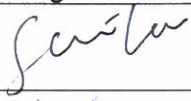



Environmental Protection Department

Contract No. HY/2012/06

**Widening of Fanling Highway
– Tai Hang to Wo Hop Shek
Interchange****Annual EM&A Report
for November 2017 to October 2018**

[1/2019]

	Name	Signature
Prepared & Checked:	Sammi Lam	
Reviewed & Approved:	Y W Fung	

Version: Rev. 0 Date: 16 January 2019

Disclaimer

This report is prepared for Environmental Protection Department and is given for its sole benefit in relation to and pursuant to Contract No. HY/2012/06 and may not be disclosed to, quoted to or relied upon by any person other than Environmental Protection Department without our prior written consent. No person (other than Environmental Protection Department) into whose possession a copy of this report comes may rely on this report without our express written consent and Environmental Protection Department may not rely on it for any purpose other than as described above.

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Attn: **Mr. James Penny**

Your Reference

EM&A for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling Stage 2 (between Tai Hang to Wo Hop Shek Interchange)

Our Reference

AFK/EC/ST/pl/T329380/2
2.05/L-0246

Environmental Permit No. EP-324/2008/E

Annual EM&A Report for November 2017 to October 2018 for the portion of Stage 2 works under Contract No. HY/2012/06

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We refer to the Annual EM&A Report for November 2017 to October 2018 for the Project received on 07 January 2019 submitted by ET via email. We confirm we have no comment.

Yours faithfully

for MOTT MACDONALD HONG KONG LIMITED



Steven Tang
Independent Environmental Checker

c.c.
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EXECUTIVE SUMMARY

The proposed widening of Tolo Highway and Fanling Highway between Island House Interchange and Fanling (the Project) is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An Environmental Impact Assessment (EIA) Report (the approved EIA Report) together with an Environmental Monitoring and Audit (EM&A) Manual (the approved EM&A Manual) were completed and approved under the EIAO on 14 July 2000 (Register Number: EIA-043/2000).

The objective of the Project “Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling” is to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.

The Project is a designated project and governed by an Environmental Permit (EP-324/2008) issued by the EPD on 23 December 2008. Subsequently, the EPD issued Variation of Environmental Permits of EP-324/2008/A, EP-324/2008/B, EP-324/2008/C and EP-324/2008/D on 31 January 2012, 17 March 2014, 27 March 2015 and 27 August 2015 respectively. The current valid VEP was applied on 29 December 2016 and the VEP (EP-324/2008/E) was subsequently granted on 26 January 2017.

The construction works for this Project are delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). Stage 2 would be implemented under three works contracts. Contract No. HY/2012/06 “Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange” and the entrusted portion to CEDD under Contract No. CV/2012/09 “Liantang/Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 3”. In addition, Contract No. “Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound” was carried out within the site boundary of Contract No. 02/HY/2015. This report focuses on Contract No. HY/2012/06 “Widening of Fanling Highway – Tai Hang to Wo Hop Shek Interchange” in Stage 2 of the Project and “Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound” under Works Order Nos. CB128520-5 and CB128519-0 in Contract No. 02/HY/2015 “Highway Department Term Contract (Management and Maintenance of Roads in Tai Po and North District excluding High Speed Roads 2016-2022)”. The construction works of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015 have been completed on 23 May 2018.

Pursuant to the EP (EP-324/2008/E) Condition 2.7, the Capture Survey Trip Report for Ma Wat River Northern Meander (Version 2) for the Project was submitted on 24 December 2013 by the Environmental Team (ET) and verified by the Independent Environmental Checker (IEC) on 6 January 2014.

The construction phase of the Contract under the EP and the Environmental Monitoring and Audit (EM&A) programme of the contract commenced on 21 November 2013. The impact environmental monitoring and audit includes air quality and noise monitoring.

This report documents the findings of EM&A works conducted in the period between 1 November 2017 and 31 October 2018. As informed by the Contractor, construction activities of Contract No. HY/2012/06 in the reporting period were:

- Site clearance
- Ground investigation
- Pipe laying
- Retaining wall construction
- Noise barrier
- Excavation
- Backfilling
- Drainage
- Footbridge demolition
- Bridge construction
- Piling

As informed by the Contractor, construction activities of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015 in the reporting period were:

- Backfilling to NB74 Bay 3 to Bay 7
- Construction of catchpits and drainage pipes sheetpiling at Bay 9 to Bay 10
- Construction of footing for Bay 9 to Bay 10
- Construction of footing for NB74 Bay 8, 8A & 8B
- Construction of footpath & bus lay-by
- Construction of Posts P27-P30
- Construction of wall stem for NB74 Bay 2 to Bay 10
- Erection of NB posts and panels
- KMB works
- Metal frame for BBI
- Metal frame & roof cladding of bus shelter
- Sheetpiling at Bay 9 to Bay 10

Reporting Change

Contract No. 02/HY/2015 (Works Order Nos. CB128520-5 and CB128519-0) has been included in this EM&A report.

Breaches of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Level was recorded for 1-hour and 24-hour TSP monitoring in the reporting period.

Breaches of Action and Limit Levels for Noise

No Action Level exceedance of construction noise was recorded in the reporting period. No noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by the Environmental Team in the reporting period.

One (1) Limit Level exceedance was recorded on 9 April 2018 for noise monitoring at M3. The exceedance at M3 is considered to be contributed from background noise, possibly traffic noise from Pak Wo Road and Fanling Highway. The exceedance was considered non-project-related.

Complaint, Notification of Summons and Successful Prosecution

One (1) noise-related complaint was received on 1 March 2018 and followed up by the Environmental Team. The full complaint investigation report is annexed in Appendix M of the Monthly EM&A Report for March 2018.

No notification of summons or successful prosecution was received in the reporting period.

1 INTRODUCTION

1.1 Project Organization and Contacts of Key Management

1.1.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
ER (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer	Edwin Chung	6115 0818	2638 0950
IEC (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker	Steven Tang	2828 5920	2827 1823
Contractor of [HY/2012/06] (China State Construction Engineering (Hong Kong) Limited)	Environmental Officer	Michael Tsang	9277 4956	2672 2501
		C C Chow	9679 6315	2672 2501
Contractor of [02/HY/2015] (Chiu Hing Construction & Transportation Company Limited)	Safety Officer	Marty Tai	9106 5318	-
ET (AECOM Asia Company Limited)	ET Leader	Y W Fung	3922 9393	3922 9797
Party	Position	Name	Telephone	Fax
ER (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer	Edwin Chung	6115 0818	2638 0950
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Contractor (China State Construction Engineering (Hong Kong) Limited)	Environmental Officer	Michael Tsang	9277 4956	2672 2501
		C C Chow	9679 6315	2672 2501
ET (AECOM Asia Company Limited)	ET Leader	Y W Fung	3922 9393	3922 9797

1.2 Programme

1.2.1 The Construction Programme is shown in Appendix B.

1.3 Summary of Construction Works

1.3.1 Details of the construction works of Contract No. HY/2012/06 carried out by the Contractor in this reporting period are listed below:

- Site clearance
- Ground investigation
- Pipe laying
- Retaining wall construction
- Noise barrier
- Excavation
- Backfilling
- Drainage
- Footbridge demolition
- Bridge construction
- Piling

Details of the construction works of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015 carried out by the Contractor in this reporting period are listed below:

- Backfilling to NB74 Bay 3 to Bay 7
- Construction of catchpits and drainage pipes sheetpiling at Bay 9 to Bay 10
- Construction of footing for Bay 9 to Bay 10
- Construction of footing for NB74 Bay 8, 8A & 8B
- Construction of footpath & bus lay-by
- Construction of Posts P27-P30
- Construction of wall stem for NB74 Bay 2 to Bay 10
- Erection of NB posts and panels
- KMB works
- Metal frame for BBI
- Metal frame & roof cladding of bus shelter
- Sheetpiling at Bay 9 to Bay 10

1.3.2 The general layout plan of the Project site of Contract No. HY/2012/06 and Works Order Nos. CB128520-5 and CB128519-0 under 02/HY/2015 showing the contract areas are shown in Figure 1.1 and Figure 1.2 respectively.

1.3.3 The environmental mitigation measures implementation schedule are presented in Appendix C.

2 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

2.1 Monitoring Parameters

2.1.1 The updated EM&A Manual has designated 1 air quality monitoring station and 2 noise monitoring stations to monitor environmental impacts on air quality and noise due to Stage 2 of the Project.

2.1.2 The updated EM&A Manual also requires environmental site inspections for air quality, noise, water quality, chemical, waste management, ecology and landscape and visual impacts.

2.2 Monitoring Locations

2.2.1 For air quality monitoring, the monitoring station was set up at Fanling Government Secondary School, in accordance with updated EM&A Manual. The location is shown in Figure 1.3a.

2.2.2 For noise monitoring, the monitoring stations M2 and M3 were set up at West Tai Wo and Fanling Government Secondary School respectively in accordance with updated EM&A Manual. Figure 1.3a-b shows the locations of the monitoring stations.

2.3 Environmental Quality Performance Limits (Action/Limit Levels)

2.3.1 The environmental quality performance limits (i.e. Action/Limit Levels) of air quality monitoring were derived from the baseline air quality monitoring results at the monitoring station (AM2); while the environmental quality performance limits of noise monitoring were defined in the EM&A Manual.

2.3.2 The environmental quality performance limits are given in Appendix D.

2.4 Environmental Mitigation Measures

2.4.1 Relevant environmental mitigation measures were stipulated in the Particular Specification and EP for the Contractor to adopt. A list of environmental mitigation measures and their implementation statuses are given in Appendix C.

2.5 Environmental Impact Hypotheses Tested

2.5.1 The EIA Report concluded that with proper mitigation measures implemented, fugitive dust emission during the construction phase would be controlled and will not exceed the acceptable criteria.

2.5.2 For construction noise, exceedances were predicted only at 2 schools (SR41 Wong Shiu Chi Middle School and SR45 HK Teacher's Association Secondary School) but they are out of the scope of this EM&A Programme. Hence, the EIA did not anticipate any noise exceedances during the construction phase within the scope of this EM&A Programme.

2.5.3 The above criteria have been tested under this EM&A Programme during the reporting period.

3 AIR QUALITY MONITORING

- 3.1.1 In accordance with the updated EM&A Manual, baseline 1-hour and 24-hour TSP levels at one air quality monitoring station was established. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days.
- 3.1.2 The weather was mostly sunny, occasionally fine, cloudy and rainy days in the reporting period. Weather information including the wind speed and wind direction is annexed in Appendix F. The information was obtained from the Hong Kong Observatory.
- 3.1.3 The monitoring results for 1-hour TSP and 24-hour TSP monitoring are summarized in Tables 3.1 and 3.2 respectively. Detailed impact air quality monitoring results are presented in Appendix E.

Table 3.1 Summary of 1-hour TSP Monitoring Results in the Reporting Period

Location	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM2 (Fanling Government Secondary School)	68.4	58.8 – 80.6	317.8	500

Table 3.2 Summary of 24-hour TSP Monitoring Results in the Reporting Period

Location	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM2 (Fanling Government Secondary School)	37.7	9.2 – 97.1	200.7	260

- 3.1.4 The major dust sources in the reporting period included construction activities from Stage 2 of the Project, as well as nearby traffic emissions.
- 3.1.5 All 1-hour and 24-hour TSP results were below the Action and Limit Level in the reporting period.
- 3.1.6 Detailed impact air quality monitoring results are presented in Appendix E.

4 NOISE MONITORING

- 4.1.1 In accordance with the EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of the Contract.
- 4.1.2 The monitoring results for construction noise are summarized in Table 4.1 and the monitoring data are provided in Appendix G.

Table 4.1 Summary of Construction Noise Monitoring Results in the Reporting Period

	Average (dB(A)) L_{eq} (30 mins)	Range (dB(A)) L_{eq} (30 mins)	Limit Level (dB(A)) L_{eq} (30 mins)
M2*	68.7	63.1 – 71.2	75
M3#	64.5	58.9 – 68.3	65/70

*+3dB(A) Façade correction included

Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

- 4.1.3 The major noise sources during the noise monitoring included nearby road traffic noise.
- 4.1.4 No Action Level exceedance of construction noise was recorded in the reporting period. No noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by the Environmental Team in the reporting period.
- 4.1.5 One (1) Limit Level exceedance was recorded on 9 April 2018 for noise monitoring at M3. The exceedance at M3 is considered to be contributed from background noise, possibly traffic noise from Pak Wo Road and Fanling Highway. The exceedance was considered non-project-related.
- 4.1.6 The graphical plots of the trends of the monitoring results are provided in Appendix G.

5 ADVICE ON THE SOLID AND LIQUID WASTE MANAGEMENT STATUS

- 5.1.1 As advised by the Contractor of Contract No. HY/2012/06, 42,863 m³ of inert C&D material was generated in the reporting month (13,077 m³ disposed of as public fill to Tuen Mun 38, 16,755 m³ of inert C&D materials was reused on site, 12,144 m³ of inert C&D materials was reused in other projects and 887 m³ was broken concrete). For C&D wastes, 1,065 m³ of general refuse was disposed of at NENT landfill, 764 kg of paper/cardboard packaging, 8,522 kg of plastics and 35,452 kg of metals were collected by recycling Contractors, and 0 kg of chemical wastes was collected by licensed Contractors in the reporting period.
- 5.1.2 The actual amounts of different types of waste generated by the activities of the Project in the reporting period are summarized in Table 5.1.

Table 5.1 Summary of Waste Flow Table for Contract No. HY/2012/06

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials disposed of as public fill	13,077 m ³	Tuen Mun 38
Broken concrete	887 m ³	Tuen Mun 38
C&D wastes disposed as general refuse	1,065 m ³	NENT Landfill
Paper/cardboard packaging	764 kg	Recycling Contractors
Plastics	8,522 kg	Recycling Contractors
Metals	35,452 kg	Recycling Contractors
C&D materials reused on site	16,755 m ³	Site Area
C&D materials reused in other projects	12,144 m ³	Other projects
Chemical wastes	0kg	Licensed Contractors

- 5.1.3 As advised by the Contractor of Works Order Nos. CB128520-5 and CB128519-0 under Contract No. 02/HY/2015, 142 m³ of inert C&D material was generated in the reporting month (137 m³ disposed of as public fill to Tuen Mun 38, 0 m³ of inert C&D materials was reused on site, 0 m³ of inert C&D materials was reused in other projects and 5 m³ was broken concrete). For C&D wastes, 0 m³ of general refuse was disposed of at NENT landfill, 6 kg of paper/cardboard packaging, 5 kg of plastics and 0 kg of metals were collected by recycling Contractors in the reporting period.
- 5.1.4 The actual amounts of different types of waste generated by the activities of the Project in the reporting period are shown in Table 5.2.

Table 5.2 Summary of Waste Flow Table for Contract No. 02/HY/2015 (Works Order Nos. CB128520-5 and CB128519-0)

Waste Type	Actual Amount	Disposal/Reuse Locations
Inert C&D materials disposed as public fill	137 m ³	Tuen Mun 38
Broken concrete	5 m ³	Tuen Mun 38
C&D wastes disposed as general refuse	0 m ³	NENT Landfill
Paper/cardboard packaging	6 kg	Recycling Facilities
Plastics	5 kg	Recycling Facilities
Metals	0 kg	Recycling Facilities
C&D materials reused on site	0 m ³	Site Area
C&D materials reused in other projects	0 m ³	Other projects

6 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

- 6.1.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting period.
- 6.1.2 No Action Level exceedance of construction noise was recorded in the reporting period. No noise complains related to 0700 – 1900 hours on normal weekdays was received and followed by the Environmental Team in the reporting period.
- 6.1.3 One (1) Limit Level exceedance was recorded on 9 April 2018 for noise monitoring at M3. The exceedance at M3 is considered to be contributed from background noise, possibly traffic noise from Pak Wo Road and Fanling Highway. The exceedance was considered non-project-related.

7 SUMMARY OF COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 7.1.1 One (1) noise-related complaint was received on 1 March 2018 and followed up by the Environmental Team. The full complaint investigation report is annexed in Appendix M of the Monthly EM&A Report for March 2018.
- 7.1.2 No notification of summons or successful prosecution was received in the reporting period.
- 7.1.3 The statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix H.
- 7.1.4 A 24-hour complaint hotline at 6628 8366 has been established for the Project. The hotline number is displayed at the site entrances, fencings and project signboards, as well as printed on publications such as newsletters for the public.

8 REVIEW OF THE VALIDITY OF THE EIA/ERR PREDICTIONS

- 8.1.1 All the air quality monitoring results in the reporting period were below the Action and Limit Levels. The result was in line with the Environmental Impact Assessment (EIA) and Environmental Review Report (ERR) prediction that dust generation would be controlled and would not exceed the acceptable criteria, with proper implementation of the recommended dust mitigation measures.
- 8.1.2 Most of the noise monitoring results in the reporting period were below the Action and Limit Levels. The result was in line with the Environmental Impact Assessment (EIA) and Environmental Review Report (ERR) prediction that with the implementation of noise mitigation measures, the construction noise from the Project works will meet the stipulated criterion at the residential NSRs and at a majority of the education institutions.
- 8.1.3 One (1) Limit Level exceedance was recorded on 9 April 2018 for noise monitoring at M3. The exceedance at M3 is considered to be contributed from background noise, possibly traffic noise from Pak Wo Road and Fanling Highway. The exceedance was considered non-project-related.

9 REVIEW OF THE EFFECTIVENESS AND EFFICIENCY OF MITIGATION MEASURES

- 9.1.1 The impact air quality and noise monitoring programme ensured that any environmental impacts to the receivers would be readily detected and timely actions could be taken to rectify any non-compliance. The environmental monitoring results indicated that the construction activities in general were in compliance with the relevant environmental requirements and were environmentally acceptable. The weekly site inspections ensured that all the environmental mitigation measures recommended in the EIA/ERR were effectively implemented. Despite the minor deficiencies found during site audits, the Contractor has taken appropriate actions to rectify deficiencies within a reasonable timeframe. Therefore, the effectiveness and efficiency of the mitigation measures were considered high in most of the time.
- 9.1.2 For all the parameters under monitoring as mentioned in Section 8, the measured levels were in line with the EIA and ERR predictions generally. This indicates that the mitigation measures were effectively and efficiently implemented.

10 REVIEW OF SUCCESS OF EM&A PROGRAMME

- 10.1.1 The environmental monitoring methodology was considered well established as the monitoring results were found in line with the EIA predictions.
- 10.1.2 As effective follow-up actions were promptly taken once exceedances were recorded, no further exceedance occurred. The EM&A programme was considered successfully and adequately conducted during the course of the reporting period.

11 COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

11.1 Comments

11.1.1 According to the environmental site inspections performed in the reporting period, the following comments are made to the Contractor for precautionary and rectification purposes:

Contract No. HY/2012/06

Air Quality Impact

11.1.2 The Contractor was advised to provide adequate watering regularly for exposed area and slope as dust suppression.

11.1.3 The Contractor was advised to provide sufficient measures to keep the public access road clear of dusty material.

11.1.4 The Contractor was advised to remove the mud trails and ensure vehicles are properly wheel washed before leaving the site.

11.1.5 The Contractor was advised to provide valid NRMM label for all equipment before operation.

11.1.6 The Contractor was advised to cover the exposed stockpile of dusty materials entirely with impervious sheeting.

11.1.7 The Contractor was advised to cover the exposed slope properly with impervious sheeting for dust suppression.

11.1.8 The Contractor was advised to remove the dusty materials near the vehicle exit point, implement measures to direct surface run-off to sedimentation tank, pave the wheel washing area with hardcore and ensure all vehicles are properly wheel-washed before leaving the site.

11.1.9 The Contractor was advised to cover the stockpile of more than 20 bags of cement entirely with impervious sheeting for dust suppression.

Construction Noise Impact

11.1.10 The Contractor was reminded to wrap the breaker tip before operation as a noise mitigation measure.

Water Quality Impact

11.1.11 The Contractor was advised to remove the sandy materials near the drainage entrance and implement measures to prevent surface runoff of site and silt from entering the drainage system.

11.1.12 The Contractor was advised to remove the silt and debris in drainage and ensure flow of water without obstruction.

11.1.13 The Contractor was advised to implement effective measures to prevent muddy water being flowed outside the site

11.1.14 The Contractor was advised to provide proper protection for the drainage system.

11.1.15 The Contractor was advised to remove the general refuse and wastes in the drainage and ensure proper protection for drainage system is provided.

11.1.16 The Contractor was advised to clean up the public access road near site boundary and implement effective measures to prevent muddy surface runoff being spilled from the site to public area.

11.1.17 The Contractor was advised to ensure the channel directing the runoff from the wheel washing facility to sedimentation tank without overflow.

11.1.18 The Contractor was reminded to remove the stagnant water and treat the wastewater properly before discharge.

11.1.19 The Contractor was advised to provide sandbags along the site boundary to prevent surface runoff leaking outside the site area.

Chemical and Waste Management

11.1.20 The Contractor was advised to keep the site clean and tidy.

11.1.21 The Contractor was advised to provide secondary containment for chemical container to prevent potential leakage.

11.1.22 The Contractor was advised to provide proper label for all chemicals and store the chemical waste at a proper storage area.

11.1.23 The Contractor was advised to plug the opening of the drip tray to prevent potential leakage.

Landscape and Visual Impact

11.1.24 The Contractor.

Miscellaneous

11.1.25 Nil.

Contract No. 02/HY/2015 (Works Order Nos. CB128520-5 and CB128519-0)

Air Quality Impact

11.1.26 The Contractor should remove the mud trail and ensure vehicles are wheel-washed properly before leaving the site.

11.1.27 The Contractor was advised to keep the vehicle exit point clear of dusty materials.

11.1.28 The Contractor was advised to provide adequate watering regularly for exposed area for dust suppression.

11.1.29 The Contractor was advised to cover the exposed stockpile of dusty materials entirely with impervious sheeting for dust suppression.

Construction Noise Impact

11.1.30 Nil.

Water Quality Impact

11.1.31 The Contractor was advised to keep the intercepting channel clear of obstacle.

Chemical and Waste Management

11.1.32 The Contractor was advised to provide secondary containment for chemical container to prevent potential leakage.

11.1.33 The Contractor was advised to improve the housekeeping condition and keep the site clean and tidy.

Landscape and Visual Impact

11.1.34 Nil.

Miscellaneous

11.1.35 Nil.

11.2 Recommendations

11.2.1 The impact air quality and noise monitoring programme ensures that any deterioration in environmental condition is readily detected and timely actions are taken to rectify any non-compliances. Assessment and analysis of monitoring results collected demonstrated the environmental acceptability of the Project. The weekly environmental site inspections ensure that all the environmental mitigation measures recommended in the ERR are effectively implemented.

11.2.2 The EM&A programme effectively monitored the environmental impacts from the construction activities and no particular recommendations were advised for the improvement of the programme.

11.3 Conclusions

11.3.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting period.

