | | | | | | | | | | | | |
| The ARQ Project | WC05 | * Earthwork | Jul-16 | Apr-17 | 500 | | | | | | | | | | | | | |
| | | * Backfilling | Nov-18 | Jun-19 | 500 | | | | | | | | | | | | | |
| | | Road Improvement Works - Area 2 (Lin Tak Road Widening) | 1 1101 10 | 00.1.10 | - 000 | | | | | | | | | | | | | |
| Concurrent Project | WC06 LTRW | * Earthwork (Excavation and Backfill) | Mar-17 | Jun-21 | 600 | | | | | | | | | | | | | |
| Concurrent rioject | WOOD_ETIKW | * Roadwork (Laying Utilities) | Sep-20 | Nov-21 | 600 | | | | | | | | | | | | | |
| | | Road Improvement Works - Area 3 (Clear Water Bay Road) | 3ep-20 | 1404-21 | 000 | | | | | | | | | | | <u> </u> | | |
| Concurrent Project | WC07_A3 | * Earthwork | Mar-17 | Jul-20 | 500 | | | | | | | | | | | | | |
| | | | Iviar-17 | Jui-20 | 500 | | | | | | | | | | | | | |
| Concurrent Project | WC07_A4 | Road Improvement Works - Area 4 (Shun Lee Tsuen Road) * Earthwork | 1 14 47 | 1.140 | 400 | | | | | | | | | | | | | |
| | | | Mar-17 | Jul-19 | 120 | | | | | | | | | | | | | |
| Concurrent Project | WC08 | Site formation for Cavern | 1 | 10.40 | 150 | | | | | | | | | | | | | |
| , , , , , , , , , , , , , , , , , , , | | * Excavation | Jan-18 | Oct-19 | 150 | | | | | | | | | | | | | |
| Concurrent Project | WC09 | Viewing Platform | 1 | | 150 | | | | | | | | | | | | | |
| | | * Site Clearence | Jan-18 | Apr-18 | 150 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | Total Are | ea in one n | nonth (m²) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Percentage of | Daily Active | Operating | Area (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | | Percentage of Max Da | ily Active O | perating Ar | ea (%) [1] | 0 (<10%) | | | | | | | | | | | | |
| | | Percentage of Anni | ıal Average | d Active Ar | ea (%) [2] | 2] 0 (<10%) | | | | | | | | | | | | |
| | | Percentage of Anni | an Average | a Active Al | oa (70) [2] | | | | | | ۷,۷ | 1070) | | | | | | |

- Notes:
 [1] 10% active operating area has been adopted for ARQ contracts (WC03 & WC04), while for other work contracts, 100% active operating area is adopted.
 [2] 10% annual averaged works area has been adopted.
 [3] Detail breakdown of construction activities are represented by an asterisk (*)

Calculation of Watering Efficiency (For Heavy Construction and Wind Erosion)

With reference to Cowherd et al., "Control of Open Fugitive Dust Sources, EPA-450/3-88-008, U.S. Environmental Protection Agency, Research Triangle Park, NC, percentage of dust mitigation efficiency is calculated from Equation (3-2):

$$C = 100 - \frac{0.8 \, pdt}{i}$$

where

p = Potential average hourly daytime evaporation rate, mm/hour = 0.25916 [1]

d = Average hourly daytime traffic rate per hour = 70 per hour [2]

 $I = Application intensity = 1.75 L/m^2 [3]$

Note:

[1] $p = 0.0049 \text{ x } 52.8898 \text{ inch, where } 52.8898 \text{inch is equivalent to the total evaoporation of } 1343.4 \text{mm obtained from Hong Kong Observatory (http://www.weather.gov.hk/cis/normal/1971_2000/normals_e.htm)}$

[2] Estimated by Engineer

[3] The assumptions provided are for the purpose of assessment predictions only. Actual figures would be defined in the detailed design stage.

By applying the Equation (3-2) with the above assumptions,

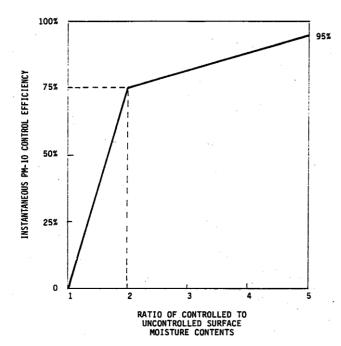
Dust suppression efficiency = $100 - 0.8 \times (0.25916 \times 70 \times t) / 1.75$ [t = time between application, hr]

Therefore,

For watering once per hour (i.e. t = 1 hour), the estimated dust suppression efficiency is 91.7%.

Calculation of Watering Efficiency (for Stockpile)

With reference to Cowherd et al., "Control of Open Fugitive Dust Sources, EPA-450/3-88-008, U.S. Environmental Protection Agency, Research Triangle Park, NC, percentage of dust mitigation efficiency is calculated from Equation (3-3) and Figure 3-3:



 $C = 75 \times (M-1) \quad \text{[for } 1 \le M \le 2\text{]}$

C = 62 + 6.7M [for $2 \le M \le 5$]

where

c = In

Instanteous control efficiency (%)

M = Ratio of controlled to uncontrolled surface moisture contents

According to the Equation (3-3), by increasing the surface moisture content by a ratio of 1.67 would achieve 50% dust suppression efficiency:

Dust suppression efficiency = $75 \times (1.67 - 1) = 50\%$

Watering Intensity

Given

Area of Stockpile = 15657.3 m^2 Dry Fill Density = 1700 kg/m^3 Uncontrolled Surface Moisture Content = 2 %Controlled Surface Moisture Content = 3.3 %

Assume

Depth of Water Penetrated into Stockpile = 0.02 m see Note [1]

Therefore,

Weight of Uncontrolled Wet Stockpile Surface = $15657.3 \times 1700 \times 0.02 / (1 - 0.02) = 543212 \text{ kg}$ Weight of Controlled Wet Stockpile Surface = $15657.3 \times 1700 \times 0.02 / (1 - 0.033) = 550705 \text{ kg}$ Watering Intensity = $(550705 - 543212) / 15657.3 = 0.5 \text{ L/m}^2/\text{hour}$

Note [1] Referenced from the Dennis R. Fitz & Kurt Bumiller (2000) "Evaluation of Watering to Control Dust in High Winds", Journal of the Air & Waste Management Association