# Maeda-CRGL-SELI Joint Venture

# Contract NO. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel

## Quarterly EM&A Report (July to September 2012)

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## Quarterly EM&A Report (July to September 2012)

**Report No** EB000364R0861

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# Contract NO. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel

## Quarterly EM&A Report (July to September 2012)

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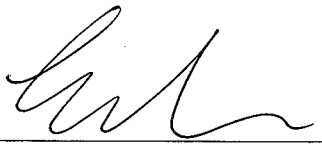
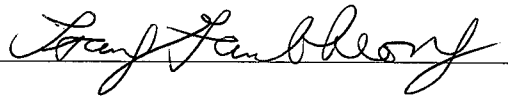
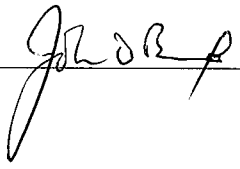
|---|---|---|
| **Author** | Edwin Chan |  |
| **Checker** | Fan Cheong Tsang |  |
| **Approver** | John Berry |  |
| **Report No** | EB000364R0861 | |
| **Date** | October 2012 | |

# CONTENTS

# APPENDICES



# TABLES

# Executive Summary

1 This quarterly EM&A summary report under the Main Contract for the Design and Construction of Tsuen Wan Drainage Tunnel (hereafter referred to as the "Project") to Maeda-CRGL-SELI Joint Venture (MCSJV), which summarises the findings of environmental impact monitoring works during the period from July to September 2012.

2 In this reporting period, air-borne noise monitoring was performed at five monitoring stations (NSR1, NSR3, NSR6, NSR8 and NSR9). Air quality monitoring was carried out at four monitoring stations (ASR1, ASR3, ASR8 and ASR9). Water quality monitoring was carried out at four monitoring stations (Intake I-1, Intake I-2, Intake I-3 and Outfall O-1). Noise level was measured in terms of $L_{eq\ (30\ min)}$, $L_{10}$ and $L_{90}$. Air quality was measured in terms of 1-hour Total Suspended Particulates (TSP). Water quality was measured in terms of Temperature, pH, Dissolved Oxygen (DO), Turbidity (Tby) and Suspended Solids (SS).

3 Details of all monitoring stations are summarized in the table below.

| Type of Monitoring | Monitoring Station ID | Name of Premises | Status of Monitoring Works during the Reporting Period |
|---|---|---|---|
| Air Quality Monitoring | ASR1 | Sik Sik Yuen Ho Fung College | Ongoing |
| | ASR3 | Hong Hoi Chee Hong Temple | Ongoing |
| | ASR8 | Beach Tower (Long Beach Garden) | Ongoing |
| | ASR9 | Greenview Terrace (Block 1) | Ongoing |
| Air-borne Noise Monitoring | NSR1 | Sik Sik Yuen Ho Fung College | Ongoing |
| | NSR3 | Hong Hoi Chee Hong Temple | Ongoing |
| | NSR6 | Squatters | Ongoing |
| | NSR8 | Beach Tower (Long Beach Garden) | Ongoing |
| | NSR9 | Greenview Terrace (Block 1) | Ongoing |
| Water Quality Monitoring | I-1 | Intake I-1 | Ongoing |
| | I-2 | Intake I-2 | Ongoing |
| | I-3 | Intake I-3 | Ongoing |
| | O-1 | Outfall O-1 | Ongoing |

4 The major construction activities undertaken by the Contractor during the period from July to September 2012 include site cleaning and tidying at Outfall, I-1, I-2 and I-3; excavation, concrete breaking for open tapered channel, cascade, box culvert and vehicular access construction at Outfall; construction of reinforced concrete (RC) structure of cascade, buttress wall and opened tapered channel and vehicular access at Outfall; construction of surface drainage at Outfall; construction of de-aeration chamber RC structure at I-3; drilling hole and excavation for main adit tunnel at I-3; backfilling for de-aeration chamber and vortex drop shaft (VDS) at I-3; construction of man access shaft RC structure at I-3; construction of vortex drop shaft RC structure at I-3; excavation and construction of road drainage at I-3; tree planting and maintenance works at I-3; blasting and excavation of main adit

tunnel and man access audit at I-2; construction of man access shaft, vortex drop shaft and deaeration chamber RC structure at I-2; installation of erosion control mat and associated landscaping works at portion G at I-2; dismantling noise enclosure of MAS at I-2; modification works of 1500 mm step-channel outlet at portion G at I-2; installation of steel works at portion G at I-2; construction of remaining box culvert RC structure at I-1; excavation for construction of skin wall and inclined ramp RC structure at I-1; installation of waterproof membrane on spiral ramp roof, screeding and rendering for tiling works at I-1; and grouting and segment repair works at Tunnel.

5 Fixing rebar at de-aeration chamber (DAC) within noise enclosure at I-2, rock splitting at main adit (MA) within noise enclosure at I-2, removing steel formwork at I-2, erecting formwork for vortex drop shaft at I-3, mucking out for main adit (MA) at I-3, re-erecting of scaffold for VDS at I-3, installation of wire mesh for main adit at I-3, erecting steel platform at approach channel at I-3 were undertaken during the restricted hours in the reporting period. As confirmed by the Contractor, no marine mud dredging works for basin scheme at Portion E was conducted in the reporting period.

6 No project related exceedance of air quality and water quality monitoring was recorded. One complaint of construction noise at I-2 was received on 5 September 2012 that constituted an Action Level exceedance. The table below summarizes the exceedances of air quality, noise and water quality in the reporting period.

| Parameter | Action Level Exceedance | Limit Level Exceedance |
|---|---|---|
| Air | Nil | Nil |
| Air-borne Noise | One record at I-2 on 5 September 2012 | Nil |
| DO | Nil | Nil |
| Turbidity | | Two records at I-1 on 23 July 2012 and 25 July 2012;<br>Four records at I-2 on 5 July 2012, 18 July 2012, 25 July 2012 and 27 July 2012<br>Six records at I-3 on 5 July 2012, 18 July 2012, 23 July 2012, 25 July 2012, 27 July 2012, 6 August 2012 |
| SS | Two records at I-1 on 18 July 2012 and 31 August 2012<br>Three records at I-2 on 27 July 2012, 30 July 2012 and 1 August 2012<br>One record at I-3 on 24 August 2012 | Five records at I-1 on 9 July 2012, 23 July 2012, 25 July 2012, 21 September 2012 and 28 September 2012<br>Five records at I-2 on 5 July 2012, 7 July 2012, 25 July 2012, 27 August 2012 and 26 September 2012<br>Five records at I-3 on 18 July 2012, 23 July 2012, 25 July 2012, 27 July 2012, 6 August 2012 |

7 Waste figures during the reporting period are summarized in the table below.

| Status of Waste Management | Quantity |
|---|---|
| Inert C&D Material Disposed of to Public Fill at Tuen Mun ($m^3$) | 6,324.8 |
| Inert C&D Material Reused in this Contract ($m^3$) | 0 |
| Inert C&D Material Reused in other Contract* ($m^3$) | 1,010.0 |
| Metals Generated (kg) | 12.0 |
| Paper / Cardboard Packaging (kg) | 400.0 |
| Plastics (kg) | 20.0 |
| Chemical Waste (kg) | 16,900.0 |
| General Waste Disposed of to NENT Landfill ($m^3$) | 89.1 |

* Other Contracts include XRL823AB and Tailor Recycle Aggregate.

8 One complaint of water quality at I-3 and one complaint of construction noise at I-2 was received on 10 August 2012 and 5 September 2012, respectively, during the reporting period.

9 No Notification of Summons was received since the commencement of the Project.

# 1 Introduction

1.1.1 The Drainage Services Department (DSD) proposes to construct a tunnel of an internal diameter of 6.5 m and length 5.13 km, with the purpose to alleviate the flooding risk in Tsuen Wan and Kwai Chung.

1.1.2 This project is a Designated Project under Schedule 2 Part I Category Q, of the Environmental Impact Assessment Ordinance (EIAO) as part of the proposed Tsuen Wan Drainage Tunnel (TWDT) passes underneath the existing Tai Mo Shan Country Park. An Environmental Impact Assessment (EIA) Study was undertaken to provide information on the nature and extent of environmental impacts arising from the construction and operation of the proposed designed project and related activities taking place concurrently. From the EIA, the recommendations for monitoring contained herein are made.

1.1.3 The Maeda-CRGL-SELI Joint Venture (MCSJV) was awarded by DSD with the Contract – Design and Construction of Tsuen Wan Drainage Tunnel.

1.1.4 Hyder was commissioned by the MCSJV as the ET to implement an EM&A program in accordance with the EM&A Manual. The proposed tunnel section flows from the junction of Shing Mun Road and Wo Yi Hop Road and discharges to south of Yau Kom Tau underneath Castle Peak Road, as shown in Appendix A.

1.1.5 The construction works of the Project commenced in January 2008. This is the eighteenth querterly EM&A report summarising the impact monitoring results and audit findings of the EM&A program during the reporting period between July and September 2012.

# 2 Project Information

## 2.1 Project Organization and Management Structure

2.1.1 The organization chart and lines of communication with respect to the on-site environmental management are shown in Appendix B.

## 2.2 Construction Progress

2.2.1 It is anticipated that the overall project programme from the detail design to completion of all civil works shall take approximately 54 months. The construction programme is presented in Appendix C.

The major construction activities undertaken in the reporting month were:

- Site cleaning and tidying at Outfall, I-1, I-2 and I-3;
- Excavation, concrete breaking for open tapered channel, cascade, box culvert and vehicular access construction at Outfall;
- Construction of reinforced concrete (RC) structure of cascade, buttress wall and opened tapered channel and vehicular access at Outfall;
- Construction of surface drainage at Outfall;

- Construction of de-aeration chamber RC structure at I-3;
- Drilling hole and excavation for main adit tunnel at I-3;
- Backfilling for de-aeration chamber and vortex drop shaft (VDS) at I-3;
- Construction of man access shaft RC structure at I-3;
- Construction of vortex drop shaft RC structure at I-3;
- Excavation and construction of road drainage at I-3;
- Tree planting and maintenance works at I-3;
- Blasting and excavation of main adit tunnel and man access audit at I-2;
- Construction of man access shaft, vortex drop shaft and de-aeration chamber RC structure at I-2;
- Dismantling noise enclosure of MAS at I-2;
- Installation of erosion control mat and associated landscaping works at portion G at I-2;
- Modification works of 1500 mm step-channel outlet at portion G at I-2;
- Installation of steel works at portion G at I-2;
- Construction of remaining box culvert RC structure at I-1;
- Excavation and construction of skin wall and inclined ramp RC structure at I-1;
- Installation of waterproof membrane on spiral ramp roof, screeding and rendering for tiling works at I-1; and
- Grouting and segment repair works at Tunnel.

## 2.3 Mitigation Measures

2.3.1 The environmental mitigation measures that were implemented and their statuses are given in Appendix D.

# 3 EM&A Requirement

## 3.1 General

3.1.1 The EM&A requirements are stipulated in the EM&A Manual. The principal purposes of the EM&A program are to assess the compliance with applicable environmental legislation and associated regulations, to ensure the implementation of mitigation measures specified in the EM&A Manual, and to identify any remedial works necessary for redressing any unacceptable or unanticipated environmental impacts.

## 3.2 EM&A on Air Quality, Noise and Water Quality

### Monitoring Parameters

3.2.1 The air quality, noise and water quality monitoring frequencies and parameters are shown in Table 3-1.

| Type of Monitoring | Monitoring Station ID | Parameter | Frequency |
|---|---|---|---|
| Air Quality Monitoring | ASR1; ASR3; ASR8 and ASR9 | 1-hour TSP ($\mu g/m^3$) | Once every 6 days |
| Air-borne Noise Monitoring | NSR1; NSR3; NSR6; NSR8 and NSR9 | $L_{eq\ (30\ min)}$ (dB(A)) | Once every week |
| Water Quality Monitoring | I-1, I-1-C, I-2, I-2-C, I-3, I-3-C, | DO (mg/L) | Three days per week |
| | | SS (mg/L) | |
| | | Turbidity (NTU) | |
| | | pH | |
| | | Temperature ($^oC$) | |

**Table 3-1 Frequency of Air Quality, Noise and Water Quality Monitoring**

## 3.3 Monitoring Locations

3.3.1 The monitoring locations for air quality, noise and water quality are shown in Tables 3-2, 3-3, 3-4 and Appendix E.

| Monitoring Station ID | Name of Premises | Floor Level |
|---|---|---|
| ASR1 | Sik Sik Yuen Ho Fung College | G/F |
| ASR3 | Hong Hoi Chee Hong Temple | Podium |
| ASR8 | Beach Tower (Long Beach Garden) | G/F |
| ASR9 | Greenview Terrace (Block 1) | G/F |

**Table 3-2 Air Quality Monitoring Locations**

| Monitoring Station ID | Name of Premises | Floor Level |
|---|---|---|
| NSR1 | Sik Sik Yuen Ho Fung College | G/F |
| NSR3 | Hong Hoi Chee Hong Temple | Podium |
| NSR6 | Squatters | G/F |
| NSR8 | Beach Tower (Long Beach Garden) | G/F |
| NSR9 | Greenview Terrace (Block 1) | Podium (up to 6 July 2009)<br>Roof* (from 16 July 2009) |

* The noise monitoring location of NSR9 had been relocated to the rooftop from 16 July 2009.

**Table 3-3 Noise Monitoring Locations**

| Monitoring Station ID | Name of Premises |
|---|---|
| I-1 | Intake I-1 |
| I-1-C | Control of Intake I-1 |

| Monitoring Station ID | Name of Premises |
|---|---|
| I-2 | Intake I-2 |
| I-2-C | Control of Intake I-2 |
| I-3 | Intake I-3 |
| I-3-C* | Control of Intake I-3 |

Note: *The upper stream location (I-3-C*) had been relocated from end of February 2009 due to coarse stone blockage.

**Table 3-4 Water Quality Monitoring Locations**

3.3.2 Referring to Section 4.4 of the approved Contract Specific EM&A Manual (Report No. EB000364R0273, dated 6 January 2010), while the construction of the Outfall requires minor dredging, water quality monitoring at the Outfall shall be undertaken during the period of the dredging works. As advised by the Contractor, all relevant marine works at Portion E of the site were completed in April 2012. As such, the ET submitted a proposal to EPD on 30 April 2012 to terminate the marine water quality monitoring effective from 1 May 2012. EPD had no objection to the proposal in their reply on 7 May 2012.

## 3.4 Performance Limits (AL Levels)

3.4.1 In accordance with the EM&A Manual, the appropriate Action and Limit Levels for air quality, air-borne noise and water quality were established. They are presented in Table 3-5, Table 3-6 and Table 3-7. Should non-compliance of the air quality, noise and water quality criteria occur, actions in accordance with the Event / Action Plan stipulated in contract specific EM&A Manual should be carried out.

| Station | 1-hr TSP Level in µg/m$^3$ | |
|---|---|---|
| | Action Level | Limit Level |
| ASR1 | 307 | 500 |
| ASR3 | 327 | 500 |
| ASR8 | 337 | 500 |
| ASR9 | 329 | 500 |

**Table 3-5 Action & Limit Levels for Air Quality**

| Time Period | Action | Limit |
|---|---|---|
| 0700 – 1900 hours on normal weekdays | When one documented complaint is received | 75 dB(A)* |

Note: * For educational establishments the limit level shall be 70 dB(A) and reduced to 65 dB(A) during examination periods between 0700 and 1900 hours on normal weekdays.

**Table 3-6 Action & Limit Levels for Air-borne Noise**

| Parameters | Action | Limit |
|---|---|---|
| DO in mg/L<br>(Surface, Middle & Bottom) | Surface & Middle<br>5%-ile of baseline data for surface and middle layer.<br><br>Bottom<br>5%-ile of baseline data for bottom layer. | Surface & Middle<br>4 mg/L, except 5 mg/L for Fish Culture Zone (FCZ) or<br>1%-ile of baseline data for surface and middle layer<br><br>Bottom<br>2 mg/L or 1%-ile of baseline data for bottom layer |
| SS in mg/L<br>(Depth-averaged) | 95%-ile of baseline data or 120% of upstream control station's SS level at the same tide of the same day | 99%-ile of baseline or 130% of upstream control station's SS level at the same tide of the same day and specific sensitive receiver water quality requirements (e.g. required suspended solids levels for concerned sea water intakes) |
| Turbidity (Tby) in NTU<br>(Depth-averaged) | 95%-ile of baseline data or 120% of upstream control station's Tby at the same tide of the same day | 99%-ile of baseline or 130% of upstream control station's Tby at the same tide of the same day |

Notes:

- For DO, non-compliance of the water quality limit occurs when monitoring result is lower than the limits.
- For SS and Tby, non-compliance of the water quality limit occurs when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever necessary.

**Table 3-7 Action & Limit Levels for Water Quality**

## 3.5 Monitoring Result

3.5.1 All measured air quality monitoring levels were complying with the Action and Limit Levels in the reporting period. A summary of air quality monitoring results is presented in Table 3-9 and Appendix F.

| Monitoring Station | 1-hour TSP (μg/m$^3$) | | | Action Level | Limit Level |
|---|---|---|---|---|---|
| | Range | | | (μg/m$^3$) | (μg/m$^3$) |
| ASR1 | 14.1 | - | 142.0 | 307 | 500 |
| ASR3 | 19.0 | - | 167.6 | 327 | 500 |
| ASR8 | 16.5 | - | 152.7 | 337 | 500 |
| ASR9 | 13.9 | - | 181.7 | 329 | 500 |

*Italic* indicates the exceedances of *Action Levels*
**Bold** indicates the exceedances of **Limit Levels**

**Table 3-8 Summary of Air Quality Monitoring Results**

3.5.2 All measured air-borne noise monitoring levels were complying with the Limit Level in the reporting period.

3.5.3 A noise complaint at I-2 was received on 5 September 2012. Details of the complaint and investigation are presented in Appendix H. The complaint was considered as an Action Level exceedance.

3.5.4 A summary of noise monitoring results is presented in Table 3-9 and Appendix F.

| Monitoring Station | $L_{eq\ (30\ min)}$ dB(A) | | | Limit Level |
|---|---|---|---|---|
| | Range | | | dB(A) |
| NSR1 | 63 | - | 68 | 65/70# |
| NSR3 | 62 | - | 74 | 75 |
| NSR6 | 55 | - | 66 | 75 |
| NSR8 | 63 | - | 68 | 75 |
| NSR9 | 65 | - | 74 | 75 |

Note: **Bold** indicates the exceedances of **Limit Levels**
# - Noise Limit Level was reduced to 65 dB(A) from 70 dB(A) during school examination period. The records above 65 dB(A) are not in that period.

**Table 3-9 Summary of Impact Air-borne Noise Monitoring Results**

3.5.5 A summary of water quality monitoring results is presented in Table 3-10 and Appendix F.

3.5.6 None of exceedance related to project construction activities was recorded during the reporting quarter but a total of **33** non-project related exceedances were recorded.

3.5.7 A total of **24** non-project related exceedances were recorded in **July 2012**, including:

Turbidity

- Two exceedances of turbidity limit level were recorded at I-1 on 23 and 25 July 2012. For 23 July 2012, the measured turbidity level (45.05 NTU) was higher than the baseline limit level, but lower than the turbidity level (45.15 NTU) of the control station (I-1-C). For 25 July 2012, the measured turbidity level (24.55 NTU) was higher than the baseline limit level, but lower than the turbidity level (24.75 NTU) of the control station (I-1-C). Details of the construction activities conducted on the monitoring days are given in Appendix G. No direct disturbance was observed from the site. About 112.0 mm and 82.3 mm rainfall were recorded by the Hong Kong Observatory on 23 and 25 July 2012, respectively. The exceedances were considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedances were non-project related, no further action was required.

- Four exceedances of turbidity limit level were recorded at I-2 on 5, 18, 25 and 27 July 2012. The measured turbidity levels on 5, 18, 25 and 27 July 2012 (12.70, 7.29, 23.25 and 8.08 NTU, respectively) were higher than the baseline limit level, but lower than the corresponding turbidity levels (12.75, 7.50, 23.35 and 8.19 NTU, respectively) of the control station (I-2-C). Details of the construction activities conducted on the monitoring days are given in Appendix G. No direct disturbance was observed from the site. About 22.0 mm, 34.3 mm, 82.3 mm and 25.7 mm rainfall were recorded by the Hong Kong Observatory on 5, 18, 25 and 27 July 2012, respectively. The exceedances were considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedances were non-project related, no further action was required.

- Five exceedances turbidity limit level were recorded at I-3 on 5, 18, 23, 25 and 27 July 2012. The measured turbidity levels on 5, 18, 23, 25 and 27 July 2012 (4.72, 48.05, 14.31, 31.15 and 24.05 NTU, respectively) were higher than the baseline limit level, but lower than the corresponding turbidity levels (4.74, 48.35, 14.47, 31.25 and 24.25 NTU, respectively) of the control station (I-2-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. About 22.0 mm, 34.3 mm, 112.0 mm, 82.3 mm and 25.7 mm rainfall were recorded by the Hong Kong Observatory on 5, 18, 23, 25 and 27 July 2012 respectively. The exceedances were considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedances were non-project related, no further action was required.

Suspended Solids

- Three exceedances of SS limit level were recorded at I-1 on 9, 23 and 25 July 2012. For 9 July 2012, the measured SS level (2.80 mg/L) was well below the baseline action / limit level, but higher than 130% of the SS level (<2.00 mg/L) of the control station (I-1-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project

related, no further action was required. For 23 July 2012, the measured SS level (62.10 mg/L) was higher than the baseline limit level, but lower than 120% of the SS level (59.70 mg/L) of the control station (I-1-C). For 25 July 2012, the measured SS level (17.20 mg/L) was higher than the baseline limit level, but lower than the SS level (18.45 mg/L) of the control station (I-1-C). Details of the construction activities conducted on the monitoring days are given in Appendix G. No direct disturbance was observed from the site. About 112.0 mm and 82.3 mm rainfall were recorded by the Hong Kong Observatory on 23 and 25 July 2012, respectively. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedances were non-project related, no further action was required.

- Three exceedances of SS limit level were recorded at I-2 on 5, 7 and 25 July 2012. The measured SS levels on 5 and 25 July 2012 (12.05 and 11.90 mg/L, respectively) were higher than the baseline limit level, but lower than the corresponding SS levels (13.40 and 13.05 mg/L, respectively) of the control station (I-2-C). Details of the construction activities conducted on the monitoring days are given in Appendix G. No direct disturbance was observed from the site. About 22.0 mm and 82.3 mm rainfall was recorded by the Hong Kong Observatory on 5 and 25 July 2012, respectively. Therefore, the exceedances were considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. For 7 July 2012, the measured SS level (4.70 mg/L) was lower than the baseline action / limit level, but higher than 130% of the SS level (<2.00 mg/L) of the control station (I-2-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No wastewater directly discharged from the site was observed. Although the SS level at I-2 was more than 135% higher than that at I-2-C, no direct sources of impact from the site were identified. As such, no further mitigation measures or actions were recommended.

- Four exceedances of SS limit level were recorded at I-3 on 18, 23, 25 and 27 July 2012. For 18 July 2012, the measured SS level (37.25 mg/L) was higher than the baseline limit level, but lower than 120% of the SS level (36.75 mg/L) of the control station (I-3-C). The measured SS levels on 23, 25 and 27 July 2012 (16.35, 15.05 and 16.70 mg/L, respectively) were higher than the baseline limit level, but lower than the corresponding SS level (16.40, 17.90 and 18.10 mg/L, respectively) of the control station (I-3-C). Details of the construction activities conducted on the monitoring days are given in Appendix G. No direct disturbance was observed from the site. About 34.3 mm, 112.0 mm, 82.3 mm and 25.7 mm rainfall were recorded by the Hong Kong Observatory on 18, 23, 25 and 27 July 2012, respectively. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedances were non-project related, no further action was required.

- One exceedance of SS action level was recorded at I-1 on 18 July 2012. The measured SS level (3.45 mg/L) was well below the baseline action/limit level, but higher than 120% of the SS level (2.75 mg/L) of the control station (I-1-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. The exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

- Two exceedances of SS action level were recorded at I-2 on 27 and 30 July 2012. For 27 July 2012, the measured SS level (5.25 mg/L) was lower than the baseline action / limit level, but higher than 120% of the SS level (4.15 mg/L) of the control station (I-2-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No

direct disturbance was observed from the site. About 25.7 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. For 30 July 2012, the measured SS level (7.10 mg/L) was lower than the baseline action / limit level, but higher than 120% of the SS level (5.65 mg/L) of the control station (I-2-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

3.5.8 A total of **6** non-project related exceedances were recorded in **August 2012**, including:

Turbidity

- One exceedance of turbidity limit level was recorded at I-3 on 6 August 2012. The measured turbidity level (6.14 NTU) was higher than the baseline limit level, but lower than the turbidity level (6.15 NTU) of the upstream control station (I-3-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. The exceedance was considered to be contributed by the rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required.

Suspended Solids

- One exceedance of SS limit level was recorded at I-2 on 27 August 2012. The measured SS level (3.45 mg/L) was lower than the baseline action / limit level, but higher than 130% of the SS level (2.50 mg/L) of the upstream control station (I-2-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

- One exceedance of SS limit level was recorded at I-3 on 6 August 2012. The measured SS level (3.65 mg/L) was lower than the baseline action / limit level, but higher than 130% of the SS level (2.70 mg/L) of the upstream control station (I-3-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

- One exceedance of SS action level was recorded at I-1 on 31 August 2012. The measured SS level (8.95 mg/L) was higher than the baseline action level, but lower than 120% of the SS level (8.60 mg/L) of the upstream control station (I-1-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation and high SS level at upstream location. Since the exceedance was non-project related, no further action was required.

- One exceedance of SS action level was recorded at I-2 on 1 August 2012. The measured SS level (2.90 mg/L) was well below the baseline action/limit level, but higher than 120% of the SS level (2.35 mg/L) of the upstream control station (I-2-C). Details of the construction

activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. The exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

- One exceedance of SS action level was recorded at I-3 on 24 August 2012. The measured SS level (3.50 mg/L) was lower than the baseline action / limit level, but higher than 120% of the SS level (2.80 mg/L) of the upstream control station (I-3-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

3.5.9 A total of **3** non-project related exceedances were recorded in **September 2012**, including:

Suspended Solids

- Two exceedances of SS limit level were recorded at I-1 on 21 and 28 September 2012. The measured SS level on 21 and 28 July 2012 (8.30 and 3.30 mg/L, respectively) were lower than the baseline limit level, but higher than 130% of the SS levels (6.25 and <2.00 mg/L, respectively) of the control station (I-1-C). Details of the construction activities conducted on the monitoring days are given in Appendix G. The Contractor had provided wastewater treatment plant for the site effluent before discharge and erected the sealed concrete block wall to separate the existing stream and site works area. No wastewater directly discharged from the site was observed. Although the SS levels at I-1 were more than 30% higher than those at I-1-C, no direct sources of impact from the site were identified. As such, no further mitigation measures or actions were recommended.

- One exceedance of SS limit level was recorded at I-2 on 26 September 2012. The measured SS level (3.45 mg/L) was lower than the baseline action / limit level, but higher than 130% of the SS level (2.30 mg/L) of the upstream control station (I-2-C). Details of the construction activities conducted on the monitoring day are given in Appendix G. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required.

3.5.9 The above mentioned exceedances were considered non-project related. However, proper mitigation measures had been implemented during measurements. Details of the above mentioned investigations can be referred to the Interim Notifications of Environmental Quality Limits Exceedances as enclosed in Appendix G.

| Monitoring Station | Temperature (°C) | DO (mg/L) | | pH | Turbidity (NTU) | | Suspended Solid (mg/L) | |
|---|---|---|---|---|---|---|---|---|
| | Range | Range | Action / Limit Level | Range | Range | Action / Limit Level | Range | Action / Limit Level |
| I-1 | 24.10 - 33.00 | 6.78 - 8.04 | 3.42 / 3.34 | 7.75 - 8.02 | 2.49- **45.05** | 9.75 / 12.47 | <2.00 - **62.10** | 8.85 / 10.17 |
| I-1-C | 24.10 - 32.90 | 6.71 - 8.00 | - | 7.74 - 8.03 | 2.52 - 45.15 | - | <2.00 - 59.70 | - |
| I-2 | 24.20 - 32.60 | 6.62 - 7.94 | 3.66 / 3.63 | 7.81 - 8.01 | 1.35 - **23.25** | 6.63 / 6.99 | <2.00 - **12.05** | 7.68 / 8.34 |
| I-2-C | 24.20 - 32.70 | 6.55 - 8.02 | - | 7.81 - 8.00 | 1.38 - 23.35 | - | <2.00 - 13.40 | - |
| I-3 | 24.00 - 33.10 | 6.75 - 8.01 | 3.65 / 3.51 | 7.80 - 8.03 | 1.66 - **48.05** | 3.99 / 4.18 | <2.00 - **37.25** | 6.13 / 7.23 |
| I-3-C | 24.00 - 33.10 | 6.67 - 7.94 | - | 7.80 - 8.03 | 1.64 - 48.35 | - | <2.00 - 36.75 | - |

Note: *Italic* indicates the exceedances of Action Levels
**Bold** indicates the exceedances of **Limit Levels**

**Table 3-10 Summary of Impact Water Quality Monitoring Results**

# 4 Quarterly Summary, Environmental Condition and Non-Compliance Records

## 4.1 Summary of Waste Disposal Records

4.1.1 According to the information provided by the Contractor, the quantities of C&D materials and other wastes in the reporting period are summarized in Table 4-1

| Status of Waste Management | July 2012 | August 2012 | September 2012 |
|---|---|---|---|
| Inert C&D Material Disposed of to Public Fill at Tuen Mun ($m^3$) | 1,930.6 | 2,431.6 | 1,962.6 |
| Inert C&D Material Reused in this Contract ($m^3$) | 0 | 0 | 0 |
| Inert C&D Material Reused in other Contract* ($m^3$) | 480.0 | 265.0 | 265.0 |
| Metals Generated (kg) | 0 | 12.0 | 0 |
| Paper / Cardboard Packaging (kg) | 0 | 400.0 | 0 |
| Plastics (kg) | 0 | 20.0 | 0 |
| Chemical Waste (kg) | 13,400.0 | 3,500.0 | 0 |
| General Waste Disposed of to NENT Landfill ($m^3$) | 20.8 | 32.6 | 35.7 |

* Other Contracts include XRL823AB and Tailor Recycle Aggregate.

**Table 4-1 Waste Generated from July to September 2012**

## 4.2 Weather Conditions

4.2.1 The weather conditions during the period from July to September 2012 were mainly sunny, cloudy and rainy.

## 4.3 Summary of Project-Related Exceedances

4.3.1 Summary of exceedance results are summarized in Table 4-2. Appendix G shows the Interim Notifications of Environmental Quality Limits Exceedances issued in the reporting period.

| Environmental Monitoring | Total No. of Measurement | Action Level Exceedance | % of Action Level Exceedance | Limit Level Exceedance | % of Limit Level Exceedance |
|---|---|---|---|---|---|
| **Air Quality** | 204 | 0 | 0 | 0 | 0 |
| **Air-borne Noise** | 68 | 1 (Complaint) | 1.5% | 0 | 0 |

| Environmental Monitoring | Total No. of Measurement | Action Level Exceedance | % of Action Level Exceedance | Limit Level Exceedance | % of Limit Level Exceedance |
|---|---|---|---|---|---|
| **Water** | 234 | 0 | 0 | 0 | 0 |

**Table 4-2 Summary of Project-Related Exceedances**

# 5 Complaint

5.1.1 A complaint hotline at 9850 3241 of the Contractor has been established for the Project.

5.1.2 Two complaints were received during the reporting period. Details of the complaint investigation and observations can be referred to Appendix H.

5.1.3 Cumulative statistics of environmental complaints are shown in Table 5-1.

| Complaints Received in the Reporting Period | Cumulative Number of Complaints |
|---|---|
| 2 | 26 |

**Table 5-1 Cumulative Statistics of Environmental Complaints**

# 6 Summary of Notification of Summons, Successful Prosecutions and Corrective Actions

6.1.1 No summons and successful prosecution was received during the reporting period.

6.1.2 Cumulative statistics of Notification of Summon, Successful Prosecutions and Convictions are shown in Table 6-1.

| Notification of Summons | | Successful Prosecution | |
|---|---|---|---|
| July – September 2012 | Cumulative | July – September 2012 | Cumulative |
| 0 | 0 | 0 | 0 |

**Table 6-1 Cumulative Statistics of Notification of Summons and Successful Prosecutions**

# 7 Comments, Recommendations and Conclusion

7.1.1 During the reporting period, no project related exceedance of air quality monitoring was recorded. One Action Level exceedance of air-borne noise monitoring was recorded on 5 September 2012. Details of the exceedance are given in Appendix H. Exceedances of water quality monitoring were recorded but none of these exceedances were related to Project's construction activities.

7.1.2 No Notification of Summons has been received since the commencement of the Project.

7.1.3 Waste management mitigation measures have been implemented by the Contractor within the reporting period. Waste figures during the reporting period are summarized in Table 7-1.

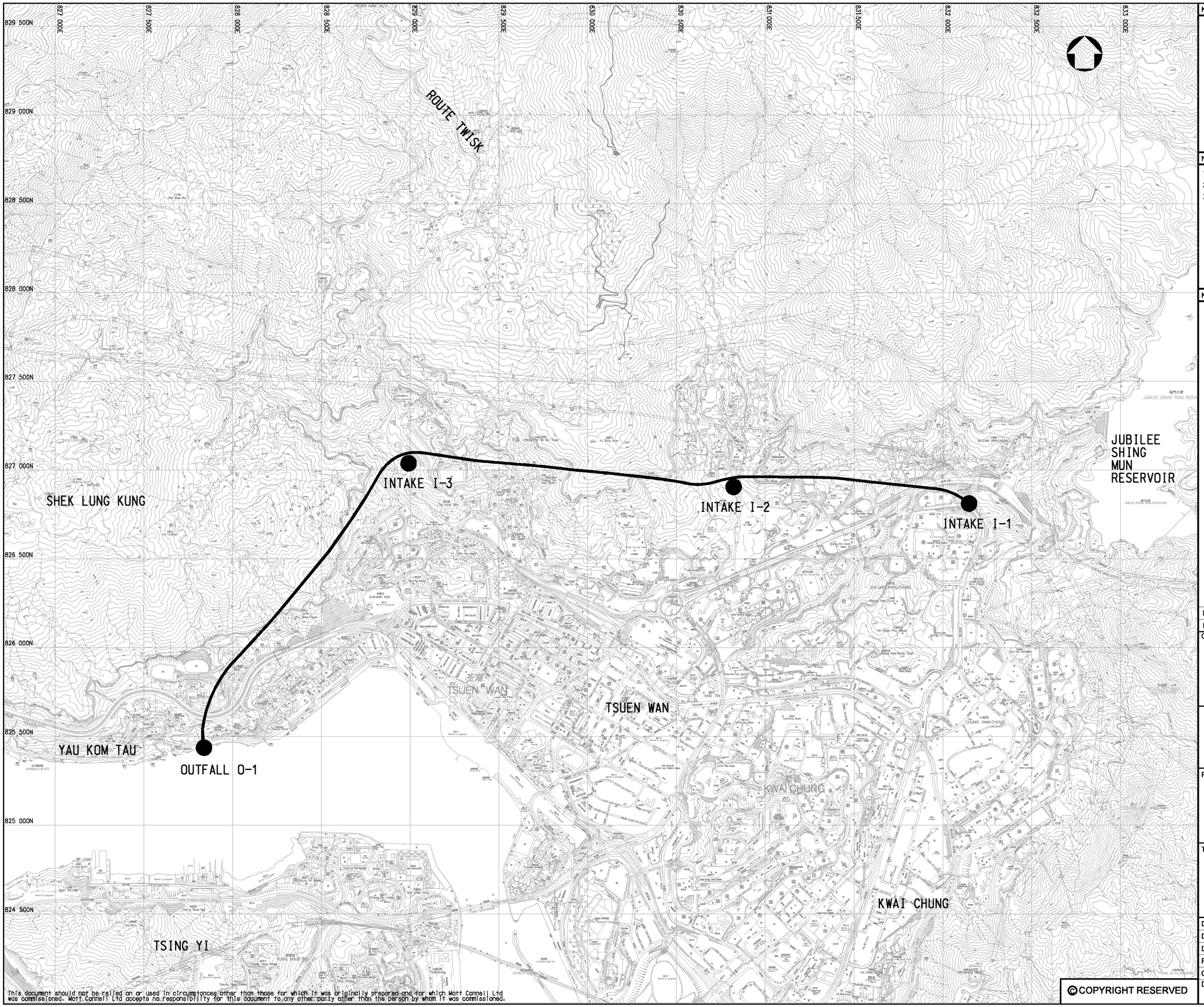
| Status of Waste Management | Quantity |
|---|---|
| Inert C&D Material Disposed of to Public Fill at Tuen Mun ($m^3$) | 6324.8 |
| Inert C&D Material Reused in this Contract ($m^3$) | 0 |
| Inert C&D Material Reused in other Contract* ($m^3$) | 1010.0 |
| Metals Generated (kg) | 12.0 |
| Paper / Cardboard Packaging (kg) | 400.0 |
| Plastics (kg) | 20.0 |
| Chemical Waste (kg) | 16,900.0 |
| General Waste Disposed of to NENT Landfill ($m^3$) | 89.1 |

* Other Contracts include XRL823AB and Tailor Recycle Aggregate.

**Table 7-1 Total Wastes Generated From July to August 2012**

Appendix A

# Site Map and Works Area




**Key Plan:**

**Notes:**

1. CO-ORDINATES REFER TO HONG KONG METRIC GRID (1980).
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (P.D.).
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

**Key to symbols**

LEGENDS :

TUNNEL ALIGNMENT

INTAKE/OUTFALL STRUCTURES

| Rev | Date | Drawn | Description | Ch'k'd | App'd |
|---|---|---|---|---|---|
| B1 | MAR 05 | EL | FOR EM&A MANUAL | MT | |

Client

The Government of the Hong Kong Special Administrative Region
Drainage Services Department

Consulting Engineers

Mott Connell Ltd.

in Association with

MVA Hong Kong Ltd
WL/Delft Hydraulics Ltd
EDAW Earth Asia Ltd
Chesterton Petty Ltd
Environmental Resources Management

Project

Drainage Improvement in Tsuen Wan and Kwai Chung - Tsuen Wan Drainage Tunnel - Investigation

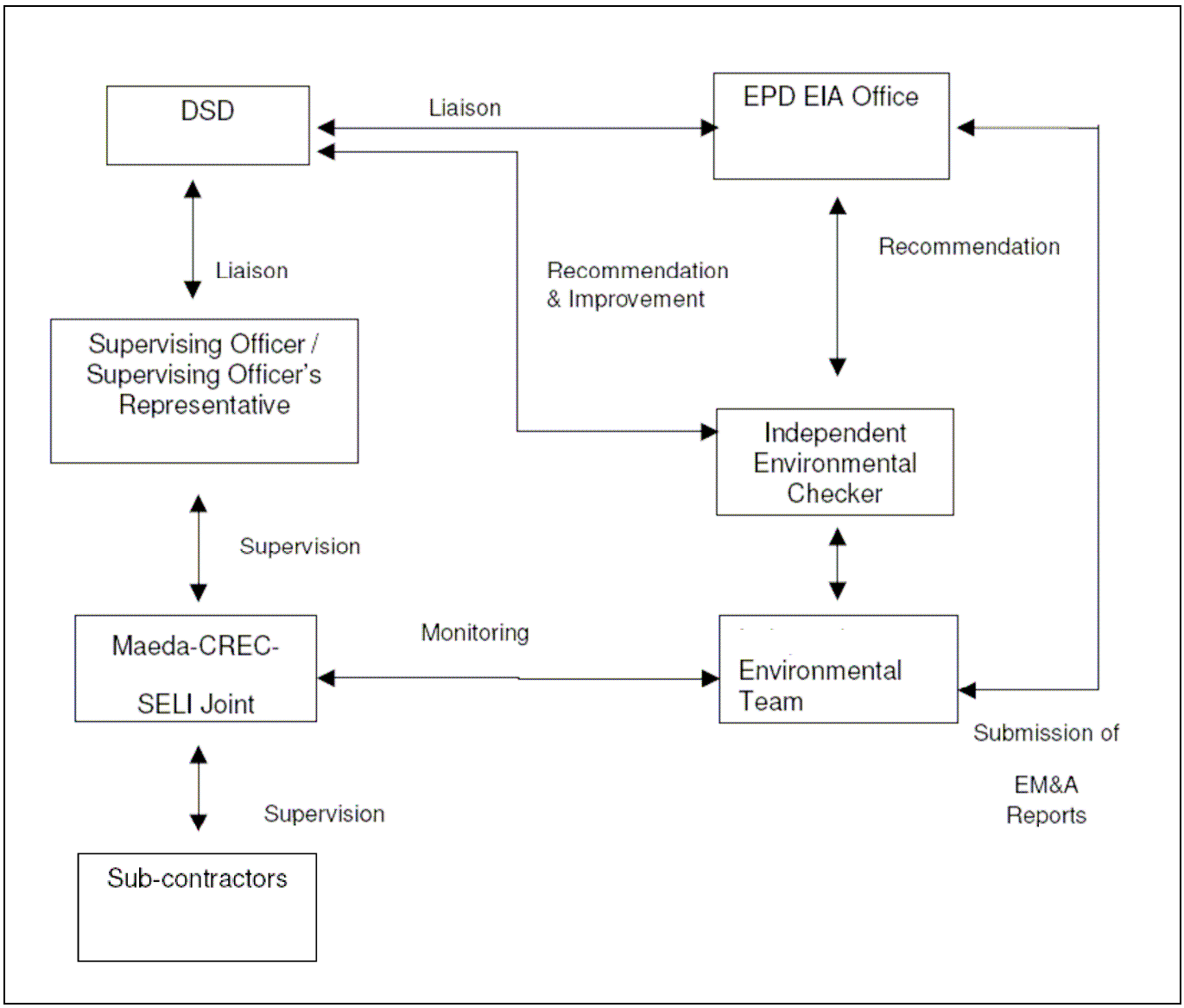
Title

TUNNEL ALIGNMENT AND SURROUNDING AREA

| | | | | | |
|---|---|---|---|---|---|
| Designed | CF | | Eng.Chk. | MT | |
| Drawn | HL | HL | Approved | TMC | |
| Dwg.Chk. | KN | | Scale | | |
| Project | 204417 | | | | Status |
| CAD file | J:\204417\DRAWING\FIGURE EM&A MANUAL\FIGURE1.1.dgn | | | | |
| Drawing No. | FIGURE 1.1 | | | | Rev 01 |

Appendix B

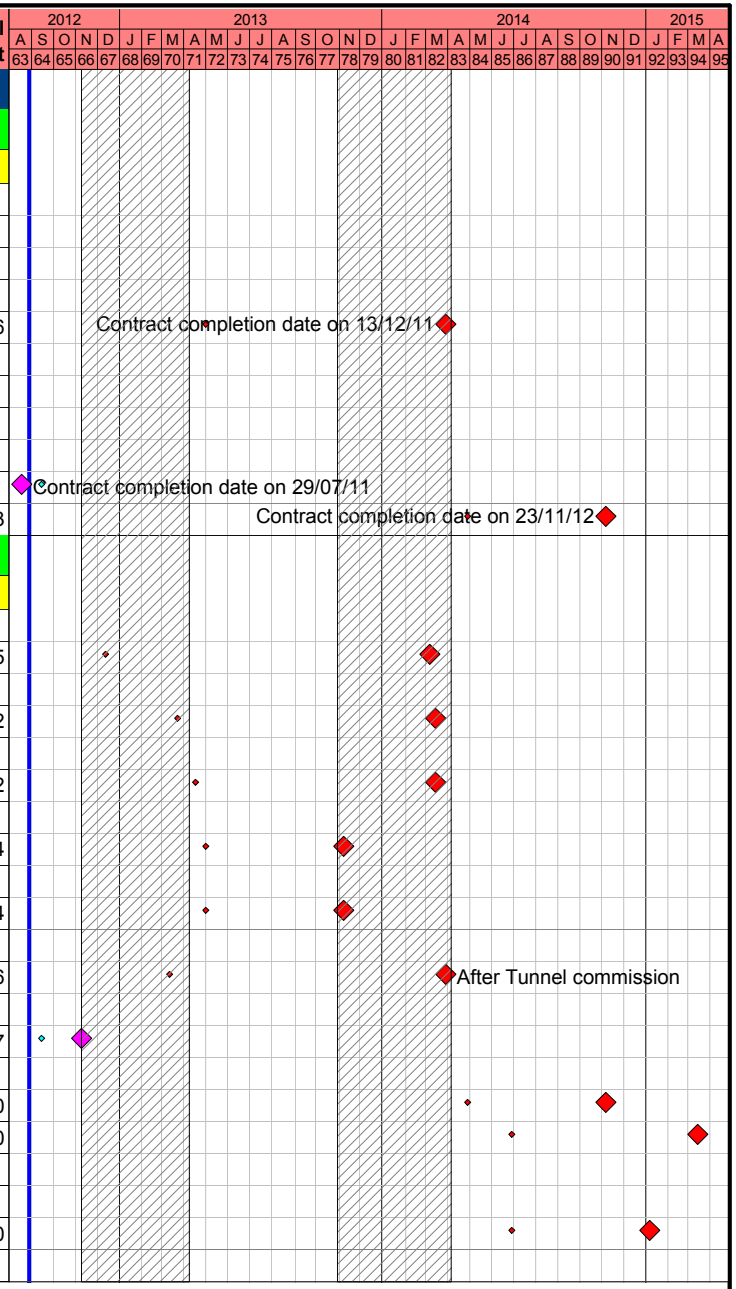
# Organization Chart


DSD
Liaison
EPD EIA Office
Liaison
Recommendation
& Improvement
Recommendation
Supervising Officer /
Supervising Officer's
Representative
Independent
Environmental
Checker
Supervision
Maeda-CREC-
SELI Joint
Monitoring
Environmental
Team
Submission of
EM&A
Reports
Supervision
Sub-contractors

Appendix C

# Works Programme

| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Preliminaries** | | | | | | | | | |
| **Project Dates** | | | | | | | | | |
| 01R0000002 | Tender Issue Date | 0 | 0 | 26JUN07A | | 100 | 26JUN07A | | |
| 01R0000004 | Tender Closing Date | 0 | 0 | 05OCT07A | | 100 | 05OCT07A | | |
| 01R0000006 | Letter of Acceptance Issued Date | 0 | 0 | 14DEC07A | | 100 | 14DEC07A | | |
| 01R0000008 | Contract Commencement Date | 0 | 0 | 28DEC07A | | 100 | 28DEC07A | | |
| 01R0000010 | Completion of Section 1 of the Works | 0 | 0 | | 28MAR14 | 0 | | 29APR13 | -836 |
| 01R0000012 | Completion of Section 2 of the Works | 0 | 0 | | 06SEP11A | 100 | | 06SEP11A | |
| 01R0000014 | Completion of Section 3 of the Works | 0 | 0 | | 03AUG11A | 100 | | 03AUG11A | |
| 01R0000016 | Completion of Section 4 of the Works | 0 | 0 | | 11AUG11A | 100 | | 11AUG11A | |
| 01R0000018 | Completion of Section 5 of the Works | 0 | 0 | | 19SEP11A | 100 | | 19SEP11A | |
| 01R0000020 | Completion of Section 6 of the Works | 0 | 0 | | 16AUG12A | 100 | | 14SEP12 | |
| 01R0000022 | Completion of Section 7 of the Works | 0 | 0 | | 06NOV14 | 0 | | 29APR14 | -713 |
| **Possession of Area** | | | | | | | | | |
| 01R00A0102 | Possession Portion A - 90d of DOC | 0 | 0 | 27FEB08A | | 100 | 27FEB08A | | |
| 01R00A0104 | Handover of Portion A | 0 | 0 | | 07MAR14 | 0 | | 12DEC12 | -815 |
| 01R00B0102 | Possession of Portion B - 90d of DOC | 0 | 0 | 07MAR08A | | 100 | 07MAR08A | | |
| 01R00B0104 | Handover of Portion B | 0 | 0 | | 14MAR14 | 0 | | 22MAR13 | -822 |
| 01R00C0102 | Possession of Portion C - 90d of DOC | 0 | 0 | 26MAR08A | | 100 | 26MAR08A | | |
| 01R00C0104 | Handover of Portion C | 0 | 0 | | 14MAR14 | 0 | | 16APR13 | -822 |
| 01R00D0102 | Possession of Portion D on DOC | 0 | 0 | 28DEC07A | | 100 | 28DEC07A | | |
| 01R00D0104 | Handover of Portion D | 0 | 0 | | 06NOV13 | 0 | | 29APR13 | -694 |
| 01R00E0102 | Possession of Portion E - 650d of DOC | 0 | 0 | 09JUL09A | | 100 | 09JUL09A | | |
| 01R00E0104 | Handover of Portion E | 0 | 0 | | 06NOV13 | 0 | | 29APR13 | -694 |
| 01R00F0102 | Possession of Portion F on DOC | 0 | 0 | 28DEC07A | | 100 | 28DEC07A | | |
| 01R00F0104 | Handover of Portion F | 0 | 0 | | 28MAR14 | 0 | | 09MAR13 | -836 |
| 01R00G0102 | Possession of Portion G - 700d of DOC | 0 | 0 | 26NOV09A | | 100 | 26NOV09A | | |
| 01R00G0104 | Handover of Portion G | 0 | 0 | | 07NOV12 | 0 | | 14SEP12 | 857 |
| 01R00I0102 | Possession of Portion I on DOC | 0 | 0 | 28DEC07A | | 100 | 28DEC07A | | |
| 01R00I0104 | Handover of Portion I | 0 | 0 | | 06NOV14 | 0 | | 29APR14 | 0 |
| 01R00J0102 | Possession of Portion J | 0 | 0 | 15MAR15 | | 0 | 29JUN14 | | 0 |
| 01R00J0104 | Handover of Portion J | 0 | 0 | | 23NOV11A | 100 | | 23NOV11A | |
| 01R0H10102 | Possession of Portion H1 on DOC | 0 | 0 | 28DEC07A | | 100 | 28DEC07A | | |
| 01R0H10104 | Handover of Portion H1 | 0 | 0 | | 05JAN15 | 0 | | 28JUN14 | 0 |
| 01R0H20102 | Possession of Portion H2 - 300d of DOC | 0 | 0 | 04NOV08A | | 100 | 04NOV08A | | |




Start Date 29JUN07
Finish Date 14MAR15
Data Date 28AUG12
Run Date 19SEP12 11:47



Early Bar
Target Bar
Progress Bar
Critical Activity

WP10

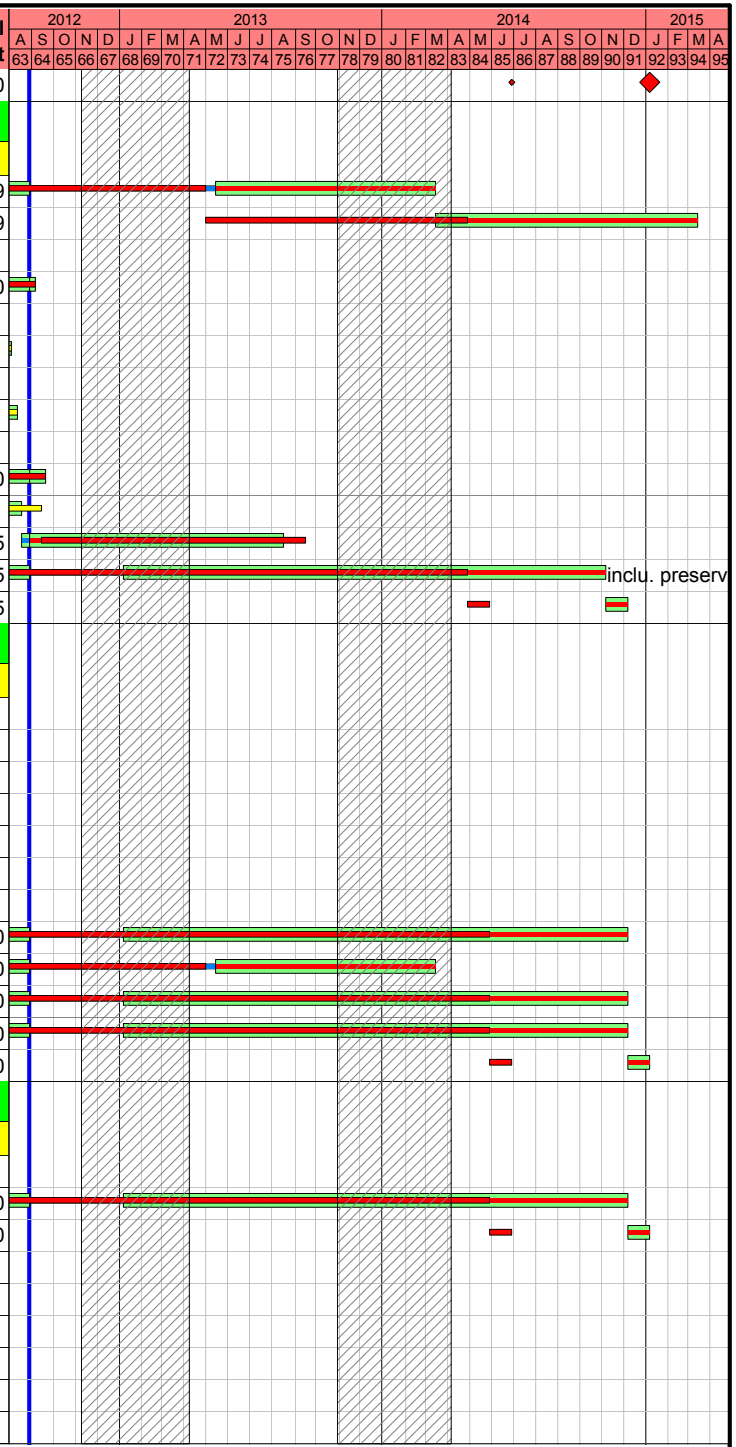
**Maeda-CREC-SELI JV**
**CONTRACT NO. DC/2007/12**
**Design and Construction of Tsuen Wan Drainage Tunnel Works Programme**



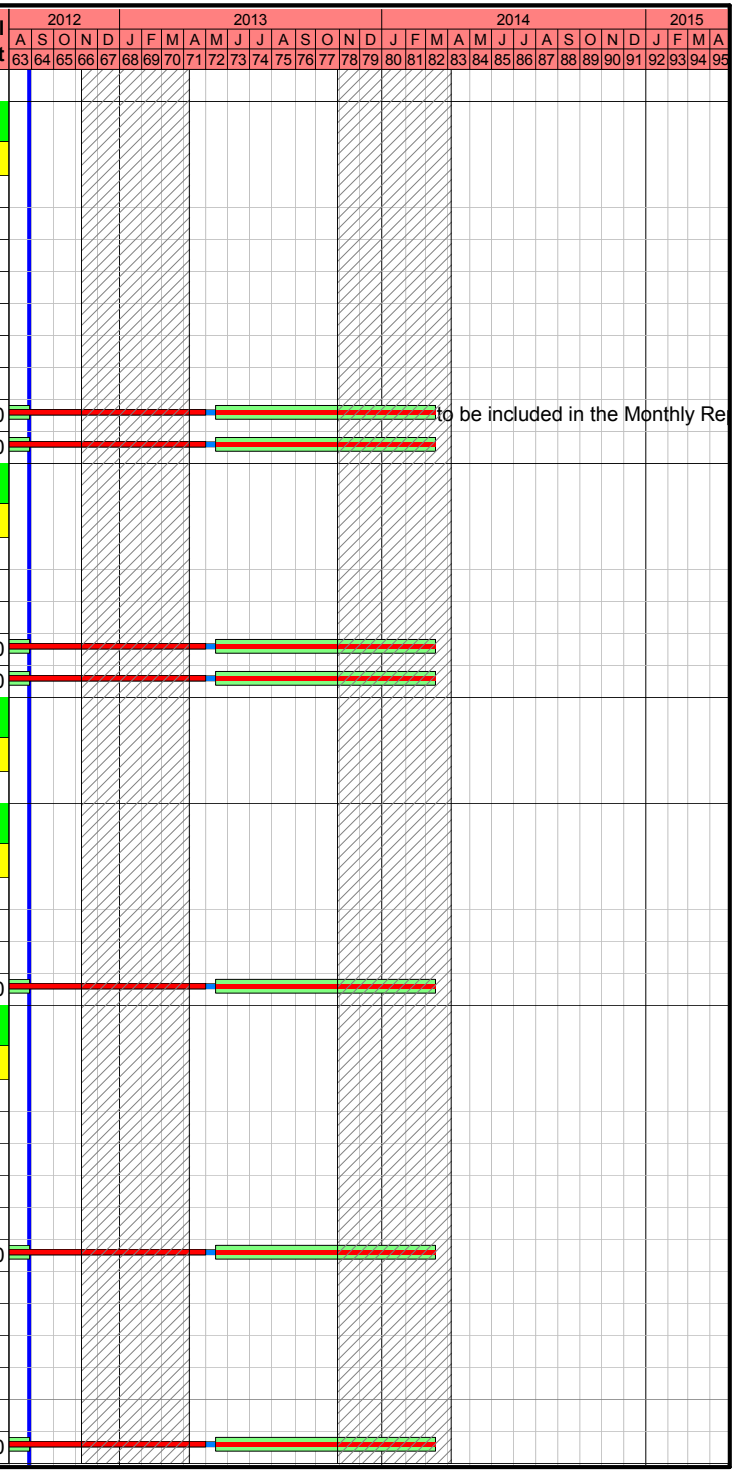
WP10

| Date | Revision | Checked | Approved |
|---|---|---|---|
| 05SEP11 | WP8A | | |
| 09MAR12 | WP09 | | |
| 13SEP12 | WP10 | | |
| | | | |
| | | | |
| | | | |

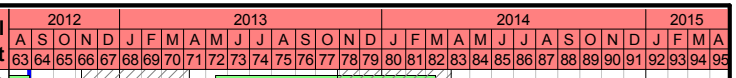
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 01R0H20104 | Handover of Portion H2 | 0 | 0 | | 05JAN15 | 0 | | 28JUN14 | 0 |
| **Section of Works - DOP to Completion** | | | | | | | | | |
| 01R1000202 | S1-Works in Portions A to F except works in S2-7 | 1,950 | 1,950 | 28DEC07A | 14MAR14 | 84 | 28DEC07A | 29APR13 | -839 |
| 01R1000204 | S1-Maintenance Period (365 days) | 365 | 365 | 15MAR14 | 14MAR15 | 0 | 30APR13 | 29APR14 | -839 |
| 01R20A0206 | S2-Slope Stabilization works within Portion A | 1,288 | 1,288 | 27FEB08A | 06SEP11A | 100 | 27FEB08A | 06SEP11A | |
| 01R20A0208 | S2-Maintenance Period (365 days) | 365 | 365 | 07SEP11A | 05SEP12 | 98 | 07SEP11A | 05SEP12 | 0 |
| 01R30B0210 | S3-Slope Stabilization works within Portion B | 1,245 | 1,245 | 07MAR08A | 03AUG11A | 100 | 07MAR08A | 03AUG11A | |
| 01R30B0212 | S3-Maintenance Period (365 days) | 365 | 365 | 04AUG11A | 02AUG12A | 100 | 04AUG11A | 02AUG12 | |
| 01R40C0214 | S4-Slope Stabilization works within Portion C | 1,234 | 1,234 | 26MAR08A | 11AUG11A | 100 | 26MAR08A | 11AUG11A | |
| 01R40C0216 | S4-Maintenance Period (365 days) | 365 | 365 | 12AUG11A | 10AUG12A | 100 | 12AUG11A | 10AUG12 | |
| 01R50D0218 | S5-Slope Stabilization works within Portion D | 1,308 | 1,308 | 28DEC07A | 19SEP11A | 100 | 28DEC07A | 19SEP11A | |
| 01R50D0220 | S5-Maintenance Period (365 days) | 365 | 365 | 20SEP11A | 18SEP12 | 94 | 20SEP11A | 18SEP12 | 0 |
| 01R60G0222 | S6-Works within Portion G | 1,023 | 1,023 | 27NOV09A | 16AUG12A | 100 | 27NOV09A | 14SEP12 | |
| 01R60G0224 | S6-Maintenance Period (365 days) | 365 | 365 | 17AUG12A | 16AUG13 | 3 | 15SEP12 | 14SEP13 | -385 |
| 01R7000226 | S7-Ladscape softworks & establishment works | 2,315 | 2,315 | 28DEC07A | 06NOV14 | 71 | 28DEC07A | 29APR14 | -745 |
| 01R7000228 | S7-Maintenance Period (30 days) | 30 | 30 | 07NOV14 | 06DEC14 | 0 | 30APR14 | 29MAY14 | -745 |
| **Facilities for the SO as per ER 12** | | | | | | | | | |
| 01R0000302 | Provide temporary accommodation | 7 | 7 | 28DEC07A | 15JAN08A | 100 | 28DEC07A | 15JAN08A | |
| 01R0000304 | Design the SO's principle office | 95 | 95 | 28DEC07A | 28AUG08A | 100 | 28DEC07A | 28AUG08A | |
| 01R0000305 | Erect Hoarding/Signboard/Gate/Fencing | 35 | 35 | 28MAR08A | 16MAR09A | 100 | 28MAR08A | 16MAR09A | |
| 01R0000306 | Erect SO's principle office in Portion H1/H2 | 100 | 100 | 19MAY08A | 13SEP08A | 100 | 19MAY08A | 13SEP08A | |
| 01R0000308 | Provide secondary offices, directed by SO | 64 | 64 | 14SEP08A | 13JUN09A | 100 | 14SEP08A | 13JUN09A | |
| 01R0000310 | Provide transport for the SO as per App. ER,M | 90 | 90 | 28DEC07A | 02MAY08A | 100 | 28DEC07A | 02MAY08A | |
| 01R0000311 | Provide survey equipments as per App. ER,M | 30 | 30 | 28DEC07A | 19AUG08A | 100 | 28DEC07A | 19AUG08A | |
| 01R0000314 | Maintain & Service the Principle Office | 2,084 | 2,084 | 14SEP08A | 06DEC14 | 66 | 14SEP08A | 29MAY14 | 0 |
| 01R0000316 | Maintain & service the Secondary Office | 1,645 | 1,645 | 28OCT08A | 14MAR14 | 81 | 28OCT08A | 29APR13 | 0 |
| 01R0000318 | Maintain & Service the transportation | 2,330 | 2,330 | 12JAN08A | 06DEC14 | 70 | 12JAN08A | 29MAY14 | 0 |
| 01R0000319 | Maintain & Service the survey equipments | 2,293 | 2,293 | 18FEB08A | 06DEC14 | 69 | 18FEB08A | 29MAY14 | 0 |
| 01R0000372 | Demolish & removal of Principle Office | 30 | 30 | 07DEC14 | 05JAN15 | 0 | 30MAY14 | 28JUN14 | 0 |
| **Contractor's Accommodation as per ER.B** | | | | | | | | | |
| 01R0001402 | Design Contractor's main office | 30 | 30 | 01FEB08A | 19MAY08A | 100 | 01FEB08A | 19MAY08A | |
| 01R0001406 | Maintain & service Contractor's office | 2,142 | 2,142 | 18JUL08A | 06DEC14 | 67 | 18JUL08A | 29MAY14 | 0 |
| 01R0001408 | Demolish & removal of Contractor's main office | 30 | 30 | 07DEC14 | 05JAN15 | 0 | 30MAY14 | 28JUN14 | 0 |
| 01R000141 | Erect Contractor's main office in Portion H1 | 50* | 50* | 19MAY08A | 17JUL08A | 100 | 19MAY08A | 17JUL08A | |
| 01R0001412 | Construct base slab | 10 | 10 | 19MAY08A | 30MAY08A | 100 | 19MAY08A | 30MAY08A | |
| 01R0001413 | Install steel frames | 12 | 12 | 31MAY08A | 21JUN08A | 100 | 31MAY08A | 21JUN08A | |
| 01R0001414 | Install wall/roof panels, windows etc | 6 | 6 | 23JUN08A | 30JUN08A | 100 | 23JUN08A | 30JUN08A | |
| 01R0001415 | Install & E& M/ceiling/floor panels | 8 | 8 | 02JUL08A | 12JUL08A | 100 | 02JUL08A | 12JUL08A | |
| 01R0001416 | Site clearance | 1 | 1 | 14JUL08A | 17JUL08A | 100 | 14JUL08A | 17JUL08A | |



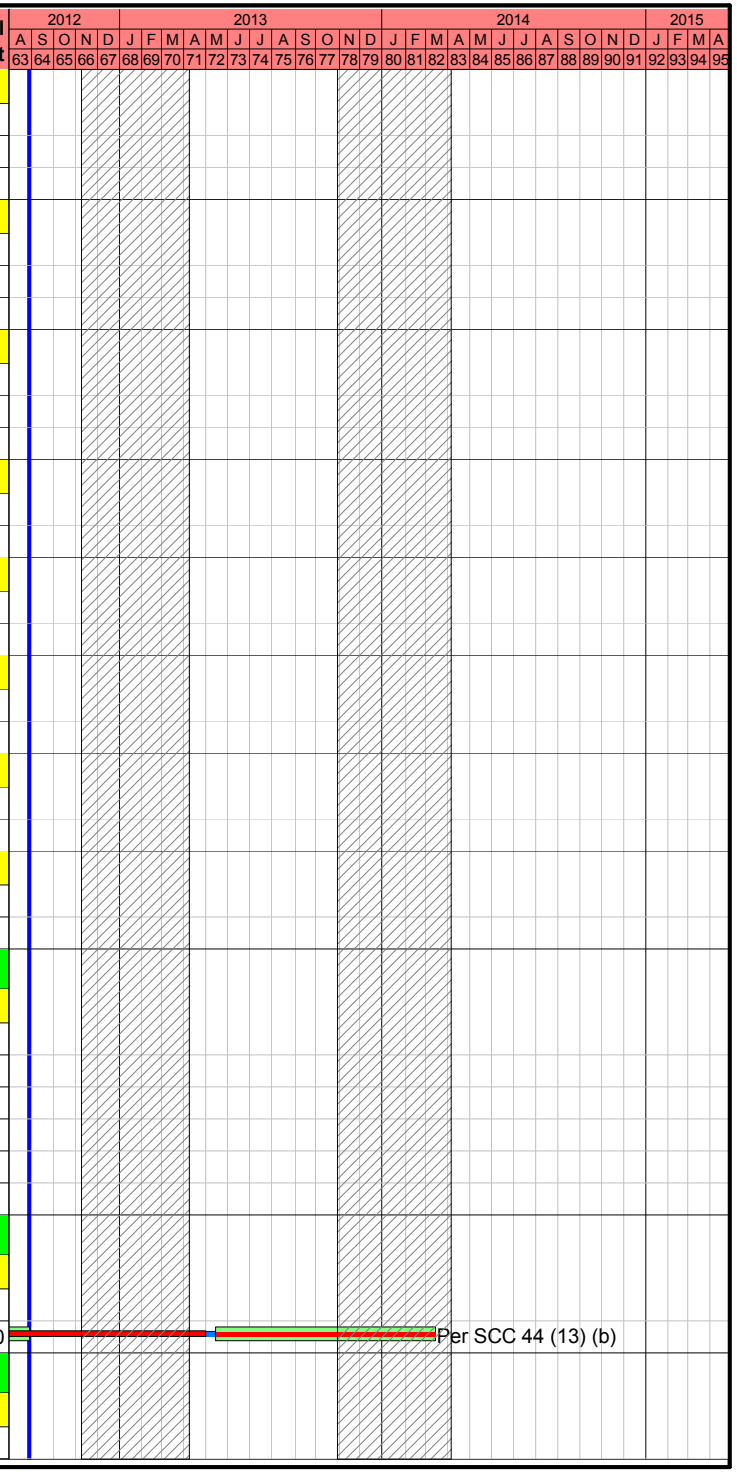
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 01R0001417 | Install furnitures/internet & move in | 2 | 2 | 14JUL08A | 17JUL08A | 100 | 14JUL08A | 17JUL08A | |
| **Works Programme & Monthly Report as per SCC 27** | | | | | | | | | |
| 01R0000502 | Prepare/Submit draft Works Programme | 7 | 7 | 14DEC07A | 21DEC07A | 100 | 14DEC07A | 21DEC07A | |
| 01R0000504 | SO's review/comment on draft Works Programme | 14 | 14 | 22DEC07A | 23JAN08A | 100 | 22DEC07A | 23JAN08A | |
| 01R0000505 | Prepare/Submit draft Works Programme Rev. 1 | 28 | 28 | 24JAN08A | 15FEB08A | 100 | 24JAN08A | 15FEB08A | |
| 01R0000506 | Prepare/Submit 1st 3-Month Rolling Programme | 14 | 14 | 14DEC07A | 03JAN08A | 100 | 14DEC07A | 03JAN08A | |
| 01R0000507 | SO's approval on draft Works Programme | 14 | 14 | 16FEB08A | 28MAR08A | 100 | 16FEB08A | 28MAR08A | |
| 01R0000508 | Submit Revised Works Programme | 14 | 14 | 28AUG08A | 30SEP08A | 100 | 28AUG08A | 30SEP08A | |
| 01R0000510 | SO's Approval of Revised Works Programme | 14 | 14 | 02OCT08A | 28FEB09A | 100 | 02OCT08A | 28FEB09A | |
| 01R0000512 | Monthly update program | 1,929 | 1,929 | 18JAN08A | 14MAR14 | 84 | 18JAN08A | 29APR13 | 0 |
| 01R0000514 | Contractor's Monthly Progress Report | 1,925 | 1,925 | 22JAN08A | 14MAR14 | 84 | 22JAN08A | 29APR13 | 0 |
| **Safety Plan as per SCC 35** | | | | | | | | | |
| 01R0000602 | Submit draft Safety Plan | 14 | 14 | 14DEC07A | 29DEC07A | 100 | 14DEC07A | 29DEC07A | |
| 01R0000604 | Hold an ad hoc meeting with RE on Safety Plan | 7 | 7 | 31DEC07A | 09JAN08A | 100 | 31DEC07A | 09JAN08A | |
| 01R0000606 | Submit 6 copies of the Safety Plan | 35 | 35 | 14DEC07A | 26FEB08A | 100 | 14DEC07A | 26FEB08A | |
| 01R0000608 | Submit updated safety orgainiza. chart monthly | 1,867 | 1,867 | 20MAR08A | 14MAR14 | 84 | 20MAR08A | 29APR13 | 0 |
| 17R0000602 | Fulfill all relevant safety obligation | 1,950 | 1,950 | 28DEC07A | 14MAR14 | 84 | 28DEC07A | 29APR13 | 0 |
| **Contractor's All Insurances** | | | | | | | | | |
| 01R0000704 | Submit documents for all insurances are effected | 21 | 21 | 14DEC07A | 02SEP08A | 100 | 14DEC07A | 02SEP08A | |
| **Quality System as per ER 9.3** | | | | | | | | | |
| 01R0000802 | Appoint a Quality Manager | 14 | 14 | 28DEC07A | 02JAN08A | 100 | 28DEC07A | 02JAN08A | |
| 01R0000804 | Submit proposed Quality System for SO's consent | 28 | 28 | 14DEC07A | 22JAN08A | 100 | 14DEC07A | 22JAN08A | |
| 01R0000806 | Submit QSSP for approval of the SO | 28 | 28 | 28DEC07A | 14MAR08A | 100 | 28DEC07A | 14MAR08A | |
| 01R0000808 | Maintain & update Quality System | 1,922 | 1,922 | 25JAN08A | 14MAR14 | 84 | 25JAN08A | 29APR13 | 0 |
| **Environment** | | | | | | | | | |
| 01R0000902 | Nominate Environmental Officer | 14 | 14 | 14DEC07A | 21DEC07A | 100 | 14DEC07A | 21DEC07A | |
| 01R0000903 | Establish a billing account for disposal | 21 | 21 | 14DEC07A | 02JAN08A | 100 | 14DEC07A | 02JAN08A | |
| 01R0000904 | Submit draft EMP | 21 | 21 | 14DEC07A | 02JAN08A | 100 | 14DEC07A | 02JAN08A | |
| 01R0000906 | Revise draft EMP within 7 days of SO's notice | 14 | 14 | 04JAN08A | 21FEB08A | 100 | 04JAN08A | 21FEB08A | |
| 01R0000908 | Submit final version of EMP | 45 | 45 | 14DEC07A | 21FEB08A | 100 | 14DEC07A | 21FEB08A | |
| 01R0000910 | Review/update/submit EMP monthly | 1,919 | 1,919 | 28JAN08A | 14MAR14 | 84 | 28JAN08A | 29APR13 | 0 |
| 01R0000912 | Employ IET | 21 | 21 | 14DEC07A | 02JAN08A | 100 | 14DEC07A | 02JAN08A | |
| 01R0000914 | Submit Baseline  Monitoring Plan | 21 | 21 | 28DEC07A | 18JAN08A | 100 | 28DEC07A | 18JAN08A | |
| 01R0000915 | Seek for EPD's Agreement on WQML & schedule | 21 | 21 | 18JAN08A | 31JAN08A | 100 | 18JAN08A | 31JAN08A | |
| 01R0000916 | Carry out baseline monitoring | 37 | 37 | 11FEB08A | 20MAR08A | 100 | 11FEB08A | 20MAR08A | |
| 01R0000918 | Prepare/submit reports for baseline monitoring | 20 | 20 | 21MAR08A | 28MAR08A | 100 | 21MAR08A | 28MAR08A | |
| 01R0000920 | Impact monitoring & reporting | 1,855 | 1,855 | 01APR08A | 14MAR14 | 84 | 01APR08A | 29APR13 | 0 |



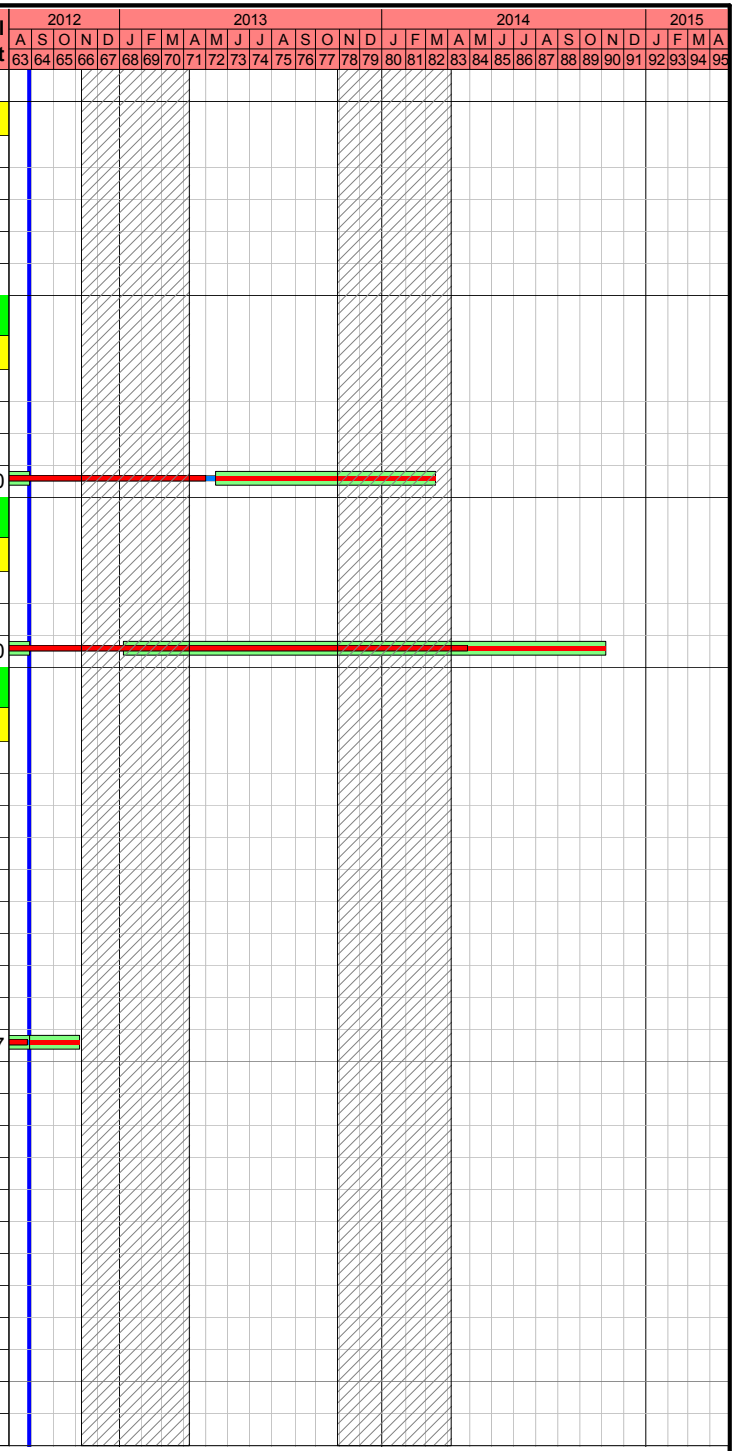
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 17R0000902 | Fulfill all relevant environmental obligation | 1,950 | 1,950 | 28DEC07A | 14MAR14 | 84 | 28DEC07A | 29APR13 | 0 |
| **Excavation Permit/Utilities per SCC 54 & SCC 83** | | | | | | | | | |
| 01R0001002 | Nominate IIUMS co-ordinator | 7 | 7 | 14DEC07A | 15JAN08A | 100 | 14DEC07A | 15JAN08A | |
| 01R0001004 | SO approve IIUMS co-ordinator | 14 | 14 | 16JAN08A | 29FEB08A | 100 | 16JAN08A | 29FEB08A | |
| 01R0001006 | Submit brand name of UGS detection equipment | 7 | 7 | 28DEC07A | 18FEB08A | 100 | 28DEC07A | 18FEB08A | |
| 01R0001008 | Utilities detection & report to the SO | 21 | 21 | 29FEB08A | 05APR08A | 100 | 29FEB08A | 05APR08A | |
| 01R0001010 | Liaison with UUs | 21 | 21 | 04JAN08A | 29FEB08A | 100 | 04JAN08A | 29FEB08A | |
| 01R0001012 | Apply XP for site entrance construction | 7 | 7 | 21JAN08A | 08MAR08A | 100 | 21JAN08A | 08MAR08A | |
| 01R0001014 | HyD process XP for site entrance construction | 20 | 20 | 10MAR08A | 28MAY08A | 100 | 10MAR08A | 28MAY08A | |
| 01R0001016 | HyD issue XP for site entrance construction | 0 | 0 | | 28MAY08A | 100 | | 28MAY08A | |
| 01R0001018 | Apply XP for GI works at I-1 & I-2 | 1 | 1 | 22APR08A | 20MAY08A | 100 | 22APR08A | 20MAY08A | |
| 01R0001020 | HyD process XP for GI works at I-1 & I-2 | 30 | 30 | 23APR08A | 26SEP08A | 100 | 23APR08A | 26SEP08A | |
| 01R0001022 | HyD issue XP for GI works at I-1 & I-2 | 0 | 0 | | 26SEP08A | 100 | | 26SEP08A | |
| 01R0001024 | Apply XP for trial grout at Fault F1 | 1 | 1 | 22APR08A | 20MAY08A | 100 | 22APR08A | 20MAY08A | |
| 01R0001026 | HyD process XP for trial grout at Fault F1 | 30 | 30 | 23APR08A | 22JUL08A | 100 | 23APR08A | 22JUL08A | |
| 01R0001028 | HyD issue XP for trial grout at Fault F1 | 0 | 0 | | 22JUL08A | 100 | | 22JUL08A | |
| **Pre-construction Condition Survey** | | | | | | | | | |
| **Preliminaries** | | | | | | | | | |
| 01R0001102 | Appoint a Qualified Structural Engineer | 30 | 30 | 28DEC07A | 19MAR08A | 100 | 28DEC07A | 19MAR08A | |
| 01R0001104 | Submit nos. & extent of the affected EBS | 30 | 30 | 28DEC07A | 19MAR08A | 100 | 28DEC07A | 19MAR08A | |
| **PCS Stage 1 between I-1 & I-2** | | | | | | | | | |
| 01R0001118 | Carry out stg 1 PCS between I-1 & I-2 | 6 | 6 | 22APR08A | 23APR08A | 100 | 22APR08A | 23APR08A | |
| 01R0001120 | Prepare/submit reports for stg 1 PCS bet I-1&I-2 | 60 | 60 | 24APR08A | 22SEP08A | 100 | 24APR08A | 22SEP08A | |
| 01R0001122 | Review/accept reports for stg 1 PCS bet I-1&I-2 | 60 | 60 | 31MAY08A | 20JAN09A | 100 | 31MAY08A | 20JAN09A | |
| **PCS Stage 1 between I-2 & I-3** | | | | | | | | | |
| 01R0001130 | Carry out stg 1 PCS between I-2 & I-3 | 5 | 5 | 25MAR08A | 30APR08A | 100 | 25MAR08A | 30APR08A | |
| 01R0001132 | Prepare/submit reports for stg 1 PCS bet I-2&I-3 | 60 | 60 | 24APR08A | 22SEP08A | 100 | 24APR08A | 22SEP08A | |
| 01R0001134 | Review/accept reports for stg 1 PCS bet I-2&I-3 | 60 | 60 | 24MAY08A | 04FEB09A | 100 | 24MAY08A | 04FEB09A | |
| **PCS Stage 1 between I-3 & O-1** | | | | | | | | | |
| 01R0001142 | Carry out stg 1 PCS between I-3 & O-1 | 5 | 5 | 25MAR08A | 26MAR08A | 100 | 25MAR08A | 26MAR08A | |
| 01R0001144 | Prepare/submit reports for stg 1 PCS bet I-3&O-1 | 60 | 60 | 26MAR08A | 11SEP08A | 100 | 26MAR08A | 11SEP08A | |
| 01R0001146 | Review/accept reports for stg 1 PCS bet I-3&O-1 | 60 | 60 | 31MAY08A | 04FEB09A | 100 | 31MAY08A | 04FEB09A | |
| **PCS Stage 1 at vicinity of O-1** | | | | | | | | | |
| 01R0001106 | Carry out stg 1 PCS at vicinity of O-1 | 5 | 5 | 25MAR08A | 29MAR08A | 100 | 25MAR08A | 29MAR08A | |
| 01R0001108 | Prepare/submit reports for stg 1 PCS at O-1 | 60 | 60 | 31MAR08A | 10SEP08A | 100 | 31MAR08A | 10SEP08A | |
| 01R0001110 | Review/accept reports for stg 1 PCS at O-1 | 60 | 60 | 27MAY08A | 09FEB09A | 100 | 27MAY08A | 09FEB09A | |
| **PCS Stage 2 between I-1 & I-2** | | | | | | | | | |
| 01R0001124 | Carry out stg 2 PCS between I-1 & I-2 | 5 | 5 | 22APR08A | 02JUN08A | 100 | 22APR08A | 02JUN08A | |
| 01R0001126 | Prepare/submit reports for stg 2 PCS bet I-1&I-2 | 60 | 60 | 24APR08A | 10JUN08A | 100 | 24APR08A | 10JUN08A | |
| 01R0001128 | Review/accept reports for stg 2 PCS bet I-1&I-2 | 60 | 60 | 11JUN08A | 09FEB09A | 100 | 11JUN08A | 09FEB09A | |



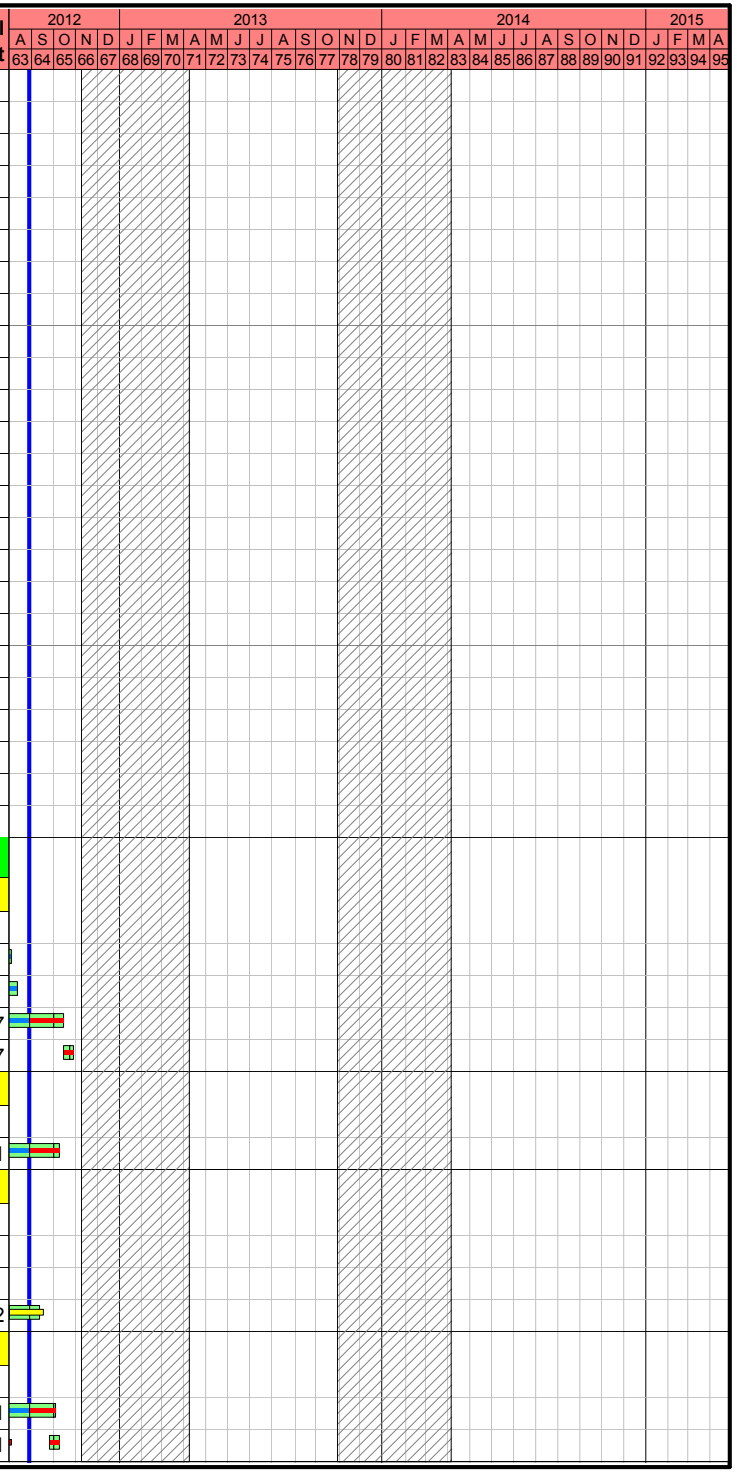
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **PCS Stage 2 between I-2 & I-3** | | | | | | | | | |
| 01R0001136 | Carry out stg 2 PCS between I-2 & I-3 | 5 | 5 | 30APR08A | 07JUN08A | 100 | 30APR08A | 07JUN08A | |
| 01R0001138 | Prepare/submit reports for stg 2 PCS bet I-2&I-3 | 60 | 60 | 02MAY08A | 12JUN08A | 100 | 02MAY08A | 12JUN08A | |
| 01R0001140 | Review/accept reports for stg 2 PCS bet I-2&I-3 | 60 | 60 | 13JUN08A | 09FEB09A | 100 | 13JUN08A | 09FEB09A | |
| **PCS Stage 2 between I-3 & O-1** | | | | | | | | | |
| 01R0001148 | Carry out stg 2 PCS between I-3 & O-1 | 5 | 5 | 09MAY08A | 13JUN08A | 100 | 09MAY08A | 13JUN08A | |
| 01R0001150 | Prepare/submit reports for stg 2 PCS bet I-3&O-1 | 60 | 60 | 04JUN08A | 18JUN08A | 100 | 04JUN08A | 18JUN08A | |
| 01R0001152 | Review/accept reports for stg 2 PCS bet I-3&O-1 | 60 | 60 | 19JUN08A | 09FEB09A | 100 | 19JUN08A | 09FEB09A | |
| **PCS Stage 2 at Vicinity of O-1** | | | | | | | | | |
| 01R0001112 | Carry out stg 2 PCS at vicinity of O-1 | 12 | 12 | 01APR08A | 06JUN08A | 100 | 01APR08A | 06JUN08A | |
| 01R0001114 | Prepare/submit reports for stg 2 PCS at O-1 | 60 | 60 | 02JUN08A | 16JUN08A | 100 | 02JUN08A | 16JUN08A | |
| 01R0001116 | Review/accept reports for stg 2 PCS at O-1 | 60 | 60 | 17JUN08A | 09FEB09A | 100 | 17JUN08A | 09FEB09A | |
| **Pre-const. condition structural survey; I-1** | | | | | | | | | |
| 01R0001154 | Prepare/submit reports for EBS at I-1 | 28 | 28 | 28AUG08A | 10JAN09A | 100 | 28AUG08A | 10JAN09A | |
| 01R0001156 | Review/accept reports for EBS at I-1 | 28 | 28 | 12JAN09A | 24MAR09A | 100 | 12JAN09A | 24MAR09A | |
| **Pre-const. condition structural survey; I-2** | | | | | | | | | |
| 01R0001158 | Prepare/submit reports for EBS at I-2 | 28 | 28 | 28AUG08A | 10JAN09A | 100 | 28AUG08A | 10JAN09A | |
| 01R0001160 | Review/accept reports for EBS at I-2 | 28 | 28 | 12JAN09A | 24MAR09A | 100 | 12JAN09A | 24MAR09A | |
| **Pre-const. condition structural survey; I-3** | | | | | | | | | |
| 01R0001162 | Prepare/submit reports for EBS at I-3 | 28 | 28 | 28AUG08A | 10JAN09A | 100 | 28AUG08A | 10JAN09A | |
| 01R0001164 | Review/accept reports for EBS at I-3 | 28 | 28 | 12JAN09A | 24MAR09A | 100 | 12JAN09A | 24MAR09A | |
| **Pre-const. condition structural survey; O-1** | | | | | | | | | |
| 01R0001166 | Prepare/submit reports for EBS at O-1 | 28 | 28 | 28AUG08A | 10JAN09A | 100 | 28AUG08A | 10JAN09A | |
| 01R0001168 | Review/accept reports for EBS at O-1 | 28 | 28 | 12JAN09A | 24MAR09A | 100 | 12JAN09A | 24MAR09A | |
| **Pre-const. condition structural survey; Tunnel** | | | | | | | | | |
| 01R0001170 | Prepare/submit reports for EBS along Tunnel alig | 346 | 346 | 28AUG08A | 22SEP09A | 100 | 28AUG08A | 22SEP09A | |
| 01R0001172 | Review/accept reports for EBS along Tunnel align | 207 | 207 | 16JAN09A | 22APR10A | 100 | 16JAN09A | 22APR10A | |
| **Traffic** | | | | | | | | | |
| | | | | | | | | | |
| 01R0001202 | Appoint Traffic Consultant/Traffic Engineer | 14 | 14 | 14DEC07A | 03JAN08A | 100 | 14DEC07A | 03JAN08A | |
| 01R0001204 | Eng's Approval of Traffic Consultant | 7 | 7 | 28DEC07A | 28FEB08A | 100 | 28DEC07A | 28FEB08A | |
| 01R0001206 | Prepare/submit TTA Schemes (ingress & egress) | 14 | 14 | 04JAN08A | 31JAN08A | 100 | 04JAN08A | 31JAN08A | |
| 01R0001216 | Obtain endorsement of TTA schemes from TMLG | 21 | 21 | 01FEB08A | 01APR08A | 100 | 01FEB08A | 01APR08A | |
| 01R0001234 | Approval of TTA schemes by the Authorities | 14 | 14 | 02APR08A | 19APR08A | 100 | 02APR08A | 19APR08A | |
| 01R0001236 | Approval of TTA schemes by the Authorities | 14 | 14 | 02APR08A | 19APR08A | 100 | 02APR08A | 19APR08A | |
| **Management of Sub-contractors as per SCC 44** | | | | | | | | | |
| | | | | | | | | | |
| 01R0001302 | Submit a Sub-contractor Management Plan | 30 | 30 | 14DEC07A | 12JAN08A | 100 | 14DEC07A | 12JAN08A | |
| 01R0001304 | Submit Quarterly the Updated SMP | 1,762 | 1,762 | 03JUL08A | 14MAR14 | 83 | 03JUL08A | 29APR13 | 0 |
| **Trees** | | | | | | | | | |
| **Siu Ho Wan as a New Tree Transplanting Area** | | | | | | | | | |
| VO028-02 | Receive VO28 for new tree transplanting area | 0 | 0 | | 16AUG08A | 100 | | 16AUG08A | |



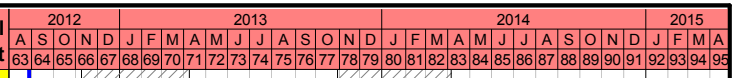
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| VO028-04 | Preparation works for new T.T. area | 20 | 20 | 18AUG08A | 07SEP08A | 100 | 18AUG08A | 07SEP08A | |
| | | | | | | | | | |
| 01R0001502 | Appoint Landscape Specialist Contractor | 14 | 14 | 14DEC07A | 14JAN08A | 100 | 14DEC07A | 14JAN08A | |
| 01R0001504 | SO's Approval of Landscape Contractor | 7 | 7 | 15JAN08A | 28FEB08A | 100 | 15JAN08A | 28FEB08A | |
| 01R0001506 | Nominate competent person to oversee tree works | 45 | 45 | 14DEC07A | 29JAN08A | 100 | 14DEC07A | 29JAN08A | |
| 01R0001510 | Obtain Tree Removal Permit by Others | 90 | 90 | 28DEC07A | 06MAR08A | 100 | 28DEC07A | 06MAR08A | |
| 01R0001512 | Remove / Transplant Trees start | 0 | 0 | 08SEP08A | | 100 | 08SEP08A | | |
| **Survey** | | | | | | | | | |
| | | | | | | | | | |
| 01R0001602 | Appoint Surveyors | 14 | 14 | 28DEC07A | 10JAN08A | 100 | 28DEC07A | 10JAN08A | |
| 01R0001604 | SO's Approval of Surveyor | 7 | 7 | 11JAN08A | 16APR08A | 100 | 11JAN08A | 16APR08A | |
| 01R0001608 | Initial Survey | 28 | 28 | 18JAN08A | 10MAR08A | 100 | 18JAN08A | 10MAR08A | |
| 01R0001610 | Maintain & carry out survey works | 1,893 | 1,893 | 23FEB08A | 14MAR14 | 84 | 23FEB08A | 29APR13 | 0 |
| **Smart Card System as per ER B.30** | | | | | | | | | |
| | | | | | | | | | |
| 01R0001802 | Submit Smart Card Sys for SO's Approval | 7 | 7 | 28DEC07A | 15JAN08A | 100 | 28DEC07A | 15JAN08A | |
| 01R0001804 | Install & start Operating Smart-Card System | 60 | 60 | 28DEC07A | 23FEB08A | 100 | 28DEC07A | 23FEB08A | |
| 01R0001806 | Operate & Maintain Smart-Card System | 2,256 | 2,256 | 25FEB08A | 06NOV14 | 70 | 25FEB08A | 29APR14 | 0 |
| **Procurement of Sub-contractor** | | | | | | | | | |
| | | | | | | | | | |
| 01R0001904 | Spoil Disposal | 60 | 60 | 28AUG08A | 27MAR09A | 100 | 28AUG08A | 27MAR09A | |
| 01R0001906 | Earthwork for Outfall O-1 | 60 | 60 | 14DEC07A | 05JUN08A | 100 | 14DEC07A | 05JUN08A | |
| 01R0001910 | Re-bar Supply | 90 | 90 | 14DEC07A | 30MAY08A | 100 | 14DEC07A | 30MAY08A | |
| 01R0001912 | Soil Nailing | 60 | 60 | 28DEC07A | 02APR08A | 100 | 28DEC07A | 02APR08A | |
| 01R0001914 | H-piling Works | 90 | 90 | 14DEC07A | 09MAY08A | 100 | 14DEC07A | 09MAY08A | |
| 01R0001916 | Fabrication of Pre-cast Lining | 80 | 80 | 02JUN08A | 05JAN09A | 100 | 02JUN08A | 05JAN09A | |
| 01R0001920 | Drainage/Road Works for Access Road at I-3 | 60 | 60 | 08AUG08A | 03NOV08A | 100 | 08AUG08A | 03NOV08A | |
| 01R0001922 | Temp. steel decking over Shing Mun Nullah at I-1 | 90 | 90 | 14DEC07A | 25APR08A | 100 | 14DEC07A | 25APR08A | |
| 01R0001924 | Design/Install Communication System | 414 | 414 | 28JUN08A | 31JUL09A | 100 | 28JUN08A | 31JUL09A | |
| 01R0001936 | Procurement & delivery of Communication System | 120 | 120 | 09JUL12A | 05NOV12 | 42 | 06MAY12A | 25AUG12 | -377 |
| 01R0018A02 | Supply TBM/Main Tunnel Construction | 7 | 7 | 14DEC07A | 21DEC07A | 100 | 14DEC07A | 21DEC07A | |
| 01R0018A04 | Security | 17 | 17 | 17DEC07A | 02JAN08A | 100 | 17DEC07A | 02JAN08A | |
| 01R0018A06 | Progress Photo/Vedio | 25 | 25 | 29DEC07A | 22JAN08A | 100 | 29DEC07A | 22JAN08A | |
| 01R0018A08 | Webpage/Physical Model/3D Animation | 48 | 48 | 14DEC07A | 14FEB08A | 100 | 14DEC07A | 14FEB08A | |
| 01R0018A10 | Hoarding/Fencing Erection | 60 | 60 | 04JAN08A | 03MAR08A | 100 | 04JAN08A | 03MAR08A | |
| 01R0018A12 | Erection of Contractor's Office | 67 | 67 | 28DEC07A | 03MAR08A | 100 | 28DEC07A | 03MAR08A | |
| 01R0018A14 | Remote Control CCTV | 60 | 60 | 04JAN08A | 03MAR08A | 100 | 04JAN08A | 03MAR08A | |
| 01R0018A16 | Concrete Supply | 45 | 45 | 14DEC07A | 11MAR08A | 100 | 14DEC07A | 11MAR08A | |
| 01R0018A18 | Geotechnical Instrumentation | 60 | 60 | 15JAN08A | 14MAR08A | 100 | 15JAN08A | 14MAR08A | |
| 01R0018A20 | Drilling/Grouting for Geotchnical Instrumentat. | 60 | 60 | 16JAN08A | 15MAR08A | 100 | 16JAN08A | 15MAR08A | |
| 01R0018A22 | Site Clearance | 60 | 60 | 26JAN08A | 25MAR08A | 100 | 26JAN08A | 25MAR08A | |
| 01R0018A24 | Erection of SOR's Office | 95 | 95 | 02JAN08A | 05APR08A | 100 | 02JAN08A | 05APR08A | |

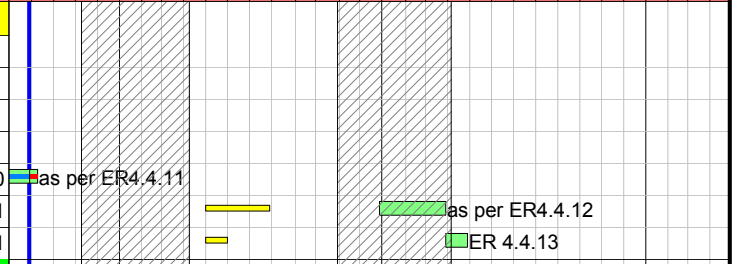


| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 01R0018A26 | Carry out Grout Trial at Fault F1 | 90 | 90 | 02APR08A | 30JUN08A | 100 | 02APR08A | 30JUN08A | |
| 01R0018A28 | Design/Fabricate Segmental Lining Mould | 90 | 90 | 23APR08A | 21JUL08A | 100 | 23APR08A | 21JUL08A | |
| 01R0018A30 | Construction of Skin Walls | 90 | 90 | 21JUL08A | 03JAN09A | 100 | 21JUL08A | 03JAN09A | |
| 01R0018A32 | Design/Fabricate/Supply/Install Conveyor Belt | 90 | 90 | 14JUL08A | 05JAN09A | 100 | 14JUL08A | 05JAN09A | |
| 01R0018A34 | Supply of Locomotive | 90 | 90 | 14JUL08A | 10OCT08A | 100 | 14JUL08A | 10OCT08A | |
| 01R0018A36 | Excavation Works at I-1 | 60 | 60 | 28AUG08A | 21JAN09A | 100 | 28AUG08A | 21JAN09A | |
| 01R0018A38 | Construction of Steel Platform at O-1 | 50 | 50 | 28AUG08A | 14MAR09A | 100 | 28AUG08A | 14MAR09A | |
| 01R0018A40 | Construction of Steel Platform at I-2 | 50 | 50 | 28AUG08A | 27DEC08A | 100 | 28AUG08A | 27DEC08A | |
| 01R0018A42 | Pre-excavation Grouting for Shaft Excavation | 60 | 60 | 28AUG08A | 11MAR09A | 100 | 28AUG08A | 11MAR09A | |
| 01R0018A46 | Excavation/Construction of TBM Launching Chamber | 70 | 70 | 28AUG08A | 18DEC08A | 100 | 28AUG08A | 18DEC08A | |
| 01R0018A48 | Construction of Subgrade Structure at I-1 | 364 | 364 | 28AUG08A | 26DEC09A | 100 | 28AUG08A | 26DEC09A | |
| 01R0018A50 | Shaft Excavation by RCD at I-2 | 90 | 90 | 28AUG08A | 26NOV08A | 100 | 28AUG08A | 26NOV08A | |
| 01R0018A52 | Excavation/Construction of Shafts/Adits/Chambers | 90 | 90 | 28AUG08A | 26MAR09A | 100 | 28AUG08A | 26MAR09A | |
| 01R0018A54 | Construction of Hopper at O-1 | 90 | 90 | 28AUG08A | 31JAN09A | 100 | 28AUG08A | 31JAN09A | |
| 01R0018A56 | Suttering of Spiral Ramp | 364 | 364 | 28AUG08A | 23JAN10A | 100 | 28AUG08A | 23JAN10A | |
| 01R0018A58 | Open Cut Excavation & Construction at I-3 | 90 | 90 | 28AUG08A | 02MAY09A | 100 | 28AUG08A | 02MAY09A | |
| 01R0018A60 | Lining Formworks for Underground Structures | 1,016 | 1,016 | 28AUG08A | 27OCT11A | 100 | 28AUG08A | 27OCT11A | |
| 01R0018A61 | Tunnel Data Management System (TDMS) | 90 | 90 | 28AUG08A | 03APR09A | 100 | 28AUG08A | 03APR09A | |
| 01R0018A62 | Supply of Rail Track | 90 | 90 | 28AUG08A | 26MAR09A | 100 | 28AUG08A | 26MAR09A | |
| 01R0018A64 | Supply of Aggregate | 169 | 169 | 28FEB09A | 02NOV09A | 100 | 28FEB09A | 02NOV09A | |
| 01R0018A68 | Construct Box Culvert/Cascade/Spiral Ramp at O-1 | 200 | 200 | 28FEB09A | 27JUL10A | 100 | 28FEB09A | 27JUL10A | |
| 01R0018A70 | Stainless steel  Works | 200 | 200 | 28FEB09A | 14MAR11A | 100 | 28FEB09A | 14MAR11A | |
| 01R0018A72 | Pipe Jacking Works at Lo Wai | 250 | 250 | 28FEB09A | 20NOV09A | 100 | 28FEB09A | 20NOV09A | |
| 01R0018A74 | Finishing Works | 980 | 980 | 28FEB09A | 27JAN12A | 100 | 28FEB09A | 27JAN12A | |
| **Others** | | | | | | | | | |
| **Off-site Fabrication of Trash Grill for Intakes** | | | | | | | | | |
| 01R1BI2T02 | Procure sub- contract | 0 | 0 | | 14MAR11A | 100 | | 14MAR11A | |
| 01R1BI2T12 | Prepare shop drawing | 157 | 157 | 15MAR11A | 04AUG12A | 100 | 15MAR11A | 05MAR12 | |
| 01R1BI2T22 | Procure stainless steel material | 48 | 48 | 01AUG11A | 11AUG12A | 100 | 01AUG11A | 14MAR12 | |
| 01R1BI2T32 | Fabrication | 60 | 60 | 16APR12A | 13OCT12 | 33 | 15MAR12 | 30MAY12 | -357 |
| 01R1BI2T42 | Delivery | 12 | 12 | 15OCT12 | 29OCT12 | 0 | 31MAY12 | 13JUN12 | -357 |
| **Fabrication of Pre-cast Staircase at MAS/MAA** | | | | | | | | | |
| 01RSC05 | Prepare & material procurement | 60 | 60 | 28FEB12A | 09MAY12A | 100 | 28FEB12 | 14MAY12 | |
| 01RSC15 | Fabrication | 60 | 60 | 17MAR12A | 09OCT12 | 40 | 15MAY12 | 25JUL12 | -281 |
| **Off-site Fabricatio of Steel Gate for Outfall** | | | | | | | | | |
| 01RSG02 | Recieve VO#137 for Penstock | 0 | 0 | | 10SEP11A | 100 | | 10SEP11A | |
| 01RSG05 | Obtain approval for shop drawing/technical subm | 122 | 122 | 12SEP11A | 11FEB12A | 100 | 12SEP11A | 11FEB12A | |
| 01RSG15 | Fabrication & approval of inspection report | 136 | 136 | 13FEB12A | 27JUL12A | 100 | 13FEB12A | 28JUL12 | |
| 01RSG25 | Packup & Delivery | 42 | 42 | 28JUL12A | 12SEP12 | 67 | 30JUL12 | 15SEP12 | 742 |
| **Fabrication of Steel Handrailing for MAS** | | | | | | | | | |
| 01RSH05 | Prepare shop drawing & material procurement | 60 | 60 | 28JAN12A | 21MAR12A | 100 | 28JAN12A | 21MAR12 | |
| 01RSH15 | Fabrication | 96 | 96 | 22MAR12A | 02OCT12 | 69 | 22MAR12 | 20JUL12 | -311 |
| 01RSH25 | Delivery | 12 | 12 | 25SEP12 | 09OCT12 | 0 | 21JUL12 | 03AUG12 | -311 |