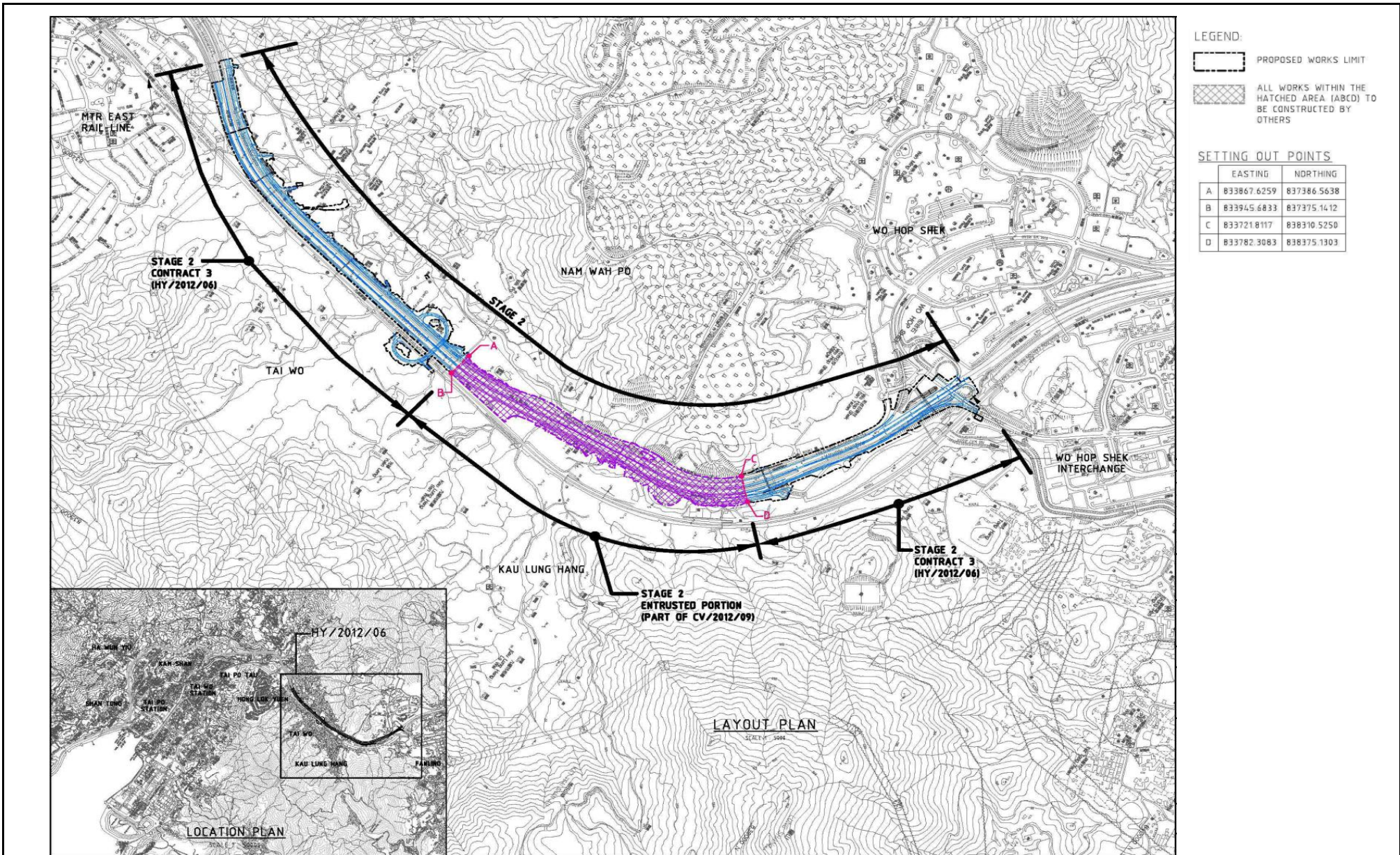
11.3.2 No Action Level exceedance of construction noise was recorded in the reporting period. No noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by Environmental Team in the reporting period.

11.3.3 One (1) Limit Level exceedance was recorded on 9 April 2018 for noise monitoring at M3. The exceedance at M3 is considered to be contributed from background noise, possibly traffic noise from Pak Wo Road and Fanling Highway. The exceedance was considered non-project-related.

11.3.4 One (1) noise-related complaint was received on 1 March 2018 and followed up by the Environmental Team. The full complaint investigation report is annexed in Appendix M of the Monthly EM&A Report for March 2018.

11.3.5 No notification of summons and successful prosecution was received in the reporting period.

FIGURES



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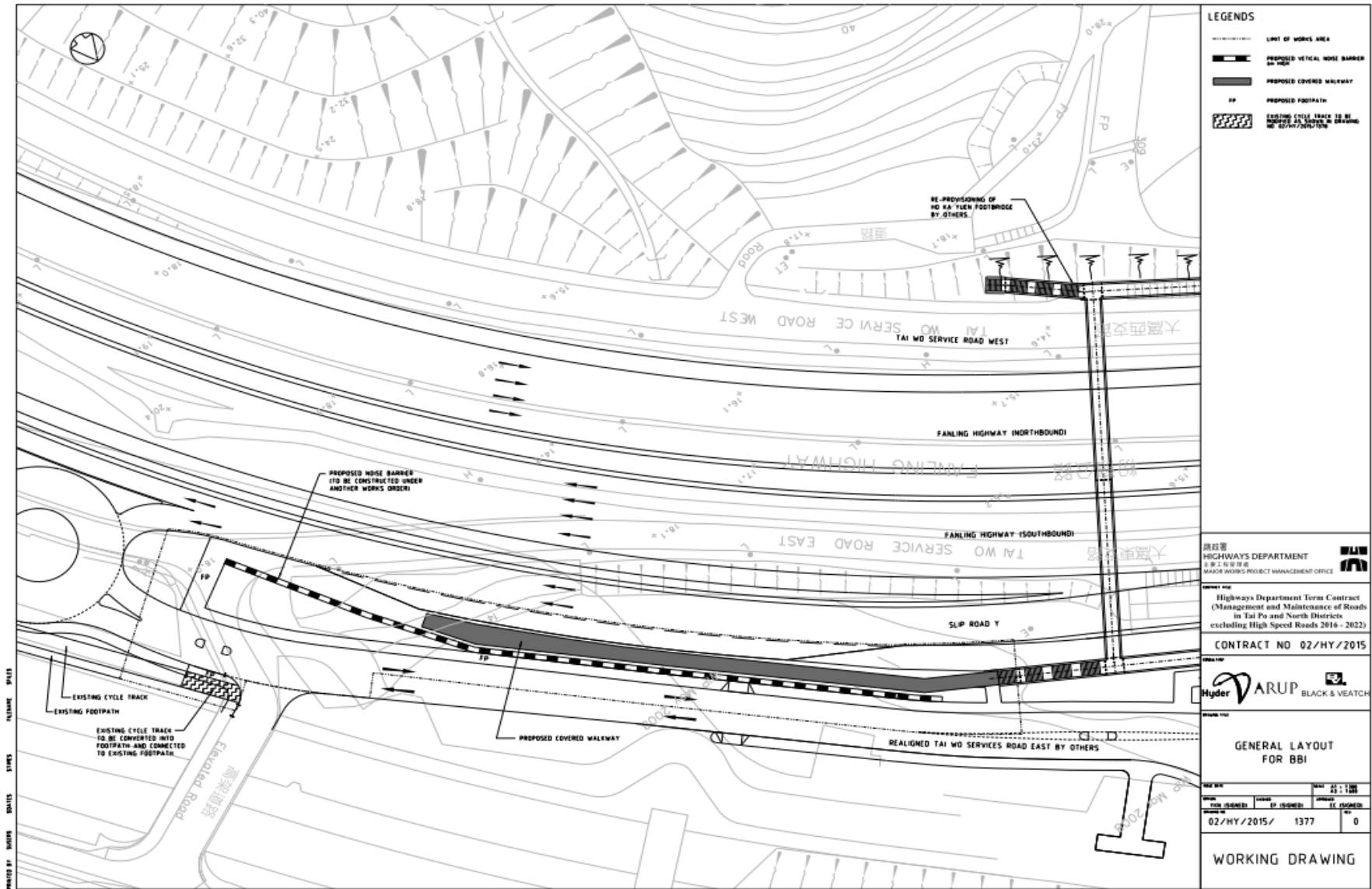
CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Layout Plan

Date: Dec 2013

Figure 1.1



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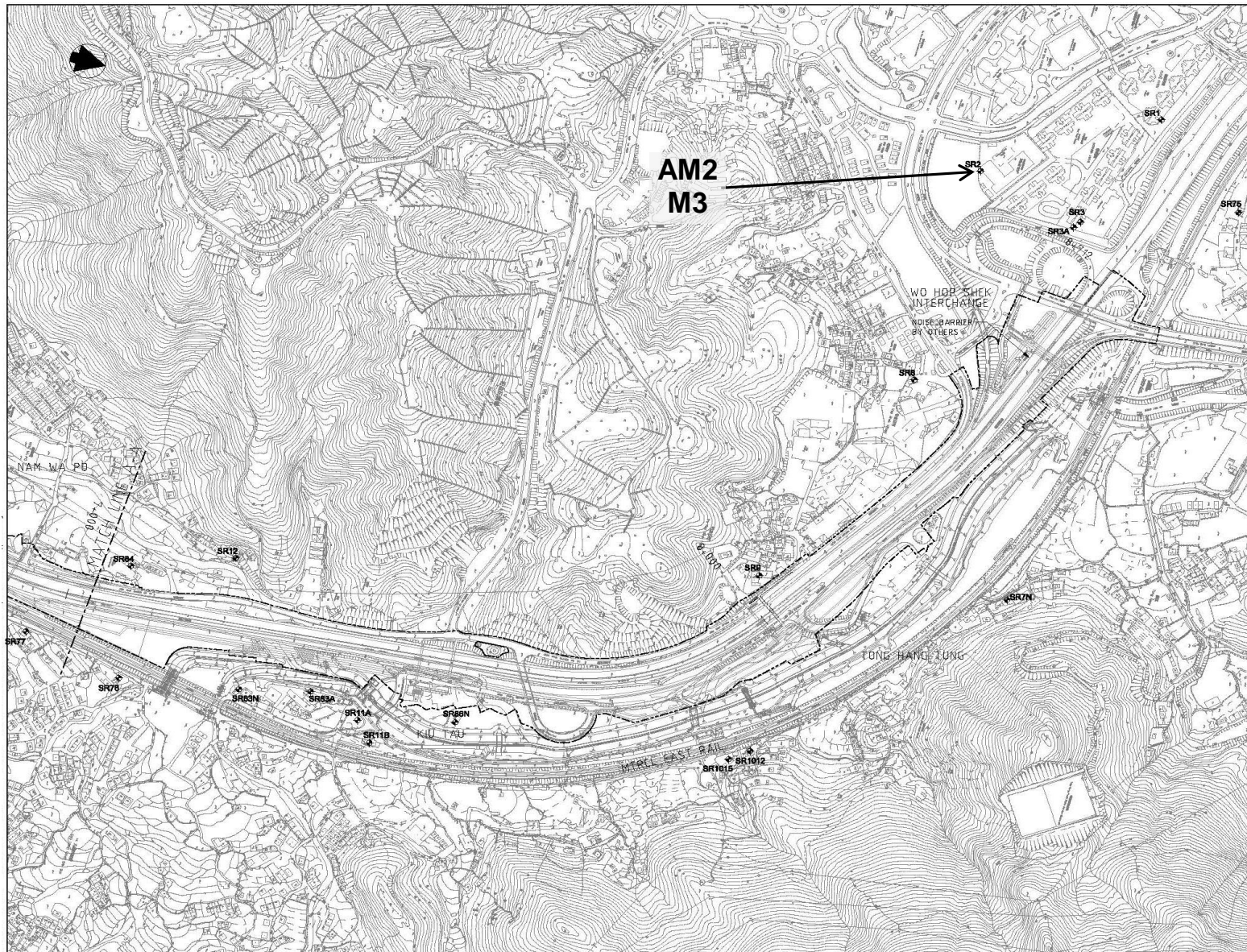
CONTRACT NO. 02/HY/2015
 PROVISION OF BUS-BUS INTERCHANGE ON FANLING HIGHWAY KOWLOON BOUND



Layout Plan

Date: Apr 2017

Figure 1.2



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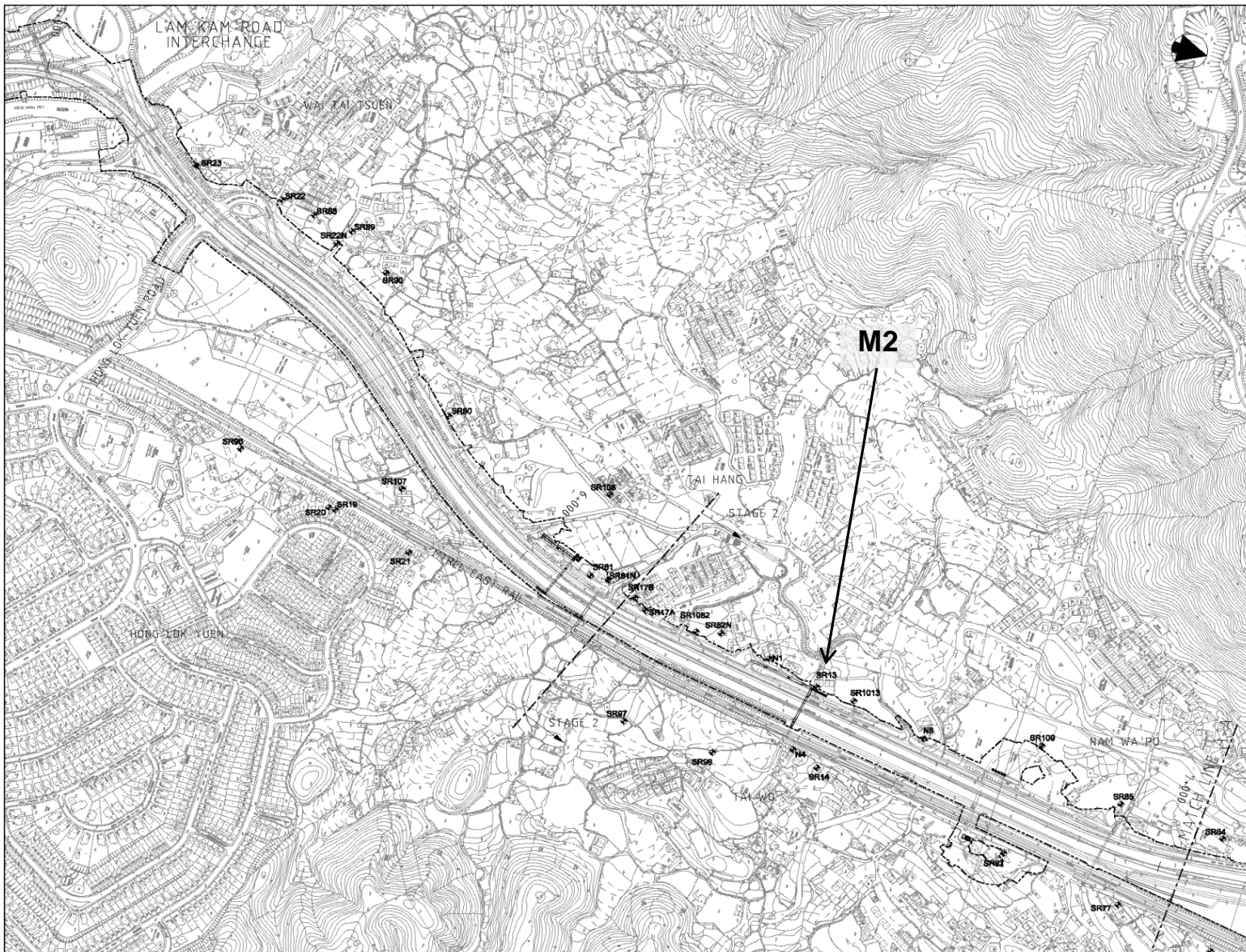
CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Locations of Monitoring Station

Date: Dec 2013

Figure 1.3a



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CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE

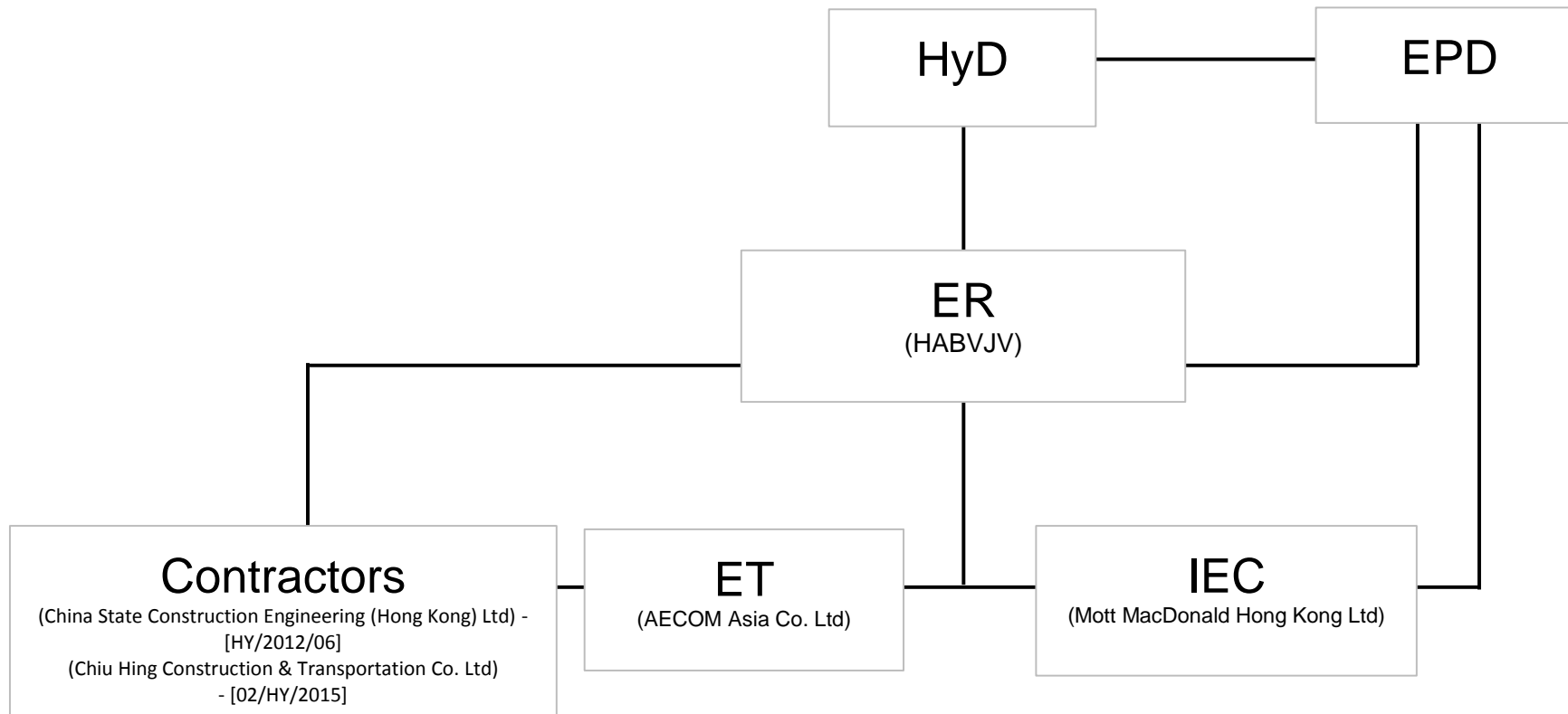


Locations of Monitoring Station

Date: Dec 2013

Figure 1.3b

**APPENDIX A
PROJECT ORGANIZATION STRUCTURE**



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CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Project Organization Structure

**APPENDIX B
CONSTRUCTION PROGRAMMES**

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Gantt Chart Grid																																															
								2013				2014				2015				2016				2017				2018				2019				2020																			
UUZ20140	Utility cable laying by Utility companies (Along NB49, 0-70m)	252	03-Feb-16 A	14-Dec-16 A				[Gantt bars for activity UUZ20140]																																															
NB49B (Ch.6215-6235)-TWSR West Side								[Gantt bars for NB49B section]																																															
Noise Barrier Works								[Gantt bars for Noise Barrier Works section]																																															
NB00536	Re-provision of Hse161 Gate complete	51	20-Aug-15 A	20-Oct-15 A				[Gantt bar for NB00536]																																															
NB00538	Pending for U-channel Design & VO	62	30-Sep-15 A	12-Dec-15 A				[Gantt bar for NB00538]																																															
NB00542	Pending for Permanent Road Works Design & VO	62	30-Sep-15 A	12-Dec-15 A				[Gantt bar for NB00542]																																															
NB00544	Construction of U-channel & permanent road for Hse 161 new access	13	14-Dec-15 A	30-Dec-15 A				[Gantt bar for NB00544]																																															
NB00545	NB49B - Pre-drilling (Deleted notified in July-14, VO issued accordingly)	0	08-Jul-14 A	08-Jul-14 A				[Gantt bar for NB00545]																																															
NB00547	Hoarding erection to change Hse 161 access	6	31-Dec-15 A	07-Jan-16 A				[Gantt bar for NB00547]																																															
NB00549	NB49B - Pre-drilling	13	05-Dec-15 A	19-Dec-15 A				[Gantt bar for NB00549]																																															
NB00550	NB49B piling (0.19m -20no)	31	28-Jan-16 A	12-Mar-16 A				[Gantt bar for NB00550]																																															
NB00560	NB49B- Sheet piling & Excavation	15	11-Jan-16 A	27-Jan-16 A				[Gantt bar for NB00560]																																															
NB00570	NB49B - Footing & Wall Structure - 2 bays	41	14-Mar-16 A	05-May-16 A				[Gantt bar for NB00570]																																															
NB00572	VO - revised NB49B wall height	0	12-Apr-16 A					[Milestone for NB00572]																																															
NB00574	Pending for revised RC detail design	13	13-Apr-16 A	27-Apr-16 A				[Gantt bar for NB00574]																																															
NB00580	NB49B - backfilling	33	06-May-16 A	15-Jun-16 A				[Gantt bar for NB00580]																																															
NB00590	NB49B - NB production	32	25-Jul-16 A	25-Aug-16 A				[Gantt bar for NB00590]																																															
NB00600	NB49B - NB post installation	7	26-Aug-16 A	02-Sep-16 A				[Gantt bar for NB00600]																																															
DSD Southern Trunk Sewer, Water Main Fire Main Works								[Gantt bars for DSD Southern Trunk Sewer section]																																															
TSZ10550	Sheet Piling & Excavation(-5m below ground) (along NB49B)	21	06-May-16 A	31-May-16 A				[Gantt bar for TSZ10550]																																															
TSZ10570	DSD Trunk Sewer laying (along NB49B - ID2-1)	17	19-Sep-16 A	08-Oct-16 A				[Gantt bar for TSZ10570]																																															
TSZ10580	Watermain installation (along NB49B)	29	12-Oct-16 A	14-Nov-16 A				[Gantt bar for TSZ10580]																																															
TSZ10590	Firemain installation (along NB49B)	18	21-Nov-16 A	10-Dec-16 A				[Gantt bar for TSZ10590]																																															
DSD Southern Trunk Sewer - Trenchless Construction								[Gantt bars for DSD Southern Trunk Sewer - Trenchless Construction section]																																															
TSZ11040	DSD Trunk Sewer laying (along - ID2-1)-Trenchless	34	20-Oct-14 A	27-Nov-14 A				[Gantt bar for TSZ11040]																																															
Underground Utility Works								[Gantt bars for Underground Utility Works section]																																															
UUZ20150	Utility cable laying by Utility companies (Along NB49B, 0-16m)	157	10-Jun-16 A	14-Dec-16 A				[Gantt bar for UUZ20150]																																															
NB54 (Ch.6240-6280)-TWSR West Side								[Gantt bars for NB54 section]																																															
Noise Barrier Works								[Gantt bars for Noise Barrier Works section]																																															
NB00605	NB54 - ID2-1 Pre-drilling (Deleted notified on14-5-14, VO issued accordingly)	0	20-Sep-14 A	20-Sep-14 A				[Gantt bar for NB00605]																																															
NB00610	NB54 - ID2-1 piling (0.19m -18no)- (Deleted notified on14-5-14, VO issued accordingly)	0	31-Mar-15 A	31-Mar-15 A				[Gantt bar for NB00610]																																															
NB00665	NB54 -Pre-drilling	91	15-Nov-14 A	12-Mar-15 A				[Gantt bar for NB00665]																																															
NB00670	NB54 piling (0.19m -16no) - rigs 1&2	70	16-Mar-15 A	10-Jun-15 A				[Gantt bar for NB00670]																																															
NB00690	NB54 - Footing & Wall Structure - 2 bays	107	09-Sep-15 A	18-Jan-16 A				[Gantt bar for NB00690]																																															
NB00700	NB54 - backfilling	4	11-Feb-16 A	20-Feb-16 A				[Gantt bar for NB00700]																																															
NB00710	NB54 - NB production	167	20-Jan-16 A	04-Jul-16 A				[Gantt bar for NB00710]																																															
NB00720	NB54 - NB post & panel installation	5	02-May-17 A	08-May-17 A				[Gantt bar for NB00720]																																															
DSD Southern Trunk Sewer, Water Main Fire Main Works								[Gantt bars for DSD Southern Trunk Sewer section]																																															
TSZ10600	Sheet Piling & Excavation(-5m below ground) (along NB54)	72	20-Aug-15 A	14-Nov-15 A				[Gantt bar for TSZ10600]																																															
TSZ10610	DSD Trunk Sewer laying (along NB54 except ID2-1 section)	25	16-Nov-15 A	14-Dec-15 A				[Gantt bar for TSZ10610]																																															
TSZ10620	Backfill up to NB54 footing level	6	15-Dec-15 A	21-Dec-15 A				[Gantt bar for TSZ10620]																																															
TSZ10630	Watermain installation (along NB54)	215	20-May-16 A	11-Feb-17 A				[Gantt bar for TSZ10630]																																															
TSZ10640	Firemain installation (along NB54)	44	19-Dec-16 A	18-Feb-17 A				[Gantt bar for TSZ10640]																																															
DSD Southern Trunk Sewer - Trenchless Construction								[Gantt bars for DSD Southern Trunk Sewer - Trenchless Construction section]																																															

