

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

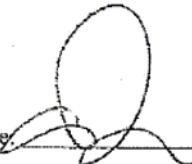

UPPER TAI PO RIVER

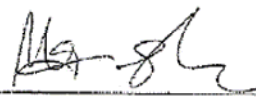
for April 2009

Environmental Pioneers & Solutions Limited
8/F, Chaiwan Industrial Centre Building
20 Lee Chung Street, Chaiwan, Hong Kong
Tel: 28890569 Fax: 2856 2010

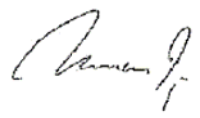
The Contents of this report have been

Certified by:

Signature:   Date: 27/5/2009
Miss. Patricia Chung
(Environmental Team Leader)

Signature:  Date: 27 May 2009
Dr. Mark Shea
(Ecologist)

and Verified by:

Signature:  Date: 27/5/2009
Mr. Marcus IP
(Independent Environment Checker)

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Executive summary

This is the eighth monthly Environmental Monitoring and Audit (EM&A) Report for the river improvement works at Upper Tai Po River under Drainage Service Department Contract No. DC/2007/06 entitled “River Improvement Works in Upper Lam Tsuen River, She Shan River and Tai Po River”. This report concludes the impact monitoring for the activities undertaken during the period from 1st April 2009 to 30th April 2009. The major construction activities carried out by the contractor during this reporting period include construction of boulder trap and gabion wall.

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.

Ecological Impact Monitoring prepared by the Ecologist Dr. Mark Shea was not scheduled in this month hence no related information was included in this reporting month. The next ecological impact monitoring was scheduled to be conducted in July 2009. The summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist Dr. Mark Shea, 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 were not scheduled for this month. Therefore, no vibration monitoring was conducted during the reporting month.

There was no non-compliance recorded for this reporting month.

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

There was no reporting change for this month.

Although river-based and major construction activities will be ceased during the wet season, site preparation works including formation of haul access and construction of bunds for flood protection, were proposed to be carried out in the coming month. With reference to the environmental permit and EM&A manual, mitigation measures should be implemented if necessary.

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 eighth monthly Environmental Monitoring and Audit (EM&A) Report for the river improvement works at Upper Tai Po River under Drainage Service 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 was 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 April 2009. 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

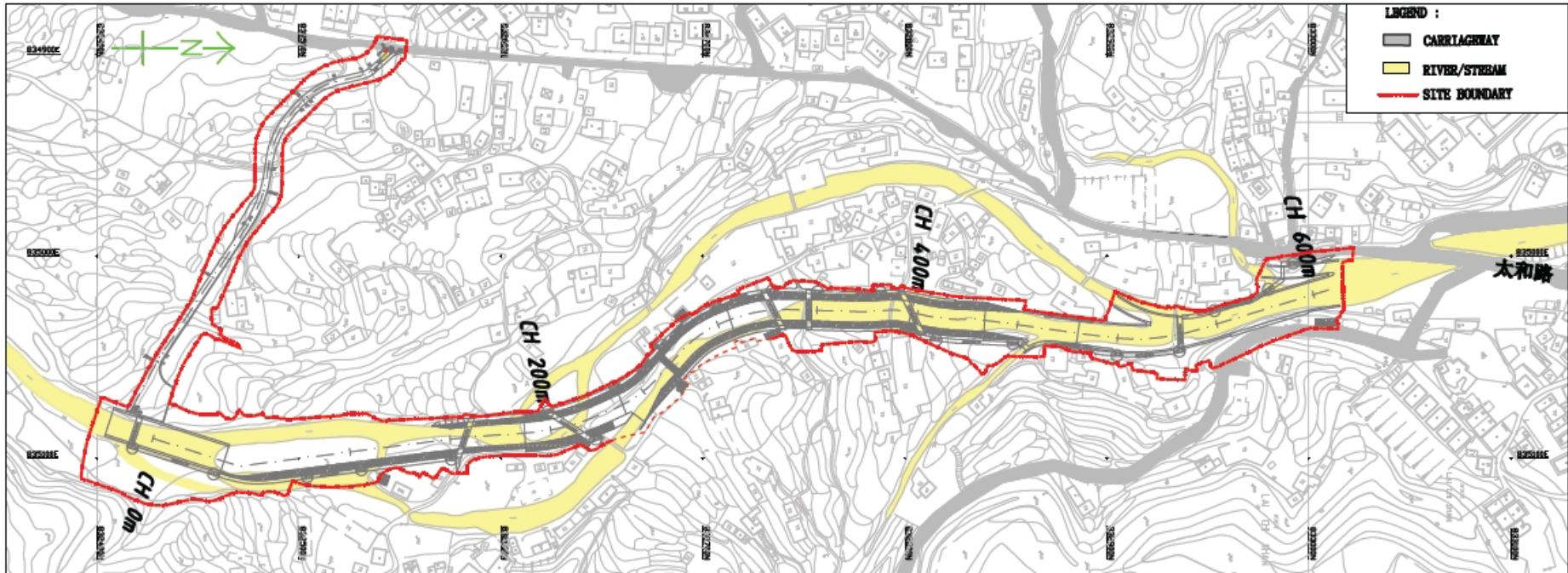
The construction of the proposed improvement works for Upper Tai Po River has been commenced on September 15th 2008 and anticipated to complete in April 2011.

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 activities carried out by the contractor during this reporting period include:

- (1) Construction of boulder trap; and
- (2) Construction of gabion wall.

2.5 Construction activities for the next reporting period

Due to the contractual requirements, no river-based construction activities should be carried out during wet season. However, site preparation works are proposed to be carried out including:

- (1) Formation of haul access D;
- (2) Construction of bunds and weirs to prevent flooding of village houses; and
- (3) Leveling of earth materials for formation of haul access D.

2.6 Non-compliance with the environmental performance limits

There was no non-compliance 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 was no complaint received for this monitoring month. Totally, four complaints had been received since the commencement of the contract. The cumulative complaint log is shown in Appendix F.

3.0 Ecological monitoring results

Capture survey and ecological impact monitoring conducted by Dr. Mark Shea was not scheduled for this month. The next ecological impact monitoring is scheduled in July 2009 and the next capture survey is scheduled in November 2009.

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 month on 7th, 14th, 21st and 28th April 2009 and the $L_{eq(30min)}$ results ranged from 43.8dB(A) to 72.3dB(A), and therefore, no exceedance of action or limit level was recorded in this reporting month. For further details of the monitoring results, graphical plots and the location plan, please refer to 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 starts in Upper Tai Po River.

