JOB NO.: TCS00670/13

AGREEMENT NO. CE 45/2008 (CE)
LIANTANG/HEUNG YUEN WAI
BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

MONTHLY ENVIRONMENTAL MONITORING AND AUDIT REPORT (NO.6) – JANUARY 2014

PREPARED FOR
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Date	Reference No.	Prepared By	Certified By
14 February 2014	TCS00670/13/600/R00121v2		
		Ben Tam (Environmental Consultant)	Tam Tak Wing (Environmental Team Leader)

Version	Date	Remarks
1	8 February 2014	First Submission
2	14 February 2014	Amended against the IEC's comment on 12 February 2014

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14 February 2014

Our ref: 7076192/L15375/RY/AB/AW/rw
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By Email & Post

Attention: Mr Kelvin LEE

Dear Sirs

Agreement No. CE 45/2008 (CE)
Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
Independent Environmental Checker – Investigation
Monthly EM&A Report (No. 6) – January 2014

With reference to the updated Monthly EM&A Report No. 6 for January 2014 (Version 2) certified by the ET Leader we received on 14 February 2014, please be noted that we have no adverse comments on the captioned submission. We herewith verify the captioned submission in accordance with Condition 5.4 of the Environmental Permit No. EP-404/2011/A.

Thank you for your attention and please do not hesitate to contact the undersigned on tel. 3995 8120 or by email to antony.wong@smec.com; or our Ms Winnie MA on tel. 3995 8138 or by email to winnie.ma@smec.com.

Yours faithfully
For and on behalf of
SMEC Asia Limited

Antony WONG
Independent Environmental Checker

cc	CEDD/BCP	-	Mr Pui Sang LI / Mr Eric CHAN / Mr William CHEUNG	by fax: 2714 0103
	AECOM	-	Mr Pat LAM / Mr Perry YAM	by email
	SRJV	-	Mr Edwin AU	by email
	CW	-	Mr Daniel HO	by email
	AUES	-	Mr TW TAM	by email

EXECUTIVE SUMMARY

ES01 This is the 6th monthly EM&A report presenting the monitoring results and inspection findings for the reporting period from **1 to 31 January 2014** (hereinafter 'the Reporting Period').

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES02 Environmental monitoring activities under the EM&A programme in the Reporting Period are summarized in the following table.

Environmental Aspect	Environmental Monitoring Parameters / Inspection	Reporting Period	
		Number of Monitoring Locations to undertake	Total Occasions
Air Quality	1-hour TSP	**4**	**60**
	24-hour TSP	**4**	**20**
Construction Noise	$L_{eq(30min)}$ Daytime	**5**	**25**
Water Quality	Water sampling	**5**	**12**
Joint Site Inspection / Audit	IEC, ET, the Contractor and RE joint site Environmental Inspection and Auditing	**Contract 3**	**4**
		Contract 5	**5**

BREACH OF ACTION AND LIMIT (A/L) LEVELS

ES03 No exceedances of air quality, construction noise and water quality were registered in the Reporting Period. The summary of breach of environmental performance is shown below.

Environmental Aspect	Monitoring Parameters	Action Level	Limit Level	Event & Action		
				NOE Issued	Investigation	Corrective Actions
Air Quality	1-hour TSP	0	0	0	0	0
	24-hour TSP	0	0	0	0	0
Construction Noise	$L_{eq(30min)}$ Daytime	0	0	0	0	0
Water Quality	DO	0	0	0	0	0
	Turbidity	0	0	0	0	0
	SS	0	0	0	0	0

ENVIRONMENTAL COMPLAINT

ES04 In the Reporting Period, one environmental complaint is received by CEDD on **22 January 2014**. According to investigation findings, air quality mitigation measure as provided by the Contractor of C5 has fulfilled the EM&A Manual requirement.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES05 No environmental summons or successful prosecutions were recorded in the Reporting Period.

REPORTING CHANGE

ES06 No reporting changes were made in the Reporting Period.

SITE INSPECTION

ES07 In the Reporting Period, joint site inspection for Contract 3 to evaluate the site environmental performance has been carried out by the RE, IEC, ET and the Contractor on **6**, **13**, **20** and **27 January 2014**. No non-compliance was noted.

ES08 In the Reporting Period, joint site inspection for Contract 5 to evaluate the site environmental performance has been carried out by the RE, IEC, ET and the Contractor on **2**, **9**, **16**, **23** and **28 January 2014**. No non-compliance was noted.

FUTURE KEY ISSUES

ES09 Construction noise would be a key environmental issue during construction work of the Project. Noise mitigation measures such as using quiet plants should be implemented in accordance with the EM&A requirement.

ES10 During dry season, special attention should be paid on the potential construction dust impact since most of the construction sites are adjacent to villages. The Contractor should fully implement the construction dust mitigation measures properly.

ES11 In addition, the potential water quality impact at the nearby rivers should be highly alerted. The Contractors including Contract 3 and Contract 5 should prevent muddy water and other water pollutants via site surface water runoff get into the Kong Yiu Channel and Ma Wat Channel, water quality mitigation measures should be properly implemented.

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Civil Engineering and Development Department is the Project Proponent and the Permit Holder of *Agreement No. CE 45/2008 (CE) Liantang / Heung Yuen Wai Boundary Control Point and Associated Works*, which is a Designated Project to be implemented under Environmental Permit number EP-404/2011/A issued on 28 October 2013.

1.1.2 The Project consists of two main components: Construction of a Boundary Control Point (hereinafter referred as "BCP"); and Construction of a connecting road alignment. Layout plan of the Project is shown in ***Appendix A***.

1.1.3 The proposed BCP is located at the boundary with Shenzhen near the existing Chuk Yuen Village, comprising a main passenger building with passenger and cargo processing facilities and the associated customs, transport and ancillary facilities. The connecting road alignment consists of six main sections:

1) Lin Ma Hang to Frontier Closed Area (FCA) Boundary – this section comprises at-grade and viaducts and includes the improvement works at Lin Ma Hang Road;
2) Ping Yeung to Wo Keng Shan – this section stretches from the Frontier Closed Area Boundary to the tunnel portal at Cheung Shan and comprises at-grade and viaducts including an interchange at Ping Yeung;
3) North Tunnel – this section comprises the tunnel segment at Cheung Shan and includes a ventilation building at the portals on either end of the tunnel;
4) Sha Tau Kok Road – this section stretches from the tunnel portal at Wo Keng Shan to the tunnel portal south of Loi Tung and comprises at-grade and viaducts including an interchange at Sha Tau Kok and an administration building;
5) South Tunnel – this section comprises a tunnel segment that stretches from Loi Tung to Fanling and includes a ventilation building at the portals on either end of the tunnel as well as a ventilation building in the middle of the tunnel near Lau Shui Heung;
6) Fanling – this section comprises the at-grade, viaducts and interchange connection to the existing Fanling Highway.

1.1.4 Action-United Environmental Services & Consulting has been commissioned as an Independent ET to implement the relevant EM&A program in accordance with the approved EM&A Manual, as well as the associated duties. As part of the EM&A program, the baseline monitoring has carried out between **13 June 2013** and **12 July 2013** for all parameters including air quality, noise and water quality before construction work commencement. The Baseline Monitoring Report summarized the key findings and the rationale behind determining a set of Action and Limit Levels (A/L Levels) from the baseline data. Also, the Project baseline monitoring report which verified by the IEC has been submitted to EPD on **16 July 2013** for endorsement. The major construction works of the Project was commenced on **16 August 2013** in accordance with the EP Section 5.3 stipulation.

1.1.5 This is **6th** monthly EM&A report presenting the monitoring results and inspection findings for reporting period from **1** to **31 January 2014**.

1.2 REPORT STRUCTURE

1.2.1 The Monthly Environmental Monitoring and Audit (EM&A) Report is structured into the following sections:-

Section 1 *Introduction*
Section 2 *Project Organization and Construction Progress*
Section 3 *Summary of Impact Monitoring Requirements*
Section 4 *Air Quality Monitoring*
Section 5 *Construction Noise Monitoring*
Section 6 *Water Quality Monitoring*
Section 7 *Waste Management*

2 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 CONSTRUCTION CONTRACT PACKAGING

2.1.1 To facilitate the project management and implementation, the Project would be divided by the following contracts:

- Contract 2 (CV/2012/08)
- Contract 3 (CV/2012/09)
- Contract 4 (TCSS)
- Contract 5 (CV/2013/03)
- Contract 6 (CV/2013/08)

2.1.2 The details of each contracts is summarized below and the delineation of each contracts is shown in ***Appendix A***.

Contract 2 (CV/2012/08)

2.1.3 Contract 2 has awarded in December 2013. Date of contract works commencement has yet to decide. Major Scope of Work of the Contract 2 is listed below:

- construction of an approximately 5.2km long dual two-lane connecting road (with about 0.4km of at-grade road and 4.8km of tunnel) connecting the Fanling Interchange with the proposed Sha Tau Kok Interchange;
- construction of a ventilation adit tunnel and the mid-ventilation building;
- construction of the north and south portal buildings of the Lung Shan Tunnel and their associated slope works;
- provision and installation of ventilation system, E&M works and building services works for Lung Shan tunnel and Cheung Shan tunnel and their portal buildings;
- construction of Tunnel Administration Building adjacent to Wo Keng Shan Road and the associated E&M and building services works; and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 3 (CV/2012/09)

2.1.4 Contract 3 was awarded in July 2013 and construction work was commenced on 5 November 2013. Major Scope of Work of the Contract 3 is listed below:

- construction of four link roads connecting the existing Fanling Highway and the south portal of the Lung Shan Tunnel;
- realignment of the existing Tai Wo Service Road West and Tai Wo Service Road East;
- widening of the existing Fanling Highway (HyD's entrustment works);
- demolishing existing Kiu Tau vehicular bridge and Kiu Tau footbridge and reconstruction of the existing Kiu Tau Footbridge (HyD's entrustment works); and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 4 (Contract number to be assigned)

2.1.5 Contract 4 has not yet awarded. The work of the Contract 4 includes provision and installation of Traffic Control and Surveillance System and the associated electrical and mechanical works for the Project.

Contract 5 (CV/2013/03)

2.1.6 Contract 5 has awarded in April 2013 and construction work was commenced in August 2013. Major Scope of Work of the Contract 5 is listed below:

- site formation of about 23 hectares of land for the development of the BCP;
- construction of an approximately 1.6 km long perimeter road at the BCP including a 175m long depressed road;

- associated diversion/modification works at existing local roads and junctions including Lin Ma Hang Road;
- construction of pedestrian subway linking the BCP to Lin Ma Hang Road;
- provision of resite area with supporting infrastructure for reprovisioning of the affected village houses; and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 6 (CV/2013/08)

2.1.7 Contract 6 has not yet awarded. Major Scope of Work of the Contract 6 will be included below:

- construction of an approximately 4.6km long dual two-lane connecting road (with about 0.6km of at-grade road, 3.3km of viaduct and 0.7km of tunnel) connecting the BCP with the proposed Sha Tau Kok Road Interchange and the associated ventilation buildings;
- associated diversion/modification works at access roads to the resite of Chuk Yuen Village;
- provision of sewage collection, treatment and disposal facilities for the BCP and the resite of Chuk Yuen Village;
- construction of a pedestrian subway linking the BCP to Lin Ma Hang Road;
- provisioning of the affected facilities including Wo Keng Shan Road garden; and
- construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

2.2 PROJECT ORGANIZATION

2.2.1 The project organization is shown in ***Appendix B***. The responsibilities of respective parties are:

Civil Engineering and Development Department (CEDD)

2.2.2 CEDD is the Project Proponent and the Permit Holder of the EP of the development of the Project and will assume overall responsibility for the project. An Independent Environmental Checker (IEC) shall be employed by CEDD to audit the results of the EM&A works carried out by the ET.

Environmental Protection Department (EPD)

2.2.3 EPD is the statutory enforcement body for environmental protection matters in Hong Kong.

Engineer or Engineers Representative (ER)

2.2.4 The ER is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the ER with respect to EM&A are:

- Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
- Monitor Contractors's, ET's and IEC's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation
- Liaison with DSD, Engineer/Engineer's Representative, ET, IEC and the Contractor of the "Construction of the DSD's Regulaiton of Shenzhen River Stage 4 (RSR 4)" Project discussing regarding the cumulative impact issues.

The Contractor(s)

2.2.5 There will be one contractor for each individual works contract. The Contractor(s) should report

to the ER. The duties and responsibilities of the Contractor are:

- Comply with the relevant contract conditions and specifications on environmental protection
- Employ an Environmental Team (ET) to undertake monitoring, laboratory analysis and reporting of EM &A Facilitate ET's monitoring and site inspection activities
- Participate in the site inspections by the ET and IEC, and undertake any corrective actions
- Provide information / advice to the ET regarding works programme and activities which may contribute to the generation of adverse environmental impacts
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event / Action Plans
- Implement measures to reduce impact where Action and Limit levels are exceeded
- Adhere to the procedures for carrying out complaint investigation

Environmental Team (ET)

2.2.6 One ET will be employed for this Project. The ET shall not be in any way an associated body of the Contractor(s), and shall be employed by the Project Proponent/Contractor to conduct the EM&A programme. The ET should be managed by the ET Leader. The ET Leader shall be a person who has at least 7 years' experience in EM&A and has relevant professional qualifications. Suitably qualified staff should be included in the ET, and resources for the implementation of the EM&A programme should be allocated in time under the Contract(s), to enable fulfillment of the Project's EM&A requirements as specified in the EM&A Manual during construction of the Project. The ET shall report to the Project Proponent and the duties shall include:

- Monitor and audit various environmental parameters as required in this EM&A Manual
- Analyse the environmental monitoring and audit data, review the success of EM&A programme and the adequacy of mitigation measures implemented, confirm the validity of the EIA predictions and identify any adverse environmental impacts arising
- Carry out regular site inspection to investigate and audit the Contractors' site practice, equipment/plant and work methodologies with respect to pollution control and environmental mitigation, and effect proactive action to pre-empt problems
- Monitor compliance with conditions in the EP, environmental protection, pollution prevention and control regulations and contract specifications
- Audit environmental conditions on site
- Report on the environmental monitoring and audit results to EPD, the ER, the lEC and Contractor(s) or their delegated representatives
- Recommend suitable mitigation measures to the Contractor in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans
- Liaise with the IEC on all environmental performance matters and timely submit all relevant EM&A proforma for approval by IEC
- Advise the Contractor(s) on environmental improvement, awareness, enhancement measures etc., on site
- Adhere to the procedures for carrying out complaint investigation
- Liaison with the client departments, Engineer/Engineer's Representative, ET, lEC and the Contractor(s) of the concurrent projects as listed under Section 2.3 below regarding the cumulative impact issues.

Independent Environmental Checker (IEC)

2.2.7 One IEC will be employed for this Project. The Independent Environmental Checker (IEC) should not be in any way an associated body of the Contractor(s) or the ET for the Project. The IEC should be employed by the Permit Holder (i.e., CEDD) prior to the commencement of the construction of the Project. The IEC should have at least 10 years' experience in EM&A and have relevant professional qualifications. The duty of IEC should be:

- Provide proactive advice to the ER and the Project Proponent on EM&A matters related to the project, independent from the management of construction works, but empowered to audit the environmental performance of construction

- Review and audit all aspects of the EM&A programme implemented by the ET
- Review and verify the monitoring data and all submissions in connection with the EP and EM&A Manual submitted by the ET
- Arrange and conduct regular, at least monthly site inspections of the works during construction phase, and ad hoc inspections if significant environmental problems are identified
- Check compliance with the agreed Event / Action Plan in the event of any exceedance
- Check compliance with the procedures for carrying out complaint investigation
- Check the effectiveness of corrective measures
- Feedback audit results to ET by signing off relevant EM&A proforma
- Check that the mitigation measures are effectively implemented
- Report the works conducted, the findings, recommendation and improvement of the site inspections, after reviewing ET's and Contractor's works, and advices to the ER and Project Proponent on a monthly basis
- Liaison with the client departments, Engineer/Engineer's Representative, ET, lEC and the Contractor(s) of the concurrent projects as listed under Section 2.3 below regarding the cumulative impact issues.

2.3 CONCURRENT PROJECTS

2.3.1 The concurrent construction works that may be carried out include, but not limited to, the following:

(a) Regulation of Shenzhen River Stage IV (Environmental Permit EP-430/2011);

(b) Building works and road works by contractors of Architectural Services Department (ArchSD) (Environmental Permit EP-404/2011/A);

(c) Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange – Contract No. HY/2012/06;

(d) Construction of cross-boundary vehicular and pedestrian bridges (total 5 numbers) across the Shenzhen River; and

(e) Construction of BCP facilities in Shenzhen.

2.4 CONSTRUCTION PROGRESS

2.4.1 In the Reporting Period, the major construction activity conducted under the Project is located in Contracts 3 and 5 and they are summarized in below. Moreover, the master construction program of both Contracts 3 and 5 is enclosed in ***Appendix C***.

Contract 2 (CV/2012/08)

- The contract has not yet commenced.

Contract 3 (CV/2012/09)

The Contract commenced in November 2013. In this Reporting Period, construction activities conducted is listed below:

- Cable detection and trail trenches
- Tree Felling Works
- Trial Pit Excavation
- Pre-drilling works and piling works
- Extension of box culvert
- Bored pile wall construction & Catch Fan
- Erection of site office
- Construction of haul road and temporary soil platform for geotechnical works

Contract 4 (Contract number to be assigned)

- The contract has not yet awarded.

Contract 5 (CV/2013/03)

The Contract awarded in April 2013 and commenced on August 2013. In this Reporting Period, construction activities conducted is listed below:

- Construction of Retaining Wall No.1
- Eastern Lift shaft's piling works
- Piling works at Bridge J & footbridge
- Construction of pedestrian subway and pump room at LMH
- Pipe jacking across Kong Yuen River
- Transplantation, Pruning/felling of existing tree
- Drainage works at LMH Road
- Sewerage works at LMH Road
- Formation Works at BCP Area
- Construction of Depressed Road at BCP3
- Filing works in ArcHD permanent office

Contract 6 (CV/2013/08)

- The contract is still yet awarded

2.5 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.5.1 In according to the EP, the required documents have submitted to EPD for retention which listed in below:

- Project Layout Plans of Contracts 3 and 5
- Landscape Plan
- Topsoil Management Plan
- Environmental Monitoring and Audit Programme
- Baseline Monitoring Report (*TCS00690/13/600/R0030v3*) for the Project
- Waste Management Plan of the Contracts 3 and 5

2.5.2 Summary of the relevant permits, licenses, and/or notifications on environmental protection for the Project of each contracts are presented in ***Table 2-1***.

Table 2-1 Status of Environmental Licenses and Permits of the Contracts

Item	Description	License/Permit Status		
		Contract 3	**Contract 5**	**Contract 2, 4 & 6**
1	Air pollution Control (Construction Dust) Regulation	Ref. No: 362101 Notification received by EPD on 17 Jul 2013	Ref. No: 359338 Notified EPD on 13 May 2013	--
2	Chemical Waste Producer Registration - Waste Producers Number	No.:5113-634-C3817-01 Valid form 7 Oct 2013 till the end of Contract	No.: 5213-642-S3735-01 Valid form 8 Jun 2013 till the end of Contract	--
3	Water Pollution Control Ordinance - Discharge License	No.:WT00016832 – 2013 Valid from 28 Aug 13 to 31 Aug 2018	No.: W5/1G44/1 Valid from 8 Jun 13 to 30 Jun 2018	--
4	Waste Disposal Regulation - Billing Account for Disposal of Construction Waste	Account No. 7017914 Valid form 2 Aug 13 till the end of Contract	Account No. 7017351 Valid form 29 Apr 13 till the end of Contract	--
5	Construction Noise Permit	GW-RN0747-13 Valid on 4 Dec 13 till 19 Jan 14 GW-RN0004-14 Valid on 7 Jan 14 till 22 Jun 2014	NA	--

3 SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

3.1.1 The Environmental Monitoring and Audit requirements are set out in the Approved EM&A manual. Environmental issues such as air quality, construction noise and water quality were identified as the key issues during the construction phase of the Project.

3.1.2 A summary of construction phase EM&A requirements are presented in the sub-sections below.

3.2 MONITORING PARAMETERS

3.2.1 The EM&A program of construction phase monitoring shall cover the following environmental issues:

- Air quality;
- Construction noise; and
- Water quality

3.2.2 A summary of the monitoring parameters is presented in ***Table 3-1.***

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Air Quality	• 1-hour TSP by Real-Time Portable Dust Meter; and • 24-hour TSP by High Volume Air Sampler.
Noise	• $L_{eq(30min)}$ in normal working days (Monday to Saturday) 07:00-19:00 except public holiday; and • 3 sets of consecutive $L_{eq(5min)}$ on restricted hours i.e. 19:00 to 07:00 next day, and whole day of public holiday or Sunday • Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
Water Quality	**In-situ Measurements** • Dissolved Oxygen Concentration (mg/L); • Dissolved Oxygen Saturation (%); • Turbidity (NTU); • pH unit; • Water depth (m); and • Temperature (℃).
	Laboratory Analysis • Suspended Solids (mg/L)

3.3 MONITORING LOCATIONS

3.3.1 The designated monitoring locations as recommended in the *EM&A Manual* are shown in ***Appendix D***. As the access to some of the designated monitoring locations was questionable due to safety reason or denied by the landlords, alternative locations therefore have had proposed. The proposed alternative monitoring locations has updated in the revised EM&A Programme which verified by IEC and certified by ET Leader prior submitted to EPD on 10 July 2013. ***Table 3-2***, ***Table 3-3*** and ***Table 3-4*** are respectively listed the air quality, construction noise and water quality monitoring locations for the Project and a map showing these monitoring stations is presented in ***Appendix E***.

Table 3-2 Impact Monitoring Stations - Air Quality

Station ID	Description	Works Area	Related to the Work Contract
AM1	Tsung Yuen Ha Village House No. 63	BCP	Contract 5
AM2	Village House near Lin Ma Hang Road	LMH to Frontier Closed Area	Contract 5, Contract 6
AM3	Ta Kwu Ling Fire Service Station of Ta Kwu Ling Village.	LMH to Frontier Closed Area	Contract 5, Contract 6
AM4a	A village house located at about 160m east side	LMH to Frontier	Contract 6

Station ID	Description	Works Area	Related to the Work Contract
	of the original point AM4	Closed Area	
AM5	Ping Yeung Village House	Ping Yeung to Wo Keng Shan	Contract 6
AM6	Wo Keng Shan Village House	Ping Yeung to Wo Keng Shan	Contract 6
AM7a	Another village (nameless) aligns to Sha Tau Kok Road – Wo Hang Section proximity to Tai Tong Wu Village. The location is about 140m away from the original point AM7	Sha Tau Kok Road	Contract 2
AM8	Po Kat Tsai Village No. 4	Po Kat Tsai	Contract 2
AM9b#	Nam Wa Po Village House No. 80	Fanling	Contract 3

 # Proposal for the change of air quality monitoring location from AM9a to AM9b was submitted to EPD on 4 Nov 2013 after verified by the IEC and it was approved by EPD (EPD's ref.: (15) in EP 2/N7/A/52 Pt.10 dated 8 Nov 2013).

Table 3-3 Impact Monitoring Stations - Construction Noise

Station ID	Description	Works Area	Related to the Work Contract
NM1	Tsung Yuen Ha Village House No. 63	BCP	Contract 5
NM2	Village House near Lin Ma Hang Road	Lin Ma Hang to Frontier Closed Area	Contract 5, Contract 6
NM3	Ping Yeung Village House (facade facing northeast)	Ping Yeung to Wo Keng Shan	Contract 6
NM4	Wo Keng Shan Village House	Ping Yeung to Wo Keng Shan	Contract 6
NM5	Village House, Loi Tung	Sha Tau Kok Road	Contract 2, Contract 6
NM6	Tai Tong Wu Village House 2	Sha Tau Kok Rpad	Contract 2, Contract 6
NM7	Po Kat Tsai Village	Po Kat Tsai	Contract 2
NM8	Village House, Tong Hang	Fanling	Contract 2 Contract 3
NM9	Village House, Kiu Tau Village	Fanling	Contract 3
NM10	Nam Wa Po Village House No. 80	Fanling	Contract 3

Table 3-4 Impact Monitoring Stations - Water Quality

Station ID	Description	Designated / Alternative Location Coordinates		Nature of the location	Related to the Work Contract
		Easting	Northing		
WM1	Downstream of Kong Yiu Channel	833679	845421	Alternative location located at upstream 51m of the designated location	Contract 5
WM1-Control	Upstream of Kong Yiu Channel	834185	845917	NA	Contract 5
WM2A	Downstream of River Ganges	834204	844471	Alternative location located at downstream 81m of the designated location	Contract 6
WM2A-Control	Upstream of River Ganges	835270	844243	Alternative location located at upstream 78m of the designated location	Contract 6
WM2B	Downstream of River Ganges	835433	843397	NA	Contract 6
WM2B-Control	Upstream of River Ganges	835835	843351	Alternative location located at downstream 31m of the designated location	Contract 6
WM3	Downstream of River Indus	836324	842407	NA	Contract 6

Station ID	Description	Designated / Alternative Location Coordinates		Nature of the location	Related to the Work Contract
		Easting	Northing		
WM3-Control	Upstream of River Indus	836763	842400	Alternative location located at downstream 26m of the designated location	Contract 6
WM4	Downstream of Ma Wat Channel	833850	838338	Alternative location located at upstream 11m of the designated location	Contract 3
WM4–Control A	Kau Lung Hang Stream	834028	837695	Alternative location located at downstream 28m of the designated location	Contract 3
WM4–Control B	Upstream of Ma Wat Channel	833760	837395	Alternative location located at upstream 15m of the designated location	Contract 3

3.4 MONITORING FREQUENCY AND PERIOD

The requirements of impact monitoring are stipulated in *Sections 2.1.6, 3.1.5* and *4.1.6* of the approved *EM&A Manual* and presented as follows.

Air Quality Monitoring

3.4.1 Frequency of impact air quality monitoring is as follows:

- 1-hour TSP 3 times every six days during course of works
- 24-hour TSP Once every 6 days during course of works.

Noise Monitoring

3.4.2 One set of $L_{eq(30min)}$ as 6 consecutive $L_{eq(5min)}$ between 0700-1900 hours on normal weekdays and once every week during course of works. If construction work necessary to carry out at other time periods, i.e. restricted time period (19:00 to 07:00 the next morning and whole day on public holidays) (hereinafter referred as "the restricted hours"), 3 consecutive $L_{eq(5min)}$ measurement will depended CNP requirements to undertake. Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

Water Quality Monitoring

3.4.3 The water quality monitoring frequency shall be 3 days per week during course of works. The interval between two sets of monitoring shall not be less than 36 hours.

3.5 MONITORING EQUIPMENT

Air Quality Monitoring

3.5.1 The 24-hour and 1-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B.* If the ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to the IEC to approve.

3.5.2 The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory.

3.5.3 All equipment to be used for air quality monitoring is listed in ***Table 3-5***.

Table 3-5 Air Quality Monitoring Equipment

Equipment	Model
24-Hr TSP	
High Volume Air Sampler	TISCH High Volume Air Sampler, HVS Model TE-5170
Calibration Kit	TISCH Model TE-5025A
1-Hour TSP	

Equipment	Model
Portable Dust Meter	Sibata LD-3B Laser Dust monitor Particle Mass Profiler & Counter

Wind Data Monitoring Equipment

3.5.4 According to the approved EM&A Manual, wind data monitoring equipment shall also be provided and set up for logging wind speed and wind direction near the dust monitoring locations. The equipment installation location shall be proposed by the ET and agreed with the IEC. For installation and operation of wind data monitoring equipment, the following points shall be observed:

1) The wind sensors should be installed 10 m above ground so that they are clear of obstructions or turbulence caused by buildings.
2) The wind data should be captured by a data logger. The data shall be downloaded for analysis at least once a month.
3) The wind data monitoring equipment should be re-calibrated at least once every six months.
4) Wind direction should be divided into 16 sectors of 22.5 degrees each.

3.5.5 ET has liaised with the landlords of the successful granted HVS installation premises. However, the owners rejected to provide premises for wind data monitoring equipment installation.

3.5.6 Under this situation, the ET proposed alternative methods to obtain representative wind data. Meteorological information as extracted from "the Hong Kong Observatory Ta Kwu Ling Station" is alternative method to obtain representative wind data. For Ta Kwu Ling Station, it is located nearby the Project site. Moreover, this station is located at 15m above mean sea level while its anemometer is located at 13m above the existing ground which in compliance with the general setting up requirement. Furthermore, this station also can be to provide the humidity, rainfall, and air pressure and temperature etc. meteorological information. In Hong Kong of a lot development projects, weather information extracted from Hong Kong Observatory is common alternative method if weather station installation not allowed.

Noise Monitoring

3.5.7 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m s^{-1}.

3.5.8 Noise monitoring equipment to be used for monitoring is listed in ***Table 3-6***.

Table 3-6 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2238 or Rion NL-14 or Rion NL-31
Calibrator	B&K Type 4231
Portable Wind Speed Indicator	Testo Anemometer

3.5.9 Sound level meters listed above comply with the *International Electrotechnical Commission Publications 651: 1979 (Type 1)* and *804: 1985 (Type 1)* specifications, as recommended in TM issued under the NCO. The acoustic calibrator and sound level meter to be used in the impact monitoring will be calibrated yearly.

Water Quality Monitoring

3.5.10 DO and water temperature should be measured in-situ by a DO/temperature meter. The instrument should be portable and weatherproof using a DC power source. It should have a membrane electrode with automatic temperature compensation complete with a cable. The equipment should be capable of measuring:

- a DO level in the range of 0-20 mg/l and 0-200% saturation; and
- a temperature of between 0 and 45 degree Celsius.

3.5.11 A portable pH meter capable of measuring a range between 0.0 and 14.0 should be provided to measure pH under the specified conditions accordingly to the APHA Standard Methods.

3.5.12 The instrument should be portable and weatherproof using a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU.

3.5.13 A portable, battery-operated echo sounder or tape measure will be used for the determination of water depth at each designated monitoring station as appropriate.

3.5.14 A water sampler e.g. Kahlsico Water Sampler, which is a transparent PVC cylinder with capacity not less than 2 litres, will be used for water sampling if water depth over than 0.5m. For sampling from very shallow water depths e.g. <0.5 m, water sample collection will be directly from water surface below 100mm use sampling plastic bottle to avoid inclusion of bottom sediment or humus. Moreover, Teflon/stainless steel bailer or self-made sampling buckets maybe used for water sampling. The equipment used for sampling will be depended the sampling location and depth situations.

3.5.15 Water samples for laboratory measurement of SS will be collected in high density polythene bottles, packed in ice (cooled to 4 ℃ without being frozen), and delivered to the laboratory in the same day as the samples were collected.

3.5.16 Analysis of suspended solids should be carried out in a HOKLAS or other accredited laboratory. Water samples of about 1L should be collected at the monitoring stations for carrying out the laboratory suspended solids determination. The SS determination work should start within 24 hours after collection of the water samples. The SS analyses should follow the *APHA Standard Methods 2540D* with Limit of Reporting of 2 mg/L.

3.5.17 Water quality monitoring equipment used in the impact monitoring is listed in ***Table 3-7***. Suspended solids (SS) analysis is carried out by a local HOKLAS-accredited laboratory, namely *ALS Technichem (HK) Pty Ltd*.

Table 3-7 Water Quality Monitoring Equipment

Equipment	Model
Water Depth Detector	Eagle Sonar or tape measures
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both ends or teflon/stainless steel bailer or self-made sampling bucket
Thermometer & DO meter	YSI PRO20 Handheld Dissolved Oxygen Instrument
pH meter	The EcoSense® pH10A pen-style instrument
Turbidimeter	Hach 2100Q
Sample Container	High density polythene bottles (provided by laboratory)
Storage Container	'Willow' 33-liter plastic cool box with Ice pad

3.6 MONITORING METHODOLOGY

1-hour TSP Monitoring

3.6.1 The 1-hour TSP monitor was a brand named "Sibata LD-3B Laser Dust monitor Particle Mass Profiler & Counter" which is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 90^{o} light scattering. The 1-hour TSP monitor consists of the following:

(a.) A pump to draw sample aerosol through the optic chamber where TSP is measured;

(b.) A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and

(c.) A built-in data logger compatible with Windows based program to facilitate data collection,

analysis and reporting.

3.6.2 The 1-hour TSP meter is used within the valid period as follow manufacturer's Operation and Service Manual.

24-hour TSP Monitoring

3.6.3 The equipment used for 24-hour TSP measurement is Thermo Andersen Model GS2310 TSP high volume air sampling system, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The High Volume Air Sampler (HVS) consists of the following:

(a.) An anodized aluminum shelter;
(b.) A 8"x10" stainless steel filter holder;
(c.) A blower motor assembly;
(d.) A continuous flow/pressure recorder;
(e.) A motor speed-voltage control/elapsed time indicator;
(f.) A 7-day mechanical timer, and
(g.) A power supply of 220v/50 Hz

3.6.4 The HVS is operated and calibrated on a regular basis in accordance with the manufacturer's instruction using Tisch Calibration Kit Model TE-5025A. Calibration would carry out in two month interval.

3.6.5 24-hour TSP is collected by the ET on filters of HVS and quantified by a local HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (ALS), upon receipt of the samples. The ET keep all the sampled 24-hour TSP filters in normal air conditioned room conditions, i.e. 70% RH (Relative Humidity) and 25^{o}C, for six months prior to disposal.

Noise Monitoring

3.6.6 Noise measurements were taken in terms of the A-weighted equivalent sound pressure level (L_{eq}) measured in decibels (dB). Supplementary statistical results (L_{10} and L_{90}) were also obtained for reference.

3.6.7 During the monitoring, all noise measurements would be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (L_{eq}). $Leq_{(30min)}$ in six consecutive $Leq_{(5min)}$ measurements will use as the monitoring parameter for the time period between 0700-1900 hours on weekdays; and also $Leq_{(15min)}$ in three consecutive $Leq_{(5min)}$ measurements would be used as monitoring parameter for other time periods (e.g. during restricted hours), if necessary.

3.6.8 Prior of noise measurement, the accuracy of the sound level meter is checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The checking is performed before and after the noise measurement.

Water Quality

3.6.9 Water quality monitoring is conducted at the designated locations. The sampling produce with the in-situ monitoring are presented as below:

Sampling Procedure

3.6.10 A Digital Global Positioning System (GPS) is used to identify the designated monitoring stations prior to water sampling. A portable, battery-operated echo sounder is used for the determination of water depth at each station. At each station, water sample would be collected from 0.1m below water surface or the water surface to prevent the river bed sediment for stirring.

3.6.11 The sample container will be rinsed with a portion of the water sample. The water sample then will be transferred to the high-density polythene bottles as provided by the laboratory, labeled with a unique sample number and sealed with a screw cap.

3.6.12 Before sampling, general information such as the date and time of sampling, weather condition as well as the personnel responsible for the monitoring would be recorded on the field data sheet.

3.6.13 A 'Willow' 33-liter plastic cool box packed with ice will be used to preserve the water samples prior to arrival at the laboratory for chemical determination. The water temperature of the cool box is maintained at a temperature as close to 4^0C as possible without being frozen. Samples collected are delivered to the laboratory upon collection.

In-situ Measurement

3.6.14 YSI PRO20 Handheld Dissolved Oxygen Instrument is used for water in-situ measures, which automates the measurements and data logging of temperature, dissolved oxygen and dissolved oxygen saturation. Before each round of monitoring, the dissolved oxygen probe would be calibrated by the wet bulb method.

3.6.15 A portable EcoSense® pH10A pen-style instrument is used for in-situ pH measurement. The pH meter is capable of measuring pH in the range of 0 – 14 and readable to 0.1. Standard buffer solutions of pH 7 and pH 10 are used for calibration of the instrument before and after measurement.

3.6.16 A portable Hach 2100Q Turbidimeter is used for in-situ turbidity measurement. The turbidity meter is capable of measuring turbidity in the range of 0 – 1000 NTU. StablCal® Standards 10NTU and 100NTU are used for calibration of the instrument before and after measurement.

3.6.17 All in-situ measurement equipment are calibrated by HOKLAS accredited laboratory of three month interval.

Laboratory Analysis

3.6.18 All water samples analyzed Suspended Solids (SS) will be carried out by a local HOKLAS-accredited testing laboratory (ALS Technichem (HK) Pty Ltd HOKLAS registration no. 66). SS determination using *APHA Standard Methods 2540D* as specified in the *EM&A Manual* will start within 48 hours of water sample receipt.

3.7 EQUIPMENT CALIBRATION

3.7.1 Calibration of the HVS is performed upon installation and thereafter at bimonthly intervals in accordance with the manufacturer's instruction using the certified standard calibrator (TISCH Model TE-5025A). Moreover, the Calibration Kit would be calibrated annually. The calibration data are properly documented and the records are maintained by ET for future reference.

3.7.2 The 1-hour TSP meter was calibrated by the supplier prior to purchase. Zero response of the equipment would be checked before and after each monitoring event. Annually calibration with the High Volume Sampler (HVS) in same condition would be undertaken by the Laboratory.

3.7.3 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis.

3.7.4 All water quality monitoring equipment would be calibrated by HOKLAS accredited laboratory of three month intervals.

3.7.5 The calibration certificates of all monitoring equipment used for the impact monitoring program in the Reporting Period and the HOKLAS accredited certificate of laboratory are attached in ***Appendix F***.

3.8 DERIVATION OF ACTION/LIMIT (A/L) LEVELS

3.8.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. According to the approved Environmental Monitoring and Audit Manual,

the air quality, construction noise and water quality criteria were set up, namely Action and Limit levels are listed in ***Tables 3-8, 3-9*** and ***3-10***.

Table 3-8 Action and Limit Levels for Air Quality Monitoring

Monitoring Station	Action Level (μg /m^3)		Limit Level (μg/m^3)	
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP
AM1	265	143	500	260
AM2	268	149		
AM3	269	145		
AM4a	267	148		
AM5	268	143		
AM6	269	148		
AM7a	275	156		
AM8	269	144		
AM9b	271	151		

Table 3-9 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
NM1, NM2, NM3, NM4, NM5, NM6, NM7, NM8, NM9, NM10	When one or more documented complaints are received	75 dB(A)[Note 1 & Note 2]

Note 1: Acceptable Noise Levels for school should be reduced to 70 dB(A) and65 dB(A) during examination period

Note 2: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the NCA have to be followed.

Table 3-10 Action and Limit Levels for Water Quality

Parameter	Performance criteria	Monitoring Location				
		WM1	WM2A	WM2B	WM3	WM4
DO (mg/L)	Action Level	(*)4.23	(**)4.00	(*)4.74	(**)4.00	(*)4.14
	Limit Level	(#)4.19	(**)4.00	(#)4.60	(**)4.00	(#)4.08
Turbidity (NTU)	Action Level	51.3	24.9	11.4	13.4	35.2
		AND 120% of upstream control station of the same day				
	Limit Level	67.6	33.8	12.3	14.0	38.4
		AND 130% of upstream control station of the same day				
SS (mg/L)	Action Level	54.5	14.6	11.8	12.6	39.4
		AND 120% of upstream control station of the same day				
	Limit Level	64.9	17.3	12.4	12.9	45.5
		AND 130% of upstream control station of the same day				

Remarks:

(*) *The Proposed **Action Level** of Dissolved Oxygen is adopted to be used 5%-ile of baseline data*

(**) *The Proposed **Action & Limit Level** of Dissolved Oxygen is used 4mg/L*

(#) *The Proposed **Limit Level** of Dissolved Oxygen is adopted to be used 1%-ile of baseline data*

3.8.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in ***Appendix G.***

3.9 DATA MANAGEMENT AND DATA QA/QC CONTROL

3.9.1 All monitoring data will be handled by the ET's in-house data recording and management system. The monitoring data recorded in the equipment will be downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data will input into a computerized database properly maintained by the ET. The laboratory results will be input directly into the computerized database and checked by personnel other than those who input the data.

3.9.2 For monitoring parameters that require laboratory analysis, the local laboratory shall follow the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory tests.

4 AIR QUALITY MONITORING

4.1 GENERAL

4.1.1 In the Reporting Period, construction works under the project have been commenced in Contracts 3 and 5 and air quality monitoring was performed at 4 relevant designated locations as below:

- AM1 - Tsung Yuen Ha Village House No. 63;
- AM2 - Village House near Lin Ma Hang Road;
- AM3 - Ta Kwu Ling Fire Service Station of Ta Kwu Ling Village; and
- AM9b - Nam Wa Po Village House No. 80

4.1.2 The air quality monitoring schedule is presented in ***Appendix H*** and the monitoring results are summarized in the following sub-sections.

4.2 AIR QUALITY MONITORING RESULTS IN REPORTING MONTH

4.2.1 In the Reporting Period, a total of ***60*** events of 1-hour TSP and ***20*** events of 24-hours TSP monitoring were carried out and the monitoring results are summarized in ***Tables 4-1 to 4-4***. The detailed 24-hour TSP monitoring data are presented in ***Appendix I*** and the relevant graphical plots are shown in ***Appendix J***.

Table 4-1 Summary of 24-hour and 1-hour TSP Monitoring Results – AM1

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
4-Jan-14	138	3-Jan-14	10:19	233	257	251
10-Jan-14	107	9-Jan-14	10:43	153	166	178
16-Jan-14	82	15-Jan-14	11:04	231	212	158
22-Jan-14	133	21-Jan-14	11:38	168	141	132
28-Jan-14	97	27-Jan-14	11:03	124	108	89
Average (Range)	**111 (82 – 138)**	Average (Range)		**173.4 (89 – 257)**		

Table 4-2 Summary of 24-hour and 1-hour TSP Monitoring Results – AM2

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
4-Jan-14	147	3-Jan-14	10:31	260	251	237
10-Jan-14	132	9-Jan-14	12:19	175	185	182
16-Jan-14	145	15-Jan-14	10:51	189	169	132
22-Jan-14	130	21-Jan-14	11:27	160	162	154
28-Jan-14	91	27-Jan-14	10:50	144	153	150
Average (Range)	**129 (91 – 147)**	Average (Range)		**180.2 (132 - 260)**		

Table 4-3 Summary of 24-hour and 1-hour TSP Monitoring Results – AM3

Date	24-hour TSP (μg/m³)	1-hour TSP (μg/m³)				
		Date	Start Time	1st reading	2nd reading	3rd reading
4-Jan-13	110	3-Jan-14	10:43	238	263	211
10-Jan-14	111	9-Jan-14	12:31	172	178	177
16-Jan-14	139	15-Jan-14	10:45	239	219	189
22-Jan-14	142	21-Jan-14	12:22	165	152	138
28-Jan-14	114	27-Jan-14	10:40	139	150	151
Average (Range)	**123 (111 – 142)**	Average (Range)		**185.4 (138 – 263)**		

Table 4-4 Summary of 24-hour and 1-hour TSP Monitoring Results – AM9b

Date	24-hour TSP ($\mu g/m^3$)	1-hour TSP ($\mu g/m^3$)				
		Date	Start Time	1st reading	2nd reading	3rd reading
4-Jan-14	73	3-Jan-14	9::49	255	238	226
10-Jan-14	137	9-Jan-14	13:56	183	182	201
16-Jan-14	76	15-Jan-14	10:05	153	139	148
22-Jan-14	124	21-Jan-14	09:50	171	154	152
28-Jan-14	97	27-Jan-14	10:06	131	145	141
Average (Range)	**101 (73 – 137)**	Average (Range)		**174.6 (131 - 255)**		

4.2.2 As shown in ***Tables 4-1*** to ***4-4***, the 24-hour and 1-hour TSP monitoring results were below the Action/ Limit Level. No Notification of Exceedances (NOE) of air quality criteria or corrective action was therefore required.

4.2.3 Two months interval calibration has been carried out at AM9b in accordance with the EM&A Manual requirements. The updated calibration certificates are attached in ***Appendix F***.

4.2.4 The meteorological data during the impact monitoring days are summarized in ***Appendix K***.

5 CONSTRUCTION NOISE MONITORING

5.1 GENERAL

5.1.1 In the Reporting Period, construction works under the project have been commenced in Contracts 3 and 5 and noise monitoring was performed at 5 relevant designated locations as below:

- NM1 - Tsung Yuen Ha Village House No. 63;
- NM2 - Village House near Lin Ma Hang Road;
- NM8 - Village House, Tong Hang;
- NM9 - Village House, Kiu Tau Village; and
- NM10 - Nam Wa Po Village House No. 80

5.1.2 The noise monitoring schedule is presented in ***Appendix H*** and the monitoring results are summarized in the following sub-sections.

5.2 NOISE MONITORING RESULTS IN REPORTING MONTH

5.2.1 In the Reporting Period, a total of **25** event noise measurements were carried out at the designated locations. The sound level meter was set in 1m from the exterior of the building façade including noise monitoring locations NM1, NM2, NM8 and NM9. Therefore, no façade correction (+3 dB(A) is added according to acoustical principles and EPD guidelines. However, free-field status was performed at NM10. So, façade correction (+3 dB(A) has added according to the requirement in this month. The noise monitoring results at the designated locations are summarized in ***Tables 5-1.*** The detailed noise monitoring data are presented in ***Appendix I*** and the relevant graphical plots are shown in ***Appendix J***.

Table 5-1 Summary of Construction Noise Monitoring Results

Date	NM1 ($L_{eq30min}$)	NM2 ($L_{eq30min}$)	NM8 ($L_{eq30min}$)	NM9 ($L_{eq30min}$)	(*) NM10 ($L_{eq30min}$)
3-Jan-13	60	64	59	59	60
9-Jan-14	53	63	56	58	63
15-Jan-14	53	65	62	59	62
21-Jan-14	56	62	63	60	64
27-Jan-14	51	64	62	57	60
Limit Level	**75 dB(A)**				

Remarks

(*) *façade correction (+3 dB(A) is added according to acoustical principles and EPD guidelines*

5.2.2 As shown in ***Tables 5-1***, the noise level measured at five (5) designated monitoring locations were below 75dB(A). Furthermore, there were no noise complaints (Action Level exceedance) received by the RE, Contractor or CEDD in the Reporting Period. Therefore, no Action or Limit Level exceedance was triggered and no corrective action was therefore required.

6 WATER QUALITY MONITORING

6.1 GENERAL

6.1.1 In the Reporting Period, construction works under the project has been commenced in Contracts 3 and 5 and water quality monitoring was performed at 5 relevant designated locations as below:

- WM1 – Contract 5 working site downstream at Kong Yiu Channel;
- WM1-Control – Contract 5 working site upstream at Kong Yiu Channel;
- WM4 - Contract 3 working site Downstream of Ma Wat Channel
- WM4–Control A - Contract 3 working site Kau Lung Hang Stream
- WM4–Control B - Contract 3 working site Upstream of Ma Wat Channel

6.1.2 The water quality monitoring schedule is presented in ***Appendix H***. The monitoring results are summarized in the following sub-sections.

6.2 RESULTS OF WATER QUALITY MONITORING

6.2.1 In the Reporting Period, a total of **12** sampling days were performed for water quality monitoring at Contracts 3 and 5. The key monitoring parameters including Dissolved Oxygen, Turbidity and Suspended Solids are summarized in ***Tables 6-1 and 6-2***. Breaches of water quality monitoring criteria are shown in ***Table 6-3***. Detailed monitoring database including in-situ measurements and laboratory analysis data are shown in ***Appendix I*** and the relevant graphical plot are shown in ***Appendix J***.

Table 6-1 Summary of Water Quality Monitoring Results for Contract 3

Date	Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
	WM4	WM4-CA	WM4-CB	WM4	WM4-CA	WM4-CB	WM4	WM4-CA	WM4-CB
3-Jan-14	9.91	8.42	7.59	8.0	3.9	9.4	13.5	5.5	23.0
7-Jan-14	10.30	8.04	8.44	8.3	29.6	6.2	13.0	26.5	10.0
9-Jan-14	9.13	7.89	4.99	7.5	6.1	4.4	6.5	3.0	3.5
11-Jan-14	6.67	9.36	9.09	17.1	34.0	6.7	25.0	40.5	4.5
13-Jan-14	9.30	8.68	8.21	24.2	39.4	16.5	33.0	52.0	30.0
15-Jan-14	9.55	9.50	9.52	23.7	58.7	12.5	13.0	32.5	4.0
17-Jan-14	9.31	7.56	7.26	11.9	7.5	7.5	13.0	3.0	4.5
21-Jan-14	10.45	8.12	9.75	8.1	7.8	7.7	6.0	2.0	5.0
23-Jan-14	12.11	9.31	8.97	7.2	11.8	5.2	7.0	6.0	3.0
25-Jan-14	10.47	8.08	7.28	9.3	5.6	8.5	9.0	2.0	6.5
27-Jan-14	9.56	6.64	8.12	18.7	4.6	9.8	19.5	2.5	6.0
29-Jan-14	7.27	6.74	5.16	9.8	5.2	5.3	24.5	3.0	4.0

Table 6-2 Summary of Water Quality Monitoring Results for Contract 5

Date	Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)	
	WM1	WM1-Control	WM1	WM1-Control	WM1	WM1-Control
3-Jan-14	8.77	8.21	31.5	8.8	24.5	7.5
7-Jan-14	7.37	10.39	16.1	7.5	10.5	3.0
9-Jan-14	4.34	9.50	45.2	11.0	12.0	7.0
11-Jan-14	6.80	10.22	28.2	8.6	19.5	6.0
13-Jan-14	9.51	9.93	10.0	18.8	5.5	10.5
15-Jan-14	9.73	10.04	19.5	13.4	8.5	2.5
17-Jan-14	8.85	8.30	11.7	17.3	6.0	11.0
21-Jan-14	9.11	8.38	26.5	8.9	17.0	3.0
23-Jan-14	10.73	10.05	18.9	7.6	10.0	2.0
25-Jan-14	9.61	6.91	21.4	14.5	10.0	5.0
27-Jan-14	4.33	9.28	21.4	15.7	20.0	10.0
29-Jan-14	4.24	7.18	13.5	27.2	5.5	13.5

Table 6-3 Breaches of Water Quality Monitoring Criteria in Reporting Period

Location	Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)		Total Exceedance	
	Action	Limit	Action	Limit	Action	Limit	Action	Limit
WM1	0	0	0	0	0	0	0	0
WM4	0	0	0	0	0	0	0	0
No of Exceedance	0	0	0	0	0	0	0	0

6.2.2 In view of the monitoring results of Dissolved Oxygen (DO) at W1 and W4, all the measured results were higher than Action Level. For Turbidity and SS were recorded at WM1 and W4, all monitoring results were below Action Level. Therefore, no water quality exceedances were triggered in the Report Period. No Notification of Exceedances (NOE) of water quality criteria or corrective action was therefore required.

7 WASTE MANAGEMENT

7.1 GENERAL WASTE MANAGEMENT

7.1.1 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

7.2 RECORDS OF WASTE QUANTITIES

7.2.1 All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste;
- General Refuse; and
- Excavated Soil.

7.2.2 The quantities of waste for disposal in this Reporting Period are summarized in ***Tables 7-1*** and ***7-2*** and the Monthly Summary Waste Flow Table is shown in ***Appendix L***. Whenever possible, materials were reused on-site as far as practicable.

Table 7-1 Summary of Quantities of Inert C&D Materials for the Project

Type of Waste	Contract 3		Contract 5		Total Quantity for the Project
	Quantity	Disposal Location	Quantity	Disposal Location	
C&D Materials (Inert) (in '000m^3)	0.409	-	0	--	**0.409**
Reused in this Project (Inert) (in '000 m^3)	0	-	0	--	**0**
Reused in other Projects (Inert) (in '000 m^3)	0	-	0	--	**0**
Disposal as Public Fill (Inert) (in '000 m^3)	0.409	Tuen Mun 38	0	--	**0.409**

Table 7-2 Summary of Quantities of C&D Wastes for the Project

Type of Waste	Contract 3		Contract 5		Total Quantity for the Project
	Quantity	Disposal Location	Quantity	Disposal Location	
Recycled Metal (kg)	0	-	0	--	**0**
Recycled Paper / Cardboard Packing (kg)	0	-	0	--	**0**
Recycled Plastic (kg)	0.100	By Licensing Collector	0	--	**0**
Chemical Wastes (kg)	0	-	0	--	**0**
General Refuses (in '000m^3)	0.110	NENT	0.85	NENT	**0.960**

8 SITE INSPECTION

8.1 REQUIREMENTS

8.1.1 According to the approved EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

8.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

The Contract 3

8.2.1 In the Reporting Period, joint site inspection for Contract 3 to evaluate the site environmental performance has been carried out by the RE, IEC, ET and the Contractor on **6**, **13**, **20** and **27 January 2014**. No non-compliance was noted.

8.2.2 The findings / deficiencies of ***Contract 3*** that observed during the weekly site inspection are listed in ***Table 8-1***.

Table 8-1 Site Observations for Contract 3

Date	Findings / Deficiencies	Follow-Up Status
30 Dec 2013 (last Reporting Period)	• The construction materials were observed located within tree protection zone. The Contractor was required immediately remove those materials. • Water overflow observed in water storage tank. To prevent the wastage, the Contractor should be repaired it to stop the issue. • The general refuse, C&D material and trunk waste should be clean-up regular basis.	• Construction materials has been removed before site inspection on 6 January 2014. • Water storage tank located at Nam Wah Po was repaired and is empty. • Wood waste and tree trunk has been clean-up.
6 Jan 2014	• Soil stockpile observed located onsite without cover. The Contractor was reminded cover with tarpaulin sheet to prevent the dust emission to air. • Oil stain observed at Nam Wa Po near Tai Wo Service Road West. The Contractor was reminded to clear-up immediately.	• No soil stockpile is located at the area. As reported by the Contractor, the soil stockpile has been used for backfill material. • Oil stain observed at Nam Wa Po near Tai Wo Service Road West has been clean-up.
13 Jan 2014	• To recommend that the Contractor should extend the sand bund to prevent runoff getting into Ma Wat Channel nearly Nam Wa Po. • Muddy trail observed in public road nearly Nam Wa Po site exit. As reminded that clean-up should be undertaken regular.	• To follow the recommendation, the Contractor has been extended the sand bund. • The Contractor has arranged a worker to clean the public access road regularly.
20 Jan 2014	• The Contractor was reminded to provide enough protection fencing for trees to be retained or transplanted in the construction site. • The Contractor was reminded to implement regular check and maintenance of all the machineries in construction site to prevent oil spilling. • The Contractor was reminded to clean all site entrance regularly. • The Contractor was reminded to keep performing good housekeeping in construction site.	• Site inspection dated 27 Jan 2014, the deficiency still yet followed-up and will be reported next reporting month. • Further to site inspection, oil spilling not observed. Reminded the Contractor to keep the regular check and maintenance of all machineries. • The Contractor has provided workers regular clean-up all site entrance. • During further site inspection, the housekeeping is acceptable. Good practice shall be continued to keep.

Date	Findings / Deficiencies	Follow-Up Status
	• The Contractor was reminded to keep conducting dust mitigation measures to prevent air quality impact.	• The Contractor has implement dust mitigation measures in accordance with EM&A Manual requirement.
27 Jan 2014	• Water barriers stored at BC02 was very close tree protection zone. The contractor was reminded to remove from it and make sure no objects placed on the root.	• The deficiency still yet followed-up and will be reported next reporting month.
	• The Contractor was reminded to remove general refuse at Nam Wa Po (Wing Chun) and at BC02.	• The general refuse has been removed.
	• The Contractor was reminded that the soil slope at BC02 should cover tarpaulin sheet to prevent dust emission.	• Reported by the Contractor, dust mitigation measure has been provided before public holiday.

8.2.3 Moreover, the general housekeeping such as tidiness of weekly and cleaniness of daily should be maintained in accordance with the PS requirements.

The Contract 5

8.2.4 In the Reporting Period, joint site inspection for Contract 5 to evaluate the site environmental performance has been carried out by the RE, IEC, ET and the Contractor on **2**, **9**, **16**, **23** and **28 January 2014**. No non-compliance was noted.

8.2.5 The findings / deficiencies of ***Contract 5*** that observed during the weekly site inspection are listed in ***Table 8-2***.

Table 8-2 Site Observations for Contract 5

Date	Findings / Deficiencies	Follow-Up Status
19 Dec 2013 (last Reporting Period)	• Uncovered sand stockpile was observed, the Contractor was reminded to cover the stockpile with imprevios sheet or remove it to prevent fugitive dust.	• Site inspection dated 2 January 2014, sand stockpile has been covered.
24 Dec 2013 (last Reporting Period)	• At location Lin Ma Hang, the Contractor should provide water quality mitigation measure for discharge water, and proper mitigation measure has been provided immediately to prevent water pollution. • Disused de-silting pool should be backfilled and also the soakaway path should be minimized or limited to improve its formation.	• During site inspection dated 2 January 2014, sand bag bund has been erected at the gaps of drainage channel to prevent wastewater directly discharge to the river. Neither wastewater nor observed discharged to the river. • The disused de-silting pool was backfilled before 2 January 2014.
2 Jan 2014	• In public road surface observed loose soil, the Contractor was reminded to clean up regularly. • At location BCP1, the Contractor is reminded that the de-silting facility should be to improve. • At location BCP1, the Contractor is reminded that the soakaway pit should provide the identification labelling.	• During site inspection on 9 Jan 2014, the deficiency observed continued, however, regular and daily clean has conducted by the Contractor. Moreover, the deficiency was rectified on 16 Jan 2014 during site inspection. • The de-silting facility was improved to provide better filtration system. The deficiency was rectified before 9 Jan 2014. • Site inspection dated 9 Jan 2014 to observed, a label was provided and the deficiency was rectified

Date	Findings / Deficiencies	Follow-Up Status
9 Jan 2014	• At the pipe jacking location, the de-silting facility should be improved to prevent water pollution and to ensure the charge water quality meet the criteria.	• At the pipe jacking location, the de-silting system was improved and water was treated by de-silting facility before discharge. The deficiency was rectified on 16 Jan 2014
16 Jan 2014	• The Contractor was reminded to increase water spray frequency along dry haul road prevent dust emission during the day dry and windy.	• Reported by the Contractor, water spray frequency has been increased at dry haul road. During site inspection on 23 Jan 2014, haul road observed is wet.
23 Jan 2014	• Patches of oil stain observed located nearby the temporary steel bridge, the Contractor was reminded to clean up the oil stains and provide proper maintenance of machinery or equipment. • Diesel drums observed located on site without a drip tray. The Contractor was reminded to provide drip tray for all chemical material. • Full of rubbish bin was observed during the site inspection. The Contractor was reminded to clean up it regularly.	• Patches of oil stains were removed. The issue is closed on 28 Jan 2014. • Diesel drums have been removed from site. The issue is closed on 28 Jan 2014. • All rubbish bins were regularly cleaned. Rubbish bins observed was empty during site inspection 28 Jan 2014.
28 Jan 2014	• NA	• NA

8.2.6 Moreover, the general housekeeping such as tidiness of weekly and cleaniness of daily should be maintained in accordance with the PS requirements. Addition, regular basis cleaning the wheel washing bay is reminder. Furthermore, works at Bridge J Area, tree protected fences should be provided to protect all retained tree. Moreover, the contractor was reminded setting up storage area as for all chemical waste dispose on site.

Other Contracts

8.2.7 Since the construction works at the Contract 2 and Contract 4 and Contract 6 are not yet commenced, no site inspection is performed for these Contracts.

9 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

9.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

The Contract 3

9.1.1 The Liantang/Heung Yuen Wai Boundary Control Point and Associated Works, no environmental complaint, summons and prosecution under the EM&A Programme was received in the Reporting Period for Contract 3. However, one air quality complaint was received for Contract 5 on 22 January 2014. The statistical summary table of environmental complaint, summons and prosecution are presented in ***Tables 9-1, 9-2*** and ***9-3***.

Table 9-1 Statistical Summary of Environmental Complaints

Reporting Period	Contract No	Environmental Complaint Statistics		
		Frequency	Cumulative	Complaint Nature
06 Nov 2013 to 30 Dec 2013	Contract 3	0	0	NA
16 Aug 2013 to 30 Dec 2013	Contract 5	0	0	NA
1 – 31 Jan 2014	Contract 3	0	0	NA
	Contract 5	1	0	Air Quality

Table 9-2 Statistical Summary of Environmental Summons

Reporting Period	Contract No	Environmental Summons Statistics		
		Frequency	Cumulative	Complaint Nature
06 Nov 2013 to 30 Dec 2013	Contract 3	0	0	NA
16 Aug 2013 to 30 Dec 2013	Contract 5	0	0	NA
1 – 31 Jan 2014	Contract 3	0	0	NA
	Contract 5	0	0	NA

Table 9-3 Statistical Summary of Environmental Prosecution

Reporting Period	Contract No	Environmental Prosecution Statistics		
		Frequency	Cumulative	Complaint Nature
06 Nov 2013 to 30 Dec 2013	Contract 3	0	0	NA
16 Aug 2013 to 30 Dec 2013	Contract 5	0	0	NA
1 – 31 Jan 2014	Contract 3	0	0	NA
	Contract 5	0	0	NA

9.1.2 According to the letter from Mr. 姚, some construction vehicles were observed leaving some site exists without clean-up the wheels and soil trails were observed on Lin Ma Hang road. That would cause dust emissions, environmental pollution and serious impact on ecology as well as direct impact on the residents' daily life and health.

9.1.3 ET has been carried out investigation for the complaint. Based on the provided site information, photographic records and the weekly site inspections:

- Wheel washing facilities including automatic wheel washing machine and wheel washing bays were installed at main site exits to provide wheel washing before leaving the site;
- Regular clean of site exit/entrance by labours were also provided;
- Water lorries were also provided by the Contractor for regular cleaning of the Lim Ma Hang Road to mitigate dust emission.

9.1.4 According to findings, air quality mitigation measure as provided by the Contractor C5 has fulfilled the EM&A Manual requirement. 1-Hour TSP and 24-Hour TSP air quality monitoring at AM1, AM2 and AM3 located at Lin Ma Hang were conducted on 21 and 22 January 2014, respectively. The monitoring results were below the Action and Limit Level.

The Other Contracts

9.1.5 Since the construction works at the Contract 2, Contract 4 and Contract 6 are not yet commenced, no environmental complaint, summons and prosecution under the EM&A Programme are registered in the Reporting Period.

10 IMPLEMENTATION STATUS OF MITIGATION MEASURES

10.1 GENERAL REQUIREMENTS

10.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in ***Appendix M.***

10.1.2 All contracts under the Project shall be implementing the required environmental mitigation measures according to the approved EM&A Manual as subject to the site condition. Environmental mitigation measures generally implemented by Contracts 3 and 5 in this Reporting Period are summarized in ***Table 10-1***.

Table 10-1 Environmental Mitigation Measures

Issues	Environmental Mitigation Measures
Water Quality	• Wastewater to be treated by the filtration systems i.e. sedimentation tank or AquaSed before to discharge.
Air Quality	• Maintain damp / wet surface on access road • Keep slow speed in the sites • All vehicles must use wheel washing facility before off site • Sprayed water during breaking works • A cleaning truck was regularly performed on the public road to prevent fugitive dust emission
Noise	• Restrain operation time of plants from 07:00 to 19:00 on any working day except for Public Holiday and Sunday. • Keep good maintenance of plants • Place noisy plants away from residence or school • Provide noise barriers or hoarding to enclose the noisy plants or works • Shut down the plants when not in used.
Waste and Chemical Management	• On-site sorting prior to disposal • Follow requirements and procedures of the "Trip-ticket System" • Predict required quantity of concrete accurately • Collect the unused fresh concrete at designated locations in the sites for subsequent disposal
General	• The site was generally kept tidy and clean.

10.2 TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

10.2.1 Construction activities as undertaken in the coming month for the Project lists below:

Contract 3

- Erection of site office
- Cable detection and trial trenches
- Pre-drilling works and piling works
- Tree felling works, waterworks and excavation works
- Dismantling works for abandoned houses
- Slope upgrading works
- Noise barrier installation
- Extension of box culvert
- Construction of haul road and temporary soil platform for geotechnical works
- Laying of concrete pipe works

Contract 5

- Construction of retaining wall No.1
- Piling works at life shaft, Bridge J & footbridge
- Construction of pedestrian subway and pump room at LMH
- Pipe jacking across Kong Yuen River

- Formation Works at BCP Area
- Construction of Depressed Road at BCP3
- Transplantation, Pruning/felling of existing tree
- Drainage and Sewerage works at LMH Road

10.3 KEY ISSUES FOR THE COMING MONTH

10.3.1 Key issues to be considered in the coming month for Contracts 3 and 5 include:

- Implementation of dust suppression measures at all times;
- Potential wastewater quality impact due to surface runoff;
- Potential fugitive dust quality impact due from the dry/loose/exposure soil surface/dusty material;
- Disposal of empty engine oil containers within site area;
- Ensure dust suppression measures are implemented properly;
- Sediment catch-pits and silt removal facilities should be regularly maintained;
- Management of chemical wastes;
- Discharge of site effluent to the nearby wetland, stockpiling or disposal of materials, and any dredging or construction area at this area are prohibited;
- Follow-up of improvement on general waste management issues; and
- Implementation of construction noise preventative control measures

10.3.2 For other Contracts, no environmental issue is considered due to these contracts still yet to commence.

11 CONCLUSIONS AND RECOMMENDATIONS

11.1 CONCLUSIONS

11.1.1 This is **6th** monthly EM&A report presenting the monitoring results and inspection findings for the Reporting Period from **1** to **31 January 2014**.

11.1.2 No 24-hour or 1-hour TSP monitoring results that triggered the Action or Limit Levels were recorded. No NOEs or the associated corrective actions were therefore issued.

11.1.3 No noise complaint (which is an Action Level exceedance) was received and no construction noise measurement results that exceeded the Limit Level were recorded in the Reporting Period. No NOEs or the associated corrective actions were therefore issued.

11.1.4 No water quality parameters such as Dissolved Oxygen, Turbidity and Suspended Solids monitoring results were found to exceed the Action or Limit levels. No NOEs or the associated corrective actions were therefore issued.

11.1.5 In the reporting period, no notification of summons or successful prosecution under the EM&A Programme of the Liantang/Heung Yuen Wai Boundary Control Point and Associated Works was received. However, one air quality complaint was received by CEDD on 22 January 2014. According to the investigation, air quality mitigation measure as provided by the Contractor C5 has fulfilled the EM&A Manual requirement. However, air quality mitigation measures should be implemented in accordance with EM&A Manual requirements. Daily cleanness shall be undertaken after each end-day. In particular, Main Contractors of Contracts 3 and 5 should ensure wheel and body washing for all construction vehicles before leaving the site.

11.1.6 Joint site inspection during Reporting Period, four events for Contract 3 and five events for Contract 5 were carried out the RE, IEC, ET and Main-contractor in accordance with the EM&A Manual stipulation. No non-compliance observed during the site inspection. During dry season, air quality mitigation measures such as increase the water spray frequency (at least eight times per day) in haul road to prevent construction dust emission is reminded. The environmental performance of the Project of Contracts 3 and 5 was therefore considered as satisfactory.

11.2 RECOMMENDATIONS

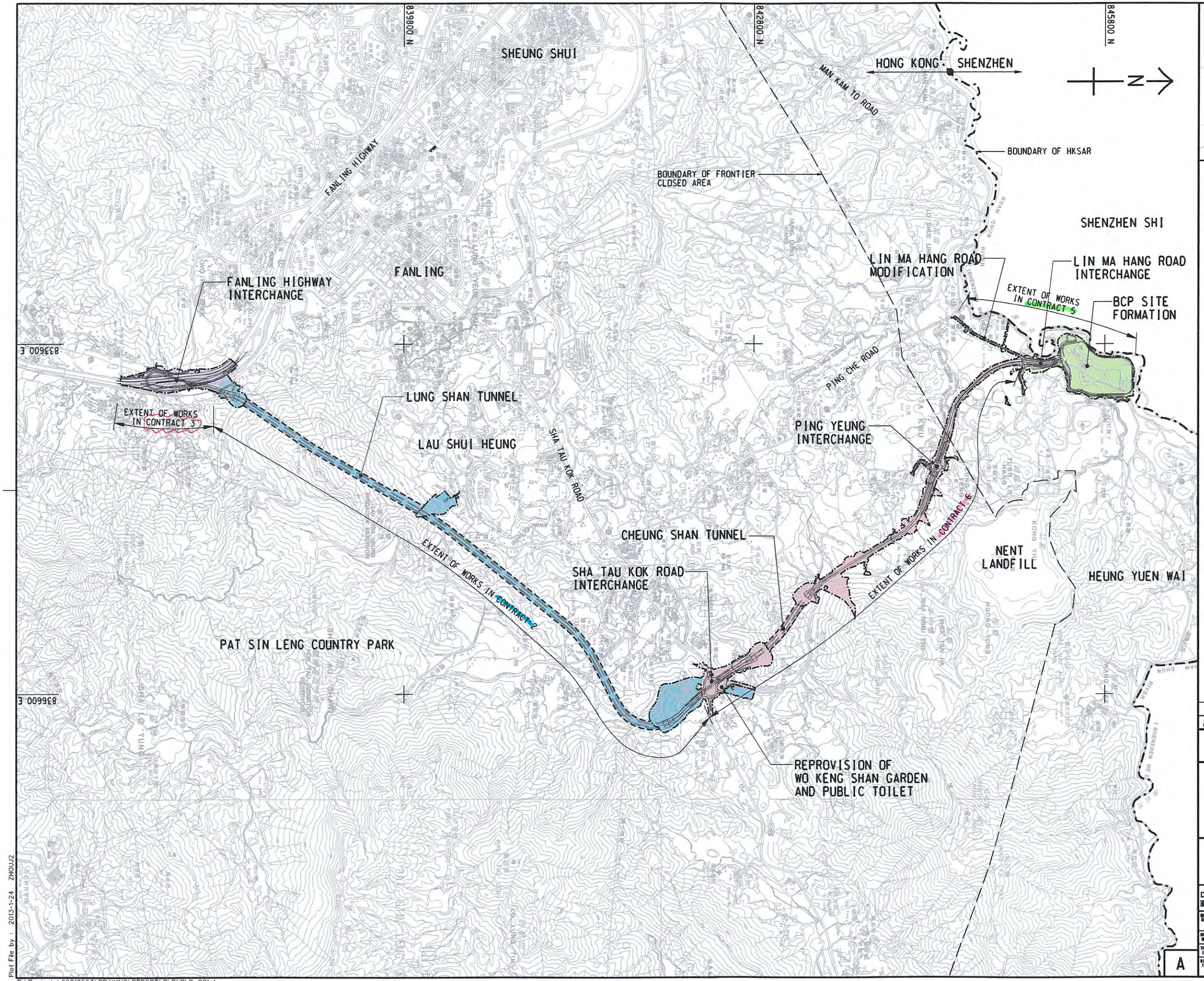
11.2.1 During dry season, special attention should be paid on the potential construction dust impact since most of the construction sites are adjacent to villages. The Contractor should fully implement the construction dust mitigation measures properly.