Remaining Level of Effort (Green line)
 Actual Level of Effort (Blue line)
 Actual Work (Blue bar)
 Remaining Work (Green bar)
 Critical Remaining Work (Red bar)
 Milestone (Diamond)
 Crit. Milestone (Red Diamond)

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Contract No. HY/2012/06
Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange
Works Programme - WP Rev. 7



Date	Revision	Checked	Approved
07-Nov-16	WP Rev 4		
17-Aug-17	WP Rev 5		
29-Mar-18	WP Rev 6		
03-Dec-18	WP Rev 7		

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	2013												2014												2015												2016												2017												2018												2019												2020											
								J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O	J	F	A	S	O																										
NB01600	NB43A-2 - NB post & panel installation	5	19-Feb-19	23-Feb-19	21-Jun-19	26-Jun-19	99																																																																																																
NB03330	Bus Shelter footing at NB43A - VO86	30	05-Dec-18	11-Jan-19	16-Jan-19	21-Feb-19	33																																																																																																
NB03340	Relocate Bus Shelter installation - VO86	30	12-Jan-19	18-Feb-19	16-May-19	20-Jun-19	99																																																																																																
NB50 (Ch.6060-6130)-FH N/B Side																																																																																																							
Noise Barrier Works																																																																																																							
NB001140	NB50 -Pre-drilling	12	03-Jun-17 A	16-Jun-17 A																																																																																																			
NB001150	NB50 -piling (0.19m -28no)	89	05-May-18 A	20-Aug-18 A																																																																																																			
NB001160	NB50 -Sheet piling & Excavation	15	20-Oct-18 A	06-Nov-18 A																																																																																																			
NB001170	NB50 -Footing & Wall Structure	26	07-Nov-18 A	06-Dec-18	28-Dec-18	15-Jan-19	31																																																																																																
NB001175	NB50 - Drainage Works	24	27-Dec-18	24-Jan-19	16-Jan-19	14-Feb-19	16																																																																																																
NB001180	NB50 -backfilling	12	01-Feb-19	16-Feb-19	22-Feb-19	07-Mar-19	16																																																																																																
NB001190	NB50 -NB production	45	07-Dec-18	20-Jan-19	07-May-19	20-Jun-19	151																																																																																																
NB001200	NB50 -NB post & panel installation	5	18-Feb-19	22-Feb-19	21-Jun-19	26-Jun-19	100																																																																																																
NB17571	NB50 - Drainage Works (VO on 14-6-18 - add 1 manhole)	6	25-Jan-19	31-Jan-19	15-Feb-19	21-Feb-19	16																																																																																																
NB50A (Ch.6130-6450)-FH N/B Side																																																																																																							
Noise Barrier Works																																																																																																							
NB001210	NB50A - ID2-2 Pre-drilling	3	15-Jun-17 A	17-Jun-17 A																																																																																																			
NB001220	NB50A - ID2-2 piling (0.19m -18no)	76	17-Jul-18 A	15-Oct-18 A																																																																																																			
NB001230	NB50A - ID2-2 Sheet piling & Excavation	19	29-Oct-18 A	19-Nov-18 A																																																																																																			
NB001240	NB50A - ID2-2 Footing & Wall Structure	50	20-Nov-18 A	19-Jan-19	20-Aug-18	19-Oct-18	-76																																																																																																
NB001245	NB50A - ID2-2 Drainage Works	18	21-Jan-19	12-Feb-19	20-Oct-18	09-Nov-18	-76																																																																																																
NB001250	NB50A - ID2-2 backfilling	12	13-Feb-19	26-Feb-19	22-Feb-19	07-Mar-19	8																																																																																																
NB001260	NB50A - ID2-2 NB production	45	19-Jan-19	05-Mar-19	07-May-19	20-Jun-19	107																																																																																																
NB001270	NB50A - ID2-2 NB post & panel installation	5	05-Mar-19	11-Mar-19	21-Jun-19	26-Jun-19	86																																																																																																
NB01604	NB50A (0-108m)(NB50A/1-11) Pre-drilling	26	01-Jun-17 A	30-Jun-17 A																																																																																																			
NB01606	NB50A (0-108m)(NB50A/1-11, 0.19m -6nos) Piling (s3)	114	31-May-18 A	15-Oct-18 A																																																																																																			
NB01610	NB50A (0-108m) - Sheet piling & Excavation	24	29-Oct-18 A	24-Nov-18	20-Nov-18	24-Nov-18	0																																																																																																
NB01620	NB50A(0-108m) - Footing & Wall Structure	55	26-Nov-18	31-Jan-19	26-Nov-18	31-Jan-19	0																																																																																																
NB01625	NB50A (0-108m) - Drainage Works	24	09-May-19	05-Jun-19	01-Feb-19	02-Mar-19	-76																																																																																																
NB01626	NB50A (0-108m) - Drainage Works (VO on 14-6-18 - add 2 manholes)	12	09-May-19	22-May-19	15-Feb-19	28-Feb-19	-66																																																																																																
NB01630	NB50A-1 - backfilling	12	28-May-19	11-Jun-19	22-Feb-19	07-Mar-19	-76																																																																																																
NB01640	NB50A-1 - NB production	45	01-Feb-19	17-Mar-19	07-May-19	20-Jun-19	95																																																																																																
NB01650	NB50A-1 - NB post & panel installation	5	12-Jun-19	17-Jun-19	21-Jun-19	26-Jun-19	8																																																																																																
NB01654	NB50A (132-228m)(NB50A/12-20) & FVMS1 Pre-drilling	20	20-Feb-18 A	14-Mar-18 A																																																																																																			
NB01656	NB50A (132-228m)(NB50A/12-S2, 0.19m -44nos) & FVMS1 (8 nos) Piling (S3)	114	31-May-18 A	15-Oct-18 A																																																																																																			
NB01660	NB50A (132-228m) - Sheet piling & Excavation	24	29-Oct-18 A	24-Nov-18	29-Aug-18	03-Sep-18	-68																																																																																																
NB01670	NB50A (132-228m) - Footing & Wall Structure	55	26-Nov-18	31-Jan-19	04-Sep-18	09-Nov-18	-68																																																																																																
NB01675	NB50A (132-228m) - Drainage Works (VO on 14-6-18 - remain 2 manholes)	12	13-Feb-19	26-Feb-19	10-Nov-18	23-Nov-18	-76																																																																																																
NB01676	NB50A (132-228m) - Drainage Works (VO on 14-6-18 - add 7 special manholes)	56	27-Feb-19	08-May-19	24-Nov-18	31-Jan-19	-76																																																																																																
NB01680	NB50A-2 - backfilling	12	02-May-19	15-May-19	22-Feb-19	07-Mar-19	-54																																																																																																
NB01690	NB50A-2 - NB production	45	01-Feb-19	17-Mar-19	07-May-19	20-Jun-19	95																																																																																																
NB01700	NB50A-2 - NB post & panel installation	5	16-May-19	21-May-19	21-Jun-19	26-Jun-19	30																																																																																																
NB01704	NB50A (228-309m)(NB50A/21-27) & ADS1 Pre-drilling	26	15-Jun-16 A	15-Jul-16 A																																																																																																			

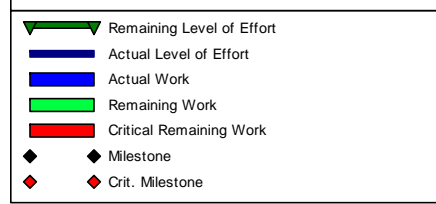
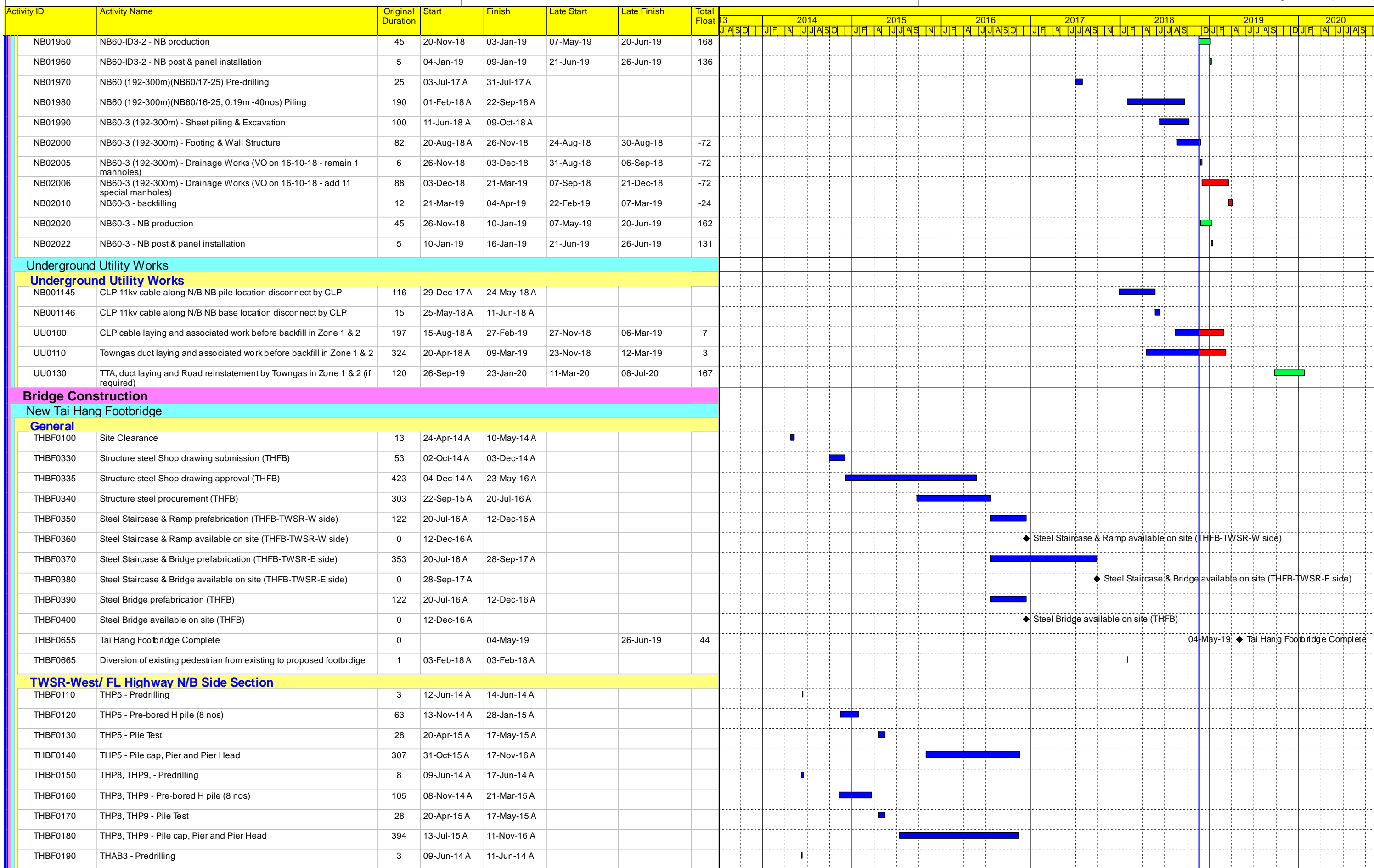
█ Remaining Level of Effort
█ Actual Level of Effort
█ Actual Work
█ Remaining Work
█ Critical Remaining Work
◆ Milestone
◆ Crit. Milestone

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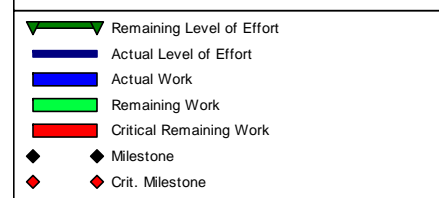
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03-Dec-18	WP Rev 7		

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Gantt Chart																							
								2013	2014				2015				2016				2017				2018				2019		
THBF0200	THAB3 - Pre-bored H pile (4 nos)	79	08-Nov-14 A	11-Feb-15 A																											
THBF0210	THAB3 - Pile Test	28	20-Apr-15 A	17-May-15 A																											
THBF0220	THAB3 - pile cap & abutment wall	79	15-Jun-16 A	15-Sep-16 A																											
THBF0230	THAB3 - Backfilling (~4m)	43	17-Sep-16 A	08-Nov-16 A																											
THBF0235	Steel Staircase ready for erection (THFB-TWSR-W side)	0		21-Jan-17 A																											
THBF0240	THP6, THP7 - Predrilling	58	10-Jun-14 A	16-Aug-14 A																											
THBF0250	THP6, THP7 - Pre-bored H pile (14 nos)	92	17-Nov-14 A	14-Mar-15 A																											
THBF0260	THP6, THP7 - Pile Test	28	20-Apr-15 A	17-May-15 A																											
THBF0270	THP6, THP7 - Pile cap, Pier and Pier Head	271	01-Feb-16 A	06-Jan-17 A																											
THBF0280	THAB2 - Predrilling	8	12-Jun-14 A	20-Jun-14 A																											
THBF0290	THAB2 - Pre-bored H pile (10 nos)	64	12-Dec-14 A	07-Mar-15 A																											
THBF0300	THAB2 - Pile Test	28	20-Apr-15 A	17-May-15 A																											
THBF0310	THAB2 - pile cap & abutment wall	49	16-Sep-16 A	15-Nov-16 A																											
THBF0320	THAB2 - Backfilling (~3m)	17	27-Oct-16 A	15-Nov-16 A																											
THBF0325	Steel Ramp ready for erection (THFB-TWSR-W side)	0		06-Jan-17 A																											
THBF0410	Erect Staircase (THFB-TWSR-W side)	6	21-Jan-17 A	27-Jan-17 A																											
THBF0420	Erect Ramp	12	07-Jan-17 A	20-Jan-17 A																											
THBF0620	Finishes Work	527	27-Feb-17 A	05-Dec-18	11-Jun-19	26-Jun-19	163																								
THBF0625	Bridge Structure complete (THFB-TWSR-W side)	0		05-Dec-18		26-Jun-19	163																								
Crossing Fanling Highway Section																															
THBF0530	THP1 - Predrilling	12	20-Apr-17 A	05-May-17 A																											
THBF0540	THP1 - Pre-bored H pile (6 nos)	20	29-Jun-17 A	22-Jul-17 A																											
THBF0560	THP1 - Pile cap, Pier and Pier Head	94	29-Jul-17 A	18-Nov-17 A																											
THBF0575	Erect Temp Tower at central divider	8	20-Nov-17 A	28-Nov-17 A																											
THBF0580	Erect THFB across fanling highway	2	29-Nov-17 A	30-Nov-17 A																											
THBF0590	Finishes Work	135	20-Jun-18 A	28-Nov-18	18-Jun-19	26-Jun-19	169																								
THBF0600	Bridge Structure complete (THFB-Cross fanling highway)	0		28-Nov-18		26-Jun-19	169																								
TWSR-East FL Highway S/B Side Section																															
THBF0430	Precautionary work for MTRC I&P area	39	01-Apr-14 A	22-May-14 A																											
THBF0432	Trial pit for locating C350 watermain	36	15-Mar-14 A	30-Apr-14 A																											
THBF0435	Pending for RE & WSD information for C350 location	45	01-May-14 A	25-Jun-14 A																											
THBF0436	Trial pit for locating C350 watermain (2nd trial)	18	10-Jul-14 A	30-Jul-14 A																											
THBF0440	THAB1 - Predrilling	82	20-Mar-15 A	30-Jun-15 A																											
THBF0470	THAB1 - pile cap & abutment wall	632	21-Nov-16 A	14-Jan-19	23-Jan-19	18-Mar-19	52																								
THBF0480	THAB1 - Backfilling (~3m)	20	15-Jan-19	08-Feb-19	19-Mar-19	11-Apr-19	52																								
THBF0490	THP2 - Predrilling	3	19-Mar-15 A	21-Mar-15 A																											
THBF0500	THP2 - Pre-bored H pile (8 nos)	40	11-Nov-15 A	29-Dec-15 A																											
THBF0510	THP2 - Pile Test	105	16-Feb-16 A	30-May-16 A																											
THBF0520	THP2 - Pile cap, Pier and Pier Head	124	20-Mar-17 A	19-Aug-17 A																											
THBF0570	Erect Staircase (THFB-TWSR-E side)	30	09-Feb-19	15-Mar-19	12-Apr-19	21-May-19	52																								
THBF0640	Finishes Work	30	16-Mar-19	24-Apr-19	22-May-19	26-Jun-19	52																								
THBF0645	Bridge Structure complete (THFB-TWSR-E side)	0		04-May-19		26-Jun-19	44																								



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29-Mar-18	WP Rev 6		
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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Year													
								2013	2014	2015	2016	2017	2018	2019	2020						
L1450	CLP Power available (by CLP)	913	21-Jun-16 A	20-Dec-18	26-Feb-19	28-Mar-19	98														
L1460	Lift available - NF78	0		04-May-19		09-May-19	4														04-May-19 ◆ Lift available - NF78
L1490	THFB Completion Date	0		04-May-19		26-Jun-19	44														04-May-19 ◆ THFB Completion Date

Demolition of Existing Tai Hang Footbridge

TWSR-West/ FL Highway N/B Side Section

Activity ID	Activity Name	Duration	Start	Finish
Z2.THF.1040	Temporary steel ramp construction	34	17-Jul-15 A	25-Aug-15 A
Z2.THF.1050	Modification of existing entrance of Tai Hang Footbridge	5	26-Aug-15 A	31-Aug-15 A
Z2.THF.1060	Diversion of existing pedestrian to temporary steel ramp	3	01-Sep-15 A	03-Sep-15 A
Z2.THF.1070	Temporary support installation to removal portions of Tai Hang Footbridge	22	04-Sep-15 A	30-Sep-15 A
Z2.THF.1080	Removal of portion of Tai Hang Footbridge for THP1 works	33	02-Oct-15 A	10-Nov-15 A
Z2.THF.1120	Demolish existing Tai Hang footbridge (TWSR-W side)	6	05-Feb-18 A	10-Feb-18 A

Crossing Fanling Highway Section

Activity ID	Activity Name	Duration	Start	Finish
Z2.THF.1090	Erect Temp platform for bridge demolition	22	18-Dec-17 A	15-Jan-18 A
Z2.THF.1100	Demolish existing Tai Hang Footbridge	2	03-Feb-18 A	05-Feb-18 A
Z2.THF.1110	Removal of temporary platform	5	06-Feb-18 A	10-Feb-18 A
Z2.THF.1130	Demolish remaining column	5	06-Feb-18 A	10-Feb-18 A

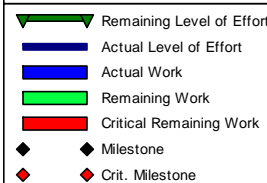
New Tai Wo Footbridge

General

Activity ID	Activity Name	Duration	Start	Finish	Notes
TWFB1010	Site Clearance	53	25-Aug-14 A	28-Oct-14 A	
TWFB1020	Structure steel Shop drawing submission (TWFB)	31	29-Oct-14 A	03-Dec-14 A	
TWFB1030	Structure steel Shop drawing approval (TWFB)	450	04-Dec-14 A	24-Jun-16 A	
TWFB1040	Structure steel procurement (TWFB)	358	22-Aug-15 A	13-Aug-16 A	
TWFB1050	Steel Staircase & Ramp prefabrication (TWFB-TWSR-W side)	105	15-Aug-16 A	17-Dec-16 A	
TWFB1060	Steel Staircase & Ramp available on site (TWFB-TWSR-W side)	0	17-Dec-16 A		◆ Steel Staircase & Ramp available on site (TWFB-TWSR-W side)
TWFB1090	Steel Bridge prefabrication (TWFB)	669	15-Aug-16 A	20-Nov-18 A	
TWFB1100	Steel Bridge available on site (TWFB)	0	22-Nov-18*	22-Nov-18	◆ Steel Bridge available on site (TWFB)
TWFB1110	Tai Wo Footbridge Complete	0		24-May-19	◆ Tai Wo Footbridge Complete