6.0 Environmental issues and actions

6.1 Site inspections and key environmental issues

As mentioned in Section 8.1 of the EM&A manual, 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 1st, 8th, 15th, 22nd and 29th April. 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, the ecological inspection prepared by the Ecologist, Dr. Mark Shea 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
4 Mar 09	Chemical tanks and drums were found poorly stored at the steel storage area in UTPR	Observation	Proper drip trays should be provided to the chemical materials temporarily used/ stored on site; unused chemicals should be returned to designated chemical storage area	Chemical tanks and drums were transferred to the temporary storage area at access road D	1 Apr 09	--
19 Mar, 25 Mar 09	Sections of noise barriers were found not set up as required by EP	Observation	Contractor was advised to erect the noise barriers in accordance with the designs and requirements stated in the project documents (i.e. EP, PS and PP)	As major construction activities were ceased due to the coming of wet season. Outstanding noise barriers were proposed not to be erected as informed by contractor	8 Apr 09	--
25 Mar 09	Surface runoff was observed entering the river channel from the gaps of rock bunds to the river channel	Observation	Contractor was advised to take immediate actions by providing sand bags and aggregates to block the muddy water further entering the channel from gaps	As immediate actions taken, no further deficiencies were observed during the site inspection on 1 Apr	1 Apr 09	--
11 Mar, 19 Mar & 25 Mar 09	Turbid water was found discharged from the de-silting facility to the river channel	Observation	Contractor was advised to check and rectify the defective de-silting facility as soon as possible to stop further deterioration caused by the discharge	The de-silting facility was repaired as claimed by contractor. No further turbid discharge was observed from the de-silting facility during inspection	1 Apr 09	--
1 Apr 09	Muddy water was observed entering the river channel from the upper branch at approximately ch.50	Observation	Although the source was believed to be outside the project area, contractor was recommended to take remedial actions to divert the muddy water to site water treatment facility.	Muddy water was diverted to the de-silting facility immediately. No further muddy water was found generated from the upper branch during the inspection on 8 Apr	8 Apr 09	--
1 Apr 09	Water pipes diverting site water was found poorly placed across the river	Observation	Contractor was advised to improve their housekeeping practice. Pipeline submerged	Defective pipelines have been removed prior to the site inspection on 8 Apr	8 Apr 09	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
	channel		into the stream course should be prevented to avoid leakage of site water from the pipes affecting the stream.			
1 Apr, 8 Apr 09	Unused de-silting tank was found accumulated with stagnant water at ch.50	Observation	Stagnant water and sediments accumulated in the de-silting tank should be removed for mosquito control and hygiene issues.	De-silting was removed from the site prior to the site inspection on 15 Apr	15 Apr 09	--
8 Apr 09	Underground water led from excavated pit for gabion wall construction to down stream area	Observation	Contractor was advised to take proper protective measures to prevent erosion of soil surfaces, which might affect the river	No further actions were observed	Ongoing	--
8 Apr, 15 Apr 09	Chemical bucket containing mould oil was found poorly placed at the haul road	Observation	Contractor was recommended to provide proper drip tray for chemical containers used on site. Unused chemicals should be returned to the designated chemical storage area.	The bucket was removed from the concerned spot as reported by Contractor during the inspection on 29 Apr	29 Apr 09	--
15 Apr, 22 Apr 09	Damaged noise barriers was found at approximately ch.50 nearby the excavated pit for gabion walls	Observation	Contractor was advised to replace or repair the damaged barriers should any construction activities carried out at the nearby	No further follow up actions were observed within this reporting month	Ongoing	--
15 Apr 09	Loose geo-textile coverings for the earth bunds were observed along the river channel	Observation	Contractor was recommended to review the conditions of such coverings provided along the river channel. Loose coverings should be removed or rectified as such may be flushed away and caused clogging and flooding	Defective coverings have been removed and rectified as advised.	22 Apr 09	--
22 Apr 09	Containers collected oil from the backhoe were found placed on the site ground defectively	Observation	Contractor was advised to provide lids and drip pans to the containers to prevent chemical spillage	Containers were removed from the site area prior to the site inspection on 29 Apr	29 Apr 09	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
22 Apr, 29 Apr 09	Soil stained with oil were found underneath the backhoe and the breaker at approximately ch.10	Observation	Contractor was advised to check the conditions of their equipment and stop further leakage as soon as possible. Secondary containment should be provided to the oily equipments for leakage control	No further follow up actions were observed within this reporting month	Ongoing	--
29 Apr 09	Construction materials and pipelines that were not in use were found placed on top of the earth bunds	Observation	Contractor was reminded to be cautious on the housekeeping. No objects should be placed nearby the channels and on top of bunds to prevent clogging of river channel	To be follow up in next inspection	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 Apr 2009	No Major findings for this inspection	No Advice is required	No Action is required to be taken	08 Apr 2009
08 Apr 2009	No Action is required to be taken	No Advice is required	No Action is required to be taken	15 Apr 2009
15 Apr 2009	No Action is required to be taken	No Advice is required	No Action is required to be taken	22 Apr 2009
22 Apr 2009	No Action is required to be taken	No Advice is required	No Action is required to be taken	29 Apr 2009
29 Apr 2009	No Action is required to be taken	No Advice is required	No Action is required to be taken	06 May 2009

6.2 Non-compliance

There was no non-compliance recorded for the month of April 2009.

6.3 Recommendations

Conditions of bunds, barriers and their geo-textile coverings are the major concerns in this reporting month. During the wet season, contractor should be aware of the increased water level and rainstorm, which would flush away the site materials and loose geo-textiles. Contractor was advised to rectify or replace the loose coverings along the channel, as it is practicable. Rainwater would also cause erosion to the exposed bare soil surface, contractor was advised to take actions to prevent soil erosion as soon as possible.

Handling of chemical materials and wastes were another major topic in this reporting month. Contractor was advised to provide drip pans to the chemicals temporarily used on site. Unused chemicals should be returned to the designated chemical storage area. Soil contaminated with chemicals should be properly collected and handled as chemical wastes for further disposal.

Contractor was reminded to ensure noise barriers provided on site are erected according to the requirements stipulated in the EP, as to minimize noise impacts to the vicinity of sensitive receivers. As major site activities will be ceased but site preparation works would be still ongoing, contractor was advised to re-erect noise barriers and implement other noise mitigation measures, if found necessary.

6.4 Implementation status and effectiveness of the mitigation measures

Contractor took most of the advice given by ER, IEC as well as ET and follow up the comments given.

As there were some ongoing follow up practices, contractor was reminded to regularly review and rectify the discrepancy once found.

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 general reuse are recommended to be audited 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.

Table 7.1 Summary of Waste Disposal for the reporting month.

Type of waste	Inert Waste	Non-Inert Waste	Chemical Waste
April 2009	0	0	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	Issued
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

In accordance with the contract requirements, major construction activities will be ceased during the wet season. However site preparation works will be carried out in the coming month, which included preparation and formation works of haul access, as well as construction works of bunds and weirs. The construction activities for these items will generate several environmental impacts. These include air, noise, water and waste.

Site construction activities may generate dust impact to the vicinity of sensitive receivers. Contractor is advised to provide regular water spraying to the dusty static area. Open stockpiles should be covered with tarpaulin to prevent erosion.

The construction machines and plants would generate noise. These machines and plants may be in intermittent use should be shut down between work periods or should be throttled down to a minimum in order to minimize the noise impact from the construction activities.

Noisy activities should be well planned and scheduled to avoid parallel operation of multiple plants, so as to minimize noise impacts to the nearby sensitive receivers.

Construction of earth bunds may generate runoff and water concern at the site. Enclosed site area should be formed for the construction as to prevent site water entering the stream course.

10.0 Conclusion

The major construction activities carried out by the contractor during this reporting period include construction of boulder trap and gabion wall.

Regular site meetings and inspection audits led by the seniors for discussing environmental issues were held among project proponent, Contractor and the ET 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 were not scheduled for this month. 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.

There was no non-compliance recorded for the reporting month.

There was no complaint received for the reporting month.

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	L90 30min	L10 30min	Leq 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description	
UTP	1	53.9	68.0	66.0	7-Apr-09	1045-1115	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	1. Background noise from public and traffic, 2. Noise from innovation activities from the village house	Cloudy	Façade
UTP	2	54.0	64.0	62.7	7-Apr-09	1120-1150	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	1. Background noise from public and traffic, 2. Noise from innovation activities from the village house	Cloudy	Façade
UTP	3	51.7	66.1	62.9	7-Apr-09	1515-1545	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public and traffic	Cloudy	Façade
UTP	4	53.4	62.1	60.2	7-Apr-09	1305-1335	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public and traffic	Cloudy	Façade
UTP	5	50.7	59.3	56.7	7-Apr-09	1337-1407	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public and avians	Cloudy	Façade
UTP	6	47.2	56.8	53.9	7-Apr-09	1550-1620	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public and avians	Cloudy	Façade
UTP	7	46.1	56.3	55.8	7-Apr-09	1621-1651	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public, dogs and avians	Cloudy	Façade
UTP	8	46.7	58.9	56.7	7-Apr-09	1655-1725	1. Excavation noise	Background noise from public, dogs and avians	Cloudy	Façade
UTP	9	53.1	61.4	58.5	7-Apr-09	1425-1455	1 Excavator noise, 2 Boulder breaking noise, 3 Boulder removing noise, 4 Concrete cutting noise	Background noise from public	Cloudy	Façade
UTP	10	45.4	74.3	68.5	7-Apr-09	1003-1033	1. Excavator noise, 2 Boulder breaking noise, 3 Boulder removing noise, 4 Concrete cutting noise	Background noise from public	Cloudy	Façade
UTP	11	48.8	64.7	60.4	7-Apr-09	0930-1000	1 Excavator noise, 2 Boulder breaking noise, 3 Boulder removing noise, 4 Concrete cutting noise	Background noise from public	Cloudy	*Free field

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

Location	L90 30min	L10 30min	Leq 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description	
UTP	1	70.2	74.0	72.3	14-Apr-08	0948-1018	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	1. Concrete curing and hand breaking noise from other construction site, 2. Background noise from public and traffic	Sunny	Façade
UTP	2	57.3	66.2	63.5	14-Apr-08	0915-0945	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	1. Concrete curing and hand breaking noise from other construction site, 2. Background noise from public and traffic	Sunny	Façade
UTP	3	45.7	53.3	51.0	14-Apr-08	1540-1610	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public and avians	Sunny	Façade
UTP	4	57.7	60.9	53.0	14-Apr-08	1022-1052	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public, traffic and avians	Sunny	Façade
UTP	5	49.3	55.6	54.0	14-Apr-08	1054-1124	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public, traffic and avians	Sunny	Façade
UTP	6	45.1	58.1	55.7	14-Apr-08	1615-1645	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its long distance from the construction activities	Background noise from public and avians	Sunny	Façade
UTP	7	46.8	60.3	56.7	14-Apr-08	1415-1445	1. Excavation noise	Background noise from public and avians	Sunny	Façade
UTP	8	48.4	56.0	53.2	14-Apr-08	1650-1720	1. Excavation noise	Background noise from public and avians	Sunny	Façade
UTP	9	50.9	63.6	60.4	14-Apr-08	1447-1517	1. Excavation noise, 2. Boulder removal noise	Background noise from public	Sunny	Façade
UTP	10	48.4	58.7	55.6	14-Apr-08	1332-1402	1. Excavation noise, 2. Boulder removal noise	Background noise from public	Sunny	Façade
UTP	11	49.3	58.0	55.5	14-Apr-08	1300-1330	1. Excavation noise, 2.Noise generated from boulder breaking and removing	Background noise from public	Sunny	*Free field

