

## *Appendix 5.10a*

### Construction Phase Model Results at WSRs – Unmitigated Scenarios

**Construction Phase Suspended Solids Elevation, Sedimentation and Oxygen Depletion at WSRs - Unmitigated Scenarios**

| WSRs   | ID  | Assessment Depth | Maximum Suspended Solids Elevations (mg/L) |            |                               |            |                               |            | Maximum Sediment Deposition Rate (g/m2/day) |                               |            |                               | Maximum Dissolved Oxygen Depletion (mg/L) |                             |                               |            |                               |            |
|--|-----|------------------|--|------------|-------------------------------|------------|-------------------------------|------------|---|-------------------------------|------------|-------------------------------|---|-----------------------------|-------------------------------|------------|-------------------------------|------------|
|  |     |                  | Assessment Criteria, Note 1                |            | Predicted Level (Scenario A1) |            | Predicted Level (Scenario A2) |            | Assessment Criteria, Note 1                 | Predicted Level (Scenario A1) |            | Predicted Level (Scenario A2) |   | Assessment Criteria, Note 1 | Predicted Level (Scenario A1) |            | Predicted Level (Scenario A2) |            |
|  |     |                  | Dry Season                                 | Wet Season | Dry Season                    | Wet Season | Dry Season                    | Wet Season |   | Dry Season                    | Wet Season | Dry Season                    | Wet Season                                |                             | Dry Season                    | Wet Season | Dry Season                    | Wet Season |
| <b>Flushing Water Intake</b>                 |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| Tseung Kwan O                                | FW1 | Depth average    | 0.1  | 0.1        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 2.73                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Cha Kwo Ling                                 | FW2 | Depth average    | 3.1  | 0.1        | 0.3                           | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 2.26                        | 7.41E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Sai Wan Ho                                   | FW3 | Depth average    | 3.1  | 0.1        | 0.2                           | 0.1        | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 2.26                        | 4.94E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Quarry Bay                                   | FW4 | Depth average    | 3.4  | 0.1        | 0.2                           | 0.1        | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 2.50                        | 4.94E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Heng Fa Chuen                                | FW5 | Depth average    | 1.2  | 0.1        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 2.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Siu Sai Wan                                  | FW6 | Depth average    | 1.2  | 0.1        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 2.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Seawater Intake</b>                       |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| TKO Desalination Plant                       | SW1 | Depth average    | 3.0  | 3.5        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.50                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Cooling Water Intake, Note 2</b>          |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| Kai Tak District Cooling System              | CW1 | Depth average    | -  | -          | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | -                           | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Yau Tong Bay Ice Plant                       | CW2 | Depth average    | -  | -          | 0.4                           | 0.2        | 0.2                           | <0.1       | -   | -                             | -          | -                             | -   | -                           | 9.88E-04                      | 4.94E-04   | 4.94E-04                      | 2.47E-04   |
| Tai Koo Place                                | CW3 | Depth average    | -  | -          | 0.2                           | 0.1        | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | -                           | 4.94E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| North Point Government Office                | CW4 | Depth average    | -  | -          | 0.2                           | 0.1        | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | -                           | 4.94E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Pamela Youde Nethersole Eastern Hospital     | CW5 | Depth average    | -  | -          | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | -                           | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Gazetted Bathing Beach</b>                |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| Big Wave Bay                                 | B1  | Depth average    | 3.0  | 3.2        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Rocky Bay                                    | B2  | Depth average    | 3.0  | 3.2        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Shek O                                       | B3  | Depth average    | 3.0  | 3.2        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Clear Water Bay First                        | B4  | Depth average    | 2.6  | 2.7        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.68                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Clear Water Bay Second                       | B5  | Depth average    | 2.6  | 2.7        | <0.1                          | <0.1       | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.68                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Potential Water Sports Area</b>           |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| Junk Bay                                     | WS1 | Depth average    | 3.2  | 3.4        | 0.5                           | 0.3        | <0.1                          | <0.1       | -   | -                             | -          | -                             | -   | 0.73                        | 1.24E-03                      | 7.41E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Secondary Contract Recreation Subzone</b> |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| Junk Bay West                                | C1a | Depth average    | 3.2  | 3.4        | 0.8                           | 6.0        | <0.1                          | 0.1        | -   | -                             | -          | -                             | -   | 0.73                        | 1.98E-03                      | 1.48E-02   | 2.47E-04                      | 2.47E-04   |
| Junk Bay West                                | C1d | Depth average    | 2.9  | 3.5        | 2.9                           | 2.6        | 0.3                           | 0.6        | -   | -                             | -          | -                             | -   | 0.59                        | 7.16E-03                      | 6.42E-03   | 7.41E-04                      | 1.48E-03   |
| Junk Bay West                                | C1f | Depth average    | 2.9  | 3.5        | 3.5                           | 3.5        | 3.9                           | 7.5        | -   | -                             | -          | -                             | -   | 0.59                        | 8.65E-03                      | 8.65E-03   | 9.63E-03                      | 1.85E-02   |
| Junk Bay West                                | C1g | Depth average    | 3.2  | 3.4        | 2.0                           | 4.6        | 1.1                           | 1.2        | -   | -                             | -          | -                             | -   | 0.73                        | 4.94E-03                      | 1.14E-02   | 2.72E-03                      | 2.96E-03   |
| Junk Bay West                                | CR1 | Depth average    | 2.9  | 3.5        | 2.6                           | 3.0        | 2.4                           | 4.6        | -   | -                             | -          | -                             | -   | 0.59                        | 6.42E-03                      | 7.41E-03   | 5.93E-03                      | 1.14E-02   |
| <b>Coral Communities</b>                     |     |                  |  |            |                               |            |                               |            |   |                               |            |                               |   |                             |                               |            |                               |            |
| Junk Bay West                                | C1a | Bottom           | 4.2  | 3.5        | 1.0                           | 7.3        | <0.1                          | 0.1        | 100   | 48                            | 307        | 2                             | 6   | 2.33                        | 2.47E-03                      | 1.80E-02   | 2.47E-04                      | 2.47E-04   |
| Junk Bay West                                | C1d | Bottom           | 3.3  | 3.8        | 3.9                           | 4.3        | 0.5                           | 2.2        | 100   | 161                           | 186        | 17                            | 41  | 1.69                        | 9.63E-03                      | 1.06E-02   | 1.24E-03                      | 5.43E-03   |
| Junk Bay West                                | C1e | Bottom           | 3.3  | 3.8        | 11.9                          | 8.8        | 5.6                           | 15.8       | 100   | 503                           | 374        | 267                           | 650                                       | 1.69                        | 2.94E-02                      | 2.17E-02   | 1.38E-02                      | 3.90E-02   |
| Junk Bay West                                | C1f | Bottom           | 3.3  | 3.8        | 5.1                           | 7.6        | 4.5                           | 6.1        | 100   | 201                           | 335        | 187                           | 259                                       | 1.69                        | 1.26E-02                      | 1.88E-02   | 1.11E-02                      | 1.51E-02   |
| Junk Bay West                                | C1g | Bottom           | 4.2  | 3.5        | 4.8                           | 6.9        | 1.5                           | 2.4        | 100   | 209                           | 283        | 61                            | 111                                       | 2.33                        | 1.19E-02                      | 1.70E-02   | 3.71E-03                      | 5.93E-03   |