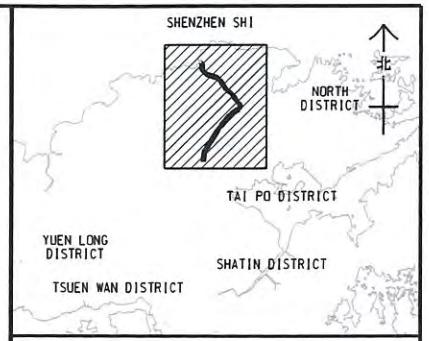
11.2.2 Moreover, muddy water and other water quality pollutants via site surface water runoff get into Kong Yiu Channel and Ma Wat Channel to public areas should be avoided. Mitigation measures for water quality should be properly implemented.

11.2.3 Construction noise should be a key environmental impact during the works. The noise mitigation measures such as use of quiet plants or temporary noise barrier installation at the construction noise predominate area should be implemented as accordance with the EM&A requirement.

Appendix A

Layout plan of the Project





LOCATION PLAN
SCALE 1 : 30000

LEGEND:

- SITE BOUNDARY
- UNDERGROUND WORKS SITE BOUNDARY

REV. 修訂	DESCRIPTION 內容摘要	BY 由	CHECKED 審核	DATE 日期

CEDD 土木工程拓展署 Civil Engineering and Development Department

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION

PROJECT LAYOUT PLAN

AECOM

DRG.NO. 圖紙編號 60212563/PLP/001

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. Dir. APPROVED 負責人
-	-	-
DRAWN BY 繪圖 ZJ	STATUS 階段	
SCALE 比例 A1 1 : 15000		
DIMENSIONS ARE IN 尺寸單位 METRES	© COPYRIGHT RESERVED 版權所有	

A

Plot File by : 2013-1-24 ZHOUJ2

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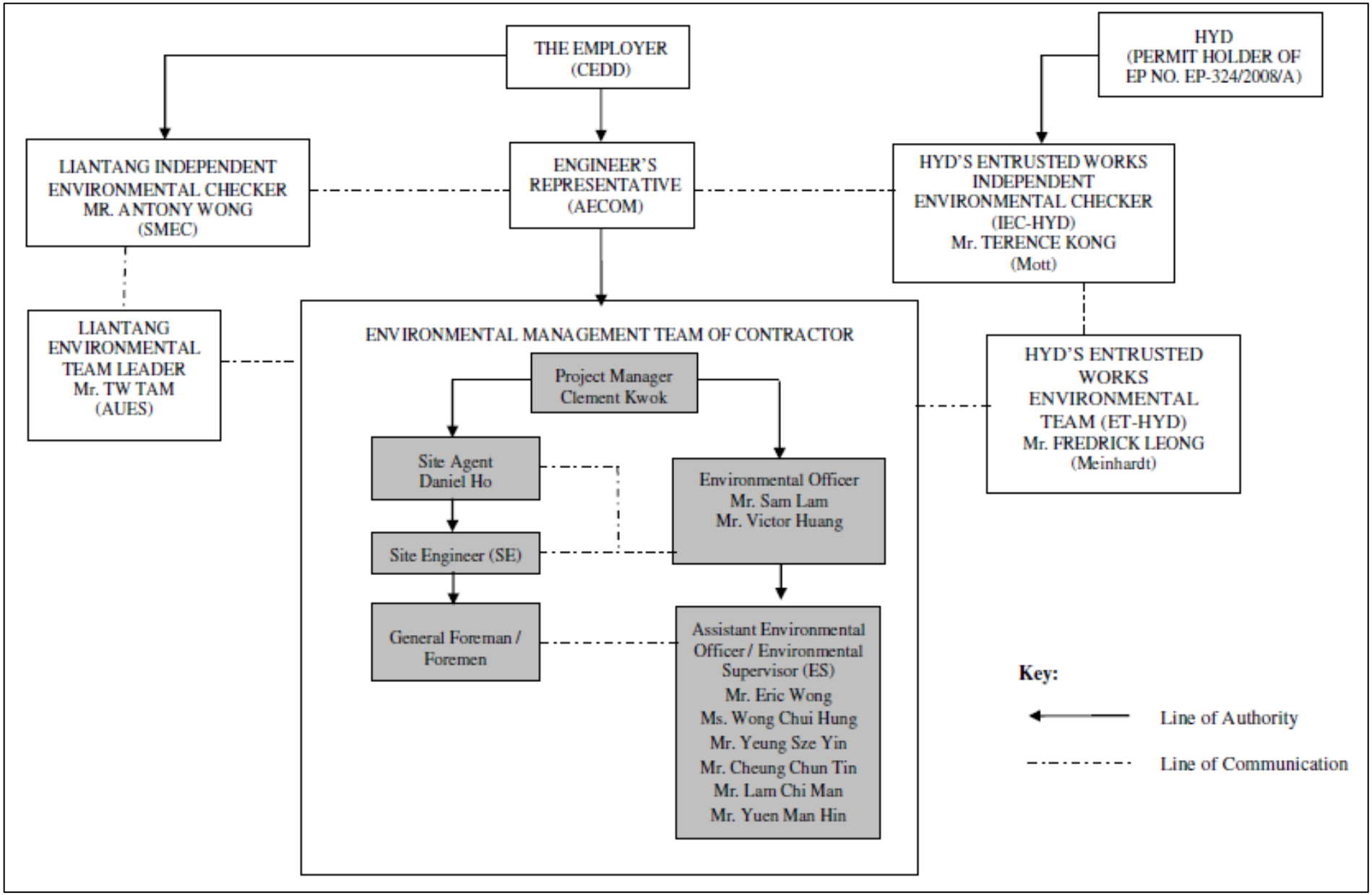
Appendix B

Organization Chart



Environmental Management Organization for Contract 3 - CV/2012/09

Contact Details of Key Personnel for Contract 3 - CV/2012/09

Organization	Project Role	Name of Key Staff	Tel No	Fax No.
AECOM	Engineer's Representative	Alan Lee	2472 0212	2472 0132
SMEC	Independent Environmental Checker	Antony Wong	3995 8120	3995 8101
Chun Wo	Project Director	Clement Kwok	2638 6136	2638 7077
Chun Wo	Site Agent	Daniel Ho	2638 6144	2638 7077
Chun Wo	Environmental Officer	Mr. Victor Huang	2638 6115	2638 7077
Chun Wo	Environmental Supervisor	Ms. Wong Chui Hing	2638 6125	2638 7077
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079

Legend:

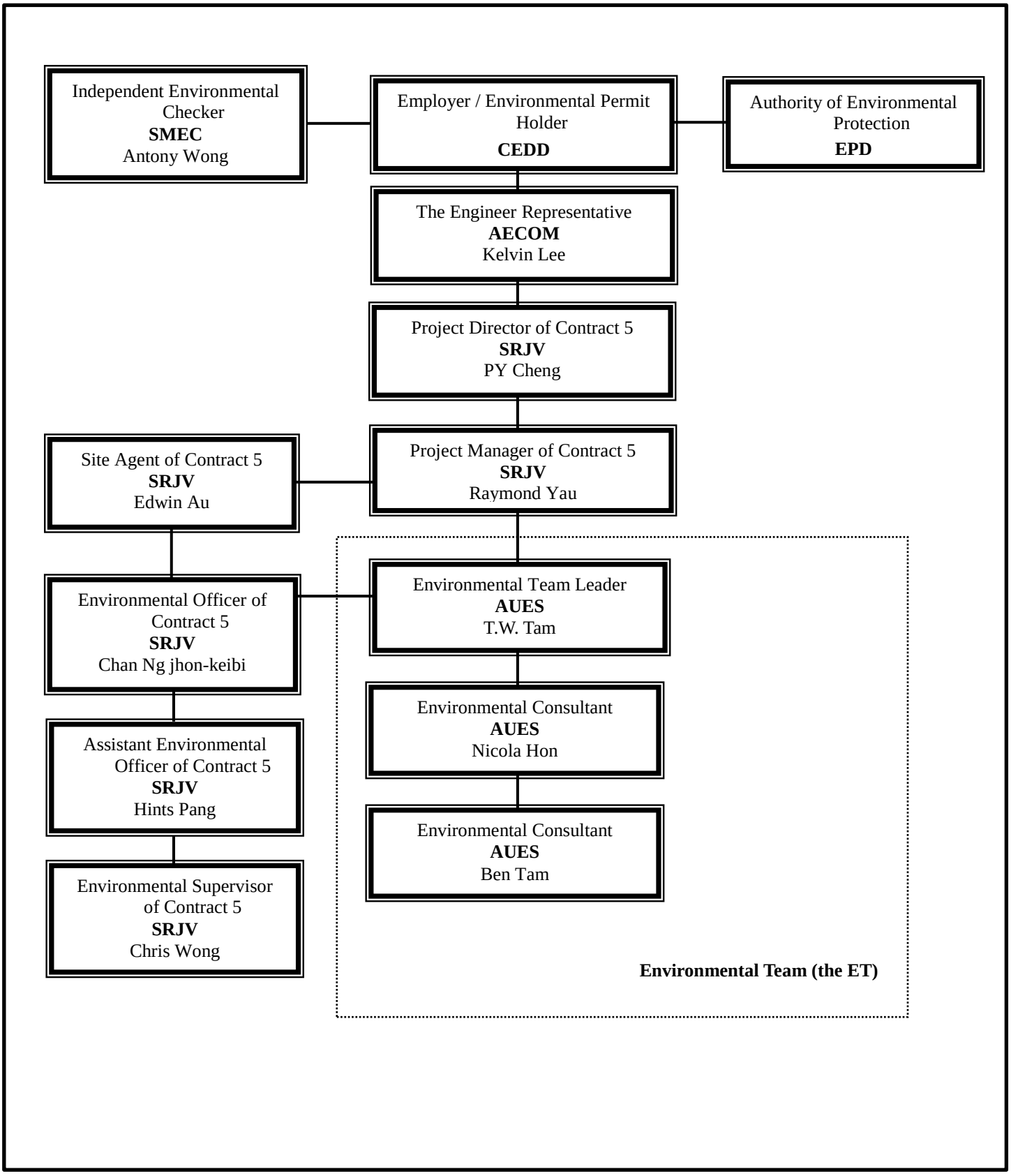
CEDD (Employer) – Civil Engineering and Development Department

AECOM (Engineer) – AECOM Asia Co. Ltd.

Chun Wo (Main Contractor) – Chun Wo Construction Ltd.

SMEC (IEC) – SMEC Asia Limited

AUES (ET) – Action-United Environmental Services & Consulting



Environmental Management Organization – CV/2013/03

Contact Details of Key Personnel for Contract 5 - CV/2013/03

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
AECOM	Engineer's Representative	Kelvin Lee	2674 2273	3992 9797
SMEC	Independent Environmental Checker	Antony Wong	3995 8120	3995 8101
SRJV	Project Director	PY Cheng	9023 4821	2403 1162
SRJV	Contract Manager	Raymond Yu	9041 1620	2403 1162
SRJV	Project Manager	Aaron Mak	9464 7095	2403 1162
SRJV	Site Agent	Edwin Au	9208 7329	2403 1162
SRJV	Environmental Officer	Chan Ng jhon-keibi	6090 0183	2403 1162
SRJV	Environmental Supervisor	Chris Wong	6387 4683	2403 1162
AUES	Environmental Team Leader	T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Ben Tam	2959 6059	2959 6079

Legend:

CEDD (Employer) – Civil Engineering and Development Department

AECOM (Engineer) – AECOM Asia Co. Ltd.

SRJV (Main Contractor) – Sang Hing Civil – Richwell Machinery JV

SMEC (IEC) – SMEC Asia Limited

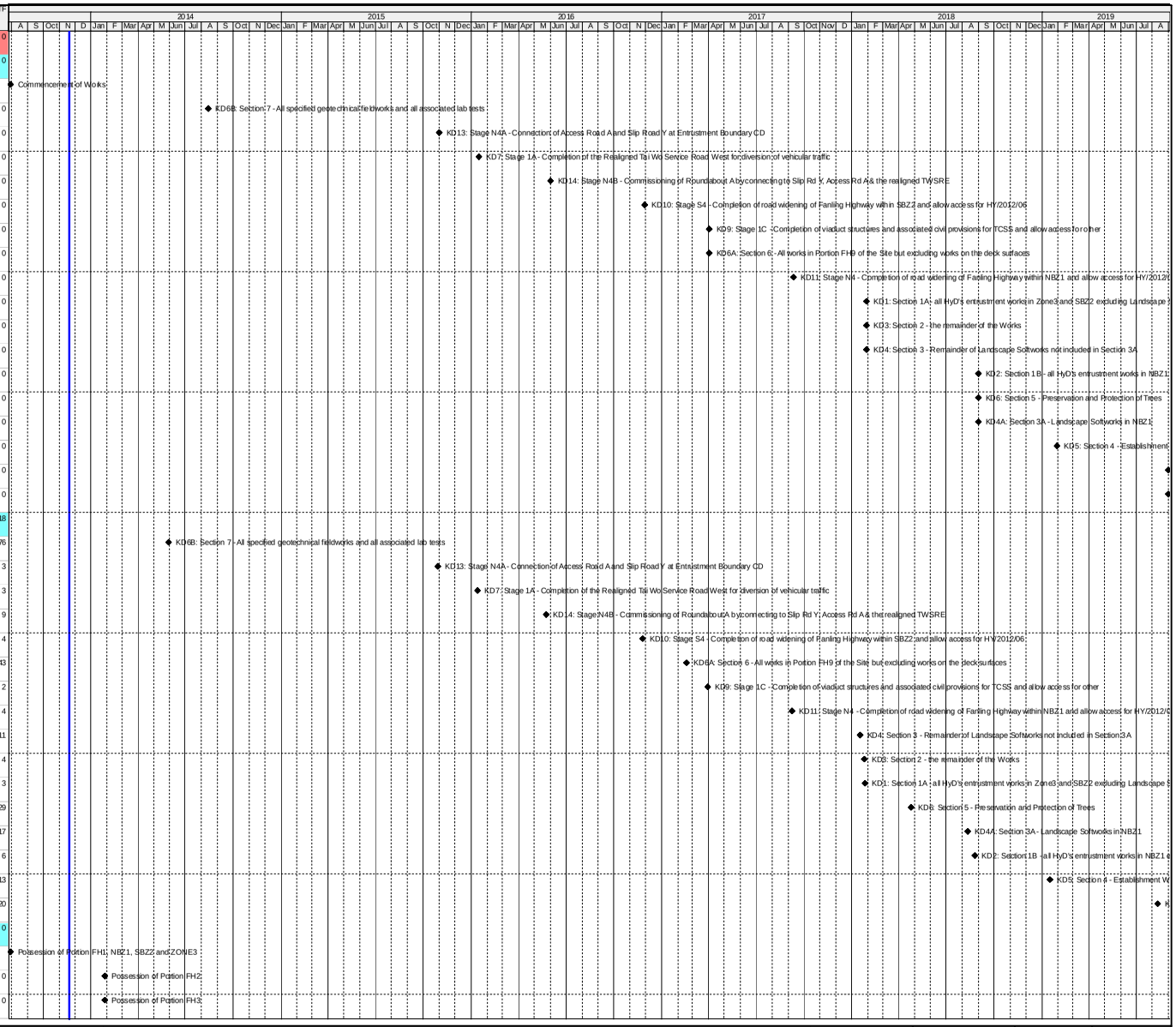
AUES (ET) – Action-United Environmental Services & Consulting

Appendix C

Master Construction Programme

Contract 3

Activity ID	Activity Name	OD	RD	Start	Finish	TF
Initial Works Programme Rev 4		1786	1692	31-Jul-13 A	31-Aug-19	0
Key Dates (Contractual)		1786	1480	31-Jul-13 A	31-Aug-19	0
KD-0010	Commencement of Works	0	0	31-Jul-13 A		
KD-1000	KD6B: Section 7 - All specified geotechnical fieldworks and all associated lab tests	0	0		14-Aug-14*	0
KD-1500	KD13: Stage N4A - Connection of Access Road A and Slip Road Y at Entrustment Boundary CD	0	0		31-Oct-15*	0
KD-1100	KD7: Stage 1A - Completion of the Realigned Tai Wo Service Road West for diversion of vehicular traffic	0	0		16-Jan-16*	0
KD-1600	KD14: Stage N4B - Commissioning of Roundabout A by connecting to Slip Rd Y, Access Rd A & the realigned TWSRE	0	0		01-Jun-16*	0
KD-1300	KD10: Stage S4 - Completion of road widening of Fanling Highway within SBZ2 and allow access for HY/2012/06	0	0		28-Nov-16*	0
KD-1200	KD9: Stage 1C - Completion of viaduct structures and associated civil provisions for TCSS and allow access for other	0	0		01-Apr-17*	0
KD-0900	KD6A: Section 6 - All works in Portion FH9 of the Site but excluding works on the deck surfaces	0	0		01-Apr-17*	0
KD-1400	KD11: Stage N4 - Completion of road widening of Fanling Highway within NBZ1 and allow access for HY/2012/06	0	0		11-Sep-17*	0
KD-0100	KD1: Section 1A - all HyD's entrustment works in Zone3 and SBZ2 excluding Landscape Softworks and Establishment Works	0	0		29-Jan-18*	0
KD-0300	KD3: Section 2 - the remainder of the Works	0	0		29-Jan-18*	0
KD-0400	KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A	0	0		29-Jan-18*	0
KD-0200	KD2: Section 1B - all HyD's entrustment works in NBZ1 excluding Landscape Softworks and Establishment Works	0	0		31-Aug-18*	0
KD-0800	KD6: Section 5 - Preservation and Protection of Trees	0	0		31-Aug-18*	0
KD-0500	KD4A: Section 3A - Landscape Softworks in NBZ1	0	0		31-Aug-18*	0
KD-0600	KD5: Section 4 - Establishment Works for Landscape Softworks under Section 3	0	0		29-Jan-19*	0
KD-0020	Completion of Contract CV/2012/09	0	0		31-Aug-19*	0
KD-0700	KD5A: Section 4A - Establishment Works for Landscape Softworks under Section 3A	0	0		31-Aug-19*	0
Key Dates (Forecast)		1525	1525	30-May-14	11-Aug-19	18
KD-1005	KD6B: Section 7 - All specified geotechnical fieldworks and all associated lab tests	0	0		30-May-14	76
KD-1505	KD13: Stage N4A - Connection of Access Road A and Slip Road Y at Entrustment Boundary CD	0	0		28-Oct-15	3
KD-1105	KD7: Stage 1A - Completion of the Realigned Tai Wo Service Road West for diversion of vehicular traffic	0	0		13-Jan-16	3
KD-1605	KD14: Stage N4B - Commissioning of Roundabout A by connecting to Slip Rd Y, Access Rd A & the realigned TWSRE	0	0		23-May-16	9
KD-1305	KD10: Stage S4 - Completion of road widening of Fanling Highway within SBZ2 and allow access for HY/2012/06	0	0		24-Nov-16	4
KD-0905	KD6A: Section 6 - All works in Portion FH9 of the Site but excluding works on the deck surfaces	0	0		17-Feb-17	43
KD-1205	KD9: Stage 1C - Completion of viaduct structures and associated civil provisions for TCSS and allow access for other	0	0		30-Mar-17	2
KD-1405	KD11: Stage N4 - Completion of road widening of Fanling Highway within NBZ1 and allow access for HY/2012/06	0	0		07-Sep-17	4
KD-0405	KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A	0	0		16-Jan-18	11
KD-0305	KD3: Section 2 - the remainder of the Works	0	0		25-Jan-18	4
KD-0105	KD1: Section 1A - all HyD's entrustment works in Zone3 and SBZ2 excluding Landscape Softworks and Establishment Works	0	0		26-Jan-18	3
KD-0805	KD6: Section 5 - Preservation and Protection of Trees	0	0		24-Apr-18	129
KD-0505	KD4A: Section 3A - Landscape Softworks in NBZ1	0	0		11-Aug-18	17
KD-0205	KD2: Section 1B - all HyD's entrustment works in NBZ1 excluding Landscape Softworks and Establishment Works	0	0		25-Aug-18	6
KD-0605	KD5: Section 4 - Establishment Works for Landscape Softworks under Section 3	0	0		16-Jan-19	13
KD-0705	KD5A: Section 4A - Establishment Works for Landscape Softworks under Section 3A	0	0		11-Aug-19	20
Possession of Site		180	0	31-Jul-13 A	27-Jan-14	0
PS-P01	Possession of Portion FH1, NBZ1, SBZ2 and ZONE3	0	0	31-Jul-13 A		
PS-P02	Possession of Portion FH2	0	0	27-Jan-14*		0
PS-P03	Possession of Portion FH3	0	0	27-Jan-14*		0



俊和建築工程有限公司
CHUN WO CONSTRUCTION & ENGINEERING CO., LTD.

Actual Work
Remaining Work
Summary Bar
Critical Remaining Work
Milestone

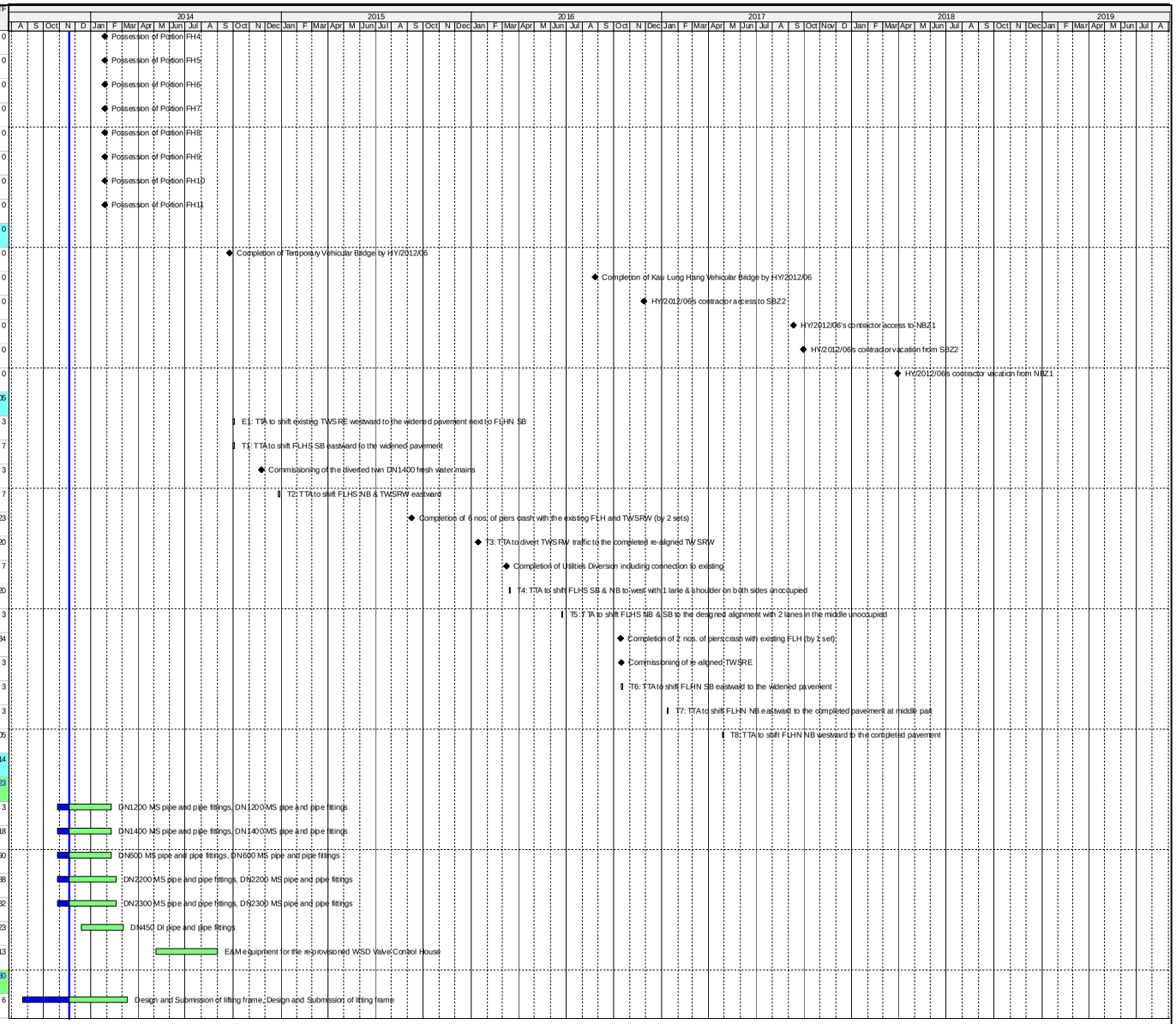
CEDD Contract No. CV/2012/09

Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

Initial Works Programme Rev 4

Date	Revision	Checked	Approved
29-Jan-14	Rev4	Sam	Daniel
21-Dec-13	Rev3	Dennis	Daniel
23-Oct-13	Rev2	Dennis	Daniel
17-Sep-13	Rev1	Dennis	Daniel
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
PS-P04	Possession of Portion FH4	0	0	27-Jan-14*		0
PS-P05	Possession of Portion FH5	0	0	27-Jan-14*		0
PS-P06	Possession of Portion FH6	0	0	27-Jan-14*		0
PS-P07	Possession of Portion FH7	0	0	27-Jan-14*		0
PS-P08	Possession of Portion FH8	0	0	27-Jan-14*		0
PS-P09	Possession of Portion FH9	0	0	27-Jan-14*		0
PS-P10	Possession of Portion FH10	0	0	27-Jan-14*		0
PS-P11	Possession of Portion FH11	0	0	27-Jan-14*		0
Dependent Milestones from Other Contracts		1283	1283	23-Sep-14	29-Mar-18	0
MS-0100	Completion of Temporary Vehicular Bridge by HY/2012/06	0	0		23-Sep-14*	0
MS-0110	Completion of Kau Lung Hang Vehicular Bridge by HY/2012/06	0	0		25-Aug-16*	0
MS-0120	HY/2012/06's contractor access to SBZ2	0	0	28-Nov-16*		0
MS-0140	HY/2012/06's contractor access to NBZ1	0	0	11-Sep-17*		0
MS-0130	HY/2012/06's contractor vacation from SBZ2	0	0		30-Sep-17*	0
MS-0150	HY/2012/06's contractor vacation from NBZ1	0	0		29-Mar-18*	0
Major Milestones and Events		754	754	30-Sep-14	29-Apr-17	105
MS-3000	E1: TTA to shift existing TWSRE westward to the widened pavement next to FLHN SB	2	2	30-Sep-14	03-Oct-14	3
MS-2000A	T1: TTA to shift FLHS SB eastward to the widened pavement	2	2	30-Sep-14	03-Oct-14	7
MS-0220	Commissioning of the diverted twin DN1400 fresh water mains	0	0		24-Nov-14	3
MS-2000B	T2: TTA to shift FLHS NB & TWSRW eastward	2	2	27-Dec-14	29-Dec-14	7
MS-0200	Completion of 6 nos. of piers crash with the existing FLH and TWSRW (by 2 sets)	0	0		08-Sep-15	123
MS-2000C	T3: TTA to divert TWSRW traffic to the completed re-aligned TWSRW	0	0	14-Jan-16		20
MS-3030	Completion of Utilities Diversion including connection to existing	0	0		08-Mar-16	7
MS-2000D	T4: TTA to shift FLHS SB & NB to west with 1 lane & shoulder on both sides unoccupied	2	2	14-Mar-16	15-Mar-16	20
MS-2000E	T5: TTA to shift FLHS NB & SB to the designed alignment with 2 lanes in the middle unoccupied	2	2	23-Jun-16	24-Jun-16	3
MS-0210	Completion of 2 nos. of piers crash with existing FLH (by 1 set)	0	0		13-Oct-16	34
MS-3010	Commissioning of re-aligned TWSRE	0	0	15-Oct-16		3
MS-1000A	T6: TTA to shift FLHN SB eastward to the widened pavement	2	2	15-Oct-16	17-Oct-16	3
MS-1000B	T7: TTA to shift FLHN NB eastward to the completed pavement at middle part	2	2	11-Jan-17	12-Jan-17	3
MS-1000C	T8: TTA to shift FLHN NB westward to the completed pavement	2	2	28-Apr-17	29-Apr-17	105
Major Procurement & Delivery		506	506	23-Aug-13 A	15-Aug-15	114
Water Supply Pipeworks		227	227	29-Oct-13 A	01-Sep-14	123
MM-1000	DN1200 MS pipe and pipe fittings	80	60	29-Oct-13 A	08-Feb-14	3
MM-1010	DN1400 MS pipe and pipe fittings	80	60	29-Oct-13 A	08-Feb-14	18
MM-1040	DN600 MS pipe and pipe fittings	80	60	29-Oct-13 A	08-Feb-14	290
MM-1020	DN2200 MS pipe and pipe fittings	90	68	29-Oct-13 A	18-Feb-14	188
MM-1030	DN2300 MS pipe and pipe fittings	90	68	29-Oct-13 A	18-Feb-14	282
MM-1050	DN450 DI pipe and pipe fittings	60	60	13-Dec-13	03-Mar-14	23
MM-1060	E&M equipment for the re-provisioned WSD Valve Control House	100	100	05-May-14	01-Sep-14	113
Precast Bridge Segment Lifting Frames and Precast Yard		250	250	23-Aug-13 A	29-Sep-14	30
MM-2000	Design and Submission of lifting frame	160	86	23-Aug-13 A	11-Mar-14	6



俊和建築工程有限公司
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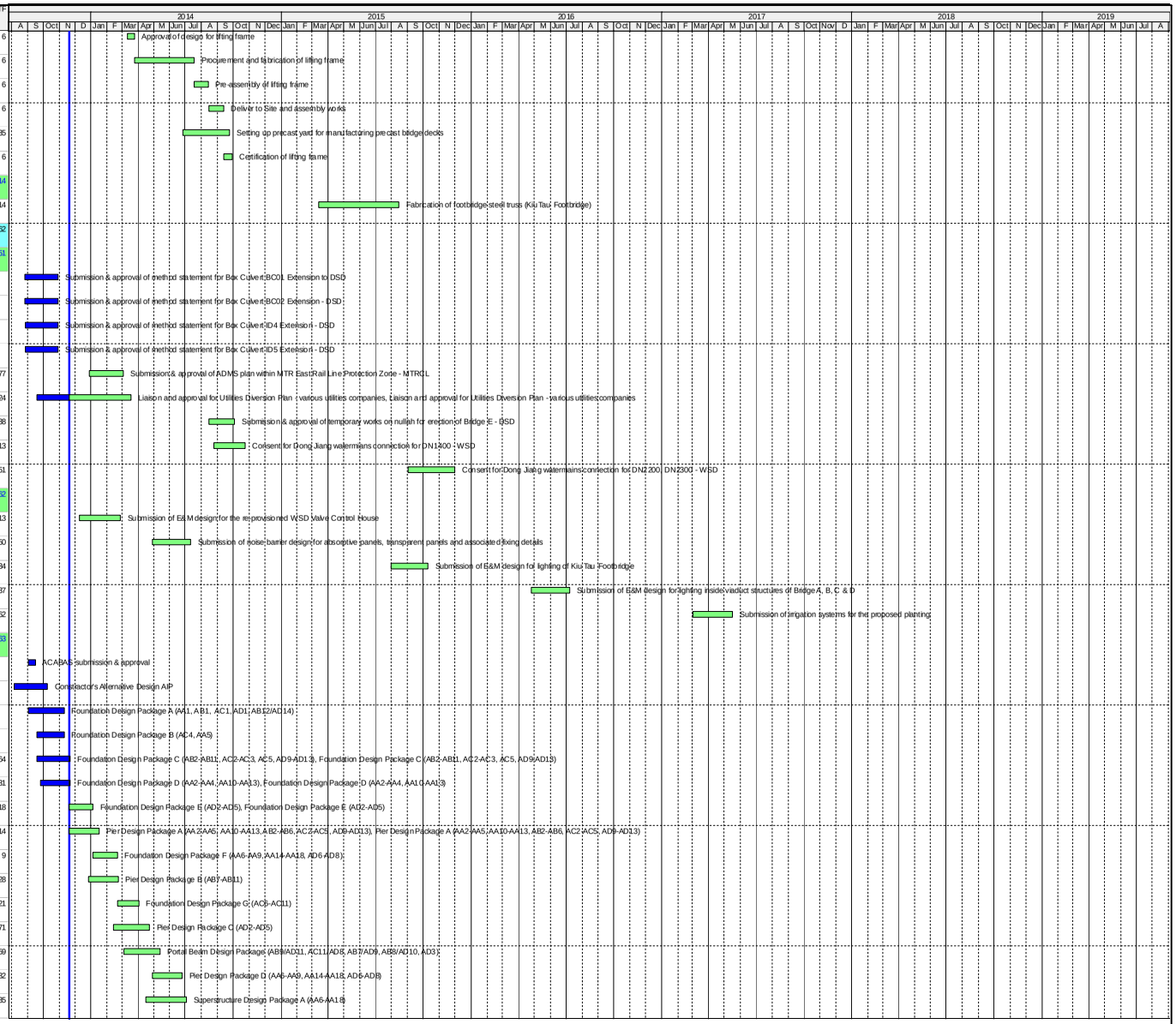
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
MM-2010	Approval of design for lifting frame	12	12	12-Mar-14	25-Mar-14	6
MM-2020	Procurement and fabrication of lifting frame	90	90	26-Mar-14	17-Jul-14	6
MM-2030	Pre-assembly of lifting frame	24	24	18-Jul-14	14-Aug-14	6
MM-2040	Deliver to Site and assembly works	24	24	15-Aug-14	12-Sep-14	6
MM-3020	Setting up precast yard for manufacturing precast bridge decks	75	75	26-Jun-14	23-Sep-14	35
MM-2050	Certification of lifting frame	14	14	13-Sep-14	29-Sep-14	6
Footbridge Steel Truss		125	125	14-Mar-15	15-Aug-15	114
MM-3050	Fabrication of footbridge steel truss (Kiu Tau Footbridge)	125	125	14-Mar-15	15-Aug-15	114
Design and Submissions		1111	1017	06-Aug-13 A	17-May-17	62
Statutory Approval		676	594	27-Aug-13 A	30-Nov-15	251
PRE-1030	Submission & approval of method statement for Box Culvert BC01 Extension to DSD	50	0	27-Aug-13 A	30-Oct-13 A	
PRE-1040	Submission & approval of method statement for Box Culvert BC02 Extension - DSD	50	0	27-Aug-13 A	30-Oct-13 A	
PRE-1050	Submission & approval of method statement for Box Culvert ID4 Extension - DSD	50	0	29-Aug-13 A	30-Oct-13 A	
PRE-1060	Submission & approval of method statement for Box Culvert ID5 Extension - DSD	50	0	29-Aug-13 A	30-Oct-13 A	
PRE-1010	Submission & approval of ADMS plan within MTR East Rail Line Protection Zone - MTRCL	50	50	28-Dec-13	04-Mar-14	77
PRE-1100	Liaison and approval for Utilities Diversion Plan - various utilities companies	150	92	19-Sep-13 A	18-Mar-14	224
PRE-1020	Submission & approval of temporary works on nullah for erection of Bridge E - DSD	40	40	15-Aug-14	03-Oct-14	38
PRE-1080	Consent for Dong Jiang watermains connection for DN1400 - WSD	50	50	25-Aug-14*	24-Oct-14	13
PRE-1070	Consent for Dong Jiang watermains connection for DN2200, DN2300 - WSD	75	75	01-Sep-15*	30-Nov-15	251
Method Statement and Design (Major) Approved by AECOM		1002	1002	09-Dec-13	17-May-17	62
PRE-2000	Submission of E&M design for the re-provisioned WSD Valve Control House	60	60	09-Dec-13	26-Feb-14	113
PRE-2020	Submission of noise barrier design for absorptive panels, transparent panels and associated fixing details	60	60	28-Apr-14	10-Jul-14	350
PRE-2030	Submission of E&M design for lighting of Kiu Tau Footbridge	60	60	31-Jul-15	10-Oct-15	134
PRE-2040	Submission of E&M design for lighting inside viaduct structures of Bridge A, B, C & D	60	60	26-Apr-16	08-Jul-16	37
PRE-2010	Submission of irrigation systems for the proposed planting	60	60	02-Mar-17	17-May-17	62
Contractor's Alternative Design (AD) Submission & Approval		320	239	06-Aug-13 A	16-Sep-14	163
PRE-4000	ACABAS submission & approval	50	0	03-Sep-13 A	17-Sep-13 A	
PRE-4010	Constractor's Alternative Design AIP	56	0	06-Aug-13 A	09-Oct-13 A	
PRE-4110	Foundation Design Package A (AA1, AB1, AC1, AD1, AB12/AD14)	36	0	03-Sep-13 A	11-Nov-13 A	
PRE-4120	Foundation Design Package B (AC4, AA5)	36	0	19-Sep-13 A	11-Nov-13 A	
PRE-4130	Foundation Design Package C (AB2-AB11, AC2-AC3, AC5, AD9-AD13)	48	2	19-Sep-13 A	22-Nov-13	64
PRE-4140	Foundation Design Package D (AA2-AA4, AA10-AA13)	48	2	26-Sep-13 A	22-Nov-13	31
PRE-4150	Foundation Design Package E (AD2-AD5)	36	36	21-Nov-13 A	04-Jan-14	18
PRE-4210	Pier Design Package A (AA2-AA5, AA10-AA13, AB2-AB6, AC2-AC5, AD9-AD13)	46	46	21-Nov-13 A	16-Jan-14	114
PRE-4160	Foundation Design Package F (AA6-AA9, AA14-AA18, AD6-AD8)	36	36	04-Jan-14*	21-Feb-14	9
PRE-4220	Pier Design Package B (AB7-AB11)	43	43	27-Dec-13*	22-Feb-14	128
PRE-4170	Foundation Design Package G (AC6-AC11)	36	36	21-Feb-14*	03-Apr-14	21
PRE-4230	Pier Design Package C (AD2-AD5)	56	56	13-Feb-14*	23-Apr-14	71
PRE-4260	Portal Beam Design Package (AB9/AD11, AC11/AD8, AB7/AD9, AB8/AD10, AD3)	54	54	05-Mar-14*	13-May-14	159
PRE-4240	Pier Design Package D (AA6-AA9, AA14-AA18, AD6-AD8)	46	46	29-Apr-14*	24-Jun-14	32
PRE-4310	Superstructure Design Package A (AA6-AA18)	60	60	16-Apr-14*	02-Jul-14	135



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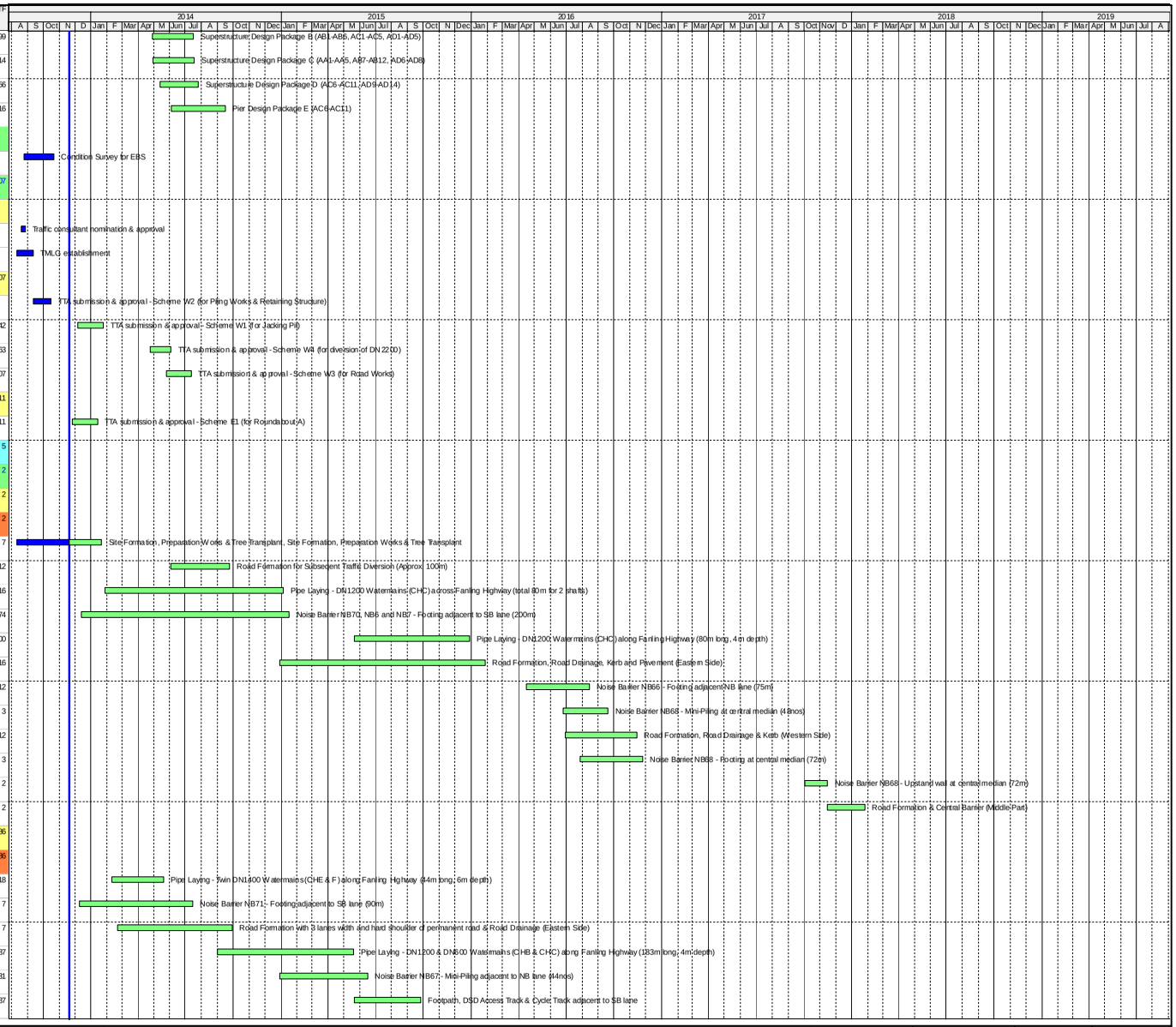
PRE-4320	Superstructure Design Package B (AB1-AB6, AC1-AC5, AD1-AD5)	64	64	29-Apr-14*	16-Jul-14	199
PRE-4330	Superstructure Design Package C (AA1-AA5, AB7-AB12, AD6-AD8)	64	64	30-Apr-14*	17-Jul-14	214
PRE-4340	Superstructure Design Package D (AC6-AC11, AD9-AD14)	62	62	14-May-14*	26-Jul-14	156
PRE-4250	Pier Design Package E (AC6-AC11)	88	88	04-Jun-14*	16-Sep-14	16
Condition Survey		18	0	26-Aug-13 A	22-Oct-13 A	
PRE-5000	Condition Survey for EBS	18	0	26-Aug-13 A	22-Oct-13 A	
Temporary Traffic Arrangement (TTA) Submission and Approval		278	180	12-Aug-13 A	12-Jul-14	107
Forming of TMLG		50	0	12-Aug-13 A	13-Sep-13 A	
PRE-6000	Traffic consultant nomination & approval	25	0	20-Aug-13 A	29-Aug-13 A	
PRE-6020	TMLG establishment	50	0	12-Aug-13 A	13-Sep-13 A	
TTA for Tai Wo Service Road West		222	170	13-Sep-13 A	12-Jul-14	107
PRE-6110	TTA submission & approval - Scheme W2 (for Piling Works & Retaining Structure)	40	0	13-Sep-13 A	15-Oct-13 A	
PRE-6100	TTA submission & approval - Scheme W1 (for Jacking Pit)	40	40	07-Dec-13	25-Jan-14	42
PRE-6120	TTA submission & approval - Scheme W4 (for diversion of DN2200)	40	40	24-Apr-14	02-Jun-14	63
PRE-6140	TTA submission & approval - Scheme W3 (for Road Works)	40	40	26-May-14	12-Jul-14	107
TTA for Tai Wo Service Road East		40	40	26-Nov-13	14-Jan-14	211
PRE-6200	TTA submission & approval - Scheme E1 (for Roundabout A)	40	40	26-Nov-13	14-Jan-14	211
Section IA & IB - Fanling Highway Widening (KD-1 & KD-2)		1414	1394	12-Aug-13 A	25-Aug-18	5
Fanling Highway South Portion between CH6935 and CH7470		1247	1227	12-Aug-13 A	26-Jan-18	2
Fanling Highway Zone 1 between CH6935 and CH7130 (within SBZ2)		1247	1227	12-Aug-13 A	26-Jan-18	2
At-Grade Roadworks (195m)		1247	1227	12-Aug-13 A	26-Jan-18	2
FHW-1100	Site Formation, Preparation Works & Tree Transplant	65	49	12-Aug-13 A	20-Jan-14	7
FHW-1130	Road Formation for Subseqent Traffic Diversion (Approx. 100m)	95	95	03-Jun-14	23-Sep-14	12
FHW-1110*	Pipe Laying - DN1200 Watermains (CHC) across Fanling Highway (total 80m for 2 shafts)	275	275	27-Jan-14	05-Jan-15	116
FHW-1140	Noise Barrier NB70, NB6 and NB7 - Footing adjacent to SB lane (200m)	320	320	13-Dec-13	16-Jan-15	74
FHW-1150*	Pipe Laying - DN1200 Watermains (CHC) along Fanling Highway (80m long, 4m depth)	182	182	21-May-15	28-Dec-15	500
FHW-1160	Road Formation, Road Drainage, Kerb and Pavement (Eastern Side)	318	318	29-Dec-14	27-Jan-16	116
FHW-1200	Noise Barrier NB66 - Footing adjacent NB lane (75m)	100	100	16-Apr-16	15-Aug-16	12
FHW-1300	Noise Barrier NB68 - Mini-Piling at central median (48nos)	72	72	25-Jun-16	19-Sep-16	3
FHW-1210	Road Formation, Road Drainage & Kerb (Western Side)	115	115	29-Jun-16	14-Nov-16	12
FHW-1310	Noise Barrier NB68 - Footing at central median (72m)	100	100	28-Jul-16	24-Nov-16	3
FHW-1320	Noise Barrier NB68 - Upstand wall at central median (72m)	35	35	03-Oct-17	14-Nov-17	2
FHW-1330	Road Formation & Central Barrier (Middle Part)	60	60	15-Nov-17	26-Jan-18	2
Fanling Highway Zone 2 between CH7130 and CH7290		1127	1127	10-Dec-13	16-Oct-17	86
At-Grade Roadworks (160m)		1127	1127	10-Dec-13	16-Oct-17	86
FHW-2100*	Pipe Laying - Twin DN1400 Watermains (CHE & F) along Fanling Highway (44m long, 6m depth)	80	80	10-Feb-14	20-May-14	18
FHW-2110	Noise Barrier NB71 - Footing adjacent to SB lane (90m)	170	170	10-Dec-13	15-Jul-14	7
FHW-2120	Road Formation with 3 lanes width and hard shoulder of permanent road & Road Drainage (Eastern Side)	180	180	21-Feb-14	29-Sep-14	7
FHW-2130*	Pipe Laying - DN1200 & DN600 Watermains (CHB & CHC) along Fanling Highway (183m long, 4m depth)	208	208	01-Sep-14	20-May-15	687
FHW-2200	Noise Barrier NB67 - Mini-Piling adjacent to NB lane (44nos)	132	132	30-Dec-14	16-Jun-15	31
FHW-2190	Footpath, DSD Access Track & Cycle Track adjacent to SB lane	108	108	21-May-15	26-Sep-15	687



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09-Jul-13	Rev0	Anselm	Daniel

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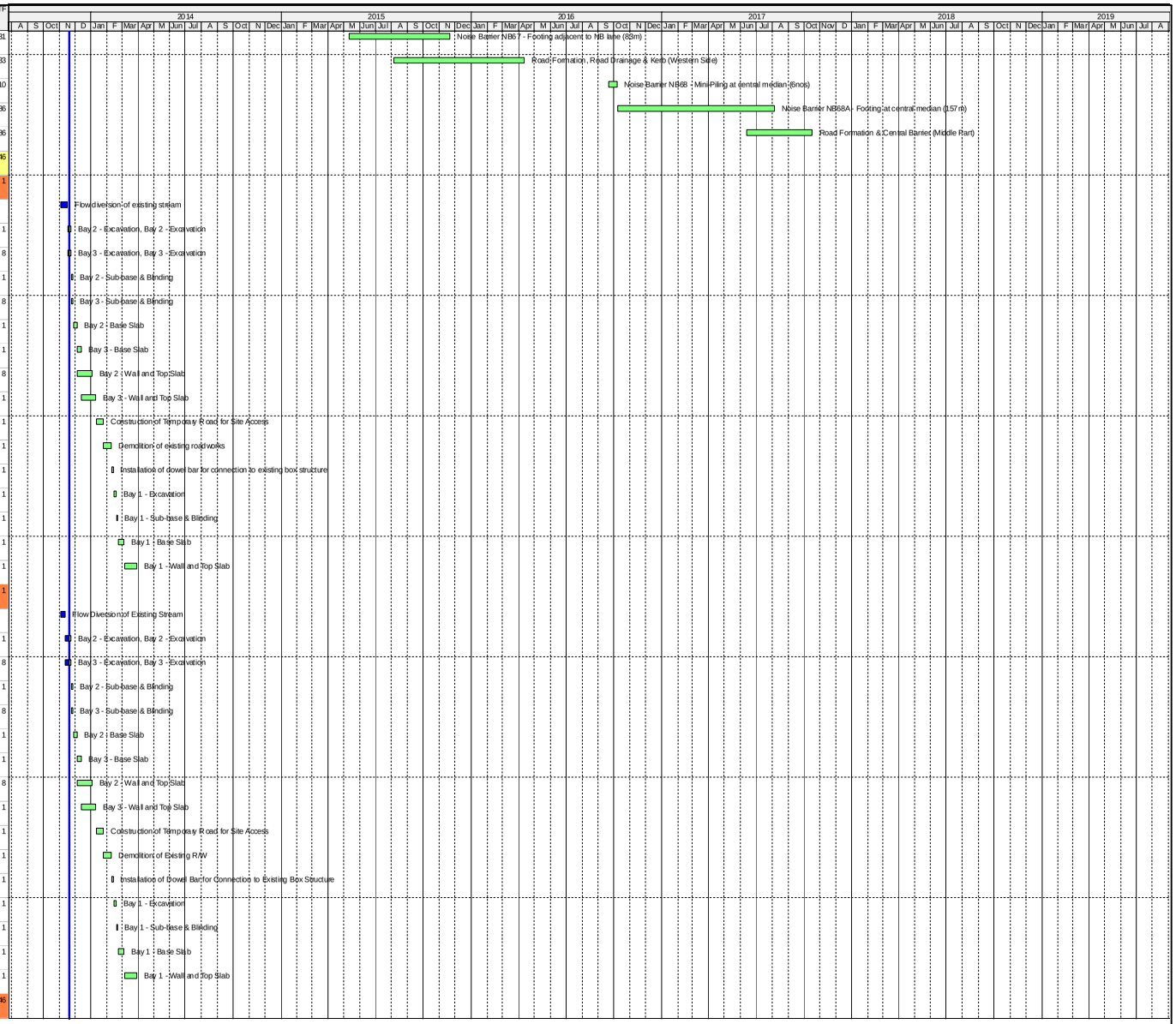
FHW-2210	Noise Barrier NB67 - Footing adjacent to NB lane (83m)	160	160	12-May-15	20-Nov-15	31
FHW-2220	Road Formation, Road Drainage & Kerb (Western Side)	200	200	05-Aug-15	12-Apr-16	533
FHW-2300	Noise Barrier NB68 - Mini-Piling at central median (6nos)	15	15	20-Sep-16	07-Oct-16	10
FHW-2310	Noise Barrier NB68A - Footing at central median (157m)	240	240	08-Oct-16	04-Aug-17	86
FHW-2320	Road Formation & Central Barrier (Middle Part)	105	105	13-Jun-17	16-Oct-17	86
Fanling Highway Zone 3 between CH7290 and CH7380		1183	1183	05-Nov-13 A	02-Dec-17	46
Box Culvert Extension - ID4		102	102	05-Nov-13 A	29-Mar-14	1
ID4-3010	Flow diversion of existing stream	4	0	05-Nov-13 A	16-Nov-13 A	
ID4-3030B	Bay 2 - Excavation	4	3	18-Nov-13 A	23-Nov-13	1
ID4-3030C	Bay 3 - Excavation	4	3	18-Nov-13 A	23-Nov-13	8
ID4-3040B	Bay 2 - Sub-base & Blinding	3	3	25-Nov-13	27-Nov-13	1
ID4-3040C	Bay 3 - Sub-base & Blinding	3	3	25-Nov-13	27-Nov-13	8
ID4-3050B	Bay 2 - Base Slab	7	7	28-Nov-13	05-Dec-13	1
ID4-3050C	Bay 3 - Base Slab	7	7	06-Dec-13	13-Dec-13	1
ID4-3060B	Bay 2 - Wall and Top Slab	21	21	06-Dec-13	02-Jan-14	8
ID4-3060C	Bay 3 - Wall and Top Slab	21	21	14-Dec-13	10-Jan-14	1
ID4-3070	Construction of Temporary Road for Site Access	12	12	11-Jan-14	24-Jan-14	1
ID4-3000	Demolition of existing roadworks	7	7	25-Jan-14	08-Feb-14	1
ID4-3020	Installation of dowel bar for connection to existing box structure	4	4	10-Feb-14	13-Feb-14	1
ID4-3030A	Bay 1 - Excavation	4	4	14-Feb-14	18-Feb-14	1
ID4-3040A	Bay 1 - Sub-base & Blinding	3	3	19-Feb-14	21-Feb-14	1
ID4-3050A	Bay 1 - Base Slab	10	10	22-Feb-14	05-Mar-14	1
ID4-3060A	Bay 1 - Wall and Top Slab	21	21	06-Mar-14	29-Mar-14	1
Box Culvert Extension - ID5		102	102	05-Nov-13 A	29-Mar-14	1
ID5-3010	Flow Diversion of Existing Stream	4	0	05-Nov-13 A	12-Nov-13 A	
ID5-3030B	Bay 2 - Excavation	4	3	13-Nov-13 A	23-Nov-13	1
ID5-3030C	Bay 3 - Excavation	4	3	13-Nov-13 A	23-Nov-13	8
ID5-3040B	Bay 2 - Sub-base & Blinding	3	3	25-Nov-13	27-Nov-13	1
ID5-3040C	Bay 3 - Sub-base & Blinding	3	3	25-Nov-13	27-Nov-13	8
ID5-3050B	Bay 2 - Base Slab	7	7	28-Nov-13	05-Dec-13	1
ID5-3050C	Bay 3 - Base Slab	7	7	06-Dec-13	13-Dec-13	1
ID5-3060B	Bay 2 - Wall and Top Slab	21	21	06-Dec-13	02-Jan-14	8
ID5-3060C	Bay 3 - Wall and Top Slab	21	21	14-Dec-13	10-Jan-14	1
ID5-3070	Construction of Temporary Road for Site Access	12	12	11-Jan-14	24-Jan-14	1
ID5-3000	Demolition of Existing R/W	7	7	25-Jan-14	08-Feb-14	1
ID5-3020	Installation of Dowel Bar for Connection to Existing Box Structure	4	4	10-Feb-14	13-Feb-14	1
ID5-3030A	Bay 1 - Excavation	4	4	14-Feb-14	18-Feb-14	1
ID5-3040A	Bay 1 - Sub-base & Blinding	3	3	19-Feb-14	21-Feb-14	1
ID5-3050A	Bay 1 - Base Slab	10	10	22-Feb-14	05-Mar-14	1
ID5-3060A	Bay 1 - Wall and Top Slab	21	21	06-Mar-14	29-Mar-14	1
At-Grade Roadworks (90m)		1108	1108	27-Feb-14	02-Dec-17	46



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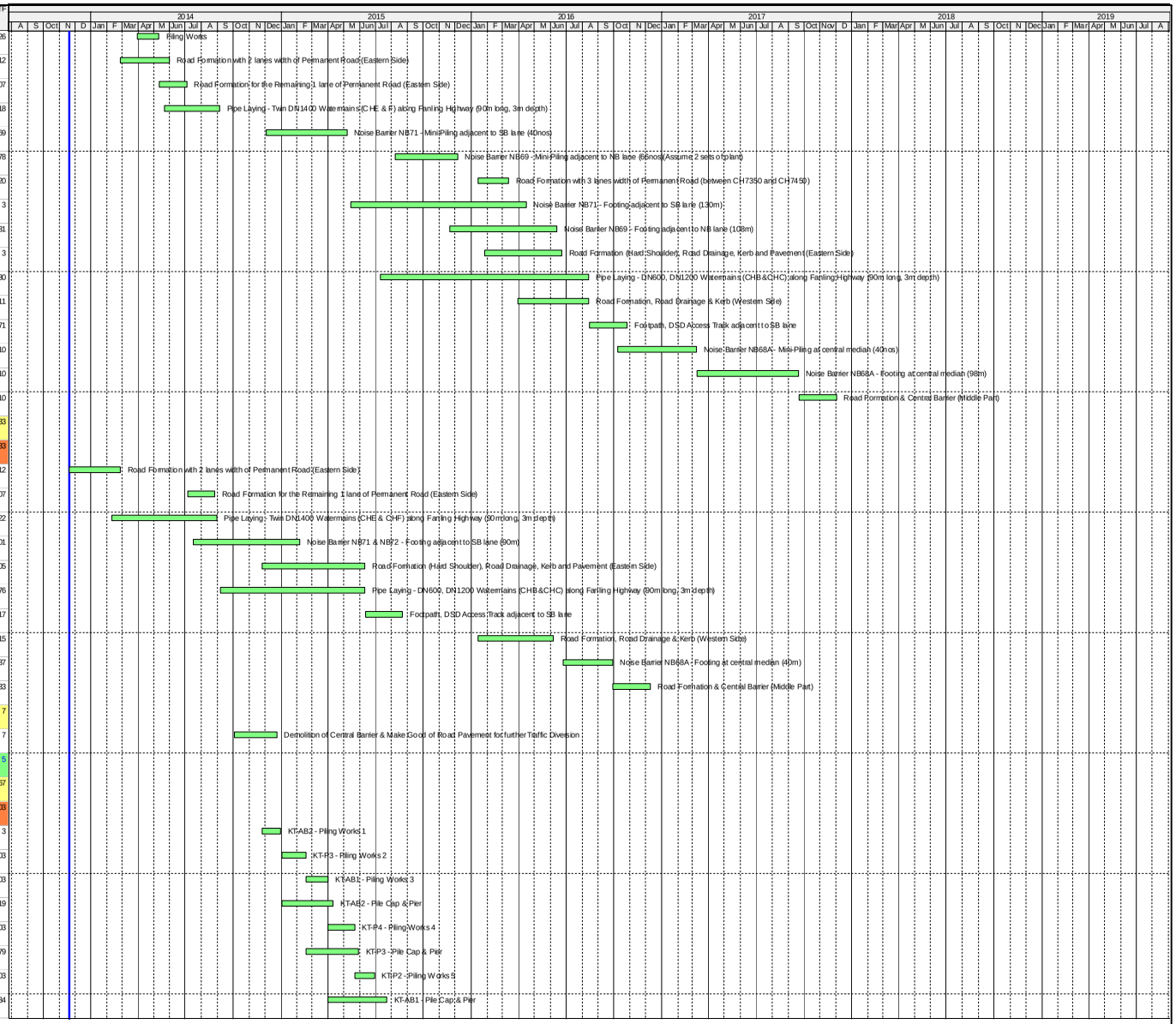
FHW-3110	Filing Works	30	30	31-Mar-14	10-May-14	26
FHW-3100	Road Formation with 2 lanes width of Permanent Road (Eastern Side)	75	75	27-Feb-14	31-May-14	12
FHW-3130	Road Formation for the Remaining 1 lane of Permanent Road (Eastern Side)	45	45	12-May-14	04-Jul-14	107
FHW-3120*	Pipe Laying - Twin DN1400 Watermains (CHE & F) along Fanling Highway (90m long, 3m depth)	90	90	21-May-14	04-Sep-14	18
FHW-3140	Noise Barrier NB71 - Mini-Piling adjacent to SB lane (40nos)	120	120	03-Dec-14	07-May-15	69
FHW-3210	Noise Barrier NB69 - Mini-Piling adjacent to NB lane (66nos)(Assume 2 sets of plant)	100	100	08-Aug-15	05-Dec-15	78
FHW-3200	Road Formation with 3 lanes width of Permanent Road (between CH7350 and CH7450)	45	45	14-Jan-16	12-Mar-16	20
FHW-3150	Noise Barrier NB71 - Footing adjacent to SB lane (130m)	270	270	15-May-15	15-Apr-16	3
FHW-3220	Noise Barrier NB69 - Footing adjacent to NB lane (108m)	160	160	21-Nov-15	13-Jun-16	31
FHW-3170	Road Formation (Hard Shoulder), Road Drainage, Kerb and Pavement (Eastern Side)	115	115	26-Jan-16	22-Jun-16	3
FHW-3160*	Pipe Laying - DN600, DN1200 Watermains (CHB &CHC) along Fanling Highway (90m long, 3m depth)	324	324	10-Jul-15	13-Aug-16	330
FHW-3230	Road Formation, Road Drainage & Kerb (Western Side)	112	112	31-Mar-16	13-Aug-16	411
FHW-3180	Footpath, DSD Access Track adjacent to SB lane	60	60	15-Aug-16	26-Oct-16	371
FHW-3300	Noise Barrier NB68A - Mini-Piling at central median (40nos)	120	120	08-Oct-16	08-Mar-17	10
FHW-3310	Noise Barrier NB68A - Footing at central median (98m)	160	160	09-Mar-17	20-Sep-17	10
FHW-3320	Road Formation & Central Barrier (Middle Part)	60	60	21-Sep-17	02-Dec-17	10
Fanling Highway Zone 4 between CH7380 and CH7470		896	896	21-Nov-13	09-Dec-16	333
At-Grade Roadworks (90m)		896	896	21-Nov-13	09-Dec-16	333
FHW-4100	Road Formation with 2 lanes width of Permanent Road (Eastern Side)	75	75	21-Nov-13	26-Feb-14	12
FHW-4120	Road Formation for the Remaining 1 lane of Permanent Road (Eastern Side)	45	45	05-Jul-14	26-Aug-14	107
FHW-4110*	Pipe Laying - Twin DN1400 Watermains (CHE & CHF) along Fanling Highway (90m long, 3m depth)	166	166	10-Feb-14	30-Aug-14	22
FHW-4130	Noise Barrier NB71 & NB72 - Footing adjacent to SB lane (90m)	170	170	16-Jul-14	05-Feb-15	101
FHW-4150	Road Formation (Hard Shoulder), Road Drainage, Kerb and Pavement (Eastern Side)	156	156	25-Nov-14	11-Jun-15	305
FHW-4140*	Pipe Laying - DN600, DN1200 Watermains (CHB &CHC) along Fanling Highway (90m long, 3m depth)	221	221	06-Sep-14	11-Jun-15	676
FHW-4160	Footpath, DSD Access Track adjacent to SB lane	60	60	12-Jun-15	22-Aug-15	717
FHW-4200	Road Formation, Road Drainage & Kerb (Western Side)	112	112	14-Jan-16	06-Jun-16	415
FHW-4300	Noise Barrier NB68A - Footing at central median (40m)	80	80	25-Jun-16	28-Sep-16	137
FHW-4310	Road Formation & Central Barrier (Middle Part)	60	60	29-Sep-16	09-Dec-16	333
Miscellaneous Works for Facilitating Traffic Diversion of Fanling Highway		70	70	04-Oct-14	24-Dec-14	7
FHW-M-1000	Demolition of Central Barrier & Make Good of Road Pavement for further Traffic Diversion	70	70	04-Oct-14	24-Dec-14	7
Fanling Highway North Portion between CH7470 and CH7925		1400	1394	30-Aug-13 A	25-Aug-18	5
Fanling Highway Zone 5 between CH7470 and CH7600 (Provision of Kiu Tau Footbridge)		1033	1033	27-Jan-14	09-Aug-17	67
Kiu Tau Footbridge Reprovision (East)		329	329	25-Nov-14	08-Jan-16	103
FHW-5000B	KT-AB2 - Piling Works 1	30	30	25-Nov-14	31-Dec-14	3
FHW-5000D	KT-P3 - Piling Works 2	40	40	02-Jan-15	17-Feb-15	103
FHW-5000A	KT-AB1 - Piling Works 3	30	30	18-Feb-15	31-Mar-15	103
FHW-5010B	KT-AB2 - Pile Cap & Pier	75	75	02-Jan-15	10-Apr-15	219
FHW-5000E	KT-P4 - Piling Works 4	40	40	01-Apr-15	22-May-15	103
FHW-5010D	KT-P3 - Pile Cap & Pier	75	75	18-Feb-15	29-May-15	179
FHW-5000C	KT-P2 - Piling Works 5	30	30	23-May-15	29-Jun-15	103
FHW-5010A	KT-AB1 - Pile Cap & Pier	90	90	01-Apr-15	23-Jul-15	134