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

Location	L90 30min	L10 30min	Leq 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	54.2	68.5	66.0	21-Apr-08	0950-1020	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	1. Background noise from public and traffic, 2. Noise from innovation activities from the village house	Sunny	Façade
UTP 2	54.4	65.3	64.8	21-Apr-08	0915-0945	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 from traffic and public	Sunny	Façade
UTP 3	43.1	57.1	54.0	21-Apr-08	1645-1715	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 from public and avians	Sunny	Façade
UTP 4	54.3	60.3	59.6	21-Apr-08	1028-1058	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 from traffic and public	Sunny	Façade
UTP 5	50.5	55.5	53.9	21-Apr-08	1100-1130	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 from traffic and public	Sunny	Façade
UTP 6	44.3	53.3	50.5	21-Apr-08	1610-1640	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 from public and avians	Sunny	Façade
UTP 7	45.9	57.2	53.6	21-Apr-08	1537-1607	1. Excavation noise	Background noise from public and avians	Sunny	Façade
UTP 8	48.2	53.0	50.9	21-Apr-08	1500-1530	1. Excavation noise	Background noise from public and avians	Sunny	Façade
UTP 9	46.6	55.6	52.5	21-Apr-08	1410-1440	1. Excavation noise	Background noise from public	Sunny	Façade
UTP 10	44.4	55.4	54.0	21-Apr-08	1335-1405	1. Excavation noise	Background noise from public	Sunny	Façade
UTP 11	44.1	52.4	49.9	21-Apr-08	1300-1330	1. Excavation noise	Background noise from public	Sunny	*Free field

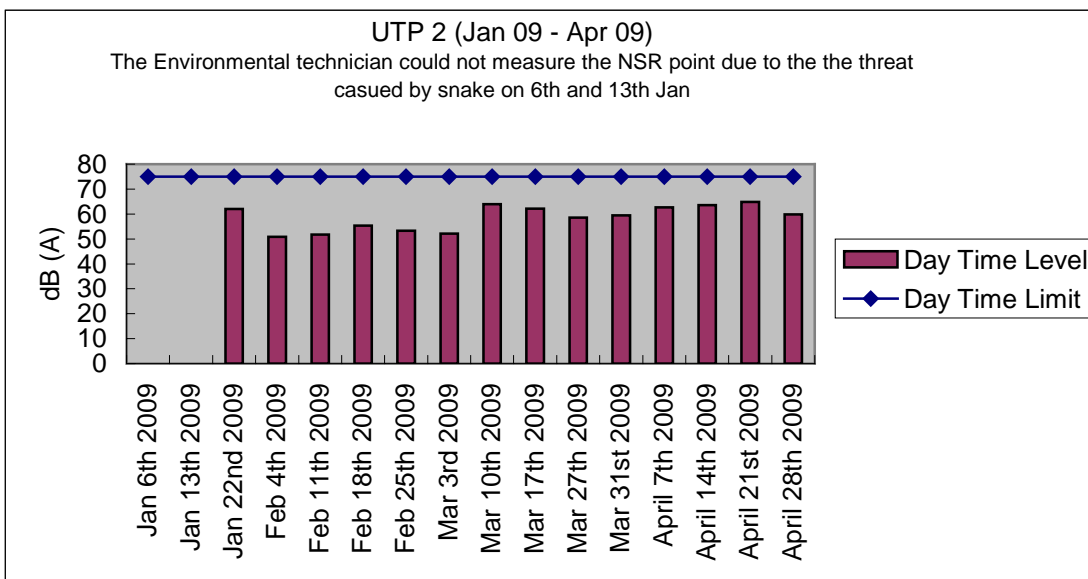
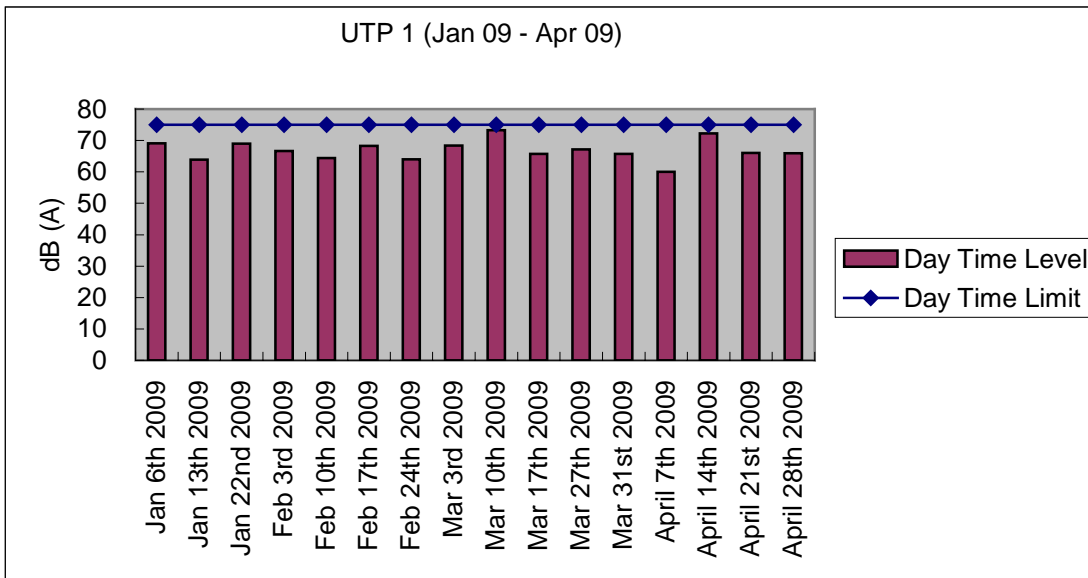
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

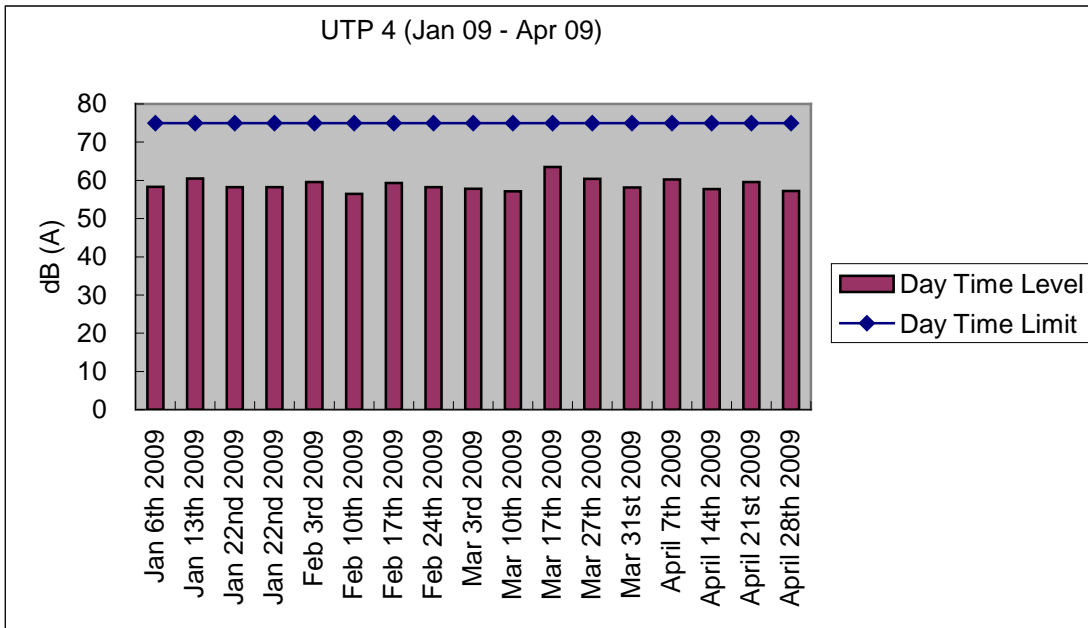
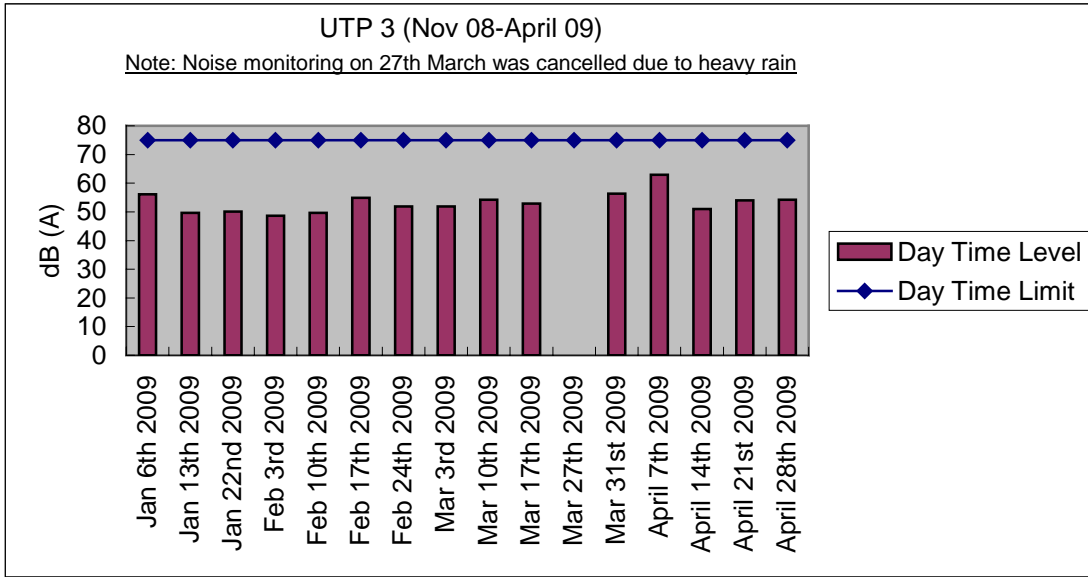
Location	L90 30min	L10 30min	Leq 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	53.4	67.2	65.9	28-Apr-09	1040-1110	The measured noise level was dominated by the background noise in the immediate vicinity of the monitoring location due to its large distance from the construction activities	Background noise from traffic and public	Sunny	Façade
UTP 2	53.1	59.2	59.9	28-Apr-09	1115-1145	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 from traffic and public	Sunny	Façade
UTP 3	48.6	56.6	54.2	28-Apr-09	1403-1433	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 from public	Sunny	Façade
UTP 4	50.7	60.4	57.2	28-Apr-09	1300-1330	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 from traffic and public	Sunny	Façade
UTP 5	48.1	56.7	55.8	28-Apr-09	1331-1401	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 from public	Sunny	Façade
UTP 6	47.9	55.8	53.6	28-Apr-09	1438-1508	1. Excavation noise	Background noise from public	Sunny	Façade
UTP 7	44.0	55.8	54.9	28-Apr-09	1509-1539	No construction was being carried out during measurement	Background noise from public	Sunny	Façade
UTP 8	47.9	49.9	43.8	28-Apr-09	1541-1611	No construction was being carried out during measurement	Background noise from public	Sunny	Façade
UTP 9	43.8	63.6	60.1	28-Apr-09	1630-1700	1. Excavation noise	Background noise from public	Sunny	Façade
UTP 10	46.3	58.7	56.0	28-Apr-09	1001-1031	1. Excavation noise 2. Hand held breaking noise	Background noise from public and dogs	Sunny	Façade
UTP 11	45.0	53.2	51.9	28-Apr-09	0930-1000	1. Excavation noise 2. Hand held breaking noise	Background noise from public and dogs	Sunny	*Free field