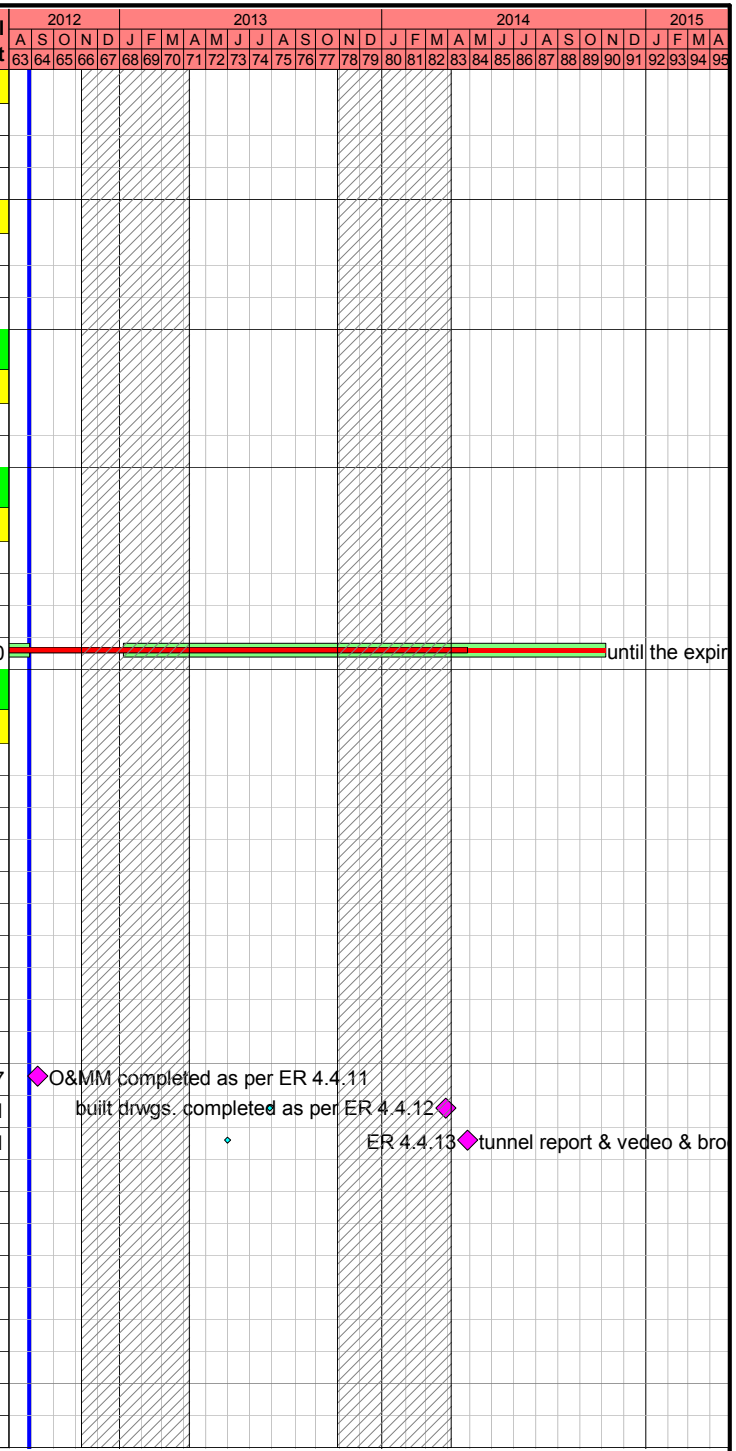


| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 01R0001928 | Submit Contractor's Management Team | 0 | 0 | | 10JAN08A | 100 | | 10JAN08A | |
| 01R0001930 | Submit Photographer for Monthly Progress Photo | 0 | 0 | 28JAN08A | | 100 | 28JAN08A | | |
| 01R0001932 | Install Project Signboards at Potions A,B,C & D | 30 | 30 | 28FEB09A | 29MAY09A | 100 | 28FEB09A | 29MAY09A | |
| 01R0001934 | Presentation of TDMS to SOR/ Employer; ER 4.4.6 | 6 | 6 | 27MAR09A | 06MAY09A | 100 | 27MAR09A | 06MAY09A | |
| 01R0001940 | Prepare/submit Operation & Maintenance Manual | 90 | 90 | 28FEB12A | 08SEP12 | 87 | 28FEB12 | 27MAY12 | -500 |
| 01R0001942 | Prepare/submit As-built Drawings | 90 | 90 | 29DEC13 | 28MAR14 | 0 | 30APR13 | 28JUL13 | 351 |
| 01R0001944 | Produce 2 documentary video for tunnel | 30 | 30 | 29MAR14 | 27APR14 | 0 | 30APR13 | 29MAY13 | 321 |
| **Construction Risk Assessment (CRA) as per ER 7** | | | | | | | | | |
| **PCRA for Works at Portion A (I-1)** | | | | | | | | | |
| 01R00PCRA2 | Prepare/submit PCRA for works at I-1 | 21 | 21 | 07APR08A | 20AUG08A | 100 | 07APR08A | 20AUG08A | |
| 01R00PCRA4 | DC review & certify PCRA for works at I-1 | 60 | 60 | 22MAY08A | 13OCT08A | 100 | 22MAY08A | 13OCT08A | |
| 01R00PCRA6 | SOR review & accept PCRA at works at I-1 | 60 | 60 | 12MAY08A | 25SEP08A | 100 | 12MAY08A | 25SEP08A | |
| **PCRA for Works at Portion B (I-2)** | | | | | | | | | |
| 01R00PCRB2 | Prepare/submit PCRA for works at I-2 | 21 | 21 | 14APR08A | 20AUG08A | 100 | 14APR08A | 20AUG08A | |
| 01R00PCRB4 | DC review & certify PCRA for works at I-2 | 60 | 60 | 22MAY08A | 13OCT08A | 100 | 22MAY08A | 13OCT08A | |
| 01R00PCRB6 | SOR review & accept PCRA at works at I-2 | 60 | 60 | 22MAY08A | 25SEP08A | 100 | 22MAY08A | 25SEP08A | |
| **PCRA for Works at Portion C (I-3)** | | | | | | | | | |
| 01R00PCRC2 | Prepare/submit PCRA for works at I-3 | 21 | 21 | 01APR08A | 20AUG08A | 100 | 01APR08A | 20AUG08A | |
| 01R00PCRC4 | DC review & certify PCRA for works at I-3 | 60 | 60 | 21MAY08A | 13OCT08A | 100 | 21MAY08A | 13OCT08A | |
| 01R00PCRC6 | SOR review & accept PCRA at works at I-3 | 60 | 60 | 21MAY08A | 25SEP08A | 100 | 21MAY08A | 25SEP08A | |
| **PCRA for Works at Portion D/E (O-1)** | | | | | | | | | |
| 01R00PCRD2 | Prepare/submit PCRA for works at O-1 | 21 | 21 | 01APR08A | 20AUG08A | 100 | 01APR08A | 20AUG08A | |
| 01R00PCRD4 | DC review & certify PCRA for works at O-1 | 60 | 60 | 21MAY08A | 13OCT08A | 100 | 21MAY08A | 13OCT08A | |
| 01R00PCRD6 | SOR review & accept PCRA at works at O-1 | 60 | 60 | 12MAY08A | 25SEP08A | 100 | 12MAY08A | 25SEP08A | |
| **PCRA for Works at Portion F/J (Main Tunnel)** | | | | | | | | | |
| 01R00PCRF2 | Prepare/submit PCRA for main tunnel works | 21 | 21 | 09JUN08A | 23APR09A | 100 | 09JUN08A | 23APR09A | |
| 01R00PCRF4 | DC review & certify PCRA for main tunnel works | 60 | 60 | 14JUL08A | 08JUN09A | 100 | 14JUL08A | 08JUN09A | |
| 01R00PCRF6 | SOR review & accept PCRA for main tunnel works | 60 | 60 | 16JUL08A | 24JUL09A | 100 | 16JUL08A | 24JUL09A | |
| **DCRA for Works at Portion A (I-1)** | | | | | | | | | |
| 01R00DCRA2 | Prepare/submit DCRA for works at I-1 | 14 | 14 | 02OCT08A | 27OCT08A | 100 | 02OCT08A | 27OCT08A | |
| 01R00DCRA4 | DC review & certify DCRA for works at I-1 | 21 | 21 | 28OCT08A | 17FEB09A | 100 | 28OCT08A | 17FEB09A | |
| 01R00DCRA6 | SOR review & accept DCRA at works at I-1 | 49 | 49 | 05NOV08A | 26MAR09A | 100 | 05NOV08A | 26MAR09A | |
| **DCRA for Works at Portion B (I-2)** | | | | | | | | | |
| 01R00DCRB2 | Prepare/submit DCRA for works at I-2 | 14 | 14 | 14OCT08A | 02JUN09A | 100 | 14OCT08A | 02JUN09A | |
| 01R00DCRB4 | DC review & certify DCRA for works at I-2 | 21 | 21 | 05DEC08A | 09JUN09A | 100 | 05DEC08A | 09JUN09A | |
| 01R00DCRB6 | SOR review & accept DCRA at works at I-2 | 49 | 49 | 10DEC08A | 28AUG09A | 100 | 10DEC08A | 28AUG09A | |
| **DCRA for Works at Portion C (I-3)** | | | | | | | | | |
| 01R00DCRC2 | Prepare/submit DCRA for works at I-3 | 14 | 14 | 14OCT08A | 03JUN09A | 100 | 14OCT08A | 03JUN09A | |
| 01R00DCRC4 | DC review & certify DCRA for works at I-3 | 21 | 21 | 31OCT08A | 10JUN09A | 100 | 31OCT08A | 10JUN09A | |
| 01R00DCRC6 | SOR review & accept DCRA at works at I-3 | 49 | 49 | 07NOV08A | 24JUN09A | 100 | 07NOV08A | 24JUN09A | |



| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **DCRA for Works at Portion D/E (O-1)** | | | | | | | | | |
| 01R00DCRD2 | Prepare/submit DCRA for works at O-1 | 14 | 14 | 03NOV08A | 03JUN09A | 100 | 03NOV08A | 03JUN09A | |
| 01R00DCRD4 | DC review & certify DCRA for works at O-1 | 21 | 21 | 15NOV08A | 10JUN09A | 100 | 15NOV08A | 10JUN09A | |
| 01R00DCRD6 | SOR review & accept DCRA at works at O-1 | 285 | 285 | 15NOV08A | 10NOV09A | 100 | 15NOV08A | 10NOV09A | |
| **DCRA for Works at Portion F/J (Main Tunnel)** | | | | | | | | | |
| 01R00DCRF2 | Prepare/submit DCRA for main tunnel works | 142 | 142 | 14MAR09A | 11AUG09A | 100 | 14MAR09A | 11AUG09A | |
| 01R00DCRF4 | DC review & certify DCRA for main tunnel works | 21 | 21 | 11AUG09A | 13AUG09A | 100 | 11AUG09A | 13AUG09A | |
| 01R00DCRF6 | SOR review & accept DCRA for main tunnel works | 49 | 49 | 12AUG09A | 22APR10A | 100 | 12AUG09A | 22APR10A | |
| **Physical Models & Other Material Display** | | | | | | | | | |
| 01R0002302 | Prepare/submit a physical models | 255 | 255 | 15FEB08A | 27NOV08A | 100 | 15FEB08A | 27NOV08A | |
| 01R0002304 | Prepare/submit a 3-D animation model | 308 | 308 | 15FEB08A | 27FEB09A | 100 | 15FEB08A | 27FEB09A | |
| **Internet Website as per ER 4.4.7** | | | | | | | | | |
| 01R0002402 | Propose the design of web page | 30 | 30 | 28DEC07A | 09FEB08A | 100 | 28DEC07A | 09FEB08A | |
| 01R0002404 | Produce the web page for approval of SO | 211 | 211 | 10MAR08A | 19FEB09A | 100 | 10MAR08A | 19FEB09A | |
| 01R0002406 | SO's approval of web page | 30 | 30 | 02JUN08A | 24FEB09A | 100 | 02JUN08A | 24FEB09A | |
| 01R0002408 | Submit updated web pages monthly | 1,890 | 1,890 | 25FEB09A | 06NOV14 | 65 | 25FEB09A | 29APR14 | 0 |
| **Schedule of Milestones for Cost Centre No. 1R** | | | | | | | | | |
| 01R0002501 | 1R 1; On provision of SO's Accommodation | 0 | 0 | | 13SEP08A | 100 | | 13SEP08A | |
| 01R0002502 | 1R 2; On providing documents of effected CWI | 0 | 0 | | 03JAN08A | 100 | | 03JAN08A | |
| 01R0002503 | 1R 3; On providing documents of effected TPI | 0 | 0 | | 03JAN08A | 100 | | 03JAN08A | |
| 01R0002504 | 1R 4; On Pproviding documents of effected PII | 0 | 0 | | 03JAN08A | 100 | | 03JAN08A | |
| 01R0002505 | 1R 5; On delivery of all Land Transport for SO | 0 | 0 | | 02MAY08A | 100 | | 02MAY08A | |
| 01R0002506 | 1R 6; On install. of computer facilities for SO | 0 | 0 | | 13SEP08A | 100 | | 13SEP08A | |
| 01R0002507 | 1R 7; On accept. of detailed CRA incl. PCS | 0 | 0 | | 22APR10A | 100 | | 22APR10A | |
| 01R0002508 | 1R 8; On acceptance of Physical Model by the SO | 0 | 0 | | 27NOV08A | 100 | | 27NOV08A | |
| 01R0002509 | 1R 9; On acceptance of 3-D Animation Model | 0 | 0 | | 27FEB09A | 100 | | 27FEB09A | |
| 01R0002510 | 1R 10; On satisf. operation of CCTV for 3 mth | 0 | 0 | | 17JUN09A | 100 | | 17JUN09A | |
| 01R0002511 | 1R 11; On acceptance of O&MM | 0 | 0 | | 08SEP12 | 0 | | 27MAY12 | 917 |
| 01R0002512 | 1R 12; On acceptance of as-built drwgs. | 0 | 0 | | 28MAR14 | 0 | | 28JUL13 | 351 |
| 01R0002513 | 1R 13; On acceptance of T.R/Video/Brouchure | 0 | 0 | | 27APR14 | 0 | | 29MAY13 | 321 |
| 01R0002514 | 1R 14; On complete all wks for 3 mth frm DOC | 0 | 0 | | 27MAR08A | 100 | | 27MAR08A | |
| 01R0002515 | 1R 15; On complete all wks for 6 mth frm DOC | 0 | 0 | | 27JUN08A | 100 | | 27JUN08A | |
| 01R0002516 | 1R 16; On complete all wks for 9 mth frm DOC | 0 | 0 | | 25SEP08A | 100 | | 25SEP08A | |
| 01R0002517 | 1R 17; On complete all wks for 12 mth frm DOC | 0 | 0 | | 27DEC08A | 100 | | 27DEC08A | |
| 01R0002518 | 1R 18; On complete all wks for 15 mth frm DOC | 0 | 0 | | 27MAR09A | 100 | | 27MAR09A | |
| 01R0002519 | 1R 19; On complete all wks for 18 mth frm DOC | 0 | 0 | | 26JUN09A | 100 | | 26JUN09A | |
| 01R0002520 | 1R 20; On complete all wks for 21 mth frm DOC | 0 | 0 | | 27SEP09A | 100 | | 27SEP09A | |
| 01R0002521 | 1R 21; On complete all wks for 24 mth frm DOC | 0 | 0 | | 26DEC09A | 100 | | 26DEC09A | |
| 01R0002522 | 1R 22; On complete all wks for 27 mth frm DOC | 0 | 0 | | 27MAR10A | 100 | | 27MAR10A | |



| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
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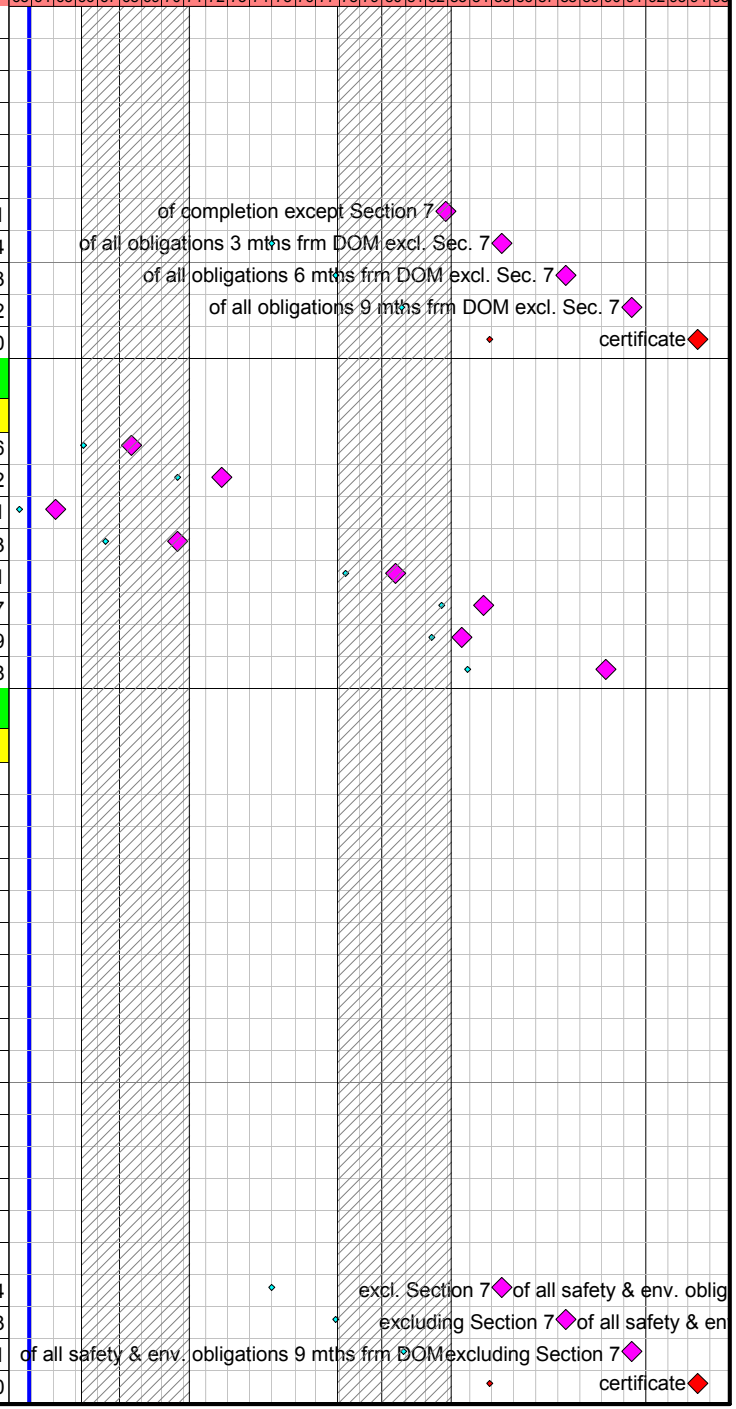
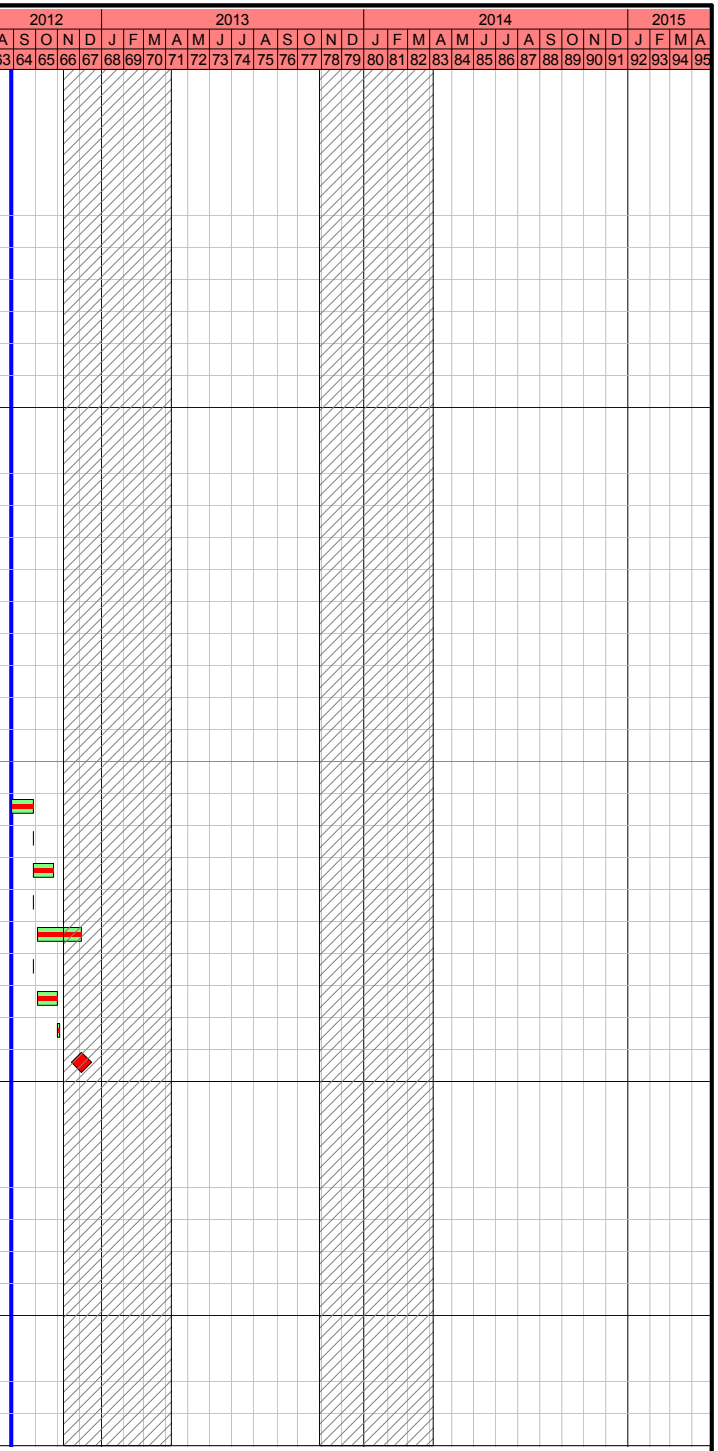
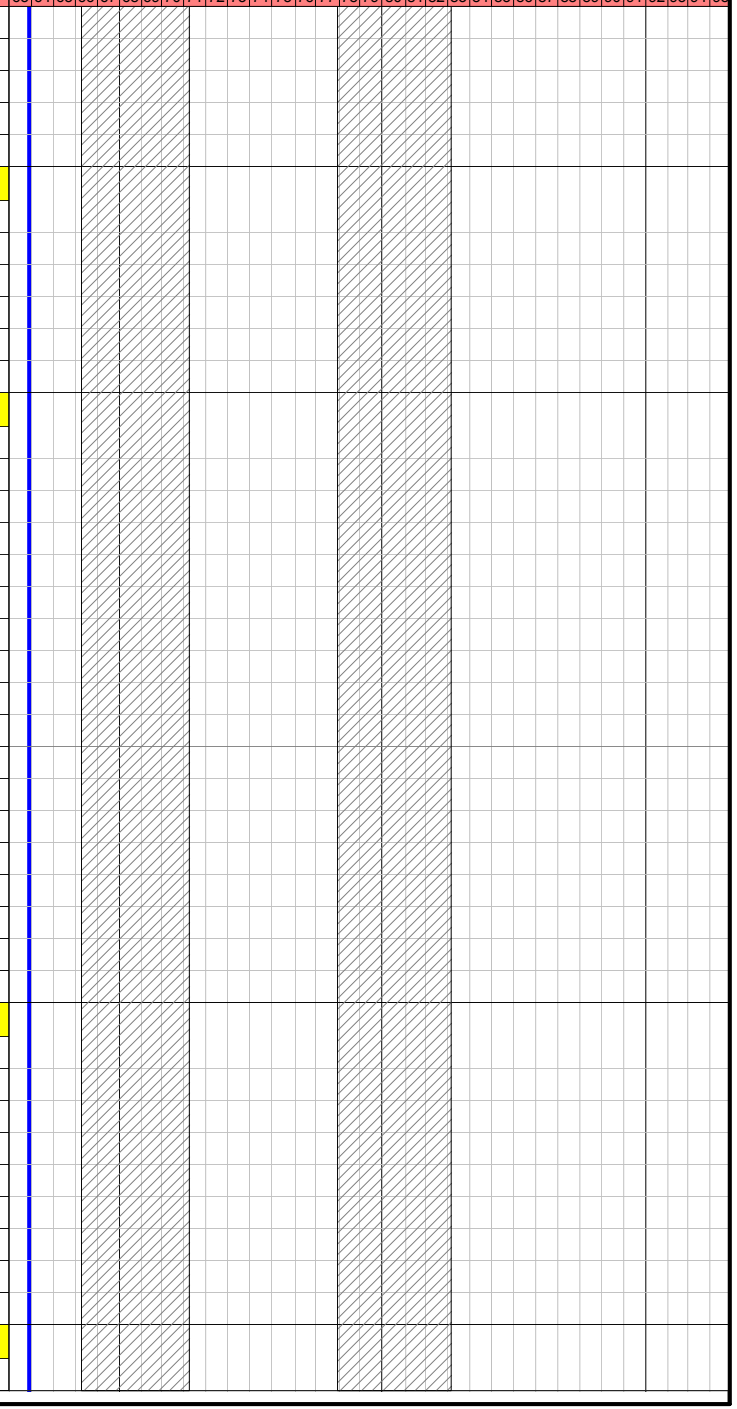
| 01R0002523 | 1R 23; On complete all wks for 30 mth frm DOC | 0 | 0 | | 26JUN10A | 100 | | 26JUN10A | |
| 01R0002524 | 1R 24; On complete all wks for 33 mth frm DOC | 0 | 0 | | 25SEP10A | 100 | | 25SEP10A | |
| 01R0002525 | 1R 25; On complete all wks for 36 mth frm DOC | 0 | 0 | | 27DEC10A | 100 | | 27DEC10A | |
| 01R0002526 | 1R 26; On complete all wks for 39 mth frm DOC | 0 | 0 | | 27MAR11A | 100 | | 27MAR11A | |
| 01R0002527 | 1R 27; On complete all wks for 42 mth frm DOC | 0 | 0 | | 26JUN11A | 100 | | 26JUN11A | |
| 01R0002528 | 1R 28; On complete all wks for 45 mth frm DOC | 0 | 0 | | 25SEP11A | 100 | | 25SEP11A | |
| 01R0002529 | 1R 29; On issuance of completion certificates | 0 | 0 | | 28MAR14 | 0 | | 27FEB12 | 351 |
| 01R0002530 | 1R 30; On complete all wks for 3 mth frm CMP | 0 | 0 | | 13JUN14 | 0 | | 29JUL13 | 274 |
| 01R0002531 | 1R 31; On complete all wks for 6 mth frm CMP | 0 | 0 | | 12SEP14 | 0 | | 28OCT13 | 183 |
| 01R0002532 | 1R 32; On complete all wks for 9 mth frm CMP | 0 | 0 | | 12DEC14 | 0 | | 27JAN14 | 92 |
| 01R0002533 | 1R 33; On issuance of maintenance certificate | 0 | 0 | | 14MAR15 | 0 | | 29MAY14 | 0 |
| **Schedule of Milestones for Cost Centre No. 16R** | | | | | | | | | |
| 16R7003001 | 16R 1; On completion of landscape wks; Portion A | 0 | 0 | | 17JAN13 | 0 | | 10NOV12 | 786 |
| 16R7003002 | 16R 2; On completion of landscape wks; Portion B | 0 | 0 | | 21MAY13 | 0 | | 22MAR13 | 662 |
| 16R7003003 | 16R 3; On completion of landscape wks; Portion C | 0 | 0 | | 04OCT12 | 0 | | 14AUG12 | 891 |
| 16R7003004 | 16R 4; On completion of landscape wks; Portion D | 0 | 0 | | 21MAR13 | 0 | | 11DEC12 | 723 |
| 16R7003005 | 16R 5; On completion of establish wks; Portion A | 0 | 0 | | 17JAN14 | 0 | | 10NOV13 | 421 |
| 16R7003006 | 16R 6; On completion of establish wks; Portion B | 0 | 0 | | 21MAY14 | 0 | | 22MAR14 | 297 |
| 16R7003007 | 16R 7; On completion of establish wks; Portion C | 0 | 0 | | 19APR14 | 0 | | 08MAR14 | 329 |
| 16R7003008 | 16R 8; On completion of establish wks; Portion D | 0 | 0 | | 06NOV14 | 0 | | 29APR14 | 128 |
| **Schedule of Milestones for Cost Centre No. 17R** | | | | | | | | | |
| 17R0003101 | 17R 1; On complet of all wks for 3 mth frm DOC | 0 | 0 | | 27MAR08A | 100 | | 27MAR08A | |
| 17R0003102 | 17R 2; On complet of all wks for 6 mth frm DOC | 0 | 0 | | 27JUN08A | 100 | | 27JUN08A | |
| 17R0003103 | 17R 3; On complet of all wks for 9 mth frm DOC | 0 | 0 | | 26SEP08A | 100 | | 26SEP08A | |
| 17R0003104 | 17R 4; On complet of all wks for 12 mth frm DOC | 0 | 0 | | 27DEC08A | 100 | | 27DEC08A | |
| 17R0003105 | 17R 5; On complet of all wks for 15 mth frm DOC | 0 | 0 | | 27MAR09A | 100 | | 27MAR09A | |
| 17R0003106 | 17R 6; On complet of all wks for 18 mth frm DOC | 0 | 0 | | 15JUL09A | 100 | | 15JUL09A | |
| 17R0003107 | 17R 7; On complet of all wks for 21 mth frm DOC | 0 | 0 | | 27SEP09A | 100 | | 27SEP09A | |
| 17R0003108 | 17R 8; On complet of all wks for 24 mth frm DOC | 0 | 0 | | 26DEC09A | 100 | | 26DEC09A | |
| 17R0003109 | 17R 9; On complet of all wks for 27 mth frm DOC | 0 | 0 | | 13MAY10A | 100 | | 13MAY10A | |
| 17R0003110 | 17R 10; On complet all wks for 30 mth frm DOC | 0 | 0 | | 12AUG10A | 100 | | 12AUG10A | |
| 17R0003111 | 17R 11; On complet all wks for 33 mth frm DOC | 0 | 0 | | 02OCT10A | 100 | | 02OCT10A | |
| 17R0003112 | 17R 12; On complet all wks for 36 mth frm DOC | 0 | 0 | | 27DEC10A | 100 | | 27DEC10A | |
| 17R0003113 | 17R 13; On complet all wks for 39 mth frm DOC | 0 | 0 | | 02APR11A | 100 | | 02APR11A | |
| 17R0003114 | 17R 14; On complet all wks for 42 mth frm DOC | 0 | 0 | | 02JUL11A | 100 | | 02JUL11A | |
| 17R0003115 | 17R 15; On complet all wks for 45 mth frm DOC | 0 | 0 | | 30SEP11A | 100 | | 30SEP11A | |
| 17R0003116 | 17R 16; On complet all wks for 48 mth frm DOC | 0 | 0 | | 28FEB12A | 100 | | 27FEB12 | |
| 17R0003117 | 17R 17; On complet of all wks for 3 mth frm CMP | 0 | 0 | | 13JUN14 | 0 | | 29JUL13 | 274 |
| 17R0003118 | 17R 18; On complet of all wks for 6 mth frm CMP | 0 | 0 | | 12SEP14 | 0 | | 28OCT13 | 183 |
| 17R0003119 | 17R 19; On complet of all wks for 9 mth frm CMP | 0 | 0 | | 13DEC14 | 0 | | 28JAN14 | 91 |
| 17R0003120 | 17R 20; On issuance of maintenance certificate | 0 | 0 | | 14MAR15 | 0 | | 29MAY14 | 0 |



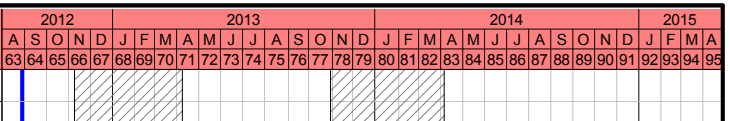
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Design/Design Check for Permanent Works** | | | | | | | | | |
| **Project -wide Packages** | | | | | | | | | |
| **Project Design Plan (PDP)** | | | | | | | | | |
| 02L10D0102 | Employ Independent Designer | 7 | 7 | 14DEC07A | 20DEC07A | 100 | 14DEC07A | 20DEC07A | |
| 02L10D0104 | Prepare & submit Project Design Plan (PDP) | 28 | 28 | 14DEC07A | 26FEB08A | 100 | 14DEC07A | 26FEB08A | |
| 02L10D0106 | SO's review & comment on PDP | 28 | 28 | 27FEB08A | 18MAR08A | 100 | 27FEB08A | 18MAR08A | |
| 02L10D0108 | Provide further information of (PDP) | 28 | 28 | 19MAR08A | 21AUG08A | 100 | 19MAR08A | 21AUG08A | |
| 02L10D0110 | SO approves PDP | 14 | 14 | 14MAY08A | 04SEP08A | 100 | 14MAY08A | 04SEP08A | |
| 02L10D0112 | Employ Independent Design Checker | 14 | 14 | 28DEC07A | 01FEB08A | 100 | 28DEC07A | 01FEB08A | |
| 02L10D0114 | Approval of Design Checker by the SO | 28 | 28 | 02FEB08A | 28FEB08A | 100 | 02FEB08A | 28FEB08A | |
| **Design for Communication System** | | | | | | | | | |
| 02L1FE0002 | Receive VO# 180 for Digital Comm. Sys | 0 | 0 | 15NOV11A | | 100 | 15NOV11A | | |
| 02L1FE0012 | AIP (Digital); Submit/approve from ICE & SOR | 121 | 121 | 31OCT11A | 11JUN12A | 100 | 31OCT11A | 27APR12 | |
| 02L1FE0102 | Design preparation for the AIP submission | 15 | 15 | 23NOV09A | 10DEC09A | 100 | 23NOV09A | 10DEC09A | |
| 02L1FE0103 | Design (AIP) submission for the DC's approval | 1 | 1 | 11DEC09A | 11DEC09A | 100 | 11DEC09A | 11DEC09A | |
| 02L1FE0104 | Design (AIP) certification by the Design Checker | 28 | 28 | 12DEC09A | 26JAN10A | 100 | 12DEC09A | 26JAN10A | |
| 02L1FE0106 | Design (AIP) submission for the SO's approval | 1 | 1 | 27JAN10A | 27JAN10A | 100 | 27JAN10A | 27JAN10A | |
| 02L1FE0108 | Design (AIP) review by the SO | 60 | 60 | 28JAN10A | 24JUN10A | 100 | 28JAN10A | 24JUN10A | |
| 02L1FE0110 | AIP submission for rel. authorities' approval | 1 | 1 | 05APR12A | 17APR12A | 100 | 30APR12 | 30APR12 | |
| 02L1FE0112 | Design (AIP) review by the rel. authorities | 28 | 28 | 06APR12A | 11JUN12A | 100 | 01MAY12 | 28MAY12 | |
| 02L1FE0114 | Obtain rel. authorities's approval for AIP | 0 | 1 | | 11JUN12A | 100 | 29MAY12 | 29MAY12 | |
| 02L1FE0116 | Obtain SO's consent for design (AIP) | 0 | 0 | | 11JUN12A | 100 | | 24JUN10A | |
| 02L1FE0118 | Design preparation for the DDA submission | 30 | 30 | 28AUG12 | 26SEP12 | 0 | 28APR12 | 27MAY12 | -406 |
| 02L1FE0119 | Design (DDA) submission for the DC's approval | 1 | 1 | 27SEP12 | 27SEP12 | 0 | 28MAY12 | 28MAY12 | -331 |
| 02L1FE0120 | Design (DDA) certification by the Design Checker | 28 | 28 | 28SEP12 | 25OCT12 | 0 | 29MAY12 | 25JUN12 | -406 |
| 02L1FE0122 | Design (DDA) submission for the SO's approval | 1 | 1 | 27SEP12 | 27SEP12 | 0 | 28MAY12 | 28MAY12 | -325 |
| 02L1FE0124 | Design (DDA) review by the SO | 60 | 60 | 05OCT12 | 03DEC12 | 0 | 05JUN12 | 03AUG12 | -406 |
| 02L1FE0126 | DDA submission for rel. authorities' approval | 1 | 1 | 27SEP12 | 27SEP12 | 0 | 28MAY12 | 28MAY12 | -299 |
| 02L1FE0128 | Design (DDA) review by the rel. authorities | 28 | 28 | 05OCT12 | 01NOV12 | 0 | 05JUN12 | 02JUL12 | -374 |
| 02L1FE0130 | Obtain rel. authorities's approval for DDA | 1 | 1 | 02NOV12 | 02NOV12 | 0 | 03JUL12 | 03JUL12 | -305 |
| 02L1FE0132 | Obtain SO's consent for design (DDA) | 0 | 0 | | 04DEC12 | 0 | | 04AUG12 | -406 |
| **Design Packages for Works in Portion A** | | | | | | | | | |
| **Temp. Steel Decking Design Over Shing Mun Nullah** | | | | | | | | | |
| 02L1AA0102 | Design preparation by the Designer | 14 | 14 | 22FEB08A | 15MAY08A | 100 | 22FEB08A | 15MAY08A | |
| 02L1AA0104 | Design certification by the Design Checker | 14 | 14 | 16MAY08A | 26MAY08A | 100 | 16MAY08A | 26MAY08A | |
| 02L1AA0106 | Design submission for the SO's approval | 1 | 1 | 26MAY08A | 26MAY08A | 100 | 26MAY08A | 26MAY08A | |
| 02L1AA0108 | Design review by the SO | 21 | 21 | 27MAY08A | 30JUN08A | 100 | 27MAY08A | 30JUN08A | |
| 02L1AA0110 | Obtain design approval from the SO | 0 | 0 | | 30JUN08A | 100 | | 30JUN08A | |
| **ELS Design for Spiral Ramp/Cascade/Box Culvert** | | | | | | | | | |
| 02L1AA0202 | Design preparation for the DDA submission | 158 | 158 | 02MAY08A | 16FEB09A | 100 | 02MAY08A | 16FEB09A | |
| 02L1AA0203 | Design submission for the DC's approval | 2 | 2 | 10JUL08A | 17FEB09A | 100 | 10JUL08A | 17FEB09A | |
| 02L1AA0204 | Design (DDA) certification by the Design Checker | 30 | 30 | 11JUL08A | 17FEB09A | 100 | 11JUL08A | 17FEB09A | |



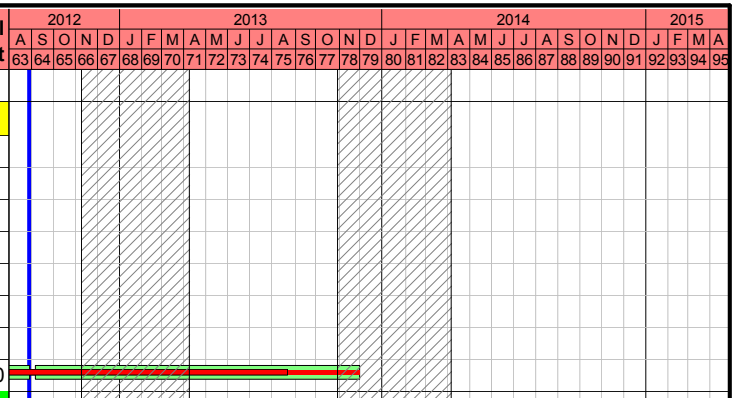
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1AA0206 | Design (DDA) submission for the SO's approval | 2 | 2 | 12AUG08A | 17FEB09A | 100 | 12AUG08A | 17FEB09A | |
| 02L1AA0208 | Design (DDA) review by the SO | 68 | 68 | 13AUG08A | 14MAR09A | 100 | 13AUG08A | 14MAR09A | |
| 02L1AA0216 | SO submit design (DDA) for review of GEO | 1 | 1 | 03FEB09A | 03MAR09A | 100 | 03FEB09A | 03MAR09A | |
| 02L1AA0218 | Design (DDA) review by the GEO | 28 | 28 | 04MAR09A | 28OCT09A | 100 | 04MAR09A | 28OCT09A | |
| 02L1AA0238 | Obtain SO's consent for design (DDA) | 0 | 0 | | 24MAR09A | 100 | | 24MAR09A | |
| **Temp. Platform Design for H-Piling** | | | | | | | | | |
| 02L1AA0302 | Design preparation by the Designer | 15 | 15 | 01FEB11A | 19FEB11A | 100 | 01FEB11A | 19FEB11A | |
| 02L1AA0303 | Design submission for the DC's approval | 1 | 1 | 21FEB11A | 21FEB11A | 100 | 21FEB11A | 21FEB11A | |
| 02L1AA0304 | Design certification by the Design Checker | 28 | 28 | 21FEB11A | 24MAR11A | 100 | 21FEB11A | 24MAR11A | |
| 02L1AA0306 | Design submission for the SO's approval | 1 | 1 | 21FEB11A | 25MAR11A | 100 | 21FEB11A | 25MAR11A | |
| 02L1AA0308 | Design review by the SO | 42 | 42 | 21FEB11A | 01APR11A | 100 | 21FEB11A | 01APR11A | |
| 02L1AA0310 | Obtain design approval from the SO | 0 | 0 | | 06APR11A | 100 | | 06APR11A | |
| **Cascade & Box Culver Design for Portion A** | | | | | | | | | |
| 02L1AA0402 | Design preparation for the AIP submission | 30 | 30 | 02JUN08A | 28FEB09A | 100 | 02JUN08A | 28FEB09A | |
| 02L1AA0403 | Design (AIP) submission for the DC's approval | 3 | 3 | 12JUL08A | 02MAR09A | 100 | 12JUL08A | 02MAR09A | |
| 02L1AA0404 | Design (AIP) certification by the Design Checker | 243 | 243 | 14JUL08A | 18MAR09A | 100 | 14JUL08A | 18MAR09A | |
| 02L1AA0406 | Design (AIP) submission for the SO's approval | 2 | 2 | 15JUL08A | 19MAR09A | 100 | 15JUL08A | 19MAR09A | |
| 02L1AA0408 | Design (AIP) review by the SO | 66 | 66 | 16JUL08A | 20MAR09A | 100 | 16JUL08A | 20MAR09A | |
| 02L1AA0410 | AIP submission for rel. authorities' approval | 1 | 1 | 14JUL08A | 19AUG08A | 100 | 14JUL08A | 19AUG08A | |
| 02L1AA0412 | Design (AIP) review by the rel. authorities | 28 | 28 | 15JUL08A | 18NOV08A | 100 | 15JUL08A | 18NOV08A | |
| 02L1AA0414 | Obtain rel. authorities's approval for AIP | 1 | 1 | 03NOV08A | 18NOV08A | 100 | 03NOV08A | 18NOV08A | |
| 02L1AA0420 | Obtain SO's consent for design (AIP) | 0 | 0 | | 20MAR09A | 100 | | 20MAR09A | |
| 02L1AA0422 | Design preparation for the DDA submission | 141 | 141 | 21MAR09A | 30SEP10A | 100 | 21MAR09A | 30SEP10A | |
| 02L1AA0423 | Design (DDA) submission for the DC's approval | 2 | 2 | 02SEP09A | 01SEP10A | 100 | 02SEP09A | 01SEP10A | |
| 02L1AA0424 | Design (DDA) certification by the Design Checker | 28 | 28 | 03SEP09A | 18NOV10A | 100 | 03SEP09A | 18NOV10A | |
| 02L1AA0426 | Design (DDA) submission for the SO's approval | 2 | 2 | 07SEP09A | 19NOV10A | 100 | 07SEP09A | 19NOV10A | |
| 02L1AA0428 | Design (DDA) review by the SO | 66 | 66 | 08SEP09A | 24NOV10A | 100 | 08SEP09A | 24NOV10A | |
| 02L1AA0430 | DDA submission for rel. authorities' approval | 1 | 1 | 06DEC10A | 06DEC10A | 100 | 06DEC10A | 06DEC10A | |
| 02L1AA0432 | Design (DDA) review by the rel. authorities | 28 | 28 | 06DEC10A | 03JAN11A | 100 | 06DEC10A | 03JAN11A | |
| 02L1AA0434 | Obtain rel. authorities's approval for DDA | 1 | 1 | 03JAN11A | 03JAN11A | 100 | 03JAN11A | 03JAN11A | |
| 02L1AA0440 | Obtain SO's consent for design (DDA) | 0 | 0 | | 24NOV10A | 100 | | 24NOV10A | |
| **Impact Assessment on WSD Wo Yip Hop V. S. P. H.** | | | | | | | | | |
| 02L1AA0502 | Design preparation for the DDA submission | 30 | 30 | 02MAY08A | 26FEB09A | 100 | 02MAY08A | 26FEB09A | |
| 02L1AA0503 | Design (DDA) submission for the DC's approval | 1 | 1 | 26JUN08A | 27FEB09A | 100 | 26JUN08A | 27FEB09A | |
| 02L1AA0504 | Design (DDA) certification by the Design Checker | 60 | 60 | 27JUN08A | 11MAR09A | 100 | 27JUN08A | 11MAR09A | |
| 02L1AA0506 | Design (DDA) submission for the SO's approval | 2 | 2 | 14JUL08A | 24MAR09A | 100 | 14JUL08A | 24MAR09A | |
| 02L1AA0508 | Design (DDA) review by the SO | 66 | 66 | 15JUL08A | 31MAR09A | 100 | 15JUL08A | 31MAR09A | |
| 02L1AA0510 | DDA submission for rel. authorities' approval | 2 | 2 | 10JUL08A | 14MAR09A | 100 | 10JUL08A | 14MAR09A | |
| 02L1AA0512 | Design (DDA) review by the rel. authorities | 385 | 385 | 14JUL08A | 02NOV09A | 100 | 14JUL08A | 02NOV09A | |
| 02L1AA0514 | Obtain rel. authorities's approval for DDA | 1 | 1 | 03NOV09A | 03NOV09A | 100 | 03NOV09A | 03NOV09A | |
| 02L1AA0520 | Obtain SO's consent for design (DDA) | 0 | 0 | | 31MAR09A | 100 | | 31MAR09A | |
| **Temporary Platform for Pipe Piling** | | | | | | | | | |
| 02L1AA0602 | Design preparation by the Designer | 11 | 11 | 21JUL08A | 23AUG08A | 100 | 21JUL08A | 23AUG08A | |



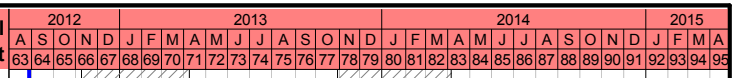
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1AA0603 | Design submission for the DC's approval | 1 | 1 | 01AUG08A | 25AUG08A | 100 | 01AUG08A | 25AUG08A | |
| 02L1AA0604 | Design certification by the Design Checker | 21 | 21 | 02AUG08A | 26SEP08A | 100 | 02AUG08A | 26SEP08A | |
| 02L1AA0606 | Design submission for the SO's approval | 1 | 1 | 08AUG08A | 27SEP08A | 100 | 08AUG08A | 27SEP08A | |
| 02L1AA0608 | Design review by the SO | 28 | 28 | 09AUG08A | 17OCT08A | 100 | 09AUG08A | 17OCT08A | |
| 02L1AA0610 | Obtain design approval from the SO | 0 | 0 | | 17OCT08A | 100 | | 17OCT08A | |
| **Temporary Works Design for Retrieval of TBM** | | | | | | | | | |
| 02L1AA0702 | Design preparation by the Designer | 162 | 162 | 28FEB09A | 12JAN11A | 100 | 28FEB09A | 12JAN11A | |
| 02L1AA0703 | Design submission for the DC's approval | 1 | 1 | 13JAN11A | 13JAN11A | 100 | 13JAN11A | 13JAN11A | |
| 02L1AA0704 | Design certification by the Design Checker | 28 | 28 | 18AUG09A | 22MAR11A | 100 | 18AUG09A | 22MAR11A | |
| 02L1AA0706 | Design submission for the SO's approval | 1 | 1 | 13JAN11A | 23MAR11A | 100 | 13JAN11A | 23MAR11A | |
| 02L1AA0708 | Design review by the SO | 42 | 42 | 14JAN11A | 20JUN11A | 100 | 14JAN11A | 20JUN11A | |
| 02L1AA0710 | Obtain design approval from the SO | 0 | 0 | | 20JUN11A | 100 | | 20JUN11A | |
| **Temporary Drainage Management Plan for Portion A** | | | | | | | | | |
| 02L1AA0802 | TDMP preparation by the Designer | 208 | 208 | 18AUG08A | 23MAY09A | 100 | 18AUG08A | 23MAY09A | |
| 02L1AA0804 | TDMP submission for the DC's approval | 2 | 2 | 24SEP08A | 25MAY09A | 100 | 24SEP08A | 25MAY09A | |
| 02L1AA0806 | TDMP certification by the Design Checker | 80 | 80 | 24OCT08A | 02DEC09A | 100 | 24OCT08A | 02DEC09A | |
| 02L1AA0808 | TDMP submission for the SO's approval | 5 | 5 | 05NOV08A | 03DEC09A | 100 | 05NOV08A | 03DEC09A | |
| 02L1AA0810 | TDMP review by the SO | 284 | 284 | 05NOV08A | 05DEC09A | 100 | 05NOV08A | 05DEC09A | |
| 02L1AA0812 | TDMP submission for DSD's approval | 1 | 1 | 03DEC09A | 03DEC09A | 100 | 03DEC09A | 03DEC09A | |
| 02L1AA0814 | TDMP review by the DSD | 60 | 60 | 23SEP09A | 05DEC09A | 100 | 23SEP09A | 05DEC09A | |
| 02L1AA0816 | Obtain DSD's approval for DDA | 1 | 1 | 07DEC09A | 07DEC09A | 100 | 07DEC09A | 07DEC09A | |
| 02L1AA0818 | Obtain SO's consent for TDMP | 0 | 0 | | 07DEC09A | 100 | | 07DEC09A | |
| **Temp. Design For Exit. Channel Modification** | | | | | | | | | |
| 02L1AA0902 | Design preparation | 25 | 25 | 25SEP09A | 27OCT09A | 100 | 25SEP09A | 27OCT09A | |
| 02L1AA0912 | Design submission to Design Checker | 1 | 1 | 28OCT09A | 28OCT09A | 100 | 28OCT09A | 28OCT09A | |
| 02L1AA0922 | Design certification by Design Checker | 18 | 18 | 29OCT09A | 15NOV09A | 100 | 29OCT09A | 15NOV09A | |
| 02L1AA0932 | Design submission to SO | 1 | 1 | 16NOV09A | 16NOV09A | 100 | 16NOV09A | 16NOV09A | |
| 02L1AA0942 | Design revew by SO | 21 | 21 | 17NOV09A | 07DEC09A | 100 | 17NOV09A | 07DEC09A | |
| 02L1AA0952 | Obtain design approval from SO | 0 | 0 | | 07DEC09A | 100 | | 07DEC09A | |
| **Temp. Design for TBM Portal Strengtheing at I-1** | | | | | | | | | |
| 02L1AA1002 | Design preparation | 18 | 18 | 02DEC09A | 10JAN11A | 100 | 02DEC09A | 10JAN11A | |
| 02L1AA1012 | Design submission to Design Checker | 1 | 1 | 11JAN11A | 11JAN11A | 100 | 11JAN11A | 11JAN11A | |
| 02L1AA1022 | Design certification by Design Checker | 7 | 7 | 12JAN11A | 22MAR11A | 100 | 12JAN11A | 22MAR11A | |
| 02L1AA1032 | Design submission to SO | 1 | 1 | 11JAN11A | 23MAR11A | 100 | 11JAN11A | 23MAR11A | |
| 02L1AA1042 | Design review by SO | 21 | 21 | 12JAN11A | 01APR11A | 100 | 12JAN11A | 01APR11A | |
| 02L1AA1052 | Obtain design approval from SO | 0 | 0 | | 01APR11A | 100 | | 01APR11A | |
| **Geotechnical Instrumentation Stg 1 for GL Works** | | | | | | | | | |
| 3DL1AAG102 | Design preparation by the Designer | 14 | 14 | 22FEB08A | 28APR08A | 100 | 22FEB08A | 28APR08A | |
| 3DL1AAG104 | Design certification by the Design Checker | 7 | 7 | 29APR08A | 16JUN08A | 100 | 29APR08A | 16JUN08A | |
| 3DL1AAG106 | Design submission for the SO's approval | 1 | 1 | 10MAY08A | 10MAY08A | 100 | 10MAY08A | 10MAY08A | |
| 3DL1AAG108 | Design review by the SO | 14 | 14 | 12MAY08A | 28AUG08A | 100 | 12MAY08A | 28AUG08A | |
| 3DL1AAG110 | Obtain design approval from the SO | 0 | 0 | | 28AUG08A | 100 | | 28AUG08A | |
| 3DL1AAG112 | Install Geotechnical Instruments | 6 | 6 | 26MAY08A | 26MAY08A | 100 | 26MAY08A | 26MAY08A | |



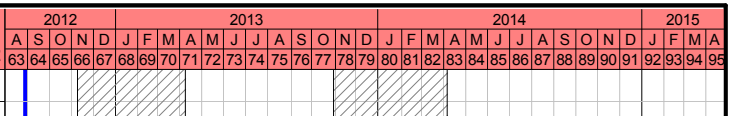
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3DL1AAG114 | Baseline Monitoring | 14 | 14 | 27MAY08A | 31MAY08A | 100 | 27MAY08A | 31MAY08A | |
| **Geotechnical Instrumentation Stg 2 for Deep Exc.** | | | | | | | | | |
| 3DL1AAG202 | Design preparation by the Designer | 14 | 14 | 01DEC08A | 24FEB09A | 100 | 01DEC08A | 24FEB09A | |
| 3DL1AAG204 | Design certification by the Design Checker | 7 | 7 | 15DEC08A | 25FEB09A | 100 | 15DEC08A | 25FEB09A | |
| 3DL1AAG206 | Design submission for the SO's approval | 1 | 1 | 07JAN09A | 25FEB09A | 100 | 07JAN09A | 25FEB09A | |
| 3DL1AAG208 | Design review by the SO | 28 | 28 | 08JAN09A | 24MAR09A | 100 | 08JAN09A | 24MAR09A | |
| 3DL1AAG210 | Obtain design approval from the SO | 0 | 0 | | 24MAR09A | 100 | | 24MAR09A | |
| 3DL1AAG212 | Install Geotechnical Instruments | 28 | 28 | 09FEB09A | 03NOV09A | 100 | 09FEB09A | 03NOV09A | |
| 3DL1AAG214 | Baseline Monitoring | 6 | 6 | 18FEB09A | 25MAR09A | 100 | 18FEB09A | 25MAR09A | |
| 3DL1AAG216 | Monitor/report Geotechnical Instrumentation | 1,908 | 1,908 | 02JUN08A | 30NOV13 | 76 | 02JUN08A | 22AUG13 | 0 |
| **Design Packages for Works in Portion B** | | | | | | | | | |
| **Piling Platform to Construct H-pile Wall** | | | | | | | | | |
| 02L1BB0202 | Design preparation by the Designer | 15 | 15 | 24MAR08A | 09MAY08A | 100 | 24MAR08A | 09MAY08A | |
| 02L1BB0204 | Design certification by the Design Checker | 14 | 14 | 10MAY08A | 08AUG08A | 100 | 10MAY08A | 08AUG08A | |
| 02L1BB0206 | Design submission for the SO's approval | 1 | 1 | 21MAY08A | 08AUG08A | 100 | 21MAY08A | 08AUG08A | |
| 02L1BB0208 | Design review by the SO | 21 | 21 | 22MAY08A | 25SEP08A | 100 | 22MAY08A | 25SEP08A | |
| 02L1BB0210 | Obtain design approval from the SO | 0 | 0 | | 25SEP08A | 100 | | 25SEP08A | |
| **Temp. Platform to Construct Drop Shafts** | | | | | | | | | |
| 02L1BB0302 | Design preparation by the Designer | 22 | 22 | 04AUG08A | 11DEC08A | 100 | 04AUG08A | 11DEC08A | |
| 02L1BB0303 | Design submission for the DC's approval | 2 | 2 | 11DEC08A | 12FEB09A | 100 | 11DEC08A | 12FEB09A | |
| 02L1BB0304 | Design certification by the Design Checker | 14 | 14 | 12DEC08A | 25FEB09A | 100 | 12DEC08A | 25FEB09A | |
| 02L1BB0306 | Design submission for the SO's approval | 2 | 2 | 12DEC08A | 25FEB09A | 100 | 12DEC08A | 25FEB09A | |
| 02L1BB0308 | Design review by the SO | 21 | 21 | 13DEC08A | 11MAR09A | 100 | 13DEC08A | 11MAR09A | |
| 02L1BB0310 | Obtain design approval from the SO | 0 | 0 | | 11MAR09A | 100 | | 11MAR09A | |
| **Temporary Drainage Management Plan** | | | | | | | | | |
| 02L1BB0402 | TDMP preparation by the Designer | 313 | 313 | 05MAY08A | 21MAR09A | 100 | 05MAY08A | 21MAR09A | |
| 02L1BB0403 | TDMP submission for the DC's approval | 2 | 2 | 05AUG08A | 23MAR09A | 100 | 05AUG08A | 23MAR09A | |
| 02L1BB0404 | TDMP certification by the Design Checker | 213 | 213 | 06AUG08A | 13APR09A | 100 | 06AUG08A | 13APR09A | |
| 02L1BB0406 | TDMP submission for the SO's approval | 2 | 2 | 24SEP08A | 14APR09A | 100 | 24SEP08A | 14APR09A | |
| 02L1BB0408 | TDMP review by the SO | 90 | 90 | 25SEP08A | 28OCT09A | 100 | 25SEP08A | 28OCT09A | |
| 02L1BB0410 | TDMP submission for DSD's approval | 1 | 1 | 23SEP08A | 23SEP08A | 100 | 23SEP08A | 23SEP08A | |
| 02L1BB0412 | TDMP review by the DSD | 90 | 90 | 24SEP08A | 02NOV09A | 100 | 24SEP08A | 02NOV09A | |
| 02L1BB0414 | Obtain DSD's approval for DDA | 1 | 1 | 03NOV09A | 03NOV09A | 100 | 03NOV09A | 03NOV09A | |
| 02L1BB0416 | Obtain SO's consent for TDMP | 0 | 0 | | 03NOV09A | 100 | | 03NOV09A | |
| **Temp. Support Design for MAA/MAS/VDS/DC** | | | | | | | | | |
| 02L1BB0502 | Design preparation for the AIP submission | 272 | 272 | 02JUN08A | 19MAR09A | 100 | 02JUN08A | 19MAR09A | |
| 02L1BB0503 | Design (AIP) submission for the DC's approval | 2 | 2 | 11JUL08A | 20MAR09A | 100 | 11JUL08A | 20MAR09A | |
| 02L1BB0504 | Design (AIP) certification by the Design Checker | 60 | 60 | 12JUL08A | 04APR09A | 100 | 12JUL08A | 04APR09A | |
| 02L1BB0506 | Design (AIP) submission for the SO's approval | 2 | 2 | 24JUL08A | 06APR09A | 100 | 24JUL08A | 06APR09A | |
| 02L1BB0508 | Design (AIP) review by the SO | 66 | 66 | 25JUL08A | 06JUN09A | 100 | 25JUL08A | 06JUN09A | |
| 02L1BB0510 | AIP submission for rel. authorities' approval | 1 | 1 | 12JUL08A | 12JUL08A | 100 | 12JUL08A | 12JUL08A | |
| 02L1BB0512 | Design (AIP) review by the rel. authorities | 28 | 28 | 14JUL08A | 10NOV08A | 100 | 14JUL08A | 10NOV08A | |
| 02L1BB0514 | Obtain rel. authorities's approval for AIP | 1 | 1 | 11NOV08A | 11NOV08A | 100 | 11NOV08A | 11NOV08A | |



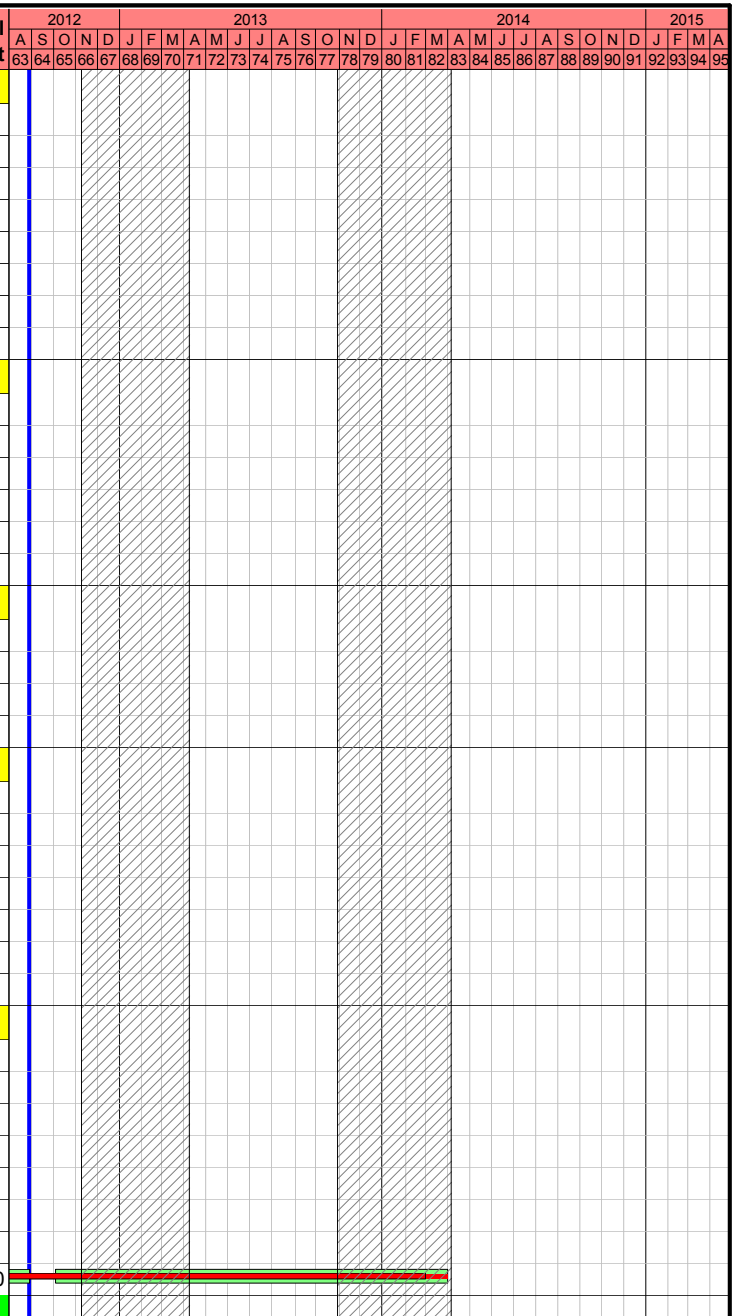
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1BB0516 | SO submit design (AIP) for review of GEO | 1 | 1 | 29MAY09A | 29MAY09A | 100 | 29MAY09A | 29MAY09A | |
| 02L1BB0518 | Design (AIP) review by the GEO | 28 | 28 | 30MAY09A | 26AUG09A | 100 | 30MAY09A | 26AUG09A | |
| 02L1BB0520 | Obtain SO's consent for design (AIP) | 0 | 0 | | 06JUN09A | 100 | | 06JUN09A | |
| 02L1BB0522 | Design preparation for the DDA submission | 30 | 30 | 04MAY09A | 28MAY09A | 100 | 04MAY09A | 28MAY09A | |
| 02L1BB0523 | Design (DDA) submission for the DC's approval | 1 | 1 | 01JUN09A | 16JUL09A | 100 | 01JUN09A | 16JUL09A | |
| 02L1BB0524 | Design (DDA) certification by the Design Checker | 80 | 80 | 02JUN09A | 28DEC09A | 100 | 02JUN09A | 28DEC09A | |
| 02L1BB0526 | Design (DDA) submission for the SO's approval | 2 | 2 | 07JUL09A | 28DEC09A | 100 | 07JUL09A | 28DEC09A | |
| 02L1BB0528 | Design (DDA) review by the SO | 66 | 66 | 08JUL09A | 16DEC09A | 100 | 08JUL09A | 16DEC09A | |
| 02L1BB0530 | DDA submission for rel. authorities' approval | 1 | 1 | 07NOV09A | 07NOV09A | 100 | 07NOV09A | 07NOV09A | |
| 02L1BB0532 | Design (DDA) review by the rel. authorities | 28 | 28 | 09NOV09A | 06DEC09A | 100 | 09NOV09A | 06DEC09A | |
| 02L1BB0534 | Obtain rel. authorities's approval for DDA | 1 | 1 | 07DEC09A | 07DEC09A | 100 | 07DEC09A | 07DEC09A | |
| 02L1BB0536 | SO submit design (DDA) for review of GEO | 1 | 1 | 05DEC09A | 05DEC09A | 100 | 05DEC09A | 05DEC09A | |
| 02L1BB0538 | Design (DDA) review by the GEO | 28 | 28 | 06DEC09A | 09JAN10A | 100 | 06DEC09A | 09JAN10A | |
| 02L1BB0540 | Obtain SO's consent for design (DDA) | 0 | 0 | | 16DEC09A | 100 | | 16DEC09A | |
| **Temp. Support Design for MA and MA/MT Connection** | | | | | | | | | |
| 02L1BB0602 | Design preparation for the AIP submission | 110 | 110 | 09JUN08A | 08NOV09A | 100 | 09JUN08A | 08NOV09A | |
| 02L1BB0603 | Design (AIP) submission for the DC's approval | 2 | 2 | 18MAY09A | 09NOV09A | 100 | 18MAY09A | 09NOV09A | |
| 02L1BB0604 | Design (AIP) certification by the Design Checker | 28 | 28 | 19MAY09A | 25NOV09A | 100 | 19MAY09A | 25NOV09A | |
| 02L1BB0606 | Design (AIP) submission for the SO's approval | 1 | 1 | 09NOV09A | 09NOV09A | 100 | 09NOV09A | 09NOV09A | |
| 02L1BB0608 | Design (AIP) review by the SO | 66 | 66 | 10NOV09A | 10MAY10A | 100 | 10NOV09A | 10MAY10A | |
| 02L1BB0616 | SO submit design (AIP) for review of GEO | 1 | 1 | 11MAY10A | 11MAY10A | 100 | 11MAY10A | 11MAY10A | |
| 02L1BB0618 | Design (AIP) review by the GEO | 28 | 28 | 12MAY10A | 28JUN10A | 100 | 12MAY10A | 28JUN10A | |
| 02L1BB0620 | Obtain SO's consent for design (AIP) | 0 | 0 | | 10JUN10A | 100 | | 10JUN10A | |
| 02L1BB0622 | Design preparation for the DDA submission | 30 | 30 | 28JUN10A | 24AUG10A | 100 | 28JUN10A | 24AUG10A | |
| 02L1BB0623 | Design (DDA) submission for the DC's approval | 1 | 1 | 25AUG10A | 06DEC10A | 100 | 25AUG10A | 06DEC10A | |
| 02L1BB0624 | Design (DDA) certification by the Design Checker | 28 | 28 | 26AUG10A | 20DEC10A | 100 | 26AUG10A | 20DEC10A | |
| 02L1BB0626 | Design (DDA) submission for the SO's approval | 1 | 1 | 25AUG10A | 20DEC10A | 100 | 25AUG10A | 20DEC10A | |
| 02L1BB0628 | Design (DDA) review by the SO | 66 | 66 | 26AUG10A | 05JAN11A | 100 | 26AUG10A | 05JAN11A | |
| **Permanent Design for MAA/MAS/VDS/DC** | | | | | | | | | |
| 02L1BB0702 | Design preparation for the AIP submission | 285 | 285 | 02JUN08A | 02JUN09A | 100 | 02JUN08A | 02JUN09A | |
| 02L1BB0703 | Design submission for the DC's approval | 2 | 2 | 03JUL08A | 06JUL09A | 100 | 03JUL08A | 06JUL09A | |
| 02L1BB0704 | Design (AIP) certification by the Design Checker | 60 | 60 | 24JUL08A | 21JUL09A | 100 | 24JUL08A | 21JUL09A | |
| 02L1BB0706 | Design (AIP) submission for the SO's approval | 2 | 2 | 04JUL08A | 22JUL09A | 100 | 04JUL08A | 22JUL09A | |
| 02L1BB0708 | Design (AIP) review by the SO | 66 | 66 | 05JUL08A | 09DEC09A | 100 | 05JUL08A | 09DEC09A | |
| 02L1BB0710 | AIP submission for rel. authorities' approval | 1 | 1 | 03JUL08A | 03JUL08A | 100 | 03JUL08A | 03JUL08A | |
| 02L1BB0712 | Design (AIP) review by the rel. authorities | 28 | 28 | 04JUL08A | 28OCT09A | 100 | 04JUL08A | 28OCT09A | |
| 02L1BB0714 | Obtain rel. authorities's approval for AIP | 1 | 1 | | 10DEC09A | 100 | | 10DEC09A | |
| 02L1BB0720 | Obtain SO's consent for design (AIP) | 0 | 0 | | 10DEC09A | 100 | | 10DEC09A | |
| 02L1BB0722 | Design preparation for the DDA submission | 30 | 30 | 04JAN10A | 11AUG11A | 100 | 04JAN10A | 11AUG11A | |
| 02L1BB0723 | Design submission for the DC's approval | 1 | 1 | 14MAY10A | 24MAR11A | 100 | 14MAY10A | 24MAR11A | |
| 02L1BB0724 | Design (DDA) certification by the Design Checker | 28 | 28 | 15MAY10A | 11AUG11A | 100 | 15MAY10A | 11AUG11A | |
| 02L1BB0726 | Design (DDA) submission for the SO's approval | 1 | 1 | 24MAY10A | 11AUG11A | 100 | 24MAY10A | 11AUG11A | |
| 02L1BB0728 | Design (DDA) review by the SO | 66 | 66 | 25MAY10A | 02JAN12A | 100 | 25MAY10A | 02JAN12A | |



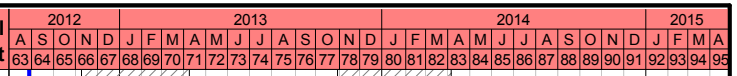
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1BB0730 | DDA submission for rel. authorities' approval | 1 | 1 | 19JAN12A | 19JAN12A | 100 | 19JAN12A | 19JAN12A | |
| 02L1BB0732 | Design (DDA) review by the rel. authorities | 28 | 28 | 20JAN12A | 29FEB12A | 100 | 20JAN12A | 18MAR12 | |
| 02L1BB0734 | Obtain rel. authorities's approval for DDA | 0 | 1 | | 29FEB12A | 100 | 19MAR12 | 19MAR12 | |
| 02L1BB0740 | Obtain SO's consent for design (DDA) | 0 | 0 | | 29FEB12A | 100 | | 19MAR12 | |
| **Permanent Design for MA and MA/MT Connection** | | | | | | | | | |
| 02L1BB0802 | Design preparation for AIP submission | 90 | 90 | 09JUN08A | 14NOV09A | 100 | 09JUN08A | 14NOV09A | |
| 02L1BB0803 | Design (AIP) submission for the DC's approval | 2 | 2 | 30JUN08A | 16NOV09A | 100 | 30JUN08A | 16NOV09A | |
| 02L1BB0804 | Design (AIP) certification by the Design Checker | 28 | 28 | 24JUL08A | 02DEC09A | 100 | 24JUL08A | 02DEC09A | |
| 02L1BB0806 | Design (AIP) submission for the SO's approval | 2 | 2 | 25JUL08A | 03DEC09A | 100 | 25JUL08A | 03DEC09A | |
| 02L1BB0808 | Design (AIP) review by the SO | 66 | 66 | 26JUL08A | 28JUN10A | 100 | 26JUL08A | 28JUN10A | |
| 02L1BB0810 | AIP submission for rel. authorities' approval | 1 | 1 | 20OCT08A | 17JUN10A | 100 | 20OCT08A | 17JUN10A | |
| 02L1BB0820 | Obtain SO's consent for design (AIP) | 0 | 0 | | 28JUN10A | 100 | | 28JUN10A | |
| 02L1BB0822 | Design preparation for the DDA submission | 30 | 30 | 28JUN10A | 12APR12A | 100 | 28JUN10A | 01MAR12 | |
| 02L1BB0823 | Design (DDA) submission for the DC's approval | 1 | 1 | 31MAY11A | 13APR12A | 100 | 31MAY11A | 02MAR12 | |
| 02L1BB0824 | Design (DDA) certification by the Design Checker | 28 | 28 | 01JUN11A | 20APR12A | 100 | 01JUN11A | 12MAR12 | |
| 02L1BB0826 | Design (DDA) submission for the SO's approval | 1 | 1 | 31MAY11A | 13APR12A | 100 | 31MAY11A | 13MAR12 | |
| 02L1BB0828 | Design (DDA) review by the SO | 66 | 66 | 01JUN11A | 21APR12A | 100 | 01JUN11A | 11APR12 | |
| 02L1BB0830 | DDA submission for rel. authorities' approval | 1 | 1 | 05MAY12A | 05MAY12A | 100 | 12APR12 | 12APR12 | |
| 02L1BB0832 | Design (DDA) review by the rel. authorities | 28 | 28 | 07MAY12A | 07JUN12A | 100 | 13APR12 | 10MAY12 | |
| 02L1BB0834 | Obtain rel. authorities's approval for DDA | 0 | 1 | | 08JUN12A | 100 | 11MAY12 | 11MAY12 | |
| 02L1BB0840 | Obtain SO's consent for design (DDA) | 0 | 0 | | 08JUN12A | 100 | | 11MAY12 | |
| **ELS for L-shapped Retaining Wall** | | | | | | | | | |
| 02L1BB0902 | Design preparation by the Designer | 14 | 14 | 05JUL10A | 31AUG10A | 100 | 05JUL10A | 31AUG10A | |
| 02L1BB0903 | Design submission for the DC's approval | 1 | 1 | 01SEP10A | 01SEP10A | 100 | 01SEP10A | 01SEP10A | |
| 02L1BB0904 | Design certification by the Design Checker | 28 | 28 | 02SEP10A | 04NOV10A | 100 | 02SEP10A | 04NOV10A | |
| 02L1BB0906 | Design submission for the SO's approval | 1 | 1 | 05OCT10A | 05OCT10A | 100 | 05OCT10A | 05OCT10A | |
| 02L1BB0908 | Design review by the SO | 42 | 42 | 06OCT10A | 17NOV10A | 100 | 06OCT10A | 17NOV10A | |
| 02L1BB0910 | Obtain design approval from the SO | 0 | 0 | | 17NOV10A | 100 | | 17NOV10A | |
| **Platform for RCD Operation (Air Vent Shaft)** | | | | | | | | | |
| 02L1BB1602 | Prepare design/method statement | 6 | 6 | 22NOV08A | 01DEC08A | 100 | 22NOV08A | 01DEC08A | |
| 02L1BB1604 | Submit design/method statement to Design Checker | 1 | 1 | 02DEC08A | 23DEC08A | 100 | 02DEC08A | 23DEC08A | |
| 02L1BB1606 | Certify design/m.s. by Design Checker | 7 | 7 | 03DEC08A | 24DEC08A | 100 | 03DEC08A | 24DEC08A | |
| 02L1BB1608 | Submit design/m.s. to SO | 1 | 1 | 24DEC08A | 24DEC08A | 100 | 24DEC08A | 24DEC08A | |
| 02L1BB1610 | Design/m.s. review by SO | 14 | 14 | 25DEC08A | 11MAR09A | 100 | 25DEC08A | 11MAR09A | |
| 02L1BB1612 | Obtain design/m.s. approval from the SO | 0 | 0 | | 11MAR09A | 100 | | 11MAR09A | |
| **Temporary Works for Air Vent Shaft Construction** | | | | | | | | | |
| 02L1BB1702 | Prepare design/method statement | 21 | 21 | 03NOV08A | 16DEC08A | 100 | 03NOV08A | 16DEC08A | |
| 02L1BB1704 | Submit design/method statement to Design Checker | 1 | 1 | 17DEC08A | 17DEC08A | 100 | 17DEC08A | 17DEC08A | |
| 02L1BB1706 | Certify design/m.s. by Design Checker | 14 | 14 | 18DEC08A | 23JAN09A | 100 | 18DEC08A | 23JAN09A | |
| 02L1BB1708 | Submit design/m.s. to SO | 1 | 1 | 23JAN09A | 23JAN09A | 100 | 23JAN09A | 23JAN09A | |
| 02L1BB1710 | Design/m.s. review by SO | 7 | 7 | 24JAN09A | 23MAR09A | 100 | 24JAN09A | 23MAR09A | |
| 02L1BB1712 | Obtain design/m.s. approval from the SO | 0 | 0 | | 23MAR09A | 100 | | 23MAR09A | |



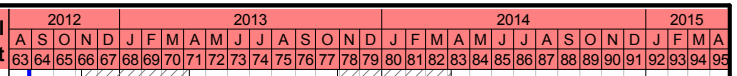
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Permanet Design for Air Vent Shaft** | | | | | | | | | |
| 02L1BB1802 | Prepare design/method statement | 60 | 60 | 05NOV08A | 24NOV09A | 100 | 05NOV08A | 24NOV09A | |
| 02L1BB1804 | Submit design/method statement to Design Checker | 2 | 2 | 12DEC08A | 25NOV09A | 100 | 12DEC08A | 25NOV09A | |
| 02L1BB1806 | Certify design/m.s. by Design Checker | 28 | 28 | 13DEC08A | 02DEC09A | 100 | 13DEC08A | 02DEC09A | |
| 02L1BB1808 | Submit design/m.s. to SO | 2 | 2 | 17DEC08A | 03DEC09A | 100 | 17DEC08A | 03DEC09A | |
| 02L1BB1810 | Design/m.s. review by SO | 42 | 42 | 18DEC08A | 04FEB10A | 100 | 18DEC08A | 04FEB10A | |
| 02L1BB1812 | Submit design to rel. authorities | 1 | 1 | 25MAR09A | 25MAR09A | 100 | 25MAR09A | 25MAR09A | |
| 02L1BB1814 | Obtain design approval from rel. authorities | 28 | 28 | 01MAR09A | 08DEC09A | 100 | 01MAR09A | 08DEC09A | |
| 02L1BB1816 | Obtain design/m.s. approval from the SO | 0 | 0 | | 04FEB10A | 100 | | 04FEB10A | |
| **ELS Design for Construction of Vortex Shaft** | | | | | | | | | |
| 02L1BB1902 | Design preparation by the Designer | 25 | 25 | 23FEB09A | 02JUN09A | 100 | 23FEB09A | 02JUN09A | |
| 02L1BB1904 | Design submission for the DC's approval | 1 | 1 | 03JUN09A | 03JUN09A | 100 | 03JUN09A | 03JUN09A | |
| 02L1BB1906 | Design certification by the Design Checker | 28 | 28 | 04JUN09A | 10NOV09A | 100 | 04JUN09A | 10NOV09A | |
| 02L1BB1908 | Design submission for the SO's approval | 1 | 1 | 12JUN09A | 12JUN09A | 100 | 12JUN09A | 12JUN09A | |
| 02L1BB1910 | Design review by the SO | 42 | 42 | 13JUN09A | 09DEC09A | 100 | 13JUN09A | 09DEC09A | |
| 02L1BB1912 | Obtain design approval from the SO | 0 | 0 | | 09DEC09A | 100 | | 09DEC09A | |
| **Blasting Assessment Report (BAR)** | | | | | | | | | |
| 02L1BBAR02 | Prepare submit BAR Feasibiliti Study Report | 31 | 31 | 03MAY10A | 08JUN10A | 100 | 03MAY10A | 08JUN10A | |
| 02L1BBAR12 | Prepare/submit BAR to SOR | 83 | 83 | 09JUN10A | 15SEP10A | 100 | 09JUN10A | 15SEP10A | |
| 02L1BBAR22 | Prepare/submit BAR to CEDD | 94 | 94 | 09JUN10A | 29SEP10A | 100 | 09JUN10A | 29SEP10A | |
| 02L1BBAR32 | Obtain Blasting Permit From Rel. Authorities | 183 | 183 | 30SEP10A | 22JUL11A | 100 | 30SEP10A | 22JUL11A | |
| **Geotechnical Instrumentation Stg 1 for GL Works** | | | | | | | | | |
| 3DL1BBG102 | Design preparation by the Designer | 14 | 14 | 22FEB08A | 05MAY08A | 100 | 22FEB08A | 05MAY08A | |
| 3DL1BBG104 | Design certification by the Design Checker | 7 | 7 | 06MAY08A | 29AUG08A | 100 | 06MAY08A | 29AUG08A | |
| 3DL1BBG106 | Design submission for the SO's approval | 1 | 1 | 10MAY08A | 10MAY08A | 100 | 10MAY08A | 10MAY08A | |
| 3DL1BBG108 | Design review by the SO | 14 | 14 | 12MAY08A | 14JUL08A | 100 | 12MAY08A | 14JUL08A | |
| 3DL1BBG110 | Obtain design approval from the SO | 0 | 0 | | 14JUL08A | 100 | | 14JUL08A | |
| 3DL1BBG112 | Install Geotechnical Instruments | 6 | 6 | 11JUN08A | 19JUL08A | 100 | 11JUN08A | 19JUL08A | |
| 3DL1BBG114 | Baseline Monitoring | 14 | 14 | 21JUL08A | 26JUL08A | 100 | 21JUL08A | 26JUL08A | |
| **Geotechnical Instrumentation Stg 2 for Deep Exc.** | | | | | | | | | |
| 3DL1BBG202 | Design preparation by the Designer | 40 | 40 | 31AUG08A | 24OCT08A | 100 | 31AUG08A | 24OCT08A | |
| 3DL1BBG204 | Design certification by the Design Checker | 14 | 14 | 24OCT08A | 22JUL09A | 100 | 24OCT08A | 22JUL09A | |
| 3DL1BBG206 | Design submission for the SO's approval | 1 | 1 | 05NOV08A | 23JUL09A | 100 | 05NOV08A | 23JUL09A | |
| 3DL1BBG208 | Design review by the SO | 28 | 28 | 06NOV08A | 04AUG09A | 100 | 06NOV08A | 04AUG09A | |
| 3DL1BBG210 | Obtain design approval from the SO | 0 | 0 | | 04AUG09A | 100 | | 04AUG09A | |
| 3DL1BBG212 | Install Geotechnical Instruments | 12 | 12 | 14MAR09A | 27MAR09A | 100 | 14MAR09A | 27MAR09A | |
| 3DL1BBG214 | Baseline Monitoring | 14 | 14 | 11JUN09A | 24JUN09A | 100 | 11JUN09A | 24JUN09A | |
| 3DL1BBG216 | Monitor/report Geotechnical Instrumentation | 2,040 | 2,040 | 28JUL08A | 01APR14 | 73 | 28JUL08A | 28FEB14 | 0 |
| **Design Packages for Works in Portion C** | | | | | | | | | |
| **Piling Platform for H-pile Wall A** | | | | | | | | | |
| 02L1CC0002 | Design preparation by the Designer | 15 | 15 | 12MAY08A | 27JUN08A | 100 | 12MAY08A | 27JUN08A | |
| 02L1CC0004 | Design certification by the Design Checker | 14 | 14 | 22MAY08A | 03JUL08A | 100 | 22MAY08A | 03JUL08A | |
| 02L1CC0006 | Design submission for the SO's approval | 1 | 1 | 04JUL08A | 04JUL08A | 100 | 04JUL08A | 04JUL08A | |



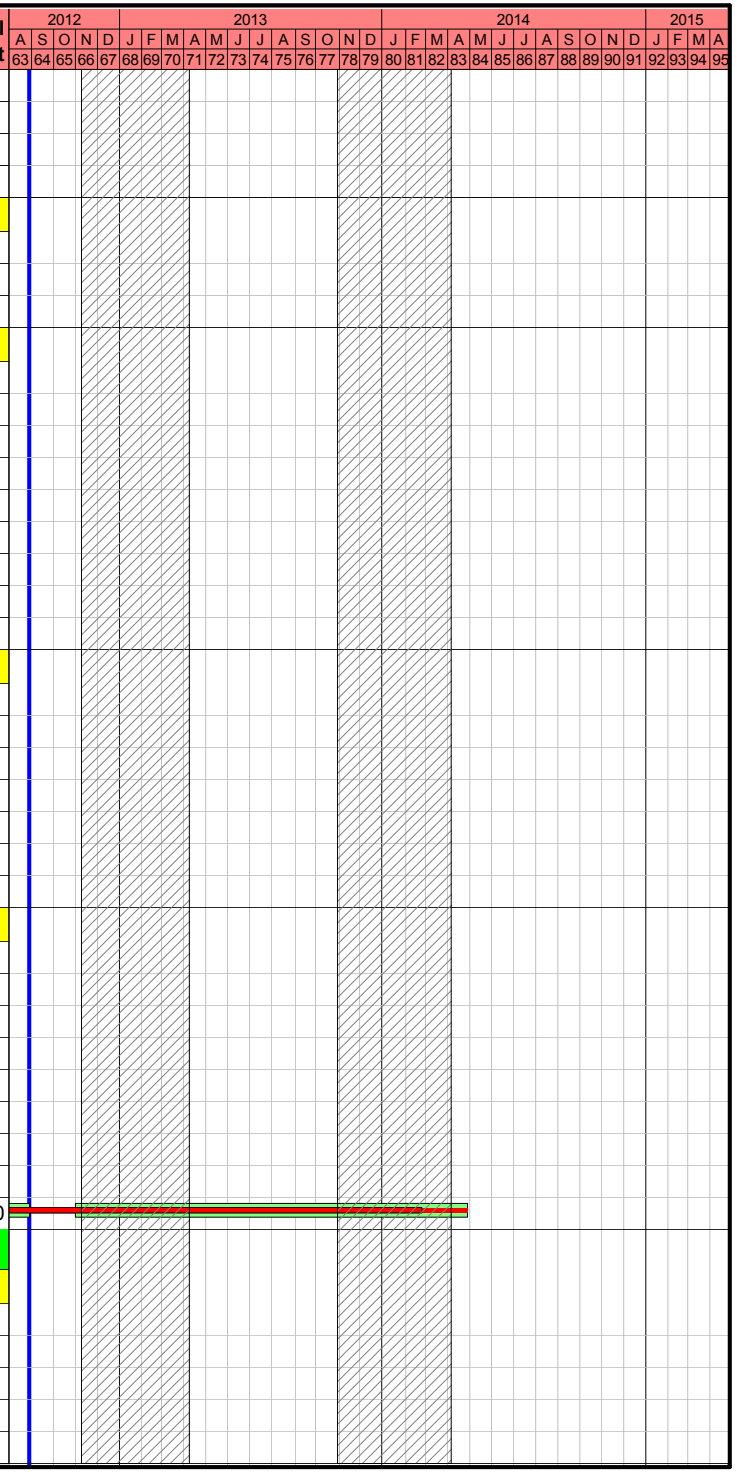
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1CC0008 | Design review by the SO | 14 | 14 | 05JUL08A | 29JUL08A | 100 | 05JUL08A | 29JUL08A | |
| 02L1CC0010 | Obtain design approval from the SO | 0 | 0 | | 29JUL08A | 100 | | 29JUL08A | |
| **Temporary Works for Formation of Access Road** | | | | | | | | | |
| 02L1CC0102 | Design preparation by the Designer | 40 | 40 | 29SEP08A | 01DEC08A | 100 | 29SEP08A | 01DEC08A | |
| 02L1CC0103 | Design submission for the DC's approval | 1 | 1 | 02DEC08A | 02DEC08A | 100 | 02DEC08A | 02DEC08A | |
| 02L1CC0104 | Design certification by the Design Checker | 14 | 14 | 03DEC08A | 08DEC08A | 100 | 03DEC08A | 08DEC08A | |
| 02L1CC0106 | Design submission for the SO's approval | 1 | 1 | 09DEC08A | 09DEC08A | 100 | 09DEC08A | 09DEC08A | |
| 02L1CC0108 | Design review by the SO | 28 | 28 | 10DEC08A | 23MAR09A | 100 | 10DEC08A | 23MAR09A | |
| 02L1CC0110 | Obtain design approval from the SO | 0 | 0 | | 23MAR09A | 100 | | 23MAR09A | |
| **Piling Platform for H-pile Wall B** | | | | | | | | | |
| 02L1CC0202 | Design preparation by the Designer | 30 | 30 | 01SEP09A | 02NOV09A | 100 | 01SEP09A | 02NOV09A | |
| 02L1CC0203 | Design submission for the DC's approval | 1 | 1 | 03NOV09A | 03NOV09A | 100 | 03NOV09A | 03NOV09A | |
| 02L1CC0204 | Design certification by the Design Checker | 28 | 28 | 04NOV09A | 01DEC09A | 100 | 04NOV09A | 01DEC09A | |
| 02L1CC0206 | Design submission for the SO's approval | 2 | 2 | 03NOV09A | 03NOV09A | 100 | 03NOV09A | 03NOV09A | |
| 02L1CC0208 | Design review by the SO | 42 | 42 | 04NOV09A | 06MAR10A | 100 | 04NOV09A | 06MAR10A | |
| 02L1CC0210 | Obtain design approval from the SO | 0 | 0 | | 06MAR10A | 100 | | 06MAR10A | |
| **Temp. Support Design for MAA/MAS/VDS/DC/AVS** | | | | | | | | | |
| 02L1CC0302 | Design preparation for the AIP submission | 103 | 103 | 26JUN08A | 09MAY09A | 100 | 26JUN08A | 09MAY09A | |
| 02L1CC0303 | Design (AIP) submission for the DC's approval | 2 | 2 | 23DEC08A | 15MAY09A | 100 | 23DEC08A | 15MAY09A | |
| 02L1CC0304 | Design (AIP) certification by the Design Checker | 28 | 28 | 24DEC08A | 19MAY09A | 100 | 24DEC08A | 19MAY09A | |
| 02L1CC0306 | Design (AIP) submission for the SO's approval | 2 | 2 | 23DEC08A | 19MAY09A | 100 | 23DEC08A | 19MAY09A | |
| 02L1CC0308 | Design (AIP) review by the SO | 66 | 66 | 24DEC08A | 05JUN09A | 100 | 24DEC08A | 05JUN09A | |
| 02L1CC0310 | AIP submission for rel. authorities' approval | 1 | 1 | 16JUN09A | 16JUN09A | 100 | 16JUN09A | 16JUN09A | |
| 02L1CC0312 | Design (AIP) review by the rel. authorities | 28 | 28 | 17JUN09A | 14NOV09A | 100 | 17JUN09A | 14NOV09A | |
| 02L1CC0314 | Obtain rel. authorities's approval for AIP | 1 | 1 | 16NOV09A | 16NOV09A | 100 | 16NOV09A | 16NOV09A | |
| 02L1CC0316 | SO submit design (AIP) for review of GEO | 1 | 1 | 28OCT09A | 28OCT09A | 100 | 28OCT09A | 28OCT09A | |
| 02L1CC0318 | Design (AIP) review by the GEO | 28 | 28 | 29OCT09A | 25NOV09A | 100 | 29OCT09A | 25NOV09A | |
| 02L1CC0320 | Obtain SO's consent for design (AIP) | 0 | 0 | | 05JUN09A | 100 | | 05JUN09A | |
| 02L1CC0322 | Design preparation for the DDA submission | 30 | 30 | 07JUN09A | 24NOV09A | 100 | 07JUN09A | 24NOV09A | |
| 02L1CC0323 | Design (DDA) submission for the DC's approval | 2 | 2 | 07JUL09A | 25NOV09A | 100 | 07JUL09A | 25NOV09A | |
| 02L1CC0324 | Design (DDA) certification by the Design Checker | 28 | 28 | 08JUL09A | 02DEC09A | 100 | 08JUL09A | 02DEC09A | |
| 02L1CC0326 | Design (DDA) submission for the SO's approval | 1 | 1 | 07JUL09A | 03DEC09A | 100 | 07JUL09A | 03DEC09A | |
| 02L1CC0328 | Design (DDA) review by the SO | 66 | 66 | 08JUL09A | 22FEB10A | 100 | 08JUL09A | 22FEB10A | |
| 02L1CC0330 | DDA submission for rel. authorities' approval | 1 | 1 | | 07JUL09A | 100 | | 07JUL09A | |
| 02L1CC0332 | Design (DDA) review by the rel. authorities | 28 | 28 | 25NOV09A | 22FEB10A | 100 | 25NOV09A | 22FEB10A | |
| 02L1CC0334 | Obtain rel. authorities's approval for DDA | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 02L1CC0336 | SO submit design (DDA) for review of GEO | 1 | 1 | 10DEC09A | 10DEC09A | 100 | 10DEC09A | 10DEC09A | |
| 02L1CC0338 | Design (DDA) review by the GEO | 28 | 28 | 11DEC09A | 22FEB10A | 100 | 11DEC09A | 22FEB10A | |
| 02L1CC0340 | Obtain SO's consent for design (DDA) | 0 | 0 | | 22FEB10A | 100 | | 22FEB10A | |
| **Temp. Support Design for MA and MA/MT Connection** | | | | | | | | | |
| 02L1CC0402 | Design preparation for the AIP submission | 110 | 110 | 18AUG08A | 20OCT09A | 100 | 18AUG08A | 20OCT09A | |
| 02L1CC0403 | Design (AIP) submission for the DC's approval | 2 | 2 | 05MAY09A | 21OCT09A | 100 | 05MAY09A | 21OCT09A | |
| 02L1CC0404 | Design (AIP) certification by the Design Checker | 28 | 28 | 06MAY09A | 27OCT09A | 100 | 06MAY09A | 27OCT09A | |



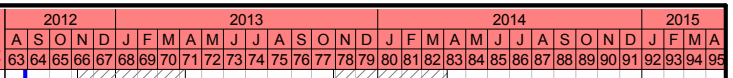
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1CC0406 | Design (AIP) submission for the SO's approval | 1 | 1 | 27OCT09A | 27OCT09A | 100 | 27OCT09A | 27OCT09A | |
| 02L1CC0408 | Design (AIP) review by the SO | 66 | 66 | 28OCT09A | 10MAY10A | 100 | 28OCT09A | 10MAY10A | |
| 02L1CC0416 | SO submit design (AIP) for review of GEO | 1 | 1 | 11MAY10A | 11MAY10A | 100 | 11MAY10A | 11MAY10A | |
| 02L1CC0418 | Design (AIP) review by the GEO | 28 | 28 | 12MAY10A | 28JUN10A | 100 | 12MAY10A | 28JUN10A | |
| 02L1CC0420 | Obtain SO's consent for design (AIP) | 0 | 0 | | 28JUN10A | 100 | | 28JUN10A | |
| 02L1CC0422 | Design preparation for the DDA submission | 30 | 30 | 29JUN10A | 30NOV10A | 100 | 29JUN10A | 30NOV10A | |
| 02L1CC0423 | Design submission for the DC's approval | 1 | 1 | 01DEC10A | 01DEC10A | 100 | 01DEC10A | 01DEC10A | |
| 02L1CC0424 | Design (DDA) certification by the Design Checker | 28 | 28 | 02DEC10A | 21DEC10A | 100 | 02DEC10A | 21DEC10A | |
| 02L1CC0426 | Design (DDA) submission for the SO's approval | 1 | 1 | 22DEC10A | 22DEC10A | 100 | 22DEC10A | 22DEC10A | |
| 02L1CC0428 | Design (DDA) review by the SO | 66 | 66 | 23DEC10A | 05JAN11A | 100 | 23DEC10A | 05JAN11A | |
| **Permanent Design for MAA/MAS/VDS/DC/AVS** | | | | | | | | | |
| 02L1CC0502 | Design preparation for the AIP submission | 103 | 103 | 26JUN08A | 04MAY09A | 100 | 26JUN08A | 04MAY09A | |
| 02L1CC0503 | Design submission for the DC's approval | 2 | 2 | 11OCT08A | 05MAY09A | 100 | 11OCT08A | 05MAY09A | |
| 02L1CC0504 | Design (AIP) certification by the Design Checker | 28 | 28 | 13OCT08A | 19MAY09A | 100 | 13OCT08A | 19MAY09A | |
| 02L1CC0506 | Design (AIP) submission for the SO's approval | 4 | 4 | 05NOV08A | 20JUL09A | 100 | 05NOV08A | 20JUL09A | |
| 02L1CC0508 | Design (AIP) review by the SO | 66 | 66 | 06NOV08A | 23DEC09A | 100 | 06NOV08A | 23DEC09A | |
| 02L1CC0510 | AIP submission for rel. authorities' approval | 1 | 1 | 28FEB09A | 28FEB09A | 100 | 28FEB09A | 28FEB09A | |
| 02L1CC0512 | Design (AIP) review by the rel. authorities | 28 | 28 | 01MAR09A | 28MAY09A | 100 | 01MAR09A | 28MAY09A | |
| 02L1CC0514 | Obtain rel. authorities's approval for AIP | 1 | 1 | 29MAY09A | 29MAY09A | 100 | 29MAY09A | 29MAY09A | |
| 02L1CC0516 | SO submit design (AIP) for review of GEO | 1 | 1 | 28FEB09A | 28FEB09A | 100 | 28FEB09A | 28FEB09A | |
| 02L1CC0518 | Design (AIP) review by the GEO | 28 | 28 | 01MAR09A | 28MAY09A | 100 | 01MAR09A | 28MAY09A | |
| 02L1CC0520 | Obtain SO's consent for design (AIP) | 0 | 0 | | 23DEC09A | 100 | | 23DEC09A | |
| 02L1CC0522 | Design preparation for the DDA submission | 60 | 60 | 09MAR09A | 11AUG11A | 100 | 09MAR09A | 11AUG11A | |
| 02L1CC0523 | Design submission for the DC's approval | 1 | 1 | 08JUN11A | 11AUG11A | 100 | 08JUN11A | 11AUG11A | |
| 02L1CC0524 | Design (DDA) certification by the Design Checker | 28 | 28 | 19JUN10A | 11AUG11A | 100 | 19JUN10A | 11AUG11A | |
| 02L1CC0526 | Design (DDA) submission for the SO's approval | 1 | 1 | 18JUN10A | 11AUG11A | 100 | 18JUN10A | 11AUG11A | |
| 02L1CC0528 | Design (DDA) review by the SO | 66 | 66 | 19JUN10A | 28DEC11A | 100 | 19JUN10A | 28DEC11A | |
| 02L1CC0530 | DDA submission for rel. authorities' approval | 1 | 1 | 14JAN12A | 14JAN12A | 100 | 14JAN12A | 14JAN12A | |
| 02L1CC0532 | Design (DDA) review by the rel. authorities | 28 | 28 | 15JAN12A | 29FEB12A | 100 | 15JAN12A | 13MAR12 | |
| 02L1CC0534 | Obtain rel. authorities's approval for DDA | 0 | 1 | | 29FEB12A | 100 | 14MAR12 | 14MAR12 | |
| 02L1CC0540 | Obtain SO's consent for design (DDA) | 0 | 0 | | 29FEB12A | 100 | | 14MAR12 | |
| **Permanent Design for MA and MA/MT Connection** | | | | | | | | | |
| 02L1CC0602 | Design preparation for the AIP submission | 84 | 84 | 01JUL08A | 20OCT09A | 100 | 01JUL08A | 20OCT09A | |
| 02L1CC0603 | Design (AIP) submission for the DC's approval | 2 | 2 | 25JUL08A | 21OCT09A | 100 | 25JUL08A | 21OCT09A | |
| 02L1CC0604 | Design (AIP) certification by the Design Checker | 28 | 28 | 26JUL08A | 27OCT09A | 100 | 26JUL08A | 27OCT09A | |
| 02L1CC0606 | Design (AIP) submission for the SO's approval | 2 | 2 | 26JUL08A | 28OCT09A | 100 | 26JUL08A | 28OCT09A | |
| 02L1CC0608 | Design (AIP) review by the SO | 66 | 66 | 28JUL08A | 14JUL10A | 100 | 28JUL08A | 14JUL10A | |
| 02L1CC0620 | Obtain SO's consent for design (AIP) | 0 | 0 | | 14JUL10A | 100 | | 14JUL10A | |
| 02L1CC0622 | Design preparation for the DDA submission | 30 | 30 | 15JUL10A | 06AUG11A | 100 | 15JUL10A | 06AUG11A | |
| 02L1CC0623 | Design (DDA) submission for the DC's approval | 1 | 1 | 08AUG11A | 12APR12A | 100 | 08AUG11A | 28FEB12 | |
| 02L1CC0624 | Design (DDA) certification by the Design Checker | 28 | 28 | 09AUG11A | 13APR12A | 100 | 09AUG11A | 04MAR12 | |
| 02L1CC0626 | Design (DDA) submission for the SO's approval | 1 | 1 | 09AUG11A | 13APR12A | 100 | 05MAR12 | 05MAR12 | |
| 02L1CC0628 | Design (DDA) review by the SO | 66 | 66 | 09AUG11A | 21APR12A | 100 | 09AUG11A | 11APR12 | |



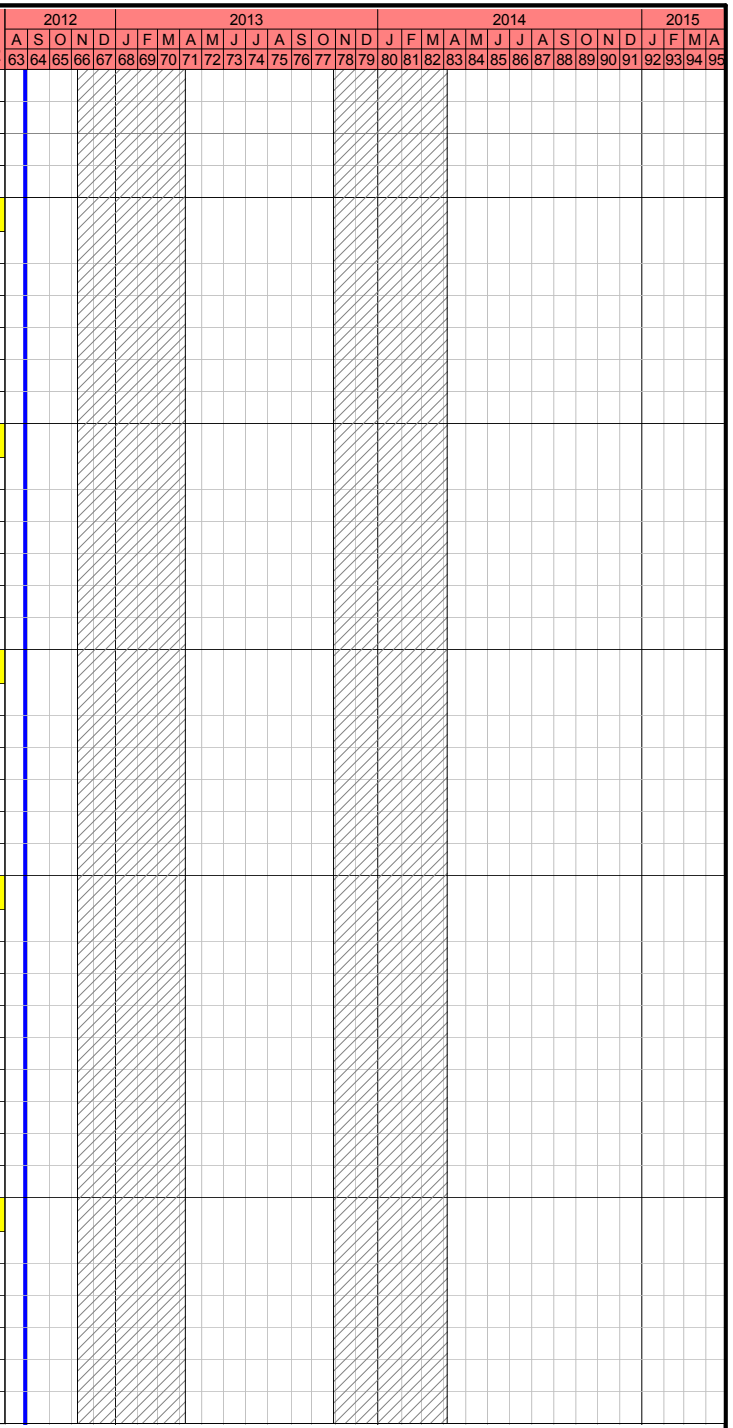
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1CC0630 | DDA submission for rel. authorities' approval | 1 | 1 | 05MAY12A | 05MAY12A | 100 | 12APR12 | 12APR12 | |
| 02L1CC0632 | Design (DDA) review by the rel. authorities | 28 | 28 | 07MAY12A | 07JUN12A | 100 | 13APR12 | 10MAY12 | |
| 02L1CC0634 | Obtain rel. authorities's approval for DDA | 0 | 1 | | 08JUN12A | 100 | 11MAY12 | 11MAY12 | |
| 02L1CC0640 | Obtain SO's consent for design (DDA) | 0 | 0 | | 08JUN12A | 100 | | 11MAY12 | |
| **Boulder Assessment & Design for Stabili. Measure** | | | | | | | | | |
| 02L1CC0702 | Boulder Surevey | 30 | 30 | 02JUN08A | 15AUG08A | 100 | 02JUN08A | 15AUG08A | |
| 02L1CC0704 | Prepare/submit boulder surevey report | 25 | 25 | 14JUL08A | 05SEP08A | 100 | 14JUL08A | 05SEP08A | |
| 02L1CC0706 | SO review boulder survey report | 14 | 14 | 06SEP08A | 19SEP08A | 100 | 06SEP08A | 19SEP08A | |
| **Temporary Drainage Management Plan** | | | | | | | | | |
| 02L1CC0802 | TDMP preparation by the Designer | 14 | 14 | 04AUG08A | 03SEP08A | 100 | 04AUG08A | 03SEP08A | |
| 02L1CC0803 | TDMP submission for the DC's approval | 1 | 1 | 08SEP08A | 08SEP08A | 100 | 08SEP08A | 08SEP08A | |
| 02L1CC0804 | TDMP certification by the Design Checker | 28 | 28 | 09SEP08A | 10DEC08A | 100 | 09SEP08A | 10DEC08A | |
| 02L1CC0806 | TDMP submission for the SO's approval | 2 | 2 | 20OCT08A | 11DEC08A | 100 | 20OCT08A | 11DEC08A | |
| 02L1CC0808 | TDMP review by the SO | 90 | 90 | 21OCT08A | 08JAN09A | 100 | 21OCT08A | 08JAN09A | |
| 02L1CC0810 | TDMP submission for DSD's approval | 1 | 1 | 21OCT08A | 21OCT08A | 100 | 21OCT08A | 21OCT08A | |
| 02L1CC0812 | TDMP review by the DSD | 90 | 90 | 22OCT08A | 08JAN09A | 100 | 22OCT08A | 08JAN09A | |
| 02L1CC0814 | Obtain DSD's approval for DDA | 1 | 1 | 08JAN09A | 08JAN09A | 100 | 08JAN09A | 08JAN09A | |
| 02L1CC0816 | Obtain SO's consent for TDMP | 0 | 0 | | 08JAN09A | 100 | | 08JAN09A | |
| **Geotechnical Instrumentation Stg 1 for GL Works** | | | | | | | | | |
| 3DL1CCG102 | Design preparation by the Designer | 14 | 14 | 22FEB08A | 29APR08A | 100 | 22FEB08A | 29APR08A | |
| 3DL1CCG104 | Design certification by the Design Checker | 7 | 7 | 30APR08A | 26MAY08A | 100 | 30APR08A | 26MAY08A | |
| 3DL1CCG106 | Design submission for the SO's approval | 1 | 1 | 10MAY08A | 26MAY08A | 100 | 10MAY08A | 26MAY08A | |
| 3DL1CCG108 | Design review by the SO | 14 | 14 | 12MAY08A | 14JUL08A | 100 | 12MAY08A | 14JUL08A | |
| 3DL1CCG110 | Obtain design approval from the SO | 0 | 0 | | 14JUL08A | 100 | | 14JUL08A | |
| 3DL1CCG112 | Install Geotechnical Instruments | 19 | 19 | 24JUN08A | 09AUG08A | 100 | 24JUN08A | 09AUG08A | |
| 3DL1CCG114 | Baseline Monitoring | 14 | 14 | 26JUL08A | 16AUG08A | 100 | 26JUL08A | 16AUG08A | |
| **Geotechnical Instrumentation Stg 2 for Deep Exc.** | | | | | | | | | |
| 3DL1CCG202 | Design preparation by the Designer | 60 | 60 | 28AUG08A | 04NOV08A | 100 | 28AUG08A | 04NOV08A | |
| 3DL1CCG204 | Design certification by the Design Checker | 14 | 14 | 11NOV08A | 01DEC08A | 100 | 11NOV08A | 01DEC08A | |
| 3DL1CCG206 | Design submission for the SO's approval | 2 | 2 | 04NOV08A | 02DEC08A | 100 | 04NOV08A | 02DEC08A | |
| 3DL1CCG210 | Design review by the SO | 28 | 28 | 05NOV08A | 24NOV09A | 100 | 05NOV08A | 24NOV09A | |
| 3DL1CCG212 | Obtain design approval from the SO | 0 | 0 | | 24NOV09A | 100 | | 24NOV09A | |
| 3DL1CCG214 | Install Geotechnical Instruments | 18 | 18 | 14MAR09A | 18JUN09A | 100 | 14MAR09A | 18JUN09A | |
| 3DL1CCG215 | Install additional Geotechnical instruments | 30 | 30 | 06OCT09A | 10NOV09A | 100 | 06OCT09A | 10NOV09A | |
| 3DL1CCG216 | Baseline Monitoring | 14 | 14 | 19JUN09A | 13NOV09A | 100 | 19JUN09A | 13NOV09A | |
| 3DL1CCG218 | Monitor/report Geotechnical Instrumentation | 2,014 | 2,014 | 18AUG08A | 28APR14 | 73 | 18AUG08A | 22FEB14 | 0 |
| **Design Packages for Works in Portion D** | | | | | | | | | |
| **Temp. Access Rd Design at P. D; +14mPD to +69mPD** | | | | | | | | | |
| 02L1DD0102 | Design preparation by the Designer | 14 | 14 | 17JAN08A | 16APR08A | 100 | 17JAN08A | 16APR08A | |
| 02L1DD0104 | Design certification by the Design Checker | 150 | 150 | 17APR08A | 13SEP08A | 100 | 17APR08A | 13SEP08A | |
| 02L1DD0106 | Design submission for the SO's approval | 2 | 2 | 25APR08A | 24SEP08A | 100 | 25APR08A | 24SEP08A | |
| 02L1DD0108 | Design review by the SO | 90 | 90 | 26APR08A | 04FEB09A | 100 | 26APR08A | 04FEB09A | |
| 02L1DD0110 | Design review by GEO | 28 | 28 | 23JUN08A | 29NOV08A | 100 | 23JUN08A | 29NOV08A | |



