

**Contract No. : DC/2007/06**  
**River Improvement Works in Upper Lam Tsuen,**  
**She Shan River and Upper Tai Po River**

ENVIRONMENTAL MONITORING AND AUDIT

**MONTHLY EM&A REPORT of**

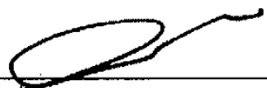
**UPPER TAI PO RIVER**

**for May 2012**

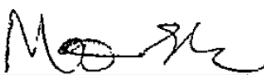
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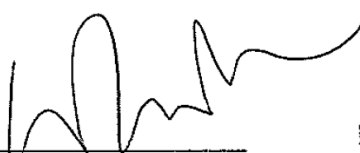
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**TABLE OF CONTENTS**

Executive summary.....	4
1.0 Introduction.....	6
2.0 Environmental status.....	6
2.1 Project area.....	6
2.2 Construction programme .....	6
2.3 Proposed construction sequences.....	7
2.4 Construction activities for the reporting period .....	9
2.5 Construction activities for the next reporting period .....	9
2.6 Exceedance with the environmental performance limits .....	9
2.7 Summary of complaints .....	9
3.0 Ecological monitoring results .....	9
4.0 Noise monitoring results .....	10
5.0 Vibration monitoring results .....	10
6.0 Environmental issues and actions .....	11
6.1 Site inspections and key environmental issues .....	11
6.2 Non-compliance .....	14
6.3 Recommendations.....	15
6.4 Implementation status and effectiveness of the mitigation measures .....	16
7.0 Waste management status .....	17
8.0 Status of environmental licensing and permit.....	18
9.0 Future key issues.....	19
10.0 Conclusion .....	20
Appendix A: Event and action plan for ecology .....	21
Appendix B: Action and limit level for construction noise .....	24
Appendix C: Reference standards for vibration.....	26
Appendix D: Noise monitoring results, graphical plots and location plan .....	28
Appendix E: Monitoring schedule for the present and next reporting period .....	41
Appendix F: Cumulative complaint log.....	44
Appendix G: Implementation status of environmental protection and mitigation measures .....	45
Appendix H: Cumulative waste flow table .....	49
Appendix I: Construction programme (Rev. No. 19).....	50
Appendix J: Checklist for Rectification of the Non-compliance.....	61

### **Executive summary**

This is the forty fifth monthly Environmental Monitoring and Audit (EM&A) Report for the river improvement works at Upper Tai Po River under Drainage Services Department Contract No. DC/2007/06 entitled “River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River”. This report concludes the impact monitoring for the activities undertaken during the period from 1<sup>st</sup> May 2012 to 31<sup>st</sup> May 2012. Construction of riverbed, gabion walls, retaining walls, additional boulder traps and inclined gabion/no-fines mass concrete walls and ground investigation works were the major site activities being carried out in this reporting period.

The Environmental Team (ET) is responsible for the EM&A works required in the EM&A manual. Site inspections were carried out on weekly basis to investigate and audit the equipment and work methodologies with respect to pollution control and environmental mitigation. The weekly inspections records and photos taken were kept.

The next ecological impact monitoring has been arranged on 5<sup>th</sup> July 2012. The summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist, are provided in table 6.2 and Appendix G respectively.

Environmental Team had carried out construction noise monitoring on weekly basis and no exceedance was found. Noise monitoring records for the reporting month and the data are presented in Section 4. The location plan and the graphical plots presenting the data are provided in Appendix D.

Piling works has been omitted. Therefore, no vibration monitoring was conducted by ET during the reporting month.

A non-compliance event regarding muddy water was recorded in this reporting month. Details of the events and recommendations given please refer to Section 6.2.

There was no formal complaint in relation to environmental issue received in the reporting month.

There was no breach of action and limit levels for this reporting month.



There was no reporting change for this month.

Construction of riverbed, gabion walls, dwarf walls, retaining walls, inclined gabion/no-fines mass concrete walls, stilling basin, installation of the fabricated steel deck for footbridge and ground investigation works would be carried out in the upcoming month.

ET has reminded the contractor to provide environmental pollution control measures wherever necessary and to keep a good environmental management at site practice.

## **1.0 Introduction**

This is the forty fifth monthly Environmental Monitoring and Audit (EM&A) Report for the river improvement works at Upper Tai Po River under Drainage Services Department Contract No. DC/2007/06 entitled “River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River”. The site layout plan is shown in Figure 2.1. The Environmental Team, Environmental Pioneers & Solutions Limited appointed by Chiu Hing Construction and Transportation Company Limited, prepares the report. The report is to be submitted to the Contractor, the Engineer and the IEC.

This report presents the results of the environmental monitoring of the project activities for Upper Tai Po River conducted during the month of May 2012. This included regular site inspections once per week for verification of implementation of the mitigation measures as recommended in the Environmental Permit (EP-223/2005/A) (EP), EM&A Manual and the Contractor’s Environmental Management Plan (EMP).

## **2.0 Environmental status**

### **2.1 Project area**

The location of the project site – Upper Tai Po River starts from Ta Tit Yan of Yai Mo Shan, flows from southeast to northeast alongside Wilson Trail, turning northward before joining the Lam Tsuen River and then runs towards Tai Po Market. For the east of the river, there are active and abandoned cultivated lands. Village settlements are mainly located on the west and northeast side of the river bank, where the San Uk Ka and Lai Chi Shan establishment also lie. The Project site is indicated in Figure 2.1.

### **2.2 Construction programme**

Approximately 0.6km of Upper Tai Po River will be improved to enhance the hydraulic performance of the river. The improvement works comprise the following:

- (1) Re-profiling and realignment of the Channel;
- (2) Inclusion of gabions and retaining wall for bank protection whilst providing a natural channel bed; and
- (3) Re-provisioning of footbridges and footpaths along the channel

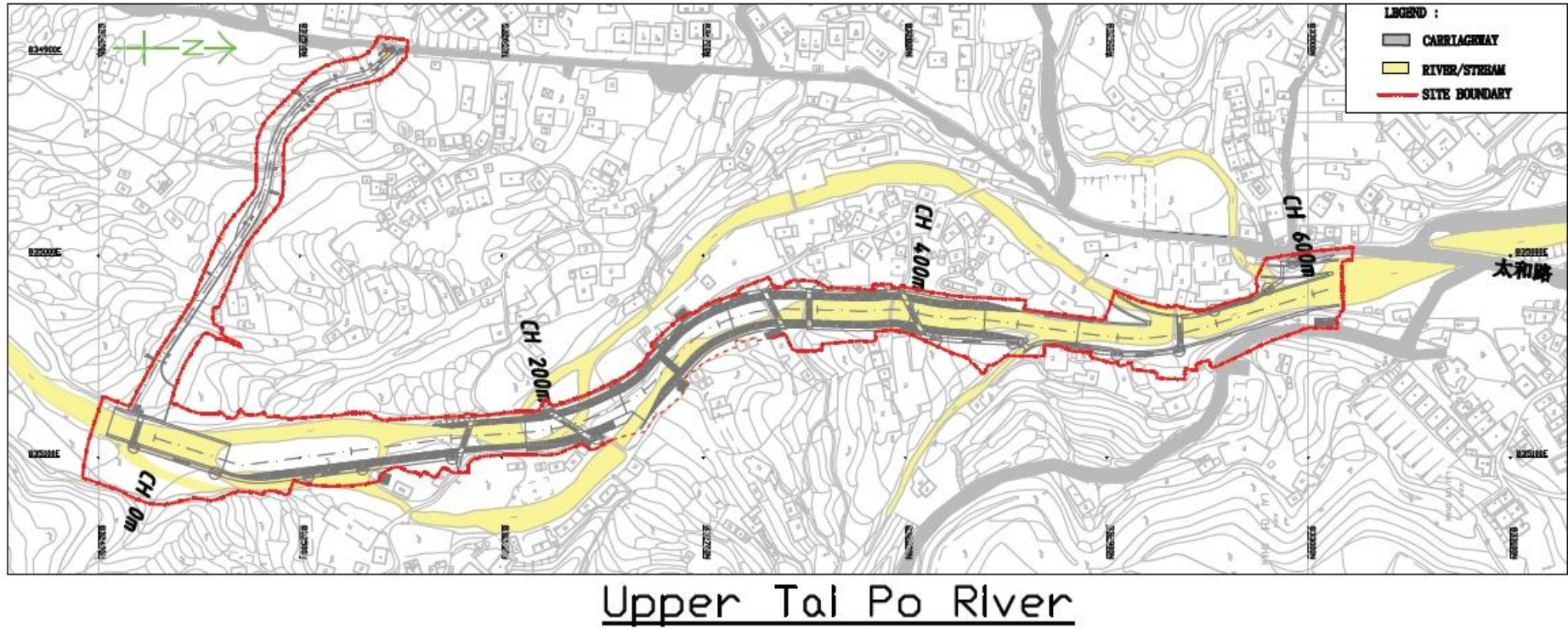
The construction of the proposed improvement works for Upper Tai Po River has been commenced on September 15<sup>th</sup> 2008 and anticipated to complete in December 2012.

### **2.3 Proposed construction sequences**

The proposed construction sequences are shown in the following:

- (1) Site clearance and preparation works
- (2) Construction of the maintenance access which involves the construction of retaining walls
- (3) River channel construction and excavation, involving the excavation works, construction of retaining walls and gabion walls
- (4) Construction of additional boulder trap and additional stilling basins with baffle blocks
- (5) Provision of riverbed treatment
- (6) Re-provisioning of footbridges
- (7) Construction of footpaths
- (8) Landscaping works

Fig 2.1 Layout of construction area



## **2.4 Construction activities for the reporting period**

Major construction activity carried out by the contractor during this reporting period includes:

- 1.) Construction of Riverbed
- 2.) Construction of Gabion Walls
- 3.) Construction of Retaining Walls
- 4.) Construction of Additional Boulder Traps
- 5.) Construction of Inclined Gabion/No-fines Mass Concrete Walls
- 6.) Ground Investigation Works

## **2.5 Construction activities for the next reporting period**

Major construction activities carried out by the contractor anticipated for the coming month include:

- 1.) Construction of Riverbed
- 2.) Construction of Gabion Walls
- 3.) Construction of Dwarf Walls
- 4.) Construction of Retaining Walls
- 5.) Construction of Inclined Gabion/No-fines Mass Concrete Walls
- 6.) Construction of Stilling Basin
- 7.) Installation of the Fabricated Steel Deck for Footbridge
- 8.) Ground Investigation Works

## **2.6 Exceedance with the environmental performance limits**

There was no exceedance with the environmental performance limits for this reporting month. The event and action plan for Ecology is shown in Appendix A. The action and limit level for Noise is shown in Appendix B. The reference standards for vibration are shown in Appendix C.

## **2.7 Summary of complaints**

No formal complaint in relation to environmental issue was received in the reporting month. In total, twenty-four complaints had been received since the commencement of the contract. The cumulative complaint log is shown in Appendix F.

## **3.0 Ecological monitoring results**

No ecological survey was carried out in this reporting period. The next ecological

impact monitoring has been arranged on 5<sup>th</sup> July 2012.

#### 4.0 Noise monitoring results

In accordance with the EM&A Manual, monitoring locations were established at 11 N.S.R. locations. The descriptions of all 11 N.S.R. are shown in Table 4.1.

Table 4.1 Description of Noise Sensitive Receivers

<b>Sensitive Receiver No.</b>	<b>Location and Description</b>
UTP1	54B, Sheung Wun Yiu
UTP2	Village House in Lai Chi Shan
UTP3	Village House near Upper Tai Po River
UTP4	Village House near Upper Tai Po River
UTP5	Village House near Upper Tai Po River
UTP6	Village House near Upper Tai Po River
UTP7	Village House near Upper Tai Po River
UTP8	Village House near Upper Tai Po River
UTP9	49A, Pun Shan Chau
UTP10	Village House near the proposed access road
UTP11	49G, San Uk Ka

Noise monitoring was carried out by the Environmental Team on weekly basis for this reporting month. The scheduled monitoring dates were 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup>, 24<sup>th</sup> and 31<sup>st</sup> May 2012. Due to the adverse weather in the afternoon of 3<sup>rd</sup> May 2012, only monitoring locations UTPR4 & UTPR6-11 were measured. Noise monitoring for the locations UTPR1-3 & UTPR5 was rescheduled on 4<sup>th</sup> May 2012. Measured  $L_{eq(30min)}$  results ranged from 51.2dB(A) to 73.9dB(A).

For further details of the monitoring results, graphical plots and the location plan, please refer to the Appendix D.

#### 5.0 Vibration monitoring results

There was no vibration monitoring results for this reporting month. Vibration monitoring will be started once the piling works start in Upper Tai Po River.

## 6.0 Environmental issues and actions

### 6.1 Site inspections and key environmental issues

Site inspections were undertaken routinely to inspect the construction activities in Upper Tai Po River to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented. Implementation status of environmental protection and mitigation measures is shown in Appendix G.

Within this reporting month, site inspections were conducted on 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> and 30<sup>th</sup> May 2012. A detailed checklist of each site inspections together with comments and relevant photos have been filed and kept for record. The findings from inspections were summarized in Table 6.1.

Ecological inspections by the Ecologist Dr. Mark Shea were carried out on 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup>, 28<sup>th</sup> and 31<sup>st</sup> May 2012. Details of findings were summarized in Table 6.2.

According to the Ad-hoc meeting amongst DSD, IEC, ET, ER and Contractor held on 14<sup>th</sup> March 2012 regarding the recently received non-compliances/complaints on muddy water, additional measures had been proposed, including provision of sedimentation tank at TB02 & TB03 and stop discharge the muddy water directly into the river, improvement of earth bund and provision of sedimentation tank for treating the muddy water from wheel washing bay at ch.600, and provision of additional sedimentation tank at ch.600 to ensure sufficient capacity of the sedimentation process. A checklist for monitoring the implementation status of the abovementioned measures has been prepared by Contractor and weekly checking and updating of the checklist would be carried out by the Environmental Officer. The checklist was updated to 5<sup>th</sup> May 2012 and is attached in Appendix J.