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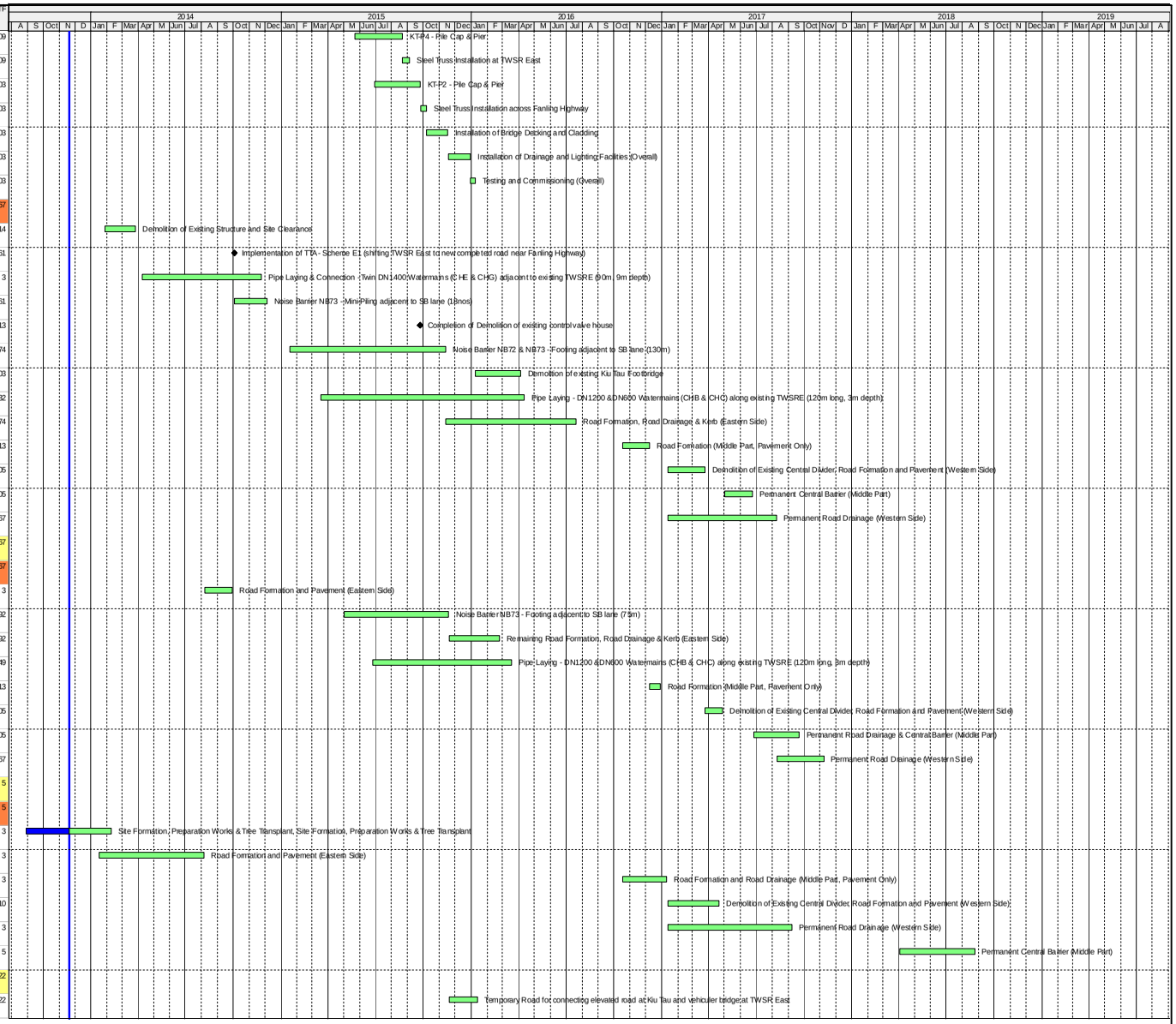
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
FHW-6010E	KT-P4 - Pile Cap & Pier	75	75	23-May-15	21-Aug-15	109
FHW-6020	Steel Truss Installation at TWSR East	12	12	22-Aug-15	04-Sep-15	109
FHW-6010C	KT-P2 - Pile Cap & Pier	75	75	30-Jun-15	25-Sep-15	103
FHW-6030	Steel Truss Installation across Fanling Highway	7	7	26-Sep-15	06-Oct-15	103
FHW-6040	Installation of Bridge Decking and Cladding	35	35	07-Oct-15	17-Nov-15	103
FHW-6050	Installation of Drainage and Lighting Facilities (Overall)	35	35	18-Nov-15	30-Dec-15	103
FHW-6060	Testing and Commissioning (Overall)	7	7	31-Dec-15	08-Jan-16	103
At-Grade Road Works (130m)		1033	1033	27-Jan-14	09-Aug-17	67
FHW-6100	Demolition of Existing Structure and Site Clearance	45	45	27-Jan-14	26-Mar-14	14
FHW-6120	Implementation of TTA - Scheme E1 (shifting TWSR East to new completed road near Fanling Highway)	0	0	04-Oct-14		161
FHW-6110*	Pipe Laying & Connection - Twin DN1400 Watermains (CHE & CHG) adjacent to existing TWSRE (90m, 9m depth)	186	186	10-Apr-14	24-Nov-14	3
FHW-6130	Noise Barrier NB73 - Mini-Piling adjacent to SB lane (18nos)	54	54	04-Oct-14	05-Dec-14	161
FHW-6170	Completion of Demolition of existing control valve house	0	0		24-Sep-15	113
FHW-6140	Noise Barrier NB72 & NB73 - Footing adjacent to SB lane (130m)	240	240	17-Jan-15	12-Nov-15	74
FHW-6160	Demolition of existing Kiu Tau Footbridge	65	65	09-Jan-16	05-Apr-16	103
FHW-6150*	Pipe Laying - DN1200 &DN600 Watermains (CHB & CHC) along existing TWSRE (120m long, 3m depth)	312	312	18-Mar-15	12-Apr-16	432
FHW-6180	Road Formation, Road Drainage & Kerb (Eastern Side)	198	198	13-Nov-15	20-Jul-16	74
FHW-6200	Road Formation (Middle Part, Pavement Only)	45	45	18-Oct-16	08-Dec-16	13
FHW-6300	Demolition of Existing Central Divider, Road Formation and Pavement (Western Side)	55	55	13-Jan-17	24-Mar-17	105
FHW-6210	Permanent Central Barrier (Middle Part)	45	45	02-May-17	24-Jun-17	105
FHW-6310	Permanent Road Drainage (Western Side)	165	165	13-Jan-17	09-Aug-17	67
Fanling Highway Zone 6 between CH7600 and CH7660 (Existing Vehicular Bridge)		957	957	07-Aug-14	08-Nov-17	67
At-Grade Roadworks (60m)		957	957	07-Aug-14	08-Nov-17	67
FHW-6100	Road Formation and Pavement (Eastern Side)	45	45	07-Aug-14	29-Sep-14	3
FHW-6110	Noise Barrier NB73 - Footing adjacent to SB lane (75m)	166	166	02-May-15	18-Nov-15	192
FHW-6130	Remaining Road Formation, Road Drainage & Kerb (Eastern Side)	75	75	19-Nov-15	24-Feb-16	192
FHW-6120*	Pipe Laying - DN1200 &DN600 Watermains (CHB & CHC) along existing TWSRE (120m long, 3m depth)	216	216	26-Jun-15	18-Mar-16	449
FHW-6200	Road Formation (Middle Part, Pavement Only)	15	15	09-Dec-16	28-Dec-16	13
FHW-6300	Demolition of Existing Central Divider, Road Formation and Pavement (Western Side)	25	25	25-Mar-17	27-Apr-17	105
FHW-6210	Permanent Road Drainage & Central Barrier (Middle Part)	75	75	26-Jun-17	21-Sep-17	105
FHW-6310	Permanent Road Drainage (Western Side)	75	75	10-Aug-17	08-Nov-17	67
Fanling Highway Zone 7 between CH7660 and CH7925		1400	1394	30-Aug-13 A	25-Aug-18	5
At-Grade Roadworks (265m)		1400	1394	30-Aug-13 A	25-Aug-18	5
FHW-7100	Site Formation, Preparation Works & Tree Transplant	127	60	30-Aug-13 A	08-Feb-14	3
FHW-7110	Road Formation and Pavement (Eastern Side)	160	160	16-Jan-14	06-Aug-14	3
FHW-7200	Road Formation and Road Drainage (Middle Part, Pavement Only)	70	70	18-Oct-16	10-Jan-17	3
FHW-7300	Demolition of Existing Central Divider, Road Formation and Pavement (Western Side)	75	75	13-Jan-17	21-Apr-17	110
FHW-7310	Permanent Road Drainage (Western Side)	190	190	13-Jan-17	07-Sep-17	3
FHW-7210	Permanent Central Barrier (Middle Part)	120	120	03-Apr-18	25-Aug-18	5
Miscellaneous Works for Facilitating Traffic Diversion of Fanling Highway		45	45	19-Nov-15	13-Jan-16	222
FHW-N-1000	Temporary Road for connecting elevated road at Kiu Tau and vehicular bridge at TWSR East	45	45	19-Nov-15	13-Jan-16	222



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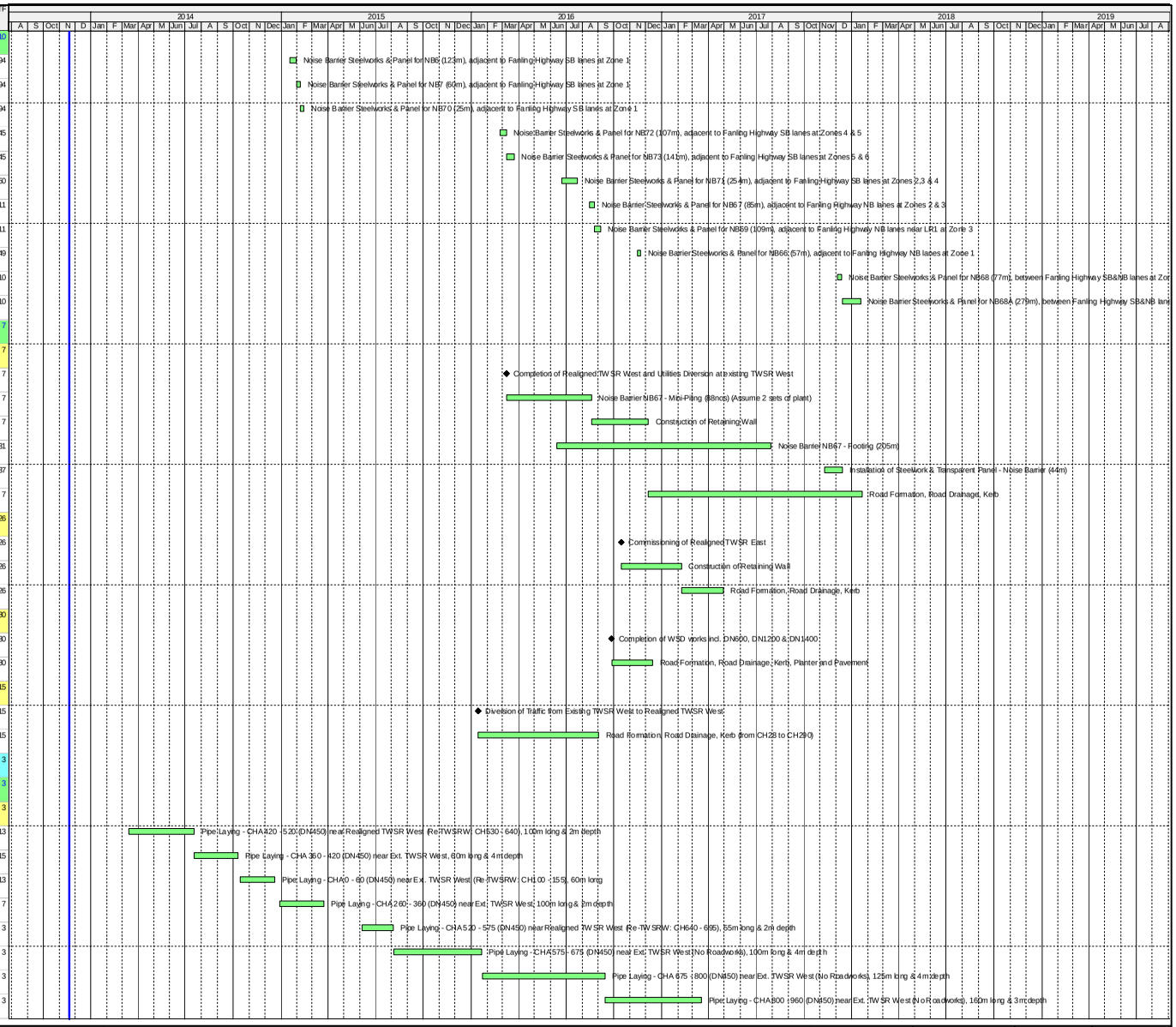
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
Remaining Works for Noise Barrier abng w tlened Fanling Highway		880	880	17-Jan-15	17-Jan-18	10
FHW-NB-120	Noise Barrier Steelworks & Panel for NB6 (123m), adjacent to Fanling Highway SB lanes at Zone 1	12	12	17-Jan-15	30-Jan-15	394
FHW-NB-130	Noise Barrier Steelworks & Panel for NB7 (60m), adjacent to Fanling Highway SB lanes at Zone 1	6	6	31-Jan-15	06-Feb-15	394
FHW-NB-110	Noise Barrier Steelworks & Panel for NB70 (25m), adjacent to Fanling Highway SB lanes at Zone 1	6	6	07-Feb-15	13-Feb-15	394
FHW-NB-150	Noise Barrier Steelworks & Panel for NB72 (107m), adjacent to Fanling Highway SB lanes at Zones 4 & 5	11	11	25-Feb-16	08-Mar-16	545
FHW-NB-160	Noise Barrier Steelworks & Panel for NB73 (141m), adjacent to Fanling Highway SB lanes at Zones 5 & 6	14	14	09-Mar-16	24-Mar-16	545
FHW-NB-140	Noise Barrier Steelworks & Panel for NB71 (254m), adjacent to Fanling Highway SB lanes at Zones 2,3 & 4	25	25	23-Jun-16	22-Jul-16	450
FHW-NB-320	Noise Barrier Steelworks & Panel for NB67 (85m), adjacent to Fanling Highway NB lanes at Zones 2 & 3	9	9	15-Aug-16	24-Aug-16	411
FHW-NB-330	Noise Barrier Steelworks & Panel for NB69 (109m), adjacent to Fanling Highway NB lanes near LR1 at Zone 3	11	11	25-Aug-16	06-Sep-16	411
FHW-NB-310	Noise Barrier Steelworks & Panel for NB66 (57m), adjacent to Fanling Highway NB lanes at Zone 1	6	6	15-Nov-16	21-Nov-16	349
FHW-NB-210	Noise Barrier Steelworks & Panel for NB68 (77m), between Fanling Highway SB&NB lanes at Zones 1 & 3	8	8	04-Dec-17	12-Dec-17	10
FHW-NB-220	Noise Barrier Steelworks & Panel for NB68A (279m), between Fanling Highway SB&NB lanes at Zones 2, 3 & 4	28	28	13-Dec-17	17-Jan-18	10
At Grade Link Road at Fanling Highway Interchange		593	593	14-Jan-16	20-Jan-18	7
Link Road 1 (near Abutment AB1)		552	552	08-Mar-16	20-Jan-18	7
FHLR1-1000	Completion of Realigned TW SR West and Utilities Diversion at existing TWSR West	0	0		08-Mar-16	7
FHLR1-1010	Noise Barrier NB67 - Mini-Piling (88nos) (Assume 2 sets of plant)	132	132	09-Mar-16	18-Aug-16	7
FHLR1-1030	Construction of Retaining Wall	90	90	19-Aug-16	05-Dec-16	7
FHLR1-1020	Noise Barrier NB67 - Footing (205m)	332	332	14-Jun-16	29-Jul-17	31
FHLR1-1050	Installation of Steelwork & Transparent Panel - Noise Barrier (44m)	30	30	09-Nov-17	13-Dec-17	37
FHLR1-1040	Road Formation, Road Drainage, Kerb	330	330	06-Dec-16	20-Jan-18	7
Link Road 2 (near Abutment AA1)		155	155	15-Oct-16	28-Apr-17	226
FHLR2-2000	Commissioning of Realigned TWSR East	0	0	15-Oct-16		226
FHLR2-2010	Construction of Retaining Wall	90	90	15-Oct-16	07-Feb-17	226
FHLR2-2020	Road Formation, Road Drainage, Kerb	65	65	08-Feb-17	28-Apr-17	226
Link Road 3 (near Abutment AD1)		65	65	26-Sep-16	13-Dec-16	330
FHLR3-3000	Completion of WSD works incl. DN600, DN1200 & DN1400	0	0		26-Sep-16	330
FHLR3-3020	Road Formation, Road Drainage, Kerb, Planter and Pavement	65	65	27-Sep-16	13-Dec-16	330
Link Road 4 (near Abutment AC1)		185	185	14-Jan-16	01-Sep-16	415
FHLR4-4000	Diversion of Traffic from Existing TWSR West to Realigned TWSR West	0	0	14-Jan-16		415
FHLR4-4010	Road Formation, Road Drainage, Kerb (from CH28 to CH290)	185	185	14-Jan-16	01-Sep-16	415
Section II - Remainder of the Works (KD-3)		1172	1172	27-Jan-14	25-Jan-18	3
WSD Works		1172	1172	27-Jan-14	25-Jan-18	3
DN450 Fire Mains (CHA)		1137	1137	15-Mar-14	25-Jan-18	3
WA-1050	Pipe Laying - CHA 420 - 520 (DN450) near Realigned TWSR West (Re-TWSRW: CH530 - 640), 100m long & 2m depth	99	99	15-Mar-14	17-Jul-14	13
WA-1040	Pipe Laying - CHA 360 - 420 (DN450) near Ext. TWSR West, 60m long & 4m depth	70	70	18-Jul-14	10-Oct-14	15
WA-1000	Pipe Laying - CHA 0 - 60 (DN450) near Ext. TWSR West (Re-TWSRW: CH100 - 155), 60m long	58	58	14-Oct-14	19-Dec-14	13
WA-1030	Pipe Laying - CHA 260 - 360 (DN450) near Ext. TWSR West, 100m long & 2m depth	65	65	30-Dec-14	23-Mar-15	7
WA-1060	Pipe Laying - CHA 520 - 575 (DN450) near Realigned TWSR West (Re-TWSRW: CH640 - 695), 55m long & 2m depth	50	50	05-Jun-15	04-Aug-15	3
WA-1070	Pipe Laying - CHA 575 - 675 (DN450) near Ext. TWSR West (No Roadworks), 100m long & 4m depth	140	140	05-Aug-15	21-Jan-16	3
WA-1080	Pipe Laying - CHA 675 - 800 (DN450) near Ext. TWSR West (No Roadworks), 125m long & 4m depth	188	188	22-Jan-16	13-Sep-16	3
WA-1090	Pipe Laying - CHA 800 - 960 (DN450) near Ext. TWSR West (No Roadworks), 160m long & 3m depth	148	148	14-Sep-16	18-Mar-17	3



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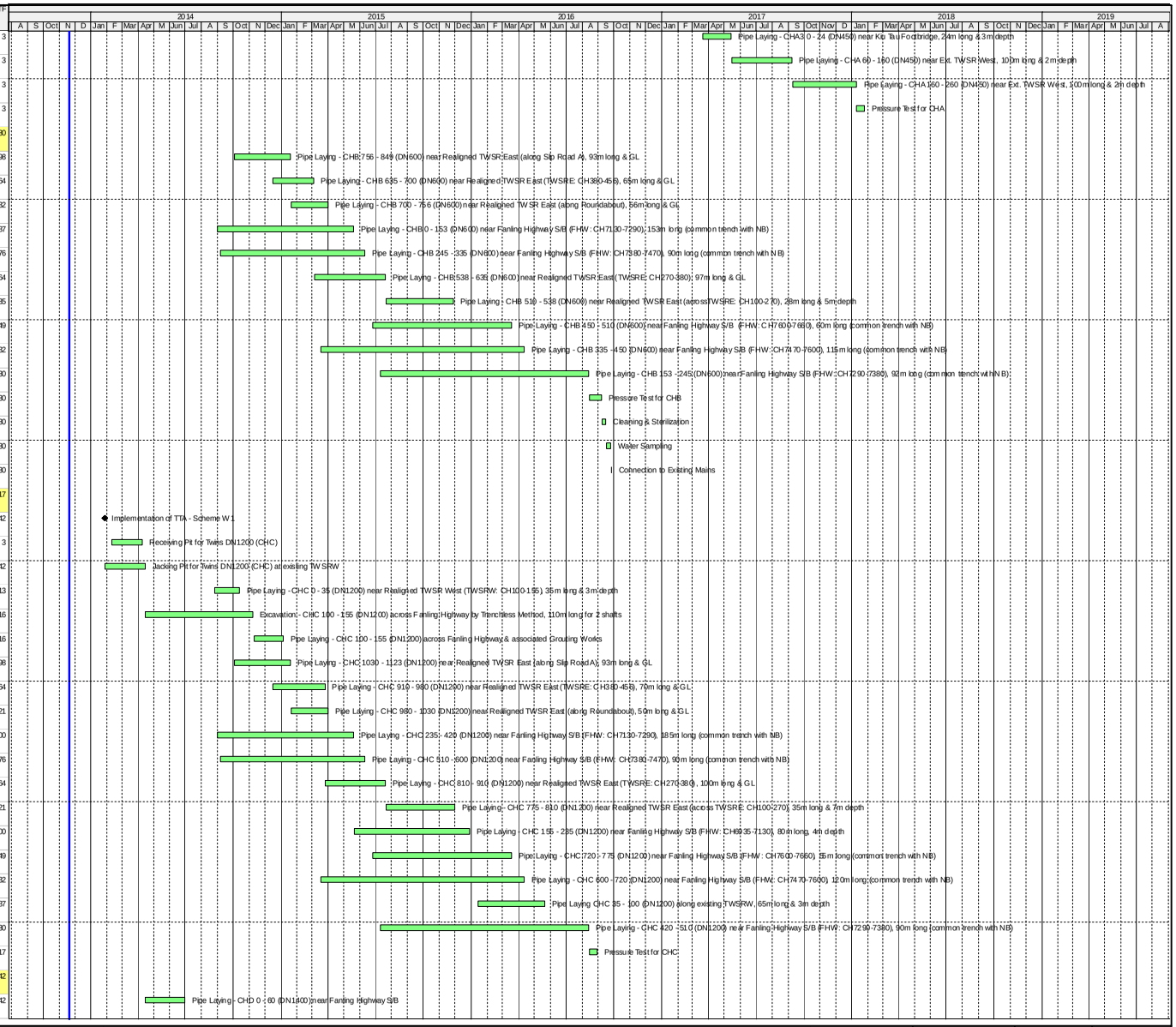
Activity ID	Activity Name	OD	RD	Start	Finish	TF
WA-1100	Pipe Laying - CHA3 0 - 24 (DN450) near Kiu Tau Footbridge, 24m long & 3m depth	42	42	20-Mar-17	13-May-17	3
WA-1010	Pipe Laying - CHA 60 - 160 (DN450) near Ext. TWSR West, 100m long & 2m depth	99	99	15-May-17	08-Sep-17	3
WA-1020	Pipe Laying - CHA 160 - 260 (DN450) near Ext. TWSR West, 100m long & 2m depth	99	99	09-Sep-17	09-Jan-18	3
WA-2000	Pressure Test for CHA	14	14	10-Jan-18	25-Jan-18	3
DN600 Water Mains (CHB)		608	608	01-Sep-14	26-Sep-16	330
WB-1090	Pipe Laying - CHB 756 - 849 (DN600) near Realigned TWSR East (along Slip Road A), 93m long & GL	89	89	04-Oct-14	19-Jan-15	98
WB-1070	Pipe Laying - CHB 635 - 700 (DN600) near Realigned TWSR East (TWSRE: CH380-456), 65m long & GL	60	60	16-Dec-14	05-Mar-15	164
WB-1080	Pipe Laying - CHB 700 - 756 (DN600) near Realigned TWSR East (along Roundabout), 56m long & GL	55	55	20-Jan-15	31-Mar-15	732
WB-1000	Pipe Laying - CHB 0 - 153 (DN600) near Fanling Highway S/B (FHW: CH7130-7290), 153m long (common trench with NB)	208	208	01-Sep-14	20-May-15	687
WB-1020	Pipe Laying - CHB 245 - 335 (DN600) near Fanling Highway S/B (FHW: CH7380-7470), 90m long (common trench with NB)	221	221	06-Sep-14	11-Jun-15	676
WB-1060	Pipe Laying - CHB 538 - 635 (DN600) near Realigned TWSR East (TWSRE: CH270-380), 97m long & GL	109	109	06-Mar-15	20-Jul-15	164
WB-1050	Pipe Laying - CHB 510 - 538 (DN600) near Realigned TWSR East (acrossTWSRE: CH100-270), 28m long & 5m depth	110	110	21-Jul-15	28-Nov-15	535
WB-1040	Pipe Laying - CHB 450 - 510 (DN600) near Fanling Highway S/B (FHW: CH7600-7660), 60m long (common trench with NB)	216	216	26-Jun-15	18-Mar-16	449
WB-1030	Pipe Laying - CHB 335 - 450 (DN600) near Fanling Highway S/B (FHW: CH7470-7600) 115m long (common trench with NB)	312	312	18-Mar-15	12-Apr-16	432
WB-1010	Pipe Laying - CHB 153 - 245 (DN600) near Fanling Highway S/B (FHW: CH7290-7380) 92m long (common trench with NB)	324	324	10-Jul-15	13-Aug-16	330
WB-2000	Pressure Test for CHB	21	21	15-Aug-16	07-Sep-16	330
WB-2010	Cleaning & Sterilization	7	7	08-Sep-16	15-Sep-16	330
WB-2020	Water Sampling	7	7	17-Sep-16	24-Sep-16	330
WB-2030	Connection to Existing Mains	1	1	26-Sep-16	26-Sep-16	330
DN1200 Water Mains (CHC)		758	758	27-Jan-14	30-Aug-16	417
WC-1020A	Implementation of TTA - Scheme W1	0	0	27-Jan-14		42
WC-1040	Receiving Pit for Twins DN1200 (CHC)	50	50	10-Feb-14	09-Apr-14	3
WC-1020B	Jacking Pit for Twins DN1200 (CHC) at existing TWSRW	60	60	27-Jan-14	14-Apr-14	42
WC-1000	Pipe Laying - CHC 0 - 35 (DN1200) near Realigned TWSR West (TWSRW: CH100-155), 35m long & 3m depth	39	39	26-Aug-14	13-Oct-14	13
WC-1030A	Excavation - CHC 100 - 155 (DN1200) across Fanling Highway by Trenchless Method, 110m long for 2 shafts	169	169	15-Apr-14	08-Nov-14	116
WC-1030B	Pipe Laying - CHC 100 - 155 (DN1200) across Fanling Highway & associated Grouting Works	46	46	10-Nov-14	05-Jan-15	116
WC-1150	Pipe Laying - CHC 1030 - 1123 (DN1200) near Realigned TWSR East (along Slip Road A), 93m long & GL	89	89	04-Oct-14	19-Jan-15	98
WC-1130	Pipe Laying - CHC 910 - 980 (DN1200) near Realigned TWSR East (TWSRE: CH380-456), 70m long & GL	78	78	16-Dec-14	26-Mar-15	164
WC-1140	Pipe Laying - CHC 980 - 1030 (DN1200) near Realigned TWSR East (along Roundabout), 50m long & GL	55	55	20-Jan-15	31-Mar-15	221
WC-1060	Pipe Laying - CHC 235 - 420 (DN1200) near Fanling Highway S/B (FHW: CH7130-7290), 185m long (common trench with NB)	208	208	01-Sep-14	20-May-15	500
WC-1080	Pipe Laying - CHC 510 - 600 (DN1200) near Fanling Highway S/B (FHW: CH7380-7470), 90m long (common trench with NB)	221	221	06-Sep-14	11-Jun-15	676
WC-1120	Pipe Laying - CHC 810 - 910 (DN1200) near Realigned TWSR East (TWSRE: CH270-380), 100m long & GL	91	91	27-Mar-15	20-Jul-15	164
WC-1110	Pipe Laying - CHC 775 - 810 (DN1200) near Realigned TWSR East (across TWSRE: CH100-270), 35m long & 7m depth	111	111	21-Jul-15	30-Nov-15	621
WC-1050	Pipe Laying - CHC 155 - 235 (DN1200) near Fanling Highway S/B (FHW: CH6935-7130), 80m long, 4m depth	182	182	21-May-15	28-Dec-15	500
WC-1100	Pipe Laying - CHC 720 - 775 (DN1200) near Fanling Highway S/B (FHW: CH7600-7660), 55m long (common trench with NB)	216	216	26-Jun-15	18-Mar-16	449
WC-1090	Pipe Laying - CHC 600 - 720 (DN1200) near Fanling Highway S/B (FHW: CH7470-7600), 120m long (common trench with NB)	312	312	18-Mar-15	12-Apr-16	432
WC-1010	Pipe Laying CHC 35 - 100 (DN1200) along existing TWSRW, 65m long & 3m depth	99	99	14-Jan-16	21-May-16	487
WC-1070	Pipe Laying - CHC 420 - 510 (DN1200) near Fanling Highway S/B (FHW: CH7290-7380), 90m long (common trench with NB)	324	324	10-Jul-15	13-Aug-16	330
WC-2000	Pressure Test for CHC	14	14	15-Aug-16	30-Aug-16	417
DN1400 Water Mains (CHD)		100	100	15-Apr-14	16-Aug-14	42
WD-1000	Pipe Laying - CHD 0 - 60 (DN1400) near Fanling Highway S/B	60	60	15-Apr-14	30-Jun-14	42



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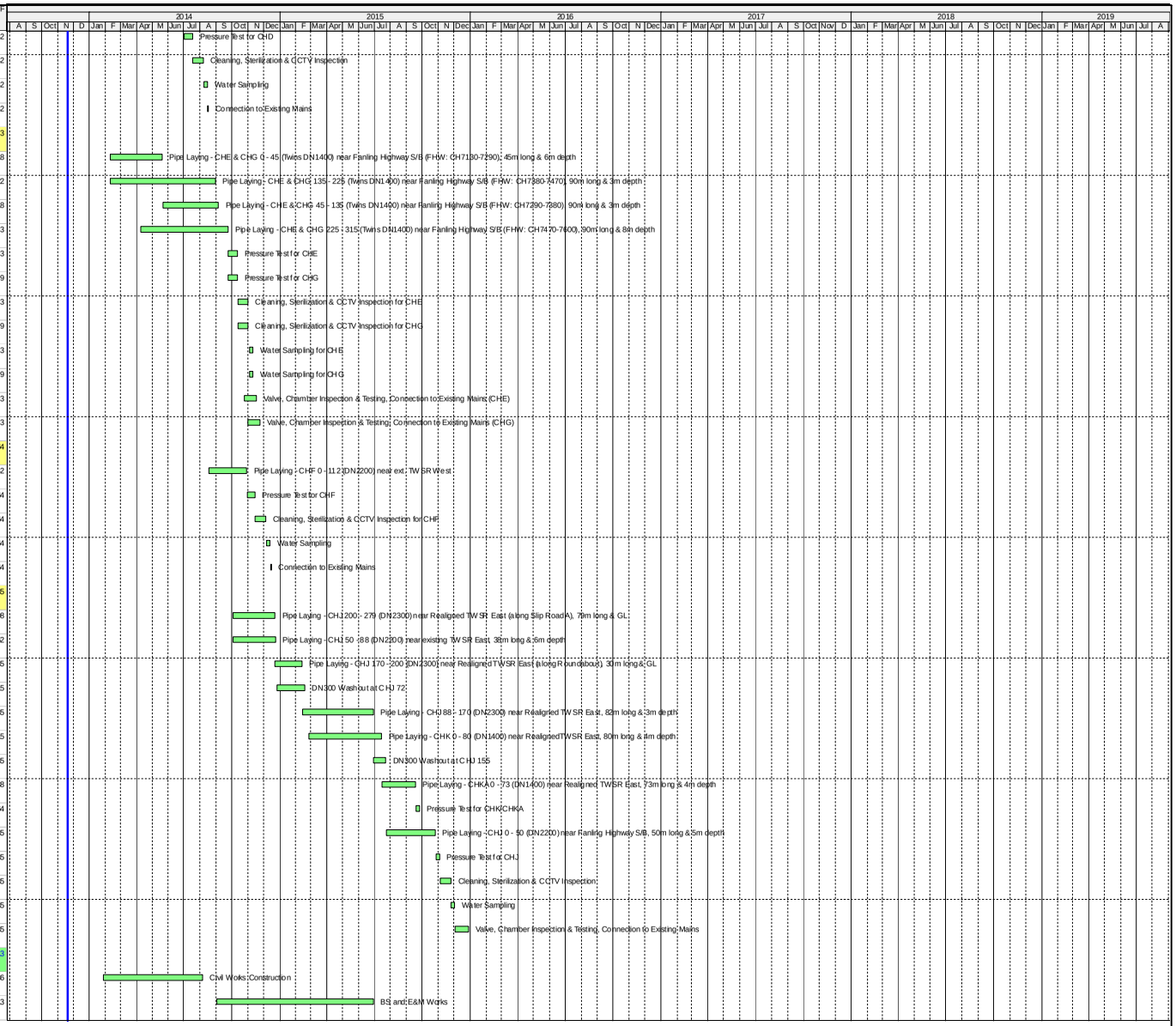
WD-2000	Pressure Test for CHD	14	14	02-Jul-14	17-Jul-14	42
WD-2010	Cleaning, Sterilization & CCTV Inspection	18	18	18-Jul-14	07-Aug-14	42
WD-2020	Water Sampling	7	7	08-Aug-14	15-Aug-14	42
WD-2030	Connection to Existing Mains	1	1	16-Aug-14	16-Aug-14	42
Twin DN1400 Water Mains (CHE & CHG)		236	236	10-Feb-14	24-Nov-14	3
WE-1000	Pipe Laying - CHE & CHG 0 - 45 (Twins DN1400) near Fanling Highway S/B (FHW: CH7130-7290), 45m long & 6m depth	80	80	10-Feb-14	20-May-14	18
WE-1020	Pipe Laying - CHE & CHG 135 - 225 (Twins DN1400) near Fanling Highway S/B (FHW: CH7380-7470), 90m long & 3m depth	166	166	10-Feb-14	30-Aug-14	22
WE-1010	Pipe Laying - CHE & CHG 45 - 135 (Twins DN1400) near Fanling Highway S/B (FHW: CH7290-7380), 90m long & 3m depth	90	90	21-May-14	04-Sep-14	18
WE-1030	Pipe Laying - CHE & CHG 225 - 315 (Twins DN1400) near Fanling Highway S/B (FHW: CH7470-7600), 90m long & 8m depth	135	135	10-Apr-14	23-Sep-14	3
WE-2000A	Pressure Test for CHE	14	14	24-Sep-14	11-Oct-14	3
WE-2000B	Pressure Test for CHG	14	14	24-Sep-14	11-Oct-14	9
WE-2010A	Cleaning, Sterilization & CCTV Inspection for CHE	18	18	13-Oct-14	01-Nov-14	3
WE-2010B	Cleaning, Sterilization & CCTV Inspection for CHG	18	18	13-Oct-14	01-Nov-14	9
WE-2020A	Water Sampling for CHE	7	7	03-Nov-14	10-Nov-14	3
WE-2020B	Water Sampling for CHG	7	7	03-Nov-14	10-Nov-14	9
WE-2030A	Valve, Chamber Inspection & Testing, Connection to Existing Mains (CHE)	20	20	25-Oct-14	17-Nov-14	3
WE-2030B	Valve, Chamber Inspection & Testing, Connection to Existing Mains (CHG)	20	20	01-Nov-14	24-Nov-14	3
DN2200 Water Mains (CHF)		100	100	18-Aug-14	15-Dec-14	164
WF-1000	Pipe Laying - CHF 0 - 112 (DN2200) near ext. TWSR West	60	60	18-Aug-14	29-Oct-14	42
WF-2000	Pressure Test for CHF	14	14	30-Oct-14	14-Nov-14	164
WF-2010	Cleaning, Sterilization & CCTV Inspection for CHF	18	18	15-Nov-14	05-Dec-14	164
WF-2020	Water Sampling	7	7	06-Dec-14	13-Dec-14	164
WF-2030	Connection to Existing Mains	1	1	15-Dec-14	15-Dec-14	164
DN2300 Water Mains and Leakage Collection System (CHJ & CHKA/CHK)		364	364	04-Oct-14	28-Dec-15	235
WJ-1050	Pipe Laying - CHJ 200 - 279 (DN2300) near Realigned TWSR East (along Slip Road A), 79m long & GL	68	68	04-Oct-14	22-Dec-14	98
WJ-1010	Pipe Laying - CHJ 50 - 88 (DN2200) near existing TWSR East, 38m long & 6m depth	82	82	04-Oct-14	24-Dec-14	152
WJ-1040	Pipe Laying - CHJ 170 - 200 (DN2300) near Realigned TWSR East (along Roundabout), 30m long & GL	42	42	23-Dec-14	12-Feb-15	235
WJ-1100	DN300 Washout at CHJ 72	45	45	27-Dec-14	18-Feb-15	115
WJ-1030	Pipe Laying - CHJ 88 - 170 (DN2300) near Realigned TWSR East, 82m long & 3m depth	104	104	13-Feb-15	29-Jun-15	235
WJ-1020A	Pipe Laying - CHK 0 - 80 (DN1400) near RealignedTWSR East, 80m long & 4m depth	112	112	26-Feb-15	15-Jul-15	115
WJ-1110	DN300 Washout at CHJ 155	20	20	30-Jun-15	23-Jul-15	235
WJ-1020B	Pipe Laying - CHKA 0 - 73 (DN1400) near Realigned TWSR East, 73m long & 4m depth	65	65	16-Jul-15	18-Sep-15	138
WJ-2000A	Pressure Test for CHK/CHKA	7	7	19-Sep-15	26-Sep-15	264
WJ-1000	Pipe Laying - CHJ 0 - 50 (DN2200) near Fanling Highway S/B, 50m long & 5m depth	78	78	24-Jul-15	26-Oct-15	235
WJ-2000B	Pressure Test for CHJ	7	7	27-Oct-15	03-Nov-15	235
WJ-2010	Cleaning, Sterilization & CCTV Inspection	18	18	04-Nov-15	24-Nov-15	235
WJ-2020	Water Sampling	7	7	25-Nov-15	02-Dec-15	235
WJ-2030	Valve, Chamber Inspection & Testing, Connection to Existing Mains	20	20	03-Dec-15	28-Dec-15	235
Kau Lung Hang Valve Control & Telemetry House Reprovision		486	486	27-Jan-14	24-Sep-15	113
VCTH-1000	Civil Works Construction	150	150	27-Jan-14	05-Aug-14	136
VCTH-1010	BS and E&M Works	240	240	02-Sep-14	30-Jun-15	113



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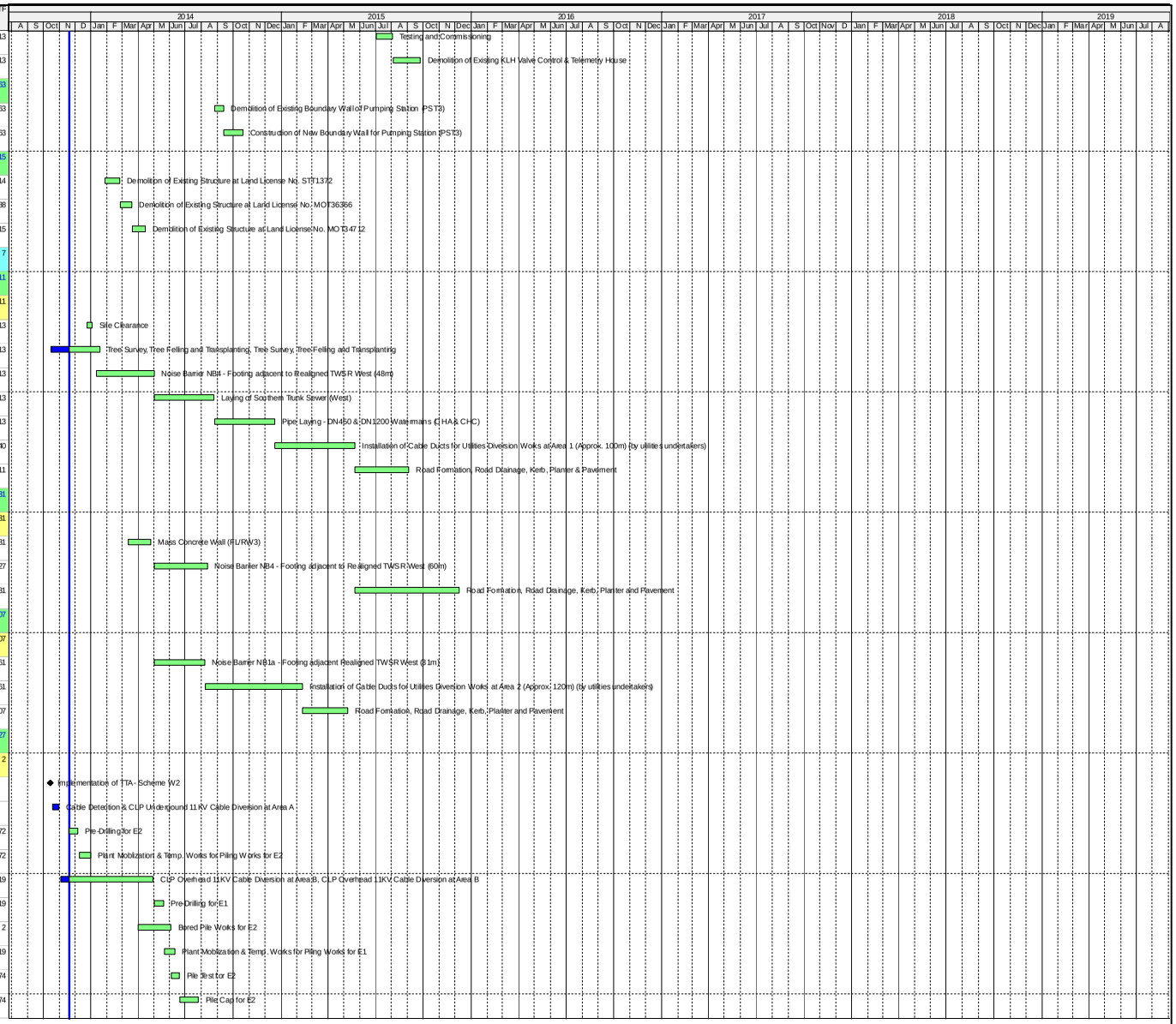
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
VCTH-1020	Testing and Commissioning	28	28	02-Jul-15	03-Aug-15	113
VCTH-1030	Demolition of Existing KLH Valve Control & Telemetry House	45	45	04-Aug-15	24-Sep-15	113
Existing Nam Wa Po Trunk Sewage Pumping Station (PST3)		45	45	26-Aug-14	20-Oct-14	963
PS-1000	Demolition of Existing Boundary Wall of Pumping Station (PST3)	15	15	26-Aug-14	12-Sep-14	963
PS-1010	Construction of New Boundary Wall for Pumping Station (PST3)	30	30	13-Sep-14	20-Oct-14	963
Demolition of Existing Structures		60	60	27-Jan-14	14-Apr-14	1115
DE-1020	Demolition of Existing Structure at Land License No. STT1372	20	20	27-Jan-14	25-Feb-14	14
DE-1000	Demolition of Existing Structure at Land License No. MOT36366	20	20	26-Feb-14	20-Mar-14	388
DE-1010	Demolition of Existing Structure at Land License No. MOT34712	20	20	21-Mar-14	14-Apr-14	1115
Stage 1A - Realignment of Tai Wo Service Road West (KD-7)		697	670	15-Oct-13A	08-Mar-16	7
TWSRW Zone 1 between CH100 and CH155		548	521	16-Oct-13A	02-Sep-15	111
At Grade Roadworks		548	521	16-Oct-13A	02-Sep-15	111
TWSRW-1110	Site Clearance	6	6	24-Dec-13	02-Jan-14	13
TWSRW-1100	Tree Survey, Tree Felling and Transplanting	81	48	16-Oct-13A	18-Jan-14	13
TWSRW-1120	Noise Barrier NB4 - Footing adjacent to Realigned TWSR West (48m)	85	85	11-Jan-14	02-May-14	13
TWSRW-1130	Laying of Southern Trunk Sewer (West)	95	95	03-May-14	25-Aug-14	13
TWSRW-1140*	Pipe Laying - DN450 & DN1200 Watermains (CHA & CHC)	97	97	26-Aug-14	19-Dec-14	13
TWSRW-1150	Installation of Cable Ducts for Utilities Diversion Works at Area 1 (Approx. 100m) (by utilities undertakes)	154	154	20-Dec-14	22-May-15	40
TWSRW-1160	Road Formation, Road Drainage, Kerb, Planter & Pavement	85	85	23-May-15	02-Sep-15	111
TWSRW Zone 2 between CH155 and CH280		514	514	13-Mar-14	08-Dec-15	31
At Grade Roadworks		514	514	13-Mar-14	08-Dec-15	31
TWSRW-2100	Mass Concrete Wall (FU/RW3)	35	35	13-Mar-14	26-Apr-14	131
TWSRW-2110	Noise Barrier NB4 - Footing adjacent to Realigned TWSR West (60m)	85	85	03-May-14	13-Aug-14	127
TWSRW-2120	Road Formation, Road Drainage, Kerb, Planter and Pavement	165	165	23-May-15	08-Dec-15	31
TWSRW Zone 3 between CH280 and CH315		299	299	03-May-14	09-May-15	207
At Grade Roadworks		299	299	03-May-14	09-May-15	207
TWSRW-3100	Noise Barrier NB1a - Footing adjacent Realigned TWSR West (31m)	80	80	03-May-14	07-Aug-14	161
TWSRW-3110	Installation of Cable Ducts for Utilities Diversion Works at Area 2 (Approx. 120m) (by utilities undertakes)	187	187	08-Aug-14	10-Feb-15	261
TWSRW-3120	Road Formation, Road Drainage, Kerb, Planter and Pavement	65	65	11-Feb-15	09-May-15	207
TWSRW Zone 4 between CH315 and CH376		532	505	15-Oct-13A	14-Aug-15	127
Construction of Bridge E		421	394	15-Oct-13A	28-Mar-15	2
TWSRW-4000	Implementation of TTA - Scheme W2	0	0	15-Oct-13A		
TWSRW-4000A	Cable Detection & CLP Underground 11KV Cable Diversion at Area A	10	0	19-Oct-13A	31-Oct-13A	
TWSRW-4010B	Pre-Drilling for E2	15	15	21-Nov-13	07-Dec-13	72
TWSRW-4020B	Plant Moblization & Temp. Works for Piling Works for E2	18	18	09-Dec-13	31-Dec-13	72
TWSRW-4000B	CLP Overhead 11KV Cable Diversion at Area B	140	125	04-Nov-13 A	30-Apr-14	19
TWSRW-4010A	Pre-Drilling for E1	15	15	02-May-14	20-May-14	19
TWSRW-4030B	Bored Pile Works for E2	48	48	01-Apr-14	03-Jun-14	2
TWSRW-4020A	Plant Moblization & Temp. Works for Piling Works for E1	18	18	21-May-14	11-Jun-14	19
TWSRW-4040B	Pile Test for E2	14	14	04-Jun-14	19-Jun-14	74
TWSRW-4050B	Pile Cap for E2	30	30	20-Jun-14	25-Jul-14	74



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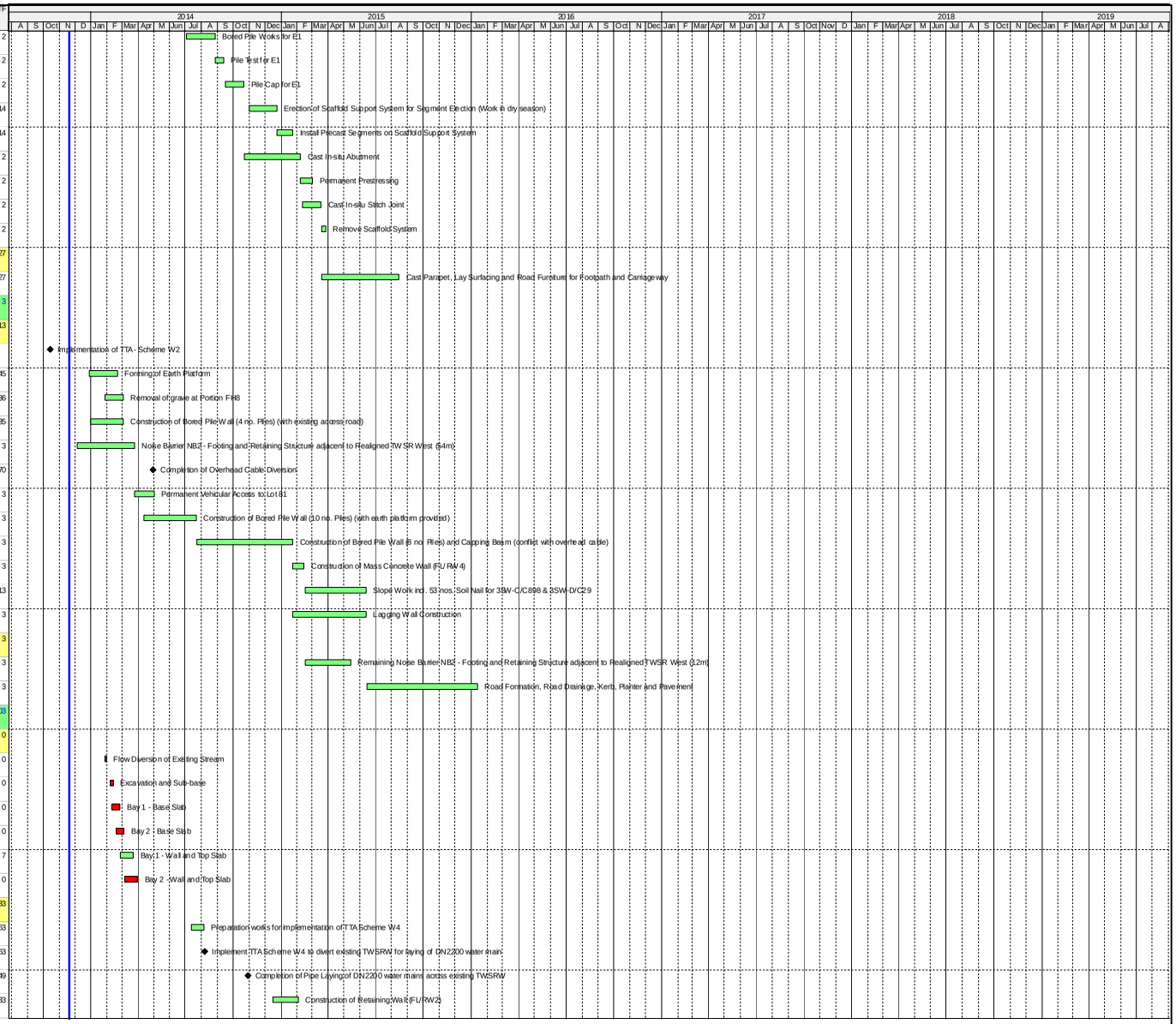
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
TWSRW-4030A	Bored Pile Works for E1	48	48	03-Jul-14	27-Aug-14	2
TWSRW-4040A	Pile Test for E1	14	14	28-Aug-14	13-Sep-14	2
TWSRW-4050A	Pile Cap for E1	30	30	15-Sep-14	21-Oct-14	2
TWSRW-4060	Erection of Scaffold Support System for Segment Erection (Work in dry season)	45	45	01-Nov-14	23-Dec-14	14
TWSRW-4070A	Install Precast Segments on Scaffold Support System	24	24	24-Dec-14	23-Jan-15	14
TWSRW-4070B	Cast In-situ Abutment	90	90	22-Oct-14	06-Feb-15	2
TWSRW-4080	Permanent Prestressing	14	14	07-Feb-15	02-Mar-15	2
TWSRW-4090B	Cast In-situ Stitch Joint	25	25	11-Feb-15	18-Mar-15	2
TWSRW-4090A	Remove Scaffold System	9	9	19-Mar-15	28-Mar-15*	2
AtGrade Roadworks		120	120	19-Mar-15	14-Aug-15	127
TWSRW-4100	Cast Parapet, Lay Surfacing and Road Furniture for Footpath and Carriageway	120	120	19-Mar-15	14-Aug-15	127
TWSRW Zone 5 between CH376 and CH520		656	616	15-Oct-13A	13-Jan-16	3
Construction of Retaining Structures		481	441	15-Oct-13A	13-Jun-15	13
TWSRW-5000	Implementation of TTA - Scheme W2	0	0	15-Oct-13A		
TWSRW-5040A	Forming of Earth Platform	40	40	28-Dec-13*	20-Feb-14	45
TWSRW-5060	Removal of grave at Portion FH8	25	25	27-Jan-14	03-Mar-14	36
TWSRW-5050A	Construction of Bored Pile Wall (4 no. Piles) (with existing access road)	48	48	31-Dec-13	04-Mar-14	35
TWSRW-5010	Noise Barrier NB2 -Footing and Retaining Structure adjacent to Realigned TWSR West (54m)	85	85	06-Dec-13	25-Mar-14	3
TWSRW-5030A	Completion of Overhead Cable Diversion	0	0		30-Apr-14	70
TWSRW-5020	Permanent Vehicular Access to Lot 81	28	28	26-Mar-14	02-May-14	3
TWSRW-5050B	Construction of Bored Pile Wall (10 no. Piles) (with earth platform provided)	80	80	12-Apr-14	22-Jul-14	3
TWSRW-5050C	Construction of Bored Pile Wall (8 no. Piles) and Capping Beam (conflict with overhead cable)	152	152	23-Jul-14	22-Jan-15	3
TWSRW-5070	Construction of Mass Concrete Wall (FL/RW4)	20	20	23-Jan-15	14-Feb-15	3
TWSRW-5080	Slope Work incl. 53 nos. Soil Nail for 3SW-C/C898 & 3SW-D/C29	90	90	16-Feb-15	13-Jun-15	13
TWSRW-5090	Lagging Wall Construction	110	110	23-Jan-15	13-Jun-15	3
AtGrade Roadworks		265	265	16-Feb-15	13-Jan-16	3
TWSRW-5100	Remaining Noise Barrier NB2 - Footing and Retaining Structure adjacent to Realigned TWSR West (12m)	65	65	16-Feb-15	14-May-15	3
TWSRW-5110	Road Formation, Road Drainage, Kerb, Planter and Pavement	175	175	15-Jun-15	13-Jan-16	3
TWSRW Zone 6 between CH520 and CH530		475	475	27-Jan-14	11-Sep-15	103
Box Culvert Extension - BC01		49	49	27-Jan-14	31-Mar-14	0
TWSRW-6000	Flow Diversion of Existing Stream	4	4	27-Jan-14	30-Jan-14	0
TWSRW-6010	Excavation and Sub-base	5	5	07-Feb-14	12-Feb-14	0
TWSRW-6020	Bay 1 - Base Slab	14	14	10-Feb-14	25-Feb-14	0
TWSRW-6030	Bay 2 - Base Slab	14	14	18-Feb-14	05-Mar-14	0
TWSRW-6040	Bay 1 - Wall and Top Slab	22	22	26-Feb-14	22-Mar-14	7
TWSRW-6050	Bay 2 - Wall and Top Slab	22	22	06-Mar-14	31-Mar-14	0
Construction of Retaining Structures		170	170	13-Jul-14	03-Feb-15	233
TWSRW-6070	Preparation works for implementation of TTA Scheme W4	25	25	13-Jul-14	06-Aug-14	63
TWSRW-6080	Implement TTA Scheme W4 to divert existing TWSRW for laying of DN2200 water main	0	0	07-Aug-14		63
TWSRW-6090	Completion of Pipe Laying of DN2200 water mains across existing TWSRW	0	0		29-Oct-14	49
TWSRW-6060	Construction of Retaining Wall (FL/RW2)	40	40	16-Dec-14	03-Feb-15	233



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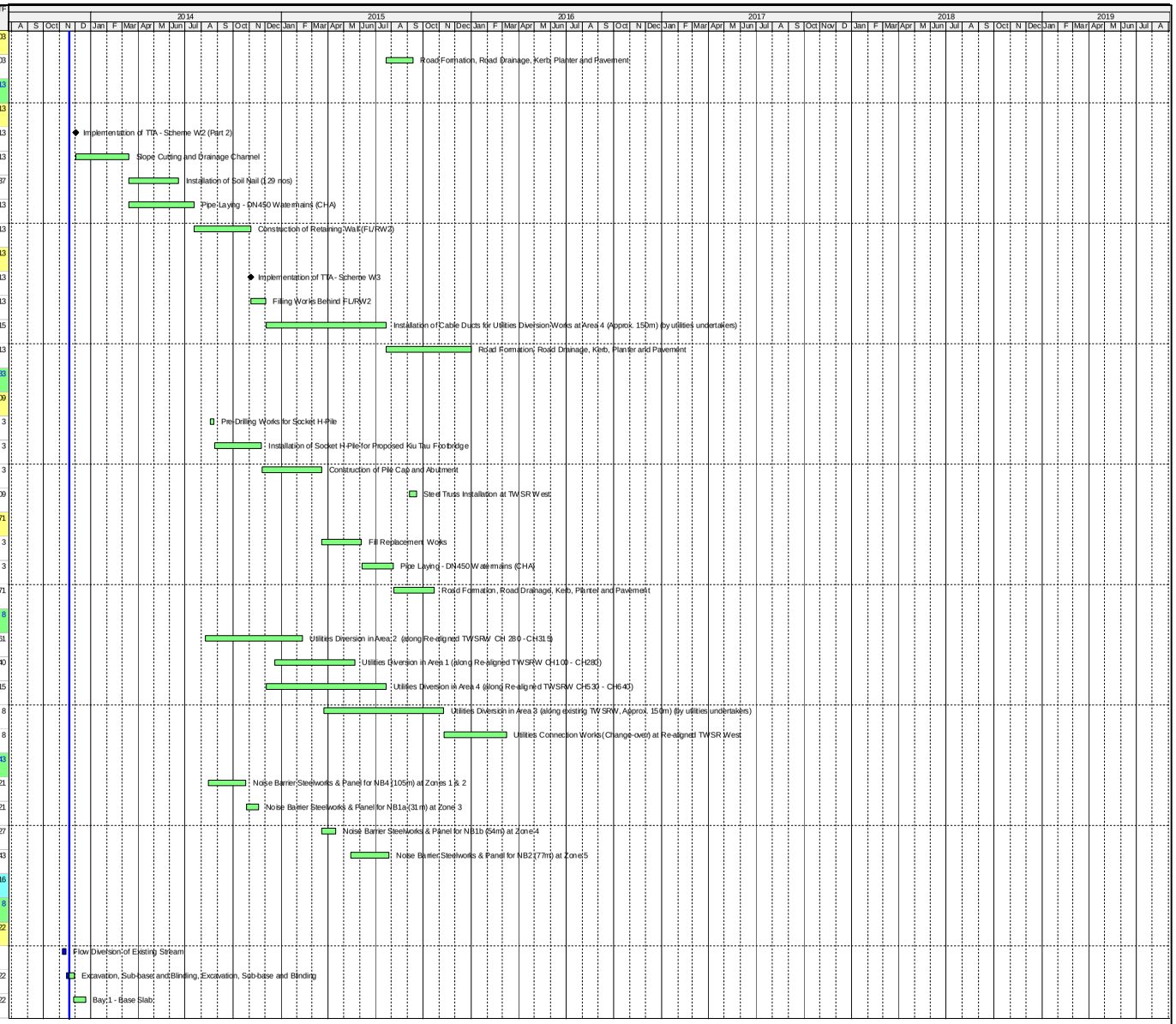
Activity ID	Activity Name	OD	RD	Start	Finish	TF
	AtGrade Roadworks	45	45	22-Jul-15	11-Sep-15	103
TWSRW-6110	Road Formation, Road Drainage, Kerb, Planter and Pavement	45	45	22-Jul-15	11-Sep-15	103
	TWSRW Zone 7 between CH530 and CH640	610	610	02-Dec-13	31-Dec-15	13
	Construction of Retaining Structures	269	269	02-Dec-13	03-Nov-14	13
TWSRW-7000	Implementation of TTA - Scheme W2 (Part 2)	0	0	02-Dec-13		13
TWSRW-7010	Slope Cutting and Drainage Channel	80	80	02-Dec-13	14-Mar-14	13
TWSRW-7020	Installation of Soil Nail (129 nos)	75	75	15-Mar-14	18-Jun-14	37
TWSRW-7030*	Pipe Laying - DN450 Watermains (CHA)	99	99	15-Mar-14	17-Jul-14	13
TWSRW-7040	Construction of Retaining Wall (FL/RW2)	90	90	18-Jul-14	03-Nov-14	13
	AtGrade Roadworks	341	341	04-Nov-14	31-Dec-15	13
TWSRW-7100	Implementation of TTA - Scheme W3	0	0	04-Nov-14		13
TWSRW-7110	Filling Works Behind FL/RW2	25	25	04-Nov-14	02-Dec-14	13
TWSRW-7120	Installation of Cable Ducts for Utilities Diversion Works at Area 4 (Approx. 150m) (by utilities undertakes)	231	231	03-Dec-14	21-Jul-15	15
TWSRW-7140	Road Formation, Road Drainage, Kerb, Planter and Pavement	135	135	22-Jul-15	31-Dec-15	13
	TWSRW Zone 8 between CH640 and CH695	347	347	18-Aug-14	22-Oct-15	83
	Kiu Tau Footbridge Reprovision (West)	321	321	18-Aug-14	18-Sep-15	109
TWSRW-8000	Pre-Drilling Works for Socket H-Pile	7	7	18-Aug-14	25-Aug-14	3
TWSRW-8010	Installation of Socket H-Pile for Proposed Kiu Tau Footbridge	75	75	26-Aug-14	24-Nov-14	3
TWSRW-8020	Construction of Pile Cap and Abutment	90	90	25-Nov-14	19-Mar-15	3
TWSRW-8030	Steel Truss Installation at TWSR West	12	12	05-Sep-15	18-Sep-15	109
	AtGrade Roadworks	175	175	20-Mar-15	22-Oct-15	71
TWSRW-8100	Fill Replacement Works	60	60	20-Mar-15	04-Jun-15	3
TWSRW-8110*	Pipe Laying - DN450 Watermains (CHA)	50	50	05-Jun-15	04-Aug-15	3
TWSRW-8120	Road Formation, Road Drainage, Kerb, Planter and Pavement	65	65	05-Aug-15	22-Oct-15	71
	Remainder of the Works	579	579	08-Aug-14	08-Mar-16	8
TWSRW-9020*	Utilities Diversion in Area 2 (along Re-aligned TWSRW CH 280 -CH315)	187	187	08-Aug-14	10-Feb-15	261
TWSRW-9010*	Utilities Diversion in Area 1 (along Re-aligned TWSRW CH100 - CH280)	154	154	20-Dec-14	22-May-15	40
TWSRW-9040*	Utilities Diversion in Area 4 (along Re-aligned TWSRW CH530 - CH640)	231	231	03-Dec-14	21-Jul-15	15
TWSRW-9030	Utilities Diversion in Area 3 (along existing TWSRW, Approx. 150m) (by utilities undertakes)	231	231	24-Mar-15	09-Nov-15	8
TWSRW-9050	Utilities Connection Works (Change-over) at Re-aligned TWSR West	120	120	10-Nov-15	08-Mar-16	8
	Remaining Works for Noise Barrier abng realigned TWSR West	278	278	14-Aug-14	27-Jul-15	143
TWSRW-NB-110	Noise Barrier Steelworks & Panel for NB4 (105m) at Zones 1 & 2	60	60	14-Aug-14	25-Oct-14	321
TWSRW-NB-120	Noise Barrier Steelworks & Panel for NB1a (31m) at Zone 3	20	20	27-Oct-14	18-Nov-14	321
TWSRW-NB-130	Noise Barrier Steelworks & Panel for NB1b (54m) at Zone 4	20	20	19-Mar-15	15-Apr-15	227
TWSRW-NB-140	Noise Barrier Steelworks & Panel for NB2 (77m) at Zone 5	60	60	15-May-15	27-Jul-15	143
	Stage N4A & N4B - Realignment of Tai Wo Service Road East (KD-13 & KD-14)	913	913	07-Nov-13 A	31-Dec-16	316
	TWSRE Zone 1 between CH100 and CH270	729	729	07-Nov-13 A	23-May-16	8
	Box Culvert Extension - BC02	76	76	07-Nov-13 A	27-Feb-14	122
TWSRE-1000	Flow Diversion of Existing Stream	7	0	07-Nov-13 A	14-Nov-13 A	
TWSRE-1010	Excavation, Sub-base and Blinding	40	9	15-Nov-13 A	30-Nov-13	122
TWSRE-1020	Bay 1 - Base Slab	21	21	28-Nov-13	21-Dec-13	122



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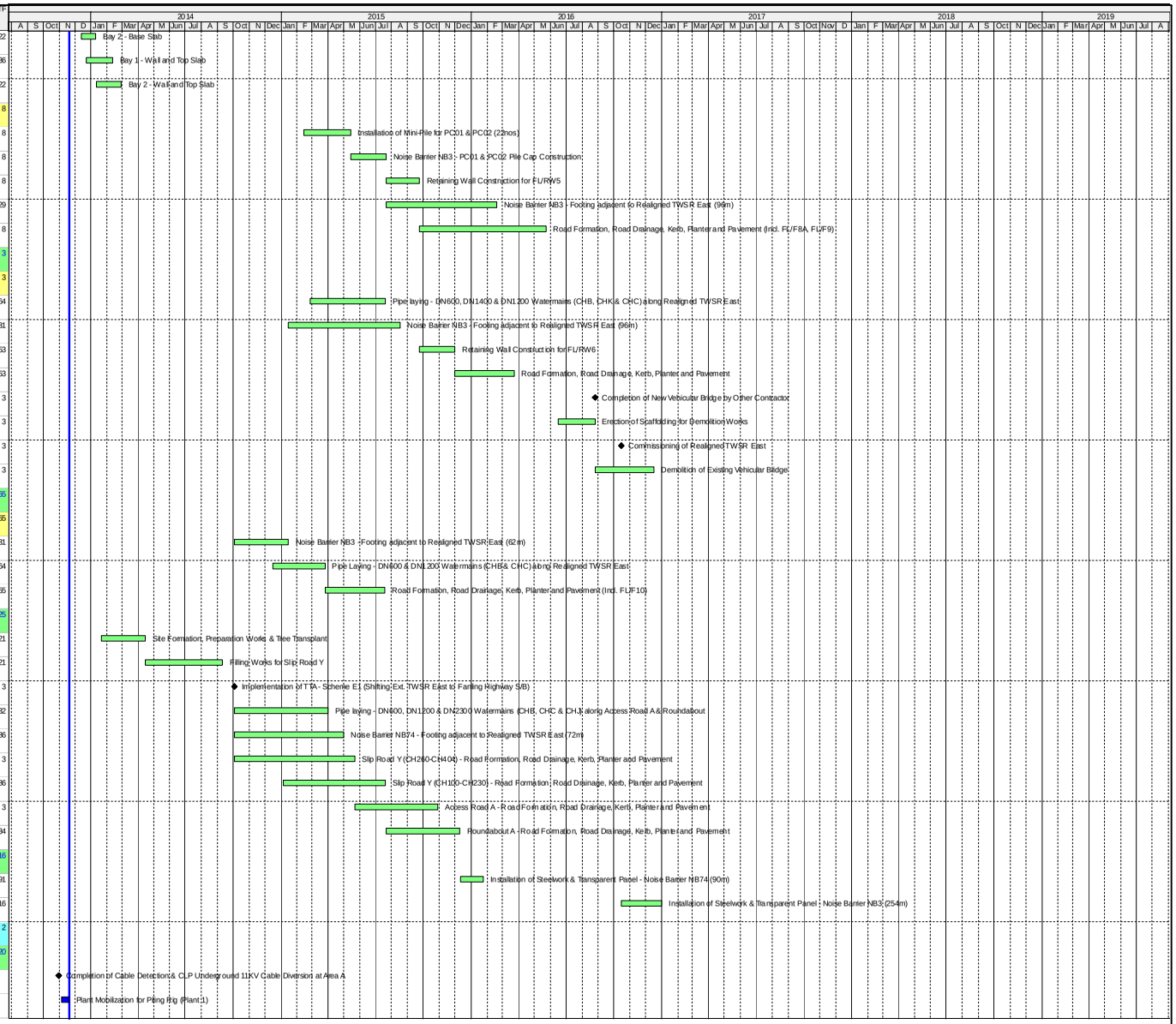
TWSRE-1030	Bay 2 - Base Slab	21	21	14-Dec-13	10-Jan-14	122
TWSRE-1040	Bay 1 - Wall and Top Slab	35	35	23-Dec-13	11-Feb-14	136
TWSRE-1050	Bay 2 - Wall and Top Slab	35	35	11-Jan-14	27-Feb-14	122
At Grade Roadworks		366	366	14-Feb-15	23-May-16	8
TWSRE-1100	Installation of Mini-Pile for PC01 & PC02 (22nos)	66	66	14-Feb-15	14-May-15	8
TWSRE-1110	Noise Barrier NB3 - PC01 & PC02 Pile Cap Construction	55	55	15-May-15	21-Jul-15	8
TWSRE-1130	Retaining Wall Construction for FL/RW5	55	55	22-Jul-15	23-Sep-15	8
TWSRE-1120	Noise Barrier NB3 - Footing adjacent to Realigned TWSR East (96m)	170	170	22-Jul-15	18-Feb-16	29
TWSRE-1160	Road Formation, Road Drainage, Kerb, Planter and Pavement (Incl. FL/F8A, FL/F9)	190	190	24-Sep-15	23-May-16	8
TWSRE Zone 2 between CH270 and CH380		566	566	15-Jan-15	17-Dec-16	3
At Grade Roadworks		566	566	15-Jan-15	17-Dec-16	3
TWSRE-2020*	Pipe laying - DN600, DN1400 & DN1200 Watermains (CHB, CHK & CHC) along Realigned TWSR East	116	116	26-Feb-15	20-Jul-15	164
TWSRE-2010	Noise Barrier NB3 - Footing adjacent to Realigned TWSR East (96m)	170	170	15-Jan-15	17-Aug-15	31
TWSRE-2020	Retaining Wall Construction for FL/RW6	55	55	24-Sep-15	30-Nov-15	53
TWSRE-2030	Road Formation, Road Drainage, Kerb, Planter and Pavement	90	90	01-Dec-15	24-Mar-16	53
TWSRE-2040	Completion of New Vehicular Bridge by Other Contractor	0	0		25-Aug-16	3
TWSRE-2050	Erection of Scaffolding for Demolition Works	60	60	16-Jun-16	25-Aug-16	3
TWSRE-2070	Commissioning of Realigned TWSR East	0	0	15-Oct-16		3
TWSRE-2060	Demolition of Existing Vehicular Bridge	95	95	26-Aug-16	17-Dec-16	3
TWSRE Zone 3 between CH380 and CH456		230	230	04-Oct-14	18-Jul-15	255
At Grade Roadworks		230	230	04-Oct-14	18-Jul-15	255
TWSRE-3010	Noise Barrier NB3 - Footing adjacent to Realigned TWSR East (62m)	85	85	04-Oct-14	14-Jan-15	31
TWSRE-3020*	Pipe Laying - DN600 & DN1200 Watermains (CHB & CHC) along Realigned TWSR East	78	78	16-Dec-14	26-Mar-15	164
TWSRE-3030	Road Formation, Road Drainage, Kerb, Planter and Pavement (Incl. FL/F10)	90	90	27-Mar-15	18-Jul-15	255
Roundabout A, Slip Road and Access Road		554	554	21-Jan-14	10-Dec-15	525
TWSRE-4000	Site Formation, Preparation Works & Tree Transplant	65	65	21-Jan-14	14-Apr-14	21
TWSRE-4010B	Filling Works for Slip Road Y	120	120	15-Apr-14	10-Sep-14	21
TWSRE-4010A	Implementation of TTA - Scheme E1 (Shifting Ext. TWSR East to Fanling Highway S/B)	0	0	04-Oct-14		3
TWSRE-4050*	Pipe laying - DN600, DN1200 & DN2300 Watermains (CHB, CHC & CHJ) along Access Road A & Roundabout	144	144	04-Oct-14	31-Mar-15	732
TWSRE-4030	Noise Barrier NB74 - Footing adjacent to Realigned TWSR East (72m)	166	166	04-Oct-14	30-Apr-15	86
TWSRE-4020	Slip Road Y (CH260-CH404) - Road Formation, Road Drainage, Kerb, Planter and Pavement	184	184	04-Oct-14	22-May-15	3
TWSRE-4040	Slip Road Y (CH100-CH230) - Road Formation, Road Drainage, Kerb, Planter and Pavement	155	155	05-Jan-15	20-Jul-15	86
TWSRE-4060	Access Road A - Road Formation, Road Drainage, Kerb, Planter and Pavement	130	130	23-May-15	28-Oct-15	3
TWSRE-4070	Roundabout A - Road Formation, Road Drainage, Kerb, Planter and Pavement	120	120	21-Jul-15	10-Dec-15	134
Remaining Works for Noise Barrier along realigned TWSR East		310	310	11-Dec-15	31-Dec-16	316
TWSRE-NB-110	Installation of Steelwork & Transparent Panel - Noise Barrier NB74 (90m)	35	35	11-Dec-15	23-Jan-16	591
TWSRE-NB-120	Installation of Steelwork & Transparent Panel - Noise Barrier NB3 (254m)	65	65	15-Oct-16	31-Dec-16	316
Stage 1C - Viaduct Structure & TCSS Civil Provisions (K D-9)		1000	982	31-Oct-13 A	30-Mar-17	2
Preliminaries		708	683	31-Oct-13 A	05-Apr-16	20
B-2020	Completion of Cable Detection & CLP Underground 11KV Cable Diversion at Area A	0	0		31-Oct-13 A	
B-3000	Plant Mobilization for Piling Rig (Plant 1)	13	0	05-Nov-13 A	19-Nov-13 A	



俊和建築工程有限公司
CHUN WO CONSTRUCTION & ENGINEERING CO., LTD.

