

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 2011


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Executive summary

This is the thirty-third 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 1st May 2011 to 31st May 2011. Construction of retaining wall and provision of temporary protection measures for wet season 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 was arranged on 21st July 2011. 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 is 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 direct discharge of site run-off was recorded in this reporting month. Details of the events and recommendations given please refer to Section 6.2

A complaint incident regarding air quality concern was referred by DSD on 6th May 2011 and two complaint incidents regarding noise generation during restricted hours

have been referred by EPD and DSD on 3rd and 24th May 2011 respectively. ET has conducted investigations for the incidents and details of findings, recommendations and outcome please refer to Section 2.7 and Appendix J.

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

There was no reporting change for this month.

In accordance with the contractual requirements, no excavation works in river is allowed to be carried out during wet season. No major construction activity will 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 thirty-third 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 2011. 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 starting from Ta Tit Yan of Yai Mo Shan, the Upper Tai Po River flows from southeast to northeast alongside Wilson Trail, turning northward before joining the Lam Tsuen River and then runs towards Tai Po Market. To the east of the river, there are active and abandoned cultivated lands. While the 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

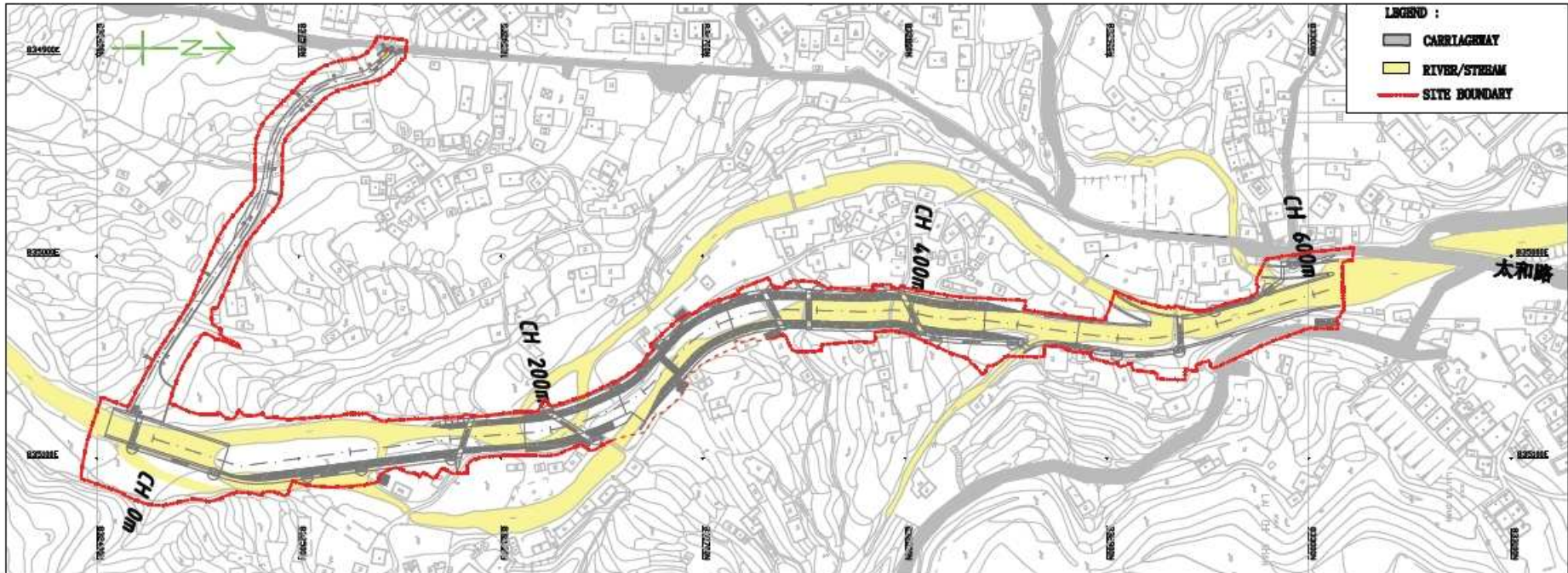
The construction of the proposed improvement works for Upper Tai Po River has been commenced on September 15th 2008 and anticipated to complete in April 2012.

2.3 Proposed construction sequences

The proposed construction sequence is shown in the following sequences:

- (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) Re-provisioning of footbridges
- (5) Construction of footpaths
- (6) Landscaping works

Fig 2.1 Layout of construction area



Upper Tai Po River

2.4 Construction activities for the reporting period

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

- 1.) construction of retaining wall
- 2.) Provision of temporary protection measures for wet season

2.5 Construction activities for the next reporting period

No major construction activity will be carried out.

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

There were three complaints recorded in this reporting month. A complaint incident regarding air quality concern has been referred by DSD on 6th May 2011. Two complaint incidents regarding excessive noise generation during restricted hours, i.e. Sunday, public holidays, and night time from 19:00 to 07:00, have been referred by EPD and DSD on 3rd and 25th May 2011 respectively.

ET has conducted investigations with representatives from Contractor and Resident Engineer on 6th and 24th May 2011 and recommendations were given to the contractor to minimize environmental impacts generated from project works. The complaint investigation reports with details of findings, recommendation and outcome were attached in Appendix J and were submitted to Environmental Protection Department (EPD) in accordance with the requirement stated in EM&A manual.

Totally, seventeen 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 was arranged on 21st July 2011.

4.0 Noise monitoring results

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

TABLE 4.1 Description of Noise Sensitive Receivers

Sensitive Receiver No.	Location and Description
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 on 6th, 13th, 20th and 28th May 2011. Measured $L_{eq(30min)}$ results ranged from 50.3dB(A) to 74.4dB(A). And therefore, no exceedance was recorded on within the reporting period.

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 4th, 11th, 18th, and 25th May 2011. A detailed checklist of each site inspection together with comments and relevant photos have been filed and kept. The findings from inspection were summarized in Table 6.1.

Ecological inspections by the Ecologist Dr. Mark Shea were carried out on 1st, 8th, 15th, 22nd and 31st May 2011. Details of findings were summarized in Table 6.2.

Table 6.1 Summary results of site inspections findings

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
09, 16, 23 & 30 Mar 11	Tree without identification at ch.300 was observed to be damaged by operation of backhoe	Observation	Contractor was advised to check the status of the tree and implement necessary protective measures for preserved trees before commencement of works	Still outstanding. To be followed during the next reporting period	Ongoing	--
16 & 30 Mar 11; 6, 13, 20 & 27 Apr 11	Site surface was observed to be dry and dusty	Observation	Contractor was advised to provide regular water spraying to dusty static area for dust suppression	Follow up action was taken as reported by Contractor	11 May 2011	--
6, 13, 20 & 27 Apr 11; 4, 11, 18, 25 May 11	The sandbags barrier at temporary crossing at ch.600 were observed to be damaged	Observation	Contractor was advised to replace the sandbags as soon as possible.	Still outstanding. To be followed during the next reporting period	Ongoing	
20 & 27 Apr 11	Empty fuel containers and unused construction equipment were found abandoned along the river bank or in the river channel at approximate ch.400 to ch.450	Observation	Contractor was advised to maintain good housekeeping condition and to remove observed equipment to storage area	The disused construction equipments had been removed by Contractor.	4 May 2011	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
27 Apr 11	Muddy water was observed along the entire river due to site water seepage and surface runoff caused by excavation works at ch.50.	Observation	Contractor was reminded to maintain the site-water treatment facilities to stop improper discharge and deteriorate water quality.	As excavated work at ch.50 had completed, no muddy water was observed in the respective area.	4 May 2011	--
4 May 11	A disused de-silting tank was observed at ch.0	Observation	Contractor was recommended to turn over the tank or to cover the opening of the tank to avoid storage of stagnant water	The de-silting tank was observed to be turned over	11 May 2011	
4 May 11	An empty fuel container were opened and abandoned at approximate ch.500	Observation	Contractor was recommended to cover the opening of the container and relocate the container for proper storage	The empty container was removed by Contractor	11 May 2011	
4 May 11	Muddy surface runoff was observed discharging directly into the river without any proper treatment at approximate ch.100	Non-compliance	Contractor was seriously recommended to rectify the mitigation measures for surface runoff and divert the muddy site water for treatment properly prior to discharging into the river	The surface run-off at approximate ch.100 of UTPR was not muddy during site inspections carried out on 11 th , 18 th and 25 th May 2011, the run-off was still observed to be discharged directly into the river without any treatment. To be followed during the next reporting period.	Ongoing	
11 May 11	Site water seepage from surface of haul access was observed at approximate ch.450	Observation	Contractor was advised to implement necessary corrective action by providing proper site drainage system	Follow up action was taken as reported by Contractor	18 May 11	
11 May 11	Oil spill was observed in the stagnant water at approximate ch.500	Observation	Contractor was advised to collect the contaminated earth surfaces and handled as chemical wastes for storage and disposal	Follow up action was taken as reported by Contractor	18 May 11	
11 May 11	A pack of wastewater treatment chemical was observed to be placed under the sedimentation tank at ch.400	Observation	Contractor was advised to place the chemical to a designated chemical storage area	Follow up action was taken as reported by Contractor	18 May 11	
18 May 11	Construction vehicles were observed in operation across the river channel at ch.500 and ch.600.	Observation	Contractor was reminded to implement sufficient mitigation measures to prevent possible contamination of river water.	No construction vehicles were observed to be operating or driven across the river at ch.500 and ch.600 of UTPR	25 May 11	
18 May 11	Muddy water was observed due to the generation of earthy materials from slope excavation works at ch.600.	Observation	Contractor was seriously advised to divert the site water for treatment before discharging and to provide effective measures to protect the river water from contamination by site water seepage and surface run-off.	Muddy water was not observed at ch.600 of UTPR as slope excavation works were finished.	25 May 11	
18 May 11	Cement water was observed at approximate ch.450.	Observation	Contractor was advised to implement mitigation measures that are necessary as soon as possible and was reminded that direct discharge of site water is an environmental offence.	As no concrete spraying was performed at approximate ch.450 of UTPR, no cement water was observed in the river	25 May 11	

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
25 May 11	River banks at approximate ch.200 of UTPR were exposed without mitigation measure for prevention of surface run-off.	Observation	Contractor was recommended to provide tarpaulin cover or other mitigation measures as appropriate to protect the river banks from erosion and contaminating the river by surface run-off.	To be followed during the next reporting period.	Ongoing	
25 May 11	Construction materials and general wastes were observed at approximate ch.300	Observation	Contractor was recommend to remove it and perform a good housekeeping practices	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
01 May 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
08 May 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
15 May 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
22 May 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
31 May 2011	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 was recorded in this reporting month with regards to the direct discharge of muddy surface run-off caused by soil erosion at approximate ch.100 of UTPR. The muddy water was directly discharged into the river without any sufficient and effective treatment system and contaminated river water at downstream was observed.

The above mal-practice was considered as non-compliance event according to the finding from the weekly inspection. No effective mitigation measures were implemented according to advices given by RE, IEC and ET.

Contractor was seriously reminded all surface run-off, muddy water and wastewater arisen from construction activities should be diverted to proper site water treatment system before discharge to fulfill statutory requirements. Quality of discharge should meet requirements stated in the applied discharged license. Contractor was also recommended to conduct assessment to the quantity and nature of silt water generated from site activities. Sedimentation tanks with sufficient capacity should be provided as to maintain appropriate flow rate of effluent discharge as well as the hydraulic detention time for sedimentation. Coagulation and flocculation process should be adopted to enhance efficiency of sedimentation should site water contain large amount of silt and fine grade suspended solids. Bared earth surface, such as riverbanks, earth bund, should be protected by geo-textile covering.

By the end of the reporting month there was still no proper follow up actions were observed. Contractor was urged to implement necessary mitigation measures and corrective actions as to avoid violation of environmental ordinance and/or regulations. Implementation status of follow up actions will be checked and reported from the weekly inspections in the next reporting month.

6.3 Recommendations

Contractor was recommended to implement necessary measures in mitigating water quality impact arisen from construction activities. Riverbanks and earth bunds should be covered with geo-textile coverings to prevent erosion.

Sufficient and effective site water treatment facilities should be provided on site. Any wastewater, surface run-off and muddy effluent within site area should be diverted for treatment before discharge.

6.4 Implementation status and effectiveness of the mitigation measures

Refer 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, especially issue of site water control and protection of bared earth surfaces.

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 of 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, C&D materials generated, were all reused and therefore no inert waste was disposed from the project.

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 2011

Type of waste	Amount generated	Amount reused	Amount disposed
Inert waste	835 m ³	835m ³	0
Non-inert waste	15 kg	0	15 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 st Aug, 2005	N/A	Superseded
Amended Environmental Permit	EP-223/2005/A	18 th Nov, 2008	N/A	Issued
Construction Noise Permit	N/A	N/A	N/A	N/A
Effluent Discharge License	3678	14 th Mar, 2008	31 st Mar, 2013	Issued
Registration as a Chemical Waste Producer	5213-724-C3251-03	19 th Dec, 2007	Not applicable	Issued
Billing Account for Disposal of Construction Waste	7006101	N/A	N/A	N/A

9.0 Future key issues

According to the contractual requirements, no excavation works in rivers is allowed in wet season. No major construction activity will be carried out in the upcoming month.

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.

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.

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.

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 retaining wall and provision of temporary protective measure for wet season were the major site activity carried out by the Contractor 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.

A non-compliance event regarding direct discharge of muddy surface run-off has been recorded in this reporting month. Contractor was urged to implement necessary mitigation measures and corrective actions as soon as possible.

Three environmental complaints regarding construction noise generation during restricted hours and dust concerns were recorded within this reporting month. ET has conducted site investigations and the reports were submitted to EPD for their information and consideration. Contractor was also reminded to pay serious attention to prevent causing environmental concerns in the future by implementing good site practices. ET has reminded the contractor to provide environmental pollution control measures wherever necessary; and to keep a good environmental management at site practice.