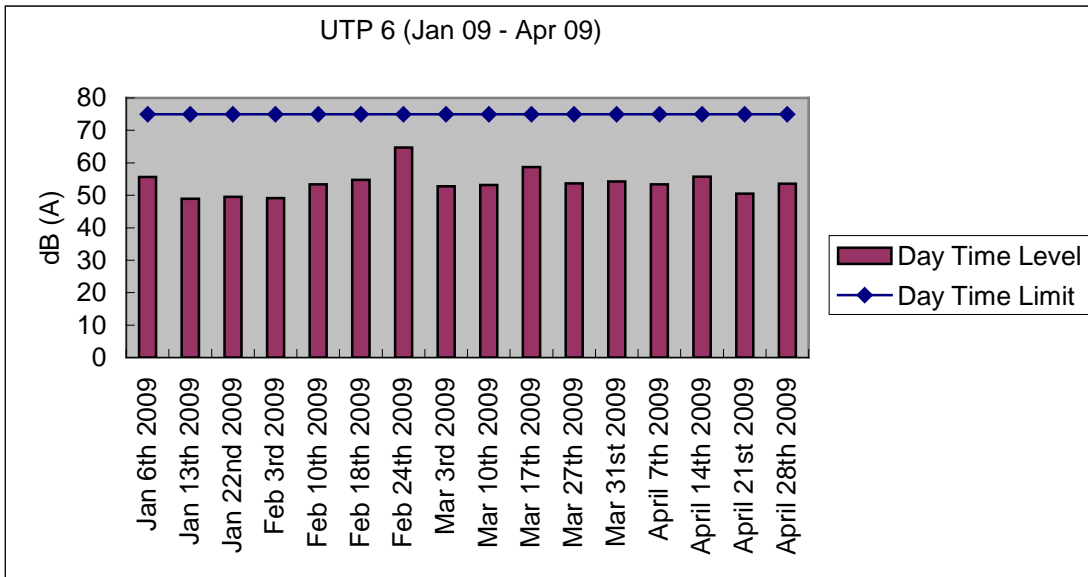
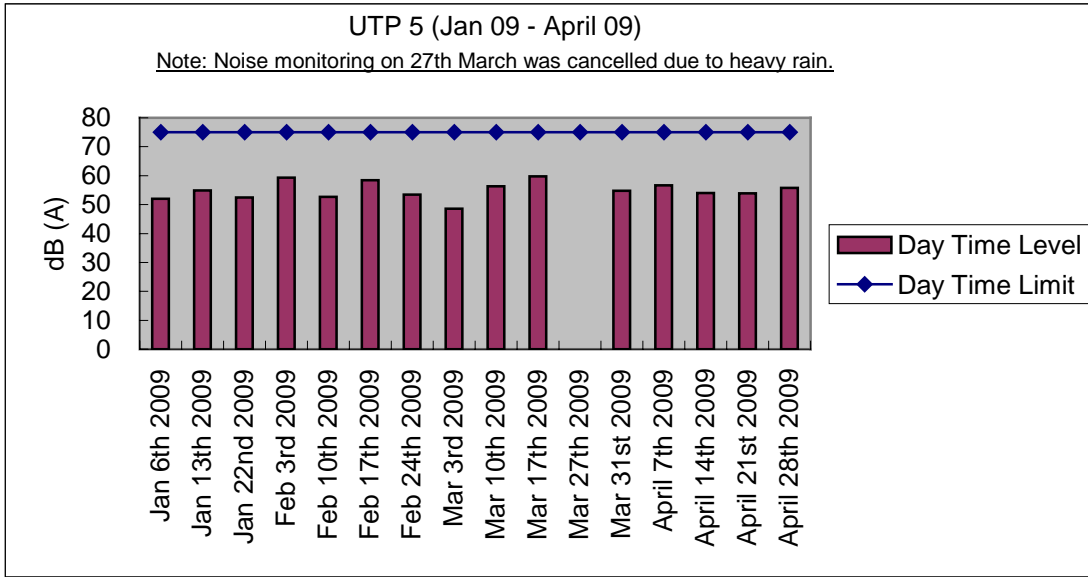
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

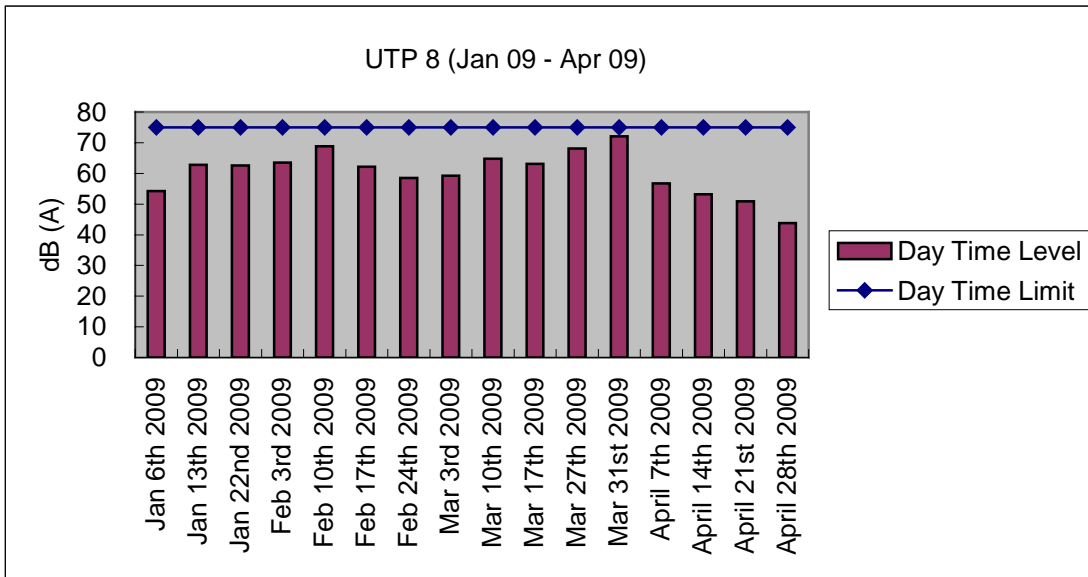
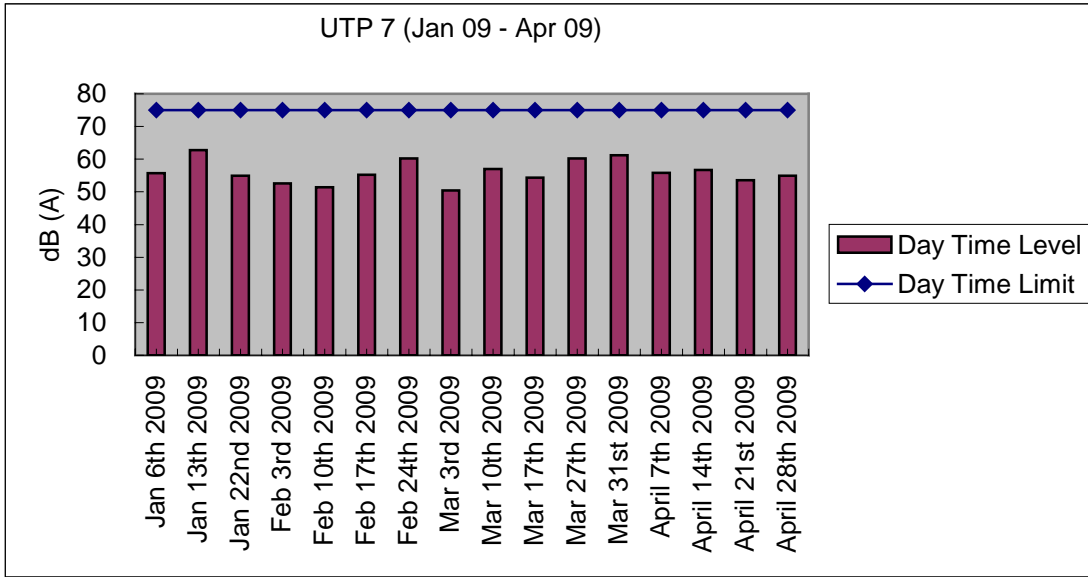
Graphical plot for noise measurements