TWSR-West/ FL Highway N/B Side Section

Activity ID	Activity Name	Duration	Start	Finish	
TWFB1130	TWP1 - Pre-drilling	4	02-Aug-14 A	06-Aug-14 A	
TWFB1140	TWP1 - Pre-bored H pile (8 nos)	82	22-Apr-15 A	30-Jul-15 A	
TWFB1150	TWP1 - Pile Test	25	23-Sep-15 A	17-Oct-15 A	
TWFB1160	TWP1 - Pile cap, Pier and Pier Head	250	18-Feb-16 A	17-Dec-16 A	
TWFB1210	TWAB2 - Pre-drilling	2	21-Oct-14 A	22-Oct-14 A	
TWFB1220	TWAB2 - Pre-bored H pile (4 nos)	50	18-Apr-15 A	17-Jun-15 A	
TWFB1230	TWAB2 - Pile Test	26	25-Sep-15 A	20-Oct-15 A	
TWFB1240	TWAB2 - pile cap & abutment wall	148	20-Jul-16 A	14-Jan-17 A	
TWFB1250	TWAB2 - Backfilling (~4m)	63	12-Nov-16 A	27-Jan-17 A	
TWFB1260	Steel Staircase ready for erection (THFB-TWSR-W side)	0		27-Jan-17 A	◆ Steel Staircase ready for erection (THFB-TWSR-W side)
TWFB1270	TWP4, TWP5 - Pre-drilling	8	21-Jun-14 A	30-Jun-14 A	
TWFB1280	TWP4, TWP5 - Pre-bored H pile (14 nos)	71	11-May-15 A	04-Aug-15 A	
TWFB1290	TWP4, TWP5 - Pile Test	40	05-Oct-15 A	13-Nov-15 A	
TWFB1300	TWP4, TWP5 - Pile cap, Pier and Pier Head	299	16-Nov-15 A	23-Nov-16 A	
TWFB1310	TWAB1 - Pre-drilling	37	27-Jun-14 A	09-Aug-14 A	



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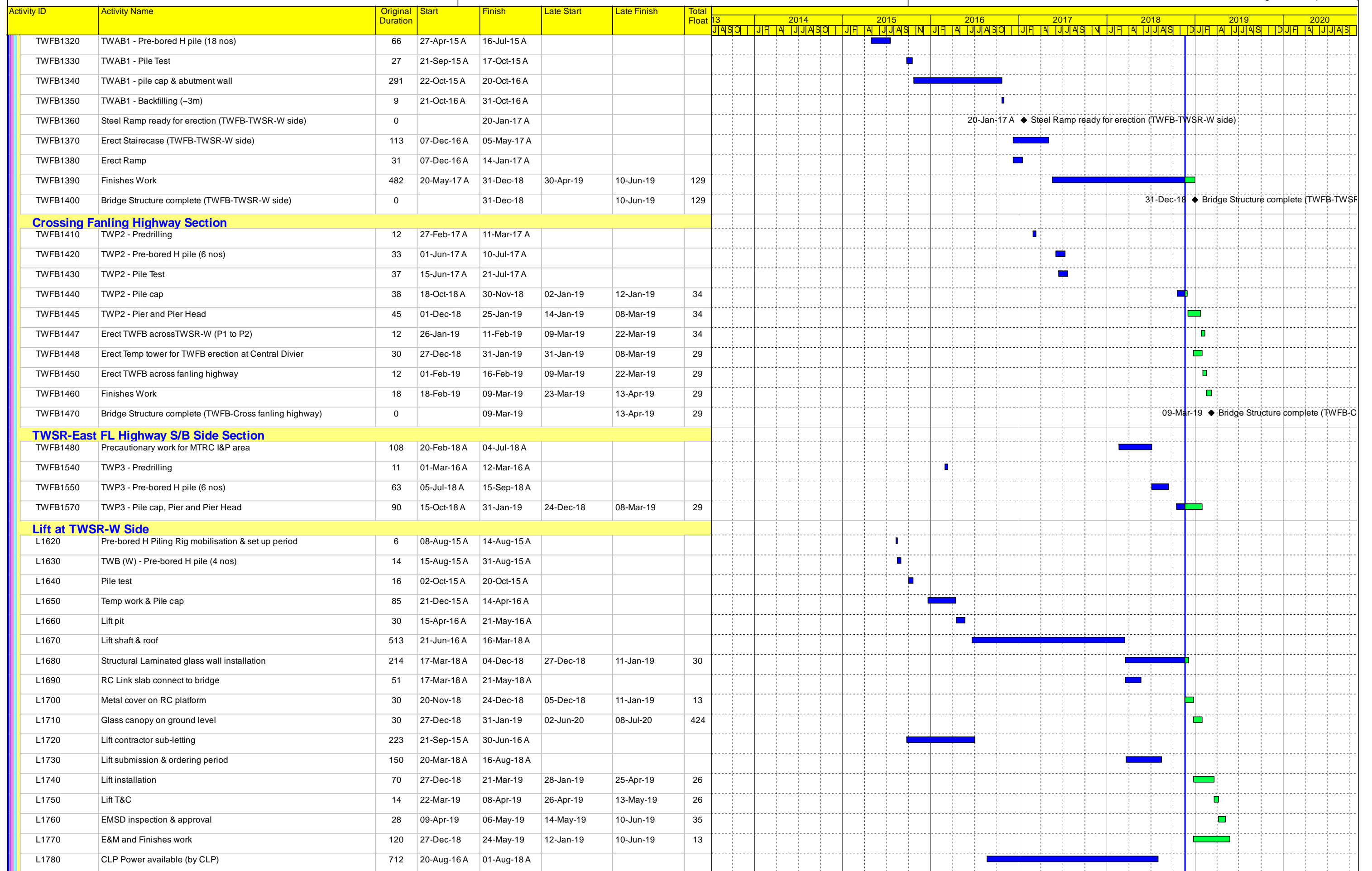
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█ Remaining Level of Effort
█ Actual Level of Effort
█ Actual Work
█ Remaining Work
█ Critical Remaining Work
◆ Milestone
◆ Crit. Milestone

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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Gantt Chart																							
								2013	2014				2015				2016				2017				2018				2019		
L1790	Lift available - NF116-Lift 1	0		24-May-19		10-Jun-19	13	24-May-19 ◆ Lift available - NF116-Lift 1																							
L1810	New Tai Wo footbridge completion	0		24-May-19		26-Jun-19	27	24-May-19 ◆ New Tai Wo footbridge complet																							
Temporary Tai Wo Footbridge																															
Design Works																															
TWFB-T1000	Procurement of Temporary bridge Design consultant	69	24-Mar-14 A	19-Jun-14 A				[Bar]																							
TWFB-T1010	Design preparation	274	20-Jul-15 A	27-Jun-16 A				[Bar]																							
TWFB-T1020	Engineer Comment	130	28-Jun-16 A	30-Nov-16 A				[Bar]																							
TWFB-T1030	Design amendment	94	01-Dec-16 A	31-Mar-17 A				[Bar]																							
TWFB-T1040	Design Available	0		31-Mar-17 A				31-Mar-17 A ◆ Design Available																							
Construction Works																															
TWFB-T1050	TTA for Temp ramp working space	48	20-May-15 A	17-Jul-15 A				[Bar]																							
TWFB-T1060	Erect Temp Ramp	138	18-Jul-15 A	31-Dec-15 A				[Bar]																							
TWFB-T1065	TW Bridge Ramp at TWSR-W available	0		31-Dec-16 A				31-Dec-16 A ◆ TW Bridge Ramp at TWSR-W available																							
TWFB-T1070	TWFB across TWSR-W available	0		25-Sep-17 A				25-Sep-17 A ◆ TWFB across TWSR-W available																							
TWFB-T1072	Piling work for NB60 bay 1 (0.19m -10no)	19	29-Jun-17 A	21-Jul-17 A				[Bar]																							
TWFB-T1073	PCCW re-access temp tower location at TWSR-W to reinstate cable duct	18	11-Aug-17 A	31-Aug-17 A				[Bar]																							
TWFB-T1074	Erect Temp tower at TWSR-W	9	01-Sep-17 A	11-Sep-17 A				[Bar]																							
TWFB-T1076	Connect Temp Bridge to new TW bridge at TWSR-W	2	12-Sep-17 A	13-Sep-17 A				[Bar]																							
TWFB-T1078	Temp footing at NB60 bay 1	6	16-Aug-17 A	22-Aug-17 A				[Bar]																							
TWFB-T1079	Erect Temp tower at NB60 bay 1	5	25-Aug-17 A	30-Aug-17 A				[Bar]																							
TWFB-T1080	Erect Temp bridge from TWP1 to P2 to Existing Bridge	1	12-Sep-17 A	12-Sep-17 A				[Bar]																							
TWFB-T1090	Diverse Pedestrian to TWFB ramp	0	13-Sep-17 A	13-Sep-17 A				[Bar]																							
TWFB-T1100	Demolish Temp Ramp & laying temp road for TTA	9	14-Sep-17 A	23-Sep-17 A				[Bar]																							
TWFB-T1190	TTA for temp column at new FLHY central divider	2	23-Sep-17 A	24-Sep-17 A				[Bar]																							
TWFB-T1195	G54 footing at central divider	29	25-Sep-17 A	31-Oct-17 A				[Bar]																							
TWFB-T1200	Erect temp column at new FLHY central divider	14	04-Jan-18 A	19-Jan-18 A				[Bar]																							
TWFB-T1205	Erect Temp Column & link bridge at FLHY N/B (besides TW-P2 & NB60 1st bay)	1	12-Sep-17 A	12-Sep-17 A				[Bar]																							
TWFB-T1208	Erect Temp Column & link bridge to existing bridge at FLHY S/B (besides TW-P3)	32	15-Jan-18 A	23-Feb-18 A				[Bar]																							
TWFB-T1210	Erect Temp Bridge across FLHY	11	24-Jan-18 A	05-Feb-18 A				[Bar]																							
TWFB-T1220	Temp TW bridge complete & pedestrian diversion	0		20-Mar-18 A				20-Mar-18 A ◆ Temp TW bridge complete & pedestrian diversion																							
TWFB-T1240	Removed Temp Footbridge	30	11-Mar-19	15-Apr-19	15-Apr-19	23-May-19	29	[Bar]																							
Demolition of Existing Tai Wo Footbridge																															
TWSR-West/ FL Highway N/B Side Section																															
TWFB-T1130	Demolish existing ramp & staircase at TWSR-W	12	02-Jan-16 A	15-Jan-16 A				[Bar]																							
TWFB-T1135	Demolish existing TWFB across TWSR-W	2	14-Nov-16 A	15-Nov-16 A				[Bar]																							
TWFB-T1230	Watermain & Firemain at NB58 & backfill	55	29-Aug-16 A	03-Nov-16 A				[Bar]																							
Crossing Fanling Highway Section																															
TWFB-DE1070	Demolish existing Tai Wo Footbridge	10	20-Mar-18 A	03-Apr-18 A				[Bar]																							
TWFB-DE1110	Demolish existing Tai Wo Footbridge complete (across FH)	0		03-Apr-18 A				03-Apr-18 A ◆ Demolish existing Tai Wo Footbridge complete (across FH)																							
Signalized Junction																															
New Tai Hang Footbridge																															
TWSR-West/ FL Highway N/B Side Section																															
THBF0630	Installation of Traffic Signal Poles at TWSR-W N/B (Tai hang Junction)	21	23-Apr-19	17-May-19	08-May-19	31-May-19	12	[Bar]																							
THBF0650	Ducting & Cable Draw Installation (Tai hang Junction)	30	18-Feb-19	23-Mar-19	04-Mar-19	08-Apr-19	12	[Bar]																							

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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	2014					2015					2016					2017					2018					2019					2020																									
								J	F	A	J	J	A	S	O	J	F	A	J	J	A	S	N	J	F	A	J	J	A	S	O	J	F	A	J	J	A	S	N	J	F	A	J	J	A	S	O	J	F	A	J	J	A	S	N	J	F	A	J	J	A	S	N
MCLT1010	Sublet Design & Build Contractor	45	14-Jul-14 A	03-Sep-14 A																																																											
MCLT1020	Sublet Demolition Contractor	45	14-Jul-14 A	03-Sep-14 A																																																											
MCLT1030	Design Preparation	249	06-Aug-14 A	12-Jun-15 A																																																											
MCLT1040	Engineer approval	25	13-Jun-15 A	14-Jul-15 A																																																											
MCLT1045	Searching Land owner for DLO exemption application	84	24-Sep-14 A	16-Dec-14 A																																																											
MCLT1050	Apply cert for exemption by DLO by Engineer	25	01-Dec-14 A	31-Dec-14 A																																																											
MCLT1060	Design available for construction	0	15-Jul-15 A																																																												
MCLT1070	Method Statement submission & Demolish House for New MCLT construcion (Additional requirement)	32	09-Dec-14 A	17-Jan-15 A																																																											
MCLT1078	Additional site formation work for New MCLT location	15	25-Dec-14 A	14-Jan-15 A																																																											
MCLT1080	Construct New MCLT (Structure)	242	21-Jul-15 A	20-May-16 A																																																											
MCLT1090	New MCLT - finishes works	503	20-May-16 A	30-Jan-18 A																																																											
MCLT1100	New MCLT completion	0		30-Jan-18 A																																																											
MCLT1110	VO - change New MCLT location from SA323A to SA322A	0	24-Sep-14 A																																																												
General																																																															
Z2.P2N.1000	Liaison with relevant villages houses's owner and related parties	30	07-Jul-14 A	09-Aug-14 A																																																											
Z2.P2N.1010	Submission of contractor's design for site formation	28	11-Aug-14 A	12-Sep-14 A																																																											
Z2.P2N.1050	Temporary access road construction	14	22-Sep-14 A	09-Oct-14 A																																																											
Z2.P2N.1060	Site clearance	10	26-Sep-14 A	09-Oct-14 A																																																											
Z2.P2N.1070	SA322A: Tree Removal Works	14	10-Oct-14 A	25-Oct-14 A																																																											
Z2.P2N.1075	Hse 116 Vacation Date	0		09-Jan-15 A																																																											
Z2.P2N.1080	Site fomration works (Demolition of existing villiage houses with log no. 115, 116 & 117)	51	17-Nov-14 A	17-Jan-15 A																																																											
Z2.P2N.1100	Handover inspection	0	17-Jan-15 A	17-Jan-15 A																																																											
TCSS Works																																																															
TCSS Pre-Construction Works																																																															
TCSS0170	Sign Gantry Factory production - AADS1	30	02-Apr-19	11-May-19	12-Mar-19	16-Apr-19	-18																																																								
TCSS0190	Sign Gantry Factory production - ADS1	30	28-Feb-19	03-Apr-19	07-Feb-19	13-Mar-19	-18																																																								
TCSS0200	Sign Gantry Factory production - FADS1	30	21-Jan-19	26-Feb-19	03-Jan-19	08-Feb-19	-15																																																								
TCSS0210	Sign Gantry Factory production - G55	30	31-Oct-18 A	04-Dec-18	18-Dec-18	04-Jan-19	24																																																								
TCSS0220	Sign Gantry Factory production - G54	30	10-May-19	14-Jun-19	15-Apr-19	23-May-19	-18																																																								
Civil Provision for TCSS Works																																																															
TCSS2140	M10 for CCTV	14	25-May-19	11-Jun-19	11-Jun-19	26-Jun-19	13																																																								
TCSS2180	Pillar box, isolator & associated duct work - PL204 for G30 & G55	30	21-Aug-19	25-Sep-19	22-May-19	26-Jun-19	-76																																																								
TCSS2190	Pillar box, isolator & associated duct work - PL205 for G54 & M10	30	21-Aug-19	25-Sep-19	22-May-19	26-Jun-19	-76																																																								
TCSS2200	Pillar box, isolator & associated duct work - PL206 for G32	30	19-Aug-19	23-Sep-19	22-May-19	26-Jun-19	-74																																																								
TCSS2270	Civil Provision for TCSS works available (Zone 2)	0		25-Sep-19		26-Jun-19	-76																																																								
AADS1																																																															
TCSS1400	Slow lane footing - AADS1 (NB43A)	0		03-Dec-18		16-Apr-19	109																																																								
TCSS1410	Fast lane footing - AADS1 (CH5880, N/B)	44	25-Sep-17 A	18-Nov-17 A																																																											
TCSS1660	TTA application & Approval - AADS1	90	19-Jan-19	11-May-19	28-Dec-18	16-Apr-19	-18																																																								
TCSS1670	Sign Gantry Erection - AADS1	28	13-May-19	14-Jun-19	17-Apr-19	23-May-19	-18																																																								
FVMS1 (Deleted by DWG HY/2012/06/SK/0866)																																																															
TCSS1420	Slow lane footing -FVMS1 (NB50A)	0		15-May-19		08-Jul-20	342																																																								
ADS1																																																															
TCSS1440	Slow lane footing - ADS1 (NB50A)	0		03-Apr-19		13-Mar-19	-18																																																								

- Remaining Level of Effort
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								2013	2014	2015	2016	2017	2018	2019	2020												
TCSS1930	Predrilling (6no, 0.19m mini pile)	13	18-Nov-17 A	03-Dec-17 A																							
TCSS1940	Piling (6nos, 0.19m mini pile)	18	04-Dec-17 A	25-Dec-17 A																							
TCSS1950	Sheeting & excavation (4m)	6	26-Dec-17 A	03-Jan-18 A																							
TCSS1960	Fast lane footing - ADS1 (CH6400, N/B)	22	02-Jan-18 A	26-Jan-18 A																							
TCSS1970	Back filling & reinstatement road work (2m)	40	20-Oct-18 A	06-Dec-18	25-Feb-19	13-Mar-19	79																				
TCSS1980	TTA application & Approval - ADS1	90	14-Dec-18	03-Apr-19	23-Nov-18	13-Mar-19	-18																				
TCSS1990	Sign Gantry Erection - ADS1	28	04-Apr-19	11-May-19	14-Mar-19	16-Apr-19	-18																				
FADS1																											
TCSS1460	Slow lane footing - FADS1 (NB60)	0		26-Feb-19		08-Feb-19	-15																				
TCSS2000	Predrilling (6no, 0.19m mini pile)	8	24-Aug-15 A	01-Sep-15 A																							
TCSS2010	Piling (6nos, 0.19m mini pile)	26	02-Sep-15 A	03-Oct-15 A																							
TCSS2020	Sheet piling & excavation (4m)	16	25-Sep-17 A	14-Oct-17 A																							
TCSS2030	Fast lane footing - FADS1 (CH6830, N/B)	22	16-Oct-17 A	10-Nov-17 A																							
TCSS2040	Back filling & reinstatement road work (2m)	56	11-Nov-17 A	18-Jan-18 A																							
TCSS2050	TTA application & Approval - FADS1	90	20-Oct-18 A	07-Feb-19	21-Nov-18	08-Feb-19	1																				
TCSS2060	Sign Gantry Erection - FADS1	28	27-Feb-19	30-Mar-19	09-Feb-19	13-Mar-19	-15																				
G55																											
TCSS1480	Slow lane footing - G55 (NB51)	0		09-Dec-16 A																							
TCSS1490	Fast lane footing - G55 (CH5970, S/B)	28	04-Oct-17 A	07-Nov-17 A																							
TCSS1740	TTA application & Approval - G55	89	20-Aug-18 A	04-Dec-18	18-Dec-18	04-Jan-19	24																				
TCSS1750	Sign Gantry Erection - G55	28	05-Dec-18	09-Jan-19	05-Jan-19	08-Feb-19	24																				
G54																											
TCSS1500	Slow lane footing - G54 (NB61)	0		03-Jan-18 A																							
TCSS2080	Sheeting & excavation (4m)	6	25-Sep-17 A	30-Sep-17 A																							
TCSS2090	Fast lane footing - G54 (CH6470, S/B)	23	02-Oct-17 A	31-Oct-17 A																							
TCSS2110	TTA application & Approval - G54	90	23-Feb-19	14-Jun-19	31-Jan-19	23-May-19	-18																				
TCSS2120	Sign Gantry Erection - G54	28	15-Jun-19	18-Jul-19	24-May-19	26-Jun-19	-18																				
Landscape Softwork																											
Landscape Works																											
Z2.LW.1000	Landscape soft work Zone2	150	26-Mar-19	25-Sep-19	05-Jan-19	09-Jul-19	-66																				
Establishment Works																											
Establishment Works																											
Z2.EW.1000	Establishment work Zone2	365	26-Sep-19	24-Sep-20	10-Jul-19	08-Jul-20	-78																				
Pai Lau in Tai Hang (VO126)																											
Pai Lau in Tai Hang (VO126)																											
Pai Lau in Tai Hang (VO126)																											
PL00900	VO 126 issue Date	0	18-Sep-18 A																								
PL01000	Works area access date (14-Dec-2018)	0	14-Dec-18*			13-Dec-18	0																				
PL01010	CLP relocation of Overhead Cable	12	15-Jan-19*	28-Jan-19	15-Jan-19	28-Jan-19	0																				
PL01020	Excavation	12	14-Dec-18	29-Dec-18	21-Dec-18	07-Jan-19	6																				
PL01030	Footing	12	31-Dec-18	14-Jan-19	08-Jan-19	21-Jan-19	6																				
PL01040	backfill	6	15-Jan-19	21-Jan-19	22-Jan-19	28-Jan-19	6																				
PL01050	Pai Lau Superstructure	65	29-Jan-19	17-Apr-19	29-Jan-19	17-Apr-19	0																				
PL01060	Material submission for finishes works	60	05-Nov-18 A	16-Jan-19	20-Nov-18	16-Jan-19	0																				

█ Remaining Level of Effort
█ Actual Level of Effort
█ Actual Work
█ Remaining Work
█ Critical Remaining Work
◆ Milestone
◆ Crit. Milestone