Table 6.1 Summary results of site inspections findings

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
6 Oct 11	Noise barriers were not yet erected by Contractor along UTPR.	Observation	Contractor was urged to install noise barriers to minimize the noise impact arisen from construction activities.	To be followed during the next reporting period.	Ongoing	--
14 Mar 12	Some construction material was observed to be placed inside the river channel at ch.100.	Observation	Contractor was urged to relocate the construction material away from the river to avoid river pollution and maintain good housekeeping.	The construction material placed inside the river channel a was removed by Contractor	23 May 12	--
18 Apr 12	The river water at ch.500 was observed to be very	Non-Compliance	Contractor was urged to trace the source of pollution and stop	Although the quality of river water was satisfactory,	2 May 12	NC issued by IEC

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
	muddy for a short period of time.		further contamination to the river. Necessary mitigation measures on water pollution should be implemented including provision of de-silting facilities for treating contaminated site water before discharge, geo-textile covering for exposed soil surface, etc. Contractor was seriously reminded that direct discharge of untreated site water into river is an environmental offence.	direct discharge of untreated site water was observed. Contractor was urged to provide de-silting facilities for treating contaminated site water before discharge as required in Discharge Permit. Contractor was reminded that direct discharge of untreated site water into river is an environmental offence. On 2 May 12, as reported by Contractor, the sump pump at ch.550 of UTPR was removed and no direct discharge of untreated site water was observed during the inspection		
25 Apr 12	Muddy surface runoff from worksite near ch.250 was entering directly into the river.	Non-Compliance	Contractor was urged to provide earth bund to prevent muddy surface runoff entering into the river.	No muddy surface runoff was observed.	2 May 12	NC issued by IEC
25 Apr 12	The accumulated water in the wheel washing bay at ch.600 was full and muddy. On 2 May 12, the wheel washing way was damaged by rainstorm and muddy water inside the bay leaked out and entered the river directly.	Observation	Contractor was advised to remove the muddy water and provide maintenance to the wheel washing bay for ensuring the effectiveness of dirt removal of vehicles before leaving the site.	Repair and maintenance for the wheel washing bay was provided by Contractor. The water level of the wheel washing bay has been reduced.	9 May 12	--
25 Apr 12	The outlet of the sedimentation tank at ch.600 was blocked leading to overflow of untreated muddy site water.	Observation	Contractor was urged to diverge the site water to the adjacent standby sedimentation tank for treating the site water before discharge. Contractor was reminded to provide regular maintenance for sedimentation tank to ensure proper operation of sedimentation tank.	Maintenance for the sedimentation tank was provided by Contractor. The quality of the treated water was satisfactory.	9 May 12	--
2 May 12	The river water was observed to be muddy. An excavator was observed to be working within the river near ch.50. Moreover, unloading of soil was observed at ch.100 which very closed to the river. Some soil was dropped into the river and caused contamination of the river. As reported by Contractor, haul roads and river courses were damaged by heavy rainstorm in previous days. Emergency works including restoration of haul	Non-Compliance	Despite the needs of emergency works execution, Contractor was reminded that river pollution without mitigation measures was unacceptable and environmental offence. Contractor was seriously reminded to provide bunding or sandbag barriers to block muddy water directly enter the river and diverge the muddy water to de-silting facilities for proper treatment before discharge. Contractor was recommended to cover any exposed soil surface after the haul roads formation works to prevent soil erosion and surface	The back hoe operating within the river channel was removed and sandbag barrier was provided at ch.50. Moreover, no unloading of soil or earth pile was observed near ch.100. No observation regarding river contamination was noted in this inspection.	9 May12	NC issued by IEC



Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
	roads and river channels and removal of C&D waste inside the river channel were being carried out.		runoff. Briefing to frontline staff should be provided about the correct actions and mitigation measures regarding river works.			
9 May 12	The mitigation measures for the rock breaking at ch.0 of UTPR were insufficient.	Observation	Contractor was seriously advised to wrap the breaker tip with sound insulating material and provide water spraying facility to minimize the noise and dust impact to the nearest sensitive receivers.	Repairing of the acoustic material has been provided by Contractor for the rock breaker. However, water spraying was still missing. The incident will be followed in next month.	Ongoing	--
9 May 12	The haul road along UTPR was dry and dusty.	Observation	Contractor was reminded to provide water spraying regularly to avoid fugitive dust emission.	The haul road along UTPR was we. No fugitive dust was observed.	16 May 12	
9 May 12	Ground water seepage causing soil washing was observed at ch.50 of UTPR. The muddy surface runoff entered into the river directly.	Observation	Contractor was reminded to provide earth bund to avoid the surface runoff enter into the river directly.	To be followed during the next reporting period.	Ongoing	--
16 May 12	Damage of retained tree was observed at ch.0 of UTPR by the operation of rock breaker.	Observation	Contractor was recommended to improve the tree protection zone by erecting protective fence at the drip line of the tree crown. Contractor was reminded that execution of construction activities and stockpiling of construction material near the tree protection zone was disallowed.	The rock breaker operating near the retained tree was relocated.	23 May 12	
16 May 12	Stagnant water and general refuse was observed at ch.50.	Observation	Contractor was reminded to remove the waste and stagnant water for proper housekeeping and avoiding mosquito breeding.	The stagnant water and general refuse was removed.	23 May 12	
16 May 12	Muddy water generated from excavation work was observed to be entered into the river through gabion walls at ch.400.	Observation	Contractor was advised that the muddy water should be diverged to de-silting facility before discharge into the river and dewatering of the excavated area should be done prior to the execution of excavation works. Contractor was advised to provide bunding or sandbags to avoid untreated water directly entering into the river.	As a new channel was constructed by contractor, the site water generated from excavation and gabion wall construction was observed to be entered into the riverstream directly without proper treatment. The incident will be followed in next month.	Ongoing	--
23 May 12	Oil drums were observed to be without secondary containment at ch.50 and ch.400.	Observation	Contractor was reminded to provide drip tray for storing chemical and oil containers to avoid land contamination as if leakage.	To be followed during the next reporting period.	Ongoing	--
23 May 12	The unused sedimentation tank at ch.600 of UTPR was observed to be full or sand and silt.	Observation	Contractor was reminded to provide cleaning and maintenance to the tank before use.	To be followed during the next reporting period.	Ongoing	--
30 May 12	Some construction material was observed within the river channel at ch.50.	Observation	Contractor was reminded to remove the construction material as soon as possible to avoid polluting the river and maintain good housekeeping.	To be followed during the next reporting period.	Ongoing	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
30 May 12	Execution of construction near the river was observed. Excavation and unloading of soil was observed to be carrying out near a natural riverstream at ch.50 of UTP. Dropping of soil into the river was observed by the abovementioned activities and caused pollution to the river.	Observation	Contractor was reminded to avoid carrying out construction works near the river and provide sufficient preventive measures prior to executing these works Contractor was recommended to provide bunding or sandbag barriers to prevent soil dropped into the river.	To be followed during the next reporting period.	Ongoing	--

The summary of ecological inspection prepared by the Ecologist, Dr. Mark Shea is shown in Table 6.2.

Date	Observations	Advice from Ecologist	Action Taken	Closing Date
07 May 2012	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
14 May 2012	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
21 May 2012	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
28 May 2012	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
31 May 2012	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A

### 6.2 Non-compliance

A non-compliance event issued by IEC regarding muddy water was recorded on 7<sup>th</sup> May 2012 in this reporting month.

During the site inspection on 25<sup>th</sup> April 2012, it was observed that muddy surface runoff from the worksite near ch.250 was entering directly into the river, and direct discharge of muddy site water was observed near ch.550. No mitigation measures were being implemented such as geo-textiles and earth bund to prevent muddy surface runoff entering the river from the exposed riverbank. No sedimentation tank was provided to treat the muddy site water before discharging into the river.

Another inspection was conducted on 2<sup>nd</sup> May 2012. Follow-up actions had been done by Contractor. It was observed that the sump pump at ch.550 was removed and no direct discharge of untreated site water was observed and no muddy surface runoff was observed at ch.250 during the inspection. Although rectifications of previous observation had been done by Contractor, occurrence of muddy water was still observed in the abovementioned inspection. It is noted that an excavator was working within the river near ch.50 and unloading of soil from a truck was observed next to the river near ch.100 and the bare earth pile was stored too close to the river. As reported by Contractor, haul roads and river courses were damaged by heavy rainstorm in previous days. Emergency works including restoration of haul roads and river channels and removal of C&D waste inside the river channel were being carried out.

Despite the needs of emergency works execution, Contractor was reminded that river pollution without mitigation measures was unacceptable and environmental offence. Contractor was seriously reminded to provide bunding or sandbag barriers to block muddy water directly enter the river and diverge the muddy water to de-silting facilities for proper treatment before discharge. Contractor was recommended to cover any exposed soil surface after the haul roads formation works to prevent soil erosion and surface runoff. Briefing to frontline staff should be provided about the correct actions and mitigation measures regarding river works.

Rectifications had been provided by Contractor within this reporting month. During the site inspection on 9<sup>th</sup> May 2012, the back hoe operating within the river channel was removed and sandbag barrier was provided at ch.50. Moreover, no unloading of soil or earth pile was observed near ch.100. No observation regarding river contamination was noted in this inspection.

Contractor was reminded to be aware of the implementation of measures to avoid soil erosion and untreated water discharged and to prevent pollution to the river water.

### **6.3 Recommendations**

Contractor was reminded that all the measures stated in the Environmental Permit should be followed. Contractor was advised that excavation work shall be carried out in sections and in enclosed dewatered condition. Dewatering of the excavation area should be carried out prior to excavation work. All site water shall be well de-silted and treated before discharge. Regular checking and maintenance on the de-silting

facilities should be provided to ensure sufficient capacity for treating the site water. Also, sufficient temporary earth bunds and barriers should be used to entirely enclose the excavation area and exposed slope surface should be covered (e.g. by tarpaulin sheet) to prevent river contamination. Contractor was reminded that discharge of contaminated water is an environmental offence and should be prohibited.

Contractor should also implement necessary measures to mitigate air quality impact from construction works. Earthy stockpiles should be covered with tarpaulin coverings and dusty static area should be dampened regularly for dust suppression.

In order to minimize the noise impact to the noise sensitive receivers, Contractor was reminded to implement proper mitigation measures as stated in Environmental Permit and EM&A Manual, i.e. erecting 2m high noise barriers at locations stated in Environmental Permit, orientating noisy plants away from the nearby NSRs, using movable barriers and acoustic mat, etc.

#### **6.4 Implementation status and effectiveness of the mitigation measures**

Referring to the table 6.1 and Section 6.2, contractor was seriously recommended to implement necessary mitigation measures to address environmental problem arisen from site activities.

## 7.0 Waste management status

It is the contractor's responsibility to ensure that all wastes produced during construction phase for the drainage improvement works are handled, stored and disposed in accordance with good waste management practices and EPD's regulation and requirement. Waste materials generated during construction activities such as construction and demolition (C&D) material, chemical wastes and general refuse, are recommended to be audited at regular intervals to ensure that proper storage, transportation and disposal practices are being implemented. Table 7.1 is the Waste Disposal recorded by the Contractor in this month.

From the report of Contractor, all C&D materials generated were reused at Lam Tsuen River for rock filling. Non-inert waste was sent to the North East New Territories (NENT) Landfill. Chemical waste were first collected by a black plastic bag with labeling (collection point, chemical name, producer's name), then placed into the Chemical Storing Area for temporary storage. A licensed collector was appointed for the collection and disposal of the chemical waste. All chemical waste was transported to the Chemical Waste Treatment Centre (CWTC). The following table showed the amount of waste generation, reused and disposed from this project site in this reporting month.

The following table showed amount of waste generation, reused and disposed from this project site in this reporting month.

Table 7.1 Summary of Waste generated and disposed in May 2012

Type of waste	Amount generated	Amount reused	Amount disposed
Inert waste	162 m <sup>3</sup>	162 m <sup>3</sup>	0
Non-inert waste	35 kg	0	35 kg
Chemical waste	0	N/A	0

The cumulative waste flow table is shown in Appendix H.

## 8.0 Status of environmental licensing and permit

This project requires different permits and licenses to be run legally. Table 8.1 is the summary of permits/ licenses for this project.

Table 8.1 Summary of Environmental Licensing and Permit Status

Description	License / Permit No.	Date of Issue	Date of Expiry	Remarks
Environmental Permit	EP-223/2005	31 <sup>st</sup> Aug, 2005	N/A	Superseded by EP-223/2005/A
Amended Environmental Permit	EP-223/2005/A	18 <sup>th</sup> Nov, 2008	N/A	Issued
Construction Noise Permit	N/A	N/A	N/A	N/A
Effluent Discharge License	3678	14 <sup>th</sup> Mar, 2008	31 <sup>st</sup> Mar, 2013	Issued
Registration as a Chemical Waste Producer	5213-724-C3251-03	19 <sup>th</sup> Dec, 2007	Not applicable	Issued
Billing Account for Disposal of Construction Waste	7006101	N/A	N/A	N/A

## 9.0 Future key issues

Construction of riverbed, gabion walls, dwarf walls, retaining walls, inclined gabion/no-fines mass concrete walls, stilling basin and installation of the fabricated steel deck for footbridge and ground investigation works would be carried out in the upcoming month. The construction activities for these items will generate environmental impacts in several aspects.

For the proposed construction activities, heavy plants and vehicles may be occupied and those would generate certain noise impacts to the sensitive receivers. To minimize noise generation, noisy activities should be well planned and scheduled to avoid parallel operation of multiple plants. Erection of noise barriers and/or movable barriers should be implemented whenever necessary.

To minimize water quality impact arising from construction activities within river channel, water quality mitigation measures should be implemented as far as practicable. Any muddy water, underground water or wastewater generated from construction activities should be diverted to proper treatment facility prior to discharge.

Contractor was reminded to provide regular water spraying to dusty static area for dust suppression. Excessive storage of earthy stockpile and/or C&D wastes should be prevented to minimize air quality impact arisen by wind erosion.