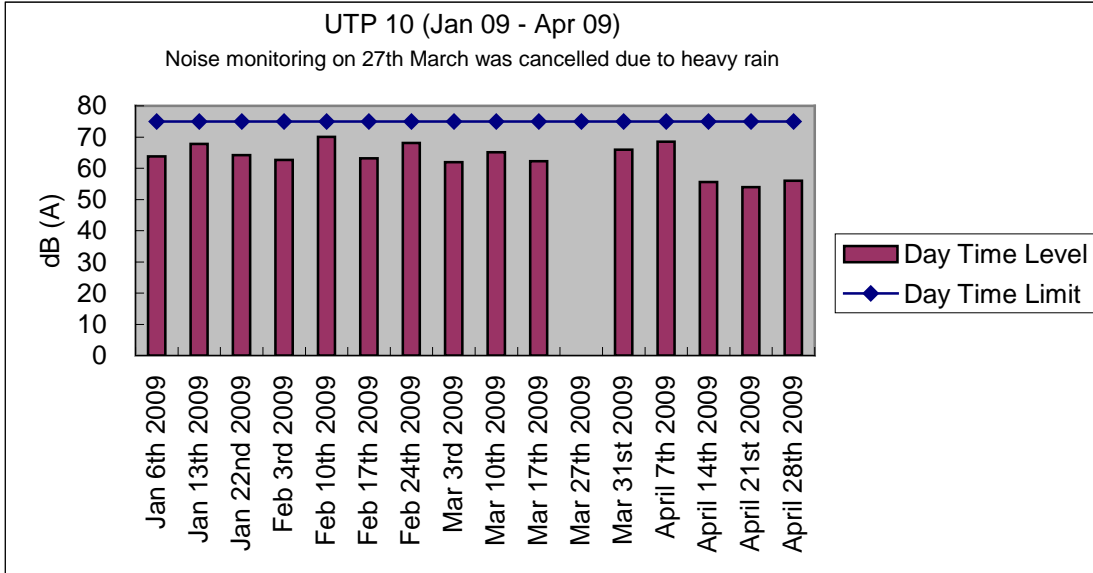
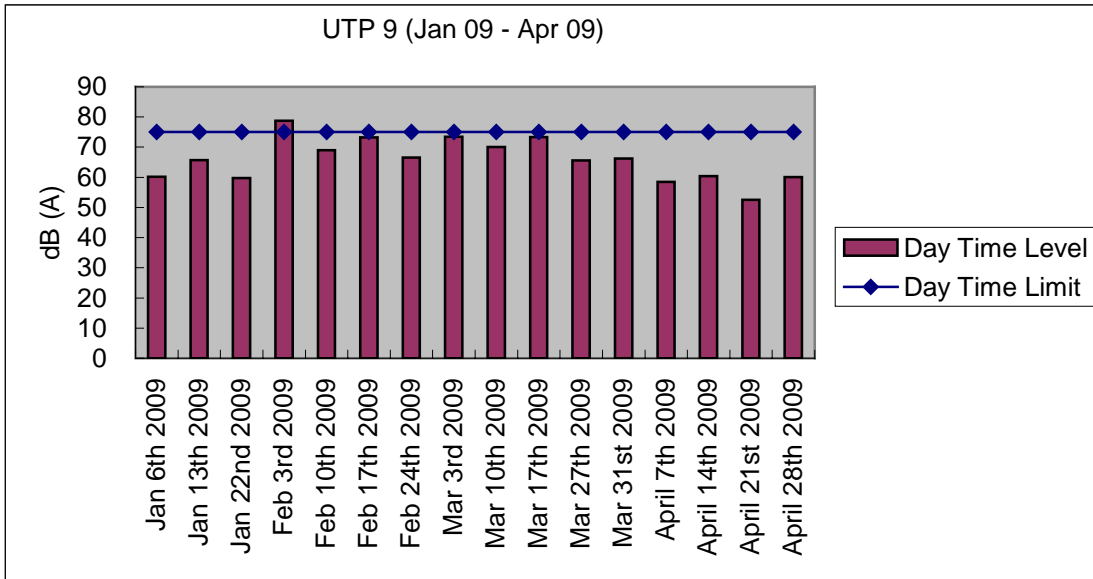
The following plots were the graphical plots for the 11 monitoring locations. Each plot showed the day time limit 75 dB(A), daytime level, date and the measured dB(A) results as in Leq 30min for each location. The graph contains the data recorded from January 2009 to April 2009.