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
Non-conformity on one occasion	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
Repeated Non conformity	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)

	Type of Building	Peak component particle velocity (mm/s) in frequency range of predominant pulse
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 ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	71.6	73.0	55.9	06-May-11	8:50-9:20	Backfilling / Boulder movement	Traffic noise and Public noise	Sunny	Façade
UTP 2	61.6	64.5	55.2	06-May-11	15:05-15:35	Backfilling / Boulder movement	Traffic noise	Sunny	Façade
UTP 3	73.8	75.8	63.2	06-May-11	11:03-11:33	Backfilling / Boulder movement	Background noise	Sunny	Façade
UTP 4	74.4	77.8	64.7	06-May-11	9:23-9:53	Boulder movement / Unloading of concrete block	Background noise	Sunny	Façade
UTP 5	65.1	66.8	52.6	06-May-11	16:22-16:52	Operation of Backhoe	Public noise	Sunny	Façade
UTP 6	65.5	68.9	57.0	06-May-11	9:55-10:25	Backfilling	Public noise	Sunny	Façade
UTP 7	64.1	66.8	56.0	06-May-11	10:28-10:58	Backfilling	Rooftop construction in neighbourhood	Sunny	Façade
UTP 8	57.8	58.0	56.0	06-May-11	13:27-13:57	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	Façade
UTP 9	54.0	56.0	49.6	06-May-11	13:57-14:27	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	Façade
UTP 10	53.2	55.3	48.2	06-May-11	8:08-8:38	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	Façade
UTP 11	50.3	51.9	44.0	06-May-11	13:02-13:32	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	*Free field

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

Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	60.4	69.2	68.3	13-May-11	16:32-17:02	Sediment removal	Traffic noise & public noise	Overcast	Façade
UTP 2	55.3	57.3	49.1	13-May-11	15:50-16:20	Sediment removal	Traffic noise	Overcast	Façade
UTP 3	65.1	66.8	60.1	13-May-11	14:00-14:30	Boulder movement	Background noise	Overcast	Façade
UTP 4	66.8	69.4	56.2	13-May-11	12:57-13:27	Sediment removal	Background noise	Overcast	Façade
UTP 5	71.5	74.5	71.5	13-May-11	13:28-13:58	Sediment removal / Boulder movement	Background noise	Overcast	Façade
UTP 6	55.6	58.8	46.4	13-May-11	11:36-12:06	Operation of Backhoe	Public noise	Overcast	Façade
UTP 7	63.8	66.6	52.6	13-May-11	14:36-15:06	Boulder movement / Sediment removal	Repair of house exterior in neighbourhood	Overcast	Façade
UTP 8	61.0	61.8	60.0	13-May-11	15:07-15:37	Boulder movement	Background noise	Overcast	Façade
UTP 9	67.4	69.7	60.1	13-May-11	10:31-11:01	Operation of Backhoe	Raining noise & background noise	Overcast	Façade
UTP 10	53.4	55.1	50.6	13-May-11	8:57-9:27	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Overcast	Façade
UTP 11	53.2	51.3	50.7	13-May-11	9:29-9:59	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Overcast	*Free field

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

Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	68.2	70.8	57.1	20-May-11	09:00-09:30	Operation of Backhoe / Drilling	Public noise and Traffic noise	Sunny	Façade
UTP 2	68.8	70.3	55.6	20-May-11	15:23-15:53	Trees transplanting	Traffic noise	Sunny	Façade
UTP 3	68.2	71.3	57.8	20-May-11	09:40-10:10	Operation of Backhoe / Drilling	Traffic noise	Sunny	Façade
UTP 4	57.6	60.0	51.5	20-May-11	10:15-10:45	Operation of Backhoe	Background noise	Sunny	Façade
UTP 5	57.0	59.4	51.5	20-May-11	10:46-11:06	Operation of Backhoe	Background noise	Sunny	Façade
UTP 6	50.5	51.9	48.3	20-May-11	11:08-11:38	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	Façade
UTP 7	55.1	57.9	48.0	20-May-11	11:38-12:08	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Public noise	Sunny	Façade
UTP 8	54.7	56.0	51.5	20-May-11	14:15-14:45	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	Façade
UTP 9	54.2	55.2	48.0	20-May-11	10:17-10:47	Boulder breaking	Background noise	Sunny	Façade
UTP 10	58.2	29.1	41.7	20-May-11	13:03-13:33	Operation of Backhoe	Background noise	Sunny	Façade
UTP 11	51.8	54.7	45.9	20-May-11	13:35-14:05	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	*Free field

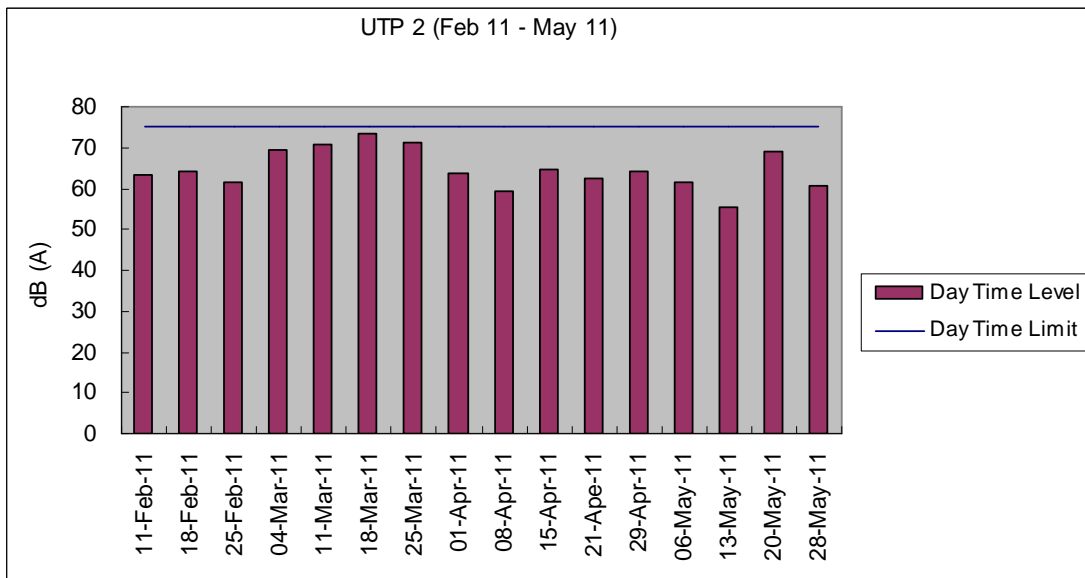
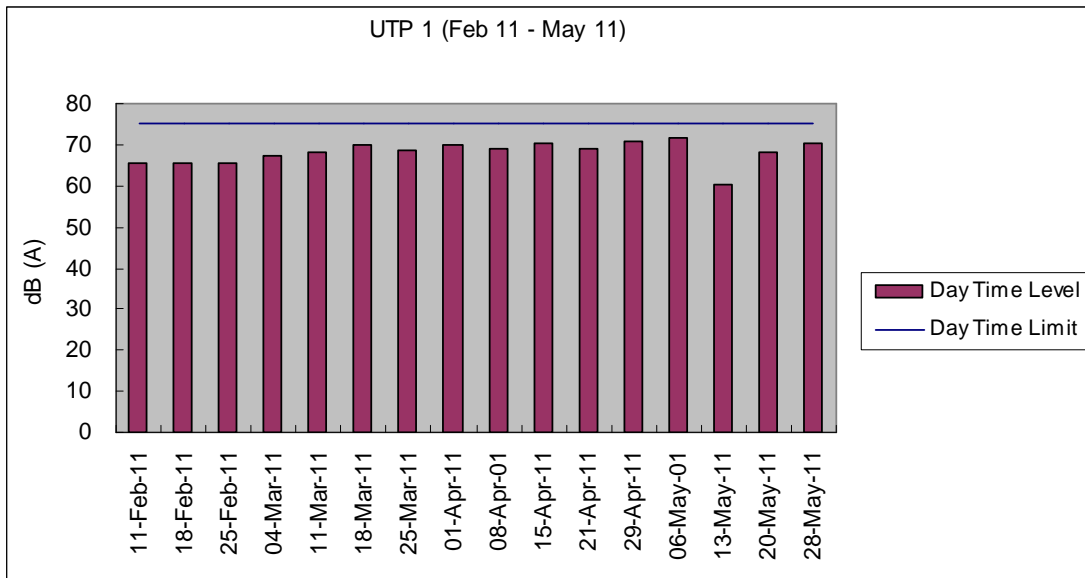
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

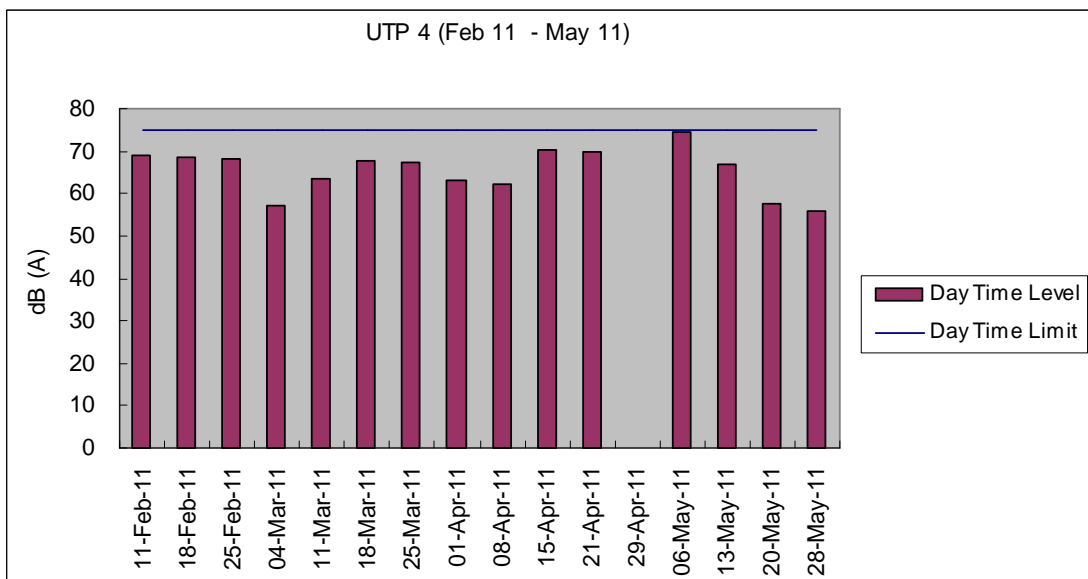
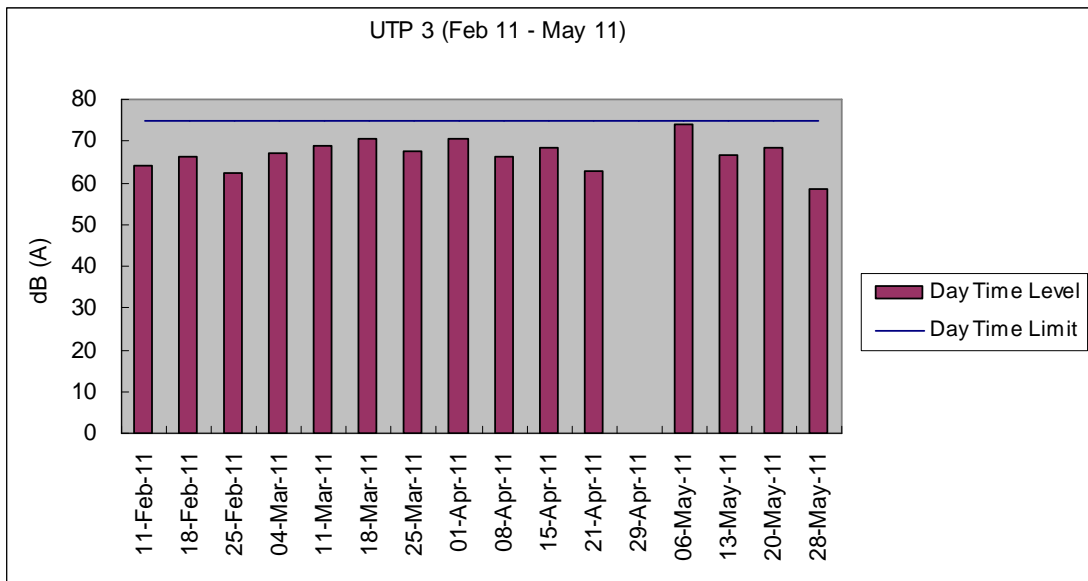
Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	70.2	73.8	57.5	28-May-11	9:44-10:14	Operation of Backhoe	Traffic noise & public noise	Sunny	Façade
UTP 2	60.8	64.5	18.6	28-May-11	16:30-17:00	Operation of Backhoe	Traffic noise & public noise	Sunny	Façade
UTP 3	58.5	59.2	53.0	28-May-11	09:46-10:16	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Public noise	Sunny	Façade
UTP 4	55.7	57.9	50.2	28-May-11	10:48-11:18	Concrete paving	Public noise	Sunny	Façade
UTP 5	56.4	58.2	50.0	28-May-11	13:51-14:21	Concrete paving	Public noise	Sunny	Façade
UTP 6	53.5	54.6	49.2	28-May-11	11:19-11:49	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Public noise	Sunny	Façade
UTP 7	57.1	59.3	53.4	28-May-11	14:22-14:52	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Public noise	Sunny	Façade
UTP 8	54.6	57.4	51.5	28-May-11	11:50-12:20	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Public noise	Sunny	Façade
UTP 9	52.9	54.7	50.7	28-May-11	9:06-9:36	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Public noise	Sunny	Façade
UTP 10	51.2	52.9	47.8	28-May-11	15:07-15:37	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	Façade
UTP 11	53.3	55.1	51.0	28-May-11	15:40-16:10	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise	Sunny	*Free field

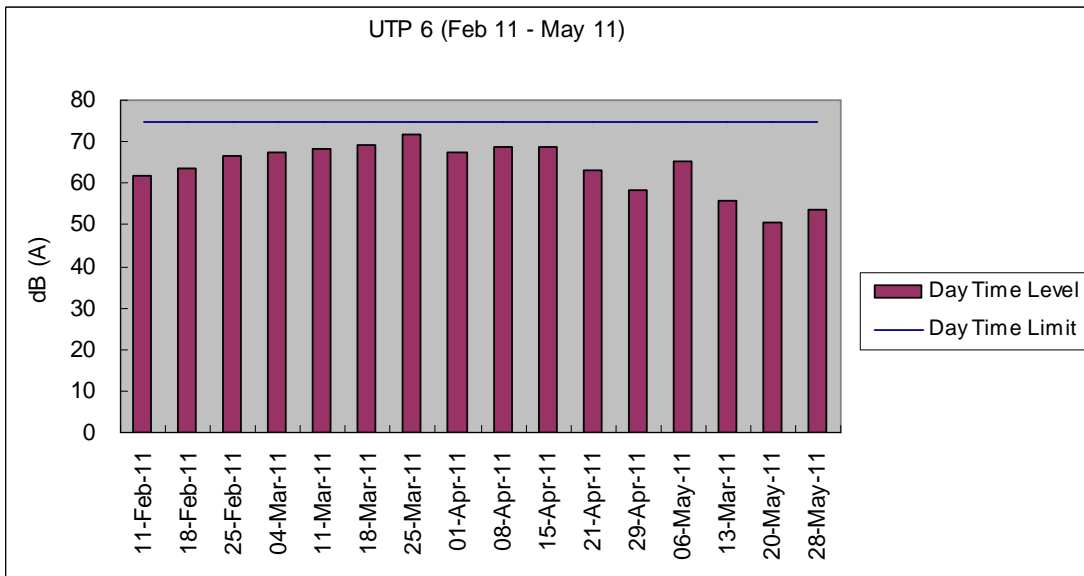
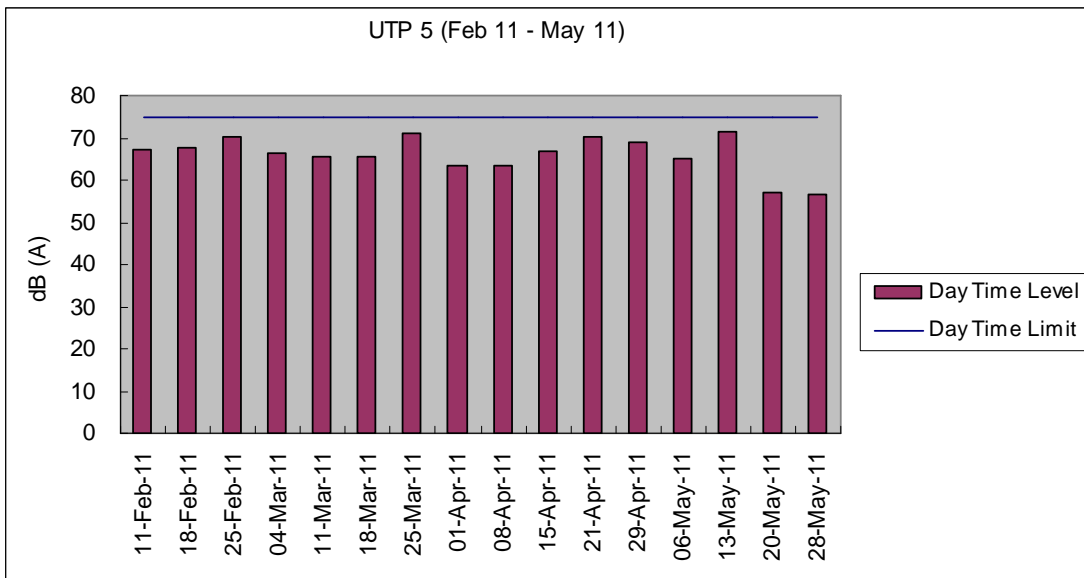
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