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Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

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09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
B-3040	Plant Mobilization for Piling Rig (Plant 5)	25	25	29-Nov-13*	30-Dec-13	35
B-3010	Plant Mobilization for Piling Rig (Plant 2)	25	25	16-Dec-13*	16-Jan-14	8
B-3020	Plant Mobilization for Piling Rig (Plant 3)	25	25	27-Jan-14*	03-Mar-14	2
B-3030	Plant Mobilization for Piling Rig (Plant 4)	25	25	27-Jan-14*	03-Mar-14	2
B-1000	ADMS Installation inside MTRCL Railway	21	21	05-Mar-14	28-Mar-14	77
B-1010	Demonstration to MTRCL	1	1	29-Mar-14	29-Mar-14	77
B-1020	Base-line Monitoring	7	7	31-Mar-14	08-Apr-14	77
B-2030	Completion of CLP Overhead 11KV Cable Diversion at Area B	0	0		30-Apr-14	28
B-2000	CLP 11KV Cable Diversion at Area C	80	80	27-Jan-14	13-May-14	144
B-2010	CLP LV Cable Diversion at Area D	80	80	27-Jan-14	13-May-14	19
B-2040	Completion of CLP 11KV Cable Diversion at Area C	0	0		13-May-14	144
B-2050	Completion of CLP LV Cable Diversion at Area D	0	0		13-May-14	19
B-3050	Relocation of Plant including Pre-drilling Works	14	14	16-Mar-16	05-Apr-16	20
Foundation & Pier Construction		861	847	20-Nov-13 A	13-Oct-16	21
Bridge A		827	827	14-Dec-13	13-Oct-16	20
BA-12-1000	Pier AA12 - Piling Works	24	24	14-Dec-13	14-Jan-14	13
BA-05-1000	Pier AA5 - Piling Works	12	12	17-Jan-14	30-Jan-14	8
BA-12-1010	Pier AA12 - Pile Test	14	14	15-Feb-14	03-Mar-14	46
BA-05-1010	Pier AA5 - Pile Test	14	14	04-Mar-14	19-Mar-14	16
BA-13-1000	Pier AA13 - Piling Works	24	24	22-Feb-14	21-Mar-14	55
BA-17-1000	Pier AA17 - Piling Works	24	24	24-Feb-14	22-Mar-14	8
BA-12-1020	Pier AA12 - Pile Cap	30	30	14-Mar-14	22-Apr-14	37
BA-05-1020	Pier AA5 - Pile Cap	30	30	20-Mar-14*	28-Apr-14	16
BA-13-1010	Pier AA13 - Pile Test	14	14	17-Apr-14	08-May-14	55
BA-17-1010	Pier AA17 - Pile Test	14	14	22-Apr-14	09-May-14	19
BA-14-1000	Pier AA14 - Piling Works	12	12	17-May-14	30-May-14	141
BA-04-1000	Pier AA4 - Piling Works	12	12	27-May-14	10-Jun-14	8
BA-05-1030	Pier AA5 - Pier Construction	17	17	26-May-14	14-Jun-14	16
BA-17-1020	Pier AA17 - Pile Cap	30	30	10-May-14	14-Jun-14	19
BA-02-2000	Pier AA2E - Piling Works	12	12	04-Jun-14	17-Jun-14	22
BA-03-1000	Pier AA3 - Piling Works	12	12	07-Jun-14	20-Jun-14	8
BA-12-1030	Pier AA12 - Pier Construction	31	31	20-May-14	25-Jun-14	126
BA-09-1000	Pier AA9 - Piling Works	24	24	04-Jun-14	02-Jul-14	2
BA-02-1000	Pier AA2W - Piling Works	12	12	20-Jun-14	04-Jul-14	22
BA-13-1020	Pier AA13 - Pile Cap	30	30	30-May-14	05-Jul-14	37
BA-15-1000	Pier AA15 - Piling Works	24	24	09-Jun-14	07-Jul-14	221
BA-14-1010	Pier AA14 - Pile Test	14	14	26-Jun-14	12-Jul-14	211
BA-04-1010	Pier AA4 - Pile Test	14	14	07-Jul-14	22-Jul-14	23
BA-01-1000	Abutment AA1 - Piling Works	24	24	02-Jul-14	29-Jul-14	22
BA-02-2010	Pier AA2E - Pile Test	14	14	14-Jul-14	29-Jul-14	82
BA-03-1010	Pier AA3 - Pile Test	14	14	17-Jul-14	01-Aug-14	31

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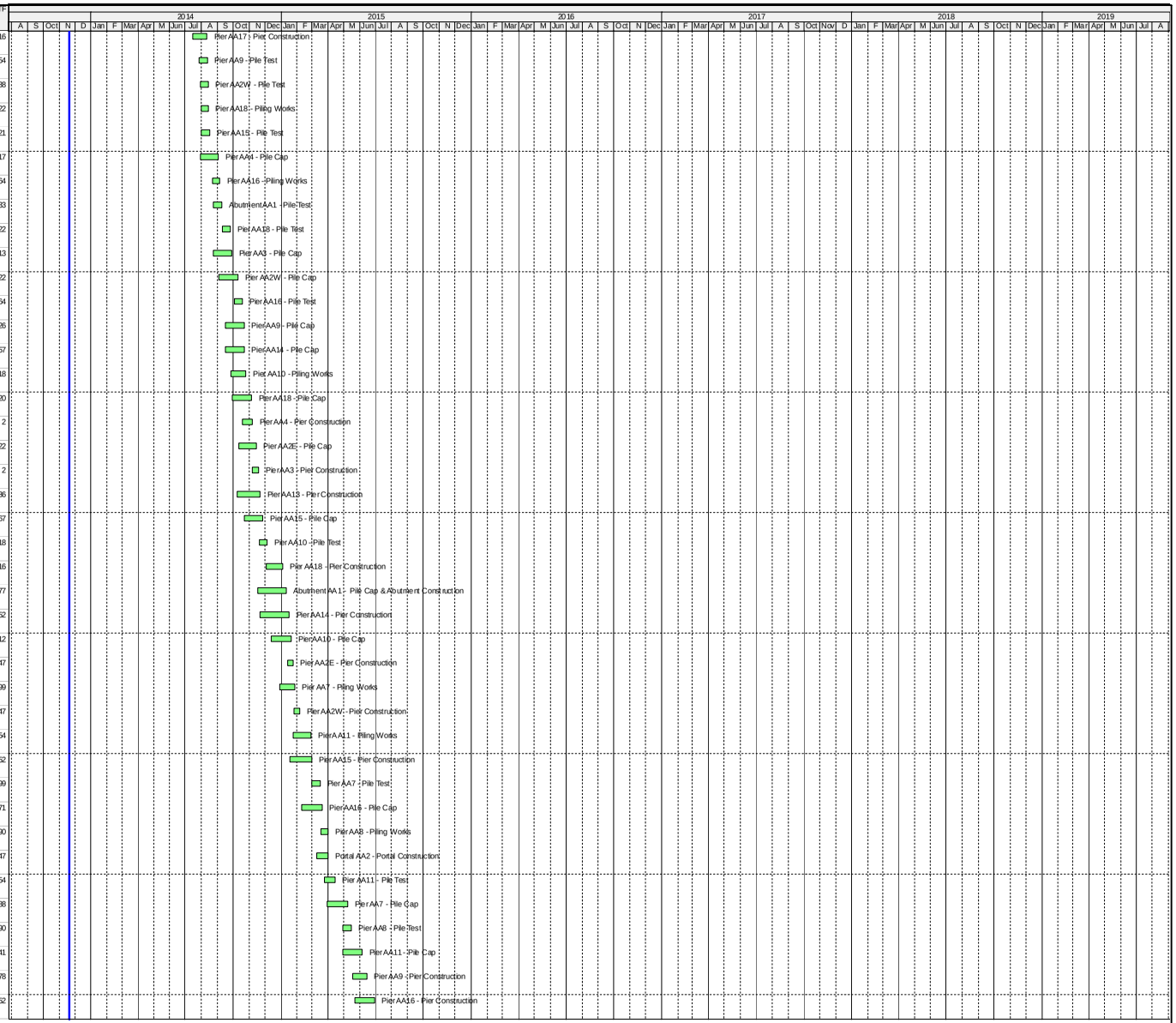
Activity ID	Activity Name	OD	RD	Start	Finish	TF
BA-17-1030	Pier AA17 - Pier Construction	24	24	15-Jul-14	11-Aug-14	16
BA-09-1010	Pier AA9 - Pile Test	14	14	28-Jul-14	12-Aug-14	154
BA-02-1010	Pier AA2W - Pile Test	14	14	30-Jul-14	14-Aug-14	38
BA-18-1000	Pier AA18 - Piling Works	12	12	01-Aug-14	14-Aug-14	22
BA-15-1010	Pier AA15 - Pile Test	14	14	01-Aug-14	16-Aug-14	221
BA-04-1020	Pier AA4 - Pile Cap	30	30	30-Jul-14	02-Sep-14	17
BA-16-1000	Pier AA16 - Piling Works	12	12	22-Aug-14	04-Sep-14	264
BA-01-1010	Abutment AA1 - Pile Test	14	14	23-Aug-14	08-Sep-14	133
BA-18-1010	Pier AA18 - Pile Test	14	14	10-Sep-14	25-Sep-14	22
BA-03-1020	Pier AA3 - Pile Cap	30	30	23-Aug-14	27-Sep-14	13
BA-02-1020	Pier AA2W - Pile Cap	30	30	03-Sep-14	10-Oct-14	22
BA-16-1010	Pier AA16 - Pile Test	14	14	03-Oct-14	18-Oct-14	264
BA-09-1020	Pier AA9 - Pile Cap	30	30	16-Sep-14	22-Oct-14	126
BA-14-1020	Pier AA14 - Pile Cap	30	30	16-Sep-14	22-Oct-14	157
BA-10-1000	Pier AA10 - Piling Works	24	24	26-Sep-14	25-Oct-14	118
BA-18-1020	Pier AA18 - Pile Cap	30	30	29-Sep-14	04-Nov-14	20
BA-04-1030	Pier AA4 - Pier Construction	17	17	18-Oct-14	06-Nov-14	2
BA-02-2020	Pier AA2E - Pile Cap	30	30	11-Oct-14	14-Nov-14	22
BA-03-1030	Pier AA3 - Pier Construction	10	10	07-Nov-14	18-Nov-14	2
BA-13-1030	Pier AA13 - Pier Construction	38	38	09-Oct-14	21-Nov-14	136
BA-15-1020	Pier AA15 - Pile Cap	30	30	23-Oct-14	26-Nov-14	167
BA-10-1010	Pier AA10 - Pile Test	14	14	20-Nov-14	05-Dec-14	118
BA-18-1030	Pier AA18 - Pier Construction	24	24	04-Dec-14	03-Jan-15	16
BA-01-1020	Abutment AA1 - Pile Cap & Abutment Construction	45	45	17-Nov-14	10-Jan-15	77
BA-14-1030	Pier AA14 - Pier Construction	45	45	22-Nov-14	16-Jan-15	152
BA-10-1020	Pier AA10 - Pile Cap	30	30	13-Dec-14	20-Jan-15	112
BA-02-2030	Pier AA2E - Pier Construction	10	10	14-Jan-15	24-Jan-15	47
BA-07-1000	Pier AA7 - Piling Works	24	24	30-Dec-14	27-Jan-15	99
BA-02-1030	Pier AA2W - Pier Construction	10	10	26-Jan-15	05-Feb-15	47
BA-11-1000	Pier AA11 - Piling Works	24	24	24-Jan-15	27-Feb-15	154
BA-15-1030	Pier AA15 - Pier Construction	31	31	17-Jan-15	28-Feb-15	152
BA-07-1010	Pier AA7 - Pile Test	14	14	28-Feb-15	16-Mar-15	99
BA-16-1020	Pier AA16 - Pile Cap	30	30	09-Feb-15	21-Mar-15	171
BA-08-1000	Pier AA8 - Piling Works	12	12	18-Mar-15	31-Mar-15	290
BA-02-2040	Portal AA2 - Portal Construction	20	20	10-Mar-15	01-Apr-15	47
BA-11-1010	Pier AA11 - Pile Test	14	14	25-Mar-15	14-Apr-15	154
BA-07-1020	Pier AA7 - Pile Cap	30	30	30-Mar-15	08-May-15	88
BA-08-1010	Pier AA8 - Pile Test	14	14	30-Apr-15	16-May-15	290
BA-11-1020	Pier AA11 - Pile Cap	30	30	30-Apr-15	05-Jun-15	141
BA-09-1030	Pier AA9 - Pier Construction	24	24	18-May-15	15-Jun-15	78
BA-16-1030	Pier AA16 - Pier Construction	31	31	22-May-15	29-Jun-15	152



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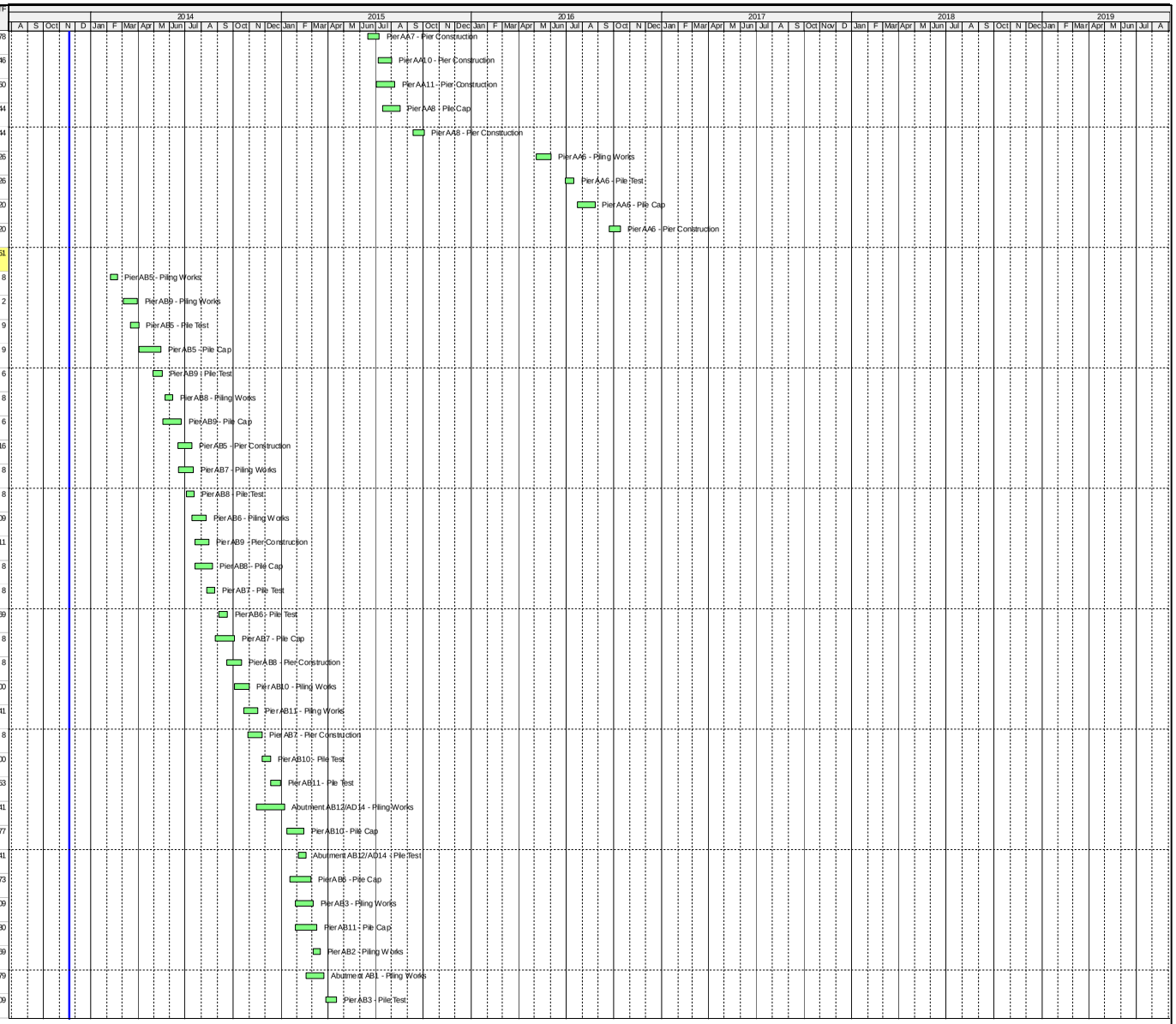
BA-07-1030	Pier AA7 - Pier Construction	17	17	16-Jun-15	07-Jul-15	78
BA-10-1030	Pier AA10 - Pier Construction	24	24	06-Jul-15	01-Aug-15	146
BA-11-1030	Pier AA11 - Pier Construction	31	31	03-Jul-15	07-Aug-15	150
BA-08-1020	Pier AA8 - Pile Cap	30	30	14-Jul-15	17-Aug-15	244
BA-08-1030	Pier AA8 - Pier Construction	17	17	11-Sep-15	02-Oct-15	244
BA-06-1000	Pier AA6 - Piling Works	24	24	05-May-16	02-Jun-16	26
BA-06-1010	Pier AA6 - Pile Test	14	14	29-Jun-16	15-Jul-16	26
BA-06-1020	Pier AA6 - Pile Cap	30	30	23-Jul-16	26-Aug-16	20
BA-06-1030	Pier AA6 - Pier Construction	17	17	22-Sep-16	13-Oct-16	20
Bridge B		759	759	07-Feb-14	05-Sep-16	51
BB-05-1000	Pier AB5 - Piling Works	12	12	07-Feb-14	20-Feb-14	8
BB-09-1000	Pier AB9 - Piling Works	24	24	04-Mar-14	31-Mar-14	2
BB-05-1010	Pier AB5 - Pile Test	14	14	18-Mar-14	02-Apr-14	9
BB-05-1020	Pier AB5 - Pile Cap	30	30	03-Apr-14*	14-May-14	9
BB-09-1010	Pier AB9 - Pile Test	14	14	30-Apr-14	17-May-14	6
BB-08-1000	Pier AB8 - Piling Works	12	12	23-May-14	06-Jun-14	8
BB-09-1020	Pier AB9 - Pile Cap	30	30	19-May-14	23-Jun-14	6
BB-05-1030	Pier AB5 - Pier Construction	24	24	16-Jun-14	14-Jul-14	16
BB-07-1000	Pier AB7 - Piling Works	24	24	18-Jun-14	16-Jul-14	8
BB-08-1010	Pier AB8 - Pile Test	14	14	03-Jul-14	18-Jul-14	8
BB-06-1000	Pier AB6 - Piling Works	24	24	14-Jul-14	09-Aug-14	109
BB-09-1030	Pier AB9 - Pier Construction	24	24	19-Jul-14	15-Aug-14	11
BB-08-1020	Pier AB8 - Pile Cap	30	30	19-Jul-14	22-Aug-14	8
BB-07-1010	Pier AB7 - Pile Test	14	14	11-Aug-14	26-Aug-14	8
BB-06-1010	Pier AB6 - Pile Test	14	14	04-Sep-14	20-Sep-14	269
BB-07-1020	Pier AB7 - Pile Cap	30	30	27-Aug-14	03-Oct-14	8
BB-08-1030	Pier AB8 - Pier Construction	24	24	18-Sep-14	17-Oct-14	8
BB-10-1000	Pier AB10 - Piling Works	24	24	04-Oct-14	31-Oct-14	100
BB-11-1000	Pier AB11 - Piling Works	24	24	21-Oct-14	17-Nov-14	441
BB-07-1030	Pier AB7 - Pier Construction	24	24	29-Oct-14	25-Nov-14	8
BB-10-1010	Pier AB10 - Pile Test	14	14	26-Nov-14	11-Dec-14	100
BB-11-1010	Pier AB11 - Pile Test	14	14	12-Dec-14	30-Dec-14	453
BB-12-1000A	Abutment AB12/AD14 - Piling Works	45	45	14-Nov-14	08-Jan-15	441
BB-10-1020	Pier AB10 - Pile Cap	30	30	12-Jan-15	14-Feb-15	77
BB-12-1010	Abutment AB12/AD14 - Pile Test	14	14	03-Feb-15	18-Feb-15	441
BB-06-1020	Pier AB6 - Pile Cap	30	30	17-Jan-15	27-Feb-15	173
BB-03-1000	Pier AB3 - Piling Works	24	24	28-Jan-15	03-Mar-15	109
BB-11-1020	Pier AB11 - Pile Cap	30	30	28-Jan-15	10-Mar-15	430
BB-02-1000	Pier AB2 - Piling Works	12	12	04-Mar-15	17-Mar-15	169
BB-01-1000	Abutment AB1 - Piling Works	24	24	18-Feb-15	24-Mar-15	179
BB-03-1010	Pier AB3 - Pile Test	14	14	28-Mar-15	17-Apr-15	109



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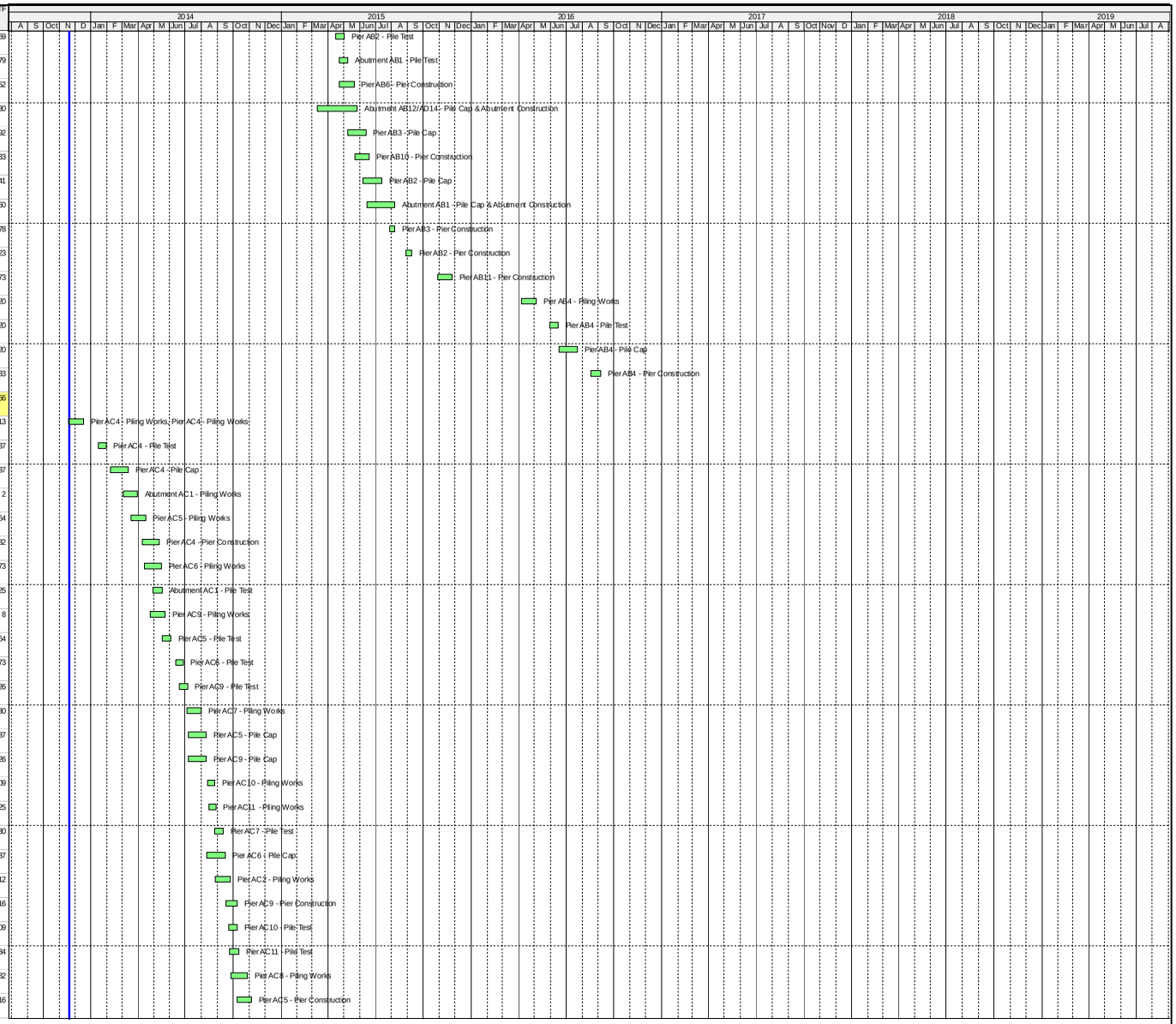
BB-02-1010	Pier AB2 - Pile Test	14	14	16-Apr-15	02-May-15	169
BB-01-1010	Abutment AB1 - Pile Test	14	14	23-Apr-15	09-May-15	179
BB-06-1030	Pier AB6 - Pier Construction	24	24	23-Apr-15	21-May-15	152
BB-12-1020	Abutment AB12/AD14 - Pile Cap & Abutment Construction	60	60	11-Mar-15	26-May-15	430
BB-03-1020	Pier AB3 - Pile Cap	30	30	09-May-15	13-Jun-15	92
BB-10-1030	Pier AB10 - Pier Construction	24	24	22-May-15	19-Jun-15	33
BB-02-1020	Pier AB2 - Pile Cap	30	30	06-Jun-15	13-Jul-15	141
BB-01-1020	Abutment AB1 - Pile Cap & Abutment Construction	45	45	15-Jun-15	07-Aug-15	150
BB-03-1030	Pier AB3 - Pier Construction	10	10	28-Jul-15	07-Aug-15	78
BB-02-1030	Pier AB2 - Pier Construction	10	10	28-Aug-15	08-Sep-15	123
BB-11-1030	Pier AB11 - Pier Construction	24	24	29-Oct-15	25-Nov-15	273
BB-04-1000	Pier AB4 - Piling Works	24	24	06-Apr-16	04-May-16	20
BB-04-1010	Pier AB4 - Pile Test	14	14	31-May-16	16-Jun-16	20
BB-04-1020	Pier AB4 - Pile Cap	30	30	17-Jun-16	22-Jul-16	20
BB-04-1030	Pier AB4 - Pier Construction	17	17	17-Aug-16	05-Sep-16	33
Bridge C		566	552	20-Nov-13 A	10-Oct-15	256
BC-04-1000	Pier AC4 - Piling Works	24	23	20-Nov-13 A	17-Dec-13	13
BC-04-1010	Pier AC4 - Pile Test	14	14	15-Jan-14	30-Jan-14	37
BC-04-1020	Pier AC4 - Pile Cap	30	30	07-Feb-14*	13-Mar-14	37
BC-01-1000	Abutment AC1 - Piling Works	24	24	04-Mar-14	31-Mar-14	2
BC-05-1000	Pier AC5 - Piling Works	24	24	19-Mar-14	16-Apr-14	64
BC-04-1030	Pier AC4 - Pier Construction	24	24	09-Apr-14	12-May-14	132
BC-06-1000	Pier AC6 - Piling Works	24	24	14-Apr-14	16-May-14	73
BC-01-1010	Abutment AC1 - Pile Test	14	14	30-Apr-14	17-May-14	625
BC-09-1000	Pier AC9 - Piling Works	24	24	24-Apr-14	23-May-14	8
BC-05-1010	Pier AC5 - Pile Test	14	14	17-May-14	03-Jun-14	64
BC-06-1010	Pier AC6 - Pile Test	14	14	12-Jun-14	27-Jun-14	73
BC-09-1010	Pier AC9 - Pile Test	14	14	19-Jun-14	05-Jul-14	26
BC-07-1000	Pier AC7 - Piling Works	24	24	04-Jul-14	31-Jul-14	230
BC-05-1020	Pier AC5 - Pile Cap	30	30	07-Jul-14	09-Aug-14	37
BC-09-1020	Pier AC9 - Pile Cap	30	30	07-Jul-14	09-Aug-14	26
BC-10-1000	Pier AC10 - Piling Works	12	12	13-Aug-14	26-Aug-14	109
BC-11-1000	Pier AC11 - Piling Works	12	12	15-Aug-14	28-Aug-14	25
BC-07-1010	Pier AC7 - Pile Test	14	14	26-Aug-14	11-Sep-14	230
BC-06-1020	Pier AC6 - Pile Cap	30	30	11-Aug-14	15-Sep-14	37
BC-02-1000	Pier AC2 - Piling Works	24	24	28-Aug-14	25-Sep-14	112
BC-09-1030	Pier AC9 - Pier Construction	17	17	17-Sep-14	08-Oct-14	16
BC-10-1010	Pier AC10 - Pile Test	14	14	22-Sep-14	09-Oct-14	109
BC-11-1010	Pier AC11 - Pile Test	14	14	24-Sep-14	11-Oct-14	34
BC-08-1000	Pier AC8 - Piling Works	24	24	27-Sep-14	27-Oct-14	282
BC-05-1030	Pier AC5 - Pier Construction	24	24	09-Oct-14	05-Nov-14	16



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09-Jul-13	Rev0	Anselm	Daniel

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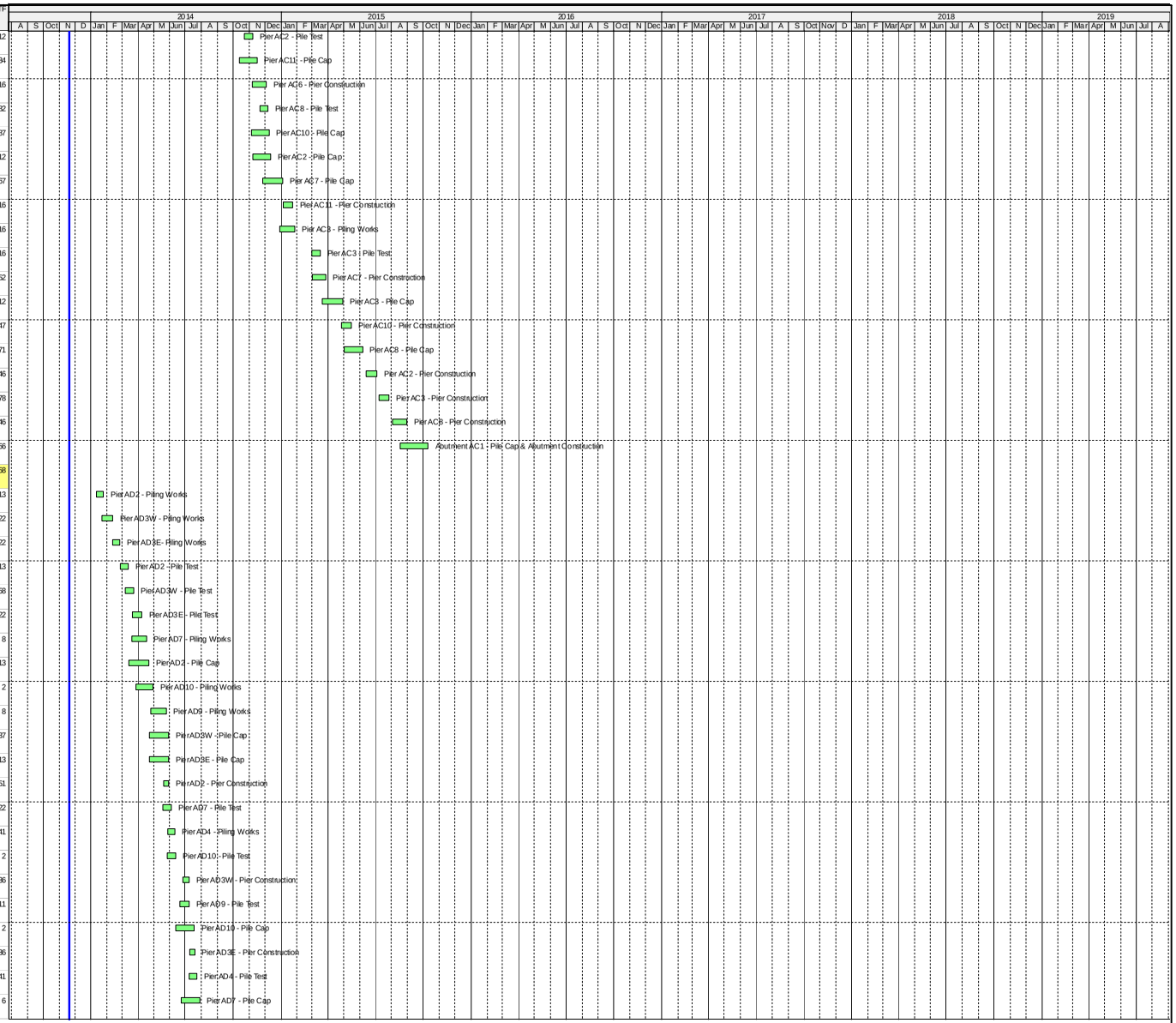
BC-02-1010	Pier AC2 - Pile Test	14	14	23-Oct-14	07-Nov-14	112
BC-11-1020	Pier AC11 - Pile Cap	30	30	13-Oct-14	15-Nov-14	34
BC-06-1030	Pier AC6 - Pier Construction	24	24	06-Nov-14	03-Dec-14	16
BC-08-1010	Pier AC8 - Pile Test	14	14	21-Nov-14	06-Dec-14	282
BC-10-1020	Pier AC10 - Pile Cap	30	30	05-Nov-14	09-Dec-14	87
BC-02-1020	Pier AC2 - Pile Cap	30	30	08-Nov-14	12-Dec-14	112
BC-07-1020	Pier AC7 - Pile Cap	30	30	27-Nov-14	03-Jan-15	167
BC-11-1030	Pier AC11 - Pier Construction	17	17	05-Jan-15	23-Jan-15	16
BC-03-1000	Pier AC3 - Piling Works	24	24	30-Dec-14	27-Jan-15	116
BC-03-1010	Pier AC3 - Pile Test	14	14	28-Feb-15	16-Mar-15	116
BC-07-1030	Pier AC7 - Pier Construction	24	24	02-Mar-15	28-Mar-15	152
BC-03-1020	Pier AC3 - Pile Cap	30	30	21-Mar-15	29-Apr-15	112
BC-10-1030	Pier AC10 - Pier Construction	17	17	27-Apr-15	16-May-15	47
BC-08-1020	Pier AC8 - Pile Cap	30	30	02-May-15	06-Jun-15	171
BC-02-1030	Pier AC2 - Pier Construction	17	17	13-Jun-15	04-Jul-15	146
BC-03-1030	Pier AC3 - Pier Construction	17	17	08-Jul-15	27-Jul-15	78
BC-08-1030	Pier AC8 - Pier Construction	24	24	03-Aug-15	29-Aug-15	146
BC-01-1020	Abutment AC1 - Pile Cap & Abutment Construction	45	45	18-Aug-15	10-Oct-15	256
Bridge D		525	525	11-Jan-14	28-Oct-15	258
BD-02-1000	Pier AD2 - Piling Works	12	12	11-Jan-14	24-Jan-14	13
BD-03-1000	Pier AD3W - Piling Works	12	12	22-Jan-14	11-Feb-14	22
BD-03-2000	Pier AD3E- Piling Works	12	12	12-Feb-14	25-Feb-14	22
BD-02-1010	Pier AD2 - Pile Test	14	14	26-Feb-14	13-Mar-14	13
BD-03-1010	Pier AD3W - Pile Test	14	14	08-Mar-14	24-Mar-14	58
BD-03-2010	Pier AD3E - Pile Test	14	14	22-Mar-14	08-Apr-14	22
BD-07-1000	Pier AD7 - Piling Works	24	24	20-Mar-14	17-Apr-14	8
BD-02-1020	Pier AD2 - Pile Cap	30	30	14-Mar-14*	22-Apr-14	13
BD-10-1000	Pier AD10 - Piling Works	24	24	28-Mar-14	29-Apr-14	2
BD-09-1000	Pier AD9 - Piling Works	24	24	26-Apr-14	26-May-14	8
BD-03-1020	Pier AD3W - Pile Cap	30	30	23-Apr-14	29-May-14	37
BD-03-2020	Pier AD3E - Pile Cap	30	30	23-Apr-14	29-May-14	13
BD-02-1030	Pier AD2 - Pier Construction	10	10	20-May-14	30-May-14	51
BD-07-1010	Pier AD7 - Pile Test	14	14	19-May-14	04-Jun-14	22
BD-04-1000	Pier AD4 - Piling Works	12	12	28-May-14	11-Jun-14	141
BD-10-1010	Pier AD10 - Pile Test	14	14	27-May-14	12-Jun-14	2
BD-03-1030	Pier AD3W - Pier Construction	10	10	26-Jun-14	08-Jul-14	136
BD-09-1010	Pier AD9 - Pile Test	14	14	21-Jun-14	08-Jul-14	11
BD-10-1020	Pier AD10 - Pile Cap	30	30	13-Jun-14	18-Jul-14	2
BD-03-2030	Pier AD3E - Pier Construction	10	10	09-Jul-14	19-Jul-14	136
BD-04-1010	Pier AD4 - Pile Test	14	14	08-Jul-14	23-Jul-14	141
BD-07-1020	Pier AD7 - Pile Cap	30	30	24-Jun-14	29-Jul-14	6



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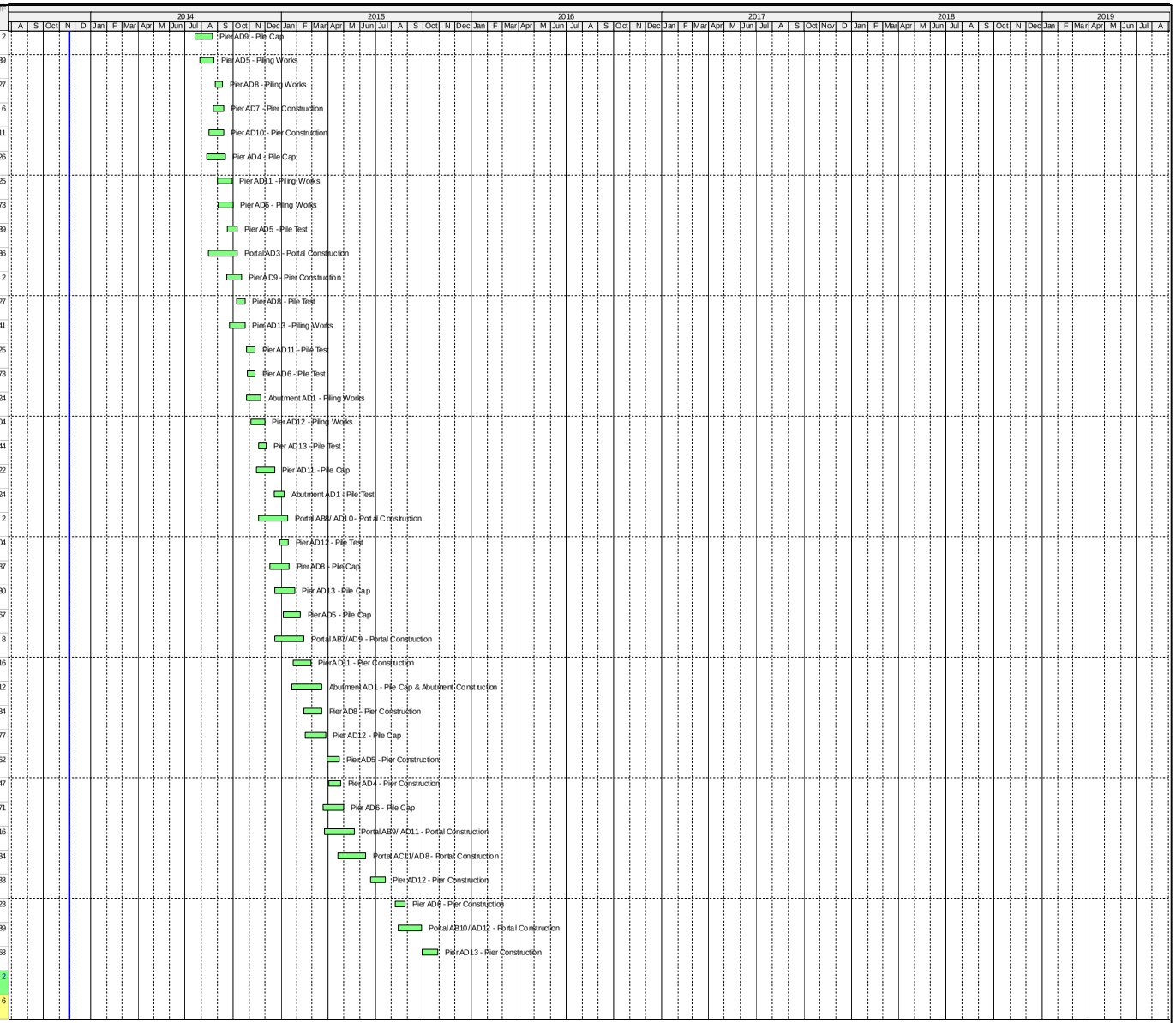
BD-09-1020	Pier AD9 - Pile Cap	30	30	19-Jul-14	22-Aug-14	2
BD-05-1000	Pier AD5 - Piling Works	24	24	29-Jul-14	25-Aug-14	239
BD-08-1000	Pier AD8 - Piling Works	12	12	27-Aug-14	10-Sep-14	127
BD-07-1030	Pier AD7 - Pier Construction	17	17	23-Aug-14	12-Sep-14	6
BD-10-1030	Pier AD10 - Pier Construction	24	24	16-Aug-14	13-Sep-14	11
BD-04-1020	Pier AD4 - Pile Cap	30	30	11-Aug-14	15-Sep-14	126
BD-11-1000	Pier AD11 - Piling Works	24	24	01-Sep-14	29-Sep-14	25
BD-06-1000	Pier AD6 - Piling Works	24	24	02-Sep-14	30-Sep-14	273
BD-05-1010	Pier AD5 - Pile Test	14	14	20-Sep-14	08-Oct-14	239
BD-03-2040	Portal AD3 - Portal Construction	45	45	14-Aug-14	08-Oct-14	136
BD-09-1030	Pier AD9 - Pier Construction	24	24	18-Sep-14	17-Oct-14	2
BD-08-1010	Pier AD8 - Pile Test	14	14	08-Oct-14	23-Oct-14	127
BD-13-1000	Pier AD13 - Piling Works	24	24	24-Sep-14	23-Oct-14	441
BD-11-1010	Pier AD11 - Pile Test	14	14	27-Oct-14	11-Nov-14	25
BD-06-1010	Pier AD6 - Pile Test	14	14	28-Oct-14	12-Nov-14	273
BD-01-1000	Abutment AD1 - Piling Works	24	24	27-Oct-14	22-Nov-14	124
BD-12-1000	Pier AD12 - Piling Works	24	24	04-Nov-14	01-Dec-14	104
BD-13-1010	Pier AD13 - Pile Test	14	14	18-Nov-14	03-Dec-14	444
BD-11-1020	Pier AD11 - Pile Cap	30	30	15-Nov-14	19-Dec-14	22
BD-01-1010	Abutment AD1 - Pile Test	14	14	18-Dec-14	06-Jan-15	124
BD-10-1040	Portal AB8/ AD10 - Portal Construction	45	45	19-Nov-14	13-Jan-15	2
BD-12-1010	Pier AD12 - Pile Test	14	14	29-Dec-14	14-Jan-15	104
BD-08-1020	Pier AD8 - Pile Cap	30	30	10-Dec-14	16-Jan-15	87
BD-13-1020	Pier AD13 - Pile Cap	30	30	20-Dec-14	27-Jan-15	430
BD-05-1020	Pier AD5 - Pile Cap	30	30	05-Jan-15	07-Feb-15	167
BD-09-1040	Portal AB7/AD9 - Portal Construction	45	45	20-Dec-14	13-Feb-15	8
BD-11-1030	Pier AD11 - Pier Construction	24	24	24-Jan-15	27-Feb-15	16
BD-01-1020	Abutment AD1 - Pile Cap & Abutment Construction	45	45	21-Jan-15	20-Mar-15	112
BD-08-1030	Pier AD8 - Pier Construction	24	24	14-Feb-15	20-Mar-15	84
BD-12-1020	Pier AD12 - Pile Cap	30	30	16-Feb-15	28-Mar-15	77
BD-05-1030	Pier AD5 - Pier Construction	17	17	30-Mar-15	22-Apr-15	152
BD-04-1030	Pier AD4 - Pier Construction	17	17	02-Apr-15	25-Apr-15	47
BD-06-1020	Pier AD6 - Pile Cap	30	30	23-Mar-15	30-Apr-15	171
BD-11-1040	Portal AB9/ AD11 - Portal Construction	45	45	25-Mar-15	21-May-15	16
BD-08-1040	Portal AC11/AD8 - Portal Construction	45	45	20-Apr-15	12-Jun-15	84
BD-12-1030	Pier AD12 - Pier Construction	24	24	22-Jun-15	20-Jul-15	33
BD-06-1030	Pier AD6 - Pier Construction	17	17	08-Aug-15	27-Aug-15	123
BD-12-1040	Portal AB10/ AD12 - Portal Construction	45	45	14-Aug-15	27-Sep-15	39
BD-13-1030	Pier AD13 - Pier Construction	24	24	29-Sep-15	28-Oct-15	258
Viaduct Bridge Segement Erection		643	643	04-Dec-14	17-Feb-17	2
Bridge A		584	584	04-Dec-14	30-Nov-16	6



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EA-1120	Bridge Deck Construction at Pier AA12 by Typical Lifting Frame (20 nos)	60	60	04-Dec-14	14-Feb-15	6
EA-1130	Bridge Deck Construction at Pier AA13 by Typical Lifting Frame (25 nos)	23	23	27-May-15	23-Jun-15	6
EA-1140	Bridge Deck Construction at Pier AA14 by Typical Lifting Frame (21 nos)	10	10	03-Sep-15	14-Sep-15	6
EA-1180	Bridge Deck Construction at Pier AA18 by Typical Lifting Frame (27 nos)	22	22	03-Nov-15	27-Nov-15	6
EA-1170	Bridge Deck Construction at Pier AA17 by Typical Lifting Frame (19 nos)	15	15	28-Nov-15	15-Dec-15	6
EA-1150	Bridge Deck Construction at Pier AA15 by Typical Lifting Frame (20 nos)	11	11	16-Dec-15	30-Dec-15	6
EA-1020	Bridge Deck Construction at Portal AA2 by Typical Lifting Frame (17 nos)	10	10	15-Jan-16	26-Jan-16	6
EA-1010	Bridge Deck Construction at Abutment AA1 (End-span) by Falsework & Crane (6 nos)	13	13	22-Jan-16	05-Feb-16	155
EA-1030	Bridge Deck Construction at Pier AA3 by Typical Lifting Frame (20 nos)	10	10	27-Jan-16	06-Feb-16	6
EA-1040	Bridge Deck Construction at Pier AA4 by Typical Lifting Frame (20 nos)	11	11	15-Feb-16	26-Feb-16	6
EA-1160	Bridge Deck Construction at Pier AA16 by Typical Lifting Frame (28 nos)	13	13	30-Mar-16	14-Apr-16	6
EA-1050	Bridge Deck Construction at Pier AA5 by Typical Lifting Frame (16 nos)	11	11	27-May-16	08-Jun-16	6
EA-1100	Bridge Deck Construction at Pier AA10 by Typical Lifting Frame (25 nos)	20	20	10-Jun-16	04-Jul-16	6
EA-1090	Bridge Deck Construction at Pier AA9 by Typical Lifting Frame (17 nos)	10	10	02-Aug-16	12-Aug-16	6
EA-1080	Bridge Deck Construction at Pier AA8 by Typical Lifting Frame (20 nos)	11	11	13-Aug-16	25-Aug-16	6
EA-1110	Bridge Deck Construction at Pier AA11 by Typical Lifting Frame (23 nos)	11	11	10-Sep-16	23-Sep-16	6
EA-1070	Bridge Deck Construction at Pier AA7 by Typical Lifting Frame (18 nos)	10	10	22-Oct-16	02-Nov-16	6
EA-1060	Bridge Deck Construction at Pier AA6 by Typical Lifting Frame (27 nos)	13	13	16-Nov-16	30-Nov-16	6
Bridge B		547	547	10-Apr-15	17-Feb-17	2
EB-1080	Bridge Deck Construction at Pier AB8 by Special Lifting Frame (38 nos)	18	18	10-Apr-15	30-Apr-15	2
EB-1070	Bridge Deck Construction at Pier AB7 by Special Lifting Frame (33 nos)	23	23	29-May-15	25-Jun-15	2
EB-1090	Bridge Deck Construction at Pier AB9 by Special Lifting Frame (41 nos)	93	93	29-Jul-15	17-Nov-15	2
EB-1060	Bridge Deck Construction at Portal AB6 by Typical Lifting Frame (27 nos)	11	11	27-Feb-16	10-Mar-16	6
EB-1100	Bridge Deck Construction at Pier AB10 by Special Lifting Frame (60 nos)	93	93	18-Nov-15	15-Mar-16	2
EB-1050	Bridge Deck Construction at Pier AB5 by Typical Lifting Frame (20 nos)	11	11	13-May-16	26-May-16	6
EB-1020	Bridge Deck Construction at Pier AB2 by Typical Lifting Frame (23 nos)	13	13	26-Aug-16	09-Sep-16	6
EB-1010	Bridge Deck Construction at Abutment AB1 (End-span) by Falsework & Crane (11 nos)	13	13	02-Sep-16	17-Sep-16	67
EB-1030	Bridge Deck Construction at Pier AB3 by Typical Lifting Frame (26 nos)	12	12	07-Oct-16	21-Oct-16	6
EB-1040	Bridge Deck Construction at Pier AB4 by Typical Lifting Frame (27 nos)	11	11	03-Nov-16	15-Nov-16	6
EB-1120	Bridge Deck Construction at Abutment AB12/AD14 (End-span) by Falsework & Crane (8 nos)	26	26	23-Nov-16	22-Dec-16	2
EB-1110	Bridge Deck Construction at Pier AB11 by Special Lifting Frame (60 nos)	72	72	16-Nov-16	17-Feb-17	2
Bridge C		478	478	16-Feb-15	06-Oct-16	6
EC-1040	Bridge Deck Construction at Pier AC4 by Typical Lifting Frame (22 nos)	14	14	16-Feb-15	10-Mar-15	6
EC-1050	Bridge Deck Construction at Pier AC5 by Typical Lifting Frame (24 nos)	10	10	13-Mar-15	24-Mar-15	6
EC-1060	Bridge Deck Construction at Pier AC6 by Typical Lifting Frame (18 nos)	13	13	24-Jun-15	09-Jul-15	6
EC-1090	Bridge Deck Construction at Pier AC9 by Typical Lifting Frame (25 nos)	12	12	10-Jul-15	23-Jul-15	6
EC-1100	Bridge Deck Construction at Pier AC10 by Typical Lifting Frame (14 nos)	15	15	24-Jul-15	10-Aug-15	6
EC-1110	Bridge Deck Construction at Portal (AC11 & AD8) by Typical Lifting Frame (17 nos)	13	13	17-Oct-15	02-Nov-15	6
EC-1070	Bridge Deck Construction at Pier AC7 by Typical Lifting Frame (27 nos)	12	12	31-Dec-15	14-Jan-16	6
EC-1080	Bridge Deck Construction at Pier AC8 by Typical Lifting Frame (22 nos)	13	13	11-Mar-16	29-Mar-16	6
EC-1020	Bridge Deck Construction at Pier AC2 by Typical Lifting Frame (25 nos)	24	24	05-Jul-16	01-Aug-16	6

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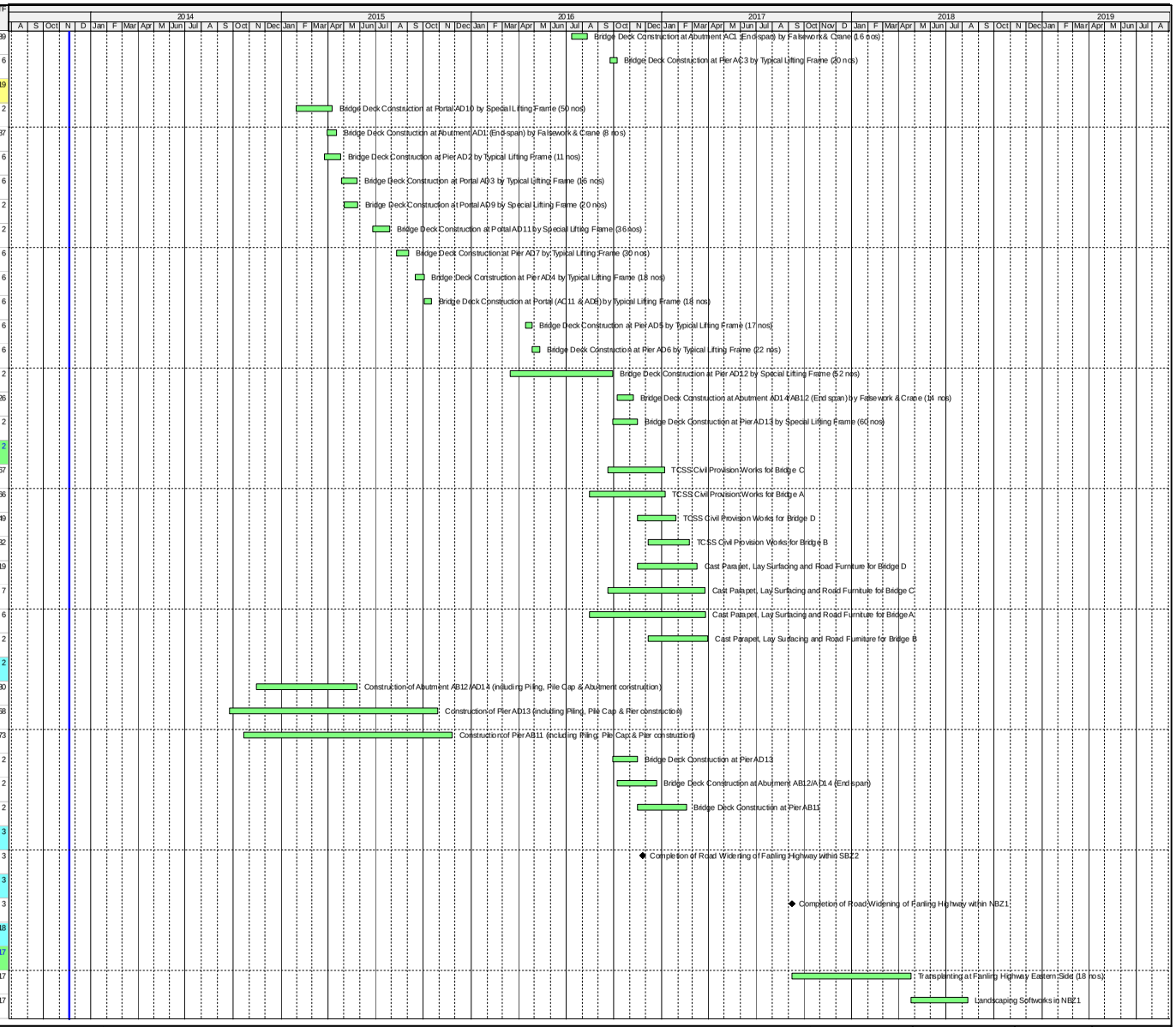
EC-1010	Bridge Deck Construction at Abutment AC1 (End-span) by Falsework& Crane (16 nos)	26	26	12-Jul-16	10-Aug-16	39
EC-1030	Bridge Deck Construction at Pier AC3 by Typical Lifting Frame (20 nos)	10	10	24-Sep-16	06-Oct-16	6
Bridge D		525	525	30-Jan-15	15-Nov-16	19
ED-1100	Bridge Deck Construction at Portal AD10 by Special Lifting Frame (50 nos)	50	50	30-Jan-15	09-Apr-15	2
ED-1010	Bridge Deck Construction at Abutment AD1 (End-span) by Falsework& Crane (8 nos)	12	12	31-Mar-15	17-Apr-15	487
ED-1020	Bridge Deck Construction at Pier AD2 by Typical Lifting Frame (11 nos)	24	24	25-Mar-15	25-Apr-15	6
ED-1030	Bridge Deck Construction at Portal AD3 by Typical Lifting Frame (16 nos)	24	24	27-Apr-15	26-May-15	6
ED-1090	Bridge Deck Construction at Portal AD9 by Special Lifting Frame (20 nos)	22	22	02-May-15	28-May-15	2
ED-1110	Bridge Deck Construction at Portal AD11 by Special Lifting Frame (36 nos)	27	27	26-Jun-15	28-Jul-15	2
ED-1070	Bridge Deck Construction at Pier AD7 by Typical Lifting Frame (30 nos)	20	20	11-Aug-15	02-Sep-15	6
ED-1040	Bridge Deck Construction at Pier AD4 by Typical Lifting Frame (18 nos)	14	14	15-Sep-15	02-Oct-15	6
ED-1080	Bridge Deck Construction at Portal (AC11 & AD8) by Typical Lifting Frame (18 nos)	12	12	03-Oct-15	16-Oct-15	6
ED-1050	Bridge Deck Construction at Pier AD5 by Typical Lifting Frame (17 nos)	10	10	15-Apr-16	26-Apr-16	6
ED-1060	Bridge Deck Construction at Pier AD6 by Typical Lifting Frame (22 nos)	13	13	27-Apr-16	12-May-16	6
ED-1120	Bridge Deck Construction at Pier AD12 by Special Lifting Frame (52 nos)	160	160	16-Mar-16	28-Sep-16	2
ED-1140	Bridge Deck Construction at Abutment AD14/AB12 (End span) by Falsework & Crane (14 nos)	26	26	07-Oct-16	07-Nov-16	26
ED-1130	Bridge Deck Construction at Pier AD13 by Special Lifting Frame (60 nos)	39	39	29-Sep-16	15-Nov-16	2
Civil Provision Works		184	184	15-Aug-16	30-Mar-17	2
C-3010	TCSS Civil Provision Works for Bridge C	90	90	19-Sep-16	06-Jan-17	67
C-1010	TCSS Civil Provision Works for Bridge A	120	120	15-Aug-16	07-Jan-17	66
C-4010	TCSS Civil Provision Works for Bridge D	60	60	16-Nov-16	27-Jan-17	49
C-2010	TCSS Civil Provision Works for Bridge B	60	60	06-Dec-16	23-Feb-17	32
C-4000	Cast Parapet, Lay Surfacing and Road Furniture for Bridge D	90	90	16-Nov-16	10-Mar-17	19
C-3000	Cast Parapet, Lay Surfacing and Road Furniture for Bridge C	150	150	19-Sep-16	24-Mar-17	7
C-1000	Cast Parapet, Lay Surfacing and Road Furniture for Bridge A	180	180	15-Aug-16	25-Mar-17	6
C-2000	Cast Parapet, Lay Surfacing and Road Furniture for Bridge B	90	90	06-Dec-16	30-Mar-17	2
Section VI - Works in Portion FH9 (KD-6A)		702	702	24-Sep-14	17-Feb-17	2
S6-1020	Construction of Abutment AB12/AD14 (including Piling, Pile Cap & Abutment construction)	151	151	14-Nov-14	26-May-15	430
S6-1010	Construction of Pier AD13 (including Piling, Pile Cap & Pier construction)	321	321	24-Sep-14	28-Oct-15	258
S6-1000	Construction of Pier AB11 (including Piling, Pile Cap & Pier construction)	324	324	21-Oct-14	25-Nov-15	273
S6-1040	Bridge Deck Construction at Pier AD13	39	39	29-Sep-16	15-Nov-16	2
S6-1050	Bridge Deck Construction at Abutment AB12/AD14 (End-span)	65	65	07-Oct-16	22-Dec-16	2
S6-1030	Bridge Deck Construction at Pier AB11	72	72	16-Nov-16	17-Feb-17	2
Stage S4 - Completion of Road Widening (SBZ2) and to Allow Access for HY/2012/06 (KD-10)		0	0	24-Nov-16	24-Nov-16	3
SS4-1000	Completion of Road Widening of Fanling Highway within SBZ 2	0	0		24-Nov-16	3
Stage N4 - Completion of Road Widening (NBZ1) and to Allow Access for HY/2012/06 (KD-11)		0	0	07-Sep-17	07-Sep-17	3
SN4-1000	Completion of Road Widening of Fanling Highway within NBZ1	0	0		07-Sep-17	3
Landscaping & Establishment Works (KD-4, 4A, 5, 5A, 6)		1045	1045	14-Jan-16	11-Aug-19	18
Secton IIIA - Landscaping Softworks in NBZ1		270	270	08-Sep-17	11-Aug-18	17
S3A-1000	Transplanting at Fanling Highway Eastern Side (18 nos.)	180	180	08-Sep-17	24-Apr-18	17
S3A-1010	Landscaping Softworks in NBZ1	90	90	25-Apr-18	11-Aug-18	17



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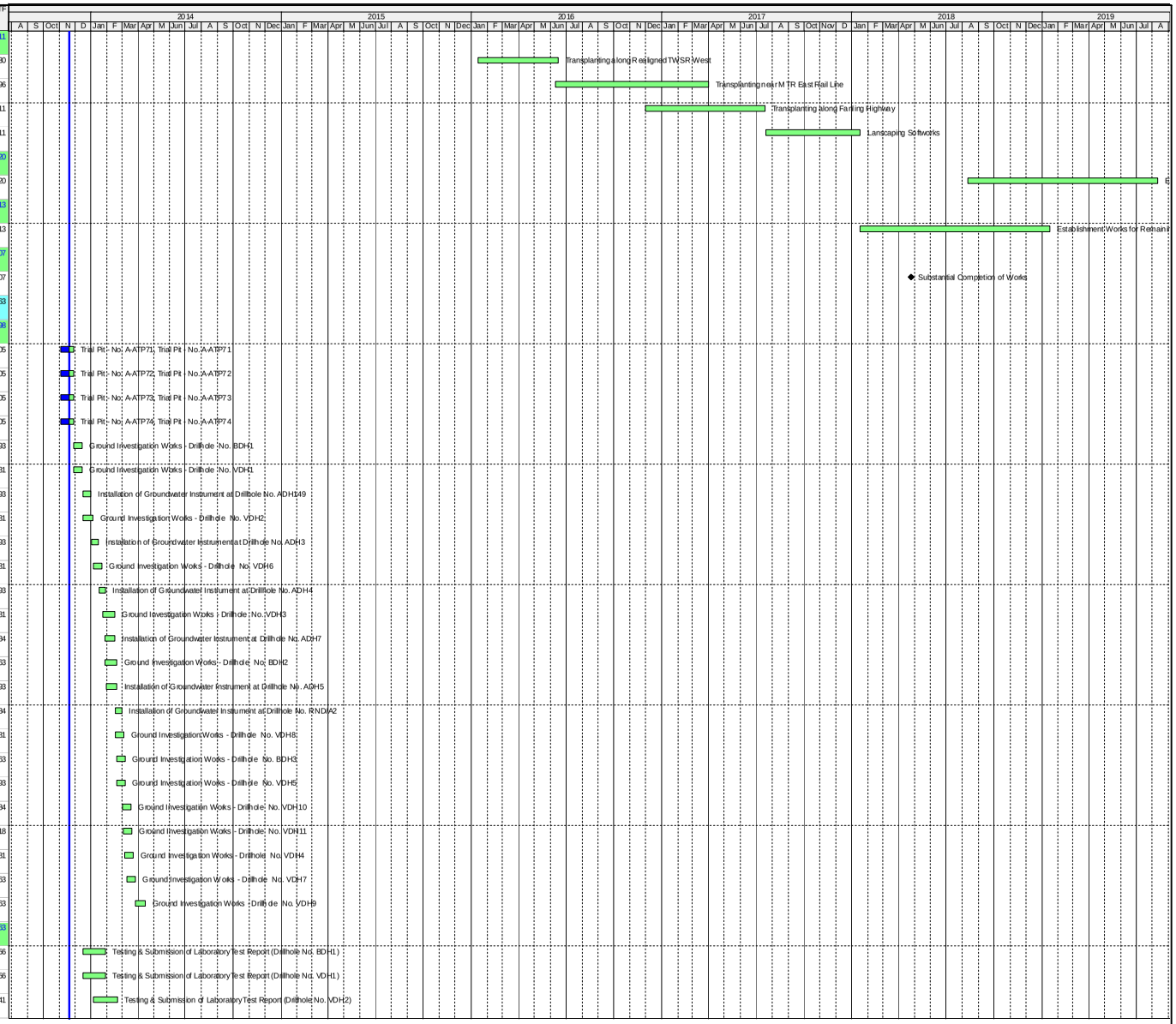
	Secton III - Remainder of Landscaping Softworks Not Included in Secton IIIA	589	589	14-Jan-16	16-Jan-18	11
S3-1000	Transplanting along Realigned TWSR West	120	120	14-Jan-16	16-Jun-16	330
S3-1020	Transplanting near MTR East Rail Line	240	240	10-Jun-16	31-Mar-17	96
S3-1010	Transplanting along Fanling Highway	180	180	01-Dec-16	18-Jul-17	11
S3-1030	Lanscaping Softworks	150	150	19-Jul-17	16-Jan-18	11
	Establishment Works for Landscape Softworks under Section IIIA	365	365	12-Aug-18	11-Aug-19	20
S4A-1000	Establishment Works at NBZ1	365	365	12-Aug-18	11-Aug-19	20
	Establishment Works for Landscape Softworks under Section III	365	365	17-Jan-18	16-Jan-19	13
S4-1000	Establishment Works for Remaining Part of Site	365	365	17-Jan-18	16-Jan-19	13
	Preservation and Protection of Trees	0	0	24-Apr-18	24-Apr-18	107
S5-1000	Substantial Completion of Works	0	0		24-Apr-18	107
	Section VII - All Geotechnical Fieldworks & All Associated Laboratory Tests (KD-6B)	143	149	05-Nov-13 A	30-May-14	63
	Installation of Geotechnical Instruments / Ground Investigation	108	114	05-Nov-13 A	14-Apr-14	98
S7-2000	Trial Pit - No. A-ATP71	7	7	05-Nov-13 A	28-Nov-13	205
S7-2010	Trial Pit - No. A-ATP72	7	7	05-Nov-13 A	28-Nov-13	205
S7-2020	Trial Pit - No. A-ATP73	7	7	05-Nov-13 A	28-Nov-13	205
S7-2030	Trial Pit - No. A-ATP74	7	7	05-Nov-13 A	28-Nov-13	205
S7-1000	Ground Investigation Works - Drillhole No. BDH1	15	15	28-Nov-13	14-Dec-13	93
S7-1030	Ground Investigation Works - Drillhole No. VDH1	15	15	28-Nov-13	14-Dec-13	81
S7-3040	Installation of Groundwater Instrument at Drillhole No. ADH149	12	12	16-Dec-13	31-Dec-13	93
S7-1040	Ground Investigation Works - Drillhole No. VDH2	15	15	16-Dec-13	04-Jan-14	81
S7-3000	Installation of Groundwater Instrument at Drillhole No. ADH3	12	12	02-Jan-14	15-Jan-14	93
S7-1080	Ground Investigation Works - Drillhole No. VDH6	15	15	06-Jan-14	22-Jan-14	81
S7-3010	Installation of Groundwater Instrument at Drillhole No. ADH4	12	12	16-Jan-14	29-Jan-14	93
S7-1050	Ground Investigation Works - Drillhole No. VDH3	15	15	23-Jan-14	15-Feb-14	81
S7-3030	Installation of Groundwater Instrument at Drillhole No. ADH7	12	12	27-Jan-14	15-Feb-14	84
S7-1010	Ground Investigation Works - Drillhole No. BDH2	15	15	27-Jan-14	19-Feb-14	63
S7-3020	Installation of Groundwater Instrument at Drillhole No. ADH5	12	12	30-Jan-14	19-Feb-14	93
S7-3050	Installation of Groundwater Instrument at Drillhole No. RND/A2	12	12	17-Feb-14	01-Mar-14	84
S7-1100	Ground Investigation Works - Drillhole No. VDH8	15	15	17-Feb-14	05-Mar-14	81
S7-1020	Ground Investigation Works - Drillhole No. BDH3	15	15	20-Feb-14	08-Mar-14	63
S7-1070	Ground Investigation Works - Drillhole No. VDH5	15	15	20-Feb-14	08-Mar-14	93
S7-1120	Ground Investigation Works - Drillhole No. VDH10	15	15	03-Mar-14	19-Mar-14	84
S7-1130	Ground Investigation Works - Drillhole No. VDH11	15	15	04-Mar-14	20-Mar-14	118
S7-1060	Ground Investigation Works - Drillhole No. VDH4	15	15	06-Mar-14	22-Mar-14	81
S7-1090	Ground Investigation Works - Drillhole No. VDH7	15	15	10-Mar-14	26-Mar-14	63
S7-1110	Ground Investigation Works - Drillhole No. VDH9	15	15	27-Mar-14	14-Apr-14	63
	Submission of Laboratory Tests	128	128	16-Dec-13	30-May-14	63
S7-5000	Testing & Submission of Laboratory Test Report (Drillhole No. BDH1)	35	35	16-Dec-13	28-Jan-14	156
S7-5030	Testing & Submission of Laboratory Test Report (Drillhole No. VDH1)	35	35	16-Dec-13	28-Jan-14	156
S7-5040	Testing & Submission of Laboratory Test Report (Drillhole No. VDH2)	35	35	06-Jan-14	21-Feb-14	141



俊和建築工程有限公司
CHUN WO CONSTRUCTION & ENGINEERING CO., LTD.