At the onset of wet season, Contractor was reminded that construction material and equipments should be relocated away from the river channel to prevent blocking the river during rainfall. Stagnant water should be removed to prevent mosquito breeding. Exposed soil stockpile and river bank should be covered to prevent erosion and to minimize siltation during rainfall.

Aforementioned construction works may generate wastes on site. Contractor is advised to assign a site area for temporary waste storage and segregation. Wastes accumulation should be prevented on site; licensed waste collection and disposal should be implemented regularly for hygiene issues.

## 10.0 Conclusion

Construction of riverbed, gabion walls, retaining walls, additional boulder traps, inclined gabion/no-fines mass concrete walls and ground investigation works were the major site activities being carried out in this reporting period.

Regular site meetings and inspection audits led by the seniors for discussing environmental issues were held among project proponent, Contractor and the Environmental Team on weekly basis.

Environmental Team had carried out construction noise monitoring on weekly basis. All results obtained were within limit and therefore no exceedance was recorded in this reporting month.

Piling works has been omitted. Therefore, no vibration monitoring was conducted during the reporting month.

From the summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist Dr. Mark Shea, there is no abnormal finding observed in the reporting month. The ecologist has no further advice and no action suggested to the contractor.

The next ecological impact monitoring has been arranged on 5<sup>th</sup> July 2012.

A non-compliance event regarding muddy water was recorded in this reporting month.

There was no formal complaint in relation to environmental issue received in the reporting month.

The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement.



## **Appendix A: Event and action plan for ecology**

**Event and action plan for ecology**

In the event of non-compliance, the Event / Action plan prepared by the ecologist shall be followed. Detailed Event/ Action plan was shown in **Appendix Table 1** for reference.

It is not proposed to set population size of the three species (i.e. Three-lined Chinese Stream Catfish, Predaceous and the Hong Kong Newt) or other faunal species for the Action Level and Limit Level in the revised EM&A manual in considering the following reasons:

- I. The schedule capture surveys would let to decrease in the populations of the target species; and
- II. The planned drainage works would also temporally de-fauna the stream habitat.

It is considered logical and appropriate to audit non-compliance events in relation with ecological mitigation measures, which were specified in the EP and the PS of the project.

**APPENDIX TABLE 1** Event / Action plan table for Ecology

Event	Action			
	ET	ER	IEC	Contractor
<b>Non-conformity on one occasion</b>	1. Identify Source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures, 4. Advise the Contractor on effectiveness of proposed remedial measures 5. Check implementation of remedial measures	1. Ensure Remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement
<b>Repeated Non conformity</b>	1. Identify Source 2. Inform the IEC and the ER 3. Increase monitoring frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring	1. Check monitoring report 2. Check the Contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures 4. Advise the Contractor on effectiveness of proposed remedial measures 5. Check implementation of remedial measures	1. Ensure Remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement

**Appendix B: Action and limit level for construction noise**

The Action and Limit levels for construction noise are defined in **Appendix Table 2**

**Appendix Table 2:** Action and Limit Levels for Construction Noise

Time Period	Action	Limit
0700 – 1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)*
0700 – 2300hrs on holidays; and 1900 – 2300 hrs on all other days		Subject to the control of Noise Control Ordinance
2300 – 0700 hrs of next day		Subject to the control of Noise Control Ordinance

\*Limit level set in accordance with Particular Specification Section 26

## **Appendix C: Reference standards for vibration**

Guidance regarding vibration limits is provided by the following British Standards (or their equivalent ISO standards):

BS 7385 - Measurement and evaluation of vibration in buildings. Part 2: Guide to damage levels from ground borne vibration.

BS 7385 suggests vibration levels, below which damage is unlikely to occur in 95% of buildings. For cosmetic damage, the level is 15 mm/s at 4 Hz, increasing to 20 mm/s at 15 Hz, increasing to 50 mm/s at 40 Hz and above. Minor structural damage is possible at vibration levels twice those given above, major damage at four times the levels given.

**Appendix Table 3:** Transient vibration guide values for cosmetic building damage (BS7385:Part 2 1993)

	<b>Type of Building</b>	<b>Peak component particle velocity (mm/s) in frequency range of predominant pulse</b>
1	Reinforced or framed structures	50 at 4 Hz and above
2	Un-reinforced or light framed structures	15 at 4 Hz, increasing to 20 at 15 Hz, increasing to 50 at 40 Hz and above.

The vibration magnitudes and frequencies refer to Peak Particle Velocities (PPV) occurring in any single direction, measured on the ground level of the building concerned.

**Appendix D: Noise monitoring results, graphical plots and location plan**



Location	Leq 30min	L <sub>10</sub> 30min	L <sub>90</sub> 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	70.0	73.7	59.1	4-May-12	10:59-11:29	N/A	- Background noise - Traffic noise	Sunny	Façade
UTP 2	59.9	62.5	51.3	4-May-12	10:26-10:56	N/A	- Background noise - Traffic noise	Sunny	Façade
UTP 3	57.8	59.6	54.1	4-May-12	11:31-12:01	N/A	- Background noise	Sunny	Façade
UTP 4	60.3	64.8	52.2	3-May-12	13:14-13:44	N/A	- Background noise	Cloudy	Façade
UTP 5	53.9	55.2	50.4	4-May-12	12:05-12:35	N/A	- Background noise	Cloudy	Façade
UTP 6	54.6	56.9	48.4	3-May-12	11:31-12:01	N/A	- Background noise	Sunny	Façade
UTP 7	65.7	67.5	54.4	3-May-12	11:01-11:31	N/A	- Background noise	Sunny	Façade
UTP 8	71.3	74.1	55.0	3-May-12	10:26-10:56	Soil sorting	- Background noise	Sunny	Façade
UTP 9	73.9	77.6	59.7	3-May-12	9:56-10:06	Rock breaking Soil sorting	- Background noise	Sunny	Façade
UTP 10	60.3	64.5	47.3	3-May-12	9:15-9:45	Rock breaking	- Background noise	Sunny	Façade
UTP 11	59.5	61.6	47.9	3-May-12	8:44-9:14	Rock breaking	- Background noise	Sunny	<b>*Free field</b>

Note\* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

Note : Due to the adverse weather in the afternoon of 3<sup>rd</sup> May 2012, only monitoring locations UTPR4 & UTPR6-11 were measured. Noise monitoring for the locations UTPR1-3 & UTPR5 was rescheduled on 4<sup>th</sup> May 2012.

Location	Leq 30min	L <sub>10</sub> 30min	L <sub>90</sub> 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	66.4	69.7	57.7	10-May-12	13:50-14:20	N/A	- Traffic noise - Background noise	Sunny	Façade
UTP 2	59.8	62.9	50.1	10-May-12	13:15-:13:45	N/A	- Traffic noise - Background noise	Sunny	Façade
UTP 3	70.9	73.1	57.7	10-May-12	14:25-14:55	N/A	- Background noise	Sunny	Façade
UTP 4	61.1	63.3	51.4	10-May-12	15:00-15:30	N/A	- Background noise	Sunny	Façade
UTP 5	58.6	60.8	50.9	10-May-12	15:35-16:05	N/A	- Background noise	Sunny	Façade
UTP 6	64.8	66.8	59.5	10-May-12	16:10-16:40	N/A	- Background noise	Sunny	Façade
UTP 7	65.2	68.3	56.0	10-May-12	11:25-11:55	N/A	- Background noise	Sunny	Façade
UTP 8	54.1	53.8	47.4	10-May-12	10:50-11:20	Soil sorting	- Background noise	Sunny	Façade
UTP 9	64.6	58.3	52.7	10-May-12	10:15-10:45	Rock breaking Soil sorting	- Background noise	Sunny	Façade
UTP 10	58.8	62.5	48.1	10-May-12	9:35-10:05	Rock breaking	- Background noise	Sunny	Façade
UTP 11	52.9	55.9	45.9	10-May-12	9:00-09:30	Rock breaking	- Background noise	Sunny	<b>*Free field</b>

Note\* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

Location	Leq 30min	L <sub>10</sub> 30min	L <sub>90</sub> 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	67.6	68.3	55.3	17-May-12	13:35-14:05	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 2	54.1	54.0	44.1	17-May-12	13:00-13:30	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 3	72.9	75.1	50.3	17-May-12	14:10-14:40	N/A	- Background noise	Sunny	Façade
UTP 4	64.5	66.7	54.5	17-May-12	14:45-15:15	N/A	- Background noise	Sunny	Façade
UTP 5	55.0	57.3	49.9	17-May-12	15:20-15:50	N/A	- Background noise	Sunny	Façade
UTP 6	67.2	69.0	58.1	17-May-12	15:55-16:25	N/A	- Background noise	Sunny	Façade
UTP 7	65.3	67.4	52.8	17-May-12	11:25-11:55	N/A	- Background noise	Sunny	Façade
UTP 8	63.1	65.4	57.6	17-May-12	10:50-11:20	Soil sorting	- Background noise	foggy	Façade
UTP 9	61.9	64.1	57.4	17-May-12	10:15-10:45	Rock breaking Soil sorting	- Background noise	foggy	Façade
UTP 10	57.7	61.8	47.7	17-May-12	9:35-10:05	Rock breaking	- Background noise	foggy	Façade
UTP 11	53.1	56.2	47.3	17-May-12	9:00-9:30	Rock breaking	- Background noise	foggy	<b>*Free field</b>

Note\* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

Location	Leq 30min	L <sub>10</sub> 30min	L <sub>90</sub> 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	68.2	71.0	58.2	24-May-12	13:35-14:05	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 2	67.4	67.3	55.2	24-May-12	13:00-13:30	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 3	72.7	76.1	59.5	24-May-12	14:10-14:40	N/A	- Background noise	Sunny	Façade
UTP 4	54.6	56.2	49.8	24-May-12	14:45-15:15	N/A	- Background noise	Sunny	Façade
UTP 5	56.2	57.7	51.1	24-May-12	15:20-15:50	N/A	- Background noise	Sunny	Façade
UTP 6	64.6	68.4	54.3	24-May-12	11:25-11:55	N/A	- Background noise	Sunny	Façade
UTP 7	64.5	68.2	54.8	24-May-12	16:00-16:30	N/A	- Background noise	Sunny	Façade
UTP 8	62.7	64.7	52.5	24-May-12	10:50-11:20	Soil sorting	- Background noise	Sunny	Façade
UTP 9	68.8	73.0	55.7	24-May-12	10:15-10:45	Rock breaking Soil sorting	- Background noise	Sunny	Façade
UTP 10	57.3	61.6	46.3	24-May-12	9:35-10:05	Rock breaking	- Background noise	Sunny	Façade
UTP 11	53.0	56.1	47.2	24-May-12	9:00-9:30	Rock breaking	- Background noise	Sunny	<b>*Free field</b>

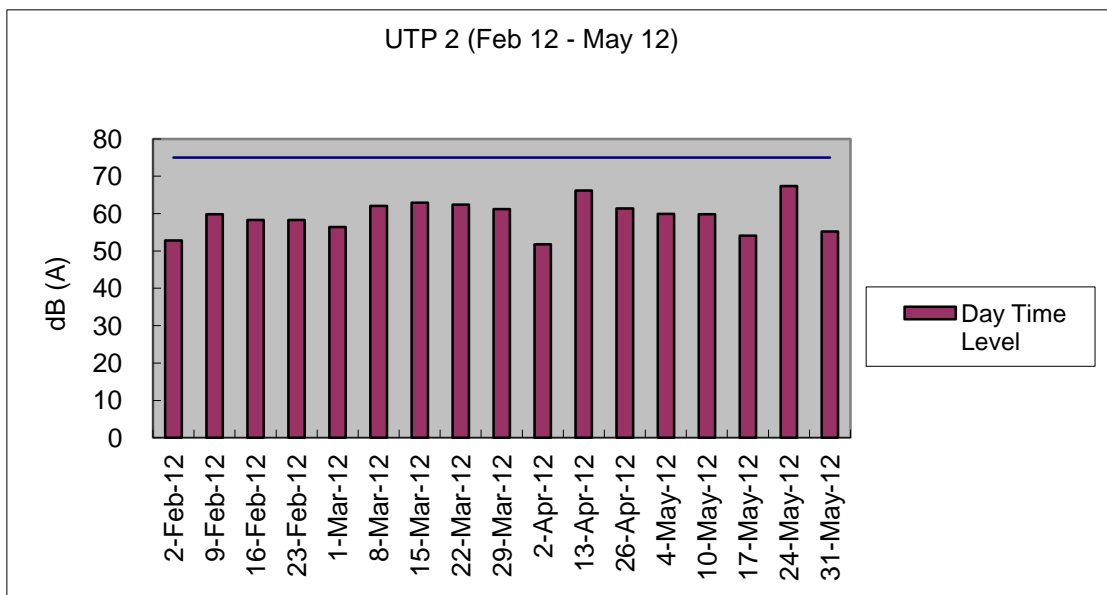
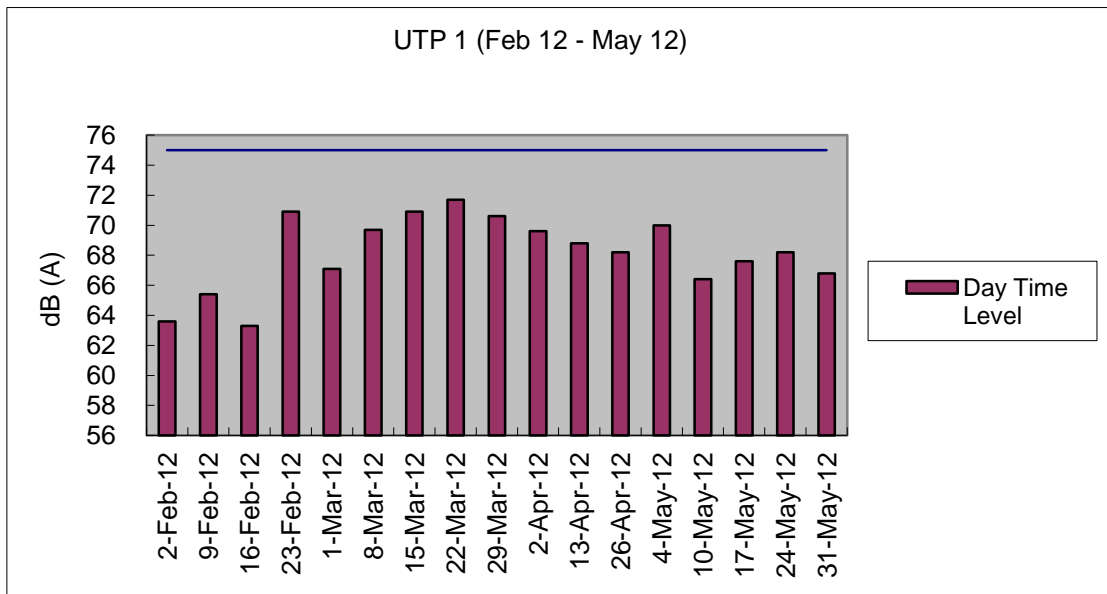
Note\* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