**Construction Phase Suspended Solids Elevation, Sedimentation and Oxygen Depletion at WSRs - Unmitigated Scenarios**

| WSRs  | ID  | Assessment Depth | Maximum Suspended Solids Elevations (mg/L) |            |                               |            |                               |            | Maximum Sediment Deposition Rate (g/m <sup>2</sup> /day) |                               |            |                               | Maximum Dissolved Oxygen Depletion (mg/L) |                             |                               |            |                               |            |
|---|-----|------------------|--|------------|-------------------------------|------------|-------------------------------|------------|--|-------------------------------|------------|-------------------------------|---|-----------------------------|-------------------------------|------------|-------------------------------|------------|
|   |     |                  | Assessment Criteria, Note 1                |            | Predicted Level (Scenario A1) |            | Predicted Level (Scenario A2) |            | Assessment Criteria, Note 1                              | Predicted Level (Scenario A1) |            | Predicted Level (Scenario A2) |   | Assessment Criteria, Note 1 | Predicted Level (Scenario A1) |            | Predicted Level (Scenario A2) |            |
|   |     |                  | Dry Season                                 | Wet Season | Dry Season                    | Wet Season | Dry Season                    | Wet Season |  | Dry Season                    | Wet Season | Dry Season                    | Wet Season                                |                             | Dry Season                    | Wet Season | Dry Season                    | Wet Season |
| <b>Site of Special Scientific Interest (SSSI)</b>           |     |                  |  |            |                               |            |                               |            |  |                               |            |                               |   |                             |                               |            |                               |            |
| Shek O Headland   | SS1 | Depth average    | 3.0  | 3.2        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Fisheries Sensitive Receivers</b>                        |     |                  |  |            |                               |            |                               |            |  |                               |            |                               |   |                             |                               |            |                               |            |
| Tung Lung Chau FCZ  | F1  | Depth average    | 3.0  | 3.5        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.05                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Po Toi O FCZ  | F2  | Depth average    | 2.6  | 2.7        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.05                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Important Spawning Ground of Commercial Fisheries Resources | SG1 | Depth average    | 3.0  | 3.2        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
|   | SG2 | Depth average    | 3.0  | 3.2        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.59                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
|   | SG3 | Depth average    | 2.6  | 2.7        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.68                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| Important Nursery Ground of Commercial Fisheries Resources  | NG1 | Depth average    | 2.9  | 2.0        | <0.1                          | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.23                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |
| <b>Typhoon Shelter</b>                                      |     |                  |  |            |                               |            |                               |            |  |                               |            |                               |   |                             |                               |            |                               |            |
| Sam Ka Tsuen  | T1  | Depth average    | 2.1  | 3.7        | 0.1                           | <0.1       | <0.1                          | <0.1       | -  | -                             | -          | -                             | -   | 0.26                        | 2.47E-04                      | 2.47E-04   | 2.47E-04                      | 2.47E-04   |

**Notes**

1. Details of assessment criteria are presented in Section 5.7.2.
  2. There are no applicable assessment criteria for the cooling water intakes (see Section 5.2.11).
- Shaded Cell (in Yellow) - Exceedance of assessment criteria