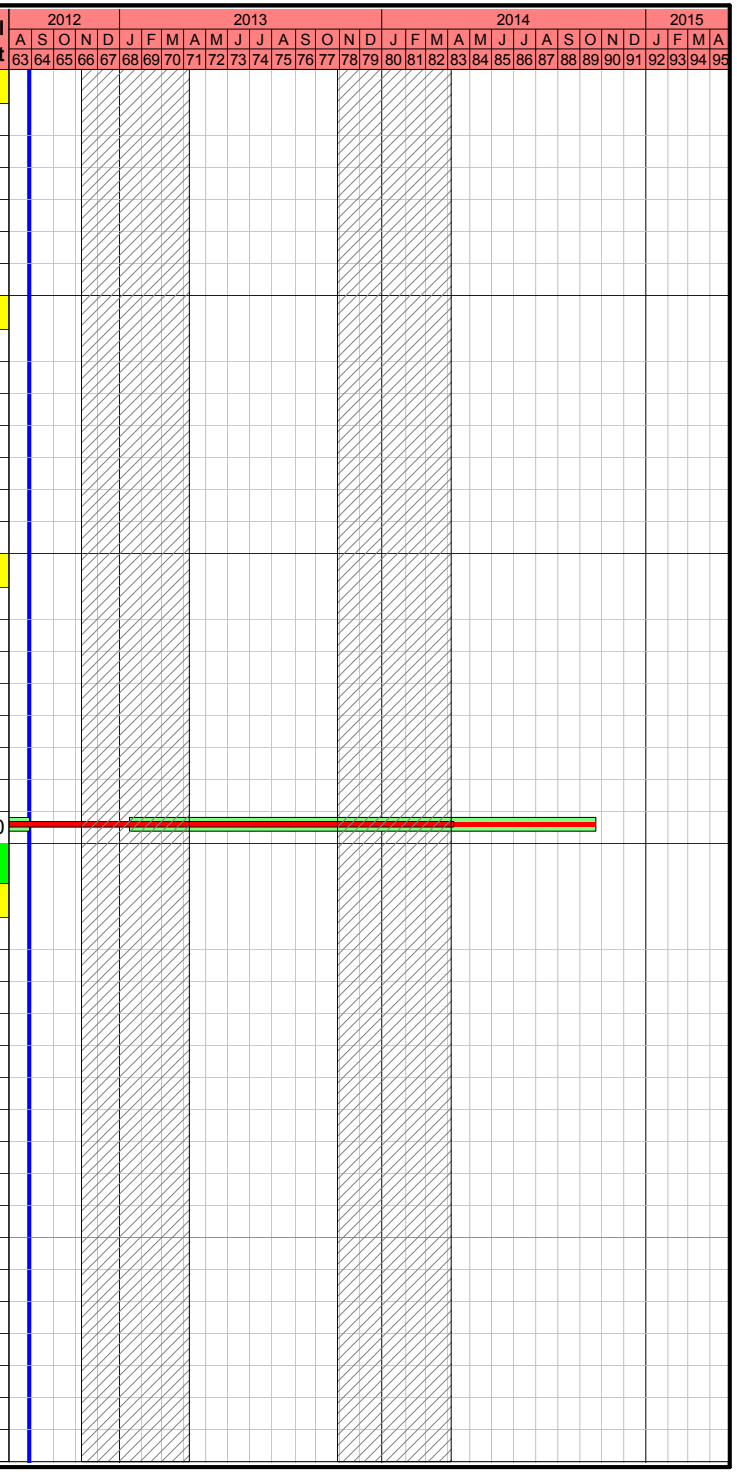
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1DD0112 | Obtain design approval from the SO | 0 | 0 | | 04FEB09A | 100 | | 04FEB09A | |
| **Boulder Assessment & Design for Stabili. Measure** | | | | | | | | | |
| 02L1DD0302 | Boulder Surevey | 14 | 14 | 03APR08A | 11APR08A | 100 | 03APR08A | 11APR08A | |
| 02L1DD0304 | Prepare/submit boulder surevey report | 25 | 25 | 12APR08A | 26MAY08A | 100 | 12APR08A | 26MAY08A | |
| 02L1DD0306 | SO review boulder survey report | 14 | 14 | 27MAY08A | 16JUN08A | 100 | 27MAY08A | 16JUN08A | |
| **Site Formation Design; +69mPD to +40mPD** | | | | | | | | | |
| 02L1DD0402 | Design preparation by the Designer | 14 | 14 | 17JAN08A | 16APR08A | 100 | 17JAN08A | 16APR08A | |
| 02L1DD0404 | Design certification by the Design Checker | 150 | 150 | 17APR08A | 14NOV08A | 100 | 17APR08A | 14NOV08A | |
| 02L1DD0406 | Design submission for the SO's approval | 2 | 2 | 25APR08A | 14NOV08A | 100 | 25APR08A | 14NOV08A | |
| 02L1DD0408 | Design review by the SO | 90 | 90 | 26APR08A | 04DEC08A | 100 | 26APR08A | 04DEC08A | |
| 02L1DD0412 | Obtain design approval from the SO | 0 | 0 | | 04DEC08A | 100 | | 04DEC08A | |
| **Site Formation Design; +40mPD to +24mPD** | | | | | | | | | |
| 02L1DD0502 | Design preparation by the Designer | 120 | 120 | 14APR08A | 09MAY09A | 100 | 14APR08A | 09MAY09A | |
| 02L1DD0504 | Design certification by the Design Checker | 145 | 145 | 05MAY08A | 15MAY09A | 100 | 05MAY08A | 15MAY09A | |
| 02L1DD0506 | Design submission for the SO's approval | 2 | 2 | 10MAY08A | 29MAY09A | 100 | 10MAY08A | 29MAY09A | |
| 02L1DD0508 | Design review by the SO | 90 | 90 | 12MAY08A | 14AUG09A | 100 | 12MAY08A | 14AUG09A | |
| 02L1DD0512 | Obtain design approval from the SO | 0 | 0 | | 14AUG09A | 100 | | 14AUG09A | |
| **Site Formation Design; +24mPD to 14mPD** | | | | | | | | | |
| 02L1DD0602 | Design preparation by the Designer | 60 | 60 | 28AUG08A | 23APR09A | 100 | 28AUG08A | 23APR09A | |
| 02L1DD0603 | Design submission for the DC's approval | 2 | 2 | 16JAN09A | 24APR09A | 100 | 16JAN09A | 24APR09A | |
| 02L1DD0604 | Design certification by the Design Checker | 28 | 28 | 19JAN09A | 03AUG09A | 100 | 19JAN09A | 03AUG09A | |
| 02L1DD0606 | Design submission for the SO's approval | 2 | 2 | 02FEB09A | 04AUG09A | 100 | 02FEB09A | 04AUG09A | |
| 02L1DD0608 | Design review by the SO | 63 | 63 | 03FEB09A | 24JUN09A | 100 | 03FEB09A | 24JUN09A | |
| 02L1DD0612 | Obtain design approval from the SO | 0 | 0 | | 24JUN09A | 100 | | 24JUN09A | |
| **TBM Launching Chamber Design** | | | | | | | | | |
| 02L1DD0702 | Design (AIP) preparation by the Designer | 381 | 381 | 21APR08A | 11MAY09A | 100 | 21APR08A | 11MAY09A | |
| 02L1DD0703 | Design (AIP) submission for the DC's approval | 3 | 3 | 28JUL08A | 12MAY09A | 100 | 28JUL08A | 12MAY09A | |
| 02L1DD0704 | Design (AIP) certification by the Design Checker | 37 | 37 | 21AUG08A | 13MAY09A | 100 | 21AUG08A | 13MAY09A | |
| 02L1DD0706 | Design (AIP) submission for the SO's approval | 3 | 3 | 28JUL08A | 13MAY09A | 100 | 28JUL08A | 13MAY09A | |
| 02L1DD0708 | Design (AIP) review by the SO | 280 | 280 | 29JUL08A | 19MAY09A | 100 | 29JUL08A | 19MAY09A | |
| 02L1DD0710 | AIP submission for rel. authorities' approval | 1 | 1 | 28AUG08A | 28AUG08A | 100 | 28AUG08A | 28AUG08A | |
| 02L1DD0712 | Design (AIP) review by the rel. authorities | 28 | 28 | 28FEB09A | 27MAR09A | 100 | 28FEB09A | 27MAR09A | |
| 02L1DD0714 | Obtain rel. authorities's approval for AIP | 0 | 0 | | 19MAY09A | 100 | | 19MAY09A | |
| 02L1DD0716 | SO submit Design (AIP) for review of GEO | 1 | 1 | 28FEB09A | 28FEB09A | 100 | 28FEB09A | 28FEB09A | |
| 02L1DD0718 | Design (AIP) review by the GEO | 28 | 28 | 01MAR09A | 28MAY09A | 100 | 01MAR09A | 28MAY09A | |
| 02L1DD0720 | Obtain SO's consent for design (AIP) | 0 | 0 | | 19MAY09A | 100 | | 19MAY09A | |
| 02L1DD0722 | Design preparation for the DDA submission | 30 | 30 | 07MAR09A | 05JUN09A | 100 | 07MAR09A | 05JUN09A | |
| 02L1DD0723 | Design (DDA) submission for the DC's approval | 1 | 1 | 06JUN09A | 06JUN09A | 100 | 06JUN09A | 06JUN09A | |
| 02L1DD0724 | Design (DDA) certification by the Design Checker | 28 | 28 | 07JUN09A | 04AUG09A | 100 | 07JUN09A | 04AUG09A | |
| 02L1DD0726 | Design (DDA) submission for the SO's approval | 2 | 2 | 06JUN09A | 28OCT09A | 100 | 06JUN09A | 28OCT09A | |
| 02L1DD0728 | Design (DDA) review by the SO | 66 | 66 | 07JUN09A | 03NOV09A | 100 | 07JUN09A | 03NOV09A | |
| 02L1DD0730 | DDA submission for rel. authorities' approval | 1 | 1 | 28OCT09A | 28OCT09A | 100 | 28OCT09A | 28OCT09A | |
| 02L1DD0732 | Design (DDA) review by the rel. authorities | 28 | 28 | 29OCT09A | 25NOV09A | 100 | 29OCT09A | 25NOV09A | |



| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1DD0734 | Obtain rel. authorities's approval for DDA | 1 | 1 | 26NOV09A | 26NOV09A | 100 | 26NOV09A | 26NOV09A | |
| 02L1DD0736 | SO submit design (DDA) for review of GEO | 0 | 0 | 27OCT09A | 27OCT09A | 100 | 27OCT09A | 27OCT09A | |
| 02L1DD0738 | Design (DDA) review by the GEO | 28 | 28 | 28OCT09A | 24NOV09A | 100 | 28OCT09A | 24NOV09A | |
| 02L1DD0740 | Obtain SO's consent for design (DDA) | 0 | 0 | | 04NOV09A | 100 | | 04NOV09A | |
| **Hopper Design** | | | | | | | | | |
| 02L1DD0802 | Design preparation by the Designer | 119 | 119 | 28FEB09A | 13AUG09A | 100 | 28FEB09A | 13AUG09A | |
| 02L1DD0803 | Design submission for the DC's approval | 1 | 1 | 14AUG09A | 14AUG09A | 100 | 14AUG09A | 14AUG09A | |
| 02L1DD0804 | Design certification by the Design Checker | 28 | 28 | 17AUG09A | 13NOV09A | 100 | 17AUG09A | 13NOV09A | |
| 02L1DD0806 | Design submission for the SO's approval | 1 | 1 | 14AUG09A | 14NOV09A | 100 | 14AUG09A | 14NOV09A | |
| 02L1DD0808 | Design review by the SO | 42 | 42 | 15AUG09A | 01DEC09A | 100 | 15AUG09A | 01DEC09A | |
| 02L1DD0810 | Obtain design approval from the SO | 0 | 0 | | 01DEC09A | 100 | | 01DEC09A | |
| **Steel Platform Design** | | | | | | | | | |
| 02L1DD0902 | Design preparation by the Designer | 82 | 82 | 02JAN09A | 24MAR09A | 100 | 02JAN09A | 24MAR09A | |
| 02L1DD0903 | Design submission for the DC's approval | 1 | 1 | 25MAR09A | 25MAR09A | 100 | 25MAR09A | 25MAR09A | |
| 02L1DD0904 | Design certification by the Design Checker | 28 | 28 | 26MAR09A | 18JUL09A | 100 | 26MAR09A | 18JUL09A | |
| 02L1DD0906 | Design submission for the SO's approval | 1 | 1 | 23JUN09A | 18JUL09A | 100 | 23JUN09A | 18JUL09A | |
| 02L1DD0908 | Design review by the SO | 42 | 42 | 24JUN09A | 24JUL09A | 100 | 24JUN09A | 24JUL09A | |
| 02L1DD0910 | Obtain design approval from the SO | 0 | 0 | | 24JUL09A | 100 | | 24JUL09A | |
| **Overhead Gantry Support & Noise Enclosure Design** | | | | | | | | | |
| 02L1DD1002 | Design preparation by the Designer | 82 | 82 | 02JAN09A | 02NOV09A | 100 | 02JAN09A | 02NOV09A | |
| 02L1DD1003 | Design submission for the DC's approval | 2 | 2 | 15JUN09A | 03NOV09A | 100 | 15JUN09A | 03NOV09A | |
| 02L1DD1004 | Design certification by the Design Checker | 28 | 28 | 16JUN09A | 13OCT09A | 100 | 16JUN09A | 13OCT09A | |
| 02L1DD1006 | Design submission for the SO's approval | 2 | 2 | 15JUN09A | 13OCT09A | 100 | 15JUN09A | 13OCT09A | |
| 02L1DD1008 | Design review by the SO | 42 | 42 | 16JUN09A | 17NOV09A | 100 | 16JUN09A | 17NOV09A | |
| 02L1DD1010 | Obtain design approval from the SO | 0 | 0 | | 17NOV09A | 100 | | 17NOV09A | |
| **ELS Design for Spiral Ramp** | | | | | | | | | |
| 02L1DD1102 | Design preparation for the AIP submission | 30 | 30 | 28MAY09A | 16SEP09A | 100 | 28MAY09A | 16SEP09A | |
| 02L1DD1103 | Design (DDA) submission for the DC's approval | 1 | 1 | 22JUN09A | 16SEP09A | 100 | 22JUN09A | 16SEP09A | |
| 02L1DD1104 | Design (DDA) certification by the Design Checker | 28 | 28 | 23JUN09A | 07OCT09A | 100 | 23JUN09A | 07OCT09A | |
| 02L1DD1106 | Design (DDA) submission for the SO's approval | 1 | 1 | 08OCT09A | 08OCT09A | 100 | 08OCT09A | 08OCT09A | |
| 02L1DD1108 | Design (DDA) review by the SO | 66 | 66 | 09OCT09A | 07JUN10A | 100 | 09OCT09A | 07JUN10A | |
| 02L1DD1114 | Obtain rel. authorities's approval for DDA | 1 | 1 | 26NOV09A | 26NOV09A | 100 | 26NOV09A | 26NOV09A | |
| 02L1DD1116 | SO submit design (DDA) for review of GEO | 0 | 0 | | 12MAY10A | 100 | | 12MAY10A | |
| 02L1DD1118 | Design (DDA) review by the GEO | 28 | 28 | 13MAY10A | 04JUN10A | 100 | 13MAY10A | 04JUN10A | |
| 02L1DD1120 | Obtain SO's consent for design (DDA) | 0 | 0 | | 07JUN10A | 100 | | 07JUN10A | |
| **Temp. Design for Box Culvert Opon Cut** | | | | | | | | | |
| 02L1DD1202 | Design preparation for the DDA submission | 80 | 80 | 27JUN09A | 28FEB10A | 100 | 27JUN09A | 28FEB10A | |
| 02L1DD1203 | Design (DDA) submission for the DC's approval | 1 | 1 | 01MAR10A | 27JUL10A | 100 | 01MAR10A | 27JUL10A | |
| 02L1DD1204 | Design (DDA) certification by the Design Checker | 28 | 28 | 02MAR10A | 06DEC10A | 100 | 02MAR10A | 06DEC10A | |
| 02L1DD1206 | Design (DDA) submission for the SO's approval | 1 | 1 | 19MAR10A | 07DEC10A | 100 | 19MAR10A | 07DEC10A | |
| 02L1DD1208 | Design (DDA) review by the SO | 66 | 66 | 20MAR10A | 16DEC10A | 100 | 20MAR10A | 16DEC10A | |
| 02L1DD1220 | Obtain SO's consent for design (DDA) | 0 | 0 | | 16DEC10A | 100 | | 16DEC10A | |

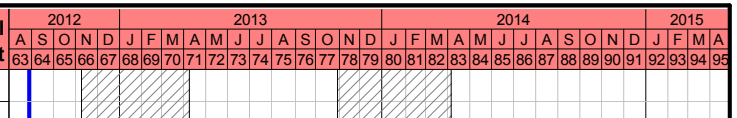


| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Temporary Drainage Management Plan** | | | | | | | | | |
| 02L1DD1302 | TDMP preparation by the Designer | 225 | 225 | 05MAY08A | 27MAR09A | 100 | 05MAY08A | 27MAR09A | |
| 02L1DD1303 | TDMP submission for the DC's approval | 2 | 2 | 08AUG08A | 29MAY09A | 100 | 08AUG08A | 29MAY09A | |
| 02L1DD1304 | TDMP certification by the Design Checker | 28 | 28 | 09AUG08A | 06JUN09A | 100 | 09AUG08A | 06JUN09A | |
| 02L1DD1306 | TDMP submission for the SO's approval | 2 | 2 | 08AUG08A | 08JUN09A | 100 | 08AUG08A | 08JUN09A | |
| 02L1DD1308 | TDMP review by the SO | 90 | 90 | 08AUG08A | 16AUG11A | 100 | 08AUG08A | 16AUG11A | |
| 02L1DD1316 | Obtain SO's consent for TDMP | 0 | 0 | | 16AUG11A | 100 | | 16AUG11A | |
| **Geotechnical Instrumentation Stg 1 for GL Works** | | | | | | | | | |
| 3DL1DDG102 | Design preparation by the Designer | 14 | 14 | 22FEB08A | 24APR08A | 100 | 22FEB08A | 24APR08A | |
| 3DL1DDG104 | Design certification by the Design Checker | 7 | 7 | 25APR08A | 16JUN08A | 100 | 25APR08A | 16JUN08A | |
| 3DL1DDG106 | Design submission for the SO's approval | 1 | 1 | 25APR08A | 16JUN08A | 100 | 25APR08A | 16JUN08A | |
| 3DL1DDG108 | Design review by the SO | 14 | 14 | 26APR08A | 14JUL08A | 100 | 26APR08A | 14JUL08A | |
| 3DL1DDG110 | Obtain design approval from the SO | 0 | 0 | | 14JUL08A | 100 | | 14JUL08A | |
| 3DL1DDG112 | Install Geotechnical Instruments | 10 | 10 | 04JUN08A | 05JUL08A | 100 | 04JUN08A | 05JUL08A | |
| 3DL1DDG114 | Initial reading | 14 | 14 | 18JUN08A | 09JUL08A | 100 | 18JUN08A | 09JUL08A | |
| **Geotechnical Instrumentation Stg 2 for Deep Exc.** | | | | | | | | | |
| 3DL1DDG202 | Design preparation by the Designer | 14 | 14 | 28MAY09A | 31OCT09A | 100 | 28MAY09A | 31OCT09A | |
| 3DL1DDG204 | Design certification by the Design Checker | 14 | 14 | 11JUN09A | 04DEC09A | 100 | 11JUN09A | 04DEC09A | |
| 3DL1DDG206 | Design submission for the SO's approval | 2 | 2 | 11JUN09A | 04DEC09A | 100 | 11JUN09A | 04DEC09A | |
| 3DL1DDG208 | Design review by the SO | 28 | 28 | 12JUN09A | 16DEC10A | 100 | 12JUN09A | 16DEC10A | |
| 3DL1DDG210 | Obtain design approval from the SO | 0 | 0 | | 16DEC10A | 100 | | 16DEC10A | |
| 3DL1DDG212 | Install Geotechnical Instruments | 18 | 18 | 09MAR10A | 25MAR11A | 100 | 09MAR10A | 25MAR11A | |
| 3DL1DDG214 | Baseline Monitoring | 14 | 14 | 24MAR10A | 26MAR11A | 100 | 24MAR10A | 26MAR11A | |
| 3DL1DDG216 | Monitor/report Geotechnical Insturmentatation | 2,098 | 2,098 | 10JUL08A | 22OCT14 | 69 | 10JUL08A | 10APR14 | 0 |
| **Design Packages for Works in Portion F** | | | | | | | | | |
| **Main Tunnel Design** | | | | | | | | | |
| 02L1FF0102 | Design preparation for the AIP submission | 414 | 414 | 08FEB08A | 27MAR09A | 100 | 08FEB08A | 27MAR09A | |
| 02L1FF0103 | Design (AIP) submission for the DC's approval | 2 | 2 | 02MAY08A | 27MAR09A | 100 | 02MAY08A | 27MAR09A | |
| 02L1FF0104 | Design (AIP) certification by the Design Checker | 28 | 28 | 03MAY08A | 27MAR09A | 100 | 03MAY08A | 27MAR09A | |
| 02L1FF0106 | Design (AIP) submission for the SO's approval | 1 | 1 | 10JUL08A | 27MAR09A | 100 | 10JUL08A | 27MAR09A | |
| 02L1FF0108 | Design (AIP) review by the SO | 66 | 66 | 11JUL08A | 16JUN09A | 100 | 11JUL08A | 16JUN09A | |
| 02L1FF0110 | AIP submission for rel. authorities' approval | 1 | 1 | 08JUL08A | 08JUL08A | 100 | 08JUL08A | 08JUL08A | |
| 02L1FF0112 | Design (AIP) review by the rel. authorities | 28 | 28 | 09JUL08A | 05MAR09A | 100 | 09JUL08A | 05MAR09A | |
| 02L1FF0114 | Obtain rel. authorities's approval for AIP | 1 | 1 | 06MAR09A | 06MAR09A | 100 | 06MAR09A | 06MAR09A | |
| 02L1FF0116 | SO submit design (AIP) for review of GEO | 1 | 1 | 16MAY09A | 16JUN09A | 100 | 16MAY09A | 16JUN09A | |
| 02L1FF0118 | Design (AIP) review by the GEO | 28 | 28 | 30MAY09A | 03NOV09A | 100 | 30MAY09A | 03NOV09A | |
| 02L1FF0120 | Obtain SO's consent for design (AIP) | 0 | 0 | | 16JUN09A | 100 | | 16JUN09A | |
| 02L1FF0122 | Design preparation for the DDA submission | 30 | 30 | 04NOV08A | 10SEP09A | 100 | 04NOV08A | 10SEP09A | |
| 02L1FF0123 | Design (DDA) submission for the DC's approval | 2 | 2 | 08JUN09A | 11SEP09A | 100 | 08JUN09A | 11SEP09A | |
| 02L1FF0124 | Design (DDA) certification by the Design Checker | 28 | 28 | 09JUN09A | 17SEP09A | 100 | 09JUN09A | 17SEP09A | |
| 02L1FF0126 | Design (DDA) submission for the SO's approval | 2 | 2 | 30JUN09A | 18SEP09A | 100 | 30JUN09A | 18SEP09A | |
| 02L1FF0128 | Design (DDA) review by the SO | 56 | 56 | 02JUL09A | 10NOV09A | 100 | 02JUL09A | 10NOV09A | |
| 02L1FF0130 | DDA submission for rel. authorities' approval | 1 | 1 | 25SEP09A | 25SEP09A | 100 | 25SEP09A | 25SEP09A | |

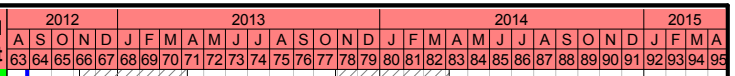


| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1FF0132 | Design (DDA) review by the rel. authorities | 28 | 28 | 26SEP09A | 22NOV09A | 100 | 26SEP09A | 22NOV09A | |
| 02L1FF0134 | Obtain rel. authorities's approval for DDA | 1 | 1 | 23NOV09A | 23NOV09A | 100 | 23NOV09A | 23NOV09A | |
| 02L1FF0136 | SO submit design (DDA) for review of GEO | 1 | 1 | 28OCT09A | 28OCT09A | 100 | 28OCT09A | 28OCT09A | |
| 02L1FF0138 | Design (DDA) review by the GEO | 28 | 28 | 29OCT09A | 25NOV09A | 100 | 29OCT09A | 25NOV09A | |
| 02L1FF0140 | Obtain SO's consent for design (DDA) | 0 | 0 | | 27NOV09A | 100 | | 27NOV09A | |
| **Impact Assessment on WSD Yau Kam Tau WTW** | | | | | | | | | |
| 02L1FF0202 | Design preparation for the DDA submission | 60 | 60 | 29APR08A | 30JUN08A | 100 | 29APR08A | 30JUN08A | |
| 02L1FF0203 | Design (DDA) submission for the DC's approval | 1 | 1 | 03JUL08A | 03JUL08A | 100 | 03JUL08A | 03JUL08A | |
| 02L1FF0204 | Design (DDA) certification by the Design Checker | 260 | 260 | 04JUL08A | 18MAR09A | 100 | 04JUL08A | 18MAR09A | |
| 02L1FF0206 | Design (DDA) submission for the SO's approval | 1 | 1 | 15JUL08A | 18MAR09A | 100 | 15JUL08A | 18MAR09A | |
| 02L1FF0208 | Design (DDA) review by the SO | 66 | 66 | 16JUL08A | 31MAR09A | 100 | 16JUL08A | 31MAR09A | |
| 02L1FF0210 | DDA submission for rel. authorities' approval | 1 | 1 | 10JUL08A | 02APR09A | 100 | 10JUL08A | 02APR09A | |
| 02L1FF0212 | Design (DDA) review by the rel. authorities | 28 | 28 | 11JUL08A | 30OCT09A | 100 | 11JUL08A | 30OCT09A | |
| 02L1FF0214 | Obtain rel. authorities's approval for DDA | 1 | 1 | 31OCT09A | 31OCT09A | 100 | 31OCT09A | 31OCT09A | |
| 02L1FF0220 | Obtain SO's consent for design (DDA) | 0 | 0 | | 31MAR09A | 100 | | 31MAR09A | |
| **Impact Assessment on WSD Tai Lam Chung WT No. 3** | | | | | | | | | |
| 02L1FF0302 | Design preparation for the DDA submission | 32 | 32 | 14APR08A | 27JUN08A | 100 | 14APR08A | 27JUN08A | |
| 02L1FF0303 | Design submission for the DC's approval | 1 | 1 | 27JUN08A | 27JUN08A | 100 | 27JUN08A | 27JUN08A | |
| 02L1FF0304 | Design (DDA) certification by the Design Checker | 285 | 285 | 28JUN08A | 30MAY09A | 100 | 28JUN08A | 30MAY09A | |
| 02L1FF0306 | Design (DDA) submission for the SO's approval | 1 | 1 | 15JUL08A | 01JUN09A | 100 | 15JUL08A | 01JUN09A | |
| 02L1FF0308 | Design (DDA) review by the SO | 66 | 66 | 16JUL08A | 04DEC10A | 100 | 16JUL08A | 04DEC10A | |
| 02L1FF0310 | DDA submission for rel. authorities' approval | 1 | 1 | 28OCT09A | 28OCT09A | 100 | 28OCT09A | 28OCT09A | |
| 02L1FF0312 | Design (DDA) review by the rel. authorities | 28 | 28 | 29OCT09A | 11DEC10A | 100 | 29OCT09A | 11DEC10A | |
| 02L1FF0314 | Obtain rel. authorities's approval for DDA | 0 | 0 | | 11DEC10A | 100 | | 11DEC10A | |
| 02L1FF0320 | Obtain SO's consent for design (DDA) | 0 | 0 | | 11DEC10A | 100 | | 11DEC10A | |
| **Impact Assessment on KCRC West Rail Tunnel** | | | | | | | | | |
| 02L1FF0402 | Design preparation for the DDA submission | 30 | 30 | 28APR08A | 26JUN08A | 100 | 28APR08A | 26JUN08A | |
| 02L1FF0403 | Design submission for the DC's approval | 1 | 1 | 26JUN08A | 26JUN08A | 100 | 26JUN08A | 26JUN08A | |
| 02L1FF0404 | Design (DDA) certification by the Design Checker | 90 | 90 | 27JUN08A | 02APR09A | 100 | 27JUN08A | 02APR09A | |
| 02L1FF0406 | Design (DDA) submission for the SO's approval | 2 | 2 | 15JUL08A | 03APR09A | 100 | 15JUL08A | 03APR09A | |
| 02L1FF0408 | Design (DDA) review by the SO | 267 | 267 | 16JUL08A | 04JAN10A | 100 | 16JUL08A | 04JAN10A | |
| 02L1FF0410 | DDA submission for rel. authorities' approval | 1 | 1 | 14JUL08A | 14JUL08A | 100 | 14JUL08A | 14JUL08A | |
| 02L1FF0412 | Design (DDA) review by the rel. authorities | 28 | 28 | 15JUL08A | 23DEC09A | 100 | 15JUL08A | 23DEC09A | |
| 02L1FF0414 | Obtain rel. authorities's approval for DDA | 1 | 1 | 23DEC09A | 23DEC09A | 100 | 23DEC09A | 23DEC09A | |
| 02L1FF0420 | Obtain SO's consent for design (DDA) | 0 | 0 | | 05JAN10A | 100 | | 05JAN10A | |
| **Impact Assessment on WSD Tsuen Wan Reservoir G.** | | | | | | | | | |
| 02L1FF0502 | Design preparation for the DDA submission | 30 | 30 | 05MAY08A | 02JUL08A | 100 | 05MAY08A | 02JUL08A | |
| 02L1FF0503 | Design submission for the DC's approval | 1 | 1 | 03JUL08A | 03JUL08A | 100 | 03JUL08A | 03JUL08A | |
| 02L1FF0504 | Design (DDA) certification by the Design Checker | 260 | 260 | 04JUL08A | 24AUG09A | 100 | 04JUL08A | 24AUG09A | |
| 02L1FF0506 | Design (DDA) submission for the SO's approval | 2 | 2 | 15JUL08A | 15SEP09A | 100 | 15JUL08A | 15SEP09A | |
| 02L1FF0508 | Design (DDA) review by the SO | 60 | 60 | 16JUL08A | 02OCT09A | 100 | 16JUL08A | 02OCT09A | |
| 02L1FF0510 | DDA submission for rel. authorities' approval | 1 | 1 | 10JUL08A | 10JUL08A | 100 | 10JUL08A | 10JUL08A | |
| 02L1FF0512 | Design (DDA) review by the rel. authorities | 28 | 28 | 11JUL08A | 11NOV09A | 100 | 11JUL08A | 11NOV09A | |

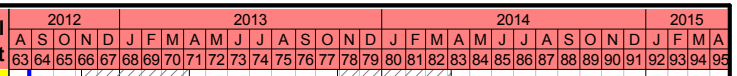
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 02L1FF0514 | Obtain rel. authorities's approval for DDA | 1 | 1 | 12NOV09A | 12NOV09A | 100 | 12NOV09A | 12NOV09A | |
| 02L1FF0520 | Obtain SO's consent for design (DDA) | 0 | 0 | | 02OCT09A | 100 | | 02OCT09A | |
| **Grout Trial at Foult Zone F1** | | | | | | | | | |
| 02L1FF0602 | MS preparation for the DDA submission | 12 | 12 | 02MAY08A | 20MAY08A | 100 | 02MAY08A | 20MAY08A | |
| 02L1FF0606 | Ms (DDA) submission for the SO's approval | 1 | 1 | 21MAY08A | 21MAY08A | 100 | 21MAY08A | 21MAY08A | |
| 02L1FF0608 | MS (DDA) review by the SO | 24 | 24 | 22MAY08A | 17JUL08A | 100 | 22MAY08A | 17JUL08A | |
| 02L1FF0620 | Obtain SO's consent for MS (DDA) | 0 | 0 | | 17JUL08A | 100 | | 17JUL08A | |
| **Geotechniucal Instrumentation** | | | | | | | | | |
| 3DL1FFGI02 | Design preparation by the Designer | 60 | 60 | 28AUG08A | 23JAN09A | 100 | 28AUG08A | 23JAN09A | |
| 3DL1FFGI04 | Design certification by the Design Checker | 14 | 14 | 24JAN09A | 31OCT09A | 100 | 24JAN09A | 31OCT09A | |
| 3DL1FFGI06 | Design submission for the SO's approval | 2 | 2 | 24JAN09A | 28NOV09A | 100 | 24JAN09A | 28NOV09A | |
| 3DL1FFGI08 | Design review by the SO | 56 | 56 | 24JAN09A | 08APR10A | 100 | 24JAN09A | 08APR10A | |
| 3DL1FFGI10 | DDA submission for rel. authorities' approval | 1 | 1 | 14MAR09A | 14MAR09A | 100 | 14MAR09A | 14MAR09A | |
| 3DL1FFGI12 | Design (DDA) review by the rel. authorities | 56 | 56 | 15MAR09A | 11DEC09A | 100 | 15MAR09A | 11DEC09A | |
| 3DL1FFGI14 | Obtain rel. authorities's approval for DDA | 1 | 1 | 12DEC09A | 12DEC09A | 100 | 12DEC09A | 12DEC09A | |
| 3DL1FFGI16 | Obtain design approval from the SO | 0 | 0 | | 08APR10A | 100 | | 08APR10A | |
| 3DL1FFGI18 | Install geotechnical instrumentsation | 90 | 90 | 03MAR10A | 31JAN11A | 100 | 03MAR10A | 31JAN11A | |
| 3DL1FFGI20 | Baseline Monitoring | 14 | 14 | 06MAR10A | 05FEB11A | 100 | 06MAR10A | 05FEB11A | |
| 3DL1FT0208 | Maintain/monitor geotechnical instrumentation | 1,196 | 1,196 | 28APR10A | 17OCT13 | 66 | 28APR10A | 06AUG13 | -328 |
| **Design Packages for Works in Portion G** | | | | | | | | | |
| **Drainage Impact Assessment** | | | | | | | | | |
| 02L1GG0115 | Information for catchment area by SOR | 21 | 21 | 09OCT09A | 03NOV09A | 100 | 09OCT09A | 03NOV09A | |
| 02L1GG0125 | Prepare DIA report | 32 | 32 | 09OCT09A | 24NOV09A | 100 | 09OCT09A | 24NOV09A | |
| 02L1GG0135 | Submission of DIA report to SOR/DSD | 1 | 1 | 25NOV09A | 25NOV09A | 100 | 25NOV09A | 25NOV09A | |
| 02L1GG0145 | SOR/DSD review/comment DIA report | 28 | 28 | 25NOV09A | 24DEC09A | 100 | 25NOV09A | 24DEC09A | |
| 02L1GG0155 | Revise DIA incorporating comments | 12 | 12 | 28DEC09A | 29JAN10A | 100 | 28DEC09A | 29JAN10A | |
| 02L1GG0165 | SOR/DSD review/approve DIA report | 28 | 28 | 30JAN10A | 16SEP11A | 100 | 30JAN10A | 16SEP11A | |
| 02L1GG0175 | Obtain consent from SOR and DSD | 0 | 0 | | 16SEP11A | 100 | | 16SEP11A | |
| **Temp. Platform Design for H-Piling at Portion G** | | | | | | | | | |
| 02L1GG0202 | Design preparation for the DDA submission | 53 | 53 | 05OCT09A | 03DEC09A | 100 | 05OCT09A | 03DEC09A | |
| 02L1GG0203 | Design (DDA) submission for the DC's approval | 1 | 1 | 15DEC09A | 15DEC09A | 100 | 15DEC09A | 15DEC09A | |
| 02L1GG0204 | Design (DDA) certification by the Design Checker | 14 | 14 | 16DEC09A | 14JAN10A | 100 | 16DEC09A | 14JAN10A | |
| 02L1GG0206 | Design (DDA) submission for the SO's approval | 1 | 1 | 15JAN10A | 15JAN10A | 100 | 15JAN10A | 15JAN10A | |
| 02L1GG0208 | Design (DDA) review by the SO | 40 | 40 | 16JAN10A | 23JUN10A | 100 | 16JAN10A | 23JUN10A | |
| 02L1GG0228 | Obtain design (DDA) approval from the SO | 0 | 0 | | 23JUN10A | 100 | | 23JUN10A | |
| **ELS Design for Pipe Jacking at Portion G** | | | | | | | | | |
| 02L1GG0302 | Design preparation for the DDA submission | 15 | 15 | 21NOV09A | 23JAN10A | 100 | 21NOV09A | 23JAN10A | |
| 02L1GG0303 | Design (DDA) submission for the DC's approval | 1 | 1 | 25JAN10A | 25JAN10A | 100 | 25JAN10A | 25JAN10A | |
| 02L1GG0304 | Design (DDA) certification by the Design Checker | 14 | 14 | 26JAN10A | 28APR10A | 100 | 26JAN10A | 28APR10A | |
| 02L1GG0306 | Design (DDA) submission for the SO's approval | 1 | 1 | 29APR10A | 29APR10A | 100 | 29APR10A | 29APR10A | |
| 02L1GG0308 | Design (DDA) review by the SO | 28 | 28 | 30APR10A | 04JUN10A | 100 | 30APR10A | 04JUN10A | |
| 02L1GG0318 | Obtain design (DDA) approval from the SO | 0 | 0 | | 04JUN10A | 100 | | 04JUN10A | |



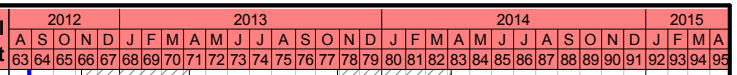
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Schedule of Milestones for Cost Centre No. 2L** | | | | | | | | | |
| 02L10D1002 | 2L 1; On submission of PDP to the SO | 0 | 0 | | 10JAN08A | 100 | | 10JAN08A | |
| 02L10D1004 | 2L 2; On acception of PDP by the SO | 0 | 0 | | 04SEP08A | 100 | | 04SEP08A | |
| 02L10D1006 | 2L 3; On submission of AIP to the SO; Portion A | 0 | 0 | | 12MAY09A | 100 | | 12MAY09A | |
| 02L10D1008 | 2L 4; On acceptance of AIP by the SO; Portion A | 0 | 0 | | 25JUL09A | 100 | | 25JUL09A | |
| 02L10D1010 | 2L 5; On subumission of DDA to the SO; Portion A | 0 | 0 | | 19NOV10A | 100 | | 28MAY12 | |
| 02L10D1012 | 2L 6; On acceptance of DDA by the SO; Portion A | 0 | 0 | | 24NOV10A | 100 | | 04AUG12 | |
| 02L10D1014 | 2L 7; On submission of AIP to the SO; Portion B | 0 | 0 | | 07JUL09A | 100 | | 07JUL09A | |
| 02L10D1016 | 2L 8; On acceptance of AIP by the SO; Portion B | 0 | 0 | | 06OCT10A | 100 | | 06OCT10A | |
| 02L10D1018 | 2L 9; On submission of DDA to the SO; Portion B | 0 | 0 | | 13APR12A | 100 | | 28MAY12 | |
| 02L10D1020 | 2L 10; On acceptance of DDA by the SO; Portion B | 0 | 0 | | 08JUN12A | 100 | | 11MAY12 | |
| 02L10D1022 | 2L 11; On submission of AIP to the SO; Portion C | 0 | 0 | | 25JUL09A | 100 | | 25JUL09A | |
| 02L10D1024 | 2L 12; On acceptance of AIP by the SO; Portion C | 0 | 0 | | 06OCT10A | 100 | | 06OCT10A | |
| 02L10D1026 | 2L 13; On submission of DDA to the SO; Portion C | 0 | 0 | | 13APR12A | 100 | | 28MAY12 | |
| 02L10D1028 | 2L 14; On acceptance of DDA by the SO; Portion C | 0 | 0 | | 08JUN12A | 100 | | 11MAY12 | |
| 02L10D1030 | 2L 15; On acceptance of AIP by the SO; Portion D | 0 | 0 | | 25JUL09A | 100 | | 25JUL09A | |
| 02L10D1032 | 2L 16; On acceptance of DDA by the SO; Portion D | 0 | 0 | | 30JUL11A | 100 | | 30JUL11A | |
| 02L10D1034 | 2L 17; On submission of AIP to the SO; Portion F | 0 | 0 | | 13JUL09A | 100 | | 13JUL09A | |
| 02L10D1036 | 2L 18; On acceptance of AIP by the SO; Portion F | 0 | 0 | | 24JUN10A | 100 | | 24JUN10A | |
| 02L10D1038 | 2L 19; On submission of DDA to the SO; Portion F | 0 | 0 | | 31JUL09A | 100 | | 28MAY12 | |
| 02L10D1040 | 2L 20; On acceptance of DDA by the SO; Portion F | 0 | 0 | | 28OCT09A | 100 | | 04AUG12 | |
| 02L10D1042 | 2L 21; On acceptance of AIP by the SO; Portion G | 0 | 0 | | 11JAN10A | 100 | | 11JAN10A | |
| 02L10D1044 | 2L 22; On acceptance of DDA by the SO; Portion G | 0 | 0 | | 16SEP11A | 100 | | 27FEB12 | |
| 02L10D1046 | 2L 23; On completion of all works under this CC | 0 | 0 | | 08JUN12A | 100 | | 27FEB12 | |
| ***Construction of Main Tunnel*** | | | | | | | | | |
| **Trial Grout at Fault Zone F1** | | | | | | | | | |
| 3AL1FT0002 | HyD issue XP | 0 | 0 | | 23JUL08A | 100 | | 23JUL08A | |
| 3AL1FT0004 | Adavance notice to HyD/Road advice | 6 | 6 | 24JUL08A | 30JUL08A | 100 | 24JUL08A | 30JUL08A | |
| 3AL1FT0006 | Trial pit excavation | 4 | 4 | 31JUL08A | 04AUG08A | 100 | 31JUL08A | 04AUG08A | |
| 3AL1FT0010 | Scaffolding, mobilize & set up | 7 | 7 | 05AUG08A | 13AUG08A | 100 | 05AUG08A | 13AUG08A | |
| 3AL1FT0012 | Drill & test for 2m Arrangement Test | 45 | 45 | 14AUG08A | 15NOV08A | 100 | 14AUG08A | 15NOV08A | |
| 3AL1FT0014 | Backfill drilled holes, demobilization & Tidy up | 6 | 6 | 17NOV08A | 22NOV08A | 100 | 17NOV08A | 22NOV08A | |
| 3AL1FT0016 | Drill & test for single hole arrangement test | 17 | 17 | 11AUG08A | 04SEP08A | 100 | 11AUG08A | 04SEP08A | |
| 3AL1FT0018 | Backfill drilled hole, demobilization & tidy up | 1 | 1 | 05SEP08A | 05SEP08A | 100 | 05SEP08A | 05SEP08A | |
| **TBM Manufacture/Testing/Delivery** | | | | | | | | | |
| **Manufacture of TBM & Back-ups** | | | | | | | | | |
| 3AL1FT0302 | TBM & Excavation Sys Procurement | 30 | 30 | 14DEC07A | 12JAN08A | 100 | 14DEC07A | 12JAN08A | |
| 3AL1FT0304 | TBM design & manufacturing | 252 | 252 | 21DEC07A | 28SEP08A | 100 | 21DEC07A | 28SEP08A | |
| 3AL1FT0306 | TBM workshop tests | 7 | 7 | 04OCT08A | 08OCT08A | 100 | 04OCT08A | 08OCT08A | |
| 3AL1FT0308 | TBM dismounting & packing | 21 | 21 | 09OCT08A | 24DEC08A | 100 | 09OCT08A | 24DEC08A | |



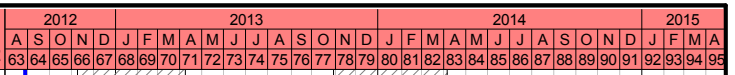
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Delivery of TBM** | | | | | | | | | |
| 3AL1FT0105 | TBM shipment to Hong Kong | 30 | 30 | 06JUL09A | 10AUG09A | 100 | 06JUL09A | 10AUG09A | |
| 3AL1FT0110 | TBM arriving Portion I | 3 | 3 | 10AUG09A | 12AUG09A | 100 | 10AUG09A | 12AUG09A | |
| 3AL1FT0115 | Destuffing Containers/Cleaning & lubrication | 24 | 24 | 08SEP09A | 10OCT09A | 100 | 08SEP09A | 10OCT09A | |
| **TBM Pre-assembly/Test & Commis. at Portion I** | | | | | | | | | |
| 3AL1FT0215 | Backup # 1 | 12 | 12 | 09SEP09A | 22SEP09A | 100 | 09SEP09A | 22SEP09A | |
| 3AL1FT0220 | Backup # 2 | 8 | 8 | 15SEP09A | 23SEP09A | 100 | 15SEP09A | 23SEP09A | |
| 3AL1FT0225 | Backup # 3 | 4 | 4 | 21SEP09A | 24SEP09A | 100 | 21SEP09A | 24SEP09A | |
| 3AL1FT0230 | Backup # 4 | 3 | 3 | 24SEP09A | 26SEP09A | 100 | 24SEP09A | 26SEP09A | |
| 3AL1FT0240 | Baackup # 5 | 2 | 2 | 28SEP09A | 29SEP09A | 100 | 28SEP09A | 29SEP09A | |
| 3AL1FT0245 | Backup # 6 | 3 | 3 | 29SEP09A | 02OCT09A | 100 | 29SEP09A | 02OCT09A | |
| 3AL1FT0250 | Backup # 7 | 3 | 3 | 30SEP09A | 05OCT09A | 100 | 30SEP09A | 05OCT09A | |
| 3AL1FT0255 | Backup # 8 | 4 | 4 | 05OCT09A | 08OCT09A | 100 | 05OCT09A | 08OCT09A | |
| 3AL1FT0260 | Backup # 9 | 5 | 5 | 07OCT09A | 15OCT09A | 100 | 07OCT09A | 15OCT09A | |
| 3AL1FT0365 | Backup # 10 | 6 | 6 | 09OCT09A | 15OCT09A | 100 | 09OCT09A | 15OCT09A | |
| 3AL1FT0370 | Backup # 11 | 6 | 6 | 10OCT09A | 15OCT09A | 100 | 10OCT09A | 15OCT09A | |
| 3AL1FT0375 | Backup # 12 | 6 | 6 | 13OCT09A | 15OCT09A | 100 | 13OCT09A | 15OCT09A | |
| 3AL1FT0377 | Backup conveyor | 5 | 5 | 17OCT09A | 16JAN10A | 100 | 17OCT09A | 16JAN10A | |
| 3AL1FT0379 | Ventilation duct into cassette and scaffolding | 3 | 3 | 04NOV09A | 26JAN10A | 100 | 04NOV09A | 26JAN10A | |
| 3AL1FT0381 | Wheels | 5 | 5 | 16OCT09A | 11JAN10A | 100 | 16OCT09A | 11JAN10A | |
| 3AL1FT0383 | Testing for compressor | 3 | 3 | 16OCT09A | 19JAN10A | 100 | 16OCT09A | 19JAN10A | |
| 3AL1FT0385 | Testing for hosereels | 3 | 3 | 28OCT09A | 19JAN10A | 100 | 28OCT09A | 19JAN10A | |
| 3AL1FT0387 | Testing for peagravel system | 3 | 3 | 12NOV09A | 19JAN10A | 100 | 12NOV09A | 19JAN10A | |
| 3AL1FT0389 | Erector | 4 | 4 | 22OCT09A | 20JAN10A | 100 | 22OCT09A | 20JAN10A | |
| 3AL1FT0391 | Segment hoisting crane | 3 | 3 | 22OCT09A | 27NOV09A | 100 | 22OCT09A | 27NOV09A | |
| 3AL1FT0393 | Shields | 7 | 7 | 29OCT09A | 07JAN10A | 100 | 29OCT09A | 07JAN10A | |
| 3AL1FT0395 | Pre-testing for hydraulic & electric system | 4 | 4 | 22SEP09A | 23JAN10A | 100 | 22SEP09A | 23JAN10A | |
| 3AL1FT0397 | Holding cylinder heads | 8 | 8 | 16NOV09A | 23NOV09A | 100 | 16NOV09A | 23NOV09A | |
| 3AL1FT0399 | Walkways | 12 | 12 | 22SEP09A | 23JAN10A | 100 | 22SEP09A | 23JAN10A | |
| 3AL1FT0401 | Ventilation pipes supports | 16 | 16 | 05NOV09A | 02JAN10A | 100 | 05NOV09A | 02JAN10A | |
| 3AL1FT0403 | Cutterhead, welding & testing | 37 | 37 | 30OCT09A | 22JAN10A | 100 | 30OCT09A | 22JAN10A | |
| **TBM Transport from Portion I to Outfall** | | | | | | | | | |
| 3AL1FT0405 | Bottm shield 1 piece | 1 | 1 | 19FEB10A | 19FEB10A | 100 | 19FEB10A | 19FEB10A | |
| 3AL1FT0415 | Outer telescopic shield bottom | 0 | 0 | | 22FEB10A | 100 | | 22FEB10A | |
| 3AL1FT0425 | Main bearing | 0 | 0 | | 19FEB10A | 100 | | 19FEB10A | |
| 3AL1FT0435 | Side shield balance 2 pieces | 1 | 1 | 22FEB10A | 23FEB10A | 100 | 22FEB10A | 23FEB10A | |
| 3AL1FT0455 | Bottom inner telescopic shield | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 3AL1FT0465 | Main thrust rams | 1 | 1 | 23FEB10A | 23FEB10A | 100 | 23FEB10A | 23FEB10A | |
| 3AL1FT0475 | Side gripper shield balance 2 pieces | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 3AL1FT0495 | Electric motors for maindrive | 1 | 1 | 25FEB10A | 25FEB10A | 100 | 25FEB10A | 25FEB10A | |
| 3AL1FT0505 | Cutterhead centre | 1 | 1 | 02MAR10A | 02MAR10A | 100 | 02MAR10A | 02MAR10A | |
| 3AL1FT0515 | Cutterhead balance 4 pieces | 1 | 1 | 02MAR10A | 02MAR10A | 100 | 02MAR10A | 02MAR10A | |
| 3AL1FT0525 | Gripper cylinders | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |



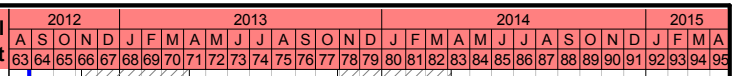
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3AL1FT0535 | Tail shield | 1 | 1 | 20MAR10A | 20MAR10A | 100 | 20MAR10A | 20MAR10A | |
| 3AL1FT0545 | Erector | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 3AL1FT0555 | TBM conveyor | 1 | 1 | 25FEB10A | 25FEB10A | 100 | 25FEB10A | 25FEB10A | |
| 3AL1FT0565 | Probe drill | 1 | 1 | 25FEB10A | 25FEB10A | 100 | 25FEB10A | 25FEB10A | |
| 3AL1FT0604 | Backup # 1 | 1 | 1 | 09MAR10A | 09MAR10A | 100 | 09MAR10A | 09MAR10A | |
| 3AL1FT0606 | Backup # 2 | 1 | 1 | 09MAR10A | 09MAR10A | 100 | 09MAR10A | 09MAR10A | |
| 3AL1FT0608 | Backup # 3 | 1 | 1 | 22MAR10A | 22MAR10A | 100 | 22MAR10A | 22MAR10A | |
| 3AL1FT0610 | Backup # 4 | 1 | 1 | 16MAR10A | 16MAR10A | 100 | 16MAR10A | 16MAR10A | |
| 3AL1FT0612 | Backup # 5 | 1 | 1 | 16MAR10A | 16MAR10A | 100 | 16MAR10A | 16MAR10A | |
| 3AL1FT0614 | Backup # 6 | 1 | 1 | 22MAR10A | 22MAR10A | 100 | 22MAR10A | 22MAR10A | |
| 3AL1FT0616 | Backup # 7 | 1 | 1 | 19MAY10A | | 100 | 19MAY10A | | |
| 3AL1FT0618 | Backup # 8 | 1 | 1 | 19MAY10A | 19MAY10A | 100 | 19MAY10A | 19MAY10A | |
| 3AL1FT0620 | Backup # 9 | 1 | 1 | 08JUN10A | 08JUN10A | 100 | 08JUN10A | 08JUN10A | |
| 3AL1FT0622 | Backup # 10 | 1 | 1 | 08JUN10A | 08JUN10A | 100 | 08JUN10A | 08JUN10A | |
| 3AL1FT0624 | Backup # 11 | 1 | 1 | 24JUN10A | 24JUN10A | 100 | 24JUN10A | 24JUN10A | |
| 3AL1FT0628 | Backup # 12 | 1 | 1 | 24JUN10A | 24JUN10A | 100 | 24JUN10A | 24JUN10A | |
| **Manufacture Pre-cast Lining/Delivery** | | | | | | | | | |
| **Segmental Lining Mould** | | | | | | | | | |
| 3AL1FTSM02 | Procure sub-contract for segmental mould | 0 | 0 | | 21JUL08A | 100 | | 21JUL08A | |
| 3AL1FTSM04 | Prepare shop drwgs for segmental mould | 60 | 60 | 02FEB09A | 05MAR09A | 100 | 02FEB09A | 05MAR09A | |
| 3AL1FTSM06 | Fabrication of segmental mould | 90 | 90 | 06MAR09A | 16MAY09A | 100 | 06MAR09A | 16MAY09A | |
| 3AL1FTSM08 | Inspection in Korea | 7 | 7 | 18MAY09A | 20MAY09A | 100 | 18MAY09A | 20MAY09A | |
| 3AL1FTSM10 | Painting & packing | 7 | 7 | 21MAY09A | 27MAY09A | 100 | 21MAY09A | 27MAY09A | |
| 3AL1FTSM12 | Delivery of segmental moulds to HKG | 7 | 7 | 28MAY09A | 03JUN09A | 100 | 28MAY09A | 03JUN09A | |
| **Pre-cast Segmental Lining** | | | | | | | | | |
| 3AL1FT0404 | Prepare/submit QA/QC System | 30 | 30 | 12JAN09A | 04MAR09A | 100 | 12JAN09A | 04MAR09A | |
| 3AL1FT0410 | SO approve QA/QC system | 28 | 28 | 05MAR09A | 06JUN09A | 100 | 05MAR09A | 06JUN09A | |
| 3AL1FT0412 | Approval of Tunnel Linig Design | 0 | 0 | | 25NOV09A | 100 | | 25NOV09A | |
| 3AL1FT0416 | Manufactur of segments | 330 | 330 | 30NOV09A | 04MAY11A | 100 | 30NOV09A | 04MAY11A | |
| 3AL1FT0418 | Delivery of Segments | 813 | 813 | 05MAR10A | 26NOV11A | 100 | 05MAR10A | 26NOV11A | |
| 3AL1FTSL02 | Procure sub-contract for segment lining | 0 | 0 | | 05JAN09A | 100 | | 05JAN09A | |
| **Geotechnical Instrumetation at WSD Tunnel** | | | | | | | | | |
| **Method Statement to Install G.I. Works** | | | | | | | | | |
| 3AL1FTMS02 | Prepare method statement | 69 | 69 | 12MAR09A | 26MAR09A | 100 | 12MAR09A | 26MAR09A | |
| 3AL1FTMS04 | Method statement endorsement by ICE & APRE | 30 | 30 | 29MAY09A | 29JUN09A | 100 | 29MAY09A | 29JUN09A | |
| 3AL1FTMS06 | Method statement endorsement by SOR | 60 | 60 | 30JUN09A | 24NOV09A | 100 | 30JUN09A | 24NOV09A | |
| 3AL1FTMS14 | Method statement endorsement by WSD | 24 | 24 | 16JUL10A | 11AUG10A | 100 | 16JUL10A | 11AUG10A | |
| **Air Sampling & Pre-construction Condition Survey** | | | | | | | | | |
| 3AL1WT3A02 | Prepare method statement for air sampling | 12 | 12 | 02NOV09A | 14NOV09A | 100 | 02NOV09A | 14NOV09A | |
| 3AL1WT3A04 | Submit method statement for air sampling | 1 | 1 | 16NOV09A | 16NOV09A | 100 | 16NOV09A | 16NOV09A | |
| 3AL1WT3A06 | Approval of method statement for air sampling | 29 | 29 | 17NOV09A | 19DEC09A | 100 | 17NOV09A | 19DEC09A | |
| 3AL1WT3A08 | WSD Tunnel Shutdown for Air Sample/Cond'n Survey | 2 | 2 | 15DEC09A | 22DEC09A | 100 | 15DEC09A | 22DEC09A | |



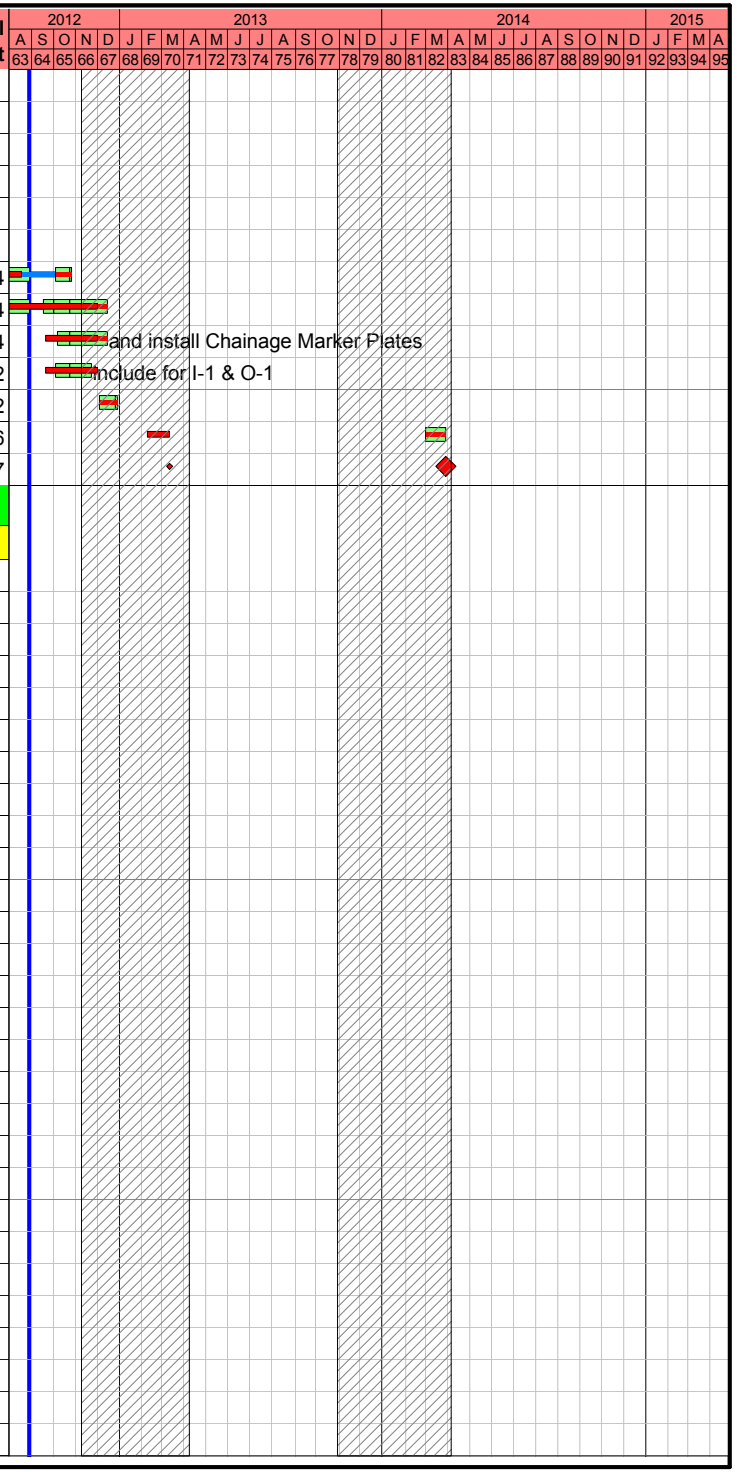
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3AL1WT3A10 | Carry out air sampling & condition survey | 9 | 9 | 21DEC09A | 22DEC09A | 100 | 21DEC09A | 22DEC09A | |
| 3AL1WT3A20 | Commence for 2nd intervantion of WSD Tunnel | 1 | 1 | 25FEB10A | 25FEB10A | 100 | 25FEB10A | 25FEB10A | |
| 3AL1WT3A30 | Carry out air sampling & condition survey | 8 | 8 | 27FEB10A | 02MAR10A | 100 | 27FEB10A | 02MAR10A | |
| **Preparation Works at Ting Kau Air Valve House** | | | | | | | | | |
| 3AL1WT3B02 | Arrange WSD to open the valve house | 1 | 1 | 30JUL10A | 30JUL10A | 100 | 30JUL10A | 30JUL10A | |
| 3AL1WT3B12 | Set up exhaust fans & arrange temp. electricity | 3 | 3 | 03AUG10A | 03AUG10A | 100 | 03AUG10A | 03AUG10A | |
| 3AL1WT3B32 | Remove the air vent pipe (DN250) | 2 | 2 | 14AUG10A | 14AUG10A | 100 | 14AUG10A | 14AUG10A | |
| 3AL1WT3B42 | Remove connection flange (DN900) | 1 | 1 | 14AUG10A | 14AUG10A | 100 | 14AUG10A | 14AUG10A | |
| 3AL1WT3B52 | Connect exhaust fan to valve shaft | 5 | 5 | 17AUG10A | 17AUG10A | 100 | 17AUG10A | 17AUG10A | |
| **Preparation Works at Chai Wan Kok Shaft** | | | | | | | | | |
| 3AL1FTCT02 | Install electricity take off, switch board & | 5 | 5 | 12AUG10A | 12AUG10A | 100 | 12AUG10A | 12AUG10A | |
| 3AL1FTCT22 | Install toilet and shower | 3 | 3 | 12AUG10A | 12AUG10A | 100 | 12AUG10A | 12AUG10A | |
| 3AL1FTCT32 | Set up generatior and two water pumps | 2 | 2 | 12AUG10A | 12AUG10A | 100 | 12AUG10A | 12AUG10A | |
| 3AL1FTCW16 | WSD Tunnel Shut Down Period | 112* | 112* | 12AUG10A | 23DEC10A | 100 | 12AUG10A | 23DEC10A | |
| 3AL1FTCW18 | WSD Tunnel #3 commences shut down | 1 | 1 | 12AUG10A | 12AUG10A | 100 | 12AUG10A | 12AUG10A | |
| 3AL1FTCW22 | Plug DN1200 pipe at the face near valve house | 1 | 1 | 23AUG10A | 23AUG10A | 100 | 23AUG10A | 23AUG10A | |
| **Works in Aqueduct** | | | | | | | | | |
| 3AL1FTAD04 | Install instruments | 26 | 26 | 26AUG10A | 03SEP10A | 100 | 26AUG10A | 03SEP10A | |
| 3AL1FTAD06 | Inspection | 2 | 2 | 27SEP10A | 27SEP10A | 100 | 27SEP10A | 27SEP10A | |
| 3AL1FTAD08 | TBM crossing affected 210m section | 16 | 16 | 30NOV10A | 16DEC10A | 100 | 30NOV10A | 16DEC10A | |
| 3AL1FTAD10 | De-install instruments | 3 | 3 | 17DEC10A | 19DEC10A | 100 | 17DEC10A | 19DEC10A | |
| **Demobilisation** | | | | | | | | | |
| 3AL1FTAE04 | Remove dewatering system | 1 | 1 | 20DEC10A | 22DEC10A | 100 | 20DEC10A | 22DEC10A | |
| 3AL1FTAE14 | Remove the plug at Chai Wan Kok | 1 | 1 | 20DEC10A | 20DEC10A | 100 | 20DEC10A | 20DEC10A | |
| 3AL1FTAE24 | Reinstate vent pipe Y falange at T.K. | 1 | 1 | 21DEC10A | 21DEC10A | 100 | 21DEC10A | 21DEC10A | |
| 3AL1FTAE34 | Remove ventilation fan | 1 | 1 | 23DEC10A | 23DEC10A | 100 | 23DEC10A | 23DEC10A | |
| **Reinstatement Works** | | | | | | | | | |
| 3AL1FTRS02 | Reinstate opening at Chai Wan Kok | 1 | 1 | 22DEC10A | 22DEC10A | 100 | 22DEC10A | 22DEC10A | |
| 3AL1FTRS04 | WSD Tunnel #3 re-operates | 1 | 1 | 23DEC10A | 23DEC10A | 100 | 23DEC10A | 23DEC10A | |
| **TBM Assembly & Initial Driving; Day Time Work** | | | | | | | | | |
| **TBM Assembly/Test & Commiss. at Outfall** | | | | | | | | | |
| 3AL1FT0605 | Mobilization & setup 300 ton crane | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 3AL1FT0607 | Bottom fornt shield | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 3AL1FT0609 | Outer telescopic shield bottom | 1 | 1 | 22FEB10A | 13MAR10A | 100 | 22FEB10A | 13MAR10A | |
| 3AL1FT0611 | Main bearing | 2 | 2 | 23FEB10A | 23FEB10A | 100 | 23FEB10A | 23FEB10A | |
| 3AL1FT0613 | Side shield balance (2 pieces) | 2 | 2 | 23FEB10A | 24FEB10A | 100 | 23FEB10A | 24FEB10A | |
| 3AL1FT0615 | Bottom gripper shield | 1 | 1 | 22FEB10A | 22FEB10A | 100 | 22FEB10A | 22FEB10A | |
| 3AL1FT0617 | Inner telescopic shield | 1 | 1 | 22FEB10A | 09MAR10A | 100 | 22FEB10A | 09MAR10A | |
| 3AL1FT0619 | Main thrust rams | 2 | 2 | 24FEB10A | 02MAR10A | 100 | 24FEB10A | 02MAR10A | |
| 3AL1FT0621 | Side gripper shield balance (2 pieces) | 2 | 2 | 23FEB10A | 25FEB10A | 100 | 23FEB10A | 25FEB10A | |
| 3AL1FT0625 | Cutterhead centre | 2 | 2 | 02MAR10A | 04MAR10A | 100 | 02MAR10A | 04MAR10A | |
| 3AL1FT0626 | Electric motors for maindrive | 3 | 3 | 25FEB10A | 02MAR10A | 100 | 25FEB10A | 02MAR10A | |
| 3AL1FT0627 | Cutterhead balance (4 pieces) | 3 | 3 | 03MAR10A | 12MAR10A | 100 | 03MAR10A | 12MAR10A | |



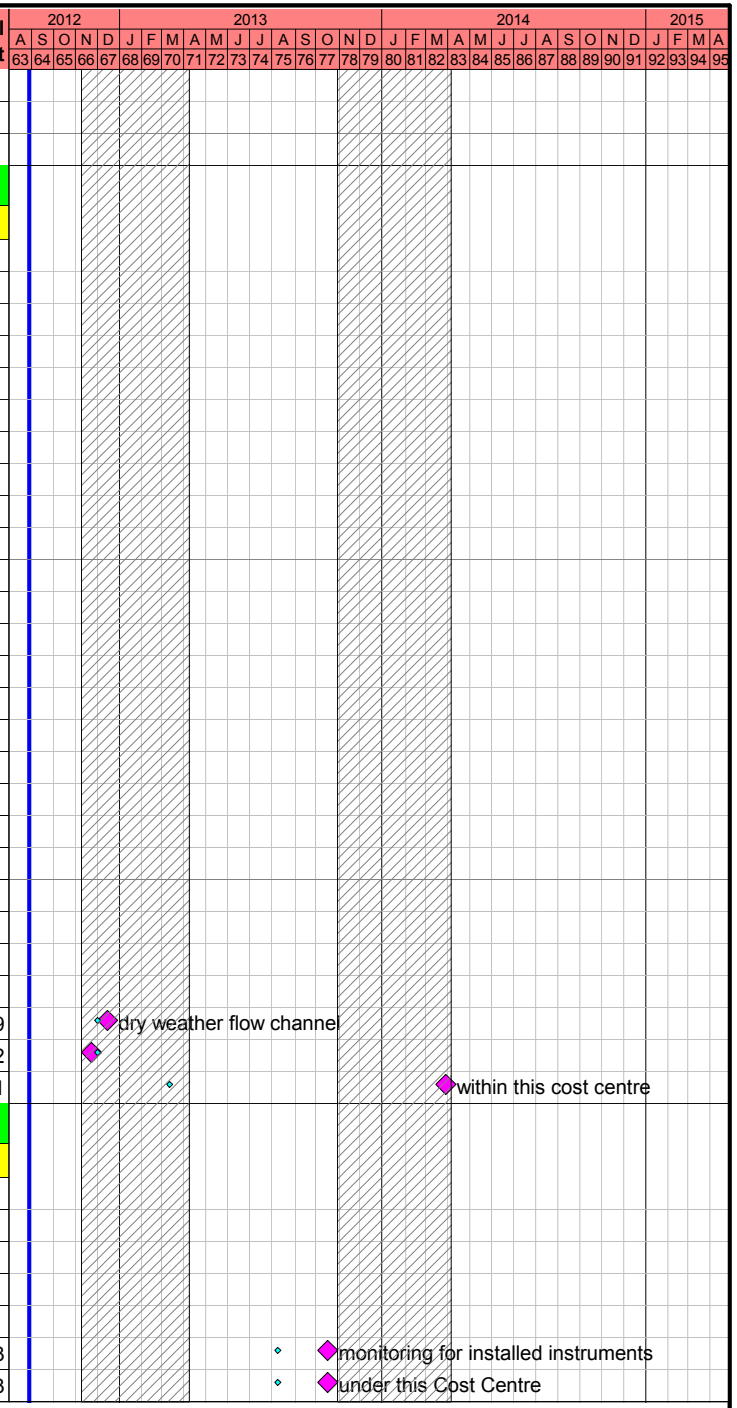
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3AL1FT0629 | Gripper cylinders | 2 | 2 | 23FEB10A | 27FEB10A | 100 | 23FEB10A | 27FEB10A | |
| 3AL1FT0631 | Tail shield | 2 | 2 | 22FEB10A | 23FEB10A | 100 | 22FEB10A | 23FEB10A | |
| 3AL1FT0633 | Erector | 1 | 1 | 22FEB10A | 02MAR10A | 100 | 22FEB10A | 02MAR10A | |
| 3AL1FT0635 | TBM conveyor | 2 | 2 | 25FEB10A | 15MAR10A | 100 | 25FEB10A | 15MAR10A | |
| 3AL1FT0637 | Probe drill | 1 | 1 | 26FEB10A | 08MAR10A | 100 | 26FEB10A | 08MAR10A | |
| 3AL1FT0649 | Connect hydraulic & electric for main shield | 6 | 6 | 27FEB10A | 10APR10A | 100 | 27FEB10A | 10APR10A | |
| 3AL1FT0651 | Back-up #1 | 2 | 2 | 10MAR10A | 27MAR10A | 100 | 10MAR10A | 27MAR10A | |
| 3AL1FT0653 | TBM launch to excavation face (30m) | 3 | 3 | 06MAR10A | 12APR10A | 100 | 06MAR10A | 12APR10A | |
| 3AL1FT0655 | Backup # 2 | 2 | 2 | 12MAR10A | 08APR10A | 100 | 12MAR10A | 08APR10A | |
| 3AL1FT0657 | Backup # 4; put aside & connect | 2 | 2 | 20MAR10A | 13APR10A | 100 | 20MAR10A | 13APR10A | |
| 3AL1FT0659 | Backup # 5; put aside & connect | 3 | 3 | 20MAR10A | 14APR10A | 100 | 20MAR10A | 14APR10A | |
| 3AL1FT0661 | Backup # 6; put aside & connect | 3 | 3 | 23MAR10A | 15APR10A | 100 | 23MAR10A | 15APR10A | |
| 3AL1FT0663 | Backup # 3 | 2 | 2 | 23MAR10A | 10APR10A | 100 | 23MAR10A | 10APR10A | |
| 3AL1FT0665 | Complete balance electric & hydraulic/test 1 | 6 | 6 | 07APR10A | 24APR10A | 100 | 07APR10A | 24APR10A | |
| 3AL1FT0669 | TBM advances 36m into tunnel (Ch. 5084 to 5048) | 12 | 12 | 27APR10A | 02JUN10A | 100 | 27APR10A | 02JUN10A | |
| 3AL1FT0671 | Install Backup # 4 | 2 | 2 | 19MAY10A | 22MAY10A | 100 | 19MAY10A | 22MAY10A | |
| 3AL1FT0673 | Install Bakcup # 5 | 2 | 2 | 24MAY10A | 25MAY10A | 100 | 24MAY10A | 25MAY10A | |
| 3AL1FT0675 | Install Backup # 6 | 3 | 3 | 26MAY10A | 28MAY10A | 100 | 26MAY10A | 28MAY10A | |
| 3AL1FT0677 | Backup #7 | 2 | 2 | 08JUN10A | 08JUN10A | 100 | 08JUN10A | 08JUN10A | |
| 3AL1FT0679 | Backup #8 | 2 | 2 | 08JUN10A | 08JUN10A | 100 | 08JUN10A | 08JUN10A | |
| 3AL1FT0681 | Backup #9 | 2 | 2 | 14JUN10A | 17JUN10A | 100 | 14JUN10A | 17JUN10A | |
| 3AL1FT0683 | Backup #10 | 2 | 2 | 14JUN10A | 17JUN10A | 100 | 14JUN10A | 17JUN10A | |
| 3AL1FT0685 | Backup #11 | 2 | 2 | 25JUN10A | 26JUN10A | 100 | 25JUN10A | 26JUN10A | |
| 3AL1FT0687 | Backup #12 | 2 | 2 | 26JUN10A | 28JUN10A | 100 | 26JUN10A | 28JUN10A | |
| 3AL1FT0689 | Complete balance electric & hydraulic/ test 2 | 3 | 3 | 27AUG10A | 27AUG10A | 100 | 27AUG10A | 27AUG10A | |
| **TBM Initial Advacing; Day Time Work** | | | | | | | | | |
| 3AL1FT0708 | TBM advances; CH5048-4957 | 42 | 42 | 03JUN10A | 23JUL10A | 100 | 03JUN10A | 23JUL10A | |
| 3AL1FT0720 | TBM stop to install rem. items | 35 | 35 | 24JUL10A | 02SEP10A | 100 | 24JUL10A | 02SEP10A | |
| **Main Tunnel Works; Day & Night Work** | | | | | | | | | |
| **TBM Advancing upto Crossing WSD Tunnel # 3** | | | | | | | | | |
| 3AL1FT0816 | TBM advances; CH4957-4460 (to WSD Tunnel # 3) | 72 | 72 | 03SEP10A | 29NOV10A | 100 | 03SEP10A | 29NOV10A | |
| 3AL1FT0818 | TBM crossing WSD Tunnel # 3; CH4460- 4250 | 15 | 15 | 30NOV10A | 16DEC10A | 100 | 30NOV10A | 16DEC10A | |
| **TBM Advancing upto Breakthrough** | | | | | | | | | |
| 3AL1FT0819 | TBM advances; P6 CH4250-4220 | 3 | 3 | 20DEC10A | 22DEC10A | 100 | 20DEC10A | 22DEC10A | |
| 3AL1FT0820 | TBM advances; CH4220-3940 | 23 | 23 | 22DEC10A | 20JAN11A | 100 | 22DEC10A | 20JAN11A | |
| 3AL1FT0821 | TBM advances; CH3940-3560 | 25 | 25 | 20JAN11A | 21FEB11A | 100 | 20JAN11A | 21FEB11A | |
| 3AL1FT0822 | TBM advances CH3560-2970 | 48 | 48 | 21FEB11A | 18APR11A | 100 | 21FEB11A | 18APR11A | |
| 3AL1FT0823 | TBM advances; WSD T.W.S. R. G. CH2970-2860 | 8 | 8 | 18APR11A | 29APR11A | 100 | 18APR11A | 29APR11A | |
| 3AL1FT0824 | TBM advances; CH2860-1827 | 64 | 64 | 29APR11A | 15JUL11A | 100 | 29APR11A | 15JUL11A | |
| 3AL1FT0825 | TBM advances; CH1827-1564 | 16 | 16 | 15JUL11A | 02AUG11A | 100 | 15JUL11A | 02AUG11A | |
| 3AL1FT0826 | TBM advances; CH1564-1449 | 7 | 7 | 02AUG11A | 11AUG11A | 100 | 02AUG11A | 11AUG11A | |
| 3AL1FT0827 | TBM advances; CH1449-1295 (Intake I-2) | 13 | 13 | 11AUG11A | 24AUG11A | 100 | 11AUG11A | 24AUG11A | |
| 3AL1FT0828 | TBM advances; CH1295-955 | 19 | 19 | 24AUG11A | 20SEP11A | 100 | 24AUG11A | 20SEP11A | |



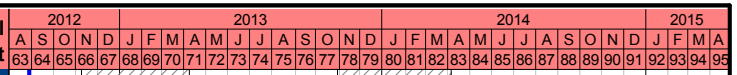
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3AL1FT0829 | TBM advances; CH955-250 | 36 | 36 | 20SEP11A | 16NOV11A | 100 | 20SEP11A | 16NOV11A | |
| 3AL1FT0831 | TBM advances; Faoult F1 CH250-150 | 10 | 10 | 16NOV11A | 21NOV11A | 100 | 16NOV11A | 21NOV11A | |
| 3AL1FT0832 | TBM advances; Fault F1 CH150-0 | 82 | 82 | 21NOV11A | 28FEB12A | 100 | 21NOV11A | 28FEB12 | |
| 3AL1FT0890 | Remov framework/demobilization of TBM& BU | 47* | 48* | 29FEB12A | 27APR12A | 100 | 29FEB12 | 30APR12 | |
| 3AL1FT0891 | Removal of TBM services from tunnel | 24 | 24 | 02MAR12A | 30APR12A | 100 | 02MAR12 | 29MAR12 | |
| 3AL1FT0892 | Back grouting; CH5100-00 | 562 | 562 | 20APR10A | 30APR12A | 100 | 20APR10A | 29MAY12 | |
| 3AL1FT0893 | Secondary grouting | 231 | 231 | 26AUG11A | 26OCT12 | 91 | 26AUG11A | 16AUG12 | -324 |
| 3AL1FT0894 | Segment bolt pocket filling/repair segment crack | 200 | 200 | 16APR12A | 15DEC12 | 62 | 02APR12 | 01DEC12 | -324 |
| 3AL1FT0895 | Install kerb for dry weathe channel | 60 | 60 | 06OCT12 | 15DEC12 | 0 | 21SEP12 | 01DEC12 | -324 |
| 3AL1FT0896 | Install anchorages for radio comm. system | 42 | 60 | 04OCT12 | 22NOV12 | 0 | 21SEP12 | 01DEC12 | -322 |
| 3AL1FT0897 | Lay cable for radio comm. system | 18 | 0 | 05DEC12 | 27DEC12 | 0 | | | -332 |
| 3AL1FT0898 | Testing & Commissioning | 28 | 28 | 01MAR14 | 28MAR14 | 0 | 10FEB13 | 09MAR13 | -836 |
| 3AL1FT0904 | Handover of Portion F | 0 | 0 | | 28MAR14 | 0 | | 09MAR13 | -677 |
| **Schedule of Milestones for Cost Centre No. 6aR** | | | | | | | | | |
| 6AR1FT0902 | 6aR 1; On completion of grouting at P7 | 0 | 0 | | 20JUL10A | 100 | | 20JUL10A | |
| 6AR1FT0904 | 6aR 2; On completion of grouting at F6c | 0 | 0 | | 30SEP10A | 100 | | 30SEP10A | |
| 6AR1FT0906 | 6aR 3; On completion of grouting at F6b | 0 | 0 | | 09OCT10A | 100 | | 09OCT10A | |
| 6AR1FT0908 | 6aR 4; On completion of grouting at F6a | 0 | 0 | | 24NOV10A | 100 | | 24NOV10A | |
| 6AR1FT0910 | 6aR 5; On completion of grouting at WSD T. 3 | 0 | 0 | | 14DEC10A | 100 | | 14DEC10A | |
| 6AR1FT0912 | 6aR 6; On completion of 20% grout by Ith at P6 | 0 | 0 | | 20DEC10A | 100 | | 20DEC10A | |
| 6AR1FT0914 | 6aR 7; On completion of 40% grout by Ith at P6 | 0 | 0 | | 20DEC10A | 100 | | 20DEC10A | |
| 6AR1FT0916 | 6aR 8; On completion of 60% grout by Ith at P6 | 0 | 0 | | 21DEC10A | 100 | | 21DEC10A | |
| 6AR1FT0918 | 6aR 9; On completion of 80% grout by Ith at P6 | 0 | 0 | | 21DEC10A | 100 | | 21DEC10A | |
| 6AR1FT0920 | 6aR 10; On completion of grouting works at P6 | 0 | 0 | | 22DEC10A | 100 | | 22DEC10A | |
| 6AR1FT0922 | 6aR 11; On completion of grouting wks at P5 | 0 | 0 | | 29JAN11A | 100 | | 29JAN11A | |
| 6AR1FT0924 | 6aR 12; On completion of grouting wks at P4 | 0 | 0 | | 21FEB11A | 100 | | 21FEB11A | |
| 6AR1FT0926 | 6aR 13; On completion of grouting wks at P3 | 0 | 0 | | 04APR11A | 100 | | 04APR11A | |
| 6AR1FT0928 | 6aR 14; On completion of grouting wks at WSD's | 0 | 0 | | 29APR11A | 100 | | 29APR11A | |
| 6AR1FT0930 | 6aR 15; On completion of grouting wks at F5 | 0 | 0 | | 11MAY11A | 100 | | 11MAY11A | |
| 6AR1FT0932 | 6aR 16; On completion of grouting wks at F4 | 0 | 0 | | 20MAY11A | 100 | | 20MAY11A | |
| 6AR1FT0934 | 6aR 17; On completion of grouting wks at F3 | 0 | 0 | | 13JUN11A | 100 | | 13JUN11A | |
| 6AR1FT0936 | 6aR 18; On completion of grouting wks at F2 | 0 | 0 | | 29AUG11A | 100 | | 29AUG11A | |
| 6AR1FT0938 | 6aR 19; On completion of grouting wks at P2 | 0 | 0 | | 04OCT11A | 100 | | 04OCT11A | |
| 6AR1FT0940 | 6aR 20; On completion of grouting wks at P1 | 0 | 0 | | 24OCT11A | 100 | | 24OCT11A | |
| 6AR1FT0942 | 6aR 21; On completion of 10% grout by Ith at F1 | 0 | 0 | | 21NOV11A | 100 | | 21NOV11A | |
| 6AR1FT0944 | 6aR 22; On completion of 20% grout by Ith at F1 | 0 | 0 | | 22NOV11A | 100 | | 22NOV11A | |
| 6AR1FT0946 | 6aR 23; On completion of 30% grout by Ith at F1 | 0 | 0 | | 22NOV11A | 100 | | 22NOV11A | |
| 6AR1FT0948 | 6aR 24; On completion of 40% grout by Ith at F1 | 0 | 0 | | 23NOV11A | 100 | | 23NOV11A | |
| 6AR1FT0950 | 6aR 25; On completion of 50% grout by Ith at F1 | 0 | 0 | | 24NOV11A | 100 | | 24NOV11A | |
| 6AR1FT0952 | 6aR 26; On completion of 60% grout by Ith at F1 | 0 | 0 | | 10JAN12A | 100 | | 10JAN12A | |
| 6AR1FT0954 | 6aR 27; On completion of 70% grout by Ith at F1 | 0 | 0 | | 30JAN12A | 100 | | 30JAN12A | |
| 6AR1FT0956 | 6aR 28; On completion of 80% grout by Ith at F1 | 0 | 0 | | 14FEB12A | 100 | | 14FEB12A | |



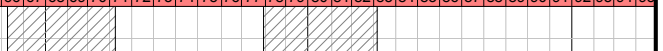
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 6AR1FT0958 | 6aR 29; On completion of 90% grout by lth at F1 | 0 | 0 | | 16FEB12A | 100 | | 16FEB12A | |
| 6AR1FT0960 | 6aR 30; On completion of grouting works at F1 | 0 | 0 | | 20FEB12A | 100 | | 20FEB12A | |
| 6AR1FT0970 | 6aR 31; On completion of all works under this CC | 0 | 0 | | 28FEB12A | 100 | | 06MAR12 | |
| **Schedule of Milestones for Cost Centre No. 3aL** | | | | | | | | | |
| 3AL1FT1002 | 3aL 1; On providing evidence of procuring TBM | 0 | 0 | | 19JAN08A | 100 | | 19JAN08A | |
| 3AL1FT1004 | 3aL 2; On providing evidence of TBM Factory Test | 0 | 0 | | 08OCT08A | 100 | | 08OCT08A | |
| 3AL1FT1006 | 3aL 3; On delivery of all parts of TBM to the Si | 0 | 0 | | 12AUG09A | 100 | | 12AUG09A | |
| 3AL1FT1008 | 3aL 4; On completion of site comm. & test. of TB | 0 | 0 | | 27SEP10A | 100 | | 27SEP10A | |
| 3AL1FT1010 | 3aL 5; On completion of 5% perm. tunnel lining | 0 | 0 | | 02OCT10A | 100 | | 02OCT10A | |
| 3AL1FT1012 | 3aL 6; On completion of 10% perm. tunnel lining | 0 | 0 | | 03NOV10A | 100 | | 03NOV10A | |
| 3AL1FT1014 | 3aL 7; On completion of 15% perm. tunnel lining | 0 | 0 | | 26NOV10A | 100 | | 26NOV10A | |
| 3AL1FT1016 | 3aL 8; On completion of 20% perm. tunnel lining | 0 | 0 | | 08JAN11A | 100 | | 08JAN11A | |
| 3AL1FT1018 | 3aL 9; On completion of 25% perm. tunnel lining | 0 | 0 | | 27JAN11A | 100 | | 27JAN11A | |
| 3AL1FT1020 | 3aL 10; On completion of 30% perm. tunnel lining | 0 | 0 | | 21FEB11A | 100 | | 21FEB11A | |
| 3AL1FT1022 | 3aL 11; On completion of 35% perm. tunnel lining | 0 | 0 | | 12MAR11A | 100 | | 12MAR11A | |
| 3AL1FT1024 | 3aL 12; On completion of 40% perm. tunnel lining | 0 | 0 | | 11APR11A | 100 | | 11APR11A | |
| 3AL1FT1026 | 3aL 13; On completion of 45% perm. tunnel lining | 0 | 0 | | 05MAY11A | 100 | | 05MAY11A | |
| 3AL1FT1028 | 3aL 14; On completion of 50% perm. tunnel lining | 0 | 0 | | 23MAY11A | 100 | | 23MAY11A | |
| 3AL1FT1030 | 3aL 15; On completion of 55% perm. tunnel lining | 0 | 0 | | 08JUN11A | 100 | | 08JUN11A | |
| 3AL1FT1032 | 3aL 16; On completion of 60% perm. tunnel lining | 0 | 0 | | 27JUN11A | 100 | | 27JUN11A | |
| 3AL1FT1034 | 3aL 17; On completion of 65% perm. tunnel lining | 0 | 0 | | 11JUL11A | 100 | | 11JUL11A | |
| 3AL1FT1036 | 3aL 18; On completion of 70% perm. tunnel lining | 0 | 0 | | 08AUG11A | 100 | | 08AUG11A | |
| 3AL1FT1038 | 3aL 19; On completion of 75% perm. tunnel lining | 0 | 0 | | 25AUG11A | 100 | | 25AUG11A | |
| 3AL1FT1040 | 3aL 20; On completion of 80% perm. tunnel lining | 0 | 0 | | 16SEP11A | 100 | | 16SEP11A | |
| 3AL1FT1042 | 3aL 21; On completion of 85% perm. tunnel lining | 0 | 0 | | 05OCT11A | 100 | | 05OCT11A | |
| 3AL1FT1044 | 3aL 22; On completion of 90% perm. tunnel lining | 0 | 0 | | 27OCT11A | 100 | | 27OCT11A | |
| 3AL1FT1046 | 3aL 23; On completion of 95% perm. tunnel lining | 0 | 0 | | 16NOV11A | 100 | | 16NOV11A | |
| 3AL1FT1048 | 3aL 24; On completion of perm. tunnel lining | 0 | 0 | | 08MAR12A | 100 | | 06MAR12 | |
| 3AL1FT1050 | 3aL 25; On completion of maint. access/flow chan | 0 | 0 | | 15DEC12 | 0 | | 01DEC12 | 819 |
| 3AL1FT1052 | 3aL 26; On completion of provision of communic. | 0 | 0 | | 22NOV12 | 0 | | 01DEC12 | 842 |
| 3AL1FT1054 | 3aL 27; On completion of all works under this CC | 0 | 0 | | 28MAR14 | 0 | | 09MAR13 | 351 |
| **Schedule of Milestones for Cost Centre No. 3dL** | | | | | | | | | |
| 3DL10T1202 | 3dL 1; On complet. of install geo instrrument. | 0 | 0 | | 27MAY11A | 100 | | 27MAY11A | |
| 3DL10T1204 | 3dL 2; Maint./monit. geo. inst. for 12 mth | 0 | 0 | | 27DEC08A | 100 | | 27DEC08A | |
| 3DL10T1206 | 3dL 3; Maint./monitor geo. inst. for 24 | 0 | 0 | | 26DEC09A | 100 | | 26DEC09A | |
| 3DL10T1208 | 3dL 4; Maint./monitor geo. inst. for 36 | 0 | 0 | | 27DEC10A | 100 | | 27DEC10A | |
| 3DL10T1210 | 3dL 5; Maint./monitor geo. inst. for 48 | 0 | 0 | | 26DEC11A | 100 | | 26DEC11A | |
| 3DL10T1212 | 3dL 6; On completion of maint. & monit. of geo. | 0 | 0 | | 17OCT13 | 0 | | 06AUG13 | 513 |
| 3DL10T1224 | 3dL 12; On completion of all works under this CC | 0 | 0 | | 17OCT13 | 0 | | 06AUG13 | 513 |



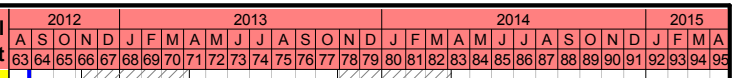
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Construction of Intake I-1** | | | | | | | | | |
| **Preliminary Works** | | | | | | | | | |
| **VO#07; Transperant Hoarding at I-1** | | | | | | | | | |
| VO007-02 | Receive VO7 for transparent hoarding | 0 | 0 | | 19MAY08A | 100 | | 19MAY08A | |
| VO007-04 | Procure/prepare/install transparent hoarding | 70 | 70 | 20MAY08A | 11AUG08A | 100 | 20MAY08A | 11AUG08A | |
| 01R1AI1102 | Possession of site | 0 | 0 | 19MAR08A | | 100 | 19MAR08A | | |
| 01R1AI1104 | Obtain TTA (ingress & egress) approval | 0 | 0 | 19APR08A | | 100 | 19APR08A | | |
| 01R1AI1106 | Site clearance | 30 | 30 | 21APR08A | 26MAY08A | 100 | 21APR08A | 26MAY08A | |
| 01R1AI1108 | Obtain tree | 6 | 6 | 13MAY08A | 31JUL08A | 100 | 13MAY08A | 31JUL08A | |
| 01R1AI1110 | Hoarding erection enclosing the Site | 18 | 18 | 23MAY08A | 11AUG08A | 100 | 23MAY08A | 11AUG08A | |
| 01R1AI1112 | Site entrance construction | 6 | 6 | 23JUN08A | 25JUL08A | 100 | 23JUN08A | 25JUL08A | |
| 01R1AI1114 | Install wheel wahing facilities | 7 | 7 | 03JUN08A | 07JUN08A | 100 | 03JUN08A | 07JUN08A | |
| 01R1AI1116 | Erect SOR's secondary site office | 6 | 6 | 28AUG08A | 03SEP08A | 100 | 28AUG08A | 03SEP08A | |
| 01R1AI1118 | Footing for temp. bridge span over Shing M. Nul. | 26 | 26 | 10JUN08A | 16JUL08A | 100 | 10JUN08A | 16JUL08A | |
| 01R1AI1120 | Decking for temp. bridge span over Shing M. Nul. | 13 | 13 | 17JUL08A | 01AUG08A | 100 | 17JUL08A | 01AUG08A | |
| 01R1AI1122 | Install remote control CCTV as per ER 4.4.10 | 12 | 12 | 04SEP08A | 18SEP08A | 100 | 04SEP08A | 18SEP08A | |
| 16R1AI1101 | Tree Identification & Report | 14 | 14 | 14MAR08A | 01APR08A | 100 | 14MAR08A | 01APR08A | |
| 16R7AI1102 | 1st tree pruning for small 3 nos. trees | 1 | 1 | 03JUN08A | 03JUN08A | 100 | 03JUN08A | 03JUN08A | |
| 16R7AI1104 | 2nd tree pruning for small 3 nos. trees | 1 | 1 | 04JUL08A | 04JUL08A | 100 | 04JUL08A | 04JUL08A | |
| 16R7AI1106 | Final pruning & uplifting of 3 nos. small trees | 2 | 2 | 08SEP08A | 09SEP08A | 100 | 08SEP08A | 09SEP08A | |
| 16R7AI1108 | Confirm location for trees to be transplanted | 51 | 51 | 02APR08A | 27AUG08A | 100 | 02APR08A | 27AUG08A | |
| 16R7AI1114 | One stg transplant for big 4 nos. big trees | 9 | 9 | 11FEB09A | 19FEB09A | 100 | 11FEB09A | 19FEB09A | |
| **Permanent Soil Nailing Works** | | | | | | | | | |
| 11R2AI1302 | Erect working platform & mobilization | 8 | 8 | 17MAY08A | 24MAY08A | 100 | 17MAY08A | 24MAY08A | |
| 11R2AI1304 | Install test nails & proof loading test; 2 nos. | 8 | 8 | 24JUN08A | 08JUL08A | 100 | 24JUN08A | 08JUL08A | |
| 11R2AI1306 | Soil nailing for A to C rows; 69 nos. | 16 | 16 | 02JUL08A | 14JUL08A | 100 | 02JUL08A | 14JUL08A | |
| 11R2AI1308 | Soil nailing for D to F rows; 71 nos. | 29 | 29 | 15JUL08A | 05SEP08A | 100 | 15JUL08A | 05SEP08A | |
| 11R2AI1310 | Constrcut soil nail heads; 140 nos. | 22 | 22 | 19JUL08A | 06SEP08A | 100 | 19JUL08A | 06SEP08A | |
| 11R2AI1312 | Demobilization | 3 | 3 | 08SEP08A | 10SEP08A | 100 | 08SEP08A | 10SEP08A | |
| **Construction of Spiral Ramp & Cascade** | | | | | | | | | |
| **Additional GI Woks to Fnalize Design** | | | | | | | | | |
| AGIA-02 | Drill for 5 nos. additional GI works | 21 | 21 | 09SEP08A | 04OCT08A | 100 | 09SEP08A | 04OCT08A | |
| **Temp. Pipe-pile cofferdam** | | | | | | | | | |
| 04L1AI1202 | Erect piling platform | 43 | 43 | 22OCT08A | 24DEC08A | 100 | 22OCT08A | 24DEC08A | |
| 04L1AI1203 | Mobilization & set up piling rig | 3 | 3 | 30OCT08A | 01NOV08A | 100 | 30OCT08A | 01NOV08A | |
| 04L1AI1204 | Install 273 mm dia. temp. pipe piles; 144 nos. | 43 | 43 | 08NOV08A | 05JAN09A | 100 | 08NOV08A | 05JAN09A | |
| 04L1AI1226 | Demobilize all plant and materials | 6 | 6 | 06JAN09A | 13JAN09A | 100 | 06JAN09A | 13JAN09A | |
| **Excavate +104.0 to +100.5mPD; Row 7** | | | | | | | | | |
| 04L1AI1402 | Mobilization | 1 | 1 | 23FEB09A | 23FEB09A | 100 | 23FEB09A | 23FEB09A | |
| 04L1AI1404 | Bulk excavation; soil (155m3) | 4 | 4 | 24FEB09A | 27FEB09A | 100 | 24FEB09A | 27FEB09A | |



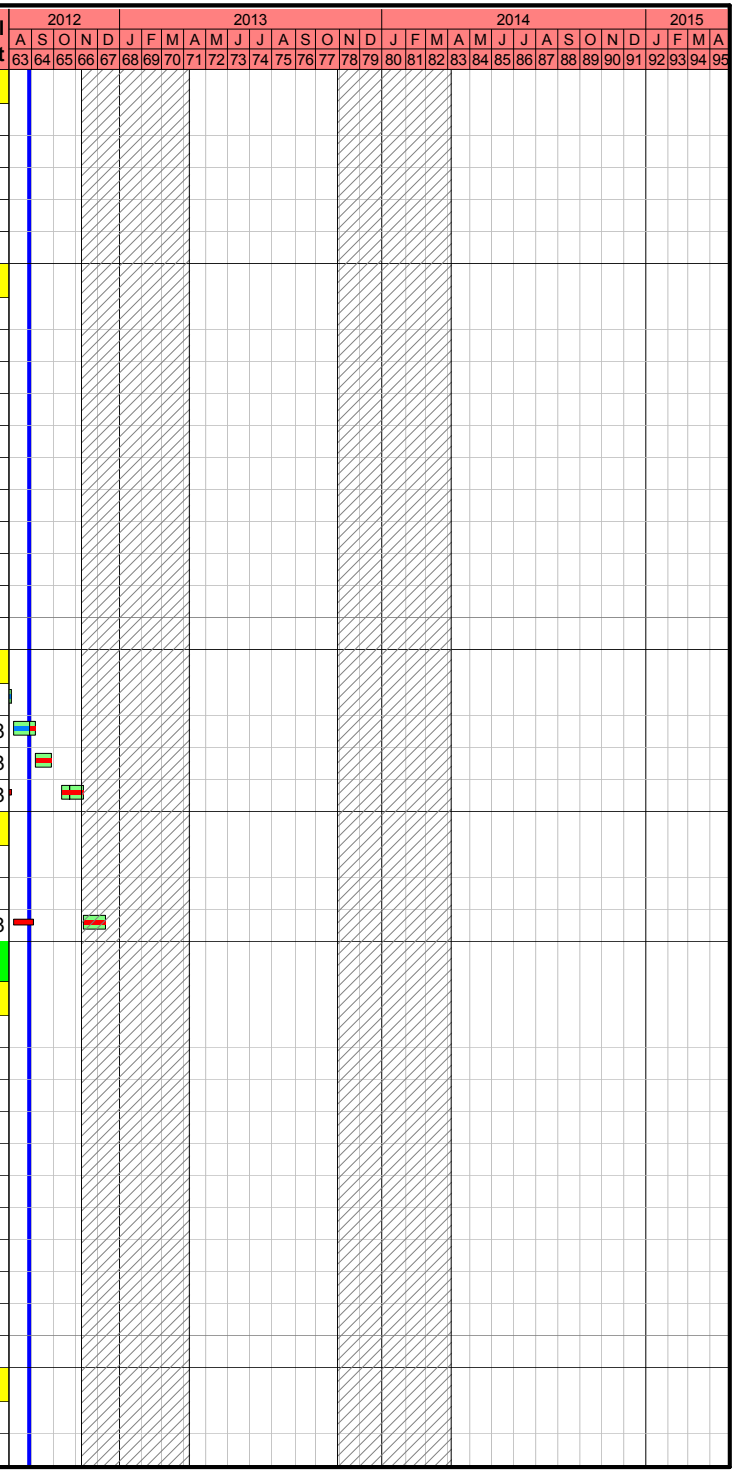
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 04L1AI1406 | Install test tie-back & proof load test | 4 | 4 | 28FEB09A | 04MAR09A | 100 | 28FEB09A | 04MAR09A | |
| 04L1AI1408 | Install tie backs/wailing & shortcrete | 4 | 4 | 03MAR09A | 06MAR09A | 100 | 03MAR09A | 06MAR09A | |
| **Excavate +100.5 to +99.0mPD; Rows 1 & 8** | | | | | | | | | |
| 04L1AI1410 | Bulk excavation; soil (219m3) | 2 | 2 | 07MAR09A | 09MAR09A | 100 | 07MAR09A | 09MAR09A | |
| 04L1AI1412 | Install tie backs/wailing & shorcrete | 6 | 6 | 10MAR09A | 16MAR09A | 100 | 10MAR09A | 16MAR09A | |
| **Excavate +99.0 to +96.5mPD; Rows 2, 9 & 18** | | | | | | | | | |
| 04L1AI1414 | Bulk excavation; soil (710m3) | 3 | 3 | 17MAR09A | 19MAR09A | 100 | 17MAR09A | 19MAR09A | |
| 04L1AI1416 | Install test tie-back & proof load test | 4 | 4 | 26MAR09A | 01APR09A | 100 | 26MAR09A | 01APR09A | |
| 04L1AI1418 | Install tie backs/wailing & shortcrete | 6 | 6 | 23MAR09A | 28MAR09A | 100 | 23MAR09A | 28MAR09A | |
| **Excavate +96.5 to +95.0mPD; Rows3, 10 & 19** | | | | | | | | | |
| 04L1AI1420 | Bulk excavation; soil (721m3) | 3 | 3 | 30MAR09A | 04APR09A | 100 | 30MAR09A | 04APR09A | |
| 04L1AI1422 | Install tie backs/wailing & shortcrete | 4 | 4 | 02APR09A | 20APR09A | 100 | 02APR09A | 20APR09A | |
| **Excavate +95.0 to +94.0 mPD; Rows 4, 11 & 20** | | | | | | | | | |
| 04L1AI1424 | Bulk excavation; soil (701m3) | 3 | 3 | 06APR09A | 18APR09A | 100 | 06APR09A | 18APR09A | |
| 04L1AI1426 | Install tie backs/wailing & shorcrete | 5 | 5 | 03APR09A | 30APR09A | 100 | 03APR09A | 30APR09A | |
| **Excavate +94.0 to + 93.0mPD; Rows 5,12,16,21&24** | | | | | | | | | |
| 04L1AI1428 | Bulk excavation; soil (818m3) | 4 | 4 | 20APR09A | 27APR09A | 100 | 20APR09A | 27APR09A | |
| 04L1AI1430 | Install test tie-back & proof load test | 4 | 4 | 21APR09A | 16MAY09A | 100 | 21APR09A | 16MAY09A | |
| 04L1AI1432 | Install tie backs/wailing & shorcrete | 5 | 5 | 21APR09A | 16MAY09A | 100 | 21APR09A | 16MAY09A | |
| **Excavate +93.0 to +92.5mPD; Row 22** | | | | | | | | | |
| 04L1AI1434 | Bulk excavation; soil (423m3) & rock (52m3) | 3 | 3 | 04MAY09A | 18MAY09A | 100 | 04MAY09A | 18MAY09A | |
| 04L1AI1436 | Install tie backs/wailing & shorcrete | 2 | 2 | 19MAY09A | 27MAY09A | 100 | 19MAY09A | 27MAY09A | |
| **Excavate +92.5 to 91.1mPD; Rows 6,13,16,17&23** | | | | | | | | | |
| 04L1AI1438 | Bulk excavation; soil (1002m3) & rock (342m3) | 8 | 8 | 06MAY09A | 23MAY09A | 100 | 06MAY09A | 23MAY09A | |
| 04L1AI1440 | Install test tie-back & proof load test | 4 | 4 | 08MAY09A | 25MAY09A | 100 | 08MAY09A | 25MAY09A | |
| 04L1AI1442 | Install tie backs/wailing & shorcrete | 4 | 4 | 18MAY09A | 27MAY09A | 100 | 18MAY09A | 27MAY09A | |
| **Excavate +91.1 to 89.5mPD; Rows 14, 17 & 25** | | | | | | | | | |
| 04L1AI1444 | Bulk excavation; soil (724m3) & rock (811m3) | 12 | 12 | 18MAY09A | 01JUN09A | 100 | 18MAY09A | 01JUN09A | |
| 04L1AI1446 | Install tie backs/wailing & shorcrete | 4 | 4 | 02JUN09A | 05JUN09A | 100 | 02JUN09A | 05JUN09A | |
| **Excavate +89.5 to 88.5mPD; Rows 15 & 26** | | | | | | | | | |
| 04L1AI1448 | Bulk excavation; soil (269m3) & rock (690m3) | 9 | 9 | 06JUN09A | 16JUN09A | 100 | 06JUN09A | 16JUN09A | |
| 04L1AI1450 | Install tie backs/wailing & shorcrete | 3 | 3 | 17JUN09A | 19JUN09A | 100 | 17JUN09A | 19JUN09A | |
| **Excavate +88.5 to 71.5mPD; Rows 27 to 31** | | | | | | | | | |
| 07R1AI1442 | Set up for dewatering | 8 | 8 | 20JUN09A | 29JUN09A | 100 | 20JUN09A | 29JUN09A | |
| 07R1AI1444 | Rock excavation/mucking out/temp. support | 168 | 168 | 30JUN09A | 30JAN10A | 100 | 30JUN09A | 30JAN10A | |
| **Ground Treatment for Fault F1** | | | | | | | | | |
| 07R1AI1G02 | Erection of scaffolding platform | 8 | 8 | 24JUN10A | 03JUL10A | 100 | 24JUN10A | 03JUL10A | |
| 07R1AI1G04 | Mobilization & setup of horizontal drilling rig | 11 | 11 | 05JUL10A | 16JUL10A | 100 | 05JUL10A | 16JUL10A | |
| 07R1AI1G06 | Drill & grout hoizontally | 87 | 87 | 17JUL10A | 01FEB11A | 100 | 17JUL10A | 01FEB11A | |
| 07R1AI1G08 | Dewater,dismantle & re-erection of platform | 46 | 46 | 23JUL10A | 02OCT10A | 100 | 23JUL10A | 02OCT10A | |
| 07R1AI1G10 | Repair of drilling rig & re-setting up | 45 | 45 | 23AUG10A | 15OCT10A | 100 | 23AUG10A | 15OCT10A | |