Actual Work
Remaining Work
Summary Bar
Critical Remaining Work
Milestone

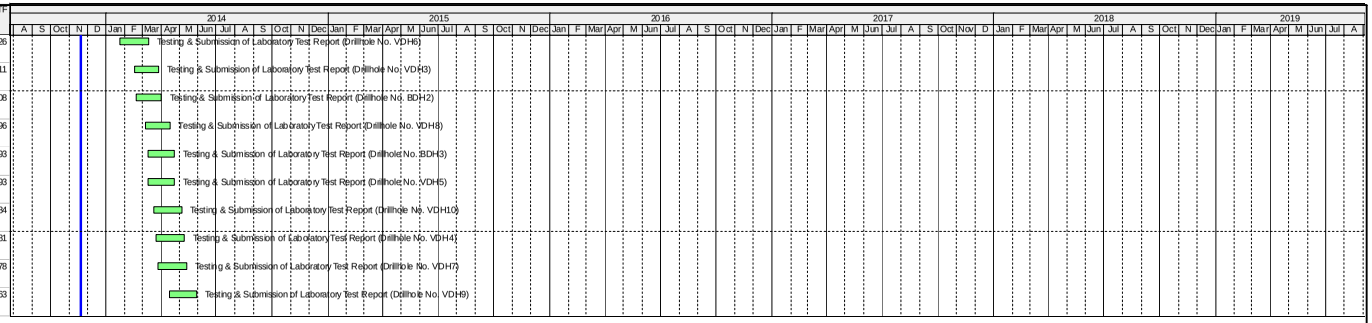
CEDD Contract No. CV/2012/09

Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

Initial Works Programme Rev 4

Date	Revision	Checked	Approved
29-Jan-14	Rev4	Sam	Daniel
21-Dec-13	Rev3	Dennis	Daniel
23-Oct-13	Rev2	Dennis	Daniel
17-Sep-13	Rev1	Dennis	Daniel
09-Jul-13	Rev0	Anselm	Daniel

Activity ID	Activity Name	OD	RD	Start	Finish	TF
S7-5080	Testing & Submission of Laboratory Test Report (Drillhole No. VDH6)	35	35	23-Jan-14	11-Mar-14	126
S7-5050	Testing & Submission of Laboratory Test Report (Drillhole No. VDH3)	35	35	17-Feb-14	28-Mar-14	111
S7-5010	Testing & Submission of Laboratory Test Report (Drillhole No. BDH2)	35	35	20-Feb-14	01-Apr-14	108
S7-5100	Testing & Submission of Laboratory Test Report (Drillhole No. VDH8)	35	35	06-Mar-14	16-Apr-14	96
S7-5020	Testing & Submission of Laboratory Test Report (Drillhole No. BDH3)	35	35	10-Mar-14	23-Apr-14	93
S7-5070	Testing & Submission of Laboratory Test Report (Drillhole No. VDH5)	35	35	10-Mar-14	23-Apr-14	93
S7-5120	Testing & Submission of Laboratory Test Report (Drillhole No. VDH10)	35	35	20-Mar-14	05-May-14	84
S7-5060	Testing & Submission of Laboratory Test Report (Drillhole No. VDH4)	35	35	24-Mar-14	09-May-14	81
S7-5090	Testing & Submission of Laboratory Test Report (Drillhole No. VDH7)	35	35	27-Mar-14	13-May-14	78
S7-5110	Testing & Submission of Laboratory Test Report (Drillhole No. VDH9)	35	35	15-Apr-14	30-May-14	63



Actual Work
Remaining Work
Summary Bar
Critical Remaining Work
Milestone

俊和建築工程有限公司
CHUN WO CONSTRUCTION & ENGINEERING CO., LTD.

CEDD Contract No. CV/2012/09

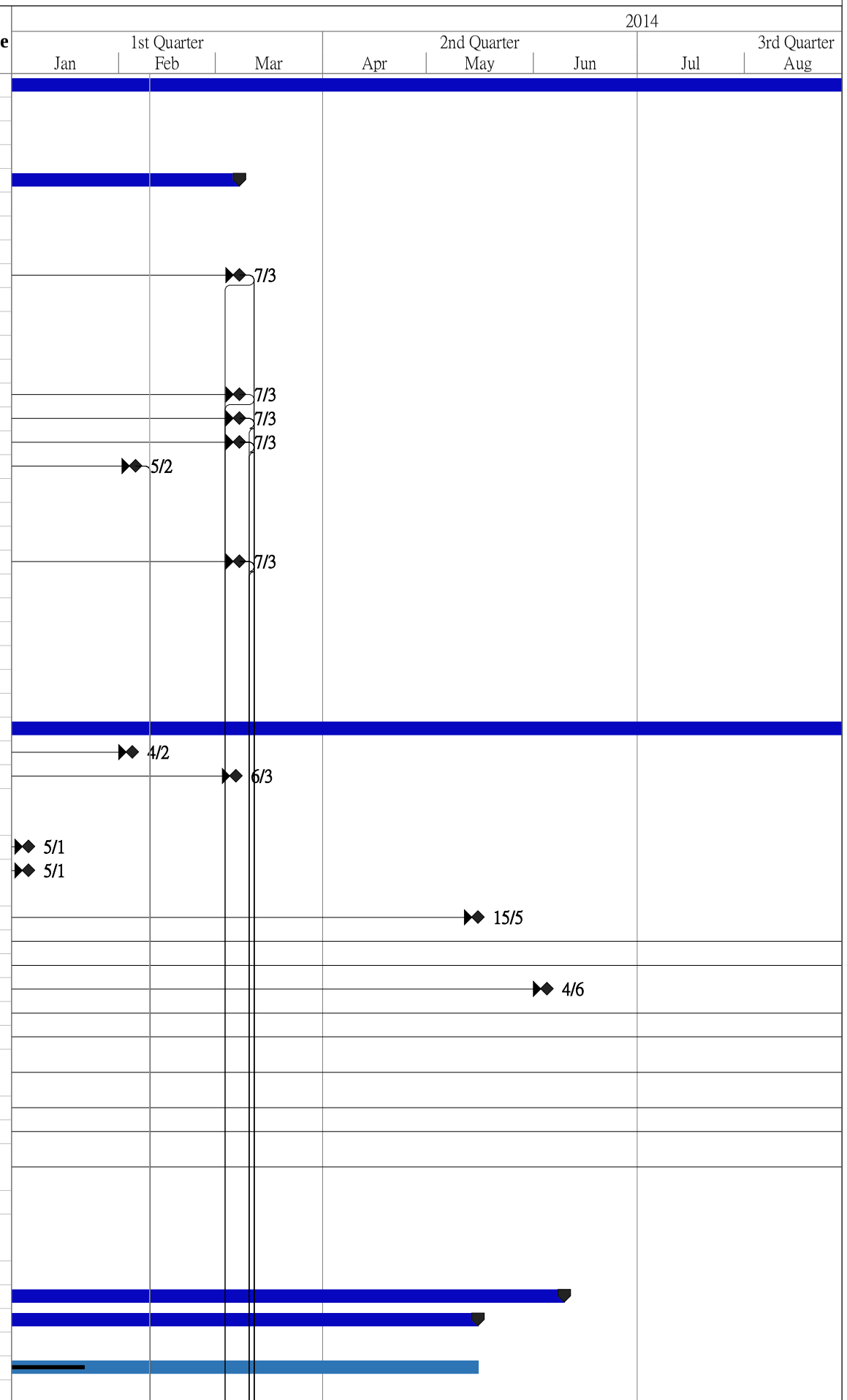
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

Initial Works Programme Rev 4

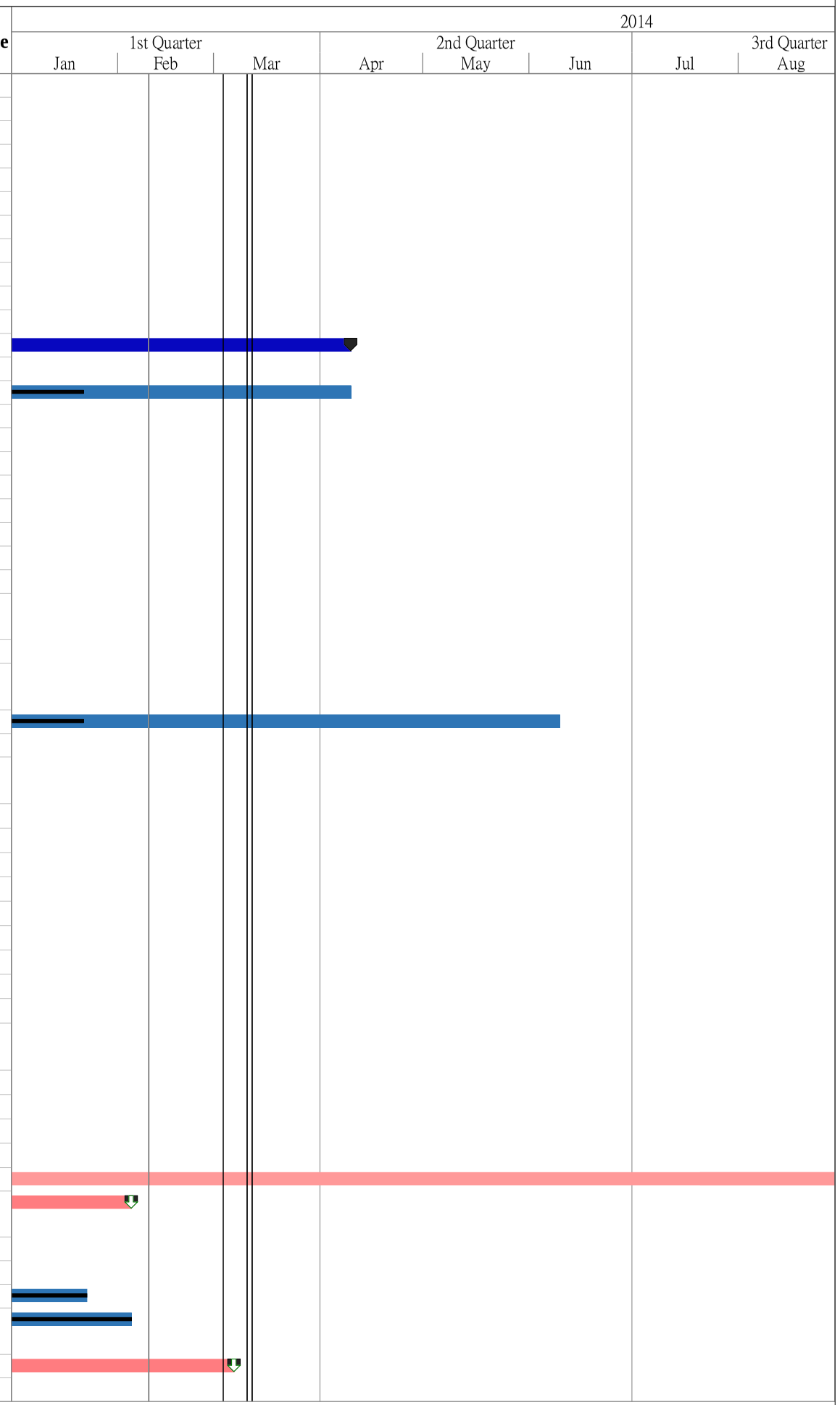
Date	Revision	Checked	Approved
29-Jan-14	Rev4	Sam	Daniel
21-Dec-13	Rev3	Dennis	Daniel
23-Oct-13	Rev2	Dennis	Daniel
17-Sep-13	Rev1	Dennis	Daniel
09-Jul-13	Rev0	Anselm	Daniel

Contract 5

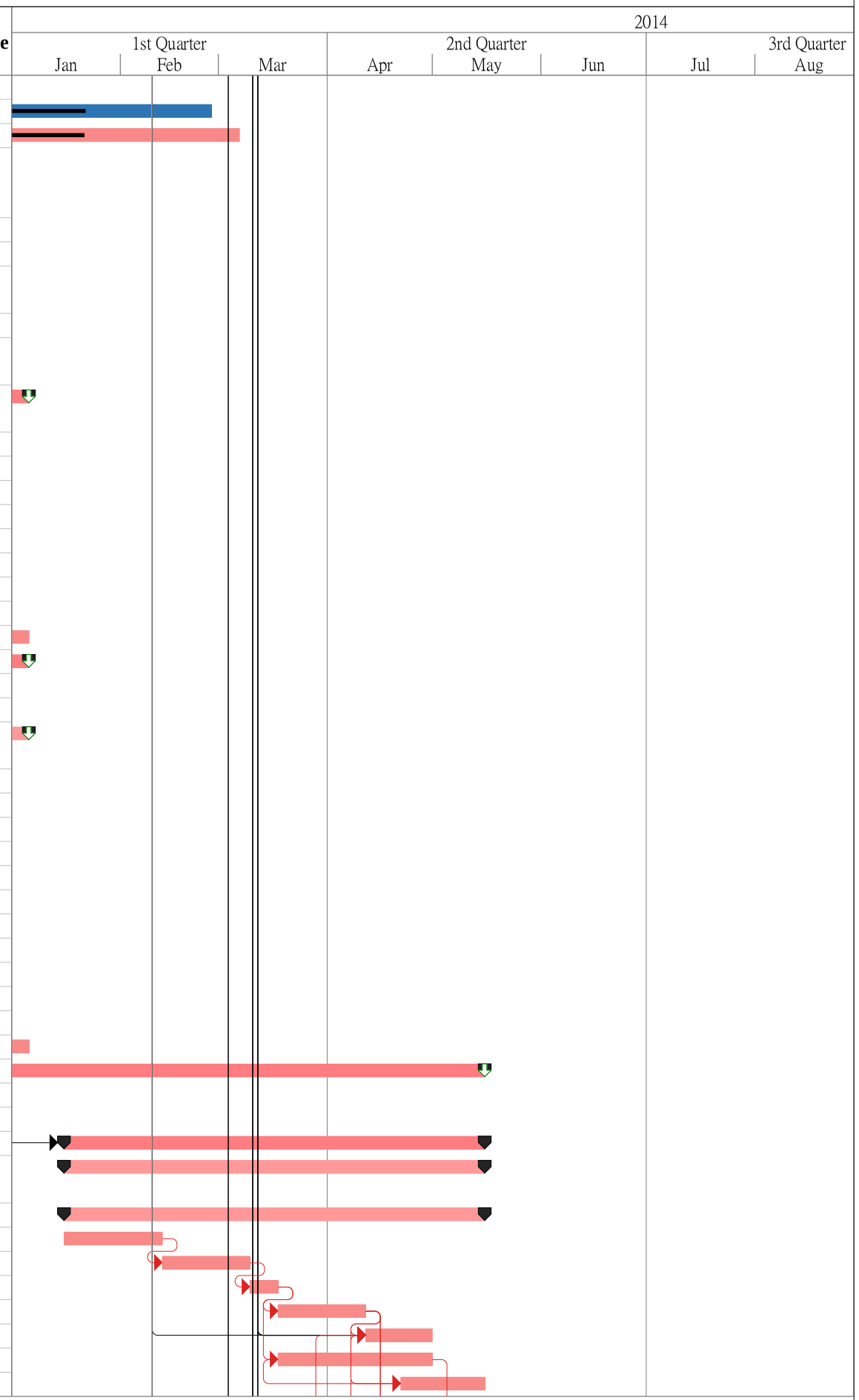
ID	WBS	Task Name	Duration	Start	Finish	% Complete
1	**1**	**Key Dates**	**1110 days**	**28/3/2013**	**10/4/2016**	**0%**
2	**1.1**	**Contract Award & Commencement**	**15 days**	**28/3/2013**	**11/4/2013**	**100%**
3	1.1.1	Letter of Acceptance	0 days	28/3/2013	28/3/2013	100%
4	1.1.2	Commencement of Works	0 days	11/4/2013	11/4/2013	100%
5	**1.2**	**Site Possession Date**	**330 days**	**11/4/2013**	**7/3/2014**	**0%**
6	1.2.1	Portion BCP 1	0 days	11/5/2013	11/5/2013	100%
7	1.2.2	Portion BCP 2	0 days	10/6/2013	10/6/2013	100%
8	1.2.3	Portion BCP 3	0 days	8/9/2013	8/9/2013	100%
9	1.2.4	Portion BCP 4	0 days	7/3/2014	7/3/2014	0%
10	1.2.5	Portion BCP 5	0 days	8/9/2013	8/9/2013	100%
11	1.2.6	Portion BCP 6	0 days	8/9/2013	8/9/2013	100%
12	1.2.7	Portion BCP 7	0 days	8/9/2013	8/9/2013	100%
13	1.2.8	Portion CR 2	0 days	7/12/2013	7/12/2013	100%
14	1.2.9	Portion CR 40	0 days	7/3/2014	7/3/2014	0%
15	1.2.10	Portion CR 41	0 days	7/3/2014	7/3/2014	0%
16	1.2.11	Portion CR 42	0 days	7/3/2014	7/3/2014	0%
17	1.2.12	Portion CR 44	0 days	5/2/2014	5/2/2014	0%
18	1.2.13	Area LMH 0	0 days	11/4/2013	11/4/2013	100%
19	1.2.14	Area LMH 1	0 days	8/9/2013	8/9/2013	100%
20	1.2.15	Area LMH 2	0 days	11/5/2013	11/5/2013	100%
21	1.2.16	Area LMH 3	0 days	7/3/2014	7/3/2014	0%
22	1.2.17	Area LMH 4	0 days	8/9/2013	8/9/2013	100%
23	1.2.18	Area LMH 5	0 days	8/10/2013	8/10/2013	100%
24	1.2.19	Area RS 1	0 days	11/5/2013	11/5/2013	100%
25	1.2.20	Area RS 2 (Omitted)	0 days	11/5/2013	11/5/2013	100%
26	1.2.21	Area RS 3	0 days	11/5/2013	11/5/2013	100%
27	1.2.22	Area RS 4	0 days	11/5/2013	11/5/2013	100%
28	**1.3**	**Section Completion Date**	**976 days**	**8/8/2013**	**10/4/2016**	**0%**
29	1.3.1	KD-1 Section I of the Works - G.I. field works	0 days	4/2/2014	4/2/2014	100%
30	1.3.2	KD-2 Section II of the Works - All laboratory tests for Section I	0 days	6/3/2014	6/3/2014	0%
31	1.3.3	KD-3 Section III of the Works - Site formation works for portion RS1, RS2 & RS3	0 days	8/8/2013	8/8/2013	100%
32	1.3.4	KD-4 Section IV of the Works - Village house within portion RS4	0 days	5/1/2014	5/1/2014	100%
33	1.3.5	KD-5 Section V of the Works - All works within portion RS4 exclude Section IV	0 days	5/1/2014	5/1/2014	100%
34	1.3.6	KD-7 Section VII of the Works - All works within Area CRD	0 days	15/5/2014	15/5/2014	0%
35	1.3.7	KD-8 Section VIII of the Works - All works within Area BCPA	0 days	12/10/2014	12/10/2014	0%
36	1.3.8	KD-8 Section IX of the Works - All works within Area BCPB	0 days	11/4/2015	11/4/2015	0%
37	1.3.9	KD-10 Section X of the Works - All works within Area BCPC	0 days	4/6/2014	4/6/2014	0%
38	1.3.10	KD-11 Section XI of the Works - All works within Area BCPD	0 days	11/4/2015	11/4/2015	0%
39	1.3.11	KD-12 Section XII of the Works - All works within Area LMH	0 days	1/12/2014	1/12/2014	0%
40	1.3.12	KD-13 Section XIII of the Works - Works not covered in any other Sections	0 days	11/4/2015	11/4/2015	0%
41	1.3.13	KD-14 Section XIV of the Works - Trees preservation and protection	0 days	11/4/2015	11/4/2015	0%
42	1.3.14	KD-15 Section XV of the Works - Landscape soft works	0 days	11/4/2015	11/4/2015	0%
43	1.3.15	KD-16 Section XVI of the Works - Establishment works for landscape soft works	0 days	10/4/2016	10/4/2016	0%
44	**1.4**	**Stage Completion Date**	**60 days**	**8/8/2013**	**7/10/2013**	**100%**
45	1.4.1	KD-17 Stage I of the Works - Temporary vehicular bridge J and temporary Lin Ma Hang Road	0 days	7/10/2013	7/10/2013	100%
46	1.4.2	KD-18 Stage II of the Works - Temporary ArchSD Depot	0 days	8/8/2013	8/8/2013	100%
47	**2**	**Preliminaries and Statuary / Contractual Submissions**	**424 days**	**11/4/2013**	**9/6/2014**	**83%**
48	**2.1**	**Site Establishment**	**399 days**	**11/4/2013**	**15/5/2014**	**78%**
49	2.1.1	Take over of the Engineer Accommodation	0 days	11/4/2013	11/4/2013	100%
50	2.1.3	Initial Survey	399 days	12/4/2013	15/5/2014	71%
51	2.1.5	Setup and Management of TMLG	60 days	12/4/2013	10/6/2013	100%



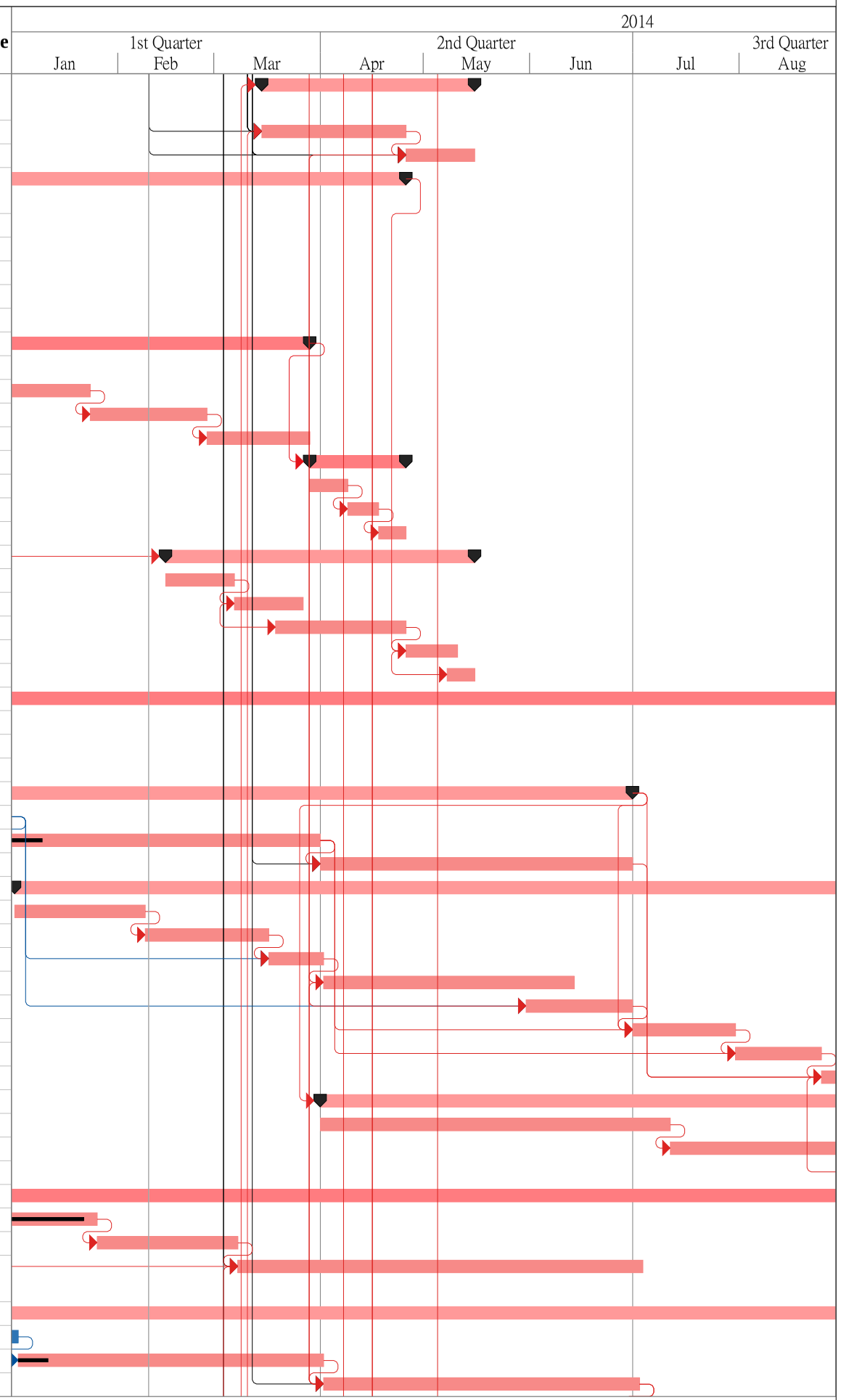
ID	WBS	Task Name	Duration	Start	Finish	% Complete
52	2.1.6	Setup and Management of ULG	60 days	12/4/2013	10/6/2013	100%
53	**2.2**	**Applications to Government Department**	**89 days**	**12/4/2013**	**9/7/2013**	**100%**
54	2.2.1	Application of excavation permit	89 days	12/4/2013	9/7/2013	100%
55	2.2.2	Application of Waste water discharge license	44 days	12/4/2013	25/5/2013	100%
56	2.2.3	Application of chemical waste producer permit	44 days	12/4/2013	25/5/2013	100%
57	2.2.4	Application of trip ticket system	44 days	12/4/2013	25/5/2013	100%
58	**2.3**	**Temporary Traffic Arrangement (TTA) Scheme for temp. LMH Rd**	**131 days**	**12/4/2013**	**20/8/2013**	**100%**
59	2.3.1	Submission / approval of traffic consultant	6 days	12/4/2013	17/4/2013	100%
60	2.3.2	Preparation of TTA scheme	45 days	18/4/2013	1/6/2013	100%
61	2.3.3	Comment & approval of TTA scheme by TD & RMO	66 days	2/6/2013	6/8/2013	100%
62	2.3.4	Obtain roadwork advice from RMO	14 days	7/8/2013	20/8/2013	100%
63	**2.4**	**Liaison with Utility Undertakers**	**363 days**	**12/4/2013**	**9/4/2014**	**80%**
64	2.4.1	Obtain most update utility drawings from various utility undertakers	29 days	12/4/2013	10/5/2013	100%
65	2.4.2	Liaise with various utility undertakers	363 days	12/4/2013	9/4/2014	79%
66	**2.5**	**Environmental Baseline & Impact Monitoring**	**132 days**	**11/4/2013**	**21/8/2013**	**100%**
67	2.5.1	Obtain Environmental Permit (EP) -- EP-404/2011	0 days	11/4/2013	11/4/2013	100%
68	2.5.2	Appointment of ET	0 days	11/4/2013	11/4/2013	100%
69	2.5.3	Approval of ET from EPD	6 days	13/4/2013	18/4/2013	100%
70	2.5.4	Preparation of method statement for baseline monitoring by ET	20 days	19/4/2013	8/5/2013	100%
71	2.5.5	Submission of relevant management plans & reports by Others	35 days	12/4/2013	16/5/2013	100%
72	2.5.6	Certify the method statement, management plans & reports by ET	15 days	17/5/2013	31/5/2013	100%
73	2.5.7	Verify the EM&A manual, management plans & reports by IEC	20 days	22/5/2013	10/6/2013	100%
74	2.5.8	Management plans & reports submitted to EPD three month before commencement of Construction works	97 days	17/5/2013	21/8/2013	100%
75	2.5.9	Carry out the baseline monitoring and preparation of report	35 days	11/6/2013	15/7/2013	100%
76	2.5.10	Baseline monitoring report submitted to EPD one month before commencement of Construction works	36 days	16/7/2013	20/8/2013	100%
77	2.6	General Site Clearance	424 days	12/4/2013	9/6/2014	67%
78	**3**	**Stage of the Works**	**180 days**	**11/4/2013**	**7/10/2013**	**100%**
79	**3.1**	**Stage I of the Works - Temporary vehicular bridge B and temporary Lin Ma Hang Road**	**179 days**	**12/4/2013**	**7/10/2013**	**100%**
80	3.1.1	Submissions	69 days	12/4/2013	19/6/2013	100%
81	3.1.2	Approval of Submissions	69 days	14/6/2013	21/8/2013	100%
82	**3.1.3**	**Construction of temporary vehicular bridge "B"**	**47 days**	**22/8/2013**	**7/10/2013**	**100%**
83	3.1.3.1	Preparation of UBs	9 days	22/8/2013	30/8/2013	100%
84	3.1.3.2	Construct concrete footings	24 days	24/8/2013	16/9/2013	100%
85	3.1.3.3	construct main beam for bridge	17 days	17/9/2013	3/10/2013	100%
86	3.1.3.4	backfill with general fill adjacent to pile caps to form access roads	4 days	4/10/2013	7/10/2013	100%
87	**3.1.4**	**Construction of temporary Lin Ma Hang Road**	**47 days**	**22/8/2013**	**7/10/2013**	**100%**
88	3.1.4.1	Section 1 : chainage 100 - 730	47 days	22/8/2013	7/10/2013	100%
89	3.1.4.2	Section 2 : Chuk Yuen Tsuen (South) Sewage Pumping Station to Existing Lin Ma Hang Road Bridge	47 days	22/8/2013	7/10/2013	100%
90	**3.2**	**Stage II of the Works - Temporary ArchSD Depot (LMH2)**	**78 days**	**11/4/2013**	**27/6/2013**	**100%**
91	3.2.1	Liaison with ArchSD	49 days	11/4/2013	29/5/2013	100%
92	3.2.2	Construction of Temporary ArchSD Depot	29 days	30/5/2013	27/6/2013	100%
93	3.2.3	Handover of Temporary ArchSD Depot	0 days	27/6/2013	27/6/2013	100%
94	**4**	**Section of the Works**	**1095 days**	**12/4/2013**	**10/4/2016**	**21%**
95	**4.1**	**Section I of the Works - Ground Investigation field works (Drg. 7101A-7111A)**	**251 days**	**30/5/2013**	**4/2/2014**	**100%**
96	4.1.1	Submit method statement and specialist	48 days	30/5/2013	16/7/2013	100%
97	4.1.2	Approve method statement and specialist from ER	45 days	17/7/2013	30/8/2013	100%
98	4.1.3	56nrs. Inspection pits (IP) & 56nrs. Boreholes (BO)	154 days	22/8/2013	22/1/2014	100%
99	4.1.4	G.I works including installation of Settlement Plate (SP84 nrs.), Extensometer (EX16 nrs.), Ground Settlement Marker (GSM18nrs.)	167 days	22/8/2013	4/2/2014	100%
100	**4.2**	**Section II of the Works - All laboratory tests for Section I**	**188 days**	**31/8/2013**	**6/3/2014**	**70%**
101	4.2.1	Propose laboratory	45 days	31/8/2013	14/10/2013	100%



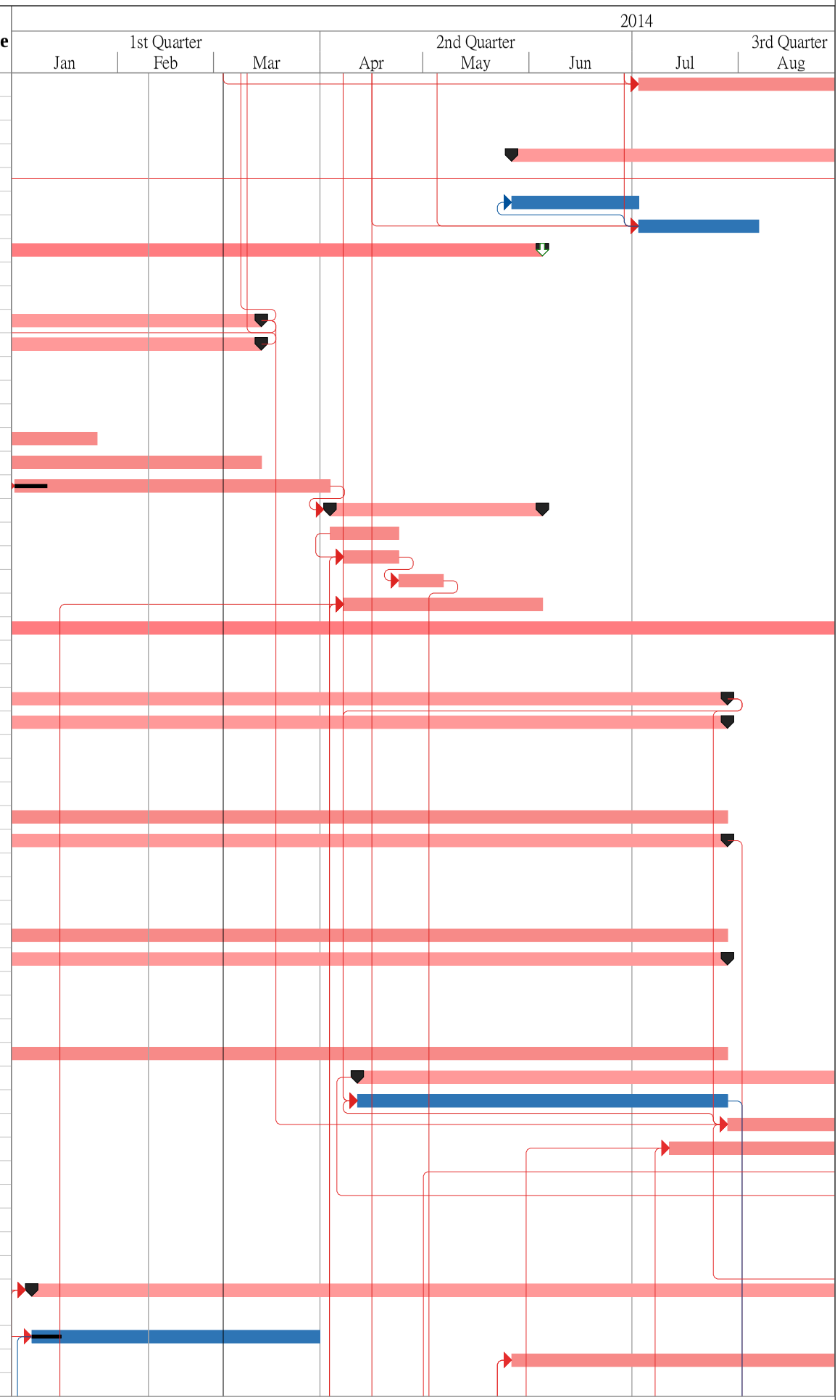
ID	WBS	Task Name	Duration	Start	Finish	% Complete
102	4.2.2	Approve laboratory from ER	42 days	15/10/2013	25/11/2013	100%
103	4.2.3	Laboratory preparation and Carry out laboratory tests	93 days	26/11/2013	26/2/2014	61%
104	4.2.4	Preparation of lab report	90 days	7/12/2013	6/3/2014	51%
105	**4.3**	**Section III of the Works - Site formation works for Portions RS1, RS2 & RS3 (seek for certificate of completion in letter ref. SRJV/W47/SO/J5/1308/00416 dated 23/8/2013)**	**89 days**	**12/5/2013**	**8/8/2013**	**100%**
106	4.3.1	General Site Clearance for RS1,RS2, and RS3	14 days	12/5/2013	25/5/2013	100%
107	4.3.2	Submission & approval of method statement	28 days	12/5/2013	8/6/2013	100%
108	4.3.3	RS1 - Site formation (1500m3) for re-site and dwarf wall construction (length approx. 84m)	76 days	25/5/2013	8/8/2013	100%
109	4.3.4	RS2 - Omitted under VO No.1	0 days	12/5/2013	12/5/2013	100%
110	4.3.5	RS3 - Site formation for re-site and dwarf wall construction (approx. 840m3, wall length app. 135m)	74 days	27/5/2013	8/8/2013	100%
111	**4.4**	**Section IV of the Works - Village house within portion RS4 - 8.25m(L) x 7.88m(W) x 10.3m (H)**	**269 days**	**12/4/2013**	**5/1/2014**	**91%**
112	4.4.1	Site Instruction from the Engineer	31 days	12/4/2013	12/5/2013	100%
113	4.4.2	Submissions / Approval of material	44 days	13/5/2013	25/6/2013	100%
114	4.4.3	Foundation (House 1 to 4)	61 days	1/6/2013	31/7/2013	100%
115	4.4.4	G/F - Ground beam, slab, wall (House 1 to 4)	51 days	20/6/2013	9/8/2013	100%
116	4.4.5	1/F - Beam, wall, slab (House 1 to 4)	48 days	31/7/2013	16/9/2013	100%
117	4.4.6	2/F - Beam, wall, slab (House 1 to 4)	53 days	31/8/2013	22/10/2013	100%
118	4.4.7	R/F - Beam, slab (House 1 to 4)	23 days	7/10/2013	29/10/2013	100%
119	4.4.8	SH and Parapet (House 1 to 4)	24 days	16/10/2013	8/11/2013	100%
120	4.4.9	Building Services (House 1 to 4)	75 days	23/10/2013	5/1/2014	50%
121	**4.5**	**Section V of the Works-All works within portion RS4 exclude Section IV**	**269 days**	**12/4/2013**	**5/1/2014**	**14%**
122	4.5.1	Submissions and method statement	37 days	12/4/2013	18/5/2013	100%
123	4.5.2	Approvals from ER	30 days	26/4/2013	25/5/2013	100%
124	**4.5.3**	**Construction of footbridge and staircase with mini-piles 8 nos. x Ø 273 and staircase (Drg. 2201A to 2207B, 6001B)**	**235 days**	**16/5/2013**	**5/1/2014**	**0%**
125	4.5.3.1	Mini-piles	61 days	16/5/2013	15/7/2013	0%
126	4.5.3.2	Pile Caps	52 days	19/6/2013	9/8/2013	0%
127	4.5.3.3	Abutments	45 days	13/7/2013	26/8/2013	0%
128	4.5.3.4	Wing walls	45 days	30/7/2013	12/9/2013	0%
129	4.5.3.5	Mass concrete	41 days	16/8/2013	25/9/2013	0%
130	4.5.3.6	Remove sheetpiles from abutments	11 days	26/9/2013	6/10/2013	0%
131	4.5.3.7	Beams	45 days	7/10/2013	20/11/2013	0%
132	4.5.3.8	Deck	34 days	21/11/2013	24/12/2013	0%
133	4.5.3.9	Compact fill behind abutments	14 days	7/10/2013	20/10/2013	0%
134	4.5.3.10	New footpath	21 days	21/10/2013	10/11/2013	0%
135	4.5.3.11	New staircase	36 days	11/11/2013	16/12/2013	0%
136	4.5.3.12	Miscellaneous (pedestrian parapet, granite tile etc.)	20 days	17/12/2013	5/1/2014	0%
137	**4.6**	**Section VII of the Works - All works within Area CRD**	**249 days**	**9/9/2013**	**15/5/2014**	**9%**
138	4.6.1	Submission of pipe jacking	30 days	9/9/2013	8/10/2013	100%
139	4.6.2	Approval of submissions of pipe jacking	31 days	23/9/2013	23/10/2013	80%
140	4.6.3	Remaining works at other portions within CRD	120 days	16/1/2014	15/5/2014	0%
141	4.6.3.1	Chain link fence, Modified CEDD hoarding Type III & Temporary Boundary Fence	120 days	16/1/2014	15/5/2014	0%
142	4.6.3.1.1	Temporary Boundary Fence (180m)	120 days	16/1/2014	15/5/2014	0%
143	4.6.3.1.1.1	discuss & agree the arrangement with HKPF	28 days	16/1/2014	12/2/2014	0%
144	4.6.3.1.1.2	approval of submission XPM Mesh	25 days	13/2/2014	9/3/2014	0%
145	4.6.3.1.1.3	place material order for XPM mesh	8 days	10/3/2014	17/3/2014	0%
146	4.6.3.1.1.4	arrival of XPM mesh	25 days	18/3/2014	11/4/2014	0%
147	4.6.3.1.1.5	footings (after filling of B5, B9)	19 days	12/4/2014	30/4/2014	0%
148	4.6.3.1.1.6	fabricate temporary boundary fence & post	44 days	18/3/2014	30/4/2014	0%
149	4.6.3.1.1.7	fix temporary boundary fence	24 days	22/4/2014	15/5/2014	0%



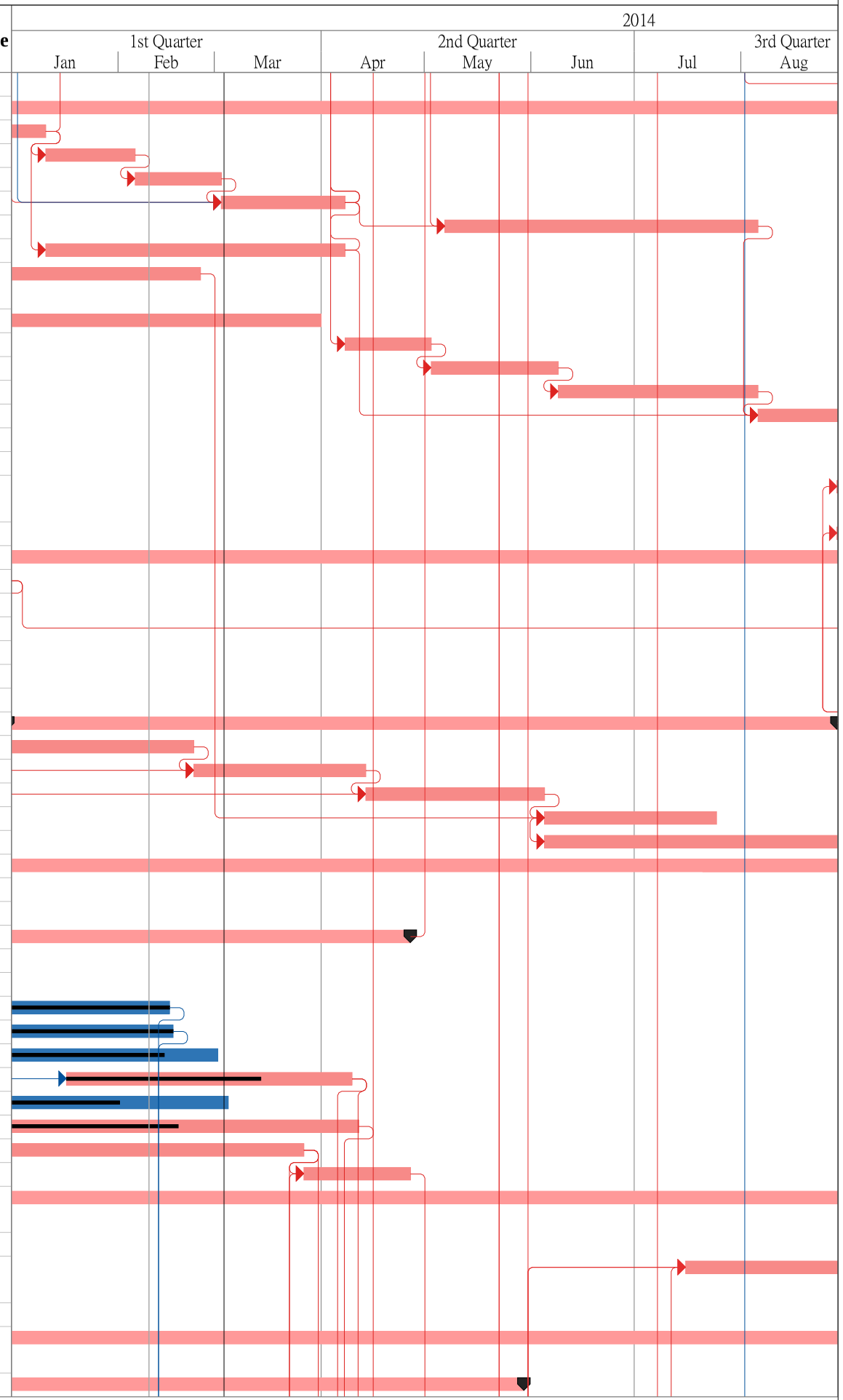
ID	WBS	Task Name	Duration	Start	Finish	% Complete
150	4.6.3.1.2	chain link fence (Drg. 1032B) & modified CEDD hoarding Type III (Drg. 1032B) (after filling of Areas B5,B9)	62 days	15/3/2014	15/5/2014	0%
151	4.6.3.1.2.1	modified CEDD hoarding Type III (after RW2, 2137-2090)	42 days	15/3/2014	25/4/2014	0%
152	4.6.3.1.2.2	chain link fence (after filling B5,B9)	20 days	26/4/2014	15/5/2014	0%
153	**4.6.4**	**4 nos. of Ø 1650 pipe jacking LV006 works including jacking / receiving pit at BCP3 (approx. 60m in BQ, 25m in Drg. 8401A)**	**184 days**	**24/10/2013**	**25/4/2014**	**0%**
154	4.6.4.1	Pits construction	49 days	24/10/2013	11/12/2013	0%
155	4.6.4.1.1	utility detection of the area	2 days	24/10/2013	25/10/2013	0%
156	4.6.4.1.2	inspection pits for jacking pit and receiving pit	5 days	26/10/2013	30/10/2013	0%
157	4.6.4.1.3	temporary work & excavation for jacking pit	21 days	31/10/2013	20/11/2013	0%
158	4.6.4.1.4	temporary work & excavation for receiving pit	21 days	21/11/2013	11/12/2013	0%
159	4.6.4.2	Jack Sleeve Pipes	128 days	21/11/2013	28/3/2014	0%
160	4.6.4.2.1	For jacking the 1st pipe	32 days	21/11/2013	22/12/2013	0%
161	4.6.4.2.2	For jacking the 2nd pipe	32 days	23/12/2013	23/1/2014	0%
162	4.6.4.2.3	For jacking the 3rd pipe	34 days	24/1/2014	26/2/2014	0%
163	4.6.4.2.4	For jacking the 4th pipe	30 days	27/2/2014	28/3/2014	0%
164	4.6.4.3	HDPE pipes	28 days	29/3/2014	25/4/2014	0%
165	4.6.4.3.1	Lay HDPE pipes	11 days	29/3/2014	8/4/2014	0%
166	4.6.4.3.2	Grout HDPE pipes	9 days	9/4/2014	17/4/2014	0%
167	4.6.4.3.3	Remove temporary works and backfilling	8 days	18/4/2014	25/4/2014	0%
168	**4.6.5**	**132kV Overhead Terminal Pole Relocation**	**90 days**	**15/2/2014**	**15/5/2014**	**0%**
169	4.6.5.1	fill area for terminal pole installation by CLP 132kV	20 days	15/2/2014	6/3/2014	0%
170	4.6.5.2	install terminal pole inside & outside site boundary by CLP 132kV	20 days	7/3/2014	26/3/2014	0%
171	4.6.5.3	ducts laying under DSD Contract by CLP 132kV	38 days	19/3/2014	25/4/2014	0%
172	4.6.5.4	remove exisitng cable by CLP 132kV	15 days	26/4/2014	10/5/2014	0%
173	4.6.5.5	filling for relevant areas	8 days	8/5/2014	15/5/2014	0%
174	**4.7**	**Section VIII of the Works - All works within Area BCPA**	**489 days**	**11/6/2013**	**12/10/2014**	**24%**
175	4.7.1	Submission for Site Formation Works & import fill	72 days	11/6/2013	21/8/2013	100%
176	4.7.2	Approval of submission for Site Formation Works	50 days	22/8/2013	10/10/2013	100%
177	4.7.3	Approval for sources of import fill	69 days	28/9/2013	5/12/2013	100%
178	4.7.4	Site formation of land (import fill 121433m3)	263 days	11/10/2013	30/6/2014	13%
179	4.7.4.1	site formation (A1-A9)	82 days	11/10/2013	31/12/2013	30%
180	4.7.4.2	site formation (A10-13, A15-20, A23, A24-A25)	90 days	1/1/2014	31/3/2014	10%
181	4.7.4.3	site formation (A14, A22, A26)	91 days	1/4/2014	30/6/2014	0%
182	4.7.5	Slope drainage works (Drg. 7156B-7159B)	284 days	2/1/2014	12/10/2014	0%
183	4.7.5.1	submission of design of sedimentation tank/pond	38 days	2/1/2014	8/2/2014	0%
184	4.7.5.2	approval of design of sedimentation tank/pond	36 days	9/2/2014	16/3/2014	0%
185	4.7.5.3	discharge to existing Box Culvert No. 4 & sedimentation tank	16 days	17/3/2014	1/4/2014	0%
186	4.7.5.4	DN1050 from CP to sedimentation tank	73 days	2/4/2014	13/6/2014	0%
187	4.7.5.5	shortcreted TC (from A3,A2,A1,A5)	31 days	31/5/2014	30/6/2014	0%
188	4.7.5.6	shortcreted TC (from A10-13)	30 days	1/7/2014	30/7/2014	0%
189	4.7.5.7	shortcreted TC (from A10,A15,A19)	25 days	31/7/2014	24/8/2014	0%
190	4.7.5.8	shortcreted TC (from A20-24A26,A14)	49 days	25/8/2014	12/10/2014	0%
191	4.7.6	Chain link fence (1120m)	195 days	1/4/2014	12/10/2014	0%
192	4.7.6.1	chain link fence (A1-5,A10,A15,A19)	102 days	1/4/2014	11/7/2014	0%
193	4.7.6.2	chain link fence (A4,A9,A14,A26,A24)	58 days	12/7/2014	7/9/2014	0%
194	4.7.6.3	chain link fence (A21-24)	35 days	8/9/2014	12/10/2014	0%
195	**4.8**	**Section IX of the Works - All works within Area BCPB**	**492 days**	**6/12/2013**	**11/4/2015**	**5%**
196	4.8.1	Submission for demolition of existing building structures	37 days	20/12/2013	25/1/2014	89%
197	4.8.2	Approval of submission for demolish existing building structures	41 days	26/1/2014	7/3/2014	0%
198	4.8.3	Demolition of existing building structures UPON instruction (Drg. 6152A, 6153A)	118 days	8/3/2014	3/7/2014	0%
199	4.8.4	Site formation works (import fill 370523m3)	492 days	6/12/2013	11/4/2015	2%
200	4.8.4.1	site formation works (B20)	28 days	6/12/2013	2/1/2014	0%
201	4.8.4.2	site formation works (B1,3,6,9,21,22)	89 days	3/1/2014	1/4/2014	10%
202	4.8.4.3	site formation works (B2,5)	92 days	2/4/2014	2/7/2014	0%



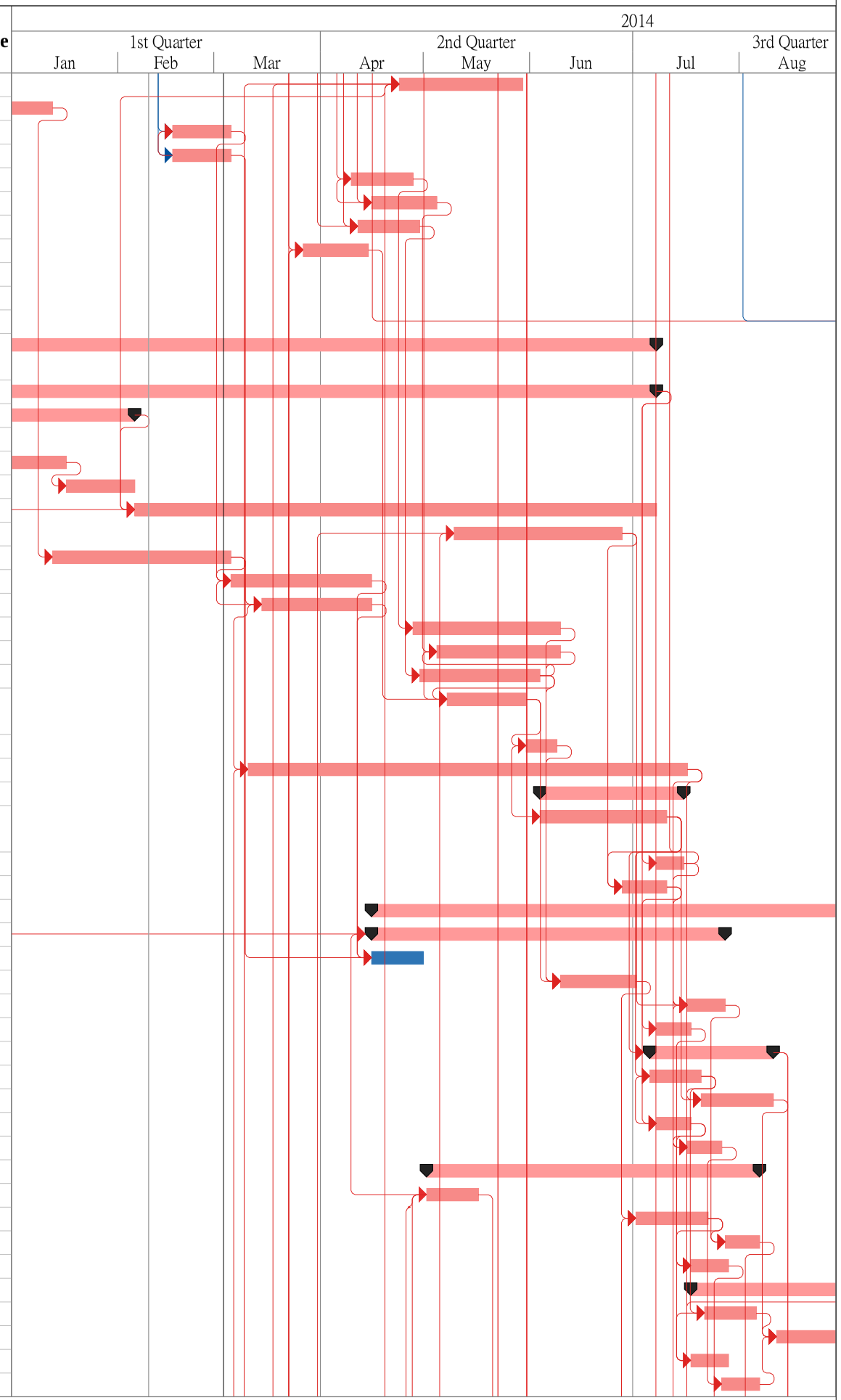
ID	WBS	Task Name	Duration	Start	Finish	% Complete
203	4.8.4.4	site formation works (B7,11,12)	93 days	3/7/2014	3/10/2014	0%
204	4.8.4.5	site formation works (4,8,10,13,14,16,17)	91 days	4/10/2014	2/1/2015	0%
205	4.8.4.6	site formation works (B15,18,19)	99 days	3/1/2015	11/4/2015	0%
206	4.8.5	Temp. boundary fence, chain link fence (Drg.1002C, 1032B, 1033B)	320 days	27/5/2014	11/4/2015	0%
207	4.8.5.1	chain link fence (780m)	99 days	3/1/2015	11/4/2015	0%
208	4.8.5.2	fabricate temporary boundary fence & post	37 days	27/5/2014	2/7/2014	0%
209	4.8.5.3	fix temporary boundary fence (105m)	35 days	3/7/2014	6/8/2014	0%
210	**4.9**	**Section X of the Works - All works within Area BCPC**	**269 days**	**9/9/2013**	**4/6/2014**	**9%**
211	4.9.1	Submission for retaining wall no. 2	12 days	9/9/2013	20/9/2013	100%
212	4.9.2	Approval of Submission for retaining wall no. 2	25 days	21/9/2013	15/10/2013	100%
213	**4.9.3**	**Construction of retaining wall RW2-CH840-1025 (length 185m)**	**150 days**	**16/10/2013**	**14/3/2014**	**0%**
214	4.9.3.1	Phase 1A - Bay 2137-2110 (28 bays)	150 days	16/10/2013	14/3/2014	0%
215	4.9.3.1.1	excavation / sheetpile	35 days	16/10/2013	19/11/2013	0%
216	4.9.3.1.2	grade 200 rock fill	28 days	25/10/2013	21/11/2013	0%
217	4.9.3.1.3	blinding layer	25 days	30/10/2013	23/11/2013	0%
218	4.9.3.1.4	bases	83 days	4/11/2013	25/1/2014	0%
219	4.9.3.1.5	walls	120 days	15/11/2013	14/3/2014	0%
220	4.9.4	Site Formation works (import fill 24936m3)(C1-C8)	92 days	2/1/2014	3/4/2014	10%
221	4.9.5	Drainage Works & Irrigation System (Drg.1305C, 1975B)	62 days	4/4/2014	4/6/2014	0%
222	4.9.5.1	drainage for CP26 (SMH9962-CP26)	20 days	4/4/2014	23/4/2014	0%
223	4.9.5.2	drainage for CP24 (SMH9924 to CP24)	16 days	8/4/2014	23/4/2014	0%
224	4.9.5.3	drainage for CP23 (SMH9923 to CP23)	13 days	24/4/2014	6/5/2014	0%
225	4.9.5.4	irrigation system in Area BCPC	58 days	8/4/2014	4/6/2014	0%
226	**4.10**	**Section XI of the Works - All works within Area BCPD**	**598 days**	**22/8/2013**	**11/4/2015**	**2%**
227	4.10.1	Submissions	23 days	22/8/2013	13/9/2013	100%
228	4.10.2	Approval of Submissions	37 days	14/9/2013	20/10/2013	100%
229	**4.10.3**	**Construction of retaining wall RW2 - CH0 to 840 (length 840m)**	**281 days**	**21/10/2013**	**28/7/2014**	**0%**
230	4.10.3.1	Phase 1 - Bay 2001-2036 (36 bays)	281 days	21/10/2013	28/7/2014	0%
231	4.10.3.1.1	excavation / sheetpile	41 days	21/10/2013	30/11/2013	0%
232	4.10.3.1.2	grade 200 rock fill	35 days	30/10/2013	3/12/2013	0%
233	4.10.3.1.3	blinding layer	32 days	4/11/2013	5/12/2013	0%
234	4.10.3.1.4	Bay 2001 to Bay 2036	263 days	8/11/2013	28/7/2014	0%
235	4.10.3.2	Phase 2 - Bay 2037-2072 (36 bays)	281 days	21/10/2013	28/7/2014	0%
236	4.10.3.2.1	excavation / sheetpile	41 days	21/10/2013	30/11/2013	0%
237	4.10.3.2.2	grade 200 rock fill	35 days	30/10/2013	3/12/2013	0%
238	4.10.3.2.3	blinding layer	32 days	4/11/2013	5/12/2013	0%
239	4.10.3.2.4	Bay 2037 to Bay 2072	263 days	8/11/2013	28/7/2014	0%
240	4.10.3.3	Phase 3 - Bay 2073-2109 (37 bays)	281 days	21/10/2013	28/7/2014	0%
241	4.10.3.3.1	excavation / sheetpile	43 days	21/10/2013	2/12/2013	0%
242	4.10.3.3.2	grade 200 rock fill	35 days	30/10/2013	3/12/2013	0%
243	4.10.3.3.3	blinding layer	32 days	4/11/2013	5/12/2013	0%
244	4.10.3.3.4	Bay 2109 to Bay 2109	263 days	8/11/2013	28/7/2014	0%
245	4.10.4	Boundary fence (Drg.1002C, 1003A)	267 days	12/4/2014	3/1/2015	0%
246	4.10.4.1	fabricate boundary fence including Section XII	108 days	12/4/2014	28/7/2014	0%
247	4.10.4.2	fix boundary fence (after RW2)	156 days	29/7/2014	31/12/2014	0%
248	4.10.4.3	fix boundary fence (after Bridge J & subway)	67 days	12/7/2014	16/9/2014	0%
249	4.10.4.4	fix boundary fence (after RW1 & 1A)	109 days	17/9/2014	3/1/2015	0%
250	4.10.5	Modified CEDD hoarding Type III (Drg. 1032B)	176 days	18/10/2014	11/4/2015	0%
251	4.10.5.1	hoarding (after RW2)	101 days	1/1/2015	11/4/2015	0%
252	4.10.5.2	hoarding (after Bridge J & subway)	75 days	18/10/2014	31/12/2014	0%
253	4.10.5.3	hoarding (after RW1 & 1A)	98 days	4/1/2015	11/4/2015	0%
254	4.10.6	Site Formation works (import fill 104958m3) including slope drainage works (Drg. 7155B-7159B)	423 days	7/1/2014	5/3/2015	2%
255	4.10.6.1	D1-D2	84 days	7/1/2014	31/3/2014	10%
256	4.10.6.2	D3, D10,D11, D17, D12- D14	95 days	27/5/2014	29/8/2014	0%
257	4.10.6.3	D4, D15, D16	94 days	30/8/2014	1/12/2014	0%



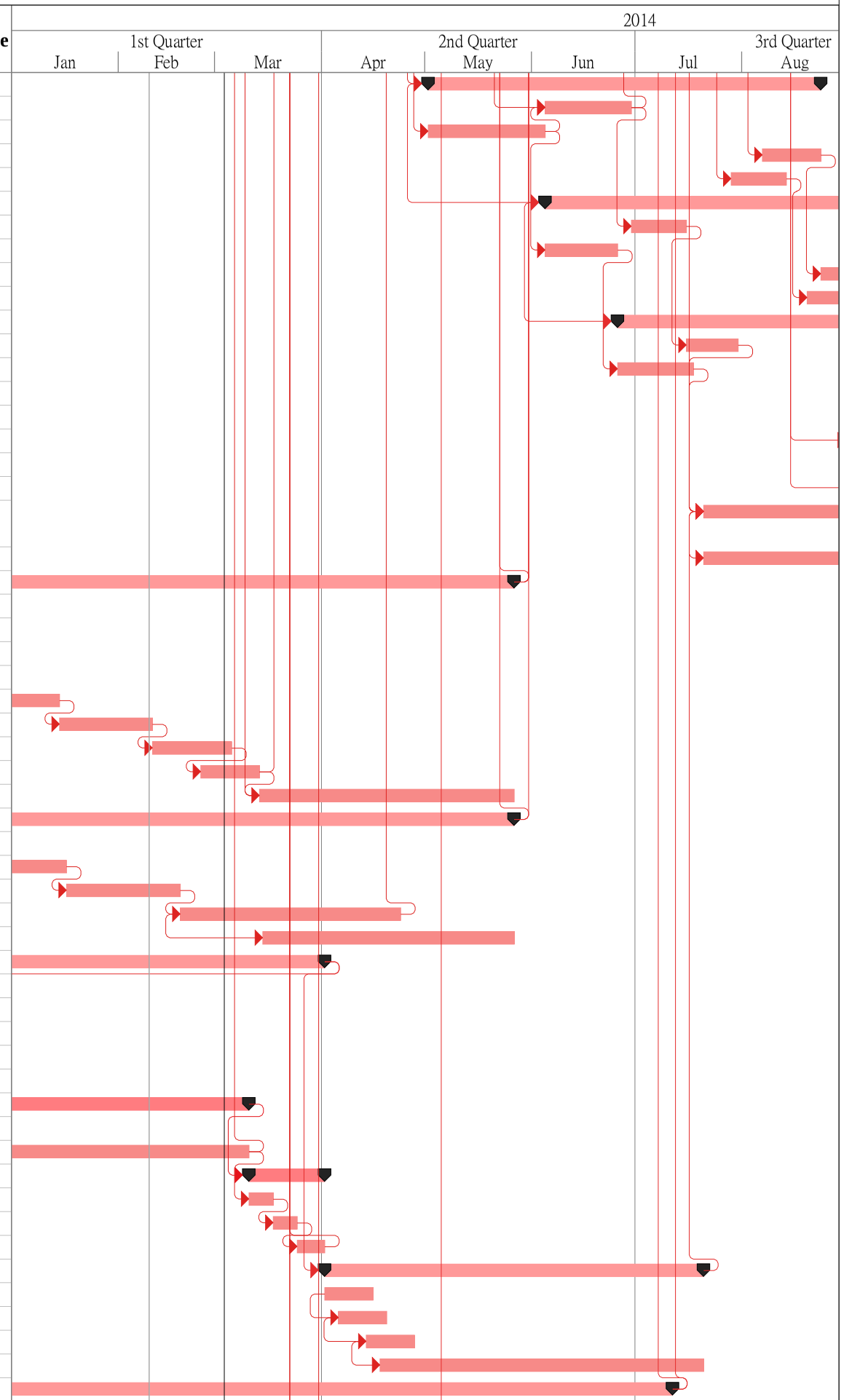
ID	WBS	Task Name	Duration	Start	Finish	% Complete
258	4.10.6.4	D5-D9	94 days	2/12/2014	5/3/2015	0%
259	4.10.7	Sewerage, Drainage & Water Works (Drg. 1323B,1305C,1309A)	368 days	21/10/2013	23/10/2014	0%
260	4.10.7.1	Sequence 1a - Sewer for FMH511 to Box Culvert No. 3 (DN300)	82 days	21/10/2013	10/1/2014	0%
261	4.10.7.2	Sequence 1b - Sewer for FMH515 to temp cap after FMH520 (DN300)	26 days	11/1/2014	5/2/2014	0%
262	4.10.7.3	Sequence 1c -Sewer for temp. cap to connect from BCP (DN300)	25 days	6/2/2014	2/3/2014	0%
263	4.10.7.4	Sequence 1d - Rising main CHC799.644-650m (2xDN100DI)	36 days	3/3/2014	7/4/2014	0%
264	4.10.7.5	Sequence 1e - Pipe laying for SMH9930, 9929 to 9922 (DN300-525)	91 days	7/5/2014	5/8/2014	0%
265	4.10.7.6	Sequence 1aa -Drainage for SMH9937 to 9961 (DN300,450,900)	87 days	11/1/2014	7/4/2014	0%
266	4.10.7.7	Sequence 1-1 Pipe laying for CP25 to SMH9702, 9702A, 9651 to Pump Room	127 days	21/10/2013	24/2/2014	0%
267	4.10.7.8	Sequence 1-2 Rising main CHA 0-157.882 (DN400)	137 days	15/11/2013	31/3/2014	0%
268	4.10.7.9	Sequence 2-1a Watermain CHL229-283(DN250)	25 days	8/4/2014	2/5/2014	0%
269	4.10.7.10	Sequence 2-1b Watermain CHL150-229(DN250)	37 days	3/5/2014	8/6/2014	0%
270	4.10.7.11	Sequence 2-2 Pipe laying for SMH9937 to 9930 (DN525,750,900)	58 days	9/6/2014	5/8/2014	0%
271	4.10.7.12	Sequence 2-3 Drainage for SMH9941, 9952 to 9942 (DN300, 525)	28 days	6/8/2014	2/9/2014	0%
272	4.10.7.13	Sequence 2-3 Pipe laying for SMH9931 to 9942 (DN450)	20 days	3/9/2014	22/9/2014	0%
273	4.10.7.14	Sequence 2-4 Watermain CHL283-335.749(DN250)	31 days	23/9/2014	23/10/2014	0%
274	4.10.8	Irrigation system (sequence 3)(see Appendix C) adjacent to underpass & depressed road	44 days	29/8/2014	11/10/2014	0%
275	4.10.9	Irrigation system (sequence 4) (see Appendix C) next to BCPC	44 days	29/8/2014	11/10/2014	0%
276	4.10.10	Utilities works (Drg. 1405A) (see Appendix A)	369 days	18/12/2013	21/12/2014	0%
277	4.10.10.1	Sequence 1 - allow ducts for 11kV & LV across the underpass	13 days	18/12/2013	30/12/2013	0%
278	4.10.10.2	Sequence 5a - 132kV	12 days	12/10/2014	23/10/2014	0%
279	4.10.10.3	Sequence 5b - 11kV	24 days	24/10/2014	16/11/2014	0%
280	4.10.10.4	Sequence 5c - LV	23 days	17/11/2014	9/12/2014	0%
281	4.10.10.5	Sequence 5d - PCCW	12 days	10/12/2014	21/12/2014	0%
282	4.10.11	Road works and Road lighting works (Drg.1205A,1505C,1605B)	111 days	22/12/2014	11/4/2015	0%
283	**4.10.12**	**Construction of depressed road & underpass-9.3m wide x168m long**	**241 days**	**31/12/2013**	**28/8/2014**	**0%**
284	4.10.12.1	Bay 16015-16012	54 days	31/12/2013	22/2/2014	0%
285	4.10.12.2	Bay 16011-16008	50 days	23/2/2014	13/4/2014	0%
286	4.10.12.3	Bay 16007-16004	52 days	14/4/2014	4/6/2014	0%
287	4.10.12.4	Bay 16003-16001	50 days	5/6/2014	24/7/2014	0%
288	4.10.12.5	miscellaneous works	85 days	5/6/2014	28/8/2014	0%
289	**4.11**	**Section XII of the Works - All works within Area LMH**	**467 days**	**22/8/2013**	**1/12/2014**	**22%**
290	4.11.1	Submissions for method statement of subway & staircase	70 days	22/8/2013	30/10/2013	100%
291	4.11.2	Approval of Submissions for method statement of subway & staircase	68 days	30/8/2013	5/11/2013	100%
292	**4.11.3**	**Construction of retaining wall RW1 - CH0 to 561.053m**	**213 days**	**26/9/2013**	**26/4/2014**	**69%**
293	4.11.3.1	Bay 1075 to Bay 1068 (8 bays) -H1	77 days	26/9/2013	11/12/2013	100%
294	4.11.3.2	Bay 1067 to Bay 1060 (8 bays) -H2	77 days	8/10/2013	23/12/2013	100%
295	4.11.3.3	Bay 1059 to Bay 1052 (8 bays) - H3	93 days	15/11/2013	15/2/2014	100%
296	4.11.3.4	Bay 1051 to Bay 1044 (8 bays) -H4	80 days	29/11/2013	16/2/2014	100%
297	4.11.3.5	Bay 1043 to Bay 1036 (8 bays) - H5	79 days	13/12/2013	1/3/2014	80%
298	4.11.3.6	Bay 1035 to Bay 1028 (8 bays) -H5,H6	83 days	17/1/2014	9/4/2014	68%
299	4.11.3.7	Bay 1027 to Bay 1020 (8 bays) -H6	79 days	16/12/2013	4/3/2014	60%
300	4.11.3.8	Bay 1019 to Bay 1012 (8 bays) -H7	105 days	28/12/2013	11/4/2014	50%
301	4.11.3.9	Bay 1011 to Bay 1004 (8 bays) H7,H8	87 days	30/12/2013	26/3/2014	0%
302	4.11.3.10	Bay 1003 to Bay 1001 (3 bays) - H8	31 days	27/3/2014	26/4/2014	0%
303	**4.11.4**	**Construction of retaining wall RW1A-CH561.053 to 612.457m (length approx.. 51.4m)**	**368 days**	**11/9/2013**	**13/9/2014**	**45%**
304	4.11.4.1	Bay 1076 to Bay 1078 (base & wall)	49 days	11/9/2013	29/10/2013	100%
305	4.11.4.2	Bay 1079 to Bay 1082 (after divert existing Rd i.e. after Staircase & Lift Shaft)	60 days	16/7/2014	13/9/2014	0%
306	4.11.5	Filling & Slope drainage behind RW1A (involve TTA)	79 days	14/9/2014	1/12/2014	0%
307	4.11.6	Site formation works (import fill 15300m3) including slope drainage works (Drg. 7154B, 7159B) (see Appendix B)	294 days	24/12/2013	13/10/2014	0%
308	4.11.6.1	site formation (H1-H8) & slope drainage works	157 days	24/12/2013	29/5/2014	0%