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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	2014				2015				2016				2017				2018				2019				2020			
								J	A	S	O	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A	J	A
DSD Southern Trunk Sewer, Water Main Fire Main Works																																			
TSZ10900	Sheet Piling & Excavation (~5m below ground) (along NB64)	52	16-Apr-15 A	17-Jun-15 A																															
TSZ10910	DSD Trunk Sewer laying (along NB64)	186	20-Apr-16 A	30-Nov-16 A																															
TSZ10920	Backfill up to NB64 footing level	6	01-Dec-16 A	07-Dec-16 A																															
TSZ10930	Watermain installation (along NB64)	33	08-Dec-16 A	18-Jan-17 A																															
TSZ10940	Firemain installation (along NB64)	21	02-Jan-17 A	26-Jan-17 A																															
TSZ11028	Demolish existing pile caps at Watermain	35	02-Dec-16 A	15-Jan-17 A																															
Underground Utility Works																																			
UUZ20220	Utility cable laying by Utility companies (Along NB64 & NB64A, 60m)	241	29-Feb-16 A	17-Dec-16 A																															
Noise Barrier Along Fanling Highway N/B NB60 (Ch.6450-6920)-FH N/B Side																																			
Noise Barrier Works																																			
NB02030	NB60 (300-408m)(NB60/26-34 Pre-drilling	44	19-Mar-14 A	15-May-14 A																															
NB02040	NB60 (300-408m)(NB60/26-S4, 0.19m -26nos) Piling	111	27-Jan-18 A	15-Jun-18 A																															
NB02050	NB60-4 (300-408m) - Sheet piling & Excavation	22	16-Jun-18 A	13-Jul-18 A																															
NB02060	NB60-4 - Footing & Wall Structure	124	16-Jul-18 A	10-Dec-18	02-Nov-18	22-Nov-18	-15																												
NB02065	NB60-4 (300-408m) - Drainage Works	24	11-Dec-18	10-Jan-19	23-Nov-18	20-Dec-18	-15																												
NB02066	NB60-4 (300-408m) - Drainage Works (VO on 16-10-18 - add 3 manholes)	18	11-Jan-19	31-Jan-19	21-Dec-18	14-Jan-19	-15																												
NB02070	NB60-4 - backfilling	20	01-Feb-19	26-Feb-19	15-Jan-19	08-Feb-19	-15																												
NB02080	NB60-4 - NB production	45	11-Dec-18	24-Jan-19	07-May-19	20-Jun-19	147																												
NB02082	NB60-4 - NB post & panel installation	5	25-Jan-19	30-Jan-19	21-Jun-19	26-Jun-19	118																												
NB02090	NB60 (408-468m)(NB60/35-39) & FADS1 Pre-drilling	5	20-Jan-18 A	25-Jan-18 A																															
NB02100	NB60 (408-468m)(NB60/18B-1 to S6, 0.19m -32nos) Piling	32	20-Jun-18 A	27-Jul-18 A																															
NB02101	NB60 (408-468m) FADS1 (8nos) Piling	12	28-Jul-18 A	10-Aug-18 A																															
NB02103	NB60 (408-468m) Staircase S1 - Pre-drilling	26	02-Mar-15 A	31-Mar-15 A																															
NB02105	NB60 (408-468m) Staircase S1 - Pre-bored H Pile (16 nos)	42	06-Feb-18 A	02-Apr-18 A																															
NB02110	NB60-5 (408-468m) - Sheet piling & Excavation	28	10-Aug-18 A	11-Sep-18 A																															
NB02120	NB60-5 - Footing & Wall Structure	86	12-Sep-18 A	24-Dec-18	24-Nov-18	31-Dec-18	4																												
NB02125	NB60-5 (408-468m) - Drainage Works	24	01-Feb-19	02-Mar-19	23-Jan-19	21-Feb-19	-8																												
NB02130	NB60-5 - backfilling	12	04-Mar-19	16-Mar-19	22-Feb-19	07-Mar-19	-8																												
NB02140	NB60-5 - NB production	26	25-Dec-18	19-Jan-19	02-Jan-19	27-Jan-19	8																												
NB02142	NB60-5 - NB post & panel installation	5	21-Jan-19	25-Jan-19	28-Jan-19	01-Feb-19	6																												
NB66 (Ch.6920-6930)-FH N/B Side																																			
Noise Barrier Works																																			
NB02150	NB66 - Sheet piling & Excavation	46	20-Jan-18 A	17-Mar-18 A																															
NB02160	NB66 - Footing & Wall Structure	39	18-Mar-18 A	08-May-18 A																															
NB02165	NB66 - Drainage Works	178	08-May-18 A	07-Dec-18	05-Nov-18	22-Nov-18	-13																												
NB02170	NB66- backfilling	15	27-Dec-18	14-Jan-19	19-Feb-19	07-Mar-19	43																												
NB02180	NB66 - NB production	45	20-Nov-18	03-Jan-19	07-May-19	20-Jun-19	168																												
NB02190	NB66 - NB post & panel installation	5	15-Jan-19	19-Jan-19	21-Jun-19	26-Jun-19	127																												
NB03320	Bus Shelter footing - VO86	30	20-Nov-18	24-Dec-18	12-Jan-19	18-Feb-19	43																												
Bridge Construction																																			
Kau Lung Hang Vehicular Bridge																																			
General																																			

- █ Remaining Level of Effort
- █ Actual Level of Effort
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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Gantt Chart													
								2013	2014			2015			2016			2017			2018
Z2.KLH.1060	Submission of method statement to Engineer	48	02-Oct-13 A	27-Nov-13 A				[Gantt bar from Oct 2013 to Nov 2013]													
Z2.KLH.1070	Consent from Engineer	276	28-Nov-13 A	10-Nov-14 A				[Gantt bar from Nov 2013 to Nov 2014]													
Target Milestone																					
MS01	Completion of Bridge Deck 1 Structure between West Abutment-VBP1-VBP2-VBP3	0		17-May-16 A				17-May-16 A ◆ Completion of Bridge Deck 1 Structure between West Abutment-VBP1-VBP2-VBP3													
MS02	Completion of Bridge Deck 2 Structure between VPB3 to VBP6	0		27-Apr-16 A				27-Apr-16 A ◆ Completion of Bridge Deck 2 Structure between VPB3 to VBP6													
MS03	Completion of Bridge Deck 3 Structure between VBP6-VBP7-VBP8-East Abutment	0		31-May-16 A				31-May-16 A ◆ Completion of Bridge Deck 3 Structure between VBP6-VBP7-VBP8-East Abutment													
MS04	Completion of Installation of all Precast Concrete Skins	0		30-Jun-16 A				30-Jun-16 A ◆ Completion of Installation of all Precast Concrete Skins													
MS05	Completion of Installation of all Parapet Walls and Planter Walls	0		16-Jul-16 A				16-Jul-16 A ◆ Completion of Installation of all Parapet Walls and Planter Walls													
MS06	Commissioning of Kau Lung Hang Vehicular Bridge to enable demolition of Kiu Tau Bridge	0		20-Aug-16 A				20-Aug-16 A ◆ Commissioning of Kau Lung Hang Vehicular Bridge to enable demolition of Kiu Tau Bridge													
TWSR-W Precast Yards and Beam Fabrication																					
PC0160	Beams Precast Yards - TWSR-W	37	01-Sep-15 A	15-Oct-15 A				[Gantt bar from Sep 2015 to Oct 2015]													
PC0170	Precast Beams Fabrication for P3 to P4 (10 nos)	63	16-Oct-15 A	31-Dec-15 A				[Gantt bar from Oct 2015 to Dec 2015]													
PC0180	Post Tensioning Beams (10 nos)	21	15-Dec-15 A	11-Jan-16 A				[Gantt bar from Dec 2015 to Jan 2016]													
Precast Yards and Beam Fabrication																					
PC0120	Precast Beams Fabrication for P4-P5 (1-3 nos)	16	15-Dec-15 A	05-Jan-16 A				[Gantt bar from Dec 2015 to Jan 2016]													
PC0130	Precast Beams Fabrication for P4-P5 (4-10 nos)	44	28-Dec-15 A	26-Feb-16 A				[Gantt bar from Dec 2015 to Feb 2016]													
PC0140	Post Tensioning Beams (1-3nos)	13	06-Jan-16 A	20-Jan-16 A				[Gantt bar from Jan 2016 to Jan 2016]													
PC0150	Post Tensioning Beams (4-10nos)	12	20-Feb-16 A	04-Mar-16 A				[Gantt bar from Feb 2016 to Mar 2016]													
Other Off-Site Prefabrication																					
PC0260	Parapet Concrete Skin Fabrication	94	12-Jan-16 A	16-May-16 A				[Gantt bar from Jan 2016 to May 2016]													
KLH Bridge - West Ramp																					
KLH.1034	West Ramp Structure Work (6 bays after P3-4 beams lifting)	88	20-Feb-16 A	08-Jun-16 A				[Gantt bar from Feb 2016 to Jun 2016]													
KLH.1140	West Ramp - Backfilling & Drainage	60	17-May-16 A	27-Jul-16 A				[Gantt bar from May 2016 to Jul 2016]													
KLH.1180	West Ramp - Parapet skin (92nos)	70	07-Apr-16 A	30-Jun-16 A				[Gantt bar from Apr 2016 to Jun 2016]													
KLH.1240	West Ramp -Parapet Wall & Planter Wall	56	21-May-16 A	27-Jul-16 A				[Gantt bar from May 2016 to Jul 2016]													
KLH.1250	West Ramp - Road Surface work ready to start	0	29-Jul-16 A					◆ West Ramp - Road Surface work ready to start													
KLH.1260	West Ramp - barrier	21	28-Jul-16 A	20-Aug-16 A				[Gantt bar from Jul 2016 to Aug 2016]													
KLH.1280	West Ramp - Lighting	21	28-Jul-16 A	20-Aug-16 A				[Gantt bar from Jul 2016 to Aug 2016]													
KLH.1290	West Ramp - Planting	21	20-Nov-18	13-Dec-18	01-Jun-19	26-Jun-19	156	[Gantt bar from Nov 2018 to Dec 2018]													
KLH.1300	West Ramp Complete	0		20-Aug-16 A				20-Aug-16 A ◆ West Ramp Complete													
Z2.KLH.0900	West Abutment- Pre-drilling work	4	04-Sep-14 A	08-Sep-14 A				[Gantt bar from Sep 2014 to Sep 2014]													
Z2.KLH.0910	West Abutment- pre-bored H-pile piling works (13nos)	30	15-Oct-14 A	18-Nov-14 A				[Gantt bar from Oct 2014 to Nov 2014]													
Z2.KLH.1002	West Abutment- Pile cap & Structural Wall	136	20-Dec-14 A	13-Jun-15 A				[Gantt bar from Dec 2014 to Jun 2015]													
Advance Works for VBP3 construction																					
Z2.KLH.1100	VBP3 New design available by ER	0	07-Jul-15 A					◆ VBP3 New design available by ER													
Z2.KLH.1103	Revised Design available for KLHVB ramp R1	0	20-Aug-14 A					◆ Revised Design available for KLHVB ramp R1													
Z2.KLH.1105	Re-design Temp ramp for NWP bridge & approval	50	20-Aug-14 A	20-Oct-14 A				[Gantt bar from Aug 2014 to Oct 2014]													
Z2.KLH.1110	Erect temp ramp for NWP bridge	102	20-Oct-14 A	18-Feb-15 A				[Gantt bar from Oct 2014 to Feb 2015]													
Z2.KLH.1150	Demolish Existing ramp of NWP bridge	13	27-Feb-15 A	13-Mar-15 A				[Gantt bar from Feb 2015 to Mar 2015]													
Z2.KLH.1155	TTA	2	14-Mar-15 A	16-Mar-15 A				[Gantt bar from Mar 2015 to Mar 2015]													
Z2.KLH.1270	Pier VBP3 U/G works ready to start	0	16-Mar-15 A					◆ Pier VBP3 U/G works ready to start													
Z2.KLH.1280	Pier VBP3 complete and road reinstatement work	53	20-Oct-15 A	21-Dec-15 A				[Gantt bar from Oct 2015 to Dec 2015]													
Z2.KLH.1290	Affected NB construction at TWSR-W resume	0	21-Dec-15 A					◆ Affected NB construction at TWSR-W resume													
KLH Bridge - Deck 1																					

■ Remaining Level of Effort
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								J	A	S	O	J	F	A	M	J	F	A	M	J	F	A	M	J	F	A	M	J	F	A	M	J	F	A	M	J	F
KLH.3650	Pedestrian walkway Roof P6 to P7	59	01-Dec-16 A	18-Feb-17 A																																	
KLH.3660	Pedestrian walkway floor finishes P6 to P7 (include barrier and lighting)	23	20-Mar-17 A	19-Apr-17 A																																	
Z2.KLH.1325	Construct Temp Road - For diversion of existing TWR east	20	20-Oct-14 A	11-Nov-14 A																																	
Z2.KLH.1330	VBP6 - Diversion of TWSR east to temporary diversion work	0	12-Nov-14 A	12-Nov-14 A																																	
Z2.KLH.1340	VBP6 - Pre-drilling work	5	13-Nov-14 A	18-Nov-14 A																																	
Z2.KLH.1350	VBP6 - Pre-bored H-pile piling works (13 Nos.)	48	22-Dec-14 A	18-Feb-15 A																																	
Z2.KLH.1360	VBP6 - Pile cap, pier construction	115	26-Feb-15 A	18-Jul-15 A																																	
Z2.KLH.1780	East Abutment - Pre-drilling work	13	10-Feb-14 A	24-Feb-14 A																																	
Z2.KLH.1785	Relocation Lamp post by CLP	24	24-Feb-14 A	22-Mar-14 A																																	
Z2.KLH.1790	East Abutment - Pre-bored H-pile piling works (13 Nos.)	60	28-Mar-14 A	13-Jun-14 A																																	
Z2.KLH.1800	East Abutment - Pile testing	44	20-Aug-14 A	13-Oct-14 A																																	
Z2.KLH.1810	East Abutment - Pile caps, abutment wall construction	188	20-Oct-14 A	12-Jun-15 A																																	
Z2.KLH.1820	VBP7 - Pre-drilling work	13	25-Feb-14 A	11-Mar-14 A																																	
Z2.KLH.1830	VBP7 - Pre-bored H-pile piling works (7 Nos.)	77	09-Apr-14 A	15-Jul-14 A																																	
Z2.KLH.1840	VBP7 - Pile testing	44	20-Aug-14 A	13-Oct-14 A																																	
Z2.KLH.1850	VBP7 - Pile caps, pier and pier head construction	174	18-May-15 A	12-Dec-15 A																																	
Z2.KLH.1860	VBP8 - Pre-drilling work	5	21-Feb-14 A	26-Feb-14 A																																	
Z2.KLH.1870	VBP8 - Pre-bored H-pile piling works (6 Nos.)	40	03-May-14 A	20-Jun-14 A																																	
Z2.KLH.1880	VBP8 - Pile testing	44	20-Aug-14 A	13-Oct-14 A																																	
Z2.KLH.1890	VBP8 - Pile caps, pier and pier head construction	103	20-Jul-15 A	19-Nov-15 A																																	
KLH Bridge - East Ramp																																					
KLH.3520	East Ramp Structure Work (5/8 remaining)	171	02-Oct-15 A	07-May-16 A																																	
KLH.3530	East Ramp - Backfilling & Drainage	65	09-May-16 A	26-Jul-16 A																																	
KLH.3540	East Ramp - Parapet skin (79nos)	53	23-Mar-16 A	30-May-16 A																																	
KLH.3550	East Ramp - Parapet Wall & Planter Wall	76	07-May-16 A	06-Aug-16 A																																	
KLH.3560	East Ramp - Road Surface work ready to start	0	08-Jul-16 A																																		
KLH.3570	East Ramp - barrier	17	20-Jul-16 A	08-Aug-16 A																																	
KLH.3580	East Ramp - Lighting	17	20-Jul-16 A	08-Aug-16 A																																	
KLH.3590	East Ramp - Planting	34	20-Nov-18	31-Dec-18	28-May-20	08-Jul-20	450																														
KLH.3600	East Ramp Complete	0		08-Aug-16 A																																	
KLH Bridge - Ramp R1																																					
Z2.KLH.1430	Ramp R1 - Pre-drilling work (R1P1-P3)	52	15-May-14 A	16-Jul-14 A																																	
Z2.KLH.1440	Ramp R1 - Pre-bored H-pile piling works (R1P1-P3) (9 Nos.)	50	30-Sep-14 A	28-Nov-14 A																																	
Z2.KLH.1450	Ramp R1 - Pile caps and pier construction (R1P1)	335	02-Jul-15 A	20-Aug-16 A																																	
Z2.KLH.1660	Ramp R1 - Pile caps and pier construction (R1P2)	183	02-Jul-15 A	06-Feb-16 A																																	
Z2.KLH.1665	Additional Disruption to R1P3 period by UU duct laying	16	01-Nov-16 A	18-Nov-16 A																																	
Z2.KLH.1667	Additional Disruption to R1P1 period by UU duct laying	28	01-Nov-16 A	02-Dec-16 A																																	
Z2.KLH.1670	Ramp R1 - Pile caps and pier construction (R1P3)	84	08-Aug-16 A	16-Nov-16 A																																	
Z2.KLH.1680	Ramp R1 - Ramp construction (Abutment R1 to R1P1)	101	20-Aug-16 A	19-Dec-16 A																																	
Z2.KLH.1685	Ramp R1 - Ramp construction (R1P1 to P1P3)	35	19-Nov-16 A	31-Dec-16 A																																	
Z2.KLH.1690	Ramp R1 - Abutment R1 - Predrilling	4	30-Aug-14 A	03-Sep-14 A																																	
Z2.KLH.1700	Ramp R1 - Abutment R1 - Pre-bored H-pile (8 nos)	13	20-Sep-14 A	07-Oct-14 A																																	

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█ Actual Level of Effort
█ Actual Work
█ Remaining Work
█ Critical Remaining Work
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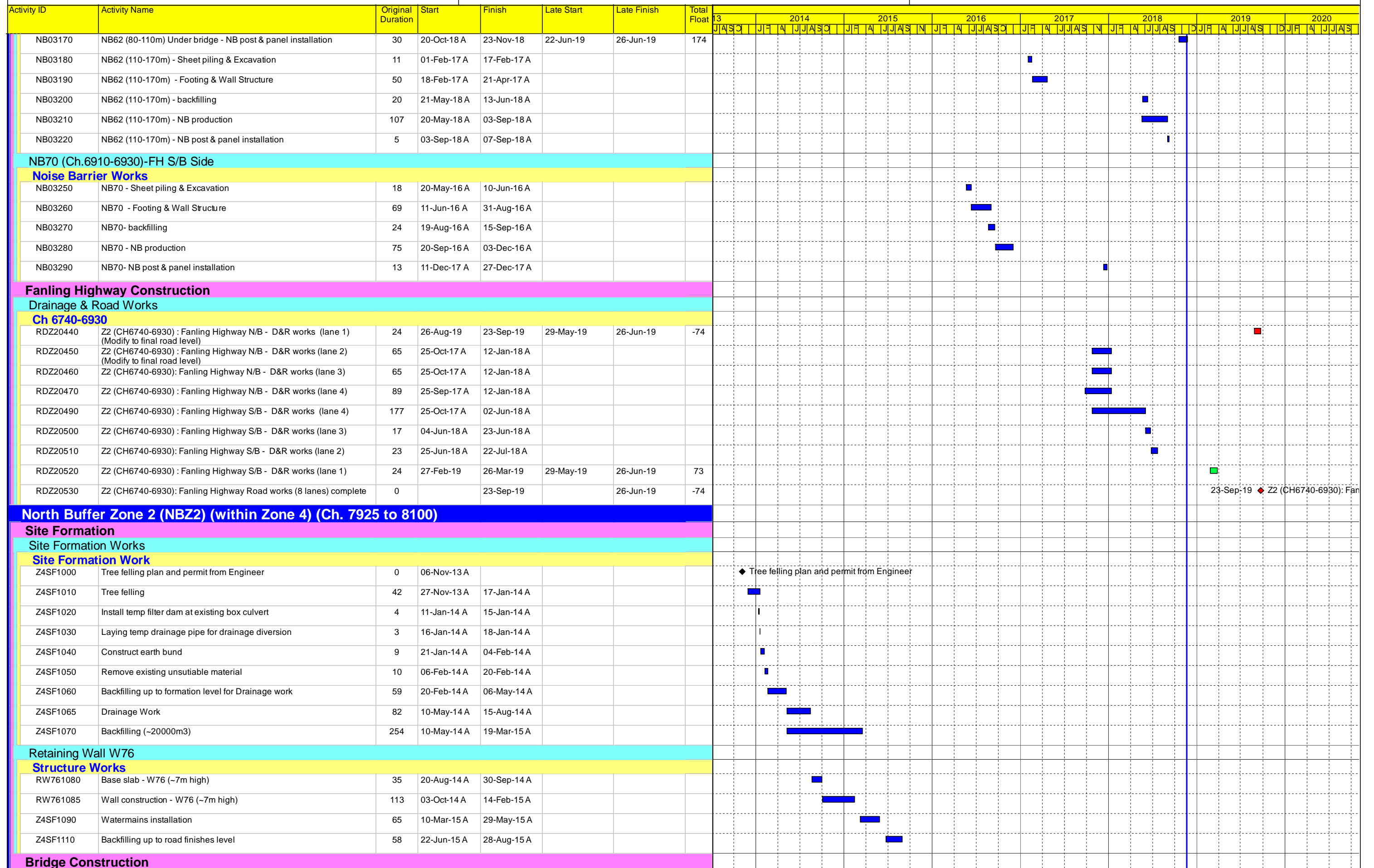
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Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	2013																					
								J	A	S	O	2014	2015	2016	2017	2018	2019	2020											
NB4420	NB77 - piling (NB77/18-26, 0.19m -36no)	87	08-Apr-17 A	26-Jul-17 A																									
NB4430	NB77 - Footing & Wall Structure (Ch8290-8390)	144	03-Nov-17 A	02-May-18 A																									
NB4440	NB77 - backfilling (Ch8290-8390)	19	13-Nov-18 A	04-Dec-18	20-Nov-18	04-Dec-18	0																						
NB4450	NB77 - NB production (Ch8290-8390)	221	03-May-18 A	09-Dec-18	02-Dec-18	21-Dec-18	12																						
NB4460	NB77 - NB post & panel installation (Ch8290-8390)	15	10-Dec-18	28-Dec-18	22-Dec-18	11-Jan-19	11																						
NB4465	TTA for bay 27-32	1	20-May-17 A	20-May-17 A																									
NB4470	NB77 -Pre-drilling (Ch8390-8450)& G35	34	20-May-17 A	29-Jun-17 A																									
NB4475	NB77 - piling (NB77/27 - 28, 0.19m -8no)	42	01-Jul-17 A	19-Aug-17 A																									
NB4480	NB77 - piling (NB77/N1- N2, 0.19m -24no) (confirming design by instruction (HY/2012/06)/R10/115/(256)	65	26-Jul-17 A	11-Oct-17 A																									
NB4482	NB77 - Footing & Wall Structure (NB77/27 - 28, N1-N2) (Ch8390-8450)	145	20-Apr-18 A	12-Oct-18 A																									
NB4485	NB77 - piling (NB77/32, S2- 32, 0.19m -14no) & G35 (8nos)	52	19-Aug-17 A	20-Oct-17 A																									
NB4490	NB77 - Footing & Wall Structure (NB77/31 - 32, 0.19m & G35) (Ch8390-8450)	40	15-Oct-18 A	30-Nov-18	27-Nov-18	07-Dec-18	6																						
NB4500	NB77 - backfilling (Ch8390-8450)	13	20-Nov-18 A	04-Dec-18	20-Nov-18	04-Dec-18	0																						
NB4510	NB77 - NB production (Ch8390-8450)	30	01-Dec-18	30-Dec-18	08-Dec-18	06-Jan-19	7																						
NB4520	NB77 - NB post & panel installation (Ch8390-8450)	5	31-Dec-18	05-Jan-19	07-Jan-19	11-Jan-19	5																						
NB4530	NB77 complete	0		11-Jan-19		11-Jan-19	0																						
NB4570	NB77 backfilling complete	0		04-Dec-18		04-Dec-18	0																						
NB4590	1650 Drainage Lining installation	90	28-Dec-18	16-Apr-19	19-Feb-19	10-Jun-19	42																						
NB4620	NB77 Drainage Works	134	10-May-18 A	19-Oct-18 A																									

Bridge Construction

New Wo Hop Shek Pedstrian & Cycle Bridge

General

WHS1000	Site Clearance (Main bridge area SA344)	20	20-Jan-14 A	20-Feb-14 A																									
WHS1010	Site Clearance & Temp Platform erection (SA340)	9	05-May-14 A	15-May-14 A																									
WHS1020	Structure steel Shop drawing submission (WHSB)	29	21-Jul-14 A	22-Aug-14 A																									
WHS1030	Structure steel Shop drawing approval (WHSB)	68	23-Aug-14 A	13-Nov-14 A																									
WHS1040	Structure steel procurement (WHSB)	256	10-Dec-14 A	22-Aug-15 A																									
WHS1050	Steel Ramp prefabrication (WHSB)	152	24-Aug-15 A	03-Mar-16 A																									
WHS1060	Steel Ramp available on site (WHSB)	0	04-Mar-16 A																										
WHS1070	Steel Staircase prefabrication (WHSB)	152	24-Aug-15 A	03-Mar-16 A																									
WHS1080	Steel Staircase available on site (WHSB)	0	04-Mar-16 A																										
WHS1105	W77A & W77B & backfilling work complete	0		03-Jan-18 A																									
WHS1110	Wo Hop Shek Bridge Complete	0		27-Mar-19		10-Jun-19	58																						
WHS1120	Diversion of existing pedestrian from existing to proposed footbrdige	1	26-Nov-16 A	26-Nov-16 A																									
WHS1140	Existing Wo Hop Shek Bridge Demolished	0		10-Oct-17 A																									