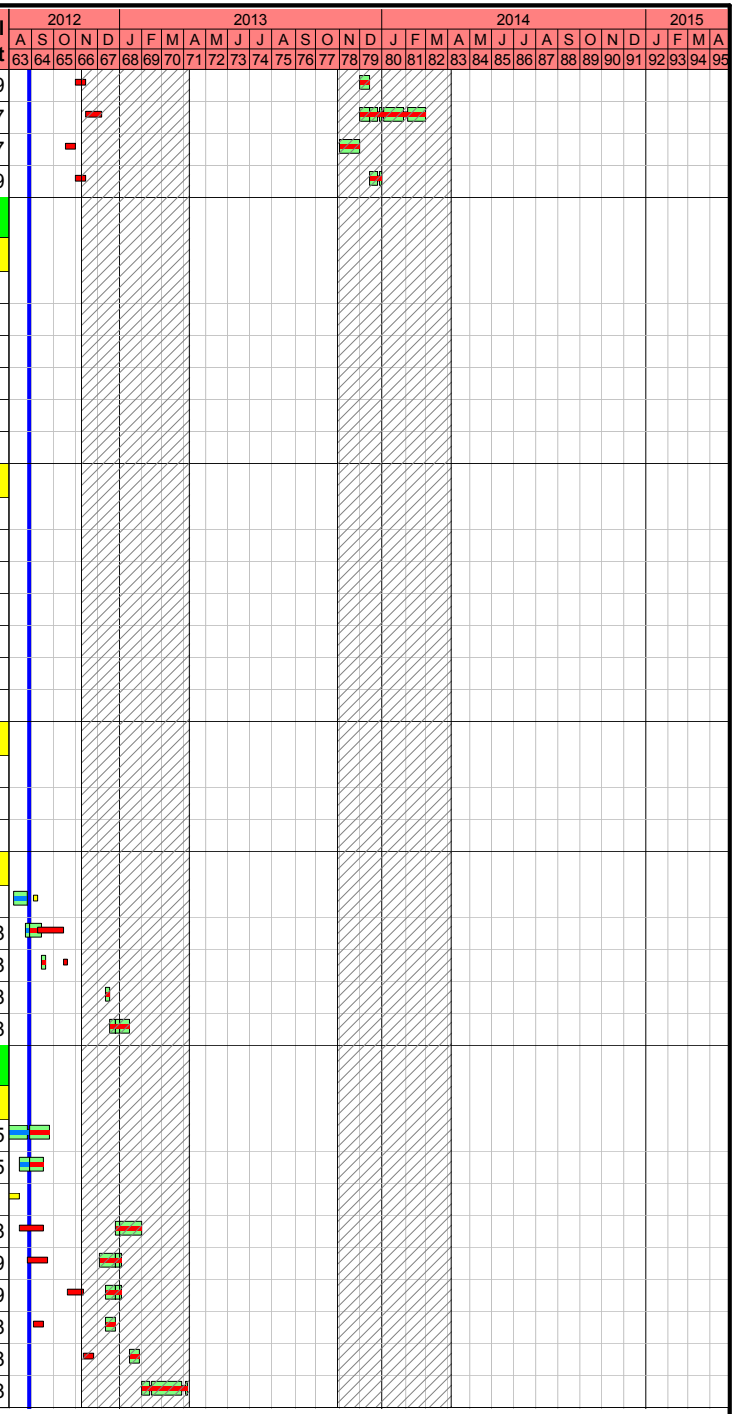
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Strengthening of Portal for TBM Breakthrough** | | | | | | | | | |
| 07R1AI1452 | Form working platform | 5 | 5 | 25FEB11A | 05MAR11A | 100 | 25FEB11A | 05MAR11A | |
| 07R1AI1462 | Mobilization & setup plants | 1 | 1 | 07MAR11A | 09MAR11A | 100 | 07MAR11A | 09MAR11A | |
| 07R1AI1472 | strengthening of portal | 25 | 25 | 10MAR11A | 24MAY11A | 100 | 10MAR11A | 24MAY11A | |
| 07R1AI1492 | Demobilization/remove working platform | 2 | 2 | 25MAY11A | 27MAY11A | 100 | 25MAY11A | 27MAY11A | |
| **Construcion of Vehiucular Access** | | | | | | | | | |
| 04L1AI1452 | Cast base slab | 6 | 6 | 05MAR11A | 16MAR11A | 100 | 05MAR11A | 16MAR11A | |
| 04L1AI1456 | Cast wall & roof slab | 24 | 24 | 17MAR11A | 04APR11A | 100 | 17MAR11A | 04APR11A | |
| **Base for Spiral Ramp** | | | | | | | | | |
| 07R1AI1402 | Cast base slab | 14 | 14 | 24FEB10A | 11MAR10A | 100 | 24FEB10A | 11MAR10A | |
| **Spiral Ramp from +73.56mPD to 76.65mPD** | | | | | | | | | |
| 07R1AI1S02 | Cast spiral ramp; pour 1 | 12 | 12 | 12MAR10A | 08APR10A | 100 | 12MAR10A | 08APR10A | |
| **Spiral Ramp from 76.65mPD to 80.95mPD** | | | | | | | | | |
| 07R1AI1S04 | Cast spiral ramp; pour 2 | 20 | 20 | 09APR10A | 03MAY10A | 100 | 09APR10A | 03MAY10A | |
| 07R1AI1S06 | Cast spiral ramp; pour 3 | 13 | 13 | 26APR10A | 11MAY10A | 100 | 26APR10A | 11MAY10A | |
| 07R1AI1S08 | Cast spiral ramp; pour 4 | 10 | 10 | 08MAY10A | 19MAY10A | 100 | 08MAY10A | 19MAY10A | |
| **Spiral Ramp from +80.95 to +85.25mPD** | | | | | | | | | |
| 07R1AI1S10 | Cast spiral ramp; pour 5 | 12 | 12 | 13MAY10A | 27MAY10A | 100 | 13MAY10A | 27MAY10A | |
| 07R1AI1S12 | Cast spiral ramp; pour 6 | 12 | 12 | 20MAY10A | 03JUN10A | 100 | 20MAY10A | 03JUN10A | |
| 07R1AI1S14 | Cast spiral ramp; pour 7 | 15 | 15 | 24MAY10A | 09JUN10A | 100 | 24MAY10A | 09JUN10A | |
| **Spiral Ramp from 85.25mPD to 89.55mPD** | | | | | | | | | |
| 07R1AI1S16 | Cast spiral ramp; pour 8 | 16 | 16 | 28MAY10A | 15JUN10A | 100 | 28MAY10A | 15JUN10A | |
| 07R1AI1S18 | Cast spiral ramp; pour 9 | 16 | 16 | 04JUN10A | 23JUN10A | 100 | 04JUN10A | 23JUN10A | |
| 07R1AI1S20 | Cast spiral ramp; pour 10 | 14 | 14 | 14JUN10A | 30JUN10A | 100 | 14JUN10A | 30JUN10A | |
| **Spiral Ramp from 89.55 to 93.85mPD** | | | | | | | | | |
| 07R1AI1S24 | Cast spiral ramp; pour 11 | 18 | 18 | 17JUN10A | 08JUL10A | 100 | 17JUN10A | 08JUL10A | |
| 07R1AI1S26 | Cast spiral ramp; pour 12 | 16 | 16 | 25JUN10A | 14JUL10A | 100 | 25JUN10A | 14JUL10A | |
| 07R1AI1S28 | Cast spiral ramp; pour 13 | 16 | 16 | 02JUL10A | 20JUL10A | 100 | 02JUL10A | 20JUL10A | |
| **Spiral Ramp from +93.85mPD to 98.15mPD** | | | | | | | | | |
| 07R1AI1S30 | Cast spiral ramp; pour 14 | 19 | 19 | 09JUL10A | 06SEP10A | 100 | 09JUL10A | 06SEP10A | |
| 07R1AI1S32 | Cast spiral ramp; pour 15 | 14 | 14 | 02SEP10A | 17SEP10A | 100 | 02SEP10A | 17SEP10A | |
| 07R1AI1S34 | Cast spiral ramp; pour 16 | 8 | 8 | 20SEP10A | 29SEP10A | 100 | 20SEP10A | 29SEP10A | |
| **Spiral Ramp from 98.15mPD to 102.45mPD** | | | | | | | | | |
| 07R1AI1S36 | Cast spiral ramp; pour 17 | 11 | 11 | 22SEP10A | 06OCT10A | 100 | 22SEP10A | 06OCT10A | |
| 07R1AI1S38 | Cast spiral ramp; pour 18 | 11 | 11 | 02OCT10A | 14OCT10A | 100 | 02OCT10A | 14OCT10A | |
| 07R1AI1S40 | Cast spiral ramp; pour 19 | 11 | 11 | 12OCT10A | 25OCT10A | 100 | 12OCT10A | 25OCT10A | |
| **Spiral Ramp from 102.45mPD to 108.50mPD** | | | | | | | | | |
| 07R1AI1S42 | Cast spiral ramp; pour 20 | 10 | 10 | 22OCT10A | 02NOV10A | 100 | 22OCT10A | 02NOV10A | |
| 07R1AI1S44 | Cast spiral ramp; pour 21 | 11 | 11 | 29OCT10A | 10NOV10A | 100 | 29OCT10A | 10NOV10A | |
| 07R1AI1S46 | Cast spiral ramp; pour 22 | 14 | 14 | 08NOV10A | 23NOV10A | 100 | 08NOV10A | 23NOV10A | |
| 07R1AI1S48 | Cast spiral ramp; pour 23 | 14 | 14 | 20NOV10A | 06DEC10A | 100 | 20NOV10A | 06DEC10A | |
| 07R1AI1S50 | Preparation & fill for central void; 2700m3 | 18 | 18 | 07DEC10A | 19FEB11A | 100 | 07DEC10A | 19FEB11A | |
| 07R1AI1S52 | Cast spiral ramp roof | 8 | 8 | 26FEB11A | 07MAR11A | 100 | 26FEB11A | 07MAR11A | |



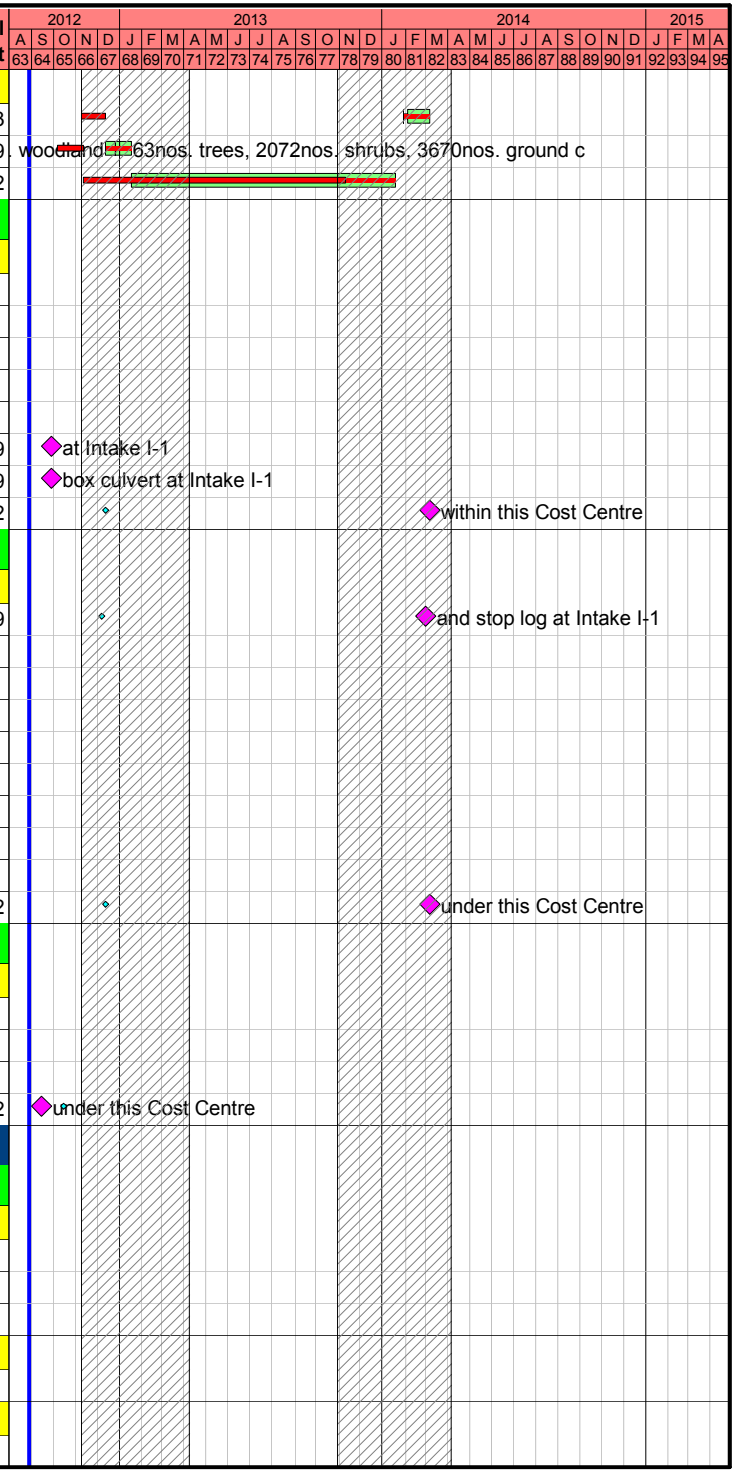
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Construction of Cascade Structure** | | | | | | | | | |
| 04L1AI1472 | Cast base slabs | 12 | 12 | 21JAN11A | 21MAR11A | 100 | 21JAN11A | 21MAR11A | |
| 04L1AI1474 | Cast walls 1st lift | 18 | 18 | 22MAR11A | 20APR11A | 100 | 22MAR11A | 20APR11A | |
| 04L1AI1476 | Cast walls 2nd lift, 200mm down from soffit | 18 | 18 | 21APR11A | 27MAY11A | 100 | 21APR11A | 27MAY11A | |
| 04L1AI1478 | Cast roof slabs | 18 | 18 | 28MAY11A | 11JUN11A | 100 | 28MAY11A | 11JUN11A | |
| 04L1AI1488 | Cast side walls | 18 | 18 | 13JUN11A | 08JUL11A | 100 | 13JUN11A | 08JUL11A | |
| **Dismantle & Removal of TBM** | | | | | | | | | |
| 04L1AI1D02 | Form cranage platform | 52 | 52 | 27JUN11A | 24AUG11A | 100 | 27JUN11A | 24AUG11A | |
| 04L1AI1D03 | Mobilization & setup- piling rig | 6 | 6 | 24AUG11A | 27AUG11A | 100 | 24AUG11A | 27AUG11A | |
| 04L1AI1D04 | Construct 2# temporary H-piles | 6 | 6 | 29AUG11A | 05SEP11A | 100 | 29AUG11A | 05SEP11A | |
| 04L1AI1D05 | Demobilze piling rig | 6 | 6 | 06SEP11A | 08SEP11A | 100 | 06SEP11A | 08SEP11A | |
| 04L1AI1D06 | Install H-beam frameworks | 24 | 24 | 09SEP11A | 07OCT11A | 100 | 09SEP11A | 07OCT11A | |
| 04L1AI1D08 | Construct cradle | 12 | 12 | 08OCT11A | 15OCT11A | 100 | 08OCT11A | 15OCT11A | |
| 04L1AI1D09 | Obtain CNP for TBM dismantle | 0 | 0 | | 16NOV11A | 100 | | 16NOV11A | |
| 04L1AI1D12 | Remove debris/steel frame & TBM push to cradle | 5 | 5 | 29FEB12A | 05MAR12A | 100 | 29FEB12 | 05MAR12 | |
| 04L1AI1D13 | Mobilization & setup 400t crane | 4 | 4 | 07MAR12A | 10MAR12A | 100 | 07MAR12 | 10MAR12 | |
| 04L1AI1D14 | Dissembly & demobiliseTBM/BU | 38 | 38 | 12MAR12A | 27APR12A | 100 | 12MAR12 | 30APR12 | |
| 04L1AI1D16 | Remove H-beam frame & cradle | 12 | 12 | 18APR12A | 21JUL12A | 100 | 02MAY12 | 15MAY12 | |
| **Construction of Box Culvert Structure** | | | | | | | | | |
| 04L1AI1463 | Cast base | 6 | 6 | 23JUL12A | 04AUG12A | 100 | 16MAY12 | 22MAY12 | |
| 04L1AI1464 | Cast walls | 24 | 18 | 06AUG12A | 05SEP12 | 67 | 23MAY12 | 12JUN12 | -428 |
| 04L1AI1468 | Cast roof slabs | 18 | 18 | 06SEP12 | 26SEP12 | 0 | 13JUN12 | 05JUL12 | -428 |
| 04L1AI1470 | Backfill & compation, 1st 13m; 4000m3 | 26 | 26 | 12OCT12 | 12NOV12 | 0 | 06JUL12 | 04AUG12 | -428 |
| **Slope Reinstatement** | | | | | | | | | |
| 04L1AI1S10 | Prepare slope reinstatement report | 42 | 42 | 28JUL11A | 19AUG11A | 100 | 28JUL11A | 19AUG11A | |
| 04L1AI1S20 | Obtain consent from SOR & GEO | 170 | 170 | 20DEC11A | 26MAY12A | 100 | 20DEC11A | 17APR12 | |
| 04L1AI1S30 | Backfill & compaction, remain. 8m; 900m3 | 24 | 24 | 13NOV12 | 10DEC12 | 0 | 06AUG12 | 01SEP12 | -428 |
| **Modification of Existing Channel in Dry Season** | | | | | | | | | |
| **Channel Modification (Varied)Works (Civil Works)** | | | | | | | | | |
| 07R1AI1502 | Demolish WYHN wall, weir and SMN weir | 10 | 10 | 08DEC09A | 28DEC09A | 100 | 08DEC09A | 28DEC09A | |
| 07R1AI1504 | Demolish WYHN slab | 4 | 4 | 29DEC09A | 28JAN10A | 100 | 29DEC09A | 28JAN10A | |
| 07R1AI1506 | Excavation for WYH channel wall under slab | 18 | 18 | 30DEC09A | 12FEB10A | 100 | 30DEC09A | 12FEB10A | |
| 07R1AI1508 | Construct WYHN wall under slab;1st layer wall | 5 | 5 | 29MAR10A | 08APR10A | 100 | 29MAR10A | 08APR10A | |
| 07R1AI1510 | Construct WYHN wall under slab; 2nd layer wall | 5 | 5 | 09APR10A | 22APR10A | 100 | 09APR10A | 22APR10A | |
| 07R1AI1512 | Install 26# 11m pipe piles | 7 | 7 | 22DEC09A | 13JAN10A | 100 | 22DEC09A | 13JAN10A | |
| 07R1AI1514 | Demolish WYHN interface wall and SMN | 23 | 23 | 14JAN10A | 12FEB10A | 100 | 14JAN10A | 12FEB10A | |
| 07R1AI1518 | Construct WYHN and SMN slab | 4 | 4 | 01MAR10A | 13MAR10A | 100 | 01MAR10A | 13MAR10A | |
| 07R1AI1520 | Construct SMN wall (1st) | 9 | 9 | 15MAR10A | 30MAR10A | 100 | 15MAR10A | 30MAR10A | |
| 07R1AI1522 | Construct SMN wall (2nd) and weir | 8 | 8 | 01APR10A | 20APR10A | 100 | 01APR10A | 20APR10A | |
| 07R1AI1524 | Construct WYHN wall | 8 | 8 | 21APR10A | 28APR10A | 100 | 21APR10A | 28APR10A | |
| **Channel Modification Works (Steel Works)** | | | | | | | | | |
| 07R1AI1628 | Construct WYH clolumn | 9 | 9 | 04NOV11A | 09DEC11A | 100 | 04NOV11A | 09DEC11A | |
| 07R1AI1638 | Construct R.C. frame for stop log | 18 | 18 | 04NOV11A | 09DEC11A | 100 | 04NOV11A | 09DEC11A | |



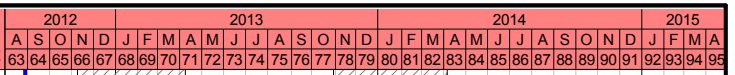
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 07R1AI1648 | Install stop log A | 12 | 12 | 29NOV13* | 12DEC13 | 0 | 01NOV12* | 14NOV12 | -629 |
| 07R1AI1658 | Install trash grill | 72 | 18 | 29NOV13 | 28FEB14 | 0 | 15NOV12 | 05DEC12 | -677 |
| 07R1AI1668 | Remove TDMP | 24 | 12 | 01NOV13* | 28NOV13 | 0 | 17OCT12 | 31OCT12 | -677 |
| 07R1AI1678 | Install stop log B | 12 | 12 | 14DEC13* | 30DEC13 | 0 | 01NOV12* | 14NOV12 | -629 |
| **Piling Works** | | | | | | | | | |
| **Piing Works Along Crest Plarform** | | | | | | | | | |
| 11R2AI1000 | Implement TTA at Shing Mun Road | 0 | 0 | | 01APR11A | 100 | | 01APR11A | |
| 11R2AI1010 | Implement XP | 0 | 0 | | 01APR11A | 100 | | 01APR11A | |
| 11R2AI1200 | Erect piling platform for upper piles | 24 | 24 | 02APR11A | 05MAY11A | 100 | 02APR11A | 05MAY11A | |
| 11R2AI1204 | Mobilize piling rig & set up | 6 | 6 | 11MAY11A | 16MAY11A | 100 | 11MAY11A | 16MAY11A | |
| 11R2AI1206 | 350mm dia. pre-bored H-piles (upper); 36 nos. | 54 | 54 | 17MAY11A | 01JUN11A | 100 | 17MAY11A | 01JUN11A | |
| 11R2AI1208 | Demobilize piling rig | 3 | 3 | 02JUN11A | 04JUN11A | 100 | 02JUN11A | 04JUN11A | |
| **Skin Wall & Crest Platform** | | | | | | | | | |
| 11R2AI1210 | Remove piling platform/Excavate & hack off grout | 18 | 18 | 07JUN11A | 05JUL11A | 100 | 07JUN11A | 05JUL11A | |
| 11R2AI1212 | Construct abutment | 18 | 18 | 06JUL11A | 26JUL11A | 100 | 06JUL11A | 26JUL11A | |
| 11R2AI1214 | Construct skin wall & capping beam | 12 | 12 | 27JUL11A | 09AUG11A | 100 | 27JUL11A | 09AUG11A | |
| 11R2AI1216 | Relocation of gully & construct catchpit; VO#067 | 14 | 14 | 10AUG11A | 15AUG11A | 100 | 10AUG11A | 15AUG11A | |
| 11R2AI1217 | Construct run-in | 7 | 7 | 15AUG11A | 17AUG11A | 100 | 15AUG11A | 17AUG11A | |
| 11R2AI1218 | Reinstatement of masonry wall | 14 | 14 | 18AUG11A | 19SEP11A | 100 | 18AUG11A | 19SEP11A | |
| 11R2AI1219 | Reinstatement of carriageway | 6 | 6 | 20SEP11A | 18OCT11A | 100 | 20SEP11A | 18OCT11A | |
| **Piling Works Above Inclined Access Ramp** | | | | | | | | | |
| 11R2AI1220 | Mobilize piling rig & set up | 6 | 6 | 17OCT11A | 20OCT11A | 100 | 17OCT11A | 20OCT11A | |
| 11R2AI1222 | 350mm dia. pre-bored H-piles (lower); 22 nos. | 22 | 22 | 20OCT11A | 04NOV11A | 100 | 20OCT11A | 04NOV11A | |
| 11R2AI1224 | Demobilize piling rig | 3 | 3 | 05NOV11A | 08NOV11A | 100 | 05NOV11A | 08NOV11A | |
| **Skin Wall & Inclined Access Ramp** | | | | | | | | | |
| 11R2AI1226 | Excavate & hack off grout | 16 | 6 | 07AUG12A | 24AUG12A | 100 | 03SEP12 | 08SEP12 | |
| 11R2AI1228 | Construct skin wall & ramp | 18 | 30 | 24AUG12A | 13SEP12 | 50 | 10SEP12 | 15OCT12 | -288 |
| 11R2AI1232 | Temporary backfill with pre-cast conc. blocks | 4 | 4 | 14SEP12 | 18SEP12 | 0 | 16OCT12 | 19OCT12 | -288 |
| 11R2AI1242 | Remove pre-cast concrete block | 6 | 0 | 11DEC12 | 17DEC12 | 0 | | | -348 |
| 11R2AI1252 | Construct ramp & additiona drainage works | 21 | 0 | 18DEC12 | 14JAN13 | 0 | | | -348 |
| **Remaining Works Prior to Handover** | | | | | | | | | |
| **Finishing Works** | | | | | | | | | |
| 07R1AI1F02 | Water proofing work at Spiral Ramp | 105 | 24 | 22MAY12A | 24SEP12 | 72 | 02MAY12 | 29MAY12 | -345 |
| 07R1AI1F12 | Tiling works; stage 1 | 28 | 48 | 15AUG12A | 15SEP12 | 65 | 30MAY12 | 26JUL12 | -345 |
| 07R1AI1F22 | Install hand rails at Spiral Ramp | 16 | 16 | 02MAY12A | 21MAY12A | 100 | 27JUL12 | 14AUG12 | |
| 07R1AI1F32 | Install GRP | 29 | 29 | 27DEC12 | 30JAN13 | 0 | 15AUG12 | 17SEP12 | -428 |
| 07R1AI1F42 | Reinstate retaining wall | 24 | 24 | 04DEC12 | 03JAN13 | 0 | 27AUG12 | 22SEP12 | -339 |
| 07R1AI1F52 | Construct drainage | 18 | 18 | 11DEC12 | 03JAN13 | 0 | 20OCT12 | 10NOV12 | -339 |
| 07R1AI1F62 | Tiling works; stage 2 | 12 | 12 | 11DEC12 | 24DEC12 | 0 | 03SEP12 | 15SEP12 | -428 |
| 07R1AI1F72 | Remove temp. bridge | 12 | 12 | 15JAN13 | 28JAN13 | 0 | 12NOV12 | 24NOV12 | -348 |
| PVO-TR-30 | Vertical greening & water points at Spiral Ramp | 48 | 0 | 31JAN13 | 03APR13 | 0 | | | -428 |



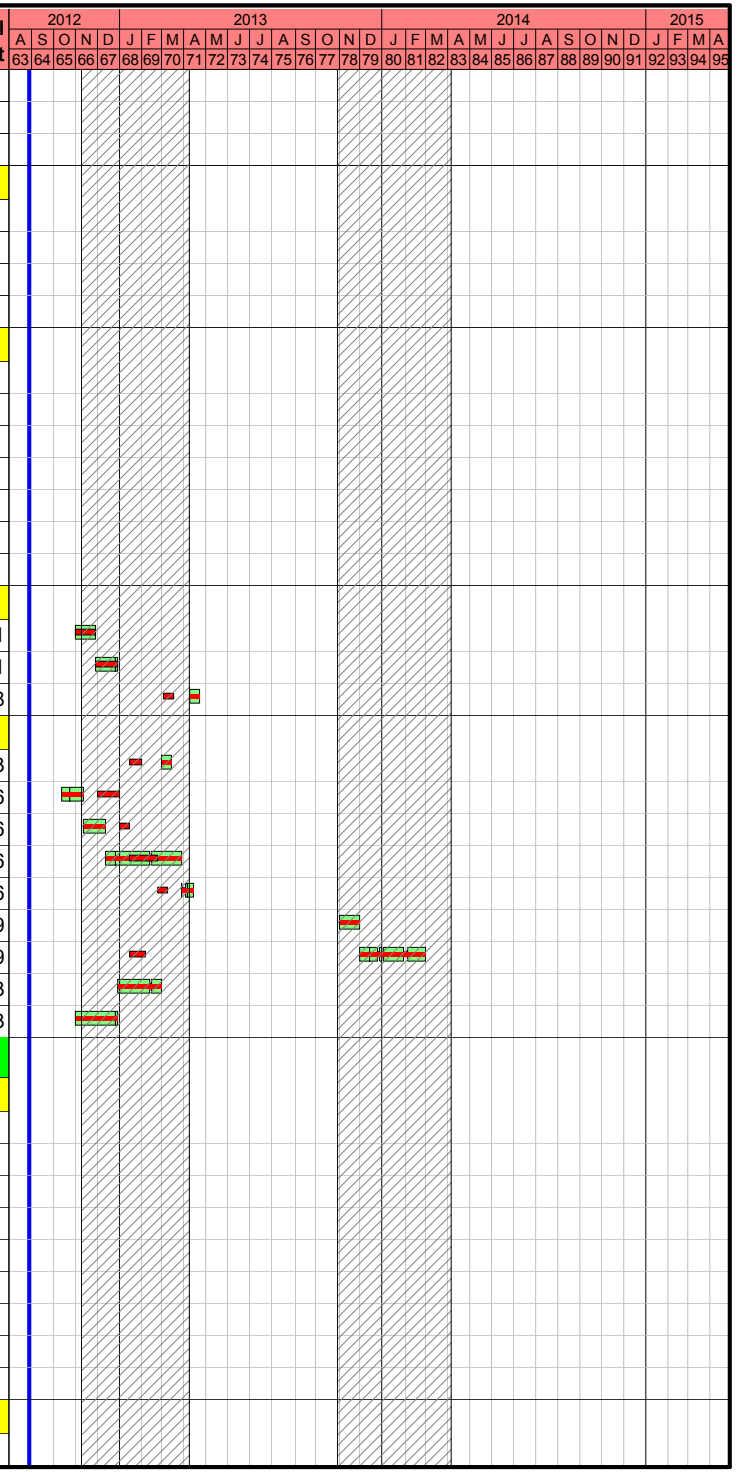
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 07R1AI1608 | Pre-handover inspections and remedial works | 30 | 30 | 29JAN14 | 07MAR14 | 0 | 08NOV12 | 12DEC12 | -673 |
| 16R7AI1602 | Landscaping works at Portion A | 30 | 30 | 11DEC12 | 17JAN13 | 0 | 06OCT12 | 10NOV12 | -369 |
| 16R7AI1604 | Establishment Works at Portion A | 365 | 365 | 18JAN13 | 17JAN14 | 0 | 11NOV12 | 10NOV13 | -452 |
| **Schedule of Milestones for Cost Center No. 4L** | | | | | | | | | |
| 04L1AI1802 | 4L 1; On completion of 50% excavation | 0 | 0 | | 29JUN09A | 100 | | 29JUN09A | |
| 04L1AI1804 | 4L 2; On completion of excavation | 0 | 0 | | 30JAN10A | 100 | | 30JAN10A | |
| 04L1AI1806 | 4L 3; On completion of 25% concreting | 0 | 0 | | 20APR11A | 100 | | 20APR11A | |
| 04L1AI1808 | 4L 4; On completion of 50% concreting | 0 | 0 | | 27MAY11A | 100 | | 27MAY11A | |
| 04L1AI1810 | 4L 5; On completion of 75% concreting | 0 | 0 | | 11JUN11A | 100 | | 11JUN11A | |
| 04L1AI1812 | 4L 6; On completion of Cascade | 0 | 0 | | 26SEP12 | 0 | | 05JUL12 | 899 |
| 04L1AI1814 | 4L 7; On completion of connecting BC | 0 | 0 | | 26SEP12 | 0 | | 05JUL12 | 899 |
| 04L1AI1816 | 4L 8; On completion of all works under this CC | 0 | 0 | | 07MAR14 | 0 | | 12DEC12 | 372 |
| **Schedule of Milestones for Cost Centre No. 7R** | | | | | | | | | |
| 07R1AI1902 | 7R 1; On completion of trash grills | 0 | 0 | | 28FEB14 | 0 | | 05DEC12 | 379 |
| 07R1AI1904 | 7R 2; On completion of 25% excavation | 0 | 0 | | 29JUN09A | 100 | | 29JUN09A | |
| 07R1AI1906 | 7R 3; On completion of 50% excavation | 0 | 0 | | 27JUL09A | 100 | | 27JUL09A | |
| 07R1AI1908 | 7R 4; On completion of 75% excavation | 0 | 0 | | 24OCT09A | 100 | | 24OCT09A | |
| 07R1AI1910 | 7R 5; On completion of all excavation | 0 | 0 | | 26DEC09A | 100 | | 26DEC09A | |
| 07R1AI1912 | 7R 6; On completion of spiral ramp to +80mPD | 0 | 0 | | 19MAY10A | 100 | | 19MAY10A | |
| 07R1AI1914 | 7R 7; On completion of spiral ramp to +90mPD | 0 | 0 | | 30JUN10A | 100 | | 30JUN10A | |
| 07R1AI1916 | 7R 8; On completion of spiral ramp to +100mPD | 0 | 0 | | 29SEP10A | 100 | | 29SEP10A | |
| 07R1AI1918 | 7R 9; On completion of spiral access ramp | 0 | 0 | | 07MAR11A | 100 | | 07MAR11A | |
| 07R1AI1920 | 7R 10; On completion of all works under this CC | 0 | 0 | | 07MAR14 | 0 | | 12DEC12 | 372 |
| **Schedule of Milestones for Cost Centre No. 11R** | | | | | | | | | |
| 11R2AI1R02 | 11R 1; On completion of soil nailing works | 0 | 0 | | 06SEP08A | 100 | | 06SEP08A | |
| 11R2AI1R04 | 11R 2; On completion of piling at platform | 0 | 0 | | 01JUN11A | 100 | | 01JUN11A | |
| 11R2AI1R06 | 11R 3; On completion of piling at branch access | 0 | 0 | | 04NOV11A | 100 | | 04NOV11A | |
| 11R2AI1R08 | 11R 4; On completion of all works under this CC | 0 | 0 | | 13SEP12 | 0 | | 15OCT12 | 912 |
| ***Construction of Intake I-2*** | | | | | | | | | |
| **Preliminary Works** | | | | | | | | | |
| **Additional GI Works to Finalize Design** | | | | | | | | | |
| AGIB-02 | Erect platform/mibilization & set up GI rig | 3 | 3 | 12SEP08A | 16SEP08A | 100 | 12SEP08A | 16SEP08A | |
| AGIB-04 | Drill 3 nos. GI holes for Intake Structures | 22 | 22 | 17SEP08A | 03NOV08A | 100 | 17SEP08A | 03NOV08A | |
| AGIB-06 | Drill 1 hole for Intersection with Main Tunnel | 12 | 12 | 11NOV08A | 24NOV08A | 100 | 11NOV08A | 24NOV08A | |
| **Diversion of CLP Overhead Cable** | | | | | | | | | |
| 01R1BU0102 | Temporary diversion of CLP overhead cable | 30 | 30 | 02SEP08A | 17OCT08A | 100 | 02SEP08A | 17OCT08A | |
| **Dievrsion of 100mm Watermain** | | | | | | | | | |
| 01R1BU0202 | Temporary Diversion of 100mm dia. Watermain | 64* | 64* | 03OCT08A | 05DEC08A | 100 | 03OCT08A | 05DEC08A | |



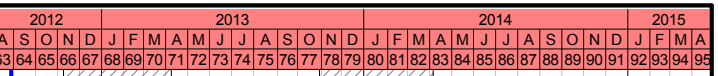
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 01R1BU0204 | Issue VO35 for temp. diversion | 1 | 1 | 03OCT08A | 03OCT08A | 100 | 03OCT08A | 03OCT08A | |
| 01R1BU0206 | Preparation works | 26 | 26 | 04OCT08A | 04NOV08A | 100 | 04OCT08A | 04NOV08A | |
| 01R1BU0208 | Install steel support | 3 | 3 | 05NOV08A | 07NOV08A | 100 | 05NOV08A | 07NOV08A | |
| 01R1BU0210 | Lay new watermain | 2 | 2 | 08NOV08A | 18NOV08A | 100 | 08NOV08A | 18NOV08A | |
| 01R1BU0212 | Obtain ICE certificate for temp. support | 0 | 0 | | 19NOV08A | 100 | | 19NOV08A | |
| 01R1BU0214 | Pressure test | 2 | 2 | 20NOV08A | 21NOV08A | 100 | 20NOV08A | 21NOV08A | |
| 01R1BU0216 | Sterilise new pipe & take water sample | 3 | 3 | 22NOV08A | 25NOV08A | 100 | 22NOV08A | 25NOV08A | |
| 01R1BU0218 | Watermain connection by WSD | 10 | 10 | 26NOV08A | 05DEC08A | 100 | 26NOV08A | 05DEC08A | |
| **VO #11; Transperant Hoarding at I-2** | | | | | | | | | |
| VO011-02 | Receive VO11 for transparent hoarding | 0 | 0 | | 14JUL08A | 100 | | 14JUL08A | |
| VO011-04 | Procure/prepare/install transparent hoarding | 51 | 51 | 15JUL08A | 13SEP08A | 100 | 15JUL08A | 13SEP08A | |
| **VO#32; Replace Hoarding by Chain Link Fence** | | | | | | | | | |
| VO032-I202 | Receive VO-32 for replacing hoarding by CLF | 0 | 0 | | 16SEP08A | 100 | | 16SEP08A | |
| VO032-I204 | Procure/prepare/install transparent hoarding | 51 | 51 | 17SEP08A | 17NOV08A | 100 | 17SEP08A | 17NOV08A | |
| | | | | | | | | | |
| 01R1BI2102 | Possession of Portion B -90d of DOC | 0 | 0 | 26MAR08A | | 100 | 26MAR08A | | |
| 01R1BI2104 | Obtain TTA (ingress & egress) approval | 0 | 0 | | 19APR08A | 100 | | 19APR08A | |
| 01R1BI2108 | Site clearance | 30 | 30 | 02MAY08A | 05SEP08A | 100 | 02MAY08A | 05SEP08A | |
| 01R1BI2112 | Erect hoarding | 30 | 30 | 05JUN08A | 16MAR09A | 100 | 05JUN08A | 16MAR09A | |
| 01R1BI2116 | Install remote contorl CCTV as per ER 4.4.10 | 12 | 12 | 28FEB09A | 13MAR09A | 100 | 28FEB09A | 13MAR09A | |
| 16R7BI2002 | Tree transplanting; 1 no. | 72 | 72 | 10DEC08A | 23APR09A | 100 | 10DEC08A | 23APR09A | |
| **Stream Diversion/Approach Channel/H-Pile Wall** | | | | | | | | | |
| **Revised Layout of Pile Wall at I-2** | | | | | | | | | |
| VO022-02 | Received VO22 for revised layout of pile wall | 0 | 0 | | 10JUL08A | 100 | | 10JUL08A | |
| VO022-04 | SOR confirmed to demolish exit. ret. wall | 38 | 38 | 11JUL08A | 21AUG08A | 100 | 11JUL08A | 21AUG08A | |
| VO022-06 | Demolish existing retaining wall | 1 | 1 | 13SEP08A | 13SEP08A | 100 | 13SEP08A | 13SEP08A | |
| VO022-16 | Reinstate piling platform | 2 | 2 | 16SEP08A | 17SEP08A | 100 | 16SEP08A | 17SEP08A | |
| **Phase 1; Construct 550 dia. H-pile Wall** | | | | | | | | | |
| 12R3BI2202 | Form temp. access ramp along west side of stream | 44 | 44 | 10JUN08A | 31JUL08A | 100 | 10JUN08A | 31JUL08A | |
| 12R3BI2204 | Additional SI & engineering works | 26 | 26 | 25AUG08A | 24SEP08A | 100 | 25AUG08A | 24SEP08A | |
| 12R3BI2206 | Mobilize piling rig & set up | 5 | 5 | 25SEP08A | 30SEP08A | 100 | 25SEP08A | 30SEP08A | |
| 12R3BI2208 | Construct piles 1 to 18 | 13 | 13 | 02OCT08A | 17OCT08A | 100 | 02OCT08A | 17OCT08A | |
| 12R3BI2210 | Piling works stopped by the SOR | 8 | 8 | 18OCT08A | 27OCT08A | 100 | 18OCT08A | 27OCT08A | |
| 12R3BI2212 | Construct piles 19-58 | 28 | 28 | 28OCT08A | 26NOV08A | 100 | 28OCT08A | 26NOV08A | |
| 12R3BI2214 | SOR's instruction to delet pile 59 | 0 | 0 | | 02DEC08A | 100 | | 02DEC08A | |
| 12R3BI2216 | Demobilize piling rig | 4 | 4 | 03DEC08A | 06DEC08A | 100 | 03DEC08A | 06DEC08A | |
| 12R3BI2218 | Construct skin wall/caping beam/u-channel | 155* | 155* | 27JUL09A | 29JAN10A | 100 | 27JUL09A | 29JAN10A | |
| 12R3BI2220 | Excavate for skin wall; 4 bays | 18 | 18 | 27JUL09A | 27AUG09A | 100 | 27JUL09A | 27AUG09A | |
| 12R3BI2222 | Construct for skin wall; 4 bays | 24 | 24 | 05OCT09A | 12NOV09A | 100 | 05OCT09A | 12NOV09A | |
| 12R3BI2224 | Construct capping beam | 16 | 16 | 13NOV09A | 01DEC09A | 100 | 13NOV09A | 01DEC09A | |
| 12R3BI2226 | Construct drainage | 12 | 12 | 02DEC09A | 29JAN10A | 100 | 02DEC09A | 29JAN10A | |
| **Phase 1; Construct Dry Weather Flow Channel** | | | | | | | | | |
| 08R1BI2202 | Excavate for new low flow channel | 6 | 6 | 27MAR09A | 03APR09A | 100 | 27MAR09A | 03APR09A | |



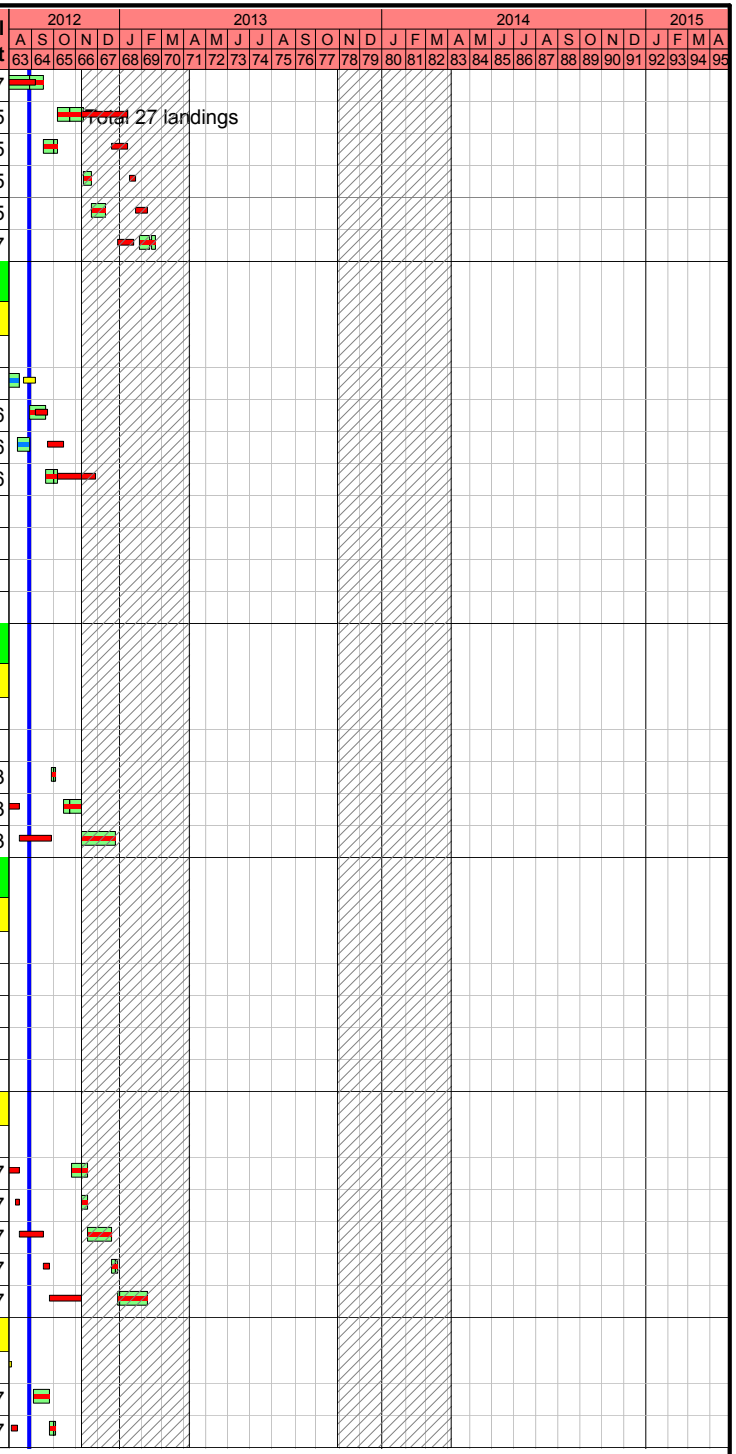
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 08R1BI2204 | Construct new low flow channel | 6 | 6 | 11JUN09A | 17JUN09A | 100 | 11JUN09A | 17JUN09A | |
| 08R3BI2208 | Remove blcock wall/excavate for gantry footing | 12 | 12 | 18JUN09A | 22JUL09A | 100 | 18JUN09A | 22JUL09A | |
| 08R3BI2212 | Construct PC bund wall to protect gantry footing | 6 | 6 | 23JUL09A | 27JUL09A | 100 | 23JUL09A | 27JUL09A | |
| **Phase 2; Construct Approach Channel West** | | | | | | | | | |
| 08R1BI2218 | Construct temp. concrete block bund | 12 | 12 | 16DEC09A | 11JAN10A | 100 | 16DEC09A | 11JAN10A | |
| 08R1BI2220 | Excavate for western portion guide wall & slab | 12 | 12 | 16DEC09A | 20JAN10A | 100 | 16DEC09A | 20JAN10A | |
| 08R1BI2222 | Construct western portion of guide wall & slab | 50 | 50 | 21JAN10A | 13APR10A | 100 | 21JAN10A | 13APR10A | |
| 08R1BI2224 | Remove concrete block bund | 6 | 6 | 14APR10A | 17APR10A | 100 | 14APR10A | 17APR10A | |
| **Phase 3; Construct Approach Channel North** | | | | | | | | | |
| 08R1BI2226 | Construct temp. concrete block bund | 6 | 6 | 01NOV11A | 05NOV11A | 100 | 01NOV11A | 05NOV11A | |
| 08R1BI2228 | Excavate for L-shaped retaining wall; VO#113 | 50 | 50 | 01NOV10A | 07JAN12A | 100 | 01NOV10A | 07JAN12A | |
| 08R1BI2229 | Formation & place blinding layer | 11 | 11 | 19JAN12A | 03FEB12A | 100 | 19JAN12A | 03FEB12A | |
| 08R1BI2230 | Construct L-shaped retaining wall; VO#113 | 26 | 26 | 04FEB12A | 05MAR12A | 100 | 04FEB12A | 05MAR12 | |
| 08R1BI2234 | Construct H piles 7# for boulder trap | 12 | 12 | 09JAN12A | 18JAN12A | 100 | 09JAN12A | 18JAN12A | |
| 08R1BI2236 | Construct eastern portion of guide wall & slab | 16 | 16 | 06MAR12A | 31MAR12A | 100 | 06MAR12 | 23MAR12 | |
| 08R1BI2240 | Construct temp. concrete blcok bund | 6 | 6 | 26MAR12A | 31MAR12A | 100 | 24MAR12 | 30MAR12 | |
| **Phase 3a; Stone Pitching Works** | | | | | | | | | |
| 08R1BI2260 | Channel modification & stone pitching | 24 | 24 | 01NOV12* | 28NOV12 | 0 | 01NOV12* | 28NOV12 | -341 |
| 08R1BI2270 | Stone Pitching to Guide Wall | 24 | 24 | 29NOV12 | 28DEC12 | 0 | 29NOV12 | 28DEC12 | -341 |
| 08R1BI2280 | Stone pitching to closing guide wall | 12 | 12 | 08APR13 | 20APR13 | 0 | 02MAR13 | 15MAR13 | -418 |
| **Phase 4 - Construct Remaining Appr. Channel** | | | | | | | | | |
| 08R1BI2238 | Boulder traps; 7 nos. | 12 | 12 | 28FEB13 | 13MAR13 | 0 | 16JAN13 | 29JAN13 | -443 |
| 08R1BI2242 | Remove noise enclosure/gantry crane/steel deck | 25 | 25 | 13OCT12 | 12NOV12 | 0 | 30NOV12 | 31DEC12 | -466 |
| 08R1BI2244 | Excavation for remaining approach channel | 25 | 12 | 13NOV12 | 11DEC12 | 0 | 02JAN13 | 15JAN13 | -466 |
| 08R1BI2246 | Construct Vortex & remaining approach channel | 84 | 30 | 12DEC12 | 26MAR13 | 0 | 16JAN13 | 22FEB13 | -466 |
| 08R1BI2248 | Close out last section of guide wall | 12 | 12 | 27MAR13 | 13APR13 | 0 | 23FEB13 | 08MAR13 | -466 |
| 08R1BI2249 | Removal of TDMP | 24 | 0 | 01NOV13* | 28NOV13 | 0 | | | -679 |
| 08R1BI2250 | Construct trash grill | 72 | 18 | 29NOV13 | 28FEB14 | 0 | 16JAN13 | 05FEB13 | -679 |
| PVOABT2-10 | Additional boulder traps | 48 | 0 | 29DEC12 | 27FEB13 | 0 | | | -443 |
| PVOMLRW-10 | Modif. to L-shap ret. wall & ground profile | 48 | 0 | 01NOV12* | 28DEC12 | 0 | | | -443 |
| **Excavate & Construct Vortex/Drop Shaft** | | | | | | | | | |
| **Steel Deck & Gantry Crane/Noise Enclosure** | | | | | | | | | |
| 05L1BI2300 | Construct 8 nos. mini piles | 24 | 24 | 20JAN09A | 21FEB09A | 100 | 20JAN09A | 21FEB09A | |
| 05L1BI2301 | Erect timber platform for mini piling | 4 | 4 | 23FEB09A | 26FEB09A | 100 | 23FEB09A | 26FEB09A | |
| 05L1BI2302 | Construct 6 nos. mini piles | 12 | 12 | 27FEB09A | 12MAR09A | 100 | 27FEB09A | 12MAR09A | |
| 05L1BI2303 | Excavation for footing/pile caps | 12 | 12 | 13MAR09A | 26MAR09A | 100 | 13MAR09A | 26MAR09A | |
| 05L1BI2304 | Construction of footing/pile caps | 12 | 12 | 27MAR09A | 18APR09A | 100 | 27MAR09A | 18APR09A | |
| 05L1BI2305 | Install steel deck | 25 | 25 | 04MAY09A | 15AUG09A | 100 | 04MAY09A | 15AUG09A | |
| 05L1BI2316 | Construct footing for gantry crane | 12 | 12 | 09SEP09A | 15OCT09A | 100 | 09SEP09A | 15OCT09A | |
| 05L1BI2318 | Install gantry crane | 42 | 42 | 28OCT09A | 01MAR10A | 100 | 28OCT09A | 01MAR10A | |
| 05L1BI2328 | Install noise enclosure | 24 | 24 | 22MAR10A | 27MAY10A | 100 | 22MAR10A | 27MAY10A | |
| **Ground Treatment Works for Vortex Shaft** | | | | | | | | | |
| 05L1BI2306 | Setting up | 2 | 2 | 16JUL09A | 16JUL09A | 100 | 16JUL09A | 16JUL09A | |



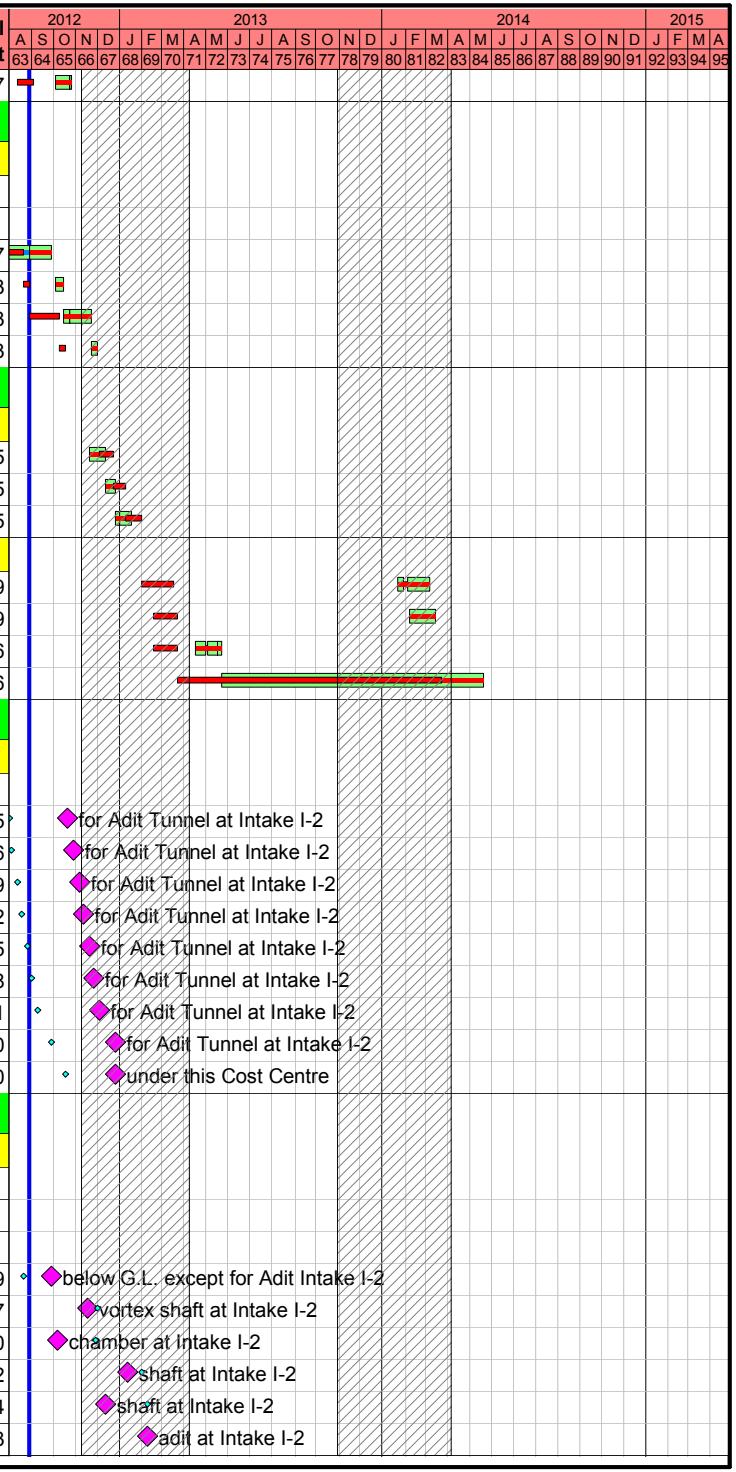
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 05L1BI2308 | Probing & curtain grouting around shaft | 37 | 37 | 17JUL09A | 08SEP09A | 100 | 17JUL09A | 08SEP09A | |
| **Excavation and Construction of Vortex Shaft** | | | | | | | | | |
| 05L1BI2319 | Construct collar | 6 | 6 | 02MAR10A | 13MAR10A | 100 | 02MAR10A | 13MAR10A | |
| 05L1BI2320 | Excavate by conventional method; +99~+68mPD | 337 | 337 | 30MAR10A | 01AUG11A | 100 | 30MAR10A | 01AUG11A | |
| 05L1BI2321 | Set up for lining construction | 6 | 6 | 06OCT12 | 12OCT12 | 0 | 09OCT12 | 15OCT12 | -466 |
| 05L1BI2322 | Construct permanent lining; 30m @ 6m/ 5days | 30 | 38 | 13OCT12 | 17NOV12 | 0 | 16OCT12 | 29NOV12 | -466 |
| **Excavate & Construct Air Vent Shaft** | | | | | | | | | |
| | | | | | | | | | |
| 05L1BI2418 | Enlarge the platform for RCD operation | 15 | 15 | 08DEC08A | 27DEC08A | 100 | 08DEC08A | 27DEC08A | |
| 05L1BI2420 | Mobilize & set up RCD for excavation | 6 | 6 | 29DEC08A | 06JAN09A | 100 | 29DEC08A | 06JAN09A | |
| 05L1BI2422 | Bore shaft with RCD; 37.5m @1m/day | 54 | 54 | 07JAN09A | 13MAR09A | 100 | 07JAN09A | 13MAR09A | |
| 05L1BI2424 | Demobilize RCD rig | 5 | 5 | 14MAR09A | 19MAR09A | 100 | 14MAR09A | 19MAR09A | |
| 05L1BI2426 | Install permanent steel liner | 3 | 3 | 20MAR09A | 23MAR09A | 100 | 20MAR09A | 23MAR09A | |
| 05L1BI2427 | Preparation works for casting concrete | 1 | 1 | 21MAR09A | 25APR09A | 100 | 21MAR09A | 25APR09A | |
| 05L1BI2428 | Damage found on installed steel liner | 0 | 0 | | 25APR09A | 100 | | 25APR09A | |
| 05L1BI2429 | Removal of steel liner | 31 | 31 | 27APR09A | 04JUN09A | 100 | 27APR09A | 04JUN09A | |
| 05L1BI2430 | Remove RCD platform | 17 | 17 | 05JUN09A | 24JUN09A | 100 | 05JUN09A | 24JUN09A | |
| 05L1BI2432 | Construct PC bund wall | 12 | 12 | 25JUN09A | 15JUL09A | 100 | 25JUN09A | 15JUL09A | |
| 05L1BI2434 | Divert channel to West | 0 | 0 | | 15JUL09A | 100 | | 15JUL09A | |
| 05L1BI2436 | Footing for lifting frame | 12 | 12 | 22JAN10A | 12FEB10A | 100 | 22JAN10A | 12FEB10A | |
| 05L1BI2438 | Erection of lifting frame | 18 | 18 | 09FEB10A | 05MAR10A | 100 | 09FEB10A | 05MAR10A | |
| 05L1BI2446 | Install steel casing | 36 | 36 | 09MAR10A | 22MAR10A | 100 | 09MAR10A | 22MAR10A | |
| 05L1BI2448 | Survey checking & capping concrete | 3 | 3 | 23MAR10A | 29MAR10A | 100 | 23MAR10A | 29MAR10A | |
| 05L1BI2450 | Preparation & concreting | 3 | 3 | 30MAR10A | 19APR10A | 100 | 30MAR10A | 19APR10A | |
| 05L1BI2452 | Construct upstand wall | 24 | 24 | 12DEC12 | 11JAN13 | 0 | 02JAN13 | 29JAN13 | -376 |
| **Excavate & Construct Man Access Shaft** | | | | | | | | | |
| **Ground Treatment for Man Access Shaft** | | | | | | | | | |
| 05L1BI2502 | Probing & curtain grouting around shaft | 31 | 31 | 12AUG09A | 15SEP09A | 100 | 12AUG09A | 15SEP09A | |
| **Gantry Crane & Noise Enclosure at M. A. Shaft** | | | | | | | | | |
| 05L1BI2504 | Excavate & construct 4 nos. gantry footings | 12 | 12 | 30SEP09A | 19NOV09A | 100 | 30SEP09A | 19NOV09A | |
| 05L1BI2505 | Install gantry crane | 18 | 18 | 08JAN10A | 24MAR10A | 100 | 08JAN10A | 24MAR10A | |
| 05L1BI2515 | Install noise enclosure | 18 | 18 | 06MAY10A | 27AUG10A | 100 | 06MAY10A | 27AUG10A | |
| **ELS and Excavation upto Rock Head Level at M.A.** | | | | | | | | | |
| 05L1BI2503 | Install sheet piles | 6 | 6 | 28OCT09A | 03NOV09A | 100 | 28OCT09A | 03NOV09A | |
| 05L1BI2506 | Excavation/wailing to rock head level | 36 | 36 | 04NOV09A | 11JAN10A | 100 | 04NOV09A | 11JAN10A | |
| **Excavation & Construction of Man Access Shaft** | | | | | | | | | |
| 05L1BI2508 | Excavate by conventional method; +102~ +70mPD | 356 | 356 | 12JAN10A | 16JUL11A | 100 | 12JAN10A | 16JUL11A | |
| 05L1BI2510 | Obtain Blasting Permit | 0 | 0 | | 22JUL11A | 100 | | 22JUL11A | |
| 05L1BI2511 | Preparation works prior to 1st blast | 13 | 13 | 18JUL11A | 01AUG11A | 100 | 18JUL11A | 01AUG11A | |
| 05L1BI2518 | Excavate;+70~68.0mPD | 12 | 12 | 10AUG11A | 07SEP11A | 100 | 10AUG11A | 07SEP11A | |
| 05L1BI2522 | Cleaning,blinding & base construction | 11 | 6 | 18JUN12A | 30JUN12A | 100 | 05JUL12 | 11JUL12 | |
| 05L1BI2524 | Set up for 37m shaft construction (wall only) | 6 | 6 | 03JUL12A | 07JUL12A | 100 | 05JUL12 | 11JUL12 | |



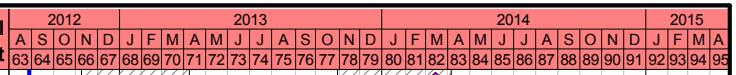
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 05L1BI2526 | Construct wall & dismante mould; 3.6m/4day | 61 | 48 | 09JUL12A | 17SEP12 | 67 | 12JUL12 | 05SEP12 | -327 |
| 05L1BI2527 | Construct stairs; Precast & insitu stich concret | 30 | 54 | 08OCT12 | 12NOV12 | 0 | 08NOV12 | 12JAN13 | -315 |
| 05L1BI2528 | Removal of noise enclosure & gantry crane | 16 | 16 | 18SEP12 | 06OCT12 | 0 | 22DEC12 | 12JAN13 | -315 |
| 05L1BI2530 | Construct wall above ground level | 9 | 9 | 13NOV12 | 22NOV12 | 0 | 14JAN13 | 23JAN13 | -315 |
| 05L1BI2532 | Construct shaft roof | 15 | 15 | 23NOV12 | 10DEC12 | 0 | 24JAN13 | 09FEB13 | -315 |
| 05L1BI2542 | Install steel handrailing incl. at MAA | 18 | 18 | 28JAN13 | 20FEB13 | 0 | 29DEC12 | 19JAN13 | -377 |
| **Excavate & Construct Deaeration Chamber** | | | | | | | | | |
| 05L1BI2602 | Excavate by drill & blasting | 148 | 148 | 08AUG11A | 23MAR12A | 100 | 08AUG11A | 14MAR12 | |
| 05L1BI2607 | Wall between Chamber & MA Adit; 20m3 | 14 | 14 | 24JUL12A | 15AUG12A | 100 | 21AUG12 | 05SEP12 | |
| 05L1BI2608 | Wall/Crown inclined section | 17 | 14 | 30AUG12 | 18SEP12 | 0 | 06SEP12 | 21SEP12 | -466 |
| 05L1BI2612 | Wall/Crown beneath Vortex | 14 | 19 | 13AUG12A | 29AUG12 | 86 | 22SEP12 | 15OCT12 | -466 |
| 05L1BI2614 | Wall/Crown middle section | 14 | 43 | 19SEP12 | 05OCT12 | 0 | 08OCT12 | 27NOV12 | -466 |
| 05L1BLR002 | Obtain Blasting Permit | 0 | 0 | | 22JUL11A | 100 | | 22JUL11A | |
| 05L1BLR012 | Cleaning & blinding | 6 | 6 | 28MAR12A | 11APR12A | 100 | 09MAY12 | 15MAY12 | |
| 05L1BLR022 | Construct base slab | 41 | 12 | 16APR12A | 05JUN12A | 100 | 16MAY12 | 29MAY12 | |
| 05L1BLR032 | Construct walls up 7m | 38 | 26 | 06JUN12A | 23JUL12A | 100 | 30MAY12 | 29JUN12 | |
| **Excavate & Construct Main Adit Tunnel** | | | | | | | | | |
| 3BL1BI2101 | Initial 4 # heading blast | 19 | 19 | 03FEB12A | 24FEB12A | 100 | 03FEB12A | 24FEB12A | |
| 3BL1BI2102 | Excavate by drill & blasting | 110 | 110 | 28FEB12A | 07JUL12A | 100 | 28FEB12 | 13JUL12 | |
| 3BL1BI2104 | Mucking out cleaning & blinding | 6 | 6 | 27SEP12 | 04OCT12 | 0 | 14JUL12 | 20JUL12 | -363 |
| 3BL1BI2110 | Construct invert; 6mx8 bays (3 pours) | 21 | 21 | 15OCT12 | 08NOV12 | 0 | 21JUL12 | 14AUG12 | -363 |
| 3BL1BI2114 | Construct wall & crown; 8 bays | 39 | 39 | 09NOV12 | 24DEC12 | 0 | 15AUG12 | 28SEP12 | -363 |
| **Excavate & Construct Man Access Adit** | | | | | | | | | |
| **Upper Horizontal Section** | | | | | | | | | |
| 05L1BI2806 | Excavate by drill & blasting | 102 | 102 | 02AUG11A | 05DEC11A | 100 | 02AUG11A | 05DEC11A | |
| 05L1BI2807 | Cleaning & blinding incl. MAS | 6 | 6 | 15MAR12A | 21MAR12A | 100 | 15MAR12 | 21MAR12 | |
| 05L1BI2808 | Construct invert; 4 bays; 2 pourx6days | 12 | 12 | 22MAR12A | 21APR12A | 100 | 22MAR12 | 05APR12 | |
| 05L1BI2830 | Set up steel mould fwk | 10 | 10 | 23APR12A | 05MAY12A | 100 | 10APR12 | 20APR12 | |
| 05L1BI2834 | Construct wall & crown | 24 | 24 | 07MAY12A | 16JUN12A | 100 | 21APR12 | 21MAY12 | |
| **Vertical Section** | | | | | | | | | |
| 05L1BI2810 | Excavate by drill & blasting | 84 | 84 | 01DEC11A | 14MAR12A | 100 | 01DEC11A | 14MAR12 | |
| 05L1BI2822 | Construct base & junction of raise shaft | 18 | 18 | 27OCT12 | 16NOV12 | 0 | 26JUL12 | 15AUG12 | -377 |
| 05L1BI2824 | Set up for raise stairway const. (wall only) | 6 | 6 | 10NOV12 | 16NOV12 | 0 | 09AUG12 | 15AUG12 | -377 |
| 05L1BI2826 | Construct wall only; | 28 | 28 | 17NOV12 | 19DEC12 | 0 | 16AUG12 | 17SEP12 | -377 |
| 05L1BI2836 | Dismantle remove moulds | 6 | 6 | 20DEC12 | 28DEC12 | 0 | 18SEP12 | 24SEP12 | -377 |
| 05L1BI2846 | Insitu stairs (6 pours) @ 6 days/pour | 36 | 36 | 29DEC12 | 09FEB13 | 0 | 25SEP12 | 07NOV12 | -377 |
| **Lower Horizontal Section** | | | | | | | | | |
| 05L1BI2814 | Excavate by blasting; 4 # blasts | 18 | 18 | 07FEB12A | 02MAY12A | 100 | 14JUL12 | 03AUG12 | |
| 05L1BI2815 | Excavate rem. (0.5m) by mech./clean & blinding | 18 | 0 | 04SEP12 | 24SEP12 | 0 | | | -377 |
| 05L1BI2816 | Construct invert | 6 | 6 | 25SEP12 | 02OCT12 | 0 | 04AUG12 | 10AUG12 | -377 |



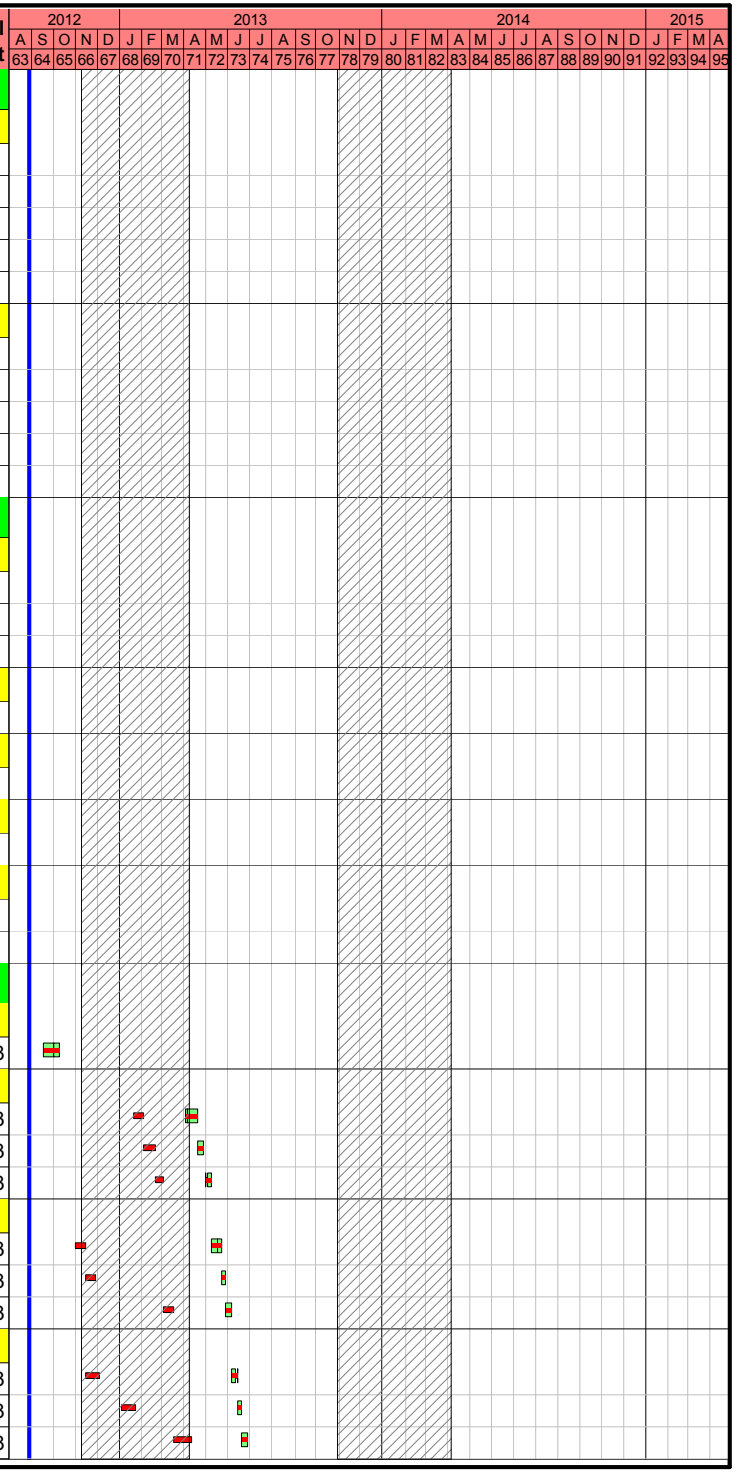
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 05L1BI2818 | Construct wall & crown | 20 | 20 | 03OCT12 | 26OCT12 | 0 | 11AUG12 | 03SEP12 | -377 |
| **Junction Between Main Tunnel & Adit Tunnel** | | | | | | | | | |
| 3BL1BI2100 | Remove TBM services/delivery of steel arches | 0 | 0 | | 24APR12A | 100 | | 03MAY12 | |
| 3BL1BI2106 | Install steel arches from main tunnel | 19 | 24 | 25APR12A | 18MAY12A | 100 | 04MAY12 | 31MAY12 | |
| 3BL1BI2107 | Excavate (breathrough);2m | 69 | 32 | 09JUL12A | 26SEP12 | 45 | 14JUL12 | 20AUG12 | -377 |
| 3BL1BI2108 | Construct invert | 8 | 8 | 05OCT12 | 13OCT12 | 0 | 21AUG12 | 29AUG12 | -363 |
| 3BL1BI2118 | Construct wall & crown | 34 | 34 | 15OCT12 | 23NOV12 | 0 | 30AUG12 | 09OCT12 | -343 |
| 3BL1BI2128 | Remove steel arches | 6 | 6 | 24NOV12 | 30NOV12 | 0 | 10OCT12 | 16OCT12 | -343 |
| **Remaining Works Prior to Handover** | | | | | | | | | |
| **Radio Communication System** | | | | | | | | | |
| VO180I205 | Construct equipment room | 18 | 18 | 20NOV12 | 10DEC12 | 0 | 03DEC12 | 22DEC12 | -345 |
| VO180I210 | Lay tiles on equipment room | 12 | 12 | 11DEC12 | 24DEC12 | 0 | 24DEC12 | 09JAN13 | -345 |
| VO180I215 | Install radio comminication system | 18 | 18 | 27DEC12 | 17JAN13 | 0 | 10JAN13 | 30JAN13 | -345 |
| 08R1BI2102 | Finishing & reinstatement works; Portion B | 36 | 36 | 22JAN14 | 07MAR14 | 0 | 30JAN13 | 15MAR13 | -679 |
| 08R1BI2103 | Pre-handover inspections and remedial works | 30 | 30 | 08FEB14 | 14MAR14 | 0 | 16FEB13 | 22MAR13 | -679 |
| 16R7BI2102 | Landscaping works at Portion B | 30 | 30 | 15APR13 | 21MAY13 | 0 | 16FEB13 | 22MAR13 | -466 |
| 16R7BI2104 | Establishment Works at Portion B | 365 | 365 | 22MAY13 | 21MAY14 | 0 | 23MAR13 | 22MAR14 | -576 |
| **Schedule of Milestones for Cost Centre No. 3bL** | | | | | | | | | |
| 3BL1BI2A02 | 3bL 1; On establishing tunnelling equipments | 0 | 0 | | 20FEB12A | 100 | | 20FEB12A | |
| 3BL1BI2A04 | 3bL 2; On completion of 12.5% perm. tunnel linin | 0 | 0 | | 20OCT12 | 0 | | 27JUL12 | 875 |
| 3BL1BI2A06 | 3bL 3; On completion of 25% perm. tunnel lining | 0 | 0 | | 29OCT12 | 0 | | 03AUG12 | 866 |
| 3BL1BI2A08 | 3bL 4; On completion of 37.5% perm. tunnel linin | 0 | 0 | | 05NOV12 | 0 | | 10AUG12 | 859 |
| 3BL1BI2A10 | 3bL 5; On completion of 50% perm. tunnel lining | 0 | 0 | | 12NOV12 | 0 | | 17AUG12 | 852 |
| 3BL1BI2A12 | 3bL 6; On completion of 62.5% perm. tunnel linin | 0 | 0 | | 19NOV12 | 0 | | 24AUG12 | 845 |
| 3BL1BI2A14 | 3bL 7; On completion of 75% perm. tunnel lining | 0 | 0 | | 26NOV12 | 0 | | 31AUG12 | 838 |
| 3BL1BI2A16 | 3bL 8; On completion of 87.5% perm. tunnel linin | 0 | 0 | | 03DEC12 | 0 | | 07SEP12 | 831 |
| 3BL1BI2A18 | 3bL 9; On completion of perm. tunnel lining | 0 | 0 | | 24DEC12 | 0 | | 28SEP12 | 810 |
| 3BL1BI2A20 | 3bL 10; On completion of all works under this CC | 0 | 0 | | 24DEC12 | 0 | | 16OCT12 | 810 |
| **Schedule of Milestones for Cost Centre No. 5L** | | | | | | | | | |
| 05L1BI2M02 | 5L 1; On completion of 25% of excavation | 0 | 0 | | 27MAY11A | 100 | | 27MAY11A | |
| 05L1BI2M04 | 5L 2; On completion of 50% of excavation | 0 | 0 | | 27DEC11A | 100 | | 27DEC11A | |
| 05L1BI2M06 | 5L 3; On completion of 75% of excavation | 0 | 0 | | 14MAR12A | 100 | | 14MAR12 | |
| 05L1BI2M08 | 5L 4; On completion of all excavation | 0 | 0 | | 26SEP12 | 0 | | 20AUG12 | 899 |
| 05L1BI2M10 | 5L 5; On completion of drop shaft & vortex shaft | 0 | 0 | | 17NOV12 | 0 | | 29NOV12 | 847 |
| 05L1BI2M12 | 5L 6; On completion of de-aeration chamber | 0 | 0 | | 05OCT12 | 0 | | 27NOV12 | 890 |
| 05L1BI2M14 | 5L 7; On completion of air vent shaft | 0 | 0 | | 11JAN13 | 0 | | 29JAN13 | 792 |
| 05L1BI2M16 | 5L 8; On completion of man access shaft | 0 | 0 | | 10DEC12 | 0 | | 09FEB13 | 824 |
| 05L1BI2M18 | 5L 9; On completion of man access adit | 0 | 0 | | 09FEB13 | 0 | | 21MAY12 | 763 |



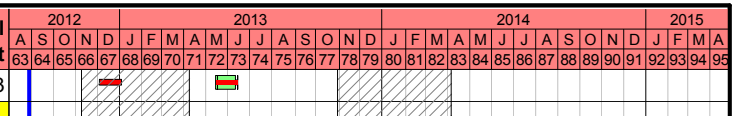
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 05L1BI2M20 | 5L 10; On completion of all works under this CC | 0 | 0 | | 14MAR14 | 0 | | 22MAR13 | 365 |
| **Schedule of Milestones for Cost Centre No. 8R** | | | | | | | | | |
| 08R1BI2R02 | 8R 1; On completion of approach channel | 0 | 0 | | 13APR13 | 0 | | 08MAR13 | 700 |
| 08R1BI2R04 | 8R 2; On completion of trash grill | 0 | 0 | | 28FEB14 | 0 | | 05FEB13 | 379 |
| 08R1BI2R06 | 8R 3; On completion of all works under this CC | 0 | 0 | | 14MAR14 | 0 | | 22MAR13 | 365 |
| **Schedule of Milestones for Cost Centre No. 12R** | | | | | | | | | |
| 12R3BI2S02 | 12R 1; On completion of 50% pile retain. wall | 0 | 0 | | 06NOV08A | 100 | | 06NOV08A | |
| 12R3BI2S04 | 12R 2; On completion of pile retain. wall | 0 | 0 | | 26NOV08A | 100 | | 26NOV08A | |
| 12R3BI2S06 | 12R 3; On completion of boulder traps | 0 | 0 | | 13MAR13 | 0 | | 29JAN13 | 731 |
| 12R3BI2S08 | 12R 4; On completion of all works under this CC | 0 | 0 | | 14MAR14 | 0 | | 22MAR13 | 365 |
| ***Construction of Intake I-3*** | | | | | | | | | |
| **Preliminary Works** | | | | | | | | | |
| **Additional GI Works To Finalize Design** | | | | | | | | | |
| AGIC-02 | Erect platform/mibilization & set up GI rig | 3 | 3 | 03NOV08A | 05NOV08A | 100 | 03NOV08A | 05NOV08A | |
| AGIC-04 | Drill 3 nos. GI holes for Intake Structures | 12 | 12 | 06NOV08A | 19NOV08A | 100 | 06NOV08A | 19NOV08A | |
| **VO#32; Replace Hoarding by Chain Link Fence** | | | | | | | | | |
| VO032-I302 | Received VO-32 for replacing hoarding by CLF | 0 | 0 | | 16SEP08A | 100 | | 16SEP08A | |
| VO032-I304 | Procure/prepare/install transparent hoarding | 80 | 80 | 17SEP08A | 06MAR09A | 100 | 17SEP08A | 06MAR09A | |
| 01R1CI3102 | Possession of Portion C -90d of DOC | 0 | 0 | 26MAR08A | | 100 | 26MAR08A | | |
| 01R1CI3104 | Site clearance | 40 | 40 | 22APR08A | 20SEP08A | 100 | 22APR08A | 20SEP08A | |
| 01R1CI3106 | Haording at slope crest | 48 | 48 | 03JUN08A | 30JUL08A | 100 | 03JUN08A | 30JUL08A | |
| 01R1CI3110 | Set-up wheel washing facilities | 6 | 6 | 30JUN08A | 03JUL08A | 100 | 30JUN08A | 03JUL08A | |
| 01R1CI3118 | Install remote contorl CCTV as per ER 4.4.10 | 12 | 12 | 28OCT08A | 10NOV08A | 100 | 28OCT08A | 10NOV08A | |
| **Tree Transplanting Works** | | | | | | | | | |
| 16R7CI3202 | Tree inspection & report | 7 | 7 | 01APR08A | 26APR08A | 100 | 01APR08A | 26APR08A | |
| 16R7CI3204 | Tree transplant for upper parts; 8 nos. | 86* | 86* | 04JUN08A | 13SEP08A | 100 | 04JUN08A | 13SEP08A | |
| 16R7CI3206 | 1st stg tree pruning | 2 | 2 | 04JUN08A | 21JUN08A | 100 | 04JUN08A | 21JUN08A | |
| 16R7CI3208 | 2nd stg tree pruning | 2 | 2 | 04JUL08A | 04JUL08A | 100 | 04JUL08A | 04JUL08A | |
| 16R7CI3210 | Final stg. tree pruning & tree uplifting | 6 | 6 | 08SEP08A | 13SEP08A | 100 | 08SEP08A | 13SEP08A | |
| 16R7CI3212 | Tree transplanting at Ch250-Ch200); 20 nos. | 214* | 214* | 21JUN08A | 09MAR09A | 100 | 21JUN08A | 09MAR09A | |
| 16R7CI3214 | 1st stg tree pruning | 3 | 3 | 21JUN08A | 15JUL08A | 100 | 21JUN08A | 15JUL08A | |
| 16R7CI3216 | 2nd stg tree pruning | 3 | 3 | 15JUL08A | 12SEP08A | 100 | 15JUL08A | 12SEP08A | |
| 16R7CI3218 | Final stg tree pruning & tree uplifting | 8 | 8 | 28FEB09A | 09MAR09A | 100 | 28FEB09A | 09MAR09A | |
| 16R7CI3220 | Tree transplanting at Ch100-Ch0 | 437* | 437* | 21JUN08A | 07DEC09A | 100 | 21JUN08A | 07DEC09A | |
| 16R7CI3222 | 1st stg tree pruning | 4 | 4 | 21JUN08A | 01DEC08A | 100 | 21JUN08A | 01DEC08A | |
| 16R7CI3224 | 2nd stg tree pruning | 4 | 4 | 05JAN09A | 28OCT09A | 100 | 05JAN09A | 28OCT09A | |
| 16R7CI3226 | Final stg tree pruning & tree uplifting | 10 | 10 | 10FEB09A | 07DEC09A | 100 | 10FEB09A | 07DEC09A | |



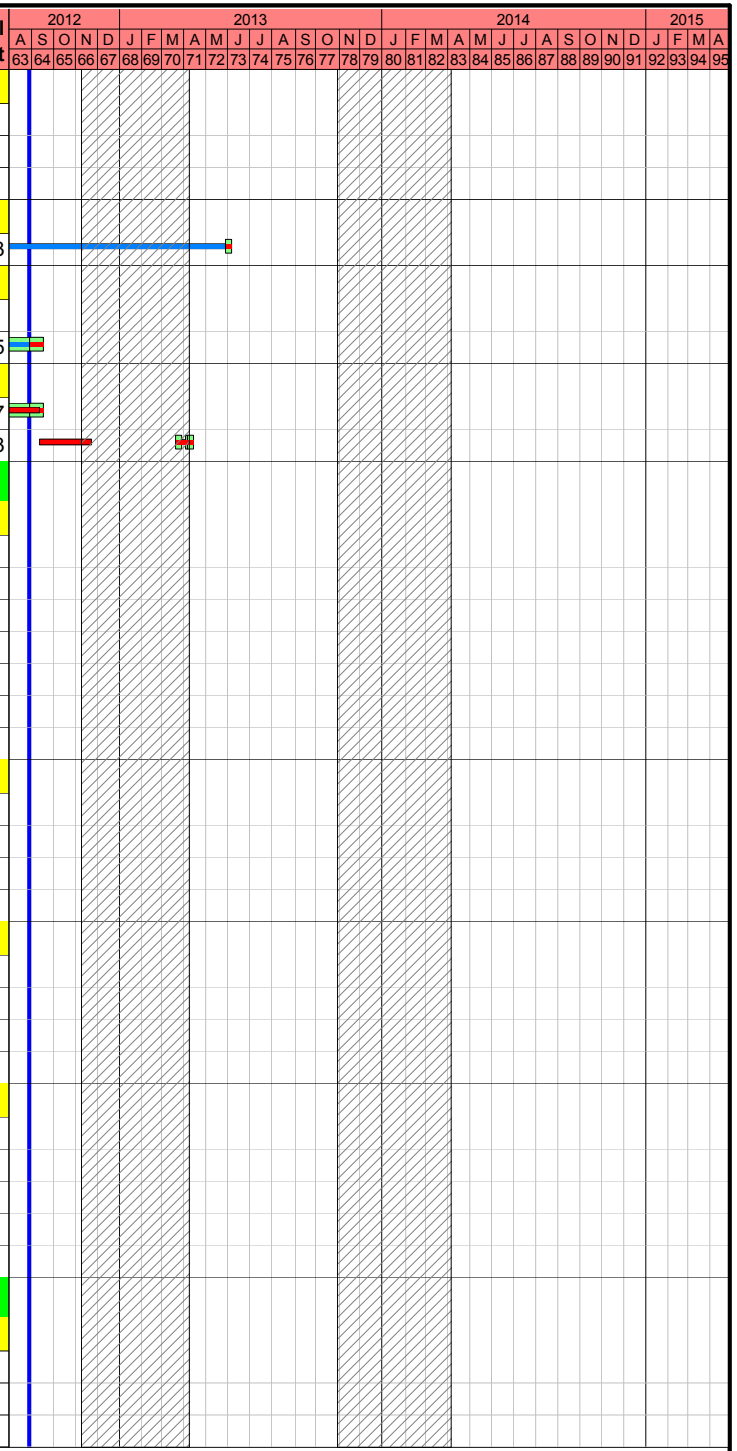
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **H-Pile Retaining Wall for Wall A** | | | | | | | | | |
| **Piling Works** | | | | | | | | | |
| 13R4CI3400 | Mobilize & set up piling rig | 6 | 6 | 11AUG08A | 16AUG08A | 100 | 11AUG08A | 16AUG08A | |
| 13R4CI3401 | Drill 28 nos. grout (partially) 11 nos. piles | 1 | 1 | 18AUG08A | 28AUG08A | 100 | 18AUG08A | 28AUG08A | |
| 13R4CI3402 | Piling stopped due to accessive grout loss | 1 | 1 | 29AUG08A | 22OCT08A | 100 | 29AUG08A | 22OCT08A | |
| 13R4CI3403 | Piling resumed date | 1 | 1 | 26NOV08A | 26NOV08A | 100 | 26NOV08A | 26NOV08A | |
| 13R4CI3405 | Complete all H-piles, Wall A; 347nos. | 70 | 70 | 18AUG08A | 21JAN09A | 100 | 18AUG08A | 21JAN09A | |
| **Skin Wall** | | | | | | | | | |
| 13R4CI3406 | Excavate for skin wall construction; 2130m3 | 60 | 60 | 14JAN09A | 02MAR09A | 100 | 14JAN09A | 02MAR09A | |
| 13R4CI3408 | Hack off piles; piles 1 to 347 | 48 | 48 | 04FEB09A | 02APR09A | 100 | 04FEB09A | 02APR09A | |
| 13R4CI3410 | Construct skin wall; | 60 | 60 | 28FEB09A | 19MAY09A | 100 | 28FEB09A | 19MAY09A | |
| 13R4CI3414 | Construct for capping beams; | 24 | 24 | 14APR09A | 04JUN09A | 100 | 14APR09A | 04JUN09A | |
| 13R4CI3416 | Construct U-channels | 37 | 37 | 06MAY09A | 18JUN09A | 100 | 06MAY09A | 18JUN09A | |
| **Soil Nailing Works** | | | | | | | | | |
| **Soil Nailing Outside Excavation Area** | | | | | | | | | |
| 13R1CI3502 | Scaffolding platform for soil nailing | 18 | 18 | 08SEP08A | 28OCT08A | 100 | 08SEP08A | 28OCT08A | |
| 13R1CI3504 | Mobilize & set up drilling & grouting plants | 4 | 4 | 12SEP08A | 17SEP08A | 100 | 12SEP08A | 17SEP08A | |
| 13R1CI3506 | Install & grout soil nails; 193 nos. + 8 Test N. | 69 | 69 | 18SEP08A | 09DEC08A | 100 | 18SEP08A | 09DEC08A | |
| **Soil Nailing Within Excavation; Ch. 270-210** | | | | | | | | | |
| 13R1CI3508 | Install & grout soil nails | 89* | 89* | 03AUG09A | 17NOV09A | 100 | 03AUG09A | 17NOV09A | |
| **Soil Nailing Within Excavation; Ch. 210-130** | | | | | | | | | |
| 13R1CI3510 | Install & grout soil nails | 117* | 117* | 12DEC08A | 11MAY09A | 100 | 12DEC08A | 11MAY09A | |
| **Soil Nailing Within Excavation; Ch.130-0** | | | | | | | | | |
| 13R1CI3512 | Install & grout soil nails | 644* | 644* | 27OCT09A | 24DEC11A | 100 | 27OCT09A | 24DEC11A | |
| **Rem. Soil Nailing Outside Excavation** | | | | | | | | | |
| 13R1CI3522 | Scoffolding platform for soil nailing | 12 | 12 | 09JUL09A | 03NOV09A | 100 | 09JUL09A | 03NOV09A | |
| 13R1CI3532 | Install & grout soil nails; 261 no.s + 3 Test N. | 100 | 100 | 21JUL09A | 12DEC09A | 100 | 21JUL09A | 12DEC09A | |
| **Access Road Construction** | | | | | | | | | |
| **Concrete Pavement; Ch. 0-20** | | | | | | | | | |
| 09R1CI3706 | Concrete pavement; Ch. 0 to 20 (6 bays) | 18 | 0 | 18SEP12 | 09OCT12 | 0 | | | -333 |
| **Concrete Pavement; Ch. 20-160** | | | | | | | | | |
| 09R1CI3714 | Road formation | 14 | 11 | 03APR13 | 19APR13 | 0 | 21JAN13 | 01FEB13 | -473 |
| 09R1CI3724 | Lay sub-base & kerb | 7 | 11 | 20APR13 | 27APR13 | 0 | 02FEB13 | 18FEB13 | -473 |
| 09R1CI3734 | Concrete paving | 7 | 11 | 29APR13 | 07MAY13 | 0 | 19FEB13 | 02MAR13 | -473 |
| **Concrete Pavement; Ch. 160-300** | | | | | | | | | |
| 09R1CI3647 | Road formation | 11 | 12 | 08MAY13* | 21MAY13 | 0 | 01NOV12* | 14NOV12 | -473 |
| 09R1CI3648 | Lay sub-base and kerb | 6 | 12 | 22MAY13 | 28MAY13 | 0 | 15NOV12 | 28NOV12 | -473 |
| 09R1CI3654 | Concrete paving | 5 | 12 | 29MAY13 | 03JUN13 | 0 | 04MAR13 | 16MAR13 | -473 |
| **Concrete Pavement; Ch. 300-420** | | | | | | | | | |
| 09R1CI3674 | Road formation | 8 | 16 | 04JUN13 | 13JUN13 | 0 | 15NOV12 | 03DEC12 | -473 |
| 09R1CI3684 | Lay sub-base and kerb | 5 | 16 | 14JUN13 | 19JUN13 | 0 | 04JAN13 | 22JAN13 | -473 |
| 09R1CI3694 | Concrete paving; 190m @ 12m/day | 7 | 16 | 20JUN13 | 27JUN13 | 0 | 18MAR13 | 09APR13 | -473 |



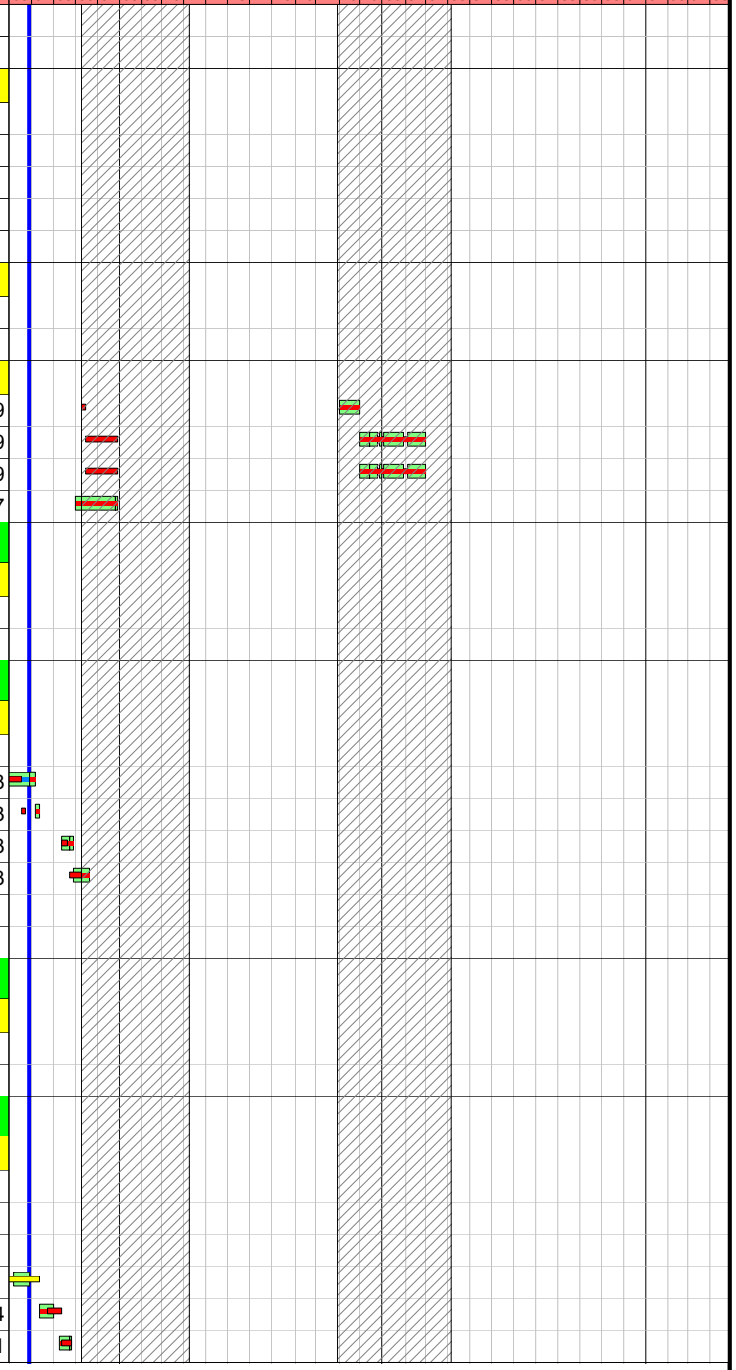
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| VO-095-02 | Green slope arrangement as per VO# 095 | 24 | 24 | 15MAY13 | 13JUN13 | 0 | 04DEC12 | 03JAN13 | -473 |
| **Preliminary Works for Works included VO#043** | | | | | | | | | |
| VO043-010 | Receive VO for revising design | 0 | 0 | | 02FEB09A | 100 | | 02FEB09A | |
| VO043-020 | Recieve amendment to VO#043 | 0 | 0 | | 05MAY09A | 100 | | 05MAY09A | |
| VO043-030 | Procurement of lean mix concrete | 12 | 12 | 06MAY09A | 14MAY09A | 100 | 06MAY09A | 14MAY09A | |
| VO043-040 | Testing & approval of lean mix concrete | 18 | 18 | 15MAY09A | 06JUN09A | 100 | 15MAY09A | 06JUN09A | |
| **Mass Wall to Protect Retained Trees; VO #043** | | | | | | | | | |
| VO043-120 | Setting out at site | 69 | 69 | 03FEB09A | 28APR09A | 100 | 03FEB09A | 28APR09A | |
| VO043-130 | Excavate & muck out manually; 50m @ 4m/day | 2 | 2 | 29APR09A | 30APR09A | 100 | 29APR09A | 30APR09A | |
| VO043-140 | Erect formwork; 70m2 @ 14m2/day | 5 | 5 | 04MAY09A | 08MAY09A | 100 | 04MAY09A | 08MAY09A | |
| VO043-150 | Set up for conreting | 2 | 2 | 08MAY09A | 09MAY09A | 100 | 08MAY09A | 09MAY09A | |
| VO043-160 | Pour concrete & removal of formwork | 2 | 2 | 09MAY09A | 11MAY09A | 100 | 09MAY09A | 11MAY09A | |
| **Ch.460 to 370; VO# 043** | | | | | | | | | |
| VO043-060 | Bulk excavation for benching;1061 @ 45m3/day | 12 | 12 | 29MAY09A | 09JUL09A | 100 | 29MAY09A | 09JUL09A | |
| VO043-070 | Fill & compaction; 39 layers @ 1 day/layer | 39 | 39 | 08JUN09A | 09JUL09A | 100 | 08JUN09A | 09JUL09A | |
| **Ch. 370 to Ch. 270; VO #043** | | | | | | | | | |
| VO043-090 | Excavation for access road Ch. 370 to 310 | 4 | 4 | 07AUG09A | 15AUG09A | 100 | 07AUG09A | 15AUG09A | |
| VO043-100 | Bulk excavation for benching; Ch. 310 to 270 | 7 | 7 | 28AUG09A | 05SEP09A | 100 | 28AUG09A | 05SEP09A | |
| VO043-110 | Fill & compaction lean mix concerete; 15 layers | 7 | 7 | 07SEP09A | 09SEP09A | 100 | 07SEP09A | 09SEP09A | |
| **Works On & Above Access Road; Ch. 460-270** | | | | | | | | | |
| 09R1CI3610 | Temporary concrete paving & curing | 16 | 16 | 21AUG09A | 11SEP09A | 100 | 21AUG09A | 11SEP09A | |
| 09R1CI3620 | Excavation of slope batter above access road | 135 | 135 | 13JUL09A | 19DEC09A | 100 | 13JUL09A | 19DEC09A | |
| **Ch. 270 to Ch. 210** | | | | | | | | | |
| 09R1CI3624 | Excavation & soil nailing | 54 | 54 | 03AUG09A | 17NOV09A | 100 | 03AUG09A | 17NOV09A | |
| 09R1CI3626 | Backfill (grade 200) & compaction | 3 | 3 | 18NOV09A | 20NOV09A | 100 | 18NOV09A | 20NOV09A | |
| **Ch. 210 to Ch. 130** | | | | | | | | | |
| 09R1CI3630 | Excavation as per conforming design | 48 | 48 | 12DEC08A | 11MAY09A | 100 | 12DEC08A | 11MAY09A | |
| 09R1CI3632 | Temporary road paving from Ch. 270 to 100 | 7 | 7 | 11MAR10A | 12MAR10A | 100 | 11MAR10A | 12MAR10A | |
| VO-084-02 | VO#084 revising the design received | 0 | 0 | 12MAY09A | | 100 | 12MAY09A | | |
| VO-084-12 | Works resumed as per VO #084 | 0 | 0 | 16MAY09A | | 100 | 16MAY09A | | |
| VO-084-22 | Excavate slope profile as per VO#084 | 34 | 34 | 16MAY09A | 25JUN09A | 100 | 16MAY09A | 25JUN09A | |
| VO-084-26 | Remove excavated material off site; 6000m3 | 18 | 18 | 07OCT09A | 29OCT09A | 100 | 07OCT09A | 29OCT09A | |
| VO-084-32 | Soil nailing at Ch. 198 to 210 | 4 | 4 | 13NOV09A | 17NOV09A | 100 | 13NOV09A | 17NOV09A | |
| VO-084-42 | Excavate to access road formation | 26 | 26 | 23NOV09A | 10MAR10A | 100 | 23NOV09A | 10MAR10A | |
| VO-127-02 | VO#127 received | 0 | 0 | | 26NOV09A | 100 | | 26NOV09A | |
| VO-127-12 | Excavation & formation | 24 | 24 | 30NOV09A | 29DEC09A | 100 | 30NOV09A | 29DEC09A | |
| VO-127-22 | Permanent soil nailing #24 | 18 | 18 | 30DEC09A | 22JAN10A | 100 | 30DEC09A | 22JAN10A | |
| VO-127-32 | Placing grade 200 rockfill | 6 | 6 | 23JAN10A | 26JAN10A | 100 | 23JAN10A | 26JAN10A | |
| **Ch. 130 to Ch. 0; up to Temp. Access to Wall PB** | | | | | | | | | |
| 09R1CI3634 | 55 deg. cut slope & soil nailing | 62 | 62 | 27OCT09A | 27MAR10A | 100 | 27OCT09A | 27MAR10A | |
| 09R1CI3636 | Temporary access to wall PB | 15 | 15 | 22JAN10A | 27MAR10A | 100 | 22JAN10A | 27MAR10A | |
| 09R1CI3646 | 10# additional soil nails instructed by SOR | 0 | 0 | | 25JAN10A | 100 | | 25JAN10A | |