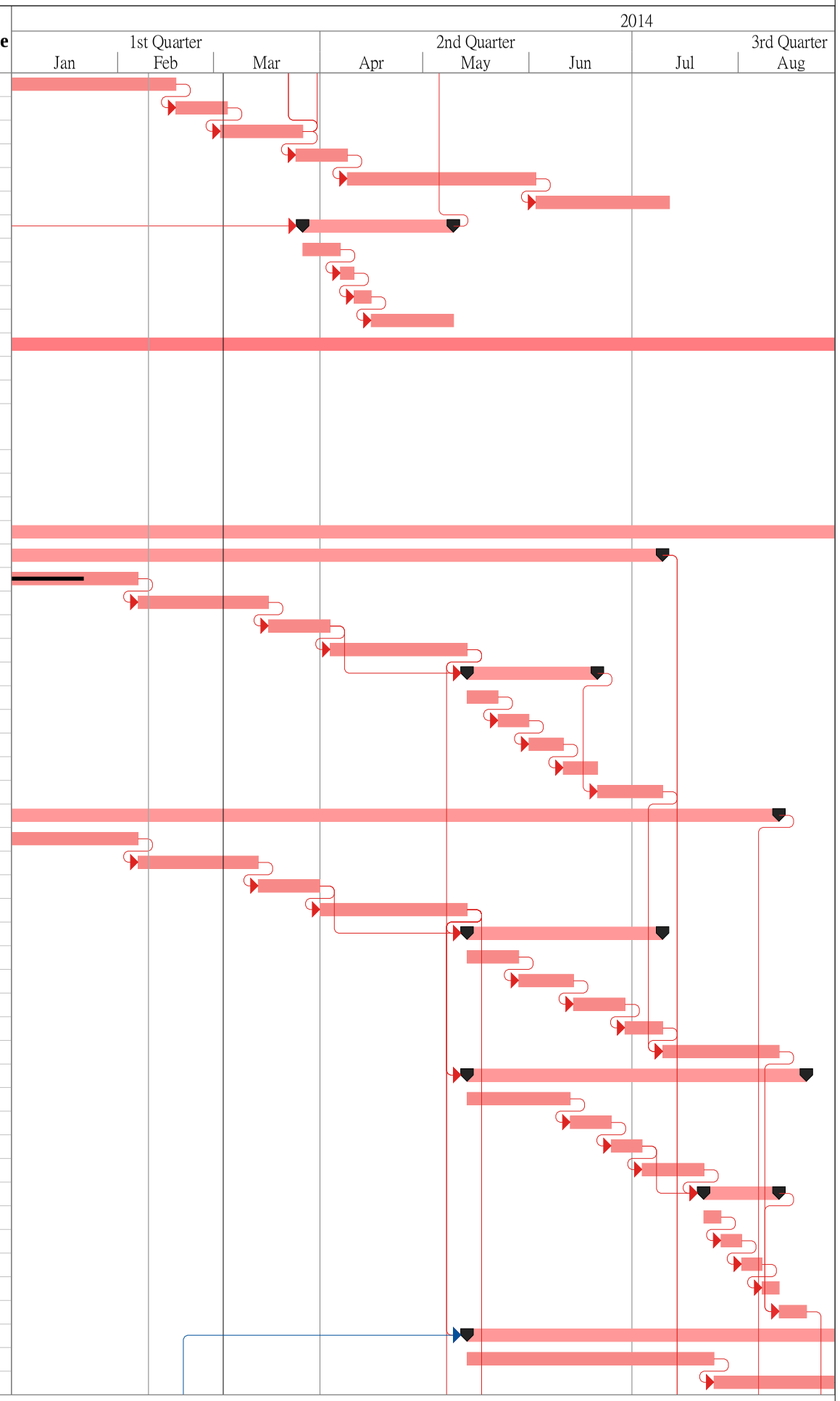
ID	WBS	Task Name	Duration	Start	Finish	% Complete
309	4.11.6.1.1	fill H1	36 days	24/4/2014	29/5/2014	0%
310	4.11.6.1.2	fill H2	20 days	24/12/2013	12/1/2014	0%
311	4.11.6.1.3	fill H3	17 days	17/2/2014	5/3/2014	0%
312	4.11.6.1.4	fill H4	17 days	17/2/2014	5/3/2014	0%
313	4.11.6.1.5	fill H5	18 days	10/4/2014	27/4/2014	0%
314	4.11.6.1.6	fill H6	19 days	16/4/2014	4/5/2014	0%
315	4.11.6.1.7	fill H7	18 days	12/4/2014	29/4/2014	0%
316	4.11.6.1.8	fill H8	19 days	27/3/2014	14/4/2014	0%
317	4.11.6.2	Remove existing Lin Ma Hang Road	13 days	1/10/2014	13/10/2014	0%
318	4.11.6.3	Fill H9 & B15 for slope	21 days	23/9/2014	13/10/2014	0%
319	4.11.7	Boundary fence & chain link fence on top of slope	49 days	14/10/2014	1/12/2014	0%
320	4.11.8	Drainage works at Lin Ma Hang Road (Drg. 1304B, 1306A, 1307A, 1309A) (see Appendix B)	244 days	6/11/2013	7/7/2014	0%
321	4.11.8.1	H1-SM16-9062, 9201 & 9105A-9062, 9054-9062, 9101-9105	244 days	6/11/2013	7/7/2014	0%
322	4.11.8.1.1	Temporary Traffic Arrangement (TTA) Schemes	92 days	6/11/2013	5/2/2014	0%
323	4.11.8.1.1.1	Preparation of TTA scheme	35 days	6/11/2013	10/12/2013	0%
324	4.11.8.1.1.2	Comment & approval of TTA scheme by TD & RMO	37 days	11/12/2013	16/1/2014	0%
325	4.11.8.1.1.3	Obtain roadwork advice from RMO	20 days	17/1/2014	5/2/2014	0%
326	4.11.8.1.2	Pipe laying	152 days	6/2/2014	7/7/2014	0%
327	4.11.8.2	SMH6895-6808, 6804-6808	49 days	10/5/2014	27/6/2014	0%
328	4.11.8.3	H2 - SMH9054-45,44, 9043	52 days	13/1/2014	5/3/2014	0%
329	4.11.8.4	H3 - SMH9043-37, 9036 (DN900)	41 days	6/3/2014	15/4/2014	0%
330	4.11.8.5	H4 - SMH9036-30,9029 (DN900)	32 days	15/3/2014	15/4/2014	0%
331	4.11.8.6	H5 - SMH9029-22,9021 (DN750,900)	43 days	28/4/2014	9/6/2014	0%
332	4.11.8.7	H6 - SMH9021-14,9013 (DN750)	36 days	5/5/2014	9/6/2014	0%
333	4.11.8.8	H7 - SMH9013-06,9005 (DN600,750)	35 days	30/4/2014	3/6/2014	0%
334	4.11.8.9	H8 - SMH9005-03,9002 (DN450)	23 days	8/5/2014	30/5/2014	0%
335	4.11.8.10	H8 - SMH9002-9001 (DN300)	9 days	31/5/2014	8/6/2014	0%
336	4.11.9	Water works at Lin Ma Hang Road (Drg.1914B-1917B)	128 days	11/3/2014	16/7/2014	0%
337	4.11.10	Irrigation System at Lin Ma Hang Road (Drg.1974B, 1976A, 1977A)	42 days	4/6/2014	15/7/2014	0%
338	4.11.10.1	from Phase H2-H8	37 days	4/6/2014	10/7/2014	0%
339	4.11.10.2	for Phase H1	8 days	8/7/2014	15/7/2014	0%
340	4.11.10.3	after Phase H8	13 days	28/6/2014	10/7/2014	0%
341	**4.11.11**	**Utility Works**	**168 days**	**16/4/2014**	**30/9/2014**	**0%**
342	4.11.11.1	CLP - LV (west side of new Lin Ma Hang Road)	103 days	16/4/2014	27/7/2014	0%
343	4.11.11.1.1	from chainage 840 to chainage 1125	15 days	16/4/2014	30/4/2014	0%
344	4.11.11.1.2	from chainage 630 to chainage 840	22 days	10/6/2014	1/7/2014	0%
345	4.11.11.1.3	from chainage 475 to chainage 630	11 days	17/7/2014	27/7/2014	0%
346	4.11.11.1.4	from chainage 1125 to chainage 1270	10 days	8/7/2014	17/7/2014	0%
347	4.11.11.2	CLP - LV (east side of new Lin Ma Hang Road)	36 days	6/7/2014	10/8/2014	0%
348	4.11.11.2.1	from chainage 840 to chainage 1125	15 days	6/7/2014	20/7/2014	0%
349	4.11.11.2.2	from chainage 630 to chainage 840	21 days	21/7/2014	10/8/2014	0%
350	4.11.11.2.3	from chainage 475 to chainage 630	10 days	8/7/2014	17/7/2014	0%
351	4.11.11.2.4	from chainage 1125 to chainage 1270	10 days	17/7/2014	26/7/2014	0%
352	4.11.11.3	CLP - 11kV (west side of new Lin Ma Hang Road)	97 days	2/5/2014	6/8/2014	0%
353	4.11.11.3.1	from chainage 840 to chainage 1125	15 days	2/5/2014	16/5/2014	0%
354	4.11.11.3.2	from chainage 630 to chainage 840	21 days	2/7/2014	22/7/2014	0%
355	4.11.11.3.3	from chainage 475 to chainage 630	10 days	28/7/2014	6/8/2014	0%
356	4.11.11.3.4	from chainage 1125 to chainage 1270	11 days	18/7/2014	28/7/2014	0%
357	4.11.11.4	CLP - 11kV (east side of new Lin Ma Hang Road)	46 days	18/7/2014	1/9/2014	0%
358	4.11.11.4.1	from chainage 840 to chainage 1125	15 days	22/7/2014	5/8/2014	0%
359	4.11.11.4.2	from chainage 630 to chainage 840	21 days	12/8/2014	1/9/2014	0%
360	4.11.11.4.3	from chainage 475 to chainage 630	11 days	18/7/2014	28/7/2014	0%
361	4.11.11.4.4	from chainage 1125 to chainage 1270	11 days	27/7/2014	6/8/2014	0%



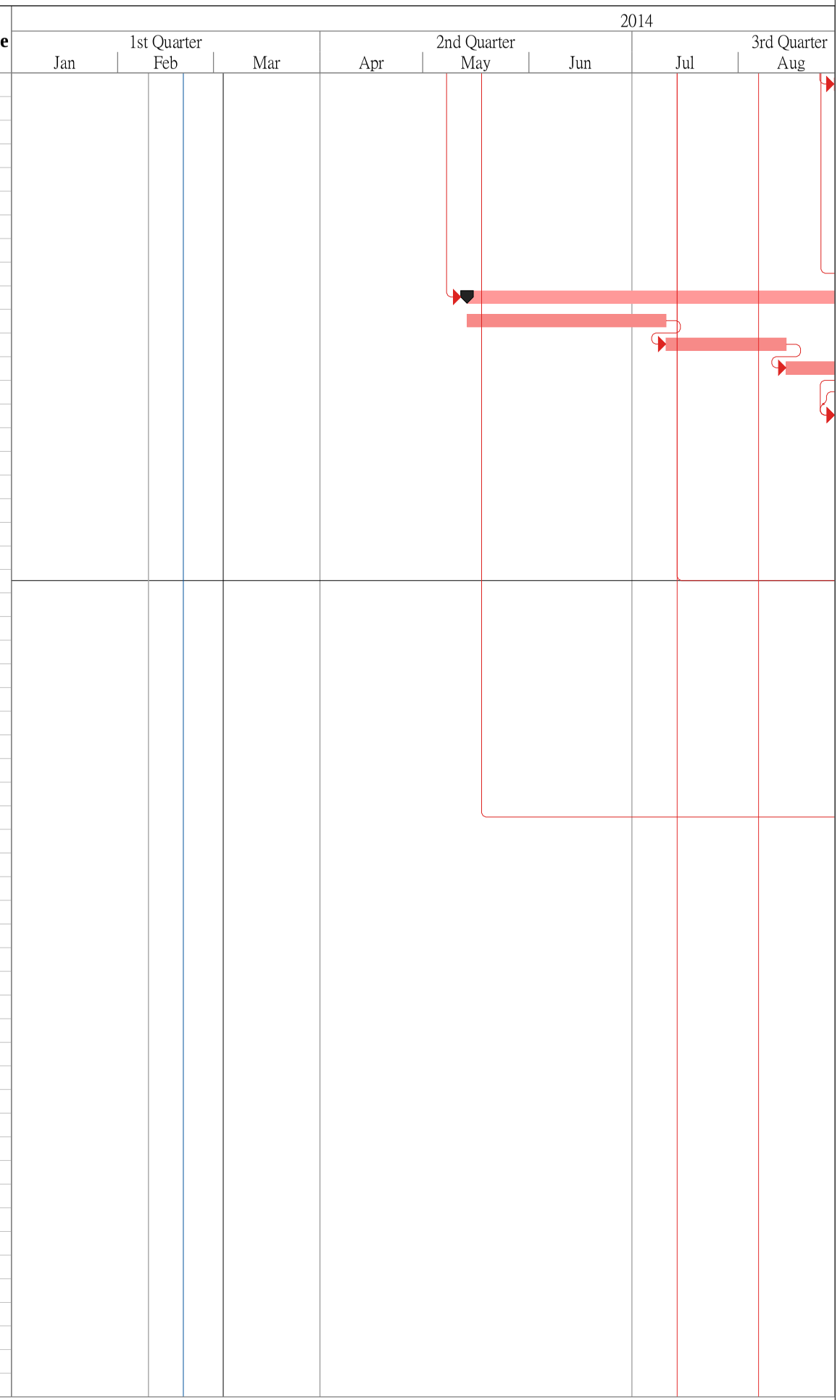
ID	WBS	Task Name	Duration	Start	Finish	% Complete
362	4.11.11.5	PCCW (west side of new Lin Ma Hang Road)	114 days	2/5/2014	23/8/2014	0%
363	4.11.11.5.1	from chainage 840 to chainage 1125	25 days	5/6/2014	29/6/2014	0%
364	4.11.11.5.2	from chainage 630 to chainage 840	34 days	2/5/2014	4/6/2014	0%
365	4.11.11.5.3	from chainage 475 to chainage 630	17 days	7/8/2014	23/8/2014	0%
366	4.11.11.5.4	from chainage 1125 to chainage 1270	16 days	29/7/2014	13/8/2014	0%
367	4.11.11.6	HGC (west side of new Lin Ma Hang Road)	91 days	5/6/2014	3/9/2014	0%
368	4.11.11.6.1	from chainage 840 to chainage 1125	16 days	30/6/2014	15/7/2014	0%
369	4.11.11.6.2	from chainage 630 to chainage 840	21 days	5/6/2014	25/6/2014	0%
370	4.11.11.6.3	from chainage 475 to chainage 630	11 days	24/8/2014	3/9/2014	0%
371	4.11.11.6.4	from chainage 1125 to chainage 1270	10 days	20/8/2014	29/8/2014	0%
372	4.11.11.7	NWT (west side of new Lin Ma Hang Road)	84 days	26/6/2014	17/9/2014	0%
373	4.11.11.7.1	from chainage 840 to chainage 1125	15 days	16/7/2014	30/7/2014	0%
374	4.11.11.7.2	from chainage 630 to chainage 840	22 days	26/6/2014	17/7/2014	0%
375	4.11.11.7.3	from chainage 475 to chainage 630	12 days	4/9/2014	15/9/2014	0%
376	4.11.11.7.4	from chainage 1125 to chainage 1270	12 days	6/9/2014	17/9/2014	0%
377	4.11.11.8	Street lighting work	29 days	2/9/2014	30/9/2014	0%
378	4.11.11.8.1	west side of new Lin Ma Hang Road	15 days	16/9/2014	30/9/2014	0%
379	4.11.11.8.2	east side of new Lin Ma Hang Road	29 days	2/9/2014	30/9/2014	0%
380	4.11.12	Roadwork of carriageway (new Lin Ma Hang Road for BCPA)	72 days	21/7/2014	30/9/2014	0%
381	4.11.13	Construction of footpath (for BCPA)	72 days	21/7/2014	30/9/2014	0%
382	**4.11.14**	**Construction of pedestrian subway & pump room**	**202 days**	**6/11/2013**	**26/5/2014**	**18%**
383	4.11.14.1	prepare formation of sheetpiling/excavation	9 days	6/11/2013	14/11/2013	100%
384	4.11.14.2	excavation &/or sheetpiling	33 days	15/11/2013	17/12/2013	85%
385	4.11.14.3	rubble mound	16 days	2/12/2013	17/12/2013	20%
386	4.11.14.4	cast blinding layer	17 days	11/12/2013	27/12/2013	20%
387	4.11.14.5	pump house	30 days	16/12/2013	14/1/2014	0%
388	4.11.14.6	subway 8th bay	27 days	15/1/2014	10/2/2014	0%
389	4.11.14.7	subway 7th bay	23 days	11/2/2014	5/3/2014	0%
390	4.11.14.8	subway 6th bay	17 days	25/2/2014	13/3/2014	0%
391	4.11.14.9	miscellaneous works	74 days	14/3/2014	26/5/2014	0%
392	**4.11.15**	**Construction of staircase with lift shaft with 6 nos. of mini pile**	**225 days**	**14/10/2013**	**26/5/2014**	**25%**
393	4.11.15.1	mini-piles	54 days	14/10/2013	6/12/2013	100%
394	4.11.15.2	lift shaft	41 days	7/12/2013	16/1/2014	30%
395	4.11.15.3	Bay 9	33 days	17/1/2014	18/2/2014	0%
396	4.11.15.4	Staircase	64 days	19/2/2014	23/4/2014	0%
397	4.11.15.5	miscellaneous works	73 days	15/3/2014	26/5/2014	0%
398	**4.11.16**	**1 no. DN1650 pipe jacking LV009 including jacking & receiving pits**	**147 days**	**6/11/2013**	**1/4/2014**	**0%**
399	4.11.16.1	Pits construction	36 days	6/11/2013	11/12/2013	0%
400	4.11.16.1.1	utility detection of the area	3 days	6/11/2013	8/11/2013	0%
401	4.11.16.1.2	inspection pits for jacking pit and receiving pit	5 days	9/11/2013	13/11/2013	0%
402	4.11.16.1.3	temporary work & excavation for receiving pit	14 days	28/11/2013	11/12/2013	0%
403	4.11.16.1.4	temporary work & excavation for jacking pit	14 days	14/11/2013	27/11/2013	0%
404	4.11.16.2	Jack sleeve Pipes	89 days	12/12/2013	10/3/2014	0%
405	4.11.16.2.1	establishment of jacking equipment	15 days	12/12/2013	26/12/2013	0%
406	4.11.16.2.2	jack pipe and excavate	74 days	27/12/2013	10/3/2014	0%
407	4.11.16.3	HDPE pipes	22 days	11/3/2014	1/4/2014	0%
408	4.11.16.3.1	Lay HDPE pipes	7 days	11/3/2014	17/3/2014	0%
409	4.11.16.3.2	Grout HDPE pipes	7 days	18/3/2014	24/3/2014	0%
410	4.11.16.3.3	Remove temporary works and backfilling	8 days	25/3/2014	1/4/2014	0%
411	**4.11.17**	**Construction of retaining wall RW9 - CH0 to 75m (length 75m)**	**110 days**	**2/4/2014**	**20/7/2014**	**0%**
412	4.11.17.1	drive sheetpile & excavation	14 days	2/4/2014	15/4/2014	0%
413	4.11.17.2	grade 200 rock fill	14 days	6/4/2014	19/4/2014	0%
414	4.11.17.3	cast blinding layer	14 days	14/4/2014	27/4/2014	0%
415	4.11.17.4	Bay 9001-9010	94 days	18/4/2014	20/7/2014	0%
416	**4.11.18**	**Construction of Bridge J with 6 x Ø 1500 bored piles**	**217 days**	**7/12/2013**	**11/7/2014**	**2%**



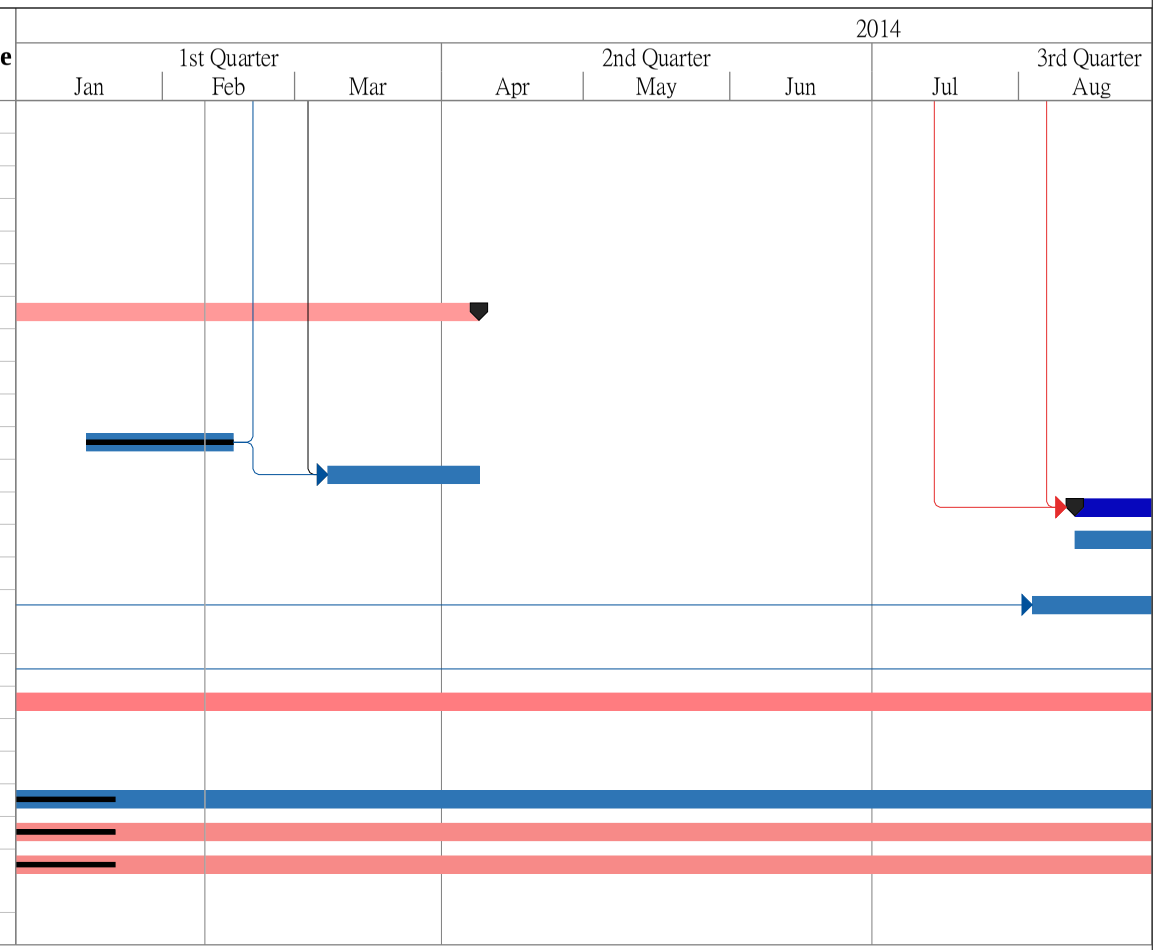
ID	WBS	Task Name	Duration	Start	Finish	% Complete
417	4.11.18.1	bored piles	73 days	7/12/2013	17/2/2014	5%
418	4.11.18.2	pile caps	15 days	18/2/2014	4/3/2014	0%
419	4.11.18.3	abutment walls	24 days	3/3/2014	26/3/2014	0%
420	4.11.18.4	falsework for deck	15 days	25/3/2014	8/4/2014	0%
421	4.11.18.5	deck	55 days	9/4/2014	2/6/2014	0%
422	4.11.18.6	parapet	39 days	3/6/2014	11/7/2014	0%
423	**4.11.19**	**Construction of retaining wall RW5 - CH0 to 60m (length 60m)**	**44 days**	**27/3/2014**	**9/5/2014**	**0%**
424	4.11.19.1	drive sheetpile & excavation	11 days	27/3/2014	6/4/2014	0%
425	4.11.19.2	grade 200 rock fill	4 days	7/4/2014	10/4/2014	0%
426	4.11.19.3	cast blinding layer	5 days	11/4/2014	15/4/2014	0%
427	4.11.19.4	Bay 5001-5008	24 days	16/4/2014	9/5/2014	0%
428	**4.12**	**Section XIII of the Works - Works not covered in any other Sections**	**598 days**	**22/8/2013**	**11/4/2015**	**16%**
429	4.12.1	Submissions	70 days	22/8/2013	30/10/2013	100%
430	4.12.2	Approval of Submissions	68 days	16/9/2013	22/11/2013	100%
431	**4.12.3**	**Temporary Traffic Arrangement (TTA) Scheme for Works at existing LMH Rd**	**92 days**	**23/8/2013**	**22/11/2013**	**100%**
432	4.12.3.1	Preparation of TTA scheme	21 days	23/8/2013	12/9/2013	100%
433	4.12.3.2	Comment & approval of TTA scheme by TD & RMO	55 days	13/9/2013	6/11/2013	100%
434	4.12.3.3	Obtain roadwork advice from RMO	16 days	7/11/2013	22/11/2013	100%
435	**4.12.4**	**Northbound of Re-aligned Lin Ma Hang Road (west side)**	**382 days**	**23/11/2013**	**9/12/2014**	**6%**
436	**4.12.4.1**	**Works from chainage 190 to chainage 310**	**229 days**	**23/11/2013**	**9/7/2014**	**26%**
437	4.12.4.1.1	Drainage & slope drain	76 days	23/11/2013	6/2/2014	79%
438	4.12.4.1.2	Waterwork	38 days	7/2/2014	16/3/2014	0%
439	4.12.4.1.3	Irrigation System	18 days	17/3/2014	3/4/2014	0%
440	4.12.4.1.4	Roadwork	40 days	4/4/2014	13/5/2014	0%
441	4.12.4.1.5	Utilities works	38 days	14/5/2014	20/6/2014	0%
442	4.12.4.1.5.1	11kV	9 days	14/5/2014	22/5/2014	0%
443	4.12.4.1.5.2	LV	9 days	23/5/2014	31/5/2014	0%
444	4.12.4.1.5.3	NWT	10 days	1/6/2014	10/6/2014	0%
445	4.12.4.1.5.4	Highway lighting	10 days	11/6/2014	20/6/2014	0%
446	4.12.4.1.6	Footpath	19 days	21/6/2014	9/7/2014	0%
447	**4.12.4.2**	**Works from chainage 380 to chainage 580**	**263 days**	**23/11/2013**	**12/8/2014**	**3%**
448	4.12.4.2.1	Drainage	76 days	23/11/2013	6/2/2014	10%
449	4.12.4.2.2	Waterwork	35 days	7/2/2014	13/3/2014	0%
450	4.12.4.2.3	Irrigation System	18 days	14/3/2014	31/3/2014	0%
451	4.12.4.2.4	Roadwork	43 days	1/4/2014	13/5/2014	0%
452	4.12.4.2.5	Utilities works	57 days	14/5/2014	9/7/2014	0%
453	4.12.4.2.5.1	11kV	15 days	14/5/2014	28/5/2014	0%
454	4.12.4.2.5.2	LV	16 days	29/5/2014	13/6/2014	0%
455	4.12.4.2.5.3	NWT	15 days	14/6/2014	28/6/2014	0%
456	4.12.4.2.5.4	Highway lighting	11 days	29/6/2014	9/7/2014	0%
457	4.12.4.2.6	Footpath	34 days	10/7/2014	12/8/2014	0%
458	**4.12.4.3**	**Works from chainage 310 to chainage 380**	**99 days**	**14/5/2014**	**20/8/2014**	**0%**
459	4.12.4.3.1	Drainage	30 days	14/5/2014	12/6/2014	0%
460	4.12.4.3.2	Waterwork	12 days	13/6/2014	24/6/2014	0%
461	4.12.4.3.3	Irrigation System	9 days	25/6/2014	3/7/2014	0%
462	4.12.4.3.4	Roadwork	18 days	4/7/2014	21/7/2014	0%
463	4.12.4.3.5	Utilities works	22 days	22/7/2014	12/8/2014	0%
464	4.12.4.3.5.1	11kV	5 days	22/7/2014	26/7/2014	0%
465	4.12.4.3.5.2	LV	6 days	27/7/2014	1/8/2014	0%
466	4.12.4.3.5.3	NWT	6 days	2/8/2014	7/8/2014	0%
467	4.12.4.3.5.4	Highway lighting	5 days	8/8/2014	12/8/2014	0%
468	4.12.4.3.6	Footpath	8 days	13/8/2014	20/8/2014	0%
469	**4.12.4.4**	**Works from chainage 580 to chainage 780**	**210 days**	**14/5/2014**	**9/12/2014**	**0%**
470	4.12.4.4.1	Drainage	72 days	14/5/2014	24/7/2014	0%
471	4.12.4.4.2	Waterwork	35 days	25/7/2014	28/8/2014	0%



ID	WBS	Task Name	Duration	Start	Finish	% Complete
472	4.12.4.4.3	Irrigation System	19 days	29/8/2014	16/9/2014	0%
473	4.12.4.4.4	Sewerage	13 days	17/9/2014	29/9/2014	0%
474	4.12.4.4.5	Roadwork	44 days	30/9/2014	12/11/2014	0%
475	4.12.4.4.6	Utilities works	56 days	30/9/2014	24/11/2014	0%
476	4.12.4.4.6.1	11kV	17 days	30/9/2014	16/10/2014	0%
477	4.12.4.4.6.2	LV	15 days	17/10/2014	31/10/2014	0%
478	4.12.4.4.6.3	NWT	15 days	1/11/2014	15/11/2014	0%
479	4.12.4.4.6.4	Highway lighting	9 days	16/11/2014	24/11/2014	0%
480	4.12.4.4.7	Footpath	15 days	25/11/2014	9/12/2014	0%
481	**4.12.4.5**	**Works from chainage 80 to chainage 190**	**170 days**	**14/5/2014**	**30/10/2014**	**0%**
482	4.12.4.5.1	Drainage	58 days	14/5/2014	10/7/2014	0%
483	4.12.4.5.2	Waterwork	35 days	11/7/2014	14/8/2014	0%
484	4.12.4.5.3	Irrigation System	16 days	15/8/2014	30/8/2014	0%
485	4.12.4.5.4	Roadwork	37 days	31/8/2014	6/10/2014	0%
486	4.12.4.5.5	Utilities works	37 days	31/8/2014	6/10/2014	0%
487	4.12.4.5.5.1	11kV	10 days	31/8/2014	9/9/2014	0%
488	4.12.4.5.5.2	LV	10 days	10/9/2014	19/9/2014	0%
489	4.12.4.5.5.3	NWT	10 days	20/9/2014	29/9/2014	0%
490	4.12.4.5.5.4	Highway lighting	7 days	30/9/2014	6/10/2014	0%
491	4.12.4.5.6	Footpath	24 days	7/10/2014	30/10/2014	0%
492	**4.12.5**	**Southbound of Re-aligned Lin Ma Hang Road (east side)**	**163 days**	**31/10/2014**	**11/4/2015**	**0%**
493	**4.12.5.1**	**Works from chainage 60 to chainage 200**	**111 days**	**31/10/2014**	**18/2/2015**	**0%**
494	4.12.5.1.1	Drainage	16 days	31/10/2014	15/11/2014	0%
495	4.12.5.1.2	Irrigation System	7 days	16/11/2014	22/11/2014	0%
496	4.12.5.1.3	Roadwork	24 days	23/11/2014	16/12/2014	0%
497	4.12.5.1.4	Utilities works	43 days	17/12/2014	28/1/2015	0%
498	4.12.5.1.4.1	11kV	13 days	17/12/2014	29/12/2014	0%
499	4.12.5.1.4.2	LV	11 days	30/12/2014	9/1/2015	0%
500	4.12.5.1.4.3	HGC	10 days	10/1/2015	19/1/2015	0%
501	4.12.5.1.4.4	Highway lighting	9 days	20/1/2015	28/1/2015	0%
502	4.12.5.1.5	Footpath	21 days	29/1/2015	18/2/2015	0%
503	**4.12.5.2**	**Works from chainage 400 to chainage 600**	**133 days**	**13/11/2014**	**25/3/2015**	**0%**
504	4.12.5.2.1	Waterwork	4 days	13/11/2014	16/11/2014	0%
505	4.12.5.2.2	Irrigation System	5 days	17/11/2014	21/11/2014	0%
506	4.12.5.2.3	Roadwork	26 days	22/11/2014	17/12/2014	0%
507	4.12.5.2.4	Utilities works	63 days	18/12/2014	18/2/2015	0%
508	4.12.5.2.4.1	11kV	17 days	18/12/2014	3/1/2015	0%
509	4.12.5.2.4.2	LV	16 days	4/1/2015	19/1/2015	0%
510	4.12.5.2.4.3	HGC	15 days	20/1/2015	3/2/2015	0%
511	4.12.5.2.4.4	Highway lighting	15 days	4/2/2015	18/2/2015	0%
512	4.12.5.2.5	Footpath	35 days	19/2/2015	25/3/2015	0%
513	**4.12.5.3**	**Works from chainage 200 to chainage 400**	**115 days**	**18/12/2014**	**11/4/2015**	**0%**
514	4.12.5.3.1	Slope drain	5 days	18/12/2014	22/12/2014	0%
515	4.12.5.3.2	Irrigation System	5 days	23/12/2014	27/12/2014	0%
516	4.12.5.3.3	Waterwork	4 days	28/12/2014	31/12/2014	0%
517	4.12.5.3.4	Roadwork	25 days	1/1/2015	25/1/2015	0%
518	4.12.5.3.5	Utilities works	62 days	26/1/2015	28/3/2015	0%
519	4.12.5.3.5.1	11kV	15 days	26/1/2015	9/2/2015	0%
520	4.12.5.3.5.2	LV	17 days	10/2/2015	26/2/2015	0%
521	4.12.5.3.5.3	HGC	15 days	27/2/2015	13/3/2015	0%
522	4.12.5.3.5.4	Highway lighting	15 days	14/3/2015	28/3/2015	0%
523	4.12.5.3.6	Footpath	17 days	26/3/2015	11/4/2015	0%
524	**4.12.5.4**	**Works from chainage 600 to chainage 780**	**115 days**	**18/12/2014**	**11/4/2015**	**0%**
525	4.12.5.4.1	Sewerage	20 days	18/12/2014	6/1/2015	0%
526	4.12.5.4.2	Irrigation System	9 days	7/1/2015	15/1/2015	0%
527	4.12.5.4.3	Roadwork	21 days	16/1/2015	5/2/2015	0%

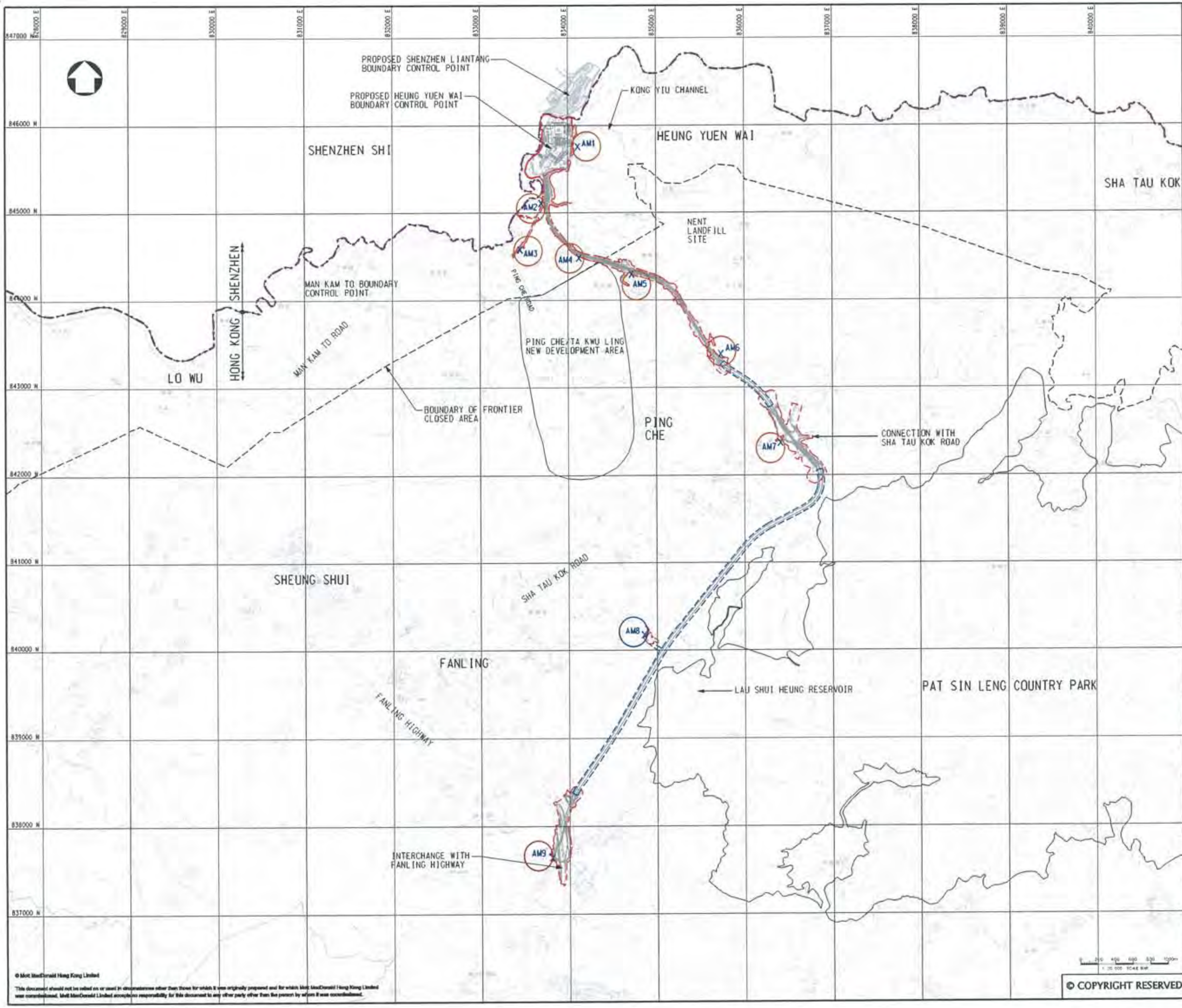


ID	WBS	Task Name	Duration	Start	Finish	% Complete
528	4.12.5.4.4	Utilities works	55 days	6/2/2015	1/4/2015	0%
529	4.12.5.4.4.1	11kV	13 days	6/2/2015	18/2/2015	0%
530	4.12.5.4.4.2	LV	16 days	19/2/2015	6/3/2015	0%
531	4.12.5.4.4.3	HGC	13 days	7/3/2015	19/3/2015	0%
532	4.12.5.4.4.4	Highway lighting	13 days	20/3/2015	1/4/2015	0%
533	4.12.5.4.5	Footpath	18 days	25/3/2015	11/4/2015	0%
534	**4.12.6**	**Archaeological survey (Sections T1 to T3)(Drg. 6403A)**	**167 days**	**24/10/2013**	**8/4/2014**	**66%**
535	4.12.6.1	AMO Permit issue	0 days	24/10/2013	24/10/2013	100%
536	4.12.6.2	Notice commencement of excavation to AMO	16 days	24/10/2013	8/11/2013	100%
537	4.12.6.3	Phase 1 - ch 380 to ch 580 (Section T1)	14 days	9/11/2013	22/11/2013	100%
538	4.12.6.4	Phase 3 - ch 580 to ch 780 (Section T2 (AWB))	31 days	16/1/2014	15/2/2014	100%
539	4.12.6.5	Phase 4 - ch 730 to ch 780 (Section T3)	32 days	8/3/2014	8/4/2014	0%
540	**4.12.7**	**Construction of retaining wall RW8 - CH0 to 22 (3 bays)**	**70 days**	**13/8/2014**	**21/10/2014**	**0%**
541	4.12.7.1	Bay 8001 to Bay 8003 (3 bays)	70 days	13/8/2014	21/10/2014	0%
542	4.12.8	Site Formation works for ArchSD Depot (Drg. 1001B)	35 days	22/10/2014	25/11/2014	0%
543	4.12.9	Existing road to be improved & run-in to the site to be constructed at RS1 (Drg.1203A, 1001B)	108 days	4/8/2014	19/11/2014	0%
544	4.12.10	Access road to be re-constructed / upgraded at RS3 (Drg/1203)	111 days	20/11/2014	10/3/2015	0%
545	**4.13**	**Section XIV of the Works - Trees preservation and protection**	**730 days**	**12/4/2013**	**11/4/2015**	**34%**
546	4.13.1	Submissions	69 days	12/4/2013	19/6/2013	100%
547	4.13.2	Approval of Submissions	70 days	20/6/2013	28/8/2013	100%
548	4.13.3	Tree felling/removal works and tree transplanting works	499 days	6/9/2013	17/1/2015	28%
549	4.13.4	Preservation and Protection of Existing Trees in all Portion of the Site	591 days	29/8/2013	11/4/2015	25%
550	**4.14**	**Section XV of the Works - Landscape soft works (including transplant trees to permanent locations)**	**524 days**	**4/11/2013**	**11/4/2015**	**15%**
551	**4.15**	**Section XVI of the Works - Establishment works for landscape soft works**	**365 days**	**12/4/2015**	**10/4/2016**	**0%**



Appendix D

Designated Monitoring Locations as Recommended in the Approved EM&A Manual



Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	MING	FIRST ISSUE	DC	HT

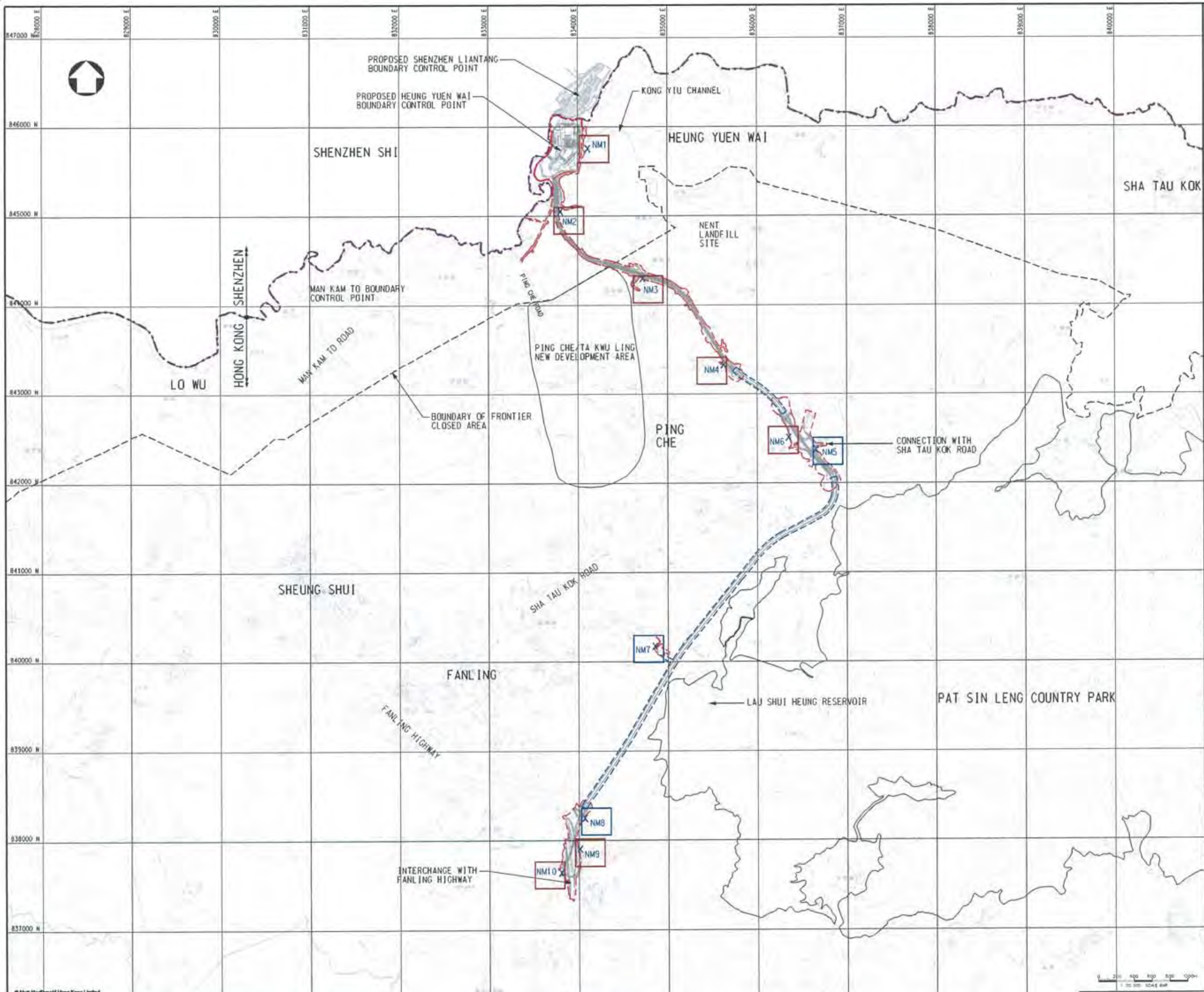
Mott MacDonald

Client: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project: AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: PROPOSED LOCATION OF CONSTRUCTION AIR QUALITY MONITORING STATIONS

Designed	DC		Eng.Chk.	EC
Drawn	MING		Coordination	EC
Dwg.Chk.	DC		Approved	HT
Scale at A1	1:20000	Project 255228		Status PRE
Drawing No	FIGURE 2.1			Rev P1



Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	WING	FIRST ISSUE	DC	WT

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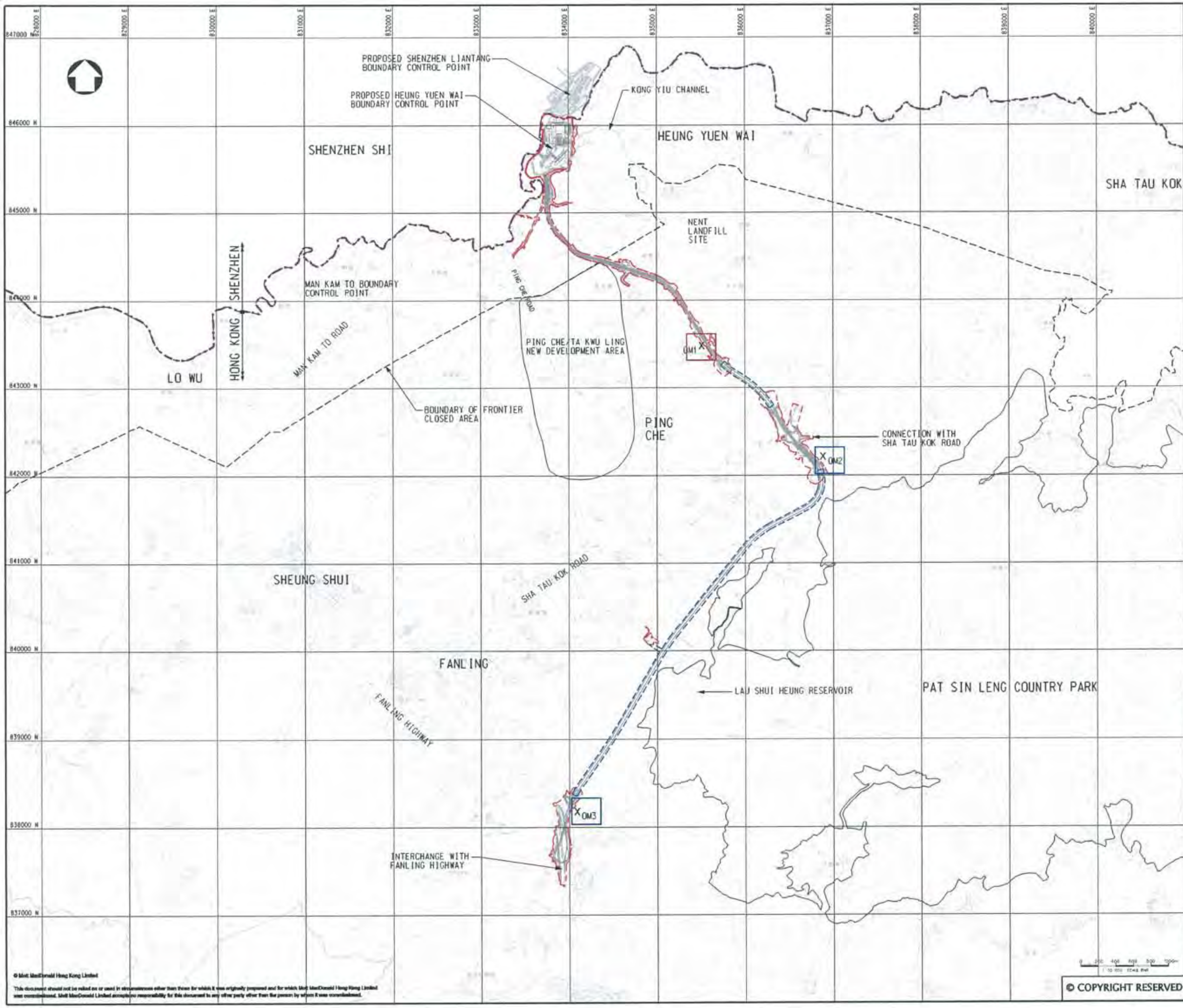
Client
CEDD
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project
AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title
PROPOSED LOCATION OF CONSTRUCTION NOISE MONITORING STATIONS

Designed	DC	Eng.Chk.	EC
Drawn	WING	Coordination	EC
Dwg.Chk.	DC	Approved	WT
Scale at A1	1:20000	Project	255228
Status	PRE	Drawing No	FIGURE 3.1
Rev	P1		



Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	WING	FIRST ISSUE	DC	RT

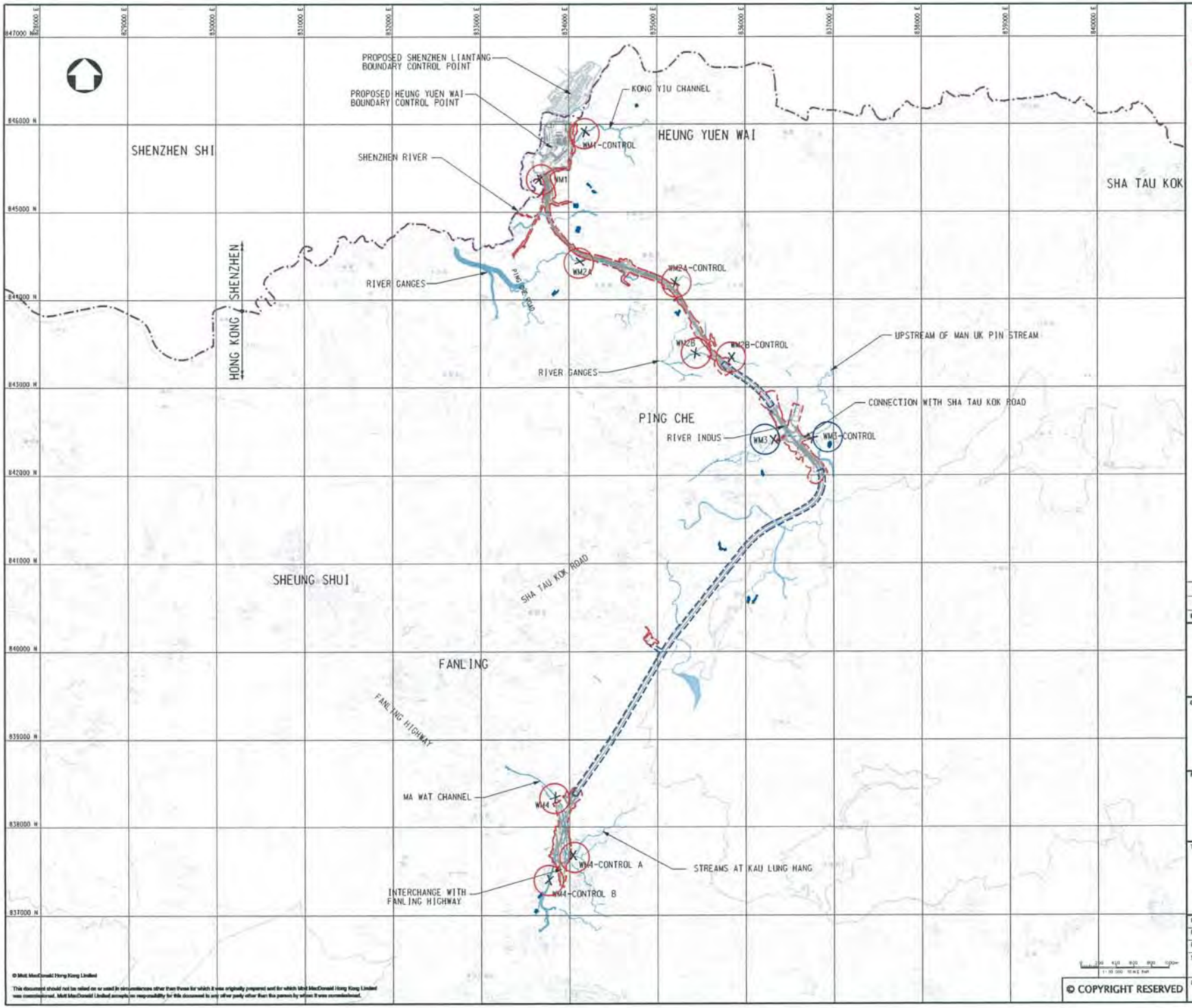
Mott MacDonald

Client: CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT (CEDD)

Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: PROPOSED LOCATION OF OPERATIONAL NOISE MONITORING STATIONS

Designed	DC	Eng.Chk.	EC
Drawn	WING	Coordination	EC
Dwg.Chk.	DC	Approved	RT
Scale at A1	1:20000	Project	255228
Status	PRE	Drawing No	FIGURE 3.2
Rev	P1		



LEGEND:

- BOUNDARY OF HKSAR
- LAND REQUIREMENT LIMIT (ABOVE GROUND)
- LAND REQUIREMENT LIMIT (TUNNEL)
- X PROPOSED WATER QUALITY MONITORING STATION

MONITORING STATION	CO-ORDINATES	
	EAST(NG(m)	NORTHING(m)
WM1	833668.635	845371.097
WM1-CONTROL	834185.480	845916.662
WM2A	834132.193	844432.910
WM2A-CONTROL	835205.329	844200.151
WM2B	835434.744	843394.606
WM2B-CONTROL	835845.878	843343.625
WM3	836323.622	842404.977
WM3-CONTROL	836763.419	842425.507
WM4	833840.783	838344.842
WM4-CONTROL A	834038.937	837688.995
WM4-CONTROL B	833769.123	837406.936

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	NOV 10	WING	GENERAL REVISION	HC	HT
P1	OCT 10	WING	FIRST ISSUE	HC	HT

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Client: CEDD — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

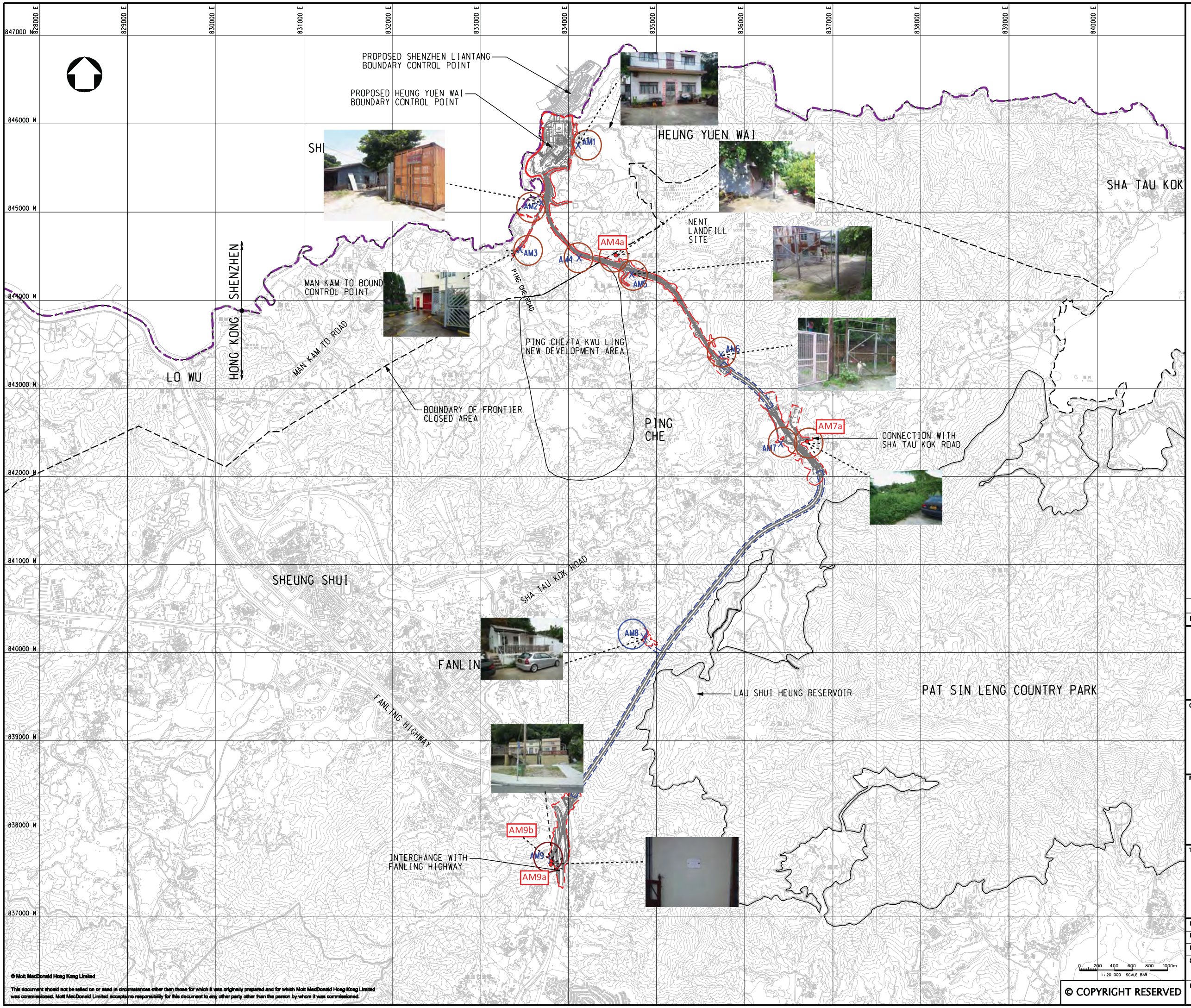
Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: LOCATIONS OF PROPOSED WATER QUALITY MONITORING STATIONS

Designed	HC		Eng.Chk.	EC	
Drawn	WING		Coordination	EC	
Eng.Chk.	HC		Approved	HT	
Scale at A1	1:20000	Project	255228		Status PRE
Drawing No	FIGURE 4.1				Rev P2

Appendix E

Monitoring Locations for Impact Monitoring



Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	MING	FIRST ISSUE	DC	HT

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Client

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CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

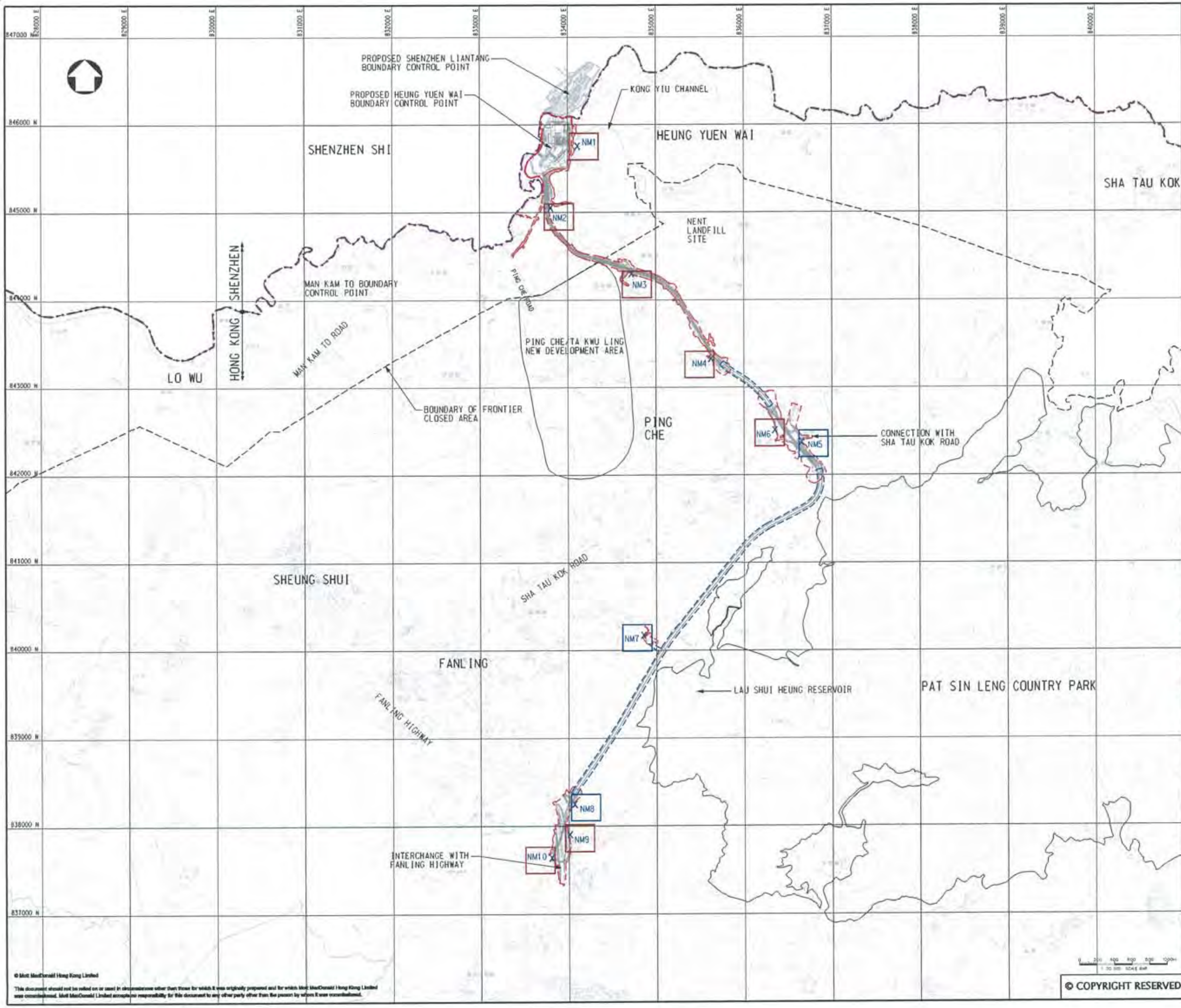
Project

AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title

PROPOSED LOCATION OF CONSTRUCTION AIR QUALITY MONITORING STATIONS

Designed	DC		Eng.Chk.	EC	
Drawn	MING		Coordination	EC	
Dwg.Chk.	DC		Approved	HT	
Scale at A1	1:20000	Project	255228		Status PRE
		CAD file	j:\255228\report\env\em&a\00083\FIG 2-1.dgn		
Drawing No	FIGURE 2.1				Rev P1



LEGEND:

- BOUNDARY OF HKSAR
- WORKS AREA (ABOVE GROUND)
- WORKS AREA (TUNNEL)
- X CONSTRUCTION NOISE MONITORING STATIONS

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	WING	FIRST ISSUE	DC	HT

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Client: CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

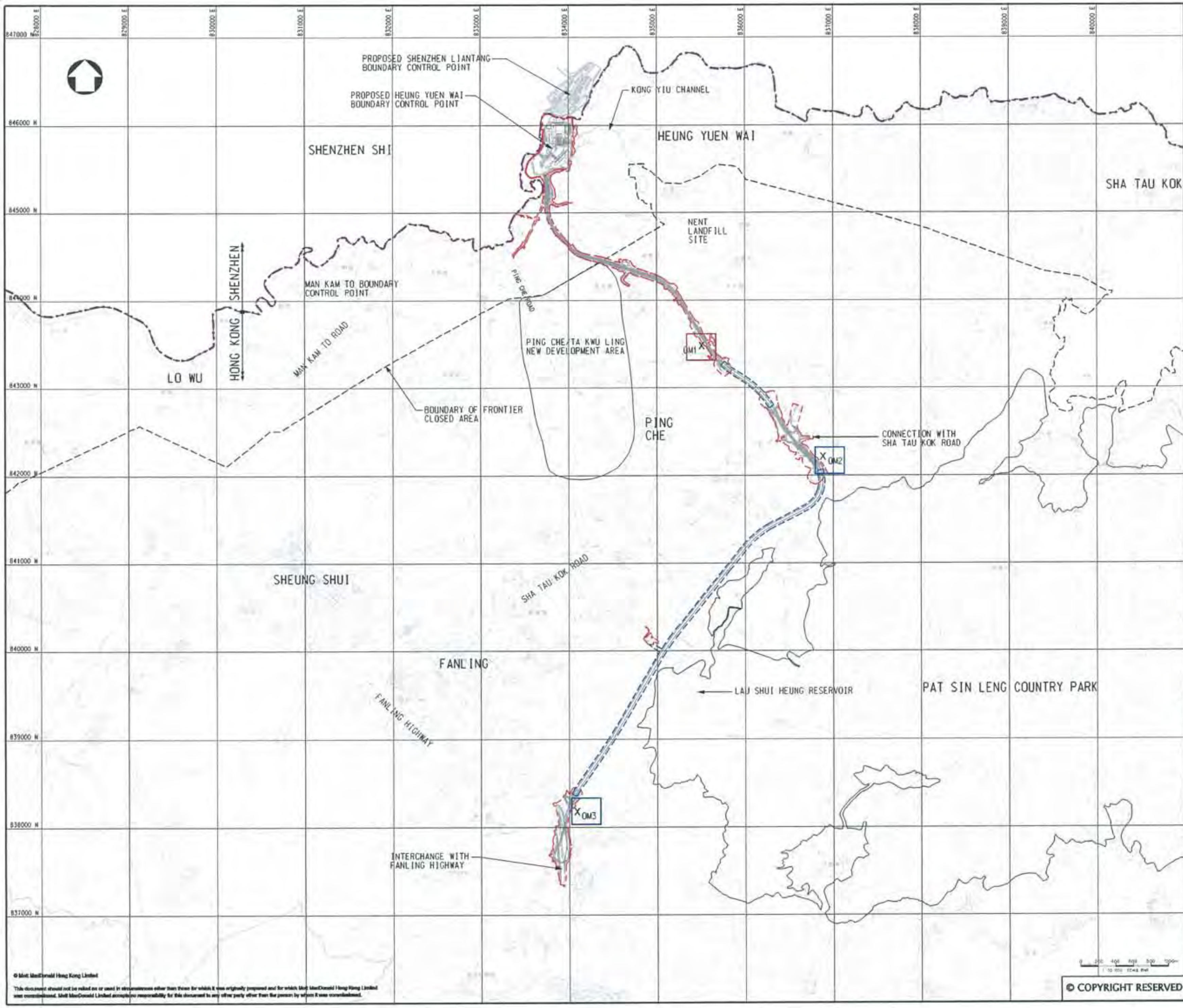
Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: PROPOSED LOCATION OF CONSTRUCTION NOISE MONITORING STATIONS

Designed	DC	Eng.Chk.	EC
Drawn	WING	Coordination	EC
Dwg.Chk.	DC	Approved	HT
Scale at A1	1:20000	Project	255228
Status	PRE		