TWSR-West/ FL Highway N/B Side Section

WHS1150	WHSP2 - Predrilling	7	19-Mar-14 A	26-Mar-14 A																									
WHS1160	WHSP2 - Pre-bored H pile (8 nos)	27	23-Mar-15 A	25-Apr-15 A																									
WHS1170	WHSP2 - Pile Test	35	27-May-15 A	30-Jun-15 A																									
WHS1180	WHSP2 - Pile cap, Pier and Pier Head	113	17-Aug-15 A	31-Dec-15 A																									
WHS1190	WHSP6 - Predrilling	9	27-Mar-14 A	07-Apr-14 A																									
WHS1200	WHSP6 - Pre-bored H pile (6 nos)	48	05-Mar-15 A	04-May-15 A																									
WHS1220	WHSP6 - Pile cap, Pier and Pier Head	74	21-Dec-15 A	31-Mar-16 A																									

█ Remaining Level of Effort
█ Actual Level of Effort
█ Actual Work
█ Remaining Work
█ Critical Remaining Work
◆ Milestone
◆ Crit. Milestone

Project File:WP Rev 07

Layout: WP rev 7

Data Date:20-Nov-18

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Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

Works Programme - WP Rev. 7



Date	Revision	Checked	Approved
07-Nov-16	WP Rev 4		
17-Aug-17	WP Rev 5		
29-Mar-18	WP Rev 6		
03-Dec-18	WP Rev 7		

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	Timeline (2014-2020)											
								2014	2015	2016	2017	2018	2019	2020					
TWSR-East FL Highway S/B Side Section																			
WHS1470	WHSP1 - Pile cap, Pier and Pier Head	346	18-Jun-14 A	19-Aug-15 A															
WHS1480	Erect WHS bridge Structure across fanling highway	93	20-Jan-16 A	23-May-16 A															
WHS1490	Finishes Work	57	20-Sep-16 A	26-Nov-16 A															
WHS1500	Bridge Structure complete (WHSB-Cross fanling highway)	0		26-Nov-16 A															
WHS1510	TTA for new WHS bridge submission & approval	33	20-Feb-18 A	02-Apr-18 A															
WHS1520	Remove railing	7	03-Apr-18 A	11-Apr-18 A															
WHS1530	Bridge floor marking	2	12-Apr-18 A	13-Apr-18 A															
WHS1540	Install bollards	5	13-Apr-18 A	18-Apr-18 A															
WHS2042	Tree felling	91	20-Dec-13 A	22-Apr-14 A															
WHS2045	Temp footbridge construction for pedestrian diversion	0	20-May-14 A	20-May-14 A															
WHS2050	North Abutment Wall (AW 1) - Predrilling	9	20-Jun-14 A	30-Jun-14 A															
WHS2060	North Abutment Wall (AW 1) - Pre-bored H pile (4 nos)	38	20-Aug-14 A	06-Oct-14 A															
WHS2070	North Abutment Wall (AW 1) - Pile Test	0	06-Oct-14 A	06-Oct-14 A															
WHS2075	North Abutment Wall (AW 1) - Temp Shoring	56	24-Nov-14 A	30-Jan-15 A															
WHS2080	North Abutment Wall (AW 1) -pile cap & abutment wall	45	31-Jan-15 A	01-Apr-15 A															
WHS2090	North Abutment Wall (AW 1) - Backfilling (~6m)	173	02-Apr-15 A	31-Oct-15 A															
Demolition of Existing Wo Hop Shek Pedstrian & Cycle Bridge																			
TWSR-West/ FL Highway N/B Side Section																			
WHS1870	Install Temp support to remove existing ramp	2	26-Dec-16 A	29-Dec-16 A															
WHS1880	Remove existing ramp for 2nd half new ramp construction	25	29-Dec-16 A	28-Jan-17 A															
WHS1890	Demolish existing WHS footbridge (TWSR-W side)	25	26-Dec-16 A	26-Jan-17 A															
WHS2030	Remove temp filled platform	1	27-Jan-17 A	28-Jan-17 A															
Crossing Fanling Highway Section																			
WHS1790	Erect Temp platform for bridge demolition	95	17-Oct-16 A	15-Feb-17 A															
WHS1800	Demolish existing WHS Footbridge	26	16-Feb-17 A	17-Mar-17 A															
WHS1820	Remove existing column	9	10-Mar-17 A	20-Mar-17 A															
TWSR-East FL Highway S/B Side Section																			
WHS1840	Demolish existing WHS Footbridge abutment wall at W77A (Instructed by letter (HY/2012/06)/M15/200/(45))	16	20-Sep-17 A	10-Oct-17 A															
TWSR-West Construction																			
Drainage & Road Works																			
TWSR-West/ FL Highway N/B Side Section																			
RDZ41180	TWSR -W Road Works rectification	50	01-Feb-19	02-Apr-19	08-Apr-19	10-Jun-19	53												
Slip Road Y Construction																			
Drainage & Road Works																			
TWSR-East FL Highway S/B Side Section																			
RDZ41000	Construct Slip Rd Y (Ch8250-8370)(SA340) (Z4 TTA-Stage 1)	239	02-Mar-15 A	16-Dec-15 A															
RDZ41010	Construct Slip Rd Y (Ch8100-8250)(SA342) (Z4 TTA-Stage 2)	132	13-Jul-15 A	16-Dec-15 A															
RDZ41020	Construct Slip Rd Y @ existing TWSR-E junction (Ch8050-8100)(SA341) (Z4 TTA-Stage 3)	207	01-Dec-15 A	19-Aug-16 A															
RDZ41060	Construct Slip Rd Y - 1st Lane (Ch8370-8650)(SA340) (Z4 TTA-Stage 4)	119	20-Jul-17 A	08-Dec-17 A															
RDZ41070	Traffic diversion to slip rd Y - half lane(Z4 TTA-Stage 4)	1	09-Dec-17 A	09-Dec-17 A															
RDZ41080	Construct Slip Rd Y- 2nd lane (Ch8370-8650)(SA340) (Z4 TTA-Stage 5)	55	15-Mar-19	23-May-19	15-Mar-19	23-May-19	0												
RDZ41082	Construct Slip Rd Y (Ch7925-8050)(SA3460) - 1 lane @ Existing Ramp location	207	17-Sep-15 A	07-Jun-16 A															
RDZ41084	Construct Slip Rd Y (Ch7925-8050)(SA3460) - 1 temp lane	163	11-Nov-15 A	07-Jun-16 A															
RDZ41085	Construct Slip Rd Y (Ch7925-8050)(SA346) - remaining lane	58	13-Oct-16 A	19-Dec-16 A															

- Remaining Level of Effort
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Crit. Milestone

Project File: WP Rev 07
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Contract No. HY/2012/06

Widening of Fanling Highway - Tai Hang to Wo Hop Shek Interchange

Works Programme - WP Rev. 7



Date	Revision	Checked	Approved
07-Nov-16	WP Rev 4		
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CHIU HING CONSTRUCTION AND TRANSPORTATION CO. LTD.

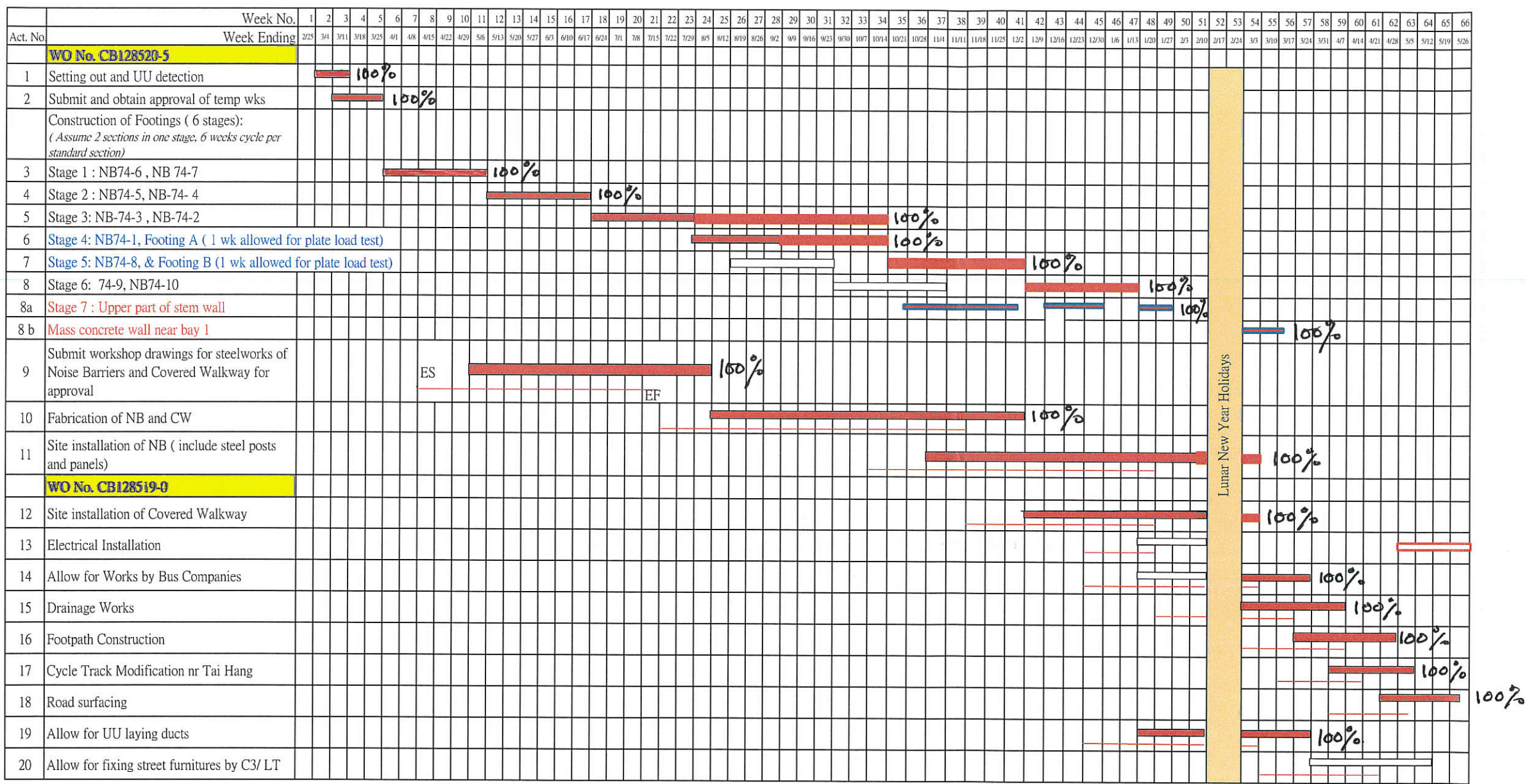
Contract No. 02/HY/2015

Works Order Nos: CB128519-0 & CB128520-5

Programme of Construction of Noise Barrier and Pedestrian Covered Walkway at Tai Wo Service Road East near Ho Ka Yuen

- ▬ Revised Program Duration
- ▬ Programmed Duration
- ▬ Actual Progress
- ▬ Critical Path Activities
- ▬ Early Start & Early Finish
- Float = 3 weeks
- ▬ upper part of stem wall

Rev	Date	Description
00	28/02/17	initial issue
01	29/03/17	refer RE's comments
02	22/5/17	add plate load test program
03	28/9/2017	revise program of task 5-8
04	23/1/2018	add mass wall & revise installation of NB & BBI



Cycle time for standard section :

Item	Activity	Approx Qty	Days for Construction (Calendar Days)
1	Sheet-piling with struts	24 x 7 = 168M ²	10 days
2	Excavation	12 x 6 x 6 = 432 M ³	7 days
3	Rock Fill (assumed)	12 x 2 = 24 M ³	2 days
4	Blinding Layer		1 day
5	Fwk-Rebar- Concreting	110 M ³	10 days **
6	Posts for Covered Walkway		7 days ##
7	Backfilling	290M ³	5 days
			Total = 42 days

** Breakdown of Item 5

	Base Slab calendar days	Stem calendar days
Fwk	1	2
Re-bar	1	3
Concreting	1	1
Remove Fwk		1
Total :	10 days	

Breakdown of Item 6

	Posts calendar days
Fwk	2
Re-bar	3
Concreting	1
Remove Fwk	1
Total :	7 days

\$\$Breakdown of Item 8a (for 2 sections of stem wall)

	Posts calendar days
Fwk	4
Re-bar	2
Concreting	1
Fix HD bolts	2
Remove Fwk	1
Total :	10 days

**APPENDIX C
IMPLEMENTATION SCHEDULE OF
ENVIRONMENTAL MITIGATION MEASURES
(EMIS)**

Appendix C - Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status																							
			HY/2012/06												02/HY/2015											
			Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18
Air Quality during Construction	Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading.	During construction	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-	
	All stockpiles of excavated materials or spoil of more than 50m ³ shall be enclosed, covered or dampened during dry or windy conditions.		@	@	@	@	@	@	V	@	@	@	@	@	V	V	V	V	@	@	V	-	-	-	-	-
	Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.		@	@	@	V	V	V	V	V	V	@	V	@	V	V	@	V	V	V	V	-	-	-	-	-
	All spraying of materials and surfaces shall avoid excessive water usage.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	Vehicles that have the potential to create dust while transporting materials shall be covered, with the cover properly secured and extended over the edges of the side and tail boards.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	Materials shall be dampened, if necessary, before transportation.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads.		@	V	@	@	@	@	@	V	@	V	@	@	@	@	@	V	V	V	V	-	-	-	-	-

Noise - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status																								
			HY/2012/06												02/HY/2015												
			Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	
Noise during Construction	Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.	During construction	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-	
	Reduce the number of equipment and their percentage on-time.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	2.5 m high temporary noise barrier along Tai Wo Service Road West (Figure 2c of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	3.5m and 7m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure 2c of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	7 m high temporary noise barrier along Tai Wo Service Road West near Tai Wo Footbridge work area (Figure 2d of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	7 m high temporary noise barrier near Kiu Tau Footbridge work area (Figure 2d of the Environmental Permit).		V	V	V	V	V	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-
	2.5 m high temporary noise barrier near river diversion work area (Figure 2e of the Environmental Permit).		N.	N.	N.	N.	N.	V*	V*	V*	V*	V*	V*	V*	N.	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-

* Permanent noise barriers have been erected.

Water Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status																								
			HY/2012/06												02/HY/2015												
			Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	
Water quality during Construction	Demolition and reconstruction of bridges <ul style="list-style-type: none"> - Prevent off-site migration through use of sheet piles. - Minimise duration of works as far as practical. - All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains. - Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains. 	During construction	@	@	@	@	@	@	V	V	@	V	V	V	N.	N.	N.	N.	N.	N.	N.	-	-	-	-	-	
	<ul style="list-style-type: none"> - Prevent off-site migration through use of sheet piles. - Minimise duration of works as far as practical. - All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains. - Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains. 		A.	A.	A.	A.	A.	A.	A.	A.	A.	A.	A.	A.	A.	-	-	-	-	-	-	-	-	-	-	-	-
	Road Widening Works, Earthworks and Culvert Extension Works <ul style="list-style-type: none"> - Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settleable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required. - Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. - Runoff from exposed working areas, unfinished slopes and from unlined temporary channels should be directed to stilling basins and/or silt traps before discharging to the drainage outfalls. - Regular inspections of stilling basins and/or silt traps is required to ensure that sediment is not conveyed into the existing drainage system. - Open stockpiles should be covered with a tarpaulin cover. - During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded. - Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains. - Fuels should be stored in bunded areas such that spillage can be easily collected. 		@	@	@	@	@	@	V	@	@	@	@	@	V	V	@	V	V	V	V	V	-	-	-	-	-

Waste - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status																							
			HY/2012/06										02/HY/2015													
			Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18
Waste Management during Construction	<p>General Waste</p> <ul style="list-style-type: none"> - Transport of wastes off site as soon as possible. - Maintenance of accurate waste records. - Minimisation of waste generation for disposal (via reduction/recycling/re-use). - No on-site burning will be permitted. - Use of re-useable metal hoardings/signboards. 	During construction	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-	
	<p>Vegetation from site clearance</p> <ul style="list-style-type: none"> - Segregation of materials to facilitate disposal. Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas. 		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	<p>Demolition Wastes</p> <ul style="list-style-type: none"> - Segregation of materials to facilitate disposal. Appropriate stockpile management. 		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	<p>Excavated Materials</p> <ul style="list-style-type: none"> - Segregation of materials to facilitate disposal / reuse. - Appropriate stockpile management. - Re-use of excavated material on or off site (where possible). <p>Special handling and disposal procedures in the event that contaminated materials are excavated.</p>		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	<p>Construction Wastes</p> <ul style="list-style-type: none"> - Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles). - Appropriate stockpile management. - Planning to reduce over ordering and waste generation. - Recycling and re-use of materials where possible (e.g. metal, wood from formwork) <p>For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.</p>		V	@	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	@	V	-	-	-	-	-
	<p>Bentonite Slurries</p> <ul style="list-style-type: none"> - Bentonite slurries should be reused as far as possible. - Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94. 		#	#	#	#	#	#	#	#	#	#	#	#	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-	-	-	-	-
	<p>Chemical Wastes</p> <ul style="list-style-type: none"> - Storage within locked, covered and bunded area. - The storage area shall not be located adjacent to sensitive receivers e.g. drains. - Minimise waste production and recycle oils/solvents where possible. - A spill response procedure shall be in place and absorption material available for minor spillages. 		@	@	@	@	@	V	@	@	@	V	V	@	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-	-	-	-	-

<ul style="list-style-type: none"> - Use appropriate and labelled containers.- - Educate site workers on site cleanliness/waste management procedures. - If chemical wastes are to be generated, the contractor must register with EPD as a chemical waste producer. <p>The chemical wastes shall be collected by a licensed chemical waste collector.</p>																									
<p>Municipal Wastes</p> <ul style="list-style-type: none"> - Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal. <p>Regular, daily collections are required by an approved waste collector.</p>		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-

Impact	Mitigation Measures	Timing	Implementation Status																								
			HY/2012/06												02/HY/2015												
			Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	
Ecology during construction	Accurate Delineation of Works Area - Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats. - Individual trees which fall within the works areas but which work plans do not require removal are to be retained and fenced off to maximize protection.	During construction	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-	
	Vegetation Clearance - No fires shall be lit within the works area for the purpose of burning cleared vegetation. - The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area / adjacent land.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	Dust generation There are a number of measures which shall be taken as specified in the Air Pollution Control (Construction Dust) Regulation on 'Dust Control Requirements, including the following key measures to be applied during construction: - Vehicle washing facilities to be provided at every discernible or designated vehicle exit point; - All temporary site access roads shall be sprayed with water to suppress dust as necessary; - All dusty materials should be sprayed with water immediately prior to any handling; and - All debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area.		@	@	@	@	@	@	@	@	@	@	@	@	@	@	@	V	V	V	V	V	-	-	-	-	-
	Surface Run-off In general, mitigation measures shall be in accordance with ProPECC PN1/94 on 'Construction Site Drainage'. Key measures include: - Bund and cover stock piles to avoid run-off; - Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical; - All vehicle maintenance to be undertaken within a bunded area; and - Maximise vegetation retention on-site to maximise absorption (minimise transport).		@	@	@	@	@	@	V	V	@	@	@	@	V	V	@	V	V	V	V	V	-	-	-	-	-

Landscape and Visual Impact - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status																								
			HY/2012/06												02/HY/2015												
			Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	
Landscape and Visual during Construction	Preservation of Existing Vegetation - Trees identified for retention within the project limit would be protected during the works; - The tree transplanting and planting works shall be implemented by approved Landscape Contractors.	During construction	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-	
	Temporary Works Areas - Where feasible the works areas would be screened using hoarding and existing vegetation would be retained where possible to reduce the landscape and visual impacts arising from the construction activity. The landscape of these works areas would be restored following the completion of the construction phase.		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	-	-	-
	Hoarding - A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSRs.		V	V	V	V	V	V	V	V	V	V	V	V	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-	-	-	-	-
	Top Soils - The works will result in disturbance to extensive areas of topsoil. Topsoil worthy of retention should be stockpiled for use following completion of the civil engineering works. It should either be temporarily vegetated with hydroseeded grass or turned over on a regular basis.		#	#	#	#	#	#	#	#	#	#	#	#	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-	-	-	-	-
	Protection of Important Landscape Features - Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.		#	#	#	#	#	#	#	#	#	#	#	#	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	-	-	-	-	-

Legend:

V = implemented;

x = not implemented;

@ = partially implemented;

+ = recommended and immediately implemented during the site inspection by the Contractor;

N/A = not applicable - No such work was undertaken or no such material was used on site;

= to be implemented.

**APPENDIX D
SUMMARY OF ACTION AND LIMIT LEVELS**

Appendix D - Summary of Action and Limit Levels

Table 1 – Action and Limit Levels for 1-hour TSP

Location	Action Level	Limit Level
AM2	317.8 µg/m ³	500 µg/m ³

Table 2 – Action and Limit Levels for 24-hour TSP

Location	Action Level	Limit Level
AM2	200.7 µg/m ³	260 µg/m ³

Table 3 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

Location	Action Level	Limit Level
M2	When one documented complaint, related to 0700 – 1900 hours on normal weekdays, is received from any one of the sensitive receivers	75 dB(A)
M3*		65/70 dB(A)

*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period

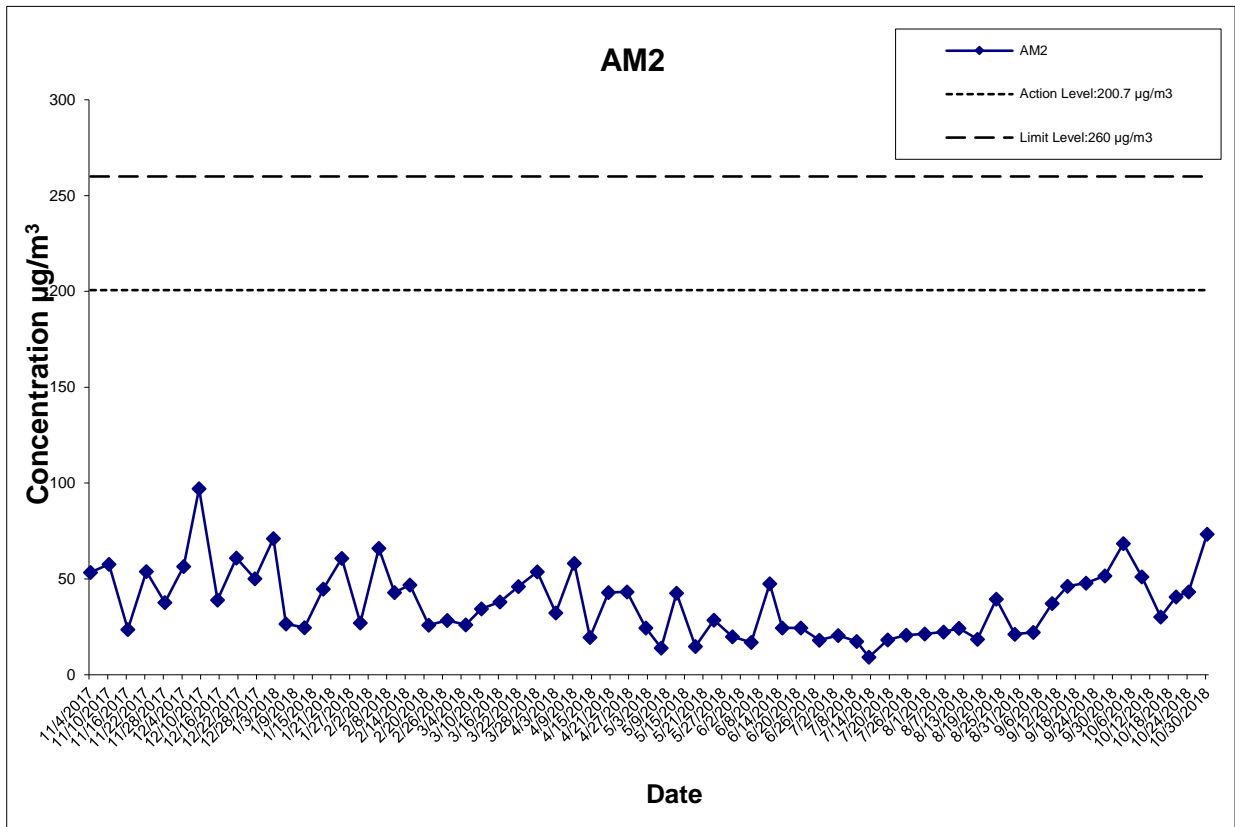
**APPENDIX E
IMPACT AIR QUALITY MONITORING
RESULTS AND THEIR GRAPHICAL
PRESENTATION**

Impact Air Quality Monitoring Results

24-hour TSP Monitoring Results at Station AM2 (Fanling Government Secondary School)

Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m³/min.)		Av. flow (m³/min)	Total vol. (m³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m³)	Actino Level (µg/m³)	Limit Level (µg/m³)
				Initial	Final			Initial	Final		Initial	Final				
4-Nov-17	Cloudy	23.6	1018.9	1.314	1.314	1.314	1892.2	2.7728	2.8740	0.1012	9450.02	9474.02	24.00	53.5	200.7	260
10-Nov-17	Sunny	25.0	1014.9	1.314	1.314	1.314	1892.2	2.5779	2.6869	0.1090	9474.02	9498.02	24.00	57.6	200.7	260
16-Nov-17	Sunny	23.4	1015.1	1.314	1.314	1.314	1892.2	2.7702	2.8150	0.0448	9498.02	9522.02	24.00	23.7	200.7	260
22-Nov-17	Fine	19.8	1016.5	1.314	1.314	1.314	1892.2	2.5905	2.6925	0.1020	9522.02	9546.02	24.00	53.9	200.7	260
28-Nov-17	Cloudy	22.2	1017.4	1.314	1.314	1.314	1892.2	2.6048	2.6761	0.0713	9546.02	9570.02	24.00	37.7	200.7	260
4-Dec-17	Fine	20.1	1018.3	1.314	1.314	1.314	1892.2	2.7948	2.9017	0.1069	9570.02	9594.02	24.00	56.5	200.7	260
9-Dec-17	Sunny	15.5	1019.7	1.314	1.314	1.314	1892.2	2.5645	2.7482	0.1837	9594.02	9618.02	24.00	97.1	200.7	260
15-Dec-17	Cloudy	19.6	1019.2	1.314	1.314	1.314	1892.2	2.5939	2.6676	0.0737	9618.02	9642.02	24.00	39.0	200.7	260
21-Dec-17	Sunny	15.0	1025.7	1.314	1.314	1.314	1892.2	2.7486	2.8639	0.1153	9642.02	9666.02	24.00	60.9	200.7	260
27-Dec-17	Sunny	17.6	1021.2	1.314	1.314	1.314	1892.2	2.7844	2.8794	0.0950	9666.02	9690.02	24.00	50.2	200.7	260
2-Jan-18	Sunny	17.8	1019.3	1.314	1.314	1.314	1892.2	2.7513	2.8859	0.1346	9690.02	9714.02	24.00	71.1	200.7	260
6-Jan-18	Rainy	16.2	1014.6	1.314	1.314	1.314	1892.2	2.6527	2.7031	0.0504	9714.02	9738.02	24.00	26.6	200.7	260
12-Jan-18	Sunny	12.8	1027.1	1.314	1.314	1.314	1892.2	2.6116	2.6581	0.0465	9738.02	9762.02	24.00	24.6	200.7	260
18-Jan-18	Sunny	19.2	1016.6	1.314	1.314	1.314	1892.2	2.6277	2.7125	0.0848	9762.02	9786.02	24.00	44.8	200.7	260
24-Jan-18	Fine	17.7	1015.5	1.314	1.314	1.314	1892.2	2.6559	2.7710	0.1151	9786.02	9810.02	24.00	60.8	200.7	260
30-Jan-18	Sunny	10.1	1020.4	1.314	1.314	1.314	1892.2	2.6385	2.6897	0.0512	9810.02	9834.02	24.00	27.1	200.7	260
5-Feb-18	Sunny	9.8	1026.6	1.314	1.314	1.314	1892.2	2.6299	2.7550	0.1251	9834.02	9858.02	24.00	66.1	200.7	260
10-Feb-18	Sunny	18.0	1017.4	1.314	1.314	1.314	1892.2	2.6218	2.7029	0.0811	9858.02	9882.02	24.00	42.9	200.7	260
15-Feb-18	Sunny	19.8	1016.0	1.304	1.304	1.304	1877.8	2.7064	2.7942	0.0878	9882.02	9906.02	24.00	46.8	200.7	260
21-Feb-18	Sunny	18.2	1014.9	1.304	1.304	1.304	1877.8	2.6167	2.6653	0.0486	9906.02	9930.02	24.00	25.9	200.7	260
27-Feb-18	Sunny	19.1	1017.3	1.304	1.304	1.304	1877.8	2.7051	2.7582	0.0531	9930.02	9954.02	24.00	28.3	200.7	260
5-Mar-18	Rainy	14.5	1019.4	1.304	1.304	1.304	1877.8	2.7194	2.7684	0.0490	9954.02	9978.02	24.00	26.1	200.7	260
9-Mar-18	Sunny	16.7	1022.1	1.324	1.324	1.324	1906.6	2.7396	2.8052	0.0656	9978.02	10002.02	24.00	34.4	200.7	260
16-Mar-18	Sunny	22.7	1014.8	1.324	1.324	1.324	1906.6	2.7142	2.7867	0.0725	10002.02	10026.02	24.00	38.0	200.7	260
22-Mar-18	Sunny	19.5	1016.9	1.324	1.324	1.324	1906.6	2.7397	2.8275	0.0878	10026.02	10050.02	24.00	46.1	200.7	260
28-Mar-18	Sunny	22.7	1014.7	1.324	1.324	1.324	1906.6	2.7216	2.8239	0.1023	10050.02	10074.02	24.00	53.7	200.7	260
3-Apr-18	Fine	24.7	1013.6	1.324	1.324	1.324	1906.6	2.5332	2.5947	0.0615	10074.02	10098.02	24.00	32.3	200.7	260
9-Apr-18	Sunny	22.0	1017.6	1.324	1.324	1.324	1906.6	2.5558	2.6666	0.1108	10098.02	10122.02	24.00	58.1	200.7	260
14-Apr-18	Sunny	26.7	1011.3	1.324	1.324	1.324	1906.6	2.5912	2.6284	0.0372	10122.02	10146.02	24.00	19.5	200.7	260
20-Apr-18	Sunny	23.2	1014.6	1.324	1.324	1.324	1906.6	2.5630	2.6448	0.0818	10146.02	10170.02	24.00	42.9	200.7	260
26-Apr-18	Rainy	24.6	1013.6	1.324	1.324	1.324	1906.6	2.5346	2.6169	0.0823	10170.02	10194.02	24.00	43.2	200.7	260
2-May-18	Sunny	27.9	1012.4	1.324	1.324	1.324	1906.6	2.5665	2.6131	0.0466	10194.02	10218.02	24.00	24.4	200.7	260
7-May-18	Sunny	28.0	1007.2	1.324	1.324	1.324	1906.6	2.5698	2.5963	0.0265	10218.02	10242.02	24.00	13.9	200.7	260
12-May-18	Cloudy	26.5	1012.3	1.324	1.324	1.324	1906.6	2.5649	2.6462	0.0813	10242.02	10266.02	24.00	42.6	200.7	260
18-May-18	Cloudy	29.8	1007.7	1.324	1.324	1.324	1906.6	2.5772	2.6055	0.0283	10266.02	10290.02	24.00	14.8	200.7	260
24-May-18	Fine	30.0	1009.3	1.324	1.324	1.324	1906.6	2.5708	2.6254	0.0546	10290.02	10314.02	24.00	28.6	200.7	260
30-May-18	Sunny	31.2	1009.7	1.324	1.324	1.324	1906.6	2.5794	2.6172	0.0378	10314.02	10338.02	24.00	19.8	200.7	260
5-Jun-18	Rainy	27.1	1006.8	1.324	1.324	1.324	1906.6	2.5755	2.6079	0.0324	10338.02	10362.02	24.00	17.0	200.7	260
11-Jun-18	Fine	30.5	1002.4	1.324	1.324	1.324	1906.6	2.5494	2.6399	0.0905	10362.02	10386.02	24.00	47.5	200.7	260
15-Jun-18	Fine	27.1	1001.8	1.324	1.324	1.324	1906.6	2.6021	2.6488	0.0467	10386.02	10410.02	24.00	24.5	200.7	260
21-Jun-18	Sunny	30.0	1005.9	1.324	1.324	1.324	1906.6	2.6176	2.6642	0.0466	10410.02	10434.02	24.00	24.4	200.7	260
27-Jun-18	Fine	29.2	1010.0	1.324	1.324	1.324	1906.6	2.5551	2.5894	0.0343	10434.02	10458.02	24.00	18.0	200.7	260
3-Jul-18	Fine	29.7	1002.5	1.324	1.324	1.324	1906.6	2.5630	2.6020	0.0390	10458.02	10482.02	24.00	20.5	200.7	260
9-Jul-18	Rainy	28.2	1005.7	1.324	1.324	1.324	1906.6	2.6762	2.7094	0.0332	10482.02	10506.02	24.00	17.4	200.7	260
13-Jul-18	Rainy	26.7	1003.9	1.324	1.324	1.324	1906.6	2.6764	2.6939	0.0175	10506.02	10530.02	24.00	9.2	200.7	260
19-Jul-18	Rainy	27.9	1004.6	1.324	1.324	1.324	1906.6	2.6427	2.6774	0.0347	10530.02	10554.02	24.00	18.2	200.7	260
25-Jul-18	Fine	29.4	1005.8	1.324	1.324	1.324	1906.6	2.6561	2.6956	0.0395	10554.02	10578.02	24.00	20.7	200.7	260
31-Jul-18	Rainy	30.2	1005.5	1.324	1.324	1.324	1906.6	2.6356	2.6764	0.0408	10578.02	10602.02	24.00	21.4	200.7	260
6-Aug-18	Cloudy	30.2	1005.4	1.324	1.324	1.324	1906.6	2.6707	2.7133	0.0426	10602.02	10626.02	24.00	22.3	200.7	260
11-Aug-18	Rainy	27.0	998.7	1.324	1.324	1.324	1906.6	2.6242	2.6706	0.0464	10626.02	10650.02	24.00	24.3	200.7	260
17-Aug-18	Rainy	27.2	1000.2	1.324	1.324	1.324	1906.6	2.6755	2.7110	0.0355	10650.02	10674.02	24.00	18.6	200.7	260
23-Aug-18	Rainy	27.7	1001.7	1.324	1.324	1.324	1906.6	2.6326	2.7080	0.0754	10674.02	10698.02	24.00	39.5	200.7	260
29-Aug-18	Rainy	27.4	1002.5	1.324	1.324	1.324	1906.6	2.6521	2.6924	0.0403	10698.02	10722.02	24.00	21.1	200.7	260
4-Sep-18	Fine	29.1	1005.7	1.324	1.324	1.324	1906.6	2.6206	2.6629	0.0423	10722.02	10746.02	24.00	22.2	200.7	260
10-Sep-18	Sunny	26.1	1012.5	1.324	1.324	1.324	1906.6	2.6729	2.7440	0.0711	10746.02	10770.02	24.00	37.3	200.7	260
15-Sep-18	Rainy	30.7	1002.8	1.324	1.324	1.324	1906.6	2.6734	2.7615	0.0881	10770.02	10794.02	24.00	46.2	200.7	260
21-Sep-18	Sunny	29.2	1011.6	1.324	1.324	1.324	1906.6	2.6708	2.7622	0.0914	10794.02	10818.02	24.00	47.9	200.7	260
27-Sep-18	Rainy	27.3	1009.8	1.324	1.324	1.324	1906.6	2.6686	2.7670	0.0984	10818.02	10842.02	24.00	51.6	200.7	260
3-Oct-18	Sunny	26.9	1015.3	1.324	1.324	1.324	1906.6	2.6345	2.7650	0.1305	10842.02	10866.02	24.00	68.4	200.7	260
9-Oct-18	Sunny	26.5	1013.7	1.324	1.324	1.324	1906.6	2.6330	2.7305	0.0975	10866.02	10890.02	24.00	51.1	200.7	260
15-Oct-18	Cloudy	25.6	1014.6	1.324	1.324	1.324	1906.6	2.6903	2.7476	0.0573	10890.02	10914.02	24.00	30.1	200.7	260
20-Oct-18	Cloudy	24.0	1018.6	1.324	1.324	1.324	1906.6	2.6661	2.7436	0.0775	10914.02	10938.02	24.00	40.6	200.7	260
24-Oct-18	Rainy	25.2	1016.8	1.324	1.324	1.324	1906.6	2.6769	2.7592	0.0823	10938.02	10962.02	24.00	43.2	200.7	260
30-Oct-18	Fine	25.7	1014.8	1.324	1.324	1.324	1906.6	2.6823	2.8222	0.1399	10962.02	11010.02	24.00	73.4	200.7	260

Average for the reporting period (Nov 17 to Oct 18)	37.7
Minimum for the reporting period (Nov 17 to Oct 18)	9.2
Maximum for the reporting period (Nov 17 to Oct 18)	97.1



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CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Graphical Presentation of Impact 24-hour TSP Monitoring Results

Project No.: 60307376

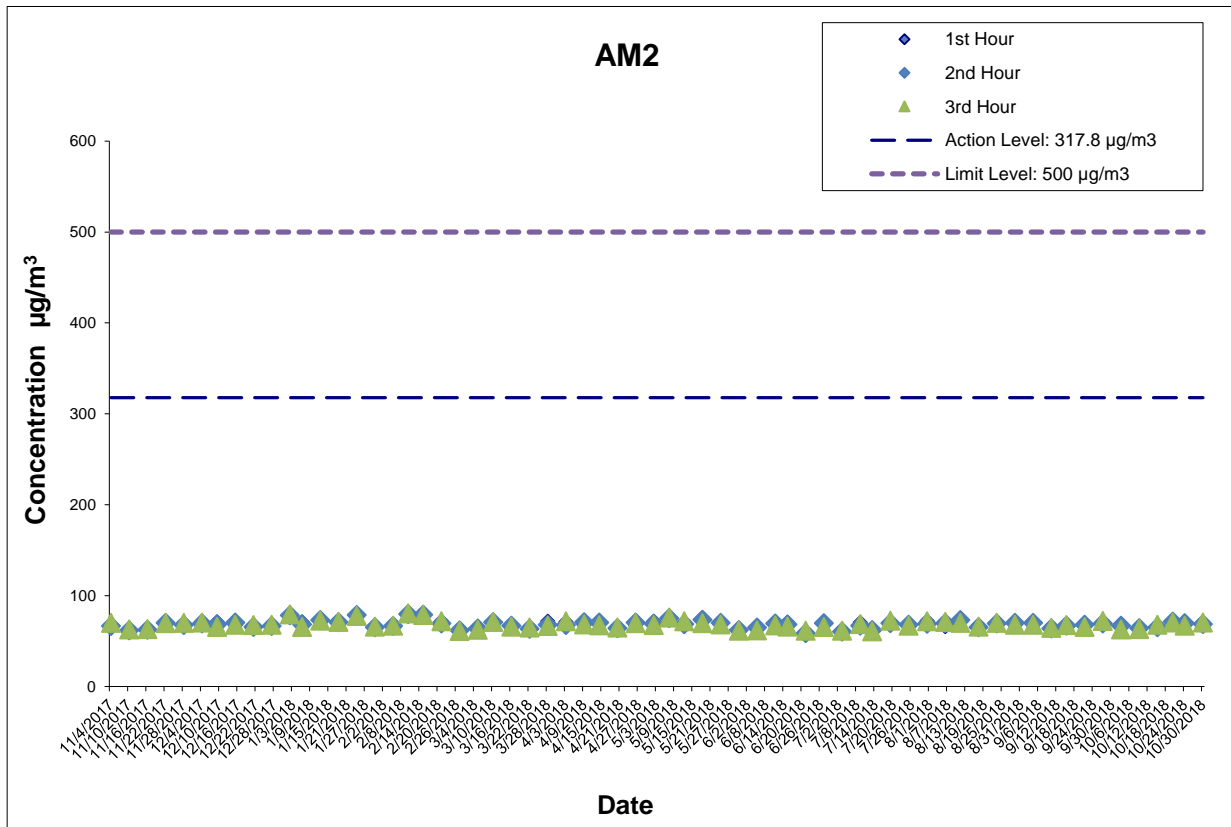
Date: Jan-19

Appendix E

Impact Air Quality Monitoring Results

1-hour TSP Monitoring Results at Station AM2 (Fanling Government Secondary School)

Date	Start Time (hh:mm)	1st Hour	2nd Hour	3rd Hour
		Conc. ($\mu\text{g}/\text{m}^3$)	Conc. ($\mu\text{g}/\text{m}^3$)	Conc. ($\mu\text{g}/\text{m}^3$)
4-Nov-17	14:00	65.8	66.8	70.2
10-Nov-17	12:12	63.4	61.9	62.9
16-Nov-17	12:25	62.1	62.7	63.4
22-Nov-17	11:05	69.8	70.1	69.9
28-Nov-17	13:38	67.9	67.8	70.2
4-Dec-17	10:48	72.0	69.6	70.4
9-Dec-17	10:20	71.1	68.5	65.9
15-Dec-17	12:05	67.8	70.5	68.1
21-Dec-17	10:30	66.2	65.9	67.8
27-Dec-17	14:00	65.0	66.7	68.1
2-Jan-18	10:00	79.1	78.6	79.7
6-Jan-18	13:30	71.2	68.5	65.6
12-Jan-18	9:30	70.6	73.2	72.8
18-Jan-18	10:45	69.5	70.8	71.1
24-Jan-18	13:10	78.1	78.7	77.8
30-Jan-18	13:00	64.6	65.3	66.2
5-Feb-18	12:30	65.4	66.7	67.2
10-Feb-18	13:06	80.4	79.8	80.6
15-Feb-18	13:05	78.6	79.3	78.8
21-Feb-18	15:00	72.0	69.6	71.8
27-Feb-18	13:30	60.6	62.1	61.3
5-Mar-18	13:00	65.0	64.0	62.8
10-Mar-18	13:45	72.3	70.8	71.1
16-Mar-18	10:25	65.5	67.2	66.0
22-Mar-18	13:00	61.6	63.7	64.9
28-Mar-18	14:35	72.1	68.1	66.9
3-Apr-18	9:40	71.1	67.8	72.0
9-Apr-18	13:35	67.7	70.8	68.6
14-Apr-18	11:05	72.2	70.5	67.6
20-Apr-18	9:30	63.8	64.2	64.9
26-Apr-18	10:35	67.9	70.7	69.8
2-May-18	13:00	72.0	69.2	67.9
7-May-18	13:30	75.6	75.3	76.1
12-May-18	13:00	66.5	68.7	72.1
18-May-18	13:10	72.7	73.6	69.8
24-May-18	13:10	71.2	70.3	68.6
30-May-18	14:00	60.6	62.4	61.7
5-Jun-18	13:35	63.3	65.2	62.0
11-Jun-18	12:10	67.9	69.6	67.4
15-Jun-18	10:45	70.5	68.6	66.1
21-Jun-18	13:00	60.0	58.8	61.7
27-Jun-18	10:30	68.6	69.9	65.8
3-Jul-18	13:30	58.9	60.4	61.6
9-Jul-18	9:45	70.6	67.2	68.8
13-Jul-18	13:20	61.7	62.2	60.9
19-Jul-18	11:35	67.7	69.8	72.6
25-Jul-18	11:25	67.5	68.1	67.2
31-Jul-18	11:35	72.3	69.2	71.8
6-Aug-18	11:25	66.2	69.8	71.1
11-Aug-18	10:35	72.5	73.3	70.1
17-Aug-18	14:02	67.3	65.4	66.1
23-Aug-18	13:50	68.2	69.7	70.1
29-Aug-18	11:20	68.6	70.3	68.1
4-Sep-18	13:50	69.9	70.2	68.1
10-Sep-18	13:30	66.1	63.9	64.8
15-Sep-18	10:30	65.4	67.2	67.8
21-Sep-18	13:55	66.7	68.0	65.7
27-Sep-18	11:45	71.6	69.7	72.4
3-Oct-18	11:25	65.9	67.1	63.1
9-Oct-18	11:05	62.9	64.5	63.3
15-Oct-18	10:55	67.2	65.3	68.2
20-Oct-18	13:10	71.1	71.5	70.7
24-Oct-18	13:30	68.8	69.8	67.2
30-Oct-18	13:15	68.0	68.9	70.7
Average for the reporting period (Nov 17 to Oct 18)				68.4
Minimum for the reporting period (Nov 17 to Oct 18)				58.8
Maximum for the reporting period (Nov 17 to Oct 18)				80.6



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CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Graphical Presentation of Impact 1-hour TSP Monitoring Results

Project No.: 60307376

Date: Jan-19

Appendix E

**APPENDIX F
METEROLOGICAL DATA**

Appendix F Meteorological Data

November 2017

The weather in Hong Kong was gloomier and more humid than usual in November 2017. The duration of bright sunshine in the month was only 114.3 hours, about 37 percent below the normal figure of 180.1 hours and the third lowest for November on record. The monthly mean temperature was 22.2 degrees, 0.4 degree above the normal figure of 21.8 degrees. Despite the rather cloudy and more humid conditions for most part of the month, the monthly rainfall was only 31.2 millimetres, about 17 percent below the normal of 37.6 millimetres. The accumulated rainfall this year up to November was 2572.1 millimetres, a surplus of about 8 percent above the normal of 2371.7 millimetres for the same period.

December 2017

In contrast to November, the weather in Hong Kong was sunny and bright in December 2017 and, apart from three days on 13, 17 and 23 December, the territory enjoyed more than two hours of sunshine each day during the month. The monthly total sunshine duration amounted to 209.6 hours, 37.4 hours and 22 percent above the December normal of 172.2 hours. The monthly mean temperature was 17.8 degrees, 0.1 degree below the December normal of 17.9 degrees. Only traces of rainfall were recorded in the month, with most of them occurring during a surge of strong easterly monsoon on 12 – 14 December. The only rain-free December was way back in 1909, and December 2017 was one of ten Decembers with traces of rainfall since records began in 1884. Nevertheless, the total rainfall of 2572.1 millimetres accumulated in 2017 still exceeded the annual normal of 2398.5 millimetres by about 7 percent.