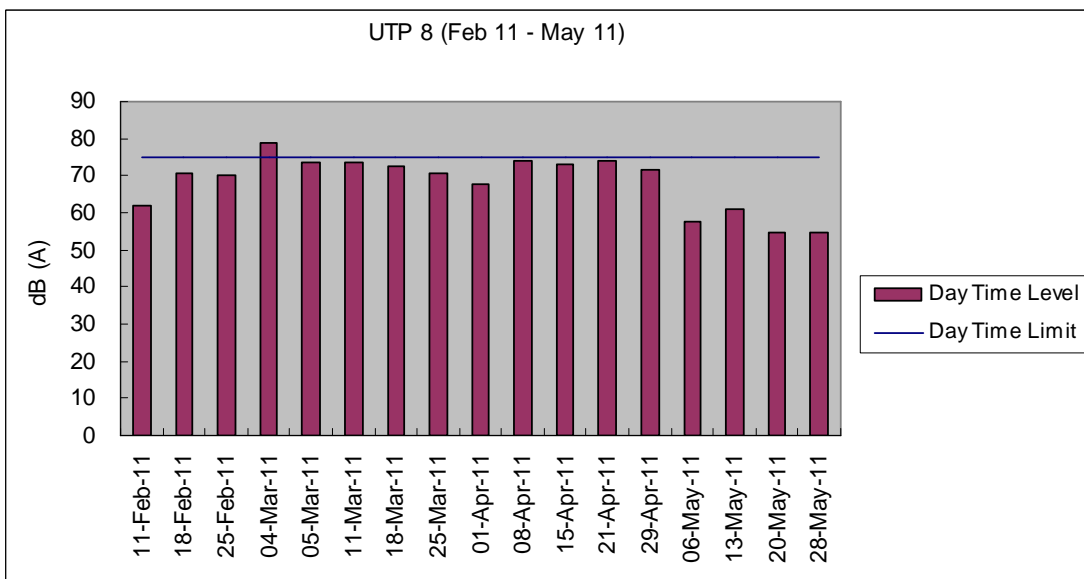
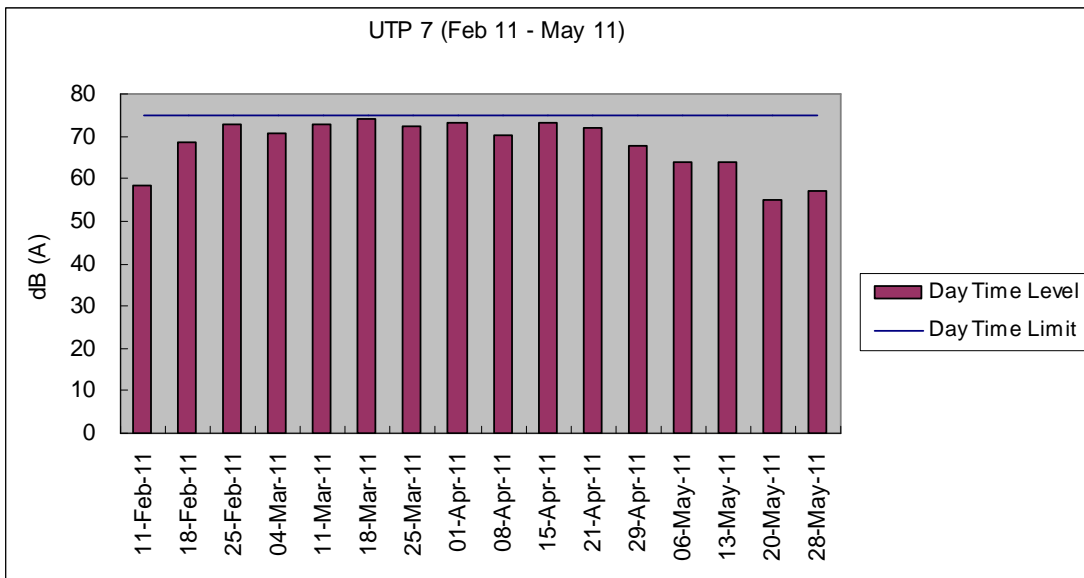
Graphical plot for noise measurements

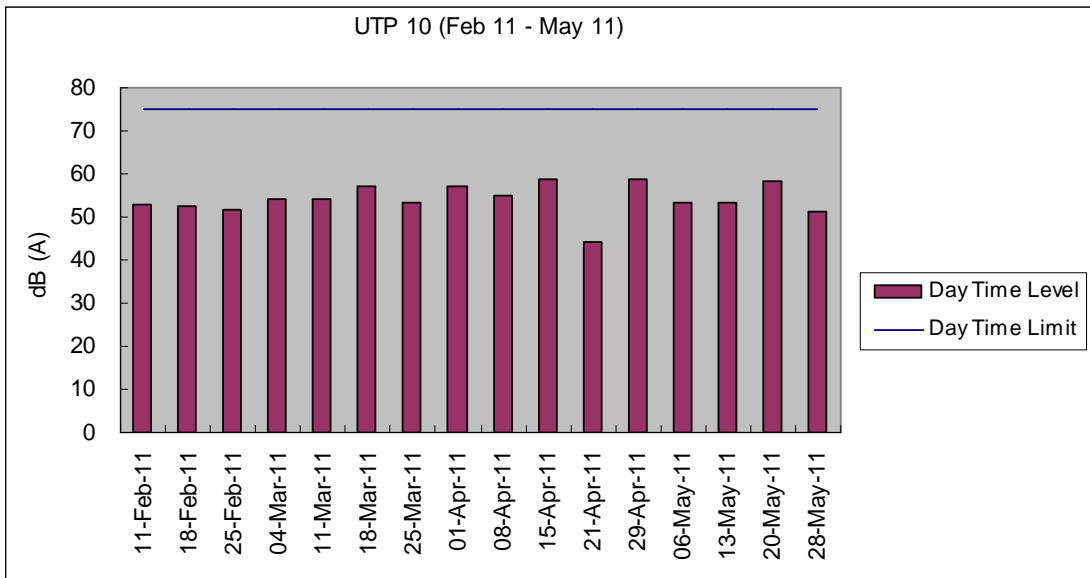
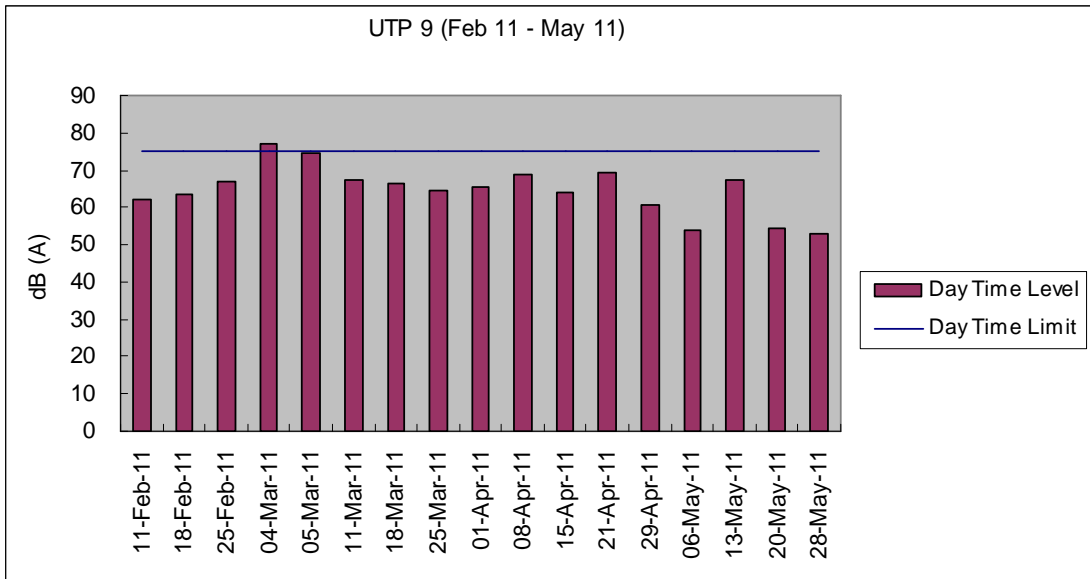
The followings were the graphical plots for the 11 monitoring locations. Each plot showed the date of measurement taken, day time limit of 75 dB(A) as well as the measured daytime level for each location. The graphs contain the data recorded from February 2011 to May 2011.

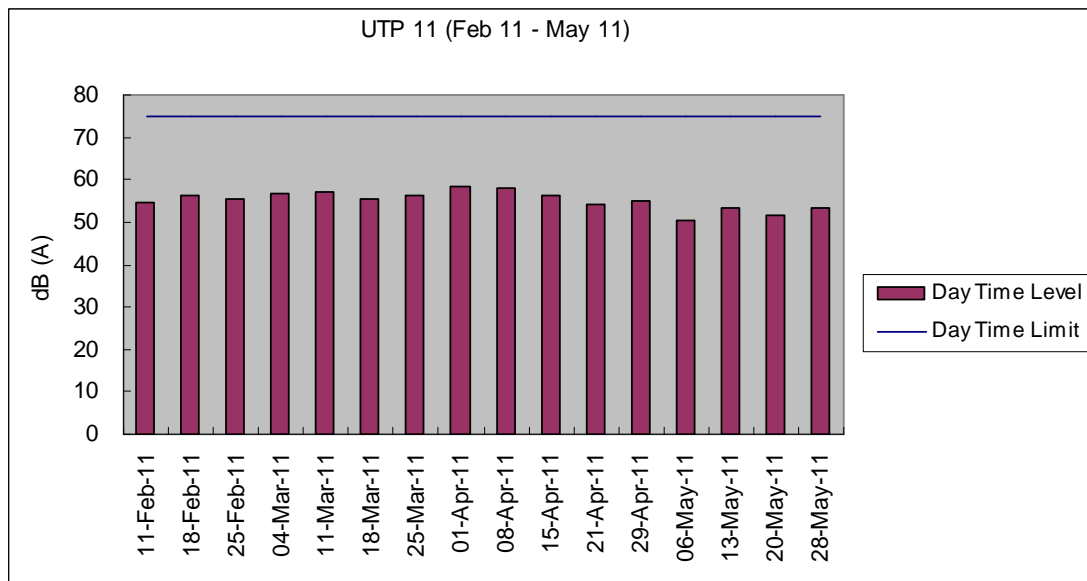


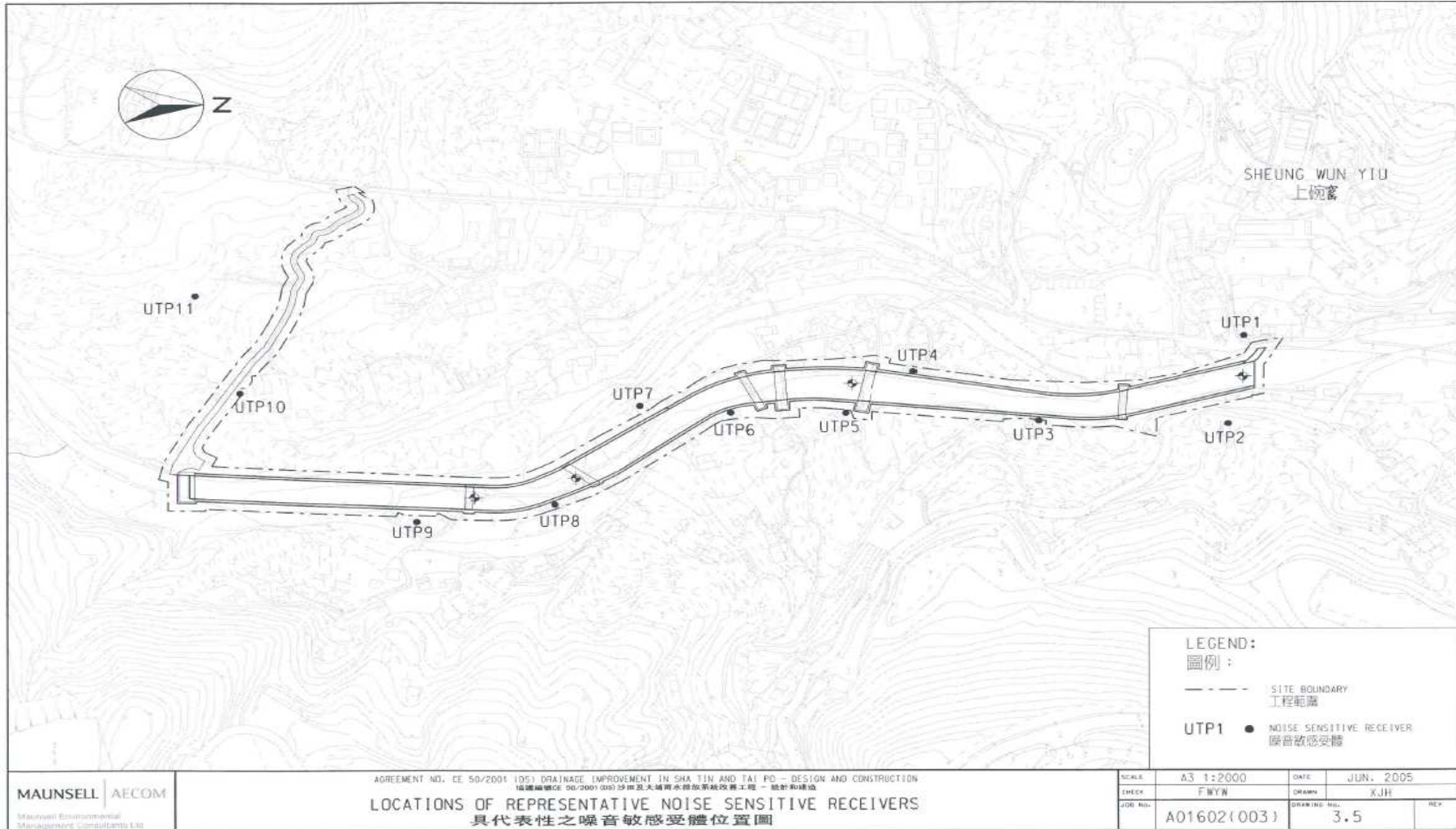












Appendix E: Monitoring schedule for the present and next reporting period

Master Schedule of EM&A works in May 2011

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

Master Schedule of EM&A works in June 2011

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

Appendix F: Cumulative complaint log

Environmental Parameters	Cumulative no. Brought forward	No. of complaint May 2011	Overall Total
Air/Dust	2	1	3
Noise	3	2	5
Water	9	0	9
House Keeping Hygiene	0	0	0
Chemical waste	0	0	0
Total	14	3	17