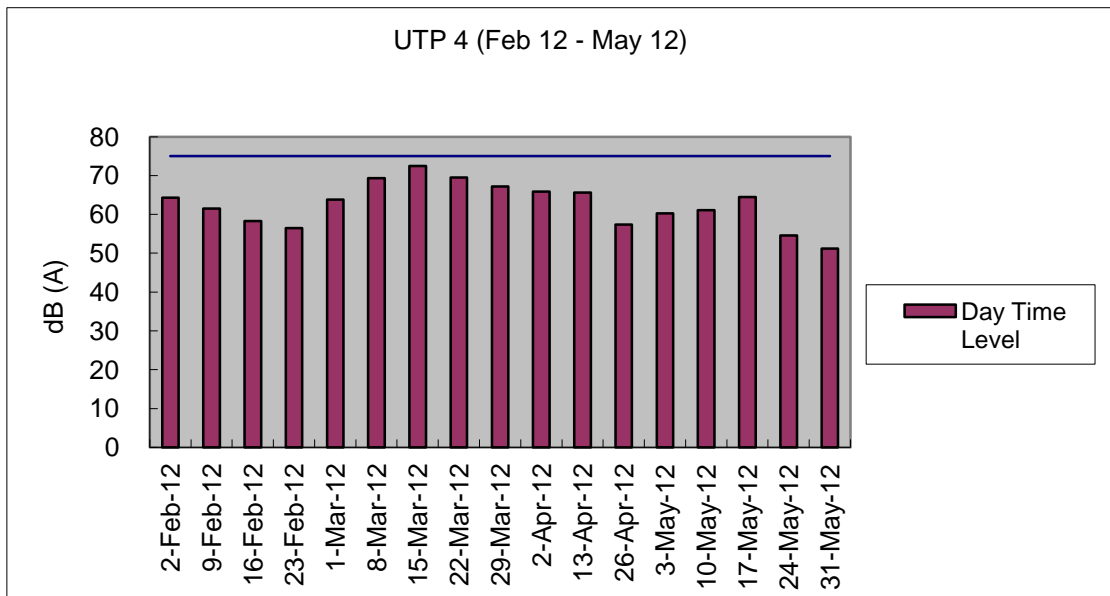
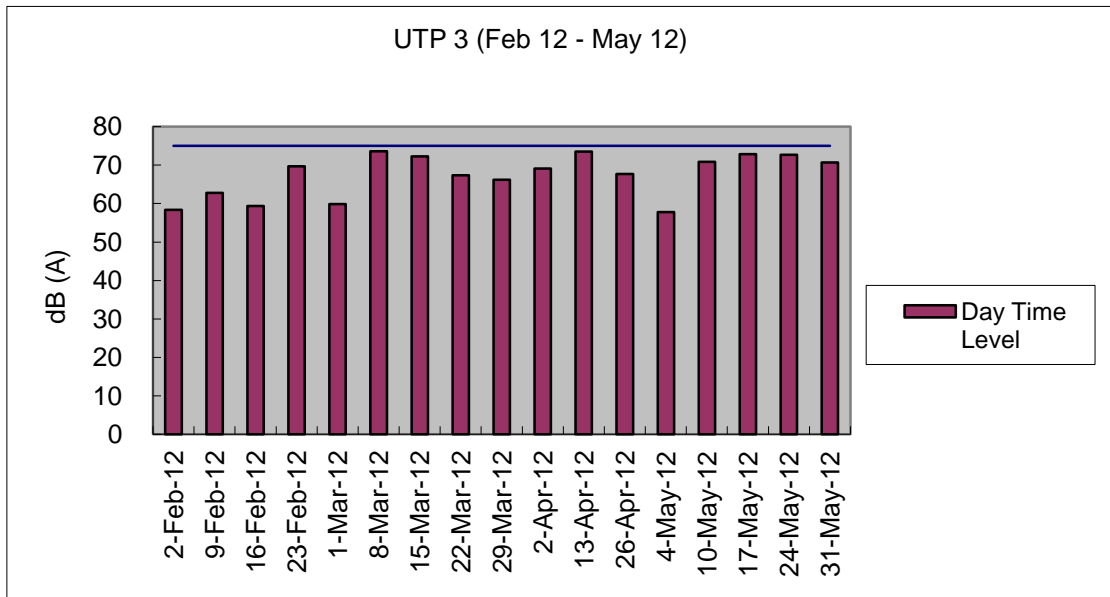
Location	Leq 30min	L <sub>10</sub> 30min	L <sub>90</sub> 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	66.8	67.2	56.4	31-May-12	15:20-15:50	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 2	55.2	56.0	46.7	31-May-12	15:55-16:25	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 3	70.7	72.9	51.4	31-May-12	14:25-15:15	N/A	- Background noise	Sunny	Façade
UTP 4	51.2	52.3	49.2	31-May-12	13:35-14:05	N/A	- Background noise	Sunny	Façade
UTP 5	56.7	57.9	52.3	31-May-12	14:10-14:40	N/A	- Background noise	Sunny	Façade
UTP 6	54.6	56.9	48.5	31-May-12	13:00-13:30	N/A	- Background noise	Sunny	Façade
UTP 7	64.2	66.7	56.8	31-May-12	13:00-13:30	N/A	- Background noise	Sunny	Façade
UTP 8	57.1	59.6	52.5	31-May-12	10:50-11:20	Soil sorting	- Background noise	Sunny	Façade
UTP 9	61.6	62.4	58.1	31-May-12	10:15-10:45	Rock breaking Soil sorting	- Background noise	Sunny	Façade
UTP 10	55.6	60.5	47.6	31-May-12	9:35-10:05	Rock breaking	- Background noise	Sunny	Façade
UTP 11	54.4	58.0	46.5	31-May-12	9:00-09:30	Rock breaking	- Background noise	Sunny	<b>*Free field</b>

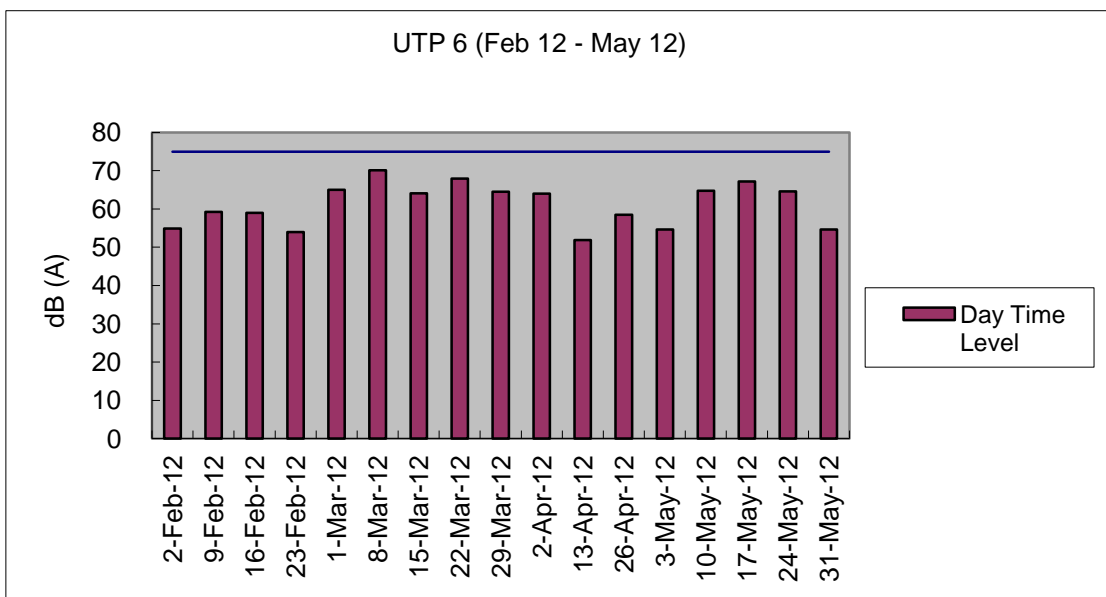
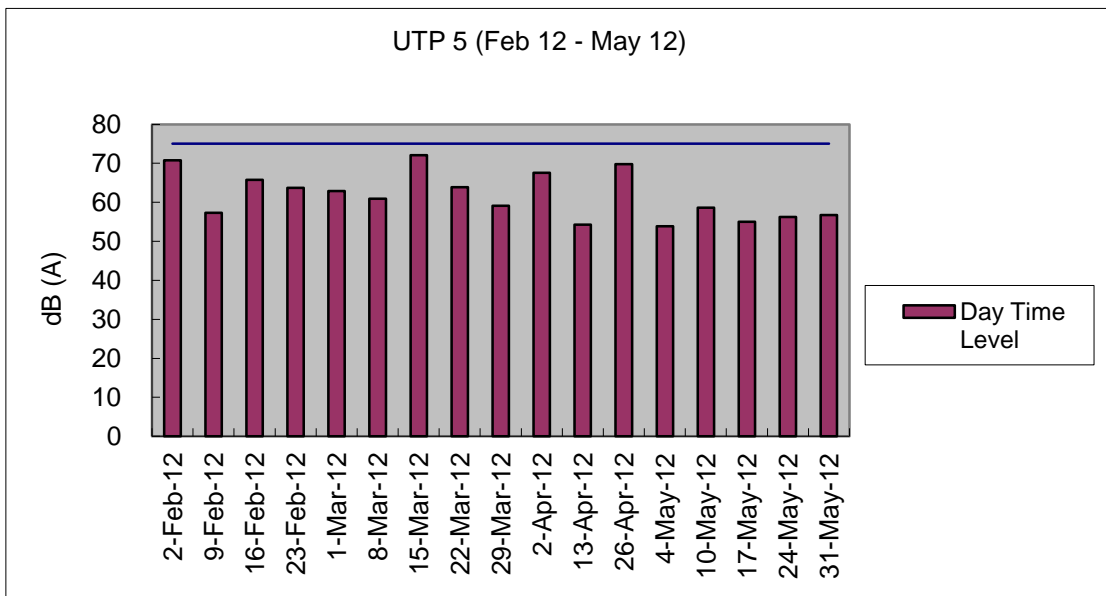
Note\* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

**Graphical plot for noise measurements**

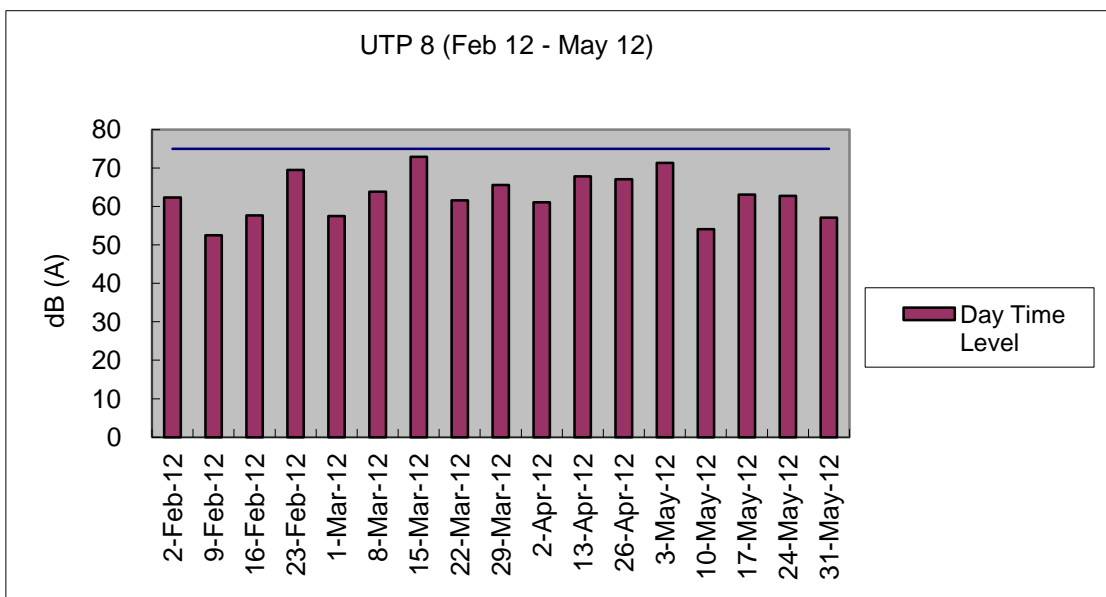
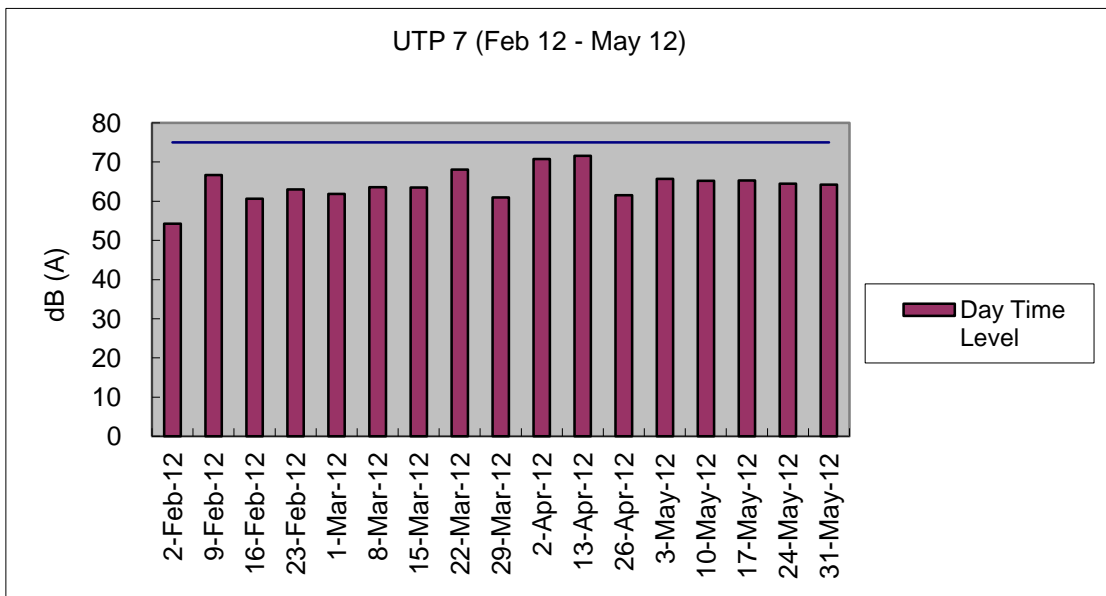
The followings were the graphical plots for the 11 monitoring locations. Each plot showed the date of measurement taken, day time limit of 75 dB(A) as well as the measured daytime level for each location. The graphs contain the data recorded from February 2012 to May 2012.

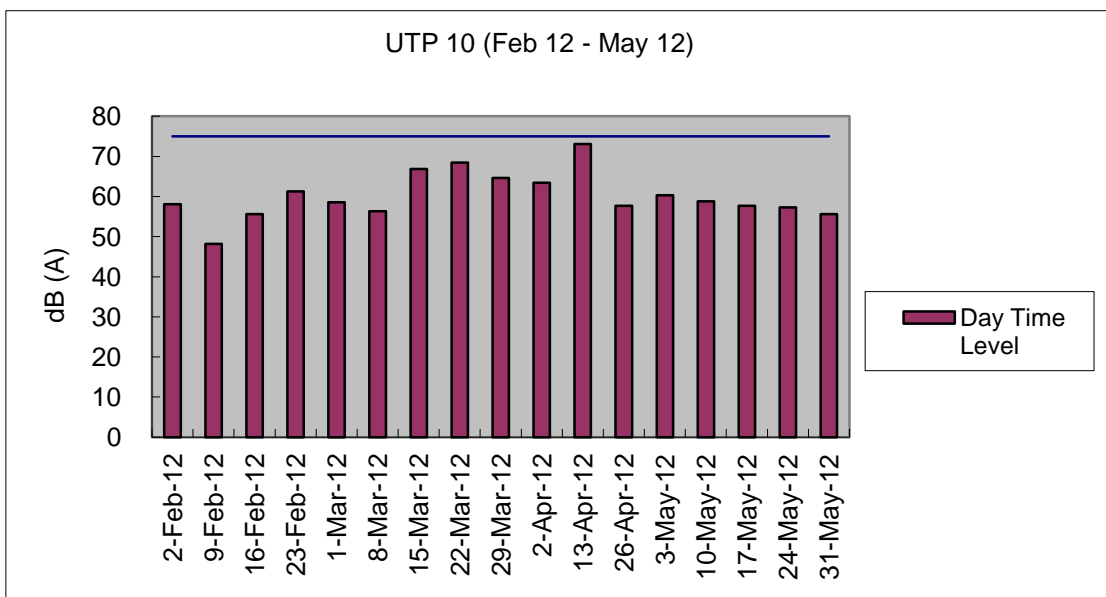
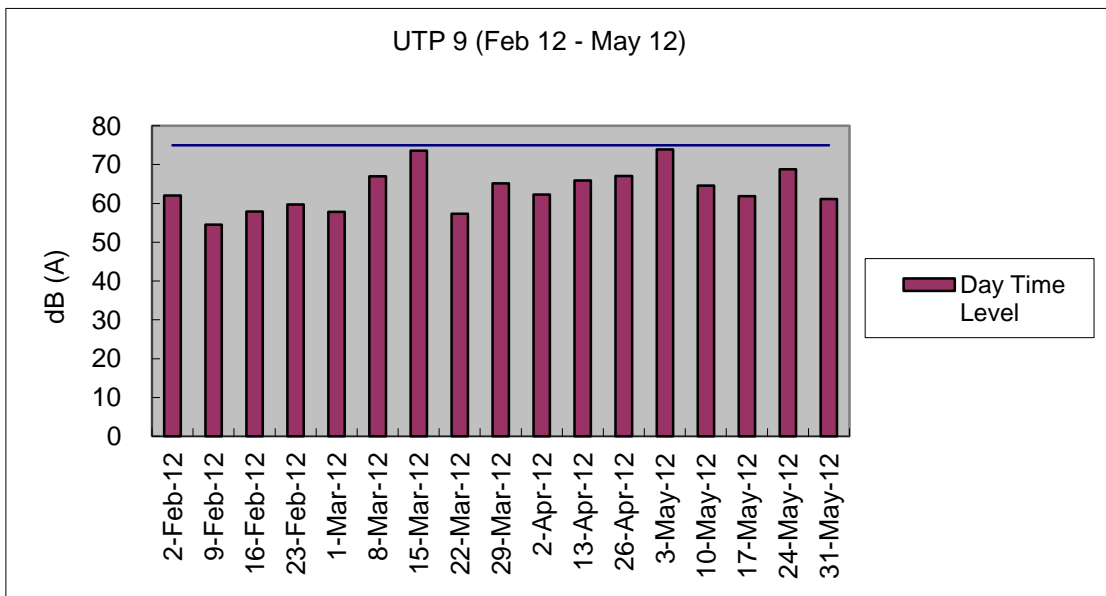


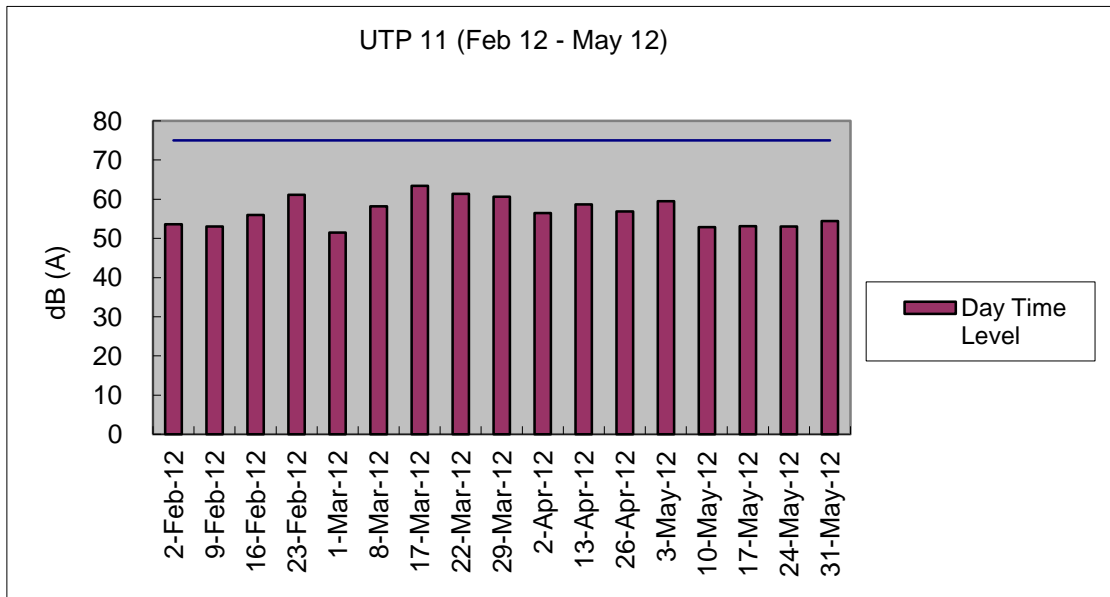


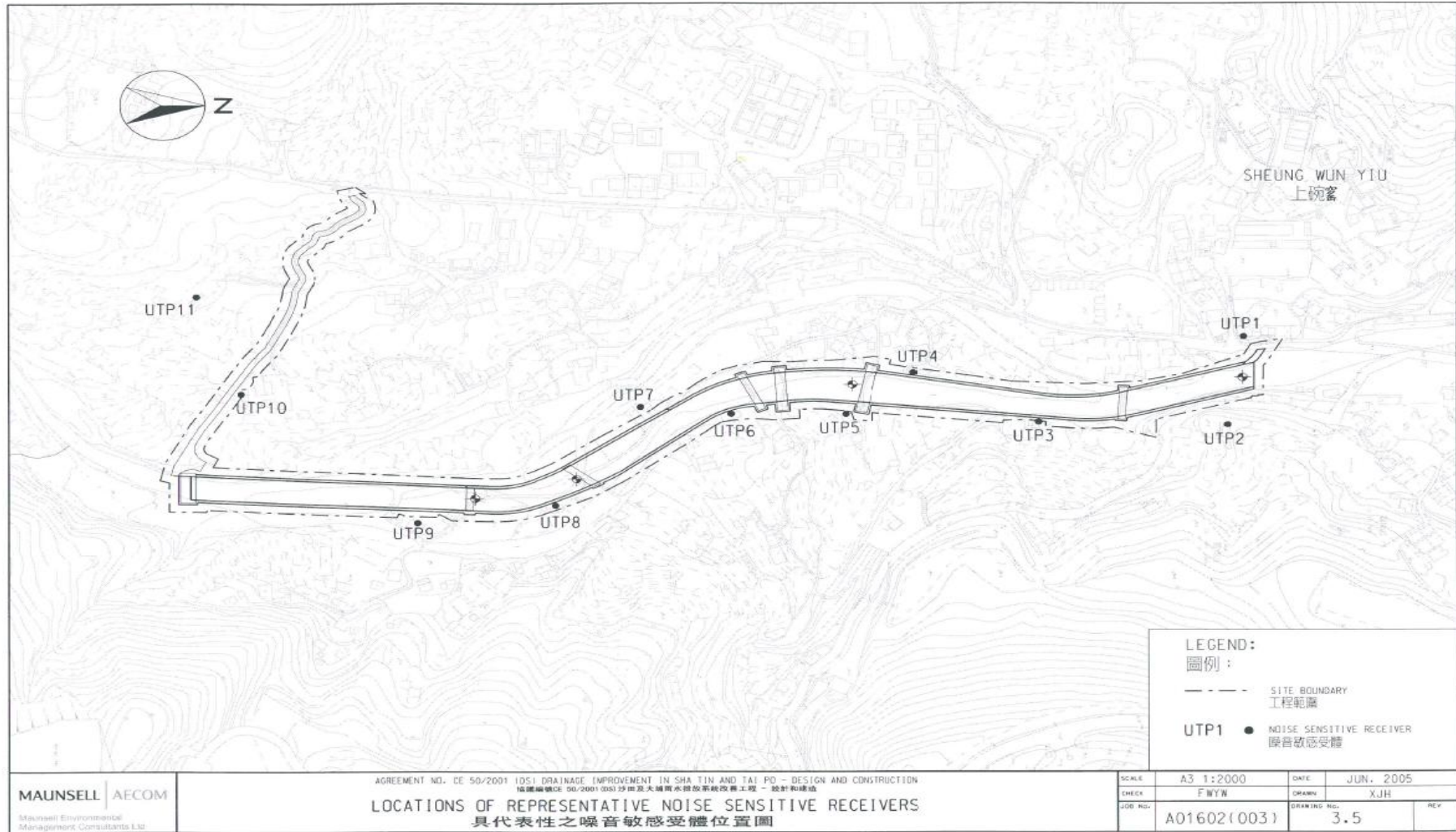












**Appendix E: Monitoring schedule for the present and next reporting period**

**Master Schedule of EM&A works in May 2012**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01/05	02/05	03/05	04/05	05/05
			Site inspection at afternoon	Noise Monitoring	Noise Monitoring	
06/05	07/05	08/05	09/05	10/05	11/05	12/05
	Ecological site inspection		Site inspection at afternoon	Noise Monitoring		
13/05	14/05	15/05	16/05	17/05	18/05	19/05
	Ecological site inspection and		Site inspection	Noise Monitoring		
20/05	21/05	22/05	23/05	24/05	25/05	26/05
	Ecological site inspection		Site inspection and SSEMC at afternoon	Noise Monitoring		
27/05	28/05	29/05	30/05	31/05		
	Ecological site inspection		Site inspection at afternoon	Noise Monitoring Ecological site inspection		

**Master Schedule of EM&A works in June 2012**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					01/06	02/06
03/06	04/06	05/06	06/06	07/06	08/06	09/06
	Ecological site inspection		Site inspection at afternoon	Noise Monitoring		
10/6	11/06	12/06	13/06	14/06	15/06	16/06
	Ecological site inspection and		Site inspection at afternoon	Noise Monitoring		
17/06	18/06	19/06	20/06	21/06	22/06	23/06
	Ecological site inspection		Site inspection at afternoon	Noise Monitoring		
24/06	25/06	26/06	27/06	28/06	29/06	30/06
	Ecological site inspection	Site inspection and SSEMC at afternoon		Noise Monitoring		Ecological site inspection

**Appendix F: Cumulative complaint log**

<b>Environmental Parameters</b>	<b>Cumulative no. Brought forward</b>	<b>No. of complaint May 2012</b>	<b>Overall Total</b>
Air/Dust	7	0	7
Noise	5	0	5
Water	11	0	11
House Keeping Hygiene	1	0	1
Chemical waste	0	0	0
Total	24	0	24



**Appendix G: Implementation status of environmental protection and mitigation measures**

Implementation status of environmental protection and mitigation

Environmental Aspect	Protection / Mitigation Measures	Implementation status	Follow-up action
Construction Noise	No percussive piling shall be carried out	Implemented	Not required
	-Use well maintained construction plant	Implemented	Not required
	-Shut down plants between work periods	Implemented	Not required
	-Install silencers on construction equipment	Implemented	Not required
	-Locate mobile plant far away from NSRs	Implemented	Not required
	-Quiet plants should be used	Implemented	Not required
	-2m high temporary noise barriers, as stipulated in EP condition 2.9, shall be installed	Deficient	Ongoing
Fugitive Dust Emission	-Implement regular watering and vehicle washing facilities	Implemented	Not required
	-Cover excavated or stockpile of dusty material by impervious sheeting or sprayed with water	Implemented	Not required
	-Use tarpaulin to cover dusty materials on vehicles	Implemented	Not required
Water Quality	Excavation works within the Tai Po River within the Project shall be carried out in stages and excavation area for each stage shall be limited to section of half width of the channel and less than 100m long at any one time in order to maintain water flow within the river during construction stage	Implemented	Not required
	Land-based plant shall be employed and site run-off shall be directed towards regularly cleaned and maintained silt traps and oil / grease separators to minimize leakage and loss of sediments during excavation	Deficient	Ongoing
	Large boulders removed from the Tai Po River within the Project during excavation shall be re-instated upon completion of works A section of 150m long natural riverbank on the western side of the river channel (Ch0 –Ch150) shall be retained	Implemented	Not required
	The excavation area shall be enclosed with bunds or barriers and dewatered prior to excavation to minimize the impacts upon the downstream of the Tai Po River	Implemented	Not required
	Provide silt trap and oil interceptor to remove the oil, lubricants, grease,	Implemented	Not required

	silt, grit and debris from the wastewater before pumped to the public storm water drainage system		
	Provide site toilet facilities	Implemented	Not required
Waste Management	Reuse excavated material as far as possible	Implemented	Not required
	Recycle scrap metals or abandoned equipment	Implemented	Not required
	Adopt a trip ticket system for the disposal of C&D materials	Implemented	Not required
	All general refuse should be segregated and stored in enclosed bins or compaction units	Deficient	Ongoing
Vibration	Percussive piling is to be replaced by bore-hole piling to minimize vibration impacts to the two identified Declared monuments	Not applicable at this stage	Not required
	Carrying out of vibration monitoring to ensure that vibration associated with the construction phase do not exceed the threshold limit otherwise contractor have to review the work method and construction activities have to be slow down or rescheduled to reduce the impacts	Not applicable at this stage	Not required
	Close monitoring and measurement on the cracks of the external wall of Fan Sin Temple during construction works will be carried out. Any changes on the cracks will be recorded for the contractor to slow down the construction activities accordingly; and to review the work methods and equipments immediately	Not Applicable at this stage	Not required

Implementation status of environmental protection and mitigation for ecology,  
 prepared by the Ecologist, Dr. Mark Shea.

Environmental Aspect	Protection / Mitigation Measures	Implementation status	Follow-up action
Ecology	Large boulders will be returned to the riverbed following the excavation works.	Not applicable	Not required
	Construction works from Ch. 0.0m – Ch. 150m would be along one side of the river only	Not applicable	Not required
	Approximately 150m of the existing natural riverbank on the western side of the river would be retained.	Implemented	Not required
	Excavation works within the river channel should be restricted to an enclosed dewater section of the river, and would be limited to sections 50-100m long at any one time.	Implemented	Not required
	Flows to the area downstream shall be maintained at all times during the construction phase	Implemented	Not required
	Capture survey shall be conducted within the Tai Po River before commencement of works. The captured target species shall be relocated to areas of the watercourse upstream of the watercourse upstream of the Tai Po River	Capture surveys had been conducted at the beginning of the Contract, during the wet season July/August 2008 and 4 <sup>th</sup> November 2008	Not required
	Temporary noise barriers should be constructed to control noise impacts to habitats and associated wildlife within and adjacent to the proposed works area	Implemented	Not required
	Excavation works shall be carried out by land based plant within enclosed dry section of river channel.	Implemented	Not required
	Compensatory planting of trees and other vegetation along the banks of the newly improved drainage channel should be provided to compensate for the loss of riparian vegetation.	Not applicable	Not required
	Operation phase activities in the improved drainage channel would be limited to periodic channel maintenance such as de-silting.	Not applicable	Not required

**Appendix H: Cumulative waste flow table**

Cumulative waste flow table showing amount of wastes generated, reused and disposed since 15<sup>th</sup> September 2008

Type of waste	Inert Waste			Non-Inert Waste			Chemical Waste	
	Amount generated	Amount reused	Amount disposed	Amount generated	Amount reused	Amount disposed	Amount generated	Amount disposed*
Year 2008 to 2009	36.9 m <sup>3</sup>	0	36.9 m <sup>3</sup>	2.000 tonnes	0	2.000 tonnes	20kg	20kg
Year 2010	1955 m <sup>3</sup>	1955m <sup>3</sup>	0	0.192 tonnes	0	0.192 tonnes	0	0
Year 2011	5505 m <sup>3</sup>	5490 m <sup>3</sup>	51.9 m <sup>3</sup>	0.376 tonnes	0	0.376 tonnes	3kg	3kg
January 2012	1920 m <sup>3</sup>	1920 m <sup>3</sup>	0	0.030 tonnes	0	0.030 tonnes	2kg	2kg
February 2012	2110 m <sup>3</sup>	2110 m <sup>3</sup>	0	0.020 tonnes	0	0.020 tonnes	1kg	1kg
March 2012	1401 m <sup>3</sup>	1401 m <sup>3</sup>	0	0.030 tonnes	0	0.030 tonnes	0	0
April 2012	710 m <sup>3</sup>	575 m <sup>3</sup>	135 m <sup>3</sup>	0.030 tonnes	0	0.030 tonnes	0	0
May 2012	162 m <sup>3</sup>	162 m <sup>3</sup>	0	0.035 tonnes	0	0.035 tonnes	0	0
<b>Total</b>	<b>13799.9 m<sup>3</sup></b>	<b>13613 m<sup>3</sup></b>	<b>223.8 m<sup>3</sup></b>	<b>2.713 tonnes</b>	<b>0</b>	<b>2.678 tonnes</b>	<b>26kg</b>	<b>26kg</b>

Remark\*: Chemical wastes generated from the project sites including Upper Tai Po River, Lam Tsuen River and She Shan River were centralized for disposal

**Appendix I: Construction programme (Rev. No. 19)**

識別碼	任務名稱	工期	開始時間	完成時間	2010年		2011年		2012年		2013年				
					H2	H1	H2	H1	H2	H1	H2	H1			
1	Programme of Upper Tai Po River	750 工作日	5/1/2010	19/11/2012											
2	Wet Season of 2010	214 工作日	5/1/2010	31/10/2010											
3	Wet Season of 2011	149 工作日	8/3/2011	30/9/2011											
4	Works Suspended Due to Villager's Rally	42 工作日	21/10/2010	18/12/2010											
5	Ch 230-350	446 工作日	28/1/2011	12/10/2012											
6	Gabion Wall (Ch 230-275 RHS) TG1/TG1A (Completed)	40 工作日	28/1/2011	24/3/2011											
10	Retaining Wall (Ch 275-330 RHS) TR1 (replaced by AD1) (Completed)	154 工作日	17/3/2011	18/10/2011											
17	Drainage & Footpath (CH 275-330 RHS)	21 工作日	6/8/2012	3/9/2012											
18	Construction of drainage & footpath	21 工作日	6/8/2012	3/9/2012											
19	Inclined Gabion Wall (Ch 290-327 LHS)	109 工作日	3/1/2012	1/6/2012											
20	Remove Concrete Blocks and shotcrete (Completed)	30 工作日	3/1/2012	13/2/2012											
21	Concreting (Completed)	50 工作日	6/2/2012	13/4/2012											
22	No-fine	60 工作日	5/3/2012	25/5/2012											
23	Gabion	5 工作日	28/5/2012	1/6/2012											
24	Maintenance Staircase (Ch 315 LHS) (Completed)	4 工作日	22/5/2012	25/5/2012											
26	Drainage & Footpath (Ch 270-330 LHS)	30 工作日	6/6/2011	15/7/2011											
27	Construction of drainage & footpath	30 工作日	6/6/2011	15/7/2011											
28															
29	Temp Utility and Pedestrian Diversion at Ch230 (Completed)	192 工作日	21/7/2011	13/4/2012											
32															
33	Demolition of Interim Footbridge at Ch230 (Completed)	17 工作日	3/10/2011	25/10/2011											
36															
37	Inclined Gabion Wall (Ch 218-240 LHS)	129 工作日	3/1/2012	29/6/2012											
38	Remove Shotcrete & concrete block (Completed)	30 工作日	3/1/2012	13/2/2012											
39	Concreting	25 工作日	14/5/2012	15/6/2012											
40	No-fine	3 工作日	22/6/2012	26/6/2012											
41	Gabion	3 工作日	27/6/2012	29/6/2012											
42	Maintenance Staircase (Ch 242 LHS)	4 工作日	18/6/2012	21/6/2012											
43	Formwork and concreting	4 工作日	18/6/2012	21/6/2012											
44	Inclined Gabion Wall (Ch 240-272 LHS)	129 工作日	3/1/2012	29/6/2012											
45	Remove Concrete Blocks and shotcrete (Completed)	30 工作日	3/1/2012	13/2/2012											
46	Concreting (Completed)	30 工作日	12/3/2012	20/4/2012											
47	No-fine	3 工作日	22/6/2012	26/6/2012											
48	Gabion	3 工作日	27/6/2012	29/6/2012											
49	Inclined RC Wall and Step 2A (Ch 272-290 LHS)	51 工作日	9/4/2012	18/6/2012											
50	Concreting (Base)	10 工作日	9/4/2012	20/4/2012											
51	Concreting (Ramp)	7 工作日	11/5/2012	21/5/2012											
52	Concreting (Slab)	5 工作日	22/5/2012	28/5/2012											
53	Concreting (Wall Stem and Step 2A with stilling basin)	15 工作日	29/5/2012	18/6/2012											
54	Drainage & Footpath (Ch 230-270 LHS)	20 工作日	16/7/2012	10/8/2012											
55	Construction of drainage & footpath	20 工作日	16/7/2012	10/8/2012											
56	Step 2(Ch 236)	10 工作日	19/6/2012	2/7/2012											
57	Stilling Basin	5 工作日	19/6/2012	25/6/2012											

專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務 進度 摘要 外部任務 期限  
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識別碼	58
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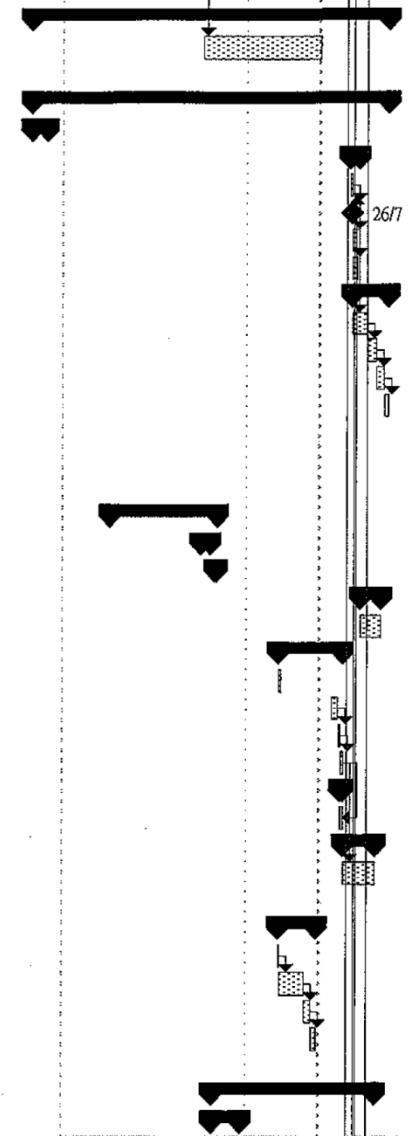
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58	Ramp and Slab	5 工作日	26/6/2012	2/7/2012								
59	Cascade (Ch 275) (Completed)	21 工作日	28/6/2012	26/7/2012								
62	Lighting at CH 250-320	45 工作日	13/8/2012	12/10/2012								
63	Construction of Drawpits / Ductings	21 工作日	13/8/2012	10/9/2012								
64	Public lighting Installation (CE2318)	12 工作日	11/9/2012	26/9/2012								
65	Public lighting Installation (CE2317)	12 工作日	11/9/2012	26/9/2012								
66	T&C	6 工作日	27/9/2012	4/10/2012								
67	Removal of existing lighting (VA1311-Z1)	6 工作日	5/10/2012	12/10/2012								
68												
69	Footbridge TB04 (Ch 330)	181 工作日	12/10/2011	20/6/2012								
70	Construction of Abutment A (LHS) (Completed)	22 工作日	7/12/2011	5/1/2012								
78	Construction of Abutment B (RHS) (Completed)	24 工作日	12/10/2011	14/11/2011								
87	Construction of decking (steel deck) (Completed)	16 工作日	11/5/2012	1/6/2012								
91	Demolition of Bridge TB-A (Completed)	17 工作日	17/5/2012	8/6/2012								
94	Lighting at Footbridge TB04	11 工作日	6/6/2012	20/6/2012								
95	Construction of Drawpits / Ductings	7 工作日	6/6/2012	14/6/2012								
96	Public lighting Installation (CE2315)	3 工作日	15/6/2012	19/6/2012								
97	Public lighting Installation (CE2316)	3 工作日	15/6/2012	19/6/2012								
98	T&C	1 工作日	20/6/2012	20/6/2012								
99	Construction of Gabion Wall at TB-A (Completed)	5 工作日	11/6/2012	15/6/2012								
103												
104	Footbridge TB05 (ch 350)	353 工作日	10/3/2011	16/7/2012								
105	Construction of Abutment A (LHS) (Completed)	20 工作日	22/5/2012	18/6/2012								
113	Construction of Abutment B (RHS) (Completed)	19 工作日	10/3/2011	5/4/2011								
121	Construction of decking (Completed)	37 工作日	11/5/2012	2/7/2012								
126	Demolition of Bridge TB-B (Completed)	17 工作日	17/5/2012	8/6/2012								
129	Lighting at Footbridge TB05	10 工作日	3/7/2012	16/7/2012								
130	Construction of Drawpits / Ductings	6 工作日	3/7/2012	10/7/2012								
131	Public lighting Installation (CE2313)	3 工作日	11/7/2012	13/7/2012								
132	Public lighting Installation (CE2314)	3 工作日	11/7/2012	13/7/2012								
133	T&C	1 工作日	16/7/2012	16/7/2012								
134	Construction of Gabion Wall at TB-B (Completed)	5 工作日	11/6/2012	15/6/2012								
138												
139												
140	Inclined Gabion Wall (Ch 327-448 LHS) (Completed)	13 工作日	11/5/2012	29/5/2012								
145	Drainage & Footpath (Ch 330-400 LHS)	30 工作日	18/7/2011	26/8/2011								
146	Construction of drainage & footpath	30 工作日	18/7/2011	26/8/2011								
147	Gabion Wall (Ch 330-345 RHS) TG2 (Completed)	16 工作日	15/11/2011	6/12/2011								
151	Drainage & Footpath (Ch 400-450 LHS)	20 工作日	29/8/2011	23/9/2011								
152	Construction of drainage & footpath	20 工作日	29/8/2011	23/9/2011								
153												
154	Step 3 (Ch327)	12 工作日	14/5/2012	29/5/2012								
155	Stilling Basin	7 工作日	14/5/2012	22/5/2012								

專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務 進度 摘要 外部任務 期限  
 分割 里程碑 專案摘要報告 外部里程碑



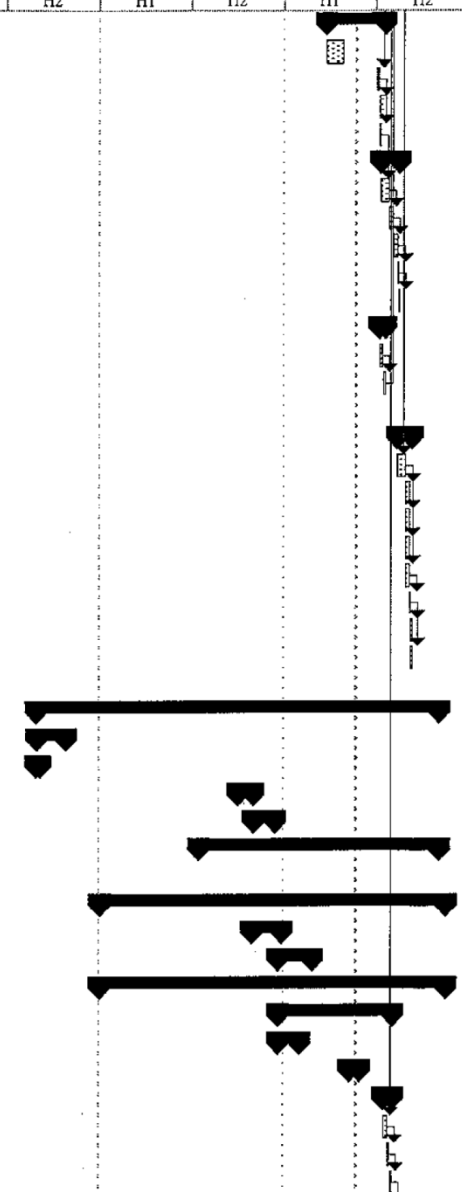
識別碼	任務名稱	工期	開始時間	完成時間	2010年		2011年		2012年		2013年
					H2	H1	H2	H1	H2	H1	H2
156	Ramp and Slab	5 工作日	23/5/2012	29/5/2012							
157											
158	Ch 45-100	505 工作日	1/11/2010	5/10/2012							
159	Additional Boulder Trap	166 工作日	7/10/2011	25/5/2012							
160											
161	Footbridge TB02 (Ch 150)	505 工作日	1/11/2010	5/10/2012							
162	Construction of Abutment A (LHS)	23 工作日	1/11/2010	1/12/2010							
170	Construction of decking	14 工作日	23/7/2012	9/8/2012							
171	Erection of steel deck+ conc deck	4 工作日	23/7/2012	26/7/2012							
172	XXConcreting	0 工作日	26/7/2012	26/7/2012							
173	Deck finishing	10 工作日	27/7/2012	9/8/2012							
174	Railing installation	7 工作日	27/7/2012	6/8/2012							
175	Lighting at Footbridge TB02	51 工作日	27/7/2012	5/10/2012							
176	Construction of Drawpits / Ductings	21 工作日	27/7/2012	24/8/2012							
177	Public lighting Installation (CE2308)	12 工作日	27/8/2012	11/9/2012							
178	Public lighting Installation (CE2309)	12 工作日	12/9/2012	27/9/2012							
179	Removal of existing lighting (VA2642-A1)	6 工作日	28/9/2012	5/10/2012							
180											
181											
182											
183	Gabion Wall (Ch 150-178 LHS) TG3A	154 工作日	5/4/2011	4/11/2011							
187	Gabion Wall (Ch 178-230 LHS) TG5A/TG2	15 工作日	3/10/2011	21/10/2011							
190	Maintenance Staircase (Ch 178 LHS)	4 工作日	31/10/2011	3/11/2011							
192	Drainage & Footpath (Ch 150-Ch230 LHS)	30 工作日	13/8/2012	21/9/2012							
193	Drainage & Footpath	30 工作日	13/8/2012	21/9/2012							
194	Inclined Gabion Wal (Ch 110-130 RHS)	91 工作日	5/3/2012	9/7/2012							
195	Remove shotcrete (Completed)	5 工作日	5/3/2012	9/3/2012							
196	Concreting	10 工作日	18/6/2012	29/6/2012							
197	No-fine	3 工作日	2/7/2012	4/7/2012							
198	Gabion	3 工作日	5/7/2012	9/7/2012							
199	Maintenance Staircase (Ch 130 RHS)	4 工作日	4/7/2012	9/7/2012							
200	Formwork and concreting	4 工作日	4/7/2012	9/7/2012							
201	Drainage & Footpath (Ch 0-150 RHS)	45 工作日	10/7/2012	10/9/2012							
202	Construction of drainage & footpath	45 工作日	10/7/2012	10/9/2012							
203											
204	Inclined Gabion Wall (Ch 130-220 RHS)	55 工作日	5/3/2012	18/5/2012							
205	Remove Shotcrete (Completed)	2 工作日	5/3/2012	6/3/2012							
206	Concreting (Completed)	35 工作日	7/3/2012	24/4/2012							
207	No-fine (Completed)	10 工作日	25/4/2012	8/5/2012							
208	Gabion	8 工作日	9/5/2012	18/5/2012							
209											
210	Footbridge TB03 (Ch 200)	229 工作日	26/10/2011	10/9/2012							
211	Construction of Abutment B (RHS)	41 工作日	26/10/2011	21/12/2011							



專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務 進度 摘要 外部任務 期限   
 分割 里程碑 專案摘要報告 外部里程碑

識別碼	任務名稱	工期	開始時間	完成時間	2010年		2011年		2012年		2013年
					H2	H1	H2	H1	H2	H1	H2
219	Construction of Decking (TB03)	85 工作日	26/3/2012	20/7/2012							
220	Modification of LHS table top	25 工作日	26/3/2012	27/4/2012							
221	Erection of steel deck+ conc deck	4 工作日	3/7/2012	6/7/2012							
222	Deck finishing	10 工作日	9/7/2012	20/7/2012							
223	Railing installation	2 工作日	9/7/2012	10/7/2012							
224	Lighting at Footbridge TB03	27 工作日	11/7/2012	16/8/2012							
225	Construction of Drawpits / Ductings	12 工作日	11/7/2012	26/7/2012							
226	Public lighting Installation (CE2321)	6 工作日	27/7/2012	3/8/2012							
227	Public lighting Installation (CE2322)	6 工作日	6/8/2012	13/8/2012							
228	T&C	1 工作日	14/8/2012	14/8/2012							
229	Removal of existing lighting (VA1309-Z1)	2 工作日	15/8/2012	16/8/2012							
230	Step 1 (Ch 178)	10 工作日	9/7/2012	20/7/2012							
231	Stilling Basin	5 工作日	9/7/2012	13/7/2012							
232	Ramp and Slab	5 工作日	16/7/2012	20/7/2012							
233											
234	Lighting CH 175-250	21 工作日	13/8/2012	10/9/2012							
235	Construction of Drawpits / Ductings	12 工作日	13/8/2012	28/8/2012							
236	Public lighting Installation (CE2319)	6 工作日	29/8/2012	5/9/2012							
237	Public lighting Installation (CE2320)	6 工作日	29/8/2012	5/9/2012							
238	Public lighting Installation (CE2323)	6 工作日	29/8/2012	5/9/2012							
239	Public lighting Installation (CE2324)	6 工作日	29/8/2012	5/9/2012							
240	T&C	1 工作日	6/9/2012	6/9/2012							
241	Removal of existing lighting (VE2641-A1)	2 工作日	7/9/2012	10/9/2012							
242	Removal of existing lighting (VA1310-A1)	2 工作日	7/9/2012	10/9/2012							
243											
244	Ch -23-45 (Completed)	570 工作日	30/8/2010	2/11/2012							
245	Retaining Wall at Access D (Boulder Trap)	41 工作日	1/9/2010	27/10/2010							
265	Filling Work at Boulder Trap (RHS of downstream)	6 工作日	30/8/2010	6/9/2010							
267	Dwarf Wall (Ch 60-75) RHS	23 工作日	3/10/2011	2/11/2011							
276	Box Culvert 03 (Ch 45) (Completed)	31 工作日	3/11/2011	15/12/2011							
287	Retaining Wall at Access D (Boulder Trap)	340 工作日	18/7/2011	2/11/2012							
319											
320	Ch 350-450	489 工作日	3/1/2011	15/11/2012							
321	Gabion Wall (Ch 350-400 LHS) TR1 (AD) (Completed)	43 工作日	31/10/2011	28/12/2011							
326	Gabion Wall (Ch 400-450 LHS) TR1 (AD) (Completed)	48 工作日	22/12/2011	27/2/2012							
331	TB06	489 工作日	3/1/2011	15/11/2012							
332	Footbridge TB06 (Ch 400)	162 工作日	22/12/2011	3/8/2012							
333	Construction of Abutment A (LHS)	30 工作日	22/12/2011	1/2/2012							
342	Construction of decking	14 工作日	11/5/2012	30/5/2012							
347	Lighting at Footbridge TB06	14 工作日	17/7/2012	3/8/2012							
348	Construction of Drawpits / Ductings	6 工作日	17/7/2012	24/7/2012							
349	Public lighting Installation (CE2311)	3 工作日	25/7/2012	27/7/2012							
350	Public lighting Installation (CE2310)	3 工作日	30/7/2012	1/8/2012							



專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務 進度 摘要 外部任務 期限   
 分割 里程碑 專案摘要報告 外部里程碑

識別碼	任務名稱	工期	開始時間	完成時間	2010年			2011年		2012年		2013年
					H2	H1	H2	H1	H2	H1	H2	H1
351	T&C	2 工作日	2/8/2012	3/8/2012								
352	Demolition of Bridge TB-C	4 工作日	31/5/2012	5/6/2012								
355	Consturction of Gabion Wall at TB-C	35 工作日	6/6/2012	24/7/2012								
359												
360	Gabion Wall (Ch 400-450 RHS) TR1 (replaced by AD1)	30 工作日	3/1/2011	11/2/2011								
364	Step 4	20 工作日	11/5/2012	7/6/2012								
365	Basin	5 工作日	11/5/2012	17/5/2012								
366	Ramp and Slab	5 工作日	18/5/2012	24/5/2012								
367	Step 5	10 工作日	25/5/2012	7/6/2012								
368	Basin	5 工作日	25/5/2012	31/5/2012								
369	Ramp and Slab	5 工作日	1/6/2012	7/6/2012								
370												
371	Box Culvert TB01 (Ch 450) (Completed)	40 工作日	10/3/2011	4/5/2011								
381												
382	Drainage & Footpath (Ch330-450) RHS	30 工作日	4/9/2012	15/10/2012								
383	Drainage & Footpath	30 工作日	4/9/2012	15/10/2012								
384												
385	Lighting at CH 350-380	23 工作日	16/10/2012	15/11/2012								
386	Construction of Drawpits / Ductings	14 工作日	16/10/2012	2/11/2012								
387	Public lighting Installation (CE2312)	7 工作日	5/11/2012	13/11/2012								
388	T&C	2 工作日	14/11/2012	15/11/2012								
389												
390	Ch 450-525	424 工作日	16/3/2011	29/10/2012								
391	Retaining Wall (ch 450-500) TR2 (RHS)	48 工作日	3/10/2011	7/12/2011								
434	Retaining Wall (ch 450-500) TR2 (LHS)	54 工作日	29/11/2011	10/2/2012								
483												
484	Drainage & Footpath (Ch 450-490 RHS)	20 工作日	15/6/2012	12/7/2012								
485	Construction of drainage & footpath and wall stem 2nd portion	20 工作日	15/6/2012	12/7/2012								
486	Retaining Wall (Ch 500-530) TR3 (RHS)	338 工作日	16/3/2011	29/6/2012								
487	Base Slab Construction Bay 1 (RHS)	28 工作日	16/3/2011	22/4/2011								
492	Wall Stem Construction Bay 1 (RHS)	10 工作日	25/4/2011	6/5/2011								
497	Base Slab Construction Bay 1 (RHS)	10 工作日	4/6/2012	15/6/2012								
498	Excavation and Formation	5 工作日	4/6/2012	8/6/2012								
499	Formwork and rebar fixing	3 工作日	11/6/2012	13/6/2012								
500	Concreting	1 工作日	14/6/2012	14/6/2012								
501	Stripping off formwork	1 工作日	15/6/2012	15/6/2012								
502	Wall Stem Construction Bay 2 (RHS)	10 工作日	18/6/2012	29/6/2012								
507												
508	Cascades (Ch 500 LHS)	28 工作日	3/10/2011	9/11/2011								
514												
515	Retaining Wall (Ch 500-530) TR3 (LHS)	54 工作日	9/11/2011	23/1/2012								
538												
539	Drainage & Footpath (Ch 490-525 RHS)	10 工作日	16/10/2012	29/10/2012								