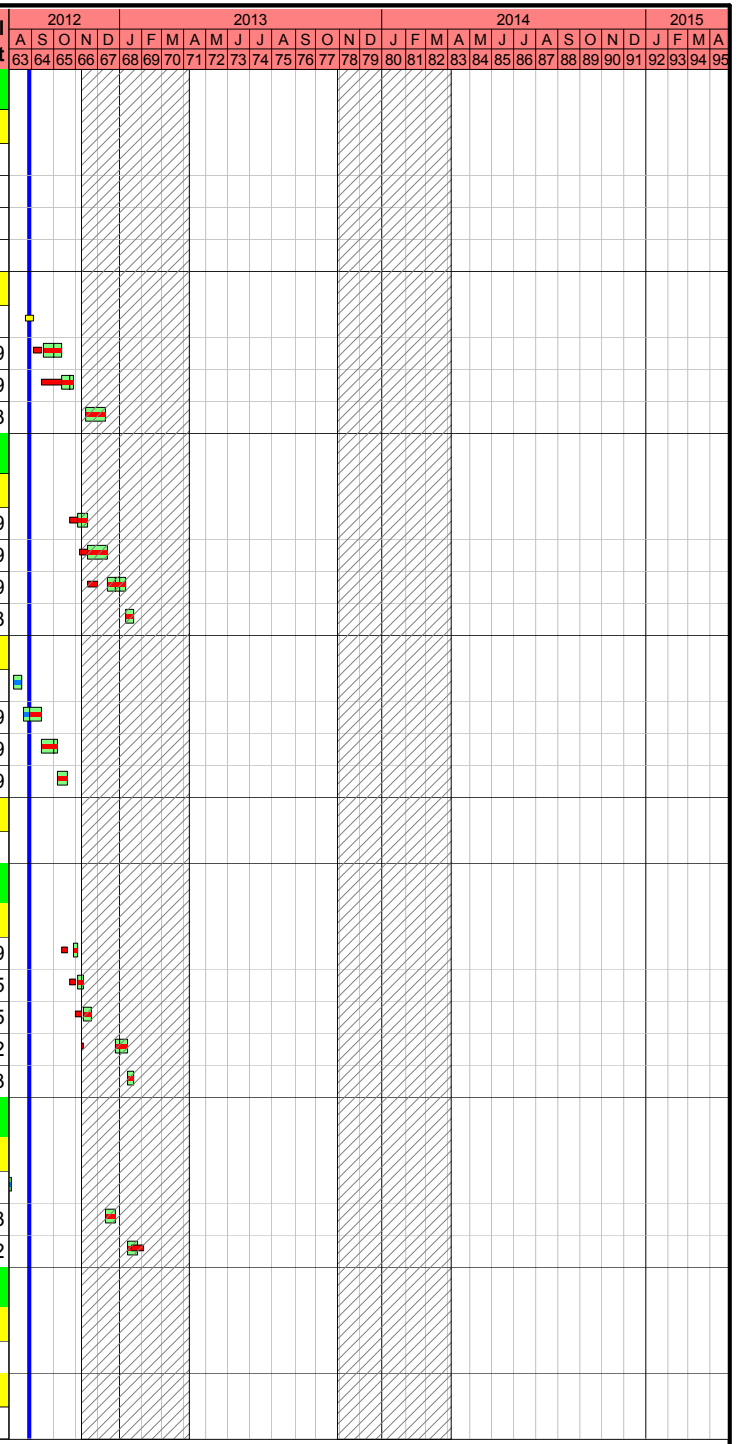
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Ch. 100 to Ch. 0; below Temp. Access to Wall PB** | | | | | | | | | |
| 09R1CI3638 | 55 deg. cut slope & soil nailing | 41 | 41 | 12NOV11A | 24DEC11A | 100 | 12NOV11A | 24DEC11A | |
| 09R1CI3640 | 80 deg cut slope +68.5 to +63mPD; 1900m3 | 100 | 100 | 28DEC11A | 07JUL12A | 100 | 28DEC11A | 03MAY12 | |
| 09R1CI3642 | Rock excavation around edge of MAS; 100m3 | 10 | 10 | 17MAR12A | 18JUL12A | 100 | 04MAY12 | 15MAY12 | |
| **Road Drainage; Ch. 460 to Ch. 270** | | | | | | | | | |
| 09R1CI3664 | Construct 375UC; 250m | 50 | 50 | 26MAR12A | 03JUN13 | 90 | 03APR12 | 06JUN12 | -473 |
| **Road Drainage; Ch. 270 to Ch. 100** | | | | | | | | | |
| 09R1CI3644 | Construct 375UC; along slope toe (outer curve) | 44 | 44 | 23NOV11A | 24MAR12A | 100 | 23NOV11A | 02APR12 | |
| 09R1CI3645 | Construct 375UC; along inner curve | 44 | 44 | 01JUN12A | 17SEP12 | 59 | 07JUN12 | 30JUL12 | -325 |
| **Road Drainage; Ch. 100 to Ch. 0** | | | | | | | | | |
| 09R1CI3704 | Construct 900mm dia. & UC inner side | 100 | 100 | 26MAR12A | 17SEP12 | 82 | 16MAY12 | 11SEP12 | -347 |
| 09R1CI3710 | Construct 450mm dia. drainage & outer UC | 18 | 60 | 19MAR13 | 12APR13 | 0 | 12SEP12 | 22NOV12 | -473 |
| **H-Pile Retaining Wall for Wall B** | | | | | | | | | |
| **Additional land for Construction of Wall PB** | | | | | | | | | |
| 13R4CI3P02 | Possession of additional land | 0 | 0 | | 01DEC09A | 100 | | 01DEC09A | |
| 13R4CI3P12 | Internal transplant for 11# trees | 55 | 55 | 02DEC09A | 04MAR10A | 100 | 02DEC09A | 04MAR10A | |
| 13R4CI3P18 | Form piling platform for Wall B | 80 | 80 | 11MAR10A | 19JUN10A | 100 | 11MAR10A | 19JUN10A | |
| 13R4CI3P20 | Reconstruct piling platform | 77 | 77 | 28JUN10A | 27SEP10A | 100 | 28JUN10A | 27SEP10A | |
| 13R4CI3P22 | Removal of piling platform | 93 | 93 | 24MAR11A | 27OCT11A | 100 | 24MAR11A | 27OCT11A | |
| 13R4CI3P32 | Slope reinstament | 93 | 93 | 01APR11A | 09NOV11A | 100 | 01APR11A | 09NOV11A | |
| 13R4CI3P42 | Planting 13# trees | 4 | 4 | 10NOV11A | 12NOV11A | 100 | 10NOV11A | 12NOV11A | |
| **VO#188; Internal Transplant of Tree T765** | | | | | | | | | |
| 13R4CI3726 | Issue VO #188 | 0 | 0 | | 24MAY11A | 100 | | 24MAY11A | |
| 13R4CI3736 | Construct planter wall | 28 | 28 | 25MAY11A | 27JUN11A | 100 | 25MAY11A | 27JUN11A | |
| 13R4CI3746 | Tree pruning | 1 | 1 | 28JUN11A | 28JUN11A | 100 | 28JUN11A | 28JUN11A | |
| 13R4CI3756 | Tree removal | 1 | 1 | 03AUG11A | 03AUG11A | 100 | 03AUG11A | 03AUG11A | |
| **Piling Works** | | | | | | | | | |
| 13R4CI3700 | Demolish existing ret. wall/slope protection | 28 | 28 | 15SEP10A | 20OCT10A | 100 | 15SEP10A | 20OCT10A | |
| 13R4CI3702 | Mobilize & set up piling rig | 6 | 6 | 22OCT10A | 29OCT10A | 100 | 22OCT10A | 29OCT10A | |
| 13R4CI3704 | 350mm dia. pre-bored H-piles, Wall B; 93 nos. | 49 | 49 | 30OCT10A | 11DEC10A | 100 | 30OCT10A | 11DEC10A | |
| 13R4CI3705 | Demobilize piling rig | 6 | 6 | 13DEC10A | 18DEC10A | 100 | 13DEC10A | 18DEC10A | |
| **Skin Wall** | | | | | | | | | |
| 13R4CI3706 | Extension of piles | 18 | 18 | 20DEC10A | 08JAN11A | 100 | 20DEC10A | 08JAN11A | |
| 13R4CI3708 | Excavate & hack off piles | 24 | 24 | 10JAN11A | 22JAN11A | 100 | 10JAN11A | 22JAN11A | |
| 13R4CI3710 | Construct skin wall & capping beams; 6 bays | 24 | 24 | 24JAN11A | 08MAR11A | 100 | 24JAN11A | 08MAR11A | |
| 13R4CI3714 | Construct end walls | 6 | 6 | 09MAR11A | 15MAR11A | 100 | 09MAR11A | 15MAR11A | |
| 13R4CI3716 | Backfill/reinstatement/U-channel | 18 | 18 | 16MAR11A | 31JUL12A | 100 | 16MAR11A | 07MAR12 | |
| **Channel Modification Works (Dry Season)** | | | | | | | | | |
| **River Diversion for Underground Works** | | | | | | | | | |
| 09R1CI3802 | Form a temporay plant access to stream | 60 | 60 | 12DEC08A | 04FEB09A | 100 | 12DEC08A | 04FEB09A | |
| 09R1CI3804 | Break boulders | 78 | 78 | 05FEB09A | 24FEB09A | 100 | 05FEB09A | 24FEB09A | |
| 09R1CI3806 | Concrete bedding for bund wall (gabion) | 11 | 11 | 25FEB09A | 09MAR09A | 100 | 25FEB09A | 09MAR09A | |



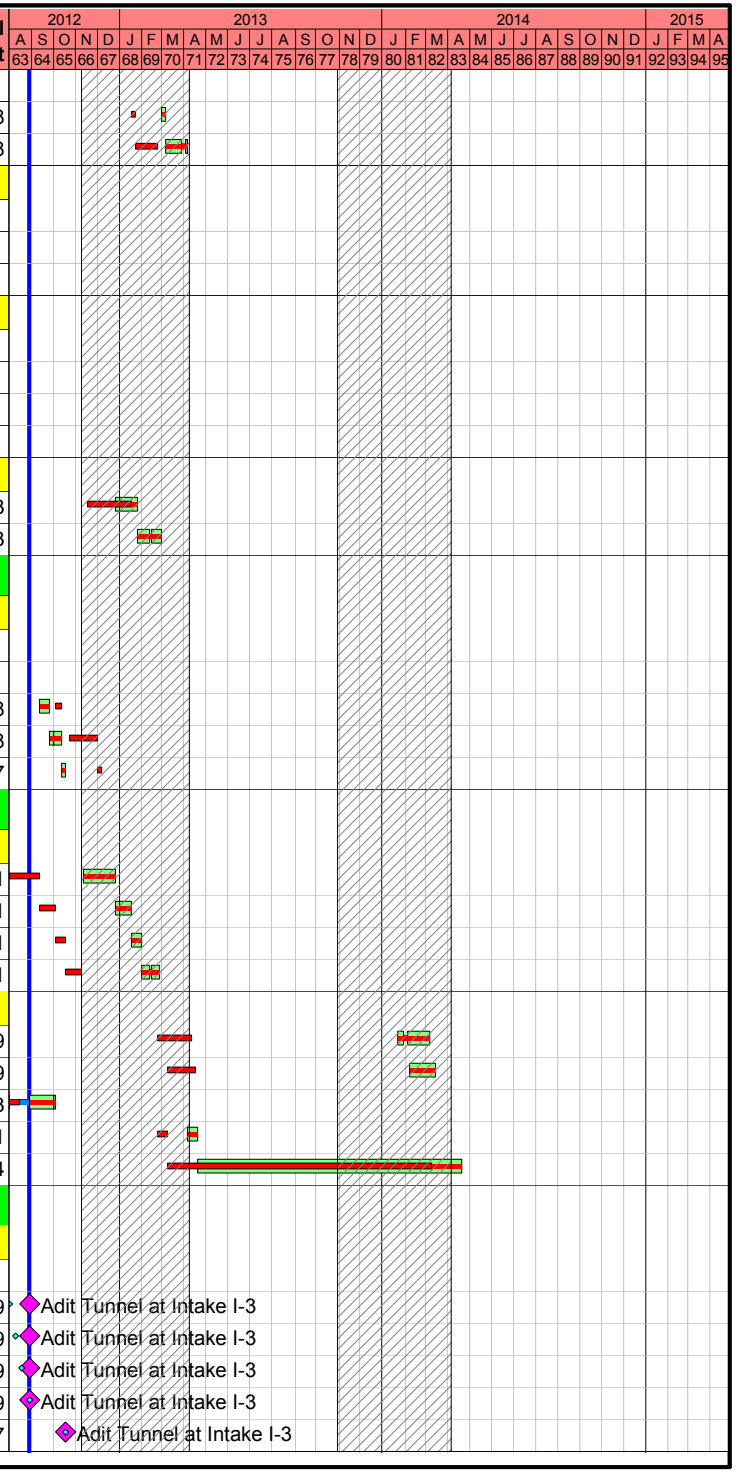
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 09R1CI3808 | Construct bund wall (gabion) | 22 | 22 | 10MAR09A | 30APR09A | 100 | 10MAR09A | 30APR09A | |
| 09R1CI3810 | Divert channel to south west | 0 | 0 | | 30APR09A | 100 | | 30APR09A | |
| **Channel Modification Works** | | | | | | | | | |
| 09R1CI3812 | Breaking of large boulders | 54 | 54 | 02NOV09A | 24MAR10A | 100 | 02NOV09A | 24MAR10A | |
| 09R1CI3814 | Excavate stream bed & make good upper part | 24 | 24 | 25JAN10A | 24MAR10A | 100 | 25JAN10A | 24MAR10A | |
| 09R1CI3816 | Laying of rock armour | 24 | 24 | 07DEC09A | 15DEC09A | 100 | 07DEC09A | 15DEC09A | |
| 09R1CI3818 | Construct bund wall for approch channel const. | 14 | 14 | 22MAR10A | 17APR10A | 100 | 22MAR10A | 17APR10A | |
| 09R1CI3820 | Divert channel to south west | 0 | 0 | | 17APR10A | 100 | | 17APR10A | |
| **Boulder Traps** | | | | | | | | | |
| 09R1C22002 | Mobilization setup | 6 | 6 | 23FEB11A | 28FEB11A | 100 | 23FEB11A | 28FEB11A | |
| 09R1C22012 | Construction of boulder trap; 7 nos. | 24 | 24 | 29MAR11A | 12APR11A | 100 | 29MAR11A | 12APR11A | |
| **Stone Pitching & Trash Grill** | | | | | | | | | |
| 09R1C3T010 | Remove concrete bund wall | 24 | 4 | 01NOV13* | 28NOV13 | 0 | 10NOV12* | 14NOV12 | -679 |
| 09R1C3T020 | Stone pitching to channel bed & wall | 72 | 36 | 29NOV13 | 28FEB14 | 0 | 15NOV12 | 28DEC12 | -679 |
| 09R1C3T040 | Install trash grill & adjustable wire | 72 | 36 | 29NOV13 | 28FEB14 | 0 | 15NOV12 | 28DEC12 | -679 |
| PVOABT3-10 | Additional boulder traps | 48 | 0 | 01NOV12* | 28DEC12 | 0 | | | -407 |
| **Excavation for AVS/VS/DC/MAS/MAA** | | | | | | | | | |
| **Open Excavation for Underground Structures** | | | | | | | | | |
| 06L1CI3906 | Mobilize drilling rig, backhoes | 1 | 1 | 11DEC09A | 11DEC09A | 100 | 11DEC09A | 11DEC09A | |
| 06L1CI3908 | Excavation | 571 | 571 | 04JAN10A | 24DEC11A | 100 | 04JAN10A | 24DEC11A | |
| **Excavation & Construction of Main Adit** | | | | | | | | | |
| 3CL1CI3101 | Probe drill | 6 | 6 | 09SEP11A | 10SEP11A | 100 | 09SEP11A | 10SEP11A | |
| 3CL1CI3102 | Excavation for 2m buffer zone | 62 | 30 | 29JUN12A | 05SEP12 | 87 | 14JUL12 | 17AUG12 | -473 |
| 3CL1CI3103 | Cleaning & place blinding | 4 | 4 | 06SEP12 | 10SEP12 | 0 | 18AUG12 | 22AUG12 | -473 |
| 3CL1CI3104 | Construct wall & crown (1 bay) | 14 | 8 | 12OCT12 | 29OCT12 | 0 | 12OCT12 | 20OCT12 | -473 |
| 3CL1CI3105 | Construct wall & crown (2 bays) | 18 | 14 | 30OCT12 | 19NOV12 | 0 | 22OCT12 | 07NOV12 | -473 |
| 3CL1CI3111 | Trial excavation (2m) | 60 | 60 | 03DEC11A | 27FEB12A | 100 | 03DEC11A | 27FEB12A | |
| 3CL1CI3121 | Excavation (11m) | 110 | 110 | 28FEB12A | 28JUN12A | 100 | 28FEB12 | 13JUL12 | |
| **Construction of Man Access Adit (MAA)** | | | | | | | | | |
| 06L1CI3112 | Construct invert; | 7 | 7 | 01FEB12A | 10FEB12A | 100 | 01FEB12A | 10FEB12A | |
| 06L1CI3116 | Construct wall & crown | 19 | 19 | 24FEB12A | 21MAR12A | 100 | 24FEB12A | 16MAR12 | |
| **Construction of Man Access Shaft (MAS)** | | | | | | | | | |
| 06L1CI3122 | Construct base | 9 | 9 | 14JAN12A | 19JAN12A | 100 | 14JAN12A | 19JAN12A | |
| 06L1CI3124 | Set up formworks | 6 | 6 | 23MAR12A | 31MAR12A | 100 | 17MAR12 | 23MAR12 | |
| 06L1CI3126 | Construct wall; 5 lifts, 3.6m per lift | 36 | 36 | 02APR12A | 06JUN12A | 100 | 24MAR12 | 11MAY12 | |
| 06L1CI3127 | Install pre-cast stair with insitu stitch | 27 | 40 | 07JUN12A | 27AUG12A | 100 | 27JUL12 | 11SEP12 | |
| 06L1CI3129 | Construct shaft roof | 15 | 15 | 13SEP12 | 29SEP12 | 0 | 22SEP12 | 10OCT12 | -304 |
| 06L1CI3139 | Install steel hadraining | 12 | 12 | 10OCT12 | 24OCT12 | 0 | 11OCT12 | 25OCT12 | -311 |



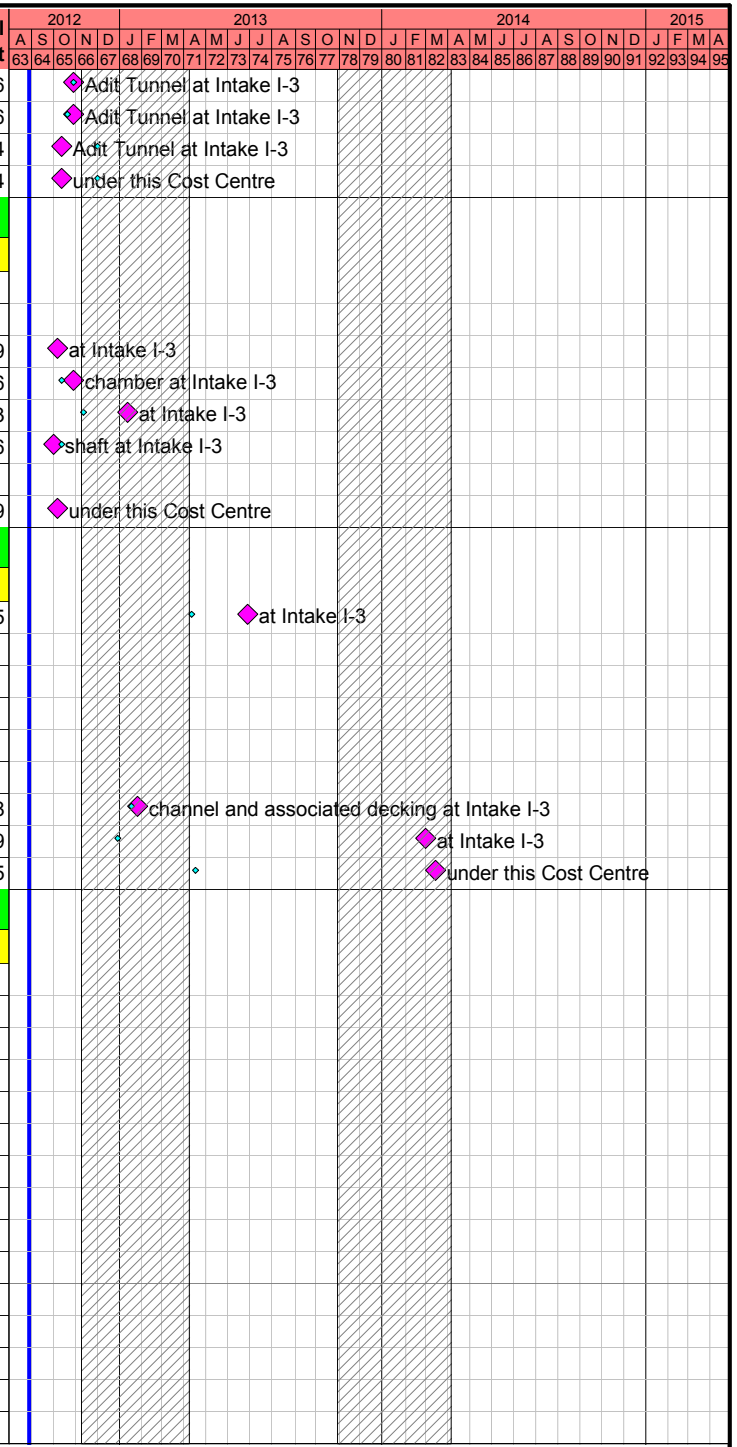
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Construction of Deaerarion Chamber (DC)** | | | | | | | | | |
| **East Side, Around Drop Shaft** | | | | | | | | | |
| 06L1CI3E02 | Clean & place blinding for all area | 6 | 6 | 28DEC11A | 03JAN12A | 100 | 28DEC11A | 03JAN12A | |
| 06L1CI3E12 | Construct base; 95m3 | 8 | 8 | 30MAR12A | 11APR12A | 100 | 17MAR12 | 26MAR12 | |
| 06L1CI3E22 | Construct walls; 100m3 | 13 | 13 | 21APR12A | 10MAY12A | 100 | 27MAR12 | 14APR12 | |
| 06L1CI3E32 | Construct crown; 150m3 | 25 | 25 | 11MAY12A | 09JUN12A | 100 | 16APR12 | 16MAY12 | |
| **West Side, Connecting to Main Adit** | | | | | | | | | |
| 06L1CI3W12 | Construct base; 95m3 | 6 | 9 | 16JUN12A | 22JUN12A | 100 | 23AUG12 | 01SEP12 | |
| 06L1CI3W22 | Construct walls | 20 | 11 | 18SEP12 | 11OCT12 | 0 | 03SEP12 | 14SEP12 | -469 |
| 06L1CI3W32 | Construct crown stage 1 | 14 | 22 | 12OCT12 | 29OCT12 | 0 | 15SEP12 | 11OCT12 | -469 |
| 06L1CI3W42 | Construct crown stage 2 | 22 | 0 | 15NOV12 | 10DEC12 | 0 | | | -473 |
| **Construction of Vortex Shaft (VS)** | | | | | | | | | |
| **Vortex; East Side** | | | | | | | | | |
| 06L1CIE010 | Construct Vortex; base | 12 | 11 | 03NOV12 | 16NOV12 | 0 | 22OCT12 | 03NOV12 | -469 |
| 06L1CIE020 | Construct Vortex; wall stg 1 | 23 | 11 | 17NOV12 | 13DEC12 | 0 | 05NOV12 | 16NOV12 | -469 |
| 06L1CIE030 | Construct Vortex; wall stg 2 with roof | 18 | 11 | 14DEC12 | 07JAN13 | 0 | 17NOV12 | 29NOV12 | -469 |
| 06L1CIE040 | Construct Vortex; planter wall | 11 | 0 | 08JAN13 | 19JAN13 | 0 | | | -383 |
| **Vortex, West Side** | | | | | | | | | |
| 06L1CIW010 | Construct Vortex; base | 12 | 11 | 06AUG12A | 18AUG12A | 100 | 12JUN12 | 25JUN12 | |
| 06L1CIW020 | Construct Vortex; wall stg 1 | 23 | 11 | 20AUG12A | 14SEP12 | 30 | 26JUN12 | 09JUL12 | -419 |
| 06L1CIW030 | Construct Vortex; wall stg 2 with roof | 18 | 11 | 15SEP12 | 06OCT12 | 0 | 10JUL12 | 21JUL12 | -419 |
| 06L1CIW040 | Construct Vortex; planter wall | 11 | 0 | 08OCT12 | 19OCT12 | 0 | | | -319 |
| | | | | | | | | | |
| 06L1CI3142 | Construct drop shaft | 12 | 12 | 16JUN12A | 14JUL12A | 100 | 17MAY12 | 30MAY12 | |
| **Construction of Air Vent Shaft Shaft (AVS)** | | | | | | | | | |
| | | | | | | | | | |
| 06L1CI3152 | Install pre-cast #1 & construct collar ring | 4 | 8 | 30OCT12 | 02NOV12 | 0 | 12OCT12 | 20OCT12 | -469 |
| 06L1CI3514 | Temp. works & granular fill | 8 | 8 | 03NOV12 | 12NOV12 | 0 | 22OCT12 | 31OCT12 | -445 |
| 06L1CI3515 | Install pre-cast #2 & granular fill | 8 | 8 | 13NOV12 | 21NOV12 | 0 | 01NOV12 | 09NOV12 | -445 |
| 06L1CI3516 | Install pre-cast #3 to #6 & granular fill | 12 | 2 | 27DEC12 | 10JAN13 | 0 | 10NOV12 | 12NOV12 | -472 |
| 06L1CI3526 | Construct insitu (top of AVS) | 8 | 0 | 11JAN13 | 19JAN13 | 0 | | | -383 |
| **Backfill Around Structure** | | | | | | | | | |
| | | | | | | | | | |
| 06L1CI3162 | Granular fill at east of DC up to base of Vortex | 10 | 10 | 17JUL12A | 04AUG12A | 100 | 31MAY12 | 11JUN12 | |
| 06L1CI3164 | Granular fill at west of AVS below bay 6 of A.C. | 12 | 6 | 11DEC12 | 24DEC12 | 0 | 23JUL12 | 28JUL12 | -473 |
| 06L1CI3174 | Granular fill for bay 7 of A.C. | 12 | 13 | 11JAN13 | 24JAN13 | 0 | 18JAN13 | 01FEB13 | -472 |
| **Construction of Approach Channel** | | | | | | | | | |
| **Excavation & Formation** | | | | | | | | | |
| 09R1CI3172 | Excavation for Approach Channel | 40 | 40 | 28SEP10A | 21FEB11A | 100 | 28SEP10A | 21FEB11A | |
| **Tower Crane** | | | | | | | | | |
| 09R1C17002 | Construction of base for tower crane | 10 | 10 | 21DEC10A | 24DEC10A | 100 | 21DEC10A | 24DEC10A | |



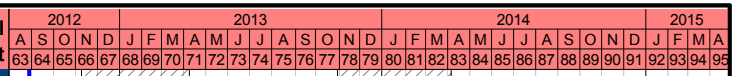
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 09R1C17012 | Erection and T&C of tower crane | 6 | 6 | 03JAN11A | 05JAN11A | 100 | 03JAN11A | 05JAN11A | |
| 09R1C17022 | Removal of tower crane | 4 | 4 | 28FEB13 | 04MAR13 | 0 | 18JAN13 | 22JAN13 | -473 |
| 09R1C17032 | Construct approach channel at TC location | 24 | 24 | 05MAR13 | 05APR13 | 0 | 23JAN13 | 22FEB13 | -473 |
| **Bays 1-4; Base and 1st Lift Wall** | | | | | | | | | |
| 09R1C18002 | Construction of Approach Channel | 32 | 32 | 02FEB11A | 25MAR11A | 100 | 02FEB11A | 25MAR11A | |
| 09R1C18012 | Modification of temporary bund wall | 18 | 18 | 15MAR11A | 12APR11A | 100 | 15MAR11A | 12APR11A | |
| 09R1C18022 | Nullah widening works | 32 | 32 | 14FEB11A | 26MAR11A | 100 | 14FEB11A | 26MAR11A | |
| **Bays 1-4 (remaining) & bay 5** | | | | | | | | | |
| 09R1C19002 | Remove concrete bund wall | 10 | 10 | 12NOV11A | 19NOV11A | 100 | 12NOV11A | 19NOV11A | |
| 09R1C19004 | Construct remaining sections of bays 1-4 | 66 | 66 | 21NOV11A | 18JAN12A | 100 | 21NOV11A | 18JAN12A | |
| 09R1C19006 | Construct base, walls & roof of bay 5 | 36 | 36 | 19JAN12A | 17MAR12A | 100 | 19JAN12A | 09MAR12 | |
| 09R1C19008 | Erect concrete bund wall | 12 | 12 | 19MAR12A | 31MAR12A | 100 | 10MAR12 | 23MAR12 | |
| **Bays 6 & 7** | | | | | | | | | |
| 09R1C2102 | Construct bay 6 | 25 | 50 | 27DEC12 | 25JAN13 | 0 | 17NOV12 | 17JAN13 | -473 |
| 09R1C2112 | Construct bay 7 | 25 | 0 | 26JAN13 | 27FEB13 | 0 | | | -473 |
| **Junction Between Main Tunnel & Adit Tunnel** | | | | | | | | | |
| | | | | | | | | | |
| 3CL1CI3100 | Install steel arches at I-2 Junction | 0 | 0 | | 18MAY12A | 100 | | 29MAR12 | |
| 3CL1CI3106 | Install steel arches from main tunnel | 24 | 24 | 19MAY12A | 16JUN12A | 100 | 30MAR12 | 03MAY12 | |
| 3CL1CI3108 | Construct invert including for main adit | 12 | 8 | 11SEP12 | 24SEP12 | 0 | 03OCT12 | 11OCT12 | -473 |
| 3CL1CI3118 | Construct wall & crown | 14 | 34 | 25SEP12 | 11OCT12 | 0 | 22OCT12 | 30NOV12 | -473 |
| 3CL1CI3128 | Remove steel arches | 6 | 6 | 12OCT12 | 18OCT12 | 0 | 01DEC12 | 07DEC12 | -367 |
| **Remaining Works Prior to Handover to Client** | | | | | | | | | |
| **Radio Communication System** | | | | | | | | | |
| VO180CI305 | Lay CLP power cable | 36 | 36 | 13NOV12 | 24DEC12 | 0 | 01AUG12 | 11SEP12 | -361 |
| VO180CI310 | Construct equipment room | 18 | 18 | 27DEC12 | 17JAN13 | 0 | 12SEP12 | 03OCT12 | -361 |
| VO180CI315 | Lay tiles on equipment room | 12 | 12 | 18JAN13 | 31JAN13 | 0 | 04OCT12 | 17OCT12 | -361 |
| VO180CI340 | Install radio communicaition system | 18 | 18 | 01FEB13 | 25FEB13 | 0 | 18OCT12 | 08NOV12 | -361 |
| | | | | | | | | | |
| 09R1CI3142 | Finishing & reinstatement works; Portion C | 36 | 36 | 22JAN14 | 07MAR14 | 0 | 22FEB13 | 09APR13 | -679 |
| 09R1CI3143 | Pre-handover inspections and remedial works | 30 | 30 | 08FEB14 | 14MAR14 | 0 | 08MAR13 | 16APR13 | -679 |
| 16R7CI3142 | Landscaping works | 108 | 108 | 14MAY12A | 04OCT12 | 70 | 02APR12 | 14AUG12 | -283 |
| 16R7CI3143 | Planting works at Aprroach Channel | 12 | 12 | 06APR13 | 19APR13 | 0 | 23FEB13 | 08MAR13 | -441 |
| 16R7CI3144 | Establishment Works at Portion C | 365 | 365 | 20APR13 | 19APR14 | 0 | 09MAR13 | 08MAR14 | -544 |
| **Schedule of Milestones for Cost Centre No. 3cL** | | | | | | | | | |
| | | | | | | | | | |
| 3CL1CI3A02 | 3cL 1; On establishing tunnelling equipments | 0 | 0 | | 27JUN12A | 100 | | 20JUL12 | |
| 3CL1CI3A04 | 3cL 2; On completion of 12.5% perm. tunnel linin | 0 | 0 | | 27AUG12 | 0 | | 30JUL12 | 929 |
| 3CL1CI3A06 | 3cL 3; On completion of 25% perm. tunnel lining | 0 | 0 | | 27AUG12 | 0 | | 08AUG12 | 929 |
| 3CL1CI3A08 | 3cL 4; On completion of 37.5 perm. tunnel lining | 0 | 0 | | 27AUG12 | 0 | | 17AUG12 | 929 |
| 3CL1CI3A10 | 3cL 5; On completion of 50% perm. tunnel lining | 0 | 0 | | 27AUG12 | 0 | | 27AUG12 | 929 |
| 3CL1CI3A12 | 3cL 6; On completion of 62.5% perm. tunnel linin | 0 | 0 | | 18OCT12 | 0 | | 18OCT12 | 877 |



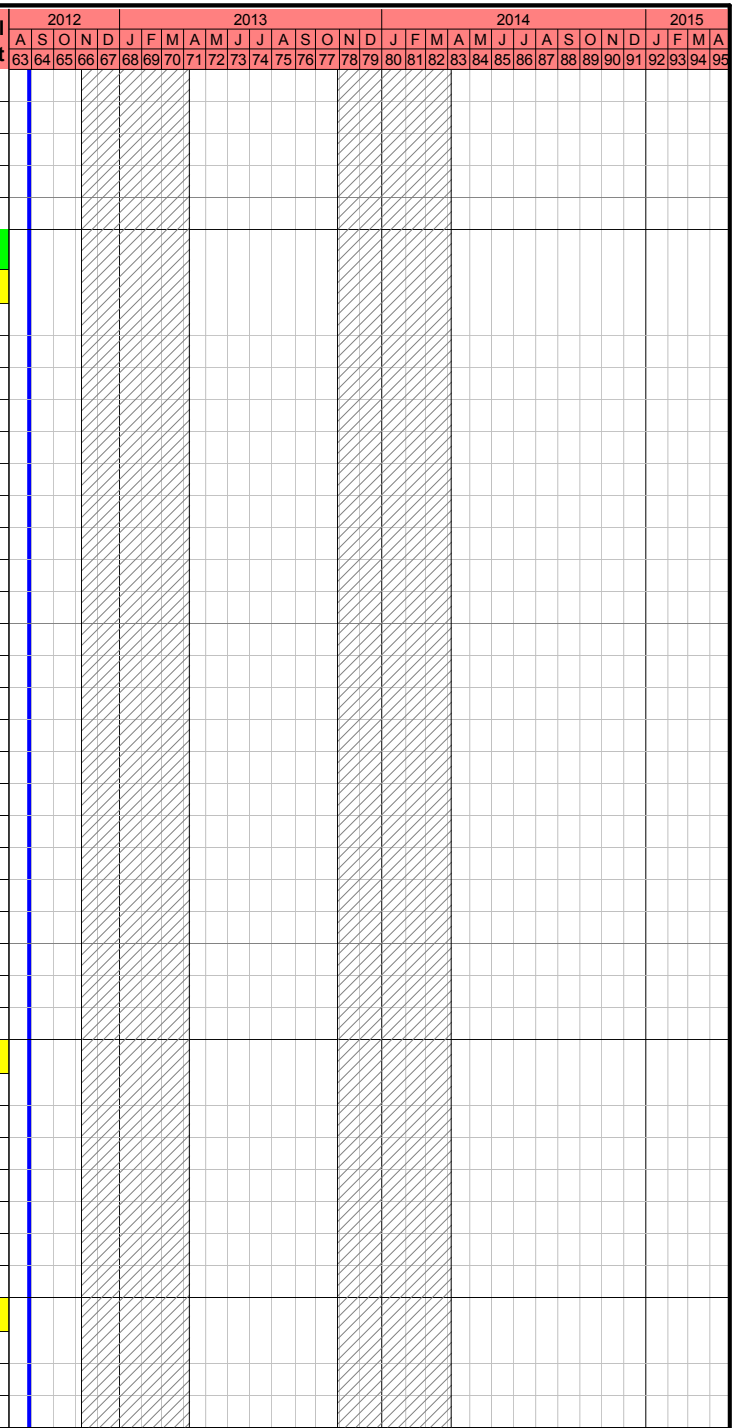
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3CL1CI3A14 | 3cL 7; On completion of 75% perm. tunnel lining | 0 | 0 | | 29OCT12 | 0 | | 29OCT12 | 866 |
| 3CL1CI3A16 | 3cL 8; On completion of 87.5% perm. tunnel linin | 0 | 0 | | 29OCT12 | 0 | | 20OCT12 | 866 |
| 3CL1CI3A18 | 3cL 9; On completion of perm. tunnel lining | 0 | 0 | | 11OCT12 | 0 | | 30NOV12 | 884 |
| 3CL1CI3A20 | 3cL 10; On completion of all works under this CC | 0 | 0 | | 11OCT12 | 0 | | 30NOV12 | 884 |
| **Schedule of Milestones for Cost Centre No. 6L** | | | | | | | | | |
| 06L1CI3M02 | 6L 1; On completion of 50% of excavation | 0 | 0 | | 27MAY10A | 100 | | 27MAY10A | |
| 06L1CI3M04 | 6L 2; On completion of excavation works | 0 | 0 | | 24DEC11A | 100 | | 24DEC11A | |
| 06L1CI3M08 | 6L 3; On completion of vortex shaft | 0 | 0 | | 06OCT12 | 0 | | 21JUL12 | 889 |
| 06L1CI3M10 | 6L 4; On completion of de-aeration chamber | 0 | 0 | | 29OCT12 | 0 | | 11OCT12 | 866 |
| 06L1CI3M12 | 6L 5; On completion of vent shaft | 0 | 0 | | 10JAN13 | 0 | | 12NOV12 | 793 |
| 06L1CI3M14 | 6L 6; On completion of man access shaft | 0 | 0 | | 29SEP12 | 0 | | 10OCT12 | 896 |
| 06L1CI3M16 | 6L 7; On completion of man access adit | 0 | 0 | | 21MAR12A | 100 | | 16MAR12 | |
| 06L1CI3M18 | 6L 8; On completion of all works under this CC | 0 | 0 | | 06OCT12 | 0 | | 21JUL12 | 889 |
| **Schedule of Milestone for Cost Centre No. 9R** | | | | | | | | | |
| 09R1CI3R02 | 9R 1; On completion of access road | 0 | 0 | | 27JUN13 | 0 | | 09APR13 | 625 |
| 09R1CI3R04 | 9R 2; On completion of 25% of excavation at G.L | 0 | 0 | | 11JUN09A | 100 | | 11JUN09A | |
| 09R1CI3R06 | 9R 3; On completion of 50% of excavation at G.L | 0 | 0 | | 15AUG09A | 100 | | 15AUG09A | |
| 09R1CI3R08 | 9R 4; On completion of 75% of excavation at G.L | 0 | 0 | | 27MAR10A | 100 | | 27MAR10A | |
| 09R1CI3R10 | 9R 5; On completion of excavation at G.L. | 0 | 0 | | 07JUL12A | 100 | | 03MAY12 | |
| 09R1CI3R12 | 9R 6; On completion of 50% of approach channel | 0 | 0 | | 18JAN12A | 100 | | 18JAN12A | |
| 09R1CI3R14 | 9R 7; On completion of approach channel | 0 | 0 | | 25JAN13 | 0 | | 17JAN13 | 778 |
| 09R1CI3R16 | 9R 8; On completion of trash grill | 0 | 0 | | 28FEB14 | 0 | | 28DEC12 | 379 |
| 09R1CI3R18 | 9R 9; On completion of all works under this CC | 0 | 0 | | 14MAR14 | 0 | | 16APR13 | 365 |
| **Schedule of Milestones for Cost Centre No. 13R** | | | | | | | | | |
| 13R4CI3S01 | 13R 1; On completion of 30% soil nailing | 0 | 0 | | 26SEP09A | 100 | | 26SEP09A | |
| 13R4CI3S02 | 13R 2; On completion of 60% soil nailing | 0 | 0 | | 12DEC09A | 100 | | 12DEC09A | |
| 13R4CI3S03 | 13R 3; On completion of all soil naing works | 0 | 0 | | 24DEC11A | 100 | | 24DEC11A | |
| 13R4CI3S04 | 13R 4; On completion of 10% piles by number | 0 | 0 | | 05DEC08A | 100 | | 05DEC08A | |
| 13R4CI3S05 | 13R 5; On completion of 20% piles by number | 0 | 0 | | 13DEC08A | 100 | | 13DEC08A | |
| 13R4CI3S06 | 13R 6; On completion of 30% piles by number | 0 | 0 | | 18DEC08A | 100 | | 18DEC08A | |
| 13R4CI3S07 | 13R 7; On completion of 40% piles by number | 0 | 0 | | 23DEC08A | 100 | | 23DEC08A | |
| 13R4CI3S08 | 13R 8; On completion of 50% piles by number | 0 | 0 | | 02JAN09A | 100 | | 02JAN09A | |
| 13R4CI3S09 | 13R 9; On completion of 60% piles by number | 0 | 0 | | 09JAN09A | 100 | | 09JAN09A | |
| 13R4CI3S10 | 13R 10; On completion of 70% piles by number | 0 | 0 | | 16JAN09A | 100 | | 16JAN09A | |
| 13R4CI3S11 | 13R 11; On completion of 80% piles by number | 0 | 0 | | 21JAN09A | 100 | | 21JAN09A | |
| 13R4CI3S12 | 13R 12; On completion of 90% piles by number | 0 | 0 | | 04DEC10A | 100 | | 04DEC10A | |
| 13R4CI3S13 | 13R 13; On completion of all piling works | 0 | 0 | | 11DEC10A | 100 | | 11DEC10A | |
| 13R4CI3S14 | 13R 14; On completion of  boulder traps | 0 | 0 | | 12APR11A | 100 | | 12APR11A | |
| 13R4CI3S15 | 13R 15; On completion of all work under this CC | 0 | 0 | | 24DEC11A | 100 | | 24DEC11A | |



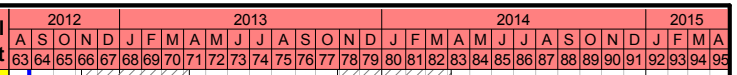
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Construction of Outfall O-1** | | | | | | | | | |
| **Preliminary Works** | | | | | | | | | |
| **VO # 06; Transperant Hoarding at Outfall** | | | | | | | | | |
| 01R1DO0106 | Receive VO6 for transperant hoarding | 0 | 0 | | 16APR08A | 100 | | 16APR08A | |
| 01R1DO0108 | Procurement for transperent hoarding | 21 | 21 | 17APR08A | 20MAY08A | 100 | 17APR08A | 20MAY08A | |
| 01R1DO0110 | Erect hoarding | 18 | 18 | 21APR08A | 02JUL08A | 100 | 21APR08A | 02JUL08A | |
| **VO #16; Chain Link Fence at O-1** | | | | | | | | | |
| V01602 | Issue VO16 for chain link fence | 0 | 0 | | 02JUL08A | 100 | | 02JUL08A | |
| V01612 | Preparation works for chain link fence | 1 | 1 | 03JUL08A | 18AUG08A | 100 | 03JUL08A | 18AUG08A | |
| V01622 | Erect chain link fence; 460m | 38 | 38 | 19AUG08A | 19SEP08A | 100 | 19AUG08A | 19SEP08A | |
| **Temporary CLP Power Supply for TBM Operation** | | | | | | | | | |
| 01R1DCLP02 | Application/approval for temp. CLP Power Supply | 200 | 200 | 07MAR08A | 01AUG08A | 100 | 07MAR08A | 01AUG08A | |
| 01R1DCLP14 | Appoint sub-contractor for design & build TX Rm | 67 | 67 | 14JUL08A | 07NOV08A | 100 | 14JUL08A | 07NOV08A | |
| 01R1DCLP24 | Design for transformer room | 24 | 24 | 08NOV08A | 11MAR09A | 100 | 08NOV08A | 11MAR09A | |
| 01R1DCLP34 | Constuct transformer room | 60 | 60 | 12MAR09A | 14MAY09A | 100 | 12MAR09A | 14MAY09A | |
| 01R1DCLP44 | CLP inspection & defect rectification | 14 | 14 | 15MAY09A | 10JUN09A | 100 | 15MAY09A | 10JUN09A | |
| 01R1DCLP54 | CLP cabling to TX room & commissioning | 32 | 32 | 11JUN09A | 30OCT09A | 100 | 11JUN09A | 30OCT09A | |
| 01R1DCLP74 | CLPE cabling from TX room to 24mPD platform | 18 | 18 | 28OCT09A | 17NOV09A | 100 | 28OCT09A | 17NOV09A | |
| **VO#25; Revised Fencig Details at O-1 Next to GVT** | | | | | | | | | |
| V025-02 | Receive VO16 for revised details next to GVT | 0 | 0 | | 17SEP08A | 100 | | 17SEP08A | |
| V025-12 | Preparation works | 24 | 24 | 22JAN09A | 07FEB09A | 100 | 22JAN09A | 07FEB09A | |
| V025-22 | Erect proposed transparent hoarding | 4 | 4 | 09FEB09A | 02MAR09A | 100 | 09FEB09A | 02MAR09A | |
| V055-02 | Receive VO#55 in lieu of VO#25 | 0 | 0 | | 21JAN09A | 100 | | 21JAN09A | |
| | | | | | | | | | |
| 01R1DO0102 | Obtain TTA (ingress & egress) approval | 0 | 0 | | 18APR08A | 100 | | 18APR08A | |
| 01R1DO0103 | Implment TTA for diverting footpath | 1 | 1 | 19APR08A | 19APR08A | 100 | 19APR08A | 19APR08A | |
| 01R1DO0104 | Obtain excavation permit | 0 | 0 | | 29MAY08A | 100 | | 29MAY08A | |
| 01R1DO0112 | Erect catch fencing | 10 | 10 | 26MAY08A | 02JUL08A | 100 | 26MAY08A | 02JUL08A | |
| 01R1DO0114 | Site establishment | 30 | 30 | 21APR08A | 15JUL08A | 100 | 21APR08A | 15JUL08A | |
| 01R1DO0116 | Site clearance | 30 | 30 | 21APR08A | 05SEP08A | 100 | 21APR08A | 05SEP08A | |
| 01R1DO0118 | Install remote contorl CCTV as per ER 4.4.10 | 12 | 12 | 28OCT08A | 10NOV08A | 100 | 28OCT08A | 10NOV08A | |
| 16R1DO0110 | Tree inspection & report | 7 | 7 | 13MAR08A | 28MAR08A | 100 | 13MAR08A | 28MAR08A | |
| **Form Temporary Access/Tree Felling** | | | | | | | | | |
| **Works Suspension Due to Obstruct. from Villagers** | | | | | | | | | |
| WSO02 | Works suspension due to obstruct. frm villagers | 24 | 24 | 19JUL08A | 10AUG08A | 100 | 19JUL08A | 10AUG08A | |
| | | | | | | | | | |
| 10R1DO0202 | Form temp. access road from +14mPD to +69mPD | 158* | 158* | 19JUN08A | 24DEC08A | 100 | 19JUN08A | 24DEC08A | |
| 10R1DOAR04 | Const. temp. steel decking over exist Outfall W | 11 | 11 | 26AUG08A | 06SEP08A | 100 | 26AUG08A | 06SEP08A | |
| 10R1DOAR08 | Form temp. access road from 14mPD to 28mPD | 12 | 12 | 19JUN08A | 18JUL08A | 100 | 19JUN08A | 18JUL08A | |
| 10R1DOAR12 | Preparation works for transplanting T160 | 53 | 53 | 11AUG08A | 25OCT08A | 100 | 11AUG08A | 25OCT08A | |
| 10R1DOAR42 | Mobilze & set up crane for tree transplant | 1 | 1 | 27OCT08A | 27OCT08A | 100 | 27OCT08A | 27OCT08A | |
| 10R1DOAR44 | Crown pruning for T160 | 2 | 2 | 28OCT08A | 29OCT08A | 100 | 28OCT08A | 29OCT08A | |



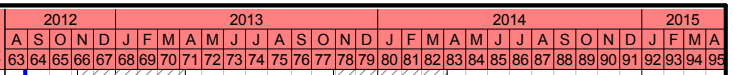
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 10R1DOAR46 | Cut root & uplift T160 | 1 | 1 | 30OCT08A | 30OCT08A | 100 | 30OCT08A | 30OCT08A | |
| 10R1DOAR54 | Crown pruning/Cut root & uplift T142 | 10 | 10 | 21FEB09A | 21FEB09A | 100 | 21FEB09A | 21FEB09A | |
| 10R1DOAR56 | Construct access road from +43 to +55mPD | 30 | 30 | 31OCT08A | 24DEC08A | 100 | 31OCT08A | 24DEC08A | |
| 16R7DO0202 | Tree transplant at Outfall O-1 | 105 | 105 | 02JUN08A | 06MAR09A | 100 | 02JUN08A | 06MAR09A | |
| 16R7DO0204 | Tree transplant above +62mPD | 11 | 11 | 31OCT08A | 12NOV08A | 100 | 31OCT08A | 12NOV08A | |
| **Form Temporary Launching Platform** | | | | | | | | | |
| **Slope Cut & Soil Nailing; +71mPD to +40mPD** | | | | | | | | | |
| 10R1DO030 | +71 to +40mPD (rows to A to P) | 217* | 217* | 13NOV08A | 08AUG09A | 100 | 13NOV08A | 08AUG09A | |
| 10R1DO031 | Remove boulder/Cut slope for rows A to D | 9 | 9 | 13NOV08A | 06DEC08A | 100 | 13NOV08A | 06DEC08A | |
| 10R1DO032 | Erect scaffold & Drill/install/grout/P1at row C | 12 | 12 | 02DEC08A | 16DEC08A | 100 | 02DEC08A | 16DEC08A | |
| 10R1DO033 | Drill/install/grout rows B to C; 18 nos. | 14 | 14 | 17DEC08A | 06JAN09A | 100 | 17DEC08A | 06JAN09A | |
| 10R1DO034 | Drill/install/grout/testing for P2 at row D | 8 | 8 | 30DEC08A | 06JAN09A | 100 | 30DEC08A | 06JAN09A | |
| 10R1DO035 | Drill/install/grout D1 to D11 | 7 | 7 | 07JAN09A | 16JAN09A | 100 | 07JAN09A | 16JAN09A | |
| 10R1DO036 | Cut slope for E1 to G20; soil 620m3 | 2 | 2 | 15JAN09A | 20JAN09A | 100 | 15JAN09A | 20JAN09A | |
| 10R1DO037 | Drill/install/grout E1 to G20: 51 nos. | 19 | 19 | 20JAN09A | 11FEB09A | 100 | 20JAN09A | 11FEB09A | |
| 10R1DO038 | Construct nail heads/remove platform; rows B-G | 10 | 10 | 02FEB09A | 17FEB09A | 100 | 02FEB09A | 17FEB09A | |
| 10R1DO039 | Erosion mat, wire mesh & hydroseed; rows B-G | 10 | 10 | 21FEB09A | 24FEB09A | 100 | 21FEB09A | 24FEB09A | |
| 10R1DO040 | Cut slope for H1 to I25; soil 1819m3 | 12 | 12 | 02FEB09A | 17FEB09A | 100 | 02FEB09A | 17FEB09A | |
| 10R1DO041 | Drill/install/grout H1 to I25; 47 nos. | 13 | 13 | 18FEB09A | 04MAR09A | 100 | 18FEB09A | 04MAR09A | |
| 10R1DO042 | Cut slope for J1 to M37; soil 5834m3 | 20 | 20 | 19FEB09A | 13MAR09A | 100 | 19FEB09A | 13MAR09A | |
| 10R1DO043 | Erect working platform for rows J to M | 14 | 14 | 28FEB09A | 16MAR09A | 100 | 28FEB09A | 16MAR09A | |
| 10R1DO044 | Test nails for P3, P4, P5 & P10 | 12 | 12 | 05MAR09A | 07APR09A | 100 | 05MAR09A | 07APR09A | |
| 10R1DO045 | Drill/install/grout J1 to M37; 134 nos. | 20 | 20 | 12MAR09A | 07APR09A | 100 | 12MAR09A | 07APR09A | |
| 10R1DO047 | Construct nail heads/remove platform; rows H-M | 20 | 20 | 14MAR09A | 18APR09A | 100 | 14MAR09A | 18APR09A | |
| 10R1DO048 | Erosion mat, wire mesh & hydroseed; rows H-M | 6 | 6 | 29MAY09A | 04JUN09A | 100 | 29MAY09A | 04JUN09A | |
| 10R1DO049 | Excavate soil 5600m3 & boulde 229m3; Rows N to P | 22 | 22 | 14MAR09A | 18APR09A | 100 | 14MAR09A | 18APR09A | |
| 10R1DO050 | Erect working platform for rows N to P | 10 | 10 | 20APR09A | 24APR09A | 100 | 20APR09A | 24APR09A | |
| 10R1DO051 | Drill/install/grout N1 to P31; 111 nos. | 20 | 20 | 23APR09A | 13MAY09A | 100 | 23APR09A | 13MAY09A | |
| 10R1DO053 | Construct nail heads/remove platform; row N to P | 14 | 14 | 14MAY09A | 02JUN09A | 100 | 14MAY09A | 02JUN09A | |
| 10R1DO054 | Erosion mat, wire mesh & hydroseed; rows N to P | 6 | 6 | 03JUN09A | 09JUN09A | 100 | 03JUN09A | 09JUN09A | |
| **Slope Cut & Soil Nailing; +40mPD to +24mPD** | | | | | | | | | |
| 10R1DO130 | +40 to +24mPD (rows Q to X) | 180* | 180* | 20APR09A | 23NOV09A | 100 | 20APR09A | 23NOV09A | |
| 10R1DO131 | Excavation; 40 to 30mPD; soil 8291m3/rock 2778m3 | 43 | 43 | 20APR09A | 18AUG09A | 100 | 20APR09A | 18AUG09A | |
| 10R1DO132 | Reinstate temp. access | 30 | 30 | 21APR09A | 27MAY09A | 100 | 21APR09A | 27MAY09A | |
| 10R1DO133 | Erect working platfrom for rows Q to U | 22 | 22 | 11MAY09A | 15AUG09A | 100 | 11MAY09A | 15AUG09A | |
| 10R1DO134 | Test nails for P4, P5, P6 and P12 | 12 | 12 | 21MAY09A | 25AUG09A | 100 | 21MAY09A | 25AUG09A | |
| 10R1DO135 | Drill/install/grout Q1 to U7; 96 nos. | 13 | 13 | 12MAY09A | 25AUG09A | 100 | 12MAY09A | 25AUG09A | |
| 10R1DO136 | Excavation; 30 to 24mPD; soil 4197m3/rock 7592m3 | 95 | 95 | 27MAY09A | 23NOV09A | 100 | 27MAY09A | 23NOV09A | |
| **TBM Launching Chamber** | | | | | | | | | |
| 10R1DO1305 | Pipe pile roof support | 9 | 9 | 08SEP09A | 30SEP09A | 100 | 08SEP09A | 30SEP09A | |
| 10R1DO1310 | Excavate/construct TBM launching chamber | 63 | 63 | 17OCT09A | 11JAN10A | 100 | 17OCT09A | 11JAN10A | |
| 10R1DO1315 | Form launching chamber cradle | 12 | 12 | 13JAN10A | 27FEB10A | 100 | 13JAN10A | 27FEB10A | |



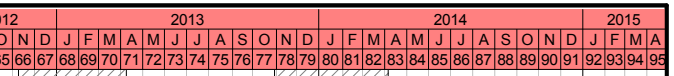
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Slope Cut & TBM Access Road; +24 to +14mPD** | | | | | | | | | |
| 10R1DO230 | +24 to +14mPD | 252* | 252* | 08JUN09A | 13APR10A | 100 | 08JUN09A | 13APR10A | |
| 10R1DO240 | Relocate sedimentation tank | 0 | 0 | | 06JUN09A | 100 | | 06JUN09A | |
| 10R1DO250 | Form access for big breaker | 12 | 12 | 08JUN09A | 20JUN09A | 100 | 08JUN09A | 20JUN09A | |
| 10R1DO260 | Mobilization of big breaker | 0 | 0 | | 20JUN09A | 100 | | 20JUN09A | |
| 10R1DO270 | Form new TBM access western section | 40 | 40 | 08SEP09A | 19NOV09A | 100 | 08SEP09A | 19NOV09A | |
| 10R1DO272 | Form new TBM access eastern section (bend) | 32 | 32 | 09NOV09A | 23DEC09A | 100 | 09NOV09A | 23DEC09A | |
| 10R1DO274 | From TBM access remaining section incl. paving | 18 | 18 | 09DEC09A | 16JAN10A | 100 | 09DEC09A | 16JAN10A | |
| 10R1DO280 | Demobilze 300T mobile crane | 0 | 0 | | 10MAR10A | 100 | | 10MAR10A | |
| 10R1DO290 | Demolish masonry & ret. wall at +14mPD | 45 | 45 | 20JUL09A | 13APR10A | 100 | 20JUL09A | 13APR10A | |
| **TBM Assembly Area at +24mPD** | | | | | | | | | |
| 10R1DO185 | Construct drainage & slab at west | 6 | 6 | 24NOV09A | 30NOV09A | 100 | 24NOV09A | 30NOV09A | |
| 10R1DO195 | Construct drainage & slab at east & middle | 12 | 12 | 25JAN10A | 20FEB10A | 100 | 25JAN10A | 20FEB10A | |
| 3AL1DO0314 | Commence TBM initial assembly | 0 | 0 | 22FEB10A | | 100 | 22FEB10A | | |
| **Tower Crane** | | | | | | | | | |
| 3AL1DO2005 | Foundation | 40 | 40 | 28DEC09A | 25FEB10A | 100 | 28DEC09A | 25FEB10A | |
| 3AL1DO2010 | Erection | 3 | 3 | 26FEB10A | 01MAR10A | 100 | 26FEB10A | 01MAR10A | |
| 3AL1DO2015 | Test & commissioning | 1 | 1 | 01MAR10A | 02MAR10A | 100 | 01MAR10A | 02MAR10A | |
| **TBM Platform** | | | | | | | | | |
| 3AL1DO2505 | Pre-fabrication | 40 | 40 | 18JUN09A | 04NOV09A | 100 | 18JUN09A | 04NOV09A | |
| 3AL1DO2515 | Foundation | 24 | 24 | 20NOV09A | 24DEC09A | 100 | 20NOV09A | 24DEC09A | |
| 3AL1DO2525 | Erect steel framework | 18 | 18 | 28DEC09A | 18FEB10A | 100 | 28DEC09A | 18FEB10A | |
| 3AL1DO2535 | Install platform | 9 | 9 | 20JAN10A | 23APR10A | 100 | 20JAN10A | 23APR10A | |
| 3AL1DO2545 | ICE certification | 3 | 3 | 19FEB10A | 19FEB10A | 100 | 19FEB10A | 19FEB10A | |
| **Noise Enclosure** | | | | | | | | | |
| 3AL1DO3005 | Pre-fabrication | 42 | 42 | 22JUN09A | 27OCT09A | 100 | 22JUN09A | 27OCT09A | |
| 3AL1DO3015 | Foundation | 12 | 12 | 21OCT09A | 17NOV09A | 100 | 21OCT09A | 17NOV09A | |
| 3AL1DO3025 | Erect steel framework | 18 | 18 | 01DEC09A | 10FEB10A | 100 | 01DEC09A | 10FEB10A | |
| 3AL1DO3035 | Cladding | 22 | 22 | 12MAY10A | 27SEP10A | 100 | 12MAY10A | 27SEP10A | |
| 3AL1DO3045 | | 1 | 0 | 21OCT09A | 27SEP10A | 100 | | | |
| 3AL1FT0802 | Apply to EPD for CNP for 24 hrs. tunnel work | 11 | 11 | 19OCT10A | 25OCT10A | 100 | 19OCT10A | 25OCT10A | |
| 3AL1FT0804 | EPD process/approve CNP application | 12 | 12 | 20OCT10A | 29NOV10A | 100 | 20OCT10A | 29NOV10A | |
| 3AL1FT0812 | | 1 | 0 | 19OCT10A | 29NOV10A | 100 | | | |
| **105 Ton Gantry Crane** | | | | | | | | | |
| 3AL1DO3505 | Manufacture | 99 | 99 | 29MAY09A | 03SEP09A | 100 | 29MAY09A | 03SEP09A | |
| 3AL1DO3515 | Shipping to Hong Kong | 6 | 6 | 14SEP09A | 21SEP09A | 100 | 14SEP09A | 21SEP09A | |
| 3AL1DO3525 | Assembly | 8 | 8 | 29DEC09A | 23JAN10A | 100 | 29DEC09A | 23JAN10A | |
| 3AL1DO3535 | Install rails | 4 | 4 | 05JAN10A | 12FEB10A | 100 | 05JAN10A | 12FEB10A | |
| 3AL1DO3545 | Test & commission | 3 | 3 | 17FEB10A | 19FEB10A | 100 | 17FEB10A | 19FEB10A | |
| 3AL1DO3555 | Receive initial segments and stock | 6 | 6 | 06MAR10A | 27MAR10A | 100 | 06MAR10A | 27MAR10A | |
| **Muck Hopper** | | | | | | | | | |
| 3AL1DO4005 | Pre-fabrication | 75 | 75 | 22JUN09A | 13MAR10A | 100 | 22JUN09A | 13MAR10A | |
| 3AL1DO4015 | Foundation incl. piles for steel platform | 31 | 31 | 15MAR10A | 25MAY10A | 100 | 15MAR10A | 25MAY10A | |



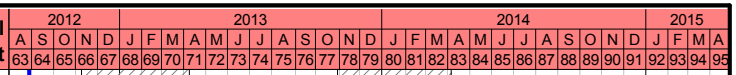
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 3AL1DO4025 | Erect steelwork | 18 | 18 | 26MAY10A | 19JUN10A | 100 | 26MAY10A | 19JUN10A | |
| 3AL1DO4035 | Erect hopper | 18 | 18 | 21JUN10A | 29JUL10A | 100 | 21JUN10A | 29JUL10A | |
| 3AL1DO4045 | Install transfer conveyor | 4 | 4 | 30JUL10A | 04AUG10A | 100 | 30JUL10A | 04AUG10A | |
| 3AL1DO4055 | M&E works | 6 | 6 | 05AUG10A | 21AUG10A | 100 | 05AUG10A | 21AUG10A | |
| 3AL1DO4065 | Test & commissioning | 3 | 3 | 23AUG10A | 02OCT10A | 100 | 23AUG10A | 02OCT10A | |
| **Marti Conveyor** | | | | | | | | | |
| 3AL1DO4505 | Engineering | 50 | 50 | 29MAY09A | 24OCT09A | 100 | 29MAY09A | 24OCT09A | |
| 3AL1DO4515 | Pre-fabrication | 60 | 60 | 17AUG09A | 30NOV09A | 100 | 17AUG09A | 30NOV09A | |
| 3AL1DO4525 | Delivery to Hong Kong | 25 | 25 | 01DEC09A | 17DEC09A | 100 | 01DEC09A | 17DEC09A | |
| 3AL1DO4535 | Pre-assembly at Portion I | 6 | 6 | 11JAN10A | 16JAN10A | 100 | 11JAN10A | 16JAN10A | |
| 3AL1DO4555 | Install winch & extension towers | 24 | 24 | 29MAY10A | 24JUN10A | 100 | 29MAY10A | 24JUN10A | |
| 3AL1DO4565 | Install transfer conveyor | 1 | 1 | 29JUL10A | 29JUL10A | 100 | 29JUL10A | 29JUL10A | |
| 3AL1DO4575 | Install belt conveyor stage 2 | 16 | 16 | 09AUG10A | 24AUG10A | 100 | 09AUG10A | 24AUG10A | |
| 3AL1DO4585 | M&E works | 2 | 2 | 25AUG10A | 27AUG10A | 100 | 25AUG10A | 27AUG10A | |
| 3AL1DO4595 | Test & commission | 1 | 1 | 28AUG10A | 28AUG10A | 100 | 28AUG10A | 28AUG10A | |
| **LV Station** | | | | | | | | | |
| 3AL1DO5005 | Delivery & install containers 1/2/3 | 4 | 4 | 08DEC09A | 11DEC09A | 100 | 08DEC09A | 11DEC09A | |
| 3AL1DO5015 | M&E works | 12 | 12 | 12DEC09A | 14JAN10A | 100 | 12DEC09A | 14JAN10A | |
| 3AL1DO5025 | Test & commision | 12 | 12 | 15JAN10A | 25JAN10A | 100 | 15JAN10A | 25JAN10A | |
| **Cooling Water System** | | | | | | | | | |
| 3AL1DO5505 | Pre-fabrication | 53 | 53 | 18JUL09A | 07DEC09A | 100 | 18JUL09A | 07DEC09A | |
| 3AL1DO5515 | Foundation | 10 | 10 | 08DEC09A | 31DEC09A | 100 | 08DEC09A | 31DEC09A | |
| 3AL1DO5525 | Erect cooling system | 12 | 12 | 09JAN10A | 20FEB10A | 100 | 09JAN10A | 20FEB10A | |
| 3AL1DO5535 | M&E works | 4 | 4 | 22FEB10A | 27FEB10A | 100 | 22FEB10A | 27FEB10A | |
| 3AL1DO5545 | Test & commission | 2 | 2 | 26APR10A | 28APR10A | 100 | 26APR10A | 28APR10A | |
| **Grout System** | | | | | | | | | |
| 3AL1DO6005 | Pre-fabrication | 90 | 90 | 22JUN09A | 12DEC09A | 100 | 22JUN09A | 12DEC09A | |
| 3AL1DO6015 | Erect system | 6 | 6 | 02AUG10A | 10AUG10A | 100 | 02AUG10A | 10AUG10A | |
| 3AL1DO6025 | M&E works | 3 | 3 | 11AUG10A | 13AUG10A | 100 | 11AUG10A | 13AUG10A | |
| 3AL1DO6035 | Test & commission | 1 | 1 | 14AUG10A | 14AUG10A | 100 | 14AUG10A | 14AUG10A | |
| **Pea Gravel Plant** | | | | | | | | | |
| 3AL1DO7505 | Pre-fabrication | 36 | 36 | 22JUN09A | 29APR10A | 100 | 22JUN09A | 29APR10A | |
| 3AL1DO7515 | Install hopper | 4 | 4 | 02AUG10A | 04SEP10A | 100 | 02AUG10A | 04SEP10A | |
| 3AL1DO7525 | Erect conveyor | 2 | 2 | 07AUG10A | 13AUG10A | 100 | 07AUG10A | 13AUG10A | |
| 3AL1DO7535 | M&E works | 4 | 4 | 25AUG10A | 04SEP10A | 100 | 25AUG10A | 04SEP10A | |
| 3AL1DO7545 | Test & commission | 0 | 0 | | 04SEP10A | 100 | | 04SEP10A | |
| 3AL1DO7555 | Install conveyor connecting to TBM | 4 | 4 | 18AUG10A | 04SEP10A | 100 | 18AUG10A | 04SEP10A | |
| **Ventilation System** | | | | | | | | | |
| 3AL1DO8005 | Pre-fabrication | 72 | 72 | 29MAY09A | 27AUG09A | 100 | 29MAY09A | 27AUG09A | |
| 3AL1DO8015 | Erect system | 2 | 2 | 24JUL10A | 06AUG10A | 100 | 24JUL10A | 06AUG10A | |
| 3AL1DO8025 | M&E works | 1 | 1 | 07AUG10A | 07AUG10A | 100 | 07AUG10A | 07AUG10A | |
| 3AL1DO8035 | Test & commission | 1 | 1 | 09AUG10A | 09AUG10A | 100 | 09AUG10A | 09AUG10A | |



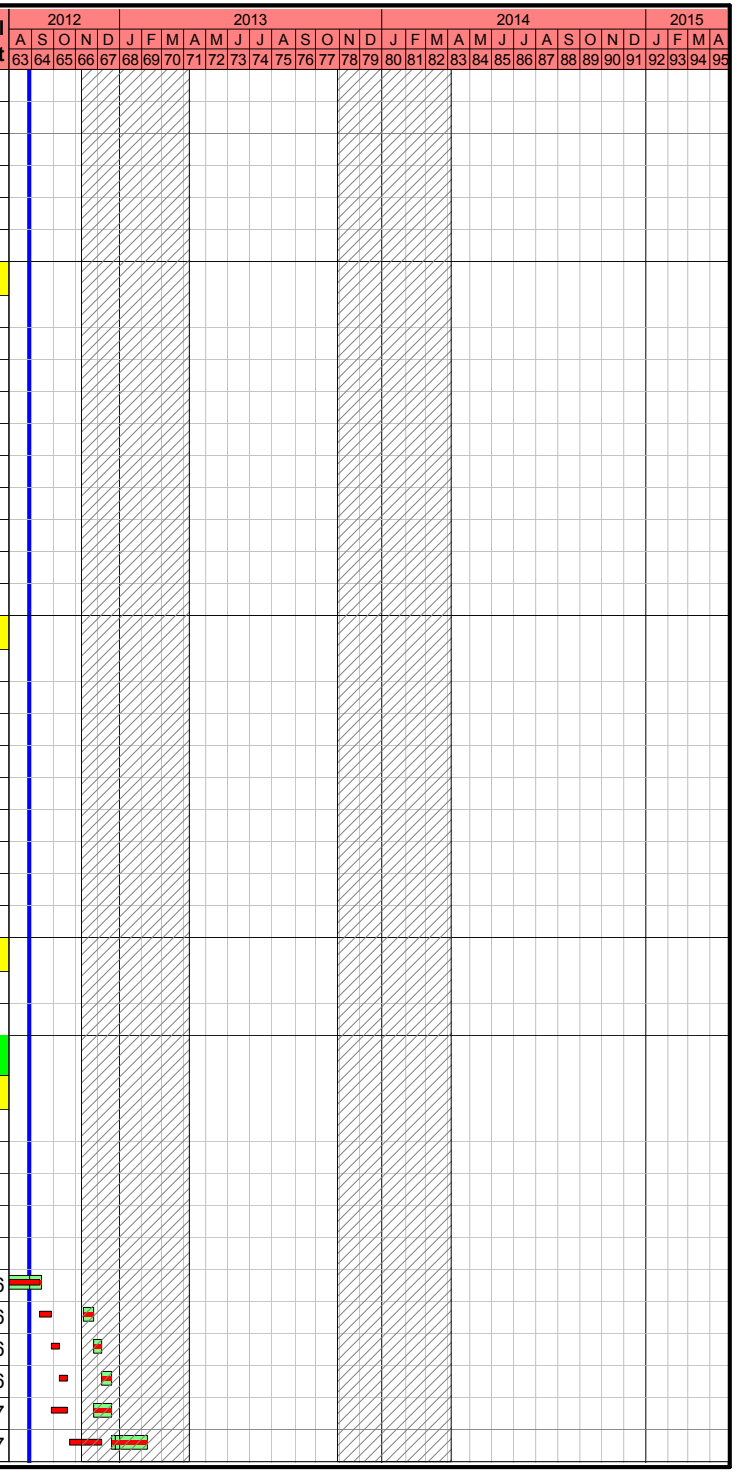
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Micsellaneous** | | | | | | | | | |
| 3AL1DO8502 | Install transformer & hormonic filter | 2 | 2 | 07JUN10A | 10JUL10A | 100 | 07JUN10A | 10JUL10A | |
| 3AL1DO8512 | Remove invert segments | 2 | 2 | 24JUL10A | 06AUG10A | 100 | 24JUL10A | 06AUG10A | |
| 3AL1DO8522 | Make good slab | 3 | 3 | 06AUG10A | 07AUG10A | 100 | 06AUG10A | 07AUG10A | |
| 3AL1DO8532 | Install rail switch | 1 | 1 | 23AUG10A | 24AUG10A | 100 | 23AUG10A | 24AUG10A | |
| **VO # 49 & 53; Additional Drainage & Stairway** | | | | | | | | | |
| VO-04910 | Received Variation orders | 0 | 0 | | 26FEB09A | 100 | | 26FEB09A | |
| VO-04920 | Preparation works for varied works | 14 | 14 | 27FEB09A | 14MAR09A | 100 | 27FEB09A | 14MAR09A | |
| VO-04930 | Construct u-channel & stairway; +71mPD to +55mPD | 60 | 60 | 16MAR09A | 29MAY09A | 100 | 16MAR09A | 29MAY09A | |
| VO-04940 | Construct u-channel & stairway;+55mPD to +47mPD | 27 | 27 | 05JUN09A | 07JUL09A | 100 | 05JUN09A | 07JUL09A | |
| VO-04950 | Construct u-channel & stairway; +47mPD to +41mPD | 40 | 40 | 08JUL09A | 08AUG09A | 100 | 08JUL09A | 08AUG09A | |
| VO-04960 | Construct u-channel & stairway at middle portion | 60 | 60 | 01NOV12* | 12JAN13 | 0 | 30MAR12 | 14JUN12 | -365 |
| **VO #88/#094/#103; Revised Slope Design** | | | | | | | | | |
| VO-088000 | Received VO #088 | 0 | 0 | | 27MAY09A | 100 | | 27MAY09A | |
| VO-088005 | Excavate from 38.5mPD to 36.5mPD | 6 | 6 | 29MAY09A | 04JUN09A | 100 | 29MAY09A | 04JUN09A | |
| VO-088010 | Procure and prepare materials | 9 | 9 | 29MAY09A | 08JUN09A | 100 | 29MAY09A | 08JUN09A | |
| VO-088015 | SOR confirm soil nails location | 2 | 2 | 05JUN09A | 06JUN09A | 100 | 05JUN09A | 06JUN09A | |
| VO-088020 | Drill/install/grout soil nails; rows AA-AB | 7 | 7 | 09JUN09A | 16JUN09A | 100 | 09JUN09A | 16JUN09A | |
| VO-088025 | Install wire mesh & shorcrete 150mm | 3 | 3 | 17JUN09A | 19JUN09A | 100 | 17JUN09A | 19JUN09A | |
| VO-088030 | Excavate from +36.5 mPD to 34.5mPD | 6 | 6 | 20JUN09A | 26JUN09A | 100 | 20JUN09A | 26JUN09A | |
| VO-088035 | SOR confirm soil nails location | 2 | 2 | 27JUN09A | 29JUN09A | 100 | 27JUN09A | 29JUN09A | |
| VO-088040 | Drill/install/grout soil nails; rows AC-AD | 7 | 7 | 30JUN09A | 08JUL09A | 100 | 30JUN09A | 08JUL09A | |
| VO-088045 | Install wire mesh & shorcrete 150mm | 3 | 3 | 09JUL09A | 11JUL09A | 100 | 09JUL09A | 11JUL09A | |
| VO-088050 | Excavate from +34.5 mPD to 32.5mPD | 6 | 6 | 13JUL09A | 18JUL09A | 100 | 13JUL09A | 18JUL09A | |
| VO-088055 | SOR confirm soil nails location | 2 | 2 | 20JUL09A | 21JUL09A | 100 | 20JUL09A | 21JUL09A | |
| VO-088060 | Drill/install/grout soil nails; rows AE-AF | 7 | 7 | 22JUL09A | 29JUL09A | 100 | 22JUL09A | 29JUL09A | |
| VO-088065 | Install wire mesh & shorcrete 150mm | 3 | 3 | 30JUL09A | 01AUG09A | 100 | 30JUL09A | 01AUG09A | |
| VO-088070 | Excavate from +34.5 mPD to 32.5mPD | 6 | 6 | 03AUG09A | 18AUG09A | 100 | 03AUG09A | 18AUG09A | |
| VO-088075 | SOR confirm soil nails location | 2 | 2 | 17AUG09A | 18AUG09A | 100 | 17AUG09A | 18AUG09A | |
| VO-088080 | Drill/install/grout soil nails; row AG | 5 | 5 | 19AUG09A | 24AUG09A | 100 | 19AUG09A | 24AUG09A | |
| VO-088085 | Install wire mesh & shorcrete 150mm | 3 | 3 | 25AUG09A | 28AUG09A | 100 | 25AUG09A | 28AUG09A | |
| VO-10302 | Drill & install rock dowels below +30 to 24mPD | 6 | 6 | 06OCT09A | 19NOV09A | 100 | 06OCT09A | 19NOV09A | |
| **Instruction from SOR/VO#093 Add. Noise Barriers** | | | | | | | | | |
| SORI-10 | Suspension of rock drilling & breaking | 1 | 1 | 20JUN09A | 20JUN09A | 100 | 20JUN09A | 20JUN09A | |
| SORI-20 | Erection/relocation of noise bearriers | 30 | 30 | 22JUN09A | 10NOV09A | 100 | 22JUN09A | 10NOV09A | |
| **Construct Spiral Ramp** | | | | | | | | | |
| **ELS & Excavation for Spiral Ramp** | | | | | | | | | |
| 10R1DELS02 | Install pipe piles/slope trim & protection works | 104 | 104 | 01JUN10A | 04OCT10A | 100 | 01JUN10A | 04OCT10A | |
| 10R1DELS12 | Pre-drilling for rock breaking & splitting | 26 | 26 | 20AUG10A | 18SEP10A | 100 | 20AUG10A | 18SEP10A | |
| 10R1DELS22 | Excavate to +13.5mPD & construct capping beam | 24 | 24 | 20SEP10A | 26OCT10A | 100 | 20SEP10A | 26OCT10A | |
| 10R1DELS32 | Excavate/rock dowels/ring beam/shotcete; 11.5mPD | 30 | 30 | 27OCT10A | 06DEC10A | 100 | 27OCT10A | 06DEC10A | |
| 10R1DELS42 | Excavate/rock dowels/ring beam/shotcrete; 9.5mPD | 33 | 33 | 07DEC10A | 13JAN11A | 100 | 07DEC10A | 13JAN11A | |
| 10R1DELS52 | Excavate/rock dowels/ring beam/shotcrete; 7.5mPD | 37 | 37 | 14JAN11A | 01MAR11A | 100 | 14JAN11A | 01MAR11A | |



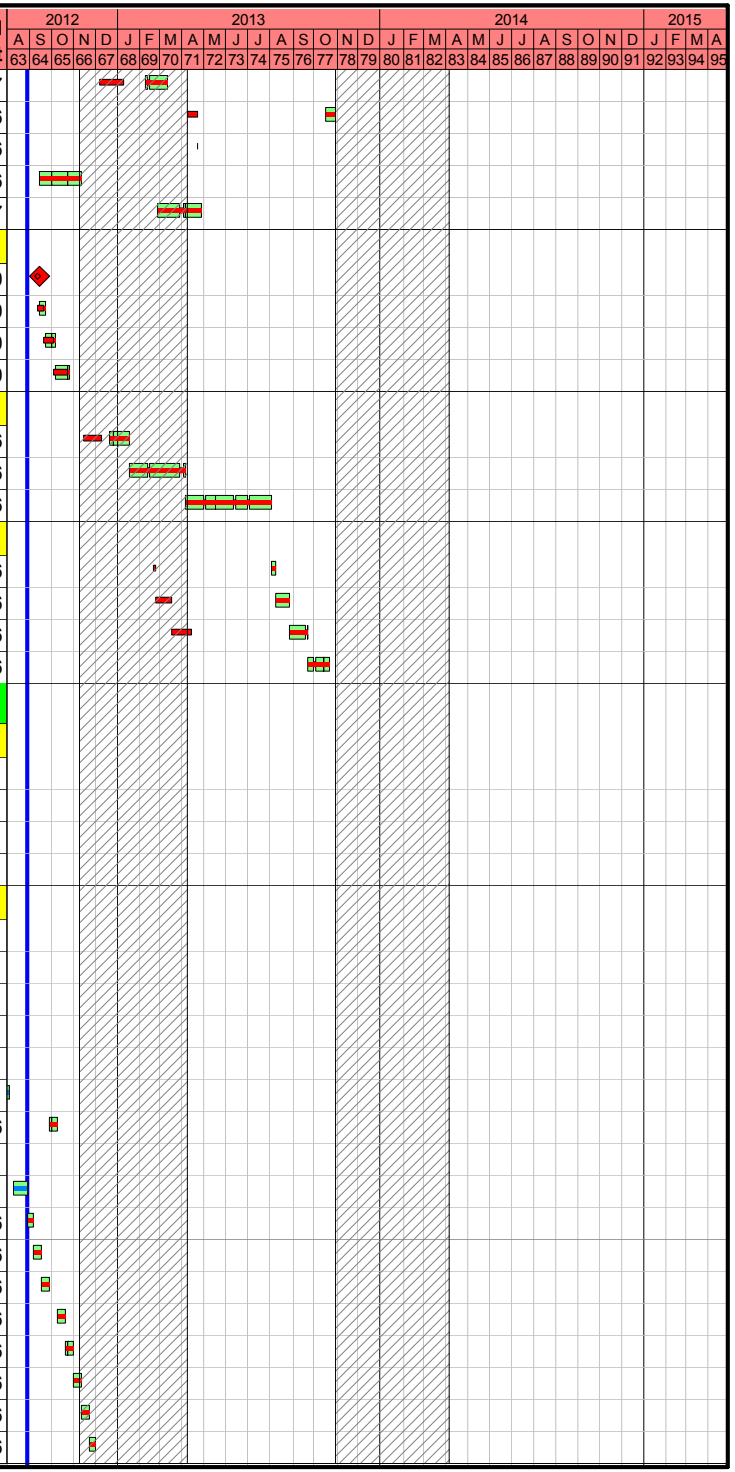
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 10R1DELS62 | Excavate/rock dowels/ring beam/shotcre;3.2mPD | 82 | 82 | 02MAR11A | 08JUN11A | 100 | 02MAR11A | 08JUN11A | |
| **Base for Spiral Ramp** | | | | | | | | | |
| 10R1DO0414 | Construct base | 14 | 14 | 09JUN11A | 20JUN11A | 100 | 09JUN11A | 20JUN11A | |
| **Spiral Ramp from +4.30mPD to +28.43mPD** | | | | | | | | | |
| 10R1DO0S02 | Cast bay 1A | 28 | 28 | 21JUN11A | 23JUL11A | 100 | 21JUN11A | 23JUL11A | |
| 10R1DO0S03 | Cast bay 1B | 11 | 11 | 25JUL11A | 04AUG11A | 100 | 25JUL11A | 04AUG11A | |
| 10R1DO0S04 | Cast bay 2 | 11 | 11 | 05AUG11A | 30AUG11A | 100 | 05AUG11A | 30AUG11A | |
| 10R1DO0S06 | Cast bay 3 | 11 | 11 | 27AUG11A | 08SEP11A | 100 | 27AUG11A | 08SEP11A | |
| 10R1DO0S08 | Cast bay 4 | 8 | 8 | 05SEP11A | 20SEP11A | 100 | 05SEP11A | 20SEP11A | |
| 10R1DO0S10 | Cast bay 5 | 8 | 8 | 09SEP11A | 04OCT11A | 100 | 09SEP11A | 04OCT11A | |
| 10R1DO0S12 | Cast bay 6 | 8 | 8 | 06OCT11A | 18OCT11A | 100 | 06OCT11A | 18OCT11A | |
| 10R1DO0S14 | Cast bay 7 | 8 | 8 | 24OCT11A | 08NOV11A | 100 | 24OCT11A | 08NOV11A | |
| 10R1DO0S16 | Cast bay 8 | 8 | 8 | 07NOV11A | 16NOV11A | 100 | 07NOV11A | 16NOV11A | |
| 10R1DO0S18 | Cast bay 9 | 8 | 8 | 14NOV11A | 24NOV11A | 100 | 14NOV11A | 24NOV11A | |
| 10R1DO0S20 | Cast bay 10 | 8 | 8 | 25NOV11A | 02DEC11A | 100 | 25NOV11A | 02DEC11A | |
| 10R1DO0S22 | Cast bay 11 | 8 | 8 | 01DEC11A | 12DEC11A | 100 | 01DEC11A | 12DEC11A | |
| 10R1DO0S24 | Cast bay 12 | 8 | 8 | 09DEC11A | 22DEC11A | 100 | 09DEC11A | 22DEC11A | |
| 10R1DO0S26 | Cast bay 13 | 8 | 8 | 19DEC11A | 16JAN12A | 100 | 19DEC11A | 16JAN12A | |
| 10R1DO0S28 | Cast bay 14 | 8 | 8 | 03JAN12A | 20JAN12A | 100 | 03JAN12A | 20JAN12A | |
| 10R1DO0S29 | Cast bay 15 | 31 | 31 | 16JAN12A | 21FEB12A | 100 | 16JAN12A | 21FEB12A | |
| 10R1DO0S30 | Preparation & fill central void; | 11 | 11 | 23APR12A | 27JUL12A | 100 | 29MAR12 | 14APR12 | |
| 10R1DO0S32 | Construct spiral ramp top; Outfall O-1 | 8 | 8 | 28JUL12A | 04AUG12A | 100 | 16APR12 | 24APR12 | |
| **Finishing Works on Spiral Ramp** | | | | | | | | | |
| 10R1DO0F10 | Install handrails | 16 | 16 | 01NOV12* | 19NOV12 | 0 | 25APR12 | 15MAY12 | -512 |
| 10R1DO0F20 | Water proofing works | 24 | 24 | 20NOV12 | 17DEC12 | 0 | 16MAY12 | 12JUN12 | -512 |
| 10R1DO0F30 | Tiling works | 48 | 48 | 18DEC12 | 18FEB13 | 0 | 13JUN12 | 09AUG12 | -512 |
| 10R1DO0F40 | Install GRP | 29 | 29 | 19FEB13 | 23MAR13 | 0 | 10AUG12 | 12SEP12 | -512 |
| PVO-TR-20 | Vertical greening & water points at Spiral Ramp | 48 | 0 | 25MAR13 | 25MAY13 | 0 | | | -512 |
| **Lower Part Box Culvert/Open Channel by Open Cut** | | | | | | | | | |
| **Approval for TTA & XP** | | | | | | | | | |
| 10R1DOD102 | Prepare TTA scheme | 100 | 100 | 28FEB09A | 30MAY09A | 100 | 28FEB09A | 30MAY09A | |
| 10R1DOD104 | Obtain TTA approval from rel. authorities/SOR | 60 | 60 | 02JUN09A | 17NOV09A | 100 | 02JUN09A | 17NOV09A | |
| 10R1DOD106 | Obtain XP from HyD | 60 | 60 | 28SEP09A | 04DEC09A | 100 | 28SEP09A | 04DEC09A | |
| 10R1DOD108 | Preparatory works prior to implement TTA | 59 | 59 | 04JAN10A | 15JUN10A | 100 | 04JAN10A | 15JUN10A | |
| **Stage 1 TTA; Fast Lane Closure of E/B C'way** | | | | | | | | | |
| 10R1DOD202 | Trial run to close one lane of E/B C'way | 1 | 1 | 13JUL10A | 13JUL10A | 100 | 13JUL10A | 13JUL10A | |
| 10R1DOD212 | Trial pit excavation | 28 | 28 | 17JUN10A | 07AUG10A | 100 | 17JUN10A | 07AUG10A | |
| 10R1DOD222 | Install stage 1(32#) pipe piles | 60 | 60 | 09AUG10A | 20OCT10A | 100 | 09AUG10A | 20OCT10A | |
| 10R1DOD224 | Drainage & traffic diversion to close fast lane | 13 | 13 | 21OCT10A | 04NOV10A | 100 | 21OCT10A | 04NOV10A | |
| 10R1DOD226 | Install stg 2 (25# pipe piles) & 10# king posts | 42 | 42 | 17NOV10A | 26JAN11A | 100 | 17NOV10A | 26JAN11A | |
| 10R1DOD232 | Excavation & temp. support to exist. services | 149 | 149 | 29NOV10A | 29JUN11A | 100 | 29NOV10A | 29JUN11A | |
| 10R1DOD330 | Construct box culvert incl upstand wall | 47 | 47 | 27JUN11A | 20AUG11A | 100 | 27JUN11A | 20AUG11A | |
| 10R1DOD430 | Backfill up to base of retain. wall & blinding | 11 | 11 | 22AUG11A | 03SEP11A | 100 | 22AUG11A | 03SEP11A | |



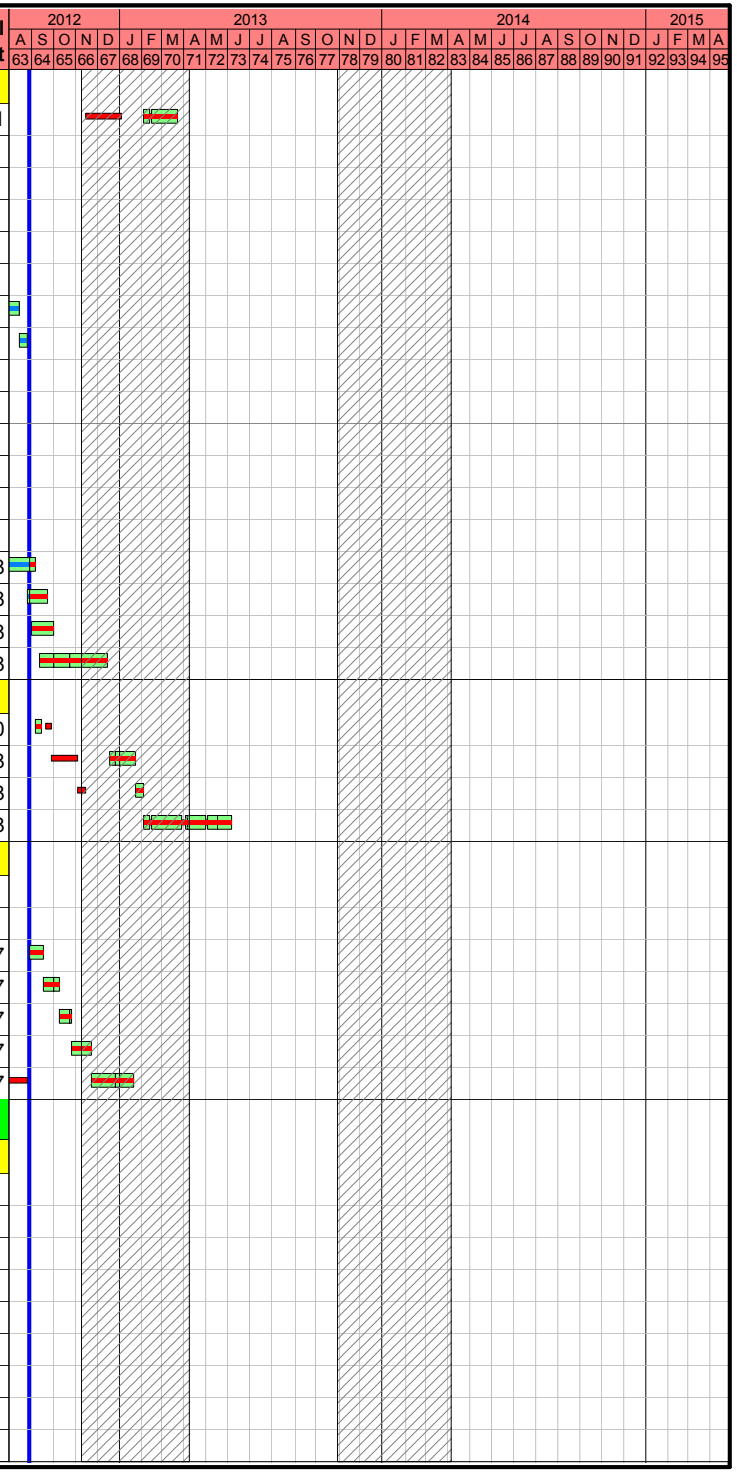
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 10R1DOD440 | Construct base for L-shapped retaining wall | 14 | 14 | 02SEP11A | 22SEP11A | 100 | 02SEP11A | 22SEP11A | |
| 10R1DOD442 | Reinst. sewer pipe/modify supports to watermain | 12 | 12 | 17OCT11A | 27OCT11A | 100 | 17OCT11A | 27OCT11A | |
| 10R1DOD444 | Construct wall for L-shapped retaining wall | 23 | 23 | 12SEP11A | 22OCT11A | 100 | 12SEP11A | 22OCT11A | |
| 10R1DOD450 | Backfill to top & remove temp. supports | 24 | 24 | 07OCT11A | 30NOV11A | 100 | 07OCT11A | 30NOV11A | |
| 10R1DOD460 | Road works | 12 | 12 | 01DEC11A | 19DEC11A | 100 | 01DEC11A | 19DEC11A | |
| 10R1DOD470 | Re-open fast lane of E/B C'way | 1 | 1 | 21DEC11A | 21DEC11A | 100 | 21DEC11A | 21DEC11A | |
| **Open Channel Between Box Culvert & Seawall; East** | | | | | | | | | |
| 10R1DOE005 | Formation & blinding | 6 | 6 | 05SEP11A | 15SEP11A | 100 | 05SEP11A | 15SEP11A | |
| 10R1DOE015 | Base inside Arch Bridge | 7 | 7 | 15SEP11A | 03OCT11A | 100 | 15SEP11A | 03OCT11A | |
| 10R1DOE025 | Walls inside Arch Bridge | 20 | 20 | 06OCT11A | 08DEC11A | 100 | 06OCT11A | 08DEC11A | |
| 10R1DOE030 | Delivery of formliner at site | 0 | 0 | | 04OCT11A | 100 | | 04OCT11A | |
| 10R1DOE035 | Coping at East end with formlier | 12 | 12 | 10OCT11A | 24OCT11A | 100 | 10OCT11A | 24OCT11A | |
| 10R1DOE045 | Base of T Shapped Wall | 7 | 7 | 27OCT11A | 02NOV11A | 100 | 27OCT11A | 02NOV11A | |
| 10R1DOE055 | Wall of T Shapped Wall with formliner | 10 | 10 | 03NOV11A | 09NOV11A | 100 | 03NOV11A | 09NOV11A | |
| 10R1DOE065 | Base outside Arch Bridge | 7 | 7 | 10NOV11A | 15NOV11A | 100 | 10NOV11A | 15NOV11A | |
| 10R1DOE075 | Wall outside Arch Bridge with formliner | 10 | 10 | 16NOV11A | 23NOV11A | 100 | 16NOV11A | 23NOV11A | |
| 10R1DOE085 | Reinstage rock armour | 24 | 24 | 28NOV11A | 09JAN12A | 100 | 28NOV11A | 09JAN12A | |
| **Open Channel Between Box Culvert & Seawall; West** | | | | | | | | | |
| 10R1DOW005 | Formation & blinding | 6 | 6 | 12SEP11A | 21SEP11A | 100 | 12SEP11A | 21SEP11A | |
| 10R1DOW015 | Base inside Arch Bridge | 7 | 7 | 04OCT11A | 11OCT11A | 100 | 04OCT11A | 11OCT11A | |
| 10R1DOW025 | Walls inside Arch Bridge | 20 | 20 | 18OCT11A | 28NOV11A | 100 | 18OCT11A | 28NOV11A | |
| 10R1DOW035 | Coping at West end with formliner | 12 | 12 | 25OCT11A | 27OCT11A | 100 | 25OCT11A | 27OCT11A | |
| 10R1DOW045 | Base of T Shapped Wall | 7 | 7 | 02NOV11A | 09NOV11A | 100 | 02NOV11A | 09NOV11A | |
| 10R1DOW055 | Wall of T Shapped Wall with formliner | 10 | 10 | 10NOV11A | 17NOV11A | 100 | 10NOV11A | 17NOV11A | |
| 10R1DOW065 | Base outside Arch Bridge | 7 | 7 | 21NOV11A | 25NOV11A | 100 | 21NOV11A | 25NOV11A | |
| 10R1DOW075 | Wall outside Arch Bridge with formliner | 10 | 10 | 26NOV11A | 30NOV11A | 100 | 26NOV11A | 30NOV11A | |
| 10R1DOW085 | Reinstage rock armour | 50 | 50 | 30JAN12A | 20MAR12A | 100 | 30JAN12A | 24MAR12 | |
| **Coping & Baffle Walls** | | | | | | | | | |
| 10R1DOM005 | Seawall coping with formliner; 9 bays | 18 | 18 | 28OCT11A | 21NOV11A | 100 | 28OCT11A | 21NOV11A | |
| 10R1DOM015 | Type G baffle walls with formliner; 16# | 16 | 16 | 05DEC11A | 04FEB12A | 100 | 05DEC11A | 04FEB12A | |
| **Vehicular Access/Upper Box Culvert/Cascade** | | | | | | | | | |
| **Stage 2 TTA; Upper B/C/Lower Cascade/V. Access** | | | | | | | | | |
| 10ELS002 | TBM advance to Ch. 0.00 | 0 | 0 | | 28FEB12A | 100 | | 28FEB12 | |
| 10ELS012 | Removel of Muck Hopper | 24 | 24 | 01MAR12A | 28MAR12A | 100 | 01MAR12 | 28MAR12 | |
| 10ELS014 | Trial pits/identify utilities/elevated footpath | 64 | 64 | 22DEC11A | 27MAR12A | 100 | 22DEC11A | 12MAR12 | |
| 10ELS022 | Install 27# pipe piles | 34 | 34 | 09JAN12A | 20FEB12A | 100 | 09JAN12A | 20FEB12A | |
| 10ELS032 | Install remaining 15# pipe piles | 24 | 24 | 29MAR12A | 25APR12A | 100 | 29MAR12 | 02MAY12 | |
| 10R1DO0706 | Excavate & temp. support to services incl. V. A. | 135 | 135 | 29MAR12A | 13SEP12 | 89 | 29MAR12 | 11SEP12 | -606 |
| 10R1DO0707 | Construct base slab; 690m3 (2 pours) | 13 | 13 | 12NOV12 | 26NOV12 | 0 | 12SEP12 | 26SEP12 | -606 |
| 10R1DO0708 | Construct step 1; 403m3 | 10 | 10 | 27NOV12 | 07DEC12 | 0 | 27SEP12 | 09OCT12 | -606 |
| 10R1DO0709 | Construct step 2 & 3; 362m3 | 10 | 10 | 08DEC12 | 19DEC12 | 0 | 10OCT12 | 20OCT12 | -606 |
| 10R1DO0710 | Construct type F baffle walls; 8# | 20 | 20 | 27NOV12 | 19DEC12 | 0 | 27SEP12 | 20OCT12 | -527 |
| 10R1DO0712 | Construct walls, roof & upstand; 860m3 (4 pours) | 40 | 40 | 20DEC12 | 07FEB13 | 0 | 22OCT12 | 07DEC12 | -527 |



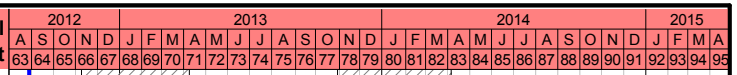
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 10R1DO0716 | Backfill include removal of king posts | 24 | 24 | 08FEB13 | 11MAR13 | 0 | 08DEC12 | 08JAN13 | -527 |
| 10R1DO0726 | Road paving & reinstate footpath | 12 | 12 | 16OCT13 | 29OCT13 | 0 | 08APR13 | 20APR13 | -606 |
| 10R1DO0728 | Re-open slow lane of E/B C'way | 1 | 1 | 30OCT13 | 30OCT13 | 0 | 22APR13 | 22APR13 | -606 |
| 10R1DO0736 | Additional ELS & key excavation | 48 | 0 | 14SEP12 | 10NOV12 | 0 | | | -606 |
| PVO-W-10 | Modification of existing Outfall "W" | 48 | 0 | 26FEB13 | 26APR13 | 0 | | | -527 |
| **Construction of Vehicular Access** | | | | | | | | | |
| 10R1DO0407 | Complete excavation with open cut/blinding | 0 | 0 | | 13SEP12 | 0 | | 11SEP12 | -440 |
| 10R1DO0408 | Construct base | 8 | 8 | 14SEP12 | 22SEP12 | 0 | 12SEP12 | 20SEP12 | -440 |
| 10R1DO0410 | Construct walls | 10 | 10 | 24SEP12 | 05OCT12 | 0 | 21SEP12 | 03OCT12 | -440 |
| 10R1DO0412 | Construct roof | 16 | 16 | 06OCT12 | 25OCT12 | 0 | 04OCT12 | 22OCT12 | -440 |
| **Construction of Upper Cascade; Bays 16-21** | | | | | | | | | |
| 10R1DO0730 | Construct base (1682m3); (6x7)/2=21 days | 21 | 21 | 20DEC12 | 16JAN13 | 0 | 15NOV12 | 08DEC12 | -606 |
| VO-245-200 | Construct walls; 15 pours | 60 | 0 | 17JAN13 | 03APR13 | 0 | | | -606 |
| VODLNDAD60 | Construct roof & planter wall; 6 pours | 98 | 0 | 05APR13 | 01AUG13 | 0 | | | -606 |
| **Reinstate Slope at West of Spiral Ramp** | | | | | | | | | |
| 10R1DOSW10 | Removal of Tower Crane | 4 | 4 | 02AUG13 | 06AUG13 | 0 | 19FEB13 | 22FEB13 | -606 |
| 10R1DOSW20 | Excavate & construct mass conc. walls | 18 | 18 | 07AUG13 | 27AUG13 | 0 | 23FEB13 | 15MAR13 | -606 |
| 10R1DOSW30 | Slope reinstatement & drainage works | 21 | 21 | 28AUG13 | 21SEP13 | 0 | 16MAR13 | 13APR13 | -606 |
| VOADIS10 | Additional Irrigation Sys Pump House | 24 | 0 | 23SEP13 | 22OCT13 | 0 | | | -606 |
| **Permanent Works at +24mPD** | | | | | | | | | |
| **Removal of TBM Services & Excavation at +24mPD** | | | | | | | | | |
| 10R1DO0600 | Remove TBM services from tunnel; 24 hrs works | 24 | 24 | 02MAR12A | 30APR12A | 100 | 02MAR12 | 29MAR12 | |
| 10R1DO0601 | Remove TBM serivces outside tunel; day time | 44 | 44 | 02MAR12A | 09JUN12A | 100 | 02MAR12 | 26APR12 | |
| 10R1DO0602 | Excavate tapered channel inside Noise Enclosure | 25 | 25 | 18APR12A | 16JUN12A | 100 | 30MAR12 | 04MAY12 | |
| 10R1DO0603 | Excavate tapered channel outside Noise Enclosre | 32 | 32 | 21MAY12A | 10JUL12A | 100 | 05MAY12 | 11JUN12 | |
| **Construction of Buttress Wall (VO#233)** | | | | | | | | | |
| VO-233-005 | Receive VO#233 | 0 | 0 | 19APR12A | | 100 | | | |
| VO-233-010 | Excavation/Formation/Blinding | 9 | 0 | 14MAY12A | 23MAY12A | 100 | | | |
| VO-233-015 | Bay B, 1st pour; +23.8mPD~+27.0mPD | 9 | 0 | 24MAY12A | 02JUN12A | 100 | | | |
| VO-233-020 | Bay B, 2nd pour; +27mPD~+31mPD | 11 | 0 | 04JUN12A | 15JUN12A | 100 | | | |
| VO-233-025 | Bay B, 3rd pour; +31.0mPD~+35.0mPD | 13 | 0 | 26JUN12A | 11JUL12A | 100 | | | |
| VO-233-030 | Bay B, 4th pour; +35.0mPD~+39.0mPD | 20 | 0 | 12JUL12A | 03AUG12A | 100 | | | |
| VO-233-035 | Bay B, Upper planter wall | 9 | 0 | 28SEP12 | 09OCT12 | 0 | | | -546 |
| VO-233-040 | Bay A, 1st pour; +23.8mPD~+27.0mPD | 7 | 0 | 16JUN12A | 25JUN12A | 100 | | | |
| VO-233-045 | Bay A, 2nd pour; +27mPD~+31mPD | 15 | 0 | 10AUG12A | 27AUG12A | 100 | | | |
| VO-233-050 | Bay A, 3rd pour; +31.0mPD~+35.0mPD | 9 | 0 | 28AUG12 | 06SEP12 | 0 | | | -546 |
| VO-233-055 | Bay A, 4th pour; +35.0mPD~+39.0mPD | 9 | 0 | 07SEP12 | 17SEP12 | 0 | | | -546 |
| VO-233-060 | Bay A, Upper planter wall | 9 | 0 | 18SEP12 | 27SEP12 | 0 | | | -546 |
| VO-233-065 | Bay C, 1st pour; +23.8mPD~+27.0mPD | 9 | 0 | 10OCT12 | 19OCT12 | 0 | | | -546 |
| VO-233-070 | Bay C, 2nd pour; +27.0mPD~+31.0mPD | 9 | 0 | 20OCT12 | 31OCT12 | 0 | | | -546 |
| VO-233-075 | Bay C, 3rd pour; +31.0mPD~+35.0mPD | 9 | 0 | 01NOV12 | 10NOV12 | 0 | | | -546 |
| VO-233-085 | Bay C, 4th pour; +35.0mPD~+39.0mPD | 9 | 0 | 12NOV12 | 21NOV12 | 0 | | | -546 |
| VO-233-090 | Bay C, Upper planter wall | 9 | 0 | 22NOV12 | 01DEC12 | 0 | | | -546 |



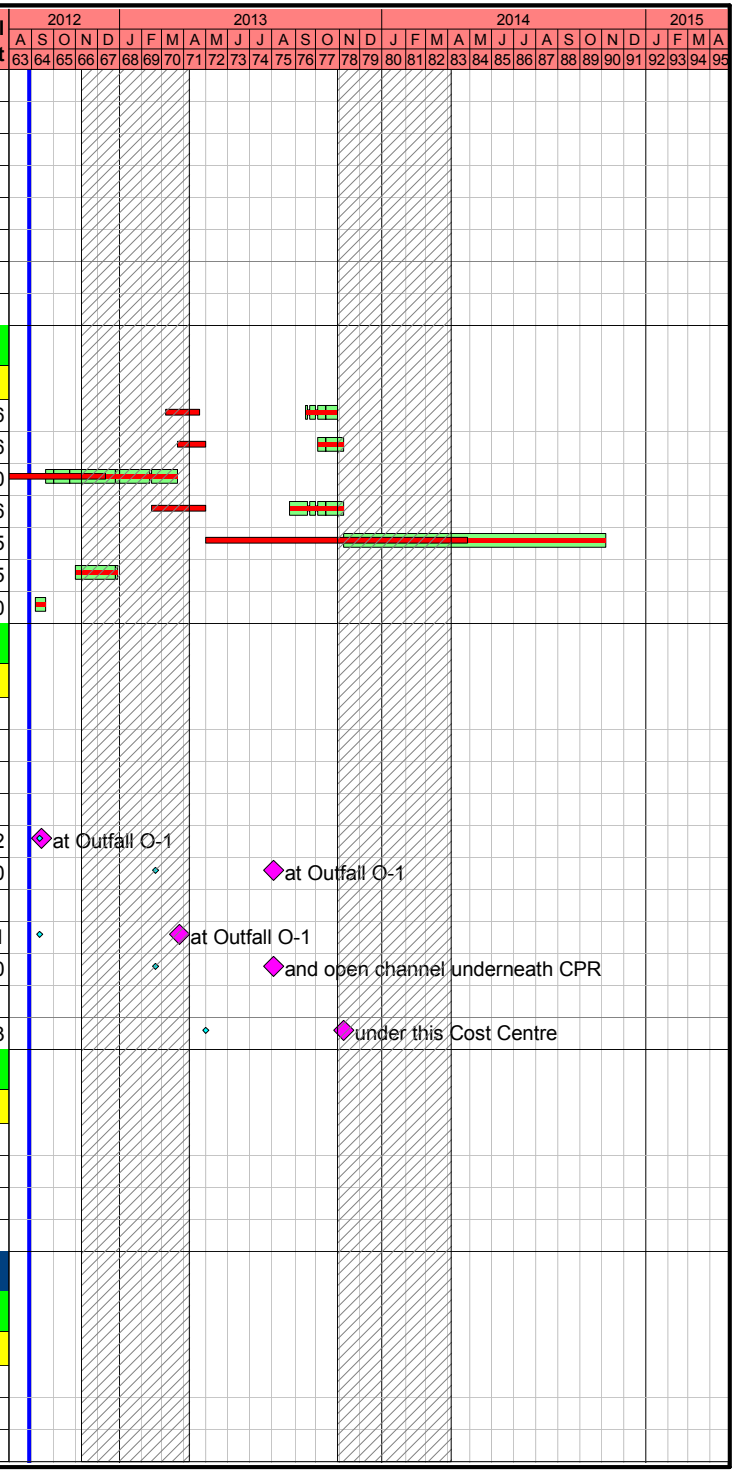
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| **Construction of Tapered Channel (VO#245)** | | | | | | | | | |
| 10R1DO0644 | Install penstock & testing | 39 | 39 | 02FEB13 | 22MAR13 | 0 | 15NOV12 | 02JAN13 | -501 |
| VO-245-005 | Receive VO#245 | 0 | 0 | 19APR12A | | 100 | | | |
| VO-245-010 | Bay B1; Blinding & survey setting out | 2 | 0 | 23MAY12A | 24MAY12A | 100 | | | |
| VO-245-015 | Bay B1; Base slab | 14 | 0 | 25MAY12A | 12JUN12A | 100 | | | |
| VO-245-020 | Bay B1; Wall B1A | 15 | 0 | 13JUN12A | 10JUL12A | 100 | | | |
| VO-245-025 | Bay B1; Wall B1B | 15 | 0 | 11JUL12A | 25JUL12A | 100 | | | |
| VO-245-030 | Bay B1; Wall B1C | 15 | 0 | 26JUL12A | 13AUG12A | 100 | | | |
| VO-245-035 | Bay B1; Wall B1D | 15 | 0 | 14AUG12A | 25AUG12A | 100 | | | |
| VO-245-040 | Bay B2A; Blinding & survey setting out | 2 | 0 | 16JUN12A | 16JUN12A | 100 | | | |
| VO-245-045 | Bay B2A; Base slab | 10 | 0 | 19JUN12A | 29JUN12A | 100 | | | |
| VO-245-060 | Bay B2B; Blinding & survey setting out | 2 | 0 | 25JUN12A | 27JUN12A | 100 | | | |
| VO-245-065 | Bay B2B; Base slab | 10 | 0 | 28JUN12A | 09JUL12A | 100 | | | |
| VO-245-080 | Bay B2C; Blinding & survey setting out | 2 | 0 | 11JUL12A | 20JUL12A | 100 | | | |
| VO-245-085 | Bay B2C; Base slab | 10 | 0 | 13JUL12A | 31JUL12A | 100 | | | |
| VO-245-090 | Walls for Bay 2A, 2B and 2C | 56 | 0 | 30JUN12A | 04SEP12 | 87 | | | -558 |
| VO-245-105 | Baffle walls (28#) | 25 | 0 | 25AUG12A | 22SEP12 | 8 | | | -558 |
| VO-245-115 | Columns (12#) | 25 | 0 | 01SEP12 | 29SEP12 | 0 | | | -558 |
| VODLNDAD10 | Construct additional landscap deck | 80 | 0 | 12SEP12 | 15DEC12 | 0 | | | -558 |
| **Platform at East of Tappered Channel** | | | | | | | | | |
| 10R1DO0P10 | Formation | 8 | 8 | 05SEP12 | 13SEP12 | 0 | 20SEP12 | 28SEP12 | -480 |
| 10R1DO0P20 | Const. slope toe planter wall/surface drainage | 28 | 28 | 17DEC12 | 21JAN13 | 0 | 29SEP12 | 02NOV12 | -558 |
| 10R1DO0P30 | Lay sub-base & construct slab | 10 | 10 | 22JAN13 | 01FEB13 | 0 | 03NOV12 | 14NOV12 | -558 |
| VOADT-10 | Additional Trellis | 96 | 0 | 02FEB13 | 04JUN13 | 0 | | | -558 |
| **Reinstate Slope at North & East of Spiral Ramp** | | | | | | | | | |
| 10R1DO0E10 | Prepare slope reinstatement report | 49 | 49 | 20JUN11A | 31MAY12A | 100 | 20JUN11A | 09MAR12 | |
| 10R1DO0E30 | Obtain consent from SOR & GEO | 170 | 170 | 08SEP11A | 14JUL12A | 100 | 08SEP11A | 09MAY12 | |
| 10R1DO0E35 | CLP disconnect power to TR | 18 | 0 | 28AUG12 | 17SEP12 | 0 | | | -557 |
| 10R1DO0E40 | Demolish transformer room | 18 | 18 | 18SEP12 | 09OCT12 | 0 | 25APR12 | 17MAY12 | -557 |
| 10R1DO0E50 | Construct ret. wall at entrance of Spiral Ramp | 12 | 12 | 10OCT12 | 24OCT12 | 0 | 18MAY12 | 31MAY12 | -557 |
| 10R1DO0E60 | Reinstate slope; +14mPD to +21mPD | 24 | 24 | 25OCT12 | 21NOV12 | 0 | 01JUN12 | 29JUN12 | -557 |
| 10R1DO0E70 | Reinstate slope; +21mPD to +28mPD | 48 | 48 | 22NOV12 | 19JAN13 | 0 | 30JUN12 | 25AUG12 | -557 |
| **Seabed Protection Works** | | | | | | | | | |
| **Preliminary Works As Per VO#061** | | | | | | | | | |
| 10R1DO0502 | Site possession of Portion E-650d of DOC | 0 | 0 | 09JUL09A | | 100 | 09JUL09A | | |
| VO061-002 | Receive VO # 061 | 0 | 0 | | 30JUN09A | 100 | | 30JUN09A | |
| VO061-004 | Appoint Independent Hydrographic Surveyor | 60 | 60 | 02JUL09A | 26SEP09A | 100 | 02JUL09A | 26SEP09A | |
| VO061-006 | Carry out sounding survey | 6 | 6 | 02OCT09A | 10OCT09A | 100 | 02OCT09A | 10OCT09A | |
| VO061-008 | Prepare/submit drwgs./report of sounding survey | 6 | 6 | 04NOV09A | 03NOV09A | 100 | 04NOV09A | 03NOV09A | |
| VO061-010 | SOR approves drwgs./report of sounding survey | 6 | 6 | 04NOV09A | 10NOV09A | 100 | 04NOV09A | 10NOV09A | |
| VO061-012 | SOR issue Supplm. Environmental Review Report | 30 | 30 | 02JUL09A | 05OCT09A | 100 | 02JUL09A | 05OCT09A | |
| VO061-014 | Apply for Variation to FEP | 6 | 6 | 05OCT09A | 05OCT09A | 100 | 05OCT09A | 05OCT09A | |
| VO061-016 | EPD review/issue FEP | 30 | 30 | 06OCT09A | 28OCT09A | 100 | 06OCT09A | 28OCT09A | |



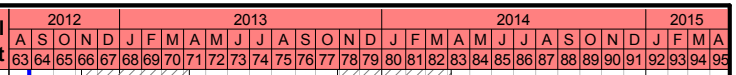
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| VO061-018 | Prepare/submit Revised EM&A Manual by ET | 30 | 30 | 29OCT09A | 02DEC09A | 100 | 29OCT09A | 02DEC09A | |
| VO061-020 | IEC endorse Revised EM&A Manual | 12 | 12 | 03DEC09A | 30DEC09A | 100 | 03DEC09A | 30DEC09A | |
| VO061-022 | EPD acknowledge Revised EM&A Manual | 6 | 6 | 02JAN10A | 06JAN10A | 100 | 02JAN10A | 06JAN10A | |
| VO061-032 | Appoint sub-contractor for varied works | 60 | 60 | 02JUL09A | 17OCT09A | 100 | 02JUL09A | 17OCT09A | |
| VO061-034 | Submit & review of method statement | 65 | 65 | 10DEC09A | 02MAR10A | 100 | 10DEC09A | 02MAR10A | |
| VO061-040 | Apply for marine notice | 6 | 6 | 05NOV09A | 11NOV09A | 100 | 05NOV09A | 11NOV09A | |
| VO061-042 | Revew/issue marine notice by Marine Department | 30 | 30 | 12NOV09A | 24DEC09A | 100 | 12NOV09A | 24DEC09A | |
| VO061-044 | Apply for dumping permit | 10 | 10 | 13AUG10A | 24AUG10A | 100 | 13AUG10A | 24AUG10A | |
| VO061-046 | Review/issue dumping permit by EPD | 31 | 31 | 16AUG10A | 20SEP10A | 100 | 16AUG10A | 20SEP10A | |
| VO061-050 | 6# pre-drilling for ground investigation | 40 | 40 | 02FEB10A | 03MAY10A | 100 | 02FEB10A | 03MAY10A | |
| **Preliminary Works As Per Alternative Design** | | | | | | | | | |
| ALP-002 | Submit Contractor's proposal; alternative design | 0 | 0 | 03JUL10A | 17SEP10A | 100 | 03JUL10A | 17SEP10A | |
| ALP-012 | Review/approval of Contractor's proposal by SOR | 87 | 87 | 05JUL10A | 26NOV10A | 100 | 05JUL10A | 26NOV10A | |
| ALP-022 | Submit method statement for basin construction | 36 | 36 | 19AUG10A | 22SEP10A | 100 | 19AUG10A | 22SEP10A | |
| ALP-032 | Review/approval of method statement by ICE | 12 | 12 | 30SEP10A | 30NOV10A | 100 | 30SEP10A | 30NOV10A | |
| ALP-042 | Review/approval of method statement by SOR | 47 | 47 | 20AUG10A | 11OCT10A | 100 | 20AUG10A | 11OCT10A | |
| ALP-062 | Review/approval of alternative design by SOR | 41 | 41 | 27AUG10A | 26NOV10A | 100 | 27AUG10A | 26NOV10A | |
| ALP-072 | Review/approval of alternative design by ICE | 32 | 32 | 03SEP10A | 27OCT10A | 100 | 03SEP10A | 27OCT10A | |
| **Basin Construction As Per Alternative Design** | | | | | | | | | |
| ALC002 | Commence basin construction | 0 | 0 | 25OCT10A | | 100 | 25OCT10A | | |
| ALC012 | Intial works | 70* | 70* | 26OCT10A | 18JAN11A | 100 | 26OCT10A | 18JAN11A | |
| ALC022 | Install silt curtain | 3 | 3 | 26OCT10A | 28OCT10A | 100 | 26OCT10A | 28OCT10A | |
| ALC032 | Dredge marine deposit | 33 | 33 | 29OCT10A | 06DEC10A | 100 | 29OCT10A | 06DEC10A | |
| ALC052 | Remove rock armor | 34 | 34 | 07DEC10A | 18JAN11A | 100 | 07DEC10A | 18JAN11A | |
| ALC062 | Form Seawall Type North & Eest | 64* | 64* | 24JAN11A | 12APR11A | 100 | 24JAN11A | 12APR11A | |
| ALC072 | Dredge | 39 | 39 | 24JAN11A | 12MAR11A | 100 | 24JAN11A | 12MAR11A | |
| ALC082 | Place concrete and levelling layer | 11 | 11 | 14MAR11A | 25MAR11A | 100 | 14MAR11A | 25MAR11A | |
| ALC092 | Place seawall blocks | 7 | 7 | 26MAR11A | 02APR11A | 100 | 26MAR11A | 02APR11A | |
| ALC102 | Backfill seawall | 7 | 7 | 04APR11A | 12APR11A | 100 | 04APR11A | 12APR11A | |
| ALC112 | Form Seawall Wing Wall at East | 38* | 38* | 13APR11A | 31MAY11A | 100 | 13APR11A | 31MAY11A | |
| ALC132 | Place concrete and levelling layer | 16 | 16 | 13APR11A | 04MAY11A | 100 | 13APR11A | 04MAY11A | |
| ALC142 | Place seawall blocks | 13 | 13 | 05MAY11A | 20MAY11A | 100 | 05MAY11A | 20MAY11A | |
| ALC152 | Backfill seawall | 9 | 9 | 21MAY11A | 31MAY11A | 100 | 21MAY11A | 31MAY11A | |
| ALC172 | Form Seawall at North & West | 55* | 55* | 28JUN11A | 31AUG11A | 100 | 28JUN11A | 31AUG11A | |
| ALC182 | Dredge | 22 | 22 | 28JUN11A | 23JUL11A | 100 | 28JUN11A | 23JUL11A | |
| ALC192 | Place back concrete and levelling layer | 9 | 9 | 25JUL11A | 03AUG11A | 100 | 25JUL11A | 03AUG11A | |
| ALC202 | Place seawall blocks; 71# | 24 | 24 | 04AUG11A | 20AUG11A | 100 | 04AUG11A | 20AUG11A | |
| ALC212 | Backfill seawall | 10 | 10 | 30AUG11A | 31AUG11A | 100 | 30AUG11A | 31AUG11A | |
| ALC214 | Form temp. conc. block wall | 6 | 6 | 22AUG11A | 27AUG11A | 100 | 22AUG11A | 27AUG11A | |
| ALC222 | Form Seawall Wing Wall at West | 168* | 174* | 01SEP11A | 24MAR12A | 100 | 01SEP11A | 31MAR12 | |
| ALC332 | Dredging | 6 | 6 | 01SEP11A | 14SEP11A | 100 | 01SEP11A | 14SEP11A | |
| ALC342 | Place back concrete and levelling layer | 6 | 6 | 15SEP11A | 19SEP11A | 100 | 15SEP11A | 19SEP11A | |
| ALC352 | Place seawall blocks (1st stage); 48# | 11 | 11 | 20SEP11A | 30SEP11A | 100 | 20SEP11A | 30SEP11A | |



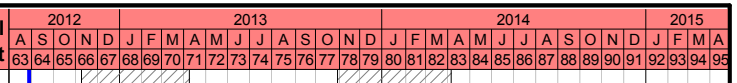
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| ALC362 | Backfill seawall | 6 | 6 | 07OCT11A | 15OCT11A | 100 | 07OCT11A | 15OCT11A | |
| ALC366 | Place seawall blocks (2nd stage); 12# | 6 | 6 | 23MAR12A | 24MAR12A | 100 | 26MAR12 | 31MAR12 | |
| ALC372 | Place Concere Blocks in Apron Invert | 137* | 155* | 25OCT11A | 12APR12A | 100 | 25OCT11A | 05MAY12 | |
| ALC382 | Dredge | 18 | 18 | 25OCT11A | 08NOV11A | 100 | 25OCT11A | 08NOV11A | |
| ALC392 | Place levelling layer | 25 | 25 | 09NOV11A | 26NOV11A | 100 | 09NOV11A | 26NOV11A | |
| ALC402 | Place step blocks | 58 | 58 | 28NOV11A | 27MAR12A | 100 | 28NOV11A | 05MAR12 | |
| ALC412 | Place type 2 arour infront of seawall | 24 | 24 | 13MAR12A | 12APR12A | 100 | 02APR12 | 05MAY12 | |
| ALC522 | Complete Outfall Basin | 0 | 0 | | 12APR12A | 100 | | 05MAY12 | |
| **Remaining Works Prior to Handover** | | | | | | | | | |
| 10R1DO0904 | Finishing & reinstatement works; Portion D | 36 | 36 | 16SEP13 | 30OCT13 | 0 | 07MAR13 | 22APR13 | -606 |
| 10R1DO0906 | Pre-handover inspections and remedial works | 30 | 30 | 02OCT13 | 06NOV13 | 0 | 21MAR13 | 29APR13 | -606 |
| 16R7DO0900 | Landscaping works upper part of slope | 150 | 150 | 19SEP12 | 21MAR13 | 0 | 15JUN12 | 11DEC12 | -420 |
| 16R7DO0902 | Landscaping works lower part of slope | 60 | 60 | 26AUG13 | 06NOV13 | 0 | 14FEB13 | 29APR13 | -606 |
| 16R7DO0904 | Establishment Works at Portion D | 365 | 365 | 07NOV13 | 06NOV14 | 0 | 30APR13 | 29APR14 | -745 |
| PVO-AP-10 | Anti-pedestrian Apron Slab at Outfall D | 48 | 0 | 01NOV12* | 28DEC12 | 0 | | | -395 |
| PVO-TR-10 | Tree survey as per revised planting schedule | 12 | 0 | 05SEP12 | 18SEP12 | 0 | | | -420 |
| **Schedule of MIlestones for Cost Centre No. 10R** | | | | | | | | | |
| 10R1DO1002 | 10R 1; On completion of 20% excavation works | 0 | 0 | | 09APR09A | 100 | | 09APR09A | |
| 10R1DO1004 | 10R 2; On completion of 40% excavation works | 0 | 0 | | 28AUG09A | 100 | | 28AUG09A | |
| 10R1DO1006 | 10R 3; On completion of 60% excavation works | 0 | 0 | | 13APR10A | 100 | | 13APR10A | |
| 10R1DO1008 | 10R 4; On completion of 80% excavation works | 0 | 0 | | 08JUN11A | 100 | | 08JUN11A | |
| 10R1DO1010 | 10R 5; On completion all excavation works | 0 | 0 | | 13SEP12 | 0 | | 11SEP12 | 912 |
| 10R1DO1012 | 10R 6; On completion of cascade structure | 0 | 0 | | 01AUG13 | 0 | | 18FEB13 | 590 |
| 10R1DO1014 | 10R 7; On completion of spiral ramp to +16mPD | 0 | 0 | | 07NOV11A | 100 | | 07NOV11A | |
| 10R1DO1016 | 10R 8; On completion of spiral access ramp | 0 | 0 | | 23MAR13 | 0 | | 12SEP12 | 721 |
| 10R1DO1018 | 10R 9; On completion box-culvert & open channel | 0 | 0 | | 01AUG13 | 0 | | 18FEB13 | 590 |
| 10R1DO1020 | 10R 10; On completion of seabed protection wks | 0 | 0 | | 12APR12A | 100 | | 05MAY12 | |
| 10R1DO1022 | 10R 11; On completion of all works under this CC | 0 | 0 | | 06NOV13 | 0 | | 29APR13 | 493 |
| **Schedule of Milestones for Cost Centre No. 14R** | | | | | | | | | |
| 14R5DO1102 | 14R 1; On complet. of remove exist. rock armour | 0 | 0 | | 22JAN11A | 100 | | 22JAN11A | |
| 14R5DO1104 | 14R 2; On complet. of 50% soil nailing by number | 0 | 0 | | 07APR09A | 100 | | 07APR09A | |
| 14R5DO1106 | 14R 3; On completion all soil nailng works | 0 | 0 | | 19NOV09A | 100 | | 19NOV09A | |
| 14R5DO1108 | 14R 4; On completion of all works under this CC | 0 | 0 | | 22JAN11A | 100 | | 22JAN11A | |
| ***Drainage Improvement Works at Portion G*** | | | | | | | | | |
| **Preliminary Works** | | | | | | | | | |
| **Site Establishment Works** | | | | | | | | | |
| 01R6GG0114 | Possession of Portion G -700d of DOC | 0 | 0 | 26NOV09A | | 100 | 26NOV09A | | |
| 01R6GG0116 | Site clearance | 30 | 30 | 26NOV09A | 02JAN10A | 100 | 26NOV09A | 02JAN10A | |
| VO-125G05 | VO#125 received for revised hoarding & fencing | 0 | 0 | | 02JAN10A | 100 | | 02JAN10A | |



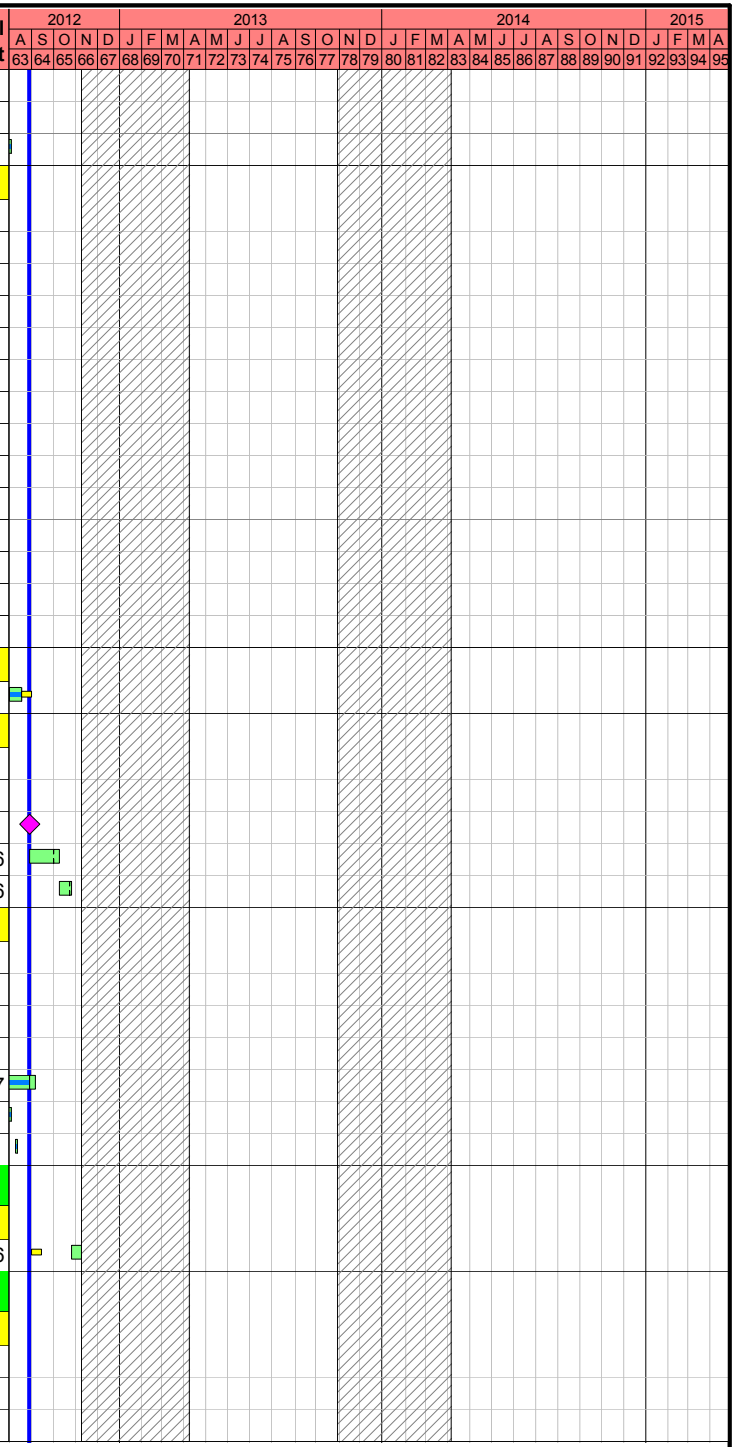
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| VO-125G10 | Fenceing/Hoarding erection | 50 | 50 | 05JAN10A | 01MAR10A | 100 | 05JAN10A | 01MAR10A | |
| **G.I. Works (VO#126)** | | | | | | | | | |
| VO-126G05 | Slope stripping for RS-3 | 14 | 14 | 09DEC09A | 24DEC09A | 100 | 09DEC09A | 24DEC09A | |
| VO-126G10 | Timber platform for predrilling works | 12 | 12 | 15JAN10A | 20JAN10A | 100 | 15JAN10A | 20JAN10A | |
| VO-126G15 | Predriliing for H-piling works & soil nailing | 36 | 36 | 20JAN10A | 04MAR10A | 100 | 20JAN10A | 04MAR10A | |
| VO-126G20 | Submission of drilling report | 14 | 14 | 18FEB10A | 18FEB10A | 100 | 18FEB10A | 18FEB10A | |
| **Tree Felling/Transplanting Works (VO#126)** | | | | | | | | | |
| VO-126T05 | Tree survey & report submission | 14 | 14 | 16DEC09A | 04JAN10A | 100 | 16DEC09A | 04JAN10A | |
| VO-126T15 | Obtain tree felling permit | 105 | 105 | 05JAN10A | 15MAY10A | 100 | 05JAN10A | 15MAY10A | |
| VO-126T25 | Tree felling | 24 | 24 | 14JUN10A | 12OCT10A | 100 | 14JUN10A | 12OCT10A | |
| **Soil Nailing Works (VO#126)** | | | | | | | | | |
| **Soil Nailing Works at Area A** | | | | | | | | | |
| VO-126S05 | Erect wokring platform & mobilization | 8 | 8 | 19MAR10A | 30MAR10A | 100 | 19MAR10A | 30MAR10A | |
| VO-126S10 | Test nails | 8 | 8 | 01APR04A | 17APR04A | 100 | 01APR04A | 17APR04A | |
| VO-126S15 | Permanent soil nails 64# | 30 | 30 | 19APR10A | 13MAY10A | 100 | 19APR10A | 13MAY10A | |
| VO-126S20 | Soil nail heads | 20 | 20 | 14MAY10A | 01JUN10A | 100 | 14MAY10A | 01JUN10A | |
| VO-126S25 | Removal of platform | 7 | 7 | 02JUN10A | 09JUN10A | 100 | 02JUN10A | 09JUN10A | |
| **Soil Nailing Works at Area B** | | | | | | | | | |
| VO-126S35 | Erect wokring platform & mobilization | 8 | 8 | 19MAR10A | 30MAR10A | 100 | 19MAR10A | 30MAR10A | |
| VO-126S40 | Test nails | 8 | 8 | 01APR04A | 17APR04A | 100 | 01APR04A | 17APR04A | |
| VO-126S45 | Permanent soil nails 19# | 10 | 10 | 19APR10A | 13MAY10A | 100 | 19APR10A | 13MAY10A | |
| VO-126S50 | Soil nail heads | 12 | 12 | 14MAY10A | 01JUN10A | 100 | 14MAY10A | 01JUN10A | |
| VO-126S55 | Removal of platform | 7 | 7 | 02JUN10A | 09JUN10A | 100 | 02JUN10A | 09JUN10A | |
| **Piling Works (VO#0126)** | | | | | | | | | |
| **Piling Platform** | | | | | | | | | |
| VO-126P05 | Obtain SO's consent for temp. works design | 0 | 0 | | 23JUN10A | 100 | | 23JUN10A | |
| VO-126P20 | Platform for mini piling | 16 | 16 | 11JUN10A | 30JUN10A | 100 | 11JUN10A | 30JUN10A | |
| VO-126P30 | Mobilization & set up for mini piling | 3 | 3 | 02JUL10A | 05JUL10A | 100 | 02JUL10A | 05JUL10A | |
| VO-126P35 | Mini piling & pile caps construction | 104 | 104 | 06JUL10A | 06NOV10A | 100 | 06JUL10A | 06NOV10A | |
| VO-126P37 | Erect steel platform for H-piling | 47 | 47 | 08NOV10A | 04JAN11A | 100 | 08NOV10A | 04JAN11A | |
| VO-126P39 | Remove steel platform; grid 2-4 | 5 | 5 | 30MAY11A | 03JUN11A | 100 | 30MAY11A | 03JUN11A | |
| VO-126P41 | Remove steel platform; grid 4-6 | 3 | 3 | 20JUN11A | 22JUN11A | 100 | 20JUN11A | 22JUN11A | |
| VO-126P43 | Remove steel platform; grid 6-10 | 9 | 9 | 28NOV11A | 03DEC11A | 100 | 28NOV11A | 03DEC11A | |
| VO-126P44 | Remove steel platform; grid 10-14 | 5 | 5 | 03JUN11A | 09JUN11A | 100 | 03JUN11A | 09JUN11A | |
| **H-Piling Works** | | | | | | | | | |
| VO-126P45 | Mibilization & set up for H-piling | 18 | 18 | 05JAN11A | 25JAN11A | 100 | 05JAN11A | 25JAN11A | |
| VO-126P50 | H-piling types 1 & 2; 38 nos. | 93 | 93 | 26JAN11A | 23MAY11A | 100 | 26JAN11A | 23MAY11A | |
| VO-126P55 | Demobilize piling rig | 5 | 5 | 24MAY11A | 28MAY11A | 100 | 24MAY11A | 28MAY11A | |
| **Skin Wall** | | | | | | | | | |
| VO-126P60 | Excavate; Bays 1, 5 & 6 | 52 | 52 | 10JUN11A | 20AUG11A | 100 | 10JUN11A | 20AUG11A | |
| VO-126P65 | Construct skin wall; Bays 1, 5 & 6 | 27 | 27 | 15JUL11A | 07SEP11A | 100 | 15JUL11A | 07SEP11A | |
| VO-126P70 | Construct capping beam; Bays 1, 5 & 6 | 18 | 18 | 27OCT11A | 23NOV11A | 100 | 27OCT11A | 23NOV11A | |



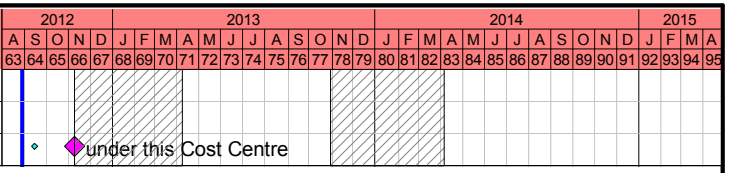
| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| VO-126P75 | Excavate; Bays 2, 3 & 4 | 30 | 30 | 05DEC11A | 21JAN12A | 100 | 05DEC11A | 21JAN12A | |
| VO-126P80 | Construct skin wall; Bays 2, 3 & 4 | 24 | 24 | 21JAN12A | 18FEB12A | 100 | 21JAN12A | 18FEB12A | |
| VO-126P85 | Construct capping beam; Bays 2, 3 & 4 | 18 | 18 | 10APR12A | 05MAY12A | 100 | 18APR12 | 10MAY12 | |
| **Drainage Improvement Works (VO#128)** | | | | | | | | | |
| **Pipe Jacking Between SM1 & SM2** | | | | | | | | | |
| 15R6GG0301 | Obtain approval of ELS design package incl MS | 0 | 0 | | 04JUN10A | 100 | | 04JUN10A | |
| 15R6GG0302 | Install ELS & construct shaft for pipe jacking | 51 | 51 | 08APR10A | 08JUN10A | 100 | 08APR10A | 08JUN10A | |
| 15R6GG0303 | Mobilization & set up | 12 | 12 | 09JUN10A | 23JUN10A | 100 | 09JUN10A | 23JUN10A | |
| 15R6GG0304 | Pipe jacking | 320 | 320 | 24JUN10A | 30JUL11A | 100 | 24JUN10A | 30JUL11A | |
| 15R6GG0314 | Construct receiving shaft | 24 | 24 | 06JUN11A | 05JUL11A | 100 | 06JUN11A | 05JUL11A | |
| 15R6GG0324 | Demobilization | 6 | 6 | 01AUG11A | 06AUG11A | 100 | 01AUG11A | 06AUG11A | |
| **1.5m dia. Drainage beween SM2 & CP2** | | | | | | | | | |
| 15R6GG0200 | Excavate existing tow wall & formation for pipe | 18 | 18 | 10AUG11A | 10SEP11A | 100 | 10AUG11A | 10SEP11A | |
| 15R6GG0205 | Construct SM2 & CP2 | 18 | 18 | 13AUG11A | 28OCT11A | 100 | 13AUG11A | 28OCT11A | |
| 15R6GG0210 | Construct 300UC along 1.5m dia. drainage (~12m) | 12 | 12 | 27AUG11A | 31OCT11A | 100 | 27AUG11A | 31OCT11A | |
| 15R6GG0215 | Construct 1.5m dia. drainage with CS (~12m) | 12 | 12 | 12SEP11A | 14OCT11A | 100 | 12SEP11A | 14OCT11A | |
| 15R6GG0220 | Construct 1.5m dia. drainage with CS (~20m) | 18 | 18 | 14MAR12A | 10APR12A | 100 | 09MAR12 | 29MAR12 | |
| 15R6GG0230 | Construct SM3 | 12 | 12 | 02APR12A | 24APR12A | 100 | 30MAR12 | 17APR12 | |
| 15R6GG0240 | Construct 300UC & install/certify hoisting syst. | 16 | 16 | 20FEB12A | 08MAR12A | 100 | 20FEB12A | 08MAR12 | |
| **750UC, 750SC & CP1 at Area B** | | | | | | | | | |
| 15R6GG0340 | Obtain TTA scheme approval from SOR | 30 | 30 | 01DEC09A | 26MAR10A | 100 | 01DEC09A | 26MAR10A | |
| 15R6GG0345 | Implement TTA | 1 | 1 | 14FEB11A | 14FEB11A | 100 | 14FEB11A | 14FEB11A | |
| 15R6GG0350 | Construct 750 UC, SC & CP1 | 72 | 72 | 20DEC10A | 19MAR11A | 100 | 20DEC10A | 19MAR11A | |
| **1.5m dia. Drainage, WS1 & Outlet Structure** | | | | | | | | | |
| 15R6GG0355 | Construct WS1 at Area A | 25 | 25 | 10FEB11A | 10MAR11A | 100 | 10FEB11A | 10MAR11A | |
| 15R6GG0385 | Construct cross road 750UC at Area A | 17 | 17 | 08APR11A | 30APR11A | 100 | 08APR11A | 30APR11A | |
| 15R6GG0390 | Revised details received | 0 | 0 | | 08JUL11A | 100 | | 08JUL11A | |
| 15R6GG0395 | ELS works and excavation for 1.5m drainage | 46 | 46 | 09JUL11A | 22OCT11A | 100 | 09JUL11A | 22OCT11A | |
| 15R6GG0405 | Strenthen existing masonry wall | 18 | 18 | 01SEP11A | 22OCT11A | 100 | 01SEP11A | 22OCT11A | |
| 15R6GG0415 | Install 1.5m dia. drainage with CS | 10 | 10 | 22OCT11A | 04NOV11A | 100 | 22OCT11A | 04NOV11A | |
| 15R6GG0425 | Backfill & reinstate | 12 | 12 | 05NOV11A | 02DEC11A | 100 | 05NOV11A | 02DEC11A | |
| 15R6GG0435 | Excavate for Outlet (additional) | 18 | 18 | 03DEC11A | 12DEC11A | 100 | 03DEC11A | 12DEC11A | |
| 15R6GG0445 | Construct Outlet (additional) | 18 | 18 | 13DEC11A | 16JAN12A | 100 | 13DEC11A | 16JAN12A | |
| 15R6GG0455 | Steel works | 6 | 6 | 28MAY12A | 31MAY12A | 100 | 30MAR12 | 10APR12 | |
| **1.5m SC & Steel Staircase connecting to CP2** | | | | | | | | | |
| 15R6GG0500 | Excavate for 1.5m stepped channel | 30 | 30 | 11JUL11A | 13AUG11A | 100 | 11JUL11A | 13AUG11A | |
| 15R6GG0520 | Construct 1.5m stepped channel (~14m) | 0 | 0 | | 19SEP11A | 100 | | 19SEP11A | |
| 15R6GG0522 | Receive VO#219 | 0 | 0 | | 15SEP11A | 100 | | 15SEP11A | |
| 15R6GG0530 | Install steel staircase (additional) | 12 | 12 | 19MAY12A | 27JUN12A | 100 | 18APR12 | 03MAY12 | |
| 15R6GG0532 | Excavate additional outlet | 12 | 12 | 20SEP11A | 22OCT11A | 100 | 20SEP11A | 22OCT11A | |
| 15R6GG0542 | Construct additional outlet | 12 | 12 | 24OCT11A | 15NOV11A | 100 | 24OCT11A | 15NOV11A | |
| 15R6GG0552 | Excavate for mass concrete | 6 | 6 | 16NOV11A | 19NOV11A | 100 | 16NOV11A | 19NOV11A | |
| 15R6GG0562 | Construct mass wall | 4 | 4 | 21NOV11A | 25NOV11A | 100 | 21NOV11A | 25NOV11A | |



| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 15R6GG0564 | Receive VO#251 for modification of outlet | 0 | 0 | | 29MAR12A | 100 | | | |
| 15R6GG0566 | Preparation works for VO#251 | 1 | 0 | 30MAR12A | 10APR12A | 100 | | | |
| 15R6GG0570 | Modify outlet; VO#251 | 86 | 0 | 11APR12A | 03AUG12A | 100 | | | |
| **1.5m dia. Drainage, WS2 at Area C** | | | | | | | | | |
| 15R6GG0605 | Confirm additional land by SOR | 0 | 0 | | 12JUL11A | 100 | | 12JUL11A | |
| 15R6GG0610 | Insurance cover for additional land | 6 | 6 | 13JUL11A | 19JUL11A | 100 | 13JUL11A | 19JUL11A | |
| 15R6GG0615 | Procurement for hoarding | 18 | 18 | 13JUL11A | 02AUG11A | 100 | 13JUL11A | 02AUG11A | |
| 15R6GG0620 | Confirm mobilization with house owner | 7 | 7 | 03AUG11A | 12AUG11A | 100 | 03AUG11A | 12AUG11A | |
| 15R6GG0625 | Erect hoarding | 6 | 6 | 13AUG11A | 17AUG11A | 100 | 13AUG11A | 17AUG11A | |
| 15R6GG0630 | Trial pit excavation | 6 | 6 | 18AUG11A | 22AUG11A | 100 | 18AUG11A | 22AUG11A | |
| 15R6GG0635 | Issue VO#223 & 216 with revised drainage details | 12 | 12 | 23AUG11A | 11OCT11A | 100 | 23AUG11A | 11OCT11A | |
| 15R6GG0640 | Confirm site clearance with SOR/house owner | 12 | 12 | 12OCT11A | 01NOV11A | 100 | 12OCT11A | 01NOV11A | |
| 15R6GG0642 | Site clerance & removal of trees | 12 | 12 | 02NOV11A | 15NOV11A | 100 | 02NOV11A | 15NOV11A | |
| 15R6GG0645 | ELS design & with ICE endorsement | 18 | 18 | 16NOV11A | 23DEC11A | 100 | 16NOV11A | 23DEC11A | |
| 15R6GG0650 | Excavation & construction of WS2 | 18 | 18 | 16NOV11A | 01DEC11A | 100 | 16NOV11A | 01DEC11A | |
| 15R6GG0655 | Excavate/construct drainage; 6.5m | 29 | 29 | 02DEC11A | 06JAN12A | 100 | 02DEC11A | 06JAN12A | |
| 15R6GG0660 | Excavate/construct drainage; 23.5m + SM1A | 136 | 85 | 07JAN12A | 30JUN12A | 100 | 07JAN12A | 23APR12 | |
| 15R6GG0665 | Backfill & reinstate | 12 | 12 | 03JUL12A | 31JUL12A | 100 | 24APR12 | 09MAY12 | |
| **800UC at Area C** | | | | | | | | | |
| 15R6GG0755 | Construct 800UC cross road & reinstate | 12 | 12 | 01AUG12A | 16AUG12A | 100 | 18AUG12 | 31AUG12 | |
| **750UC Crossroad connecting to CP2** | | | | | | | | | |
| 15R6GG0801 | Receive VO#252 for revised 750UC | 0 | 0 | 31MAR12A | | 100 | | | |
| 15R6GG0803 | Trial pit excavation | 1 | 0 | 11MAY12A | 26MAY12A | 100 | | | |
| 15R6GG0808 | Receive further revised 750UC details | 0 | 0 | | 27AUG12A | 100 | | | |
| 15R6GG0810 | Fabrication of pre-cast UC | 36 | 24 | 28AUG12 | 09OCT12 | 0 | 11MAY12 | 07JUN12 | 696 |
| 15R6GG0820 | Excavation & installation of pre-cast UC | 12 | 12 | 10OCT12 | 24OCT12 | 0 | 08JUN12 | 21JUN12 | 696 |
| **Mass Concrete Beam, 300UC, 300SC, at Slope** | | | | | | | | | |
| 15R6GG0900 | Excavate for mass concrete beam | 12 | 12 | 07SEP11A | 28SEP11A | 100 | 07SEP11A | 28SEP11A | |
| 15R6GG0910 | Construct mass concrete beam | 6 | 6 | 20SEP11A | 31OCT11A | 100 | 20SEP11A | 31OCT11A | |
| 15R6GG0920 | Construct 300UC, 300SC & conc. stair | 48 | 48 | 12SEP11A | 31JAN12A | 100 | 12SEP11A | 31JAN12A | |
| 15R6GG0930 | Install steel stair & steel gate | 12 | 12 | 25MAY12A | 14JUL12A | 100 | 04MAY12 | 17MAY12 | |
| 15R6GG0940 | Install hand railing; | 18 | 18 | 24MAY12A | 06SEP12 | 50 | 25APR12 | 17MAY12 | 747 |
| 15R6GG0950 | Lay erosoin control mat | 6 | 6 | 05JUN12A | 02AUG12A | 100 | 18MAY12 | 24MAY12 | |
| 15R6GG0960 | Hydroseeding | 1 | 2 | 10AUG12A | 10AUG12A | 100 | 25MAY12 | 26MAY12 | |
| **Remaning Works Prior to Handover to Client** | | | | | | | | | |
| | | | | | | | | | |
| 15R6GG0370 | Pre-handover inspections and remedial works | 12 | 12 | 25OCT12 | 07NOV12 | 0 | 01SEP12 | 14SEP12 | 696 |
| **Schedule of Milestones for Cost Centre No. 15R** | | | | | | | | | |
| | | | | | | | | | |
| 15R6GG0502 | 15R 1; On completion of all temp. works | 0 | 0 | | 04JAN11A | 100 | | 04JAN11A | |
| 15R6GG0504 | 15R 2; On completion of 25% of pipejacking | 0 | 0 | | 08OCT10A | 100 | | 08OCT10A | |
| 15R6GG0506 | 15R 3; On completion of 50% of pipejacking | 0 | 0 | | 12FEB11A | 100 | | 12FEB11A | |



| ID | Activity Description | WP10 Dur | WP09 Dur | WP10 Start | WP10 Finish | % Comp | WP09 Start | WP09 Finish | Total Float |
|---|---|---|---|---|---|---|---|---|---|
| 15R6GG0508 | 15R 4; On completion of 75% of pipejacking | 0 | 0 | | 19MAR11A | 100 | | 19MAR11A | |
| 15R6GG0510 | 15R 5; On completion of all pipejacking | 0 | 0 | | 30JUL11A | 100 | | 30JUL11A | |
| 15R6GG0512 | 15R 6; On completion of all wks under this CC | 0 | 0 | | 07NOV12 | 0 | | 14SEP12 | 857 |



Appendix D

# Implementation Status of Environmental Mitigation Measures

**Appendix D**

# IMPLEMENTATION SCHEDULE July 2012

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| **Air Quality** | | | | | |
| 3.6.1 | **Specific**<br><br>As mentioned in Section 3.5, exceedances of 1-hour and 24-hour average TSP guideline levels have been predicted at most of the ASRs. Hence, mitigation measures are considered necessary in order to suppress the potential dust impact. | DSD's Contractor | Construction Work Sites | Air Pollution Control (Construction Dust) Regulation | ✓ |
| | The dust suppression measures set out in the *Air Pollution Control (Construction Dust) Regulation*, in fact, are more extensive. Therefore, it is expected that with watering the construction site every four times daily together with strict implementation of dust suppression measures as stipulated in the *Air Pollution Control (Construction Dust) Regulation*, the dust level is expected to be reduced by over 75%. | | | | ✓ |
| | **General**<br><br>To further ensure compliance with the guideline and AQO limit at the ASRs at all time, it is recommended to implement the *Air Pollution Control (Construction Dust) Regulation* and include good site practice in the contract clauses to minimize cumulative dust impact. In addition, a comprehensive dust monitoring and audit programme is recommended to ensure proper implementation of the identified mitigation measures. Details of the monitoring and audit requirements are provided in a separate EM&A Manual. | | | | |
| | • effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level of the scaffolding where a scaffolding is erected around the perimeter of a building under construction; | | | | N/A |
| | • dump truck for material transport should be totally enclosed by impervious sheeting; | | | | ✓ |
| | • any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading; | | | | ✓ |
| | • stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones; | | | | ✓ |
| | • dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 3.6.1 | • the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; | DSD's Contractor | Construction Work Sites | Air Pollution Control (Construction Dust) Regulation | ✓ |
| | • where a site boundary adjoins a road, street or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit; | | | | ✓ |
| | • every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet; | | | | ✓ |
| | • the portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials; | | | | ✓ |
| | • stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet; | | | | ✓ |
| | • all dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet; | | | | ✓ |
| | • vehicle speed should be limited to 10 kph except on completed access roads; | | | | ✓ |
| | • every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites; | | | | ✓ |
| | • the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle; and | | | | ✓ |
| | • the working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet. | | | | ✓ |
| **Noise** | | | | | |
| 4.6.1 | **During Construction**<br><br>Appropriate mitigation measures such as the use of quiet equipment and movable barriers will be developed to ensure that noise can be reduced to acceptable levels without causing programme delays | DSD's Contractor | Construction Work Sites | PN 2/93 Noise from Construction Activities & EIAO | ✓ |
| | *Good Site Practice*<br>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during construction: | | | | |
| | • only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works; | | | | ✓ |
| | • machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 4.6.1 | • plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs; | DSD's Contractor | Construction Work Sites | PN 2/93 Noise from Construction Activities & EIAO | ✓ |
| | • mobile plant should be sited as far away from NSRs as possible; and | | | | ✓ |
| | • material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. | | | | ✓ |
| | *For Drill and Blast Works*<br>• Charge mass per delay should be decreased by minimising the number of blastholes firing on each delay. | | | | N/A |
| | • Smaller blasthole patterns and longer delays should be used between dependent charges. | | | | N/A |
| | • Times of blasting should be established to suit the situation and firing blasts when neighbours are busy with their daily tasks (and at a regular time such as lunch time). | | | | N/A |
| | *For TBM Tunnelling*<br>• For the tunnel excavation, it is anticipated that beyond the initial length (say within 30m), excavation will be carried out well within the tunnel and door should be provided to further minimize the noise nuisance to the nearby receivers. | | | | N/A |
| 4.6.2 | **During Operation**<br><br>Good site practice and noise management can significantly reduce the impact of maintenance activities on nearby NSRs. The following package of measures should be followed during construction | DSD's Contractor | Project Area | NCO & EIAO | |
| | • only well-maintained plant should be operated on-site; | | | | N/A |
| | • machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; and | | | | N/A |
| | • plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs. | | | | N/A |
| **Water Quality** | | | | | |
| 5.9.1 | **During Construction**<br><br>Mitigation measures and a spill control and response plan have been prepared for works at the intakes and work sites. | DSD's Contractor | Construction Work Sites | Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and WQO | ✓ |
| | *Precautions to be taken at any time of year when rainstorms are likely:*<br>• Temporarily exposed surfaces should be covered e.g. by tarpaulin. | | | | ✓ |
| | • Temporary access roads should be protected by crushed stone or gravel. | | | | ✓ |
| | • Trenches should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches. | | | | ✓ |
| | *Actions to be taken when a rainstorm is imminent or forecast:*<br>• Silt removal facilities, should be checked to ensure that they can function properly. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 5.9.1 | • Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric. | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| | • All temporary covers to slopes and stockpiles should be secured. | | | | ✓ |
| | *Actions to be taken during or after rainstorms:*<br>• Silt removal facilities should be checked and maintained to ensure satisfactory working conditions. | | | | ✓ |
| | **Spill Control and Response Plan** | | | | |
| | **1 Prevention and Precaution Measures** | | | | |
| | ***General Precautions***<br>• No discharge of silty water into watercourses. | | | | ✓ |
| | • All materials to be used during construction and operation shall be identified and their hazard potential evaluated. | | | | ✓ |
| | • Maintenance of vehicles and equipment involving activities with potential for leakage and spillage shall only be undertaken with the areas appropriately equipped to control these discharges. | | | | ✓ |
| | • Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | | | | ✓ |
| | • Any construction plant which causes pollution to catchwaters or water gathering ground due to leakage of oil or fuel shall be removed off-site immediately. | | | | ✓ |
| | • Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport | | | | ✓ |
| | • Chemical waste containers shall be suitably labelled to notify and warn the personnel who are handling the wastes to avoid accidents. | | | | ✓ |
| | • Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area. | | | | ✓ |
| | • Prevent obstructions and tripping hazards. | | | | ✓ |
| | ***Storage Precautions***<br>• All chemical storage containers shall be correctly labelled. | | | | ✓ |
| | • Solid and impermeable enclosure walls or storage shelves shall be used. | | | | ✓ |
| | • Only compatible chemical wastes shall be stored in the same storage area. | | | | ✓ |
| | • The storage areas shall be inspected to detect any leakages or defective containers on a regular basis. | | | | ✓ |
| | • Suitable notices warning of hazards, emergency response plans, telephone numbers etc shall be posted around the site, including storage areas. | | | | ✓ |
| | • Large and heavy containers shall be stored at ground level. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | • Chemical waste containers shall be stored below eye level. | | | | ✓ |
| 5.9.1 | • Adequate space for handling of the containers shall be provided | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| | • Spill response kits shall be located adjacent/near to the storage areas. | | | | ✓ |
| | • A log of chemical wastes shall be maintained. | | | | ✓ |
| | • Incompatible chemicals shall be stored separately. | | | | ✓ |
| | **2 Responses/Action Plan** | | | | |
| | All Workers shall be made aware of emergency telephone numbers and the location of all relevant pollution control equipment. Training be given in emergency response/action plans. The action include the following steps: | | | | ✓ |
| | • Only trained personnel who are equipped with protective clothing and equipment shall be allowed to enter the spillage area for clean up. | | | | ✓ |
| | • Spills shall be transferred appropriate back into containers using suitable equipment. | | | | ✓ |
| | • Absorbent materials shall be used to clean up the spills and shall be disposed of as chemical wastes. | | | | ✓ |
| | • Where appropriate suitable solvents may be used to clean the contaminated area after removal of all contaminated materials. | | | | ✓ |
| | • All necessary protective devices, safety equipment, containers and clean up materials for emergency use shall be maintained to a high standard. | | | | ✓ |
| | **3 Spill Clean Up and Disposal** | | | | |
| | Effect the response plan. | | | | ✓ |
| | Control the leakage and absorb the spillage using suitably absorbent materials. | | | | ✓ |
| | Provide safety equipment and personal protective equipment for handling of chemical wastes would be similar to that for handling of chemicals. | | | | ✓ |
| | *Safety equipment includes but is not limited to:*<br>• Fire extinguishers. | | | | ✓ |
| | • Spades, brushes, dustpan, mop and bucket (or similar readily available on site). | | | | ✓ |
| | • Absorbent material such as dry sand, tissues and toweling (all materials readily available on-site). | | | | ✓ |
| | • Containers including plaster bags, drums, etc. | | | | ✓ |
| | • Absorbing materials. | | | | ✓ |
| | • Pumps. | | | | ✓ |
| | *Personal protective equipment includes as appropriate:*<br>• First-aid kits. | | | | ✓ |
| | • Safety helmet and goggles. | | | | ✓ |
| | • Gloves which can resist chemical reaction. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | • Protective boot and clothing. | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| 5.9.1 | • Respirators and gas masks. | | | | ✓ |
| | • Face visor and masks. | | | | ✓ |
| 5.9.2 | **Emergency Responses to Spillages**<br><br>Emergency plans and clean up procedures will need to be provided by the Contractor recognising his specific working methods and construction programme, activities and sequences. Agreement must be sought prior to commencement of the construction work but the following principles should be considered. | | | | |
| | *The emergency plans should include the procedures for:*<br>• spill prevention and precaution; | | | | ✓ |
| | • response actions; and | | | | ✓ |
| | • spill clean up and disposal. | | | | ✓ |
| | *Spill prevention and precaution embraces good site practice and covers:*<br>• good housekeeping practices; | | | | ✓ |
| | • chemical storage requirements; and | | | | ✓ |
| | • chemical transfer and transport. | | | | ✓ |
| 5.9.3 | **During Operation**<br><br>Regular inspection of the tunnels is essential to monitor the structural integrity and proper functioning of the drainage tunnel, which allows repairing of structural deterioration when it begins to develop. It is recommended that routine inspection shall be carried out at least two times per year for the drainage tunnel at the beginning and end of wet season from April to September. | DSD's Contractor | Project Area | | N/A |
| **Waste Management** | | | | | |
| 6.5.1 | **During Construction**<br><br>*Vegetation Removed from Site Clearance*<br>Wastes generated from site clearance shall be sorted and excavated topsoil segregated from roots for re-use in landscaping works, thus eliminating the need for off-site disposal. | DSD's Contractor | Construction Work Sites | Waste Disposal Ordinance (Cap.354); Waste Disposal (Chemical Wastes) (General) Regulation (Cap 354) and ETWBTC No. 15/2003, Waste anagement on Construction Site | ✓ |
| | *Construction and Demolition Materials*<br>The Contractor should reuse any C&D material on-site. C&D waste should be segregated and stored in different containers to other wastes to encourage the re-use or recycling of materials and their proper disposal. The use of wooden hoardings shall not be allowed. An alternative material, which can be reused or recycled, for example, metal (aluminium, alloy, etc) shall be used. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 6.5.1 | As referred to the section 6.4.1, the 317,936m3 of inert surplus material generated by the project is suitable for public fill. The public fill reception facility at Tuen Mun Area 38 provides a suitable facility for the reuse of surplus inert C&D material generated from the project. | DSD's Contractor | Construction Work Sites | WDO (Cap.354), ETWBTC No. 15/ 2003, ETWBTC No. 12/2002 and ETWBTC No. 31/2004 | |
| | Under the contract, the contractor will be required to minimise the generation of C&D material and reuse it on site through the following: | | | | |
| | (a) to plan in the design and construction, methods to minimise the generation of C&D material; | | | | ✓ |
| | (b) to submit a Waste Management Plan (WMP) in accordance with Environment Transport and Works Bureau Technical Circular (ETWBTC) No. 15/2003 or any superseding circular(s); | | | | ✓ |
| | (c) to reuse recycled aggregates in accordance with ETWBTC No. 12/2002 or any superseding circular(s); | | | | ✓ |
| | (d) to observe the requirements of the Trip-Ticket System, stipulated in ETWBTC No. 31/2004 or any superceding circular(s), for disposal of C&D material; | | | | ✓ |
| | (e) to incorporate a Waste Management System into the WMP for effective management and control of C&D materials to avoid/reduce/minimise the generation of C&D material during construction. | | | | ✓ |
| | The contractor will be required to properly sort into inert C&D materials, metals, timber and other non-inert C&D material in the workplace to prevent cross-contamination. | | | | ✓ |
| | In addition, DSD will conduct site inspection to monitor the contractors' performance in the implementation of the WMP and other relevant specified requirements. | DSD | Construction Work Sites | WDO (Cap.354) and ETWBTC No. 15/2003 | ✓ |
| | *Excavated Materials*<br>Excavated materials should be segregated from other wastes to avoid contamination thereby ensuring acceptability at public filling areas and avoiding the need for disposal at landfill. | DSD's Contractor | Construction Work Sites | WDO (Cap.354) and ETWBTC No. 15/2003 | ✓ |
| | *Municipal Waste*<br>Temporary refuse collection facilities should be set-up by the contractor and wastes should be stored in appropriate containers prior to collection and disposal. | | | | ✓ |
| | Domestic effluent generated by the workforce will be directed to foul sewer or chemical toilets if public facilities are not available. | | | | ✓ |
| 6.5.1 | *Waste Management Plan*<br>A Waste Management Plan (WMP) for the construction of the Project should be prepared as part of the contractors submission. It will provide recommendations for appropriate recycling or disposal route and should include method statement for stockpiling and transportation of the excavated material and other construction wastes should also be included in the WMP and approved before the commencement of construction. All mitigation measures arising from the approved WMP shall be fully implemented. | DSD's Contractor | Construction Work Sites | WDO (Cap.354), ETWBTC No. 15/2003 and ETWBTC No. 33/2002 | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | For the purpose of enhancing the management of C&D material including rock, and to minimize its generation at source, a C&D Material Management Plan (C&DMMP) has been prepared for this project and would be processed in accordance with the Environment, Transport and Works Bureau Technical Circular (Works) No. 33/2002 - Management of Construction and Demolition Material Including Rock. | | | | N/A |
| **Ecology** | | | | | |
| 7.7.1 | **Avoidance**<br><br>The surface structures are located mainly on existing disturbed areas (ie pollution and urbanisation) and have generally avoided the natural stream sections of higher species diversity and abundance of aquatic organisms. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | The major construction activities at streams are scheduled to avoid wet season of high water flow which may adversely affect the downstream natural habitats due to the construction runoff. | | | | ✓ |
| 7.7.2 | **Minimisation**<br><br>The previous discussion in Section 7.6.4 has indicated that the impacts on ecological resources due to the construction and operation of the proposed Project are generally expected to be low. The following mitigation measures to minimise impacts and disturbance to the surrounding habitats, are recommended. | | | | |
| | *Measures for Construction Runoff*<br>Install sheet piles/cofferdam/weir along the boundary of the works area within the stream habitats in particular Sam Dip Tam Stream and Tso Kung Tam Stream before the commencement of works to prevent construction runoff during construction. Provision of adequate designed sand/ silt removal facilities such as sand traps, silt traps and sediment basin in the areas which could potentially be affected may be required. | | | | ✓ |
| | *Good Construction Practice* | | | | ✓ |
| | Erect fences along the boundary of the works area before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent areas, particularly the stream habitats. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the remaining and surrounding natural stream habitats. | | | | ✓ |
| | Regularly check the work site boundaries to ensure that they are not breached and that no damage occurs to surrounding areas. | | | | ✓ |
| | Prohibit and prevent open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas. | | | | ✓ |
| | Treat any damage that may have occurred to individual major trees in the adjacent area with surgery. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | Reinstate temporary work sites/disturbed areas, particularly stream of natural bottom and bank, plantation, intertidal habitat, and the areas located within the proposed Ecological Park, immediately after completion of the construction works, ie through on-site tree/shrub planting and reprovision of natural or semi-natural bottom (also refer to Section 7.7.3), in order to facilitate the recolonisation of the wildlife recorded during the baseline surveys. Tree/shrub species used should make reference from those in the surrounding area | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| 7.7.3 | **Compensation**<br><br>Provide natural stream bed (approximately 0.03 ha) for the new Dry Weather Flow Channel (created from village-orchard) by laying natural stones at Intake I-2 (Figure 7.7). The reinstated stream bed shall mimic the existing natural conditions with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. | | | | N/A |
| | Provide natural stream bed (approximately 0.5 ha,) for the Approach Channel and Dry Weather Flow Channel by laying natural stones at Intake I-3 (Figure 7.8). The reinstated stream bed shall mimic the existing natural conditions (rocky bottom with very limited aquatic plants) with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. | | | | N/A |
| | Provide natural bottom (ie retain the existing stream bed or reinstate the stream bed by providing boulders/ rocks, riprap or gabion) for the affected stream sections (Figure 7.8) in order to allow natural colonisation of aquatic fauna. | | | | N/A |
| | Provide at least 2.2 ha of compensatory planting on the permanent and temporary affected plantation areas, particularly the slopes along access road and adjacent to Intake I-3 and cascade at Outfall O-1, after construction to stabilise the slope to present soil erosion and consequent stream sedimentation. Among the 2.2 ha compensatory planting, at least 0.5 ha of compensatory tree planting on the new formed slope along the access road of the Intake I-3 and 0.5 ha of compensatory tree planting over the cascade (by constructing intermediate platform) at Outfall O-1 will be provided (location refer to Figures 7.4 – 7.6). Species used for planting should take reference from the species identified in Appendix F and be native to Hong Kong or South China region. | | | | N/A |
| | Provide armour rocks for the affected intertidal habitat in order to allow natural colonisation of intertidal organisms. | | | | N/A |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| **Cultural Heritage** | | | | | |
| 8.6 | As no impacts on recorded archaeological sites or area with archaeological potential were identified within the Study Area, no mitigation measure for archaeological resources is considered necessary. | | | | N/A |
| | The construction methods to be employed should seek to avoid potential vibration impacts to Kuen Yuen Tung Monastery at Lo Wai, the Western Monastery, Yuen Yuen Home for the Aged, Hong Hoi Chee Hong Temple, Chiu Yum Tsing Yuen, Tse's Grave, Wan Lin Bridge and Sam Dip Tam Rock Carving in Sam Dip Tam and the Tin Hau Temple, Yam Kom Tau Village Rural Committee and the Yeung's Ancestral Hall in Yau Kom Tau as these sites fall within 50 m of the Preferred Option of the drainage tunnel alignment or associated Intakes/Outfall construction activities. Construction works that generates excessive vibration in close proximity to these sites should be restricted to protect the building from adverse vibration impacts and to ensure that the building structures will not be damaged as a result of these impacts. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | In order to ensure that no structural or superficial damage will be caused by the construction activities, a precautionary approach involving a pre-construction condition survey and establishment of appropriate vibration limits for the potentially impacted structures should be adopted. Protection measures for the potentially impacted structures, if considered necessary from the pre-construction condition survey, should be implemented prior to the commencement of construction works. Vibration monitoring during the construction phase should be undertaken as part of the EM&A programme. | Qualified archaeologist/ built heritage specialist | Construction Work Sites | EIAO | ✓ |
| **Fisheries** | | | | | |
| 10.6 | In accordance with the guidelines in the *EIAO-TM* on fisheries impact assessment the general policy for mitigating impacts to fisheries, in order of priority are avoidance, minimization and compensation. | DSD's Contractor | Construction Work Sites | EIAO | N/A |
| | Impacts to fisheries resources and fishing operations have largely been avoided during the construction and operation of the drainage tunnel through the avoidance of dredging, reclamation and filling activities. Good construction practice and associated measures were recommended in Water Quality Assessment in Section 5 to control water quality impacts to within acceptable levels and are also expected to control impacts to fisheries resources. Hence, no fisheries-species mitigation measures are required during construction and operation of the drainage tunnel. | | | | N/A |

Remarks:
- ✓ Compliance of mitigation measure
- × Non-compliance of mitigation measure
- N/A Not applicable

# IMPLEMENTATION SCHEDULE August 2012

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| **Air Quality** | | | | | |
| 3.6.1 | **Specific**<br><br>As mentioned in Section 3.5, exceedances of 1-hour and 24-hour average TSP guideline levels have been predicted at most of the ASRs. Hence, mitigation measures are considered necessary in order to suppress the potential dust impact. | DSD's Contractor | Construction Work Sites | Air Pollution Control (Construction Dust) Regulation | ✓ |
| | The dust suppression measures set out in the *Air Pollution Control (Construction Dust) Regulation*, in fact, are more extensive. Therefore, it is expected that with watering the construction site every four times daily together with strict implementation of dust suppression measures as stipulated in the *Air Pollution Control (Construction Dust) Regulation*, the dust level is expected to be reduced by over 75%. | | | | ✓ |
| | **General**<br><br>To further ensure compliance with the guideline and AQO limit at the ASRs at all time, it is recommended to implement the *Air Pollution Control (Construction Dust) Regulation* and include good site practice in the contract clauses to minimize cumulative dust impact. In addition, a comprehensive dust monitoring and audit programme is recommended to ensure proper implementation of the identified mitigation measures. Details of the monitoring and audit requirements are provided in a separate EM&A Manual. | | | | |
| | • effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level of the scaffolding where a scaffolding is erected around the perimeter of a building under construction; | | | | N/A |
| | • dump truck for material transport should be totally enclosed by impervious sheeting; | | | | ✓ |
| | • any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading; | | | | ✓ |
| | • stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones; | | | | ✓ |
| | • dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 3.6.1 | • the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; | DSD's Contractor | Construction Work Sites | Air Pollution Control (Construction Dust) Regulation | ✓ |
| | • where a site boundary adjoins a road, street or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit; | | | | ✓ |
| | • every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet; | | | | ✓ |
| | • the portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials; | | | | ✓ |
| | • stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet; | | | | ✓ |
| | • all dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet; | | | | ✓ |
| | • vehicle speed should be limited to 10 kph except on completed access roads; | | | | ✓ |
| | • every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites; | | | | ✓ |
| | • the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle; and | | | | ✓ |
| | • the working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet. | | | | ✓ |
| **Noise** | | | | | |
| 4.6.1 | **During Construction**<br><br>Appropriate mitigation measures such as the use of quiet equipment and movable barriers will be developed to ensure that noise can be reduced to acceptable levels without causing programme delays | DSD's Contractor | Construction Work Sites | PN 2/93 Noise from Construction Activities & EIAO | ✓ |
| | *Good Site Practice*<br>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during construction: | | | | |
| | • only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works; | | | | ✓ |
| | • machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 4.6.1 | • plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs; | DSD's Contractor | Construction Work Sites | PN 2/93 Noise from Construction Activities & EIAO | ✓ |
| | • mobile plant should be sited as far away from NSRs as possible; and | | | | ✓ |
| | • material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. | | | | ✓ |
| | *For Drill and Blast Works*<br>• Charge mass per delay should be decreased by minimising the number of blastholes firing on each delay. | | | | N/A |
| | • Smaller blasthole patterns and longer delays should be used between dependent charges. | | | | N/A |
| | • Times of blasting should be established to suit the situation and firing blasts when neighbours are busy with their daily tasks (and at a regular time such as lunch time). | | | | N/A |
| | *For TBM Tunnelling*<br>• For the tunnel excavation, it is anticipated that beyond the initial length (say within 30m), excavation will be carried out well within the tunnel and door should be provided to further minimize the noise nuisance to the nearby receivers. | | | | N/A |
| 4.6.2 | **During Operation**<br><br>Good site practice and noise management can significantly reduce the impact of maintenance activities on nearby NSRs. The following package of measures should be followed during construction | DSD's Contractor | Project Area | NCO & EIAO | |
| | • only well-maintained plant should be operated on-site; | | | | N/A |
| | • machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; and | | | | N/A |
| | • plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs. | | | | N/A |
| **Water Quality** | | | | | |
| 5.9.1 | **During Construction**<br><br>Mitigation measures and a spill control and response plan have been prepared for works at the intakes and work sites. | DSD's Contractor | Construction Work Sites | Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and WQO | ✓ |
| | *Precautions to be taken at any time of year when rainstorms are likely:*<br>• Temporarily exposed surfaces should be covered e.g. by tarpaulin. | | | | ✓ |
| | • Temporary access roads should be protected by crushed stone or gravel. | | | | ✓ |
| | • Trenches should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches. | | | | ✓ |
| | *Actions to be taken when a rainstorm is imminent or forecast:*<br>• Silt removal facilities, should be checked to ensure that they can function properly. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 5.9.1 | • Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric. | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| | • All temporary covers to slopes and stockpiles should be secured. | | | | ✓ |
| | *Actions to be taken during or after rainstorms:*<br>• Silt removal facilities should be checked and maintained to ensure satisfactory working conditions. | | | | ✓ |
| | **Spill Control and Response Plan** | | | | |
| | **1 Prevention and Precaution Measures** | | | | |
| | ***General Precautions***<br>• No discharge of silty water into watercourses. | | | | ✓ |
| | • All materials to be used during construction and operation shall be identified and their hazard potential evaluated. | | | | ✓ |
| | • Maintenance of vehicles and equipment involving activities with potential for leakage and spillage shall only be undertaken with the areas appropriately equipped to control these discharges. | | | | ✓ |
| | • Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | | | | ✓ |
| | • Any construction plant which causes pollution to catchwaters or water gathering ground due to leakage of oil or fuel shall be removed off-site immediately. | | | | ✓ |
| | • Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport | | | | ✓ |
| | • Chemical waste containers shall be suitably labelled to notify and warn the personnel who are handling the wastes to avoid accidents. | | | | ✓ |
| | • Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area. | | | | ✓ |
| | • Prevent obstructions and tripping hazards. | | | | ✓ |
| | ***Storage Precautions***<br>• All chemical storage containers shall be correctly labelled. | | | | ✓ |
| | • Solid and impermeable enclosure walls or storage shelves shall be used. | | | | ✓ |
| | • Only compatible chemical wastes shall be stored in the same storage area. | | | | ✓ |
| | • The storage areas shall be inspected to detect any leakages or defective containers on a regular basis. | | | | ✓ |
| | • Suitable notices warning of hazards, emergency response plans, telephone numbers etc shall be posted around the site, including storage areas. | | | | ✓ |
| | • Large and heavy containers shall be stored at ground level. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | • Chemical waste containers shall be stored below eye level. | | | | ✓ |
| 5.9.1 | • Adequate space for handling of the containers shall be provided | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| | • Spill response kits shall be located adjacent/near to the storage areas. | | | | ✓ |
| | • A log of chemical wastes shall be maintained. | | | | ✓ |
| | • Incompatible chemicals shall be stored separately. | | | | ✓ |
| | **2 Responses/Action Plan** | | | | |
| | All Workers shall be made aware of emergency telephone numbers and the location of all relevant pollution control equipment. Training be given in emergency response/action plans. The action include the following steps: | | | | ✓ |
| | • Only trained personnel who are equipped with protective clothing and equipment shall be allowed to enter the spillage area for clean up. | | | | ✓ |
| | • Spills shall be transferred appropriate back into containers using suitable equipment. | | | | ✓ |
| | • Absorbent materials shall be used to clean up the spills and shall be disposed of as chemical wastes. | | | | ✓ |
| | • Where appropriate suitable solvents may be used to clean the contaminated area after removal of all contaminated materials. | | | | ✓ |
| | • All necessary protective devices, safety equipment, containers and clean up materials for emergency use shall be maintained to a high standard. | | | | ✓ |
| | **3 Spill Clean Up and Disposal** | | | | |
| | Effect the response plan. | | | | ✓ |
| | Control the leakage and absorb the spillage using suitably absorbent materials. | | | | ✓ |
| | Provide safety equipment and personal protective equipment for handling of chemical wastes would be similar to that for handling of chemicals. | | | | ✓ |
| | *Safety equipment includes but is not limited to:*<br>• Fire extinguishers. | | | | ✓ |
| | • Spades, brushes, dustpan, mop and bucket (or similar readily available on site). | | | | ✓ |
| | • Absorbent material such as dry sand, tissues and toweling (all materials readily available on-site). | | | | ✓ |
| | • Containers including plaster bags, drums, etc. | | | | ✓ |
| | • Absorbing materials. | | | | ✓ |
| | • Pumps. | | | | ✓ |
| | *Personal protective equipment includes as appropriate:*<br>• First-aid kits. | | | | ✓ |
| | • Safety helmet and goggles. | | | | ✓ |
| | • Gloves which can resist chemical reaction. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | • Protective boot and clothing. | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| 5.9.1 | • Respirators and gas masks. | | | | ✓ |
| | • Face visor and masks. | | | | ✓ |
| 5.9.2 | **Emergency Responses to Spillages**<br><br>Emergency plans and clean up procedures will need to be provided by the Contractor recognising his specific working methods and construction programme, activities and sequences. Agreement must be sought prior to commencement of the construction work but the following principles should be considered. | | | | |
| | *The emergency plans should include the procedures for:*<br>• spill prevention and precaution; | | | | ✓ |
| | • response actions; and | | | | ✓ |
| | • spill clean up and disposal. | | | | ✓ |
| | *Spill prevention and precaution embraces good site practice and covers:*<br>• good housekeeping practices; | | | | ✓ |
| | • chemical storage requirements; and | | | | ✓ |
| | • chemical transfer and transport. | | | | ✓ |
| 5.9.3 | **During Operation**<br><br>Regular inspection of the tunnels is essential to monitor the structural integrity and proper functioning of the drainage tunnel, which allows repairing of structural deterioration when it begins to develop. It is recommended that routine inspection shall be carried out at least two times per year for the drainage tunnel at the beginning and end of wet season from April to September. | DSD's Contractor | Project Area | | N/A |
| **Waste Management** | | | | | |
| 6.5.1 | **During Construction**<br><br>*Vegetation Removed from Site Clearance*<br>Wastes generated from site clearance shall be sorted and excavated topsoil segregated from roots for re-use in landscaping works, thus eliminating the need for off-site disposal. | DSD's Contractor | Construction Work Sites | Waste Disposal Ordinance (Cap.354); Waste Disposal (Chemical Wastes) (General) Regulation (Cap 354) and ETWBTC No. 15/2003, Waste anagement on Construction Site | ✓ |
| | *Construction and Demolition Materials*<br>The Contractor should reuse any C&D material on-site. C&D waste should be segregated and stored in different containers to other wastes to encourage the re-use or recycling of materials and their proper disposal. The use of wooden hoardings shall not be allowed. An alternative material, which can be reused or recycled, for example, metal (aluminium, alloy, etc) shall be used. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 6.5.1 | As referred to the section 6.4.1, the 317,936m3 of inert surplus material generated by the project is suitable for public fill. The public fill reception facility at Tuen Mun Area 38 provides a suitable facility for the reuse of surplus inert C&D material generated from the project. | DSD's Contractor | Construction Work Sites | WDO (Cap.354), ETWBTC No. 15/ 2003, ETWBTC No. 12/2002 and ETWBTC No. 31/2004 | |
| | Under the contract, the contractor will be required to minimise the generation of C&D material and reuse it on site through the following: | | | | |
| | (a) to plan in the design and construction, methods to minimise the generation of C&D material; | | | | ✓ |
| | (b) to submit a Waste Management Plan (WMP) in accordance with Environment Transport and Works Bureau Technical Circular (ETWBTC) No. 15/2003 or any superseding circular(s); | | | | ✓ |
| | (c) to reuse recycled aggregates in accordance with ETWBTC No. 12/2002 or any superseding circular(s); | | | | ✓ |
| | (d) to observe the requirements of the Trip-Ticket System, stipulated in ETWBTC No. 31/2004 or any superceding circular(s), for disposal of C&D material; | | | | ✓ |
| | (e) to incorporate a Waste Management System into the WMP for effective management and control of C&D materials to avoid/reduce/minimise the generation of C&D material during construction. | | | | ✓ |
| | The contractor will be required to properly sort into inert C&D materials, metals, timber and other non-inert C&D material in the workplace to prevent cross-contamination. | | | | ✓ |
| | In addition, DSD will conduct site inspection to monitor the contractors' performance in the implementation of the WMP and other relevant specified requirements. | DSD | Construction Work Sites | WDO (Cap.354) and ETWBTC No. 15/2003 | ✓ |
| | *Excavated Materials*<br>Excavated materials should be segregated from other wastes to avoid contamination thereby ensuring acceptability at public filling areas and avoiding the need for disposal at landfill. | DSD's Contractor | Construction Work Sites | WDO (Cap.354) and ETWBTC No. 15/2003 | ✓ |
| | *Municipal Waste*<br>Temporary refuse collection facilities should be set-up by the contractor and wastes should be stored in appropriate containers prior to collection and disposal. | | | | ✓ |
| | Domestic effluent generated by the workforce will be directed to foul sewer or chemical toilets if public facilities are not available. | | | | ✓ |
| 6.5.1 | *Waste Management Plan*<br>A Waste Management Plan (WMP) for the construction of the Project should be prepared as part of the contractors submission. It will provide recommendations for appropriate recycling or disposal route and should include method statement for stockpiling and transportation of the excavated material and other construction wastes should also be included in the WMP and approved before the commencement of construction. All mitigation measures arising from the approved WMP shall be fully implemented. | DSD's Contractor | Construction Work Sites | WDO (Cap.354), ETWBTC No. 15/2003 and ETWBTC No. 33/2002 | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | For the purpose of enhancing the management of C&D material including rock, and to minimize its generation at source, a C&D Material Management Plan (C&DMMP) has been prepared for this project and would be processed in accordance with the Environment, Transport and Works Bureau Technical Circular (Works) No. 33/2002 - Management of Construction and Demolition Material Including Rock. | | | | N/A |
| **Ecology** | | | | | |
| 7.7.1 | **Avoidance**<br><br>The surface structures are located mainly on existing disturbed areas (ie pollution and urbanisation) and have generally avoided the natural stream sections of higher species diversity and abundance of aquatic organisms. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | The major construction activities at streams are scheduled to avoid wet season of high water flow which may adversely affect the downstream natural habitats due to the construction runoff. | | | | ✓ |
| 7.7.2 | **Minimisation**<br><br>The previous discussion in Section 7.6.4 has indicated that the impacts on ecological resources due to the construction and operation of the proposed Project are generally expected to be low. The following mitigation measures to minimise impacts and disturbance to the surrounding habitats, are recommended. | | | | |
| | *Measures for Construction Runoff*<br>Install sheet piles/cofferdam/weir along the boundary of the works area within the stream habitats in particular Sam Dip Tam Stream and Tso Kung Tam Stream before the commencement of works to prevent construction runoff during construction. Provision of adequate designed sand/ silt removal facilities such as sand traps, silt traps and sediment basin in the areas which could potentially be affected may be required. | | | | ✓ |
| | *Good Construction Practice* | | | | ✓ |
| | Erect fences along the boundary of the works area before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent areas, particularly the stream habitats. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the remaining and surrounding natural stream habitats. | | | | ✓ |
| | Regularly check the work site boundaries to ensure that they are not breached and that no damage occurs to surrounding areas. | | | | ✓ |
| | Prohibit and prevent open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas. | | | | ✓ |
| | Treat any damage that may have occurred to individual major trees in the adjacent area with surgery. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | Reinstate temporary work sites/disturbed areas, particularly stream of natural bottom and bank, plantation, intertidal habitat, and the areas located within the proposed Ecological Park, immediately after completion of the construction works, ie through on-site tree/shrub planting and reprovision of natural or semi-natural bottom (also refer to Section 7.7.3), in order to facilitate the recolonisation of the wildlife recorded during the baseline surveys. Tree/shrub species used should make reference from those in the surrounding area | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| 7.7.3 | **Compensation**<br><br>Provide natural stream bed (approximately 0.03 ha) for the new Dry Weather Flow Channel (created from village-orchard) by laying natural stones at Intake I-2 (Figure 7.7). The reinstated stream bed shall mimic the existing natural conditions with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. | | | | N/A |
| | Provide natural stream bed (approximately 0.5 ha,) for the Approach Channel and Dry Weather Flow Channel by laying natural stones at Intake I-3 (Figure 7.8). The reinstated stream bed shall mimic the existing natural conditions (rocky bottom with very limited aquatic plants) with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. | | | | N/A |
| | Provide natural bottom (ie retain the existing stream bed or reinstate the stream bed by providing boulders/ rocks, riprap or gabion) for the affected stream sections (Figure 7.8) in order to allow natural colonisation of aquatic fauna. | | | | N/A |
| | Provide at least 2.2 ha of compensatory planting on the permanent and temporary affected plantation areas, particularly the slopes along access road and adjacent to Intake I-3 and cascade at Outfall O-1, after construction to stabilise the slope to present soil erosion and consequent stream sedimentation. Among the 2.2 ha compensatory planting, at least 0.5 ha of compensatory tree planting on the new formed slope along the access road of the Intake I-3 and 0.5 ha of compensatory tree planting over the cascade (by constructing intermediate platform) at Outfall O-1 will be provided (location refer to Figures 7.4 – 7.6). Species used for planting should take reference from the species identified in Appendix F and be native to Hong Kong or South China region. | | | | N/A |
| | Provide armour rocks for the affected intertidal habitat in order to allow natural colonisation of intertidal organisms. | | | | N/A |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| **Cultural Heritage** | | | | | |
| 8.6 | As no impacts on recorded archaeological sites or area with archaeological potential were identified within the Study Area, no mitigation measure for archaeological resources is considered necessary. | | | | N/A |
| | The construction methods to be employed should seek to avoid potential vibration impacts to Kuen Yuen Tung Monastery at Lo Wai, the Western Monastery, Yuen Yuen Home for the Aged, Hong Hoi Chee Hong Temple, Chiu Yum Tsing Yuen, Tse's Grave, Wan Lin Bridge and Sam Dip Tam Rock Carving in Sam Dip Tam and the Tin Hau Temple, Yam Kom Tau Village Rural Committee and the Yeung's Ancestral Hall in Yau Kom Tau as these sites fall within 50 m of the Preferred Option of the drainage tunnel alignment or associated Intakes/Outfall construction activities. Construction works that generates excessive vibration in close proximity to these sites should be restricted to protect the building from adverse vibration impacts and to ensure that the building structures will not be damaged as a result of these impacts. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | In order to ensure that no structural or superficial damage will be caused by the construction activities, a precautionary approach involving a pre-construction condition survey and establishment of appropriate vibration limits for the potentially impacted structures should be adopted. Protection measures for the potentially impacted structures, if considered necessary from the pre-construction condition survey, should be implemented prior to the commencement of construction works. Vibration monitoring during the construction phase should be undertaken as part of the EM&A programme. | Qualified archaeologist/ built heritage specialist | Construction Work Sites | EIAO | ✓ |
| **Fisheries** | | | | | |
| 10.6 | In accordance with the guidelines in the *EIAO-TM* on fisheries impact assessment the general policy for mitigating impacts to fisheries, in order of priority are avoidance, minimization and compensation. | DSD's Contractor | Construction Work Sites | EIAO | N/A |
| | Impacts to fisheries resources and fishing operations have largely been avoided during the construction and operation of the drainage tunnel through the avoidance of dredging, reclamation and filling activities. Good construction practice and associated measures were recommended in Water Quality Assessment in Section 5 to control water quality impacts to within acceptable levels and are also expected to control impacts to fisheries resources. Hence, no fisheries-species mitigation measures are required during construction and operation of the drainage tunnel. | | | | N/A |

Remarks:
- ✓ Compliance of mitigation measure
- × Non-compliance of mitigation measure
- N/A Not applicable

# IMPLEMENTATION SCHEDULE September 2012

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| **Air Quality** | | | | | |
| 3.6.1 | **Specific**<br><br>As mentioned in Section 3.5, exceedances of 1-hour and 24-hour average TSP guideline levels have been predicted at most of the ASRs. Hence, mitigation measures are considered necessary in order to suppress the potential dust impact. | DSD's Contractor | Construction Work Sites | Air Pollution Control (Construction Dust) Regulation | ✓ |
| | The dust suppression measures set out in the *Air Pollution Control (Construction Dust) Regulation*, in fact, are more extensive. Therefore, it is expected that with watering the construction site every four times daily together with strict implementation of dust suppression measures as stipulated in the *Air Pollution Control (Construction Dust) Regulation*, the dust level is expected to be reduced by over 75%. | | | | ✓ |
| | **General**<br><br>To further ensure compliance with the guideline and AQO limit at the ASRs at all time, it is recommended to implement the *Air Pollution Control (Construction Dust) Regulation* and include good site practice in the contract clauses to minimize cumulative dust impact. In addition, a comprehensive dust monitoring and audit programme is recommended to ensure proper implementation of the identified mitigation measures. Details of the monitoring and audit requirements are provided in a separate EM&A Manual. | | | | |
| | • effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level of the scaffolding where a scaffolding is erected around the perimeter of a building under construction; | | | | N/A |
| | • dump truck for material transport should be totally enclosed by impervious sheeting; | | | | ✓ |
| | • any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading; | | | | ✓ |
| | • stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones; | | | | ✓ |
| | • dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 3.6.1 | • the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; | DSD's Contractor | Construction Work Sites | Air Pollution Control (Construction Dust) Regulation | ✓ |
| | • where a site boundary adjoins a road, street or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length except for a site entrance or exit; | | | | ✓ |
| | • every main haul road should be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet; | | | | ✓ |
| | • the portion of road leading only to a construction site that is within 30m of a designated vehicle entrance or exit should be kept clear of dusty materials; | | | | ✓ |
| | • stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet; | | | | ✓ |
| | • all dusty materials should be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet; | | | | ✓ |
| | • vehicle speed should be limited to 10 kph except on completed access roads; | | | | ✓ |
| | • every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites; | | | | ✓ |
| | • the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle; and | | | | ✓ |
| | • the working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet. | | | | ✓ |
| **Noise** | | | | | |
| 4.6.1 | **During Construction**<br><br>Appropriate mitigation measures such as the use of quiet equipment and movable barriers will be developed to ensure that noise can be reduced to acceptable levels without causing programme delays | DSD's Contractor | Construction Work Sites | PN 2/93 Noise from Construction Activities & EIAO | ✓ |
| | *Good Site Practice*<br>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during construction: | | | | |
| | • only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works; | | | | ✓ |
| | • machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 4.6.1 | • plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs; | DSD's Contractor | Construction Work Sites | PN 2/93 Noise from Construction Activities & EIAO | ✓ |
| | • mobile plant should be sited as far away from NSRs as possible; and | | | | ✓ |
| | • material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. | | | | ✓ |
| | *For Drill and Blast Works*<br>• Charge mass per delay should be decreased by minimising the number of blastholes firing on each delay. | | | | N/A |
| | • Smaller blasthole patterns and longer delays should be used between dependent charges. | | | | N/A |
| | • Times of blasting should be established to suit the situation and firing blasts when neighbours are busy with their daily tasks (and at a regular time such as lunch time). | | | | N/A |
| | *For TBM Tunnelling*<br>• For the tunnel excavation, it is anticipated that beyond the initial length (say within 30m), excavation will be carried out well within the tunnel and door should be provided to further minimize the noise nuisance to the nearby receivers. | | | | N/A |
| 4.6.2 | **During Operation**<br><br>Good site practice and noise management can significantly reduce the impact of maintenance activities on nearby NSRs. The following package of measures should be followed during construction | DSD's Contractor | Project Area | NCO & EIAO | |
| | • only well-maintained plant should be operated on-site; | | | | N/A |
| | • machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; and | | | | N/A |
| | • plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the NSRs. | | | | N/A |
| **Water Quality** | | | | | |
| 5.9.1 | **During Construction**<br><br>Mitigation measures and a spill control and response plan have been prepared for works at the intakes and work sites. | DSD's Contractor | Construction Work Sites | Practice Note for Professional Persons with regard to site drainage (ProPECC PN 1/94) and WQO | ✓ |
| | *Precautions to be taken at any time of year when rainstorms are likely:*<br>• Temporarily exposed surfaces should be covered e.g. by tarpaulin. | | | | ✓ |
| | • Temporary access roads should be protected by crushed stone or gravel. | | | | ✓ |
| | • Trenches should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches. | | | | ✓ |
| | *Actions to be taken when a rainstorm is imminent or forecast:*<br>• Silt removal facilities, should be checked to ensure that they can function properly. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 5.9.1 | • Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric. | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| | • All temporary covers to slopes and stockpiles should be secured. | | | | ✓ |
| | *Actions to be taken during or after rainstorms:*<br>• Silt removal facilities should be checked and maintained to ensure satisfactory working conditions. | | | | ✓ |
| | **Spill Control and Response Plan** | | | | |
| | **1 Prevention and Precaution Measures** | | | | |
| | ***General Precautions***<br>• No discharge of silty water into watercourses. | | | | ✓ |
| | • All materials to be used during construction and operation shall be identified and their hazard potential evaluated. | | | | ✓ |
| | • Maintenance of vehicles and equipment involving activities with potential for leakage and spillage shall only be undertaken with the areas appropriately equipped to control these discharges. | | | | ✓ |
| | • Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials. | | | | ✓ |
| | • Any construction plant which causes pollution to catchwaters or water gathering ground due to leakage of oil or fuel shall be removed off-site immediately. | | | | ✓ |
| | • Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport | | | | ✓ |
| | • Chemical waste containers shall be suitably labelled to notify and warn the personnel who are handling the wastes to avoid accidents. | | | | ✓ |
| | • Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area. | | | | ✓ |
| | • Prevent obstructions and tripping hazards. | | | | ✓ |
| | ***Storage Precautions***<br>• All chemical storage containers shall be correctly labelled. | | | | ✓ |
| | • Solid and impermeable enclosure walls or storage shelves shall be used. | | | | ✓ |
| | • Only compatible chemical wastes shall be stored in the same storage area. | | | | ✓ |
| | • The storage areas shall be inspected to detect any leakages or defective containers on a regular basis. | | | | ✓ |
| | • Suitable notices warning of hazards, emergency response plans, telephone numbers etc shall be posted around the site, including storage areas. | | | | ✓ |
| | • Large and heavy containers shall be stored at ground level. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | • Chemical waste containers shall be stored below eye level. | | | | ✓ |
| 5.9.1 | • Adequate space for handling of the containers shall be provided | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| | • Spill response kits shall be located adjacent/near to the storage areas. | | | | ✓ |
| | • A log of chemical wastes shall be maintained. | | | | ✓ |
| | • Incompatible chemicals shall be stored separately. | | | | ✓ |
| | **2 Responses/Action Plan** | | | | |
| | All Workers shall be made aware of emergency telephone numbers and the location of all relevant pollution control equipment. Training be given in emergency response/action plans. The action include the following steps: | | | | ✓ |
| | • Only trained personnel who are equipped with protective clothing and equipment shall be allowed to enter the spillage area for clean up. | | | | ✓ |
| | • Spills shall be transferred appropriate back into containers using suitable equipment. | | | | ✓ |
| | • Absorbent materials shall be used to clean up the spills and shall be disposed of as chemical wastes. | | | | ✓ |
| | • Where appropriate suitable solvents may be used to clean the contaminated area after removal of all contaminated materials. | | | | ✓ |
| | • All necessary protective devices, safety equipment, containers and clean up materials for emergency use shall be maintained to a high standard. | | | | ✓ |
| | **3 Spill Clean Up and Disposal** | | | | |
| | Effect the response plan. | | | | ✓ |
| | Control the leakage and absorb the spillage using suitably absorbent materials. | | | | ✓ |
| | Provide safety equipment and personal protective equipment for handling of chemical wastes would be similar to that for handling of chemicals. | | | | ✓ |
| | *Safety equipment includes but is not limited to:*<br>• Fire extinguishers. | | | | ✓ |
| | • Spades, brushes, dustpan, mop and bucket (or similar readily available on site). | | | | ✓ |
| | • Absorbent material such as dry sand, tissues and toweling (all materials readily available on-site). | | | | ✓ |
| | • Containers including plaster bags, drums, etc. | | | | ✓ |
| | • Absorbing materials. | | | | ✓ |
| | • Pumps. | | | | ✓ |
| | *Personal protective equipment includes as appropriate:*<br>• First-aid kits. | | | | ✓ |
| | • Safety helmet and goggles. | | | | ✓ |
| | • Gloves which can resist chemical reaction. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | • Protective boot and clothing. | DSD's Contractor | Construction Work Sites | WQO | ✓ |
| 5.9.1 | • Respirators and gas masks. | | | | ✓ |
| | • Face visor and masks. | | | | ✓ |
| 5.9.2 | **Emergency Responses to Spillages**<br><br>Emergency plans and clean up procedures will need to be provided by the Contractor recognising his specific working methods and construction programme, activities and sequences. Agreement must be sought prior to commencement of the construction work but the following principles should be considered. | | | | |
| | *The emergency plans should include the procedures for:*<br>• spill prevention and precaution; | | | | ✓ |
| | • response actions; and | | | | ✓ |
| | • spill clean up and disposal. | | | | ✓ |
| | *Spill prevention and precaution embraces good site practice and covers:*<br>• good housekeeping practices; | | | | ✓ |
| | • chemical storage requirements; and | | | | ✓ |
| | • chemical transfer and transport. | | | | ✓ |
| 5.9.3 | **During Operation**<br><br>Regular inspection of the tunnels is essential to monitor the structural integrity and proper functioning of the drainage tunnel, which allows repairing of structural deterioration when it begins to develop. It is recommended that routine inspection shall be carried out at least two times per year for the drainage tunnel at the beginning and end of wet season from April to September. | DSD's Contractor | Project Area | | N/A |
| **Waste Management** | | | | | |
| 6.5.1 | **During Construction**<br><br>*Vegetation Removed from Site Clearance*<br>Wastes generated from site clearance shall be sorted and excavated topsoil segregated from roots for re-use in landscaping works, thus eliminating the need for off-site disposal. | DSD's Contractor | Construction Work Sites | Waste Disposal Ordinance (Cap.354); Waste Disposal (Chemical Wastes) (General) Regulation (Cap 354) and ETWBTC No. 15/2003, Waste anagement on Construction Site | ✓ |
| | *Construction and Demolition Materials*<br>The Contractor should reuse any C&D material on-site. C&D waste should be segregated and stored in different containers to other wastes to encourage the re-use or recycling of materials and their proper disposal. The use of wooden hoardings shall not be allowed. An alternative material, which can be reused or recycled, for example, metal (aluminium, alloy, etc) shall be used. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| 6.5.1 | As referred to the section 6.4.1, the 317,936m3 of inert surplus material generated by the project is suitable for public fill. The public fill reception facility at Tuen Mun Area 38 provides a suitable facility for the reuse of surplus inert C&D material generated from the project. | DSD's Contractor | Construction Work Sites | WDO (Cap.354), ETWBTC No. 15/ 2003, ETWBTC No. 12/2002 and ETWBTC No. 31/2004 | |
| | Under the contract, the contractor will be required to minimise the generation of C&D material and reuse it on site through the following: | | | | |
| | (a) to plan in the design and construction, methods to minimise the generation of C&D material; | | | | ✓ |
| | (b) to submit a Waste Management Plan (WMP) in accordance with Environment Transport and Works Bureau Technical Circular (ETWBTC) No. 15/2003 or any superseding circular(s); | | | | ✓ |
| | (c) to reuse recycled aggregates in accordance with ETWBTC No. 12/2002 or any superseding circular(s); | | | | ✓ |
| | (d) to observe the requirements of the Trip-Ticket System, stipulated in ETWBTC No. 31/2004 or any superceding circular(s), for disposal of C&D material; | | | | ✓ |
| | (e) to incorporate a Waste Management System into the WMP for effective management and control of C&D materials to avoid/reduce/minimise the generation of C&D material during construction. | | | | ✓ |
| | The contractor will be required to properly sort into inert C&D materials, metals, timber and other non-inert C&D material in the workplace to prevent cross-contamination. | | | | ✓ |
| | In addition, DSD will conduct site inspection to monitor the contractors' performance in the implementation of the WMP and other relevant specified requirements. | DSD | Construction Work Sites | WDO (Cap.354) and ETWBTC No. 15/2003 | ✓ |
| | *Excavated Materials*<br>Excavated materials should be segregated from other wastes to avoid contamination thereby ensuring acceptability at public filling areas and avoiding the need for disposal at landfill. | DSD's Contractor | Construction Work Sites | WDO (Cap.354) and ETWBTC No. 15/2003 | ✓ |
| | *Municipal Waste*<br>Temporary refuse collection facilities should be set-up by the contractor and wastes should be stored in appropriate containers prior to collection and disposal. | | | | ✓ |
| | Domestic effluent generated by the workforce will be directed to foul sewer or chemical toilets if public facilities are not available. | | | | ✓ |
| 6.5.1 | *Waste Management Plan*<br>A Waste Management Plan (WMP) for the construction of the Project should be prepared as part of the contractors submission. It will provide recommendations for appropriate recycling or disposal route and should include method statement for stockpiling and transportation of the excavated material and other construction wastes should also be included in the WMP and approved before the commencement of construction. All mitigation measures arising from the approved WMP shall be fully implemented. | DSD's Contractor | Construction Work Sites | WDO (Cap.354), ETWBTC No. 15/2003 and ETWBTC No. 33/2002 | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | For the purpose of enhancing the management of C&D material including rock, and to minimize its generation at source, a C&D Material Management Plan (C&DMMP) has been prepared for this project and would be processed in accordance with the Environment, Transport and Works Bureau Technical Circular (Works) No. 33/2002 - Management of Construction and Demolition Material Including Rock. | | | | N/A |
| **Ecology** | | | | | |
| 7.7.1 | **Avoidance**<br><br>The surface structures are located mainly on existing disturbed areas (ie pollution and urbanisation) and have generally avoided the natural stream sections of higher species diversity and abundance of aquatic organisms. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | The major construction activities at streams are scheduled to avoid wet season of high water flow which may adversely affect the downstream natural habitats due to the construction runoff. | | | | ✓ |
| 7.7.2 | **Minimisation**<br><br>The previous discussion in Section 7.6.4 has indicated that the impacts on ecological resources due to the construction and operation of the proposed Project are generally expected to be low. The following mitigation measures to minimise impacts and disturbance to the surrounding habitats, are recommended. | | | | |
| | *Measures for Construction Runoff*<br>Install sheet piles/cofferdam/weir along the boundary of the works area within the stream habitats in particular Sam Dip Tam Stream and Tso Kung Tam Stream before the commencement of works to prevent construction runoff during construction. Provision of adequate designed sand/ silt removal facilities such as sand traps, silt traps and sediment basin in the areas which could potentially be affected may be required. | | | | ✓ |
| | *Good Construction Practice* | | | | ✓ |
| | Erect fences along the boundary of the works area before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent areas, particularly the stream habitats. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | Avoid any damage and disturbance, particularly those caused by filling and illegal dumping, to the remaining and surrounding natural stream habitats. | | | | ✓ |
| | Regularly check the work site boundaries to ensure that they are not breached and that no damage occurs to surrounding areas. | | | | ✓ |
| | Prohibit and prevent open fires within the site boundary during construction and provide temporary fire fighting equipment in the work areas. | | | | ✓ |
| | Treat any damage that may have occurred to individual major trees in the adjacent area with surgery. | | | | ✓ |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| | Reinstate temporary work sites/disturbed areas, particularly stream of natural bottom and bank, plantation, intertidal habitat, and the areas located within the proposed Ecological Park, immediately after completion of the construction works, ie through on-site tree/shrub planting and reprovision of natural or semi-natural bottom (also refer to Section 7.7.3), in order to facilitate the recolonisation of the wildlife recorded during the baseline surveys. Tree/shrub species used should make reference from those in the surrounding area | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| 7.7.3 | **Compensation**<br><br>Provide natural stream bed (approximately 0.03 ha) for the new Dry Weather Flow Channel (created from village-orchard) by laying natural stones at Intake I-2 (Figure 7.7). The reinstated stream bed shall mimic the existing natural conditions with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. | | | | N/A |
| | Provide natural stream bed (approximately 0.5 ha,) for the Approach Channel and Dry Weather Flow Channel by laying natural stones at Intake I-3 (Figure 7.8). The reinstated stream bed shall mimic the existing natural conditions (rocky bottom with very limited aquatic plants) with certain portion of big boulders creating the lentic and lotic zones for the aquatic fauna, and while it will be developed during detailed design may draw on concepts shown in Figure 2.18. | | | | N/A |
| | Provide natural bottom (ie retain the existing stream bed or reinstate the stream bed by providing boulders/ rocks, riprap or gabion) for the affected stream sections (Figure 7.8) in order to allow natural colonisation of aquatic fauna. | | | | N/A |
| | Provide at least 2.2 ha of compensatory planting on the permanent and temporary affected plantation areas, particularly the slopes along access road and adjacent to Intake I-3 and cascade at Outfall O-1, after construction to stabilise the slope to present soil erosion and consequent stream sedimentation. Among the 2.2 ha compensatory planting, at least 0.5 ha of compensatory tree planting on the new formed slope along the access road of the Intake I-3 and 0.5 ha of compensatory tree planting over the cascade (by constructing intermediate platform) at Outfall O-1 will be provided (location refer to Figures 7.4 – 7.6). Species used for planting should take reference from the species identified in Appendix F and be native to Hong Kong or South China region. | | | | N/A |
| | Provide armour rocks for the affected intertidal habitat in order to allow natural colonisation of intertidal organisms. | | | | N/A |

| EIA Ref. | Recommended Mitigation Measures | Who to implement the measure ? | Location of the measure | What requirements or standards for the measure to achieve ? | Status |
|---|---|---|---|---|---|
| **Cultural Heritage** | | | | | |
| 8.6 | As no impacts on recorded archaeological sites or area with archaeological potential were identified within the Study Area, no mitigation measure for archaeological resources is considered necessary. | | | | N/A |
| | The construction methods to be employed should seek to avoid potential vibration impacts to Kuen Yuen Tung Monastery at Lo Wai, the Western Monastery, Yuen Yuen Home for the Aged, Hong Hoi Chee Hong Temple, Chiu Yum Tsing Yuen, Tse's Grave, Wan Lin Bridge and Sam Dip Tam Rock Carving in Sam Dip Tam and the Tin Hau Temple, Yam Kom Tau Village Rural Committee and the Yeung's Ancestral Hall in Yau Kom Tau as these sites fall within 50 m of the Preferred Option of the drainage tunnel alignment or associated Intakes/Outfall construction activities. Construction works that generates excessive vibration in close proximity to these sites should be restricted to protect the building from adverse vibration impacts and to ensure that the building structures will not be damaged as a result of these impacts. | DSD's Contractor | Construction Work Sites | EIAO | ✓ |
| | In order to ensure that no structural or superficial damage will be caused by the construction activities, a precautionary approach involving a pre-construction condition survey and establishment of appropriate vibration limits for the potentially impacted structures should be adopted. Protection measures for the potentially impacted structures, if considered necessary from the pre-construction condition survey, should be implemented prior to the commencement of construction works. Vibration monitoring during the construction phase should be undertaken as part of the EM&A programme. | Qualified archaeologist/ built heritage specialist | Construction Work Sites | EIAO | ✓ |
| **Fisheries** | | | | | |
| 10.6 | In accordance with the guidelines in the *EIAO-TM* on fisheries impact assessment the general policy for mitigating impacts to fisheries, in order of priority are avoidance, minimization and compensation. | DSD's Contractor | Construction Work Sites | EIAO | N/A |
| | Impacts to fisheries resources and fishing operations have largely been avoided during the construction and operation of the drainage tunnel through the avoidance of dredging, reclamation and filling activities. Good construction practice and associated measures were recommended in Water Quality Assessment in Section 5 to control water quality impacts to within acceptable levels and are also expected to control impacts to fisheries resources. Hence, no fisheries-species mitigation measures are required during construction and operation of the drainage tunnel. | | | | N/A |

Remarks:
- ✓ Compliance of mitigation measure
- × Non-compliance of mitigation measure
- N/A Not applicable