Drawing No: FIGURE 3.1

Rev: P1



LEGEND:

- BOUNDARY OF HKSAR
- WORKS AREA (ABOVE GROUND)
- WORKS AREA (TUNNEL)
- X OPERATIONAL NOISE MONITORING STATIONS

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 10	WING	FIRST ISSUE	DC	HT

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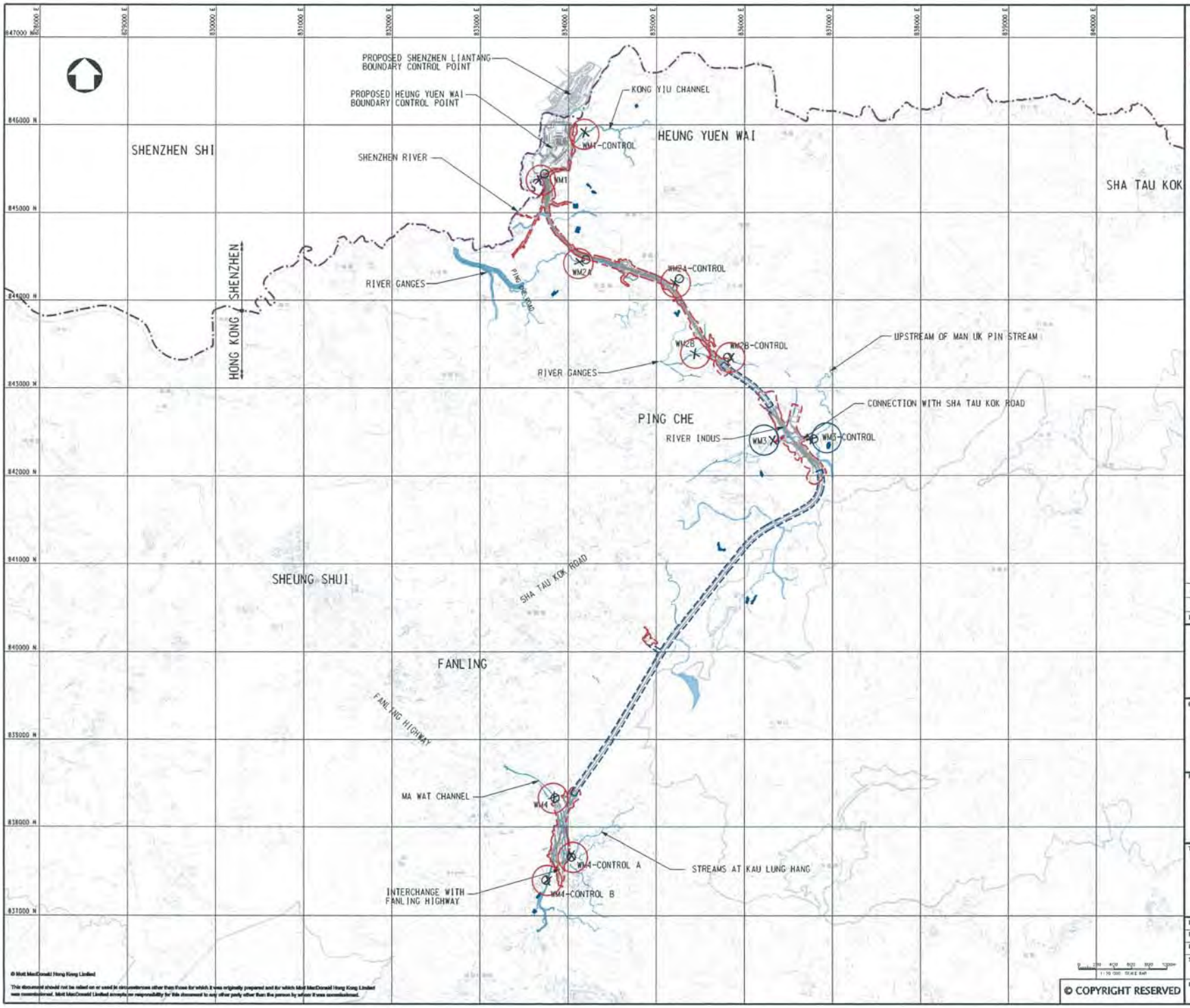
Client: CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project: AGREEMENT NO. CE45/2008(CE) LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title: PROPOSED LOCATION OF OPERATIONAL NOISE MONITORING STATIONS

Designed	DC	Eng.Chk.	EC	
Drawn	WING	Coordination	EC	
Dwg.Chk.	DC	Approved	HT	
Scale at A1	1:20000	Project 255228		Status PRE
Drawing No	FIGURE 3.2			Rev P1



LEGEND:

- BOUNDARY OF HKSAR
- LAND REQUIREMENT LIMIT (ABOVE GROUND)
- LAND REQUIREMENT LIMIT (TUNNEL)
- X — Water Quality Monitoring Location Recommended in EM&A Manual
- O — Alternative Water Quality Monitoring Location for EM&A Programme

Station ID	Location recommended in EM&A Manual – Coordinates		Location found during site visit – Coordinates	
	Easting	Northing	Easting	Northing
WM1	833668.635	845371.097	833679	845423
WM1-Control	834185.480	845916.662	834185	845917
WM2A	834132.193	844432.910	834204	844471
WM2A-Control	835205.529	844200.151	835270	844243
WM2B	835434.744	843394.606	835433	843397
WM2B-Control	835845.878	843343.625	835835	843351
WM3	836523.622	842404.977	836524	842407
WM3-Control	836763.419	842425.507	836763	842400
WM4	833840.785	838344.842	833850	838358
WM4-Control A	834038.937	837668.995	834028	837695
WM4-Control B	833769.123	837406.936	833760	837395

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	NOV 10	MING	GENERAL REVISION	HC	HT
P1	OCT 10	MING	FIRST ISSUE	HC	HT

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AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

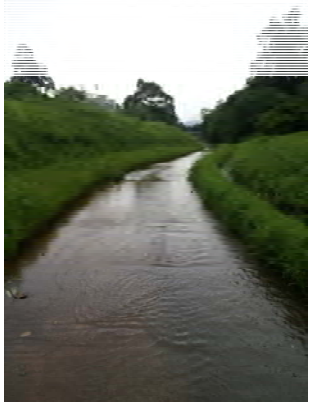
Title

LOCATIONS OF PROPOSED WATER QUALITY MONITORING STATIONS

Designed	HC		Eng.Chk.	EC	
Drawn	MING		Coordination	EC	
Dwg.Chk.	HC		Approved	HT	
Scale at A1	1:20000	Project	255228	Status	PRE
		CAD file	A1\255228\REPORT\EMY-EM&A MANUAL\FIG 4-1.dgn		
Drawing No	FIGURE 4.1			Rev	P2

Photographic Records for Water Quality Monitoring Location

	
Alternative Location of WM1	**Co-ordinates of Alternative Location of WM1**
	
Alternative Location of WM1 - Control	**Co-ordinates of Alternative Location of WM1 - Control**
	
Alternative Location of WM2A	**Co-ordinates of Alternative Location of WM2A**
	
Alternative Location of WM2-Control A	**Co-ordinates of Alternative Location of WM2 – Control**

	
Location of WM2B-Control	**Co-ordinates of WM2B-Control**
	
Location of WM2B	**Co-ordinates of WM2B**
	
Location of WM3-Control	**Co-ordinates of WM3-Control**
	
Location of WM3	**Co-ordinates of WM3**

	
Location of WM4–Control A	**Co-ordinates of WM4-Control A**
	
Location of WM4–Control B	**Co-ordinates of WM4-Control B**
	
Location of WM4	**Co-ordinates of WM4**

Appendix F

Calibration Certificate of Monitoring Equipment and HOKLAS-accreditation Certificate of the Testing Laboratory

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Tsung Yuen Ha Village House No. 63
Location ID : AM1

Date of Calibration: 2013/12/23
Next Calibration Date: 2014/2/23
Technician: Keung Chi Young

CONDITIONS

Sea Level Pressure (hPa)	1022.5	Corrected Pressure (mm Hg)	766.875
Temperature (°C)	17.9	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11662
Model->	5025A	Qstd Intercept ->	-0.01714
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.7	6.6	13.3	1.760	53	53.88	Slope = 46.1783
13	5.8	5.7	11.5	1.637	46	46.77	Intercept = -28.7774
10	4.7	4.6	9.3	1.473	36	36.60	Corr. coeff. = 0.9926
7	3.5	3.4	6.9	1.270	30	30.50	
5	2.5	2.4	4.9	1.071	21	21.35	

Calculations :

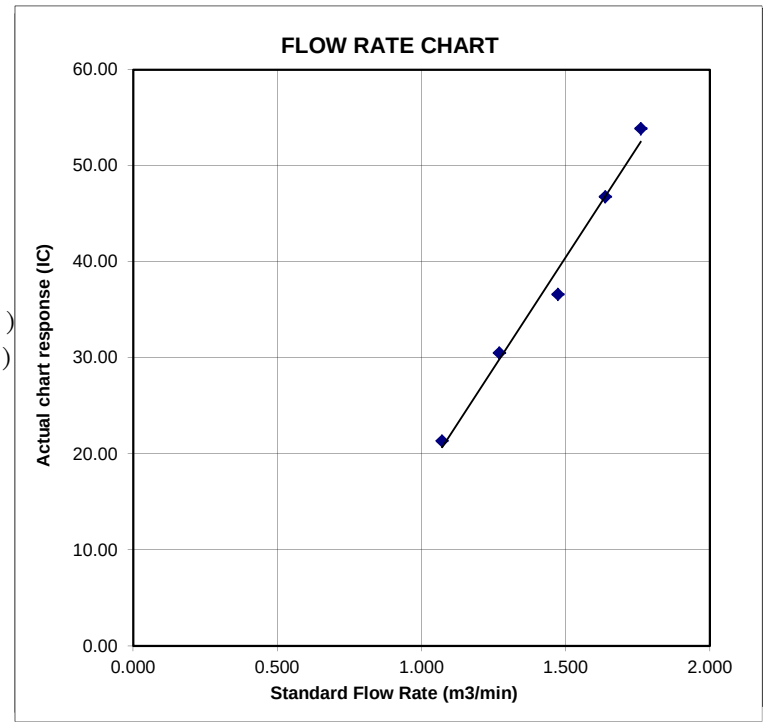
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Village House near Lin Ma Hang Road
Location ID : AM2

Date of Calibration: 2013/12/23
Next Calibration Date: 2014/2/23
Technician: Keung Chi Young

CONDITIONS

Sea Level Pressure (hPa)	1022.5	Corrected Pressure (mm Hg)	766.875
Temperature (°C)	17.9	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11662
Model->	5025A	Qstd Intercept ->	-0.01714
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.9	6.6	13.5	1.773	57	57.95	Slope = 30.5627
13	5.4	5.2	10.6	1.572	51	51.85	Intercept = 3.9313
10	4.2	4.1	8.3	1.392	46	46.77	Corr. coeff. = 0.9996
7	2.8	2.6	5.4	1.124	38	38.63	
5	1.8	1.5	3.3	0.881	30	30.50	

Calculations :

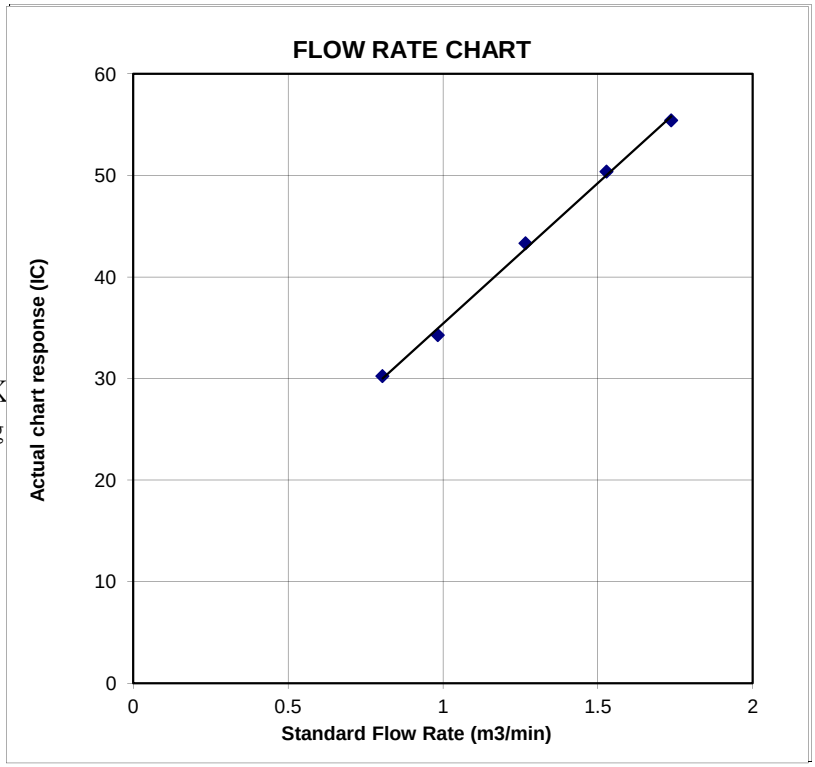
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K
Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Ta Kwu Ling Fire Service Station
Location ID : AM3

Date of Calibration: 2013/12/23
Next Calibration Date: 2014/2/23
Technician: Keung Chi Young

CONDITIONS

Sea Level Pressure (hPa)	1022.5	Corrected Pressure (mm Hg)	766.875
Temperature (°C)	17.9	Temperature (K)	291

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11662
Model->	5025A	Qstd Intercept ->	-0.01714
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.3	5.7	11.0	1.601	53	53.88	Slope = 39.0324
13	4.9	4.8	9.7	1.504	48	48.80	Intercept = -9.6422
10	3.9	4.1	8.0	1.367	42	42.70	Corr. coeff. = 0.9968
7	2.7	2.9	5.6	1.145	34	34.57	
5	1.8	1.9	3.7	0.932	27	27.45	

Calculations :

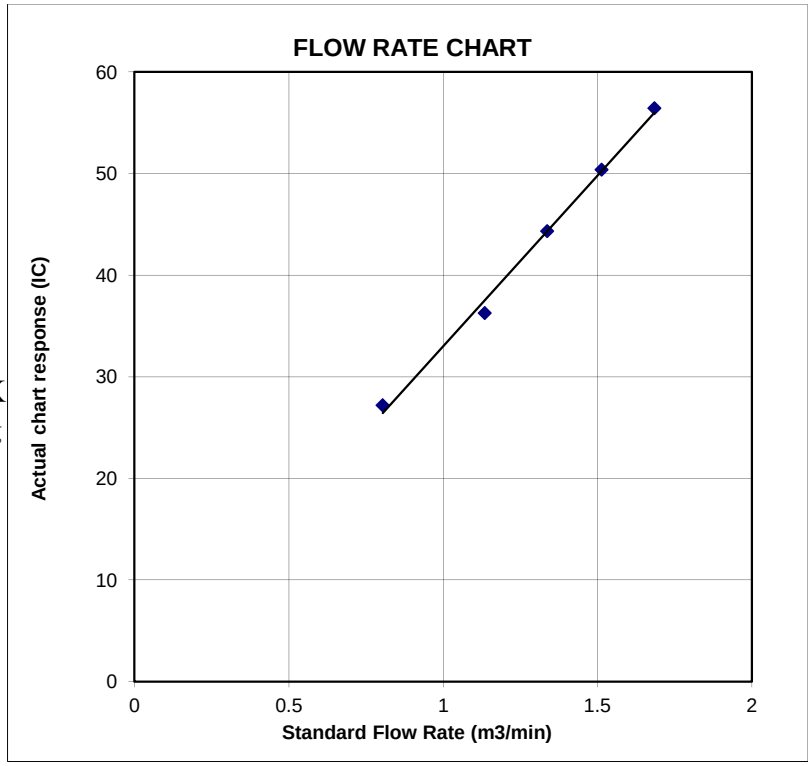
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K
Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Nam Wa Po Village House No. 80
Location ID : AM9b

Date of Calibration: 2013/11/6
Next Calibration Date: 2014/1/6
Technician: Tung Chi Sun

CONDITIONS

Sea Level Pressure (hPa)	1018.3	Corrected Pressure (mm Hg)	763.725
Temperature (°C)	24.2	Temperature (K)	297

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11662
Model->	5025A	Qstd Intercept ->	-0.01714
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.4	6.4	12.8	1.705	53	53.20	Slope = 32.2697
13	5.1	5.1	10.2	1.523	48	48.18	Intercept = -1.0508
10	4.1	4.1	8.2	1.366	44	44.17	Corr. coeff. = 0.9978
7	2.6	2.6	5.2	1.090	34	34.13	
5	1.6	1.6	3.2	0.856	26	26.10	

Calculations :

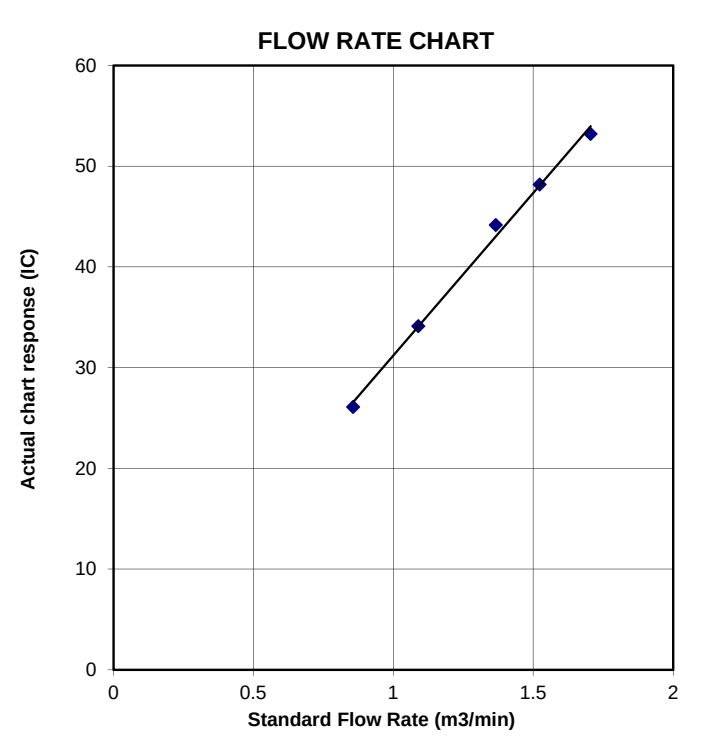
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K
Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Nam Wa Po Village House No. 80		Date of Calibration:	2014/1/9
Location ID : AM9b		Next Calibration Date:	2014/3/9
		Technician:	Keung Chi Young

CONDITIONS

Sea Level Pressure (hPa)	1022.9	Corrected Pressure (mm Hg)	767.175
Temperature (ºC)	15.6	Temperature (K)	289

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.11662
Model->	5025A	Qstd Intercept ->	-0.01714
Serial # ->	1941		

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.3	6.4	12.7	1.727	55	56.15	Slope = 33.6146
13	5.2	5.3	10.5	1.571	49	50.03	Intercept = -2.1268
10	4.0	4.1	8.1	1.381	43	43.90	Corr. coeff. = 0.9947
7	2.5	2.6	5.1	1.097	36	36.75	
5	1.5	1.6	3.1	0.857	25	25.52	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart respones

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K

Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

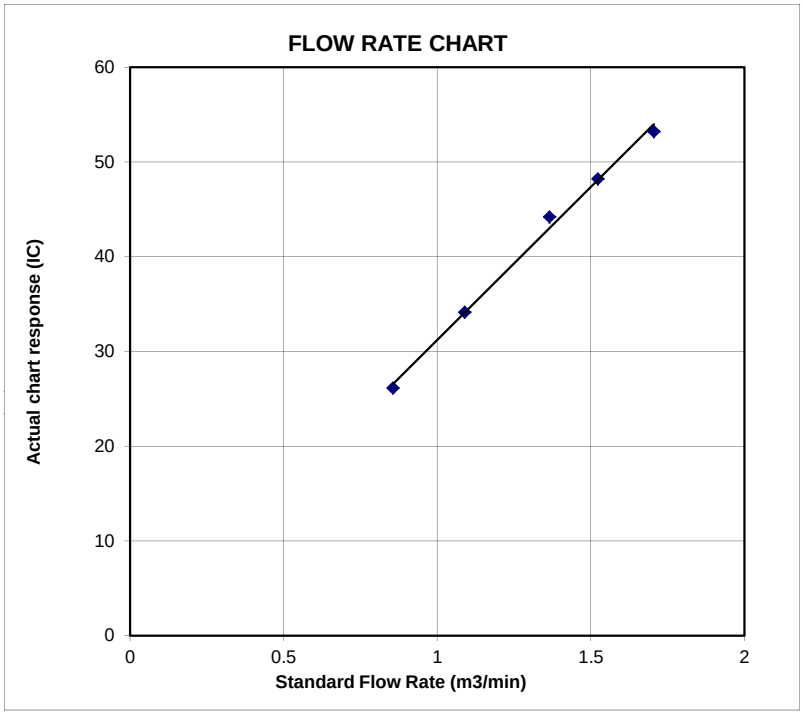
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Apr 09, 2013 Rootsmeter S/N 0438320 Ta (K) - 296
Operator Tisch Orifice I.D. - 1941 Pa (mm) - 751.84

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4710	3.3	2.00
2	NA	NA	1.00	1.0370	6.4	4.00
3	NA	NA	1.00	0.9270	7.9	5.00
4	NA	NA	1.00	0.8840	8.8	5.50
5	NA	NA	1.00	0.7300	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9916	0.6741	1.4113		0.9956	0.6768	0.8874
0.9874	0.9521	1.9959		0.9914	0.9560	1.2549
0.9854	1.0630	2.2315		0.9894	1.0673	1.4030
0.9843	1.1134	2.3405		0.9883	1.1180	1.4715
0.9790	1.3410	2.8227		0.9829	1.3465	1.7747
Qstd slope (m) =		2.11662		Qa slope (m) =		1.32539
intercept (b) =		-0.01714		intercept (b) =		-0.01078
coefficient (r) =		0.99999		coefficient (r) =		0.99999
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

SIBATA

SIBATA SCIENTIFIC TECHNOLOGY LTD.
1-1-62, Nakane, Soka, Saitama, 340-0005 Japan
TEL : 048-933-1582 FAX : 048-933-1591

CALIBRATION CERTIFICATE

Date: June 20, 2013

Equipment Name	:	Laser Dust Monitor, Model LD-3B
Code No.	:	080000-42
Quantity	:	1 unit
Serial No.	:	366407
Sensitivity	:	0.001 mg/m3
Sensitivity Adjustment	:	563 CPM
Scale Setting	:	June 17, 2013

We hereby certify that the avobe mentioned instrment has been calibrated satisfactory.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

Kentaro Togo
Overseas Sales Division

SIBATA

SIBATA SCIENTIFIC TECHNOLOGY LTD.

1-1-62, Nakane, Soka, Saitama, 340-0005 Japan

TEL : 048-933-1582 FAX : 048-933-1591

CALIBRATION CERTIFICATE

Date: June 20, 2013

Equipment Name	:	Laser Dust Monitor, Model LD-3B
Code No.	:	080000-42
Quantity	:	1 unit
Serial No.	:	366410
Sensitivity	:	0.001 mg/m3
Sensitivity Adjustment	:	668 CPM
Scale Setting	:	June 17, 2013

We hereby certify that the avobe mentioned instrment has been calibrated satisfactory.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

Kentaro Togo

Overseas Sales Division

SIBATA

SIBATA SCIENTIFIC TECHNOLOGY LTD.
1-1-62, Nakane, Soka, Saitama, 340-0005 Japan
TEL : 048-933-1582 FAX : 048-933-1591

CALIBRATION CERTIFICATE

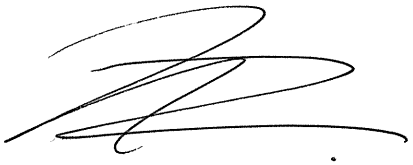
Date: June 20, 2013

Equipment Name	:	Laser Dust Monitor, Model LD-3B
Code No.	:	080000-42
Quantity	:	1 unit
Serial No.	:	366409
Sensitivity	:	0.001 mg/m3
Sensitivity Adjustment	:	527 CPM
Scale Setting	:	June 17, 2013

We hereby certify that the avobe mentioned instrment has been calibrated satisfactory.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.



Kentaro Togo
Overseas Sales Division

SIBATA

SIBATA SCIENTIFIC TECHNOLOGY LTD.

1-1-62, Nakane, Soka, Saitama, 340-0005 Japan

TEL : 048-933-1582 FAX : 048-933-1591

CALIBRATION CERTIFICATE

Date: June 20, 2013

Equipment Name	:	Laser Dust Monitor, Model LD-3B
Code No.	:	080000-42
Quantity	:	1 unit
Serial No.	:	366418
Sensitivity	:	0.001 mg/m3
Sensitivity Adjustment	:	664 CPM
Scale Setting	:	June 17, 2013

We hereby certify that the avobe mentioned instrment has been calibrated satisfactory.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

Kentaro Togo

Overseas Sales Division

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C132568
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-0878)

Description / 儀器名稱 : Integrating Sound Level Meter (EQ006)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2285762
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 27 April 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Tested By 測試 : H C Chan

Certified By 核證 : K C Lee

Date of Issue 簽發日期 : 30 April 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: catlab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C132568
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.4.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	93.6

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.0	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.0

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
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c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C132568
證書編號

6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.0	Ref.
	L_{ASP}		S			94.0	± 0.1
	L_{AIP}		I			94.1	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
30 - 110	L_{AFP}	A	F	106.0	Continuous	106.0	Ref.
	L_{AFMax}				200 ms	104.9	-1.0 ± 1.0
	L_{ASP}		S		Continuous	106.0	Ref.
	L_{ASMax}				500 ms	101.9	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	31.5 Hz	55.1	-39.4 ± 1.5
					63 Hz	67.9	-26.2 ± 1.5
					125 Hz	77.8	-16.1 ± 1.0
					250 Hz	85.3	-8.6 ± 1.0
					500 Hz	90.7	-3.2 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	95.2	+1.2 ± 1.0
					4 kHz	95.0	+1.0 ± 1.0
					8 kHz	92.9	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.8	-4.3 (+3.0 ; -6.0)

Sun Creation Engineering Limited - Calibration & Testing Laboratory
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輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C132568
證書編號

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	31.5 Hz	91.4	-3.0 ± 1.5
					63 Hz	93.3	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.0
					250 Hz	94.0	0.0 ± 1.0
					500 Hz	94.0	0.0 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	93.8	-0.2 ± 1.0
					4 kHz	93.2	-0.8 ± 1.0
					8 kHz	90.9	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.8	-6.2 (+3.0 ; -6.0)

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
30 - 110	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	100.0	± 0.5
						$1/10^2$		90	89.8	± 0.5
			60 sec.			$1/10^3$		80	79.4	± 1.0
			5 min.			$1/10^4$		70	69.2	± 1.0

Remarks : - Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB :	31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB : 1 kHz		: ± 0.10 dB (Ref. 94 dB)
114 dB : 1 kHz		: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C132567
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-0878)

Description / 儀器名稱	:	Integrating Sound Level Meter (EQ010)
Manufacturer / 製造商	:	Brüel & Kjær
Model No. / 型號	:	2238
Serial No. / 編號	:	2285721
Supplied By / 委託者	:	Action-United Environmental Services and Consulting Unit A, 20/F., Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 27 April 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Tested By 測試 : H C Chan

Certified By 核證 : K C Lee

Date of Issue 簽發日期 : 30 April 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
新創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C132567
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.4.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.7

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.1 (Ref.)
				104.00		104.1
				114.00		114.0

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

Certificate of Calibration
校正證書

Certificate No. : C132567
證書編號

6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.1	Ref.
	L_{ASP}		S			94.1	± 0.1
	L_{AIP}		I			94.1	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
30 - 110	L_{AFP}	A	F	106.0	Continuous	106.0	Ref.
	L_{AFMax}				200 ms	105.0	-1.0 ± 1.0
	L_{ASP}		S		Continuous	106.0	Ref.
	L_{ASMax}				500 ms	102.0	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	31.5 Hz	54.7	-39.4 ± 1.5
					63 Hz	67.9	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.0
					250 Hz	85.4	-8.6 ± 1.0
					500 Hz	90.8	-3.2 ± 1.0
					1 kHz	94.1	Ref.
					2 kHz	95.3	+1.2 ± 1.0
					4 kHz	95.1	+1.0 ± 1.0
					8 kHz	92.9	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.8	-4.3 (+3.0 ; -6.0)

Certificate of Calibration
校正證書

Certificate No. : C132567
證書編號

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	31.5 Hz	91.2	-3.0 ± 1.5
					63 Hz	93.3	-0.8 ± 1.5
					125 Hz	93.9	-0.2 ± 1.0
					250 Hz	94.1	0.0 ± 1.0
					500 Hz	94.1	0.0 ± 1.0
					1 kHz	94.1	Ref.
					2 kHz	93.9	-0.2 ± 1.0
					4 kHz	93.3	-0.8 ± 1.0
					8 kHz	91.0	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
30 - 110	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	99.9	± 0.5
						$1/10^2$		90	90.0	± 0.5
			60 sec.			$1/10^3$		80	79.9	± 1.0
			5 min.			$1/10^4$		70	69.7	± 1.0

Remarks : - Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	: 31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C132979
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-0878)

Description / 儀器名稱	:	Sound Level Meter (EQ068)
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-31
Serial No. / 編號	:	00410247
Supplied By / 委託者	:	Action-United Environmental Services and Consulting Unit A, 20/F., Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 18 May 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By / 測試 : K C Lee

Certified By / 核證 : K M Wu

Date of Issue / 簽發日期 : 20 May 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
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Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C132979
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	94.0	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L_A	A	Fast	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.0

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	94.0	Ref.
			Slow			94.0	± 0.1

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Certificate of Calibration
校正證書

Certificate No. : C132979
證書編號

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
20 -110	L_A	A	Fast	106.00	Continuous	106.0	Ref.
	$L_A$max				200 ms	105.1	-1.0 ± 1.0
	L_A		Slow		Continuous	106.0	Ref.
	$L_A$max				500 ms	102.0	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	31.5 Hz	54.2	-39.4 ± 1.5
					63 Hz	67.7	-26.2 ± 1.5
					125 Hz	77.7	-16.1 ± 1.0
					250 Hz	85.2	-8.6 ± 1.0
					500 Hz	90.7	-3.2 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	95.2	+1.2 ± 1.0
					4 kHz	95.1	+1.0 ± 1.0
					8 kHz	92.9	-1.1 (+1.5; -3.0)
					12.5 kHz	90.0	-4.3 (+3.0; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	31.5 Hz	90.9	-3.0 ± 1.5
					63 Hz	93.1	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.0
					250 Hz	93.9	0.0 ± 1.0
					500 Hz	94.0	0.0 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	93.9	-0.2 ± 1.0
					4 kHz	93.3	-0.8 ± 1.0
					8 kHz	91.0	-3.0 (+1.5; -3.0)
					12.5 kHz	88.2	-6.2 (+3.0 ; -6.0)

Certificate of Calibration
校正證書

Certificate No. : C132979
證書編號

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Integrating Time	Freq. (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
20 - 110	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	100.0	± 0.5
						$1/10^2$		90	90.0	± 0.5
			60 sec.			$1/10^3$		80	80.0	± 1.0
			5 min.			$1/10^4$		70	70.0	± 1.0

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 319841

- Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	: 31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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Certificate of Calibration
校正證書

Certificate No. : C132229
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-0878)

Description / 儀器名稱	:	Precision Integrating Sound Level Meter (EQ012)
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-14
Serial No. / 編號	:	10303225
Supplied By / 委託者	:	Action-United Environmental Services and Consulting Unit A, 20/F., Gold King Industrial Building, 35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 15 April 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By 測試 : K C Lee

Certified By 核證 : K M Wu

Date of Issue 簽發日期 : 16 April 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
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Certificate of Calibration
校正證書

Certificate No. : C132229
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C130019
CL281	Multifunction Acoustic Calibrator	DC110233

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
40 - 100	L_P	A	Fast	94.00	1	93.8	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
60 - 120	L_P	A	Fast	94.00	1	93.7 (Ref.)
				104.00		103.7
				114.00		113.8

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

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Certificate of Calibration
校正證書

Certificate No. : C132229
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6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
40 - 100	L_P	A	Fast	94.00	1	93.8	Ref.
			Slow			93.8	± 0.1
			Imp			93.8	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mose	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
50 - 110	L_P	A	Fast	106.0	Continuous	106.0	Ref.
	L_{Amax}				200 ms	105.2	-1.0 ± 1.0
	L_P		Slow		Continuous	106.0	Ref.
	L_{Amax}				500 ms	102.1	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
40 - 100	L_P	A	Fast	94.00	31.5 Hz	54.4	-39.4 ± 1.5
					63 Hz	67.7	-26.2 ± 1.5
					125 Hz	77.8	-16.1 ± 1.0
					250 Hz	85.3	-8.6 ± 1.0
					500 Hz	90.6	-3.2 ± 1.0
					1 kHz	93.8	Ref.
					2 kHz	95.0	+1.2 ± 1.0
					4 kHz	94.7	+1.0 ± 1.0
					8 kHz	92.5	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.3	-4.3 (+3.0 ; -6.0)

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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Certificate of Calibration
校正證書

Certificate No. : C132229
證書編號

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
40 - 100	L_P	C	Fast	94.00	31.5 Hz	90.8	-3.0 ± 1.5
					63 Hz	93.0	-0.8 ± 1.5
					125 Hz	93.7	-0.2 ± 1.0
					250 Hz	93.9	0.0 ± 1.0
					500 Hz	93.9	0.0 ± 1.0
					1 kHz	93.9	Ref.
					2 kHz	93.7	-0.2 ± 1.0
					4 kHz	93.0	-0.8 ± 1.0
					8 kHz	90.7	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.5	-6.2 (+3.0 ; -6.0)

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
50 - 110	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	99.8	± 0.5
						$1/10^2$		90	89.6	± 0.5
			60 sec.			$1/10^3$		80	79.3	± 1.0
			5 min.			$1/10^4$		70	70.0	± 1.0

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 319944

- Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	: 31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C132565
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC13-0878)

Description / 儀器名稱 : Acoustical Calibrator (EQ082)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 4231
Serial No. / 編號 : 2713428
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 27 April 2013

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies, USA
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Tested By 測試 : H C Chan

Certified By 核證 : K C Lee

Date of Issue 簽發日期 : 30 April 2013

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
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Certificate of Calibration
校正證書

Certificate No. : C132565
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C123541
CL281	Multifunction Acoustic Calibrator	DC110233
TST150A	Measuring Amplifier	C120886

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.0	± 0.2	± 0.2
114 dB, 1 kHz	114.0		

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	1.000 0	1 kHz ± 0.1 %	± 0.1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1328906
Date of Issue: 24/10/2013
Client: ACTION UNITED ENVIRO SERVICES

Equipment Type: Dissolved Oxygen Meter
Brand Name: YSI
Model No.: PRO 20
Serial No.: 12C100570
Equipment No.: --
Date of Calibration: 24 October, 2013 Date of next Calibration: 24 January, 2014

Parameters:

Dissolved Oxygen **Method Ref: APHA (21st edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
3.29	3.31	0.02
5.28	5.16	-0.12
8.89	8.85	-0.04
	Tolerance Limit (±mg/L)	0.20

Temperature **Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
12.0	11.8	-0.2
20.0	19.0	-1.0
38.5	39.4	0.9
	Tolerance Limit (±°C)	2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1336477
Date of Issue: 03/01/2014
Client: ACTION UNITED ENVIRO SERVICES

Equipment Type: YSI PROFESSIONAL PLUS
Brand Name: YSI
Model No.: YSI PROFESSIONAL PLUS
Serial No.: 10G101946
Equipment No.: --
Date of Calibration: 03 January, 2014 Date of next Calibration: 03 April, 2014

Parameters:

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
4.96	4.84	-0.12
7.76	7.67	-0.09
9.02	9.04	0.02
	Tolerance Limit (±mg/L)	0.20

pH Value

Method Ref: APHA 21st Ed. 4500H:B

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	4.02	0.02
7.0	7.08	0.08
10.0	9.91	-0.09
	Tolerance Limit (±pH unit)	0.20

Salinity

Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0	--
10	9.03	-9.7
20	18.38	-8.1
30	27.63	-7.9
	Tolerance Limit (±%)	10.0

Temperature

Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
6.0	6.4	0.4
20.0	20.2	0.2
42.0	42.3	0.3
	Tolerance Limit (±°C)	2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1327856
Date of Issue: 17/10/2013
Client: ACTION UNITED ENVIRO SERVICES

Equipment Type: Turbidimeter
Brand Name: HACH
Model No.: 2100Q
Serial No.: 12060C018266
Equipment No.: --
Date of Calibration: 16 October, 2013 Date of next Calibration: 16 January, 2014

Parameters:

Turbidity **Method Ref: APHA 21st Ed. 2130B**

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.62	--
4	3.94	-1.5
40	37.1	-7.3
80	76.8	-4.0
400	370	-7.5
800	740	-7.5
	Tolerance Limit (±%)	10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1401663
Date of Issue: 18/01/2014
Client: ACTION UNITED ENVIRO SERVICES

Equipment Type: Turbidimeter
Brand Name: HACH
Model No.: 2100Q
Serial No.: 12060C018266
Equipment No.: --
Date of Calibration: 15 January, 2014 Date of next Calibration: 15 April, 2014

Parameters:

Turbidity

Method Ref: APHA 21st Ed. 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.20	--
4	4.07	1.8
40	36.7	-8.2
80	75.3	-5.9
400	385	-3.8
800	783	-2.1
	Tolerance Limit (±%)	10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Mr. Fung Lim Chee, Richard
General Manager -
Greater China & Hong Kong

Hong Kong Accreditation Service
香港認可處

Certificate of Accreditation
認可證書

This is to certify that
特此證明

ALS TECHNICHEM (HK) PTY LIMITED

11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong
香港新界葵涌永業街1-3號忠信針織中心11樓

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a
為香港認可處執行機關根據認可諮詢委員會建議而接受的

HOKLAS Accredited Laboratory
「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO / IEC 17025 : 2005 – General requirements for the competence of testing and calibration laboratories and it has been accredited for performing specific tests or calibrations as listed in the HOKLAS Directory of Accredited Laboratories within the test category of
此實驗所符合ISO / IEC 17025 : 2005 –《測試及校正實驗所能力的通用規定》所訂的要求，獲認可進行載於香港實驗所認可計劃《認可實驗所名冊》內下述測試類別中的指定測試或校正工作

Environmental Testing
環境測試

This laboratory is accredited in accordance with the recognised International Standard ISO / IEC 17025 : 2005.
本實驗所乃根據公認的國際標準 ISO / IEC 17025 : 2005 獲得認可。
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (see joint IAF-ILAC-ISO Communiqué).
這項認可資格演示在指定範疇所需的技術能力及實驗所質量管理體系的運作（見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報）。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive
香港認可處根據認可處執行機關的權限在此蓋上通用印章

CHAN Sing Sing, Terence, Executive Administrator
執行幹事 陳成城
Issue Date : 5 May 2009
簽發日期：二零零九年五月五日

Registration Number : HOKLAS 066
註冊號碼：

Date of First Registration : 15 September 1995
首次註冊日期：一九九五年九月十五日

This certificate is issued subject to the terms and conditions laid down by HKAS
本證書按照香港認可處訂立的條款及條件發出

L 000552

Appendix G

Event and Action Plan

Event and Action Plan for Air Quality

Event	ET	IEC	ER	Action Contractor
Action Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and ER; 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Monitor theimplementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Construction Noise

Event	ET	IEC	ER	Action Contractor
Action Level	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.

Event and Action Plan for Water Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER; 6. Implement the agreed mitigation measures.
Action Level being exceeded by more than two consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 2 working days; 6. Implement the agreed mitigation measures.
Limit Level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures.
Limit level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify reasons for non-compliance and sources of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit Level.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the ER, to slow down or to stop all or part of the construction activities.

Appendix H

Impact Monitoring Schedule

Impact Monitoring Schedule for the Reporting Period – January 2014

Date		Dust Monitoring		Noise Monitoring	Water Quality
		1-hour TSP	24-hour TSP		
Wed	1-Jan-14				
Thu	2-Jan-14				
Fri	3-Jan-14	■		■	■
Sat	4-Jan-14		■		
Sun	5-Jan-14				
Mon	6-Jan-14				
Tue	7-Jan-14				■
Wed	8-Jan-14				
Thu	9-Jan-14	■		■	■
Fri	10-Jan-14		■		
Sat	11-Jan-14				■
Sun	12-Jan-14				
Mon	13-Jan-14				■
Tue	14-Jan-14				
Wed	15-Jan-14	■		■	■
Thu	16-Jan-14		■		
Fri	17-Jan-14				■
Sat	18-Jan-14				
Sun	19-Jan-14				
Mon	20-Jan-14				
Tue	21-Jan-14	■		■	■
Wed	22-Jan-14		■		
Thu	23-Jan-14				■
Fri	24-Jan-14				
Sat	25-Jan-14				■
Sun	26-Jan-14				
Mon	27-Jan-14	■		■	■
Tue	28-Jan-14		■		
Wed	29-Jan-14				■
Thu	30-Jan-14				
Fri	31-Jan-14				

Air Quality Monitoring Location:
- Contract 3 – AM9b
- Contract 5 – AM1, AM2 and AM3

Construction Noise Monitoring Location:
- Contract 3 – NM8, NM9 and NM10
- Contract 5 – NM1 and NM2

Water Quality Monitoring Location:
- Contract 3 – W4 , W4-Control A and W4-Control B
- Contract 5 – W1 and W1-Control

■	Monitoring Day
■	Sunday or Public Holiday

Impact Monitoring Schedule for next Reporting Period – February 2014

Date		Dust Monitoring		Noise Monitoring	Water Quality
		1-hour TSP	24-hour TSP		
Sat	1-Feb-14				
Sun	2-Feb-14				
Mon	3-Feb-14				
Tue	4-Feb-14	■	■	■	■
Wed	5-Feb-14				
Thu	6-Feb-14				■
Fri	7-Feb-14				
Sat	8-Feb-14		■		■
Sun	9-Feb-14				
Mon	10-Feb-14	■		■	■
Tue	11-Feb-14				
Wed	12-Feb-14				■
Thu	13-Feb-14				
Fri	14-Feb-14		■		
Sat	15-Feb-14	■		■	■
Sun	16-Feb-14				
Mon	17-Feb-14				■
Tue	18-Feb-14				
Wed	19-Feb-14				■
Thu	20-Feb-14		■		
Fri	21-Feb-14	■		■	■
Sat	22-Feb-14				
Sun	23-Feb-14				
Mon	24-Feb-14				
Tue	25-Feb-14				■
Wed	26-Feb-14		■		
Thu	27-Feb-14	■		■	■
Fri	28-Feb-14				

Air Quality Monitoring Location:
- Contract 3 – AM9b
- Contract 5 – AM1, AM2 and AM3

Construction Noise Monitoring Location:
- Contract 3 – NM8, NM9 and NM10
- Contract 5 – NM1 and NM2

Water Quality Monitoring Location:
- Contract 3 – W4 , W4-Control A and W4-Control B
- Contract 5 – W1 and W1-Control

■	Monitoring Day
■	Sunday or Public Holiday

Appendix I

Database of Monitoring Result

24-Hour TSP Monitoring Data

DATE	SAMPLE NUMBER	ELAPSED TIME			CHART READING			AVG TEMP	AVG AIR PRESS	STANDARD FLOW RATE	AIR VOLUME	FILTER WEIGHT (g)		DUST WEIGHT COLLECTED	24-hr TSP (μg/m^3)
		INITIAL	FINAL	(min)	MIN	MAX	AVG	(℃)	(hPa)	(m^3/min)	(std m^3)	INITIAL	FINAL	(g)	
AM1 - Tsung Yuen Ha Village House No. 63															
4-Jan-14	26298	7929.82	7953.41	1415.40	43	44	43.5	17.0	1020.3	1.58	2238	2.7199	3.0289	0.3090	138
10-Jan-14	26309	7953.41	7977.01	1416.00	50	51	50.5	16.8	1020.2	1.74	2458	2.8838	3.1466	0.2628	107
16-Jan-14	26313	7977.01	8000.57	1413.60	52	53	52.5	16.2	1020.2	1.78	2518	2.8845	3.0906	0.2061	82
22-Jan-14	26358	8000.57	8024.14	1414.20	47	48	47.5	15.9	1019.7	1.67	2363	2.7351	3.0491	0.3140	133
28-Jan-14	26358	8024.14	8048.15	1440.60	58	60	59.0	15.5	1020.8	1.93	2775	2.7603	3.0302	0.2699	97
AM2 - Village House near Lin Ma Hang Road															
4-Jan-14	205539	3372.89	3396.49	1416.00	43	45	44.0	17.0	1020.3	1.34	1891	2.8700	3.1482	0.2782	147
10-Jan-14	26310	3396.49	3420.11	1417.20	41	43	42.0	16.8	1020.2	1.27	1799	2.8847	3.1221	0.2374	132
16-Jan-14	26314	3420.11	3443.73	1417.20	42	44	43.0	16.2	1020.2	1.30	1849	2.8906	3.1579	0.2673	145
22-Jan-14	26354	3443.73	3467.39	1419.60	43	45	44.0	15.9	1019.7	1.34	1900	2.7218	2.9684	0.2466	130
28-Jan-14	26359	3467.39	3491.04	1419.00	45	46	45.5	15.5	1020.8	1.39	1972	2.7571	2.9363	0.1792	91
AM3 - Ta Kwu Ling Fire Service Station of Ta Kwu Ling Village															
4-Jan-13	26275	4381.73	4405.58	1431.00	38	39	38.5	17.0	1020.3	1.25	1789	2.7406	2.9377	0.1971	110
10-Jan-14	26311	4405.58	4428.80	1393.20	41	42	41.5	16.8	1020.2	1.33	1851	2.8647	3.0694	0.2047	111
16-Jan-14	26315	4428.80	4452.01	1392.60	41	42	41.5	16.2	1020.2	1.33	1852	2.9001	3.1574	0.2573	139
22-Jan-14	26355	4452.01	4475.24	1393.80	44	45	44.5	15.9	1019.7	1.41	1963	2.7434	3.0226	0.2792	142
28-Jan-14	26360	4475.24	4500.16	1495.20	41	44	42.5	15.5	1020.8	1.36	2030	2.7399	2.9714	0.2315	114
AM9b - Nam Wa Po Village House No. 80															
4-Jan-14	26306	13415.40	13440.38	1498.80	28	29	28.5	19.0	1020.3	0.93	1391	2.9377	3.0395	0.1018	73
10-Jan-14	26312	13440.38	13465.21	1498.80	44	45	28.5	16.8	1020.2	0.93	1388	2.8751	3.0653	0.1902	137
16-Jan-14	26307	13465.21	13489.99	1486.80	44	45	44.5	16.8	1020.2	1.41	2097	2.8559	3.0144	0.1585	76
22-Jan-14	26356	13489.99	13514.73	1484.40	38	40	39.0	15.9	1019.7	1.25	1849	2.7478	2.9775	0.2297	124
28-Jan-14	26361	13514.73	13538.11	1402.80	43	44	43.5	15.5	1020.8	1.38	1941	2.7485	2.9365	0.1880	97

Construction Noise Monitoring Results, (dB)

Date	Start Time	1st Leq_{5min}	L10	L90	2nd Leq_{5min}	L10	L90	3rd Leq_{5min}	L10	L90	4th Leq_{5min}	L10	L90	5th Leq_{5min}	L10	L90	6th Leq_{5min}	L10	L90	Leq30	façade correction
NM1 - Tsung Yuen Ha Village House No. 63																					
3-Jan-13	10:57	53.2	55.4	50.1	61.1	63.7	53.8	60.6	63.9	54.9	60.4	63.1	56.1	61.7	64.3	57.6	60.8	63.4	56.9	60	NA
9-Jan-14	11:25	52.8	55.0	49.3	54.7	57.3	49.0	53.2	56.2	48.4	52.1	52.8	48.2	53.4	55.2	47.9	50.1	52.0	46.7	53	NA
15-Jan-14	14:11	47.9	50.4	44.8	53.5	55.3	46.2	52.5	55.5	49.4	53.7	55.4	50.7	55.5	57.7	51.1	48.5	50.9	45.4	53	NA
21-Jan-14	11:30	56.0	58.9	50.3	58.3	60.3	48.8	55.0	57.4	48.4	57.6	58.1	45.1	56.1	55.9	46.1	53.9	54.3	44.7	56	NA
27-Jan-14	11:07	49.8	52.0	46.6	49.6	51.0	47.3	48.9	50.7	46.3	48.8	50.4	46.9	48.5	50.2	46.0	54.3	50.5	44.4	51	NA
NM2 - Village House near Lin Ma Hang Road																					
3-Jan-13	11:36	71.4	71.8	44.9	55.4	55.4	44.2	53.3	54.2	43.9	57.5	58.1	44.6	54.9	58.1	43.8	53.4	51.0	43.3	64.1	NA
9-Jan-14	15:32	67.2	66.6	48.3	64.6	68.2	46.4	55.5	52.9	45.6	59.8	62.7	45.0	63.1	64.3	45.0	52.0	50.3	43.5	62.9	NA
15-Jan-14	16:07	65.7	65.8	42.8	62.0	59.7	42.8	65.0	66.7	50.7	67.7	65.5	47.7	59.9	62.9	48.6	64.1	66.5	48.7	64.7	NA
21-Jan-14	11:29	59.5	61.3	48.1	63.1	63.0	46.7	63.8	65.9	47.5	61.9	65.5	46.4	61.9	62.3	44.1	58.1	56.9	44.4	61.8	NA
27-Jan-14	10:48	68.2	70.7	46.7	65.6	70.1	45.3	65.9	69.0	44.7	56.1	57.6	41.4	52.7	54.6	41.4	56.5	61.0	41.2	64.0	NA
NM8 - Village House, Tong Hang																					
3-Jan-13	13:00	58.0	61.2	49.4	55.7	56.1	48.8	57.7	62.2	49.9	62.7	67.8	52.1	57.4	63.0	50.8	57.7	60.9	52.1	58.8	NA
9-Jan-14	17:00	56.5	60.3	51.9	57.7	63.4	51.5	53.6	55.3	49.8	57.3	60.6	50.4	55.3	55.8	50.9	54.6	56.7	49.3	56	NA
15-Jan-14	09:34	65.3	69.5	50.0	63.3	67.5	48.5	57.8	60.5	48.0	62.9	65.5	48.0	60.8	59.0	48.5	60.4	65.5	48.5	62	NA
21-Jan-14	11:35	65.9	67.0	51.5	61.0	65.5	51.5	61.4	64.5	51.5	63.8	68.0	53.5	62.8	63.5	53.0	60.8	64.5	50.5	63	NA
27-Jan-14	11:41	60.9	64.0	52.5	61.1	66.0	53.0	61.6	66.0	54.0	60.1	64.0	53.5	63.7	67.0	52.5	62.2	67.0	53.5	62	NA
NM9 - Village House, Kiu Tau Village																					
3-Jan-13	13:00	58.0	61.2	49.4	55.7	56.1	48.8	57.7	62.2	49.9	62.7	67.8	52.1	57.4	63.0	50.8	57.7	60.9	52.1	58.8	NA
9-Jan-14	17:52	58.0	63.1	51.1	57.1	58.6	50.7	58.6	62.6	53.0	56.4	56.8	51.3	57.1	61.7	50.7	58.0	62.8	52.0	58	NA
15-Jan-14	11:12	59.6	63.0	52.5	56.6	60.0	51.0	60.7	64.5	51.5	55.3	58.5	48.5	57.3	61.0	48.5	60.7	63.0	47.5	59	NA
21-Jan-14	13:00	57.8	61.0	53.0	60.1	63.0	55.5	61.0	65.0	54.0	61.3	64.5	54.5	61.3	64.5	53.5	59.5	63.0	53.0	60	NA
27-Jan-14	13:13	57.5	61.5	52.0	56.2	56.5	52.5	56.8	59.5	51.5	55.0	57.0	51.0	55.4	58.0	50.5	60.3	64.0	50.5	57	NA
NM10 - Nam Wa Po Village House No. 80																					
3-Jan-13	10:20	58.3	59.5	56.4	58.8	60.3	56.5	59.4	61.3	57.0	59.3	61.1	56.8	58.6	60.2	56.3	59.4	61.0	57.4	59	62
9-Jan-14	17:00	58.0	62.1	52.6	57.8	61.7	52.2	56.9	59.7	51.1	58.2	61.5	50.5	57.1	61.7	50.4	56.6	59.4	50.8	57	60
15-Jan-14	16:56	60.2	61.5	57.9	59.0	60.2	57.5	58.8	60.4	56.9	60.0	61.5	58.0	59.7	61.0	58.0	62.8	60.7	55.8	60	63
21-Jan-14	10:13	59.0	60.5	57.1	60.0	61.7	58.0	59.2	60.4	57.6	58.7	60.3	57.1	58.9	60.2	57.3	58.3	59.5	56.5	59	62
27-Jan-14	13:17	60.3	62.2	56.0	60.2	61.9	58.1	60.3	62.8	57.6	60.1	61.9	57.6	61.2	63.2	58.6	61.2	63.2	58.8	61	64

Water Quality Monitoring Results

Date	3-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	16:28	0.33	21.1	21.1	8.15	8.2	96.1	96.9	8.73	8.8	7.93	7.9	8	7.5
			21.1		8.27		97.6		8.88		7.94		7	
WM1	17:03	0.97	19.3	19.3	8.84	8.8	94.4	93.5	30.3	31.5	7.78	7.8	25	24.5
			19.3		8.69		92.6		32.7		7.77		24	
WM4-CA	12:24	0.09	24.9	24.9	8.40	8.4	108.5	109.9	3.9	3.9	8.04	8.1	5	5.5
			24.9		8.43		111.3		3.9		8.06		6	
WM4-CB	12:05	0.17	24.0	24.0	7.82	7.6	96.6	96.7	9.7	9.4	7.50	7.5	22	23.0
			24.0		7.35		96.8		9.1		7.50		24	
WM4	14:55	0.50	21.1	21.1	9.77	9.9	91.3	88.4	8.1	8.0	7.20	7.3	13	13.5
			21.1		10.04		85.4		7.9		7.30		14	

Date	7-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	13:10	0.34	19.5	19.5	10.39	10.4	110.5	110.4	7.7	7.5	8.2	8.2	2	3.0
			19.5		10.38		110.3		7.4		8.1		4	
WM1	13:35	0.95	18.6	18.6	7.47	7.4	79.0	78.1	16.6	16.1	8	8.0	10	10.5
			18.6		7.26		77.2		15.6		8		11	
WM4-CA	11:05	0.15	18.3	18.3	7.9	8.0	82.9	84.4	29.2	29.6	8.9	8.9	27	26.5
			18.3		8.17		85.8		29.9		8.8		26	
WM4-CB	10:11	0.19	19.3	19.3	8.48	8.4	90.3	89.9	6.4	6.2	7.5	7.5	10	10.0
			19.3		8.4		89.5		6.0		7.5		10	
WM4	10:37	0.46	19.6	19.6	10.12	10.3	108.5	110.4	8.3	8.3	7.8	7.8	13	13.0
			19.6		10.47		112.3		8.3		7.8		13	

Date	9-Jan-2014													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	11:41	0.37	14.7	14.7	9.48	9.5	91.6	91.7	10.7	11.0	7.9	7.9	6	7.0
			14.7		9.51		91.8		11.2		7.9		8	
WM1	12:06	0.90	16.2	16.2	4.32	4.3	43.9	44.0	46.1	45.2	8.1	8.1	12	12.0
			16.2		4.35		44.1		44.3		8.1		12	
WM4-CA	18:00	0.14	16.4	16.4	7.97	7.9	77.9	77.2	5.9	6.1	8.1	8.1	4	3.0
			16.4		7.81		76.4		6.3		8.1		2	
WM4-CB	17:35	0.17	15.7	15.7	5.01	5.0	49.4	49.2	4.6	4.4	8.1	8.1	3	3.5
			15.7		4.97		49.0		4.3		8.1		4	
WM4	17:10	0.19	17.6	17.6	9.18	9.1	87.9	87.7	7.7	7.5	8.2	8.2	6	6.5
			17.6		9.08		87.5		7.4		8.2		7	

Date	11-Jan-2014													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	14:20	0.19	21.5	21.5	10.27	10.2	113.3	112.3	8.5	8.6	8.2	8.2	7	6.0
			21.5		10.16		111.2		8.7		8.1		5	
WM1	14:43	0.90	20.5	20.5	6.83	6.8	74.8	74.5	27.8	28.2	8.4	8.4	19	19.5
			20.5		6.77		74.2		28.6		8.4		20	
WM4-CA	12:03	0.17	19.9	19.9	9.42	9.4	101.3	100.5	35.4	34.0	8.6	8.6	42	40.5
			19.9		9.29		99.7		32.5		8.6		39	
WM4-CB	12:28	0.13	21.2	21.2	9.11	9.1	102.4	101.9	6.6	6.7	8.0	8.0	4	4.5
			21.2		9.06		101.3		6.9		8.0		5	
WM4	11:48	0.34	21.3	21.3	6.68	6.7	73.8	73.8	16.8	17.1	8.2	8.2	24	25.0
			21.3		6.66		73.8		17.3		8.2		26	

Date	13-Jan-2014													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	12:07	0.35	14.3	14.3	9.99	9.9	94.4	93.7	10.6	10.0	8.5	8.5	6	5.5
			14.3		9.86		93.0		9.5		8.4		5	
WM1	12:33	0.93	15.7	15.7	9.72	9.5	95.6	93.5	19.0	18.8	8.3	8.3	11	10.5
			15.7		9.3		91.4		18.6		8.3		10	
WM4-CA	15:10	0.09	17	17.0	8.92	8.7	90.0	87.6	43.3	39.4	8.4	8.4	52	52.0
			17		8.44		85.1		35.5		8.4		52	
WM4-CB	15:30	0.16	17.1	17.1	8.15	8.2	82.6	83.2	16.1	16.5	7.9	7.9	30	30.0
			17.1		8.26		83.7		16.9		7.9		30	
WM4	14:46	0.49	17.7	17.7	9.48	9.3	97.3	95.5	24.9	24.2	8.1	8.1	32	33.0
			17.7		9.11		93.6		23.5		8.1		34	

Date	15-Jan-2014													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	11:25	0.34	13.2	13.2	10.16	10.0	96.1	94.8	14.0	13.4	8.35	8.3	2	2.5
			13.2		9.91		93.4		12.7		8.34		3	
WM1	15:38	0.91	18.9	18.9	9.9	9.7	106.6	104.9	19.7	19.5	8.00	8.0	8	8.5
			18.9		9.56		103.1		19.3		8.00		9	
WM4-CA	10:31	0.11	18.1	18.1	9.58	9.5	101.4	100.5	59.4	58.7	7.9	7.9	33	32.5
			18.1		9.41		99.6		57.9		7.9		32	
WM4-CB	12:20	0.17	18.8	18.8	9.61	9.5	103.2	102.3	12.8	12.5	7.6	7.6	4	4.0
			18.8		9.43		101.3		12.2		7.6		4	
WM4	10:20	0.45	17.9	17.9	9.46	9.5	100.0	100.8	24.5	23.7	7.5	7.5	14	13.0
			17.9		9.63		101.6		22.9		7.5		12	

Date	17-Jan-2014													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	11:05	0.34	14.2	14.2	8.38	8.3	78.7	77.9	16.7	17.3	7.5	7.5	11	11.0
			14.2		8.22		77.1		17.9		7.5		11	
WM1	11:29	0.87	17.7	17.7	8.91	8.9	91.9	90.5	11.8	11.7	7.4	7.5	6	6.0
			17.7		8.79		89.0		11.6		7.5		6	
WM4-CA	13:43	0.12	19.5	19.5	7.60	7.6	81.1	80.7	7.4	7.5	7.7	7.8	3	3.0
			19.5		7.52		80.3		7.6		7.8		3	
WM4-CB	13:55	0.23	20.4	20.4	7.30	7.3	79.2	78.8	7.4	7.5	7.7	7.7	5	4.5
			20.4		7.21		78.4		7.6		7.7		4	
WM4	13:29	0.33	20.5	20.5	9.38	9.3	101.8	101.1	11.6	11.9	7.4	7.4	13	13.0
			20.5		9.24		100.4		12.2		7.4		13	

Date	21-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	15:50	0.34	16.5	16.5	8.33	8.4	91.6	91.9	8.8	8.9	7.7	7.7	3	3.0
			16.5		8.42		92.1		9.0		7.7		3	
WM1	16:09	0.87	14.5	14.5	9.17	9.1	92.2	91.8	26.3	26.5	7.4	7.4	17	17.0
			14.5		9.05		91.3		26.7		7.4		17	
WM4-CA	14:00	0.14	18.3	18.3	8.17	8.1	85.1	84.6	7.8	7.8	8.3	8.3	2	2.0
			18.3		8.07		84.1		7.9		8.3		2	
WM4-CB	10:32	0.13	15.2	15.2	9.84	9.8	95.6	94.7	7.9	7.7	8.1	8.2	6	5.0
			15.2		9.66		93.7		7.5		8.2		4	
WM4	13:46	0.31	18	18.0	10.5	10.4	112.7	112.1	6.7	8.1	7.8	7.8	6	6.0
			18		10.39		111.4		9.5		7.8		6	

Date	23-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	12:00	0.29	13.8	13.8	10.1	10.0	95.4	94.8	7.2	7.6	7.5	7.5	2	2.0
			13.8		9.99		94.1		8.0		7.5		2	
WM1	11:40	0.92	15.5	15.5	10.85	10.7	106.7	105.6	19.3	18.9	7	7.0	10	10.0
			15.5		10.61		104.4		18.5		7		10	
WM4-CA	14:27	0.10	18	18.0	9.27	9.3	96.4	96.2	12.1	11.8	7.7	7.7	7	6.0
			18		9.34		96.0		11.4		7.7		5	
WM4-CB	14:02	0.12	20	20.0	8.99	9.0	97.1	96.9	5.0	5.2	7.4	7.4	3	3.0
			20		8.95		96.6		5.3		7.4		3	
WM4	14:44	0.19	20	20.0	12.06	12.1	130.3	130.8	7.0	7.2	7.6	7.6	7	7.0
			20		12.16		131.3		7.5		7.6		7	

Date	25-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	10:36	0.25	17.5	17.5	7.11	6.9	73.2	72.0	15.0	14.5	7.7	7.7	5	5.0
			17.5		6.71		70.8		14.0		7.7		5	
WM1	11:02	0.69	18.9	18.9	9.75	9.6	102.9	101.3	21.6	21.4	7.9	7.9	10	10.0
			18.9		9.46		99.7		21.2		7.9		10	
WM4-CA	12:57	0.17	21	21.0	8.06	8.1	89.0	89.1	5.7	5.6	8.1	8.1	2	2.0
			21		8.09		89.2		5.4		8.1		2	
WM4-CB	13:13	0.15	22.5	22.5	7.24	7.3	82.8	83.4	8.4	8.5	7.8	7.8	7	6.5
			22.5		7.32		83.9		8.7		7.8		6	
WM4	12:39	0.19	19.5	19.5	10.57	10.5	121.3	120.3	9.1	9.3	7.7	7.7	8	9.0
			19.5		10.36		119.3		9.5		7.7		10	

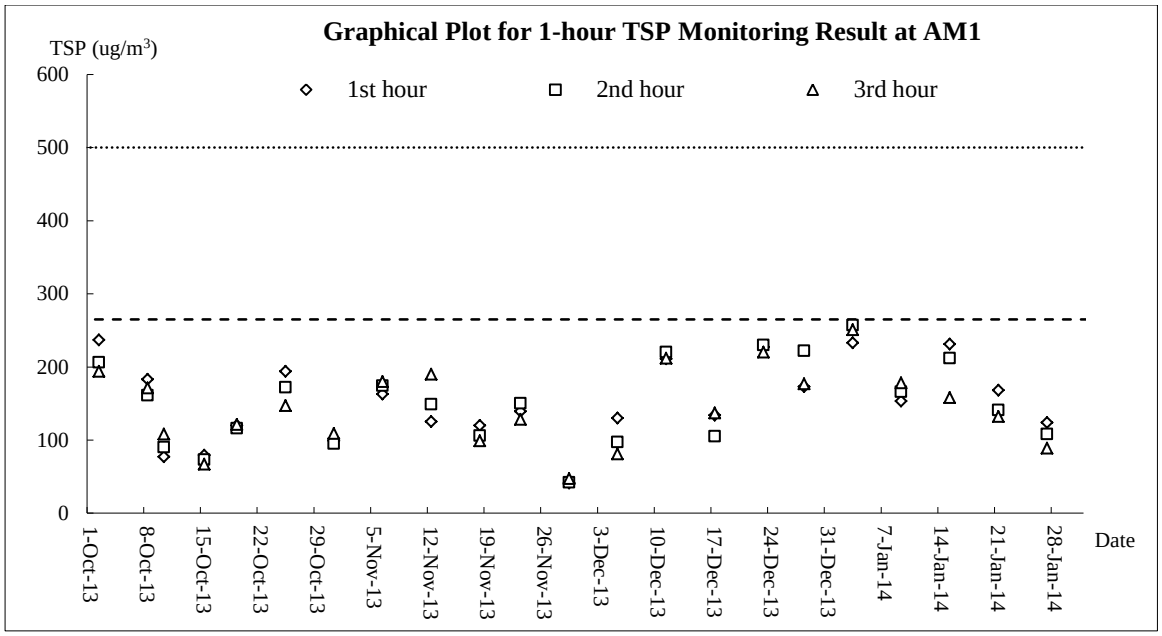
Date	27-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	16:13	0.27	20.5	20.5	9.30	9.28	104.5	104.2	15.2	15.7	7.6	7.6	10	10.0
			20.5		9.25		103.8		16.1		7.6		10	
WM1	16:21	0.81	20.5	20.5	4.35	4.33	48.2	47.9	21.7	21.4	7.6	7.6	21	20.0
			20.5		4.31		47.5		21.1		7.6		19	
WM4-CA	14:33	0.13	20	20.0	6.66	6.6	75.1	74.8	4.4	4.6	7.9	7.9	2	2.5
			20		6.61		74.5		4.8		7.9		3	
WM4-CB	13:33	0.13	21.9	21.9	8.11	8.1	90.9	90.9	9.7	9.8	7.6	7.6	5	6.0
			21.9		8.13		90.9		9.8		7.6		7	
WM4	14:45	0.19	21.5	21.5	9.6	9.6	104.4	103.8	19.0	18.7	7.9	7.9	19	19.5
			21.5		9.51		103.1		18.4		7.9		20	

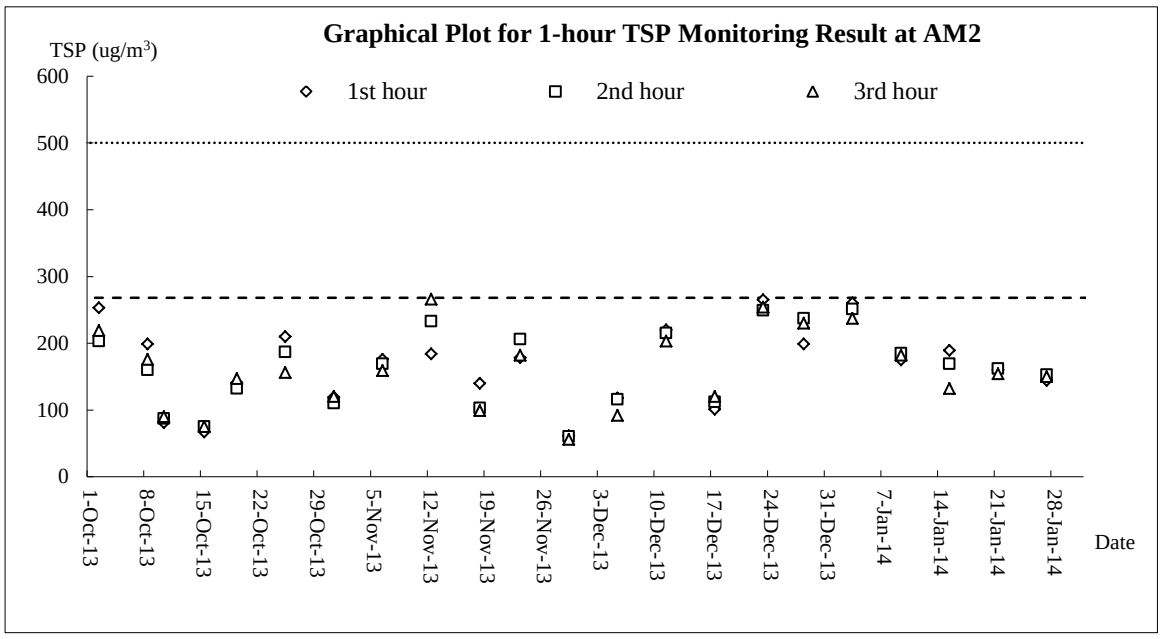
Date	29-Jan-14													
Location	**Time**	**Depth (m)**	**Temp (oC)**		**DO (mg/L)**		**DO (%)**		**Turbidity (NTU)**		**pH**		**SS(mg/L)**	
WM1-C	11:55	0.35	18.5	18.5	7.26	7.18	78.2	77.3	27.5	27.2	8.5	8.5	14	13.5
			18.5		7.09		76.4		26.8		8.5		13	
WM1	12:07	0.78	20	20.0	4.26	4.24	45.8	45.8	13.6	13.5	8.0	8.0	5	5.5
			20		4.21		45.7		13.4		8.0		6	
WM4-CA	14:12	0.14	21.5	21.5	6.75	6.7	76.9	76.8	5.3	5.2	7.9	7.9	3	3.0
			21.5		6.73		76.6		5.2		7.9		3	
WM4-CB	15:15	0.12	22.5	22.5	5.17	5.2	59.4	59.3	5.3	5.3	7.2	7.2	3	4.0
			22.5		5.14		59.1		5.3		7.2		5	
WM4	13:52	0.29	23	23.0	7.28	7.3	92.8	92.8	9.9	9.8	7.6	7.6	25	24.5
			23		7.26		92.8		9.7		7.6		24	