專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務  
分割



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摘要



外部任務



期限



分割



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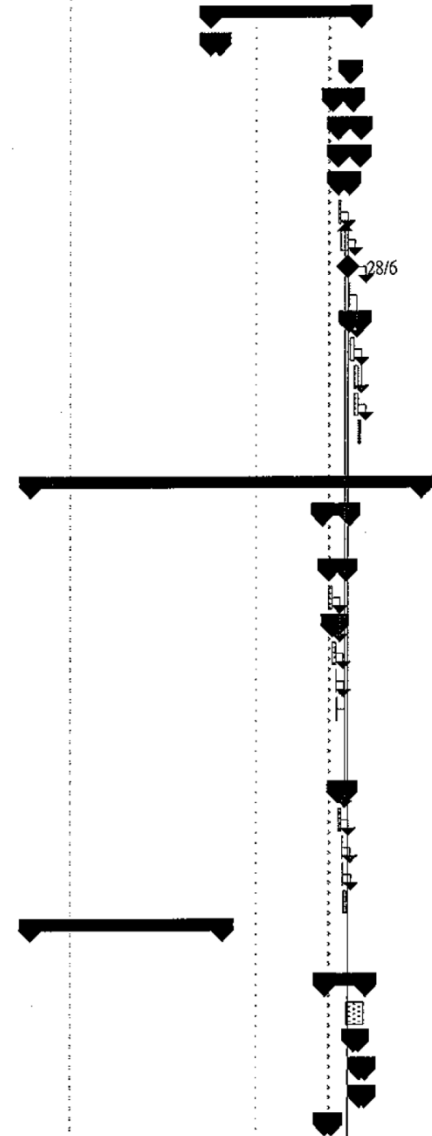
專案摘要報告



外部里程碑



識別碼	任務名稱	工期	開始時間	完成時間	2010年		2011年		2012年		2013年
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540	Construction of drainage & footpath	10 工作日	16/10/2012	29/10/2012							
541											
542	Footbridge TB07 (Ch 525)	213 工作日	3/10/2011	25/7/2012							
543	Temporary Pedestrian Division	14 工作日	3/10/2011	20/10/2011							
545	Demolition of existing Footbridge TB-D (Ch 525)	3 工作日	3/7/2012	5/7/2012							
547	Construction of Abutment A	28 工作日	31/5/2012	9/7/2012							
556	Construction of Abutment B	33 工作日	11/6/2012	25/7/2012							
565	Footbridge TB07 (Ch 525)	31 工作日	11/6/2012	23/7/2012							
566	Construction of decking	16 工作日	11/6/2012	2/7/2012							
567	Erection of steel deck+ conc deck	4 工作日	11/6/2012	14/6/2012							
568	Deck finishing	10 工作日	15/6/2012	28/6/2012							
569	NA	0 工作日	28/6/2012	28/6/2012							
570	Railing installation	2 工作日	29/6/2012	2/7/2012							
571	Footbridge TB07 Lighting	15 工作日	3/7/2012	23/7/2012							
572	Construction of Drawpits / Ducting	7 工作日	3/7/2012	11/7/2012							
573	Public lighting installation (CE2328)	6 工作日	12/7/2012	19/7/2012							
574	Public lighting installation (CE2329)	6 工作日	12/7/2012	19/7/2012							
575	T&C	2 工作日	20/7/2012	23/7/2012							
576											
577	Ch 525-615	547 工作日	15/10/2010	19/11/2012							
578	Retaining Wall (Ch 535-546) TR4 (LHS)	37 工作日	11/5/2012	2/7/2012							
598											
599	Retaining Wall (Ch 535-546) TR4 (RHS)	25 工作日	23/5/2012	26/6/2012							
600	Excavation and Formation	5 工作日	23/5/2012	29/5/2012							
601	Base Slab Construction Bay 1+2 (RHS)	8 工作日	30/5/2012	8/6/2012							
602	Formwork and rebar fixing (with DWF)	5 工作日	30/5/2012	5/6/2012							
603	Concreting	1 工作日	6/6/2012	6/6/2012							
604	Stripping off formwork	2 工作日	7/6/2012	8/6/2012							
605	Wall Stem Construction Bay 1 (RHS) del	0 工作日	8/6/2012	8/6/2012							
610	Base Slab Construction Bay 2 (RHS) del	0 工作日	8/6/2012	8/6/2012							
614	Wall Stem Construction Bay 1+2 (RHS)	12 工作日	11/6/2012	26/6/2012							
615	Formwork and rebar fixing	5 工作日	11/6/2012	15/6/2012							
616	Concreting	1 工作日	18/6/2012	18/6/2012							
617	Stripping off formwork	2 工作日	19/6/2012	20/6/2012							
618	Backfill	4 工作日	21/6/2012	26/6/2012							
619	Retaining Wall TR5 Ch (546-596 RHS) TR5 (AD)	269 工作日	15/10/2010	26/10/2011							
627											
628	Retaining Wall TR5A CH546-585 LHS	58 工作日	16/5/2012	3/8/2012							
629	River diversion, Excavation and Formation	24 工作日	27/6/2012	30/7/2012							
630	Base Slab Construction TR5A Bay 1 LHS	8 工作日	11/7/2012	20/7/2012							
634	Wall Stem Construction TR5A Bay 1 LHS	9 工作日	23/7/2012	2/8/2012							
639	Base Slab Construction TR5A Bay 2 LHS	8 工作日	23/7/2012	1/8/2012							
643	Wall Stem Construction TR5A Bay 2 LHS	9 工作日	16/5/2012	28/5/2012							












專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務 進度 摘要 外部任務 期限

分割 里程碑 專案摘要報告 外部里程碑

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					H2	H1	H2	H1	H2	H1	H1
644	Formwork and rebar fixing	4 工作日	16/5/2012	21/5/2012							
645	Concreting	1 工作日	22/5/2012	22/5/2012							
646	Stripping off formwork	1 工作日	23/5/2012	23/5/2012							
647	Backfill	3 工作日	24/5/2012	28/5/2012							
648	Base Slab Construction TR5A Bay 3 LHS	8 工作日	11/7/2012	20/7/2012							
652	Wall Stem Construction TR5A Bay 3 LHS	10 工作日	23/7/2012	3/8/2012							
657											
658	Box Culvert TB02 (ch 580)	39 工作日	24/1/2012	16/3/2012							
668											
669	Retaining Wall TR5A & TR6 CH585-595 LHS	50 工作日	7/2/2012	16/4/2012							
670	River/Haul Road Diverison (to TR3 and TR5 RHS)	3 工作日	7/2/2012	9/2/2012							
671	Excavation and Blinding	14 工作日	10/2/2012	29/2/2012							
672	Base Slab Construction TR6 Bay 1 LHS	10 工作日	1/3/2012	14/3/2012							
676	Wall Stem Construction TR6 Bay 1 LHS	10 工作日	15/3/2012	28/3/2012							
681	Base Slab Construction TR5A Bay 4 LHS	8 工作日	14/3/2012	23/3/2012							
685	Wall Stem Construction TR5A Bay 4 LHS	10 工作日	26/3/2012	6/4/2012							
690	Base Slab Construction TR5A Bay 5 LHS	8 工作日	22/3/2012	2/4/2012							
694	Wall Stem Construction TR5A Bay 5 LHS	10 工作日	3/4/2012	16/4/2012							
699											
700	Retaining Wall (ch 595-615) TR3 (Bay 3)	36 工作日	3/10/2011	21/11/2011							
715	Concrete Slab (Ch546 - Ch596) LHS	27 工作日	15/6/2012	23/7/2012							
716	Bay 1	11 工作日	15/6/2012	29/6/2012							
717	Excavation/Blinding	3 工作日	15/6/2012	19/6/2012							
718	Formwork and rebar fixing for DWF	4 工作日	20/6/2012	25/6/2012							
719	Concreting of DWF	1 工作日	26/6/2012	26/6/2012							
720	Formwork and rebar fixing for slab	4 工作日	22/6/2012	27/6/2012							
721	Concreting of slab	1 工作日	28/6/2012	28/6/2012							
722	Stripping off formwork	1 工作日	29/6/2012	29/6/2012							
723	Bay 2	12 工作日	20/6/2012	5/7/2012							
724	Excavation/Blinding	2 工作日	20/6/2012	21/6/2012							
725	Formwork and rebar fixing for DWF	4 工作日	26/6/2012	29/6/2012							
726	Concreting of DWF	1 工作日	27/6/2012	27/6/2012							
727	Formwork and rebar fixing for slab	4 工作日	28/6/2012	3/7/2012							
728	Concreting of slab	1 工作日	4/7/2012	4/7/2012							
729	Stripping off formwork	1 工作日	5/7/2012	5/7/2012							
730	Bay 3	14 工作日	22/6/2012	11/7/2012							
731	Excavation/Blinding	2 工作日	22/6/2012	25/6/2012							
732	Formwork and rebar fixing for DWF	4 工作日	29/6/2012	4/7/2012							
733	Concreting of DWF	1 工作日	5/7/2012	5/7/2012							
734	Formwork and rebar fixing for slab	4 工作日	4/7/2012	9/7/2012							
735	Concreting of slab	1 工作日	10/7/2012	10/7/2012							
736	Stripping off formwork	1 工作日	11/7/2012	11/7/2012							
737	Bay 4	16 工作日	26/6/2012	17/7/2012							

專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務  進度  摘要  外部任務  期限   
 分割  里程碑  專案摘要報告  外部里程碑 

識別碼	任務名稱	工期	開始時間	完成時間	2010年			2011年		2012年		2013年
					H2	H1	H2	H1	H2	H1	H2	H1
738	Excavation/Blinding	2 工作日	26/6/2012	27/6/2012								
739	Formwork and rebar fixing for DWF	4 工作日	5/7/2012	10/7/2012								
740	Concreting of DWF	1 工作日	11/7/2012	11/7/2012								
741	Formwork and rebar fixing for slab	4 工作日	10/7/2012	13/7/2012								
742	Concreting of slab	1 工作日	16/7/2012	16/7/2012								
743	Stripping off formwork	1 工作日	17/7/2012	17/7/2012								
744	Bay 5	18 工作日	28/6/2012	23/7/2012								
751												
752	Drainage and Footpath (Ch525-615 LHS & RHS)	15 工作日	16/10/2012	5/11/2012								
753	Construction of footpath & drainage works	15 工作日	16/10/2012	5/11/2012								
754	Lighting at CH 550-610	10 工作日	6/11/2012	19/11/2012								
755	Construction of Drawpits / Ducting	6 工作日	6/11/2012	13/11/2012								
756	Public lighting Installation (CE2325)	2 工作日	14/11/2012	15/11/2012								
757	Public lighting Installation (CE2326)	2 工作日	14/11/2012	15/11/2012								
758	Public lighting Installation (CE2327)	2 工作日	14/11/2012	15/11/2012								
759	T&C	1 工作日	16/11/2012	16/11/2012								
760	Removal of existing lighting (CE1600-B2)	1 工作日	19/11/2012	19/11/2012								

專案: Master Programme TPR 11 May  
日期: 22/5/2012

任務  
分割



進度



摘要



外部任務



期限



里程碑



里程碑



專案摘要報告





外部里程碑






## **Appendix J: Checklist for Rectification of the Non-compliance**

**Checklist for Rectification of the Non-compliance (NC)**

Action Items	Location	Record Photos	Non-compliance Defects	Rectification Method	Rectify Photos	Inspection Date	Inspection by
1.3 (a)	Upper Tai Po River, Area N		<p>Muddy water was observed being directly discharged into river from sump pit near Ch. 250.</p>	<p>A sedimentation tank has been provided to treat the muddy water prior to the discharge into the west branch of the river. The sedimentation tank will be cleaned and de-sludge regularly. During the inspection, no muddy water was generated from the sump pit.</p>		17 Mar 12	<i>Jus</i>
						24 Mar 12	<i>Jus</i>
						31 Mar 12	<i>Jus</i>
						07 Apr 12	<i>Jus</i>
						14 Apr 12	<i>Jus</i>
						21 Apr 12	<i>Jus</i>
						28 Apr 12	<i>Jus</i>
						05 May 12	<i>Jus</i>



1.3 (b)	Upper Tai Po River, Area N		<p>Muddy water overflowed from the wheel washing bay was observed</p>	<p>A sedimentation tank has been provided to treat the muddy water from ahead washing bay prior to the discharge into the river. The sedimentation tank will be cleaned and de-sludge regularly</p>	 	17 Mar 12	<i>Juf</i>
						24 Mar 12	<i>Juf</i>
						31 Mar 12	<i>Juf</i>
						07 Apr 12	<i>Juf</i>
						14 Apr 12	<i>Juf</i>
						21 Apr 12	<i>Juf</i>
						28 Apr 12	<i>Juf</i>
						05 May 12	<i>Juf</i>

1.3 (c)	Upper Tai Po River, Area N		The capacity of sedimentation tank near Ch.600 was insufficient.	Two proper sedimentation tanks which have sufficient capacity have been provided to treat the muddy water before discharge to the river.		17 Mar 12	<i>Jus</i>
		24 Mar 12				<i>Jus</i>	
		31 Mar 12				<i>Jus</i>	
		07 Apr 12				<i>Jus</i>	
		14 Apr 12				<i>Jus</i>	
		21 Apr 12				<i>Jus</i>	
		28 Apr 12				<i>Jus</i>	
		05 May 12				<i>Jus</i>	