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	Implemented	Not required
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	Implemented	Not required
	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	Non-compliance identified	Ongoing

	Provide silt trap and oil interceptor to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before pumped to the public storm water drainage system	Non-compliance identified	Ongoing
	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	Implemented	Not required
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 th 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 15th 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	36.9m ³	0	36.9m ³	2.000 tonnes	0	2.000 tonnes	20kg	20kg
Year 2010	1955m ³	1955m ³	0	0.192 tonnes	0	0.192 tonnes	0	0
January 2011	117m ³	117m ³	0	0.040 tonnes	0030	0.040 tonnes	0	0
February 2011	581m ³	581m ³	0	0.045 tonnes	0	0.045 tonnes	0	0
March 2011	927m ³	927m ³	0	0.047 tonnes	0	0.047 tonnes	0	0
April 2011	467m ³	467m ³	0	0.050 tonnes	0	0.050 tonnes	0	0
May 2011	835 m ³	835 m ³	0	0.015 tonnes	0	0.015 tonnes	0	0
Total	4918.9m³	44882m³	36.9m³	2.389 tonnes	0	2.389 tonnes	20kg	20kg

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. 15)

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

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010				2011				2012				2013	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1072	Install Stone Facing	14 days	2/6/2011	18/6/2011														
1073	Reinstatement of River bed Variation Order No. 178	3 days	20/6/2011	22/6/2011														
1074		37 days	23/6/2011	5/8/2011														
1075	Temp. Haul Road Diversion	7 days	23/6/2011	30/6/2011														
1076	Excavation	14 days	27/7/2011	18/7/2011														
1077	Formwork	7 days	19/7/2011	26/7/2011														
1078	Re-BAR	7 days	27/7/2011	3/8/2011														
1079	Concrete	2 days	4/8/2011	5/8/2011														
1080	Programme of Upper Tai Po River	1747 days?	28/9/2007	31/10/2012														
1081	Wei Season of 2010	184 days	1/4/2010	1/10/2010														
1082	Wei Season of 2011	183 days	1/4/2011	1/11/2011														
1083	Wei Season of 2012	184 days	19/3/2012	31/10/2012														
1084	Works Suspended Due to Villager's Ball	42 days?	7/11/2010	18/12/2010														
1085		1615 days?	28/9/2007	24/5/2012														
1086	Gabion Wall (Ch 230-275 RHS) TG1/TG1A	40 days	28/1/2011	9/3/2011														
1087	Excavation and Formation	20 days	28/1/2011	16/2/2011														
1088	Gabion Wall Construction (Ch 235-275 LHS)	14 days	17/2/2011	2/3/2011														
1089	Backfilling	6 days	3/3/2011	25/11/2011														
1090	Retaining Wall (Ch 275-330 RHS) TR1 (replaced by AD1)	220 days?	3/3/2011	25/11/2011														
1091	Excavation and Formation	12 days	3/3/2011	16/3/2011														
1092	Laying Concrete block and gabion units (Ch275-330 RHS)	12 days	17/3/2011	30/3/2011														
1093	Backfilling	6 days	31/3/2011	7/4/2011														
1094	Excavation and Formation	7 days	12/11/2011	19/11/2011														
1095	Laying Concrete block and gabion units (Ch320-330 RHS)	4 days?	2/11/2011	24/11/2011														
1096	Backfilling	21 days	3/10/2011	27/10/2011														
1097	Drainage & Footpath (Ch 275-320 RHS)	16 days	10/2/2012	28/2/2012														
1098	Excavation and Formation	7 days	18/2/2012	25/2/2012														
1099	Gabion Wall (Ch 315-330 LHS) TG2A	7 days	18/2/2012	25/2/2012														
1100	Backfilling	2 days	27/2/2012	28/2/2012														
1101	Maintenance Staircase (Ch 315 LHS)	4 days	6/2/2012	9/2/2012														
1102	Formwork and concreting	4 days	6/2/2012	9/2/2012														
1103	Drainage & Footpath (Ch 307-330 LHS)	14 days	27/2/2012	13/3/2012														
1104	Construction of drainage & footpath	14 days	27/2/2012	13/3/2012														
1105	Temp Utility and Pedestrian Diversion at Ch230	171 days	20/8/2011	24/3/2012														
1106	Temp UU diversion near Ch230	39 days	29/8/2011	15/10/2011														
1107	Temp Pedestrian diversion	119 days	1/11/2011	26/3/2012														
1108	Demolition of Interim Footbridge at Ch230	7 days	12/11/2011	19/11/2011														
1109	Demolition of Interim Footbridge	7 days	12/11/2011	19/11/2011														
1110	Gabion Wall (Ch 230-257 LHS) TG2/TG2A/TG2B	1615 days?	28/9/2007	24/5/2012														
1111	Excavation and Formation	14 days	2/11/2011	6/12/2011														
1112	Gabion Wall Construction (Ch 230-257 LHS)	7 days	7/12/2011	14/12/2011														
1113	Backfilling	3 days	15/12/2011	17/12/2011														
1114	Maintenance Staircase (Ch 242 LHS)	4 days	19/12/2011	22/12/2011														
1115	Formwork and concreting	4 days	19/12/2011	22/12/2011														
1116	Gabion Wall (Ch 257-270 LHS) TG4	11 days	23/12/2011	7/1/2012														
1117	Excavation and Formation	5 days	23/12/2011	30/12/2011														
1118	Gabion Wall Construction (Ch 257-270 LHS)	3 days	31/12/2011	4/1/2012														
1119	Backfilling	3 days	31/12/2011	7/1/2012														
1120	Retaining Wall (Ch 275-315 LHS) TR1 (replaced by AD1)	46 days	9/1/2012	5/3/2012														
1121	Excavation and Formation	21 days	9/1/2012	4/2/2012														
1122	Laying Concrete block and gabion units	18 days	6/2/2012	25/2/2012														
1123	Backfilling	7 days	27/2/2012	5/3/2012														
1124	Drainage & Footpath (Ch 200-307 LHS)	60 days	19/12/2011	3/3/2012														

Revised Master Prog Rev. 15
 日期: 22/9/2011

任務: 進度

里程碑: 摘要

上圖例任務: 上圖例里程碑

分期: 外部任務

專案摘要

摘要母組: 期限

第 19 頁

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

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010				2011				2012				2013	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1190	Construction of Abutment B (RHS)	19 days	21/11/2011	12/12/2011														
1191	Excavation and Blinding	5 days	21/11/2011	25/11/2011														
1192	Formwork and rebar fixing for base slab	2 days	26/11/2011	28/11/2011														
1193	Concreting of base slab	1 day	29/11/2011	29/11/2011														
1194	Stripping off formwork	3 days	30/11/2011	2/12/2011														
1195	Rebar fixing and shuttering formwork for column	4 days	31/12/2011	7/1/2012														
1196	Concreting of column	1 day	8/1/2012	8/1/2012														
1197	Stripping off formwork	3 days	9/1/2012	12/1/2012														
1198	Construction of decking	25 days	28/3/2012	2/5/2012														
1199	Formwork and rebar fixing for decking	8 days	28/3/2012	10/4/2012														
1200	Concreting	1 day	11/4/2012	11/4/2012														
1201	Stripping off formwork	14 days	12/4/2012	27/4/2012														
1202	Rebar installation	2 days	30/4/2012	2/5/2012														
1203	Demolition of Bridge TB-B	1 day	23/4/2012	23/4/2012														
1204	Demolition works	1 day	23/4/2012	23/4/2012														
1205	Lighting at Footbridge TB05	10 days	11/4/2012	21/4/2012														
1206	Construction of Downpits / Drains	6 days	11/4/2012	17/4/2012														
1207	Public lighting installation (CE21.9)	3 days	18/4/2012	20/4/2012														
1208	Public lighting installation (CE23.14)	3 days	18/4/2012	20/4/2012														
1209	T&C	1 day	21/4/2012	21/4/2012														
1210	Construction of Gabion Wall at TB-B	5 days	24/4/2012	30/4/2012														
1211	Excavation and Formation	2 days	24/4/2012	25/4/2012														
1212	Gabion Wall Construction (Ch 230-257 LHS)	2 days	26/4/2012	27/4/2012														
1213	Backfilling	1 day	30/4/2012	30/4/2012														
1214																		
1215																		
1216	Gabion Wall (Ch 335-345 LHS) T02/T02A	16 days	20/3/2012	11/4/2012														
1217	Excavation and Formation	6 days	20/3/2012	26/3/2012														
1218	Gabion Wall Construction (Ch 335-345 LHS)	6 days	27/3/2012	2/4/2012														
1219	Backfilling	4 days	3/4/2012	11/4/2012														
1220	Drainage & Footpath (Ch 335-345 LHS)	12 days	12/4/2012	25/4/2012														
1221	Construction of drainage & footpath	12 days	12/4/2012	25/4/2012														
1222	Gabion Wall (Ch 330-345 RHS) T02	14 days	13/12/2011	30/12/2011														
1223	Excavation and Formation	4 days	13/12/2011	16/12/2011														
1224	Gabion Wall Construction (Ch 330-345 RHS)	6 days	17/12/2011	23/12/2011														
1225	Backfilling	4 days	24/12/2011	30/12/2011														
1226	Drainage & Footpath (Ch 330-340 RHS)	12 days	31/12/2011	1/1/2012														
1227	Construction of drainage & footpath	12 days	31/12/2011	1/1/2012														
1228																		
1229	River Bed formation (Ch 330-330)	8 days	30/4/2012	9/5/2012														
1230	Placing Grade 500 Ice Stone	8 days	30/4/2012	9/5/2012														
1231																		
1232	Step 4 (Ch 330)	8 days	20/3/2012	28/3/2012														
1233	Excavation and Blinding	4 days	20/3/2012	23/3/2012														
1234	Formwork and rebar fixing for base slab	2 days	24/3/2012	26/3/2012														
1235	Concreting of base slab	1 day	27/3/2012	27/3/2012														
1236	Stripping off formwork	1 day	28/3/2012	28/3/2012														
1237																		
1238	Ch 43-230	1615 days*	26/9/2007	2/4/2012														
1239	Footbridge TB02 (Ch 150)	452 days	21/10/2010	5/3/2012														
1240	Construction of Abutment A (LHS)	23 days	21/10/2010	24/10/2010														
1241	Excavation and Blinding	6 days	21/10/2010	27/10/2010														
1242	Formwork and rebar fixing for base slab	5 days	8/10/2010	12/10/2010														
1243	Concreting of base slab	1 day	13/10/2010	13/10/2010														
1244	Stripping off formwork	3 days	14/10/2010	16/10/2010														
1245	Rebar fixing and shuttering formwork for column	5 days	17/10/2010	21/10/2010														
1246	Concreting of column	1 day	22/10/2010	22/10/2010														
1247	Stripping off formwork	2 days	23/10/2010	24/10/2010														
1248	Construction of decking	33 days	23/3/2011	4/5/2011														

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專家摘要:

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

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010				2011				2012				2013	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1544	Concreting	1 day	20/2/2012	20/2/2012														
1545	Stripping off formwork	1 day	23/2/2012	23/2/2012														
1546	Base Slab Construction Bay 2 (LHS)	8 days	18/2/2012	27/2/2012														
1547	Formwork and rebar fixing	6 days	18/2/2012	24/2/2012														
1548	Concreting	1 day	25/2/2012	25/2/2012														
1549	Stripping off formwork	1 day	27/2/2012	27/2/2012														
1550	Wall Stem Construction Bay 2 (LHS)	6 days	28/2/2012	5/3/2012														
1551	Formwork and rebar fixing	4 days	28/2/2012	2/3/2012														
1552	Concreting	1 day	3/3/2012	3/3/2012														
1553	Stripping off formwork	1 day	5/3/2012	5/3/2012														
1554	Base Slab Construction Bay 3 (LHS)	8 days	24/2/2012	3/3/2012														
1555	Formwork and rebar fixing	6 days	24/2/2012	1/3/2012														
1556	Concreting	1 day	2/3/2012	2/3/2012														
1557	Stripping off formwork	1 day	3/3/2012	3/3/2012														
1558	Wall Stem Construction Bay 3 (LHS)	6 days	5/3/2012	10/3/2012														
1559	Formwork and rebar fixing	4 days	5/3/2012	8/3/2012														
1560	Concreting	1 day	9/3/2012	9/3/2012														
1561	Stripping off formwork	1 day	10/3/2012	10/3/2012														
1562	Base Slab Construction Bay 4 (incl. Step 6)(LHS)	10 days	18/2/2012	29/2/2012														
1563	Formwork and rebar fixing	8 days	18/2/2012	27/2/2012														
1564	Concreting	1 day	28/2/2012	28/2/2012														
1565	Stripping off formwork	1 day	29/2/2012	29/2/2012														
1566	Wall Stem Construction Bay 4 (RHS)	6 days	1/3/2012	7/3/2012														
1567	Formwork and rebar fixing	4 days	1/3/2012	5/3/2012														
1568	Concreting	1 day	6/3/2012	6/3/2012														
1569	Stripping off formwork	1 day	7/3/2012	7/3/2012														
1570	Base Slab Construction Bay 5 (incl. Step 6) (RHS)	13 days	8/3/2012	22/3/2012														
1571	Formwork and rebar fixing	8 days	8/3/2012	16/3/2012														
1572	Concreting	1 day	17/3/2012	17/3/2012														
1573	Stripping off formwork	4 days	19/3/2012	22/3/2012														
1574	Drainage & Footpath (Ch 450-490 RHS)	1596 days	28/9/2007	2/5/2012														
1576	Construction of drainage & footpath	1 day	2/5/2012	2/5/2012														
1577	Retaining Wall (Ch 500-530) TR3 (RHS)	1 day	28/9/2007	28/9/2007														
1578	Excavation and Formation	34 days	16/3/2011	28/4/2011														
1579	Base Slab Construction Bay 1 (incl. Step 7) (RHS)	12 days	16/3/2011	29/3/2011														
1580	Formwork and rebar fixing	8 days	30/3/2011	8/4/2011														
1581	Concreting	6 days	30/3/2011	6/4/2011														
1582	Stripping off formwork	1 day	7/4/2011	7/4/2011														
1583	Wall Stem Construction Bay 1 (RHS)	6 days	9/4/2011	15/4/2011														
1584	Formwork and rebar fixing	4 days	9/4/2011	13/4/2011														
1585	Concreting	1 day	14/4/2011	14/4/2011														
1586	Stripping off formwork	1 day	15/4/2011	15/4/2011														
1587	Base Slab Construction Bay 2 (incl. Step 7)(RHS)	8 days	9/4/2011	18/4/2011														
1589	Formwork and rebar fixing	6 days	9/4/2011	15/4/2011														
1590	Concreting	1 day	16/4/2011	16/4/2011														
1591	Stripping off formwork	1 day	18/4/2011	18/4/2011														
1592	Wall Stem Construction Bay 2 (RHS)	6 days	19/4/2011	28/4/2011														
1593	Formwork and rebar fixing	4 days	19/4/2011	26/4/2011														
1594	Concreting	1 day	27/4/2011	27/4/2011														
1595	Stripping off formwork	1 day	28/4/2011	28/4/2011														
1596	Cascades (Ch 500 LHS)	12 days	21/1/2012	7/2/2012														
1598	Excavation	4 days	21/1/2012	28/1/2012														
1599	Formwork and rebar fixing	6 days	30/1/2012	4/2/2012														
1600	Concreting	1 day	6/2/2012	6/2/2012														
1601	Stripping off formwork	1 day	7/2/2012	7/2/2012														
1602																		