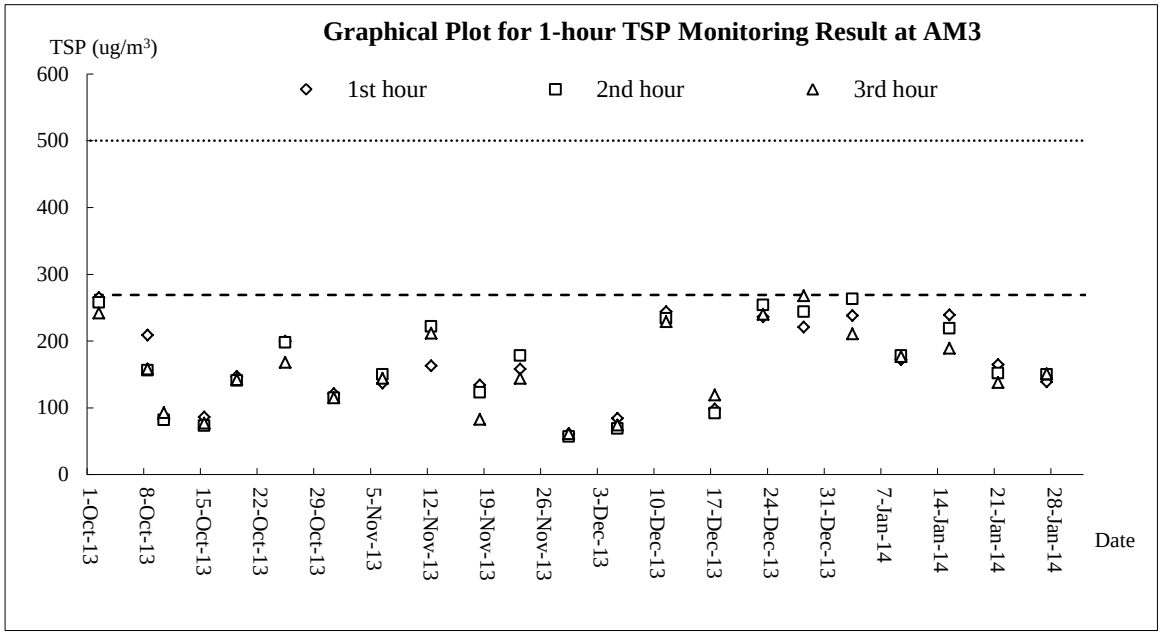
Appendix J

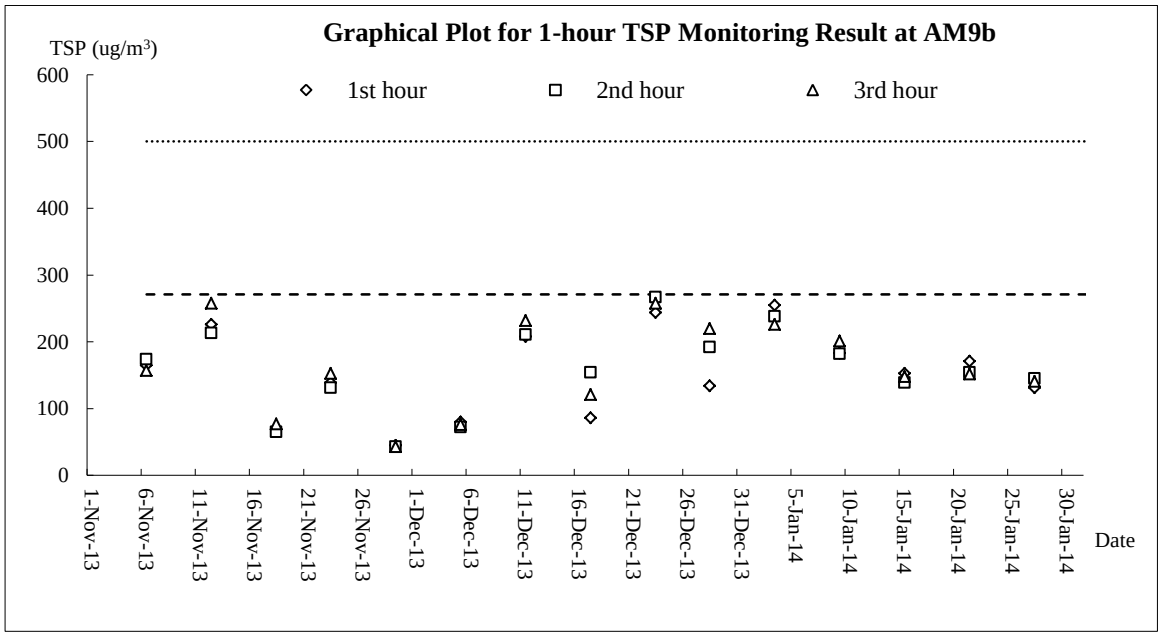
Graphical Plots for Monitoring Result

Air Quality – 1-hour TSP

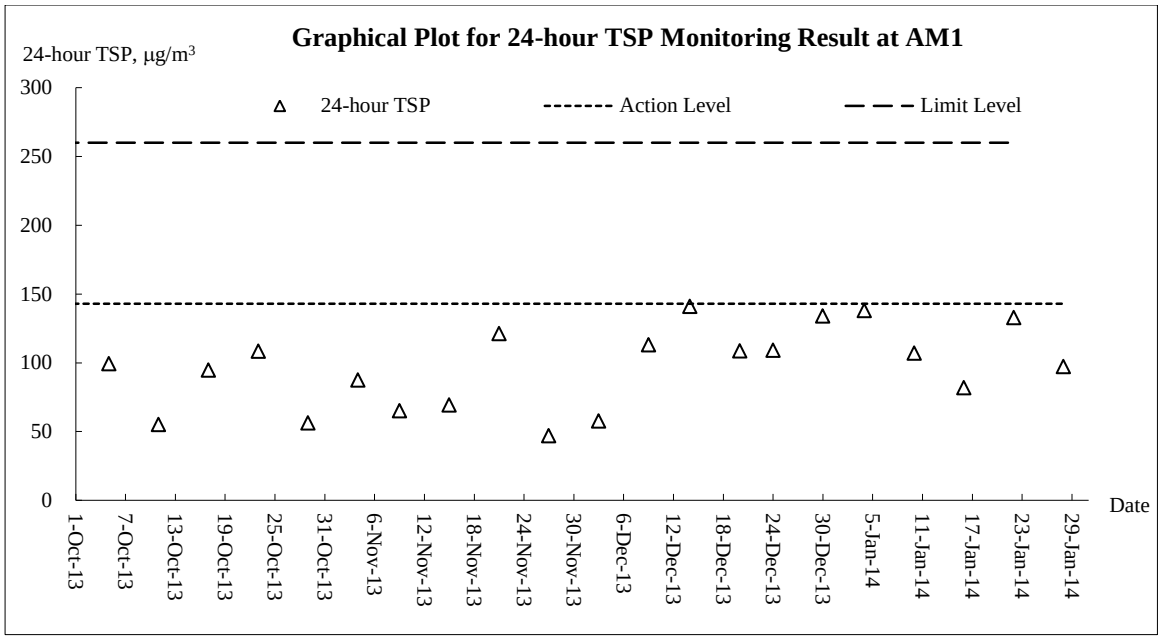


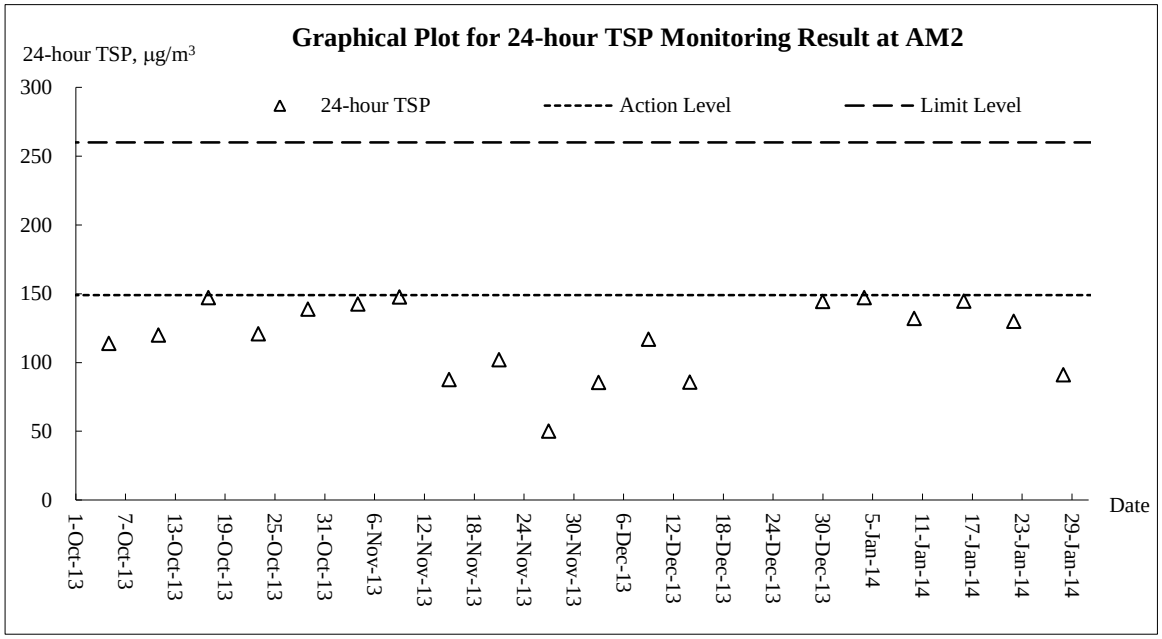


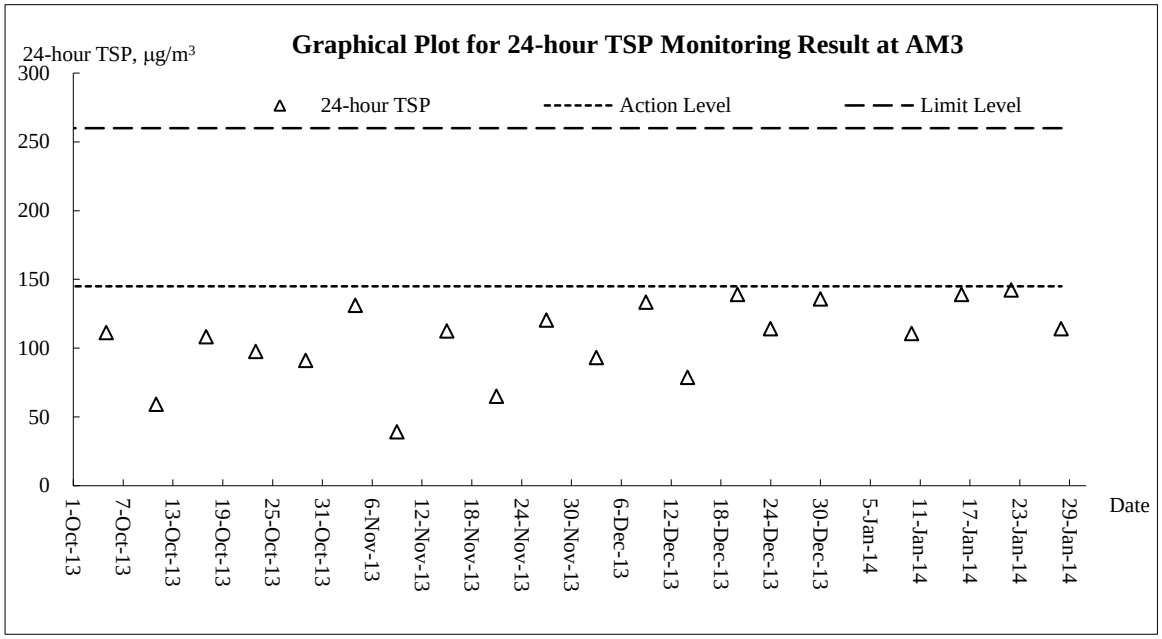

Graphical Plot for 1-hour TSP Monitoring Result at AM3
TSP (ug/m3)
1st hour
2nd hour
3rd hour
600
500
400
300
200
100
0
1-Oct-13
8-Oct-13
15-Oct-13
22-Oct-13
29-Oct-13
5-Nov-13
12-Nov-13
19-Nov-13
26-Nov-13
3-Dec-13
10-Dec-13
17-Dec-13
24-Dec-13
31-Dec-13
7-Jan-14
14-Jan-14
21-Jan-14
28-Jan-14
Date

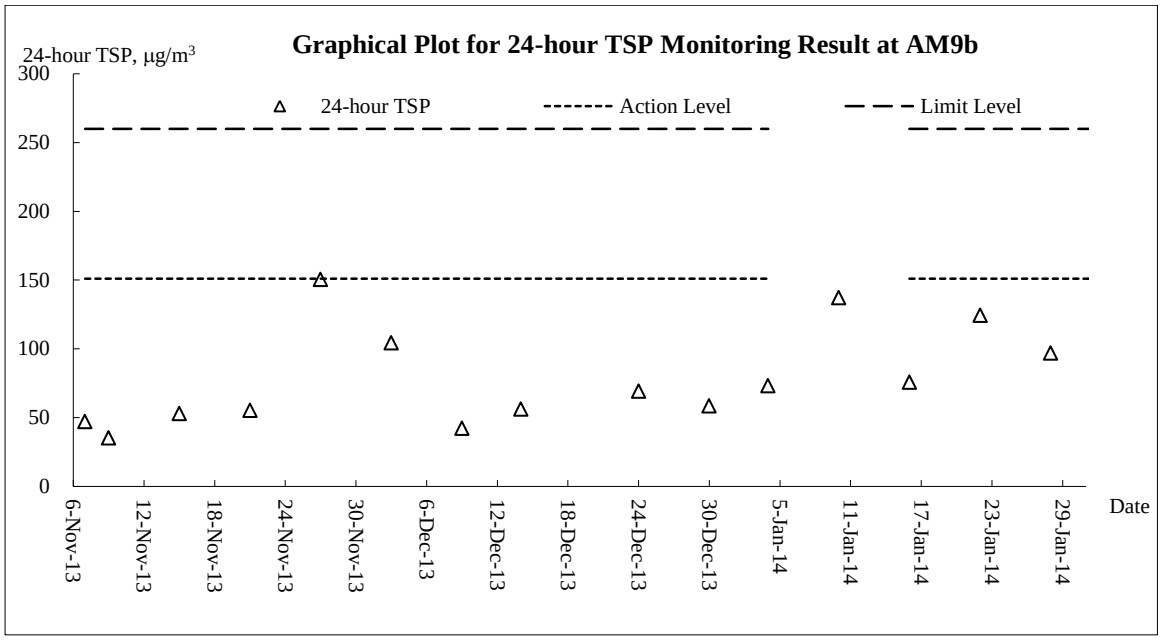

Graphical Plot for 1-hour TSP Monitoring Result at AM9b
TSP (ug/m3)
1st hour
2nd hour
3rd hour
600
500
400
300
200
100
0
1-Nov-13
6-Nov-13
11-Nov-13
16-Nov-13
21-Nov-13
26-Nov-13
1-Dec-13
6-Dec-13
11-Dec-13
16-Dec-13
21-Dec-13
26-Dec-13
31-Dec-13
5-Jan-14
10-Jan-14
15-Jan-14
20-Jan-14
25-Jan-14
30-Jan-14
Date

Air Quality – 24-hour TSP

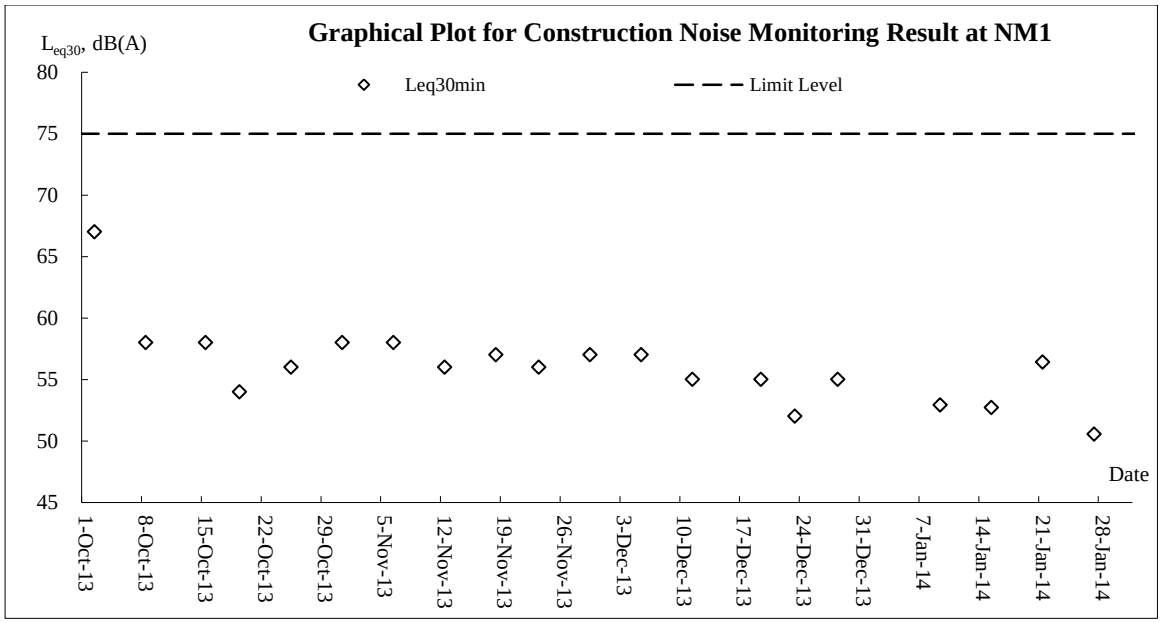





Graphical Plot for 24-hour TSP Monitoring Result at AM3
24-hour TSP, µg/m3
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
1-Oct-13
7-Oct-13
13-Oct-13
19-Oct-13
25-Oct-13
31-Oct-13
6-Nov-13
12-Nov-13
18-Nov-13
24-Nov-13
30-Nov-13
6-Dec-13
12-Dec-13
18-Dec-13
24-Dec-13
30-Dec-13
5-Jan-14
11-Jan-14
17-Jan-14
23-Jan-14
29-Jan-14
Date


Graphical Plot for 24-hour TSP Monitoring Result at AM9b
24-hour TSP, µg/m3
24-hour TSP
Action Level
Limit Level
300
250
200
150
100
50
0
6-Nov-13
12-Nov-13
18-Nov-13
24-Nov-13
30-Nov-13
6-Dec-13
12-Dec-13
18-Dec-13
24-Dec-13
30-Dec-13
5-Jan-14
11-Jan-14
17-Jan-14
23-Jan-14
29-Jan-14
Date

Noise


Graphical Plot for Construction Noise Monitoring Result at NM1
L_{eq30}, dB(A)
Leq30min
Limit Level
80
75
70
65
60
55
50
45
Date
1-Oct-13
8-Oct-13
15-Oct-13
22-Oct-13
29-Oct-13
5-Nov-13
12-Nov-13
19-Nov-13
26-Nov-13
3-Dec-13
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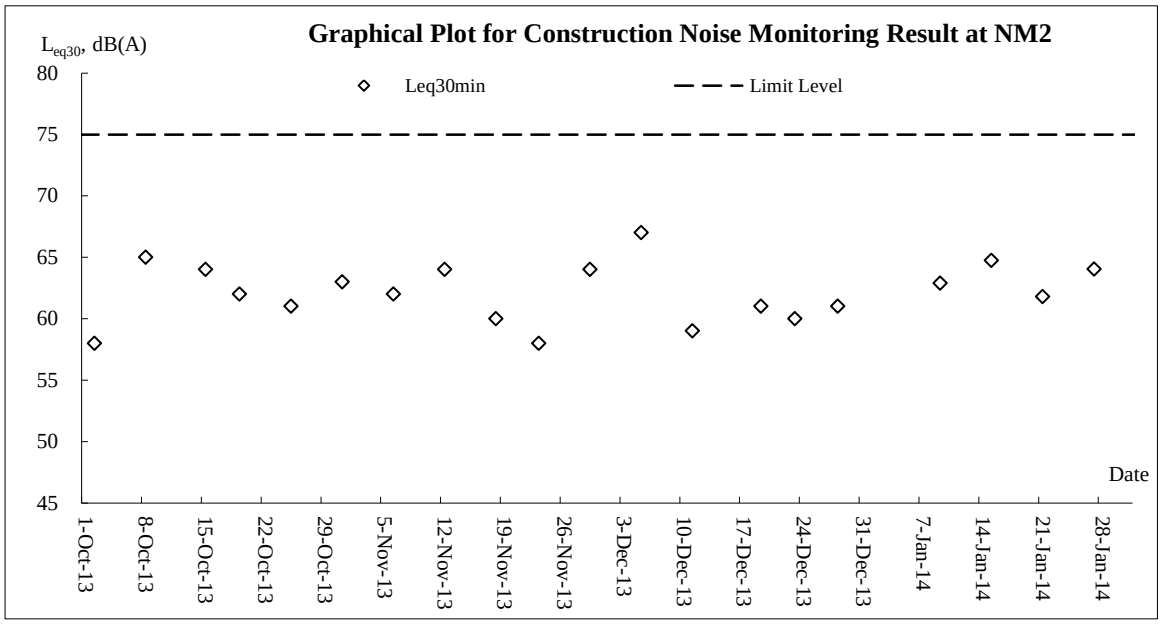
21-Jan-14
28-Jan-14


Graphical Plot for Construction Noise Monitoring Result at NM2
L_{eq30}, dB(A)
Leq30min
Limit Level
80
75
70
65
60
55
50
45
Date
1-Oct-13
8-Oct-13
15-Oct-13
22-Oct-13
29-Oct-13
5-Nov-13
12-Nov-13
19-Nov-13
26-Nov-13
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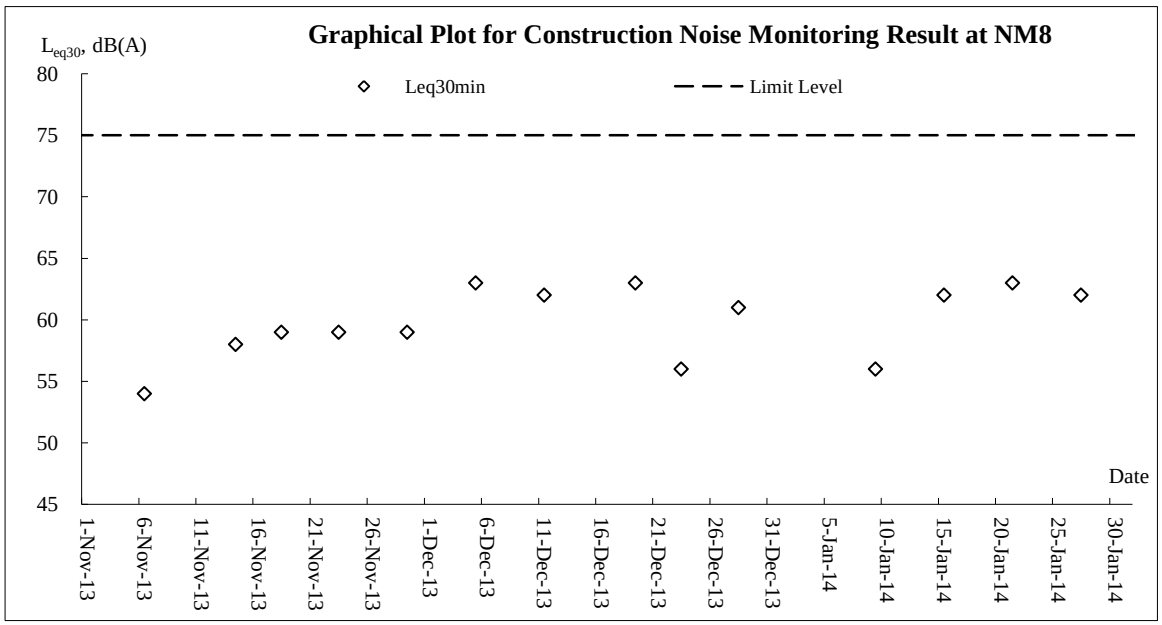
21-Jan-14
28-Jan-14


Graphical Plot for Construction Noise Monitoring Result at NM8
L_{eq30}, dB(A)
Leq30min
Limit Level
80
75
70
65
60
55
50
45
Date
1-Nov-13
6-Nov-13
11-Nov-13
16-Nov-13
21-Nov-13
26-Nov-13
1-Dec-13
6-Dec-13
11-Dec-13
16-Dec-13
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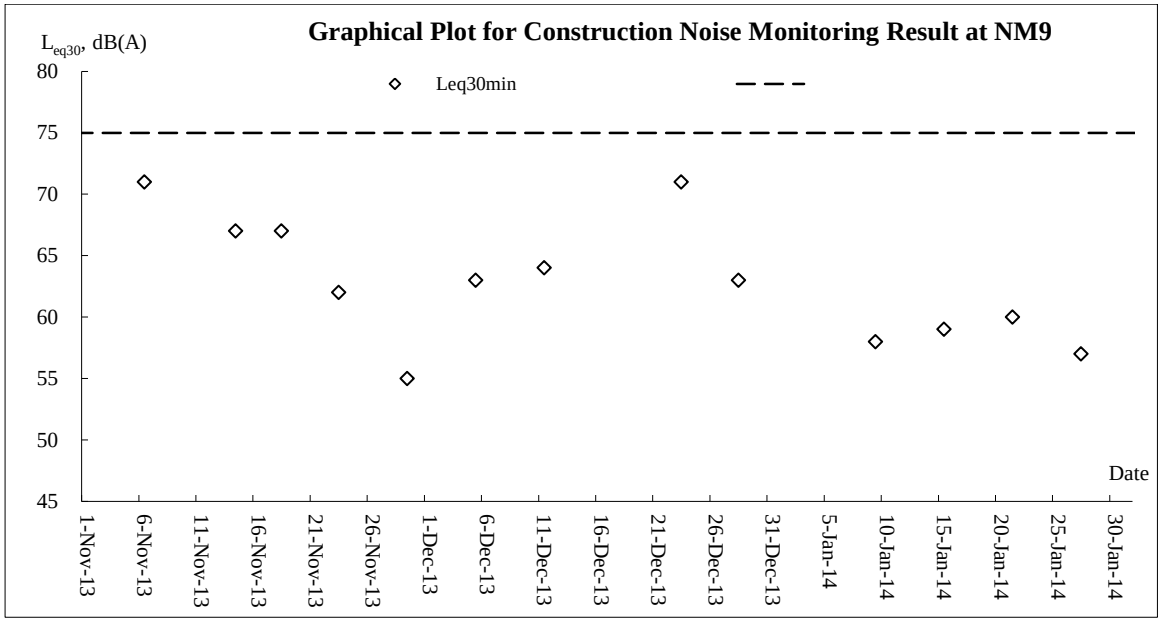
25-Jan-14
30-Jan-14


Graphical Plot for Construction Noise Monitoring Result at NM9
L_{eq30}, dB(A)
Leq30min
80
75
70
65
60
55
50
45
Date
1-Nov-13
6-Nov-13
11-Nov-13
16-Nov-13
21-Nov-13
26-Nov-13
1-Dec-13
6-Dec-13
11-Dec-13
16-Dec-13
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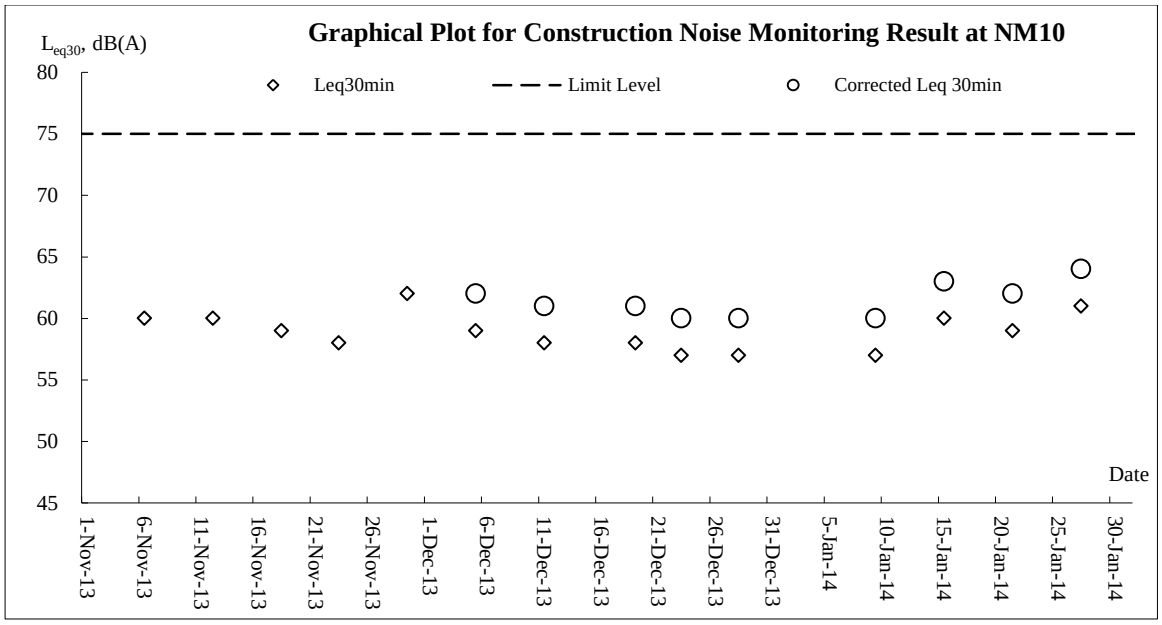
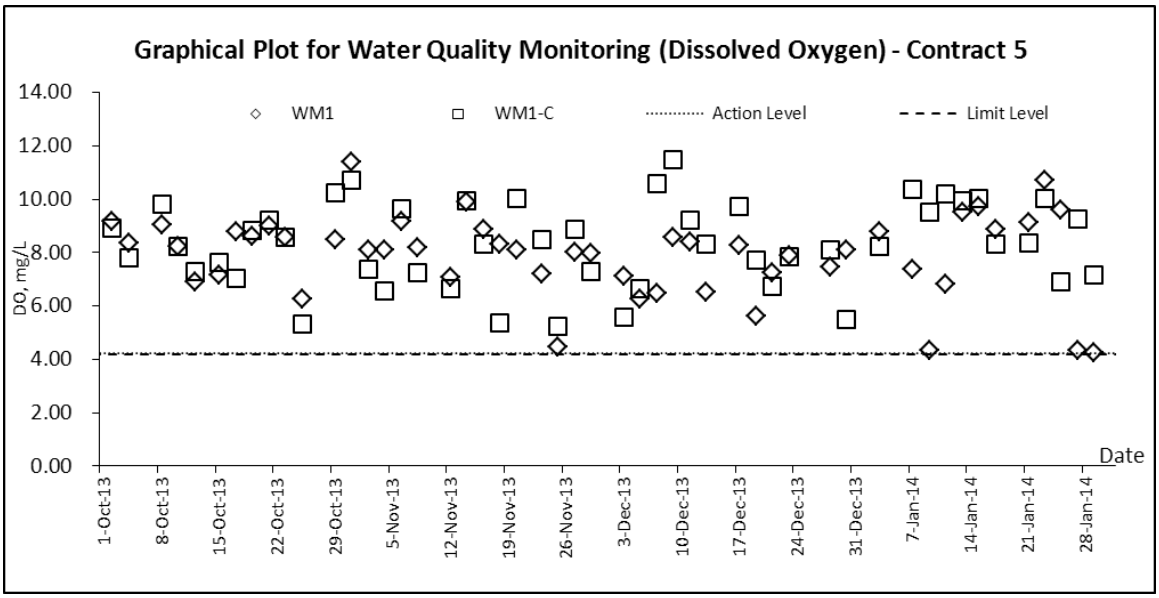
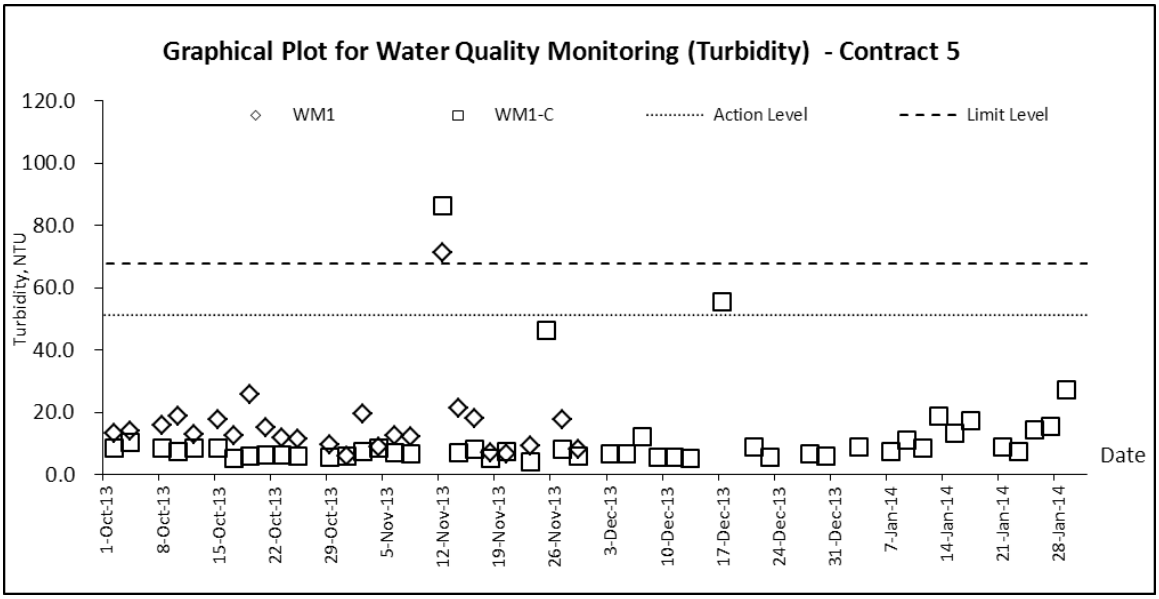
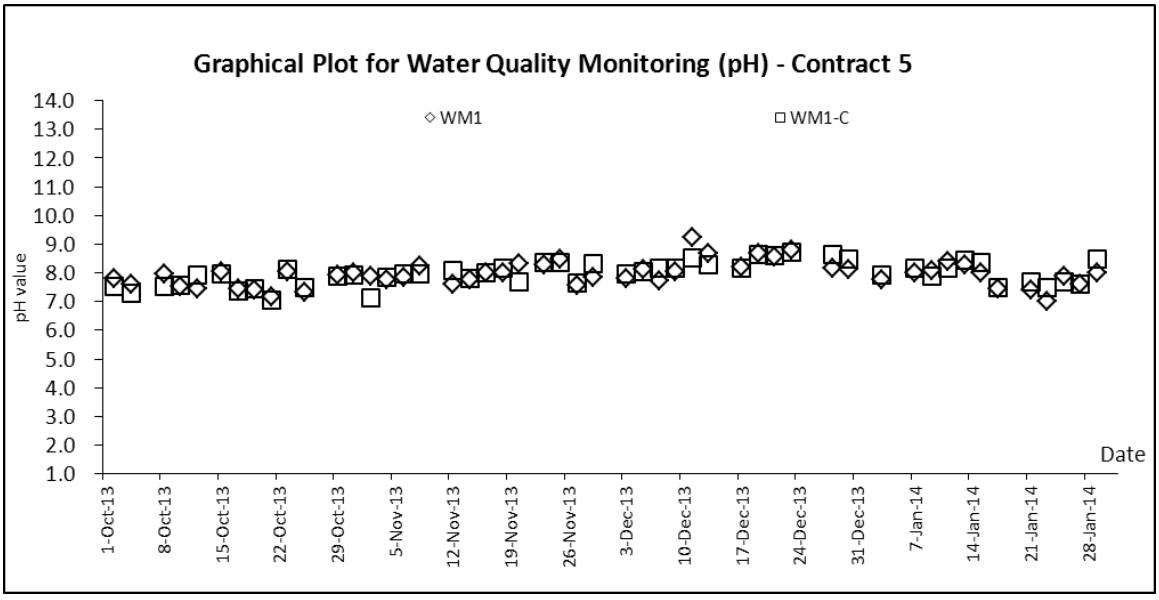
25-Jan-14
30-Jan-14

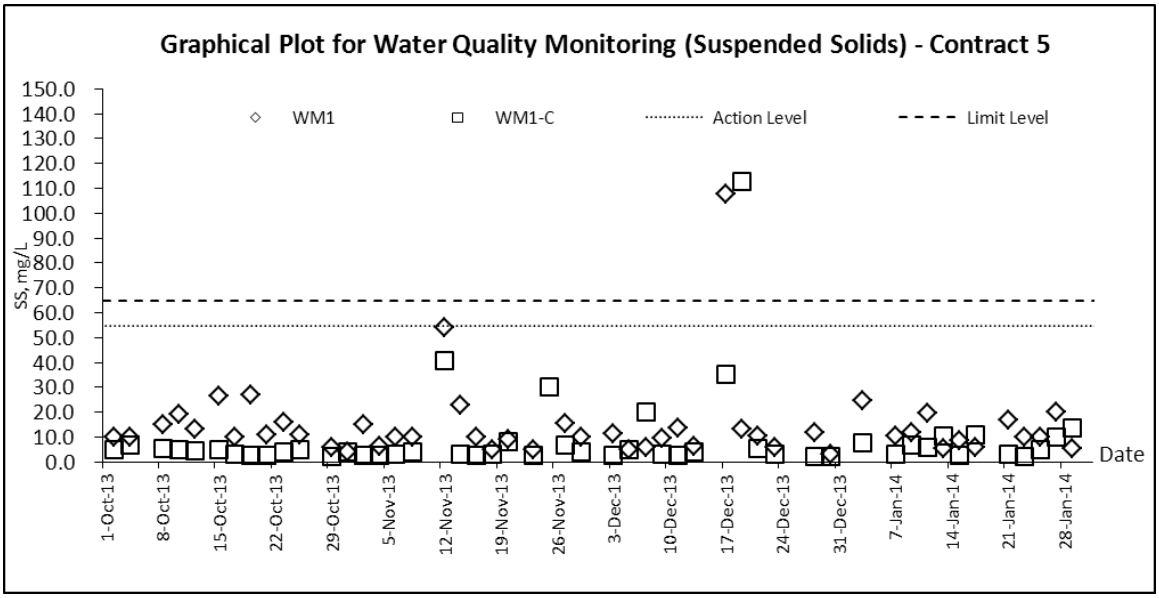

Graphical Plot for Construction Noise Monitoring Result at NM10
L_{eq30}, dB(A)
Leq30min
Limit Level
Corrected Leq 30min
80
75
70
65
60
55
50
45
Date
1-Nov-13
6-Nov-13
11-Nov-13
16-Nov-13
21-Nov-13
26-Nov-13
1-Dec-13
6-Dec-13
11-Dec-13
16-Dec-13
21-Dec-13
26-Dec-13
31-Dec-13
5-Jan-14
10-Jan-14
15-Jan-14
20-Jan-14
25-Jan-14
30-Jan-14

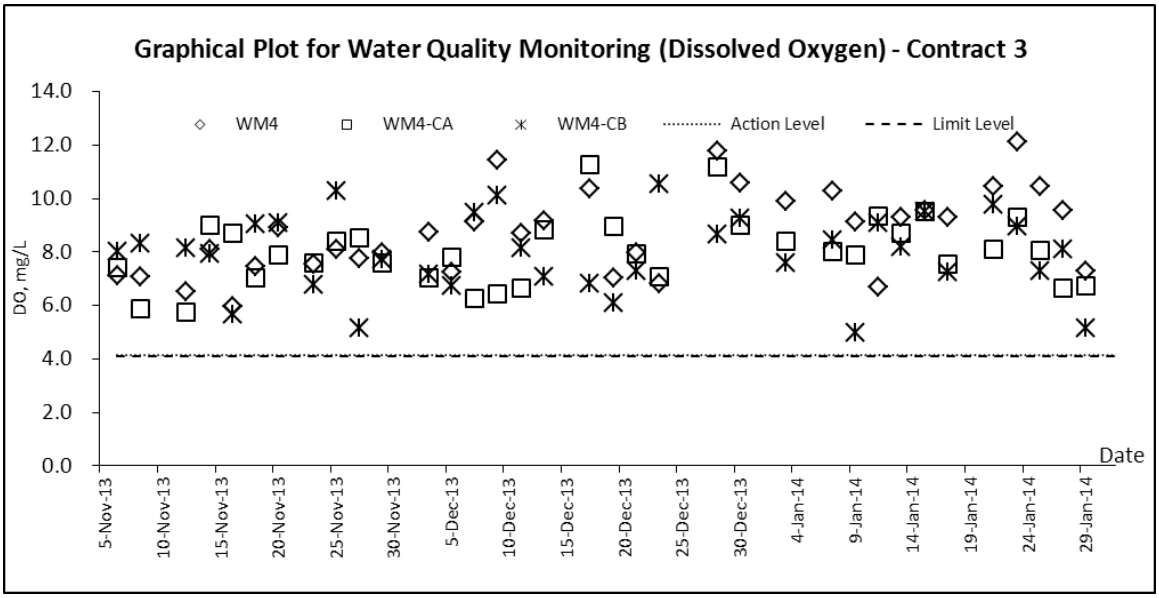
Water Quality

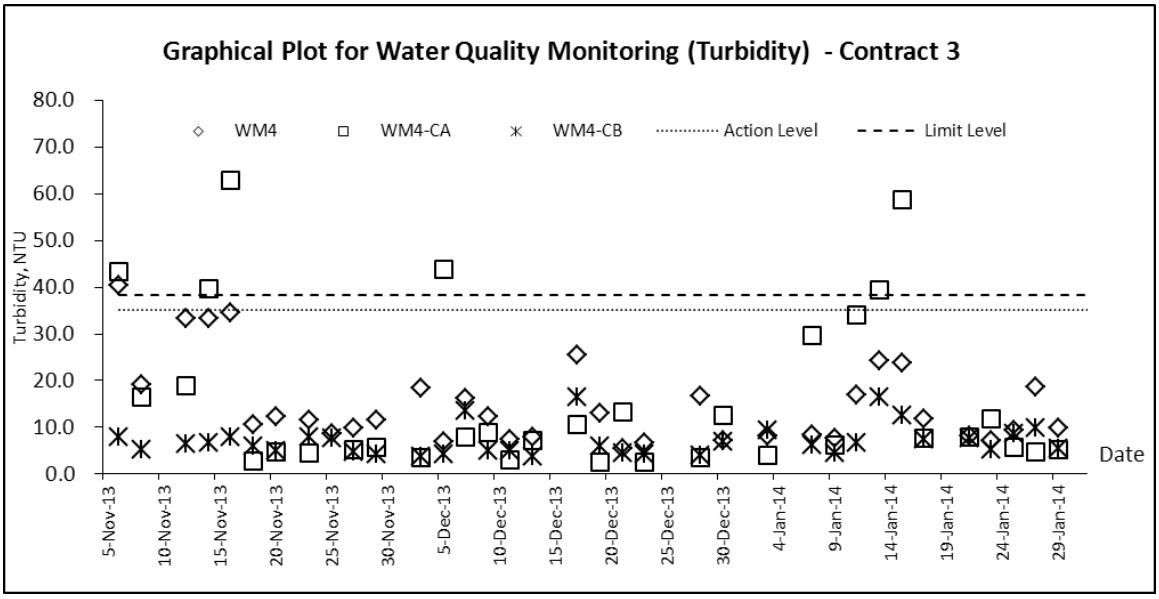


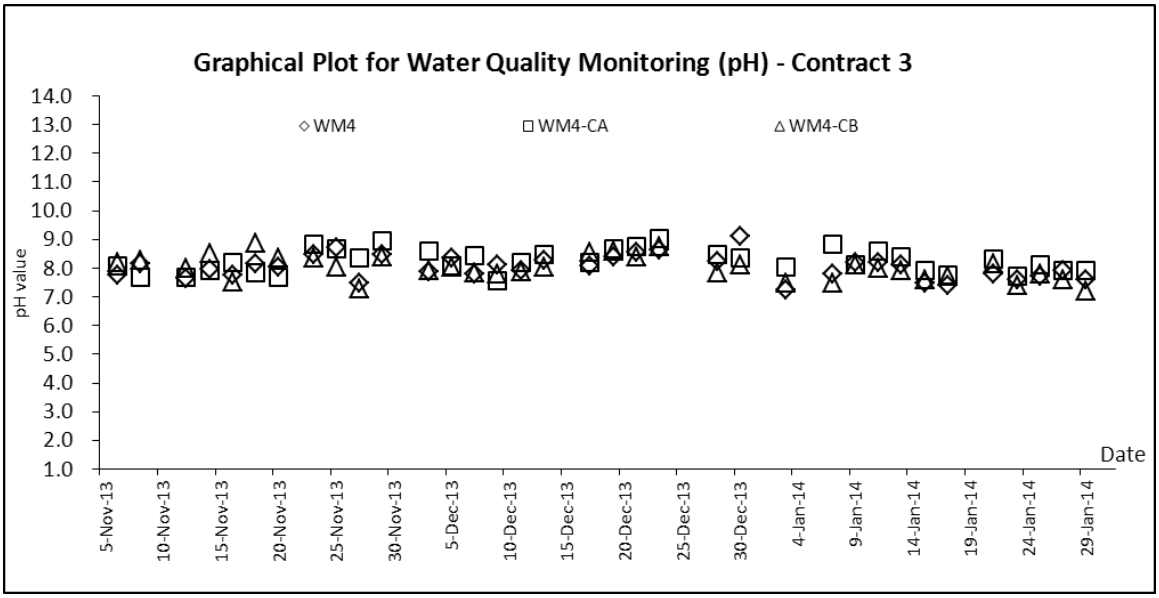


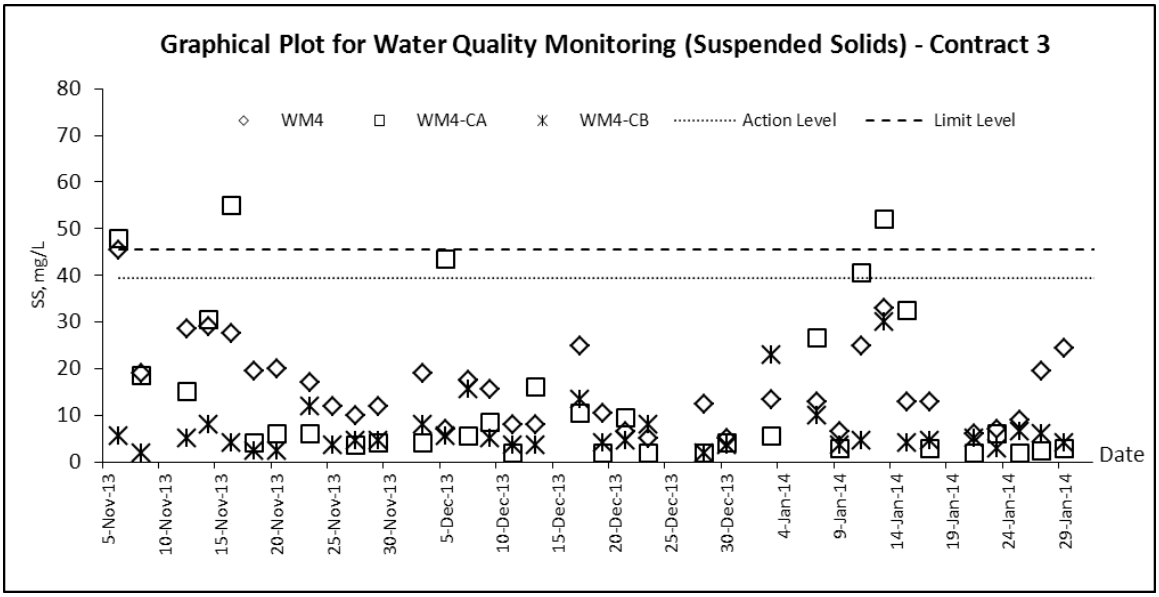



Graphical Plot for Water Quality Monitoring (Suspended Solids) - Contract 5
WM1
WM1-C
Action Level
Limit Level
SS, mg/L
Date


Graphical Plot for Water Quality Monitoring (Dissolved Oxygen) - Contract 3
WM4
WM4-CA
WM4-CB
Action Level
Limit Level
DO, mg/L
Date


Graphical Plot for Water Quality Monitoring (Turbidity) - Contract 3
WM4
WM4-CA
WM4-CB
Action Level
Limit Level
Turbidity, NTU
Date


Graphical Plot for Water Quality Monitoring (pH) - Contract 3
WM4
WM4-CA
WM4-CB
pH value
Date
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
5-Nov-13
10-Nov-13
15-Nov-13
20-Nov-13
25-Nov-13
30-Nov-13
5-Dec-13
10-Dec-13
15-Dec-13
20-Dec-13
25-Dec-13
30-Dec-13
4-Jan-14
9-Jan-14
14-Jan-14
19-Jan-14
24-Jan-14
29-Jan-14


Graphical Plot for Water Quality Monitoring (Suspended Solids) - Contract 3
WM4
WM4-CA
WM4-CB
Action Level
Limit Level
SS, mg/L
Date
80
70
60
50
40
30
20
10
0
5-Nov-13
10-Nov-13
15-Nov-13
20-Nov-13
25-Nov-13
30-Nov-13
5-Dec-13
10-Dec-13
15-Dec-13
20-Dec-13
25-Dec-13
30-Dec-13
4-Jan-14
9-Jan-14
14-Jan-14
19-Jan-14
24-Jan-14
29-Jan-14

Appendix K

Meteorological Data

Date		Weather	Total Rainfall (mm)	Ta Kwu Ling Station			
				Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
1-Jan-14	Wed	Dry, cloudy. Moderate to fresh north to northeasterly winds.	0	12.5	5.5	60	E/NE
2-Jan-14	Thu	Fine, dry, cloudy.Light to moderate east to northeasterly winds.	0	14.5	6.5	71	E
3-Jan-14	Fri	Fine, dry, cloudy.Light to moderate east to northeasterly winds.	0	18.9	4.9	66.2	N/NW
4-Jan-14	Sat	Dry, cloudy. Moderate to fresh north to northeasterly winds.	0	15.8	8.7	60.5	N/NE
5-Jan-14	Sun	Dry, cloudy. Moderate to fresh north to northeasterly winds.	0	12.8	7.7	61.5	SE
6-Jan-14	Mon	Cloudy, dry, fine. Moderate to fresh northerly winds.	0	15.7	9.1	63	E
7-Jan-14	Tue	Cloudy, dry, fine. Moderate to fresh northerly winds.	Trace	18.4	11.9	72	E/SE
8-Jan-14	Wed	Cloudy, rain, light winds. Appreciably cooler as winds strengthening from the north.	Trace	18.6	6.7	80	N/NW
9-Jan-14	Thu	Cloudy, dry, fine. Moderate to fresh northerly winds.	0	14.1	12	59.2	N
10-Jan-14	Fri	Cloudy, dry, fine. Moderate to fresh northerly winds.	Trace	15.1	8.5	68	E/NE
11-Jan-14	Sat	Fine and very dry. Moderate northeasterly winds.	0	15.6	9.5	69	E/NE
12-Jan-14	Sun	Fine, dry, cold. Moderate northeasterly wind.	0	16.2	9.7	74	N
13-Jan-14	Mon	Fine, dry, cold. Moderate northeasterly wind.	0	11.4	11.2	65.5	N
14-Jan-14	Tue	Fine, dry, cold. Moderate northeasterly wind.	0	11.7	12.2	58	N
15-Jan-14	Wed	Fine, dry, cold. .Moderate to fresh east to northeasterly winds.	0	12.3	6.6	59.2	N
16-Jan-14	Thu	Fine and dry. Moderate to fresh east to northeasterly winds.	0	12.1	7.5	66.2	E/NE
17-Jan-14	Fri	Fine, dry, cold. Moderate northeasterly wind.	0	13.6	5.7	64.5	N/NE
18-Jan-14	Sat	Fine and very dry. Moderate northeasterly winds.	0	14.7	11.7	47.5	N
19-Jan-14	Sun	Fine and dry. Moderate to fresh east to northeasterly winds.	0	11.4	5.5	66.2	E/SE
20-Jan-14	Mon	Fine and dry. Moderate to fresh east to northeasterly winds.	0	14.3	9	54	N/NW
21-Jan-14	Tue	Fine and very dry. Moderate northeasterly winds.	0	14.1	13.1	21.5	N/NE
22-Jan-14	Wed	Fine and very dry. Moderate northeasterly winds.	0	10.6	7.8	43	N/NW
23-Jan-14	Thu	Mainly cloudy with sunny periods. Moderate easterly winds.	0	11.7	7.5	62.2	E
24-Jan-14	Fri	Mainly cloudy with sunny periods. Moderate easterly winds.	0	14.5	9.3	72.5	E
25-Jan-14	Sat	Mainly fine and dry. Moderate easterly winds.	0	18.9	5.4	67	E/NE
26-Jan-14	Sun	Mainly cloudy with sunny periods. Moderate easterly winds.	0	20.7	11.7	67	E/SE
27-Jan-14	Mon	Mainly fine and dry. Moderate easterly winds.	0	17.6	9.6	60.5	E
28-Jan-14	Tue	Mainly fine and dry. Moderate easterly winds.	0	17.7	6.1	68.5	E/NE
29-Jan-14	Wed	Fine, dry. Moderate easterly winds, fresh at times.	0	16	8.8	67.2	E
30-Jan-14	Thu	Fine, dry. Light to moderate easterly winds.	0	17.4	5.9	70.5	E/SE
31-Jan-14	Fri	Fine. Dry with some haze. Light to moderate easterly winds.	0	17.4	8.1	68.7	E

Remarks: (***) Maintenance

Appendix L

Waste Flow Table

Name of Department: CEDD

Contract No.: CV/2012/09

Monthly Summary Waste Flow Table for 2014 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated (in '000m^3)	Hard Rock and Large Broken Concrete (in '000m^3)	Reused in the Contract (in '000m^3)	Reused in other Projects (in '000m^3)	Disposed as Public Fill (in '000m^3)	Imported Fill (in '000m^3)	Metals (in '000m^3)	Paper/ cardboard packaging (in '000m^3)	Plastics (see Note 3) (in '000m^3)	Chemical Waste (in '000m^3)	Others, e.g. general refuse (in '000m^3)
Jan	0.409	0.084	0	0	0.409	0.200	0	0	0.010	0	0.110
Feb											
Mar											
Apr											
May											
Jun											
Sub-total	0.409	0.084	0	0	0.409	0.200	0	0	0.010	0	0.110
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.409	0.084	0	0	0.409	0.200	0	0	0.010	0	0.110

Note:

1. Assume the density of soil fill is 2 ton/m^3.
2. Assume the density of rock and broken concrete is 2.5 ton/m^3.
3. Assume each truck of C&D wastes is 5m^3.
4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
5. The slurry and bentonite are disposed at Tseung Kwun O 137.
6. The non-inert C&D wastes are disposed at NENT.

Appendix M

Implementation Schedule for Environmental Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
Air Quality Impact (Construction)							
3.6.1.1	2.1	**General Dust Control Measures** The following dust suppression measures should be implemented: ■ Frequent water spraying for active construction areas (4 times per day for active areas in Po Kak Tsai and 8 times per day for all other active areas), including areas with heavy construction and slope cutting activities ■ 80% of stockpile areas should be covered by impervious sheets ■ Speed of trucks within the site should be controlled to about 10 km/hr ■ All haul roads within the site should be paved to avoid dust emission due to vehicular movement	To minimize adverse dust emission generated from various construction activities of the works sites	Contractor	Construction Works Sites	During Construction	EIA Recommendation and Air Pollution Control (Construction Dust) Regulation
3.6.1.2	2.1	**Best Practice for Dust Control** The relevant best practices for dust control as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted to further reduce the construction dust impacts of the Project. These best practices include: *Good site management* ■ The Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. ■ Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimize the release of visible dust emission. ■ Any piles of materials accumulated on or around the work areas should be cleaned up regularly. ■ Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimizing generation of fugitive dust emissions. ■ The material should be handled properly to prevent fugitive dust emission before cleaning. *Disturbed Parts of the Roads* ■ Each and every main temporary access should be paved with	To minimize adverse dust emission generated from various construction activities of the works sites	Contractor	Construction Works Sites	During Construction	EIA Recommendation and Air Pollution Control (Construction Dust) Regulation

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or ■ Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. *Exposed Earth* ■ Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. *Loading, Unloading or Transfer of Dusty Materials* ■ All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. *Debris Handling* ■ Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. ■ Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. *Transport of Dusty Materials* ■ Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. *Wheel washing* ■ Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. *Use of vehicles* ■ Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. ■ Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.				

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		Site hoarding ■ Where a site boundary adjoins a road, street, service lane 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 of that portion of the site boundary except for a site entrance or exit. *Blasting* ■ The areas within 30m from the blasting area should be wetted with water prior to blasting.					
Air Quality Impact (Operation)							
3.5.2.2	2.2	The following odour containment and control measures will be provided for the proposed sewage treatment work at the BCP site: ■ The treatment work will be totally enclosed. Negative pressure ventilation will be provided within the enclosure to avoid any fugitive odorous emission from the treatment work. ■ Further odour containment will be achieved by covering or confining the sewage channels, sewage tanks, and equipment with potential odour emission. ■ Proper mixing will be provided at the equalization and sludge holding tanks to prevent sewage septicity. ■ Chemical or biological deodorisation facilities with a minimum odour removal efficiency of 90% will be provided to treat potential odorous emissions from the treatment plant including sewage channels / tanks, filter press and screening facilities so as to minimize any potential odour impact to the nearby ASRs.	To minimize potential odour impact from operation of the proposed sewage treatment work at BCP	DSD	BCP	Operation Phase	EIA recommendation
Noise Impact (Construction)							
4.4.1.4	3.1	**Adoption of Quieter PME** Use of the recommended quieter PME such as those given in the BS5228: Part 1:2009 and presented in **Table 4.14**, which can be found in Hong Kong.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and Noise Control Ordinance (NCO)

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
4.4.1.4	3.1	**Use of Movable Noise Barrier** The use of movable barrier for certain PME can further alleviate the construction noise impacts. In general, a 5 dB(A) reduction for movable PME and 10 dB(A) for stationary PME can be achieved depending on the actual design of the movable noise barrier. The Contractor shall be responsible for design of the movable noise barrier with due consideration given to the size of the PME and the requirement for intercepting the line of sight between the NSRs and PME. Barrier material with surface mass in excess of 7 kg/m^2 is recommended to achieve the predicted screening effect.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO
4.4.1.4	3.1	**Use of Noise Enclosure/ Acoustic Shed** The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the GW-TM.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO
4.4.1.4	3.1	**Use of Noise Insulating Fabric** Noise insulating fabric can be adopted for certain PME (e.g. drill rig, pilling auger etc). The insulating fabric should be lapped such that there are no openings or gaps on the joints. Technical data from manufacturers state that by using the Fabric, a noise reduction of over 10 dB(A) can be achieved on noise level.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
4.4.1.4	3.1	**Good Site Practice** The good site practices listed below should be followed during each phase of construction: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction programme; • Mobile plant, if any, should be sited as far from NSRs as possible; • Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and • Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.	To minimize the construction air-borne noise impact	Contractors	Construction Work Sites	During Construction	EIA recommendation, EIAO and NCO
Noise Impact (Operation)							
		Road Traffic Noise					
Table 4.42 and Figure 4.20.1 to 4.20.4	3.2	Erection of noise barrier/ enclosure along the viaduct section.	To minimize the road traffic noise along the connecting road of BCP	Contractor	Loi Tung and Fanling Highway Interchange	Before Operation	EIAO and NCO
		Fixed Plant Noise					
Table 4.46	3.2	Specification of the maximum allowable sound power levels of the proposed fixed plants during daytime and night-time.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	EIA recommendation, EIAO and NCO

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
4.5.2.4	3.2	The following noise reduction measures shall be considered as far as practicable during operation: • Choose quieter plant such as those which have been effectively silenced; • Include noise levels specification when ordering new plant (including chillier and E/M equipment); • Locate fixed plant/louver away from any NSRs as far as practicable; • Locate fixed plant in walled plant rooms or in specially designed enclosures; • Locate noisy machines in a basement or a completely separate building; • Install direct noise mitigation measures including silencers, acoustic louvers and acoustic enclosure where necessary; and • Develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise.	To minimize the fixed plant noise impact	Managing Authority of the buildings / Contractor	BCP, Administration Building and all ventilation buildings	Before Operation	EIAO and NCO
Water Quality Impact (Construction)							
5.6.1.1	4.1	**Construction site runoff and drainage** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts: ▪ At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the Contractor prior to the commencement of construction. ▪ The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas.	To control site runoff and drainage; prevent high sediment loading from reaching the nearby watercourses	Contractor	Construction Works Sites	Construction Phase	Practice Note for Professional Persons on Construction Site Drainage (ProPECC Note PN 1/94)

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		Temporary ditches should be provided to facilitate the runoff discharge into stormwater drainage system through a sediment/silt trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates, if practical. ▪ Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractor prior to the commencement of construction. ▪ All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. ▪ Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. ▪ If surface excavation works cannot be avoided during the wet season (April to September), temporarily exposed slope/soil surfaces should be covered by tarpaulin or other means, as far as practicable, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Interception channels should be provided (e.g. along the crest/edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. Other measures that need to be implemented before, during and after rainstorms are summarized in ProPECC Note PN 1/94. ▪ The overall slope of the site should be kept to a minimum to reduce					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		the erosive potential of surface water flows. ▪ All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. ▪ Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. ▪ Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. ▪ Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. ▪ Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.					
5.6.1.1	4.1	**Good site practices for works within water gathering grounds** The following conditions should be complied, if there is any works to be carried out within the water gathering grounds:	To minimize water quality impacts to the water gathering grounds	Contractor	Construction Works Sites within the water gathering	Construction Phase	ProPECC Note PN 1/94

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		▪ Adequate measures should be implemented to ensure no pollution or siltation occurs to the catchwaters and catchments. ▪ No earth, building materials, oil or fuel, soil, toxic materials or any materials that may possibly cause contamination to water gathering grounds are allowed to be stockpiled on site. ▪ All surplus spoil should be removed from water gathering grounds as soon as possible. ▪ Temporary drains with silt traps should be constructed at the site boundary before the commencement of any earthworks. ▪ Regular cleaning of silt traps should be carried out to ensure proper operation at all time. ▪ All excavated or filled surfaces which have the risk of erosion should always be protected form erosion. ▪ Facilities for washing the wheels of vehicles before leaving the site should be provided. ▪ Any construction plant which causes pollution to catchwaters or catchments due to the leakage of oil or fuel should be removed off site immediately. ▪ No maintenance activities which may generate chemical wastes should be undertaken in the water gathering grounds. Vehicle maintenance should be confined to designated paved areas only and any spillages should be cleared up immediately using absorbents and waste oils should be collected in designated tanks prior to disposal off site. All storm water run-off from these areas should be discharged via oil/petrol separators and sand/silt removal traps. ▪ Any soil contaminated with fuel leaked from plant should be removed off site and the voids arising from removal of contaminated soil should be replaced by suitable material approved by the Director of Water Supplies. ▪ Provision of temporary toilet facilities and use of chemicals or insecticide of any kind are subject to the approval of the Director of Water Supplies. ▪ Drainage plans should be submitted for approval by the Director of			grounds		

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		Water Supplies. ▪ An unimpeded access through the waterworks access road should always be maintained. ▪ Earthworks near catchwaters or streamcourses should only be carried out in dry season between October and March, ▪ Advance notice must be given before the commencement of works on site quoting WSD's approval letter reference.					
5.6.1.2	4.1	**Good site practices of general construction activities** Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby stormwater drain. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby stormwater drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.	To minimize water quality impacts	Contractor	All construction works sites	Construction phase	EIA Recommendation
5.6.1.3	4.1	**Sewage effluent from construction workforce** Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	To minimize water quality impacts	Contractor	All construction works sites with on-site sanitary facilities	Construction phase	EIA Recommendation and Water Pollution Control Ordinance (WPCO)
5.6.1.4	4.1	**Hydrogeological Impact** Grout injection works would be conducted before blasting, for sealing a limited area around the tunnel with a grout of a suitable strength for controlling the potential groundwater inflows. The pre-injection grouting method would be supplemented by post-injection grouting where necessary to further enhance the groundwater inflow control. On-site treatment for the groundwater ingress pumped out would be required to remove any contamination by grouting materials before discharge off-site.	To minimize water quality impacts	Contractor	Construction works sites of the drill and blast tunnel	Construction phase	EIA Recommendation and WPCO
Water Quality Impact (Operation)							
		No mitigation measure is required.					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
Sewage and Sewerage Treatment Impact (Construction)							
6.7	5	The sewage generated by the on-site workforce should be collected in chemical toilets and disposed of off-site by a licensed waste collector.	To minimize water quality impacts	Contractor	All construction works sites with on-site sanitary facilities	Construction phase	EIA recommendation and WPCO
Sewage and Sewerage Treatment Impact (Operation)							
6.6.3	5	Sewage generated by the BCP and Chuk Yuen Village Resite will be collected and treated by the proposed on-site sewage treatment facility using Membrane Bioreactor treatment with a portion of the treated wastewater reused for irrigation and flushing within the BCP.	To minimize water quality impacts	DSD	BCP	Operation phase	EIA recommendation and WPCO
6.5.3	5	Sewage generated from the Administration Building will be discharged to the existing local sewerage system.	To minimize water quality impacts	DSD	Administration Building	Operation phase	EIA recommendation and WPCO
Waste Management Implication (Construction)							
7.6.1.1	6	**Good Site Practices** Adverse impacts related to waste management such as potential hazard, air, odour, noise, wastewater discharge and public transport as mentioned in section 3.4.7.2 (ii)(c) of the Study Brief are not expected to arise, provided that good site practices are strictly followed. Recommendations for good site practices during the construction activities include: ▪ Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site ▪ Training of site personnel in proper waste management and chemical handling procedures ▪ Provision of sufficient waste disposal points and regular collection of waste ▪ Dust suppression measures as required under the Air Pollution Control (Construction Dust) Regulation should be followed as far as practicable. Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by covering trucks or in enclosed containers ▪ General refuse shall be removed away immediately for disposal. As	To minimize adverse environmental impact	Contractor	Construction works sites (general)	Construction Phase	EIA recommendation; Waste Disposal Ordinance; Waste Disposal (Chemical Wastes) (General) Regulation; and ETWB TC(W) No. 19/2005, Environmental Management on Construction Site

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		such odour is not anticipated to be an issue to distant sensitive receivers ▪ Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction from public road ▪ Covers and water spraying system should be provided for the stockpiled C&D material to prevent dust impact or being washed away ▪ Designate different locations for storage of C&D material to enhance reuse ▪ Well planned programme for transportation of C&D material to lessen the off-site traffic impact. Well planned delivery programme for offsite disposal and imported filling material such that adverse noise impact from transporting of C&D material is not anticipated ▪ Site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" should be adopted as far as practicable, such as cleaning and maintenance of drainage systems regularly ▪ Provision of cover for the stockpile material, sand bag or earth bund as barrier to prevent material from washing away and entering the drains					
7.6.1.2	6	**Waste Reduction Measures** Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: ▪ Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal ▪ Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force ▪ Proper storage and site practices to minimise the potential for damage or contamination of construction materials ▪ Plan and stock construction materials carefully to minimise amount	To reduce the quantity of wastes	Contractor	Construction works sites (General)	Construction Phase	EIA recommendation and Waste Disposal Ordinance

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve?
		of waste generated and avoid unnecessary generation of waste ▪ In addition to the above measures, specific mitigation measures are recommended below for the identified waste arising to minimise environmental impacts during handling, transportation and disposal of these wastes.					
7.6.1.3	6	**C&D Materials** In order to minimise impacts resulting from collection and transportation of C&D material for off-site disposal, the excavated materials should be reused on-site as backfilling material as far as practicable. The surplus rock and other inert C&D material would be disposed of at the Government's Public Fill Reception Facilities (PFRFs) at Tuen Mun Area 38 for beneficial use by other projects in the HKSAR as the last resort. C&D waste generated from general site clearance and tree felling works would require disposal to the designated landfill site. Other mitigation requirements are listed below: ▪ A Waste Management Plan should be prepared and implemented in accordance with ETWB TC(W) No. 19/2005 Environmental Management on Construction Site; and ▪ In order to monitor the disposal of C&D material and solid wastes at public filling facilities and landfills, and to control fly-tipping, a trip-ticket system (e.g. ETWB TCW No. 31/2004) should be included.	To minimize impacts resulting from C&D material	Contractor	Construction Works Sites (General)	Construction Phase	EIA recommendation; Waste Disposal Ordinance; and ETWB TCW No. 31/2004
7.6.1.4	6	**General refuse** General refuse should be stored in enclosed bins or compaction units separated from other C&D material. A reputable waste collector is to be employed by the Contractor to remove general refuse from the site separately. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' litter.	To minimize impacts resulting from collection and transportation of general refuse for off-site disposal	Contractor	Construction works sites (General)	Construction phase	Waste Disposal Ordinance and Public Health and Municipal Services Ordinance - Public Cleansing and Prevention of Nuisances Regulation
7.6.1.5	6	**Chemical waste** If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical	To minimize impacts resulting from collection and transportation of chemical waste for off-site disposal	Contractor	Construction works sites (General)	Construction phase	Waste Disposal (Chemical Waste) (General) Regulation and Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes