

Highways Department

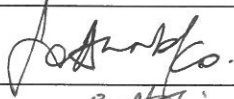

Agreement No. CE 20/2009 (EP)

**Environmental Team for the Widening of
Tolo Highway / Fanling Highway between
Island House Interchange and Fanling**

**(Stage 1)
Between Island House Interchange and
Tai Hang - Investigation**

**Supplementary EM&A Report
for January 2015**

[03/2015]

	Name	Signature
Prepared & Checked:	Joanne Ko	
Reviewed & Approved:	Y T Tang	

Version:	Rev. 0	Date: 9 March 2015
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Disclaimer

This report is prepared for Highways Department and is given for its sole benefit in relation to and pursuant to Environmental Team for the Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling (Stage 1) Between Island House Interchange and Tai Hang - Investigation and may not be disclosed to, quoted to or relied upon by any person other than Highways Department without our prior written consent. No person (other than Highways Department) into whose possession a copy of this report comes may rely on this report without our express written consent and Highways Department may not rely on it for any purpose other than as described above.

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9 March 2015
By Fax (2805 5028) and Post

Attn.: Mr. James Penny

Dear Sir,

**Widening of Tolo Highway between
Island House Interchange and Tai Hang
Environmental Permit (EP) No.: EP-324/2008/B
Submission of Supplementary EM&A Report for January 2015 (Stage 1)**

We refer to the captioned Supplementary EM&A Report submitted by Environmental Team (ET) via email on 9 March 2015. We confirm we have no comment.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

Terence Kong
Independent Environmental Checker

c.c. HyD – Mr. Raymond T W Kong / Mr. Dennis Wong
ETL, AECOM – Mr. Y T Tang

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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) and is governed by an Environmental Permit (EP-324/2008)(EP) issued by EPD on 23 December 2008. Subsequently, EPD issued a Variation of Environmental Permit (EP-324/2008/A) (VEP) on 31 January 2012. The VEP (EP-324/2008/B) was subsequently granted on 17 March 2014 which superseded the previous EP (EP-324/2008/A). The most recent variation of the EP does not cover Stage 1 (between Island House Interchange and Tai Hang) of the Project.

The Project aims 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 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). The construction works of Stage 1 commenced on 23 November 2009 and substantially completed on 30 September 2014. This report focuses on Stage 1 of the Project only.

The constructional phase Environmental Monitoring and Audit (EM&A) programme for Stage 1 of the Project comprised impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit. It commenced on 23 November 2009 and has been mostly completed by the reporting period. The operational phase EM&A programme which includes noise monitoring will commence in March 2015.

The impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit for Contract 1 of the Project was completed on 15 July 2014.

The impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit for Contract 2 of the Project was completed on 30 September 2014.

This report mainly documents the construction activities carried out by the Contractors during the Maintenance Period of the Project, the status of the environmental licenses and permits, and the status of the operational phase EM&A programme in the period between 1 and 31 January 2015.

As informed by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.), the summary of major construction activities during the Maintenance Period in the reporting period is as follows:

- Asphalt laying; and
- Landscape softworks.

As informed by the Contract 2 Contractor (Gammon Construction Ltd.), the summary of major construction activities during the Maintenance Period in the reporting period is as follows:

- Temporary traffic arrangements;
- Road and drainage outstanding and remedial works; and
- Landscaping works.

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

1 BACKGROUND

- 1.1. Tolo Highway and Fanling Highway are expressways in the North East New Territories connecting Sha Tin, Tai Po and Fanling. These highways form a vital part of the strategic Route 9, which links other major strategic routes to Shenzhen. At present, this section of Route 9 is dual 3-lane carriageway. However, at several major interchanges along this section of Route 9, the highway is only dual-2 lane. Severe congestion is a frequent occurrence during peak periods, particularly in the Kowloon bound direction.
- 1.2. 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.
- 1.3. The Project is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is governed by an Environmental Permit (EP-324/2008)(EP) issued by EPD on 23 December 2008. Subsequently, EPD issued a Variation of Environmental Permit (EP-324/2008/A) (VEP) on 31 January 2012. The VEP (EP-324/2008/B) was subsequently granted on 17 March 2014 which superseded the previous EP (EP-324/2008/A). The most recent variation of the EP does not cover Stage 1 (between Island House Interchange and Tai Hang) of the Project.
- 1.4. The scope of the Project comprises mainly:-
 - (i) Widening of a 5.7 km section of Tolo Highway and 3.0 km section of Fanling Highway between Island House Interchange and Wo Hop Shek Interchange from the existing dual 3-lane to dual 4-lane, including construction of new vehicular bridges;
 - (ii) Widening of interchange sections at Island House Interchange, Tai Po North Interchange, and Lam Kam Road Interchange from dual 2-lane to dual 3-lane, except Sha Tin bound carriageway at Tai Po North Interchange, which is widened from 3-lane to 4-lane, including realignment of various slip roads;
 - (iii) Modification and reconstruction of highways, vehicular bridges, underpasses and footbridges.
- 1.5. 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). The construction works of Stage 1 commenced on 23 November 2009 and substantially completed on 30 September 2014. This report focuses on Stage 1 of the Project only.
- 1.6. The construction works for Stage 1 of the Project are implemented under 2 works contracts (Contract 1 and Contract 2). Contract 1 covers the section of Tolo Highway between Island House Interchange and Ma Wo, Contract 2 covers the section of Tolo Highway between Ma Wo and Tai Hang.
- 1.7. Hyder-Arup-Black and Veatch Joint Venture (HABVJV) are appointed by Highways Department (HyD) as the consultants for the design and construction assignment for the Tolo project under Agreement No. CE 58/2000 Supplementary Agreement No. 3 (SA3) (i.e. the Engineer for the Contracts).
- 1.8. China State Construction Engineering (Hong Kong) Ltd. (CSHK) was commissioned as the Contractor of Contract 1 of Stage 1 of the Project, while Gammon Construction Limited (GCL) was commissioned as the Contractor of Contract 2 of Stage 1 of the Project.
- 1.9. AECOM Asia Co. Ltd. was employed by HyD as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for Stage 1 of the Project and Mott MacDonald Hong Kong Ltd. acts as the Independent Environmental Checker (IEC) for the Contracts.
- 1.10. The constructional phase Environmental Monitoring and Audit (EM&A) programme for Stage 1 of the Project commenced on 23 November 2009 and has been mostly completed by the reporting period. The operational phase EM&A programme which includes noise monitoring will commence in March 2015.

2 SUMMARY OF CONSTRUCTION WORKS

- 2.1 The construction works of Stage 1 commenced on 23 November 2009 and substantially completed on 30 September 2014.
- 2.2 The summary of major construction activities carried out by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.) during the Maintenance Period in the reporting period is as follows:
- Asphalt laying; and
 - Landscape softworks.
- 2.3 The summary of major construction activities carried out by the Contract 2 Contractor (Gammon Construction Ltd.) during the Maintenance Period in the reporting period is as follows:
- Temporary traffic arrangements;
 - Road and drainage outstanding and remedial works; and
 - Landscaping works.
- 2.4 The summary of major construction activities during the Maintenance Period for Contract 1 in February 2015 will be:
- Asphalt laying; and
 - Landscape softworks.
- 2.5 The summary of major construction activities during the Maintenance Period for Contract 2 in February 2015 will be:
- Temporary traffic arrangements for inspections and minor remedials;
 - Close out of drainage CCTV and final handover of small sections of outstanding drainage works; and
 - Landscaping works, including waterpoints.
- 2.6 The Construction Programmes are shown in Appendix A, detailing the aforementioned construction activities.
- 2.7 The general layout plan of the Project site showing the contract areas is shown in Figure 2.1.
- 2.8 The environmental mitigation measures implementation schedule are presented in Appendix B.

3 STATUS OF EM&A PROGRAMME

- 3.1 The constructional phase Environmental Monitoring and Audit (EM&A) programme for Stage 1 of the Project comprised impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit. It commenced on 23 November 2009 and has been mostly completed by the reporting period. The operational phase EM&A programme which includes noise monitoring will commence in March 2015.
- 3.2 The impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit for Contract 1 of the Project was completed on 15 July 2014.
- 3.3 The impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit for Contract 2 of the Project was completed on 30 September 2014.

4 ENVIRONMENTAL LICENSES AND PERMITS

- 4.1 The environmental licenses and permits for Stage 1 of the Project and valid in the reporting period is summarized in Table 4.1.

Table 4.1 Summary of Environmental Licensing and Permit Status

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
EIAO	Environmental Permit	EP-324/2008/B	17/03/2014	N/A	HyD	Tolo Highway/Fanling Highway between Island House Interchange and Ma Wo The VEP (EP-324/2008/B) was granted on 17 March 2014 which superseded the previous EP (EP-324/2008/A).
WPCO	Discharge License (Office)	WT00005096-2009	03/12/2009	31/12/2014	CSHK	Discharge at Site Office
	Discharge License (Site)	WT00005445-2009	15/12/2009	31/12/2014	CSHK	Discharge of Construction Runoff
	Discharge License (Office)	WT00006782-2010	25/06/2010	30/06/2015	GCL	Discharge at Site Office
	Discharge License (Site)	WT00007162-2010	09/08/2010	31/07/2015	GCL	Discharge of Construction Runoff
WDO	Chemical Waste Producer Registration	5213-727-C3249-46	25/09/2009	N/A	CSHK	Chemical waste produced in Contract HY/2008/09
		5213-722-G2347-18	18/05/2010	N/A	GCL	Chemical waste produced in Contract HY/2009/08
	Billing Account for Disposal of Construction Waste	7009328	08/09/2009	N/A	CSHK	Waste disposal in Contract HY/2008/09
		7010320	02/03/2010	N/A	GCL	Waste disposal in Contract HY/2009/08
NCO	Construction Noise Permit	GW-RN0628-14	14/10/2014	13/01/2015	CSHK	Construction works next to MTRC's track protection zone
		GW-RN0009-15	14/01/2015	28/03/2015	GCL	Tolo Highway between Ma Wo and Tai Hang, CH 17.96 to CH 21.00, Tai Po, New Territories, (Widening of Tolo Highway /Fanling Highway, Stage 1, Contract No. HY/2009/08)

5 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

- 5.1 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in Appendix B.