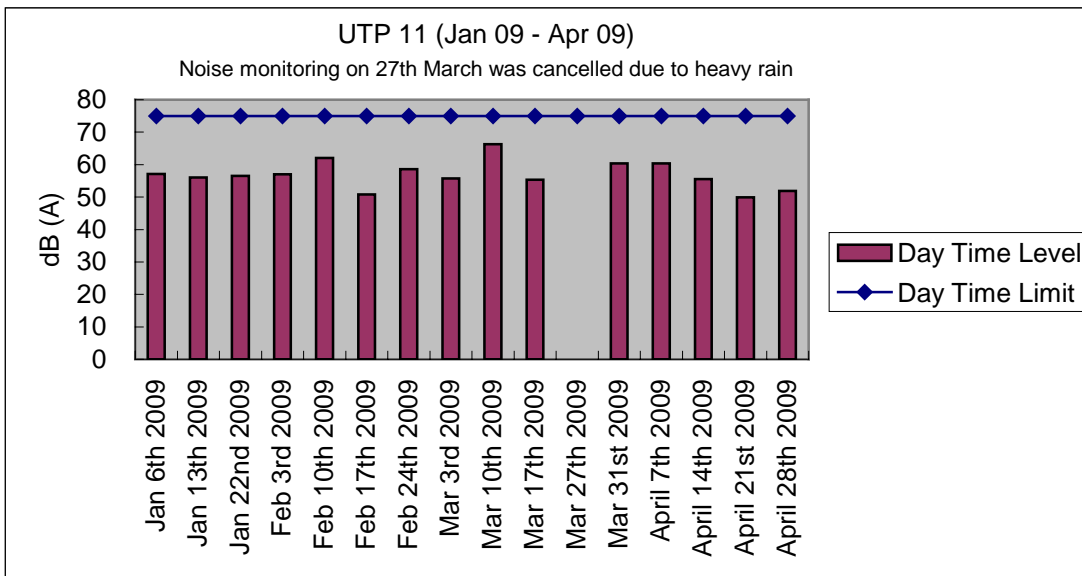


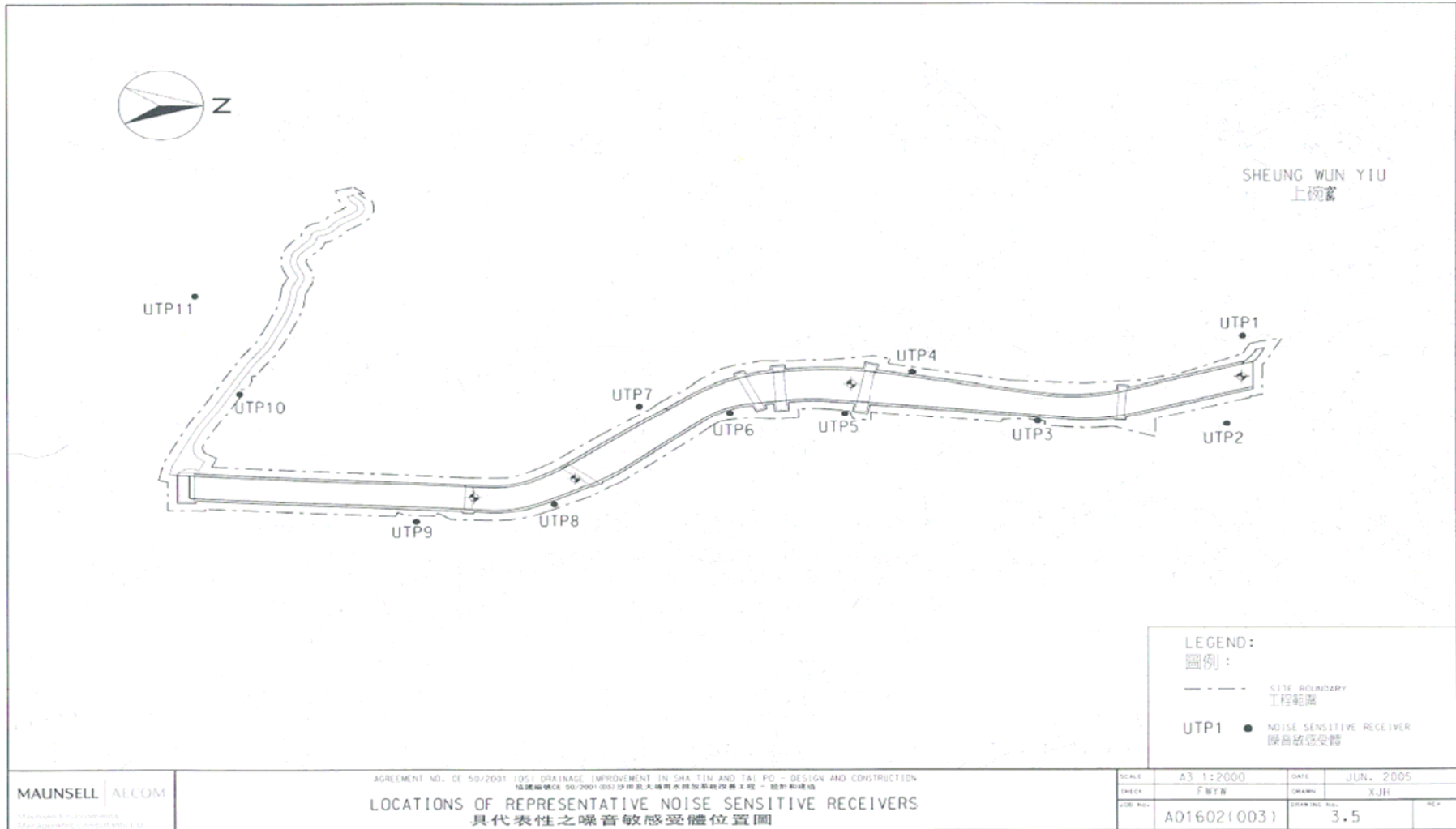












Appendix E: Monitoring schedule for the present and next reporting period

Master Schedule of EM&A works in April 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			4/1	4/2	4/3	4/4
			Site inspection at afternoon			
4/5	4/6	4/7	4/8	4/9	4/10	4/11
		Noise monitoring	Site inspection at afternoon			
4/12	4/13	4/14	4/15	4/16	4/17	4/18
		Noise monitoring	Site inspection at afternoon			
4/19	4/20	4/21	4/22	4/23	4/24	4/25
		Noise monitoring	Site inspection and S.S.E.M.C. at morning			
4/26	4/27	4/28	4/29	4/30		
		Noise monitoring	Site inspection at afternoon			

Master Schedule of EM&A works in May 2009

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					5/1	5/2
5/3	5/4	5/5	5/6	5/7	5/8	5/9
		Noise monitoring	Site inspection at afternoon			
5/10	5/11	5/12	5/13	5/14	5/15	5/16
		Noise monitoring	Site inspection at afternoon			
5/17	5/18	5/19	5/20	5/21	5/22	5/23
		Noise monitoring	Site inspection and S.S.E.M.C. at morning			
5/24 & 5/31	5/25	5/26	5/27	5/28	5/29	5/30
		Noise monitoring	Site inspection at afternoon			

Appendix F: Cumulative complaint log

Environmental Parameters	Cumulative no. Brought forward	No. of complaint April 2009	Overall Total
Air/Dust	1	0	1
Noise	1	0	1
Water	2	0	2
House Keeping Hygiene	0	0	0
Chemical waste	0	0	0
Total	4	0	4

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	Not applicable	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	Improvement required	Settled on 8 Apr 09
	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	Not applicable at this stage	Not required
	The excavation area shall be enclosed with bunds or barriers and dewatered prior to excavation to minimize the impacts upon the downstream of the Tai Po River	Implemented	Not required
	Provide silt trap and oil interceptor to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before pumped to the public storm water drainage system	Implemented	Not required
	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

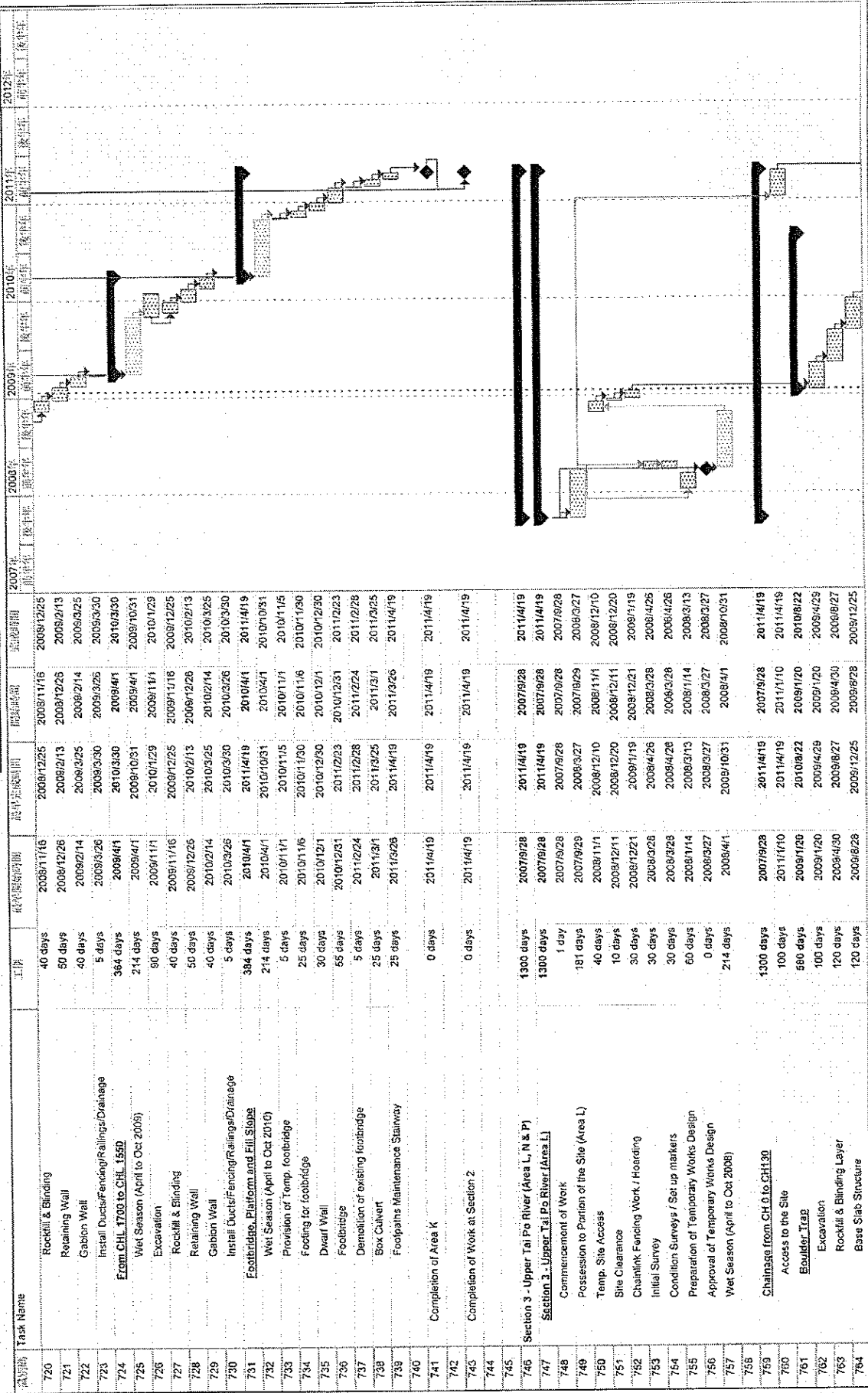
Appendix H: Cumulative waste flow tableCumulative waste flow table since September 15th 2008

Type of waste	Inert Waste	Non-Inert Waste	Chemical Waste
September 2008	0	0	0
October 2008	0	2 tonnes	0
November 2008	36m ³	0	0
December 2008	0	0	0
January 2009	0	0	0
February 2009	0	0	0
March 2009	0	0	0
April 2009	0	0	0
Total	36m ³	2 tonnes	0

Appendix I: Construction programme

Drainage Services Department

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



Task No.	Task Name	Duration	Start Date	End Date	Actual End Date
720	Rockfill & Blinding	40 days	2008/11/16	2009/12/25	2009/12/25
721	Retaining Wall	50 days	2008/12/26	2009/2/13	2009/2/13
722	Gabion Wall	40 days	2009/2/14	2009/3/25	2009/3/25
723	Install Ducts/Fencing/Railings/Drainage	5 days	2009/3/26	2009/3/30	2009/3/30
724	From CHL 1708 to CHL 1550	364 days	2009/4/1	2010/3/30	2009/4/1
725	Wet Season (April to Oct 2009)	214 days	2009/4/1	2009/10/31	2009/10/31
726	Excavation	90 days	2009/11/1	2010/1/29	2010/1/29
727	Rockfill & Blinding	40 days	2009/11/16	2009/12/25	2009/12/25
728	Retaining Wall	50 days	2009/12/26	2010/2/13	2010/2/13
729	Gabion Wall	40 days	2010/2/14	2010/3/25	2010/3/25
730	Install Ducts/Fencing/Railings/Drainage	5 days	2010/3/26	2010/3/30	2010/3/30
731	Footbridge, Platform and Fill Slaps	384 days	2010/4/1	2011/4/19	2011/4/19
732	Wet Season (April to Oct 2010)	214 days	2010/4/1	2010/10/31	2010/10/31
733	Provision of Temp. footbridge	5 days	2010/11/1	2010/11/5	2010/11/5
734	Footing for footbridge	25 days	2010/11/6	2010/11/30	2010/11/30
735	Dwarf Wall	30 days	2010/12/1	2010/12/30	2010/12/30
736	Footbridge	55 days	2010/12/31	2011/2/23	2011/2/23
737	Demolition of existing footbridge	5 days	2011/2/24	2011/2/28	2011/2/28
738	Box Culvert	25 days	2011/3/1	2011/3/25	2011/3/25
739	Footpaths Maintenance Stairway	25 days	2011/3/26	2011/4/19	2011/4/19
740	Completion of Area K	0 days	2011/4/19	2011/4/19	2011/4/19
741	Completion of Work at Section 2	0 days	2011/4/19	2011/4/19	2011/4/19
742					
743					
744					
745					
746	Section 3 - Upper Tai Po River (Area L, N & P)	1300 days	2007/9/28	2011/4/19	2011/4/19
747	Section 3 - Upper Tai Po River (Area L)	1300 days	2007/9/28	2011/4/19	2011/4/19
748	Commencement of Work	1 day	2007/9/28	2007/9/28	2007/9/28
749	Possession to Portion of the Site (Area L)	181 days	2007/9/29	2008/3/27	2008/3/27
750	Temp. Site Access	40 days	2008/11/1	2008/12/10	2008/12/10
751	Site Clearance	10 days	2008/12/11	2008/12/20	2008/12/20
752	Chainlink Fencing Work / Hoarding	30 days	2008/12/21	2009/1/19	2009/1/19
753	Initial Survey	30 days	2008/12/21	2009/1/20	2009/1/20
754	Condition Surveys / Set up markers	30 days	2008/12/21	2009/1/20	2009/1/20
755	Preparation of Temporary Works Design	60 days	2008/1/14	2008/3/13	2008/3/13
756	Approval of Temporary Works Design	0 days	2008/3/27	2008/3/27	2008/3/27
757	Wet Season (April to Oct 2008)	214 days	2008/4/1	2008/10/31	2008/10/31
758					
759	Chainage from CH 0 to CH 130	1300 days	2007/9/28	2011/4/19	2011/4/19
760	Access to the Site	100 days	2011/4/19	2011/4/19	2011/4/19
761	Boulder Trap	580 days	2009/1/20	2010/8/22	2010/8/22
762	Excavation	100 days	2009/4/29	2009/6/27	2009/6/27
763	Rockfill & Blinding Layer	120 days	2009/4/30	2009/8/27	2009/8/27
764	Base Slab Structure	120 days	2009/6/28	2009/12/25	2009/12/25

Drainage Services Department

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

Task Name	工期	前置日期	前置日期	前置日期	前置日期	前置日期	前置日期	前置日期	前置日期	前置日期
765 Wall Structure	120 days	2009/12/26	2010/04/24	2009/12/26	2010/04/24	2010/04/24	2010/04/24	2010/04/24	2010/04/24	2012-12
766 Cut/Fill Slope	120 days	2010/04/25	2010/08/22	2010/04/25	2010/08/22	2010/08/22	2010/08/22	2010/08/22	2010/08/22	2012-12
767 Footbridge, Platform and Fill Slope	1285 days	2007/9/28	2011/4/14	2007/9/28	2011/4/14	2007/9/28	2011/4/14	2007/9/28	2011/4/14	2012-12
768 Provision of Temp. footbridge	10 days	2007/9/28	2007/10/7	2007/9/28	2007/10/7	2007/9/28	2007/10/7	2007/9/28	2007/10/7	2012-12
769 Footing for footbridge	85 days	2009/12/26	2010/03/30	2009/12/26	2010/03/30	2009/12/26	2010/03/30	2009/12/26	2010/03/30	2012-12
770 Gabion Wall	90 days	2010/03/31	2010/06/28	2010/03/31	2010/06/28	2010/03/31	2010/06/28	2010/03/31	2010/06/28	2012-12
771 Install Ducts/Fencing/Railings/Cleanage	10 days	2010/06/29	2010/07/8	2010/06/29	2010/07/8	2010/06/29	2010/07/8	2010/06/29	2010/07/8	2012-12
772 Footbridge (FB1)	90 days	2010/07/9	2010/10/6	2010/07/9	2010/10/6	2010/07/9	2010/10/6	2010/07/9	2010/10/6	2012-12
773 Demolition of existing footbridge	10 days	2010/10/7	2010/10/16	2010/10/7	2010/10/16	2010/10/7	2010/10/16	2010/10/7	2010/10/16	2012-12
774 Platform & Fill Slope & Maintenance stairway	90 days	2010/10/17	2011/1/14	2010/10/17	2011/1/14	2010/10/17	2011/1/14	2010/10/17	2011/1/14	2012-12
775 Footpaths	90 days	2011/1/15	2011/4/14	2011/1/15	2011/4/14	2011/1/15	2011/4/14	2011/1/15	2011/4/14	2012-12
776 Completion of Area L	0 days	2011/4/19	2011/4/19	2011/4/19	2011/4/19	2011/4/19	2011/4/19	2011/4/19	2011/4/19	2012-12
777										
778										
779 Section 3 - Upper Tai Po River (Area P)	1300 days	2007/9/28	2011/4/19	2007/9/28	2011/4/19	2007/9/28	2011/4/19	2007/9/28	2011/4/19	2012-12
780 Commencement of Work	1 day	2007/9/28	2007/9/28	2007/9/28	2007/9/28	2007/9/28	2007/9/28	2007/9/28	2007/9/28	2012-12
781 Possession to Portion of the Site (Area P)	244 days	2007/9/29	2008/6/29	2007/9/29	2008/6/29	2007/9/29	2008/6/29	2007/9/29	2008/6/29	2012-12
782 Wet Season	155 days	2008/6/30	2008/10/31	2008/6/30	2008/10/31	2008/6/30	2008/10/31	2008/6/30	2008/10/31	2012-12
783 Temp. Site Access	40 days	2008/11/1	2008/12/10	2008/11/1	2008/12/10	2008/11/1	2008/12/10	2008/11/1	2008/12/10	2012-12
784 Site Clearance	20 days	2008/12/11	2008/12/30	2008/12/11	2008/12/30	2008/12/11	2008/12/30	2008/12/11	2008/12/30	2012-12
785 Chainlink Fencing Work	20 days	2008/12/11	2008/12/30	2008/12/11	2008/12/30	2008/12/11	2008/12/30	2008/12/11	2008/12/30	2012-12
786 Initial Survey	30 days	2008/6/30	2008/8/28	2008/6/30	2008/8/28	2008/6/30	2008/8/28	2008/6/30	2008/8/28	2012-12
787 Condition Surveys / Set up markers	30 days	2008/5/30	2008/6/28	2008/5/30	2008/6/28	2008/5/30	2008/6/28	2008/5/30	2008/6/28	2012-12
788 Preparation of Temporary Works Design	60 days	2008/9/28	2008/11/28	2008/9/28	2008/11/28	2008/9/28	2008/11/28	2008/9/28	2008/11/28	2012-12
789 Approval of Temporary Works Design	14 days	2008/11/27	2008/12/10	2008/11/27	2008/12/10	2008/11/27	2008/12/10	2008/11/27	2008/12/10	2012-12
790 S.I. Works	30 days	2008/12/31	2009/1/29	2008/12/31	2009/1/29	2008/12/31	2009/1/29	2008/12/31	2009/1/29	2012-12
791 Temp. Shoring Works	30 days	2008/12/11	2009/1/9	2008/12/11	2009/1/9	2008/12/11	2009/1/9	2008/12/11	2009/1/9	2012-12
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Project: Master Programme (REV.7)
Data Date: Jun 2009
Consultant: MCAI