January 2018

Despite some mild interludes, January 2018 was dominated by the northeast monsoon with two episodes of cold weather during the first half and towards the end of the month. Overall, the month was slightly cooler than usual with a mean temperature of 16.1 degrees, 0.2 degree below the normal figure of 16.3 degrees. It also had more rain than usual with 62.2 millimetres of rainfall recorded in the month, more than double the normal figure of 24.7 millimetres.

February 2018

With the persistence of an intense winter monsoon during the early part of the month, the weather of February 2018 was overall cooler than usual. The monthly mean temperature of 16.0 degrees was 0.8 degree below the normal figure of 16.8 degrees. It was also relatively dry with only 4.5 millimetres of rainfall recorded in the month, less than 10 percent of the February normal of 54.4 millimetres. The accumulated rainfall for the first two months of the year was 66.7 millimetres, about 15 percent below the normal figure of 78.9 millimetres for the same period.

March 2018

March 2018 was unseasonably warm and sunny with little rain. The total duration of bright sunshine of 196.2 hours in the month was more than twice the normal of 90.8 hours and was the highest on record for March. The monthly mean temperature was 20.8 degrees, 1.7 degrees higher than the normal of 19.1 degrees and one of the fourth highest on record for March. The total rainfall in the month was 22.7 millimetres, only about 28 percent of the normal of 82.2 millimetres. The accumulated rainfall of 89.4 millimetres since 1 January was about 45 percent below the normal of 161.3 millimetres for the same period.

April 2018

April 2018 was warmer than usual with a mean temperature of 23.6 degrees, 1.0 degree above the normal of 22.6 degrees. The month was also much drier than usual with only 28.1 millimetres of rainfall recorded in the month, about one-sixth of the normal of 174.7 millimetres and the eighth lowest on record for April. The accumulated rainfall recorded in the first four months of the year was 117.5 millimetres, a deficit of 65 percent compared to the normal of 336.1 millimetres for the same period.

May 2018

Under the dominance of an upper-air anticyclone over the northern part of the South China Sea, Hong Kong experienced an exceptionally hot and dry May with a 20-day fine spell that lasted till the end of the month. The monthly mean temperature of 28.3 degrees and monthly mean minimum temperature of 26.1 degrees were 2.4 degrees and 2.0 degrees above their respective normals and were the highest ever on record for May. The mean maximum temperature of 31.7 degrees was 3.3 degrees above normal and the second highest on record for May. There were in total 16 very hot days, including a heat wave of 15 consecutive very hot days that started from 17 May, and 6 hot nights in the month, all breaking the records for May. The total duration of bright sunshine was 236.9 hours, 96.5 hours above the normal of 140.4 hours and the fourth highest on record for May. The mean cloud amount of 62% and the mean relative humidity of 77% were respectively the joint fifth and joint third lowest on record for May. Rainfall in the month amounted to only 57.5 millimetres, less than one-fifth of the normal of 304.7 millimetres. The accumulated rainfall recorded in the first five months of the year was 175.0 millimetres, a deficit of 73 percent compared to the normal of 640.8 millimetres and the second lowest record for the same period.

June 2018

After a very dry May, the long awaited rainfall eventually returned to Hong Kong in June 2018, mainly due to the passage of tropical cyclone Ewiniar in early June, as well as showery activities associated with troughs and an active southerly airstream later in the month. The monthly rainfall was 458.8 millimetres, slightly above the normal of 456.1 millimetres in June. However, with well below normal rainfall in the first five months, the accumulated rainfall recorded in the first half of the year was 633.8 millimetres, a deficit of 42 percent compared to the normal of 1096.9 millimetres for the same period. The month was also warmer than usual with a mean temperature of 28.6 degrees, 0.7 degree above the normal of 27.9 degrees.

July 2018

The weather in Hong Kong was cloudier than usual in July 2018. The mean amount of cloud in the month was 77 percent, 8 percent above the normal of 69 percent. The duration of bright sunshine in the month was only 181.1 hours, about 15 percent below the normal figure of 212.0 hours. The month was also warmer than usual with the mean temperature of 29.1 degrees, 0.3 degrees above the normal of 28.8 degrees. Despite the cloudy and rather showery conditions for most part of the month, the monthly rainfall was 341.1 millimetres, about 9 percent below the normal of 376.5 millimetres in July. The accumulated rainfall recorded in the first seven months of the year was 974.9 millimetres, a deficit of 34 percent compared to the normal of 1473.3 millimetres for the same period.

August 2018

Affected by the outer rainbands of tropical cyclone Bebinca in mid-August and the heavy showers associated with an active trough of low pressure towards the end of the month, the weather in Hong Kong was wetter and much gloomier than usual in August 2018. The mean amount of cloud in the month was 84 percent, 15 percent above the normal of 69 percent and one of the highest on record for August. The duration of bright sunshine in the month was only 116.2 hours, about 38 percent lower than the normal figure of 188.9 hours and the lowest on record for August. The monthly rainfall was 615.1 millimetres, about 42 percent above the normal of 432.2 millimetres in August. The accumulated rainfall recorded in the first eight months of the year was 1590.0 millimetres, a deficit of 17 percent compared to the normal of 1905.5 millimetres for the same period.

September 2018

September 2018 was marked by the ferocious strike of severe typhoon Mangkhut which necessitated the issuance of the No. 10 Hurricane Signal in Hong Kong for 10 hours on 16 September. This is the second longest duration of No. 10 Hurricane Signal in Hong Kong since 1946, just next to the record of 11 hours set by Typhoon York in 1999. Mainly attributing to the rainfall brought by Mangkhut, the month was wetter than usual. The monthly rainfall was 383.3 millimetres, about 17 percent above the normal of 327.6 millimetres in September. The accumulated rainfall recorded in the first nine months of the year was 1973.3 millimetres, a deficit of 12 percent compared to the normal of 2233.1 millimetres for the same period. The month was also hotter than usual with a mean temperature of 28.0 degrees, 0.3 degrees above normal of 27.7 degrees.

October 2018

With the northeast monsoon successively affecting south China coastal areas, October 2018 was slightly cooler than usual in Hong Kong. The monthly mean temperature of 25.3 degrees was 0.2 degrees below the normal figure of 25.5 degrees. The monthly rainfall was 104.3 millimetres, slightly above the normal of 100.9 millimetres in October. The accumulated rainfall recorded in the first ten months of the year was 2077.6 millimetres, a deficit of 11 percent compared to the normal of 2334.0 millimetres for the same period.

**APPENDIX G
IMPACT DAYTIME CONSTRUCTION NOISE
MONITORING RESULTS AND THEIR
GRAPHICAL PRESENTATION**

Location : M2 (West Tai Wo - Free Field)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq*	L10*	L90*		
10-Nov-17	14:46	69.8	71.1	65.6	75	N
16-Nov-17	14:40	69.6	71.0	67.0	75	N
22-Nov-17	11:09	69.8	71.7	67.2	75	N
28-Nov-17	14:38	69.4	70.5	67.3	75	N
4-Dec-17	10:30	69.7	72.6	64.2	75	N
15-Dec-17	13:30	69.8	71.7	67.2	75	N
21-Dec-17	11:30	67.8	70.0	65.5	75	N
27-Dec-17	14:30	68.8	70.0	66.0	75	N
2-Jan-18	10:30	68.4	70.0	66.5	75	N
12-Jan-18	10:20	70.6	73.6	67.2	75	N
18-Jan-18	11:20	65.7	66.4	64.3	75	N
24-Jan-18	14:10	69.3	71.8	67.0	75	N
30-Jan-18	13:20	67.7	69.0	63.5	75	N
5-Feb-18	13:35	70.8	72.3	68.7	75	N
15-Feb-18	13:30	67.7	69.5	65.5	75	N
21-Feb-18	14:10	70.2	73.9	66.2	75	N
27-Feb-18	14:30	66.5	68.0	64.5	75	N
5-Mar-18	14:00	66.0	68.0	64.0	75	N
16-Mar-18	11:30	67.6	69.2	65.3	75	N
22-Mar-18	14:00	67.7	69.0	65.0	75	N
28-Mar-18	15:35	67.8	69.5	65.2	75	N
3-Apr-18	9:53	68.3	69.8	66.2	75	N
9-Apr-18	15:00	69.2	71.1	66.3	75	N
20-Apr-18	10:15	68.2	70.5	65.6	75	N
26-Apr-18	10:15	69.5	71.1	67.2	75	N
2-May-18	13:30	69.2	72.0	65.6	75	N
7-May-18	14:25	67.4	69.8	65.7	75	N
18-May-18	14:10	68.9	70.5	65.8	75	N
24-May-18	15:30	68.2	70.6	66.0	75	N
30-May-18	13:55	67.4	69.0	65.0	75	N
5-Jun-18	14:45	67.9	69.3	65.5	75	N
11-Jun-18	13:12	70.6	74.3	66.2	75	N
21-Jun-18	13:20	66.6	67.5	64.0	75	N
27-Jun-18	10:10	71.2	74.6	67.8	75	N
3-Jul-18	14:10	66.8	70.0	64.5	75	N
9-Jul-18	10:08	70.0	76.2	66.5	75	N
19-Jul-18	14:18	67.9	69.6	65.2	75	N
25-Jul-18	10:25	69.7	71.4	67.2	75	N
31-Jul-18	13:35	68.8	70.5	65.9	75	N
6-Aug-18	13:05	68.6	70.3	65.9	75	N
17-Aug-18	14:49	68.9	71.5	66.3	75	N
23-Aug-18	13:45	67.6	69.2	65.5	75	N
29-Aug-18	13:25	63.1	65.0	60.5	75	N
4-Sep-18	15:05	67.7	69.0	65.2	75	N
10-Sep-18	14:20	66.8	69.5	65.0	75	N
21-Sep-18	14:45	67.2	69.0	65.0	75	N
27-Sep-18	11:35	69.7	72.3	66.9	75	N
3-Oct-18	11:45	69.4	71.0	66.5	75	N
9-Oct-18	11:20	66.5	68.5	64.0	75	N
15-Oct-18	9:52	69.5	71.8	67.2	75	N
24-Oct-18	15:00	68.3	70.4	66.8	75	N
30-Oct-18	14:15	68.2	69.8	66.1	75	N
Minimum for Nov 17 to Oct 18		63.1	65.0	60.5		
Maximum for Nov 17 to Oct 18		71.2	76.2	68.7		
Average for Nov 17 to Oct 18		68.7	70.9	66.0		

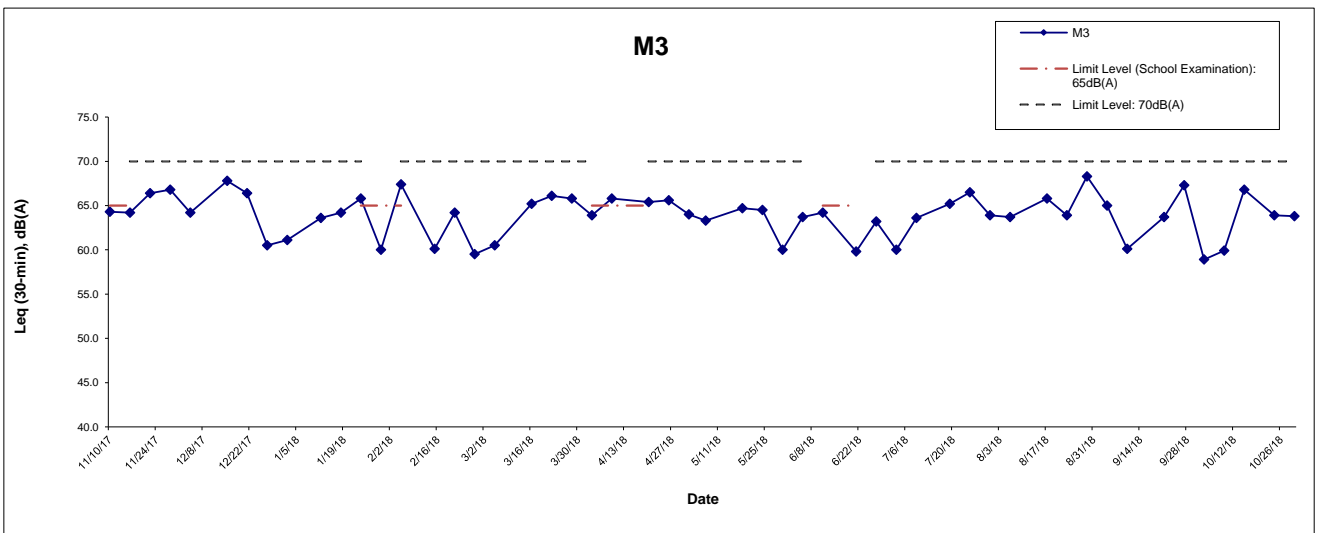
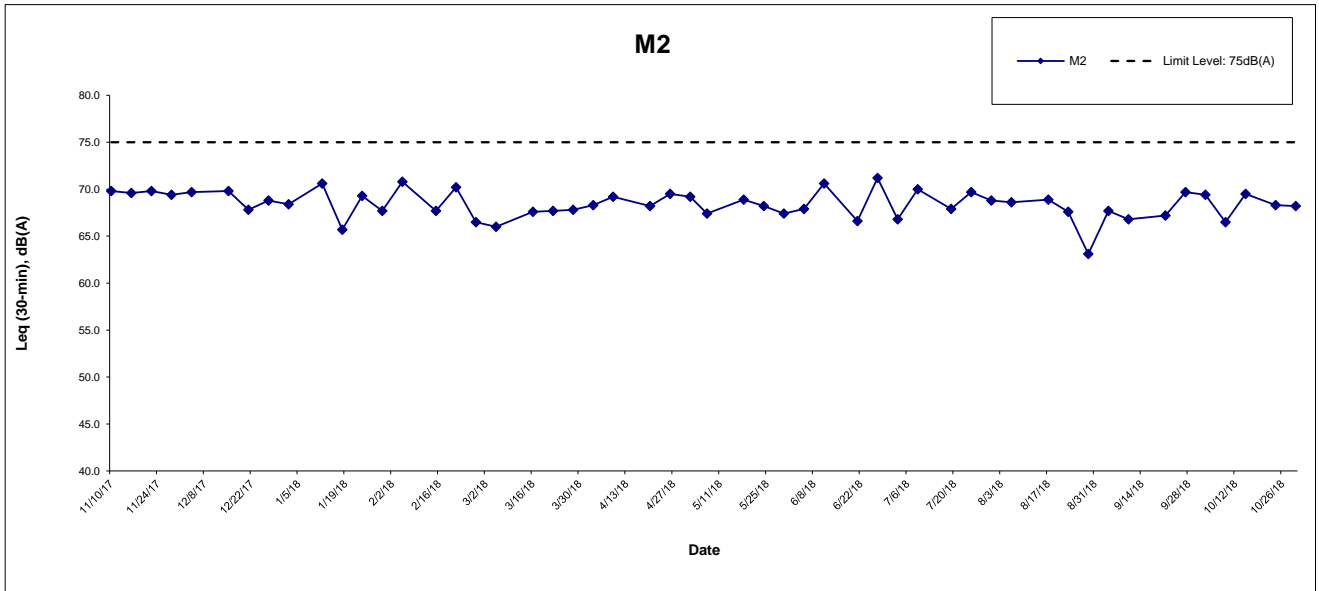
Location : M3 (Fanling Government Secondary School- Façade)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Limit Level, dB(A)^	Exceedance (Y/N)
	Start Time	Leq	L10	L90		
10-Nov-17	12:12	64.3	66.0	61.8	65	N
16-Nov-17	12:25	64.2	65.5	61.5	70	N
22-Nov-17	13:35	66.4	68.0	63.9	70	N
28-Nov-17	13:25	66.8	68.7	64.3	70	N
4-Dec-17	10:48	64.2	67.9	60.5	70	N
15-Dec-17	14:50	67.8	70.5	65.3	70	N
21-Dec-17	13:35	66.4	68.0	63.9	70	N
27-Dec-17	14:00	60.5	61.5	56.5	70	N
2-Jan-18	10:00	61.1	62.0	56.6	70	N
12-Jan-18	9:30	63.6	66.7	60.6	70	N
18-Jan-18	10:45	64.2	65.5	63.8	70	N
24-Jan-18	13:15	65.8	67.7	63.6	70	N
30-Jan-18	13:00	60.0	61.0	57.0	65	N
5-Feb-18	14:40	67.4	69.5	65.7	70	N
15-Feb-18	13:05	60.1	61.0	57.5	70	N
21-Feb-18	15:09	64.2	67.5	60.2	70	N
27-Feb-18	13:30	59.5	60.5	57.0	70	N
5-Mar-18	13:00	60.5	61.5	58.0	70	N
16-Mar-18	10:27	65.2	67.0	63.1	70	N
22-Mar-18	13:00	66.1	61.5	57.5	70	N
28-Mar-18	14:40	65.8	67.7	63.2	70	N
3-Apr-18	9:40	63.9	65.6	62.1	70	N
9-Apr-18	13:37	65.8	67.3	62.9	65	Y
20-Apr-18	9:30	65.4	67.3	62.7	70	N
26-Apr-18	10:30	65.6	67.3	61.5	70	N
2-May-18	14:19	64.0	67.3	60.5	70	N
7-May-18	13:35	63.3	66.1	60.8	70	N
18-May-18	13:15	64.7	65.8	62.9	70	N
24-May-18	14:25	64.5	66.1	62.2	70	N
30-May-18	13:05	60.0	61.0	57.0	70	N
5-Jun-18	13:40	63.7	65.6	61.8	70	N
11-Jun-18	14:10	64.2	66.9	60.6	65	N
21-Jun-18	13:00	59.8	60.5	56.5	65	N
27-Jun-18	10:30	63.2	66.7	59.6	70	N
3-Jul-18	13:30	60.0	61.0	56.5	70	N
9-Jul-18	9:45	63.6	67.2	57.8	70	N
19-Jul-18	15:05	65.2	66.8	62.6	70	N
25-Jul-18	11:28	66.5	68.9	64.3	70	N
31-Jul-18	14:30	63.9	65.6	61.5	70	N
6-Aug-18	14:15	63.7	65.5	61.4	70	N
17-Aug-18	15:50	65.8	67.1	63.2	70	N
23-Aug-18	14:02	63.9	65.5	61.8	70	N
29-Aug-18	14:40	68.3	69.8	65.5	70	N
4-Sep-18	14:00	65.0	66.7	63.2	70	N
10-Sep-18	13:30	60.1	61.5	57.0	70	N
21-Sep-18	13:50	63.7	65.2	61.3	70	N
27-Sep-18	13:49	67.3	69.4	65.6	70	N
3-Oct-18	11:30	58.9	60.5	56.5	70	N
9-Oct-18	11:05	59.9	60.5	56.5	70	N
15-Oct-18	10:50	66.8	68.7	64.3	70	N
24-Oct-18	13:35	63.9	65.5	60.7	70	N
30-Oct-18	13:20	63.8	65.8	60.9	70	N
Minimum for Nov 17 to Oct 18		58.9	60.5	56.5		
Maximum for Nov 17 to Oct 18		68.3	70.5	65.7		
Average for Nov 17 to Oct 18		64.5	66.4	62.0		

* +3dB(A) Façade effect correction included

^ Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.



Remark:

^ Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

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CONTRACT NO. HY/2012/06
 WIDENING OF FANLING HIGHWAY
 - TAI HANG TO WO HOP SHEK INTERCHANGE



Graphical Presentation of Impact Daytime Construction Noise Monitoring Results

Project No.: 60307376

Date:

Jan-19

Appendix G

**APPENDIX H
STATISTICS ON COMPLAINTS,
NOTIFICATION OF SUMMONS AND
SUCCESSFUL PROSECUTIONS**

Appendix H

Statistics on Complaints, Notifications of Summons and Successful Prosecutions

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

	Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
Environmental complaints	19 December 2013	EPD referred a complaint from Lot no. 116 of Fui Sha Wai at Tai Hang of Tai Po which is concerned about the construction noise and diesel-like smell generated from construction activities nearby which caused nuisance and health problems on 19 December 2013 morning.	Closed	0	8
	24 February 2014	EPD referred an air-and-odour complaint on 24 February 2014. The complainant complained about the construction site located near the bus stop in Fui Sha Wai, Tai Hang, Tai Wo Service Road West. When construction works were carried out, odour, white smoke and dust were generated. The complainant asked for follow-up actions.	Closed		

Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
23 October 2014	<p>EPD referred an air complaint on 24 October 2014.</p> <p>A resident complained against the excavation works of Tai Wo Service Road West between Nam Wah Po & Tai Hang Tsuen, which have piled up high stockpiles, causing serious dust nuisance to his house.</p> <p>The resident also complained that the stockpiles have not been covered and watered properly. He now requires the EPD to follow up. The location of complaint is near Lamppost Location EB5717.</p>	Closed		
31 December 2014	<p>EPD referred a water complaint on 31 December 2014.</p> <p>The complainant complained about the muddy river outside Tai Hang Village Office on 29 December 2014. It was suspected that the muddy water was discharged from the construction works of the Project. He required the EPD to follow up.</p>	Closed		
25 March 2015	<p>EPD referred a water complaint on 25 March 2015.</p> <p>The complainant complained about the generation of the smell of gasoline from the Widening of Fanling Highway construction site on Tai Wo Service Road West, causing serious nuisance to nearby houses.</p> <p>The situation has continued for a few weeks and she asked the EPD to follow up as soon as possible.</p>	Closed		

Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
<p>5 January 2017 (Referred by the Contractor on 13 January 2017)</p>	<p>A complaint was received by the 1823 enquiry and complaint hotline on 5 January 2017. The complaint was referred to the Environmental Team by the Contractor on 13 January 2017.</p> <p>The complainant complained against the dust emission generated by the Widening of Fanling Highway construction site on Tai Wo Service Road West near Tai Hang Village.</p> <p>The complainant also complained that Highway Department did not conduct road surface cleansing, which affects residents' health. He/she now requires the Highway Department to follow up.</p>	<p>Closed</p>		
<p>22 May 2017 (Referred by the Contractor on 23 May 2017)</p>	<p>A complaint was received by the 1823 enquiry and complaint hotline on 22 May 2017. The complaint was referred to the Environmental Team by the Contractor on 23 May 2017.</p> <p>A complainant complained that construction noise was caused by the erection of noise barrier on Tai Wo Service Road West near Tai Hang Village on Sunday(s).</p> <p>The complainant concerned about if any Construction Noise Permit is issued by the Environmental Protection Department.</p>	<p>Closed</p>		

	Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
	25 February 2018 (Referred by the Contractor on 1 March 2018)	<p>The 1823 enquiry and complaint hotline received a complaint on 25 February 2018. The complaint was referred to the Environmental Team by the Contractor on 1 March 2018.</p> <p>A complainant complained that noise nuisance was caused continuously by road construction works at Fanling Highway near Tai Hang Village during 01:30 to 04:00 on 25 February 2018.</p> <p>The complainant concerned that the nuisance affects residence and asked for follow-up action from the related department.</p>			
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0

Contract No. 02/HY/2015 – Provision of Bus-Bus Interchange on Fanling Highway Kowloon Bound

	Date Received	Subject	Status	Total no. followed up by the ET this month	Total no. followed up by the ET since project commencement
Environmental complaints	-	-	-	0	0
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0