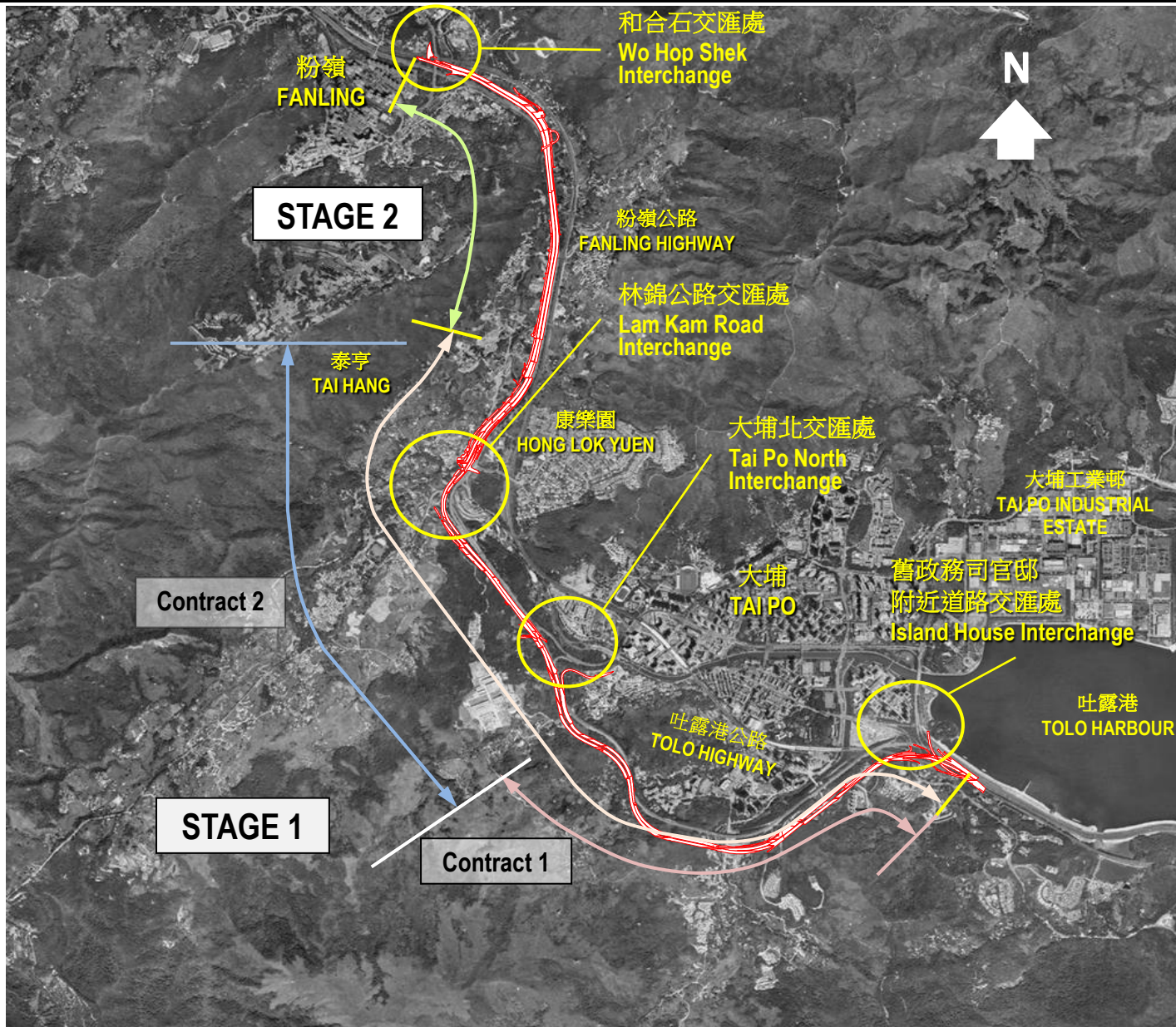
6 SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 6.1 The Environmental Complaint Handling Procedure is annexed in Figure 6.1.
- 6.2 No complaint, notification of summons and successful prosecution was received in the reporting period. Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix C.

7 CONCLUSIONS

- 7.1 The constructional phase Environmental Monitoring and Audit (EM&A) programme for Stage 1 of the Project comprised impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit. It commenced on 23 November 2009 and has been mostly completed by the reporting period. The operational phase EM&A programme which includes noise monitoring will commence in March 2015.
- 7.2 The impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit for Contract 1 of the Project was completed on 15 July 2014.
- 7.3 The impact environmental monitoring including air quality and noise monitoring, and environmental site inspection and audit for Contract 2 of the Project was completed on 30 September 2014.
- 7.4 No new complaint, notification of summons or prosecution was received in the reporting period.

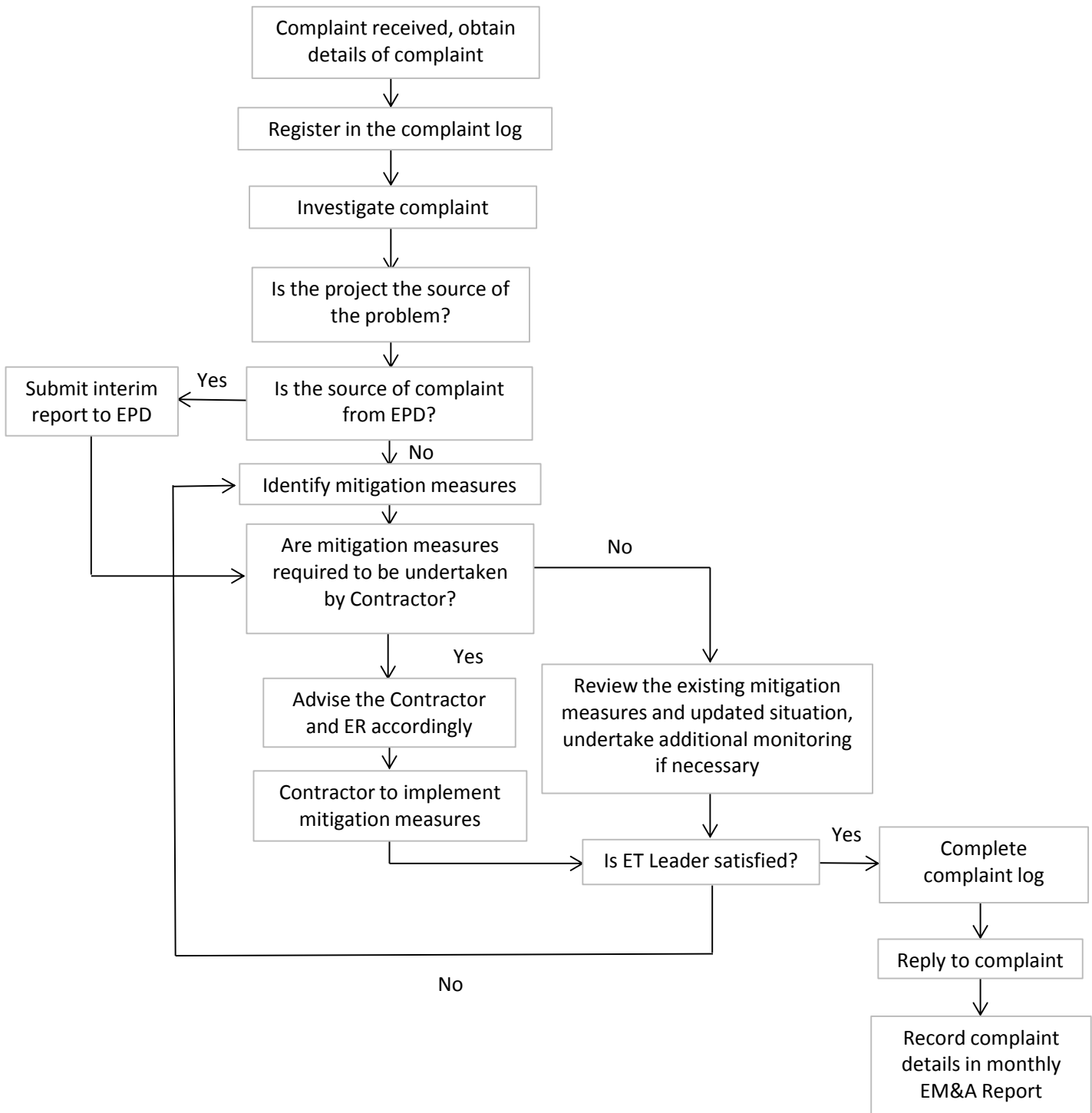
FIGURES



**Environmental Team for the Widening of Tolo Highway between
Island House Interchange and Tai Hang - Investigation**

General Project Layout Plan

SCALE	N.T.S.	DATE	Dec-09
CHECK	ENFL	DRAWN	RWHW
JOB NO.	60102979	FIGURE NO.	2.1
		Rev	0



Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation

Environmental Complaint Handling Procedure

SCALE	N.T.S.	DATE	Mar-13
CHECK	ENFL	DRAWN	CHCL
JOB NO.	60102979	FIGURE	6.1
			Rev. -

**APPENDIX A
CONSTRUCTION PROGRAMMES**

Contract No. HY/2008/09

List of Outstanding Works – Zone 1

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
1	Geotechnical Works				
1.1	Slopeworks for Cut Slope S4B (incl. reinstatement of the slope profile) and landscaping works (incl. laying erosion control mat & hydroseeding) and associated U-channel and maintenance access)	93%	93%	Feb 2015 Jul 2014	Reinstatement of slope is suspended due to DSD pipe leakage. Leakage pipe was under repaired by DSD. The works will be resumed after repairing works of leakage pipe.
2	Road Works				
2.1	Ground Reinstatement at YCT additional works area	92%	92%	Feb 2015 Aug 2014	To be reinstated upon the completion of adjacent slope of KFWV pier 6A, 6B.
2.2	DSD entrustment works for the foul sewer at YCT – Additional Manhole	50%	50%	Feb 2015 Jan 2015	VO for additional manhole is issued. Shoring was completed. Installation of pipe collars completed. The manhole to be constructed after for completion of repairing works of leakage pipe by DSD.
2.3	DN40 Irrigation Main (including main laying, fittings installation, connection to existing main and chamber construction)	83%	80%	Feb 2015 Jul 2014	Additional waterproofing painting to planter was completed. Backfilling of planter is in progress.
2.4	DN150 Fire Main from Jacking/Receiving Pit (including main laying, fittings installation, connection to existing main and chamber construction)	98%	97%	Feb 2015 Jul 2014	Firemain A2 was permanent connected. Pressure testing for DN150 firemain outside NB12 (Southbound) was found leakage. TTA road closure was implemented on 26 January 2015 for repairing works.

Contract No. HY/2008/09

List of Outstanding Works – Zone 1

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
2.5	Outstanding civil & E&M provision and ground reinstatement at YCT Hub Room	99%	99%	Feb 2015 Jun 2014	Handed over to EMSD. U-channel outside hub room is outstanding.
2.6	Additional Enhancement of Pavement Drainage at Fanling Bound Tolo Highways at CH 15.88 near New Banyan Bridge	95%	80%	Early Feb 2015 Jan 2015	Pipe laying and manhole construction generally completed. Reinstatement works are in progress
2.7	High mast lighting system (including Footing, ducting, HM post pillar box & cabling)	99%	99%	Mid Feb 2015 Dec 2014	All high mast (HM) except HM83 were .completed HM83 target to complete by 14 Feb 2015
2.8	Street Lighting at Slip Road D	70%	70%	Feb 2015 Jun 2014	3 nos of light poles are outstanding and to be erected in this week.
2.9	Road marking	99%	99%	Feb 2015	Amend the road marking for change of road speed will be carried out later
3	Noise Barriers				
3.1	Slope reinstatement works for 7NW-B/F114 & F126 (in order to facilitate Kwong Fuk Noise Barrier Construction)	98%	98%	Feb 2015 Jul 2014	Backfilling and u-channel of slope was completed. Stone pitching is outstanding
4	Landscaping Works				
4.1	Planting works (incl. Heavy standard trees, woodland mix and amenity shrub planting)	88%	86%	Feb 2015 Jul 2014	Oustanding work in YCT and planter of New Banyan Bridge & New Banyan West Bridge. Planting works at YCT above S4 is in progress.

List of Outstanding Works – Zone 2

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
1	Geotechnical Works				
1.1	Slopedworks W4A (incl. re-compaction and slope trimming works), landscaping works (incl. laying erosion control mat & hydroseeding) for part of existing slope 7NW-B/F121, i.e. the slope in front of W4A. and associated ctachment drainage and maintenance access.	85%	80%	Feb 2015 Oct 2014	The re-compaction of the existing soil is change to rockfill to speed up the works. The Slip Road M was partially completed, the filling of rockfill delivered. Construction of u-channel and backfilling is in progress.
1.2	Slopedworks for Slope S7 (incl. filling works and slope trimming works) and landscaping works (incl. laying erosion control mat & hydroseeding) and associated ctachment drainage and maintenance access	90%	88%	Feb 2015 Nov 2014	Backfilling works completed in general. Construction of maintenance access and u-channel in progress.
1.3	Catchment drainage and maintenance access for W8	65%	55%	Feb 2015	Construction of catchment drainage is generally completed. Construction of vehicular access is in progress.
2	Road Works				
2.1	Road works at Slip Road L (including road pavement, road marking, traffic aids, verge, U channel & street furniture)	97%	97%	Feb 2015 Jun 2014	Pavement and road marking completed. Construction of U-channel was completed. Street furniture to be started in this week.
2.2	Road works at Slip Road M (including road pavement, road marking, traffic aids, verge, U channel & street furniture)	95%	95%	Feb 2015	Street furniture was completed Outstanding bituminous paving will be carried out during full closure of Slip Road in early February 2015. Pending for CNP.

List of Outstanding Works – Zone 2

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
2.3	Reinstatement works underneath Bridge 11 & Bridge 11A (including footpath adjacent to Shan Tong Road)	75%	75%	Feb 2015	Contractor's site office was removed at end Jan 2015. Reinstatement of concrete pavement to be started.
2.4	L-3 barrier near Existing Lam Kam Railway Bridge	95%	90%	Feb 2015 Jul-2014	Construction structure of L-3 barrier was completed. Installation of steel parapet is outstanding
2.6	DN150 Fire Main (including main laying, fittings installation, connection to existing main and chamber construction)	99%	99%	Mid Feb 2015 Jul-2014	Pressure test was completed. Handover inspection is arranged on 3 February 2015. Firemain connection subject to WSD arrangement.
2.7	Street Lighting at Slip Road L and M	90%	90%	Feb 2015 Jan-2015	5 nos of light poles are outstanding and will be installed in early Feb 2015.
3	Landscaping Works				
3.1	Planting works (incl. Heavy standard trees, woodland mix and amenity shrub planting)	82%	82%	Feb 2015 Jun-2014	Outstanding is NB16, S7 and W4A.
4	Bridgeworks				
4.1	Slope Reinstatement and maintenance access for both abutments for New Lam Kam Railway Bridge	80%	70%	Feb 2015 Jun-2014	Reinstatement works at south abutment are in progress. Staircase and u-channel were cast. Reinstatement works at north abutment is in progress. Fill grade 200 rock slope and staircase were completed. Construction u-channel ais in progress

List of Outstanding Works – Zone 2

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
4.2	Transition barrier at fast lane of Existing Lam Kam Railway Bridge	90%	80%	Feb 2015 Jan 2014	Construction of transition is in progress and target to completed by 4 February 2014

Contract No. HY/2008/09

List of Outstanding Works – Zone 3

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
1	Geotechnical Works				
1.1	Slopeworks for S20A (incl. reinstatement works and slope trimming works) and landscaping (incl. laying erosion control mat and hydroseeding) and associated catchment drainage and maintenance access	58%	55%	Mar 2015 Oct 2014	Filling work is in progress
2	Road Works				
2.1	Reinstatement works underneath Bridge 10 & Bridge 10A (including footpath and cycle track adjacent to Tat Wan Road)	91%	89%	Mar 2015 Aug 2014	Re-construction of public access was completed . Demolition of steel bridge was completed and reinstatement of Tai Po river is in progress.
2.2	DN150 Fire Main (including main laying, fittings installation, connection to existing main and chamber construction)	98%	98%	Feb 2015 Jun 2014	Laying of DN150 firemain completed. Pressure test of firemain was completed on 13 Dec 2014. Installation of valve cover and fire hydrant are in progress. Handover inspection to be arranged. Firemain connection subject to WSD arrangement.
2.3	Street Lighting at Slip Road P	95%	95%	Feb 2015 Dec 2014	1 no of light pole is outstanding and will be installed in this week.
3	Landscaping Works				
3.1	Planting works (incl. Heavy standard trees, woodland mix and amenity shrub planting)	99%	99%	Feb 2015 Jun 2014	Outstanding at NB19. Backfilling of remaining portion in progress.
4	Bridgeworks				

Contract No. HY/2008/09

List of Outstanding Works – Zone 3

Item	Outstanding Works	Progress as of 2 Feb 2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
4.1	Slope reinstatement works at North Abutments of Bridge 11	99%	99%	Feb 2015 Jun 2014	Backfilling for slope reinstatement at North abutment completed. U-channel construction completed. Stone pitching work is in progress
4.2	Bridge drainage system at ground level of Bridge 11	45%	40%	Feb 2015 Aug 2014	Removal of Containers and stockpile materials are in progress. Bridge drainage works to be started.

Contract No. HY/2008/09

List of Outstanding Works – Zone 4

Item	Outstanding Works	Progress as of 2 Feb2015	Progress as of 26 Jan 2015	Target Completion Date	Remarks
1	Geotechnical Works				
1.1	Backfilling in front of wall and construction of catchment drainage, maintenance access and handrailing for Retaining Wall W29B and W34	98%	98%	Feb 2015 Aug 2014	Details refer to the pre-handover inspection carried out on 28 Jan 14. Construction of u-channel at W34 and backfilling of W27 are in progress.

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013		2014		
							47	48	Q1 49	50	Q2 51
HY/2009/08 TOLO HIGHWAY WIDENING, Based on UWP Jan 14, upto Feb progress											
EXECUTIVE SUMMARY											
Construction											
Section 2											
A1070	SA24 - North Bound	-310	99.94%	787	25-Aug-10 A	26-Jan-15					
Section 3											
A1110	SA26A - North Bound	-249	99.33%	1191	26-Feb-10 A	02-Feb-15					
A1120	SA26A - South Bound	-162	99.09%	879	26-Feb-10 A	02-Feb-15					
Section 4											
A1160	SA28 - South Bound	-3	99.95%	1099	23-Jun-10 A	26-Jan-15					
Section 7											
A1200	SA41 - Site Office	-168	85.9%	1581	26-Feb-10 A	05-Sep-15					
A1210	SA42 - Temporary Contractor's Works Area	-214	100%	1582	25-Feb-10 A	26-Jan-15					
Section 17 (Subject to Excision, Engineer may instruct within 819 days)											
A1300	Validity Period	45	98.6%	819	25-Feb-10 A	06-Feb-15					
KEY DATES/ MILESTONES											
Key Dates (include EOT GCL submitted and awarded upto Dec 2013)											
HDS01000	KD1: Completion of Section 1 - (Day1216) - Overall Completion of Works	-365	0%	0		26-Jan-15*					
HDS01100	KD1: Completion of Section 1 - (Day1216) - Substantial Completion for Road Op		100%	0		25-Jan-14 A				◆ KD1: Completion of Section 1 - (Day1216) - Substantial Completion for Road Op	
HDS02000	KD2: Completion of Section 2 - (Day1216) - Overall Completion of Works	-310	0%	0		26-Jan-15*					
HDS03000	KD3: Completion of Section 3 - (Day1216) - Overall Completion of Works	-339	0%	0		02-Feb-15*					
HDS04000	KD4: Completion of Section 4 - (Day1216) - Overall Completion of Works	-332	0%	0		26-Jan-15*					
HDS07000	KD7: Completion of Section 7 - (Day1581)	-214	0%	0		26-Jan-15*					
HDS08000	KD8: Completion of Section 8 - (Day1581)	-245	0%	0		27-Sep-15*					
HDS09000	KD9: Completion of Section 9 - (Day1581)	-187	0%	0		25-Sep-15*					
HDS10000	KD10: Completion of Section 10 - (Day1581)	-244	0%	0		31-Oct-15*					
HDS11000	KD11: Completion of Section 11 - (Day1581)	-244	0%	0		31-Oct-15*					
HDS12000	KD12: Completion of Section 12 - (Day1581)	-214	0%	0		26-Jan-15*					
HDS13000	KD13: Completion of Section 13 - (Day1581)	-245	0%	0		26-Oct-15*					
HDS14000	KD14: Completion of Section 14 - (Day1581)	-214	0%	0		26-Jan-15*					
CONSTRUCTION PHASE											
Section 1											
Site Area SA21											
SA210000	Site Area SA21 Works Period	56	100%	1076	16-Jul-10 A	26-Jan-15					
SA210010	Site Area SA21 Works Completion	56	0%	0		26-Jan-15					
SA210020	Temporary Traffic Management (Detail shall refer to supplementary informatio	46	100%	872	16-Jul-10 A	26-Jan-15					
Section 2											
Site Area SA22											
SA220010	Site Area SA22 Works Completion	56	0%	0		26-Jan-15					

Project ID: J3318-UPDATE 2014FEB-12
 Project Name: HY/2009/08 TOLO HIGHWAY WIDENING...
 Print Date: 05-Feb-15
 Data Date: 26-Jan-15
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- Current Bar
- Level of Effort
- Critical
- Milestone

Highways Department - Contract No. HY/2009/08

Widening of Tolo Highway/ Fanling Highway
Stage 1 - Between Ma Wo and Tai Hang

3 MRP, 26 Jan 2015

UWP Revision			
Date	Revision	Checked	Approved
26-Jan-15	3MRP January 2015	WY	JC

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013		2014		
							47	48	Q1		Q2
									49	50	51
SA220020	Temporary Traffic Management (Detail shall refer to supplementary informatio	56	100%	985	25-Feb-10 A	26-Jan-15					
Site Area SA23											
SA230010	Site Area SA23 Works Completion	56	0%	0		26-Jan-15					
Site Area SA24											
SA240000	Site Area SA24 Works Period	-310	99.94%	788	04-May-10 A	26-Jan-15					
SA240010	Site Area SA24 Works Completion	56	0%	0		26-Jan-15					
North Bound											
Landscaping											
S24N6000	Landscaping Works	-252	99%	50	27-Jan-14 A	26-Jan-15					
Site Area SA25											
SA250010	Site Area SA25 Works Completion	56	0%	0		26-Jan-15					
Site Area SA26											
SA260010	Site Area SA26 Works Completion	-309	0%	0		26-Jan-15					
Section 3											
Site Area SA26A											
SA26A010	Site Area SA26A Works Completion	-331	0%	0		26-Jan-15					
North Bound											
Landscaping											
S26AN610	Landscaping Works	-270	99%	29	15-Mar-13 A	26-Jan-15					
South Bound											
Landscaping											
S26AS600	Landscaping	46	99%	30	27-Jan-14 A	26-Jan-15					
Road Re-Construction Works, Roadworks, Drainage & Utilities											
S27S4111	Claim 40: Revised traffic signs & road markings	-277	0%	5	26-Jan-15	30-Jan-15					
S27S4112	Claim 41: Revised kerb & fencing layout	-277	0%	2	31-Jan-15	02-Feb-15					
Site Area SA27											
SA270000	Site Area SA27 Works Period	-331	100%	1187	26-Mar-10 A	26-Jan-15					
SA270010	Site Area SA27 Works Completion	-331	0%	0		26-Jan-15					
SA270020	Temporary Traffic Arrangement (Detail shall refer to supplementary informatio	-270	100%	959	26-Mar-10 A	26-Jan-15					
SA270030	Overall Utilities Diversion (Detail shall refer to supplementary information)	-270	100%	959	26-Mar-10 A	26-Jan-15					
Section 4											
Site Area SA28											
SA280000	Site Area SA28 Works Period	55	99.96%	1216	26-Feb-10 A	26-Jan-15					
SA280010	Site Area SA28 Works Completion	55	0%	0		26-Jan-15					
SA280030	Temporary Traffic Arrangement (Detail shall refer to supplementary informatio	45	99.94%	983	26-Feb-10 A	26-Jan-15					
SA280040	Overall Utilities Diversion (Detail shall refer to supplementary information)	45	99.94%	983	26-Feb-10 A	26-Jan-15					
North Bound											
Road Re-Construction Works, Roadworks, Drainage & Utilities											
S28N4330	Roadwork, Drainages & Utilities at TWSRW Road from NB38 to NB41 -bay6 (-271	0%	0	26-Nov-12 A	26-Jan-15					
S28N4370	Road Works and Road Surfacing at Slip Road T (Slow Lane)	-271	99%	40	15-Feb-14 A	26-Jan-15					
S28N4421	Claim 40: Revised traffic signs & road marking	-271	98.99%	12	27-Dec-14 A	26-Jan-15					
S28N4422	Claim 41: Revised kerb & fencing layout	-271	98.96%	2	27-Dec-14 A	26-Jan-15					
South Bound											
Road Construction and Road Resurfacing											
S28S4960	Road Construction and Resurfacing S/B for SA28	-271	99%	60	26-Sep-13 A	26-Jan-15					
Site Area SA29											

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013		2014		
							47	48	Q1 49	50	Q2 51
SA290000	Site Area SA29 Works Period (incl. VO002 & VO0011: Fencing details along si	56	100%	946	27-Jul-10 A	26-Jan-15					
SA290010	Site Area SA29 Works Completion	56	0%	0		26-Jan-15					
SA290020	Temporary Traffic Arrangement (Detail shall refer to supplementary informatio	46	100%	764	27-Jul-10 A	26-Jan-15					
SA290030	Overall Utilities Diversion (Detail shall refer to supplementary information)	46	100%	764	27-Jul-10 A	26-Jan-15					
Section 5											
Site Area SA31											
SA310000	Site Area SA31 Works Period (incl. VO42, VO52, VO59 & VO65)	56	99.97%	884	26-Feb-10 A	26-Jan-15					
SA310010	Site Area SA31 Works Completion	56	0%	0		26-Jan-15					
South Bound											
Roadworks, Drainage & Utilities											
Portion 3											
S31S5120	Traffic Lights	46	95%	5	30-May-14 A	26-Jan-15					
Section 7											
Site Area SA41											
SA410000	Site Area SA41 Works Period	-168	85.9%	1581	26-Feb-10 A	05-Sep-15					
SA410010	Site Area SA41 Works Completion	-167	0%	0		05-Sep-15					
Temporary Site Office											
S41G9100	Temp Warehouse, Fabrication & Equip Yard	-361	90%	1419	13-May-10 A	16-Jun-15					
S41G9120	Dismantle of ER & Contractor's Office	-137	0%	68	16-Jun-15	05-Sep-15					
Site Area SA42 (Core Storage & Works Area)											
SA410040	Site Area SA42 Works Period	-214	100%	1581	26-Feb-10 A	26-Jan-15					
SA420010	Site Area SA42 Works Completion	-214	0%	0		26-Jan-15*					
Site Area SA43											
SA410020	Site Area SA43 Works Period	-362	90.09%	1492	04-May-10 A	22-Jun-15					
SA410030	Site Area SA43 Works Completion	-362	0%	0		22-Jun-15*					
Mulching Production Area											
S41G050	Temp Warehouse, Fabrication & Equip Yard (Site allocated for period till 8 May	56	100%	1260	13-Sep-10 A	26-Jan-15					
S41G280	Dismantle of Mulching Production Yard : Removing Security Fence and Securiti	-295	80%	20	16-Oct-14 A	22-Jun-15					
Section 8											
Establishment Works											
S21G8000	SA21 Establishment Works	-245	33%	365	26-Jan-14 A	27-Sep-15					
Section 9											
Establishment Works											
S22G8000	SA22 Establishment Works	-187	33.9%	365	24-Mar-14 A	25-Sep-15					
S23G8000	SA23 Establishment Works	-187	33.9%	365	24-Mar-14 A	25-Sep-15					
S24G8000	SA24 Establishment Works	-187	33.9%	365	24-Mar-14 A	25-Sep-15					
S25G8000	SA25 Establishment Works	-187	33.9%	365	24-Mar-14 A	25-Sep-15					
S26G8000	SA26 Establishment Works	-187	33.9%	365	24-Mar-14 A	25-Sep-15					
Section 10											
Establishment Works											
S26AG800	SA26A Establishment Works	-244	23.8%	365	01-Mar-14 A	31-Oct-15					
S27G8000	SA27 Establishment Works	-244	23.8%	365	01-Mar-14 A	31-Oct-15					
Section 11											
Establishment Works											
S28G8000	SA28 Establishment Works	-244	23.8%	365	01-Mar-14 A	31-Oct-15					
S29G8000	SA29 Establishment Works	-244	23.8%	365	01-Mar-14 A	31-Oct-15					

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013		2014		
							Q1			Q2	
							47	48	49	50	51
Section 12											
Establishment Works											
S30AG800	SA30A Establishment Works	-309	0%	365	26-Jan-15	25-Jan-16					
S30G8000	SA30 Establishment Works	-309	0%	365	26-Jan-15	25-Jan-16					
Section 13											
Establishment Works											
S30AG810	Remainder of Establishment Works (Exclude Section 8 to 12)	-245	25%	365	25-Jan-14 A	26-Oct-15					

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

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

Air Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Air Quality during Construction	<ul style="list-style-type: none"> Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading. 	During construction	V
	<ul style="list-style-type: none"> All stockpiles of excavated materials or spoil of more than 50m³ shall be enclosed, covered or dampened during dry or windy conditions. 		V
	<ul style="list-style-type: none"> Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas. 		V
	<ul style="list-style-type: none"> All spraying of materials and surfaces shall avoid excessive water usage. 		V
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Materials shall be dampened, if necessary, before transportation. 		V
	<ul style="list-style-type: none"> Travelling speeds shall be controlled to reduce traffic induced dust dispersion and resuspension within the site from the operating haul trucks. 		V
	<ul style="list-style-type: none"> Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads. 		V

