

Appendix 5.6

Modelling Scenarios for Construction Phase

Table A5-6-1 Sediment Loss Rates for Scenario A1 (Unmitigated without Silt Curtain)

| Source ID | Activity | Fine Content | Dry Density (kg/m ³) | Production Rate (m ³ /day) | Spill Rate | Working Hours per day | Sediment Loss Rate (kg/s), see Note 1 |
|---------------------------------|--|--------------|----------------------------------|---|----------------------|-----------------------|---------------------------------------|
| TKO 137 (Figure A5-6-1) | | | | | | | |
| S1 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| Total | | | | | | | 0.1031 |
| TKO 132 (Figures A5-6-2) | | | | | | | |
| D1 | Sediment removal (1 work front) | - | - | 2,100 | 20 kg/m ³ | 12 | 0.9722 |
| S2 | Sand blanket laying (seawall) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| S3 | Sand blanket laying (reclamation) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| S4 | Sand blanket laying (reclamation) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| S5 | Sand blanket laying (reclamation) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| D2 | Construction of marine viaduct | - | - | 18.85 (surface sediment volume disturbed by piling) | 20 kg/m ³ | 12 | 0.008727 |
| Total | | | | | | | 1.393 |

Note 1 – The sediment loss rates are rounded up to 4 significant figures.

Table A5-6-2 Sediment Loss Rates for Scenario A1 (Mitigated with Silt Curtain)

| Source ID | Activity | Fine Content | Dry Density (kg/m ³) | Production Rate (m ³ /day) | Spill Rate | Working Hours per day | Layer of Silt Curtains | Sediment Loss Rate (kg/s), see Note 1 |
|---------------------------------|--|--------------|----------------------------------|---|----------------------|-----------------------|------------------------|---------------------------------------|
| TKO 137 (Figure A5-6-1) | | | | | | | | |
| S1 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Single | 0.02576 |
| Total | | | | | | | | 0.02576 |
| TKO 132 (Figures A5-6-2) | | | | | | | | |
| D1 | Sediment removal (1 work front) | - | - | 2,100 | 20 kg/m ³ | 12 | Double | 0.1225 |
| S2 | Sand blanket laying (seawall) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Double | 0.01299 |
| S3 | Sand blanket laying (reclamation) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Double | 0.01299 |
| S4 | Sand blanket laying (reclamation) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Double | 0.01299 |
| S5 | Sand blanket laying (reclamation) (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Double | 0.01299 |
| D2 | Construction of marine viaduct | - | - | 18.85 (surface sediment volume disturbed by piling) | 20 kg/m ³ | 12 | Single | 0.002182 |
| Total | | | | | | | | 0.1766 |

Note 1 – The sediment loss rates are rounded up to 4 significant figures.