Task
Task Progress
Critical Task

Critical Task Progress
Milestone
Summary

Roll Up Task
Roll Up Critical Task
Roll Up Milestone

Project Summary
Spk
External Tasks

Drainage Services Department

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

Activity	Task Name	Start	End	Duration	2007年	2008年	2009年	2010年	2011年	2012年
810	Demolition of existing footbridge	2010/03/26	2010/03/31	6 days						
811	Wet Season	2010/10/31	2010/10/31	214 days						
812	Platform & Cuffill Slope & Maintenance Stairway	2010/11/1	2011/1/24	85 days						
813	Footpaths	2011/1/25	2011/4/19	85 days						
814	Footbridge, Platform and Cuffill Stair	2008/4/1	2009/10/31	746 days						
815	Wet Season	2009/10/31	2009/10/31	214 days						
816	Provision of Temp. footbridge	2008/1/1	2009/1/1	5 days						
817	Footbridge (TB2)	2008/1/1	2009/12/30	55 days						
818	Dwarf Wall	2009/1/23/1	2010/3/31	91 days						
819	Wet Season	2010/1/1	2010/10/31	214 days						
820	Footbridge (TB2)	2011/1/1	2011/1/1	65 days						
821	Demolition of existing footbridge	2011/1/1	2011/1/1	5 days						
822	Platform & Cuffill Slope & Maintenance Stairway	2011/1/10	2011/2/28	50 days						
823	Footpaths	2011/3/1	2011/3/1	50 days						
824										
825	Completion of Area P	2011/4/19	2011/4/19	0 days						
826										
827	Section 3 - Upper Tai Po River (Area B)									
828	Commencement of Work	2007/9/28	2011/4/19	1320 days						
829	Possession to Portion of the Site (Area B)	2007/9/28	2007/9/28	1 day						
830	Temp. Site Access (XPT/A)	2007/9/28	2008/5/29	244 days						
831	Site Clearance	2008/5/30	2008/10/11	135 days						
832	Chainlink Fencing Work	2008/10/12	2008/10/12	20 days						
833	Initial Survey	2008/10/12	2008/10/31	20 days						
834	Condition Surveys / Set up markers	2008/10/31	2008/5/30	30 days						
835	Preparation of Temporary Works Design	2008/5/30	2008/6/28	30 days						
836	Approval of Temporary Works Design	2008/6/28	2008/5/15	60 days						
837	S.I. Works	2008/5/15	2008/3/17	14 days						
838	Temp. Shoring Works	2008/3/17	2008/5/16	30 days						
839		2008/11/1	2008/11/1	30 days						
840	Chainage from CHL 238 to CHL 600	2008/6/28	2008/6/28	1025 days						
841	From CHL 238 to CHL 380	2008/11/1	2011/4/19	900 days						
842	Temp. Shoring Works	2008/11/1	2008/11/1	30 days						
843	Excavation	2008/11/1	2008/11/30	30 days						
844	Rockfill & Blinding	2008/11/30	2008/11/16	120 days						
845	Base Slab Structure	2008/12/1	2009/2/28	90 days						
846	Wet Season (April to Oct 2009)	2008/12/1	2008/12/1	90 days						
847	Wall Structure	2009/2/28	2008/12/1	214 days						
848	Gabion Wall	2009/10/31	2009/10/31	85 days						
849	Install Ducts/Fencing/Railings/Chimney	2010/1/1	2009/11/1	6 days						
850	Wet Season (April to Oct 2010)	2010/1/1	2010/3/25	214 days						
851	Footbridge (TB4 & TB5)	2010/3/26	2010/3/26	135 days						
852	Dwarf Wall	2010/4/1	2010/4/1	30 days						
853	Demolition of Existing Footbridge	2011/3/1	2011/3/1	20 days						
854	Construction of Retaining Wall (TB5)	2011/3/1	2011/3/1	780 days						

Project Master Programme (REV 7)
Data Date: Jan 2009
Consultant: WCAP

Task
Task Progress
Critical Task

Critical Task Progress
Milestone
Summary

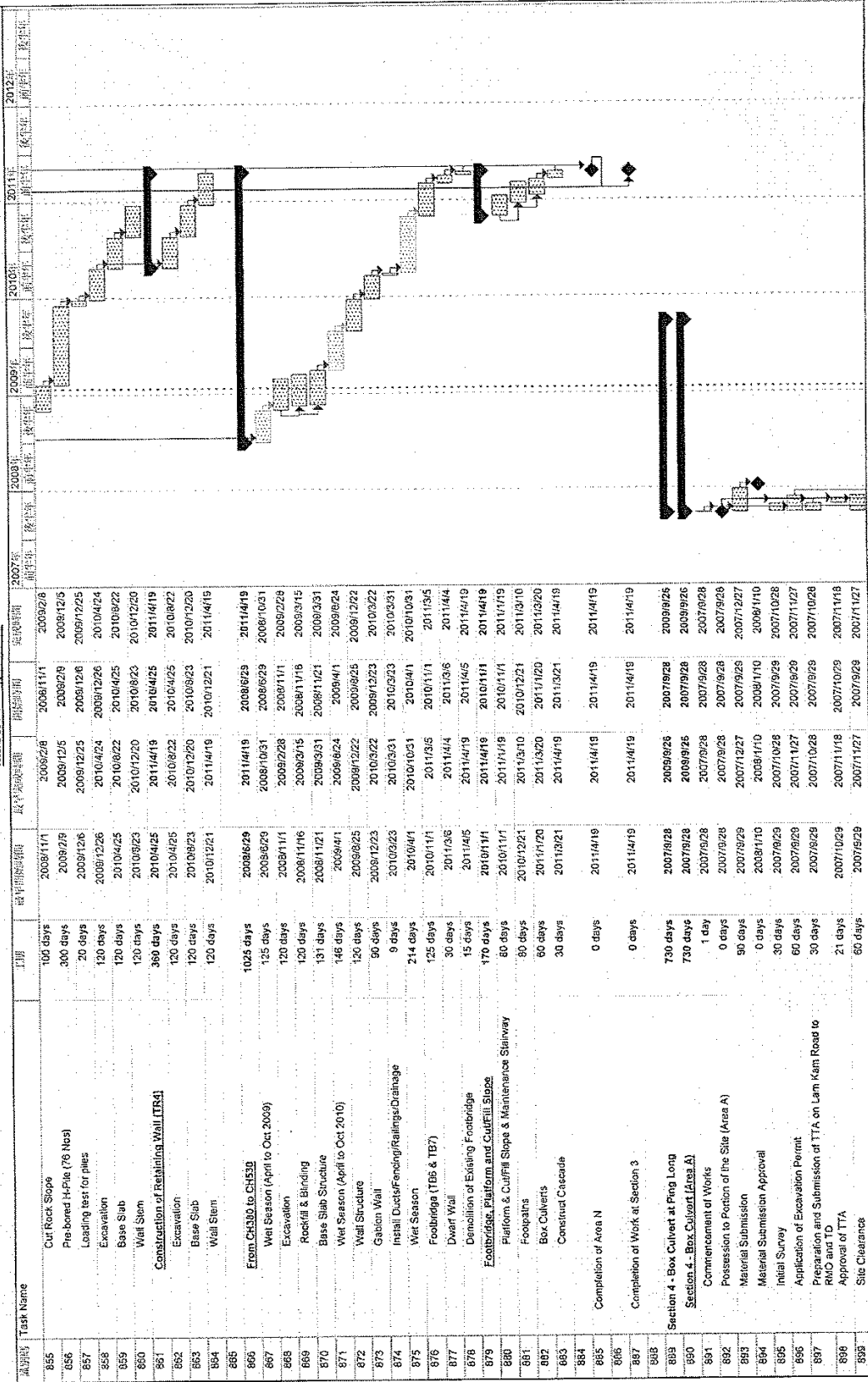
Roll Up Task
Roll Up Critical Task
Roll Up Milestone

Roll Up Progress
Split
External Tasks

Project Summary

Drainage Services Department

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



Project Summary

Legend:

- Task
- Task Progress
- Critical Task
- Milestone
- Summary
- Rolled Up Task
- Rolled Up Critical Task
- Rolled Up Milestone
- Rolled Up Progress
- Split
- External Tasks

Task: []

Task Progress: []

Critical Task: []

Milestone: []

Summary: []

Rolled Up Task: []

Rolled Up Critical Task: []

Rolled Up Milestone: []

Rolled Up Progress: []

Split: []

External Tasks: []

Project: Master Programme (REV. 7)
Date: Jan 2009
Consultant: MCAL

Chiu Hing Construction & Transportation Co., Ltd

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