Noise - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Noise during Construction	<ul style="list-style-type: none"> Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant. 	During construction	V
	<ul style="list-style-type: none"> Reduce the number of equipment and their percentage on-time. 		V
	<ul style="list-style-type: none"> 3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit). 		V
	<ul style="list-style-type: none"> 3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit). 		V
	<ul style="list-style-type: none"> 2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit). 		In progress
	<ul style="list-style-type: none"> 2.5 m high temporary noise barrier along Tai Wo Service Road West (Figure 2c of the Environmental Permit). 		V
	<ul style="list-style-type: none"> 3.5m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure2c of the Environmental Permit). 		In progress

Water Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Water quality during Construction	Demolition and reconstruction of bridges	During construction	
	<ul style="list-style-type: none"> Prevent off-site migration through use of sheet piles. 		V
	<ul style="list-style-type: none"> Minimize duration of works as far as practical. 		V
	<ul style="list-style-type: none"> All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains. 		V
	<ul style="list-style-type: none"> Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains. 		V
	River training works		
	<ul style="list-style-type: none"> Inspection and testing of water quality in the nullah on the Tai Po River. 		N/A
	Road Widening Works and Earthworks		
	<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 settable 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. 		V
	<ul style="list-style-type: none"> Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. 		V
	<ul style="list-style-type: none"> 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. 		V
	<ul style="list-style-type: none"> Regular inspections of stilling basins and/or silt traps are required to ensure that sediment is not conveyed into the existing drainage system. 		V
	<ul style="list-style-type: none"> Open stockpiles should be covered with a tarpaulin cover. 		V
	<ul style="list-style-type: none"> During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded. 		V
	<ul style="list-style-type: none"> Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains. 		V
<ul style="list-style-type: none"> Fuels should be stored in bunded areas such that spillage can be easily collected. 	V		

Waste - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Waste Management during Construction	General Waste	During construction	
	<ul style="list-style-type: none"> Transport of wastes off site as soon as possible. 		V
	<ul style="list-style-type: none"> Maintenance of accurate waste records 		V
	<ul style="list-style-type: none"> Minimization of waste generation for disposal (via reduction/recycling/re-use). 		V
	<ul style="list-style-type: none"> No on-site burning will be permitted. 		V
	<ul style="list-style-type: none"> Use of re-useable metal hoardings/signboards. 		V
	Vegetation from site clearance		
	<ul style="list-style-type: none"> Segregation of materials to facilitate disposal. 		V
	<ul style="list-style-type: none"> Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas. 		V
	Demolition Wastes		
	<ul style="list-style-type: none"> Segregation of materials to facilitate disposal. 		V

• Appropriate stockpile management.	V
Excavated Materials	
• Segregation of materials to facilitate disposal / reuse.	V
• Appropriate stockpile management.	V
• Re-use of excavated material on or off site (where possible).	V
• Special handling and disposal procedures in the event that contaminated materials are excavated.	N/A
Construction Wastes	
• Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles).	V
• Appropriate stockpile management.	V
• Planning to reduce over ordering and waste generation.	V
• Recycling and re-use of materials where possible (e.g. metal, wood from formwork)	V
• For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.	V
Bentonite Slurries	
• Bentonite slurries should be reused as far as possible.	N/A
• Disposal in accordance with <i>Practice Note For Professional Persons ProPECC PN 1/94</i> .	N/A
Chemical Wastes	
• Storage within locked, covered and bunded area.	V
• The storage area shall not be located adjacent to sensitive receivers e.g. drains.	V
• Minimize waste production and recycle oils/solvents where possible.	V
• A spill response procedure shall be in place and absorption material available for minor spillages.	V
• Use appropriate and labelled containers.	V
• Educate site workers on site cleanliness/waste management procedures.	V
• If chemical wastes are to be generated, the contractor must register with EPD as a Chemical Waste Producer.	V
• The chemical wastes shall be collected by a licensed chemical waste collector.	V
Municipal Wastes	
• Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal.	V
• Regular, daily collections are required by an approved waste collector.	V

Ecology - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Ecology during Construction	Accurate Delineation of Works Area	During construction	
	• Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats.		V
	• Individual trees which fall within the works areas but which work plans show do not require removal are to be retained and fenced off to maximize protection.		V
	Vegetation Clearance		
	• No fires shall be lit within the works area for the purpose of burning cleared vegetation.		V
• The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area /	V		

	adjacent land.		
	Dust generation		
	• Vehicle washing facilities to be provided at every discernible or designated vehicle exit point;		V
	• All temporary site access roads shall be sprayed with water to suppress dust as necessary;		V
	• All dusty materials should be sprayed with water immediately prior to any handling; and		V
	• All debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area.		V
	Surface Run-off		
	• Bund and cover stockpiles to avoid run-off;		V
	• Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical;		V
	• All vehicle maintenance to be undertaken within a bunded area; and		N/A
	• Maximize vegetation retention on-site to maximize absorption (minimize transport).		V

Landscape and Visual Impact - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Landscape and Visual Impact during Construction	Preservation of Existing Vegetation	During construction	
	• Trees identified for retention within the project limit would be protected during the works		V
	• The tree transplanting and planting works shall be implemented by approved Landscape Contractors		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
	Hoarding		
	• A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSR's.		V
	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
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.	V		

Legend: V = implemented;
x = not implemented;
@ = partially implemented;
N/A = not applicable - No such work was undertaken or no such material was used on site.

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

Appendix C

Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. followed up by ET this month	Total no. followed up by ET since project commencement
Environmental complaints	-	-	-	0	39
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0