Appendix E

# Monitoring Locations

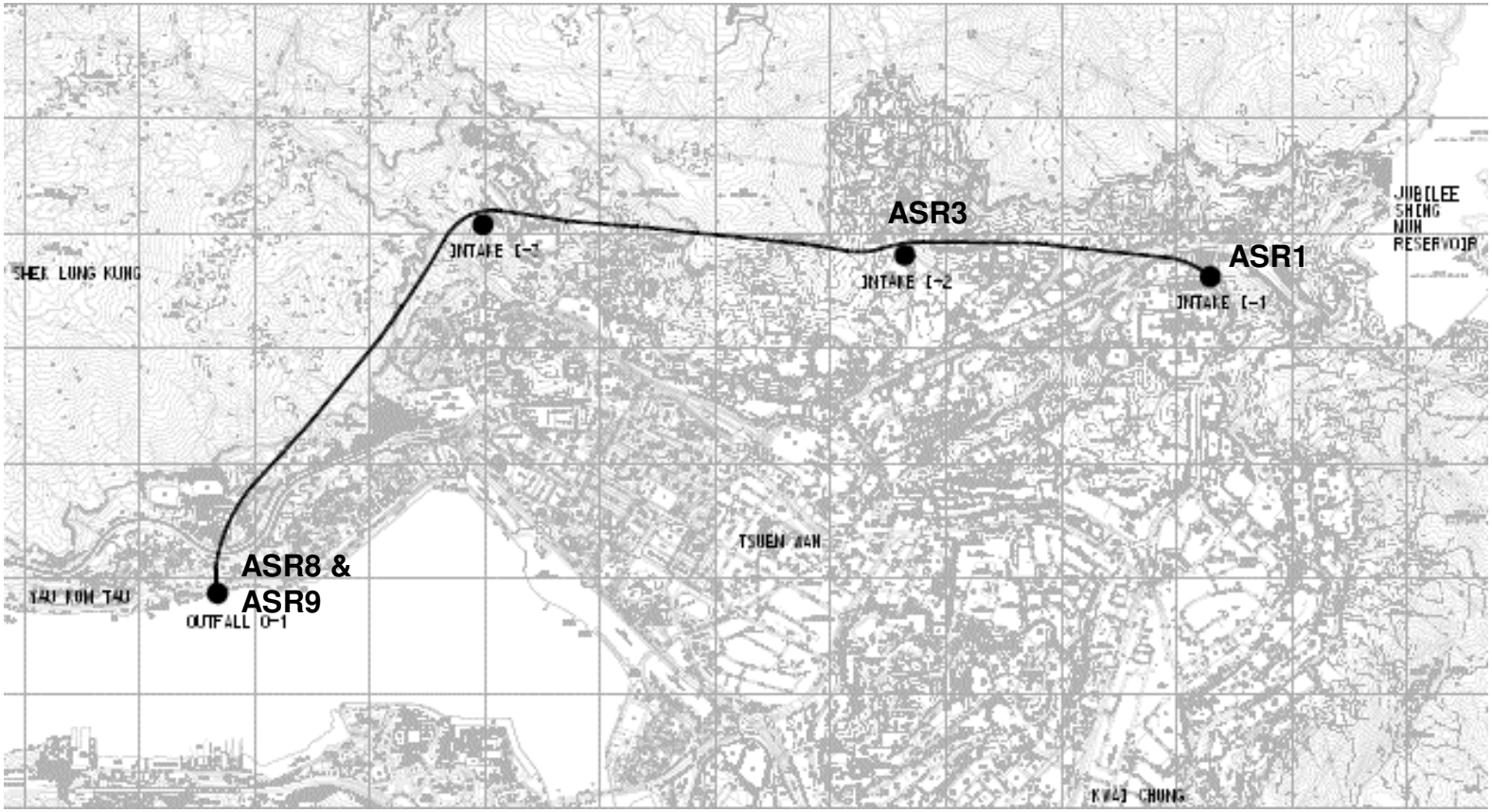



**Figure 1 Air Quality Monitoring Stations**

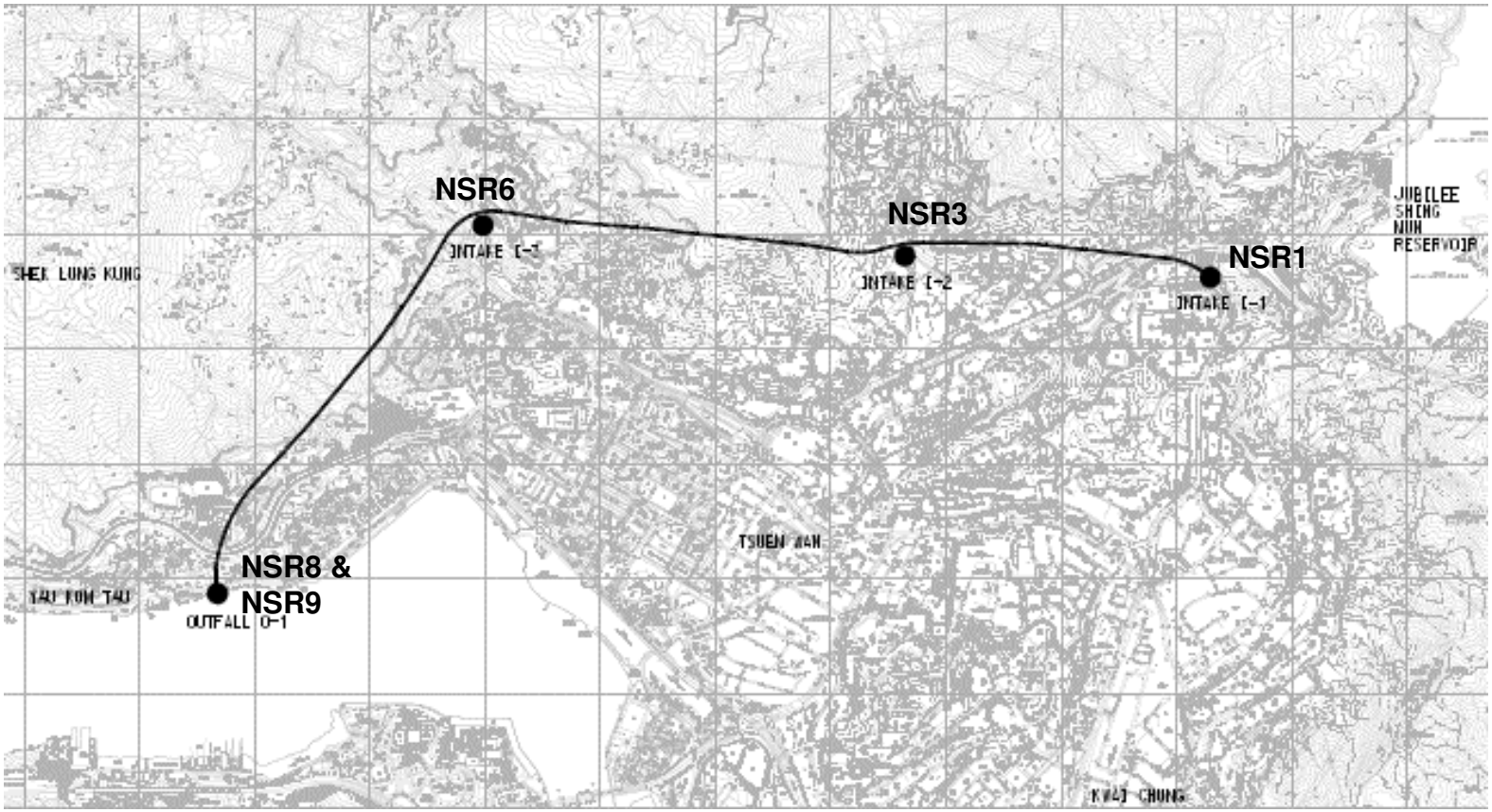



**Figure 2 Noise Monitoring Stations**

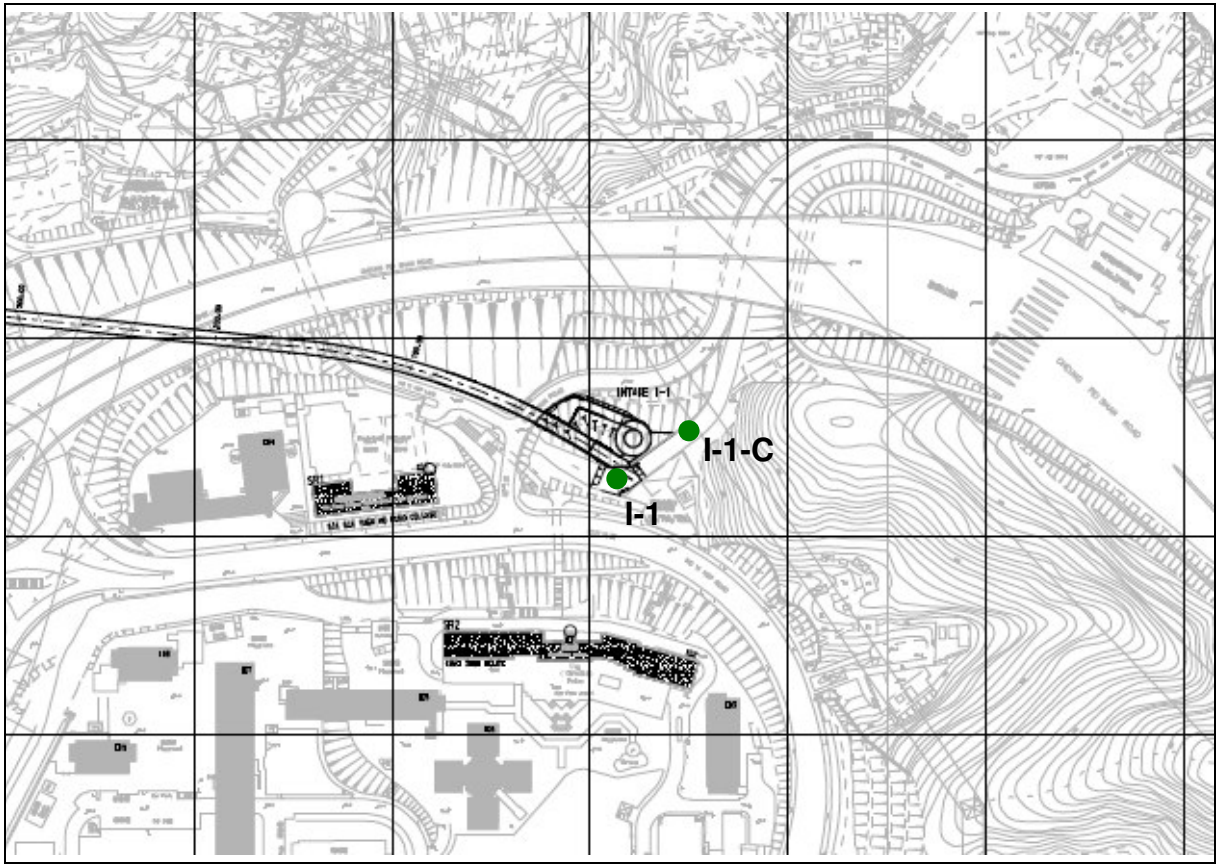



**Figure 3 Water Quality Monitoring Stations: I-1 & I-1-C at Intake I-1**

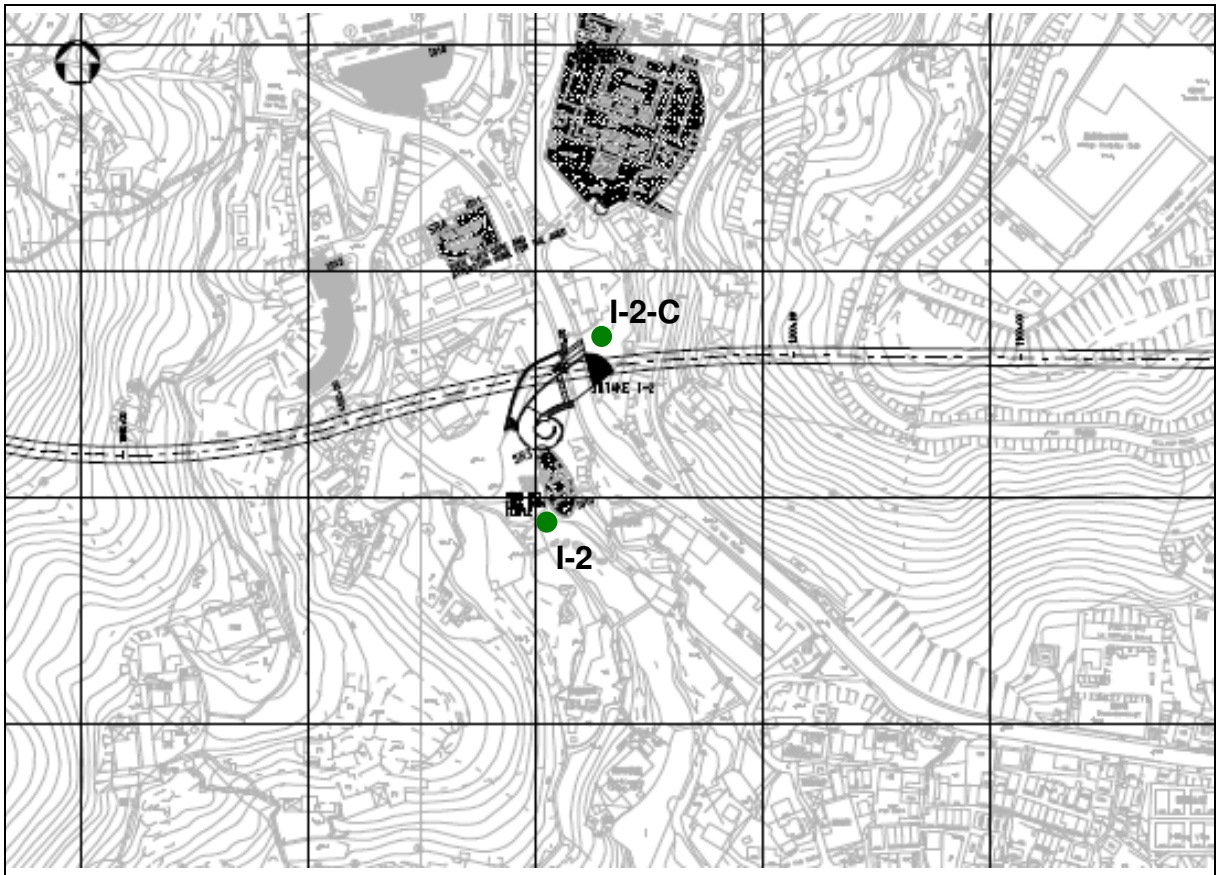



**Figure 4** **Water Quality Monitoring Stations: I-2 & I-2-C at Intake I-2**

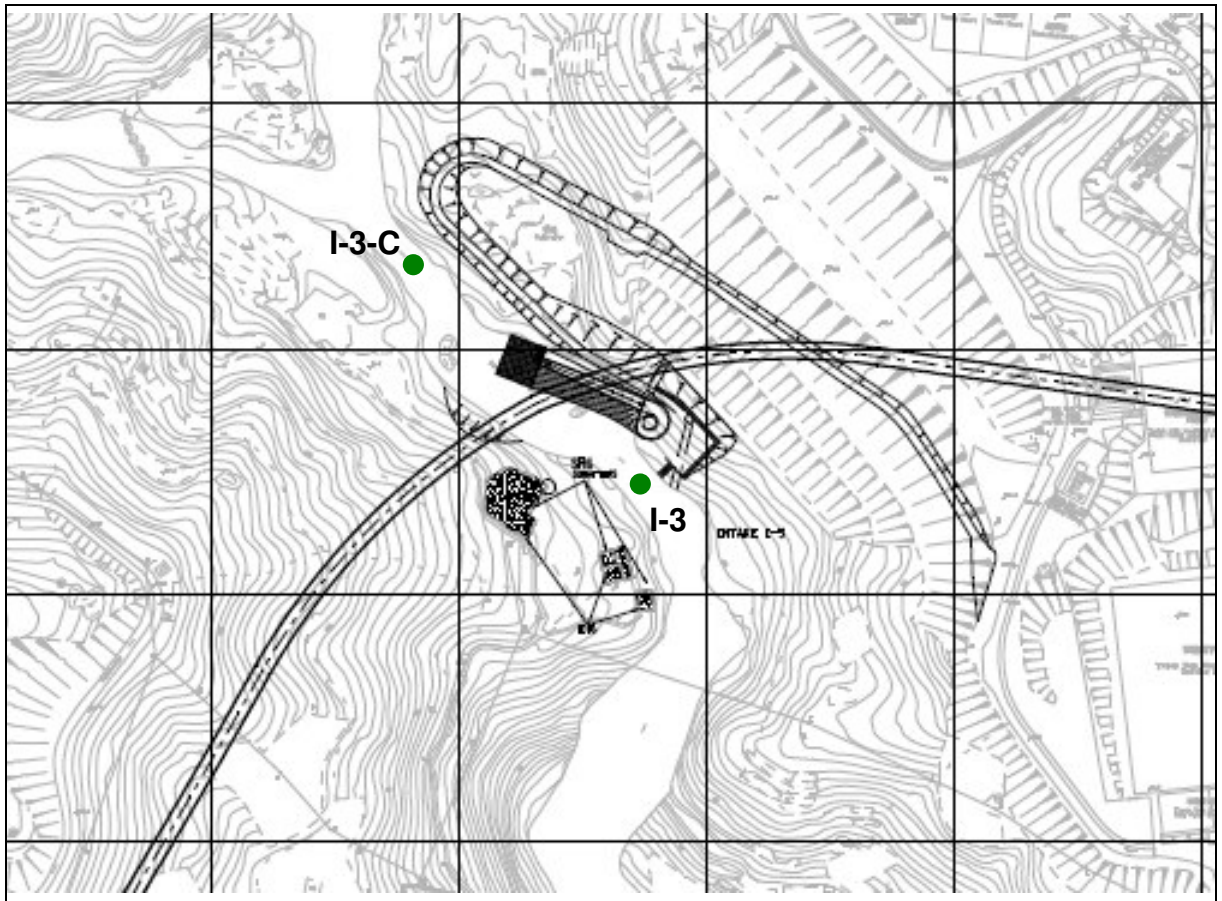



**Figure 5** **Water Quality Monitoring Stations: I-3 & I-3-C at Intake I-3**

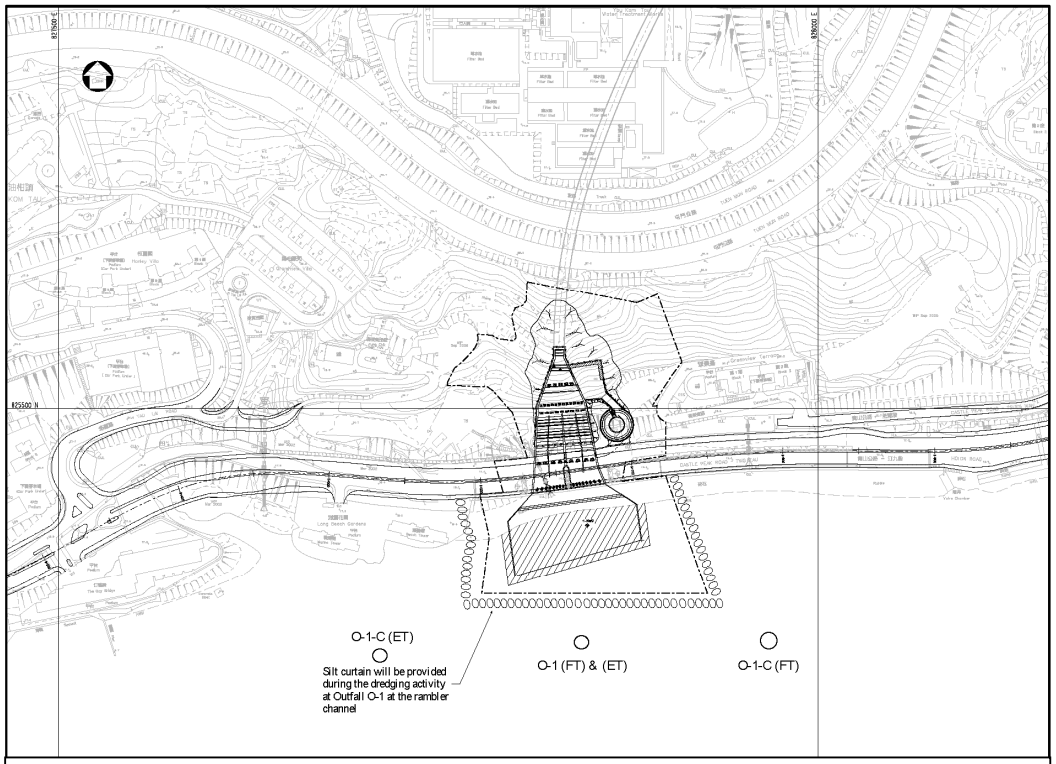
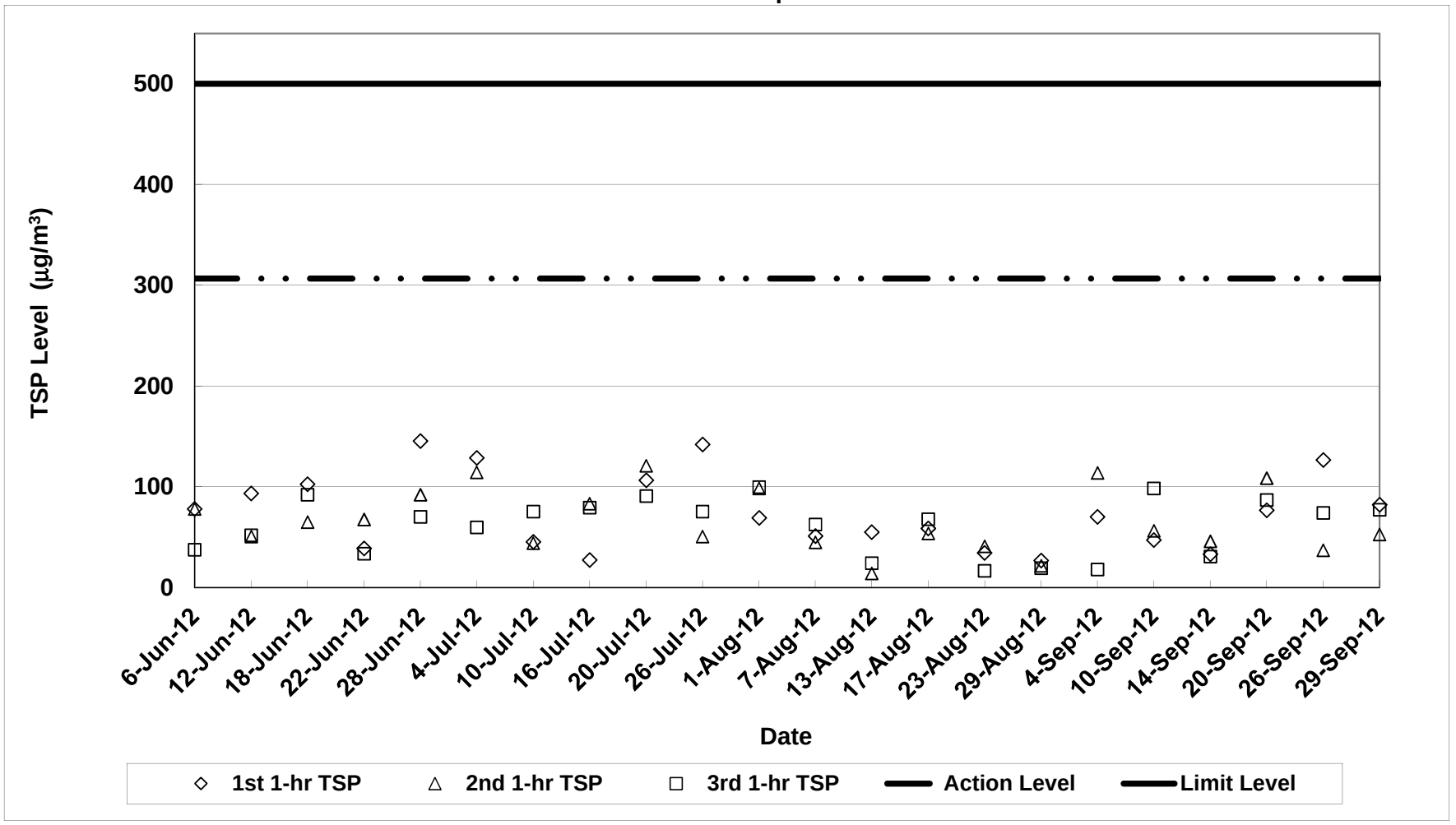



**Figure 6 Water Quality Monitoring Stations: O-1 (FT) & (ET), O-1-C(FT) & O-1-C(FT) at Outfall O-1**

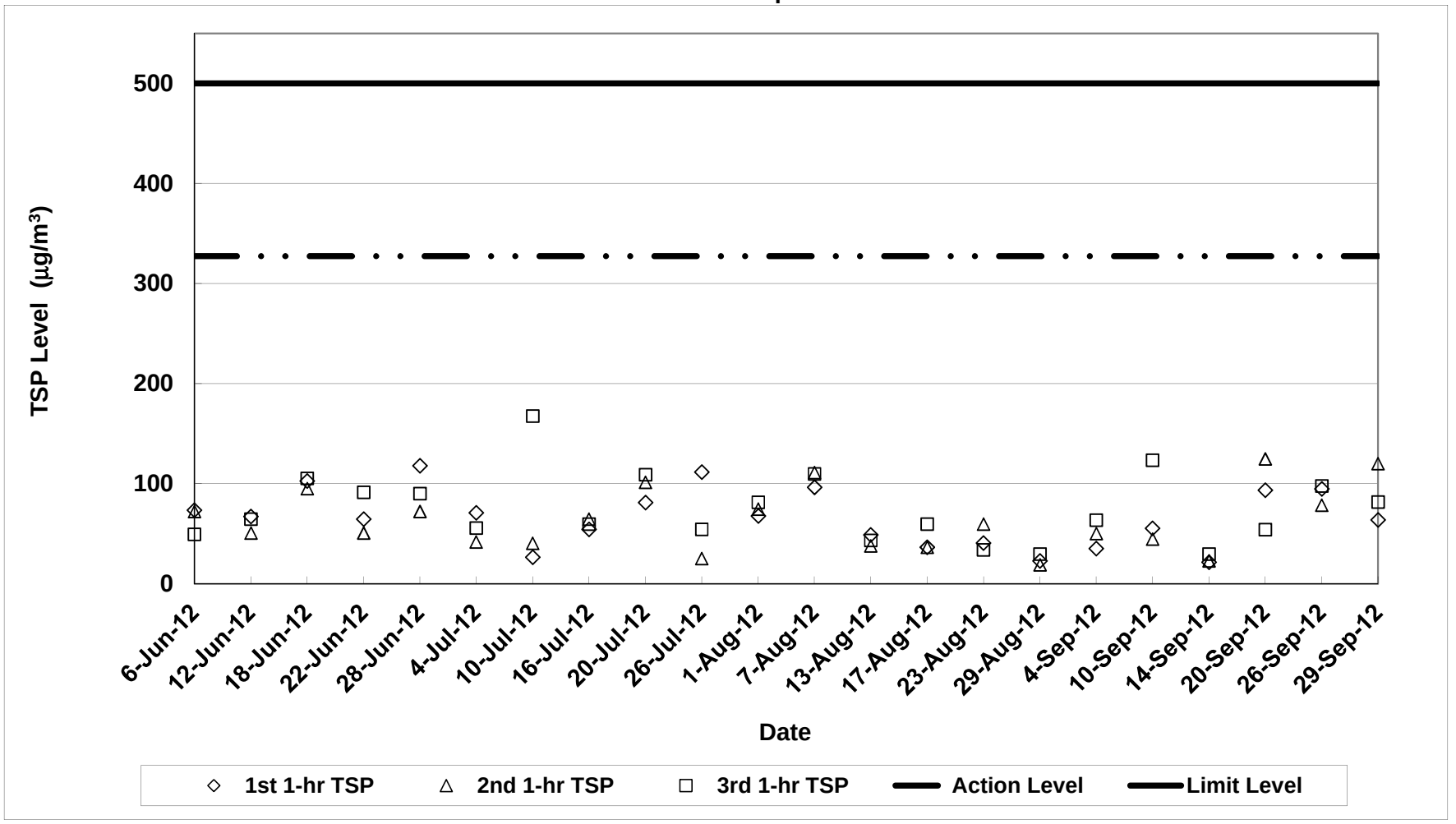
Appendix F

# Monitoring Results

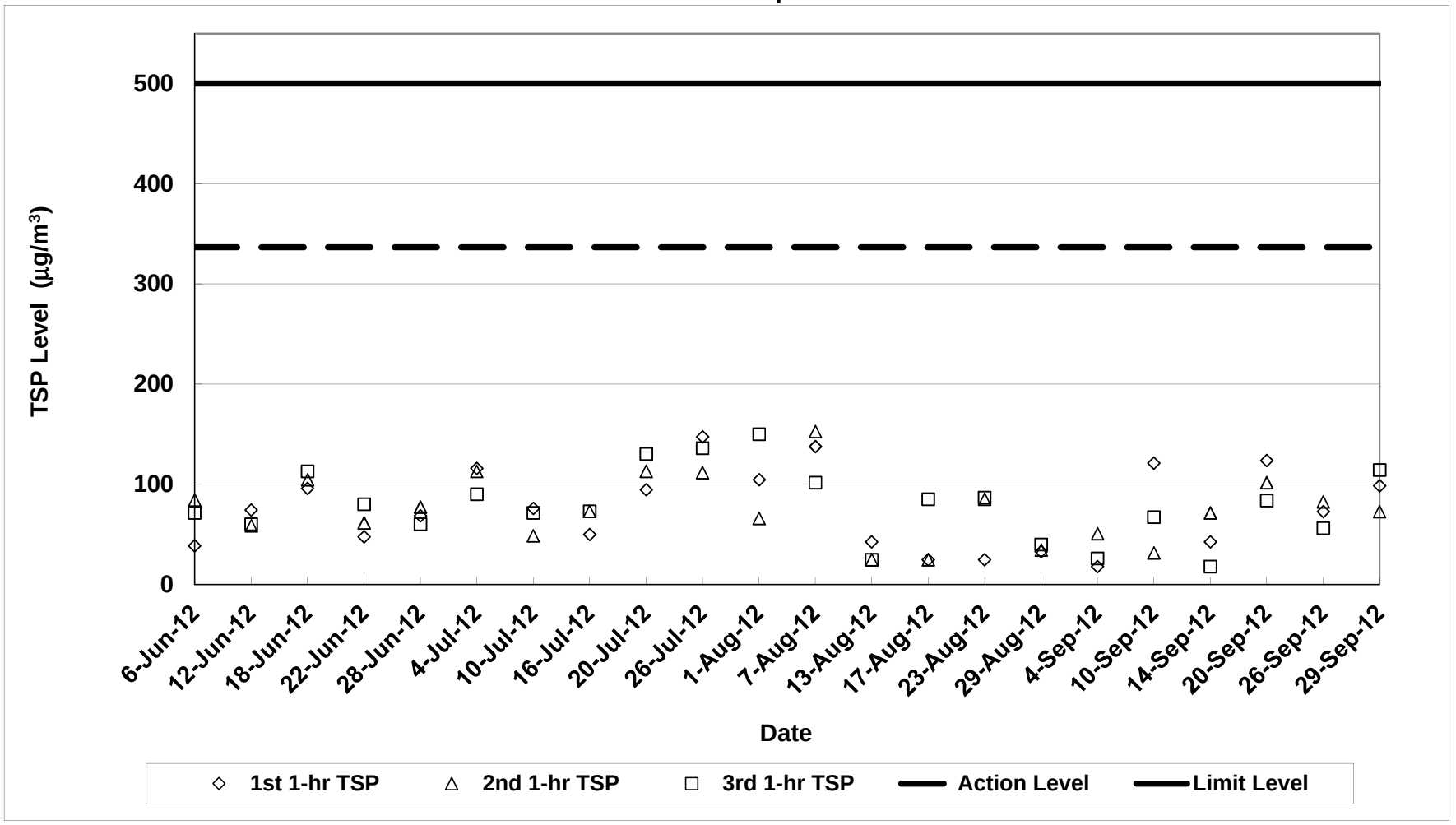
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Air Quality Monitoring (1-hr TSP) Results at Sik Sik Yuen Ho Fung College - Intake (ASR1)**
**Jun-12 to Sep-12**



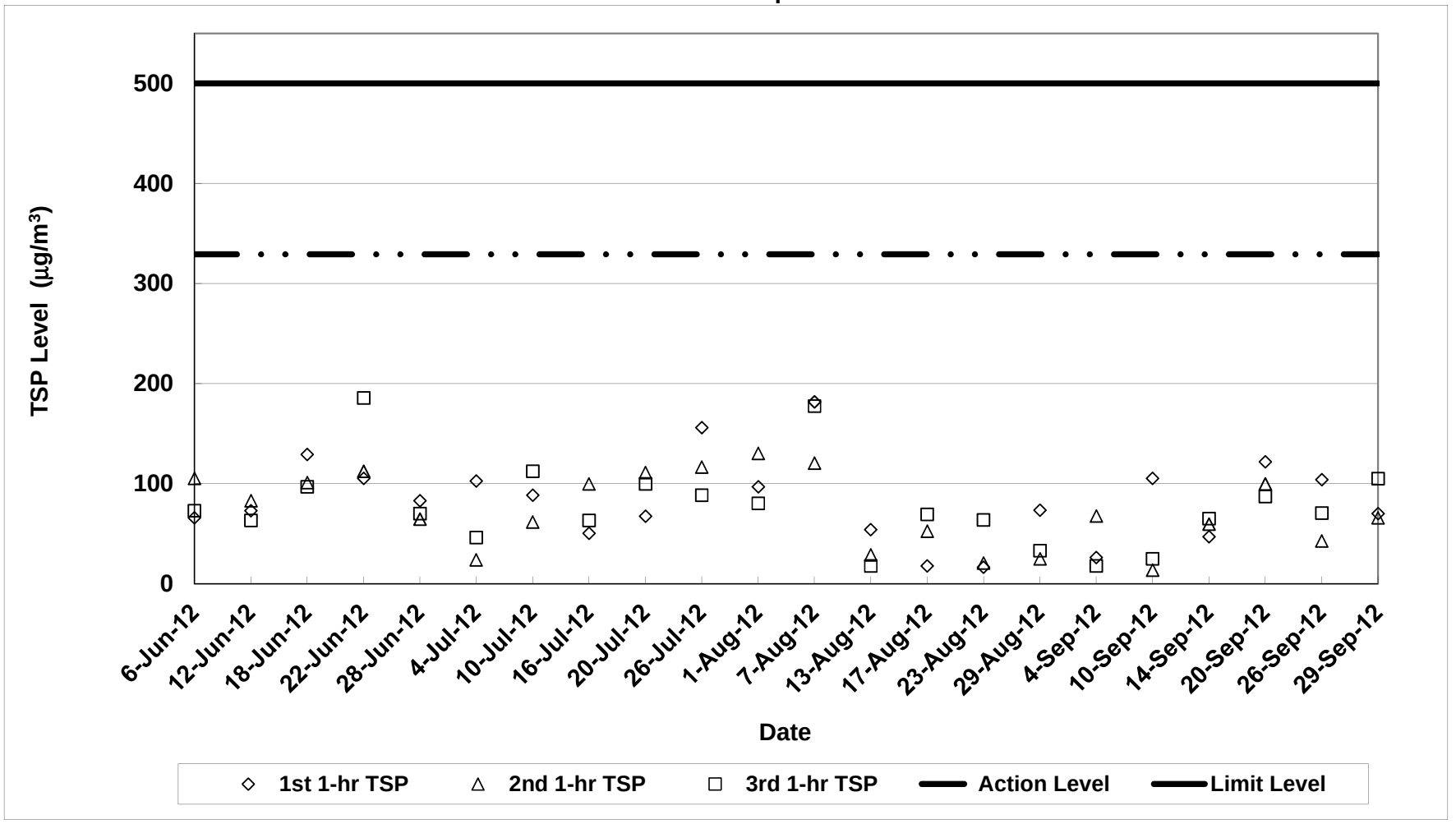
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Air Quality Monitoring (1-hr TSP) Results at Hong Hoi Chee Hong Temple - Intake (ASR3)**
**Jun-12 to Sep-12**



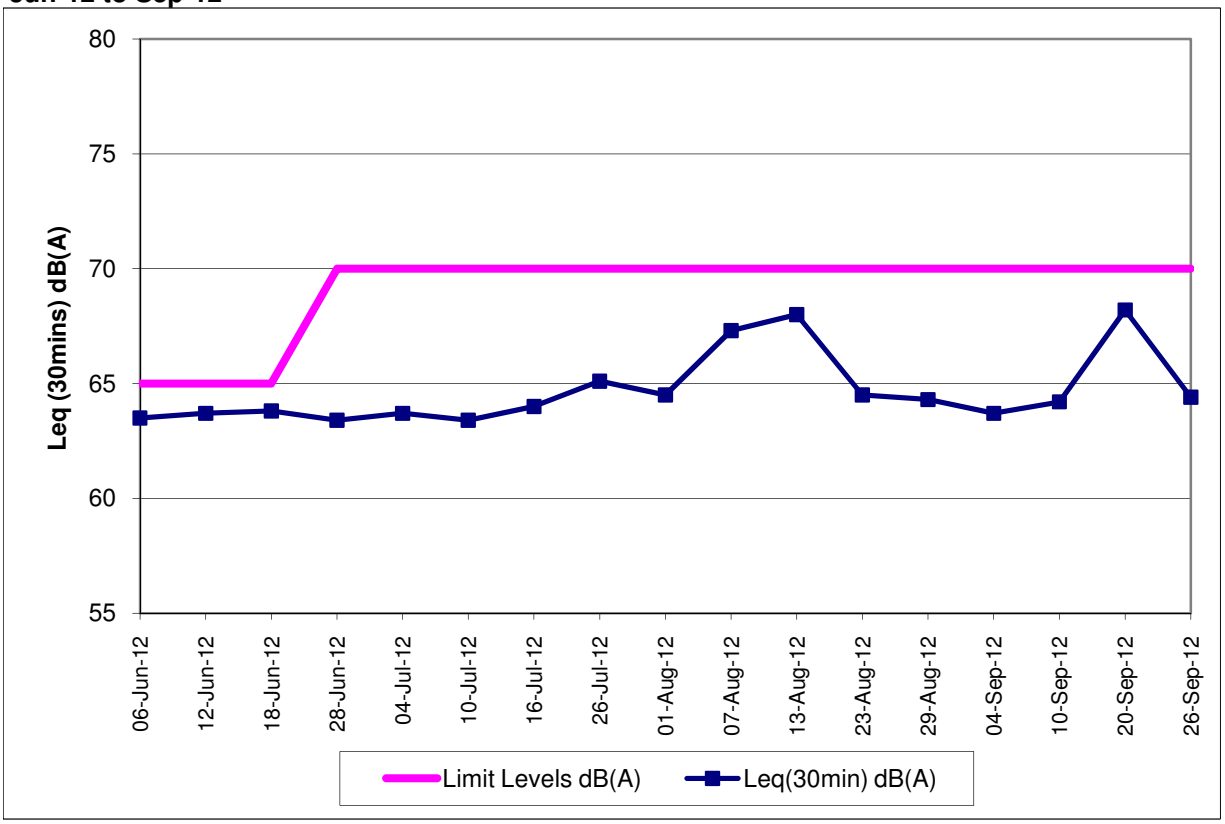
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Air Quality Monitoring (1-hr TSP) Results at Long Beach Gardens - Outfall (ASR8)**
**Jun-12 to Sep-12**



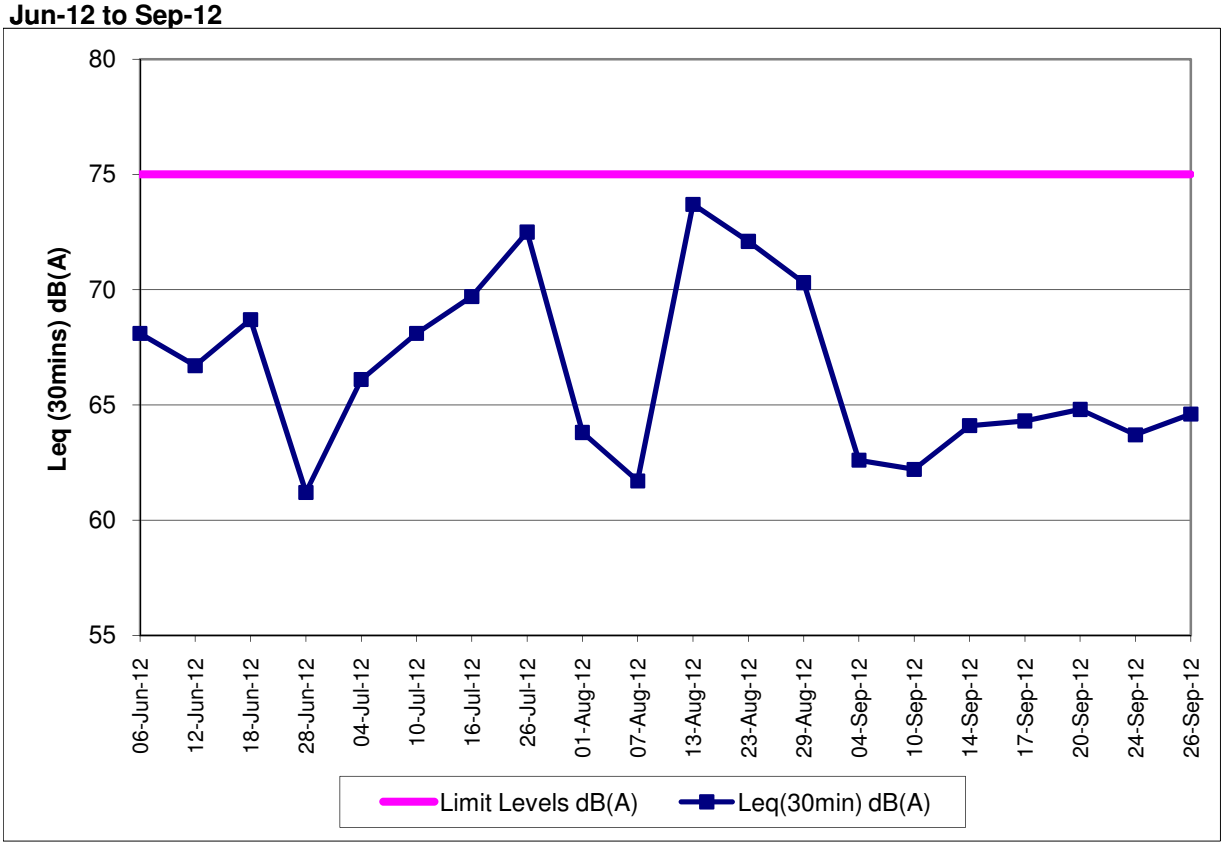
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Air Quality Monitoring (1-hr TSP) Results at Greenview Terrace - Outfall (ASR9)**
**Jun-12 to Sep-12**



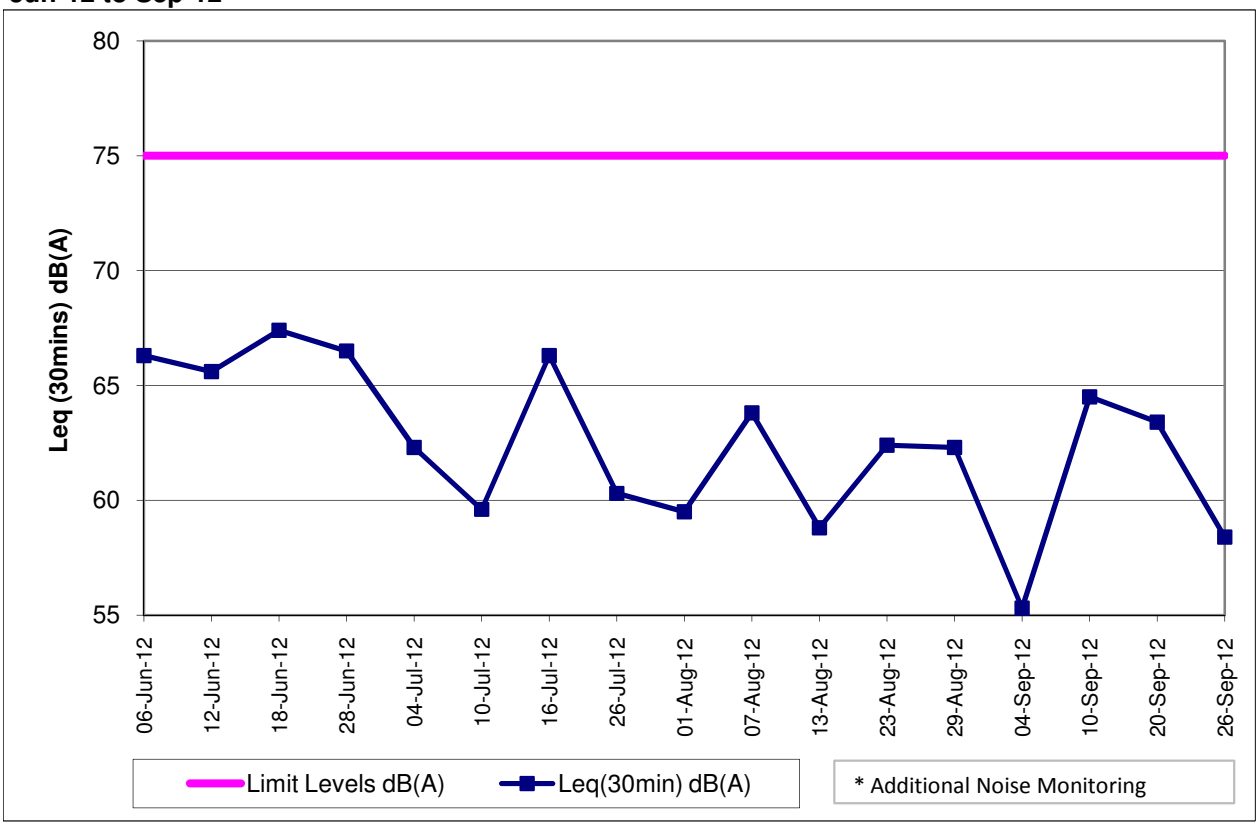
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Noise Monitoring Results at Sik Sik Yuen Ho Fung College (NSR 1)**
**Jun-12 to Sep-12**



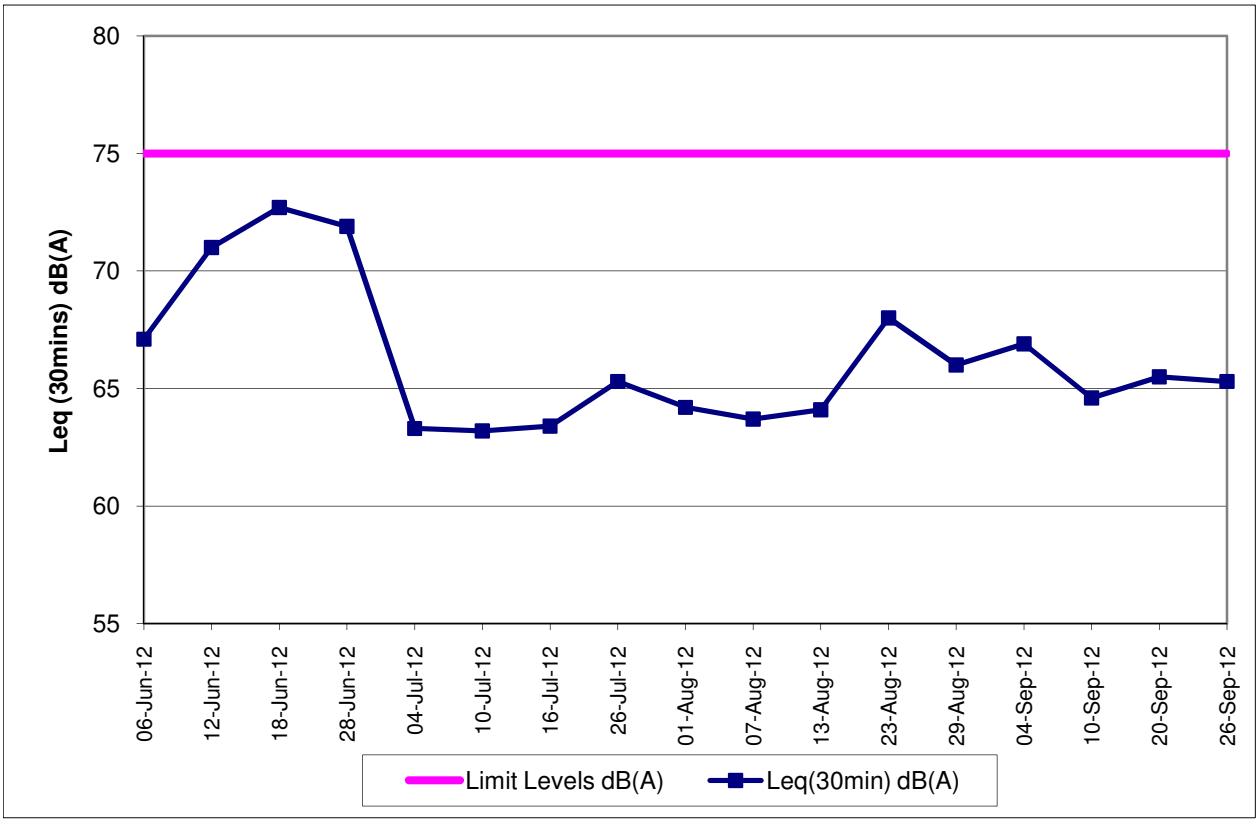

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Noise Monitoring Results at Hong Hoi Chee Hong Temple (NSR 3)**
**Jun-12 to Sep-12**



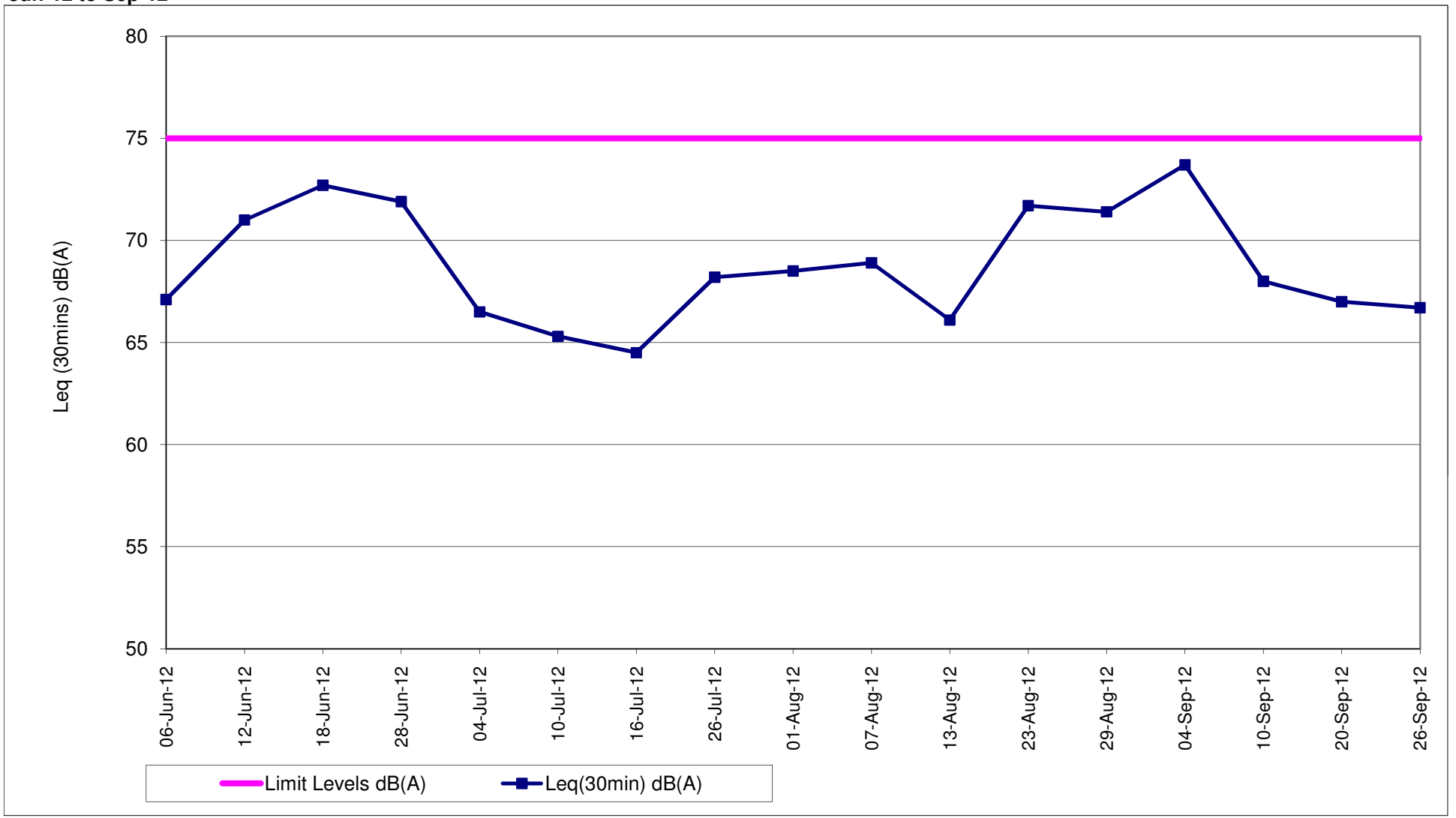
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Noise Monitoring Results at Squatters (NSR 6)**
**Jun-12 to Sep-12**



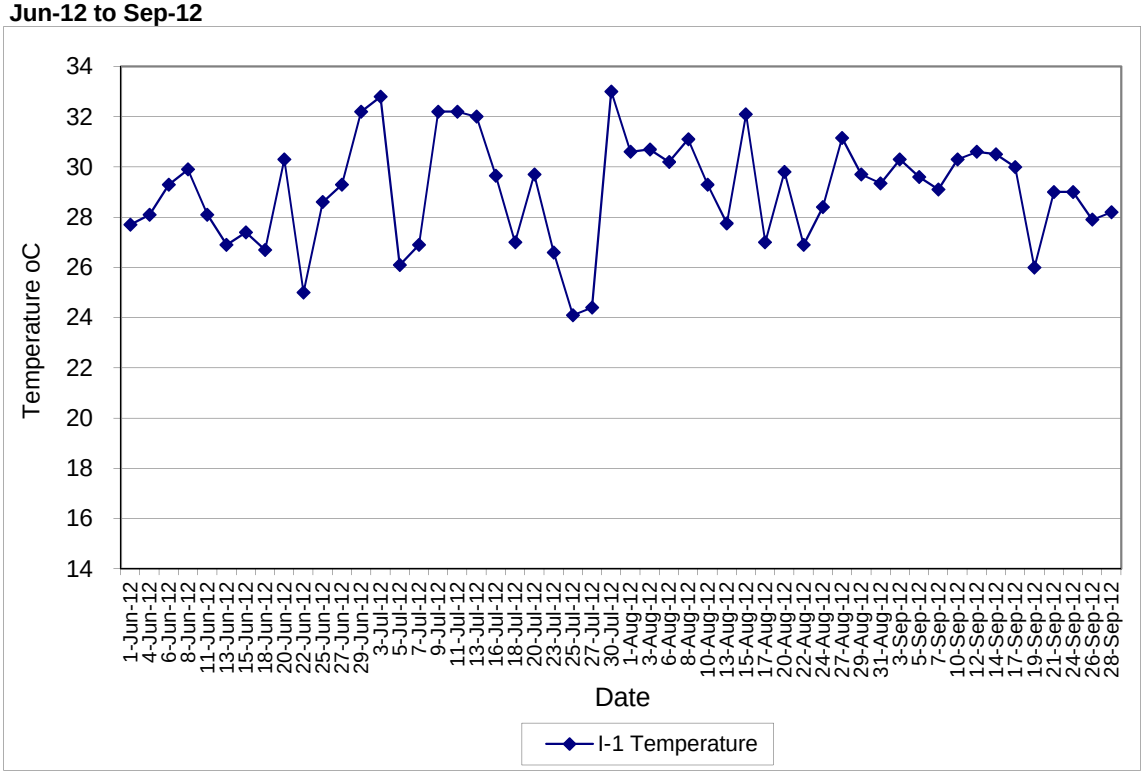

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Noise Monitoring Results at Long Beach Gardens (NSR 8)**
**Jun-12 to Sep-12**



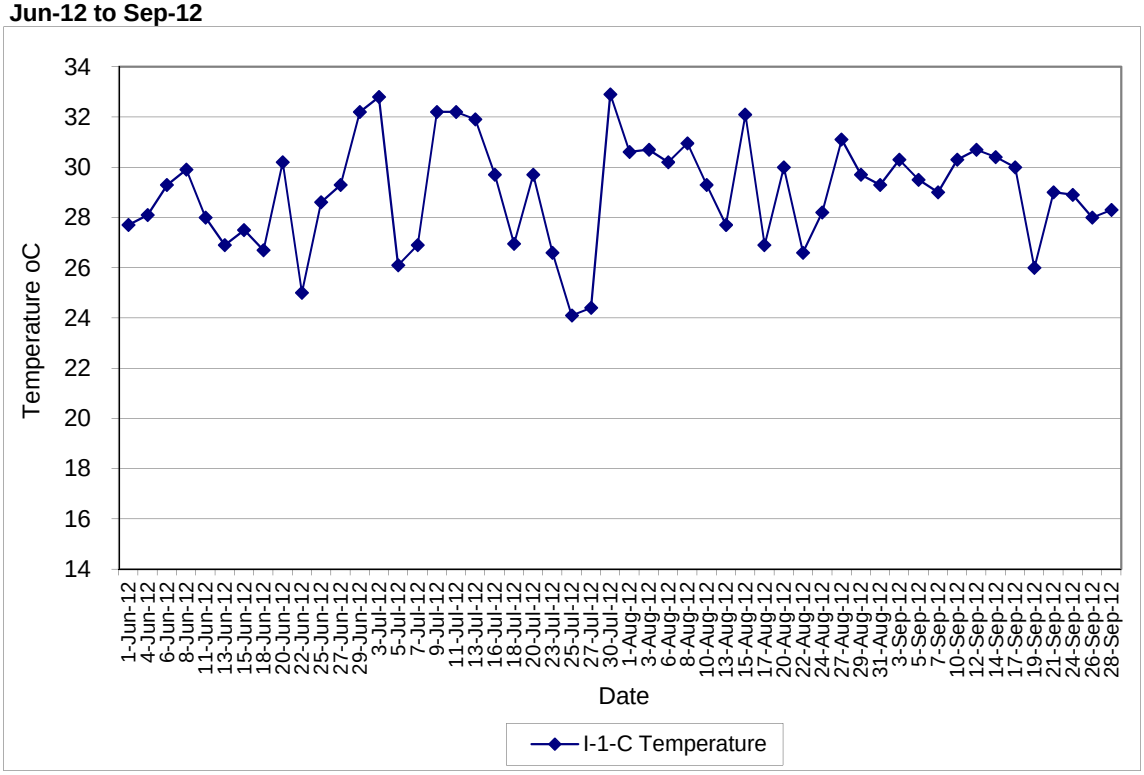
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Noise Monitoring Results at Greenview Terrace (NSR 9)**
**Jun-12 to Sep-12**



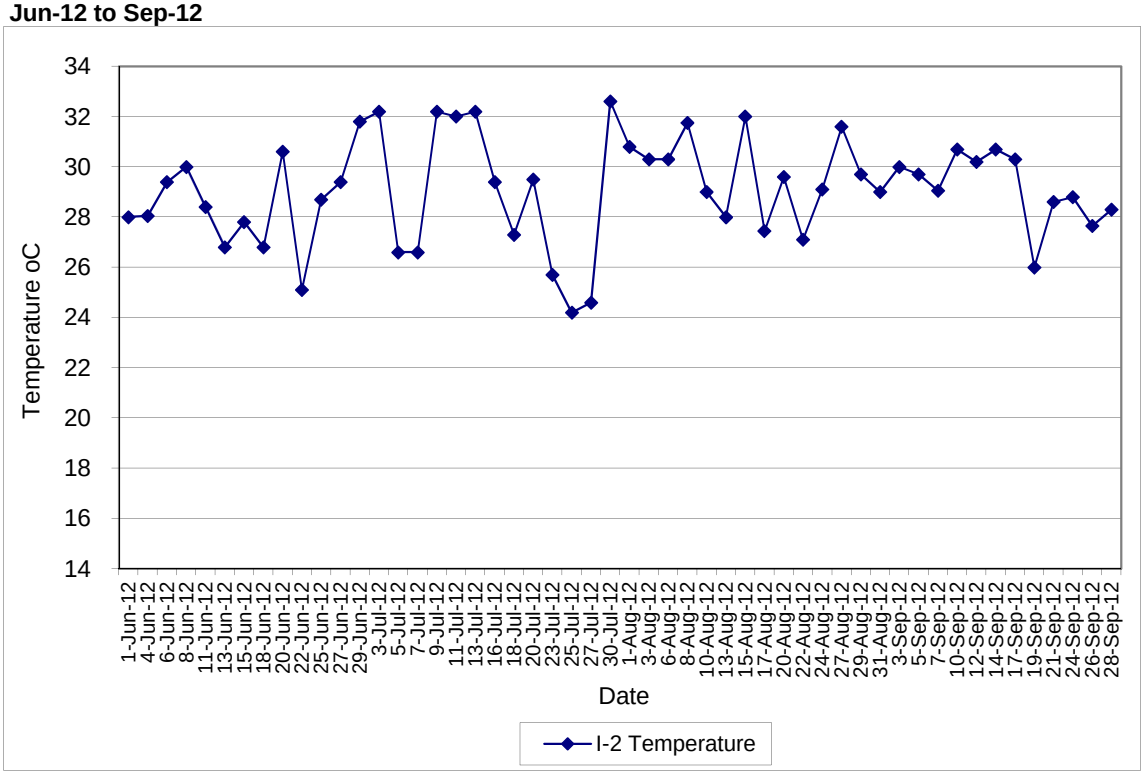
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1)**
**Jun-12 to Sep-12**



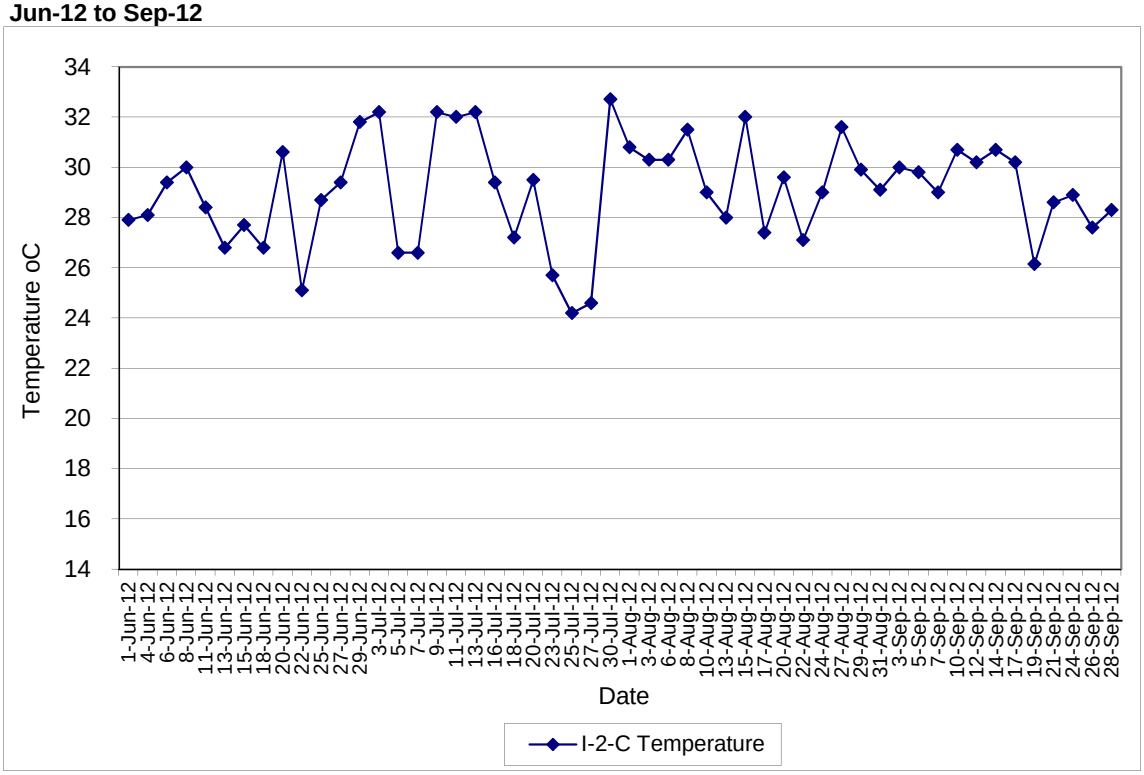

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C)**
**Jun-12 to Sep-12**



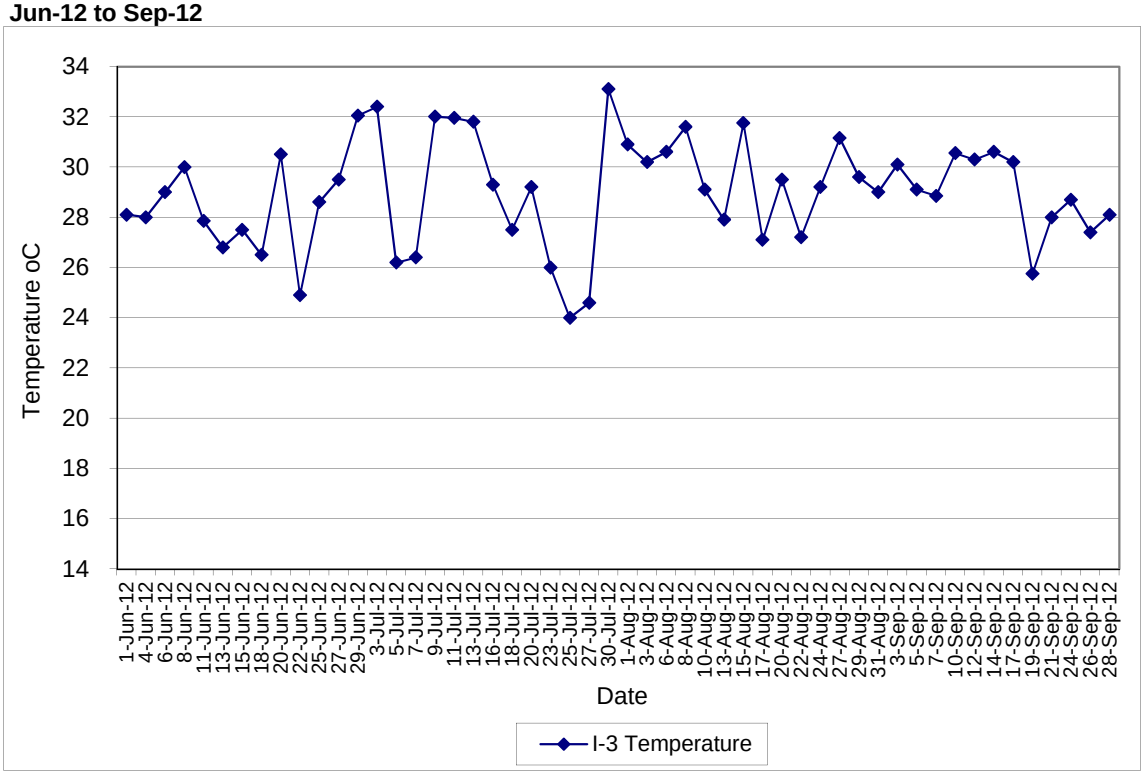
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2)**
**Jun-12 to Sep-12**



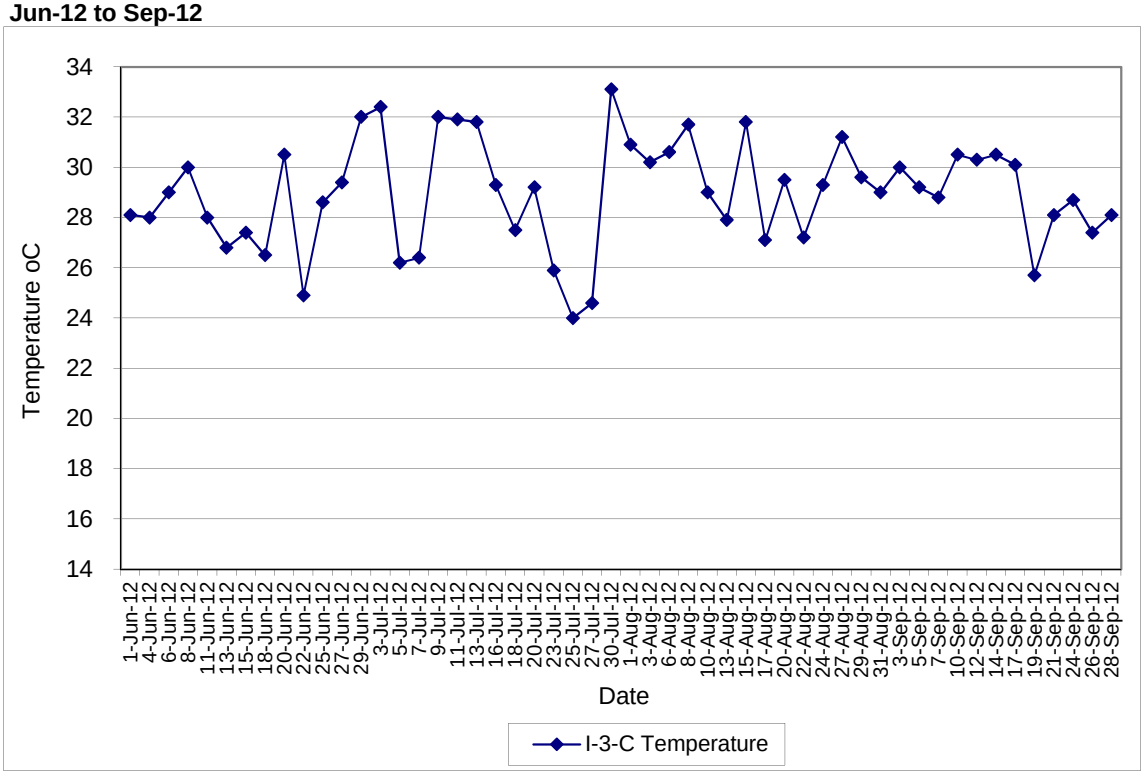

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C)**
**Jun-12 to Sep-12**



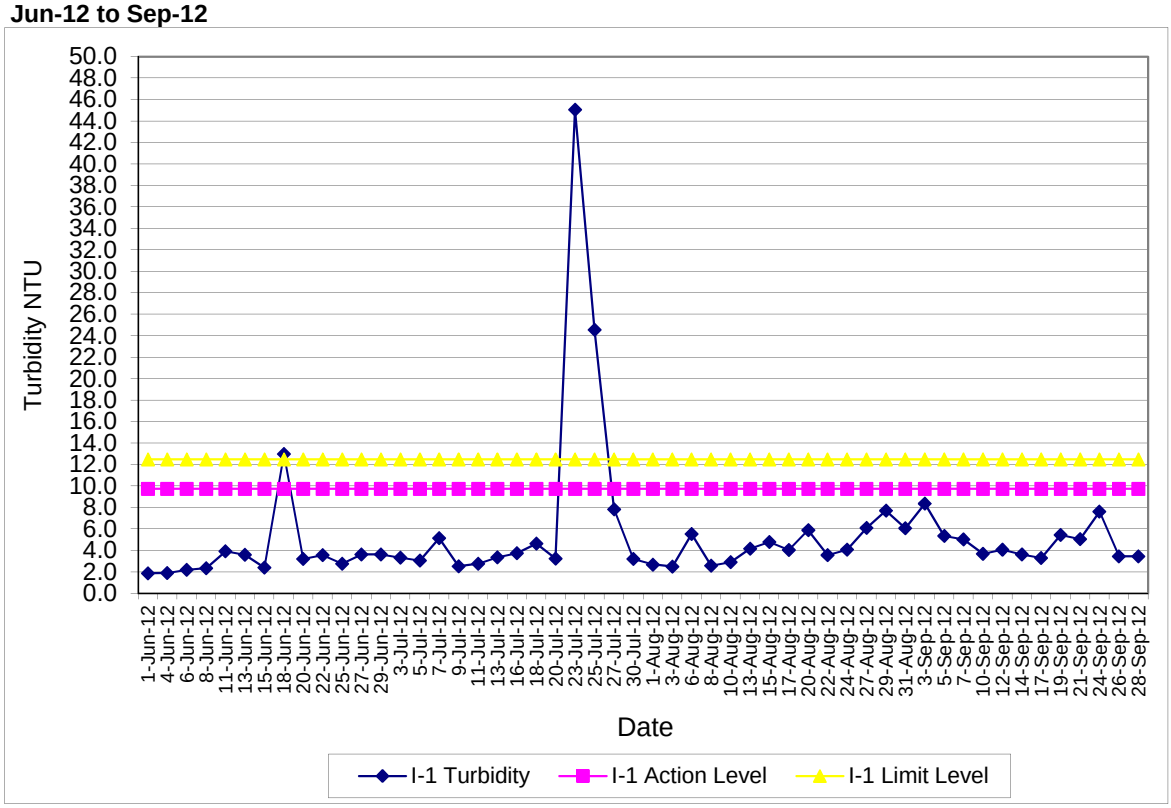
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3)**
**Jun-12 to Sep-12**



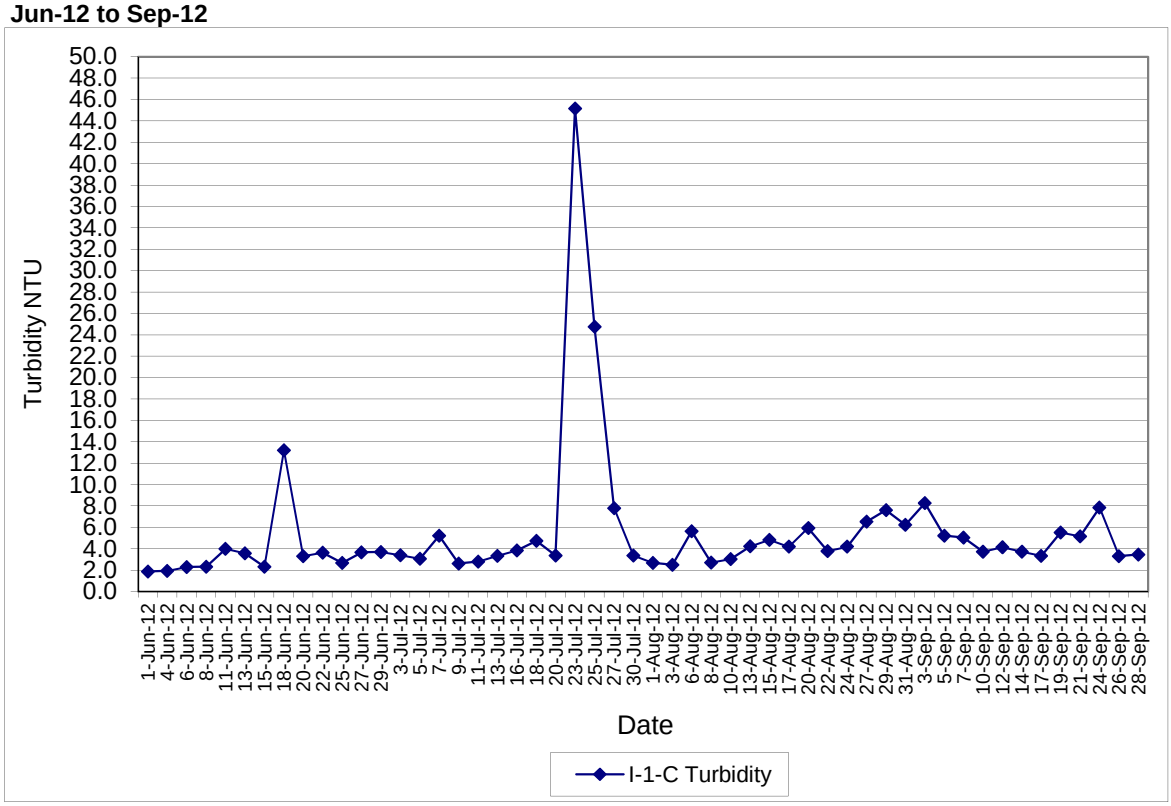

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3-C)**
**Jun-12 to Sep-12**



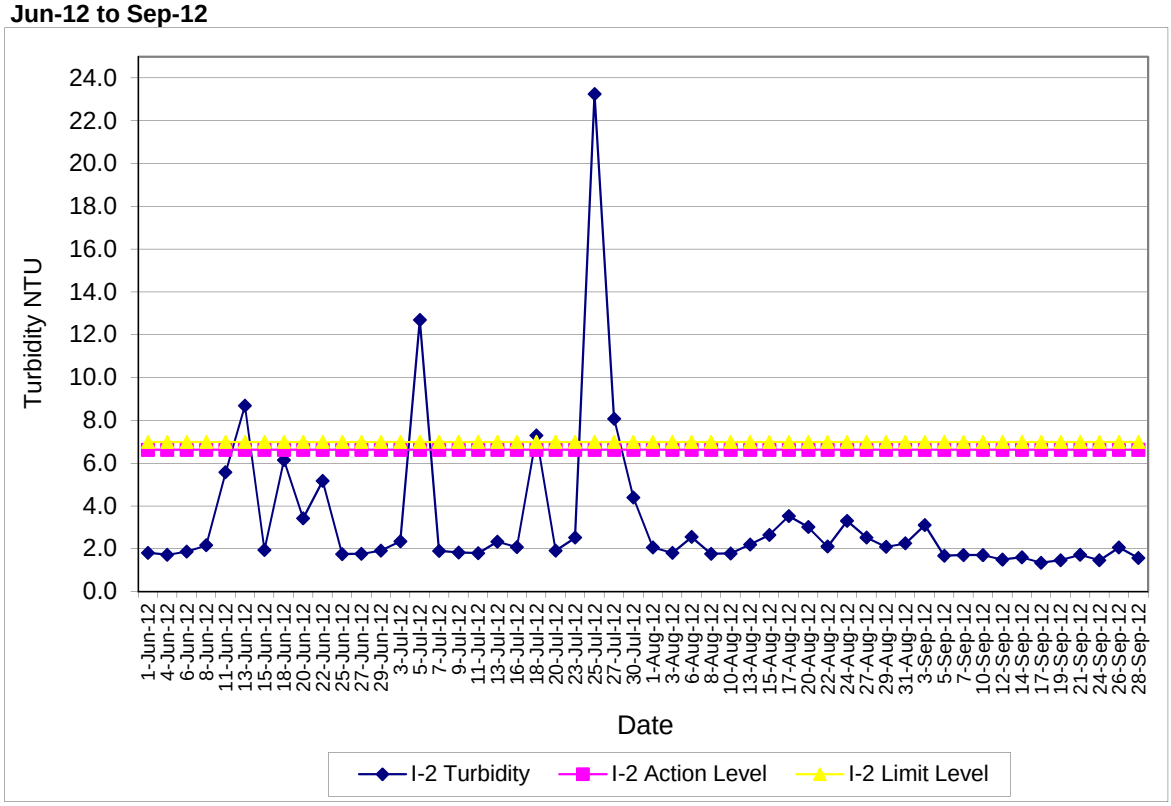
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1)**
**Jun-12 to Sep-12**



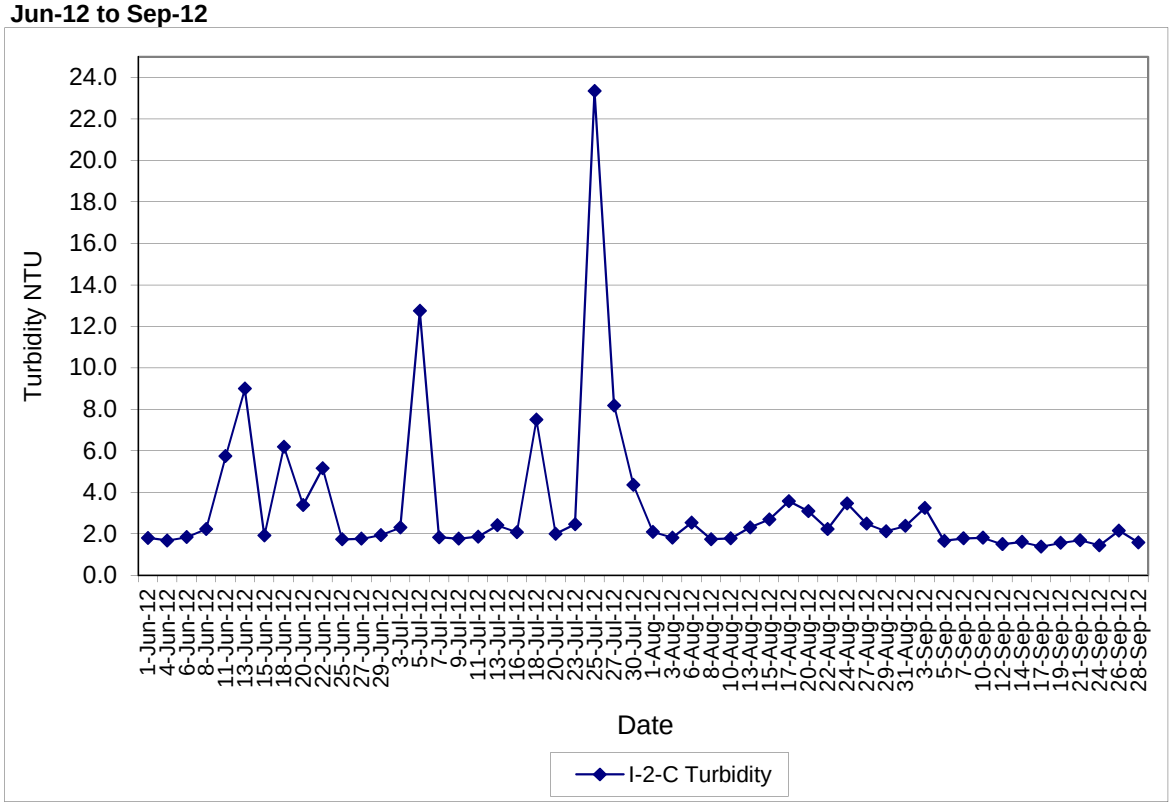

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C)**
**Jun-12 to Sep-12**



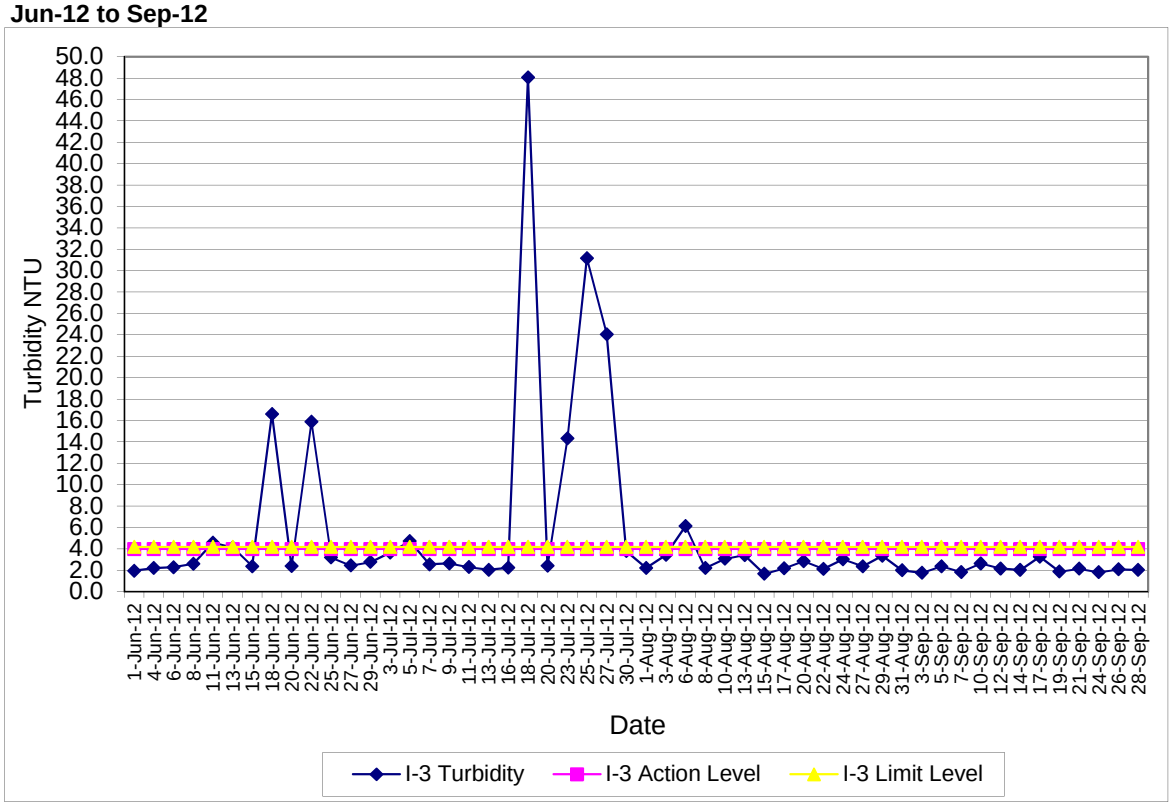
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2)**
**Jun-12 to Sep-12**



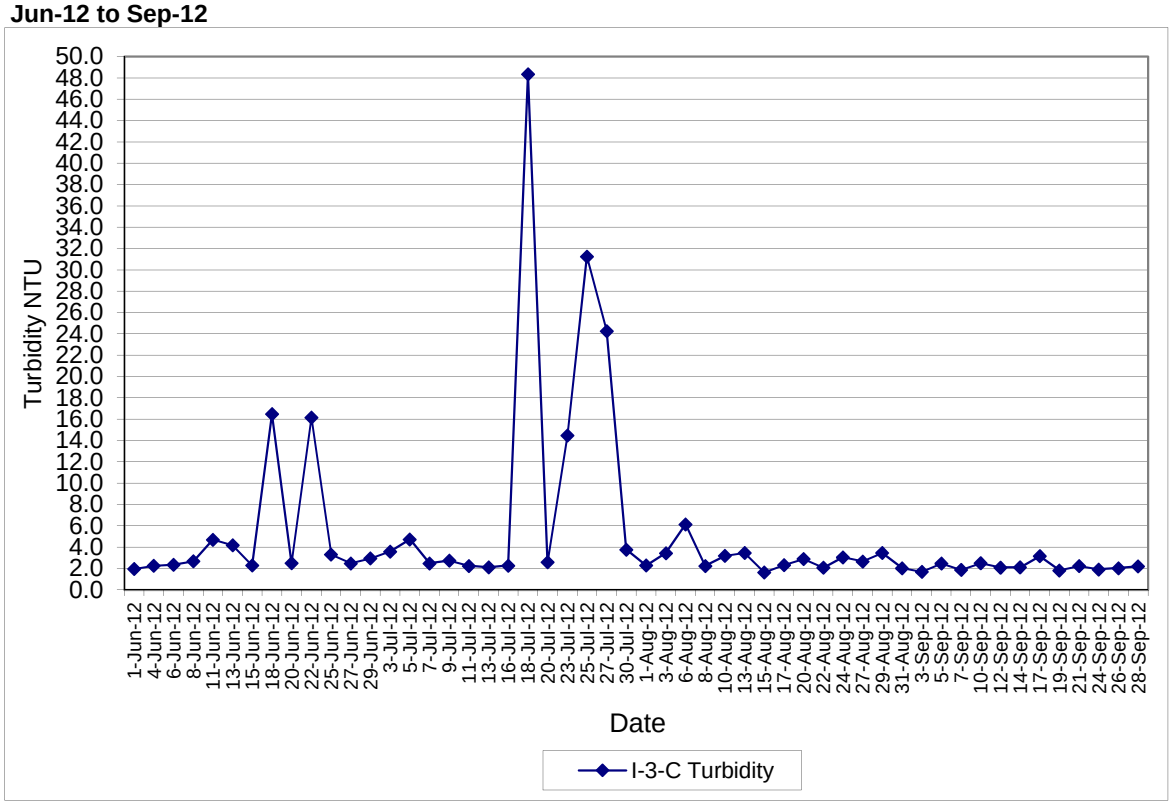

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C)**
**Jun-12 to Sep-12**



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3)**
**Jun-12 to Sep-12**

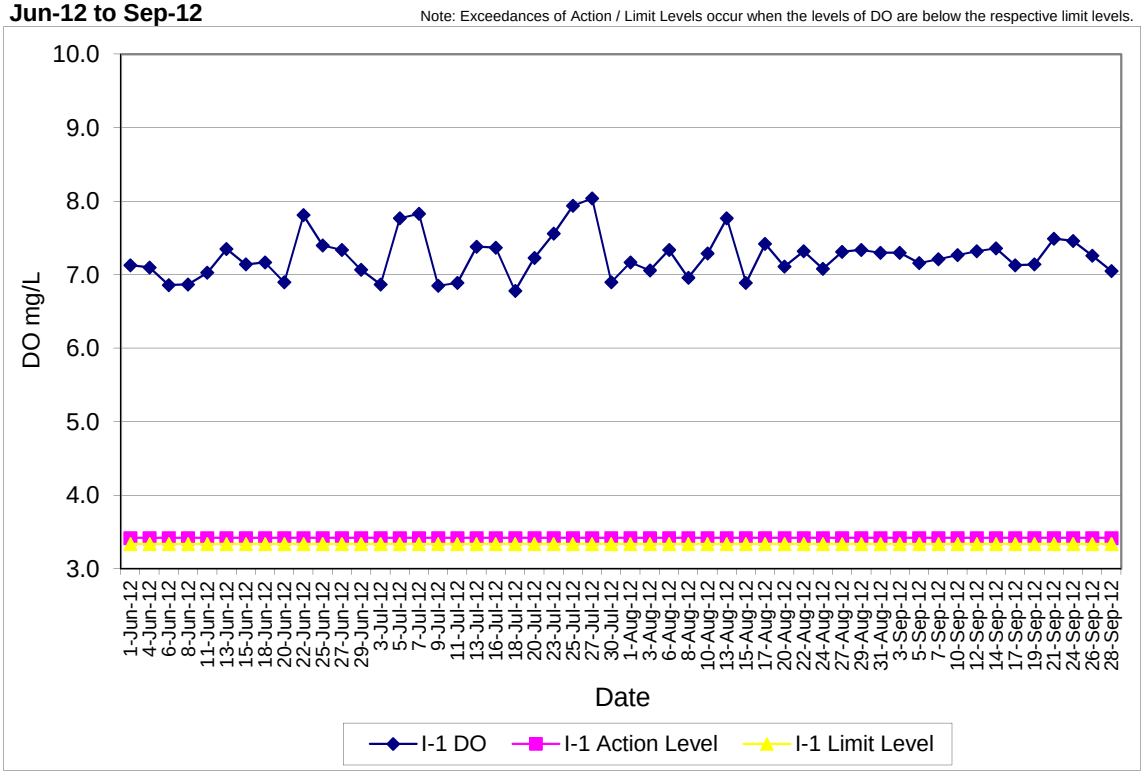



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3-C)**
**Jun-12 to Sep-12**

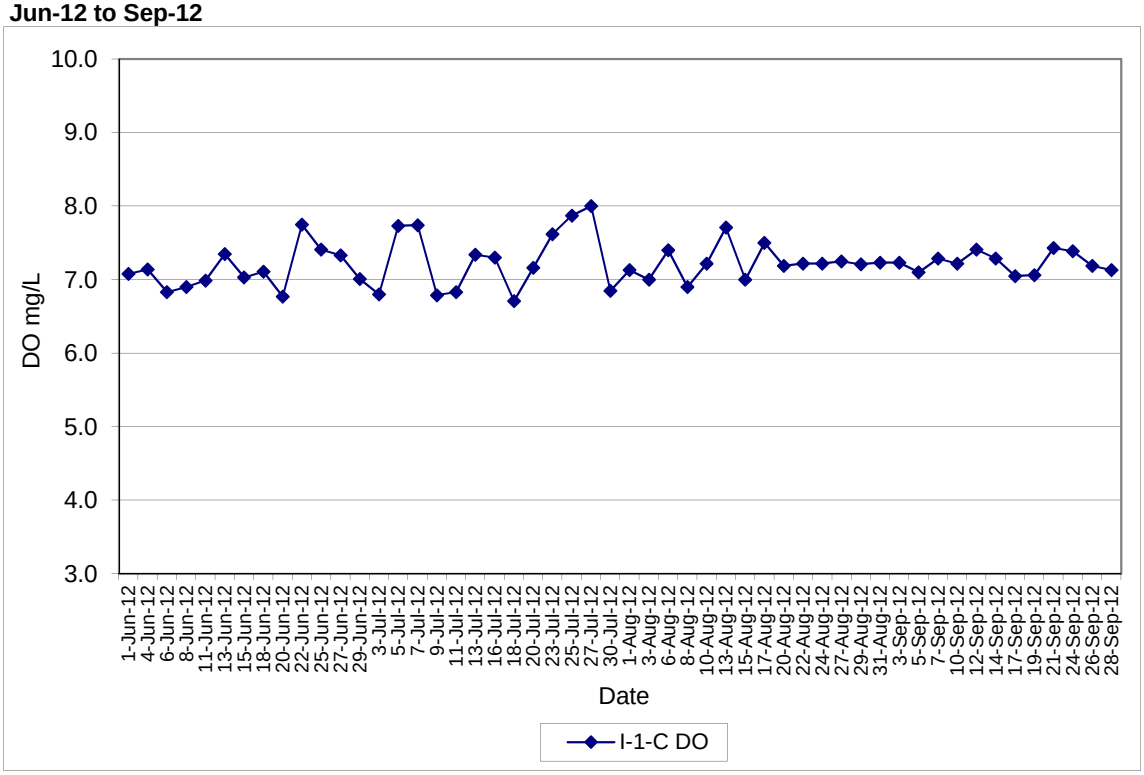


**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1)**
**Jun-12 to Sep-12**

Note: Exceedances of Action / Limit Levels occur when the levels of DO are below the respective limit levels.

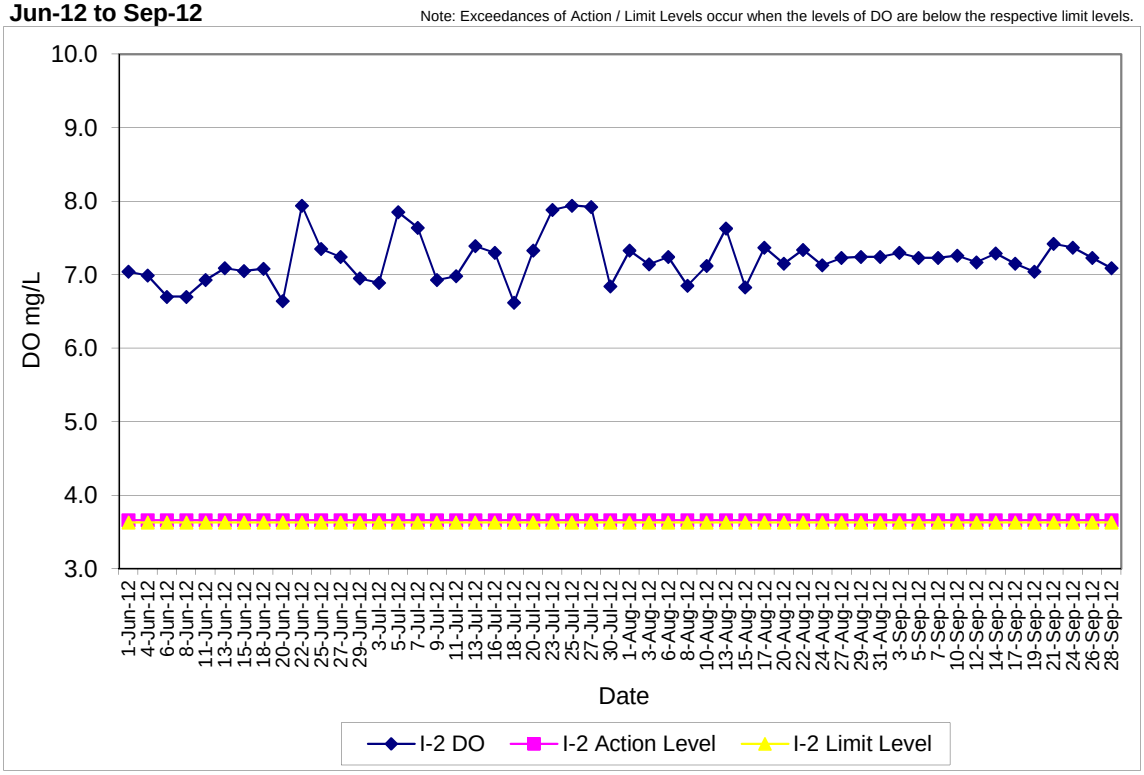



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C)**
**Jun-12 to Sep-12**

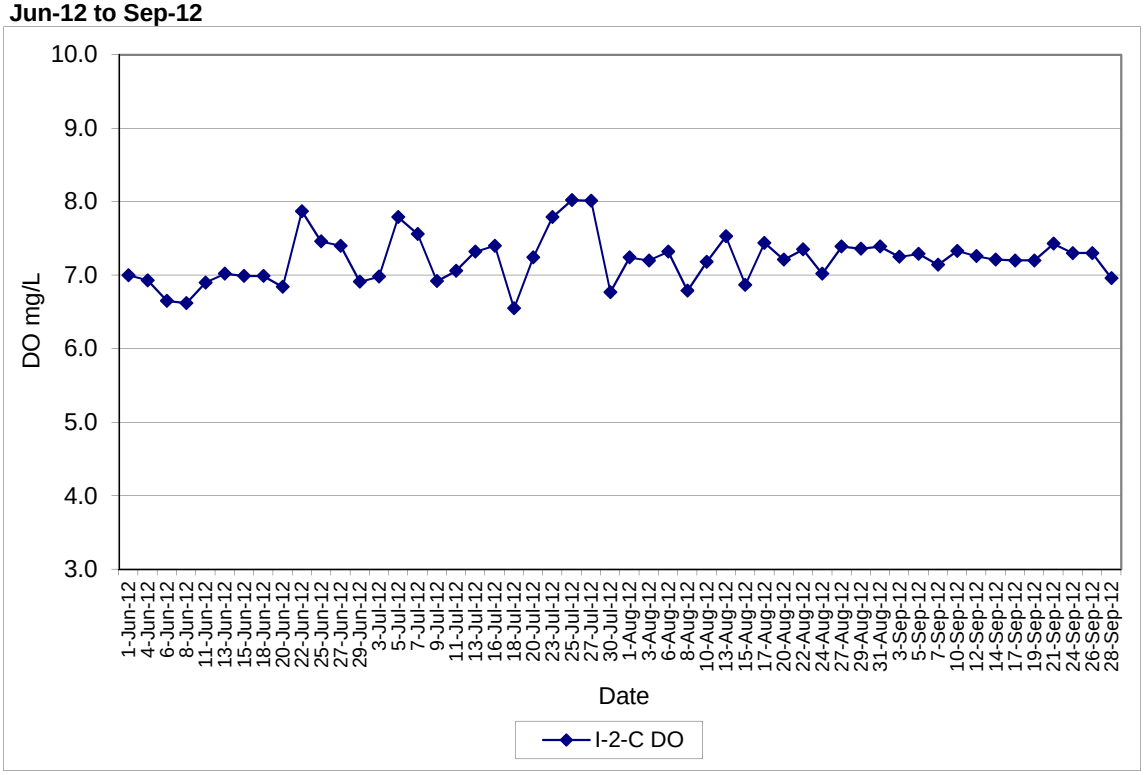


**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2)**
**Jun-12 to Sep-12**

Note: Exceedances of Action / Limit Levels occur when the levels of DO are below the respective limit levels.

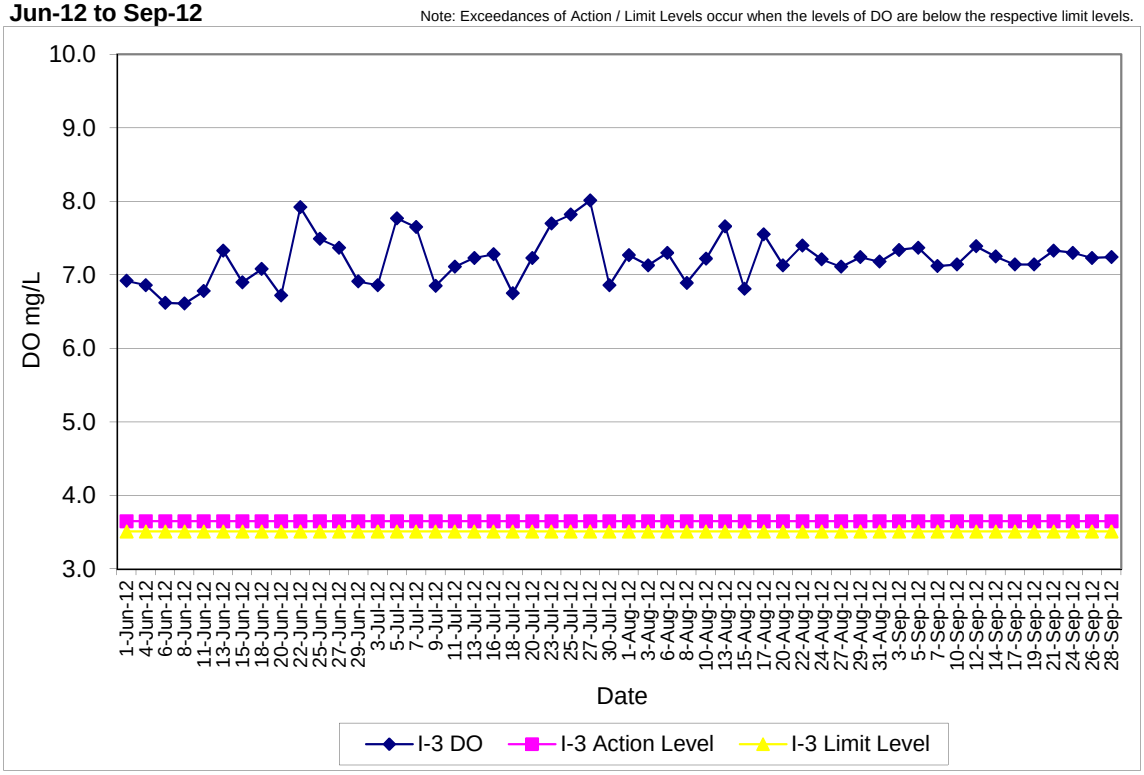



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C)**
**Jun-12 to Sep-12**

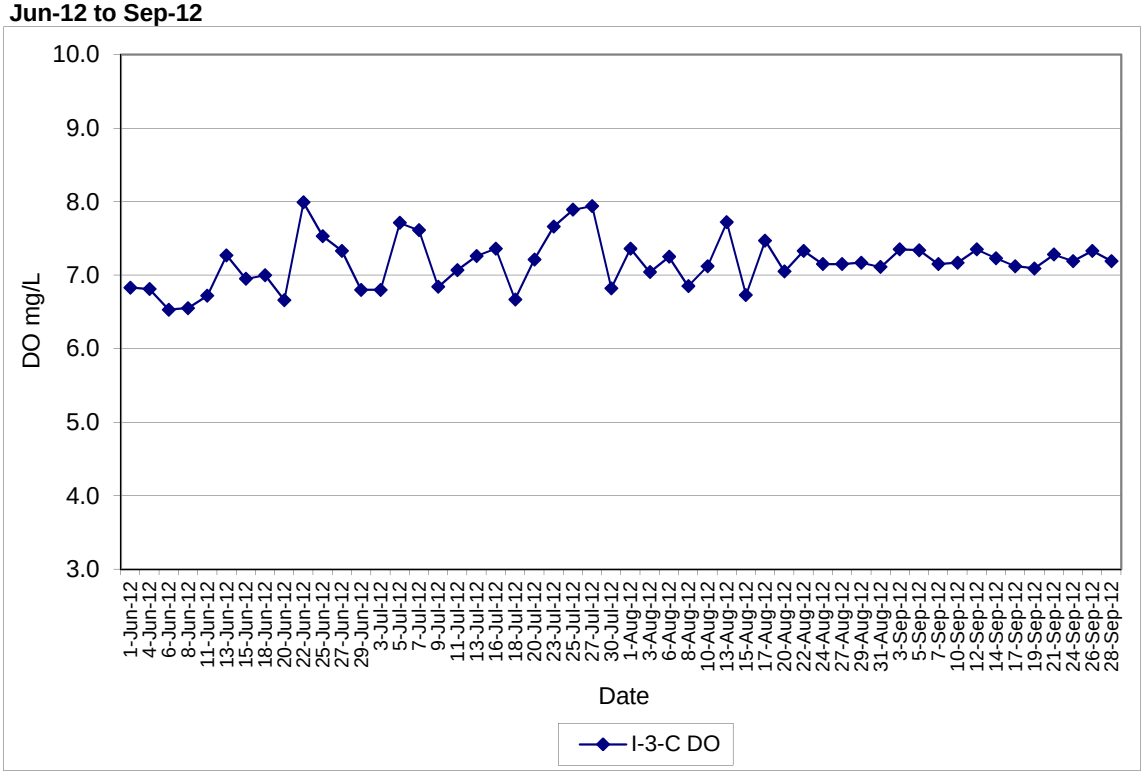


**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3)**
**Jun-12 to Sep-12**

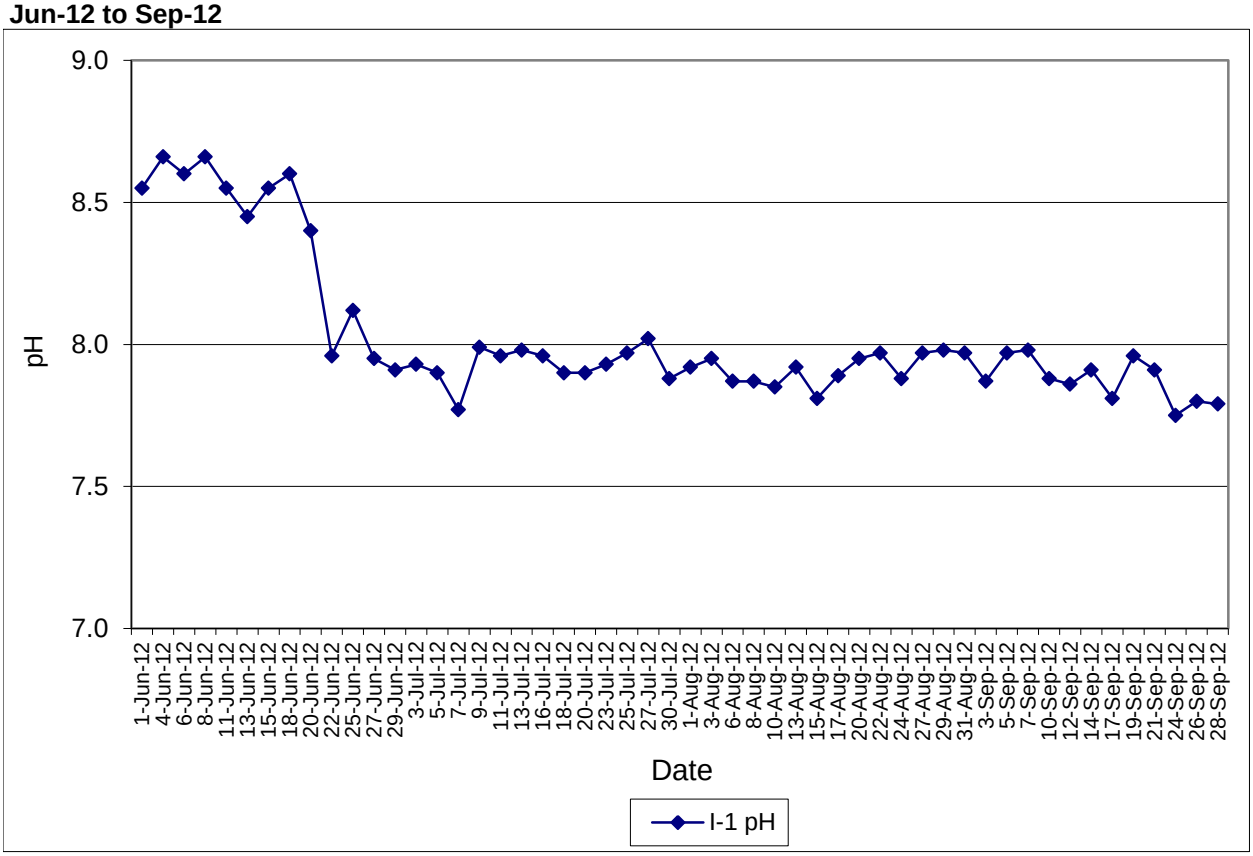
Note: Exceedances of Action / Limit Levels occur when the levels of DO are below the respective limit levels.