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

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	2010				2011				2012				2013	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1603																		
1604	Retaining Wall (Ch 500-530) TR3 (LHS)	34 days	7/22/2012	16/3/2012														
1605	Excavation and Formation	6 days	7/22/2012	13/2/2012														
1606	Base Slab Construction Bay 1 (incl. Step 7)(LHS)	8 days	14/2/2012	22/2/2012														
1607	Formwork and rebar fixing	6 days	14/2/2012	20/2/2012														
1608	Concreting	1 day	21/2/2012	21/2/2012														
1609	Stripping off formwork	1 day	22/2/2012	22/2/2012														
1610	Wall Stem Construction Bay 1 (LHS)	6 days	23/2/2012	29/2/2012														
1611	Formwork and rebar fixing	4 days	23/2/2012	27/2/2012														
1612	Concreting	1 day	28/2/2012	28/2/2012														
1613	Stripping off formwork	1 day	29/2/2012	29/2/2012														
1614	Base Slab Construction Bay 2 (incl. Step 7)(LHS)	8 days	1/3/2012	9/3/2012														
1615	Formwork and rebar fixing	6 days	1/3/2012	7/3/2012														
1616	Concreting	1 day	8/3/2012	8/3/2012														
1617	Stripping off formwork	1 day	9/3/2012	9/3/2012														
1618	Wall Stem Construction Bay 2 (LHS)	6 days	10/3/2012	16/3/2012														
1619	Formwork and rebar fixing	4 days	10/3/2012	14/3/2012														
1620	Concreting	1 day	15/3/2012	15/3/2012														
1621	Stripping off formwork	1 day	16/3/2012	16/3/2012														
1622																		
1623	Drainage & Footpath (Ch 490-525 RHS)	14 days	29/4/2011	16/5/2011														
1624	Construction of drainage & footpath	14 days	29/4/2011	16/5/2011														
1625																		
1626	Footbridge TB07 (Ch 525)	102 days	12/11/2011	16/3/2012														
1627	Temporary Pedestrian Division	3 days	12/11/2011	15/11/2011														
1628	Temporary Pedestrian Division (at grade)	3 days	12/11/2011	15/11/2011														
1629	Demolition of existing Footbridge TB-D (Ch 525)	3 days	16/11/2011	18/11/2011														
1630	Demolition works	3 days	16/11/2011	18/11/2011														
1631	Construction of Abutment A	28 days	14/2/2012	16/3/2012														
1632	Excavation and Blinding	12 days	14/2/2012	27/2/2012														
1633	Formwork and rebar fixing for base slab	4 days	28/2/2012	2/3/2012														
1634	Concreting of base slab	1 day	3/3/2012	3/3/2012														
1635	Stripping off formwork	3 days	5/3/2012	7/3/2012														
1636	Rebar fixing and shoring formwork for column	4 days	8/3/2012	12/3/2012														
1637	Concreting	1 day	13/3/2012	13/3/2012														
1638	Stripping off formwork	3 days	14/3/2012	16/3/2012														
1639	Construction of Abutment B	28 days	19/11/2011	21/12/2011														
1640	Excavation and Blinding	12 days	19/11/2011	21/2/2011														
1641	Formwork and rebar fixing for base slab	4 days	3/12/2011	7/12/2011														
1642	Concreting of base slab	1 day	8/12/2011	8/12/2011														
1643	Stripping off formwork	3 days	9/12/2011	12/12/2011														
1644	Rebar fixing and shoring formwork for column	4 days	13/12/2011	16/12/2011														
1645	Concreting	1 day	17/12/2011	17/12/2011														
1646	Stripping off formwork	3 days	19/12/2011	21/12/2011														
1647																		
1648	Footbridge TB07 (Ch 525)	44 days	14/3/2012	10/5/2012														
1649	Construction of decking	29 days	14/3/2012	20/4/2012														
1650	Formwork and rebar fixing for decking	12 days	14/3/2012	27/3/2012														
1651	Concreting	1 day	28/3/2012	28/3/2012														
1652	Stripping off formwork	14 days	29/3/2012	18/4/2012														
1653	Railing installation	2 days	19/4/2012	20/4/2012														
1654	Footbridge TB07 Lighting	15 days	21/4/2012	10/5/2012														
1655	Construction of Drawplus / Ducting	7 days	21/4/2012	30/4/2012														
1656	Public lighting installation (CE2328)	6 days	2/5/2012	8/5/2012														
1657	Public lighting installation (CE2329)	6 days	2/5/2012	8/5/2012														
1658	TLC	2 days	9/5/2012	10/5/2012														
1659																		
1660	Ch 525-615	471 days	15/10/2010	16/4/2012														
1661	Retaining Wall (Ch 535-540) TR4 (RHS)	26 days	30/3/2011	3/5/2011														

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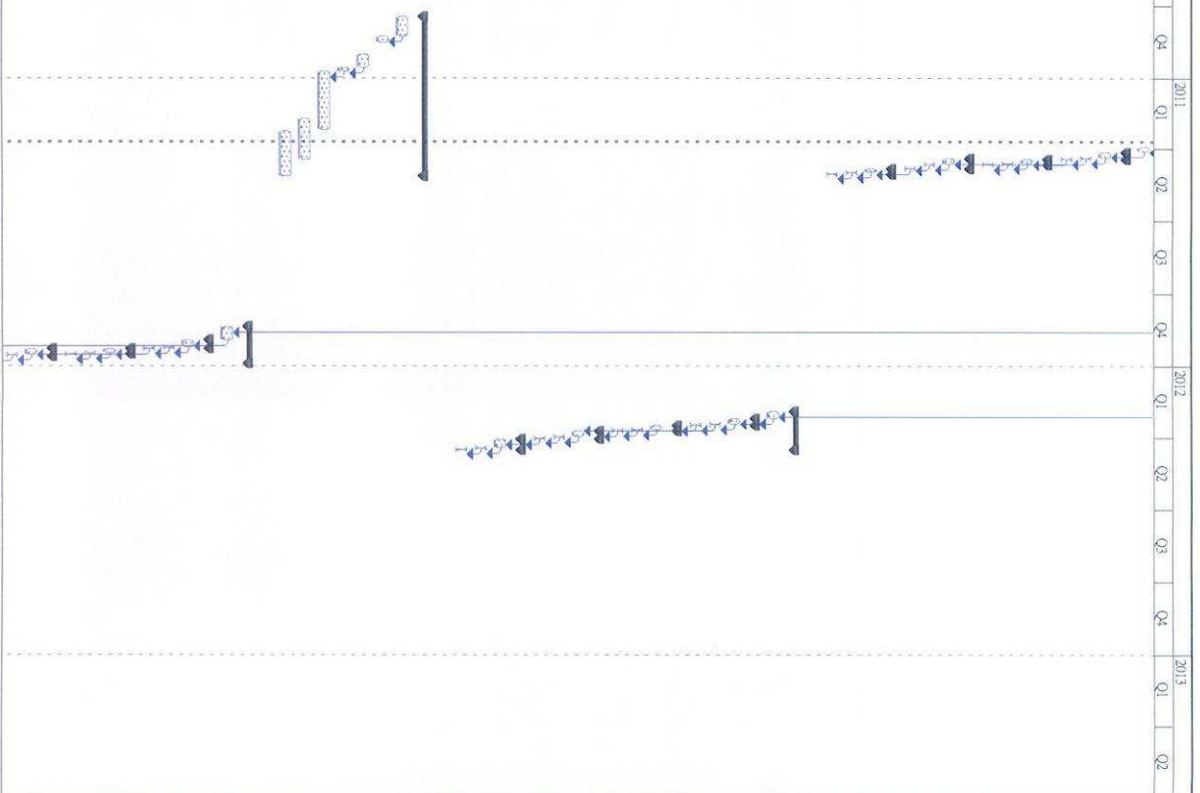
外部任務 專案摘要

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 Contract No. DC/2007/06
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					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2	
1662	Excavation and Formation	5 days	30/3/2011	4/4/2011															
1663	Base Slab Construction Bay 1 (RHS)	8 days	6/4/2011	14/4/2011															
1664	Formwork and rebar fixing	6 days	6/4/2011	12/4/2011															
1665	Concreting	1 day	13/4/2011	13/4/2011															
1666	Stripping off formwork	1 day	14/4/2011	14/4/2011															
1667	Wall Stem Construction Bay 1 (RHS)	6 days	15/4/2011	21/4/2011															
1668	Formwork and rebar fixing	4 days	15/4/2011	19/4/2011															
1669	Concreting	1 day	20/4/2011	20/4/2011															
1670	Stripping off formwork	1 day	21/4/2011	21/4/2011															
1671	Base Slab Construction Bay 2 (RHS)	8 days	14/4/2011	26/4/2011															
1672	Formwork and rebar fixing	6 days	14/4/2011	20/4/2011															
1673	Concreting	1 day	21/4/2011	21/4/2011															
1674	Stripping off formwork	1 day	26/4/2011	26/4/2011															
1675	Wall Stem Construction Bay 2 (RHS)	6 days	21/4/2011	3/5/2011															
1676	Formwork and rebar fixing	4 days	21/4/2011	30/4/2011															
1677	Concreting	1 day	1/5/2011	1/5/2011															
1678	Stripping off formwork	1 day	3/5/2011	3/5/2011															
1679																			
1680	Retaining Wall (Ch 535-540) TR4 (LHS)	38 days	28/2/2012	16/4/2012															
1681	Excavation and Formation	8 days	28/2/2012	7/3/2012															
1682	Base Slab Construction Bay 1 (LHS)	8 days	8/3/2012	16/3/2012															
1683	Formwork and rebar fixing	6 days	8/3/2012	14/3/2012															
1684	Concreting	1 day	15/3/2012	15/3/2012															
1685	Stripping off formwork	1 day	16/3/2012	16/3/2012															
1686	Wall Stem Construction Bay 1 (LHS)	6 days	17/3/2012	23/3/2012															
1687	Formwork and rebar fixing	4 days	17/3/2012	21/3/2012															
1688	Concreting	1 day	22/3/2012	22/3/2012															
1689	Stripping off formwork	1 day	23/3/2012	23/3/2012															
1690	Base Slab Construction Bay 2 (LHS)	8 days	24/3/2012	2/4/2012															
1691	Formwork and rebar fixing	6 days	24/3/2012	30/3/2012															
1692	Concreting	1 day	31/3/2012	31/3/2012															
1693	Stripping off formwork	1 day	2/4/2012	2/4/2012															
1694	Wall Stem Construction Bay 2 (LHS)	8 days	3/4/2012	16/4/2012															
1695	Formwork and rebar fixing	6 days	3/4/2012	13/4/2012															
1696	Concreting	1 day	14/4/2012	14/4/2012															
1697	Stripping off formwork	1 day	16/4/2012	16/4/2012															
1698																			
1699	Retaining Wall TR5 Ch (546-596 LHS) TR5 (AD)	190 days	15/10/2010	5/5/2011															
1700	Construction of temp haul road	25 days	15/10/2010	8/11/2010															
1701	Demolition of Existing structure at slope crest	8 days	9/11/2010	16/11/2010															
1702	Suspension of Work due to villagers rally	17 days	21/12/2010	18/1/2011															
1703	Construction of temporary ground beam	5 days	19/1/2011	23/1/2011															
1704	Trimming of rock slope (from downstream to upstre	73 days	24/1/2011	7/3/2011															
1705	Install rock dowel	45 days	22/2/2011	14/4/2011															
1706	Construction of skin wall (from DIS to U/S, from to	45 days	10/3/2011	5/5/2011															
1707																			
1708	Retaining Wall TR5A CH546-596 LHS	38 days	12/11/2011	28/12/2011															
1709	River diversion, Excavation and Formation	14 days	12/11/2011	28/11/2011															
1710	Base Slab Construction TR5A Bay 1 LHS	10 days	29/11/2011	9/12/2011															
1711	Formwork and rebar fixing	8 days	29/11/2011	7/12/2011															
1712	Concreting	1 day	8/12/2011	8/12/2011															
1713	Stripping off formwork	1 day	9/12/2011	9/12/2011															
1714	Wall Stem Construction TR5A Bay 1 LHS	6 days	10/12/2011	16/12/2011															
1715	Formwork and rebar fixing	4 days	10/12/2011	14/12/2011															
1716	Concreting	1 day	15/12/2011	15/12/2011															
1717	Stripping off formwork	1 day	16/12/2011	16/12/2011															
1718	Base Slab Construction TR5A Bay 2 LHS	8 days	10/12/2011	19/12/2011															
1719	Formwork and rebar fixing	6 days	10/12/2011	16/12/2011															
1720	Concreting	1 day	17/12/2011	17/12/2011															



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 專案摘要: 摘要
 摘要任務: 摘要
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ID	任務名稱	Duration	Start	Finish	2010				2011				2012				2013	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
1721	Stripping off formwork	1 day	19/12/2011	19/12/2011														
1722	Wall Stem Construction TRSA Bay 2 LHS	6 days	20/12/2011	28/12/2011														
1723	Formwork and rebar fixing	4 days	20/12/2011	23/12/2011														
1724	Concreting	1 day	24/12/2011	24/12/2011														
1725	Stripping off formwork	1 day	28/12/2011	28/12/2011														
1726	Base Slab Construction TRSA Bay 3 LHS	8 days	29/11/2011	7/12/2011														
1727	Formwork and rebar fixing	6 days	29/11/2011	5/12/2011														
1728	Concreting	1 day	6/12/2011	6/12/2011														
1729	Stripping off formwork	1 day	7/12/2011	7/12/2011														
1730	Wall Stem Construction TRSA Bay 3 LHS	6 days	8/12/2011	14/12/2011														
1731	Formwork and rebar fixing	4 days	8/12/2011	12/12/2011														
1732	Concreting	1 day	13/12/2011	13/12/2011														
1733	Stripping off formwork	1 day	14/12/2011	14/12/2011														
1734																		
1735	Box Culvert TR902 (Gh 580)	30 days?	22/2012	7/3/2012														
1736	River diversion, Excavation and Blinding	1 day?	22/2012	22/2012														
1737	Construction of Base Slab	8 days	3/2/2012	11/2/2012														
1738	Formwork and rebar fixing	6 days	3/2/2012	9/2/2012														
1739	Concreting	1 day	10/2/2012	10/2/2012														
1740	Stripping off formwork	1 day	11/2/2012	11/2/2012														
1741	Construction of Wall Stem and Top Slab	21 days	13/2/2012	7/3/2012														
1742	Formwork and rebar fixing	6 days	13/2/2012	18/2/2012														
1743	Concreting	1 day	20/2/2012	20/2/2012														
1744	Stripping off formwork	14 days	21/2/2012	7/3/2012														
1745																		
1746	Remaining Wall TR5A & TR6 CH555-595 LHS	39 days	10/2/2012	26/3/2012														
1747	River/flood Road Diversion (to TR3 and TR5 RHS)	3 days	10/2/2012	13/2/2012														
1748	Excavation and Blinding	7 days	14/2/2012	21/2/2012														
1749	Base Slab Construction TR6 Bay 1 LHS	10 days	22/2/2012	3/3/2012														
1750	Formwork and rebar fixing	8 days	22/2/2012	1/3/2012														
1751	Concreting	1 day	2/3/2012	2/3/2012														
1752	Stripping off formwork	1 day	3/3/2012	3/3/2012														
1753	Wall Stem Construction TR6 Bay 1 RHS	6 days	5/3/2012	10/3/2012														
1754	Formwork and rebar fixing	4 days	5/3/2012	8/3/2012														
1755	Concreting	1 day	9/3/2012	9/3/2012														
1756	Stripping off formwork	1 day	10/3/2012	10/3/2012														
1757	Base Slab Construction TR5A Bay 4 LHS	8 days	3/3/2012	12/3/2012														
1758	Formwork and rebar fixing	6 days	3/3/2012	9/3/2012														
1759	Concreting	1 day	10/3/2012	10/3/2012														
1760	Stripping off formwork	1 day	12/3/2012	12/3/2012														
1761	Wall Stem Construction TR5A Bay 4 LHS	6 days	13/3/2012	19/3/2012														
1762	Formwork and rebar fixing	4 days	13/3/2012	16/3/2012														
1763	Concreting	1 day	17/3/2012	17/3/2012														
1764	Stripping off formwork	1 day	19/3/2012	19/3/2012														
1765	Base Slab Construction TR5A Bay 5 LHS	8 days	10/3/2012	16/3/2012														
1766	Formwork and rebar fixing	6 days	10/3/2012	16/3/2012														
1767	Concreting	1 day	17/3/2012	17/3/2012														
1768	Stripping off formwork	1 day	19/3/2012	19/3/2012														
1769	Wall Stem Construction TR5A Bay 5 LHS	6 days	20/3/2012	26/3/2012														
1770	Formwork and rebar fixing	4 days	20/3/2012	23/3/2012														
1771	Concreting	1 day	24/3/2012	24/3/2012														
1772	Stripping off formwork	1 day	26/3/2012	26/3/2012														
1773																		
1774	Remaining Wall (Gh 595-615) TR3 (Bay 3)	37 days	15/12/2011	2/2/2012														
1775	River diversion, Excavation and Formation	13 days	15/12/2011	31/12/2011														
1776	Base Slab Construction Bay 3 LHS	12 days	31/12/2011	16/1/2012														
1777	Formwork and rebar fixing	10 days	31/12/2011	13/1/2012														
1778	Concreting	1 day	14/1/2012	14/1/2012														
1779																		

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					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2	
1780	Stripping off formwork	1 day	16/11/2012	16/11/2012															
1781	Wall Sown Construction TR3 Bay 3 RHS	6 days	17/11/2012	26/11/2012															
1782	Formwork and rebar fixing	4 days	17/11/2012	20/11/2012															
1783	Concreting	1 day	21/11/2012	21/11/2012															
1784	Stripping off formwork	1 day	26/11/2012	26/11/2012															
1785	Wall Sown Construction TR3 Bay 3 LHS	6 days	27/11/2012	2/12/2012															
1786	Formwork and rebar fixing	4 days	27/11/2012	31/11/2012															
1787	Concreting	1 day	1/12/2012	1/12/2012															
1788	Stripping off formwork	1 day	2/12/2012	2/12/2012															
1789																			
1790	Concrete Slab (CH546 - CH586)	27 days	5/12/2012	5/12/2012															
1791	Bay 1	9 days	5/12/2012	14/12/2012															
1792	Excavation/Blinding	3 days	5/12/2012	7/12/2012															
1793	Formwork and rebar fixing	4 days	8/12/2012	12/12/2012															
1794	Concreting	1 day	13/12/2012	13/12/2012															
1795	Stripping off formwork	1 day	14/12/2012	14/12/2012															
1796	Bay 2	9 days	15/12/2012	24/12/2012															
1797	Excavation/Blinding	3 days	15/12/2012	17/12/2012															
1798	Formwork and rebar fixing	4 days	19/12/2012	22/12/2012															
1799	Concreting	1 day	23/12/2012	23/12/2012															
1800	Stripping off formwork	1 day	24/12/2012	24/12/2012															
1801	Bay 3	9 days	5/1/2013	14/1/2013															
1802	Excavation/Blinding	3 days	5/1/2013	7/1/2013															
1803	Formwork and rebar fixing	4 days	8/1/2013	12/1/2013															
1804	Concreting	1 day	13/1/2013	13/1/2013															
1805	Stripping off formwork	1 day	14/1/2013	14/1/2013															
1806	Bay 4	9 days	15/1/2013	24/1/2013															
1807	Excavation/Blinding	3 days	15/1/2013	17/1/2013															
1808	Formwork and rebar fixing	4 days	19/1/2013	22/1/2013															
1809	Concreting	1 day	23/1/2013	23/1/2013															
1810	Stripping off formwork	1 day	24/1/2013	24/1/2013															
1811	Bay 5	9 days	26/1/2013	5/2/2013															
1812	Excavation/Blinding	3 days	26/1/2013	28/1/2013															
1813	Formwork and rebar fixing	4 days	29/1/2013	2/2/2013															
1814	Concreting	1 day	3/2/2013	3/2/2013															
1815	Stripping off formwork	1 day	5/2/2013	5/2/2013															
1816	Drainage and Footpath (CH525-615 LHS & RHS)	48 days	12/2/2012	12/5/2012															
1817	Construction of footpath & drainage works	48 days	12/2/2012	12/5/2012															
1818	Lighting at CH 590-610	10 days	14/5/2012	24/5/2012															
1820	Construction of Drawings / Ducting	6 days	14/5/2012	19/5/2012															
1821	Public Lighting Installation (CE2325)	2 days	21/5/2012	22/5/2012															
1822	Public Lighting Installation (CE2326)	2 days	21/5/2012	22/5/2012															
1823	Public Lighting Installation (CE2327)	2 days	21/5/2012	22/5/2012															
1824	T&C	1 day	23/5/2012	23/5/2012															
1825	Removal of existing lighting (CE160A-B)	1 day	24/5/2012	24/5/2012															
1826																			
1827	Section 4 - Box Culvert at Ping Loang	0 days	9/12/2009	9/12/2009															
1828	Section 4 - Box Culvert (Area A)	0 days	9/12/2009	9/12/2009															
1829	Completion of Work at Section 4	0 days	9/12/2009	9/12/2009															
1830																			
1831	Section 5 - Landscape Establishment Works (Portion B, C, D, E, F, G, H & I)	1666 days?	28/9/2007	25/7/2012															
1832	Section 5 Landscape Works	1665 days	28/9/2007	24/7/2012															
1833	Commencement of Works	1 day	28/9/2007	28/9/2007															
1834	Material Submission	120 days	29/9/2007	26/1/2008															
1835	Submission Approval	0 days	9/2/2008	9/2/2008															
1836	Landscape Hardworks	1541 days?	13/11/2007	19/4/2012															
1837	Landscape Softworks	365 days	31/1/2011	18/4/2012															
1838	Submission of Tree Survey	400 days	29/9/2007	1/11/2008															

Reviewed Master Prog Rev 15
 日期: 22/9/2011
 任務進度: 里程碑: 上層型任務: 上層型里程碑: 分割: 外部任務: 專案摘要: 摘要詳細: 期限:

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

Revised Master Programme Rev (15)

ID	任務名稱	Duration	Start	Finish	Q3	Q4	2010	Q1	Q2	Q3	Q4	2011	Q1	Q2	Q3	Q4	2012	Q1	Q2	2013	Q1	Q2	
1839	Preservation and Protection of Preserved Trees	1265 days	21/1/2008	25/7/2012																			
1840	Landscape Establishment Works	1265 days	21/1/2008	25/7/2012																			
1841	Completion of Works	0 days	25/7/2012	25/7/2012																			
1842																							
1843	Section 6 - Landscape Establishment Works (Portion J, K & M)	1666 days*	28/9/2007	25/7/2012																			
1844	Section 6 Landscape Works	1665 days	28/9/2007	24/7/2012																			
1845	Commencement of Works	1 day	28/9/2007	28/9/2007																			
1846	Material Submission	120 days	29/9/2007	26/1/2008																			
1847	Submission Approval	0 days	9/2/2008	9/2/2008																			
1848	Landscape Hardworks	1161 days*	27/11/2008	19/4/2012																			
1849	Landscape Softworks	365 days	12/2/2011	19/4/2012																			
1850	Submission of Tree Survey	400 days	29/9/2007	1/1/2008																			
1851	Preservation and Protection of Preserved Trees	1265 days	21/1/2008	25/7/2012																			
1852	Landscape Establishment Works	1265 days	21/1/2008	25/7/2012																			
1853	Completion of Works	0 days	25/7/2012	25/7/2012																			
1854																							
1855	Section 7 - Landscape Establishment Works (Portion L, N & P)	1666 days*	28/9/2007	25/7/2012																			
1856	Section 7 Landscape Works	1665 days	28/9/2007	24/7/2012																			
1857	Commencement of Works	1 day	28/9/2007	28/9/2007																			
1858	Material Submission	120 days	29/9/2007	26/1/2008																			
1859	Submission Approval	0 days	9/2/2008	9/2/2008																			
1860	Landscape Hardworks	1176 days*	12/11/2008	19/4/2012																			
1861	Landscape Softworks	365 days	12/2/2011	19/4/2012																			
1862	Submission of Tree Survey	400 days	29/9/2007	1/1/2008																			
1863	Preservation and Protection of Preserved Trees	1265 days	21/1/2008	25/7/2012																			
1864	Landscape Establishment Works	1265 days	21/1/2008	25/7/2012																			
1865	Completion of Works	0 days	25/7/2012	25/7/2012																			
1866																							
1867	Section 8 - All Remaining Work at All Portions	1301 days*	28/9/2007	3/5/2011																			
1868	Commencement of Works	1 day	28/9/2007	28/9/2007																			
1869	All remaining works at all Area	1300 days	29/9/2007	3/5/2011																			
1870	Completion of Works	0 days	3/5/2011	3/5/2011																			
1871		1 day*	28/9/2007	28/9/2007																			

Revised Master Prog Rev 15
 日期: 22/3/2011

任務 進度

里程碑 摘要

上圖型任務 上圖型里程碑

上圖型進度 分割

外部任務 專案摘要

摘要群組 摘要

Appendix J: Complaint Investigation Reports and Log



大成環境科技拓展有限公司
Environmental Pioneers & Solutions Limited

Our ref. no.: DC0706-CL-110504(DSD)

By Fax and Mail
11th May 2011

To: Distribution List

Dear Sirs or Madams,

Contract No. DC/2007/06

Drainage Improvement works in Upper Tai Po River, Lam Tsuen River and She Shan River

Complaint Investigation Report and Log

Based on the complaint incident received from EPD with details of:

EPD complaint ref.: EP3/N05/RN/00008234-11
Date received: 04/05/2011
Incident location: Upper Tai Po River, nearby Ha Wun Yiu
Description: Complaint against noise nuisance arisen from construction activities during Easter holidays and Labour Day holidays.

Enclosed please find the complaint investigation reports and log sheets of the incident as for your record.

Yours faithfully,

Patricia Chung
ET leader

Environmental Pioneers and Solutions Limited

c.c. SRE/Maunsell (Mr. KY Chan)
RE/Maunsell (Mr. Adrian Ng)
IEC/ERM (Ms. Winnie Ko)
Chiu Hing Project Manager (Mr. Samson Lam)
Chiu Hing Site Agent (Mr. Daniel Tai)
Chiu Hing Environmental Officer (Mr. Pui-Shing Chan)

DSD Project – River Improvement Works in Upper Lam Tsuen River, She Shan River and Upper Tai Po River

Report for Complaint/ Concern

Our Ref.: DC0706-CL-110504(DSD)

EPD Case Ref. No.: EP3/N05/RN/00008234-11

Sheet: 1 of 2

RECIPIENT

Name: Chiu Hing Construction & Transportation Co., Ltd,

Details: Complaint was referred by DSD that a resident complained against noise nuisance arisen from road work renovation within project site on Easter holiday and Labour Day holiday along Upper Tai Po River (UTPR), nearby Ha Wun Yiu.

Received Date: 4th May 2011

Received Time: N/A

COMPLAINANT / Concern

Name: N/A

Tel: N/A

Address: N/A

COMPLAINT

Noise Air quality/Dust Water Odour Environment Traffic/Pedestrian
Safety Others

Event Date and Time: 22nd-25th April 2011, and 1st-2nd May 2011

Location: A complaint was recorded for noise nuisance arisen from construction in the project site on Easter holiday and Labour Day holiday at Upper Tai Po River, nearby Ha Wun Yiu.

INVESTIGATION RESULTS, RECOMMENDATIONS & MITIGATION MEASURES

1. A complaint on 3rd May 2011 was recorded regarding noise concern generated from construction activities within project site on Easter holiday and Labour Day holiday (i.e. 22nd-25th April 2011, and 1st-2nd May 2011) at UTPR. Environmental Team (ET) was informed by email on the same day by the Residential Engineer (RE).
2. As reported by Contractor, emergency flood relief works were carried out during the holidays of Easter and Labour Day due to the expected rainfall. Contractor had also notified EPD via the form of "Record of Emergency Works during Restricted Hours" (Appendix A) by fax on 22nd April 2011 and 30th April 2011 for carrying out the emergency works during the public holidays.
3. ET reviewed the routine noise monitoring results recorded on 29th April 2011 and no exceedance was found during measurement.
4. As a follow up investigation, ET conducted a site visit on 6th May 2011 with representative from Contractor to resolve the concerns. Routine noise monitoring was also scheduled on the same day.
5. Findings from the investigation showed major noise source was generated from backfilling and sediment removal activities being carried out between approximate ch.350 and ch.500 of UTPR. It was also observed that some noise barriers along the UTPR, which were erected in the past, have been removed by Contractor. In addition, excavators were observed to be operating at the same time between approximate ch.350 and ch.500 (Fig.1)

6. During the course of backfilling and sediment removal activities, noise measurements were carried out at the nearest noise sensitive receivers (i.e.: UTP 3, 4, 5, 6) from the noise sources. No exceedance of limit level (i.e.: >75 dB) was recorded all four monitoring locations during site investigation on 6th May 2011.
7. To minimize noise generation from the concerned activities, Contractor was recommended to further enhance mitigation measures immediately, which should at least include:
 - Re-erecting noise barriers at locations where construction activities were undergoing
 - Well-scheduling noisy activities, by means such as rotation and time buffering, to minimize consecutive / excessive exposure of nearby sensitive receivers to high levels of construction noise
 - Avoiding the operation of construction equipments that has noise impact at the same time
 - Warming up the tips and hydraulic arms of excavators with sound insulation material to minimize noise generation.
8. Contractor was reminded to maintain proper practices and noise mitigation measures, such as administrative planning and noise barriers erection as mentioned in item 6, to minimize noise impact to the vicinity sensitive receivers. Other noise minimization features by means of insulation or screening should be regularly reviewed and maintained to ensure they are in good condition and functional.
9. ET has reminded the contractor to pay serious attention on preventing possible environmental impacts from arisen in the future.



Signature:

Patricia Chung Chi Ping, ET Leader

Date: 11-05-2011

Fig.1 – Excavators were operating at the same time



Appendix A

Record of Emergency Works During Restricted Hours

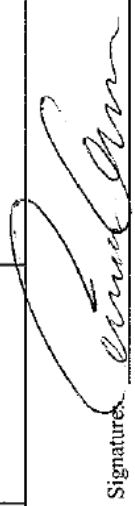
To: Director of Environmental Protection
 (Attn: S(RA)6 Fax: 2413 3358)
 6/F., Chimachem Tsuen Wan Plaza,
 455-457 Castle Peak Road, Tsuen Wan,
 N. T.

From: Chiu Hing Construction & Transportation Co. Ltd.
 (Name of Company/Utility/Gov't Dept)
 Name/Post: Samson Lam (Project Manager)
 Date: 22-25 April 2011
 Tel. No. 92311740 Fax No. 24459139

cc: AECOM (DC0706 Site Office)
 Record of Emergency Work During Restricted Hours*
 For the Day/Month of 22-25 April 2011 (from 0800 - 2000)

HyD Emerg. Serial No. (If applicable)	Police ref.	Name of Contractor	Location of Work	Description and Justification of Emergency Work	Date & Time		List of PME used and/or PCW carried out	Noise control measure implemented? Noise barrier provided? If no, gives reasons?	Is hand-held breaker used?	
					Start of Work	Completion of Work			If Yes, What Type?	Noise barrier provided. If no, Why?
EO no.	FOB no.	Chiu Hing Construction & Transportation Co. Ltd.	DSD Contract No. DC2007/06 Lam Tsuen River, She Sha River and Tai Po River	As heavy rain is expected in Easter Holiday, Emergency Flood Preventive Works shall be carried	22/4/2011 0800	25/4/2011 2000	10 Backhoe for earth removal 1 set of shotcreting machine 2 set of vibration polers	Temp Noise barrier	No	

* Restricted hours: 7pm-7am and any time on general holiday, including Sunday
 # Example: Use of Silenced equipment (I.e. hydraulic crusher, electric/hydraulic breaker, quiet miller, pavement ripper, saw & lift etc.)
 1) Powered Mechanical Equipment
 2) Prescribed Construction Work, if the construction site is within Designated Area.
 3) For example, electric/ hydraulic hand-held breaker.
 (Please refer overleaf for examples of typical emergency construction works)


 Signatures: Samson Lam
 Name/Post: Samson Lam (Project Manager)

Record of Emergency Works During Restricted Hours

To: Director of Environmental Protection
 (Attn: S(RA)6 Fax: 2413 3358)
 6/F., Chinachem Tsuen Wan Plaza,
 455-457 Castle Peak Road, Tsuen Wan,
 N. T.


From: Chiu Hing Construction & Transportation Co. Ltd.
 (Name of Company/Utility/Gov't Dept)
 Name/Post: Samson Lam (Project Manager)
 Date: 1-2 May 2011
 Tel. No. 92311740 Fax No. 24459139

Record of Emergency Work During Restricted Hours* For the Day/Month of 1-2 May 2011 (from 0800 - 2000)

cc: AECOM (DC0706 Site Office)

HyD Emerg. Serial No. (if applicable)	Police ref.	Name of Contractor	Location of Work	Description and Justification of Emergency Work	Date & Time		List of PME used and/or PCW carried out	Noise control measure Implemented? Noise barrier provided? If no, gives reasons?	Is hand-held breaker used?	
					Start of Work	Completion of Work			If Yes, What Type?	Noise barrier provided. If no, Why?
EO no.	EOB no.	Chiu Hing Construction & Transportation Co. Ltd.	DSD Contract No. DC2007/06 Lam Tsuen River, She Sha River and Tai Po River	As heavy rain is expected in Labour Holiday, Emergency Flood Preventive Works shall be carried	1/5/2011 0800	2/5/2011 2000	10 Backhoes for earth removal 1 set of shotcreting machine 2 set of vibration pokers	Temp Noise barrier	No	

* Restricted hours: 7pm-7am and any time on general holiday, including Sunday
 # Example: Use of Sited equipment (I.e. hydraulic crusher, electric/hydraulic breaker, quiet miller, pavement ripper, saw & lift etc.)
 1) Powered Mechanical Equipment
 2) Prescribed Construction Work, if the construction site is within Designated Area.
 3) For example, electric/ hydraulic hand-held breaker.
 (Please refer overleaf for examples of typical emergency construction works)

Signature: 
 Name/Post: Samson Lam (Project Manager)

COMPLAINT / CONCERN LOG

Ref: DC0706-CL-110504 (DSD)

Log Ref	Event Date/Location	Complainant/Date of Contact	Details of Complaint	Investigation/Mitigation Action	File Closed
<p>Our REF: DC0706-CL-110504(DSD)</p> <p>EPD Case Ref. No.: EP3/N05/RN/00008234-11</p>	<p>22nd – 25th April 2011, and 1st – 2nd May 2011</p> <p>Project site at Upper Tai Po River, nearby Ha Wun Yiu</p>	<p>A Complaint was referred by DSD 4th May 2011</p>	<p>A complaint was recorded regarding noise nuisance arisen from road work renovation during public holidays in the project site at Upper Tai Po River (UTPR).</p>	<p>1. A complaint on 3rd May 2011 was recorded regarding noise concern generated from construction activities within project site on Easter holiday and Labour Day holiday (i.e. 22nd-25th April 2011, and 1st-2nd May 2011) at UTPR. Environmental Team (ET) was informed by email on the same day by the Residential Engineer (RE).</p> <p>2. As reported by Contractor, emergency flood relief works were carried out during the holidays of Easter and Labour Day due to the expected rainfall. Contractor had also notified EPD via the form of “Record of Emergency Works during Restricted Hours” (Appendix A) by fax on 22nd April 2011 and 30th April 2011 for carrying out the emergency works during the public holidays.</p> <p>3. ET reviewed the routine noise monitoring results recorded on 29th April 2011 and no exceedance was found during measurement.</p> <p>4. As a follow up investigation, ET conducted a site visit on 6th May 2011 with representative from Contractor to resolve the concerns. Routine noise monitoring was also scheduled on the same day.</p> <p>5. Findings from the investigation showed major noise source was generated from backfilling and sediment removal activities being carried out between</p>	<p>File Closed</p>

			<p>approximate ch.350 and ch.500 of UTPR. It was also observed that some noise barriers along the UTPR, which were erected in the past, have been removed by Contractor. In addition, excavators were observed to be operating at the same time between approximate ch.350 and ch.500 (Fig.1)</p> <p>6. During the course of backfilling and sediment removal activities, noise measurements were carried out at the nearest noise sensitive receivers (i.e.: UTP 3, 4, 5, 6) from the noise sources. No exceedance of limit level (i.e.: >75 dB) was recorded all four monitoring locations during site investigation on 6th May 2011.</p> <p>7. To minimize noise generation from the concerned activities, Contractor was recommended to further enhance mitigation measures immediately, which should at least include:</p> <ul style="list-style-type: none"> i. Re-erecting noise barriers at locations where construction activities were undergoing ii. Well-scheduling noisy activities, by means such as rotation and time buffering, to minimize consecutive / excessive exposure of nearby sensitive receivers to high levels of construction noise iii. Avoiding the operation of construction equipments that has noise impact at the same time
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				<p>iv. Warming up the tips and hydraulic arms of excavators with sound insulation material to minimize noise generation.</p> <p>8. Contractor was reminded to maintain proper practices and noise mitigation measures, such as administrative planning and noise barriers erection as mentioned in item 6, to minimize noise impact to the vicinity sensitive receivers. Other noise minimization features by means of insulation or screening should be regularly reviewed and maintained to ensure they are in good condition and functional.</p> <p>9. ET has reminded the contractor to pay serious attention on preventing possible environmental impacts from arisen in the future.</p>
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P.P. Lee Cheung Lai

Filed by Environmental Team Leader: _____ Date: 11th May 2011



大成環境科技拓展有限公司
Environmental Pioneers & Solutions Limited

Our ref. no.: DC0706-CL-110506(DSD)

By Fax and Mail
13th May 2011

To: Distribution List

Dear Sirs or Madams,

Contract No. DC/2007/06
Drainage Improvement works in Upper Tai Po River, Lam Tsuen River and She Shan River

Complaint Investigation Report and Log

Based on the complaint incident received from EPD with details of:

DSD ECRS request no.: 3270
Date received: 6th May 2011
Incident location: Upper Tai Po River, nearby Sheung Wun Yiu
Description: Complaint was referred by DSD regarding the repeated complaint on environmental nuisance arising from dust pollution to the public area at Upper Tai Po River (UTPR), nearby Sheung Wun Yiu

Enclosed please find the complaint investigation report and log sheets of the incident as for your record.

Yours faithfully,

P.P. Lee Cheung Lei
Patricia Chung
ET leader

Environmental Pioneers and Solutions Limited

c.c. SRE/Maunsell (Mr. KY Chan)
RE/Maunsell (Mr. Adrian Ng)
IEC/ERM (Ms. Winnie Ko)
Chiu Hing Project Manager (Mr. Samson Lam)
Chiu Hing Site Agent (Mr. Daniel Tai)
Chiu Hing Environmental Officer (Mr. Pui-Shing Chan)

Report for Complaint/ Concern

Our Ref.: DC0706-CL-110506(DSD)

DSD Enquiry / Complaint Recording System (ECRS) Request No.: 3270

Sheet: 1 of 2

RECIPIENT

Name: Chiu Hing Construction & Transportation Co., Ltd.

Details: Complaint was referred by DSD regarding the repeated complaint on environmental nuisance arising from dust pollution to the public area at Upper Tai Po River (UTPR), nearby Sheung Wun Yiu.

Received Date: 6th May 2011

Received Time: N/A

COMPLAINANT / Concern

Name: N/A

Tel: N/A

Address: N/A

COMPLAINT

Noise Air quality/Dust Water Odour Environment Traffic/Pedestrian
Safety Others

Event Date and Time: 6th May 2011

Location: Upper Tai Po River, nearby Sheung Wun Yiu

INVESTIGATION RESULTS, RECOMMENDATIONS & MITIGATION MEASURES

1. A complaint on 6th May 2011 was recorded regarding the repeated complaint on environmental nuisance arising from dust pollution to the public area at UTPR, nearby Sheung Wun Yiu. Environmental Team (ET) was informed by email on the same day by the Residential Engineer (RE).
2. According to details provided by the complainant, no improvements were observed in the surrounding environment after repeated complaint on dust pollution.
3. ET has conducted a site investigation on 11th May 2011 with representatives from RE and Contractor to resolve the concern. Dust generated from haul access and earth materials carried by construction vehicles were identified as the major sources of dust pollution to the surrounding environment.
4. As reported by Contractor, a frontline staff was assigned to station at the intersection of Access Road D and Tat Wan Road. Regular water spraying was provided for both Tat Wan Road (Fig 4.1) and Access Road D (Fig.4.2), which was observed to be wet during site investigation (Fig.4.3). During site investigation, it was also observed that high jet water sprayers were provided at the site entrance at Access Road D and were used by drivers for wheel washing before leaving from site (Fig.4.4 and Fig.4.5).
5. As reported by Contractor, a frontline staff was assigned to provide water spraying for the public area at Tat Wan Road near the site entrance at ch.600 twice per day and wash the wheels of construction vehicles using the high jet water sprayers. A wheel washing bay was also provided at the same location, but the condition of water in the wheel washing bay was observed to be muddy (Fig.5.1). As such, Contractor was recommended to clean and maintain the wheel washing area regularly to maintain good condition as to avoid site vehicles from bringing muddy water to public area.

6. Contractor was also recommended to pay serious attention on their site practices and implement necessary mitigation measures to avoid dust emission, which should at least include:
 - Dust accumulated on site should be regularly removed by means of washing and/or scrubbing.
 - Haul access that was frequently used by site equipments and/or vehicles should be regularly water sprayed.
 - Regular water spraying should be provided for site activities which were known to be main sources of dust emission, such as excavation, boulder breaking and earth movement works.
 - Earthy stockpiles and exposed earth surfaces should be protected with fabric coverings to prevent erosion from causing air quality impact.
7. Contractor was reminded to maintain proper practices and dust suppression measures, such as provision of regular water spraying for haul access and maintenance of the water condition of wheel washing bay as mentioned in item 6, to minimize dust pollution to the surrounding environment.
8. ET has reminded the contractor to pay serious attention to prevent causing possible environmental impacts in the future.

P.P. Lee Cheung Lai

Signature:

Patricia Chung Chi Ping, ET Leader

Date: 13-05-2011

Fig.4.1 – Regular water spraying was provided for the public area at Tat Wan Road.



Fig.4.2 – Regular water spraying was provided for Access Road D.



Fig.4.3 – Access Road D was observed to be wet during site investigation.



Fig.4.4 – High jet water sprayer was used for wheel washing at site entrance at Access Road D.



Fig.4.5 – High jet water sprayer was used for wheel washing at site entrance at Access Road D.



Fig.5.1 – Water condition in the wheel washing bay at site entrance at ch.600 was muddy.



COMPLAINT / CONCERN LOG

Ref: DC0706-CL-110506(DSD)

Log Ref	Event Date/Location	Complainant/Date of Contact	Details of Complaint	Investigation/Mitigation Action	File Closed
<p>Our REF: DC0706-CL-110506(DSD)</p> <p>DSD ECRS request no.: 3270</p>	<p>6th May 2011, Project site at Upper Tai Po River, nearby Sheung Wun Yiu</p>	<p>A Complaint was referred by DSD on 6th May 2011</p>	<p>Complaint was referred by DSD regarding the repeated complaint on environmental nuisance arising from dust pollution to the public area at Upper Tai Po River (UTPR), nearby Sheung Wun Yiu.</p>	<p>1. A complaint on 6th May 2011 was recorded regarding the repeated complaint on environmental nuisance arising from dust pollution to the public area at UTPR, nearby Sheung Wun Yiu. Environmental Team (ET) was informed by email on the same day by the Residential Engineer (RE).</p> <p>2. According to details provided by the complainant, no improvements were observed in the surrounding environment after repeated complains on dust pollution.</p> <p>3. ET has conducted a site investigation on 11th May 2011 with representatives from RE and Contractor to resolve the concern. Dust generated from haul access and earth materials carried by construction vehicles were identified as the major sources of dust pollution to the surrounding environment.</p> <p>4. As reported by Contractor, a frontline staff was assigned to station at the intersection of Access Road D and Tat Wan Road. Regular water spraying was provided for both Tat Wan Road (Fig 4.1) and Access Road D (Fig.4.2), which was observed to be wet during site investigation (Fig.4.3). During site investigation, it was also observed that high jet water sprayers were provided at the site entrance at Access Road D and were used by drivers for wheel washing before leaving from site (Fig.4.4 and Fig.4.5).</p>	<p>Yes</p>

	<p>5. As reported by Contractor, a frontline staff was assigned to provide water spraying for the public area at Tat Wan Road near the site entrance at ch.600 twice per day and wash the wheels of construction vehicles using the high jet water sprayers. A wheel washing bay was also provided at the same location, but the condition of water in the wheel washing bay was observed to be muddy (Fig.5.1). As such, Contractor was recommended to clean and maintain the wheel washing area regularly to maintain good condition as to avoid site vehicles from bringing muddy water to public area.</p> <p>6. Contractor was also recommended to pay serious attention on their site practices and implement necessary mitigation measures to avoid dust emission, which should at least include:</p> <ol style="list-style-type: none">i. Dust accumulated on site should be regularly removed by means of washing and/or scrubbing.ii. Haul access that was frequently used by site equipments and/or vehicles should be regularly water sprayed.iii. Regular water spraying should be provided for site activities which were known to be main sources of dust emission, such as excavation, boulder breaking and earth movement works.iv. Earthy stockpiles and exposed earth surfaces should be protected with fabric coverings to prevent erosion from causing air quality impact.

				<p>7. Contractor was reminded to maintain proper practices and dust suppression measures, such as provision of regular water spraying for haul access and maintenance of the water condition of wheel washing bay as mentioned in item 6, to minimize dust pollution to the surrounding environment.</p> <p>8. ET has reminded the contractor to pay serious attention to prevent causing possible environmental impacts in the future.</p> <p>9.</p>
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Filed by Environmental Team Leader: P.P. Lee Cheung Lai

Date: 13th May 2011



大成環境科技拓展有限公司
Environmental Pioneers & Solutions Limited

Our ref. no.: DC0706-CL-110524(EPD)

By Fax and Mail
31st May 2011

To: Distribution List

Dear Sirs or Madams,

Contract No. DC/2007/06

Drainage Improvement works in Upper Tai Po River, Lam Tsuen River and She Shan River

Complaint Investigation Report and Log

Based on the complaint incident received from EPD with details of:

EPD complaint ref.: EP3/N05/RN/00009991-11
Date received: 24/05/2011
Incident location: Upper Tai Po River, nearby Sheung Wun Yiu
Description: Complaint against noise nuisance arisen from construction activities during public holidays and Sundays since 1st May 2011, and during night time between 19:00 and 00:00 on weekdays.

Enclosed please find the complaint investigation reports and log sheets of the incident as for your record.

Yours faithfully,

P.P. Lee Chung Lai

Patricia Chung
ET leader

Environmental Pioneers and Solutions Limited

c.c. SRE/Maunsell (Mr. KY Chan)
RE/Maunsell (Mr. Adrian Ng)
IEC/ERM (Mr. Roger Leung)
Chiu Hing Project Manager (Mr. Samson Lam)
Chiu Hing Site Agent (Mr. Raymond Kwok)
Chiu Hing Environmental Officer (Mr. Pui-Shing Chan)

Report for Complaint/ Concern

Our Ref.: DC0706-CL-110524(EPD)

EPD Case Ref. No.: EP3/N05/RN/00009991-11

Sheet: 1 of 2

RECIPIENT

Name: Chiu Hing Construction & Transportation Co., Ltd.

Details: Complaint was referred by EPD that a resident complained against noise nuisance arisen from construction activities during public holidays and Sundays since 1st May 2011, and during night time between 19:00 and 00:00 on weekdays along Upper Tai Po River (UTPR), nearby Sheung Wun Yiu.

Received Date: 24th May 2011

Received Time: N/A

COMPLAINANT / Concern

Name: N/A

Tel: N/A

Address: N/A

COMPLAINT

Noise Air quality/Dust Water Odour Environment Traffic/Pedestrian
 Safety Others

Event Date and Time: Sundays and public holidays since 1st May 2011, and between 19:00 and 00:00 on weekdays

Location: A complaint was recorded for noise nuisance arisen from construction activities during public holidays and Sundays since 1st May 2011, and during night time between 19:00 and 00:00 on weekdays at Upper Tai Po River, nearby Sheung Wun Yiu.

INVESTIGATION RESULTS, RECOMMENDATIONS & MITIGATION MEASURES

1. A complaint on 24th May 2011 was recorded regarding noise concern generated from construction activities within project site during public holidays and Sundays since 1st May 2011, and during night time between 19:00 and 00:00 on weekdays at UTPR. Environmental Team (ET) was informed by email on the same day by the Residential Engineer (RE).
2. As reported by Contractor, emergency flood relief works were carried out by backhoes during 1st-2nd and 15th May from 08:00 to 20:00, and on 22nd May from 13:30 to 16:30 due to the expected rainfall. Contractor had also notified EPD via the form of "Record of Emergency Works during Restricted Hours" (Appendix A) by fax on 30th April 2011, 14th and 25th May 2011 for carrying out the emergency works during the public holidays. Contractor also reported that the working hour for weekdays is from 08:00 to 18:00.
3. ET reviewed the routine noise monitoring results recorded on 6th, 13th, 20th and 28th May 2011 and no exceedance was found for all measurements.
4. Site investigation was held on 25th May 2011 with representatives from RE, Independent Environmental Checker and Contractor to resolve the concerns.

5. During investigation, a backhoe was observed in idle at approximate ch.550. No other noise source was identified nearby Sheung Wun Yiu, i.e. between ch.400 and ch.600 of UTPR, during investigation as no river work should be carried out after the arrival of wet season (Fig.5.1 and 5.2).
6. ET conducted routine noise monitoring on 28th May 2011 at the nearest noise sensitive receivers (i.e.: UTP 1, 2 and 3) from the noise sources. No exceedance of limit level (i.e.: >75 dB) was recorded all three monitoring locations.
7. As similar complaint was received on 4th May 2011 already, Contractor was recommended to minimize the number of emergency works during restricted hours, such as public holiday and Sunday. If necessary, EPD should be notified through the record of "emergency works during restricted hours" prior to the start of the emergency work. Contractor was also reminded that no construction activity should be carried out after 19:00 on weekdays unless a construction noise permit was possessed.
8. Since some of the proposed recommendations of noise mitigation measures for the noise complaint received on 4th May 2011 were not observed, Contractor was seriously advised to enhance the site practise on noise mitigation measures, such as avoiding parallel operations of construction machinery to minimize noise generation and re-erecting noise barriers to protect nearby sensitive receivers from construction noise.
9. ET has reminded the contractor to pay serious attention on preventing possible environmental impacts from arisen in the future.

Signature:

P.P. Lee Cheung Lai
Patricia Chung Chi Ping, ET Leader

Date: 31-05-2011

Fig.5.1 – During site investigation, no river work was being carried out between ch.400 and 500 of UTPR



Fig.5.2 – During site investigation, no river work was being carried out between ch.500 and 600 of UTPR



Appendix A


To: Director of Environmental Protection
 (Attn: S(RA)6 Fax: 2413 3358)
 6/F., Chinachem Tsuen Wan Plaza,
 455-457 Castle Peak Road, Tsuen Wan,
 N. T.

From: Chiu Hing Construction & Transportation Co. Ltd.
 (Name of Company/Utility/Gov't Dept)
 Name/Post: Samson Lam (Project Manager)
 Date: 1-2 May 2011
 Tel. No. 92311740 Fax No. 24459139

cc: AECOM (DC0706 Site Office)

Record of Emergency Work During Restricted Hours*
 For the Day/Month of 1-2 May 2011 (from 0800 - 2000)

HyD Emerg. Serial No. (If applicable)	Police ref.	Name of Contractor	Location of Work	Description and Justification of Emergency Work	Date & Time		List of PME used and/or PCW carried out	Noise control measure Implemented? Noise barrier provided? If no, gives reasons?	Is hand-held breaker used?	
					Start of Work	Completion of Work			If Yes, What Type?	Noise barrier provided. If no, Why?
EO no.	EOB no.	Chiu Hing Construction & Transportation Co. Ltd.	DSD Contract No. DC2007/06 Lam Tsuen River, She Sha River and Tai Po River	As heavy rain is expected in Labour Holiday, Emergency Flood Preventive Works shall be carried	1/5/2011 0800	2/5/2011 2000	10 Backhoe for earth removal 1 set of shotcreting machine 2 set of vibration posers	Temp Noise barrier	No	

Signature: 
 Name/Post: Samson Lam (Project Manager)

* Restricted hours: 7pm-7am and any time on general holiday, including Sunday
 # Example: Use of Silenced equipment (I.e. hydraulic crusher, electric/hydraulic breaker, quiet miller, pavement tippert, saw & lift etc.)
 1) Powered Mechanical Equipment
 2) Prescribed Construction Work, if the construction site is within Designated Area.
 3) For example, electric/ hydraulic hand-held breaker.
 (Please refer overleaf for examples of typical emergency construction works)

Record of Emergency Works During Restricted Hours

To: Director of Environmental Protection
 (Attn: S(RA)6 Fax: 2413 3358)
 6/F., Chinachem Tsuen Wan Plaza,
 455-457 Castle Peak Road, Tsuen Wan,
 N. T.


From: Chiu Hing Construction & Transportation Co. Ltd.
 (Name of Company/Utility/Gov't Dept)
 Name/Post: Samson Lam (Project Manager)
 Date: 14 May 2011
 Tel. No. 92311740 Fax No. 24459139

cc: AECOM (DC0706 Site Office)
 EPD (SEP(REGION N)11 - Mr K C Tam)(Fax: 26506033)

Record of Emergency Work During Restricted Hours*
 For the Day/Month of 15 May 2011 (from 0800 - 2000)

Hyd Emerg. Serial No.(If applicable)	EO no.	Police ref.	Name of Contractor	Location of Work	Description and Justification of Emergency Work	Date & Time		List of PME used and/or PCW carried out	Noise control measure Implemented? Noise barrier provided? If no, gives reasons?	Is hand-held breaker used?	
						Start of Work	Completion of Work			If Yes, What Type?	Noise barrier provided. If no, Why?
		BOB no.	Chiu Hing Construction & Transportation Co. Ltd.	DSD Contract No. DC2007/06 Lam Tsuen River, She Sha River and Tai Po River	As heavy rain is expected on 15-17 May 2011, Emergency Flood Preventive Works shall be carried	15/5/2011 0800	15/5/2011 2000	6 Backhoe for earth removal	Temp Noise Barrier	No	

* Restricted hours: 7pm-7am and any time on general holiday, including Sunday
 # Example: Use of Sited equipment (I.e. hydraulic crusher, electric/hydraulic breaker, quiet miller, pavement ripper, saw & lift etc.)
 1) Powered Mechanical Equipment
 2) Prescribed Construction Work, if the construction site is within Designated Area.
 3) For example, electric/ hydraulic hand-held breaker.
 (Please refer overleaf for examples of typical emergency construction works)

Signature: 
 Name/Post: Samson Lam (Project Manager)

To: Director of Environmental Protection
 (Attn: S(RA)6 Fax: 2413 3358)
 6/F., Chinachem Tsuen Wan Plaza,
 455-457 Castle Peak Road, Tsuen Wan,
 N. T.

From: Chiu Hing Construction & Transportation Co. Ltd.
 (Name of Company/Utility/Gov't Dept)
 Name/Post: Raymond Kwok (Site Agent)
 Date: 25 May 2011
 Tel. No. 68 22 5136 Fax No. 24459139

cc: AECOM (DC0706 Site Office)
 EPD (SEP/REGION N)11 - Mr K C Tam (Fax: 26506033)

Record of Emergency Work During Restricted Hours*
 For the Day/Month of 22 May 2011 (From 13:30 - 16:30)

Hyd Emerg. Serial No. (If applicable)	EO no.	Police ref.	Name of Contractor	Location of Work	Description and Justification of Emergency Work	Date & Time		List of PME used and/or PCW carried out	Noise control measure implemented? Noise barrier provided? If no, gives reasons?	Is hand-held breaker used?	
						Start of Work	Completion of Work			If Yes, What Type?	Noise barrier provided. If no, Why?
			Chiu Hing Construction & Transportation Co. Ltd.	DSD Contract No. DC2007706 Lam Tsuen River, She Sha River and Tai Po River	As directed by ER to clean the sediment on river course to prevent flooding.	22 May 2011	22 May 2011	2 Backhoe for earth removal	Temp Noise Barrier	No	

* Restricted hours: 7pm-7am and any time on general holiday, including Sunday
 # Example: Use of Sited equipment (i.e. hydraulic crusher, electric/hydraulic breaker, quiet miller, pavement ripper, saw & lift etc.)
 1) Powered Mechanical Equipment
 2) Prescribed Construction Work, if the construction site is within Designated Area.
 3) For example, electric/ hydraulic hand-held breaker.
 (Please refer overleaf for examples of typical emergency construction works)

Signature: [Signature]
 Name/Post: Raymond Kwok (Site Agent)

COMPLAINT / CONCERN LOG

Ref: DC0706-CL-110524 (EPD)

Log Ref	Event Date/Location	Complainant/Date of Contact	Details of Complaint	Investigation/Mitigation Action	File Closed
<p>Our REF: DC0706-CL-110524(EPD)</p> <p>EPD Case Ref. No.: EP3/N05/RN/00009991-11</p>	<p>Sundays and public holidays since 1st May 2011, and between 19:00 and 00:00 on weekdays</p> <p>Project site at Upper Tai Po River, nearby Sheung Wun Yiu</p>	<p>A Complaint was referred by EPD on 24th May 2011</p>	<p>A complaint was recorded for noise nuisance arisen from construction activities during public holidays and Sundays since 1st May 2011, and during night time between 19:00 and 00:00 on weekdays at Upper Tai Po River (UTPR).</p>	<p>1. A complaint on 24th May 2011 was recorded regarding noise concern generated from construction activities within project site during public holidays and Sundays since 1st May 2011, and during night time between 19:00 and 00:00 on weekdays at UTPR. Environmental Team (ET) was informed by email on the same day by the Residential Engineer (RE).</p> <p>2. As reported by Contractor, emergency flood relief works were carried out by backhoes during 1st-2nd May and 15th May from 08:00 to 20:00, and on 22nd May from 13:30 to 16:30 due to the expected rainfall. Contractor had also notified EPD via the form of "Record of Emergency Works during Restricted Hours" (Appendix A) by fax on 30th April 2011, 14th and 25th May 2011 for carrying out the emergency works during the public holidays. Contractor also reported that the working hour for weekdays is from 08:00 to 18:00.</p> <p>3. ET reviewed the routine noise monitoring results recorded on 6th, 13th, 20th and 28th May 2011 and no exceedance was found for all measurements.</p> <p>4. Site investigation was held on 25th May 2011 with representatives from RE, Independent Environmental Checker and Contractor to resolve the concerns.</p>	<p>Yes</p>

	<p>5. During investigation, a backhoe was observed in idle at approximate ch.550. No other noise source was identified nearby Sheung Wun Yiu, i.e. between ch.400 and ch.600 of UTPR, during investigation as no river work should be carried out after the arrival of wet season (Fig.5.1 and 5.2).</p> <p>6. ET conducted routine noise monitoring on 28th May 2011 at the nearest noise sensitive receivers (i.e.: UTP 1, 2 and 3) from the noise sources. No exceedance of limit level (i.e.: >75 dB) was recorded all three monitoring locations.</p> <p>7. As similar complaint was received on 4th May 2011 already, Contractor was recommended to minimize the number of emergency works during restricted hours, such as public holiday and Sunday. If necessary, EPD should be notified through the record of “emergency works during restricted hours” prior to the start of the emergency work. Contractor was also reminded that no construction activity should be carried out after 19:00 on weekdays unless a construction noise permit was possessed.</p> <p>8. Since some of the proposed recommendations of noise mitigation measures for the noise complaint received on 4th May 2011 were not observed, Contractor was seriously advised to enhance the site practise on noise mitigation measures, such as avoiding parallel operations of construction machinery to minimize noise generation and re-erecting noise barriers to protect nearby sensitive receivers from construction noise.</p>