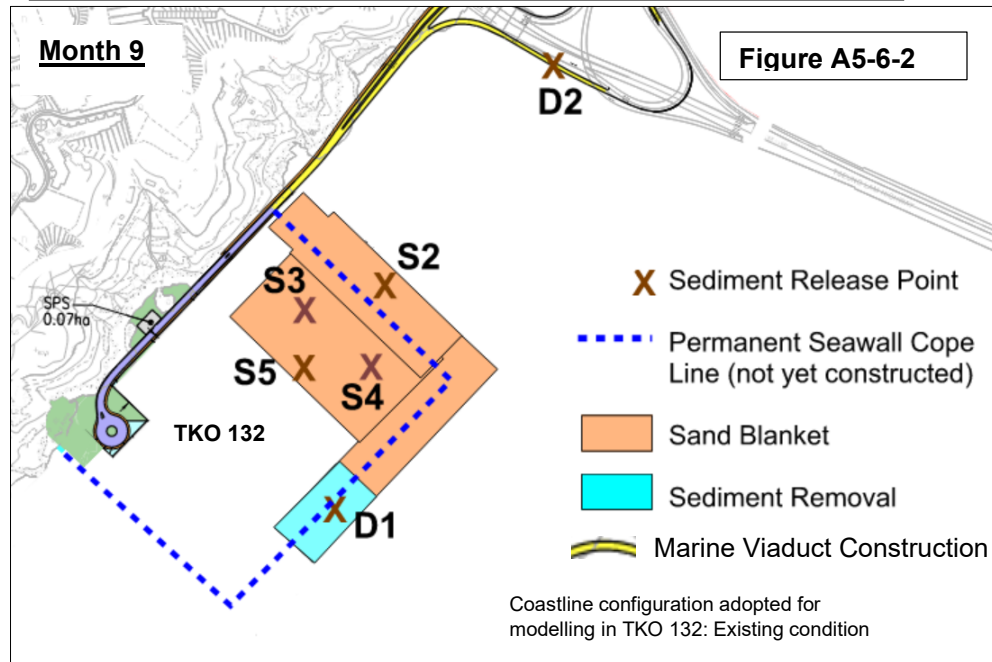
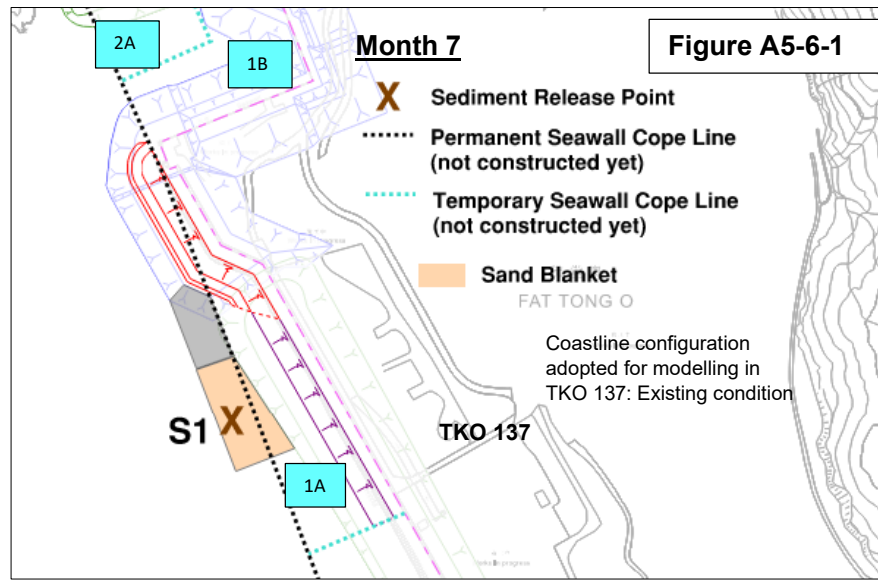


Table A5-6-3 Sediment Loss Rates for Scenario A2 (Unmitigated without Silt Curtain)

| Source ID | Activity | Fine Content | Dry Density (kg/m ³) | Production Rate (m ³ /day) | Spill Rate | Working Hours per day | Sediment Loss Rate (kg/s), see Note 1 |
|----------------------------------|------------------------------------|--------------|----------------------------------|---|----------------------|-----------------------|---------------------------------------|
| TKO 137 (Figure A5-6-3) | | | | | | | |
| S6 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| F1 | Underwater filling (4 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | 1.166 |
| Total | | | | | | | 1.269 |
| TKO 132 (Figures A5-6-4) | | | | | | | |
| S7 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| S8 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | 0.1031 |
| F2 | Underwater filling (2 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | 1.166 |
| F3 | Underwater filling (2 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | 1.166 |
| F4 | Underwater filling (2 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | 1.166 |
| D3 | Construction of marine viaduct | - | - | 18.85 (surface sediment volume displaced by piling) | 20 kg/m ³ | 12 | 0.008727 |
| Total | | | | | | | 3.713 |

Note 1 – The sediment loss rates are rounded up to 4 significant figures.

Table A5-6-4 Sediment Loss Rates for Scenario A2 (Mitigated with Silt Curtain)

| Source ID | Activity | Fine Content | Dry Density (kg/m ³) | Production Rate (m ³ /day) | Spill Rate | Working Hours per day | Layer of Silt Curtains | Sediment Loss Rate (kg/s), see Note 1 |
|----------------------------------|------------------------------------|--------------|----------------------------------|---|----------------------|-----------------------|------------------------|---------------------------------------|
| TKO 137 (Figure A5-6-3) | | | | | | | | |
| S6 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Single | 0.02576 |
| F1 | Underwater filling (4 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | Single | 0.2914 |
| Total | | | | | | | | 0.3172 |
| TKO 132 (Figures A5-6-4) | | | | | | | | |
| S7 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Double | 0.01299 |
| S8 | Sand blanket laying (1 work front) | 5% | 1,680 | 1,060 | 5% | 12 | Double | 0.01299 |
| F2 | Underwater filling (2 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | Double | 0.1469 |
| F3 | Underwater filling (2 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | Double | 0.1469 |
| F4 | Underwater filling (2 work fronts) | 25% | 1,900 | 2,120 | 5% | 12 | Double | 0.1469 |
| D3 | Construction of marine viaduct | - | - | 18.85 (surface sediment volume displaced by piling) | 20 kg/m ³ | 12 | Single | 0.002182 |
| Total | | | | | | | | 0.4689 |

Note 1 – The sediment loss rates are rounded up to 4 significant figures.