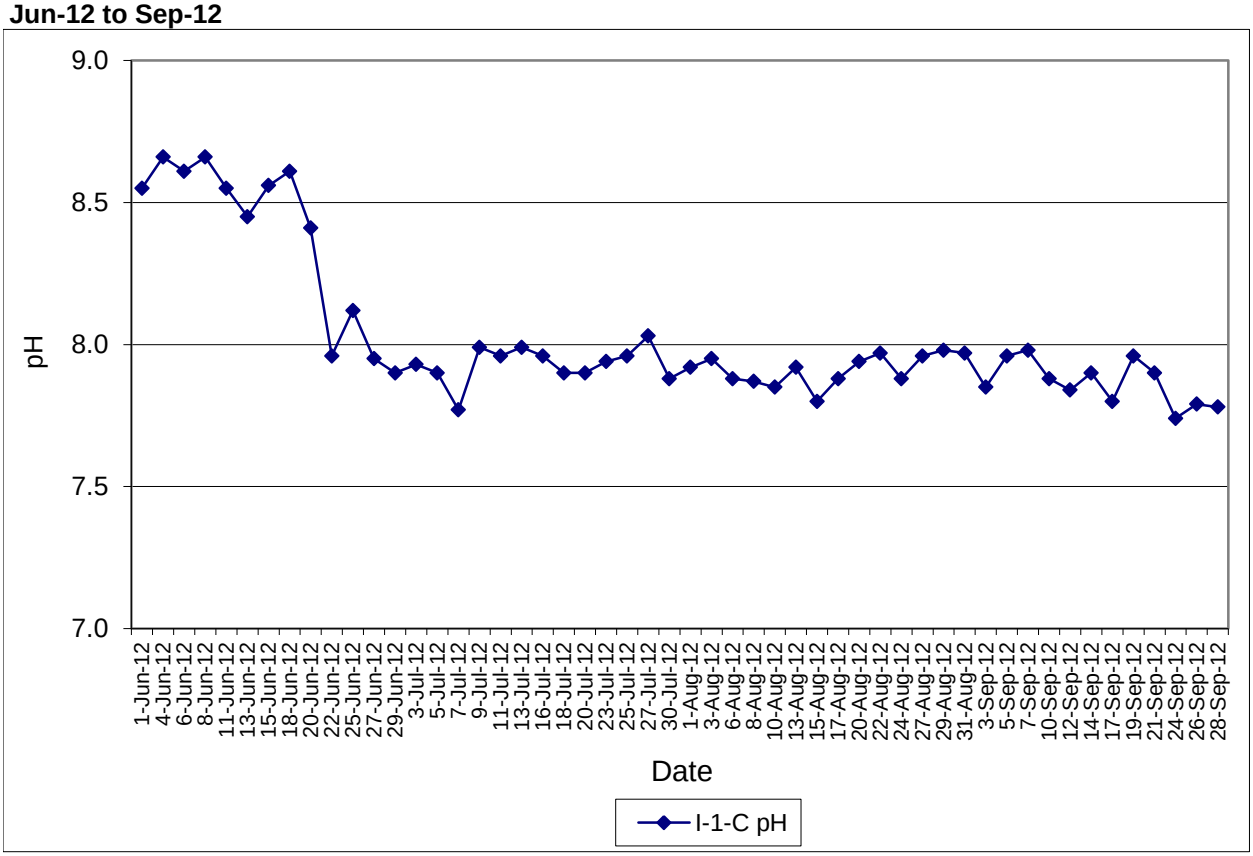

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3-C)**
**Jun-12 to Sep-12**



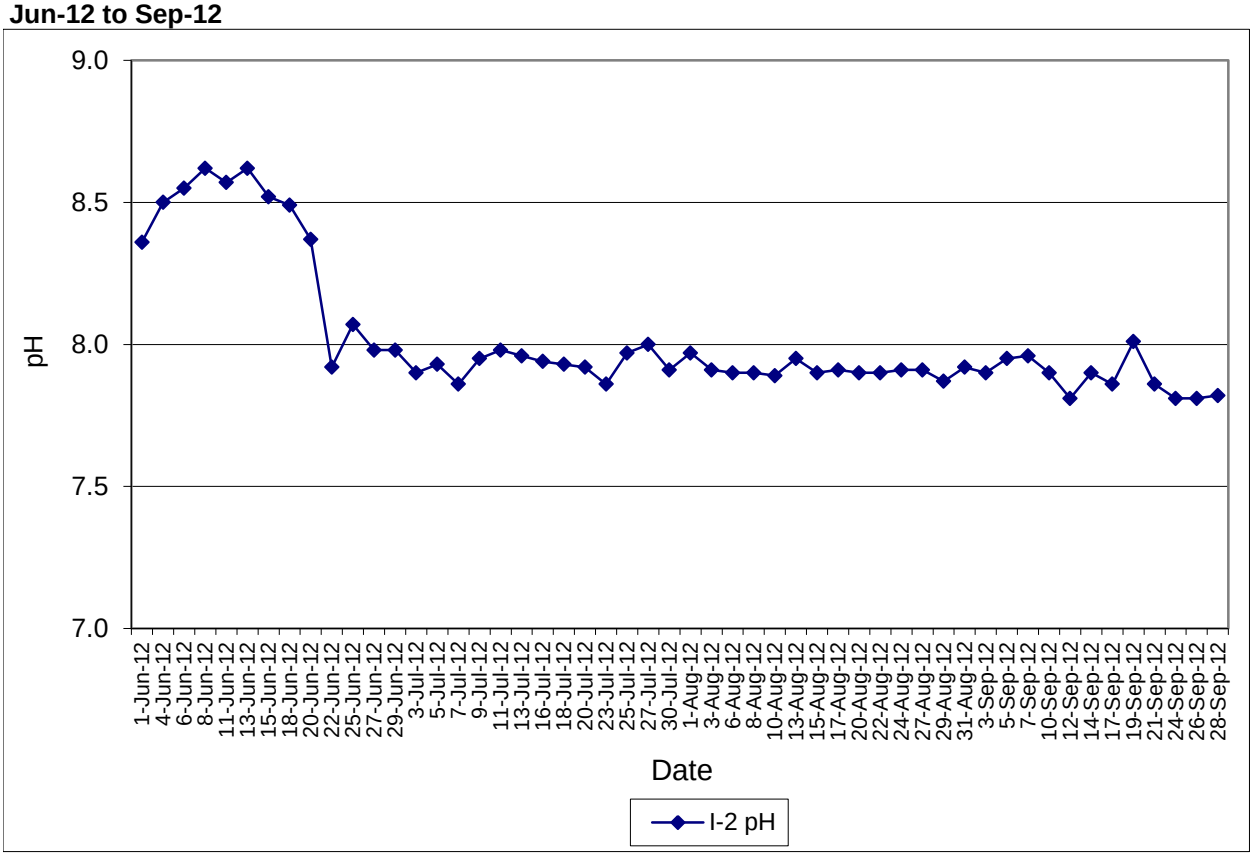
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1)**
**Jun-12 to Sep-12**



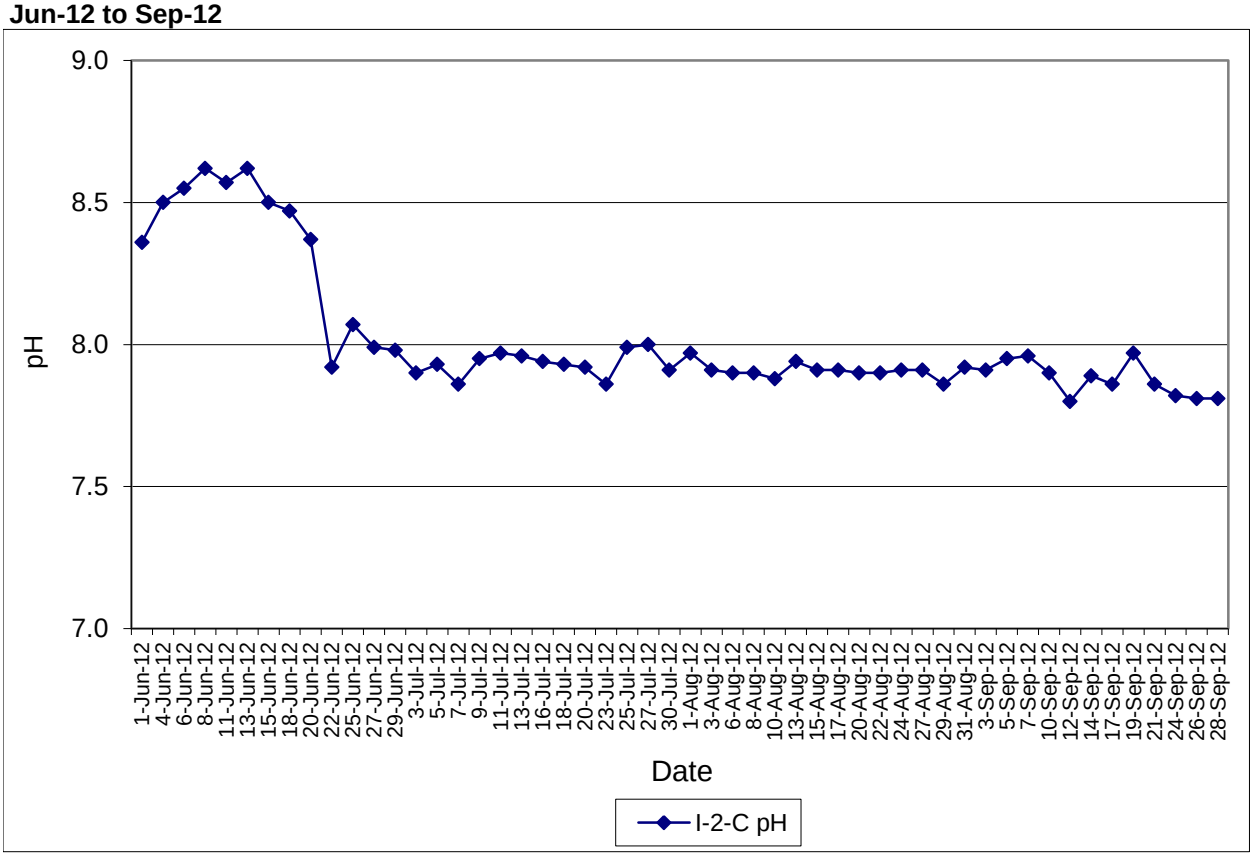

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C)**
**Jun-12 to Sep-12**



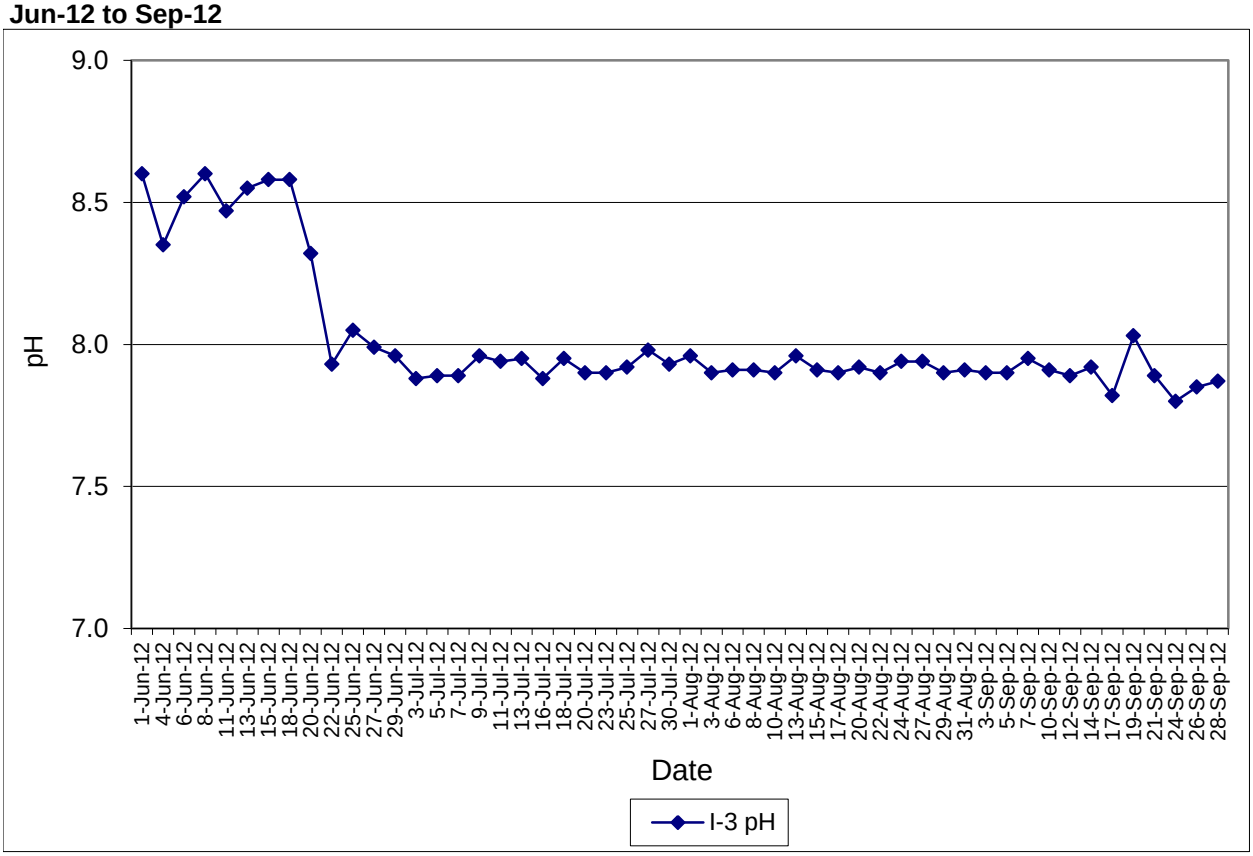
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2)**
**Jun-12 to Sep-12**



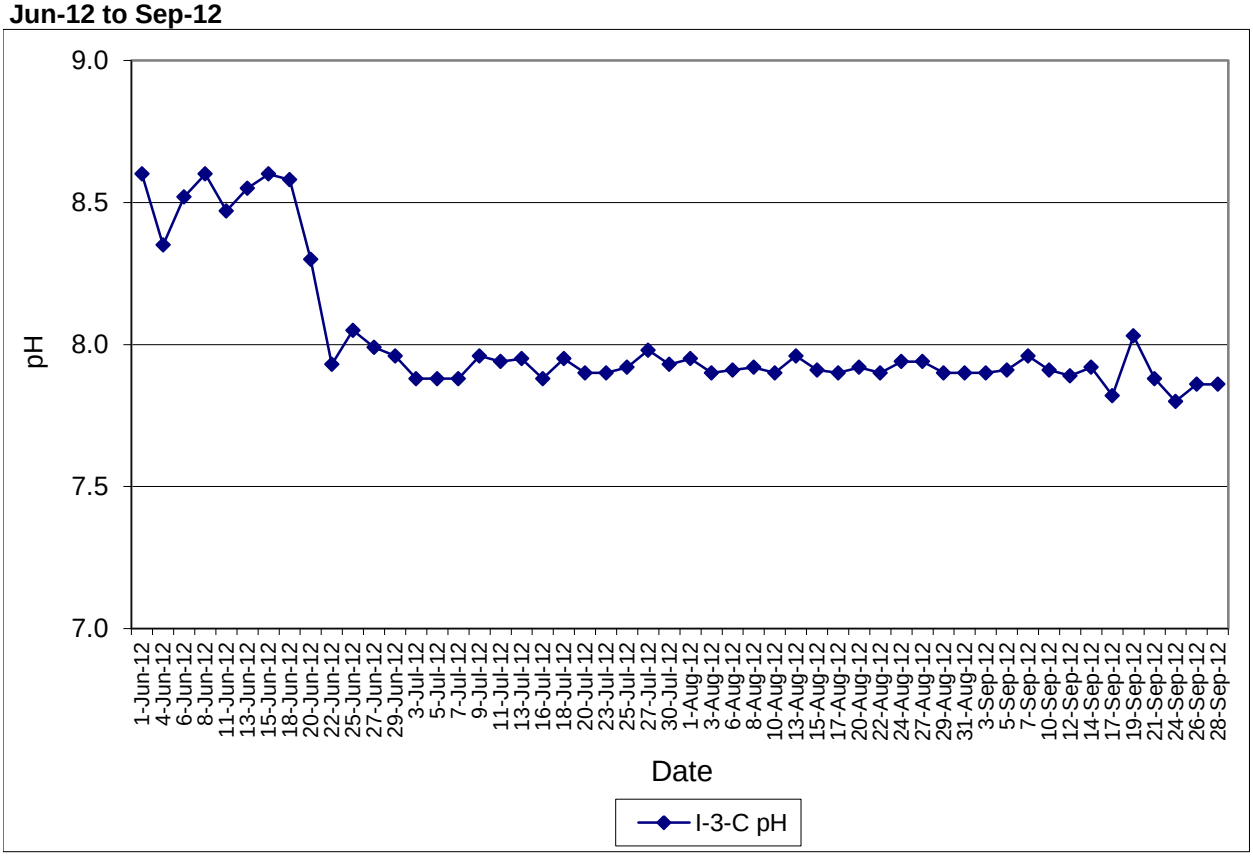

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C)**
**Jun-12 to Sep-12**



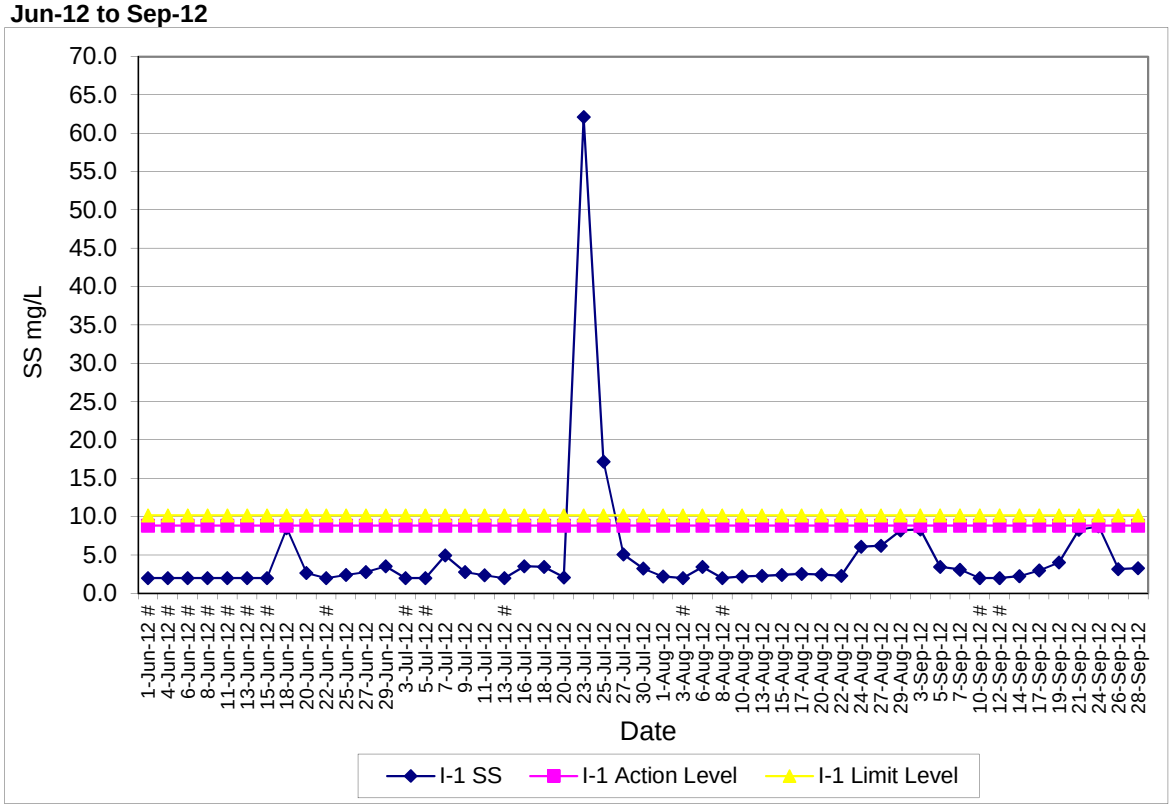
**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3)**
**Jun-12 to Sep-12**



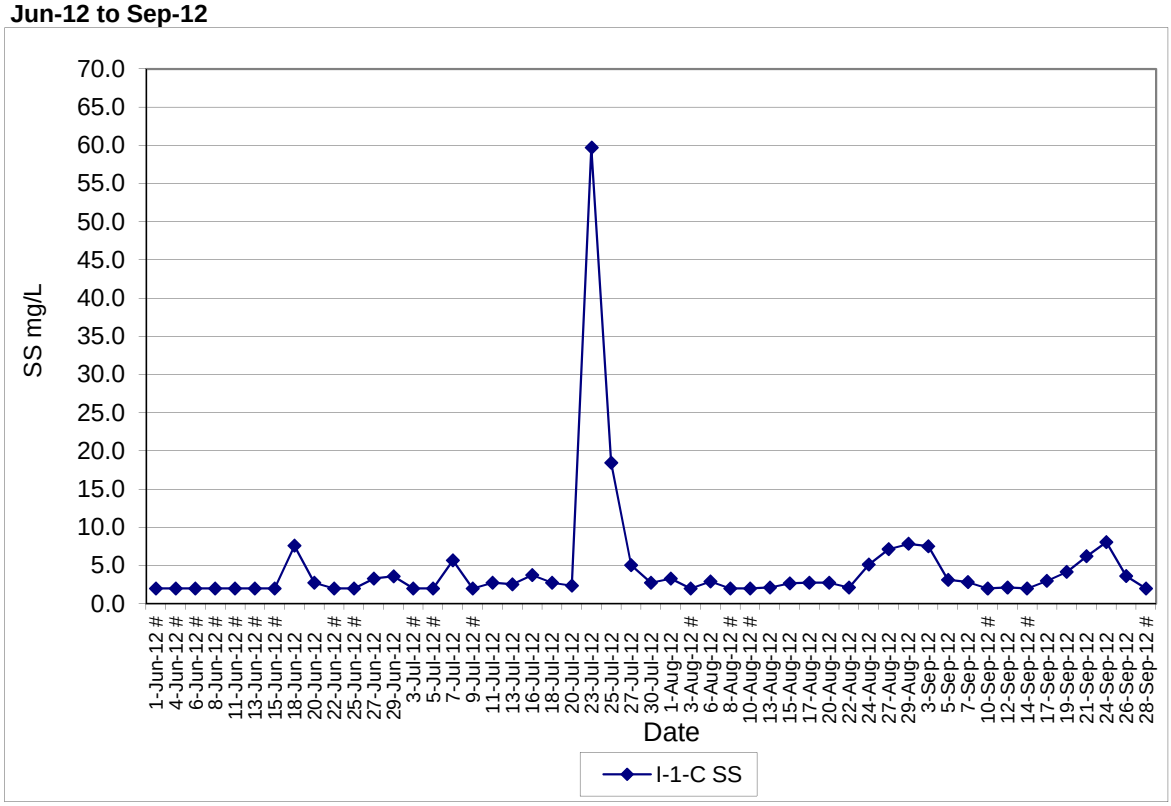

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3-C)**
**Jun-12 to Sep-12**



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1)**
**Jun-12 to Sep-12**

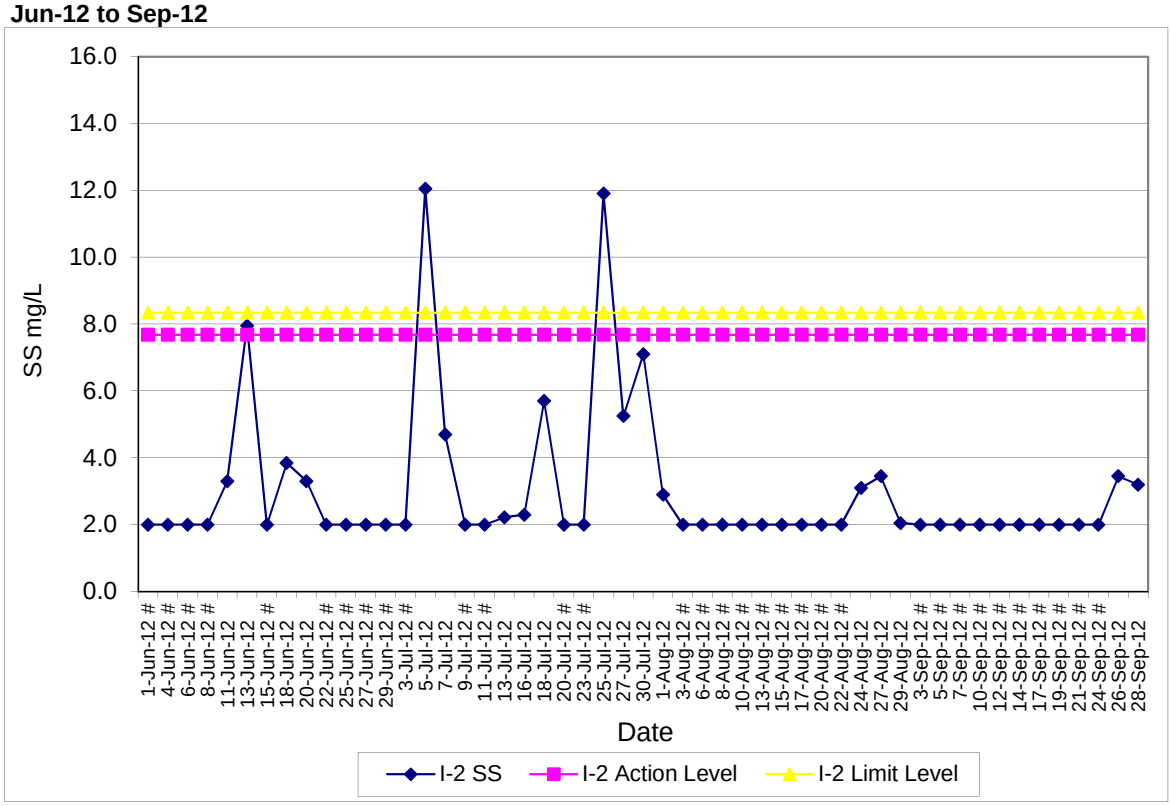



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Sik Sik Yuen Ho Fung College (I-1-C)**
**Jun-12 to Sep-12**

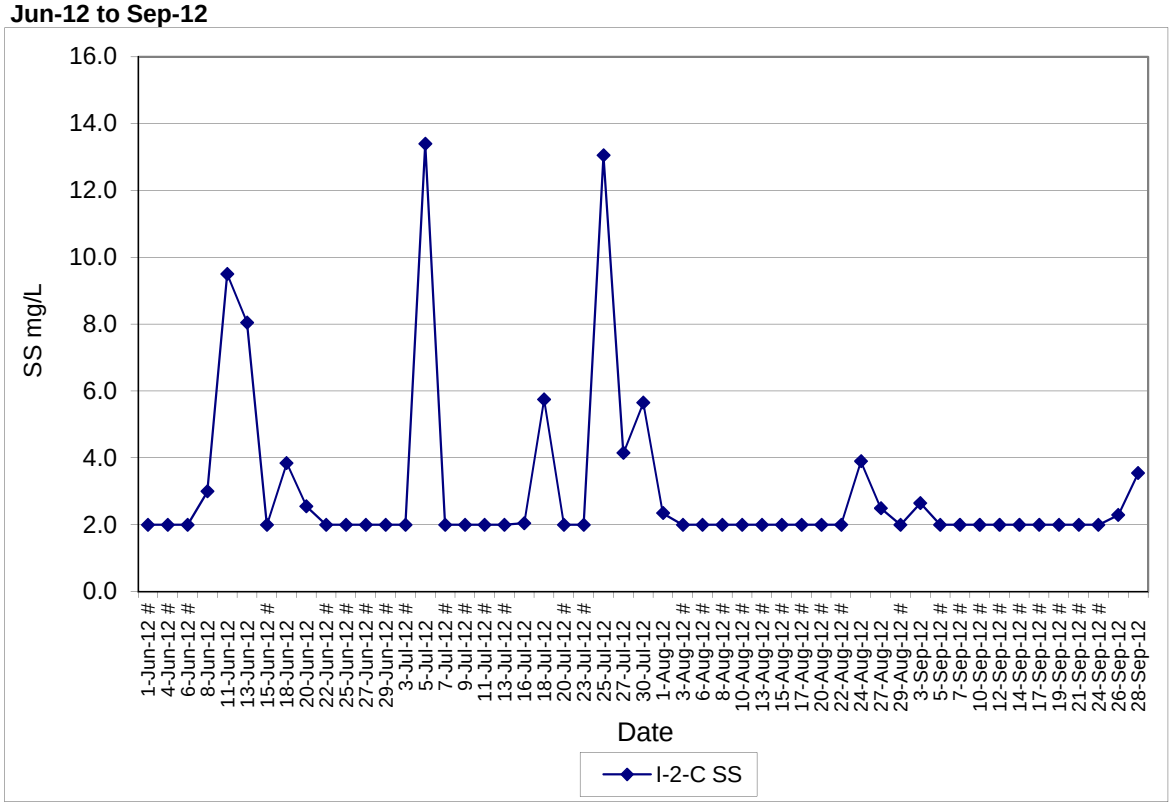



**Note:# - For average SS level smaller than 2 mg/L, the level is plotted as 2 mg/L in the graph**

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2)**
**Jun-12 to Sep-12**

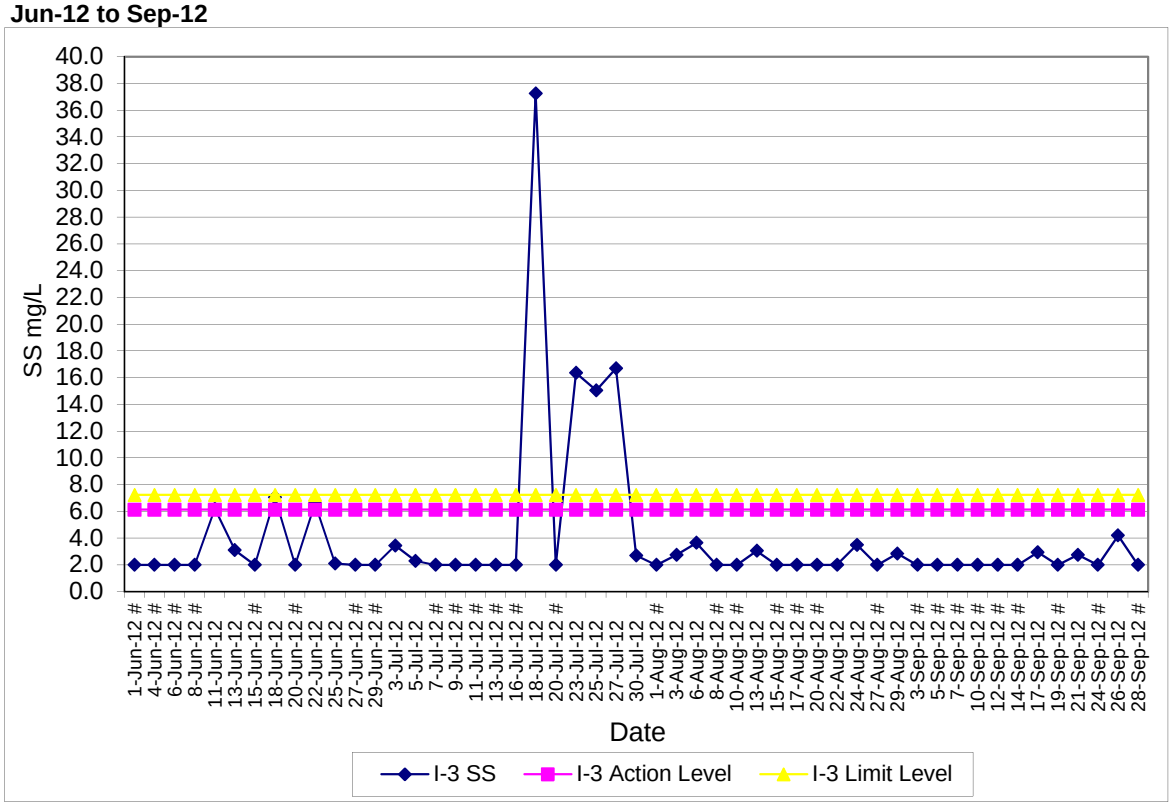



**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Hong Hoi Chee Hong Temple (I-2-C)**
**Jun-12 to Sep-12**

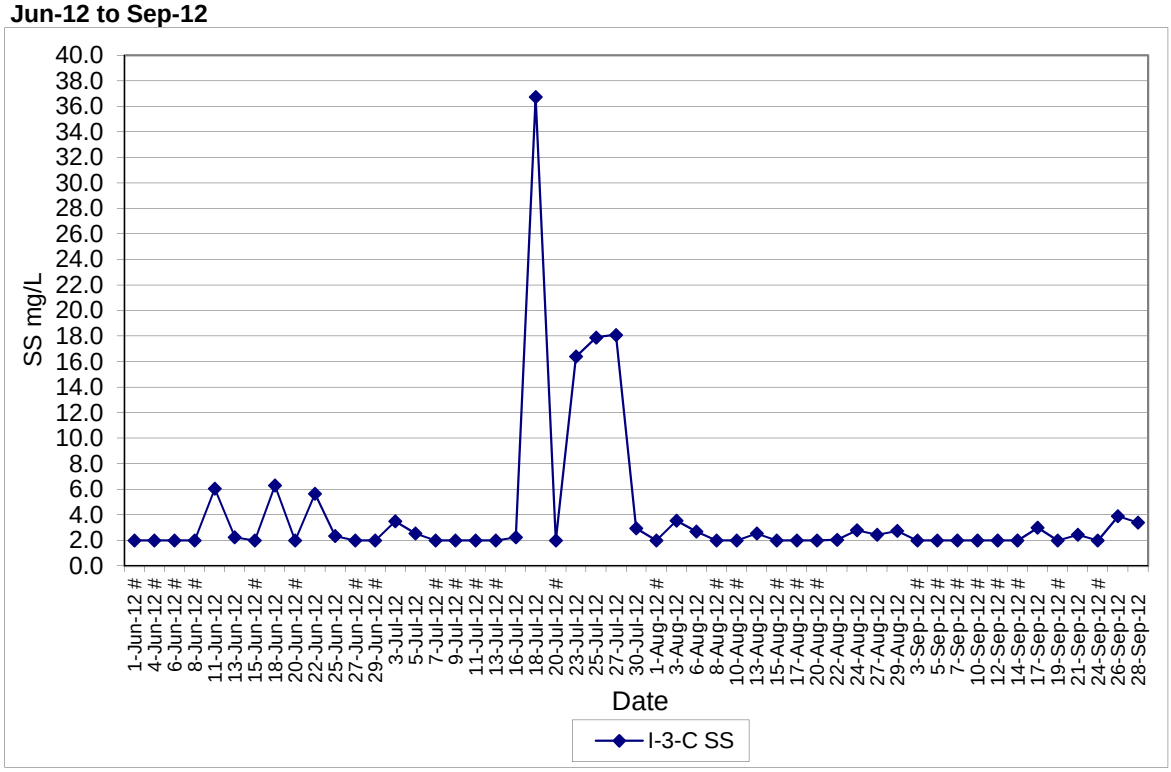



**Note:# - For average SS level smaller than 2 mg/L, the level is plotted as 2 mg/L in the graph**

**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3)**
**Jun-12 to Sep-12**




**Contract No. DC/2007/12 - Design and Construction of Tsuen Wan Drainage Tunnel**
**Water Quality Results at Squatters (I-3-C)**
**Jun-12 to Sep-12**




**Note:# - For average SS level smaller than 2 mg/L, the level is plotted as 2 mg/L in the graph**

Appendix G

# Interim Notifications of Environmental Quality Limits Exceedances

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 05-Jul-12 |
| Time | 10:33 AM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 6.63 / 6.99 |
| Measured Level (NTU) | 12.70 |
| Control Station | I-2-C |
| Measured Level at the Control Station (NTU) | 12.75 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-2-C). General site cleaning and housekeeping, mucking out, drilling blast holes and carrying out Blast No.136 at main adit (MA), erecting formwork for Wall A and Wall C at de-aeration chamber (DC), fixing rebar for lining at upper man access shaft (UMAS), welding wall-tie at Wall A of DC and mucking out at MA, cutting and bending rebar for side wall of DC & UMAS, erecting scaffolding and removing the grass below mid-level of slope at portion G, excavating for trial pit at vortex drop shaft (VDS), and mucking out surplus of soil at SM1A at portion G were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 22.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 06-Jul-12

**Photographic record for exceedance of Turbidity recorded at Hong Hoi Chee Hong Temple (I-2) on 05-Jul-12**

Photo taken at I-2

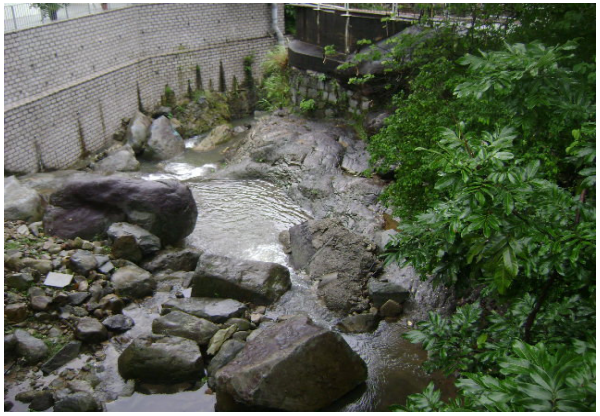


Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 05-Jul-12 |
| Time | 11:04 AM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 3.99 / 4.18 |
| Measured Level (NTU) | 4.72 |
| Control Station | I-3-C |
| Measured Level at the Control Station (NTU) | 4.74 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-3-C). General site cleaning and housekeeping, drilling holes for rock breaking for CH.7-9 at main adit, excavation for 900mm drainage and 900m stepped channel, concreting to S3-31-MA base slab at access road, dismantling of formwork for vortex drop shaft (VDS), and concreting at 350mm U channel at access road were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 22.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 06-Jul-12

**Photographic record for exceedance of Turbidity recorded at Squatters (I-3) on 05-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 05-Jul-12 |
| Time | 10:33 AM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 12.05 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 13.40 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline limit level, but lower than the SS level of the control station (I-2-C). General site cleaning and housekeeping, mucking out, drilling blast holes and carrying out Blast No.136 at main adit (MA), erecting formwork for Wall A and Wall C at de-aeration chamber (DC), fixing rebar for lining at upper man access shaft (UMAS), welding wall-tie at Wall A of DC and mucking out at MA, cutting and bending rebar for side wall of DC & UMAS, erecting scaffolding and removing the grass below mid-level of slope at portion G, excavating for trial pit at vortex drop shaft (VDS), and mucking out surplus of soil at SM1A at portion G were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 22.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 11-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 05-Jul-12**

Photo taken at I-2

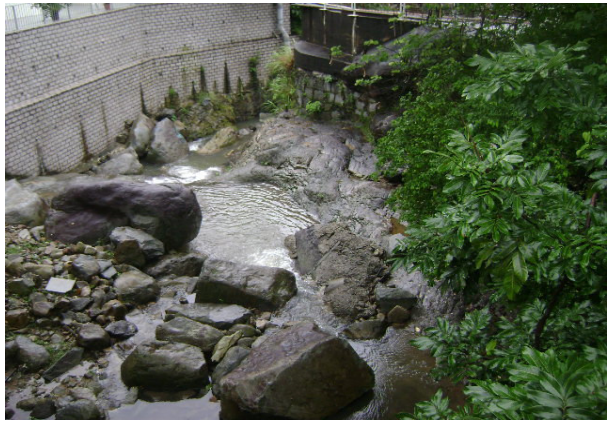


Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 07-Jul-12 |
| Time | 9:36 AM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 4.70 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | <2.00 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action/limit level, but higher than the SS level of the control station (I-2-C). General site cleaning and housekeeping, mucking out, drilling blast holes and carrying out Blast No.138 at main adit (MA), erecting formwork for Wall C at de-aeration chamber (DC), welding wall-tie at Wall A of DC, erecting working platform at upper man access shaft (UMAS) and preparation works for installation of steel moulds, welding wall-tie at Wall A of DC and mucking out at MA, cutting and bending rebar for side wall of DC and UMAS, removing shrubs at slope adjacent to 1500mm step-channel (SC) at portion G, and mucking out surplus of soil at SM1A to SM1 at portion G were undertaken during the monitoring day. No wastewater directly discharged from the site was observed. Although the SS level at I-2 was more than 135% higher than that at I-2-C, no direct sources of impact from the site were identified. As such, no further mitigation measures or actions were recommended. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature: 

Date: 13-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 07-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 09-Jul-12 |
| Time | 11:45 AM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 2.80 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | <2.00 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level at I-1 was well below the baseline action/limit levels, but higher than 130% of the SS level of the control station (I-1-C). Screeding of spiral ramp wall, removal of cradle at shaft, and mucking out were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected to waste water treatment plant for treatment before discharge; and (2) nullah and site area were separated by sealed concrete blocks. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 18-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 09-Jul-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 18-Jul-12 |
| Time | 10:07 AM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 6.63 / 6.99 |
| Measured Level (NTU) | 7.29 |
| Control Station | I-2-C |
| Measured Level at the Control Station (NTU) | 7.50 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-2-C). General site cleaning and housekeeping, mucking out, drilling holes and rock splitting at main adit (MA), site tidiness and cleanliness works at de-aeration chamber (DC) & MA, trimming and cleanliness works to formation for blinding layer of MA from Ch 0 – Ch 30, sawing out and chipping concrete for making good the defect concrete surface at Wall A and Wall B, rebar fixing for upper man access shaft (UMAS), and removing grass/shrubs below mid-level of slope at portion G were undertaken during the monitoring day. Raining was observed on the monitoring day and about 34.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 25-Jul-12

**Photographic record for exceedance of Turbidity recorded at Hong Hoi Chee Hong Temple (I-2) on 18-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 18-Jul-12 |
| Time | 9:33 AM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 3.99 / 4.18 |
| Measured Level (NTU) | 48.05 |
| Control Station | I-3-C |
| Measured Level at the Control Station (NTU) | 48.35 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-3-C). General site cleaning and housekeeping, drilling holes for rock breaking for Ch. 7-9 at main adit, safety works along open cut shaft at access road, internal transportation of TBM spoil and backfilling for de-aeration chamber (DAC) top, and shuttering for intake I-2 precast staircase flight for man access shaft were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 34.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 25-Jul-12

**Photographic record for exceedance of Turbidity recorded at Squatters (I-3) on 18-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 23-Jul-12 |
| Time | 1:43 PM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 9.75 / 12.47 |
| Measured Level (NTU) | 45.05 |
| Control Station | I-1-C |
| Measured Level at the Control Station (NTU) | 45.15 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-1-C). General housekeeping and site cleaning, erecting formwork for slab of box culvert, preparing construction joint (CJ), expanded joint (EJ) and rebar for box culvert, and rendering for tile at spiral ramp were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 112.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and divered to waste water treatment plant for treatment before discharge; and (2) nullah and site area were separated by sealed concrete blocks. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 25-Jul-12

**Photographic record for exceedance of Turbidity recorded at Sik Sik Yuen Ho Fung College (I-1) on 23-Jul-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 23-Jul-12 |
| Time | 2:48 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 3.99 / 4.18 |
| Measured Level (NTU) | 14.31 |
| Control Station | I-3-C |
| Measured Level at the Control Station (NTU) | 14.47 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-3-C). General site cleaning and housekeeping, rock breaking for Ch. 7-9 at main adit, erecting bund wall for backfilling at de-aeration chamber (DAC), internal transportation of TBM spoil and backfilling for DAC top, and shuttering for intake I-2 precast staircase flight for man access shaft were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 112.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 25-Jul-12

**Photographic record for exceedance of Turbidity recorded at Squatters (I-3) on 23-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Action Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 18-Jul-12 |
| Time | 10:34 AM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 3.45 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | 2.75 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level at I-1 was well below the baseline action/limit levels, but higher than 120% of the SS level of the control station (I-1-C). Water proofing work at planter of spiral ramp, rebar preparation for box culvert, breaking cradle at box culvert, and mucking out tunnel spoil at box culvert were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant for treatment before discharge; and (2) nullah and site area were separated by sealed concrete blocks. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 26-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 18-Jul-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 18-Jul-12 |
| Time | 9:33 AM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 6.13 / 7.23 |
| Measured Level (mg/L) | 37.25 |
| Control Station | I-3-C |
| Measured Level at the Control Station (mg/L) | 36.75 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline limit level, but lower than the SS level of the control station (I-3-C). General site cleaning and housekeeping, drilling holes for rock breaking for Ch. 7-9 at main adit, safety works along open cut shaft at access road, internal transportation of TBM spoil and backfilling for de-aeration chamber (DAC) top, and shuttering for intake I-2 precast staircase flight for man access shaft were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 34.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 26-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Squatters (I-3) on 18-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 23-Jul-12 |
| Time | 1:43 PM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 62.10 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | 59.70 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level at I-1 was was higher than the baseline limit level, but lower than 120% of the SS level of the control station (I-1-C). General housekeeping and site cleaning, erecting formwork for slab of box culvert, preparing construction joint (CJ), expanded joint (EJ) and rebar for box culvert, and rendering for tile at spiral ramp were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 112.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant for treatment before discharge; and (2) nullah and site area were separated by sealed concrete blocks. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 27-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 23-Jul-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 23-Jul-12 |
| Time | 2:48 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 6.13 / 7.23 |
| Measured Level (mg/L) | 16.35 |
| Control Station | I-3-C |
| Measured Level at the Control Station (mg/L) | 16.40 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline limit level, but lower than the SS level of the control station (I-3-C). General site cleaning and housekeeping, rock breaking for Ch. 7-9 at main adit, erecting bund wall for backfilling at de-aeration chamber (DAC), internal transportation of TBM spoil and backfilling for DAC top, and shuttering for intake I-2 precast staircase flight for man access shaft were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 112.0 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 27-Jul-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Squatters (I-3) on 23-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 25-Jul-12 |
| Time | 2:57 PM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 9.75 / 12.47 |
| Measured Level (NTU) | 24.55 |
| Control Station | I-1-C |
| Measured Level at the Control Station (NTU) | 24.75 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-1-C). General housekeeping, rebaring preparation of box culvert, and rendering for tile at spiral ramp were undertaken during the monitoring day. No construction works were carried out in the afternoon due to amber rainstorm warning. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 82.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant for treatment before discharge; and (2) nullah and site area were separated by sealed concrete blocks. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 30-Jul-12

**Photographic record for exceedance of Turbidity recorded at Sik Sik Yuen Ho Fung College (I-1) on 25-Jul-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 25-Jul-12 |
| Time | 3:33 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 6.63 / 6.99 |
| Measured Level (NTU) | 23.25 |
| Control Station | I-2-C |
| Measured Level at the Control Station (NTU) | 23.35 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), concrete breaking to expose the couplers for Wall D at de-aeration chamber (DC), erecting steel frames and formwork for Wall D at DC, erecting lining for upper man access shaft (UMAS), rock splitting at MA, and installing manhole cover for SM2 & SM3, were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 82.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 30-Jul-12

**Photographic record for exceedance of Turbidity recorded at Hong Hoi Chee Hong Temple (I-2) on 25-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 25-Jul-12 |
| Time | 4:12 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 3.99 / 4.18 |
| Measured Level (NTU) | 31.15 |
| Control Station | I-3-C |
| Measured Level at the Control Station (NTU) | 31.25 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-3-C). General site cleaning and housekeeping, rock breaking for Ch. 7-9 at main adit, erecting bund wall for backfilling at de-aeration chamber (DAC), internal transportation of TBM spoil and backfilling for DAC top, and planting rectification works after typhoon at PA wall were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 82.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature: 

Date: 30-Jul-12

**Photographic record for exceedance of Turbidity recorded at Squatters (I-3) on 25-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 27-Jul-12 |
| Time | 1:34 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 6.63 / 6.99 |
| Measured Level (NTU) | 8.08 |
| Control Station | I-2-C |
| Measured Level at the Control Station (NTU) | 8.19 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), preparation works for erection of steel falseworks for roof top of de-aeration chamber (DC), erecting steel frames and formwork for Wall D at DC, placing concrete for upper man access shaft (UMAS), rock splitting at MA and installing manhole cover for SM1A and SM1 were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 25.7 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 30-Jul-12

**Photographic record for exceedance of Turbidity recorded at Hong Hoi Chee Hong Temple (I-2) on 27-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 27-Jul-12 |
| Time | 2:08 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 3.99 / 4.18 |
| Measured Level (NTU) | 24.05 |
| Control Station | I-3-C |
| Measured Level at the Control Station (NTU) | 24.25 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-3-C). General site cleaning and housekeeping, drilling holes for rock breaking and rock breaking for Ch. 7-9 at main adit, internal transportation of TBM spoil and backfilling for vortex drop shaft (VDS), and concrete breaking at +58mPD platform were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 25.7 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 30-Jul-12

**Photographic record for exceedance of Turbidity recorded at Squatters (I-3) on 27-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 25-Jul-12 |
| Time | 2:57 PM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 17.20 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | 18.45 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level at I-1 was higher than the baseline limit level, but lower than the SS level of the control station (I-1-C). General housekeeping, rebaring preparation of box culvert, and rendering for tile at spiral ramp were undertaken during the monitoring day. No construction works were carried out in the afternoon due to amber rainstorm warning. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 82.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant for treatment before discharge; and (2) nullah and site area were separated by sealed concrete blocks. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature: 

Date: 02-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 25-Jul-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 25-Jul-12 |
| Time | 3:33 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 11.90 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 13.05 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline limit level, but lower than the SS level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), concrete breaking to expose the couplers for Wall D at de-aeration chamber (DC), erecting steel frames and formwork for Wall D at DC, erecting lining for upper man access shaft (UMAS), rock splitting at MA, and installing manhole cover for SM2 & SM3 were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 82.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 02-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 25-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 25-Jul-12 |
| Time | 4:12 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 6.13 / 7.23 |
| Measured Level (mg/L) | 15.05 |
| Control Station | I-3-C |
| Measured Level at the Control Station (mg/L) | 17.90 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline limit level, but lower than the SS level of the control station (I-3-C). General site cleaning and housekeeping, rock breaking for Ch. 7-9 at main adit, erecting bund wall for backfilling at de-aeration chamber (DAC), internal transportation of TBM spoil and backfilling for DAC top, and planting rectification works after typhoon at PA wall were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 82.3 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 02-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Squatters (I-3) on 25-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Action Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 27-Jul-12 |
| Time | 1:34 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 5.25 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 4.15 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level, but higher than 120% of the SS level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), preparation works for erection of steel falseworks for roof top of de-aeration chamber (DC), erecting steel frames and formwork for Wall D at DC, placing concrete for upper man access shaft (UMAS), rock splitting at MA and installing manhole cover for SM1A and SM1 were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 25.7 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 02-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 27-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 27-Jul-12 |
| Time | 2:08 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 6.13 / 7.23 |
| Measured Level (mg/L) | 16.70 |
| Control Station | I-3-C |
| Measured Level at the Control Station (mg/L) | 18.10 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline limit level, but lower than the SS level of the control station (I-3-C). General site cleaning and housekeeping, drilling holes for rock breaking and rock breaking for Ch. 7-9 at main adit, internal transportation of TBM spoil and backfilling for vortex drop shaft (VDS), and concrete breaking at +58mPD platform were undertaken during the monitoring day. No direct disturbance was observed from the site. Raining was observed on the monitoring day and about 25.7 mm rainfall was recorded by the Hong Kong Observatory on the monitoring day. Therefore, the exceedance was considered to be contributed by heavy rainfall and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 02-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Squatters (I-3) on 27-Jul-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Action Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 30-Jul-12 |
| Time | 10:30 AM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 7.10 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 5.65 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level, but higher than 120% of the SS level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), erecting steel formwork for roof top of de-aeration chamber (DC), erecting formwork and fixing rebar for Wall D at DC, erecting lining formwork for upper man access shaft (UMAS), fixing erosion control mat and wire mesh on slope at portion G, and placing concrete for top slab of backdrop at SM1A (portion G) were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 03-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 30-Jul-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 06-Aug-12 |
| Time | 4:13 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Turbidity |
| Action & Limit Levels (NTU) | 3.99 / 4.18 |
| Measured Level (NTU) | 6.14 |
| Control Station | I-3-C |
| Measured Level at the Control Station (NTU) | 6.15 |
| Possible reason for Action or Limit Level Non-compliance | The measured turbidity level was higher than the baseline limit level, but lower than the turbidity level of the control station (I-3-C). General site cleaning and housekeeping, excavation for 375mm U-channel at hair pin curve, rock breaking for 900mm drainage pipe, fixing rebar for vortex drop shaft (VDS) base slab, and drilling holes for rock breaking and rock breaking for Ch. 13-17 at main adit were undertaken during the monitoring day. No direct disturbance was observed from the site. About 2mm to 20mm rainfall was observed between 10:00 am and 12:00 pm at the upper catchment of Tso Kung Tam on the monitoring day. Therefore, the exceedance was considered to be contributed by the rainfall and high turbidity level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 08-Aug-12

**Photographic record for exceedance of Turbidity recorded at Squatters (I-3) on 06-Aug-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Action Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 01-Aug-12 |
| Time | 3:30 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 2.90 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 2.35 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action level, but higher than 120% of the SS level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), erection of steel falseworks for roof top of de-aeration chamber (DC), erecting formwork for wall D at DC, fixing rebar for wall D at DC, placing concrete for upper man access shaft (UMAS), and fixing erosion control mat and wire mesh on slope at portion G were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 08-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 01-Aug-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 06-Aug-12 |
| Time | 4:13 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 6.13 / 7.23 |
| Measured Level (mg/L) | 3.65 |
| Control Station | I-3-C |
| Measured Level at the Control Station (mg/L) | 2.70 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level , but higher than 130% of the SS level of the control station (I-3-C). General site cleaning and housekeeping, excavation for 375mm U-channel at hair pin curve, rock breaking for 900mm drainage pipe, fixing rebar for vortex drop shaft (VDS) base slab, and drilling holes for rock breaking and rock breaking for Ch. 13-17 at main adit were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 14-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Squatters (I-3) on 06-Aug-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Action Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 24-Aug-12 |
| Time | 3:53 PM |
| Monitoring Location | Squatters (I-3) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 6.13 / 7.23 |
| Measured Level (mg/L) | 3.50 |
| Control Station | I-3-C |
| Measured Level at the Control Station (mg/L) | 2.80 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level, but higher than 120% of the SS level of the control station (I-3-C). General site cleaning and housekeeping, rock breaking and mucking out at main adit, shuttering and concreting for intake I-2 precast staircase, rebar fixing at vortex shaft (VS), construction joint (CJ) preparation for VS base slab, installing tie bar at VS, concreting for staircase in-situ landing at man access shaft (MAS), erecting scaffold around MAS, and placing 900mm drainage pipe at access road were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) site area and existing stream were separated by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 30-Aug-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Squatters (I-3) on 24-Aug-12**

Photo taken at I-3

Photo of I-3-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 27-Aug-12 |
| Time | 2:37 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 3.45 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 2.50 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action/limit level, but higher than 130% of the SS level of the control station (I-2-C). General site cleaning and housekeeping, drilling holes and rock splitting at main adit (MA), concreting of crown soffit of de-aeration chamber (DC), and erecting lining for upper man access shaft (UMAS) were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 01-Sep-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 27-Aug-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Action Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 31-Aug-12 |
| Time | 10:42 AM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 8.95 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | 8.60 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was higher than the baseline action level, but lower than 120% of the SS level of the control station (I-1-C). Steel fixing for roof of box culvert north wall, erecting formwork for taper of box culvert north wall, installing tile for spiral ramp wall, and screeding for waterproofing at spiral ramp roof were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation and high SS level at upstream location. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) nullah and site area were separated by sealed concrete block. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 07-Sep-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 31-Aug-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 21-Sep-12 |
| Time | 8:52 AM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 8.30 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | 6.25 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level, but higher than 130% of the SS level of the control station (I-1-C). Steel rebar fixing for roof slab of box culvert, falsework erection for roof slab of box culvert, breaking mass concrete and removing concrete blocks for formation of temporary access road, and waterproofing installation at spiral ramp roof were undertaken during the monitoring day. The Contractor has provided wastewater treatment plant for the site effluent before discharge and erected the sealed concrete block wall to separate the existing stream and site works area. No wastewater directly discharged from the site was observed. Although the SS level at I-1 was more than 30% higher than that at I-1-C, no direct sources of impact from the site were identified. As such, no further mitigation measures or actions were recommended. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) nullah and site area were separated by sealed concrete block. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 28/9/2012

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 21-Sep-12**

Photo taken at I-1

Photo of I-1-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 26-Sep-12 |
| Time | 2:06 PM |
| Monitoring Location | Hong Hoi Chee Hong Temple (I-2) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 7.68 / 8.34 |
| Measured Level (mg/L) | 3.45 |
| Control Station | I-2-C |
| Measured Level at the Control Station (mg/L) | 2.30 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level, but higher than 130% of the SS level of the control station (I-2-C). General site cleaning and housekeeping, shotcreting at main adit (MA), placing blinding layer at lower man access shaft (LMAS), erecting formwork for crown of de-aeration chamber (DC), erecting access platform for crown of DC, and dismantling noise panel and I-Beam of noise enclosure at man access shaft (MAS) were undertaken during the monitoring day. No direct disturbance was observed from the site. Therefore, the exceedance was considered to be contributed by natural variation. Since the exceedance was non-project related, no further action was required. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) existing stream was bunded by sealed concrete block wall. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 8-Oct-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Hong Hoi Chee Hong Temple (I-2) on 26-Sep-12**

Photo taken at I-2

Photo of I-2-C

**Interim Notification of Environmental Quality Limit Exceedance**

Incident Report on Limit Level Non-compliance

| | |
|---|---|
| Project | Tsuen Wan Drainage Tunnel |
| Date | 28-Sep-12 |
| Time | 1:15 PM |
| Monitoring Location | Sik Sik Yuen Ho Fung College (I-1) |
| Parameter | Suspended Solids (SS) |
| Action & Limit Levels (mg/L) | 8.85 / 10.17 |
| Measured Level (mg/L) | 3.30 |
| Control Station | I-1-C |
| Measured Level at the Control Station (mg/L) | <2.00 |
| Possible reason for Action or Limit Level Non-compliance | The measured SS level was lower than the baseline action / limit level, but higher than 130% of the SS level of the control station (I-1-C). Concreting for box culvert roof was undertaken during the monitoring day. The Contractor has provided wastewater treatment plant for the site effluent before discharge and erected the sealed concrete block wall to separate the existing stream and site works area. No wastewater directly discharged from the site was observed. Although the SS level at I-1 was more than 30% higher than that at I-1-C, no direct sources of impact from the site were identified. As such, no further mitigation measures or actions were recommended. |
| Actions taken / to be taken | The following mitigation measures were provided on-site during monitoring: (1) wastewater was collected and diverted to waste water treatment plant prior to discharge; and (2) nullah and site area were separated by sealed concrete block. |
| Remarks | None |

Prepared by: Fan Cheong Tsang

Designation: Environmental Team Leader

Signature:

Date: 11-Oct-12

**Photographic record for exceedance of Suspended Solids (SS) recorded at Sik Sik Yuen Ho Fung College (I-1) on 28-Sep-12**

Photo taken at I-1

Photo of I-1-C

Appendix H

# Complaint Log

**APPENDIX H**

**COMPLAINT LOG**

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| 1 | CIR-001 | 9 March 2009<br>at Outfall | Public through EPD | EPD has received a complaint (EPD ref: EP3/N22/RW/04846-09) regarding to muddy effluent discharged from the outfall of the construction site from a public on 9 March 2009. Site investigation was also carried out by EPD with the Contractor on the same day. | Findings/ Observations<br>In the afternoon on 9 March 2009, the Contractor was carrying out regular maintenance for removing silt accumulated in the wastewater treatment plant. During the maintenance works, some residual silt inside the plant was accidentally leaked out to the outfall discharge outlet. The reason was that a flexible pipe for disposing silt was found connecting to the concrete platform of the outfall discharge outlet.<br>Conclusion/Remedial Action<br>The complaint was valid and it was due to maintenance works at the wastewater treatment plant at the outfall area. The contractor had cleaned up the silt at discharge outlet and the channel at the outfall area on 12 March 2009 as shown in the attached photo. The ET will closely inspect the discharge outlet and the channel during the routine site inspections and provide advice to the Contractor. The Contractor was also advised to provide mitigation measures during any occasion of the maintenance work on the wastewater treatment plant.<br>The discharge pipe of the treatment plant should be plugged and ensure not functioned when carrying out maintenance works on the wastewater treatment plant in order to prevent the discharge of silt or muddy water to the outlet.<br>Flexible pipe for discharge of sludge should not be placed on the concrete platform under the outfall discharge outlet. For disposal of slit or sludge in the wastewater treatment plant, tanker should be used. | Closed |
| 2 | CIR-002 | 8 May 2009<br>at Outfall | Public through EPD | EPD has received a complaint (EPD ref: EP3/N22/RW/09755-09) regarding to construction dust from the outfall | Findings/ Observations<br>Regular 1-hour TSP monitoring, in accordance with EM&A Manual, is performed by Environmental Team. The monitoring station concerned is ASR9 (i.e. at the podium level of Greenview Terrace facing to the construction site).<br>The closest date for the 1-hour TSP concentration monitoring was on 6 | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | construction site on 8 May 2009. Site investigation was also carried out by EPD with the Contractor on 14 May 2009. | May 2009 and 12 May 2009 at Greenview Terrace, ASR9. Soil nailing works and loading & unloading excavated materials were observed during monitoring. In accordance with the EM&A Manual and the Baseline Monitoring Report, all 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels. No exceedance was recorded on 6 and 12 May 2009.<br>The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. It was confirmed that the air quality mitigation measures as recommended in EIA have been provided by the Contractor. The mitigation measures are as follows:<br>• Water spraying was provided to the exposed surface.<br>• Several automatic sprinklers were provided at the outfall construction site for water spraying of the haul road.<br>• Water spraying was provided during dust generating works (e.g. rock breaking and soil nailing works).<br><u>Conclusion/Remedial Action</u><br>Based on the site inspection and monitoring results, the complaint is considered not justifiable since no action & limit level exceedance on construction dust are identified. Air quality mitigation measures as recommended in EIA have been implemented in order to control and minimise the air quality impact and nuisance arising from the construction activities. Nevertheless, in view of the recent dry and sunny weather, the haul road and the exposed area would be dry very quickly. The Contractor was recommended to provide more frequent water spraying especially in the dry and sunny weather. | |
| 3 | CIR-003 | 14 May 2009 at Outfall | Public through EPD | EPD has received a complaint (EPD ref: EP/RW/080206) regarding to daytime construction rock breaking at 7:15 am | The closest date to the complaint for the 1-hour TSP monitoring & daytime construction noise monitoring was on 12, 18 and 27 May 2009 at Greenview Terrace, ASR9 and NSR9. Soil nailing, excavation, rock breaking, loading and unloading the materials were observed during monitoring period. The measured noise levels complied with the limit level in accordance with the EIAO-TM. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels. No 1-hour TSP | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | and dusty at the outfall construction site on 14 May 2009. | exceedance was recorded.<br>The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Air quality mitigation measures as recommended in EIA have been implemented by the Contractor. However, noise mitigation measures could be further improved.<br>Based on our site inspection and monitoring results, the complaint for dust is considered not justifiable since no action & limit level exceedance on construction dust is identified. Air quality mitigation measures as recommended in EIA have also been implemented in order to control and minimise the air quality impact arising from the construction activities. In view of the recent dry and sunny weather, the haul road and the exposed area would be dry very quickly. The Contractor was recommended to enhance water spraying especially in the dry and sunny weather.<br>On the other hand, the complaint for noise is considered due to works and the Contractor was agreed to improve the on-site noise mitigation measures such as the following measures. ET's site inspection and the joint inspection with relevant parties was conducted on 29 May 2009 and 4 June 2009 respectively to confirm all the below measures have been implemented.<br>• For the idling plant, it should be switched off to reduce noise level generated.<br>• The sound insulation sheets and noise insulation materials should be placed to enclose the breaking tip tightly and also aside or surrounding the breaking activities as recommended in the following photos 1-3 in noise mitigation measures.<br>• Noise monitoring frequency was increased in order to check the effectiveness of the mitigation measures. The additional measurement was taken on 27 May, 8 June, 10 June and 12 June 2009 after all the measures implemented. The noise levels ($L_{eq, 30\ min}$) were 70.9 dB (A), 70.5 dB (A), 70.3 dB (A) and 70.3 dB (A) respectively, which comply with the limit level in accordance with the EIAO-TM. Soil nailing, excavation and rock breaking were observed during monitoring period. | |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | The measures were well in place and seemed effective during the measurement. | |
| 4 | CIR-004 | 10 July 2009 at Outfall | Public through EPD | EPD has received a complaint (EPD ref: EP3/N22/RW/15137-09) regarding to construction dust from the outfall construction site on 10 July 2009. | Findings/ Observations<br>1-hour TSP concentration monitoring was on 10 July 2009 at Greenview Terrace, ASR9. Soil nailing works, concrete breaking, excavation and loading & unloading excavated materials were observed during monitoring. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels. No exceedance was recorded on 10 July 2009.<br>The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. It was confirmed that the air quality mitigation measures as recommended in EIA have been provided by the Contractor. The mitigation measures are as follows:<br>• Water spraying was provided to the exposed surface.<br>• Automatic sprinklers were provided at the outfall construction site for water spraying of the haul road.<br>• Water spraying was provided during dust generating works (e.g. rock breaking and soil nailing works).<br>• Tarpaulin was used for covering the dusty works in the Portal area.<br>Conclusion/Remedial Action<br>The complaint is considered not justifiable since no action & limit level exceedance on construction dust are identified | Closed |
| 5 & 6 | CIR-005 | 29 July 2009 & 11 August 2009 at Outfall | Public through SOR | SOR has received two complaints (SOR ref: (DC/2007/12)/M45/500/02480, 02500) from Greenview Terrace regarding to daytime construction noise exceedance | Findings/ Observations<br>Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. According to the noise monitoring results from 6 July 2009 to 31 August 2009 at NSR 9, the measured noise levels complied with the limit level in accordance with the EIAO-TM. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels from 6 July 2009 to 25 August 2009.<br>Conclusion/Remedial Action<br>The dust complaint on 22 July 2009 was due to the soil nailing works. The | Same Case with Complaint No. 11 |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | recorded at NSR9 on 8, 22, 23, 27 and 29 July 2009 and a large amount dust generated at the outfall construction site. The complaint dates were corresponded to 29 July and 11 August 2009. | Contractor was reminded enhance the dust mitigation measures during soil nailing works. A designated staff was provided to spray water continuously during soil nailing. A nylon bag was placed on the drilling hole and keeping wet to suppress dust. A sprinkler was added at the hillside of the site and water spraying was provided continuously during operation of drilling to suppress dust.<br>The documented complaint for noise is considered to trigger the action level and the Contractor was also reminded to enhance the on-site noise mitigation measures continuously. The enhanced mitigation measures are proposed as follows:<br>• A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level.<br>• The designated staff was reminded to record all the weather condition including raining and wind speed.<br>• Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.<br>• Movable noise barriers were placed on site and the movable noise barriers were also modified.<br>• Existing 25 ton rock breaker had been replaced by the another breaker.<br>• The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap.<br>• A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace.<br>From the additional monitoring data and monitoring data under regular EM&A requirements, noise level ($L_{eq,\ 30\ min}$) between 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency was maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August | |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | 2009. Noise levels ($L_{eq,\ 30\ min}$) were also re-measured after the implementation of the mitigation measures. Noise level ($L_{eq,\ 30\ min}$) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. In our investigation, there was no exceedance of the measured noise level at Greenview Terrace. | |
| 7 | CIR-006 | 12 August 2009 at Outfall | Public through SOR | SOR has received a complaint (SOR ref: (DC/2007/12)/M45/500/02527) from Greenview Terrace, via Apple Daily regarding to daytime construction noise level ($L_{eq(30min)}$) was sometimes more than 80 dB(A) and a large amount dust generated at the outfall construction site. The complaint date was corresponded to 12 August 2009. | <u>Findings/ Observations</u><br>Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. According to the noise monitoring results from 6 July 2009 to 31 August 2009 at NSR 9, the measured noise levels complied with the limit level in accordance with the EIAO-TM. All 1-hour TSP concentrations at ASR9 were below the established Action and Limit Levels from 6 July 2009 to 25 August 2009.<br><u>Conclusion/Remedial Action</u><br>The dust complaint was considered not justifiable since no action & limit level exceedance on construction dust were identified. However, it was a recurrent case from Greenview Terrace. The Contractor was recommended to enhance water spraying continuously especially in rock breaking activities.<br>On the other hand, there was no noise levels ($L_{eq(30min)}$) from the measurement taken from ET was more than 80 dB(A). However, it was a recurrent case from Greenview Terrace. The Contractor was reminded to enhance the on-site noise mitigation measures. The enhanced mitigation measures are proposed as follows:<br>• A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level.<br>• The designated staff was reminded to record all the weather condition including raining and wind speed.<br>• Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | much as possible.<br>• Movable noise barriers were placed on site and the movable noise barriers were also modified.<br>• Existing 25 ton rock breaker had been replaced by the another breaker.<br>• The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap.<br>• A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace.<br>From the additional monitoring data and monitoring data under regular EM&A requirements, noise level ($L_{eq, 30\ min}$) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency was maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels ($L_{eq, 30\ min}$) were also re-measured after the implementation of the mitigation measures. Noise level ($L_{eq, 30\ min}$) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. | |
| 8 | CIR-007 | 14 August 2009 at Outfall | Public through EPD | EPD has received a complaint (EPD ref: EP3/N22/RW/17978-09) from Greenview Terrace regarding to daytime construction noise from the outfall construction site.<br>The complaint date was corresponded to 14 August 2009. | <u>Findings/ Observations</u><br>Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. According to the noise monitoring results from 6 July 2009 to 31 August 2009 at NSR 9, the measured noise levels complied with the limit level in accordance with the EIAO-TM.<br><u>Conclusion/Remedial Action</u><br>This was a recurrent case from Greenview Terrace. The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures continuously. The enhanced mitigation measures are proposed as follows:<br>• A staff from the Contractor was designated to take the reading of Leq | Same Case with Complaint No. 11 |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level.<br>• The designated staff was reminded to record all the weather condition including raining and wind speed.<br>• Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.<br>• Movable noise barriers were placed on site and the movable noise barriers were also modified.<br>• Existing 25 ton rock breaker had been replaced by the another breaker.<br>• The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap.<br>• A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace.<br>From the additional monitoring data and monitoring data under regular EM&A requirements, noise level ($L_{eq, 30\ min}$) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency would be maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels ($L_{eq, 30\ min}$) were also re-measured after the implementation of the mitigation measures. Noise level ($L_{eq, 30\ min}$) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. | |
| 9 | CIR-008 | 17 August 2009 at Portion D of the Site | Public through SOR | SOR has received a complaint (SOR ref:(DC/2007/12)/M45/500/02546) from Long Bench Garden | <u>Findings/ Observations</u><br>Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in August 2009. The monitoring results from 3 August 2009 to 31 August 2009 at NSR 8 showed the measured noise levels complied with the limit level in accordance with the EIAO-TM. The contractor and the environmental | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | regarding to noise nuisance generated from the daytime construction work (rock-breaking) in Portion D of the Site. The complaint date was corresponded to 17 August 2009. | team were also undertaken site investigation on the subject area in response to the complaint. Noise mitigation measures should be enhanced continuously due to this complaint.<br>Conclusion/Proposed Action<br>The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures continuously. The enhanced mitigation measures are recommended as follows:<br>• Movable noise barriers had been placed towards the direction of Long Bench Garden, particular for the pipe pile works in the portal.<br>• Tools box talk for construction team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.<br>• The existing noisy 25 ton rock breaker had been replaced by the other breaker.<br>• A joint filler wall had been fixed on the vertical face of west bound to absorb the noise generated towards Long Beach Garden.<br>Noise monitoring frequency was increased twice per week by ET due to this complaint. The measured noise levels were complied with the limit level in accordance with the EIAO-TM. No further complaint was received from Long Bench Garden within the reporting month. | |
| 10 | CIR-009 | 22 August 2009 at Outfall | Public through SOR | A complaint (SOR ref: (DC/2007/12)/M45/500/02628) was received from Greenview Terrace regarding to daytime construction noise level (Leq(30min)) was sometimes exceeded 75 dB(A) | Findings/ Observations<br>Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and August 2009. The monitoring results from 6 July 2009 to 31 August 2009 at NSR 9 showed the measured noise levels complied with the limit level in accordance with the EIAO-TM. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Noise mitigation measures should be enhanced continuously due to this complaint.<br>Conclusion/Proposed Action<br>The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise | Same Case with Complaint No. 11 |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | at the outfall construction site. The complaint date was corresponded to 22 August 2009. | mitigation measures continuously. The enhanced mitigation measures are recommended as follows:<br>• A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level.<br>• The designated staff was reminded to record all the weather condition including raining and wind speed.<br>• Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.<br>• Movable noise barriers were placed on site and the movable noise barriers were also modified.<br>• Existing 25 ton rock breaker had been replaced by the another breaker.<br>• The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap.<br>• A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace.<br>From the additional monitoring data and monitoring data under regular EM&A requirements, noise level ($L_{eq, 30\ min}$) from 6 July to 31 August 2009 was in the range of 71 to 74 dB(A) to the nearest integer. The noise monitoring frequency was maintained in twice per week to check whether the mitigation measures are effective. From the information of the Contractor, all the mitigation measures were implemented on 31 August 2009. Noise levels ($L_{eq, 30\ min}$) were also re-measured after the implementation of the mitigation measures. Noise level ($L_{eq, 30\ min}$) from 4 Sep to 28 Sep 2009 was in the range of 70 to 73 dB(A) to the nearest integer after the implementation of the mitigation measures. In our investigation, there was no exceedance of the measured noise level at Greenview Terrace. | |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| 11 | CIR-010 | 24 September 2009 at Outfall | Public through SOR | A complaint (SOR ref: (DC/2007/12)/M45/500/02749) was received from Greenview Terrace regarding to daytime construction noise level (Leq(30min)) was sometimes exceeded 75 dB(A) at the outfall construction site. | Findings/ Observations<br>Soil nailing, excavation, rock breaking and drilling, loading and unloading the materials were generally observed during monitoring period in July and September 2009. The monitoring results from 6 July 2009 to 29 October 2009 at NSR 9 showed the measured noise levels complied with the limit level in accordance with the EIAO-TM. The contractor and the environmental team were also undertaken site investigation on the subject area in response to the complaint. Noise mitigation measures have been enhanced continuously due to this complaint.<br>Conclusion/Proposed Action<br>The documented complaint for noise is considered to trigger the action level and the Contractor was reminded to enhance the on-site noise mitigation measures continuously. The enhanced mitigation measures were implemented as follows:<br>• A staff from the Contractor was designated to take the reading of Leq (5mins) at the roof of Greenview Terrace. In case of the Leq (5min) exceed 73 dB(A), the Contractor would re-schedule the noisy plants to mitigate the escalation of noise level.<br>• The designated staff was reminded to record all the weather condition including raining and wind speed.<br>• Tools box talk for the Contractor's Team was carried out for reminding that the movable barrier should be placed to the breaking activities as much as possible.<br>• Movable noise barriers were placed on site and the movable noise barriers were also modified.<br>• Existing 25 ton rock breaker had been replaced by the another breaker.<br>• The breaking tap of the 25 ton rock breaker had been replaced by another breaking tap.<br>• A joint filler wall was installed at the vertical face of westbound to mitigate the noise rebound from the vertical face to high level of Greenview Terrace. | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | From the additional monitoring data above and the regular monitoring under EM&A requirements, the measured noise levels were complied with the limit level in accordance with the EIAO-TM. From the noise level on 25 September 2009 and 2 October 2009, the trend of noise level seemed to be increased since the decoration work at 14/F Greenview Terrace was the domain noise source during the monitoring. The noise level during that time would be considered for reference only. There was no exceedance of the measured noise level at Greenview Terrace in our investigation. | |
| 12 | CIR-011 | 2 October 2009 at I-3 | Public through EPD | EPD has received a complaint (EPD ref: EP3/N22/RW/22016-09) regarding to construction dust at the Intake-3 on 2 October 2009. | <u>Findings/ Observations</u><br>There is no representative air monitoring location as stated in the EM&A Manual. The contractor and the environmental team were undertaken site investigation on the subject area at 08-Oct-09 in response to the complaint. Air quality mitigation measures as recommended in EIA have been implemented by the Contractor. However, the dust impact by exposed area could be further improved. The mitigation measures during the site investigation were observed as follows:<br>• Water spraying was provided to the exposed surface.<br>• Wheel washing facilities for dump trucks was provided at the site exit.<br>• Water spraying was provided during excavation and loading/unloading works<br><br><u>Conclusion/Proposed Action</u><br>Based on our site inspection, the complaint for dust is considered justifiable as it is due to windy erosion on the exposed surface. Air quality mitigation measures as recommended in EIA have also been implemented in order to control and minimise the air quality impact arising from the construction activities. In view of the recent dry season, the haul road and the exposed area would be dry very quickly. The Contractor was recommended to provide water spraying more frequently especially in the dry season. | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| 13 | (DC/2007/12)/ M45/500/2923 & email on 11 November 2009 from MCSJV | 9 November 2009 at Outfall | Greenview Terrace through EPD | Movable noise barrier was not placed close enough to the piling machine. | Immediate Action<br>The rig was re-orientated and the barrier was placed closed to the drilling head.<br><br>Follow-up Action<br>• Training was conducted to the operator to ensure that the workers aware that the barrier should be placed closed not the drilling head not the machine itself.<br>• In order to prevent future occurrence, a permit to dig system was adopted. It should be checked by the Contractor and endorsed by the SOR before starting the drilling rig.<br><br>The follow up action was checked and a permit to dig system has been implemented. | Closed |
| 14 | (DC/2007/12)/ M45/500/2978 & email on 19 November 2009 from MCSJV | 18 November 2009 at Outfall | Greenview Terrace through EPD | Rock-breaking activity carried out in the eastern area of Portion D, closest to Greenview Terrace, was not totally screened and line of sight of the breaker was observed from the NSR. | Follow up Action<br>• The bamboo scaffold was extended further away from stage 3 scaffold to further screen off the activities to the Greenview. The length of the extension was about 8 to 10 m.<br>• A strong reminded was given to the relevant staff and sub-contractor and the barrier should be placed in the right orientation before breaking.<br>• The mitigation measures were strictly followed as stated in the proposal.<br><br>The follow up action and relevant records was checked. | Closed |
| 15. | CIR-12 | 19 January 2010 at Intake-3 construction site | Public through EPD | EPD has received a public complaint (EPD ref: EP3/N22/RW/01270-10) regarding effluent discharge at Intake-3 construction site on 19 January 2010. | Findings/ Observations<br>The effluent discharge on 19 January 2010 was due to the leakage of Gabion wall at I3. The water from the rock drilling work was flowing through the gap of the Gabion Wall to the watercourses at I3.<br>Immediate Action<br>The contractor had sealed the gap at the Gabion Wall immediately after the incident.<br>Conclusion/Proposed Action<br>Based on our site inspection, the complaint was due to leakage of Gabion | Closed. |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | wall. The area would be checked and maintained continuously to avoid recurrence case. The above identified mitigation measures have been implemented by the Contractor on 22 January 2010 and ET has also checked the implementation on 31 January 2010. The ET will closely inspect the watercourses during the routine site inspections and provide advice to the Contractor. | |
| 16 | CIR-13 | 19 January 2010 at Intake-3 construction site | Public through EPD | EPD has received a public complaint (EPD ref: EP3/N22/RW/01319-10) regarding daytime construction noise at Intake-3 construction site on 19 January 2010. | Findings/ Observations<br>The monitoring station concerned is NSR6 (i.e. at Squatter facing to the construction site). Excavation, soil nailing, rock drilling and breaking, loading and unloading the materials were generally observed during monitoring period in mid-January 2010. The measured noise levels in January 2010 complied with the limit level in accordance with the EM&A Manual. These cases would also be treated as two action level exceedances on noise. The Contractor and the Environmental Team were also undertaken site investigation on the subject area in response to complaint. The noise mitigation measures during the site investigation were recommended as follows:<br>• Sound insulation sheets were installed covering the working area during breaking and rock drilling in order to block the line of sight to the NSR.<br>• Noise insulation materials were used to enclose the drilling rig tightly.<br>Conclusion/Proposed Action<br>Based on the site inspection and monitoring results, the complaint was due to noise generated by rock breaking work. The identified mitigation measures have been discussed with the Contractor and the Contractor has submitted the remedial proposal. The proposal was implemented by the Contractor on 25 January 2010 and ET has also checked the implementation on 31 January 2010. The Contractor was also advised to review the mitigation measures from time to time near the NSR at I3. The ET will closely inspect the area during the routine site inspections and provide advice to the Contractor. | Closed. |
| 17 | CIR-13 | 21 January 2010 at Intake-3 | Public through | EPD has received a public complaint (EPD ref: | Refers to Investigation /Mitigation Action for Complaint No. 16. | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | construction site | EPD | EP3/N22/RW/01444-10) regarding daytime construction noise at Intake-3 construction site on 21 January 2010. | | |
| 18 | CIR-14 | 27 August 2010 near Intake-2 construction site | Public through DSD | DSD has received a public complaint regarding choked sewage manhole (MH1) at Lo Wai Road construction site on 27 August 2010. | Findings/ Observations<br>During DSD inspection on 30 August 2010, improper discharge from the site to manhole, MH3, which is located downstream of MH1 was observed. ET had received those information from the Contractor on 09 September 2010. Site investigation was also carried out by SOR's representative with the Contractor on 01 September 2010. Checking with the site log, the construction activity at Lo Wai on 27 August 2010 was pipe jacking only. No site formation works was undertaken. The contractor and SOR's representative have undertaken site investigation on the subject area on 01 September 2010. On-site flow test at Portion G had conducted.<br>● Maeda works area is located at the lower section of Lo Wai Road and manhole MH3 is adjacent to the works area. MH1 (choked sewage manhole) is located at the upper section of Lo Wai Road. MH2 manhole is located middle section of Lo Wai Road. MH1 and MH2 are outside the works area.<br>● Water flow test for manhole MH2 and MH3 and no blockage was observed.<br>● Sewage overflow was found at MH1 during the joint site inspection on 01 September 2010<br>● It was reported that there were water pipes connected between the site and the MH3. Discharge was found in MH3 during DSD inspection.<br>● The contractor claimed that the purpose of the water pipes was to direct the storm water and underground water inside the concrete pipe "pipe jacking".<br>● There was no discharge license for that portion. The Contractor had stopped on 01 September 2010 the water pumping to MH3 and | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | apply the discharge license for the Lo Wai site.<br><br>Conclusion/Proposed Action<br>Based on the joint site inspection, the choked manhole MH1 was not due to works activities. The Contractor had clean up the choked manhole MH1 and no sewage overflow from MH1 was observed. The Contractor was requested to divert the storm water to desilting system prior to discharge while no such discharge can be made until a valid discharge license is granted. The ET will closely inspect the vicinity area during the routine site inspections and provide advice to the Contractor as necessary. | |
| 19&20 | CIR-15 | 17 November 2010 at outfall construction site | Public through EPD | EPD has received a public complaint (EPD ref: EP3/N22/RW/24002-10 and EP3/N22/RW/24006-10) regarding daytime construction noise about derrick barge squeaking and rock breaking at Outfall construction site on 17 November 2010. | Findings/ Observations<br>Drilling, excavation, marine mud dredging, rock breaking, mucking-out process and crane operation were observed during site inspections on 2 and 17 December 2010. The monitoring results measured on 15 November 2010 and 25 November at NSR 9 showed that the measured noise levels complied with the limit level (75 dB(A)) in accordance with the EIAO-TM. As part of the investigation of the noise complaints, the Contractor and the ET conducted additional site inspections and reviewed and audited the current noise mitigation practices and the Contractor's environmental performance on-site.<br><br>Conclusion / Proposed Action<br>The documented complaints for noise triggered the action level of the noise monitoring. The Contractor had implemented the following on-site noise mitigation measures:<br>● Erection of temporary noise insulation sheet at the rim of the spiral ramp construction site;<br>● Moveable barriers for rock breaker;<br>● Wrapping noise absorptive material at the rock breaker head;<br>● Tailor made noise enclosure for drilling rig;<br>● Semi-enclosed muck out process at muck hopper;<br>● Use of rock splitter (which is a relatively quieter method in contrast to rock breaker); and<br>● Noise insulation blanket enclosing the crane engine of derrick barge.<br>Noise monitoring was increased to twice per week and the results were | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | reported in the Complaint Investigation Report submitted on 24 December 2010. The measured noise level after implementation of the noise mitigation measures ranged from 69 to 73 dB(A) to the nearest integer and complied with the limit level in accordance with the EIAO-TM. The results showed that noise mitigation measures were effective. The contractor was advised to review the mitigation measures from time to time near the NSR 9. The ET would closely inspect the area during the routine site inspections and provide advice to the Contractor. | |
| 21 | CIR-16 | 10 January 2011 at outfall construction site | Public through EPD | EPD has received a public complaint (EPD ref: EP3/N22/RW/00484-11) regarding dark smoke emission from derrick barge and construction noise and dust at Outfall construction site on 10 January 2011. | Findings/ Observations<br>1. Dark Smoke Emission from Derrick Barge<br>Dark smoke emitted from the derrick barge was promptly investigated after the receipt of the complaint. The issue was found specific to the mechanical operation of the barge working at the site at that moment. The derrick barge being complained was then replaced by another barge without the relevant mechanical issue. No further complaint was received since then.<br>2. Construction Dust<br>Regular 1-hour TSP monitoring, in accordance with EM&A Manual, was carried out by the Environmental Team (ET). The monitoring station concerned is ASR 9, located at the podium level of Greenview Terrace facing the construction site. In January, 1 hour TSP concentration monitoring had been conducted on 4, 10, 14, 20 and 26 January 2011 at Greenview Terrace (ASR). Rock breaking, drilling and excavation were observed during monitoring. No exceedance was recorded.<br>The contractor and the environmental team were also undertaken site investigation at the subject area on 21 January 2011 in response to the complaint. It was confirmed that the air quality mitigation measures as recommended in EIA had been provided by the Contractor. The mitigation measures are as follows:<br>● Water spraying surrounding the spiral ramp;<br>● Water spraying for rock drilling and rock breaking;<br>● Water spraying for C&D material before loading and unloading to | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | derrick barge;<br>● Water spraying for the exposed surface and the haul road;<br>● Water spraying for trucks and vehicles at the site exit.<br>3. <u>Construction Noise</u><br>The documented complaints for noise triggered the action level of the noise monitoring. The Contractor had implemented the following on-site noise mitigation measures:<br>● Extension of Temporary noise insulation barrier (made of noise blanket) at the rim of the spiral ramp construction site facing Greenview Terrace;<br>● Movable noise barriers to surround the rock breaking activities at the spiral ramp where it is in safe ground condition;<br>● Tailor made noise enclosure for rock drilling machine;<br>● Semi-enclosed muck out process at muck hopper (with noise curtain underneath);<br>● Use of temporary noise enclosure for piling work at Castle Peak Road;<br>● Noise insulation blanket enclosing the crane engine of derrick barge;<br>● Additional noise blanket along the railings of the spiral ramp; and<br>● Use of rock splitter (which is a relatively quieter method in contrast to rock breaker).<br>Noise monitoring has been increased to twice per week and the results will be reported in the Complaint Investigation Report to be submitted in mid-February 2011. The measured noise level after implementation of the noise mitigation measures ranged from 71 to 74 dB(A) to the nearest integer and complied with the limit level in accordance with the EIAO-TM. The results showed that noise mitigation measures were effective. The contractor was advised to review the mitigation measures from time to time near the NSR 9. The ET would closely inspect the area during the routine site inspections and provide advice to the Contractor.<br><br><u>Conclusion / Proposed Action</u><br>1. <u>Dark Smoke Emission from Derrick Barge</u><br>Dark smoke emitted from the derrick barge was considered a stand-alone | |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | incident and was specific to the derrick barge being complained. No further complaint was received after the barge was replaced by another.<br>2. Construction Dust<br>Based on our site inspection and monitoring results, the complaint was considered not justifiable since no action and limit level exceedance on construction dust were identified. Air quality mitigation measures as recommended in EIA were implemented in order to control and minimize the air quality impact and nuisance arising from the construction activities. Nevertheless, the Contractor was reminded to enhance the air quality mitigation measures such as increasing the water spraying frequency and ensure proper functioning of the automatic sprinklers at the Outfall construction site.<br>3. Construction Noise<br>Noise measurement results between 10 and 28 January 2011 were below the limit level (75 dB(A)) and complied with the noise criterion. The Contractor had implemented various mitigation measures on site to alleviate the construction noise impact. The ET will remind the Contractor to enhance and maintain the normal functioning of the measures continuously to minimize the impact. The Contractor should also closely liaise with the nearby residents and inform the progress of the construction and the implementation of the environmental mitigation measures at the Outfall construction site. | |
| 22 | CIR-17 | 30 June 2011 at Intake-3 construction site | Public through EPD | EPD has received a public complaint (EPD ref: EP3/N22/RW/12759-11) regarding construction dust and daytime construction noise from the Intake-3 construction site on 30 June | 1. Findings / Observations<br>Checking with the site log, construction activities conducted at I-3 were breaking / mucking out and rock splitting inside the shaft, curing of planter wall, backfilling at tree pit, slope reinstatement and backfilling at PB wall, monitoring of de-formation monitoring point, and general site cleaning and housekeeping. The Contractor and ET undertook site investigations on the subject area on 8 and 20 July 2011. The following dust and noise mitigation measures were implemented during site investigations:<br>Dust Mitigation Measures (implemented prior to the complaint)<br>● All the main haul road was paved; | Closed |

| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | 2011. | • Material transported by a dump truck was covered with impervious sheeting;<br>• Exposed soil slope surface near the PB wall was covered by tarpaulin sheets;<br>• Hoardings (with 2.4 m high) were provided along the site boundary next to the access road;<br>• Regular watering on haul roads by sprinklers was observed;<br>• Vehicle speed limit of 5 km per hour was implemented within the construction site;<br>• Water spraying for dust suppression of on-going "dusty" activities (essentially including drilling and rock breaking within the shaft of about 16.5 m below ground) was observed;<br><u>Construction Noise Mitigation Measures (implemented prior to the complaint)</u><br>• Temporary noise barriers (about 4 m high) were erected on the shaft concrete block wall;<br>• Quiet plant (rock splitter) was employed for shaft excavation;<br>• Noise from generator was screened by a temporary noise barrier; and<br>• Breaker heads of rock breaking machine were wrapped with sound insulating materials.<br>2. <u>Conclusion / Proposed Action</u><br>As there are no substantial noise sources at I-3 other than the project construction activities, it is considered that the noise complaint is project-related. In accordance with the Event / Action Plan for Construction Noise specified in the EM&A Manual, noise monitoring frequency at the squatters (NSR 6) near I-3 were increased to twice per week (from 11 July 2011 to 30 July 2011) due to this complaint. The measured noise levels ($L_{eq, 30\ min}$) are shown in the following table. The measured noise levels, ranged from 60.0 dB(A) to 68.9 dB(A), are well below the limit level (75 dB(A)) in accordance with the EIAO-TM. During the site investigations on 8 and 20 July 2011, the above noise mitigation measures were continuously implemented. No further noise complaint was received in July 2011. Thus, with the consideration of the noise measurement results | |

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<tr><th>Complaint No.</th><th>Log Ref.</th><th>Date/Location</th><th>Complainant</th><th>Details of Complaint</th><th>Investigation / Mitigation Action</th><th>Status</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>and implementation of the above noise mitigation measures, the construction noise is considered acceptable. The Contractor will maintain the noise mitigation measures mentioned above to minimise noise nuisance.
<table>
<tr><th>Date</th><th>Start Time</th><th>End Time</th><th>$L_{eq}$, dB(A)</th><th>Limit Level, dB(A)</th><th>Major Construction Noise Sources</th></tr>
<tr><td>6-Jul-11</td><td>11:17</td><td>11:47</td><td>60.0</td><td>75</td><td>Crane operation</td></tr>
<tr><td>14-Jul-11</td><td>16:00</td><td>16:30</td><td>67.0</td><td>75</td><td>Drilling and rock breaking</td></tr>
<tr><td>15-Jul-11</td><td>17:00</td><td>17:30</td><td>68.9</td><td>75</td><td>Drilling and rock breaking</td></tr>
<tr><td>18-Jul-11</td><td>13:30</td><td>14:00</td><td>65.7</td><td>75</td><td>Drilling and crane operation</td></tr>
<tr><td>20-Jul-11</td><td>13:10</td><td>13:40</td><td>68.1</td><td>75</td><td>Drilling and rock breaking</td></tr>
<tr><td>28-Jul-11</td><td>13:35</td><td>14:05</td><td>64.9</td><td>75</td><td>Drilling and excavation</td></tr>
<tr><td>30-Jul-11</td><td>09:10</td><td>09:40</td><td>63.6</td><td>75</td><td>Drilling and crane operation</td></tr>
</table>
Remark:<br>The location of powered mechanical equipment (PME) will change occasionally and the utilization time for each PME may not be constant.<br><br>As observed during the site investigation on 8 July 2011, dust suppression measures aforementioned were implemented on site. Additional dust control measures have been implemented at I-3 by the Contractor in early July 2011 to further suppress dust emission:<br><br>1) Tailor-made frame with blankets has been installed for the drilling rig;<br>2) Water hoses have been installed to the drilling rig within the tailor-made frame during drilling; and<br>3) Water smog device installed at the edge of intermediate platform of</td><td></td></tr>
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| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | the shaft.<br>The Contractor have continuously applied all the above mentioned dust suppression measures to minimise airborne dust generation, as observed during the site investigation on 20 July 2011. No dust dispersion from the construction site was observed during the site investigations on 8 and 20 July 2011. In addition, no further construction dust complaint is received in July 2011. As such, it is considered that the dust suppression measures implemented on site are adequate to minimise dust nuisance. The Contractor will maintain these measures on site for construction dust control.<br>3. Follow Up Action(s)<br>For this complaint, the Contractor has implemented adequate mitigation measures for construction dust and noise control. As no further complaint is received in July 2011, it is considered that the complaint is closed. Nevertheless, the ET will continuously review the condition of the site during the routine site inspections, inspect proper functioning of the aforementioned construction dust and noise mitigation measures, and provide advice to the Contractor to be vigilant and tailor mitigation measures in advance of future planned site work activities. | |
| 23 | CIR-18 | 2 September 2011 at Sheung Kok Shan near Intake 2 | Mr. Cheung through EPD | EPD have received a complaint from Mr. Cheung, who lived in Sheung Kok Shan, concerning construction noise arising from the use of the TBM at night time. He alleged that the noise emanated from the tunnelling works had caused | 1. Findings / Observations<br>According to the approved EIA Report, it is recommended to restrict the tunnel boring machine (TBM) operation in the non-restricted period for tunnel section from chainage 1295 m to 1449 m. Checking with the site log, the Contractor has strictly followed the EIA recommendation for the TBM operation within the non-restricted period between the chainage 1295 m to 1449 m. TBM moved from CH1449 on 11 August 2011 and passed through CH1295 on 23 August 2011, and the Contractor resumed night time TBM operation afterwards. TBM was operating at night time (from 01:10 to 07:00) on 26 August 2011 (about 55 m away from the EIA restricted zone and about 22 m away from Mr. Cheung's house, which is located near CH1218). | Closed |

<table>
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<tr><td></td><td></td><td></td><td></td><td>nuisance to him since 26 August 2011.</td><td>First verbal complaint from Mr. Cheung was received in the morning of 26 August 2001 by the Contractor. The Contractor had stopped TBM night time operation from 26 August to 01 September 2011 accordingly. On 01 September 2011, TBM was located 38 m away from Mr. Cheung's house and the Contractor attempted to resume the night time operation.<br><br>Second verbal complaint from Mr. Cheung was received on 02 September 2011 by EPD. The Contractor took immediate measure to stop the night time operation from 02 to 07 September 2011. On 08 September 2011, TBM moved 109 m away from Mr. Cheung's house. The Contractor attempted to resume night time operation and no further complaint was received after that.<br><br>2. <u>Mitigation Measure Implemented after Receiving the Complaints</u><br><br>Night time operation of the TBM was restricted as shown in the following table:<br><br>
<table>
<tr><th>Period</th><th>Night Time Operation[1]</th><th>Remark</th></tr>
<tr><td>25 - 26 Aug 2011</td><td>From 01:10 to 07:00 (26 Aug)</td><td>The Contractor received a verbal complaint in the morning (26 Aug 2011). The Contractor began to stop night time TBM operation. TBM was located about 22 m away from Mr. Cheung's house.</td></tr>
<tr><td>26 - 27 Aug 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>27 - 28 Aug 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>28 - 29 Aug 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>29 - 30 Aug 2011</td><td>-</td><td>No night time TBM operation</td></tr>
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</td><td></td></tr>
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<table>
<tr><th>Complaint No.</th><th>Log Ref.</th><th>Date/Location</th><th>Complainant</th><th>Details of Complaint</th><th>Investigation / Mitigation Action</th><th>Status</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>30 - 31 Aug 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>31 Aug - 01 Sep 2011</td><td>- -</td><td>No night time TBM operation. TBM was located about 38 m away from Mr. Cheung’s house.</td></tr>
<tr><td>01 - 02 Sep 2011</td><td>From 23:00 (01 Sep) to 04:50 (02 Sep)</td><td>The Contractor attempted to resume night time TBM operation on 01 Sep 2011. ET received a complaint via EPD in the morning (2 Sep 2011). The Contractor began to stop night time TBM operation on 02 Sep 2011.</td></tr>
<tr><td>02 - 03 Sep 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>03 - 04 Sep 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>04 - 05 Sep 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>05 - 06 Sep 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>06 – 07 Sep 2011</td><td>-</td><td>No night time TBM operation</td></tr>
<tr><td>07 – 08 Sep 2011</td><td>From 06:00 to 07:00 (08 Sep 2011)</td><td>TBM was located about 109 m away from Mr. Cheung’s house. The Contractor attempted to resume TBM night time operation and no further complaint was received.</td></tr>
</table>
Remark: 1. ”Night Time” refers to 23:00 to 07:00 of the following day.<br><br>3. <u>Conclusion / Proposed Action</u><br><br>Having reviewed the timing of the complaints and periods of TBM operation during the night time on 25 - 26 August 2011 and 1 - 2</td><td></td></tr>
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| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
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| | | | | | September 2011, it is believed that the complaints are related to the TBM operation during the night time. The Contractor has undertaken swift and appropriate action in response to Mr. Cheung's complaints. The night time operation of the TBM was restricted following the complaint. As the TBM continues to operate during the day time and moves further away from Mr. Cheung's house, the ground-borne noise nuisance upon Mr. Cheung gradually fades away. It is considered that the nuisance caused by TBM night time operation is then imperceptible from the complainant. No further complaint is received after 2 September 2011. As such, no further action is required.<br>4. Follow Up Action(s)<br>For this complaint, the Contractor has implemented adequate mitigation measure (that is, restricting the TBM to operate during the day time only) for ground-borne noise control. The TBM has moved further away from Mr. Cheung's house and no further complaint is received after the Contractor resumed the TBM night time operation (08 September 2011). Thus, it is considered that the complaint is closed. | |
| 24 | CIR-19 | 8 February 2012 at Intake-3 Construction Site | Mr. Cheng through SOR | SOR has received a public complaint regarding daytime construction noise from the Intake-3 construction site on 8 February 2012. | 1) Findings / Observations<br>Checking with the site log, construction activities conducted at I-3 in that morning was rock breaking by hydraulic breaker at the proposed access road. The Contractor and ET undertook site investigations on the subject area on 9 February 2012. The following noise mitigation measures were implemented during site investigations:<br><br>Construction Noise Mitigation Measures (implemented prior to the complaint)<br>1) Noise barrier on the top of vortex shaft was maintained;<br>2) Silent type breaker tip was utilized; and<br>3) Breaker tip was wrapped by acoustic insulating material. | Closed |

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<tr><th>Complaint No.</th><th>Log Ref.</th><th>Date/Location</th><th>Complainant</th><th>Details of Complaint</th><th>Investigation / Mitigation Action</th><th>Status</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>2) <u>Conclusion / Proposed Action</u><br><br>As there are no substantial noise sources at I-3 other than the project construction activities, it is considered that the noise complaint is project-related. In accordance with the Event / Action Plan for Construction Noise specified in the EM&A Manual, noise monitoring frequency at the squatters (NSR 6) near I-3 were increased to twice per week (from 10 February 2012 to 29 February 2012) due to this complaint. The measured noise levels ($L_{eq, 30\ minutes}$) are shown in the following table. The measured noise levels, ranged from 59.5 dB(A) to 68.1 dB(A), are well below the limit level (75 dB(A)) in accordance with the EIAO-TM. During the site investigations on 9 and 23 February 2012, the above noise mitigation measures were continuously implemented. No further noise complaint was received in February 2012. Thus, with the consideration of the noise measurement results and implementation of the above noise mitigation measures, the construction noise is considered acceptable. The Contractor will maintain the noise mitigation measures mentioned above to minimise noise nuisance.<br><br>
<table>
<tr><th>Date</th><th>Start Time</th><th>End Time</th><th>$L_{eq}$, dB(A)</th><th>Limit Level, dB(A)</th><th>Major Construction Noise Sources</th></tr>
<tr><td>7-Feb-2012</td><td>13:28</td><td>13:58</td><td>60.2</td><td>75</td><td>Crane operation and rock breaking</td></tr>
<tr><td>10-Feb-2012</td><td>15:15</td><td>15:45</td><td>62.1</td><td>75</td><td>Crane operation and excavation works</td></tr>
<tr><td>13-Feb-2012</td><td>13:35</td><td>14:05</td><td>68.1</td><td>75</td><td>Crane operation and rock breaking</td></tr>
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<tr><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>17-Feb-2012</td><td>16:20</td><td>16:50</td><td>60.2</td><td>75</td><td>Crane operation and excavation works</td></tr>
<tr><td>20-Feb-2012</td><td>13:33</td><td>14:03</td><td>66.4</td><td>75</td><td>Crane operation and rock breaking</td></tr>
<tr><td>23-Feb-2012</td><td>14:30</td><td>15:00</td><td>64.3</td><td>75</td><td>Crane operation and rock breaking</td></tr>
<tr><td>27-Feb-2012</td><td>11:10</td><td>11:40</td><td>63.4</td><td>75</td><td>Crane operation and rock breaking</td></tr>
<tr><td>29-Feb-2012</td><td>13:26</td><td>13:56</td><td>59.5</td><td>75</td><td>Crane operation and rock breaking</td></tr>
</table>
Remark:<br>The location of powered mechanical equipment (PME) will change occasionally and the utilization time for each PME may not be constant.<br><br>Additional noise mitigation measures have been implemented at I-3 by the Contractor to further reduce the construction noise:<br>● Noise barrier comprised of acoustic blankets installed close to the rock breaking area was erected on the site.<br><br>The Contractor have continuously applied all the above mentioned noise mitigation measures to minimise construction noise, as observed during the site investigation on 9 and 23 February 2012. No further construction noise complaint was received in February 2012. As such, it is considered that the noise mitigation measures implemented on site are adequate to minimise construction noise nuisance. The Contractor will maintain these measures on site for construction noise control.
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<tr><td></td><td></td><td></td><td></td><td></td><td>3) <u>FOLLOW UP ACTION(S)</u><br>For this complaint, the Contractor has implemented adequate mitigation measures for construction noise control. As no further complaint is received in February 2012, it is considered that the complaint is closed. Nevertheless, the ET will continuously review the condition of the site during the routine site inspections, inspect proper functioning of the aforementioned construction noise mitigation measures, and provide advice to the Contractor to be vigilant and tailor mitigation measures in advance of future planned site work activities. This case will be reported as an action level exceedance on noise and also in the complaint log in the monthly EM&A Report (February 2012).</td><td></td></tr>
<tr><td>25</td><td>CIR-20</td><td>10 August 2012 at Intake-3 Construction Site</td><td>Mr. Cheng through ICC</td><td>1823 Call Centre (ICC) received a verbal complaint regarding the deterioration of water quality at Tso Kung Tam due to the construction works at Intake 3 construction site on 10 August 2012.</td><td>1) <u>Findings / Observations</u><br>Routine water quality monitoring upstream (I-3-C) and downstream (I-3) of the construction site at Intake 3 has been carried out since the commencement of construction works. Monitoring was conducted on 8 August 2012 and 10 August 2012. The results, as presented in the following table, indicate full compliance of water quality at I-3 with the action / limit levels of the water quality monitoring programme.
<table>
<tr><th rowspan="2">Date</th><th rowspan="2">Parameters</th><th colspan="2">Stations</th><th rowspan="2">Action Level</th><th rowspan="2">Limit Level</th><th rowspan="2">Exceedance</th></tr>
<tr><th>Impact (I-3)</th><th>Control (I-3-C)</th></tr>
<tr><td rowspan="3">8 August 2012</td><td>Water Temperature (℃)</td><td>31.6</td><td>31.7</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>pH</td><td>7.91</td><td>7.92</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Dissolved Oxygen (mg/L)</td><td>6.89</td><td>6.85</td><td>3.65</td><td>3.51</td><td>No</td></tr>
</table></td><td>Closed</td></tr>
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<tr><th>Complaint No.</th><th>Log Ref.</th><th>Date/Location</th><th>Complainant</th><th>Details of Complaint</th><th>Investigation / Mitigation Action</th><th>Status</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><td></td><td>Turbidity (NTU)</td><td>2.21</td><td>2.25</td><td>3.99 NTU or 120% of upstream control station's turbidity</td><td>4.18 NTU or 130% of upstream control station's turbidity</td><td>No</td></tr>
<tr><td></td><td>Suspended Solids (SS) (mg/L)</td><td>< 2.00</td><td>< 2.00</td><td>6.13 mg/L or 120% of upstream control station's SS</td><td>7.23 mg/L or 130% of upstream control station's SS</td><td>No</td></tr>
<tr><td rowspan="5">10 August 2012</td><td>Water Temperature (℃)</td><td>29.1</td><td>29.0</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>pH</td><td>7.90</td><td>7.90</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Dissolved Oxygen (mg/L)</td><td>7.22</td><td>7.12</td><td>3.65</td><td>3.51</td><td>No</td></tr>
<tr><td>Turbidity (NTU)</td><td>3.07</td><td>3.20</td><td>3.99 NTU or 120% of upstream control station's turbidity</td><td>4.18 NTU or 130% of upstream control station's turbidity</td><td>No</td></tr>
<tr><td>Suspended Solids (SS) (mg/L)</td><td>< 2.00</td><td>< 2.00</td><td>6.13 mg/L or 120% of upstream control station's SS</td><td>7.23 mg/L or 130% of upstream control station's SS</td><td>No</td></tr>
</table>
<br>The following mitigation measures were implemented on-site during monitoring on 8 and 10 August 2012:<br>(1) Wastewater was collected and diverted to waste water treatment plant prior to discharge; and<br>(2) site area and existing stream were separated by sealed concrete block wall.
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| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|
| | | | | | Clear flowing stream water was visually observed during the monitoring at I-3 on 10 August 2012. No significant water pollution source from the construction site was identified.<br><br>2) Conclusion / Proposed Action<br>Based on the site observation and the water quality monitoring data collected at I-3 and I-3-C on 8 and 10 August 2012, it is concluded that the construction works at I-3 did not generate unacceptable water quality impact at Tso Kung Tam. As such, the concerned complaint is not considered related to the construction works at Intake 3. No further action is, therefore, required.<br><br>3) FOLLOW UP ACTION(S)<br>Prior to the receipt of this complaint, the Contractor has already implemented adequate mitigation measures for construction effluent discharge. As no unacceptable water quality impact from the construction works was identified during the investigation, the complaint is considered as non-project related and is closed. Nevertheless, the ET will continuously monitor the water quality at Intake 3 under the current EM&A programme, review the condition of the site during the routine site inspections, and inspect proper functioning of the waste water treatment facilities. | |
| 26 | CIR-21 | 5 September 2012 at Chung Kee Store at Lo Wai Road (NSR 3) | Through ICC | 1823 Call Center (ICC) received a complaint (5 September 2012) regarding daytime construction noise nuisance generated by the power supply | 1) Findings / Observations<br>Checking with the site log, an air compressor was located opposite to Chung Kee Store on 5 September 2012. As there was no other powered mechanical equipment located nearby and the construction was only undertaken during the daytime, it is considered that the complaint is about the noise nuisance generated from the air compressor during the daytime operation. | |

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<tr><td></td><td></td><td></td><td></td><td>machine opposite to Chung Kee Store at Lo Wai Road.</td><td>In response to the complaint, the Contractor has implemented the following measures:<br><br>• The concerned air compressor (AC1) located opposite to Chung Kee Store near the Vortex Drop Shaft (VDS) entrance (as “L1” shown in the attached I-2 layout plan) was de-mobilised for maintenance on 7 September 2012 and replaced by another air compressor (AC2);<br>• A layer of acoustic sheet was installed next to AC2 at L1 to minimise the noise nuisance, as observed during the site investigation on 11 September 2012;<br>• A third air compressor (AC3) was mobilized on site and placed behind the sub-contractor’s office container (as “L2” shown in the attached I-2 layout plan) that screened off the noise from AC3 and minimised potential noise nuisance to the public. AC3 had been operated for another stage of construction activities since 14 September 2012 (as observed during the site investigation on 20 September 2012); and<br>• AC2 at L1 had ceased operation since 14 September 2012 and was demobilised off-site on 18 September 2012. As observed during the site investigation on 20 September 2012, no air compressor or other mechanical equipment was located at L1.<br><br>Regular daytime construction noise monitoring is currently undertaken by the ET at NSR 3 (that is, Hong Hoi Chee Hong Temple) in accordance with the contract specific EM&A Manual. According to the Manual, the complaint was considered as an exceedance of action level of construction air-borne noise. Following the Event / Action Plan for air-borne noise in the Manual, the noise monitoring frequency at NSR 3 was increased from once to twice per week between 10 September and 26 September 2012. The noise measurement results (as $L_{eq(30\text{-minute})}$) at NSR 3 in September 2012 were presented in the following table:<br><br>
<table>
<tr><th>Date</th><th>Start Time</th><th>End Time</th><th>$L_{eq}$, dB(A)</th><th>Limit Level, dB(A)</th><th>Dominant Noise Sources</th></tr>
<tr><td>4-Sep-12</td><td>15:50</td><td>16:20</td><td>62.6</td><td>75</td><td>Drilling</td></tr>
<tr><td>10-Sep-12</td><td>14:05</td><td>14:35</td><td>62.2</td><td>75</td><td>Drilling and concrete work</td></tr>
</table>
</td><td></td></tr>
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| Complaint No. | Log Ref. | Date/Location | Complainant | Details of Complaint | Investigation / Mitigation Action | Status |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 14-Sep-12 | 11:00 | 11:30 | 64.1 | 75 | Drilling |
| 17-Sep-12 | 15:20 | 15:50 | 64.3 | 75 | Drilling |
| 20-Sep-12 | 14:02 | 14:32 | 64.8 | 75 | Drilling and concrete work |
| 24-Sep-12 | 13:20 | 13:50 | 63.7 | 75 | Drilling and concrete work |
| 26-Sep-12 | 16:00 | 16:30 | 64.6 | 75 | Drilling and concrete work |

The measured noise levels, ranged from 62.2 dB(A) to 64.8 dB(A), are below the limit level (75 dB(A)) in accordance with the approved EIA Report and the Contract Specific EM&A Manual.

2) Conclusion / Proposed Action

With the consideration of the noise measurement results and implementation of the above noise mitigation measures, construction noise nuisance is considered minimised with no further complaint received. As the concerned air compressor has been demobilised and the air compressor currently deployed on site is screened by a site container to minimise construction noise nuisance to the public, no further action is considered necessary.

3) Follow Up Actions

As the noise source of complaint was removed from the site and no further complaint was received, it is considered that the complaint is closed. Nevertheless, the ET will continuously review the condition of the site during the routine site inspections, inspect proper functioning of the construction noise mitigation measures implemented on site, and provide advice to the Contractor to be vigilant and tailor mitigation measures in advance of future planned site work activities. This case will be reported as an action level exceedance on construction noise.

Signed by Environmental Team Leader: Date: 16 October 2012